

PLAINTIFF'S
EXHIBIT

G-405

CARLOCK
PACKINGS

Group 4

157-88

This catalog of
GARLOCK PRODUCTS
is presented to

of

by

of

THE GARLOCK PACKING COMPANY

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G A R L O C K
P A C K I N G S

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G A R L O C K P A C K I N G S

THE
GARLOCK PACKING COMPANY

General Offices and Factories
PALMYRA · NEW YORK

In Canada

THE GARLOCK PACKING COMPANY OF CANADA, LTD.
MONTREAL · QUEBEC

Canadian Factory

HAMILTON · ONTARIO

CATALOG 8 - 1932

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THE GARLOCK PACKING COMPANY

GARLOCK PRODUCTS

*are sold in the United States by the following
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THE GARLOCK PACKING COMPANY

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EXPORT DEPARTMENTS

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114 Liberty Street
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Pacific Coast Division
671 Mission Street
San Francisco, Cal.

IN CANADA

THE GARLOCK PACKING COMPANY OF CANADA, LTD.

maintains the following sales offices and warehouses

Calgary, Alta.	Montreal, Que.	Vancouver, B. C.
Hamilton, Ont.	Toronto, Ont.	Winnipeg, Man.

I N T R O D U C T I O N

» » » » » INCE 1887 The GARLOCK Packing Company has been identified prominently with the manufacture and sale of high grade mechanical packings and immediately allied materials. Its Quality Controlled products, sold only under the registered GARLOCK name and the caliper and scale trade-mark emblem, are known in every civilized country.

In this catalog are illustrated and described those styles and types of GARLOCK materials for which there is general usage and demand. It is hoped that the book will serve the user as a complete guide and reference book for mechanical packing materials. Reference to the text and to the recommendation tables should permit the selection of a satisfactory GARLOCK product for any regular packing job.

For special equipment, or for unusual operating conditions, packings other than standard frequently are desirable or necessary. A comprehensive line of special GARLOCK materials, each designed and intended for some specific and out-of-the-ordinary equipment or service, therefore, has been developed. These special GARLOCK materials are not shown in this catalog. To include them would require a book cumbersome in size and confusing to the user.

When confronted with a condition on which satisfactory packing service is not being obtained, and for which none of the products included in this catalog appears to be suitable, the packing user is invited to call a GARLOCK Representative. Members of this corps of competent men, fully qualified by training and experience for consultation concerning packing problems, are available everywhere.

A survey by a GARLOCK Representative will determine whether the line of regular or special products contains one exactly suited to the condition on which trouble is being experienced. If not, a new material, designed to meet that condition will be developed in the GARLOCK laboratories and manufactured in the GARLOCK factories.

To the packing users of the world this catalog and the services of the extensive field organization of GARLOCK Representatives are dedicated.

THE APPLICATION AND CARE OF GARLOCK PACKINGS

The GARLOCK Packing Company consistently makes every effort to place in the hands of its customers packings that are standard in every way. Through the Company's Quality Controlled method of manufacture the finished products are right in quality of material, uniform in excellence of workmanship, correct in measurements and in general conformity with the Company's established standards.

The actual application and care of packings are responsibilities of the user. The few simple suggestions set forth below may save annoyance, trouble and expense if followed out carefully.

ROD PACKINGS

Rod packings should be applied to a clean stuffing box. Each ring should be firmly seated, by tamping, as it is applied. When the stuffing box is full, the gland should be tightened with a wrench to seat the packing properly; then slacken off and retighten by hand, locking the gland a quarter turn with a wrench. Care should be taken to avoid cocking the gland.

Ammonia compressor rod packings contract during a "freeze back," making it necessary sometimes to tighten the gland to stop leakage. With the returning heat following the "freeze back" the packing expands, and unless the gland then is slackened off to compensate for this expansion the packing may be damaged. Most of the packing failures on ammonia compressors are caused by the failure to adjust the packing after a "freeze back."

Packings applied to hot water pumps sometimes cause trouble because of expansion as the temperature of the water increases. In this service packing should be watched carefully for a few days after application and the gland slackened

off from time to time if expansion or swelling of the packing has occurred.

Proper lubrication is essential. A liberal application of GARLOCK No. 2 or No. 3 Lubricating Compound (described on page 115) to all surfaces of rod packings before installation is strongly recommended. Rods should also be swabbed with GARLOCK Compound at frequent intervals. Observance of the above practice will reduce friction, prevent scored rods and add life to the packing.

GASKETS

Before applying gaskets the flanges should be cleaned thoroughly. Gaskets should be cut and centered so that no portion of the inner diameter or flange of the gasket projects beyond the flange of the pipe or equipment on which the gasket is being applied.

Many gasket users wish to coat gaskets with a paste before applying them to pipe lines or equipment handling hot or cold gasoline, oil or petroleum derivatives. Inasmuch as the pastes sometimes used for this purpose actually are harmful to the gaskets, the Company developed GARLOCK Gasket Paste, Compound No. 1, for this service. Compound No. 1 has the correct body for a seal, expands under heat, will not discolor gasoline and is not harmful to gaskets.

When tightening the gasket in the flange make sure that the bolts are drawn up evenly all around. Unless this is done trouble will follow.

In the event of apparent failure of any packing at any time the Company will gladly have a competent GARLOCK Representative investigate all of the plant conditions as applying to packings, and make suitable recommendations for future packing usage.

THE SELECTION OF GARLOCK PACKINGS

The recommendations appearing on the following pages must be employed with due regard for the explanations and qualifications set forth in the succeeding paragraphs.

In preparing recommendations, the obviously simple and desirable procedure would embody the naming of one style of material for each kind of service condition described. This Company, however, has determined on the basis of its experience over the past forty years and more that no single packing can be flatly and definitely recommended for universal usage with the maximum of economy and service on any given condition. The principal reasons for this situation are:

1. Variations in operating methods in relation to one installation as compared with another.
2. Variations in operating conditions as between two apparently similar installations.
3. Variations in operating requirements to be met in different installations for same service.
4. Variations in contributory service factors surrounding one installation on a certain condition as compared with another apparently duplicate installation.
5. Personal preference of individual operators for a certain type of design or material.

These circumstances have necessitated the extension of the GARLOCK recommendations to include several styles of packing for each service named. Otherwise the user might be misled in making his selection.

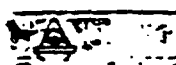
In making a choice of packings from the recommendation lists, the user will bear in mind the following points:

1. Each of the several styles named for a given service is in successful employment for that particular usage in hundreds of installations all over the world.
2. The style first named in each list is the one most widely used for the stated condition.
3. The styles named later in each list are successfully used for the condition stated approximately in the order of their listing.

We suggest that the intending user who is not familiar with the proper GARLOCK product to employ for a stated condition, select the material named first in the list for that service. In so doing, he is invited to accompany his inquiry or order with a detailed statement of conditions that the correctness of his choice may be checked.

The Company maintains a record, constantly under revision, of thousands of actual installations under all kinds and classes of service ranging from the ordinary everyday applications to those of most infrequent and unusual occurrence. The information relative thereto is at the disposal of the Company's district offices and sales representatives for the benefit of all packing users.

The experience of this Company over a period of many years proves that in the great majority of cases, the best selection of a packing product can be made by affording a GARLOCK representative an opportunity to survey carefully the requirements of the job. It is recommended, therefore, that a representative of the Company be consulted concerning the selection of GARLOCK products whenever the convenience of the user will permit.



GARLOCK



GENERAL RECOMMENDATIONS for the use of GARLOCK PACKINGS
RECIPROCATING PISTON RODS and VALVE RODS
OUTSIDE PACKED PLUNGERS and RAMS

TYPE OF PACKING	STEAM High Pressure		STEAM Low Pressure		WATER Hot		WATER - Cold High Pressure		WATER - Cold Low Pressure		GASOLINE & OIL - Hot	
	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page
FIBROUS	200	21	333	48	333	48	430	68	99	61	530	69
	530	69	430	68	430	68	333	48	430	68	1005	45
	146	24	712	51	712	51	99	61	26	62	928	81
	245	22	253	54	253	54	26	62	31	63	238	27
	235	23	87	83	87	83	31	63	66	67		
	107	82	926	79	926	79	183	67	67	84		
	377	28	368	53	368	53	440	72	926	79		
	928	81	446	70	443	73	66	67	440	72		
	358	29	449	71	1900	74	926	79	980	75		
					1906	73	87	83	43	65		
					1907	74	980	75	35	66		
							960	76				
							963	76				
SHREDDED METAL	935	122	7050	120	7050-C	121	7050	120	7050	120	935	122
	934	122	962	119	7050	120	962	119	962	119	934	122
	7050	120	968	119	962	119	968	119	968	119	7050-C	121
	962	119	969	119	968	119	969	119	969	119	7050	120
	968	119			969	119					962	119
	969	119									968	119
CASE METAL	821	140	805	133								
	805	133	808	135								
	808	135	809	136								
	809	136	861	132								
	861	132	806	134								
	806	134										

CENTRIFUGAL and ROTARY SHAFTS

FIBROUS	239	25	239	25	239	25	239	25	239	25	238	27
	249	26	249	26	249	26	249	26	249	26	928	81
	928	81	926	79	249	26	646	31	646	31		
	646	31	646	31	926	79	99	61	926	79		
			991	86	991	86	926	79	26	62		
SHREDDED METAL	935	122	7050	120	7050	120	7050	120	7050	120	935	122
	934	122	962	119	962	119	962	119	962	119	934	122
	7050	120	968	119	968	119	968	119	968	119	7050	120
	962	119	969	119	969	119	969	119	969	119	962	119
	968	119									968	119
	969	119									969	119

Before selecting a style of packing from the above list the reader will please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GENERAL RECOMMENDATIONS for the use of GARLOCK PACKINGS

RECIPROCATING PISTON RODS and VALVE RODS

OUTSIDE PACKED PLUNGERS and RAMS

TYPE OF PACKING	GASOLINE & OIL - Cold		AIR		ACIDS - Weak and CAUSTICS		ACIDS Strong		GAS		AMMONIA	
	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page
FIBROUS	430	68	222	26	239	25	231	31	530	69	334	48
	927	80	530	69	245	25			200	21	337	50
	238	27	245	22	235	23			550	49	536	49
	99	61	235	23	991	86					712	51
	255	34									255	34
SHREDDED METAL	7050-C	121	7050-C	121	7050	120	7050	120	7050-C	121	7050-C	121
	7050	120	7050	120	962	119	962	119	7050	120	7050	120
	962	119	962	119	968	119	968	119				
	968	119	968	119	969	119	969	119				
	969	119	969	119								
CASE METAL			875	129	870	130	870	130	875	129	800	128
			805	133								
			808	135								
			809	136								
			861	132								
			806	134								
			821	140								

CENTRIFUGAL and ROTARY SHAFTS

FIBROUS	238	27	239	25	239	25	231	31	239	25	239	25
	99	61			245	25						
	927	80			235	23						
					991	86						
SHREDDED METAL	7050	120	935	122	7050	120	7050	120	7050-C	121	7050-C	121
	962	119	7050	120	962	119	962	119	7050	120	7050	120
	968	119			968	119	968	119	935	122	962	119
	969	119									968	119

Before selecting a style of packing from the above list the reader will please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GENERAL RECOMMENDATIONS for the use of GARLOCK PACKINGS

GLOBE and ANGLE VALVE STEMS

TYPE OF PACKING	STEAM High Pressure		STEAM Low Pressure		WATER Hot		WATER-Cold High Pressure		WATER-Cold Low Pressure		GASOLINE & OIL - Hot	
	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page
FIBROUS	17	33	117	32	117	32	117	32	117	32	330	69
	117	12	115	33	115	33	115	33	115	33	1005	45
	115	33	646	31	646	31	646	31	646	31	238	27
	1700	35	926	79	926	79	926	79	926	79	928	81
	646	31	333	48	333	48	333	48	333	48	1700	35
	928	81									117	32
SHREDDED METAL	935	122	962	119	962	119	962	119	962	119	935	122
	934	122	968	119	968	119	968	119	968	119	934	122
	962	119									7050	120
	968	119									962	119
											968	119

SHEET PACKINGS and GASKETS

SERVICE	Garlock Sheet Style	Garlock Gasket Style	Page
STEAM — High Pressure	900	333	100
	902	950	87
	7021	952	90
	603	7022	88
		607	89
		604	101
		601	102
		602	102
		6007	102
	625	627	90
		512	104
		511	104
STEAM — Low Pressure	22	122	91
	333	953	93
	24	124	92
AIR — High Pressure	900	333	100
	902	950	87
		952	90
AIR — Low Pressure	333	933	93
	22	122	91
COLD WATER — High Pressure	22	333	100
	19	122	91
		219	91
COLD WATER — Low Pressure	22	122	91
	333	953	93
	660	661	96
	681	691	95

Before selecting a style of packing from the above list the reader will please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

THE STANDARD PACKING OF THE WORLD



GARLOCK



GENERAL RECOMMENDATIONS for the use of GARLOCK PACKINGS

GLOBE and ANGLE VALVE STEMS

TYPE OF PACKING	GASOLINE & OIL - Cold		AIR		ACIDS (Weak) and CAUSTICS		ACIDS Strong		GAS		AMMONIA	
	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page
FIBROUS	430	68	117	32	239	25	231	31	117	32	117	32
	238	27	115	33	1700	35			115	33	115	33
	99	61	239	25					235	23	239	25
	927	80							239	25	334	48
	1700	35							333	48		
	117	32										
	115	33										
SHREDDED METAL	7050	120	7050	120	7050	120	7050	120	7050	120	7050	120
	962	119	962	119	962	119	962	119	962	119	962	119
	968	119	968	119	968	119	968	119	968	119	968	119

SHEET PACKINGS and GASKETS

SERVICE	Garlock Sheet Style	Garlock Gasket Style	Page
HOT WATER — High Pressure	22	553	100
	24	122	91
	353	124	92
		953	93
HOT WATER — Low Pressure	22	122	91
	353	953	93
COLD OIL or GASOLINE	902	952	90
	660	661	96
	681	691	95
	7601	7601	117
	353	953	93
HOT OIL or GASOLINE	7021	7022	88
AMMONIA — High Pressure, and Various Alkali Solutions	900	553	100
	902	950	87
		952	90
AMMONIA — Low Pressure, and Various Alkali Solutions	353	953	93
	22	122	91
GAS — High Pressure	7021	555	100
	900	7022	88
	902	950	87
		952	90
	625	627	90

Before selecting a style of packing from the above list the reader will please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

THE STANDARD PACKING OF THE WORLD



GENERAL RECOMMENDATIONS for the use of GARLOCK PACKINGS

PUMP PISTON PACKING

SERVICE	Garlock Style	Page
HOT WATER	261	37
	33 Special	44
	33	58
COLD WATER	261	37
	33 Special	44
	33	58
CRUDE OIL, GASOLINE, MINERAL SEAL OIL	261	37
	33 Special	44

PUMP VALVES

SERVICE	Garlock Style	Page
HOT WATER — High Temperatures and Pressures	108	109
	156	109
	153	109
WARM AND COLD WATER — From 125 Pounds to 300 Pounds Pressure	188	109
COLD WATER — From 75 Pounds to 125 Pounds Pressure	182	109
	359	109
COLD WATER — From 50 Pounds to 75 Pounds Pressure	139	109
	173	109
	189	109
GASOLINE, SYRUPS, ALKALI, LYE, etc. — High Temperatures and Pressures	108	109
HOT OR COLD OIL — High Pressures	108	109
	156	109
	153	109
COLD OIL — From 75 Pounds to 125 Pounds Pressure	359	109
CONDENSER	154	109
	151	109
	152	109
	197	109

DIAPHRAGM SHEETS

SERVICE	Garlock Style	Page
AIR, WATER, DRY NATURAL GAS — High Pressure	7677	99
	7104	99
AIR, AMMONIA — High Pressure	7548	99
GASOLINE, OIL, WET NATURAL AND MANUFACTURED GAS up to 150° Fahr. — Medium Pressure	7598	99
AIR, WATER, DRY NATURAL GAS — Medium Pressure	7715	98
	619	98
GASOLINE, OIL, WET NATURAL AND MANUFACTURED GAS up to 150° Fahr. — Low Pressure	7603	98
AIR, WATER, DRY NATURAL GAS — Low Pressure	7561	98
	7543	97

LUBRICATING and GASKET COMPOUNDS

SERVICE	Garlock Style	Page
For Application to all kinds of Gaskets operating against Hot or Cold Gasoline and Oil	Compound No. 1	115
For Application to Rod Packing working against Steam, Hot or Cold Water and Water Solutions	Compound No. 2	115
For Application to Rod Packing working against Oil, Gasoline, Benzine, Ether, Carbon Tetrachloride and all Vapors and Chemicals of an Oily Nature	Compound No. 3	115

Before selecting a style of packing from the above list the reader will please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.



GARLOCK



GENERAL RECOMMENDATIONS for the use of GARLOCK PACKINGS

RAILROAD SERVICE PACKINGS

SERVICE	Garlock Style	Page
Locomotive Cab Cock and Valve Stem Packing	1700	35
Locomotive Throttle Packing	530	69
	2000	36
	3200	37
	9001	37
American Multiple Throttle Packing	9001	37
Locomotive Air Pump Packing	377	28
	2200	38
	2215	39
Power Reverse Gear Cylinder Packing	1200	40
	812	41
Power Reverse Gear Cups	813-A	41
Power Reverse Gear Piston Rod Packing	1225	40
Also Power Reverse Gear Packing	449-S	42
Front End Locomotive Tape	616	43
Tank Hose Gaskets	122	43
Piston Rod Packing for Worthington Feed Water Heaters	430	68
	530	69
	7091	44
Piston Packing for Worthington Feed Water Heaters	33 Special Rock Hard	44
	108 Rings	44
Piston Packing for Elesco Feed Water Heaters	261	57
Locomotive Ball Joint Packing	1010	46
Locomotive Expansion Joint Packing	1005	45
	5250	47
	5270	47

Before selecting a style of packing from the above list the reader will please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

THE STANDARD PACKING OF THE WORLD

THE GARLOCK WARRANTY

• The GARLOCK Packing Company guarantees to its customers that it will replace, free of charge including transportation charges but not cost of installation, any GARLOCK product claimed to be defective either in material or workmanship whereby it is not suitable under proper usage and service for the purpose for which designed, if so found defective upon examination by its representative.



G A R L O C K



GARLOCK 150 SPIRAL

HIGH PRESSURE PACKING

GARLOCK 125 COIL

GARLOCK 200 RINGS

Construction—This high pressure packing consists of a core of formed asbestos cloth and resilient rubber, wrapped with a cover of specially woven GARLOCK asbestos cloth. The packing is treated with a heat-resisting rubber friction and lubricated with a high grade lubricant compounded to withstand extreme temperatures; it is furnished with an external coating of graphite.

Service—For general use against high temperatures. It is specially recommended for application to piston rods of steam engines, pumps, compressors and other similar equipment; for expansion joints, and for any other service against steam pressures up to 300 pounds per square inch.

Form—This material is obtainable in the three forms illustrated above—GARLOCK 150 Spiral, GARLOCK 125 Coil and GARLOCK 200 Ring.

GARLOCK 200 Rings are furnished cut and formed in any size to fit rod and stuffing box dimensions. When ordering, specify inside diameter, outside diameter, and quantity required.

GARLOCK 125 Coil and GARLOCK 150 Spiral are furnished in standard 12½ foot lengths and are manufactured in all packing sizes from ¼" to 1½", advancing by sixteenths. Approximate footage and approximate weight per box of a few standard sizes are shown below:

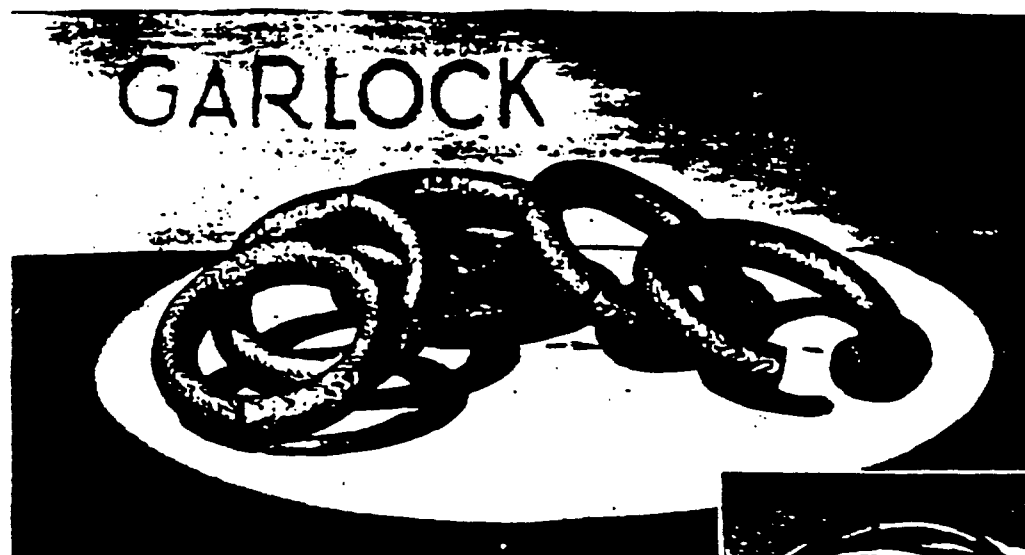
GARLOCK 125 Coil		
Size	Feet per Box	Weight per Box
¼"	75 ft.	4½ lbs.
⅜"	50 ft.	6½ lbs.
½"	50 ft.	11 lbs.
⅝"	37½ ft.	12½ lbs.
¾"	25 ft.	12½ lbs.
⅞"	12½ ft.	8½ lbs.
1"	12½ ft.	10½ lbs.

GARLOCK 150 Spiral		
Size	Feet per Box	Weight per Box
¼"	12½ ft.	½ lbs.
⅜"	12½ ft.	1½ lbs.
½"	12½ ft.	2½ lbs.
⅝"	12½ ft.	4½ lbs.
¾"	12½ ft.	6½ lbs.
⅞"	12½ ft.	8½ lbs.
1"	12½ ft.	10½ lbs.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 245 RINGS



GARLOCK 243 COIL

ROUND DERBY PACKING

Construction — GARLOCK Round Derby Packing is manufactured from Canadian long fibre asbestos yarn by the braid over braid method. It receives a lubrication and graphite treatment, which by a special process, is impregnated into every strand, making a soft and pliable material.

Service — Recommended for service on piston rods of pumps handling steam, acids, gas, lye or caustic soda.

Form — GARLOCK Round Derby Packing is

obtainable in the two forms illustrated above — GARLOCK 243 Coil and GARLOCK 245 Ring.

GARLOCK 245 Rings are cut from GARLOCK 243 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 243 Coil is manufactured in sizes from $\frac{1}{4}$ " to $1\frac{3}{4}$ ". Can be furnished in coil lengths or in continuous length on a reel.

The table below indicates the number of coils, number of feet and approximate weight per box of a few standard sizes:

GARLOCK 243 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	4	152 ft.	5 lbs.
$\frac{3}{8}$ "	3	60 ft.	5 lbs.
$\frac{1}{2}$ "	4	68 ft.	10 lbs.
$\frac{3}{4}$ "	3	51 ft.	10 lbs.
$\frac{1}{1}$ "	3	31½ ft.	10 lbs.
$\frac{1}{1}$ "	2	21 ft.	10 lbs.
$\frac{1}{1}$ "	2	21 ft.	10 lbs.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 233 COIL

SQUARE DERBY PACKING



GARLOCK 235 RINGS

Construction — GARLOCK Square Derby Packing is manufactured from Canadian long fibre asbestos yarn by the braid over braid method. It receives a lubrication and graphite treatment, which by a special process, is impregnated into every strand, making a soft and pliable material.

Service — Recommended for service on piston rods of pumps handling steam, acids, gas, lye or caustic soda.

Form — GARLOCK Square Derby Packing is obtainable in the two forms illustrated above—GARLOCK 233 Coil and GARLOCK 235 Ring.

GARLOCK 235 Rings are cut from GARLOCK 233 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 233 Coil is manufactured in all packing sizes from $\frac{1}{4}$ " to $1\frac{1}{4}$ " advancing by sixteenths. Can be furnished in coil lengths or in continuous length on reel.

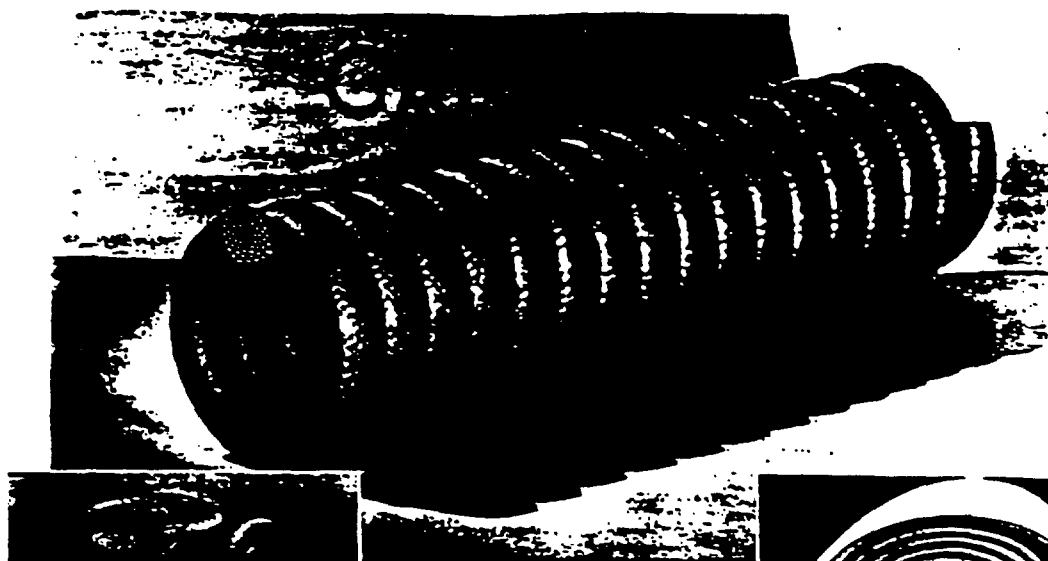
The table below indicates the number of coils, number of feet and approximate weight per box of a few standard sizes:

GARLOCK 233 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	4	132 ft.	5 lbs.
$\frac{3}{8}$ "	3	60 ft.	5 lbs.
$\frac{1}{2}$ "	4	60 ft.	10 lbs.
$\frac{3}{4}$ "	3	30 ft.	10 lbs.
$\frac{1}{4}$ "	3	25 ft.	10 lbs.
$\frac{3}{8}$ "	3	21 ft.	10 lbs.
$\frac{1}{2}$ "	2	13 $\frac{1}{2}$ ft.	10 lbs.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 145 SPIRAL



GARLOCK 146 RINGS

PALMYRA PACKING



GARLOCK 144 COIL

Construction — This high pressure packing consists of a center core of a resilient, red rubber wrapped with covers of specially woven GARLOCK asbestos cloth. The packing is treated with a heat-resisting rubber friction and lubricated with a high grade lubricant, compounded to withstand extreme temperatures; it is finished with a surface coating of graphite.

Service — For general use against high temperatures. Particularly recommended for service against saturated steam pressures up to 300 pounds per square inch and in stuffing boxes in which condensation is present in considerable quantity.

Form — This material is obtainable in the three forms illustrated above—GARLOCK 145 Spiral, GARLOCK 144 Coil and GARLOCK 146 Ring.

GARLOCK 146 Rings are furnished cut and formed in any specified size to fit rod and stuffing box dimensions.

GARLOCK 145 Spiral and GARLOCK 144 Coil are furnished in standard 12½ foot lengths and are manufactured in all packing sizes from ¼" to 1½", advancing by sixteenths.

Approximate footage and approximate weight per box of a few standard sizes are shown below:

GARLOCK 144 Coil		
Size	Feet per Box	Weight per Box
¼"	73 ft.	4 ¼ lbs.
½"	50 ft.	6 ¼ lbs.
¾"	50 ft.	11 ½ lbs.
1"	37 ½ ft.	12 lbs.
1 ¼"	25 ft.	11 ½ lbs.
1 ½"	12 ½ ft.	7 ½ lbs.
1 ¾"	12 ½ ft.	10 ¼ lbs.

GARLOCK 145 Spiral		
Size	Feet per Box	Weight per Box
¼"	12 ½ ft.	4 lbs.
½"	12 ½ ft.	1 ¼ lbs.
¾"	12 ½ ft.	2 ¼ lbs.
1"	12 ½ ft.	4 lbs.
1 ¼"	12 ½ ft.	5 ½ lbs.
1 ½"	12 ½ ft.	7 ½ lbs.
1 ¾"	12 ½ ft.	10 ¼ lbs.

THE STANDARD PACKING OF THE WORLD



GARLOCK



GARLOCK 234 COIL

ROTOPAC ROTARY PUMP PACKING



GARLOCK 239 RINGS

Construction — GARLOCK Rotopac Packing is manufactured from long fibre asbestos, braided square by the same method used in producing flax packing. It receives a lubrication and graphite treatment, which by a special process, is impregnated into each strand of material.

Service — A high grade centrifugal or rotary pump packing recommended for service against hot or cold water, caustic solutions and weak acids.

Form — GARLOCK Rotopac Packing is obtain-

able in the two forms illustrated above—GARLOCK 234 Coil and GARLOCK 239 Ring.

GARLOCK 239 Rings are cut from GARLOCK 234 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 234 Coil is manufactured in all packing sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ " advancing by sixteenths. Can be furnished in coil lengths or in continuous length on reel.

The table below indicates the number of coils, number of feet and approximate weight per box of a few standard sizes:

GARLOCK 234 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{8}$ "	5	115 ft.	5 lbs.
$\frac{3}{16}$ "	4	108 $\frac{1}{2}$ ft.	10 $\frac{1}{4}$ lbs.
$\frac{1}{4}$ "	3	63 ft.	10 $\frac{1}{4}$ lbs.
$\frac{5}{16}$ "	3	44 $\frac{1}{4}$ ft.	12 $\frac{1}{2}$ lbs.
$\frac{3}{8}$ "	2	27 ft.	9 $\frac{1}{4}$ lbs.
$\frac{7}{16}$ "	2	22 $\frac{3}{4}$ ft.	10 $\frac{1}{4}$ lbs.
$\frac{1}{2}$ "	1	19 $\frac{1}{4}$ ft.	13 $\frac{1}{4}$ lbs.

THE STANDARD PACKING OF THE WORLD



GARLOCK



COMPRESSOR PACKING

GARLOCK 220 COIL
GARLOCK 221 SPIRAL
GARLOCK 222 RING

Construction — GARLOCK Compressor Packing consists of a core of formed asbestos fabric, wrapped with a cover of specially woven GARLOCK asbestos cloth. The packing is treated with a heat-resisting rubber friction and lubricated with a special lubricant compounded to withstand extreme temperature; it is furnished with an external coating of graphite.

Service — For general use against high temperature. Particularly constructed for the severe service encountered in air and gas compressor work.

Form — GARLOCK Compressor Packing is produced in three forms—GARLOCK 221 Spiral, GARLOCK 220 Coil and GARLOCK 222 Ring.

GARLOCK 222 Rings are furnished cut and formed to any specified size to fit rod and stuffing box dimensions.

GARLOCK 220 Coil and GARLOCK 221 Spiral are furnished in standard $12\frac{1}{2}$ foot lengths and are manufactured in all packing sizes from $\frac{1}{8}$ " to $1\frac{1}{2}$ ", advancing by sixteenths.

ROTOPAC ROTARY PUMP PACKING

WIRE INSERTED

GARLOCK 244 COIL
GARLOCK 249 RING

Construction — GARLOCK Wire Inserted Rotopac Packing is manufactured from long fibre asbestos yarn, containing a fine brass wire insertion. It is braided square by the same method used in producing flax packing. It receives a lubrication and graphite treatment, which by a special process, is impregnated into each strand of material.

Service — A high grade centrifugal or rotary pump packing recommended for service against hot or cold water, caustic solutions and weak acids.

Form — GARLOCK Wire Inserted Rotopac Packing is obtainable in two forms—GARLOCK 244 Coil and GARLOCK 249 Ring.

GARLOCK 249 Rings are cut from GARLOCK 244 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 244 Coil is manufactured in all packing sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ " advancing by sixteenths. Can be furnished in coil lengths or in continuous length on reel.

The table below indicates the number of coils, number of feet and approximate weight per box of a few standard sizes:

GARLOCK 244 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{8}$ "	3	182½ ft.	13¼ lbs.
$\frac{3}{16}$ "	3	73 ft.	11½ lbs.
$\frac{1}{4}$ "	3	57 ft.	14¼ lbs.
$\frac{5}{16}$ "	2	33 ft.	11½ lbs.
$\frac{3}{8}$ "	2	30½ ft.	15½ lbs.
$\frac{7}{16}$ "	2	22 ft.	14¼ lbs.
1 "	1	17 ft.	14½ lbs.

THE STANDARD PACKING OF THE WORLD



GARLOCK 237 COIL

THORNDYKE ROTARY PUMP PACKING



GARLOCK 238 RINGS

Construction — GARLOCK Thorndyke Packing is manufactured from long fibre asbestos, braided square by the same method used in producing flax packing. It is lubricated and graphited throughout.

Service — Developed and recommended for service on the shafts of centrifugal and rotary pumps handling cold oil or gasoline.

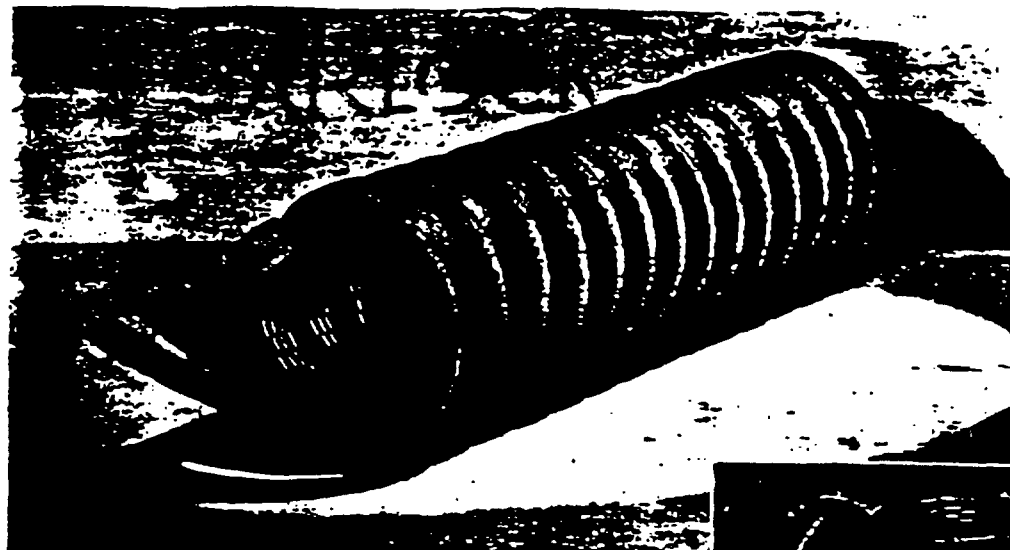
Form — GARLOCK Thorndyke Packing is obtainable in two forms—GARLOCK 237 Coil and GARLOCK 238 Ring.

GARLOCK 238 Rings are cut from GARLOCK 237 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 237 Coil is manufactured in sizes from 1/4" to 1 1/4" advancing by sixteenths. Can be furnished in coil lengths or in continuous length on reel.

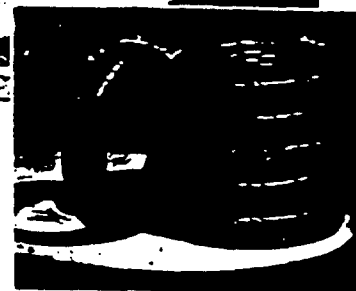
The table below indicates the number of coils, number of feet and approximate weight per box of a few standard sizes:

GARLOCK 237 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
1/4"	5	115 ft.	5 lbs.
3/8"	4	108 3/4 ft.	10 1/4 lbs.
1/2"	3	63 ft.	10 1/4 lbs.
5/8"	3	44 1/4 ft.	12 3/4 lbs.
3/4"	2	37 ft.	9 1/4 lbs.
7/8"	2	22 3/4 ft.	10 1/4 lbs.
1"	1	19 1/4 ft.	13 1/4 lbs.



GARLOCK 377 SPIRAL

METALMARINE PACKING



GARLOCK 377 RINGS

Construction — GARLOCK Metalmarine Packing consists of a non-frictional, soft metal core with side walls, back and cushion of rubberized asbestos cloth. The special design of the metal core provides a number of small wearing surfaces so staggered as to give a pressure tight bearing on the rod. This material is supplied lubricated and with a surface graphiting.

Service — Recommended for general steam engine service particularly on piston rods of main engines on steamships, deck engines, hoisting engines, steam shovels and dredges, steam hammers and kickers and steam niggers in the lumber industry.

Form — This material is obtainable in the two forms illustrated above—GARLOCK 377 Spiral and GARLOCK 377 Ring.

GARLOCK 377 Rings are furnished cut and formed in any specified size to fit rod and stuffing box dimensions.

GARLOCK 377 Spiral is furnished in standard 12½ foot lengths and is manufactured in all packing sizes from ¼" to 1½", advancing by sixteenths.

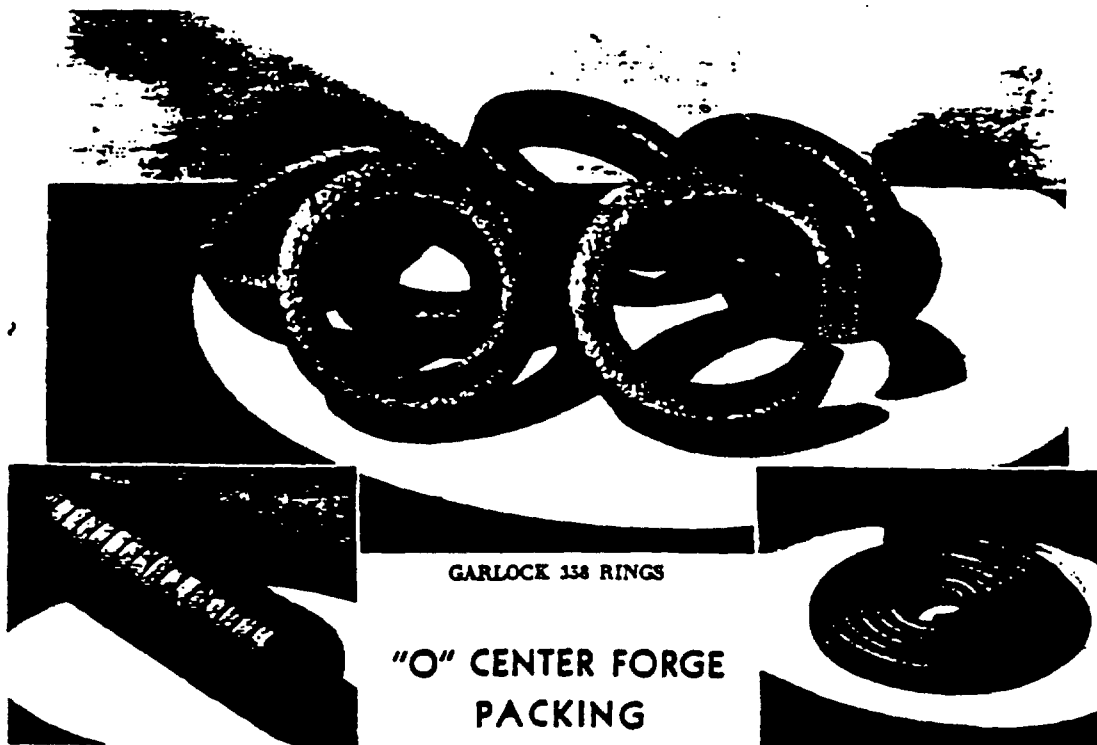
Packed one spiral per box, the following list indicates the approximate net weights of a few standard sizes:

GARLOCK 377 Spiral			
Size	Weight per Box	Size	Weight per Box
¼"	1½ lbs.	¾"	11½ lbs.
⅜"	2¼ lbs.	1"	14½ lbs.
½"	4½ lbs.		19 lbs.
¾"	9½ lbs.		

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 358 RINGS

"O" CENTER FORGE PACKING

GARLOCK 357 SPIRAL

GARLOCK 356 COIL

Construction — GARLOCK "O" Center Forge Packing is constructed of specially woven GARLOCK asbestos cloth frictioned with a tenacious rubber cement and formed with a hollow center. It is lubricated with a high grade lubricant compounded to withstand high temperatures and is finished with an external coating of graphite.

Service — Recommended for use against high temperatures particularly where extreme vibration or lateral motion, requiring a resilient packing is encountered. Extensively used on the rods of steam hammers.

Form — This material is obtainable in the

three forms illustrated above—GARLOCK 357 Spiral, GARLOCK 356 Coil and GARLOCK 358 Ring.

GARLOCK 358 Rings are furnished cut and formed in practically any size to fit rod and stuffing box dimensions.

GARLOCK 356 Coil and GARLOCK 357 Spiral are furnished in standard 12½ foot lengths and are manufactured in all packing sizes from ¼" to 1½" advancing by sixteenths.

Approximate footage and approximate weight per box of a few standard sizes are shown below:

GARLOCK 356 Coil		
Size	Feet per Box	Weight per Box
¼"	75 ft.	4¼ lbs.
½"	50 ft.	3½ lbs.
¾"	50 ft.	10½ lbs.
1"	37½ ft.	11½ lbs.
1½"	25 ft.	10½ lbs.
2"	12½ ft.	6½ lbs.
3"	12½ ft.	9½ lbs.

GARLOCK 357 Spiral		
Size	Feet per Box	Weight per Box
¼"	12½ ft.	¼ lbs.
½"	12½ ft.	1½ lbs.
¾"	12½ ft.	2½ lbs.
1"	12½ ft.	3½ lbs.
1½"	12½ ft.	5½ lbs.
2"	12½ ft.	6½ lbs.
3"	12½ ft.	9½ lbs.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



MILL PACKING—WIRE COVERED

GARLOCK 247 COIL

GARLOCK 250 RING

Construction—GARLOCK Mill Packing—Wire Covered consists of a braided core of brass wire inserted, asbestos yarn, with a cover of fine copper wire. Both the core and the copper wire cover are made by the braid over braid method. The packing is regularly supplied lubricated and graphited.

Service—Recommended for steam and oil conditions at high temperatures and for the piston rods of gas engines.

Form—GARLOCK Mill Packing—Wire Covered is produced in two forms—GARLOCK 247 Coil and GARLOCK 250 Ring.

GARLOCK 250 Rings are cut from GARLOCK 247 Coil in any specified size to fit rod and stuffing box.

GARLOCK 247 Coil is furnished in all packing sizes from $\frac{1}{4}$ " to $1\frac{1}{2}$ " advancing by sixteenths. In addition to coil lengths, it can also be furnished in continuous length on reels.

MILL PACKING

GARLOCK 248 COIL

GARLOCK 251 RING

Construction—GARLOCK Mill Packing is manufactured from high grade, brass wire inserted asbestos yarn. It is braided square by the braid over braid method and is regularly supplied lubricated and graphited.

Service—Recommended for steam and oil conditions at high temperatures and for the piston rods of gas engines.

Form—GARLOCK Mill Packing is produced in two forms—GARLOCK 248 Coil and GARLOCK 251 Ring.

GARLOCK 251 Rings are cut from GARLOCK 248 Coil, in any specified size to fit rod and stuffing box dimensions.

GARLOCK 248 Coil is furnished in all packing sizes from $\frac{1}{4}$ " to $1\frac{1}{2}$ " advancing by sixteenths. In addition to coil lengths, it can also be furnished in continuous length on reels.

Approximate footage and approximate weight per box of a few standard sizes are indicated below:

GARLOCK 248 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	3	190 ft.	10 lbs.
$\frac{3}{8}$ "	3	84 ft.	10 lbs.
$\frac{1}{2}$ "	3	46 $\frac{1}{2}$ ft.	10 lbs.
$\frac{3}{4}$ "	3	30 ft.	10 lbs.
$\frac{7}{8}$ "	2	20 ft.	10 lbs.
$1\frac{1}{8}$ "	2	15 $\frac{1}{2}$ ft.	10 lbs.
$1\frac{1}{4}$ "	2	13 ft.	10 lbs.

THE STANDARD PACKING OF THE WORLD



GARLOCK



PACIFIC SEMI-METALLIC PACKING

GARLOCK 644 COIL

GARLOCK 646 RING

Construction — Pacific Semi-Metallic Packing is manufactured from long fibre asbestos yarn and soft metal strands, braided square by the same method used in producing flax packing. It is thoroughly lubricated and graphited.

Service — Recommended for general service on centrifugal pumps. *See also 646 Ring*

Form — This material is supplied in two forms, GARLOCK 644 Coil and GARLOCK 646 Ring.

GARLOCK 646 Rings are cut from GARLOCK 644 Coil and are furnished to fit any rod and stuffing box dimensions.

GARLOCK 644 Coil is manufactured in all packing sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ " advancing by sixteenths.

HORNBLLENDE ACID PACKING

GARLOCK 230 COIL

GARLOCK 231 RING

Construction — GARLOCK Hornblende Acid Packing is manufactured from pure Blue Cape asbestos, braided square by the same method used in producing flax packings. It receives a thorough lubrication and graphite treatment.

Service — Developed and recommended for service on the shafts of centrifugal and rotary pumps handling acids and strong chemical solutions.

Form — GARLOCK Hornblende Acid Packing is obtainable in two forms—GARLOCK 230 Coil and GARLOCK 231 Ring.

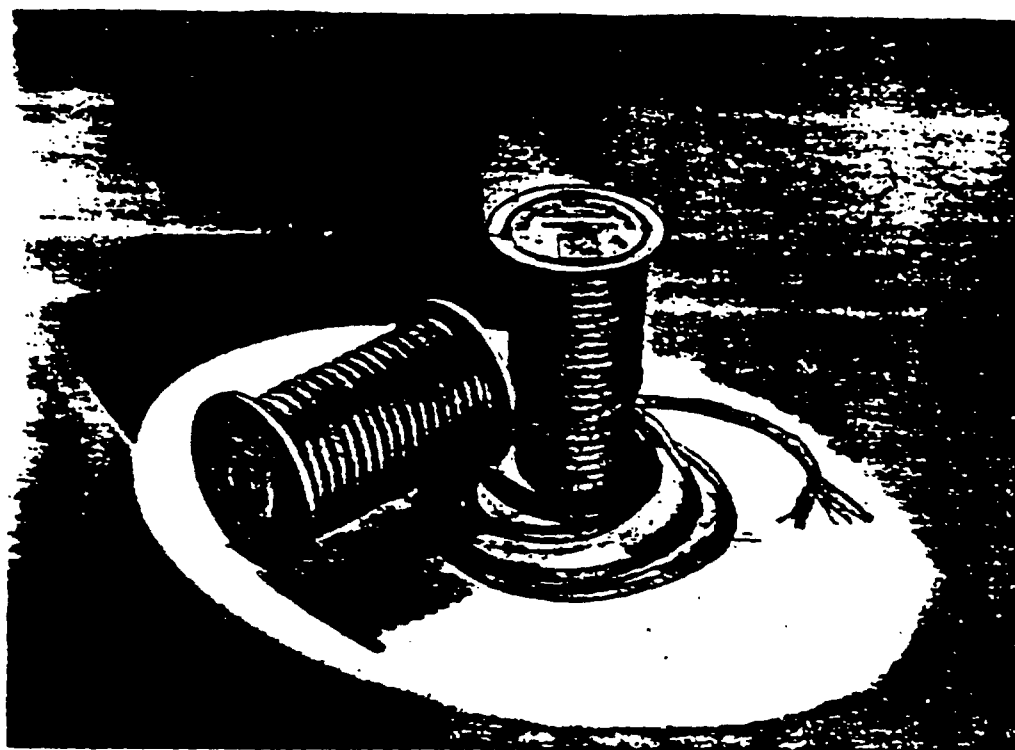
GARLOCK 231 Rings are cut from GARLOCK 230 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 230 Coil is manufactured in all packing sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ " advancing by sixteenths. Can be furnished in coil lengths or in continuous lengths on reel.

The table below indicates the number of coils, number of feet and approximate weight per box of a few standard sizes:

GARLOCK 230 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{8}$ "	4	90 $\frac{3}{4}$ ft.	54 $\frac{1}{2}$ lbs.
$\frac{3}{16}$ "	3	81 ft.	40 $\frac{1}{2}$ lbs.
$\frac{1}{4}$ "	3	63 ft.	32 $\frac{1}{2}$ lbs.
$\frac{5}{16}$ "	2	32 ft.	11 $\frac{1}{2}$ lbs.
$\frac{3}{8}$ "	2	28 ft.	10 $\frac{1}{2}$ lbs.
$\frac{7}{16}$ "	2	22 ft.	13 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	1	19 $\frac{1}{2}$ ft.	16 $\frac{1}{2}$ lbs.

THE STANDARD PACKING OF THE WORLD



GARLOCK 117

ROUND BEAVER PACKING

Construction — GARLOCK 117 is manufactured from long fibre asbestos yarn, thoroughly lubricated with a heat resisting compound and graphite. It is furnished either braided or twisted. In ordering, specify which construction is desired.

Service — GARLOCK 117 is recommended for use on stems of globe and angle valves operating against high pressure steam, hot or cold water, or oil.

Form — GARLOCK 117 is furnished round in

cross section: standard sizes from $\frac{1}{8}$ " to $\frac{3}{4}$ ", advancing by sixteenths.

Regularly packaged on 1 pound, 2 pound or 5 pound spools. Maximum size packaged on 1 pound spools is $\frac{3}{8}$ "; maximum size on 2 pound spools, $\frac{1}{2}$ ". Sizes in excess of $\frac{1}{2}$ " are furnished on 5 pound spools.

Approximate weights per hundred feet of a few standard sizes both of braided and twisted construction are listed below:

GARLOCK 117 Braided	
Size	Weight per Hundred Feet
$\frac{1}{8}$ "	25 lbs.
$\frac{1}{4}$ "	87.5 lbs.
$\frac{3}{8}$ "	312.5 lbs.
$\frac{1}{2}$ "	7.125 lbs.
$\frac{5}{8}$ "	14.125 lbs.
$\frac{3}{4}$ "	20.125 lbs.
$\frac{7}{8}$ "	28.125 lbs.

GARLOCK 117 Twisted	
Size	Weight per Hundred Feet
$\frac{1}{8}$ "	31.25 lbs.
$\frac{1}{4}$ "	1.125 lbs.
$\frac{3}{8}$ "	4.0625 lbs.
$\frac{1}{2}$ "	7.375 lbs.
$\frac{5}{8}$ "	12.75 lbs.
$\frac{3}{4}$ "	19.875 lbs.
$\frac{7}{8}$ "	30.0625 lbs.

THE STANDARD PACKING OF THE WORLD



GARLOCK



SQUARE BEAVER PACKING

GARLOCK 115

Construction — GARLOCK 115 is a braided asbestos packing produced from long fibre asbestos yarn, thoroughly lubricated with a heat resisting compound and graphite.

Service — GARLOCK 115 is recommended for use on stems of globe and angle valves operating against high pressure steam, hot or cold water, or oil.

Form — GARLOCK 115 is furnished square in cross section; standard sizes from $\frac{1}{8}$ " to $\frac{3}{4}$ ", advancing by sixteenths.

Regularly furnished on 1 pound, ~~2 pound~~ or 5 pound spools. Maximum size packaged on 1 pound spools is $\frac{3}{8}$ "; maximum size on 2 pound spools, $\frac{1}{2}$ ". Sizes in excess of $\frac{1}{2}$ " are furnished on 5 pound spools.

ALABESTINE PACKING

GARLOCK 17

Construction — GARLOCK 17 is a braided asbestos packing produced from Canadian long fibre asbestos yarn. It is treated with a heat resisting compound and is regularly supplied with a surface lubrication of graphite.

Service — A satisfactory valve stem packing for use on small angle and globe valves or any mechanical equipment where the stuffing boxes are small and difficult to keep steam tight. Will give long service in high pressure work.

Form — This material is regularly furnished round in cross section. It can be furnished, however, in square form if desired; standard sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by thirty-seconds.

Usual method of packaging is on 1, 2 or 5 pound spools. Maximum size supplied on 1 pound spools is $\frac{3}{8}$ "; maximum size on 2 pound spools is $\frac{1}{2}$ ". All sizes in excess of $\frac{1}{2}$ " are furnished on 5 pound spools.

Approximate weights per hundred feet of a few standard round sizes are listed below:

GARLOCK 17			
Size	Weight per Hundred Feet	Size	Weight per Hundred Feet
$\frac{1}{8}$ "	1875 lbs.	$\frac{1}{4}$ "	14 375 lbs.
$\frac{1}{4}$ "	5 lbs.	$\frac{3}{8}$ "	21 5 lbs.
$\frac{3}{8}$ "	2 375 lbs.	$\frac{1}{2}$ "	29 125 lbs.
$\frac{1}{2}$ "	5 125 lbs.	1"	37 625 lbs.
$\frac{5}{8}$ "	7 875 lbs.		

THE STANDARD PACKING OF THE WORLD



FURNACE DOOR PACKING

GARLOCK 252

Construction — GARLOCK 252 is an unlubricated packing consisting of a braided core of brass wire inserted, asbestos yarn, with a braided cover of fine copper wire.

Service — Recommended for service as a fur-

nace door packing in steel mills, glass plants, blast furnaces and foundries.

Form — GARLOCK 252 is furnished in all packing sizes from $\frac{1}{4}$ " to $1\frac{1}{2}$ ", advancing by sixteenths. It is furnished in coil lengths or in continuous lengths on reels.

WIRE WOUND COIL PACKING

GARLOCK 114 COIL

GARLOCK 116 RING

Construction — GARLOCK 114 is a high grade asbestos packing produced with a non-vulcanizing rubber core and a cover of braided copper wire.

Service — Recommended for service on all engines that are exposed to the weather. Extensively used in marine service on deck engines.

Form — GARLOCK 114 Coil is regularly furnished oval in cross section, standard sizes $\frac{1}{4}$ " to 1". It is also supplied round or square in cross section, if desired.

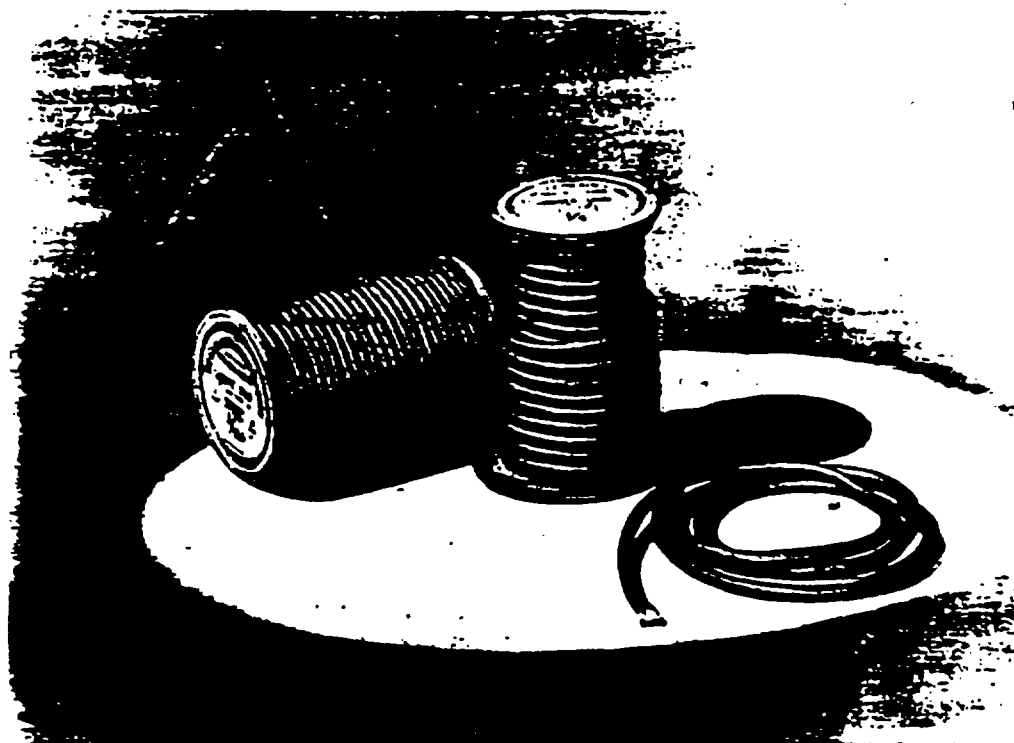
GARLOCK 116 Rings, which are cut from GARLOCK 114 Coil, are furnished in any specified size.

Listed below is footage and approximate weight on some standard sizes:

GARLOCK 114 Coil			
Size	Coils per Box	Feet per Coil	Weight per Box
$\frac{1}{4}$ "	3	40 ft.	10 lbs.
$\frac{3}{8}$ "	3	20 ft.	10 lbs.
$\frac{1}{2}$ "	3	16 ft.	10 lbs.
$\frac{5}{8}$ "	3	13 $\frac{1}{2}$ ft.	10 lbs.
$\frac{3}{4}$ "	3	10 ft.	10 lbs.
$\frac{7}{8}$ "	3	8 $\frac{1}{2}$ ft.	10 lbs.
1"	1	11 $\frac{1}{2}$ ft.	10 lbs.



G A R L O C K



GARLOCK 1700

LOCOMOTIVE CAB COCK PACKING

Construction — GARLOCK 1700 is braided from Canadian long fibre asbestos yarn. It receives an external graphite treatment.

Service — Recommended for service on locomotive cab cocks and on other valve stems handling high temperature and superheated steam and oils. It is also recommended for use on valve stems operating on acid lines.

Form — GARLOCK 1700 is furnished round in

cross section; standard sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by thirty-seconds.

Regularly furnished on 1 pound, 2 pound or 5 pound spools. Maximum size packaged on 1 pound spools is $\frac{3}{8}$ "; maximum size on 2 pound spools, $\frac{1}{2}$ ". Sizes in excess of $\frac{1}{2}$ " are furnished on 5 pound spools.

Approximate weights per hundred feet of a few standard sizes of GARLOCK 1700 are listed below:

GARLOCK 1700			
Size	Weight per Hundred Feet	Size	Weight per Hundred Feet
$\frac{1}{8}$ "	25 lbs.	$\frac{1}{2}$ "	7.625 lbs.
$\frac{1}{4}$ "	56.25 lbs.	$\frac{3}{4}$ "	12 lbs.
$\frac{3}{8}$ "	2.375 lbs.	$1\frac{1}{4}$ "	18.875 lbs.
$\frac{1}{2}$ "	1.75 lbs.		

THE STANDARD PACKING OF THE WORLD



GARLOCK 2000

LOCOMOTIVE THROTTLE PACKING

Construction — GARLOCK 2000 is a set packing composed of rings of GARLOCK 200 High Pressure Asbestos Packing.

Service — Recommended for application to throttle stuffing boxes on locomotives. It is particularly suitable for throttle boxes located above the water line.

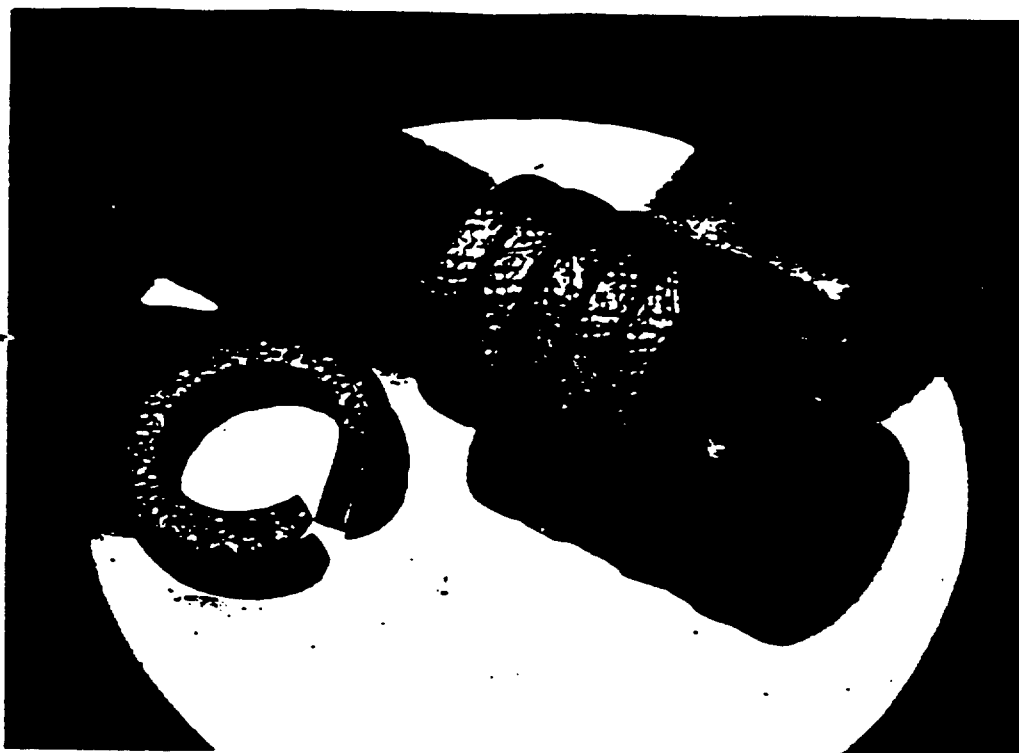
Form — GARLOCK 2000 is furnished in a complete range of sizes for locomotive throttle installations.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 3200

LOCOMOTIVE THROTTLE DUO PACKING

Construction — GARLOCK 3200 is a combination packing consisting of GARLOCK 200 High Pressure Asbestos Packing with a soft metal insertion, duck and rubber ring at the bottom of the set.

Service — Recommended for service in throttle stuffing boxes on locomotives. It is particularly

suitable for throttle boxes located below the water line.

Form — GARLOCK 3200 is furnished in a complete range of sizes for locomotive throttle installations.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.

AMERICAN MULTIPLE THROTTLE PACKING

GARLOCK 9001

GARLOCK 9001 consists of a series of concave, convex shredded metal rings, molded from strands of special metal floss suitable for service against temperatures up to 1500° Fahrenheit. Each set contains a throat or top adapter ring. In most sizes this throat ring is of bronze unless

otherwise specified. Sets of 9001-E and 9001-F, however, are regularly supplied with the throat ring of the same material as the balance of the set.

When ordering, specify Superheater Company blue print or card numbers.

THE STANDARD PACKING OF THE WORLD



GARLOCK 2200

LOCOMOTIVE AIR PUMP PACKING

Construction — GARLOCK 2200 is a set packing composed of rings of GARLOCK High Pressure Asbestos Packing.

Service — Recommended for application to either the air or steam end of Westinghouse and New York Air Pumps.

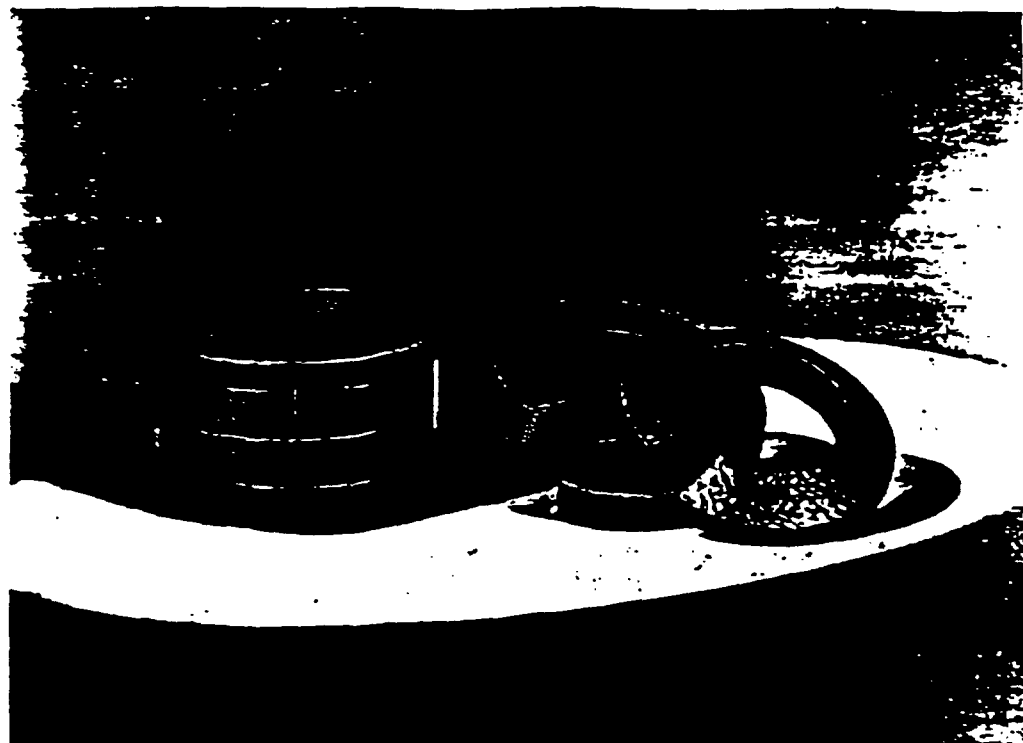
Form — GARLOCK 2200 is furnished in all standard sizes for Westinghouse and New York

Air Pumps. In ordering GARLOCK 2200 for Westinghouse equipment, the size of the pump should be specified; for New York equipment, the number of the pump should be specified.

A package of GARLOCK 2200 contains sufficient packing for one stuffing box only. When ordering for a complete pump installation, it, therefore, is necessary to indicate that a complete set is desired.



G A R L O C K



GARLOCK 2245

LOCOMOTIVE AIR PUMP PACKING

Construction — GARLOCK 2245 is a set packing composed of rings of braided asbestos construction. The inner braiding of these rings consists of brass wire inserted yarn, and the outer braid is woven from pure asbestos yarn. The lubricating and graphite treatment which this material receives results in a flexible packing capable of withstanding high temperatures.

Service — Recommended for service on either the air or steam end of Westinghouse and New York Air Pumps.

Form — GARLOCK 2245 is furnished in all standard sizes for Westinghouse and New York Air Pumps. In ordering GARLOCK 2245 for Westinghouse equipment, the size of the pump should be specified; for New York equipment, the number of the pump should be specified.

A package of GARLOCK 2245 contains sufficient packing for one stuffing box only. When ordering for a complete pump installation, it, therefore, is necessary to indicate that a complete set is desired.

THE STANDARD PACKING OF THE WORLD



GARLOCK 1225

POWER REVERSE GEAR PISTON ROD PACKING

Construction — GARLOCK 1225 is a combination packing consisting of GARLOCK 222 Asbestos Compressor Ring Packing and GARLOCK 235 Asbestos Square Derby Packing put up in sets.

Service — This combination is particularly

designed and recommended for use on the piston rods of locomotive power reverse gears.

Form — GARLOCK 1225 is furnished in any required size to fit rod and stuffing box dimensions.

POWER REVERSE GEAR CYLINDER PACKING

GARLOCK 1200

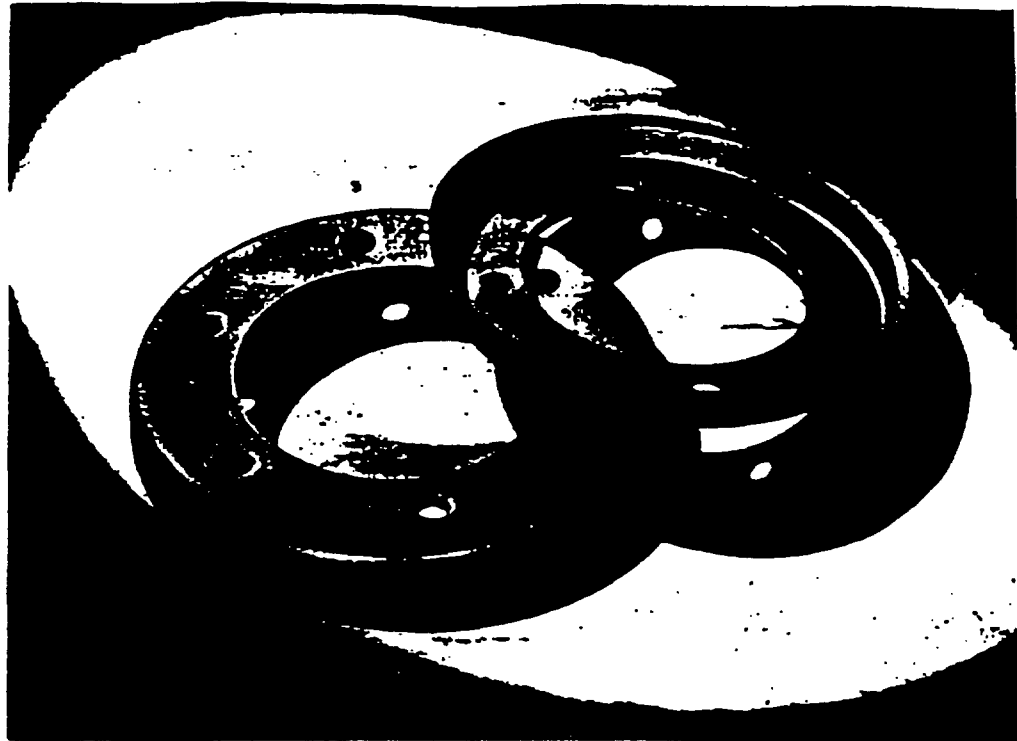
Construction — GARLOCK 1200 is a braided asbestos packing molded rectangular in cross section and lubricated with a heat resisting compound and graphite.

Service — Recommended for the pistons of

locomotive power reverse gears.

Form — GARLOCK 1200 is furnished in ring form, molded to proper sizes to fit reverse gear cylinders. It can be obtained either in single rings, or in sets to the proper depth.

THE STANDARD PACKING OF THE WORLD



GARLOCK 813-A

POWER REVERSE GEAR CUPS

Construction — GARLOCK 813-A Cups are manufactured from GARLOCK asbestos cloth, frictioned with a high grade heat and oil resistant compound. They are molded to the desired size and shape.

Service — Recommended for service on all types of reverse gear pistons.

Form — GARLOCK Power Reverse Gear Cups are furnished in a complete range of sizes to fit all reverse gears, including Ragonnet, Precision, Alco and Lewis.

When ordering, the size of cylinder and make of the reverse gear should be specified.

POWER REVERSE GEAR CYLINDER PACKING

GARLOCK 812

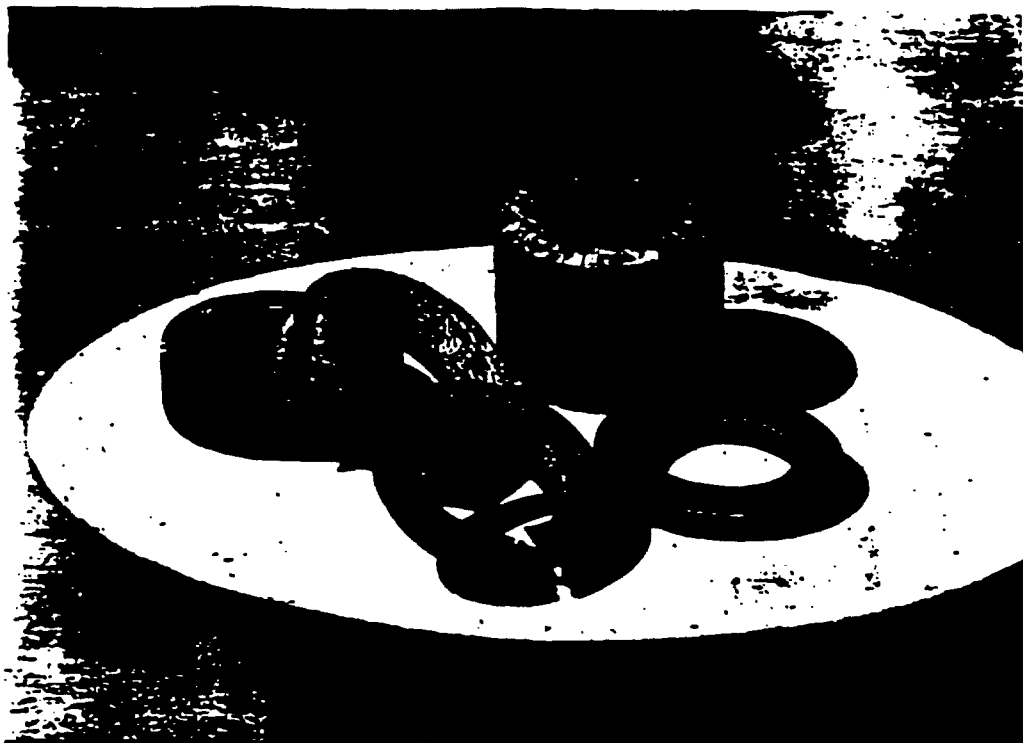
Construction — GARLOCK 812 is a duck and rubber packing constructed with diagonal plies and molded rectangular in cross section. It is lubricated and graphited.

Service — Recommended for the pistons of

locomotive power reverse gears.

Form — GARLOCK 812 is furnished in ring form, molded to proper sizes to fit reverse gear cylinders. It is obtainable either in single rings or in sets to the proper depth.

THE STANDARD PACKING OF THE WORLD



GARLOCK 449-S

POWER REVERSE GEAR PACKING

Construction — GARLOCK 449-S is a combination packing consisting of GARLOCK 333 duck and rubber rings and GARLOCK 550 diagonal cut duck and rubber rings.

Service — Recommended and specially de-

signed for application in the stuffing boxes of Alco power reverse gears.

Form — Supplied in standard sizes to fit Alco power reverse gear stuffing boxes. Packaged in individual boxes, each box containing a complete installation for one stuffing box.



G A R L O C K



GARLOCK 616

BUTTON HOLE TAPE

(Patent Applied For)



Construction — GARLOCK 616 Button Hole Tape is constructed of two parallel courses of folded, GARLOCK wire inserted asbestos cloth joined together by a single ply of bonding fabric. It is treated with a high grade, heat resisting compound.

Service — Particularly recommended for service on front ends of locomotives and on flanged

tanks of large diameters against high temperatures and pressures.

Form — GARLOCK 616 Button Hole Tape is furnished in practically any width and thickness desired. It is obtainable in continuous lengths. When ordering, specify length or amount of tape in addition to the width and thickness dimensions.

TANK HOSE GASKETS

GARLOCK 122

GARLOCK 122 Gaskets, for service on tank hose connections between tender and locomotive, are furnished in a wide range of sizes. They are

highly recommended for this service.

The material used in these gaskets is the same as described on page 91.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



PISTON PACKING
FOR
WORTHINGTON FEED WATER HEATERS

GARLOCK 33 SPECIAL ROCK HARD

Construction — GARLOCK 33 Special Rock Hard is a hydraulic packing constructed of a special type of duck and a tenacious rubber friction.

Service — GARLOCK 33 Special Rock Hard was developed for use on the pistons of Worthington Feed Water Heaters. The methods and materials used in the manufacture of this packing

result in a product having a minimum amount of expansion in service.

Form — GARLOCK 33 Special Rock Hard is regularly furnished approximately square in cross section, in sizes from $\frac{1}{4}$ " to $1\frac{1}{4}$ ".

It is obtainable in ring, coil or spiral form: standard length of coil or spiral is 15 feet.

GARLOCK 108 RINGS

Construction — GARLOCK 108 Rings are very hard, glassy, black rubber rings molded to exact sizes.

Service — GARLOCK 108 Rings are specially recommended for service on pistons of Worthington Feed Water Heaters.

PISTON ROD PACKING
FOR
WORTHINGTON FEED WATER HEATERS

GARLOCK 7091

Construction — GARLOCK 7091 is constructed of a round core of resilient red rubber wrapped with plies of frictioned duck. The packing is formed square in cross section and is furnished with a lubrication and graphite treatment.

Service — Recommended for service on the piston rods of Worthington Feed Water Heaters.

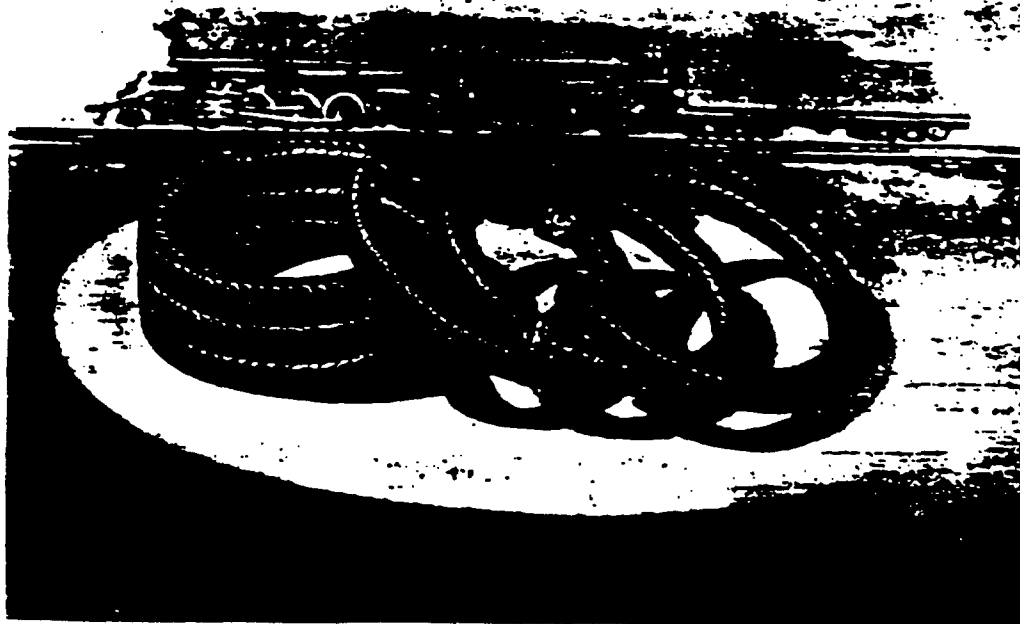
Form — GARLOCK 7091 is obtainable in three

forms — Coil, Spiral and Ring. GARLOCK 7091 Rings are cut and formed in any specified size to fit rod and stuffing box dimensions. GARLOCK 7091 Coil and 7091 Spiral are furnished in standard $12\frac{1}{2}$ foot lengths and are manufactured in all packing sizes necessary for application to the stuffing boxes of Worthington Feed Water Heaters.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 1005

LOCOMOTIVE EXPANSION JOINT PACKING

Construction — GARLOCK Locomotive Expansion Joint Packing is a wire inserted asbestos packing, braided square like flax, with a very hard braid. It is furnished lubricated and graphited or with an external graphite treatment only.

Service — This material was specially developed for use on the slip joints of mallet locomotives. It is also recommended for old type ball joints, and for application to any expansion joint operating against steam or oil.

Form — Expansion Joint Packing is furnished either in coil or ring form, designated as follows:

GARLOCK 1005 Ring — Unlubricated, but externally graphited.

GARLOCK 1015 Coil — Unlubricated, but externally graphited.

GARLOCK 1005-A Ring — Lubricated and graphited.

GARLOCK 1015-A Coil — Lubricated and graphited.

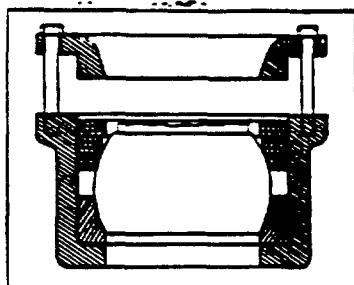
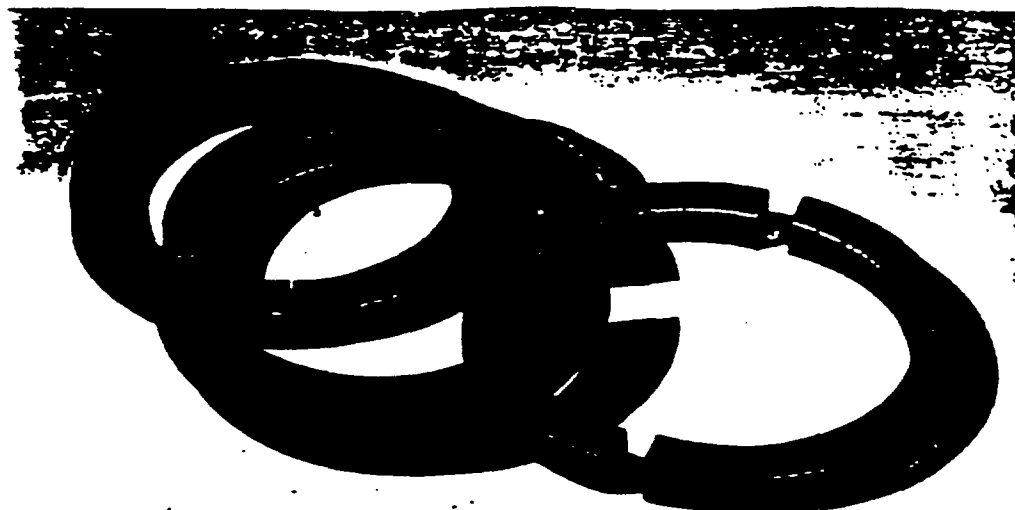
GARLOCK 1015 Coil and GARLOCK 1015-A Coil are furnished in sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by sixteenths. Regularly packaged in boxes of approximately 10 pounds net weight. Can also be furnished in continuous lengths on reels.

GARLOCK 1005 Rings and GARLOCK 1005-A Rings are furnished in any specified sizes.

THE STANDARD PACKING OF THE WORLD

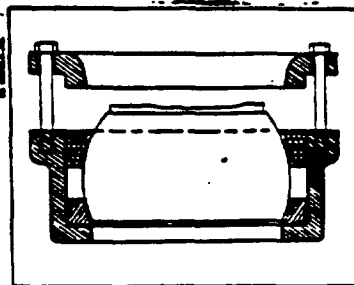


G A R L O C K



GARLOCK 1010 RINGS

LOCOMOTIVE BALL JOINT PACKING



Construction — GARLOCK Locomotive Ball Joint Packing is a special packing made of asbestos cloth folded and formed square in cross section. It receives an external treatment of lubrication and graphite.

Service — This material was specially designed for service on the new type ball joints of mallet locomotives, as indicated in the sketches above. For that service it is furnished in molded ring form to the proper diameters and thickness. It is also recommended for service on the ball joints of booster engines; for piston rings in

steam hammers; and for other general steam service.

Form — GARLOCK Locomotive Ball Joint Packing is furnished in two forms — GARLOCK 1010 Ring and GARLOCK 1020 Coil.

GARLOCK 1010 Rings are cut from GARLOCK 1020 Coil. For ball joint service these rings are furnished molded to exact sizes.

GARLOCK 1020 Coil is manufactured in all packing sizes above $\frac{1}{2}$ " and in any desired length. The coil form of this material is not recommended for ball joint service.

THE STANDARD PACKING OF THE WORLD



LOCOMOTIVE EXPANSION JOINT PACKING

GARLOCK 5250

Construction — GARLOCK 5250 is constructed of brass wire inserted asbestos yarn braided very hard in a square cross section by the lamination or braid over braid method. It receives an oil lubrication treatment and a thorough graphiting between each braid.

Service — Recommended for locomotive expansion joint service.

Form — GARLOCK 5250 is obtainable in two forms — Coil and Ring.

GARLOCK 5250 Rings are cut from GARLOCK 5250 Coil in any specified size.

GARLOCK 5250 Coil is manufactured in all packing sizes from $\frac{1}{4}$ " to $1\frac{1}{4}$ " advancing by sixteenths.

GARLOCK 5270

Construction — GARLOCK 5270 is manufactured from brass wire inserted asbestos yarn and is braided very hard in a square cross section by the same method as used in producing flax packing. It receives a lubrication and a very heavy graphite treatment which is impregnated into every strand of the material.

Service — Recommended for locomotive expansion joint service.

Form — GARLOCK 5270 is obtainable in two forms — Coil and Ring.

GARLOCK 5270 Rings are cut from GARLOCK 5270 Coil in any specified size.

GARLOCK 5270 Coil is manufactured in all packing sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ " advancing by sixteenths.



GARLOCK 777 SPIRAL (Steam)
GARLOCK 778 SPIRAL (Ammonia)

LOW PRESSURE PACKING

GARLOCK 339 RINGS (Odd Shape)

GARLOCK 333 RINGS (Steam)
GARLOCK 334 RINGS (Ammonia)

Construction — GARLOCK Extra Spiral and Ring Packing is constructed of plies of closely woven duck, frictioned with a high grade rubber compound, and finished with thick rubber covers. Although regularly lubricated and graphited, it is also furnished unlubricated and ungraphited when so specified.

Service — GARLOCK 777 Spiral, GARLOCK 333 Ring and GARLOCK 339 Ring are recommended for hot or cold water service; for steam service on piston and valve rods of engines, and for steam piston rods of pumps at pressures of 100 pounds per square inch, or less. GARLOCK 778 Spiral and GARLOCK 334 Ring are specially treated for ammonia service.

Form — This packing is regularly furnished either in spiral form — GARLOCK 777 and GARLOCK 778 — or in ring form — GARLOCK 333 and GARLOCK 334. Odd shape rings, for application on rods with flat sides, are styled GARLOCK 339.

Ring forms of this packing are furnished to fit any specified rod and stuffing box size. Spiral forms of this packing are furnished in standard 12½ foot lengths and in standard thicknesses from ¼" to 1", advancing by eighths.

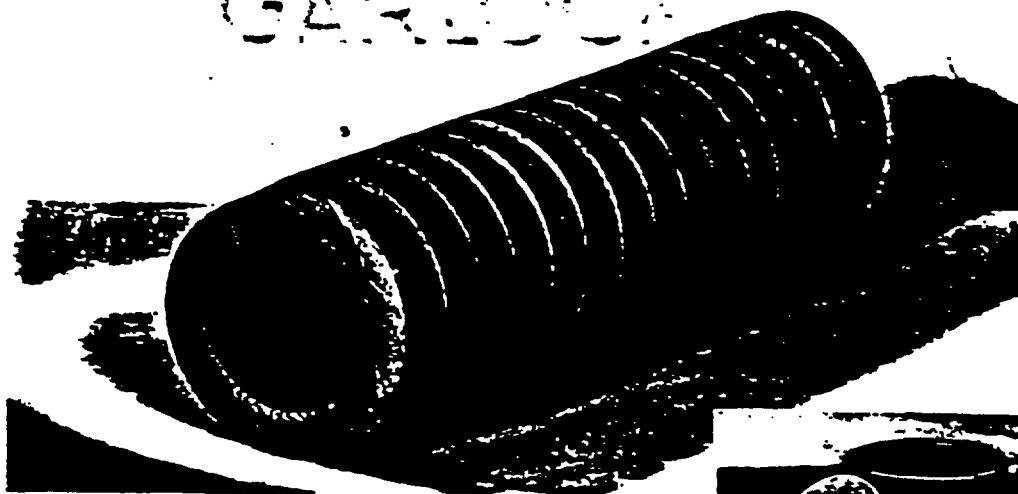
Footage and approximate weights per box of both dry and lubricated material are shown below:

GARLOCK 777 Spiral — GARLOCK 778 Spiral					
Lubricated and Graphited			Unlubricated and Ungraphited		
Size	Feet per Box	Weight per Box	Size	Feet per Box	Weight per Box
1/8"	12½ ft.	1½ lbs.	1/8"	12½ ft.	1½ lbs.
1/4"	12½ ft.	1½ lbs.	1/4"	12½ ft.	1½ lbs.
3/8"	12½ ft.	2½ lbs.	3/8"	12½ ft.	2½ lbs.
1/2"	12½ ft.	3½ lbs.	1/2"	12½ ft.	3½ lbs.
5/8"	12½ ft.	4½ lbs.	5/8"	12½ ft.	4½ lbs.
3/4"	12½ ft.	6½ lbs.	3/4"	12½ ft.	6½ lbs.
1"	12½ ft.	8½ lbs.	1"	12½ ft.	8½ lbs.

THE STANDARD PACKING OF THE WORLD

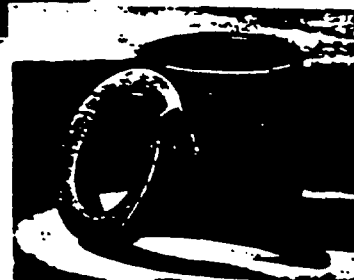
GARLOCK

GARLOCK



GARLOCK 711 SPIRAL

"Z" SPIRAL PACKING



GARLOCK 712 RINGS

Construction — GARLOCK "Z" Spiral Packing is constructed of diagonal plies of closely woven duck, frictioned with a specially compounded rubber.

Service — The diagonal ply construction of GARLOCK "Z" Spiral Packing results in a material of an unusually expansive nature. It is recommended for service against medium pressure steam, hot water and ammonia, particularly on equipment having rods or plungers out of line or subject to a lateral motion.

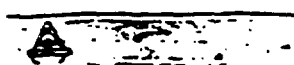
Form — This material is supplied in two forms, GARLOCK 711 Spiral and GARLOCK 712 Ring. GARLOCK 712 Rings are cut from GARLOCK 711 Spiral and are furnished to fit any rod and stuffing box dimensions.

GARLOCK 711 Spiral is furnished in standard 12½ foot lengths and in all packing sizes from ¼" to 1½", advancing by sixteenths.

Listed below is footage and approximate weight on a few standard sizes:

GARLOCK 711 Spiral					
Size	Feet per Box	Weight per Box	Size	Feet per Box	Weight per Box
¼"	12½ ft.	¾ lbs.	¾"	12½ ft.	4½ lbs.
½"	12½ ft.	1½ lbs.	1"	12½ ft.	6½ lbs.
¾"	12½ ft.	2½ lbs.	1½"	12½ ft.	8 lbs.
1"	12½ ft.	3½ lbs.			

THE STANDARD PACKING OF THE WORLD



METAL INSERTION EXTRA RING PACKING

GARLOCK 313 RING (Steam)

GARLOCK 314 RING (Ammonia)

GARLOCK 316 RING—SECTIONAL CUT (Steam)

GARLOCK 317 RING—SECTIONAL CUT (Ammonia)

Construction — GARLOCK Metal Insertion Extra Ring Packing is constructed of plies of duck and rubber with a soft metal insertion, and finished with thick rubber covers.

Service — GARLOCK 313 and GARLOCK 316 Rings are recommended for service against low pressure steam, hot or cold water.

GARLOCK 314 and GARLOCK 317 Rings are recommended for service against ammonia.

Form — GARLOCK Metal Insertion Extra Ring Packing is supplied in ring form only, to any specified rod and stuffing box sizes. Standard thicknesses are approximately $\frac{3}{8}$ " and $\frac{1}{2}$ ".

As indicated above, either plain or sectional cut rings, with regular lubrication for steam service, and with special treatment for ammonia service, are manufactured.

METAL WEDGE RING PACKING

GARLOCK 216 INNER WEDGE

GARLOCK 217 OUTER WEDGE

Construction — GARLOCK Metal Wedge Ring Packing is manufactured from high grade duck and rubber slab stock with a triangular, soft metal wedge insert.

Service — Recommended for hydraulic service, particularly in combination with other hydraulic packings.

Form — Furnished in practically any diameters required, and in thicknesses approximating $\frac{1}{2}$ ", $\frac{3}{4}$ ", $\frac{7}{8}$ ", $1\frac{1}{4}$ " and 1". Minimum packing space, or width of packing, is $\frac{3}{4}$ ".

GARLOCK Metal Wedge Packing is manufactured in two types, designated as follows:

GARLOCK 216 Inner Wedge has the metal wedge inserted on the inner wearing surface of the ring. This type is designed for service on outside packed plungers.

GARLOCK 217 Outer Wedge has the metal wedge on the outer wearing surface of the ring. This type is designed for service on inside packed plungers.



G A R L O C K



RUBBER INSERTION EXTRA RING PACKING

GARLOCK 285 RING

GARLOCK 286 SECTIONAL RING

Construction — Rubber Insertion Extra Ring Packing consists of plies of duck and rubber with one or more central cushions of resilient rubber. Regularly furnished lubricated and graphited.

Service — Recommended for use as an ammonia rod packing.

Form — GARLOCK Rubber Insertion Extra Ring Packing is produced in standard thicknesses of approximately $\frac{3}{4}$ ", $\frac{1}{2}$ ", and $\frac{3}{8}$ ". It is supplied in the two types indicated above — GARLOCK 285 Rings and GARLOCK 286 Sectional Rings.

GARLOCK 286 Sectional Rings are usually combined alternately in sets with GARLOCK 285.

CUSHION CENTER HYDRAULIC PACKING

GARLOCK 273 COIL

GARLOCK 274 SPIRAL

GARLOCK 275 RING

Construction — GARLOCK Cushion Center Hydraulic Packing consists of a central soft rubber cushion placed between plies of duck and rubber laid parallel with the rod. Regularly supplied lubricated and graphited.

Service — Recommended for service on elevator plungers and on vertical hydraulic plungers having a lateral motion.

Form — GARLOCK Cushion Center Hydraulic Packing is furnished approximately square in cross section and is obtainable in three forms —

GARLOCK 273 Coil, GARLOCK 274 Spiral and GARLOCK 275 Ring.

GARLOCK 275 Rings are furnished cut to any specified size to fit rod and stuffing box dimensions.

GARLOCK 273 Coil and GARLOCK 274 Spiral are furnished in standard $12\frac{1}{2}$ foot lengths and are manufactured in sizes from $\frac{1}{4}$ " to 1", advancing by thirty-seconds.

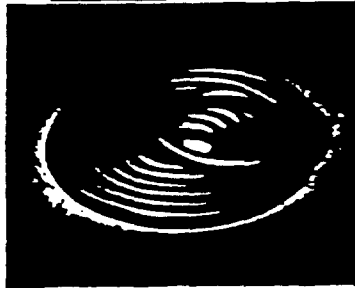
Approximate footage and approximate weight per box of a few standard sizes are shown below:

GARLOCK 273 Coil			GARLOCK 274 Spiral		
Size	Feet per Box	Weight per Box	Size	Feet per Box	Weight per Box
$\frac{1}{4}$ "	50 ft.	13½ lbs.	$\frac{1}{4}$ "	12½ ft.	17½ lbs.
$\frac{3}{8}$ "	50 ft.	6¾ lbs.	$\frac{3}{8}$ "	12½ ft.	18½ lbs.
$\frac{1}{2}$ "	50 ft.	11 lbs.	$\frac{1}{2}$ "	12½ ft.	22½ lbs.
$\frac{5}{8}$ "	37½ ft.	11½ lbs.	$\frac{5}{8}$ "	12½ ft.	31½ lbs.
$\frac{3}{4}$ "	25 ft.	11½ lbs.	$\frac{3}{4}$ "	12½ ft.	5¾ lbs.
$\frac{7}{8}$ "	25 ft.	15¾ lbs.	$\frac{7}{8}$ "	12½ ft.	7½ lbs.
1"	12½ ft.	10½ lbs.	1"	12½ ft.	10½ lbs.

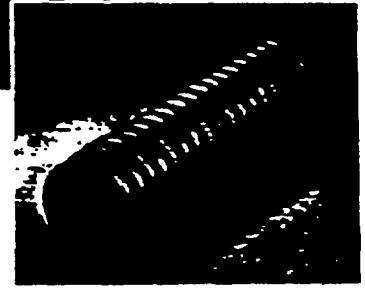
THE STANDARD PACKING OF THE WORLD



GARLOCK 255 RINGS



GARLOCK 253 COIL



GARLOCK 254 SPIRAL

IDEAL PACKING

Construction — GARLOCK Ideal Packing consists of a round core of resilient red rubber wrapped with plies of frictioned duck. It is regularly supplied lubricated and graphited.

Service — Recommended for service on high speed engine pistons and valve stems. It is also an excellent material for use on oil or hot water pumps.

Form — GARLOCK Ideal Packing is obtainable in the three forms illustrated above — GARLOCK 253 Coil, GARLOCK 254 Spiral and GARLOCK 255 Ring.

GARLOCK 255 Rings are furnished cut and formed in any specified size to fit rod and stuffing box dimensions.

GARLOCK 253 Coil and GARLOCK 254 Spiral are furnished in standard 12½ foot lengths and are manufactured in all packing sizes from ¼" to 1½", advancing by sixteenths.

The table below indicates the number of feet per box and approximate weight per box of a few standard sizes:

GARLOCK 253 Coil			GARLOCK 254 Spiral		
Size	Feet per Box	Weight per Box	Size	Feet per Box	Weight per Box
¼"	75 ft.	3¼ lbs.	¼"	12½ ft.	1¼ lbs.
⅜"	50 ft.	4¼ lbs.	⅜"	12½ ft.	1¾ lbs.
½"	50 ft.	8 lbs.	½"	12½ ft.	2 lbs.
⅝"	37½ ft.	8¼ lbs.	⅝"	12½ ft.	2¼ lbs.
¾"	25 ft.	8½ lbs.	¾"	12½ ft.	4¼ lbs.
7⁄8"	12½ ft.	6 lbs.	7⁄8"	12½ ft.	6 lbs.
1"	12½ ft.	8¼ lbs.	1"	12½ ft.	8¼ lbs.

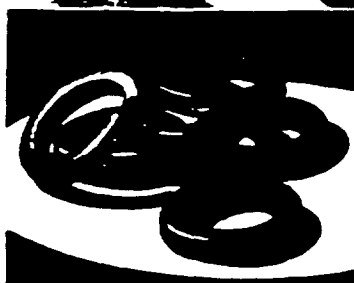
THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 366 COIL



GARLOCK 368 RINGS

"O" CENTER HYDRAULIC PACKING



GARLOCK 367 SPIRAL

Construction — GARLOCK "O" Center Hydraulic Packing is constructed of a high grade woven duck, frictioned with a tenacious rubber compound and formed with a hollow center. It is regularly treated with a high grade lubricant and a surface graphiting.

Service — Recommended for use on steam hammer pistons, elevator plungers, ammonia compressors and plungers of outside packed pumps, in hot or cold water service.

Form — GARLOCK "O" Center Hydraulic Pack-

ing is obtainable in the three forms illustrated above — GARLOCK 366 Coil, GARLOCK 367 Spiral and GARLOCK 368 Ring.

GARLOCK 368 Rings are furnished cut and formed in any specified size to fit rod and stuffing box dimensions.

GARLOCK 366 Coil and GARLOCK 367 Spiral are furnished in standard $12\frac{1}{2}$ foot lengths and are manufactured in all packing sizes from $\frac{1}{4}$ " to $1\frac{1}{2}$ ", advancing by sixteenths.

Footage and approximate weight per box of a few standard sizes are indicated below:

GARLOCK 366 Coil			GARLOCK 367 Spiral		
Size	Feet per Box	Weight per Box	Size	Feet per Box	Weight per Box
$\frac{1}{4}$ "	75 ft.	$3\frac{3}{4}$ lbs.	$\frac{1}{4}$ "	$12\frac{1}{2}$ ft.	$\frac{3}{4}$ lbs.
$\frac{3}{8}$ "	50 ft.	$4\frac{1}{2}$ lbs.	$\frac{3}{8}$ "	$12\frac{1}{2}$ ft.	$1\frac{1}{4}$ lbs.
$\frac{1}{2}$ "	50 ft.	$7\frac{1}{2}$ lbs.	$\frac{1}{2}$ "	$12\frac{1}{2}$ ft.	$1\frac{3}{4}$ lbs.
$\frac{5}{8}$ "	$37\frac{1}{2}$ ft.	$9\frac{3}{4}$ lbs.	$\frac{5}{8}$ "	$12\frac{1}{2}$ ft.	$3\frac{1}{4}$ lbs.
$\frac{3}{4}$ "	25 ft.	$8\frac{1}{4}$ lbs.	$\frac{3}{4}$ "	$12\frac{1}{2}$ ft.	$4\frac{1}{4}$ lbs.
$\frac{7}{8}$ "	$12\frac{1}{2}$ ft.	$6\frac{3}{4}$ lbs.	$\frac{7}{8}$ "	$12\frac{1}{2}$ ft.	$6\frac{3}{4}$ lbs.
1"	$12\frac{1}{2}$ ft.	$8\frac{1}{2}$ lbs.	1"	$12\frac{1}{2}$ ft.	$8\frac{1}{2}$ lbs.

THE STANDARD PACKING OF THE WORLD

RUBBER CUSHION ELEVATOR PACKING

GARLOCK 56 COIL

GARLOCK 54 RING

Construction — GARLOCK 56 is manufactured of plies of special duck cemented together with a high grade friction and combined with a rubber back.

Service — Particularly designed for service on hydraulic conditions of all kinds.

Form — Rubber Cushion Elevator Packing is approximately square in cross section; standard sizes $\frac{3}{8}$ " to 2", advancing by thirty-seconds. It

is obtainable in two forms: GARLOCK 56 Coil and GARLOCK 54 Ring.

GARLOCK 56 Coil is furnished in standard lengths of $14\frac{1}{2}$ feet.

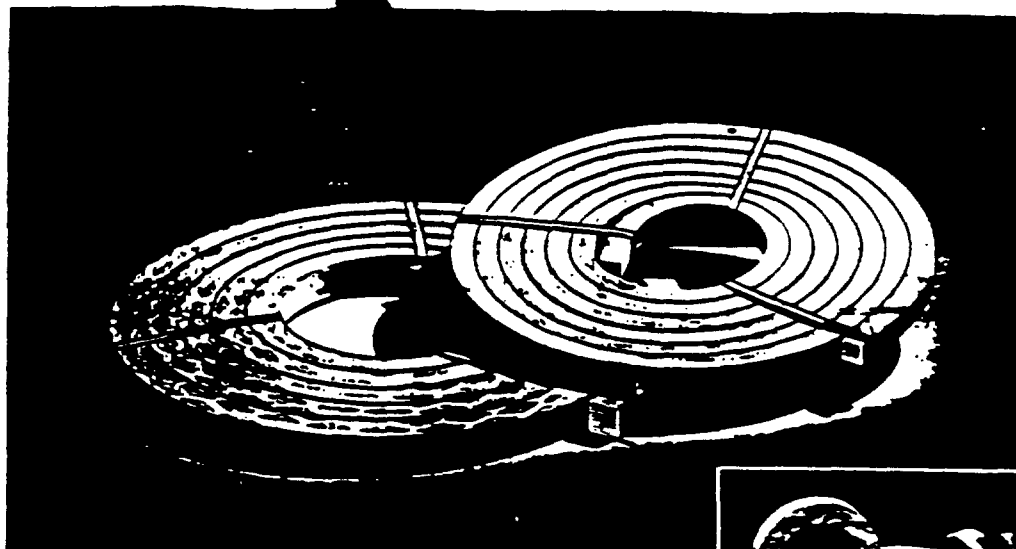
GARLOCK 54 Rings, which are cut from GARLOCK 56 Coil, are furnished in any specified size.

Listed below are approximate weights of GARLOCK 56 in some stock sizes:

GARLOCK 56 Coil					
Size	Coils per Box	Weight per Box	Size	Coils per Box	Weight per Box
$\frac{3}{8}$ "	4	8 lbs.	$\frac{1}{4}$ "	2	10 $\frac{3}{4}$ lbs.
$\frac{1}{2}$ "	4	10 $\frac{3}{4}$ lbs.	$\frac{3}{8}$ "	1	8 $\frac{1}{4}$ lbs.
$\frac{5}{8}$ "	2	8 $\frac{1}{4}$ lbs.	1"	1	10 lbs.



G A R L O C K



GARLOCK 262 COIL

SPECIAL HYDRAULIC PACKING



GARLOCK 261 RINGS

Construction — GARLOCK Special Hydraulic Packing is manufactured from a very fine cotton fabric, laid up with a high grade, white friction.

Service — Recommended for service on inside packed plungers of pumps handling either hot or cold water. It is also satisfactory for service against hot or cold oils.

Form — GARLOCK Special Hydraulic Packing is regularly furnished in two forms — GARLOCK 262 Coil and GARLOCK 261 Ring. Solid rings are styled GARLOCK 260. Both ring and coil forms are obtainable with either regular or rock hard cure.

GARLOCK 261 Rings are furnished cut and

formed in any specified size. They are regularly furnished with a step joint as illustrated above. Can also be furnished with a butt or beveled joint.

GARLOCK 260 Rings are furnished solid, and in any outside diameter up to 21". Can be furnished in thicknesses of $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ " and $\frac{3}{4}$ " only.

GARLOCK 262 Coil is furnished in standard 15 foot lengths, and is manufactured in sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by thirty-seconds.

Number of coils and approximate weight per box of a few standard sizes are indicated below:

GARLOCK 262 Coil					
Size	Coils per Box	Weight per Box	Size	Coils per Box	Weight per Box
$\frac{1}{4}$ "	4	21 $\frac{1}{2}$ lbs.	$\frac{1}{4}$ "	2	12 $\frac{1}{2}$ lbs.
$\frac{3}{8}$ "	3	14 $\frac{1}{2}$ lbs.	$\frac{3}{8}$ "	1	8 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	2	11 $\frac{1}{2}$ lbs.	$\frac{1}{2}$ "	1	11 lbs.
$\frac{3}{4}$ "	2	11 $\frac{1}{2}$ lbs.			

THE STANDARD PACKING OF THE WORLD



REGULAR HYDRAULIC COIL PACKING

GARLOCK 33 COIL

Construction — GARLOCK 33 Coil is a good grade hydraulic packing of duck and rubber construction.

Service — GARLOCK 33 Coil is intended particularly for use on pistons of inside packed pumps handling hot or cold water.

Form — GARLOCK 33 Coil is regularly furnished approximately square in cross section, in sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ "; standard length of coil is 15 feet.

It is obtainable with either regular or rock hard cure.

BLACK FRICTION HYDRAULIC COIL PACKING

GARLOCK 38 COIL

Construction — GARLOCK 38 Coil is a high grade hydraulic packing, made up of plies of good quality duck and a black rubber friction.

Service — GARLOCK 38 Coil is recommended for service against cold water on the pistons of inside packed pumps.

Form — GARLOCK 38 Coil is regularly fur-

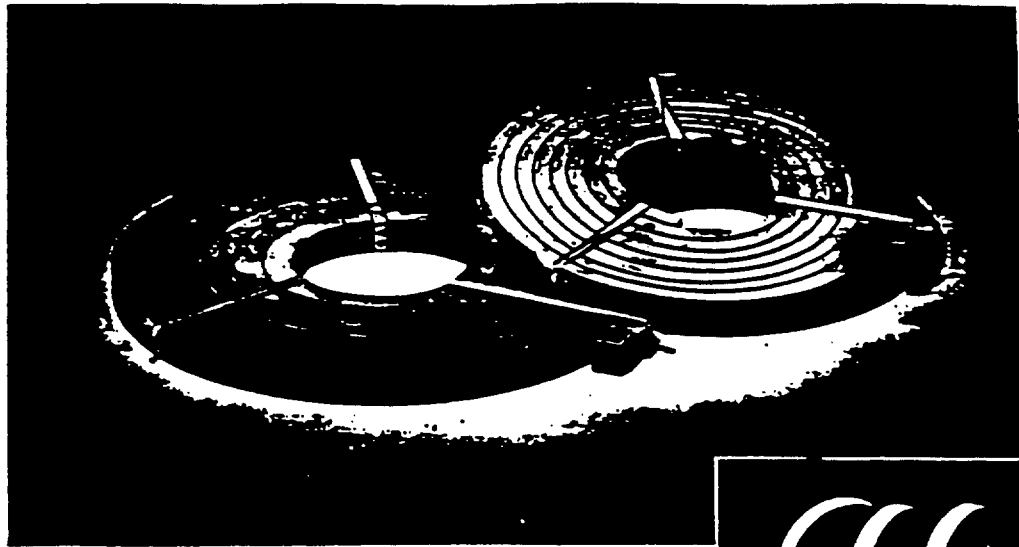
nished approximately square in cross section, in sizes $\frac{1}{8}$ " to $1\frac{1}{4}$ "; standard length of coil is 15 feet. It is obtainable with either regular or rock hard cure.

In the following table, the number of coils and approximate weight per box of a few standard sizes are shown:

GARLOCK 38 Coil					
Size	Coils per Box	Weight per Box	Size	Coils per Box	Weight per Box
$\frac{1}{8}$ "	4	2 lbs.	$\frac{3}{8}$ "	2	10 $\frac{1}{2}$ lbs.
$\frac{1}{4}$ "	3	4 $\frac{1}{2}$ lbs.	$\frac{1}{2}$ "	1	6 $\frac{1}{2}$ lbs.
$\frac{3}{8}$ "	2	4 $\frac{1}{2}$ lbs.	$\frac{3}{4}$ "	1	10 $\frac{1}{4}$ lbs.
$\frac{1}{2}$ "	1	7 $\frac{1}{2}$ lbs.			

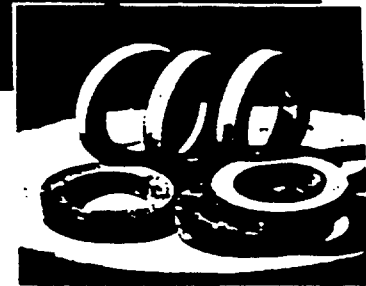


GARLOCK



GARLOCK 94 COIL

SQUARE GRAY RUBBER PACKING



GARLOCK 95 RINGS

Construction — GARLOCK Square Gray Rubber Packing is a medium soft gray rubber stock containing a high percentage of rubber. Outstanding characteristics are its toughness and lasting resiliency, either in service or in stock.

Service — GARLOCK 94 Coil will give excellent service as a packing wherever a medium soft, square rubber strip is required. It is widely used in the marine trade as a port hole rubber. In ring form, it is particularly recommended as a wiper ring in sets of ammonia packing.

Form — GARLOCK 94 Coil packing is regularly

supplied square in sizes $\frac{1}{4}$ " to $1\frac{1}{4}$ ". Can also be furnished in round, rectangular or irregular cross sections. Standard length of coils is $12\frac{1}{2}$ feet; can be furnished in continuous lengths if desired.

GARLOCK 95 Ring can be supplied in practically any size desired. Is regularly furnished solid but will be cut open when so specified.

The table below indicates the number of $12\frac{1}{2}$ foot coils and the approximate weight per box of a few standard sizes:

GARLOCK 94 Coil					
Size	Coils per Box	Weight per Box	Size	Coils per Box	Weight per Box
$\frac{1}{4}$ "	6	$4\frac{1}{2}$ lbs.	$\frac{3}{4}$ "	2	$11\frac{1}{2}$ lbs.
$\frac{3}{8}$ "	4	6 lbs.	$1\frac{1}{4}$ "	1	$8\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	3	$7\frac{1}{2}$ lbs.			
$\frac{3}{4}$ "	2	$8\frac{1}{2}$ lbs.			

THE STANDARD PACKING OF THE WORLD

SPECIAL CYLINDER PACKING

GARLOCK 45 COIL

GARLOCK 65 RING

Construction — GARLOCK 45 is a tubular material manufactured from a high grade, soft gray rubber compound. With each box of GARLOCK 45, connecting leads and friction tape for use in forming rings or gaskets are furnished.

Service — GARLOCK 45 is designed for use in combination with other of our hydraulic packings, or for gasket service.

Form — GARLOCK 45 Coil is regularly fur-

nished in 12½ foot lengths; it can also be supplied in continuous lengths on reels. Standard sizes ¼" to 1", advancing by sixteenths. GARLOCK 65 Rings, which are formed from GARLOCK 45 Coil, are furnished in any specified size.

Listed below is approximate weight information applying to standard boxes of GARLOCK 45 in the stock sizes:

Size	Coils per Box	Connections per Box	Weight per Box
¾"	4	30	13½ lbs.
½"	3	20	6½ lbs.
¼"	2	15	6½ lbs.
⅛"	2	12	6½ lbs.

GARLOCK GAUGE GLASS WASHERS

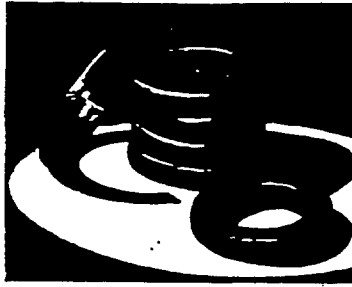
GARLOCK Gauge Glass Washers are manufactured from a high grade rubber stock specially compounded to obtain long life and lasting resiliency.

The design of these washers enables easy application. They also reduce breakage of the glasses

and keep the connections from sputtering and leaking.

GARLOCK Gauge Glass Washers are furnished in standard sizes for ½", ⅜", ¼" and 1" gauge glasses.

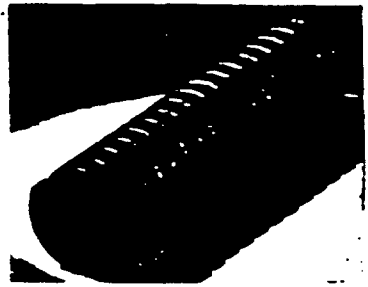
GARLOCK



GARLOCK 99 RINGS (Regular)
GARLOCK 99-S RINGS (Soft)
GARLOCK 99-VS RINGS (Very Soft)

GARLOCK 90 COIL (Regular)
GARLOCK 90-S COIL (Soft)
GARLOCK 90-VS COIL (Very Soft)

WATERPROOF HYDRAULIC FLAX PACKING



GARLOCK 92 SPIRAL (Regular)
GARLOCK 92-S SPIRAL (Soft)
GARLOCK 92-VS SPIRAL (Very Soft)

Construction — GARLOCK Waterproof Hydraulic Flax Packing is manufactured from the longest fibre, imported roving, sorted and graded by flax experts. It is free from tow, coarse or short fibres. Extreme care in braiding produces an even and uniform material. The packing is thoroughly impregnated with a special graphite waterproof lubricant.

Service — This material is recommended for use on heavy hydraulic duty such as rams, accumulators, hydraulic pumps, elevator plungers or outside packed pumps handling cold water or cold oil.

Form — GARLOCK Waterproof Hydraulic Flax Packing is regularly braided square and is produced in three densities, designated—Regular,

Soft and Very Soft. It is furnished in coil, spiral or ring form.

Coil Form is furnished in sizes $\frac{1}{4}$ " to 3" and is boxed in the manner indicated in the table below. May also be produced in continuous length on reels.

Spiral Form is furnished in sizes $\frac{1}{4}$ " to 3". It is packaged one spiral length per box.

Ring Form — Rings of GARLOCK Waterproof Hydraulic Packing are furnished cut and formed in any specified size to fit rod and stuffing box dimensions.

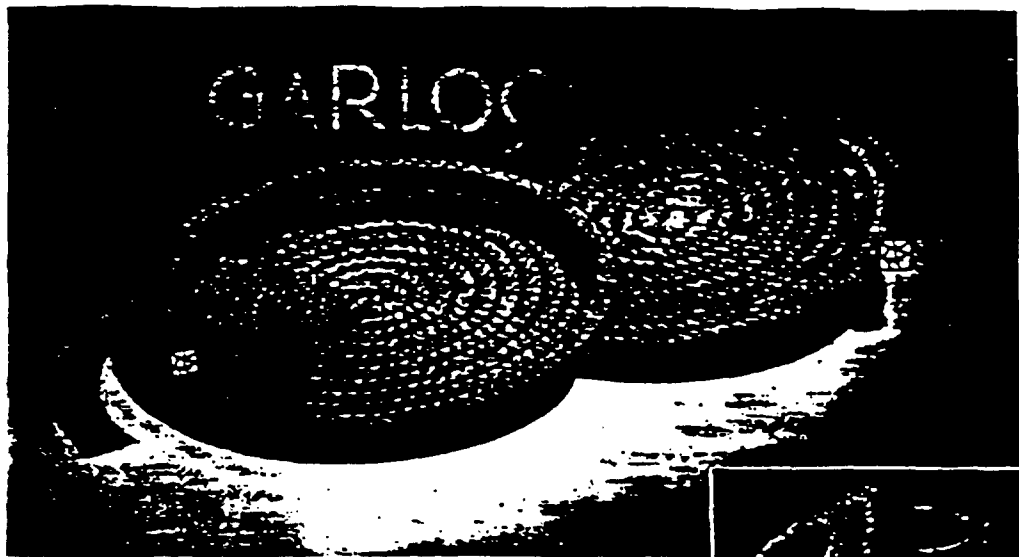
Listed below are approximate footage and weights on some standard sizes of GARLOCK 90 Coil.

GARLOCK 90 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	4	164 ft.	6 lbs.
$\frac{3}{8}$ "	4	120 ft.	8 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	4	88 ft.	11 $\frac{1}{2}$ lbs.
$\frac{3}{4}$ "	1	34 ft.	7 lbs.
$\frac{1}{2}$ "	1	26 ft.	8 lbs.
$\frac{3}{4}$ "	1	22 ft.	9 lbs.
1"	1	19 ft.	9 $\frac{1}{2}$ lbs.

THE STANDARD PACKING OF THE WORLD

100% - R. 1.125 - 1.125 - 1.125

100% - R. 1.550 - 1.550 - 1.550



GARLOCK 25 COIL (*Hard*)
GARLOCK 26 COIL (*Regular*)

GARLOCK 27 COIL (*Very Soft*)
GARLOCK 36 COIL (*Graphited*)



GOLD BRAND SQUARE FLAX PACKING

Construction — GARLOCK Gold Brand Flax Packing is manufactured from the longest fibre, imported roving, sorted and graded by flax experts. It is free from tow, coarse or short fibres. Extreme care in braiding produces an even and uniform material. Gold Brand Flax is the highest grade flax packing.

Service — Gold Brand Flax Packing will give satisfactory service on heavy hydraulic duty and all cold water installations.

Form — This grade of flax is regularly braided square in sizes $\frac{1}{4}$ " to 3" and is furnished either in coil or ring form. It is obtainable with four different lubrication treatments, as follows:

GARLOCK 25 Coil is treated with a hard grease lubricant which gives a relatively firm density.

GARLOCK 26 Coil is treated with our regular flax lubricant and has a medium density.

GARLOCK 27 Coil has a heavier lubrication treatment resulting in a very soft material.

GARLOCK 36 Coil is treated with our regular flax lubricant and graphited.

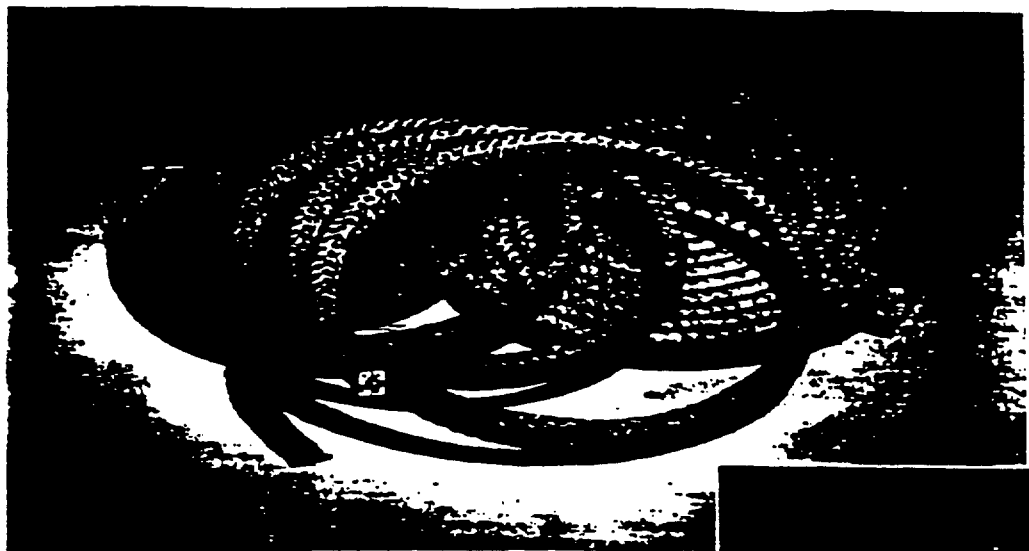
Listed below are footage and approximate weights of some standard sizes:

GARLOCK 25 Coil (<i>Hard</i>)		GARLOCK 26 Coil (<i>Regular</i>)		GARLOCK 27 Coil (<i>Very Soft</i>)	
Size	Coils per Box	Feet per Box	Weight per Box		
$\frac{1}{4}$ "	7	280 ft.	9 $\frac{1}{4}$ lbs.		
$\frac{3}{8}$ "	5	150 ft.	9 $\frac{1}{4}$ lbs.		
$\frac{1}{2}$ "	4	80 ft.	9 $\frac{1}{4}$ lbs.		
$\frac{3}{4}$ "	3	51 ft.	9 $\frac{1}{4}$ lbs.		
$\frac{1}{1}$ "	3	42 ft.	11 $\frac{1}{4}$ lbs.		
$\frac{1}{1}$ "	3	36 ft.	12 $\frac{1}{4}$ lbs.		
$\frac{1}{1}$ "	1	19 ft.	9 $\frac{1}{4}$ lbs.		

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 30 COIL (*Hard*)
GARLOCK 31 COIL (*Regular*)

GARLOCK 32 COIL (*Very Soft*)
GARLOCK 131 COIL (*Graphited*)

SILVER BRAND SQUARE FLAX PACKING



Construction — GARLOCK Silver Brand Flax Packing is manufactured from good grade, long fibre flax roving. Extreme care in braiding produces an even and uniform material.

Service — Silver Brand Flax Packing will give excellent service on hydraulic and cold water conditions.

Form — Silver Brand Flax Packing is regularly braided square in sizes $\frac{1}{8}$ " to 3" and is furnished either in coil or ring form. It is obtainable with four different lubrication treatments as follows:

GARLOCK 30 Coil is treated with a hard grease lubricant which gives a relatively firm density.

GARLOCK 31 Coil is treated with our regular flax lubricant and has a medium density.

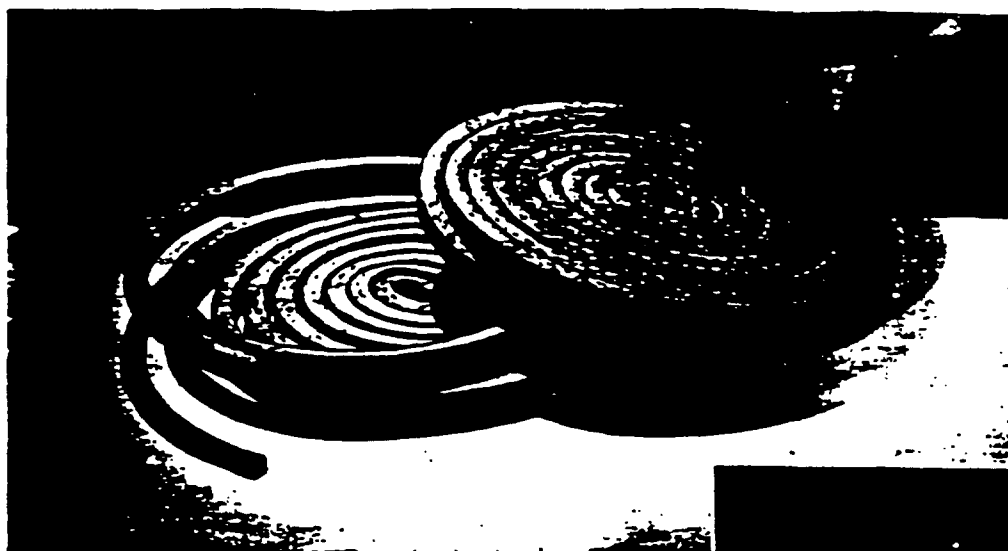
GARLOCK 32 Coil has a heavier lubricant treatment resulting in a very soft material.

GARLOCK 131 Coil is treated with our regular flax lubricant and graphited.

Listed below are footage and approximate weights of some standard sizes:

GARLOCK 30 Coil (<i>Hard</i>)		GARLOCK 31 Coil (<i>Regular</i>)		GARLOCK 32 Coil (<i>Very Soft</i>)	
Size	Coils per Box	Feet per Box	Weight per Box		
$\frac{1}{8}$ "	7	280 ft.	9 $\frac{1}{4}$ lbs.		
$\frac{1}{4}$ "	5	150 ft.	9 $\frac{1}{4}$ lbs.		
$\frac{3}{8}$ "	4	80 ft.	9 $\frac{1}{4}$ lbs.		
$\frac{1}{2}$ "	3	51 ft.	9 $\frac{1}{4}$ lbs.		
$\frac{3}{4}$ "	3	42 ft.	11 $\frac{3}{4}$ lbs.		
1"	3	36 ft.	12 $\frac{1}{4}$ lbs.		
1 $\frac{1}{2}$ "	1	19 ft.	9 $\frac{1}{4}$ lbs.		

THE STANDARD PACKING OF THE WORLD



GARLOCK 50

HIGH PRESSURE FLAX COIL PACKING



Construction — GARLOCK 50 is manufactured from the longest fibre, imported roving, sorted and graded by flax experts. It is free from tow, coarse or short fibres. Extreme care in braiding produces an even and uniform material. GARLOCK 50 is processed with a special waterproof lubricant.

Service — GARLOCK 50 is recommended for heavy hydraulic duty and all cold water in-

stallations. Because it will not discolor liquids or solutions, it is also particularly suitable for dairy and paper mill service.

Form — GARLOCK 50 is regularly braided square in sizes $\frac{1}{8}$ " to 3" and is furnished either in coil or ring form.

Listed below are footage and approximate weights of some standard sizes:

Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{8}$ "	1	164 ft.	6 lbs.
$\frac{3}{16}$ "	4	120 ft.	8 $\frac{1}{2}$ lbs.
$\frac{1}{4}$ "	4	88 ft.	11 $\frac{1}{2}$ lbs.
$\frac{5}{16}$ "	1	34 ft.	7 lbs.
$\frac{3}{8}$ "	1	26 ft.	7 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	1	23 ft.	9 lbs.
1"	1	19 ft.	9 $\frac{1}{2}$ lbs.

THE STANDARD PACKING OF THE WORLD



GARLOCK



OCEAN BRAND BLENDED FLAX PACKING

GARLOCK 42 COIL (*Very Soft*)GARLOCK 43 COIL (*Regular*)GARLOCK 53 COIL (*Graphited*)

Construction — GARLOCK Ocean Brand Blended Flax Packing is manufactured from a medium grade of flax roving. The same care in braiding is used as in the manufacture of our highest grade flax packings insuring even and uniform material.

Service — GARLOCK Ocean Brand Blended Flax Packing is designed for service in ordinary hydraulic conditions.

Form — Ocean Brand Blended Flax Packing is regularly braided square in sizes $\frac{1}{8}$ " to 3" and is furnished either in coil or ring form. It is

obtainable with three different lubrication treatments as follows:

GARLOCK 42 Coil has a heavy treatment of our regular flax lubricant resulting in a very soft material.

GARLOCK 43 Coil is treated with our regular flax lubricant and has a medium density.

GARLOCK 53 Coil is treated with our regular flax lubricant and graphited.

Listed below are footage and approximate weights of some standard sizes:

GARLOCK 42 COIL (<i>Very Soft</i>) GARLOCK 43 COIL (<i>Regular</i>)			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{8}$ "	7	237 ft.	11 lbs.
$\frac{3}{16}$ "	5	150 ft.	11 lbs.
$\frac{1}{4}$ "	4	80 ft.	11 lbs.
$\frac{5}{16}$ "	3	51 ft.	10 lbs.
$\frac{3}{8}$ "	3	42 ft.	12 $\frac{1}{4}$ lbs.
$\frac{1}{2}$ "	3	36 ft.	12 $\frac{1}{4}$ lbs.
1"	1	19 ft.	10 lbs.

THE STANDARD PACKING OF THE WORLD

GARLOCK



GARLOCK 53S COIL (Very Soft)
GARLOCK 52 COIL (Graphited)

LAKE BRAND SQUARE JUTE
PACKING

Listed below are footage and approximate weights of some standard sizes:

Form — Lake Brand Jute Packing is regularly braided square in sizes $\frac{1}{8}$ " to 3" and is furnished either in coil or ring form. It is obtain-

GARLOCK 34 Coil (Hard)		GARLOCK 35 Coil (Regular)		GARLOCK 33S Coil (Very Soft)	
Size	Coils per Box	Feet per Box	Weight per Box		
1/2"	7	287 ft.	10 lbs.		
3/8"	5	150 ft.	10 lbs.		
1/2"	4	80 ft.	10 lbs.		
3/4"	4	68 ft.	10 lbs.		
7/8"	3	42 ft.	11 lbs.		
1"	3	36 ft.	14 lbs.		
1 1/4"	1	27 ft.	14 lbs.		

THE STANDARD PACKING OF THE WORLD



BRAIDED COTTON COIL PACKING

GARLOCK 66

Construction — GARLOCK 66 is manufactured of high grade cotton carefully braided to produce an even and uniform material. It is thoroughly impregnated with lubrication and graphite.

Service — Particularly adapted for service on

centrifugal and reciprocating pumps handling cold oil or water.

Form — This braided cotton packing is approximately square in cross section. It is furnished in sizes $\frac{1}{8}$ " to 3" in coil form, or in cut rings.

RUBBER BACK FLAX PACKING

GARLOCK 83 WATERPROOF HYDRAULIC COIL

GARLOCK 183 WATERPROOF HYDRAULIC RING

GARLOCK 93 UNTREATED COIL

GARLOCK 193 UNTREATED RING

Construction — GARLOCK Rubber Back Packing is a braided flax packing, manufactured from the longest fibre, imported flax roving, to which is vulcanized a good grade rubber cushion.

Service — Particularly recommended for service on cold water rods that are out of line.

Form — GARLOCK Rubber Back Flax Packing is approximately square in cross section; standard sizes $\frac{1}{4}$ " to 3". It is furnished in coil or ring form, lubricated or unlubricated under the following style designations:

GARLOCK 83 Coil is treated with a waterproof

hydraulic compound. Standard length of coil is 14 feet.

GARLOCK 183 Ring is treated with a waterproof hydraulic compound. Can be furnished in any specified sizes.

GARLOCK 93 Coil is untreated. Standard length of coil is 14 feet.

GARLOCK 193 Ring is untreated. Can be furnished in any specified sizes.

Listed below are footage and approximate weights on some standard sizes of GARLOCK 83 Coil and GARLOCK 93 Coil.

GARLOCK 83 Coil			GARLOCK 93 Coil		
Size	Feet per Box	Weight per Box	Size	Feet per Box	Weight per Box
$\frac{1}{8}$ "	84 ft.	4 $\frac{1}{2}$ lbs.	$\frac{1}{8}$ "	98 ft.	4 lbs.
$\frac{3}{16}$ "	56 ft.	5 $\frac{1}{2}$ lbs.	$\frac{3}{16}$ "	70 ft.	4 $\frac{3}{4}$ lbs.
$\frac{1}{4}$ "	56 ft.	8 lbs.	$\frac{1}{4}$ "	56 ft.	6 $\frac{1}{4}$ lbs.
$\frac{5}{16}$ "	42 ft.	9 $\frac{1}{4}$ lbs.	$\frac{5}{16}$ "	42 ft.	7 $\frac{1}{2}$ lbs.
$\frac{3}{8}$ "	28 ft.	10 $\frac{1}{4}$ lbs.	$\frac{3}{8}$ "	28 ft.	8 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	14 ft.	7 $\frac{1}{2}$ lbs.	$\frac{1}{2}$ "	14 ft.	6 $\frac{1}{2}$ lbs.
1"	14 ft.	8 $\frac{1}{4}$ lbs.	1"	14 ft.	7 $\frac{1}{4}$ lbs.

GARLOCK



GARLOCK 430

CHEVRON HYDRAULIC PACKING

(Patented)



Construction — GARLOCK Chevron Packing is a patented packing material manufactured only by The GARLOCK Packing Company. The special duck cloth and rubber compound from which it is manufactured, are combined and molded into rings having the unique and exclusive Chevron design illustrated. The hinge-like cross sectional shape of the Chevron rings permits easy expansion and contraction with changing pressures. This action is entirely automatic.

Service — GARLOCK 430 Chevron Packing is recommended for service on presses, accumulators, outside packed pumps, triplex pumps or other rams or plungers against hot or cold water, or heavy hydraulic pressures. The design of Chevron rings which allows the use of a plurality of rings in a limited packing depth, adapts this material for use in shallow stuffing boxes to replace "U" type packings.

Form — GARLOCK Chevron Packing is furnished in ring form only, molded to practically any rod and stuffing box size. A set of this material consists of one GARLOCK 430-T Top Adapter Ring; one GARLOCK 430-B Bottom Adapter Ring; and sufficient GARLOCK 430 Chevron Rings to produce the desired depth of the set. Adapter rings will be furnished to fit the bevel of gland or stuffing box when so specified.

Application — Inasmuch as GARLOCK 430 Chevron Packing is entirely automatic in action and is very sensitive to pressure changes, very little gland pressure should be applied. Care should be taken to adjust the gland loosely so that the packing can operate properly. When this is done there will be no leakage on the power stroke and no gripping of the rod or plunger on the return stroke.

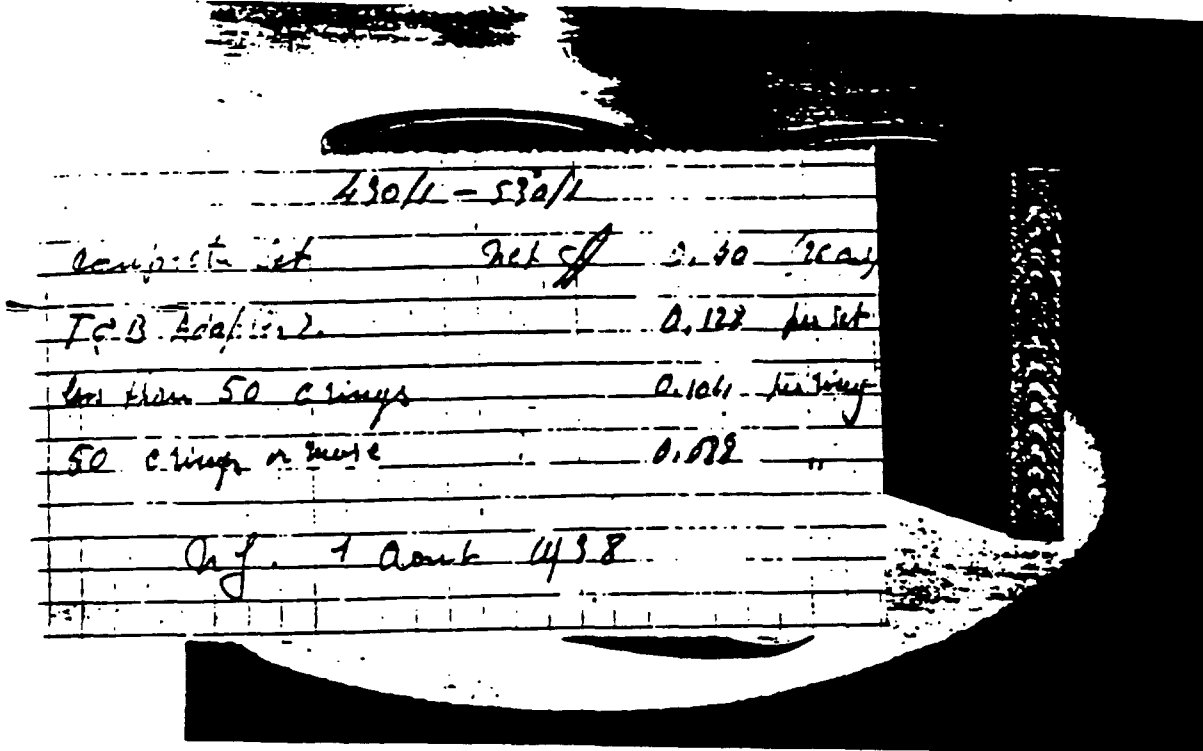
THE STANDARD PACKING OF THE WORLD

Fix maximum pressure in pump is 2500 psi

plus plus diameter 2.0 = 1.8 "



G A R L O C K



GARLOCK 330

CHEVRON HIGH TEMPERATURE PACKING

(Patented)

Construction—GARLOCK 330 Chevron is a patented packing manufactured only by The GARLOCK Packing Company. The special GARLOCK asbestos cloth and rubber cement used in its manufacture are molded into rings having the unique and exclusive Chevron shape illustrated. The hinge-like design of these rings results in easy expansion and contraction as the pressure varies. This action in Chevron is entirely automatic.

Service—GARLOCK 330 Chevron Packing is recommended for service on piston rods, plungers, or centrifugal shafts operating against steam, air, gas or oil at high temperatures and pressures. It has been particularly successful as a packing for locomotive throttle stems.

Form—Chevron Packing is furnished in ring

form only, molded to fit exactly almost any rod and stuffing box size. A set of this material consists of one GARLOCK 330-T Top Adapter Ring; one GARLOCK 330-B Bottom Adapter Ring; and a sufficient number of GARLOCK 330 Chevron Rings to produce a set of the desired depth. Top and bottom adapter rings will be furnished to fit the bevel of the gland and stuffing box when so specified.

Application—Inasmuch as GARLOCK 330 Chevron Packing is entirely automatic in action and is unusually sensitive to pressure changes, very little gland pressure should be applied. Care should be taken to adjust the gland loosely so that the packing can operate properly. When this is done there will be no leakage on the power stroke and no gripping of the rod or plunger on the return stroke.

THE STANDARD PACKINGS OF THE WORLD

air compressors 530



GARLOCK 446

STEAM DUO PACKING

Construction — GARLOCK 446 is a combination packing consisting of end rings of GARLOCK 200 high pressure asbestos packing and center rings of GARLOCK 550 diagonal cut duck and rubber steam packing.

Service — Recommended for service on piston rods of steam engines working against pressures up to 125 pounds per square inch; also for the

intermediate and low pressure piston rods of triple expansion marine engines.

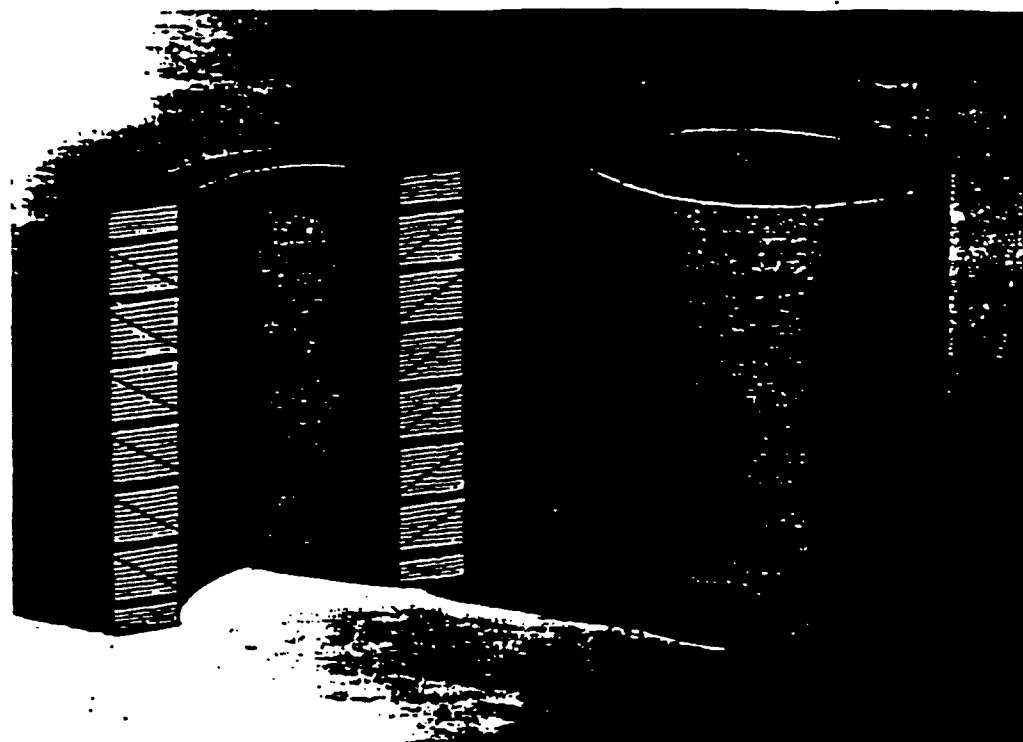
Form — GARLOCK 446 is furnished in any required size to fit rod and stuffing box dimensions.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 449

STEAM HAMMER DUO PACKING

Construction — GARLOCK 449 is a combination packing consisting of end rings of GARLOCK 333 duck and rubber steam packing and center rings of GARLOCK 550 diagonal cut duck and rubber steam packing.

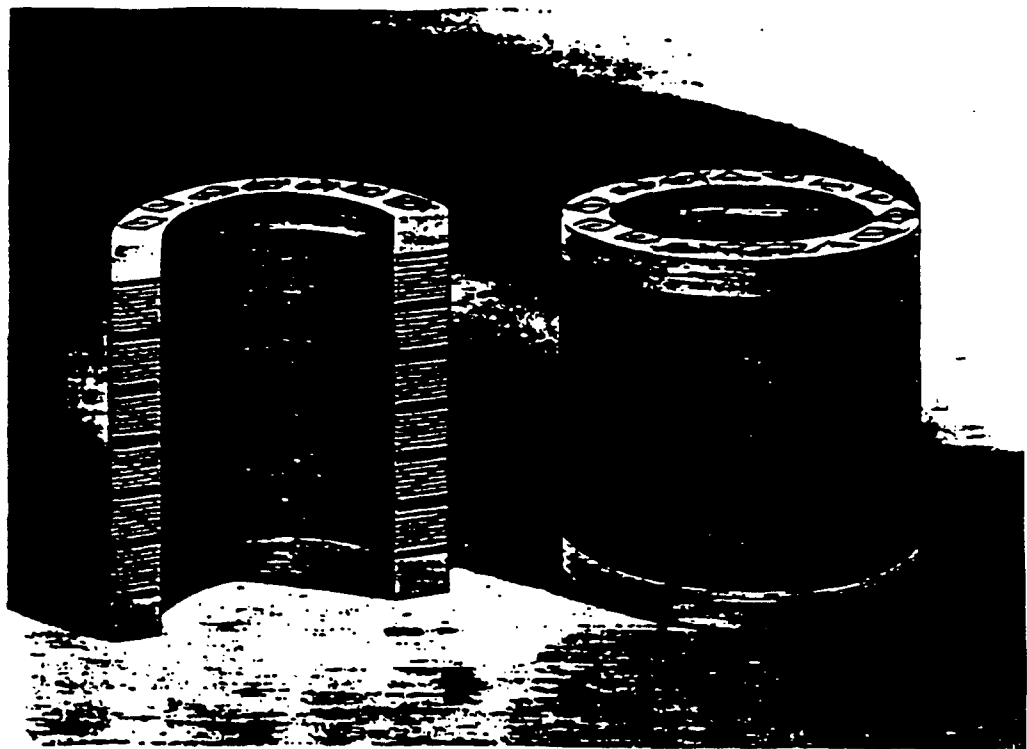
Service — Recommended for service on piston rods of steam hammers at steam pressures up to 100 pounds per square inch. It is particularly

recommended for use on worn or scored rods; also on rods having considerable vibration or sway.

Form — GARLOCK 449 is furnished in any required size to fit rod and stuffing box dimensions.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.

THE STANDARD PACKING OF THE WORLD



GARLOCK 440

HOT OR COLD WATER DUO PACKING

Construction — GARLOCK 440 is a combination packing consisting of end rings of GARLOCK 261 special hydraulic and center rings of GARLOCK 550 diagonal cut duck and rubber steam packing.

Service — Recommended for hot or cold water service on outside packed plunger pumps. Par-

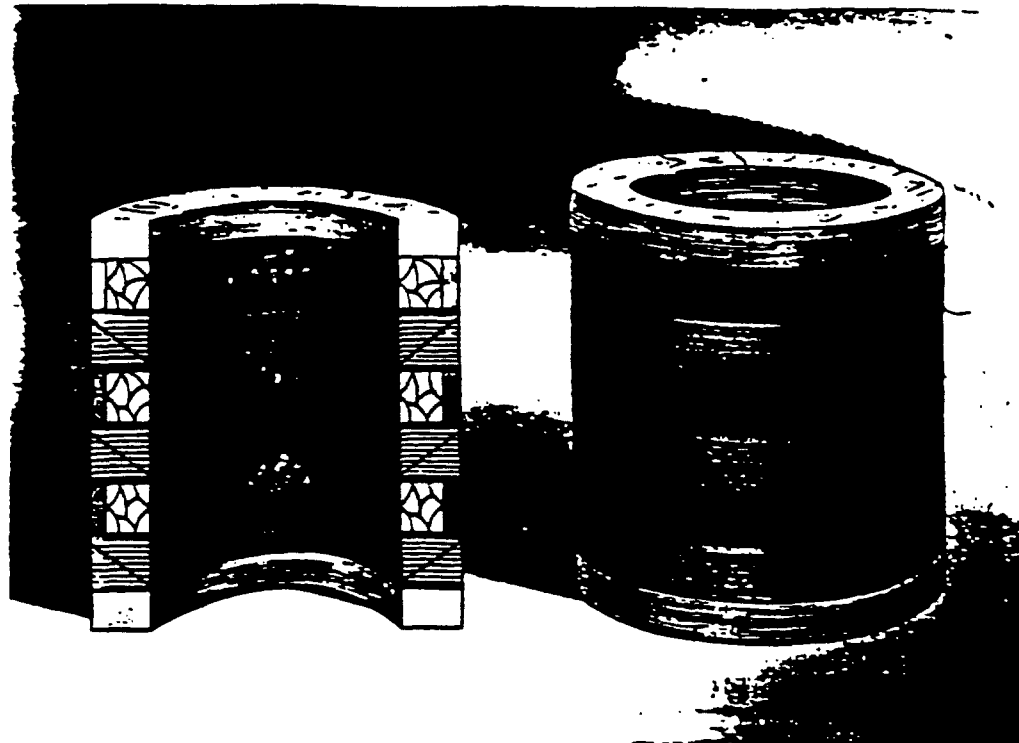
ticularly serviceable on worn or scored plungers.

Form — GARLOCK 440 is obtainable in any required size to fit rod and stuffing box dimensions.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.



G A R L O C K



GARLOCK 443

HOT WATER DUO PACKING

Construction — GARLOCK 443 is a combination packing consisting of end rings of GARLOCK 261 special hydraulic, and alternated center rings of GARLOCK 193 rubber back waterproof hydraulic packing and GARLOCK 550 diagonal cut duck and rubber steam packing.

Service — Recommended for service on the

plungers of outside packed pumps handling hot water.

Form — GARLOCK 443 is obtainable in any required size to fit rod and stuffing box dimensions.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.

THE STANDARD PACKING OF THE WORLD

HOT WATER DUO PACKING

GARLOCK 1900

Construction — GARLOCK 1900 is a combination packing consisting of end rings of GARLOCK 261 hydraulic packing and center rings of specially constructed duck and rubber. The plies of the special center rings run horizontal with the rod.

Service — Recommended for service on outside packed pumps conveying hot water.

Form — Sets of GARLOCK 1900 are furnished in any required sizes to fit rod and stuffing box dimensions.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and the depth of the stuffing box should be given.

HOT WATER DUO PACKING

GARLOCK 1907

Construction — GARLOCK 1907 is a combination packing consisting of end rings of GARLOCK 261 special hydraulic packing and alternating center rings of GARLOCK 275 cushion center duck and rubber packing and GARLOCK 550 diagonal cut duck and rubber packing.

Service — Recommended for service on outside packed plunger pumps working against hot

water at high temperatures and high pressures.

Form — GARLOCK 1907 is furnished in any required size to fit plunger and stuffing box dimensions.

In ordering, the diameter of the plunger, the inside diameter of the stuffing box and depth of stuffing box should be given.



G A R L O C K



HOT WATER DUO PACKING

GARLOCK 1906

Construction — GARLOCK 1906 is a combination packing consisting of end rings of GARLOCK 333 duck and rubber packing and alternating center rings of GARLOCK 273 cushion center duck and rubber packing, and GARLOCK 550 diagonal cut duck and rubber packing.

Service — Recommended for hot water service on the plungers of outside packed pumps at

high temperatures and medium pressures.

Form — GARLOCK 1906 is furnished in any required size to fit plunger and stuffing box dimensions.

In ordering, the diameter of the plunger, the inside diameter of the stuffing box and depth of stuffing box should be given.

HYDRAULIC DUO PACKING

GARLOCK 980

Construction — GARLOCK 980 is a combination packing consisting of end rings of GARLOCK 99 waterproof hydraulic packing and center rings of GARLOCK 550 diagonal cut duck and rubber packing.

Service — Recommended for cold water service on the plungers of outside packed pumps.

Form — GARLOCK 980 is furnished in any required size to fit plunger and stuffing box dimensions.

In ordering, the diameter of the plunger, the inside diameter of the stuffing box and depth of stuffing box should be given.

THE STANDARD PACKING OF THE WORLD



HYDRAULIC DUO PACKING

GARLOCK 960

Construction — GARLOCK 960 is a combination packing consisting of end rings of GARLOCK 346 braided copper wire packing and alternated center rings of GARLOCK 216 metal inner wedge duck and rubber packing, and GARLOCK 99 waterproof hydraulic packing.

Service — Recommended for extremely high

pressure hydraulic service on rams or plungers of presses, accumulators, and hydraulic pumps.

Form — GARLOCK 960 is furnished in any required size to fit rod and stuffing box dimensions.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.

HYDROSTATIC DUO PACKING

GARLOCK 965

Construction — GARLOCK 965 is a combination packing consisting of soft metal rings, GARLOCK 346 braided copper wire rings, and GARLOCK 99 waterproof hydraulic rings.

Service — GARLOCK 965 is designed to hold the heaviest hydraulic pressures and is recommended for service on heavy duty rams or

plungers of presses, accumulators and outside packed hydraulic pumps.

Form — GARLOCK 965 is furnished in any required size to fit rod and stuffing box dimensions.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.



G A R L O C K



SLUSH PUMP PACKING

GARLOCK 400

Construction — GARLOCK 400 is a combination set packing, consisting of center rings of GARLOCK 67 diagonal packing and end rings of GARLOCK 353 oil resistant rubber.

Service — GARLOCK 400 is recommended for service on piston rods of slush pumps used

extensively in the oil fields. It is recommended for service in the most severe conditions.

Form — GARLOCK 400 is furnished in sizes to fit all standard slush pump equipment. In ordering, indicate the diameter of piston rod, inside diameter of stuffing box and depth of stuffing box.

SLUSH PUMP PACKING

GARLOCK 405

Construction — GARLOCK 405 is a combination set packing, consisting of center rings of a good grade diagonal packing and GARLOCK 151 gray rubber end rings.

Service — GARLOCK 405 is recommended for service on piston rods of slush pumps where

service conditions are not extremely severe.

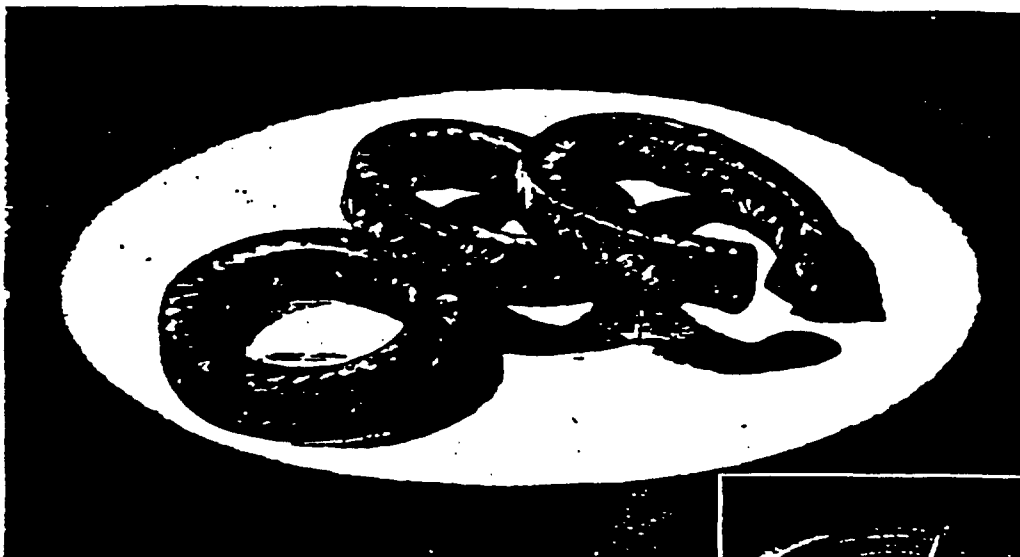
Form — GARLOCK 405 is furnished in sizes to fit all standard slush pump equipment. In ordering, indicate the diameter of piston rod, inside diameter of stuffing box and depth of stuffing box.

THE STANDARD PACKING OF THE WORLD

22

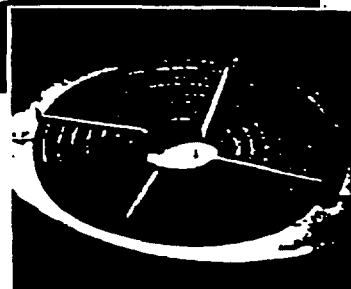


G A R L O C K



GARLOCK 346 RINGS

BRAIDED COPPER WIRE PACKING



GARLOCK 344 COIL

Construction — GARLOCK Braided Copper Wire Packing is manufactured from fine strand copper wire braided approximately square in cross section.

Service — Recommended as an end ring in the bottom of stuffing boxes against heavy hydraulic duty. Also used on both ends of packing sets on heavy horizontal plungers, in which service the packing frequently bears a portion of the weight of the plunger.

Form — This material is supplied in two forms, GARLOCK 344 Coil and GARLOCK 346 Ring.

GARLOCK 346 Rings are cut from GARLOCK 344 Coil and are furnished to fit any rod and stuffing box dimensions.

GARLOCK 344 Coil is manufactured in all packing sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by sixteenths. It is regularly boxed in the manner indicated below, but can also be furnished in continuous length on reels.

The following table lists footage and approximate weights on some standard sizes of GARLOCK 344 Coil.

GARLOCK 344 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{8}$ "	2	78 ft.	11 lbs.
$\frac{1}{4}$ "	1	28 ft.	10 lbs.
$\frac{3}{8}$ "	1	18 ft.	10 lbs.
$\frac{1}{2}$ "	1	16 ft.	14 lbs.
$\frac{5}{8}$ "	1	13 ft.	20 lbs.
$\frac{3}{4}$ "	1	11 ft.	20 lbs.
$1\frac{1}{4}$ "	1	17½ ft.	41 lbs.

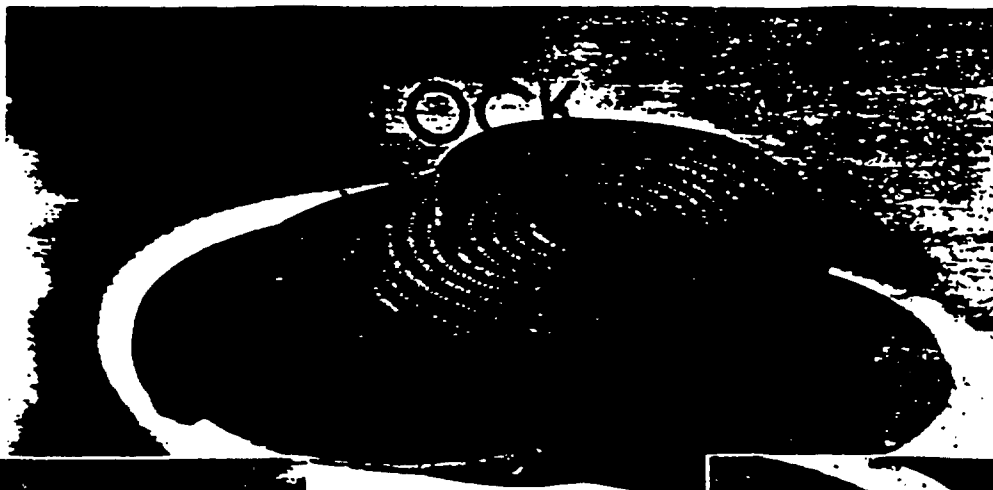
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THE STANDARD PACKING OF THE WORLD

6,4 grams in Cu



G A R L O C K



GARLOCK 926 COIL



LOOSE FORM

PLASTALLIC PACKING



Construction — GARLOCK 926 Plastallic is a plastic packing, compounded of pure asbestos fibre, shreds of soft metal, graphite, and heat resisting lubricant.

Service — Recommended for service against water, steam, air and heavy oils at temperatures not in excess of 550°. It is equally serviceable on reciprocating and centrifugal equipment.

Form — GARLOCK 926 is produced in three forms — loose or bulk form, coil and ring. GARLOCK 926 bulk is regularly packaged in tin

cans of 2½ pounds net weight. Each package of GARLOCK 926 in this form contains a coil of shredded metal packing for use as a bottom ring in the stuffing box.

GARLOCK 926 Rings are formed to any specified rod and stuffing box dimensions.

GARLOCK 926 Coil is regularly furnished either round or square in cross section. It may be identified by the open braid cover of red and yellow yarn.

Size designations and approximate weights are shown below:

For Packing Spaces Measuring	Specify Garlock 926 Coil	Approximate Footage per Box		Approximate Weight per Box	
		Round	Square	Round	Square
Below ½" and up to ¾" inclusive.....	Size X	56 ft.	60 ft.	5 lbs.*	5 lbs.*
¾" to 1" inclusive.....	Size 3-8-X	40 ft.	28 ft.	5 lbs.*	5 lbs.*
1" to 1½" inclusive.....	Size 2-X	51 ft.	51 ft.	12½ lbs.	14½ lbs.
1½" to 2" inclusive.....	Size 3-X	26 ft.	26 ft.	14 lbs.	17 lbs.
2" and above.....	Size 4-X	20 ft.	20 ft.	20 lbs.	22 lbs.

*On spool.

Note: Specify whether Round or Square Coil is desired.

THE STANDARD PACKING OF THE WORLD



G. A R L O C K



GARLOCK 927 COIL

PLASTALLIC PACKING



LOOSE FORM

Construction — GARLOCK 927 Plastallic is a plastic packing, compounded of pure asbestos fibre, shreds of soft metal, graphite and a special lubricant.

Service — Recommended for use against gasoline, kerosene, oils, ether, carbon tetrachloride, butane gas, methyl chloride, SO_2 and all other similar and allied liquids.

Form — GARLOCK 927 is produced in three forms — loose or bulk form, coil and ring.

GARLOCK 927 bulk is regularly packaged in tin cans of $2\frac{1}{2}$ pounds net weight. Each package of

GARLOCK 927 in this form contains a coil of shredded metal packing for use as a bottom ring in the stuffing box.

GARLOCK 927 Rings are formed to any specified rod and stuffing box dimensions.

GARLOCK 927 Coil is regularly furnished either round or square in cross section. It may be identified by the open braid cover of red yarn.

Size designations and approximate weights are shown below:

For Packing Specs. Measuring	Specify Garlock 927 Coil	Approximate Footage per Box		Approximate Weight per Box	
		Round	Square	Round	Square
Below $\frac{1}{8}$ " and up to $\frac{1}{4}$ " inclusive.....	Size N	56 ft.	60 ft.	5 lbs.*	5 lbs.*
$\frac{1}{8}$ " to $\frac{1}{4}$ " inclusive.....	Size 3-8-N	40 ft.	28 ft.	5 lbs.*	5 lbs.*
$\frac{1}{4}$ " to $\frac{3}{8}$ " inclusive.....	Size 2-N	51 ft.	51 ft.	12½ lbs.	14½ lbs.
$\frac{3}{8}$ " to $\frac{1}{2}$ " inclusive.....	Size 3-N	26 ft.	26 ft.	14 lbs.	17 lbs.
1" and above.....	Size 4-N	20 ft.	20 ft.	20 lbs.	20 lbs.

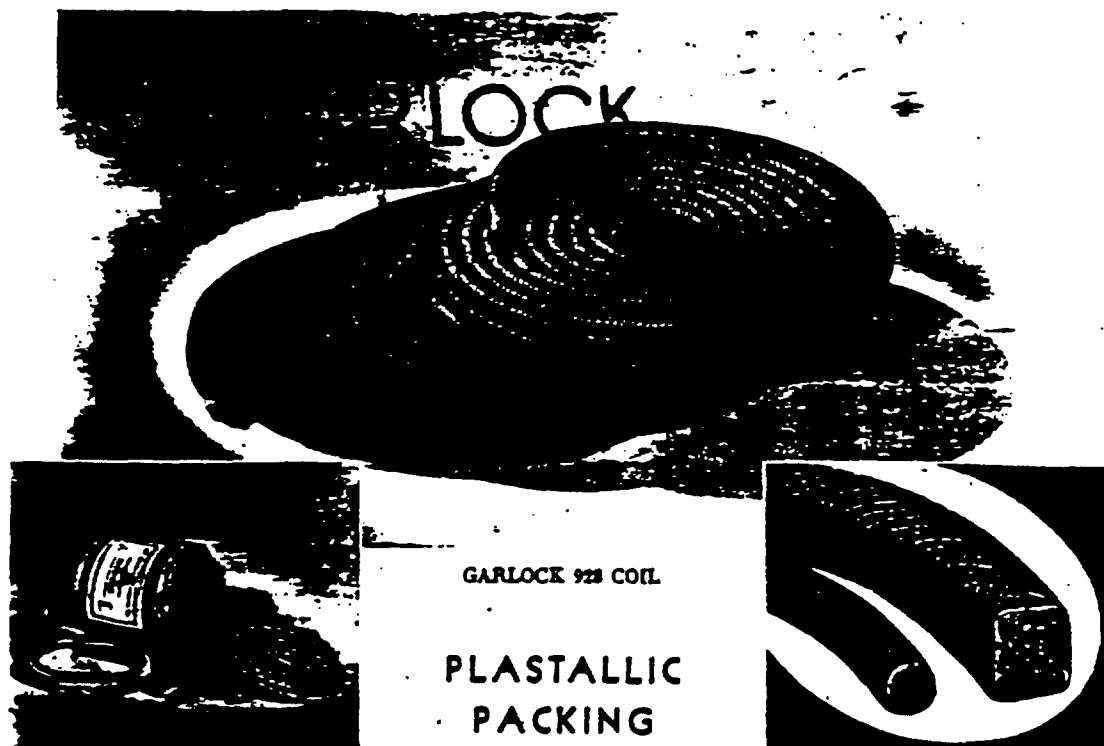
*On spool.

Note: Specify whether Round or Square Coil is desired.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 928 COIL

PLASTALLIC PACKING

LOOSE FORM

Construction — GARLOCK 928 Plastallic is a plastic packing, compounded of strands of heat resisting metal, pure asbestos fibre, graphite and a special lubricant.

Service — Recommended for steam and hot oil service where temperatures exceed 600 degrees Fahrenheit.

Form — GARLOCK 928 is produced in three

forms — loose or bulk form, coil and ring.

GARLOCK 928 bulk is regularly packaged in tin cans of 2 pounds net weight.

GARLOCK 928 Rings are formed to any specified rod and stuffing box dimensions.

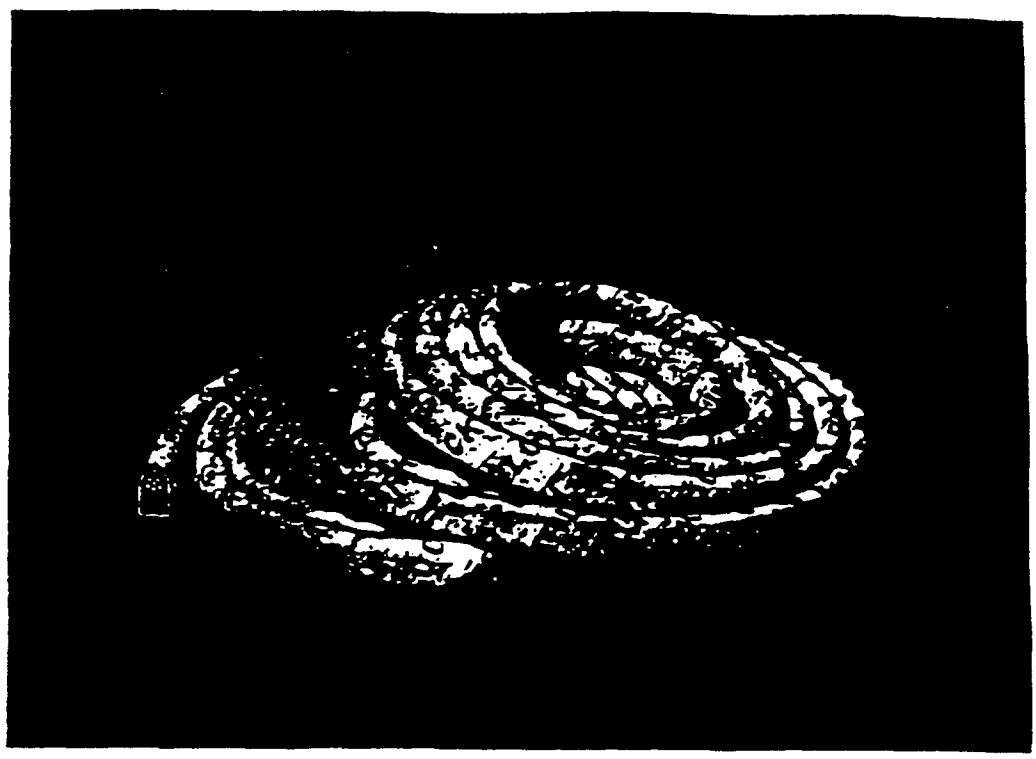
GARLOCK 928 Coil is regularly furnished either round or square in cross section and to the following size designations:

For Packing Spaces Measuring	Specify Garlock 928 Coil	Approximate Footage per Box		Approximate Weight per Box	
		Round	Square	Round	Square
Below $\frac{1}{8}$ " and up to $\frac{1}{4}$ " inclusive	Size X	67 ft.	72 ft.	5 lbs.*	5 lbs.*
$\frac{1}{8}$ " to $\frac{1}{4}$ " inclusive	Size 3-8-X	48 ft.	33 ft.	5 lbs.*	5 lbs.*
$\frac{1}{4}$ " to $\frac{3}{8}$ " inclusive	Size 2-X	51 ft.	51 ft.	10 lbs.	11 lbs.
$\frac{3}{8}$ " to $\frac{1}{2}$ " inclusive	Size 1-X	26 ft.	26 ft.	11 1/4 lbs.	14 lbs.
$\frac{1}{2}$ " and above	Size 4-X	20 ft.	20 ft.	16 lbs.	19 lbs.

*On spool.

Note: Specify whether Round or Square Coil is desired.

THE STANDARD PACKING OF THE WORLD



GARLOCK 107

HIGH PRESSURE DIAGONAL COIL PACKING

Construction — GARLOCK 107 is a diagonal packing having a cushion of twisted, long fibre asbestos yarn combined with diagonal wedges of special quality duck and rubber. These parts are held in place with a braided cotton cover. The packing is given a special lubrication treatment. For protection in handling and shipping, GARLOCK 107 is provided with a muslin cover. This should be removed before the packing is used.

Service — Recommended for service against

high pressure steam. It is particularly effective on equipment having rods slightly worn or out of alignment.

Form — GARLOCK 107 has straight sides and bottom and a rounding top, the thickness being approximately double the packing space. It is furnished in coil form in sizes 1/4" to 1 1/2", or in cut rings.

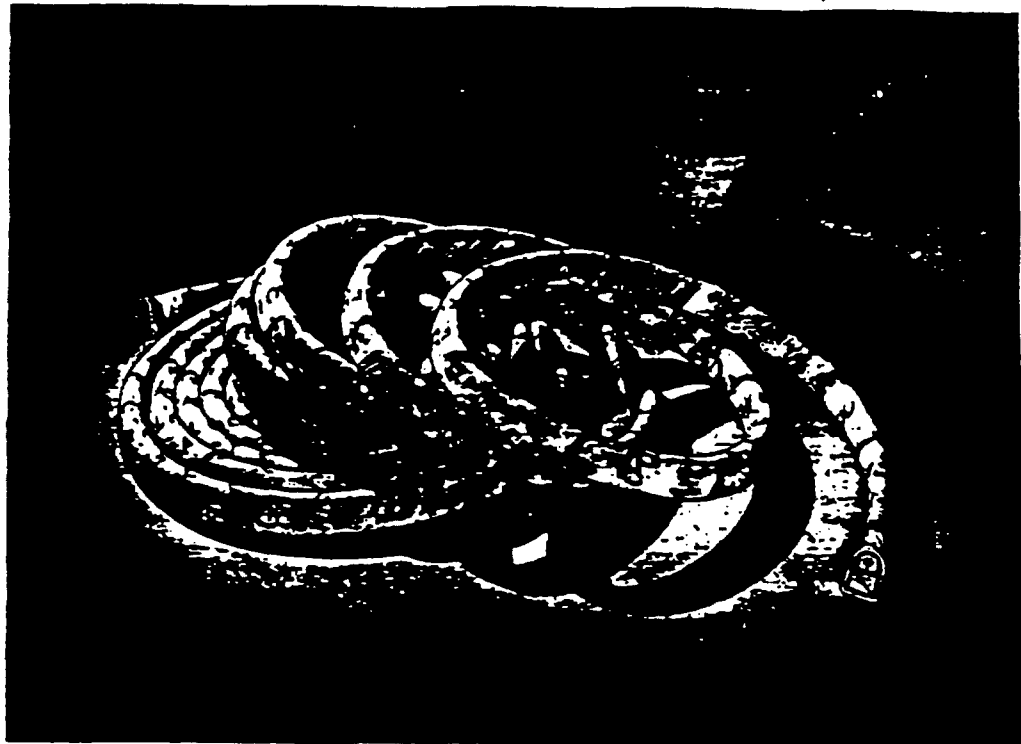
Listed below are footage and approximate weight on some standard sizes:

GARLOCK 107 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
1/4"	5	105 ft.	10 lbs.
3/8"	3	63 ft.	10 lbs.
1/2"	3	40 ft.	10 lbs.
3/4"	2	25 ft.	10 lbs.
1"	3	25 ft.	11 1/4 lbs.
1 1/4"	4	25 ft.	22 1/4 lbs.
1 1/2"	3	25 ft.	29 1/4 lbs.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 87

EXTRA DIAGONAL COIL PACKING

Construction — GARLOCK 87 is a diagonal packing having a duck wrapped, rubber cushion combined with diagonal wedges of first grade duck and rubber. The component parts are held together with a braided cotton cover. Packing is processed with a special lubricant. For protection in handling and shipping, GARLOCK 87 is provided with a muslin cover. This should be removed before the packing is used.

Service — Recommended for service against medium pressure steam, hot, or cold water. It

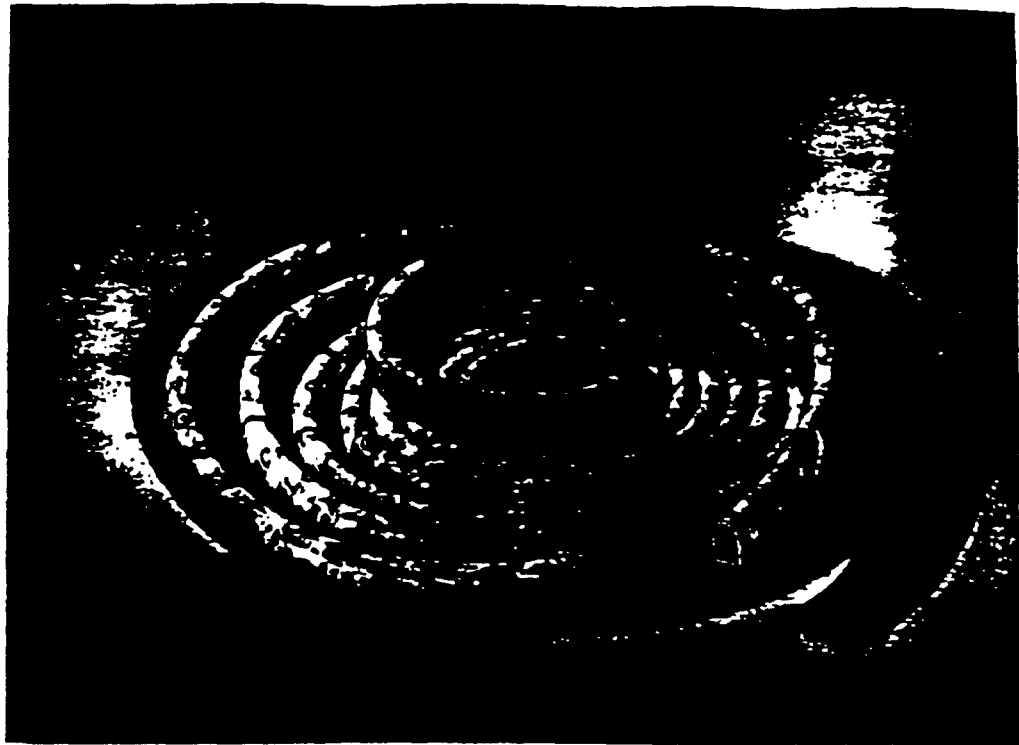
is particularly effective on equipment having rods slightly worn or out of alignment.

Form — GARLOCK 87 has straight sides and bottom and a rounding top, the thickness being approximately double the packing space. It is furnished in coil form in sizes $\frac{1}{4}$ " to $1\frac{1}{2}$ ", or in cut rings.

Listed below are footage and approximate weight on some standard sizes:

GARLOCK 87 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	3	160 ft.	10 lbs.
$\frac{3}{8}$ "	3	63 ft.	10 lbs.
$\frac{1}{2}$ "	3	40 $\frac{1}{4}$ ft.	10 lbs.
$\frac{3}{4}$ "	2	25 ft.	10 lbs.
$\frac{1}{2}$ "	3	25 ft.	15 lbs.
$\frac{3}{4}$ "	4	25 ft.	20 lbs.
1"	3	25 ft.	26 $\frac{1}{4}$ lbs.

THE STANDARD PACKING OF THE WORLD



GARLOCK 67

STAR DIAGONAL COIL PACKING

Construction — GARLOCK 67 is a diagonal packing having a fibrous cushion combined with diagonal wedges of duck and rubber. The component parts are held together with a braided cotton cover. It is thoroughly lubricated. For protection in handling and shipping, GARLOCK 67 is provided with a muslin cover. This should be removed before the packing is used.

Service — Recommended for service against

cold water and low pressure steam. It is particularly effective on old equipment with worn rods.

Form — GARLOCK 67 has straight sides and bottom and a rounding top, the thickness being approximately double the packing space. It is furnished in coil form in sizes $\frac{1}{4}$ " to $1\frac{1}{2}$ ", or in cut rings.

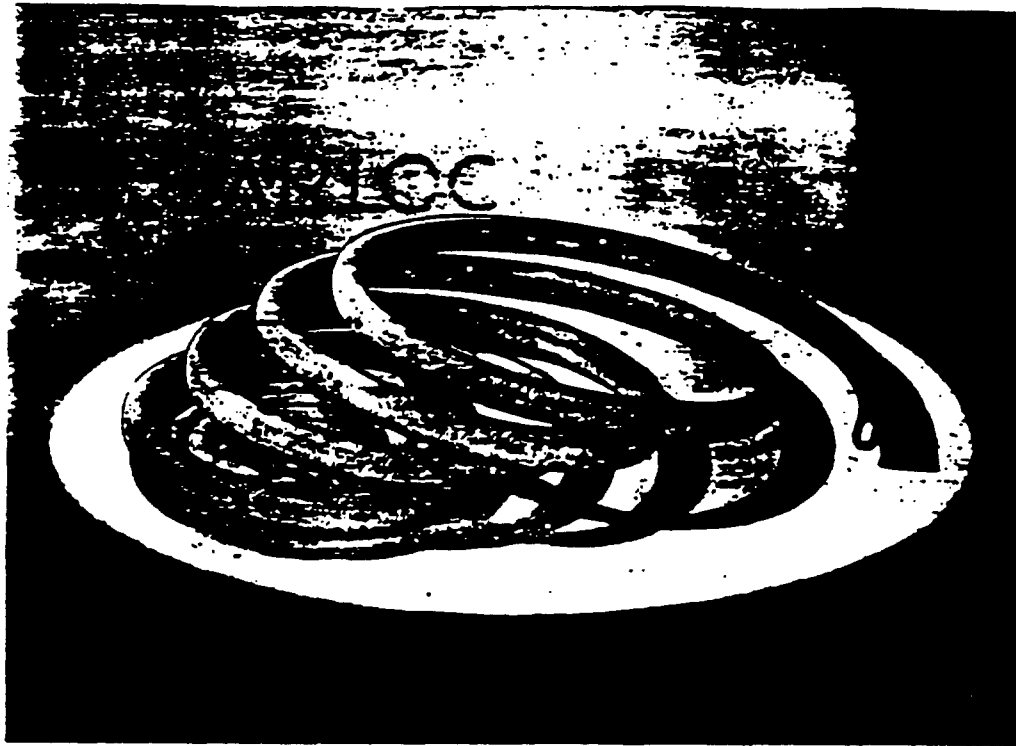
Listed below are footage and approximate weight on some standard sizes:

GARLOCK 67 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	5	160 ft.	10 lbs.
$\frac{3}{8}$ "	3	81 ft.	10 lbs.
$\frac{1}{2}$ "	3	45 ft.	10 lbs.
$\frac{3}{4}$ "	2	25 ft.	10½ lbs.
$\frac{7}{8}$ "	3	25 ft.	15 lbs.
$1\frac{1}{4}$ "	4	25 ft.	20¼ lbs.
1"	3	25 ft.	26½ lbs.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 80 COIL (Oval)
GARLOCK 81 COIL (Round)

MAJESTIC GUM CORE PACKING

Construction — Majestic Gum Core Packing consists of a core of high grade rubber encased in a woven cover of specially processed and lubricated flax.

Service — Majestic Gum Core Packing is recommended for service on pumps working against low pressure steam and cold water.

Form — GARLOCK 80 Coil, oval in crosssection.

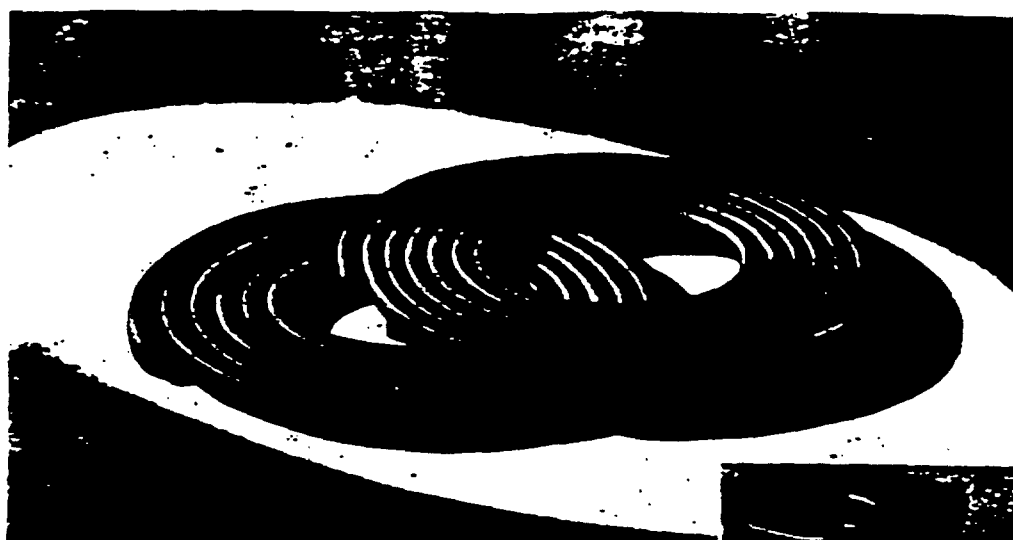
is regularly furnished in sizes $\frac{1}{4}$ " to $1\frac{1}{4}$ ".

GARLOCK 81 Coil, round in cross section, is regularly furnished in sizes $\frac{1}{4}$ " to 1". Either style is obtainable in ring form.

The table below shows footage and approximate weight of some standard sizes of both styles. Approximate thickness of GARLOCK 80 (oval) is also indicated

GARLOCK 80 Coil				GARLOCK 81 Coil		
Size	Thickness	Feet per Box	Weight per Box	Size	Feet per Box	Weight per Box
$\frac{1}{4}$ "	$\frac{1}{4}$ "	232 ft.	10 lbs.	$\frac{1}{4}$ "	355 ft.	10 lbs.
$\frac{3}{8}$ "	$\frac{3}{8}$ "	106 ft.	10 lbs.	$\frac{3}{8}$ "	166 ft.	10 lbs.
$\frac{1}{2}$ "	$\frac{1}{2}$ "	53 ft.	10 lbs.	$\frac{1}{2}$ "	99 ft.	10 lbs.
$\frac{3}{4}$ "	$\frac{3}{4}$ "	40 ft.	10 lbs.	$\frac{3}{4}$ "	59 ft.	10 lbs.
$\frac{7}{8}$ "	$\frac{7}{8}$ "	27 ft.	10 lbs.	$\frac{7}{8}$ "	44 ft.	10 lbs.
1"	1"	23 ft.	10 lbs.	1"	30 ft.	10 lbs.
1 $\frac{1}{4}$ "	1 $\frac{1}{4}$ "	16 ft.	10 lbs.	1 $\frac{1}{4}$ "	24 ft.	10 lbs.

THE STANDARD PACKING OF THE WORLD



GARLOCK 981 COIL

FLEXOMET PACKING



GARLOCK 991 RINGS

Construction — GARLOCK Flexomet Packing is manufactured of soft metal strands twisted to size and covered with a thin braided fibrous cover. This braided jacket serves to keep the packing in proper condition during shipment, handling and installation. It wears away immediately on application leaving the metal bearing on the rod.

Service — Recommended for service against steam, water and many acid and chemical solutions on rotary rods and plungers of outside packed pumps.

Form — This material is supplied in two forms. GARLOCK 981 Coil and GARLOCK 991 Ring.

GARLOCK 991 Rings are cut from GARLOCK 981 Coil and are furnished to fit any rod and stuffing box dimensions.

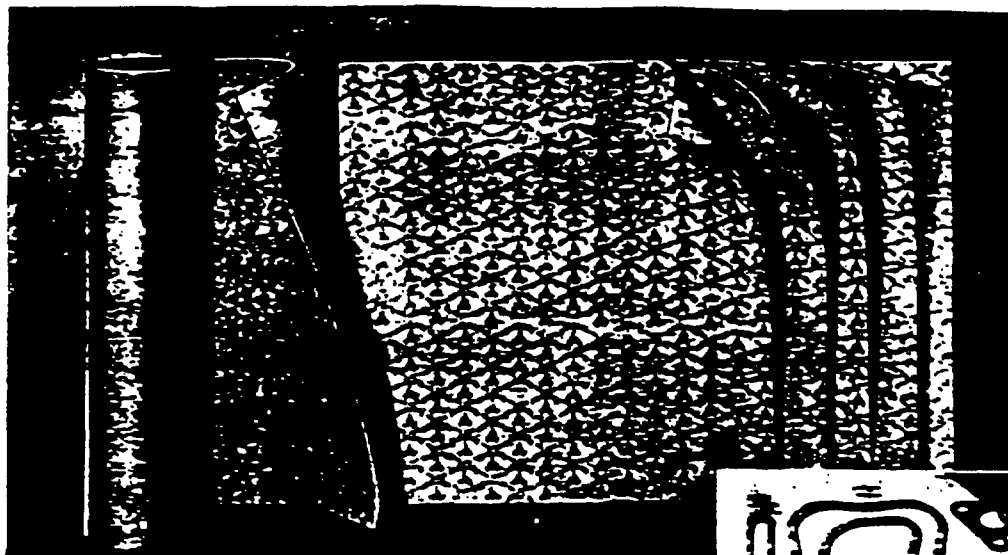
GARLOCK 981 Coil is manufactured in all packing sizes from $\frac{1}{8}$ " to 1", advancing by sixteenths.

The following table lists footage and approximate weight on some standard sizes of GARLOCK 981 Coil:

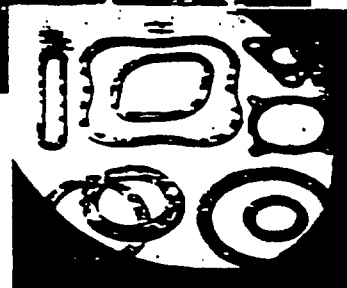
GARLOCK 981			
Size	Coils per Box	Feet per Coil	Weight per Box
$\frac{1}{8}$ "	1 (on spool)	30 ft.	1 $\frac{1}{4}$ lbs.
$\frac{1}{4}$ "	1	15 ft.	3 $\frac{1}{4}$ lbs.
$\frac{3}{8}$ "	1	15 ft.	10 lbs.
$\frac{1}{2}$ "	1	15 ft.	16 $\frac{1}{4}$ lbs.
$\frac{5}{8}$ "	1	15 ft.	13 $\frac{3}{4}$ lbs.
$\frac{3}{4}$ "	1	15 ft.	17 $\frac{1}{2}$ lbs.
$\frac{7}{8}$ "	1	10 ft.	21 $\frac{1}{2}$ lbs.



G A R L O C K



GARLOCK 900 SHEET
GARLOCK 901 SHEET (Graphited)



GARLOCK 950 GASKETS
GARLOCK 951 GASKETS (Graphited)

COMPRESSED ASBESTOS FIBRE SHEET PACKING

Construction — GARLOCK 900 Compressed Asbestos Fibre Sheet Packing is made of Canadian asbestos fibre, scientifically blended with superheat resisting compounds. It is bonded under tremendous pressure, resulting in a pliable sheet with high tensile strength.

Service — Recommended for use against superheated or saturated steam, air, gas, ammonia and most chemical solutions.

Form — GARLOCK Compressed Asbestos Fibre

Packing is furnished in two forms, GARLOCK 900 Sheet and GARLOCK 950 Gaskets.

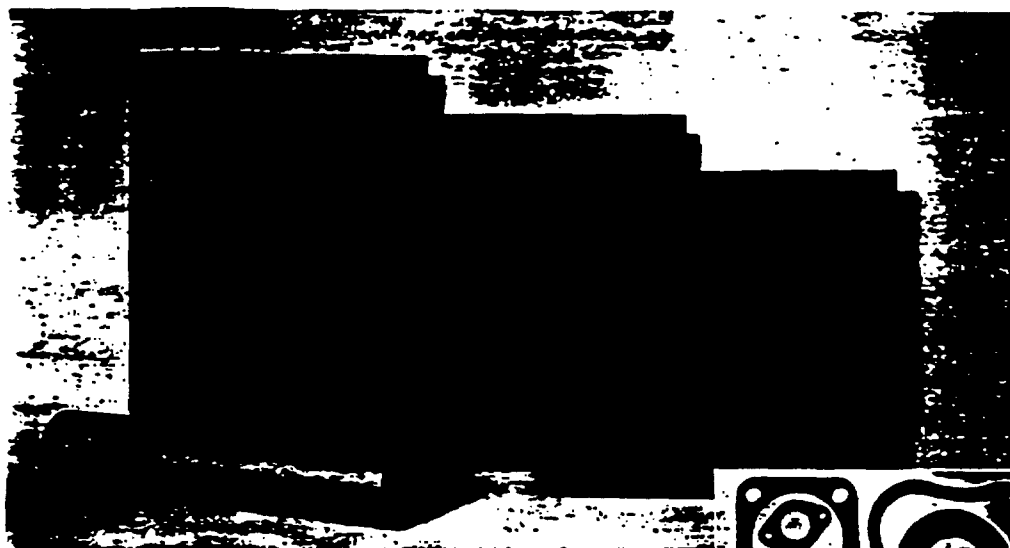
GARLOCK 950 Gaskets are cut from GARLOCK 900 Sheet Packing. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired. This material can be furnished with a graphite finish — styled GARLOCK 901 Sheet and GARLOCK 951 Gaskets.

Listed below are standard thicknesses and sheet sizes applying to GARLOCK 900 and GARLOCK 901 Sheet:

GARLOCK 900 Sheet GARLOCK 901 Sheet (Graphited)			
Standard Thicknesses		Standard Sheet Sizes	
1/8"	1/4"	40" x 40"	60" x 80"
3/16"	3/8"	40" x 60"	60" x 120"
1/2"	1/2"	40" x 80"	80" x 80"
		40" x 120"	80" x 120"
		60" x 60"	120" x 120"

THE STANDARD PACKING OF THE WORLD

GARLOCK



GARLOCK 7021 SHEET

HOT OIL ASBESTOS SHEET PACKING



GARLOCK 7022 GASKETS

Construction — GARLOCK 7021 Sheet Packing is made of Canadian asbestos fibre scientifically blended with heat and oil resisting compounds and bonded into sheet under tremendous pressure.

Service — Recommended for use against all oil conditions, particularly light oil at high temperatures, as on cracking stills and other oil and gasoline refinery equipment.

Form — This compressed asbestos fibre packing is furnished in two forms — GARLOCK 7021 Sheet and GARLOCK 7022 Gaskets.

GARLOCK 7022 Gaskets are cut from GARLOCK 7021 Sheet. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired.

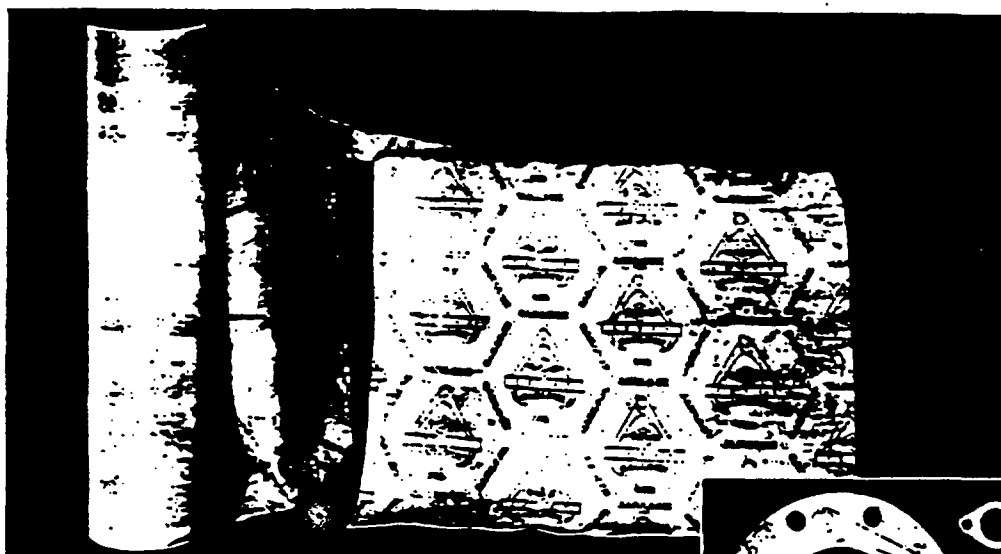
GARLOCK 7021 Sheet is furnished in the thicknesses and sheet sizes specified below:

GARLOCK 7021 Sheet			
Standard Thicknesses		Standard Sheet Sizes	
1/8"	1/4"	40" x 40"	60" x 80"
1/4"	3/8"	40" x 60"	60" x 120"
3/8"	1/2"	40" x 80"	80" x 80"
1/2"		40" x 120"	80" x 120"
		60" x 60"	120" x 120"

THE STANDARD PACKING OF THE WORLD

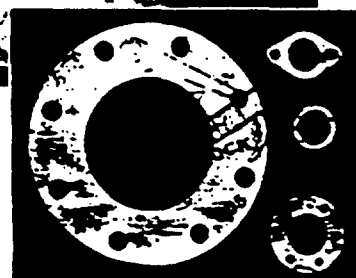


G A R L O C K



GARLOCK 605 SHEET

HIGH PRESSURE WIRE INSERTION ASBESTOS PACKING



GARLOCK 607 GASKETS

Construction — GARLOCK High Pressure Wire Insertion Asbestos Packing is produced from specially treated, heat resisting asbestos cloth, woven from fine brass wire inserted, long fibre asbestos yarn.

Service — Recommended as a flange or cylinder head gasket in contact with high pressure steam. Particularly suited, due to its woven construction, for service on narrow flanges and cylinder heads having many ports and bolt holes for which an ordinary gasket is not suitable.

Form — GARLOCK 605 Sheet is regularly supplied in thicknesses of $\frac{1}{16}$ ", $\frac{1}{8}$ " and $\frac{1}{4}$ "; standard width 48".

GARLOCK 607 Gaskets are cut from GARLOCK 605 Sheet Packing. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired.

Approximate length and weight of rolls of GARLOCK 605 Sheet in standard thicknesses are listed below:

GARLOCK 605 Sheet				
Thickness	Plies	Length per Roll	Weight per Roll	Width
$\frac{1}{16}$ "	1	20 yds.	100 lbs.	48"
$\frac{1}{8}$ "	1	10 yds.	200 lbs.	48"
$\frac{1}{4}$ "	2	15 yds.	200 lbs.	48"

THE STANDARD PACKING OF THE WORLD

OIL RESISTING COMPRESSED ASBESTOS FIBRE SHEET PACKING

GARLOCK 902 SHEET
GARLOCK 952 GASKET

*Heat the wire graphite
and return later*

Construction — GARLOCK 902 Sheet Packing is made of Canadian asbestos fibre scientifically blended with superheat resisting compounds and bonded into sheet under tremendous pressure, and specially processed.

Service — Recommended for service against steam and oil; also methyl chloride, SO₂ and other refrigerants.

Form — This compressed asbestos fibre packing is furnished in two forms — GARLOCK 902 Sheet and GARLOCK 952 Gaskets. Either sheet or gaskets can be furnished with a graphite finish when specified. In addition to the usual round and oval shapes, gaskets can be supplied in any odd or special shape desired.

AUTOLINE SHEET PACKING

GARLOCK 625 SHEET
GARLOCK 627 GASKET

Construction — GARLOCK Autoline Sheet Packing is a woven, high pressure, wire inserted asbestos sheet packing treated with a red compound on one side and black on the other.

Service — Recommended for use on internal combustion engines.

Form — GARLOCK 625 Sheet is regularly sup-

plied in thicknesses of $\frac{1}{16}$ ", $\frac{1}{8}$ " and $\frac{1}{4}$ "; standard width, 48".

GARLOCK 627 Gaskets are cut from GARLOCK 625 Sheet Packing. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired.

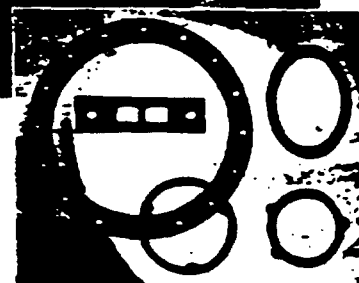
Approximate length and weight of rolls of GARLOCK 625 Sheet in standard thicknesses are listed below:

GARLOCK 625 Sheet				
Thickness	Piles	Length per Roll	Weight per Roll	Width
$\frac{1}{16}$ "	1	20 yds.	100 lbs.	48"
$\frac{1}{8}$ "	1	30 yds.	200 lbs.	48"
$\frac{1}{4}$ "	2	15 yds.	200 lbs.	48"



GARLOCK 22 SHEET

RED SHEET PACKING



GARLOCK 122 GASKETS

Construction — GARLOCK 22 is a high grade red rubber sheet, scientifically compounded from the best materials.

Service — GARLOCK Red Sheet Packing gives universal satisfaction in any service on which a high quality rubber gasketing material is required. It is particularly recommended for use on hot or cold water and saturated steam joints at pressures up to 150 lbs. per square inch.

Form — GARLOCK 22 Sheet is regularly sup-

plied in thicknesses from $\frac{1}{16}$ " up to, and including $\frac{1}{4}$ "; standard width, 40".

GARLOCK 122 Gaskets are cut from GARLOCK 22 Sheet Packing. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired.

Approximate length and weight of rolls of GARLOCK 22 Sheet in various thicknesses are listed below:

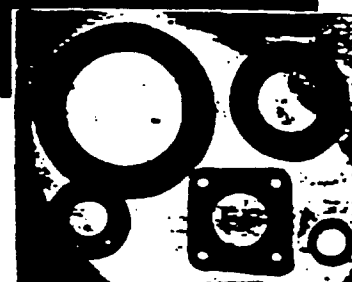
GARLOCK 22 Sheet			
Thickness	Length per Roll	Weight per Roll	Width
$\frac{1}{16}$ "	32 yds.	100 lbs.	40"
$\frac{1}{8}$ "	32 yds.	200 lbs.	40"
$\frac{3}{16}$ "	22 yds.	200 lbs.	40"
$\frac{1}{2}$ "	16 yds.	200 lbs.	40"
$\frac{3}{4}$ "	11 yds.	200 lbs.	40"
1"	8 yds.	200 lbs.	40"

THE STANDARD PACKING OF THE WORLD



GARLOCK 24 SHEET

WIRE INSERTION RED RUBBER SHEET PACKING



GARLOCK 124 GASKETS

Construction — GARLOCK 24 is made from the same high grade red rubber compound used in the manufacture of GARLOCK 22 Red Sheet, reinforced with woven brass wire. This wire is made to our specifications and is specially treated to eliminate oxidation usually present in untreated brass, iron or copper wire.

Service — GARLOCK 24 Wire Insertion Red Sheet is recommended for service on hot or cold water or saturated steam lines. It is particularly useful where gaskets with narrow flanges are required or on pipe lines having considerable vibration.

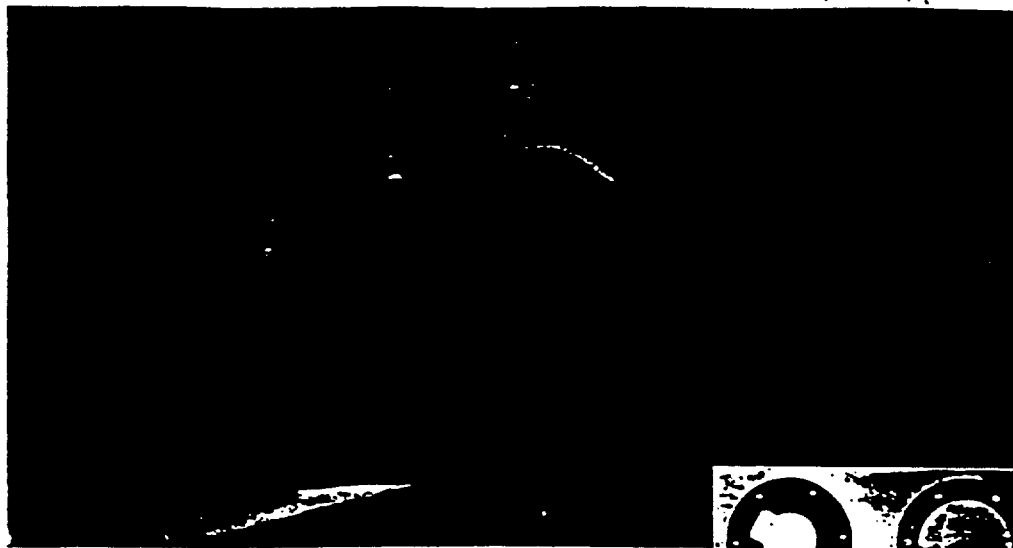
Form — GARLOCK 24 Sheet is obtainable in any thickness from $\frac{1}{8}$ " to $\frac{3}{4}$ ". Standard width of sheet, 40".

GARLOCK 124 Gaskets are cut from GARLOCK 24 Sheet Packing. In addition to the usual round or oval shapes, they are supplied in any odd or special shapes desired.

Approximate length and weight of rolls of GARLOCK 24 Sheet in the various stock thicknesses are listed below:

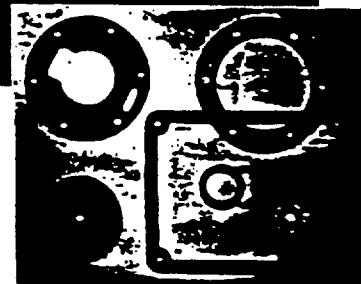
GARLOCK 24 Sheet			
Thickness	Length per Roll	Weight per Roll	Width
$\frac{1}{8}$ "	10 yds.	50 lbs.	40"
$\frac{1}{4}$ "	30 yds.	200 lbs.	40"
$\frac{3}{4}$ "	15 yds.	200 lbs.	40"

THE STANDARD PACKING OF THE WORLD



GARLOCK 353 SHEET

OILBLACK RUBBER SHEET PACKING



GARLOCK 953 GASKETS

Construction — GARLOCK 353 is a high grade black rubber sheet, scientifically compounded to resist the deteriorating action of oils.

Service — Recommended for service against heavy or light oil, hot or cold water, steam, ammonia or alkali solutions.

Form — GARLOCK 353 Sheet is regularly supplied in thicknesses from $\frac{1}{16}$ " up to and

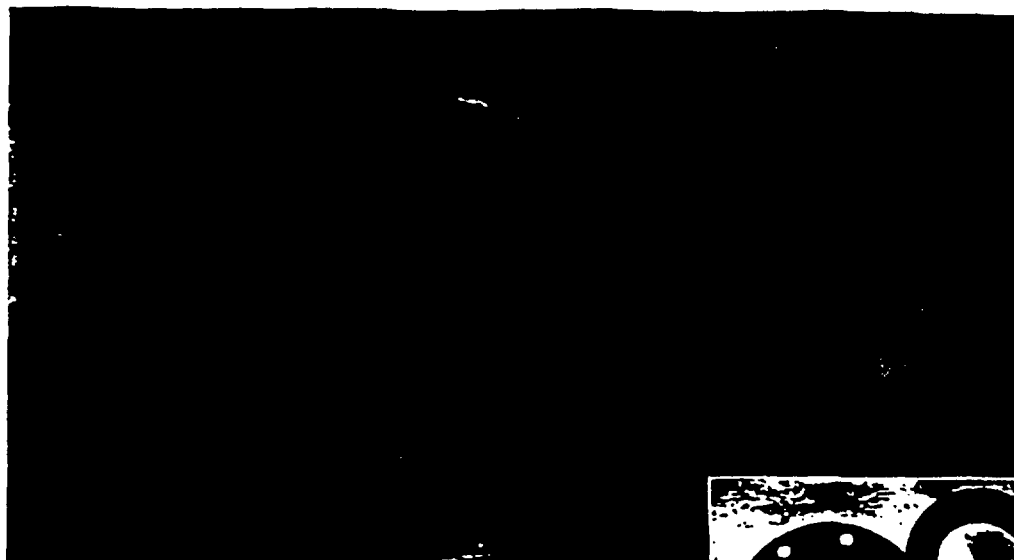
including $\frac{1}{4}$ "; standard width, 40".

GARLOCK 953 Gaskets are cut from GARLOCK 353 Sheet Packing. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired.

Approximate length and weight of rolls of GARLOCK 353 Sheet, in various thicknesses, are listed below:

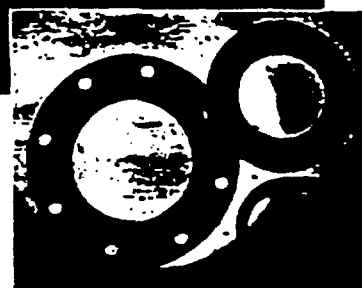
GARLOCK 353 Sheet			
Thickness	Length per Roll	Weight per Roll	Width
$\frac{1}{16}$ "	40 yds.	100 lbs.	40"
$\frac{1}{8}$ "	40 yds.	200 lbs.	40"
$\frac{3}{16}$ "	30 yds.	200 lbs.	40"
$\frac{1}{4}$ "	20 yds.	200 lbs.	40"
$\frac{5}{16}$ "	13 yds.	200 lbs.	40"
$\frac{3}{8}$ "	10 yds.	200 lbs.	40"

THE STANDARD PACKING OF THE WORLD



GARLOCK 19 SHEET

SPECIAL DUCK INSERTION RUBBER SHEET PACKING



GARLOCK 219 GASKETS

Construction — GARLOCK 19 is manufactured from heavy weight, high tensile duck, with covers of strong high grade rubber. Outstanding characteristics of this sheet are long life and lasting resiliency either in service or in stock.

Service — Particularly recommended as a gasket material for heavy hydraulic work as it will not creep in the flanges. Also very often used as door stripping on street cars and as apron cloths in paper mills.

Form — This material is obtainable in the two

forms illustrated above—GARLOCK 19 Sheet and GARLOCK 219 Gaskets.

GARLOCK 19 Sheet is regularly furnished in thicknesses from $\frac{1}{8}$ " up to, and including $\frac{1}{4}$ "; standard width, 40".

GARLOCK 219 Gaskets are cut from GARLOCK 19 Sheet either in round or oval shapes or in special odd shapes to meet particular requirements.

Standard ply construction, and approximate length and weight of rolls of GARLOCK 19 Sheet are shown below:

GARLOCK 19 Sheet				
Thickness	Number of Plies	Length per Roll	Weight per Roll	Width
$\frac{1}{8}$ "	1	34 yds.	100 lbs.	40"
$\frac{1}{16}$ "	1	34 yds.	200 lbs.	40"
$\frac{1}{32}$ "	2	22 yds.	200 lbs.	40"
$\frac{1}{64}$ "	3	17 yds.	200 lbs.	40"
$\frac{1}{128}$ "	3	10 yds.	200 lbs.	40"
$\frac{1}{256}$ "	4	8 yds.	200 lbs.	40"

THE STANDARD PACKING OF THE WORLD



RESISTOIL SHEET PACKING

GARLOCK 681 SHEET

GARLOCK 691 GASKET

Construction — GARLOCK Resistoil Packing is a compressed, vegetable fibre sheet, impregnated with a special preservative compound.

Service — GARLOCK Resistoil Sheet Packing is impervious to the action of cold oils and water. It is particularly recommended for service against cold gasoline.

Form — GARLOCK 681 Sheet is regularly supplied in thicknesses from $\frac{1}{16}$ " to $\frac{1}{4}$ "; standard

width, 40". All thicknesses are produced in sheets measuring 40" x 40", 40" x 80" and 40" x 120"; is also furnished in 100 yard rolls of $\frac{1}{16}$ " and $\frac{1}{8}$ " thicknesses and 50 yard rolls of $\frac{1}{8}$ " thickness.

GARLOCK 691 Gaskets are cut from GARLOCK 681 Sheet Packing. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired.

GRAY RUBBER SHEET PACKING

GARLOCK 91 SHEET

GARLOCK 96 GASKET

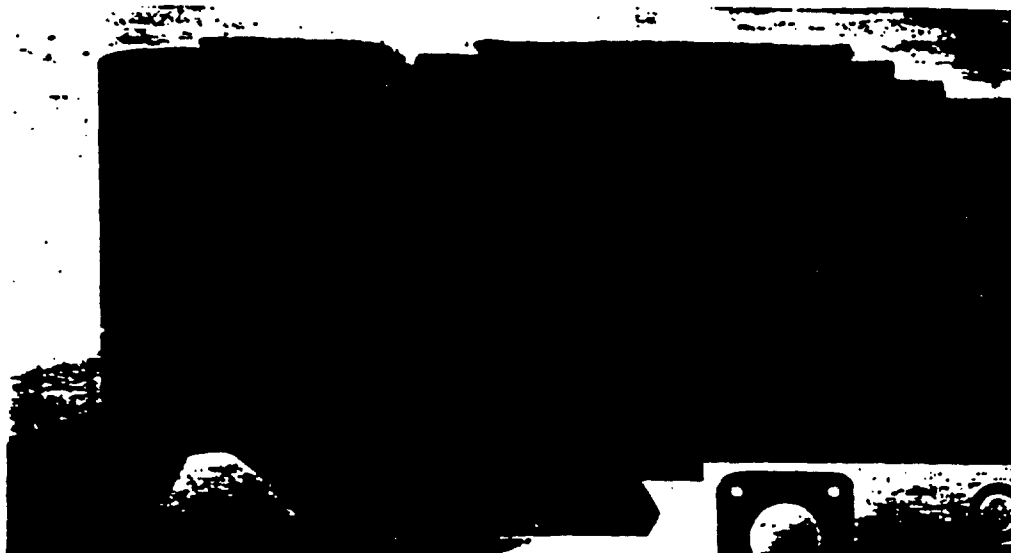
Construction — GARLOCK 91 Sheet is a soft gray rubber sheet containing a high percentage of rubber. Outstanding characteristics are its toughness and its lasting resiliency, either in service or in stock.

Service — Particularly recommended for packing joints of all descriptions against cold water or other fluids. Is extensively used on joints in

which one or both of the flanges are glass, such as peep sights on tanks, etc.

Form — GARLOCK 91 Sheet is regularly supplied in thicknesses from $\frac{1}{16}$ " up to and including $\frac{1}{4}$ "; standard width, 40".

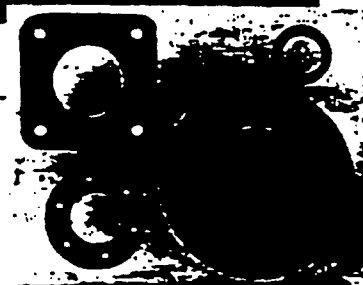
GARLOCK 96 Gaskets are cut from GARLOCK 91 Sheet Packing. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired.



GARLOCK 660 SHEET

GARLOCK SIX-SIXTY SHEET PACKING

(Patent Applied For)



GARLOCK 661 GASKETS

Construction — GARLOCK 660 Sheet Packing is an entirely new product made by combining cork particles with paper-making fibre into compressed sheet form. The processes by which this material is made are protected by a patent application.

GARLOCK 660 Sheet Packing has much greater resiliency than the conventional treated paper sheet; it closely approaches cork in compressibility. The strength of GARLOCK 660 Sheet, however, is much greater than that of cork sheet, and is almost as great as the strength of treated paper.

Service — Recommended for service against gasoline, cold oil or cold water, or for any application on which either treated paper or cork usually is used.

Form — This material is furnished in two forms — GARLOCK 660 Sheet and GARLOCK 661 Gasket.

GARLOCK 661 Gaskets are cut from GARLOCK 660 Sheet. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired.

GARLOCK 660 Sheet can be furnished in thicknesses from .010" to $\frac{1}{4}$ ". Thicknesses up to $\frac{1}{4}$ " can be supplied in roll lots, 36" wide, as specified below. Thicknesses $\frac{1}{4}$ " and over are furnished in 36" square sheets.

Listed below are standard thicknesses up to $\frac{1}{4}$ " together with roll lot quantities and approximate weights per square yard:

GARLOCK 660

Thickness	Maximum Roll Length	Weight per Square Yard	Thickness	Maximum Roll Length	Weight per Square Yard
.010"	100 yds.	.44 lbs.	.047" ($\frac{1}{2}$ ")	50 yds.	1.74 lbs.
.015" ($\frac{1}{16}$ ")	50 yds.	.62 lbs.	.062" ($\frac{1}{4}$ ")	25 yds.	2.06 lbs.
.021"	50 yds.	.82 lbs.	.095" ($\frac{3}{8}$ ")	25 yds.	3.24 lbs.
.032" ($\frac{1}{4}$ ")	50 yds.	1.18 lbs.	.125" ($\frac{1}{2}$ ")	36" sq. sheets	4.12 lbs.

750° corkyade

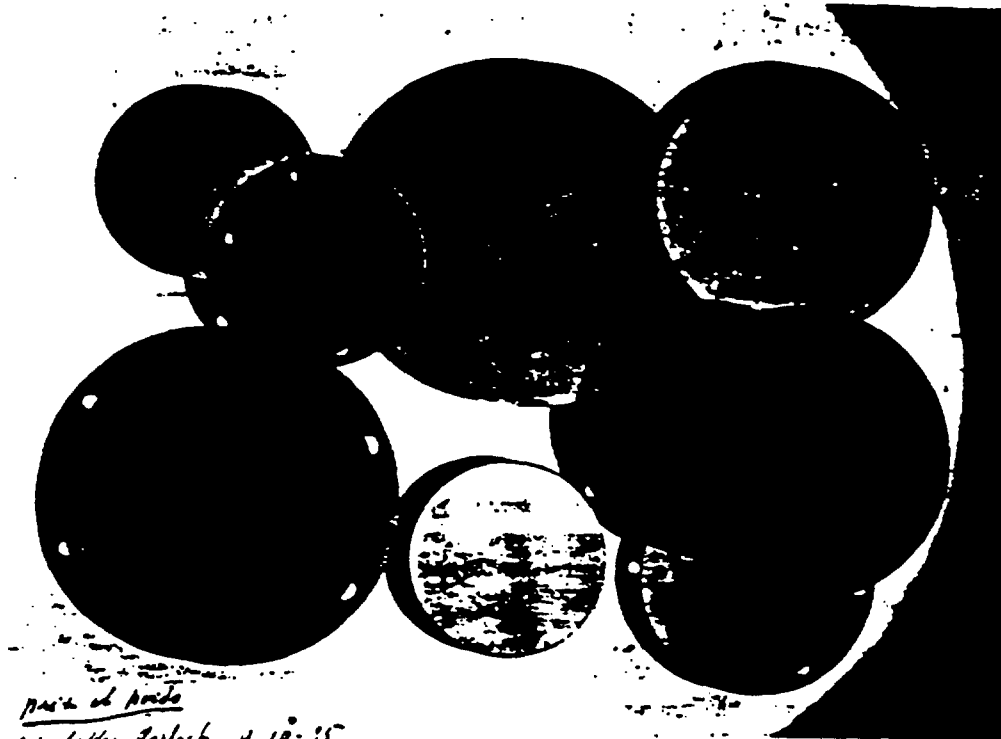
THE STANDARD PACKING TO BE USED

1 Sq. Yard = 2.46 x 10 x 5 x 10 ft. = 100 sq. ft. = 100 sq. yd.

1 m. = 168 x 100 ft. = 16,800 sq. ft.

1 ft. = 12 in. = 12 x 12 in. = 144 sq. in.

Maximum 36"



*Part of photo
in letter Garlock 4-10-35*

GARLOCK DIAPHRAGM SHEETS

A complete line of quality diaphragm stocks for a wide variety of service conditions and an extensive range of pressures is outlined in the following pages.

All weight and pressure data given has been predicated on a single ply insertion and a single standard thickness. In most instances, thicker

sheets with additional cloth plies can be furnished; also, in some cases, sheets thinner than standard are produced.

The bursting strength test indicated on each style was conducted across a 2" circular opening and is intended only to show the comparative strength of the various stocks.

GARLOCK 7543

GARLOCK 7543 Diaphragm Sheet is constructed of a muslin insertion between covers of a very high grade, pure rubber compound.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{16}$ " and a standard width of 40". The approximate weight per square yard in this thickness

is 23 ounces; the bursting strength across a 2" circular opening, approximately 55 pounds.

GARLOCK 7543 is recommended for low pressure service against dry natural gas, air or water. It is particularly suitable where a very sensitive diaphragm is required.

GARLOCK DIAPHRAGM SHEETS—CONTINUED

GARLOCK 7561

GARLOCK 7561 Diaphragm Sheet is constructed of a sheeting insertion between covers of a high grade rubber compound.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{8}$ " and a standard width of 40". The approximate weight per square yard in this thickness

is 30 ounces; the bursting strength across a 2" circular opening, approximately 70 pounds.

GARLOCK 7561 is recommended for low pressure service against dry natural gas, air or water. It is less sensitive than GARLOCK 7543 but is somewhat stronger.

GARLOCK 7603

GARLOCK 7603 Diaphragm Sheet is constructed of a sheeting insertion between covers of GARLOCK Kolutol — a special Thiokol compound impervious to the action of cold oil.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{8}$ " and a standard width of 40". The approximate

weight per square yard in this thickness is 37 ounces; the bursting strength across a 2" circular opening, approximately 70 pounds.

GARLOCK 7603 is recommended for low pressure service against wet natural or manufactured gas, gasoline or oil at temperatures not exceeding 150° Fahrenheit.

GARLOCK 619

GARLOCK 619 Diaphragm Sheet is constructed of a duck insertion, between covers of a high grade rubber compound.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{8}$ " and a standard width of 40". The approximate

weight per square yard in this thickness is 137 ounces; the bursting strength across a 2" circular opening, approximately 130 pounds.

GARLOCK 619 is recommended for medium pressure service against dry natural gas, air or water.

GARLOCK 7715

GARLOCK 7715 Diaphragm Sheet is constructed of a ply of open weave duck, between covers of a very high grade, pure rubber compound.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{8}$ " and a standard width of 40". The approximate weight per square yard in this thickness

is 93 ounces; the bursting strength across a 2" circular opening, approximately 105 pounds.

GARLOCK 7715 is recommended for medium pressure service against dry natural gas, or water. It has extraordinary flexibility and is extremely sensitive to pressure changes.



GARLOCK DIAPHRAGM SHEETS—CONTINUED

GARLOCK 7598

GARLOCK 7598 Diaphragm Sheet is constructed of a high quality duck insertion between covers of GARLOCK Kolutol — a special Thiokol compound impervious to the action of cold oil.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{8}$ " only and a standard width of 40". The approximate

weight per square yard is 73 ounces; the bursting strength across a 2" circular opening, approximately 130 pounds.

GARLOCK 7598 is recommended for medium pressure service against wet natural or manufactured gas, gasoline or oil at temperatures not exceeding 150° Fahrenheit.

GARLOCK 7104

GARLOCK 7104 Diaphragm Sheet is constructed of a heavy duck insertion between covers of a high grade rubber compound.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{4}$ " and a standard width of 40". The approximate

weight per square yard in this thickness is 135 ounces; the bursting strength across a 2" circular opening, approximately 220 pounds.

GARLOCK 7104 is recommended for high pressure service against dry natural gas, air or water.

GARLOCK 7548

GARLOCK 7548 Diaphragm Sheet is constructed of a heavy duck insertion between covers of oil resistant rubber.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{4}$ " and a standard width of 40". The approximate weight per square yard in this thickness is 167

ounces; the bursting strength across a 2" circular opening, approximately 220 pounds.

GARLOCK 7548 is recommended for high pressure service against air or ammonia vapor. It is effective on air compressor, refrigerating machine governors and similar services, where traces of oil are usually encountered.

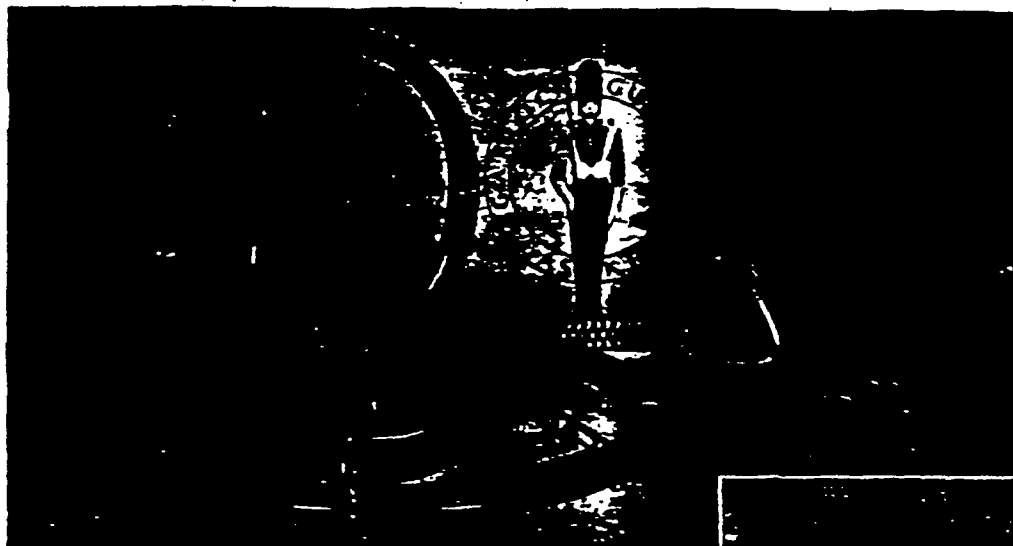
GARLOCK 7677

GARLOCK 7677 Diaphragm Sheet is constructed of an extra heavy duck insertion between covers of a high grade rubber compound.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{4}$ " and a standard width of 40". The approximate weight

per square yard in this thickness is 132 ounces; the bursting strength across a 2" circular opening, approximately 310 pounds.

GARLOCK 7677 is recommended for service at the highest pressures against dry natural gas, air or water.



GARLOCK 555

GARLOCK GUARDIAN GASKETS

(Patent Applied For)



GARLOCK 555 Guardian Gaskets were designed and developed in the GARLOCK Factories, to meet the demand for a dependable gasket for use on severe service conditions.

GARLOCK Guardian Gaskets are constructed of metal and asbestos, combined in a manner which produces a gasket of great resiliency, exceptional rebound and unusual ruggedness. The metal strip used in these gaskets is formed into a shape resembling somewhat the letter M with rounded angles. This is a structural design found in no other gasket.

A double thickness of this metal strip protects and reinforces the inner edge of the gasket. The gasket is then built up to the desired flange width by winding continuous alternating layers of the metal strip and asbestos. A double thickness of metal reinforces the outer edge.

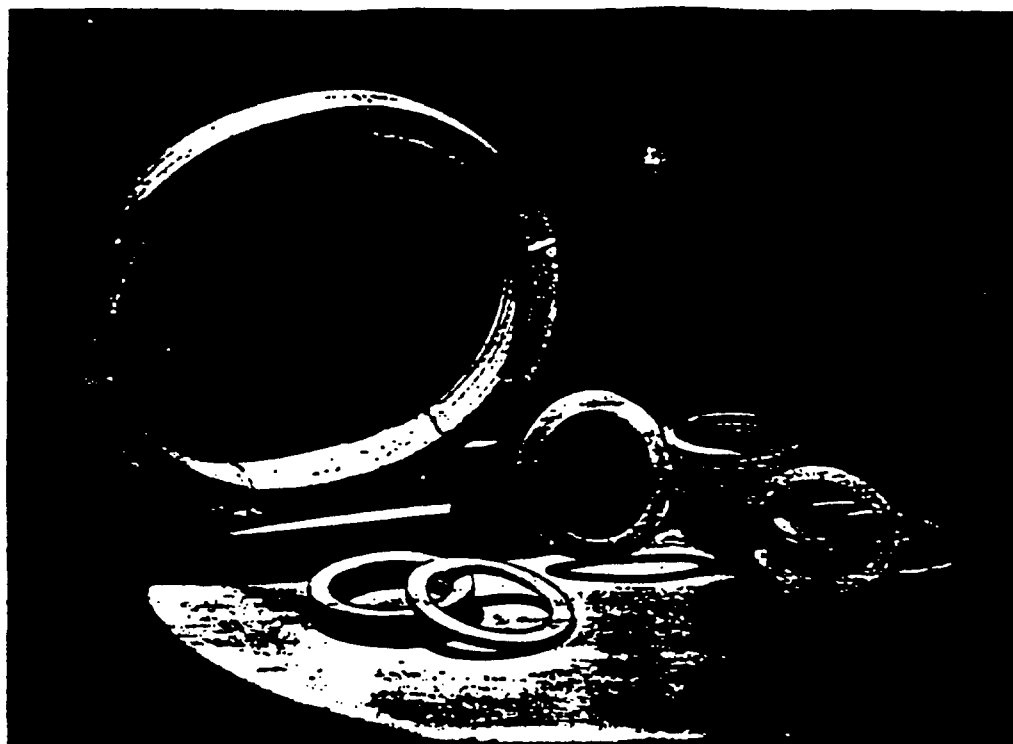
GARLOCK Guardian Gaskets are exceptionally serviceable against steam, gases, or liquids at high temperatures and high pressures. They are particularly recommended for use on pipe lines or on other equipment subject to frequent or extreme temperature changes with the resultant expansion and contraction of the metal parts. The exceptional compressibility and rebound qualities of the Guardian Gasket permit the maintenance of tight joints under such severe conditions.

GARLOCK 555 Guardian Gaskets are made in a standard $\frac{1}{4}$ " thickness. They are produced in round, oval, square, diamond, pear and other shapes. Guardian Gaskets for most standard boiler tube, handhole and manhole plates, and for pipe flanges and fittings are carried in stock.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 604 GASKETS

HIGH PRESSURE FOLDED ASBESTOS GASKETS

Construction — GARLOCK 604 Gaskets are manufactured of asbestos cloth woven from fine wire center, long fibre asbestos yarn. The cloth is treated with a heat resisting compound; it is then folded and pressed to required shape and size.

Service — Recommended for handholes and

manholes of boilers, or for other steam service.

Form — GARLOCK 604 Gaskets are furnished in practically any size or shape desired.

When ordering gaskets, other than round or oval, a template, drawing or sample should be furnished and the required thickness designated.

THE STANDARD PACKING OF THE WORLD



TUBE PLATE GASKETS

GARLOCK HIGH PRESSURE FOLDED ASBESTOS GASKETS FOR WATER TUBE BOILERS

GARLOCK 601 ROUND (Heine)
 GARLOCK 601 OVAL (Heine)
 GARLOCK 602 OVAL (B & W)
 GARLOCK 602 SQUARE (B & W)
 GARLOCK 6007 OVAL (Edgemoor)

Construction — These gaskets are manufactured of GARLOCK Asbestos Cloth woven from fine wire center, long fibre asbestos yarn. The cloth is treated with a heat resisting compound: it is then folded and pressed to required shape and size.

Service — GARLOCK 601 Round Gaskets are recommended for service on round tube plates of Heine Water Tube Boilers.

GARLOCK 601 Oval Gaskets are recommended for service on oval tube plates of Heine Water Tube Boilers.

GARLOCK 602 Oval Gaskets are recommended for service on oval tube plates of B & W Water Tube Boilers.

GARLOCK 602 Square Gaskets are recommended for service on square tube plates of B & W Water Tube Boilers.

GARLOCK 6007 Oval Gaskets are recommended for service on the tube plates of Edgemoor Water Tube Boilers.

Form — Standard sizes are as follows:

601 Round — $3\frac{1}{2} \times 4\frac{1}{4} \times \frac{1}{8}$ thick
 601 Oval — $3\frac{1}{2} \times 4\frac{1}{4} \times \frac{1}{8} \times \frac{1}{8}$ thick
 602 Oval — $4\frac{1}{2} \times 5\frac{3}{8} \times \frac{1}{8} \times \frac{1}{8}$ thick
 602 Square — $4\frac{1}{2} \times 4\frac{1}{4} \times \frac{1}{8} \times \frac{1}{8}$ thick
 6007 Oval — $4\frac{1}{8} \times 5\frac{1}{8} \times \frac{1}{2} \times 4$ ply thick

THE STANDARD PACKING OF THE WORLD



GARLOCK 612

ASBESTOS TAPE

Construction — GARLOCK 612 Asbestos Tape is a folded tape manufactured of wire inserted asbestos cloth treated with a heat resisting compound.

Service — Recommended for service against all steam pressures on cylinder heads, heater doors and other mechanical equipment where a

heat resisting asbestos tape is required.

Form — GARLOCK 612 is furnished in practically any width and thickness desired. There is no standard length of coil or regular box quantity. In ordering, length or amount of tape should be specified in addition to the width and thickness dimensions.

ASBESTOS TUBULAR GASKETING

GARLOCK 610 GASKETING
GARLOCK 611 FORMED GASKETS

Construction — GARLOCK 610 is a high pressure tubular gasketing material constructed of GARLOCK wire inserted asbestos cloth frictioned with a heat resisting compound and formed with a hollow center. With each box of GARLOCK 610, connecting leads and friction tape for use in forming gaskets, are furnished.

Service — GARLOCK 610 is recommended for

high pressure steam service on the handholes and manholes of boilers, heater doors and large tanks.

Form — GARLOCK 610 Gasketing is regularly furnished in 12½ and 25 foot coils; standard sizes ¾" to 1", advancing by sixteenths. GARLOCK 611 Gaskets, which are formed from GARLOCK 610, are furnished in any specified size.

THE STANDARD PACKING OF THE WORLD



CORRUGATED METAL GASKETS

GARLOCK 511

Construction — GARLOCK 511 Gaskets are manufactured from a single thickness of metal, corrugated in cross section. Although copper gaskets are usually supplied, steel, monel metal, aluminum or other metal can be furnished when specified.

Service — Recommended for use on steam lines and for all general flange gasket service. Should be used only for application to machine finished joints and flanges.

Form — GARLOCK 511 Gaskets are furnished to the following specifications:

1. Standard overall thickness of gasket — approximately $\frac{1}{8}$ ".
2. Maximum outside diameter of gasket — 23 $\frac{1}{4}$ ".
3. Shape of gasket — round only.

CORRUGATED METAL-ASBESTOS GASKETS

GARLOCK 512

Construction — GARLOCK 512 Gaskets are made of single thickness corrugated metal, with asbestos cord superimposed in the corrugations on either side of the gasket. Although copper gaskets are usually supplied, steel, monel metal, aluminum or other metals can be furnished when specified.

Service — GARLOCK 512 Gaskets are recommended for service against superheat steam and other severe conditions. They are particularly suitable for application to rough and uneven surfaces, or in piping slightly out of alignment.

Form — GARLOCK 512 Gaskets are furnished to the following specifications:

1. Standard overall thickness of gasket — approximately $\frac{1}{4}$ ".
2. Maximum outside diameter of gasket — 23 $\frac{1}{4}$ ".
3. Shape of gasket — round only.

CORRUGATED LEAD GASKETS

GARLOCK 516

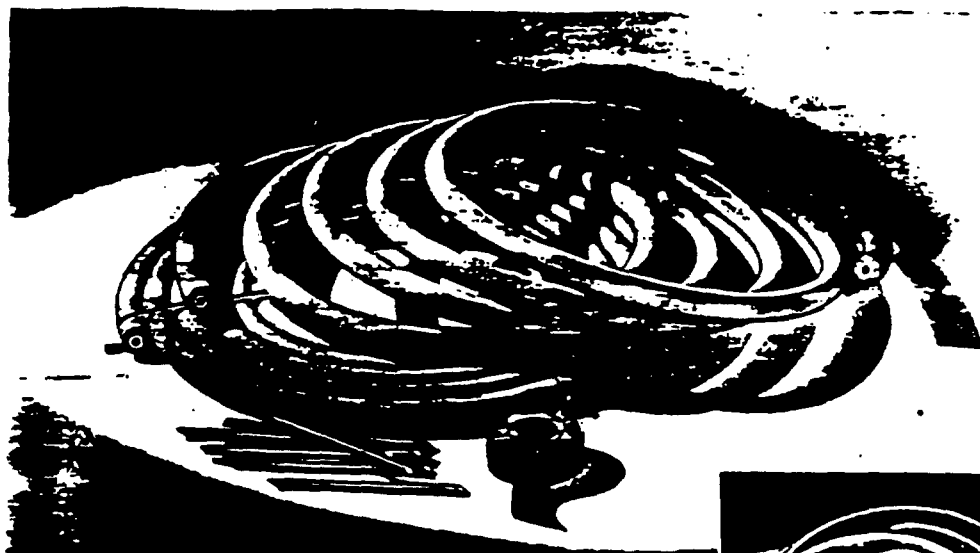
Construction — GARLOCK 516 Gaskets are made from a single thickness of lead sheet, corrugated in cross section.

used, however, against other petroleum products, alcohol or in any service for which lead gaskets are suitable.

Service — Particularly recommended for service on oil and gasoline drums. They may be

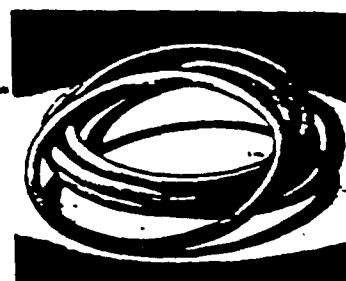
Form — GARLOCK 516 Gaskets are furnished to the following specifications:

1. Thickness of lead sheet — $\frac{1}{16}$ " or $\frac{1}{8}$ ".
2. Maximum outside diameter of gasket — 29 $\frac{1}{2}$ ".
3. Shape of gasket — round only.



GARLOCK 500 GASKETING

METAL INSERTION RED TUBULAR GASKETING MATERIAL



GARLOCK 501 GASKETS

Construction — GARLOCK 500 is a red tubular gasketing material with a soft metal tube insertion. With each box of GARLOCK 500, connecting leads and friction tape, for use in forming gaskets, are furnished.

Service — GARLOCK 500 is recommended for service against steam pressures up to 150 lbs. per square inch. It is widely used as a gasketing on manholes and handholes of boilers, heater doors and large tanks.

Form — GARLOCK 500 is regularly furnished in 12½ foot coils; it can also be supplied in continuous lengths on reels. Standard sizes are from ¼" to 1", advancing by sixteenths.

GARLOCK 501 Gaskets, which are formed from GARLOCK 500, are furnished in any specified size.

Listed below are approximate weights applying to 12½ foot coils of GARLOCK 500 in the stock sizes:

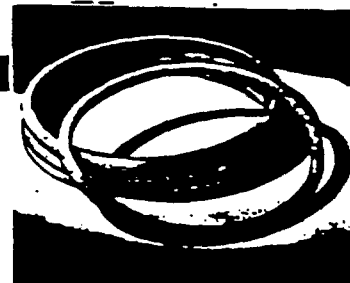
Size	Coils per Box	Connections per Box	Weight per Box
¼"	3	30	5 lbs.
½"	2	20	5 ½ lbs.
¾"	2	15	10 ½ lbs.
1"	2	12	13 ½ lbs.

THE STANDARD PACKING OF THE WORLD



GARLOCK 28 GASKETING

RED TUBULAR GASKETING MATERIAL



GARLOCK 281 GASKETS

Construction — GARLOCK 28 is a tubular gasketing material manufactured from a high grade, resilient red rubber compound. With each box of GARLOCK 28, connecting leads and friction tape, for use in forming gaskets, are furnished.

Service — GARLOCK 28 is recommended for service against hot and cold water, low pressure steam and air. It is widely used as a gasketing on manholes and handholes of boilers, heater doors and large tanks.

Form — GARLOCK 28 Gasketing is regularly furnished in 12½ foot coils; it can also be supplied in continuous lengths on reels. Standard sizes, ¼" to 1", advancing by sixteenths.

GARLOCK 281 Gaskets, which are formed from GARLOCK 28, are furnished in any specified size.

Listed below are approximate weights applying to 12½ foot coils of GARLOCK 28 in the stock sizes:

Size	Coils per Box	Connections per Box	Weight per Box
¼"	4	30	4¾ lbs.
½"	3	20	5¾ lbs.
¾"	2	15	6¾ lbs.
1"	2	12	8¾ lbs.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK RUBBER TUBINGS

GARLOCK 1 (Soft Black)
GARLOCK 2 (Soft White)

Construction — GARLOCK Tubings are manufactured from high grade rubber stocks specially compounded to insure long life and the maintenance of proper resiliency in the particular services for which they are recommended.

Service — GARLOCK 1 Tubing is a soft, high grade black stock specially developed and recommended for laboratory work.

GARLOCK 2 Tubing is a soft, white stock particularly desirable for use in hospitals and all places where a high grade white stock is required.

GARLOCK 3 (Semi-hard Black)
GARLOCK 4 (Medium Soft Red)

GARLOCK 3 is a semi-hard, black tubing having oil resisting qualities. It is also a desirable tubing for service in chemical and dye works.

GARLOCK 4 is a good grade, medium soft, red rubber tubing. It is recommended for general service such as ice plants, etc., where a red rubber tubing is desired.

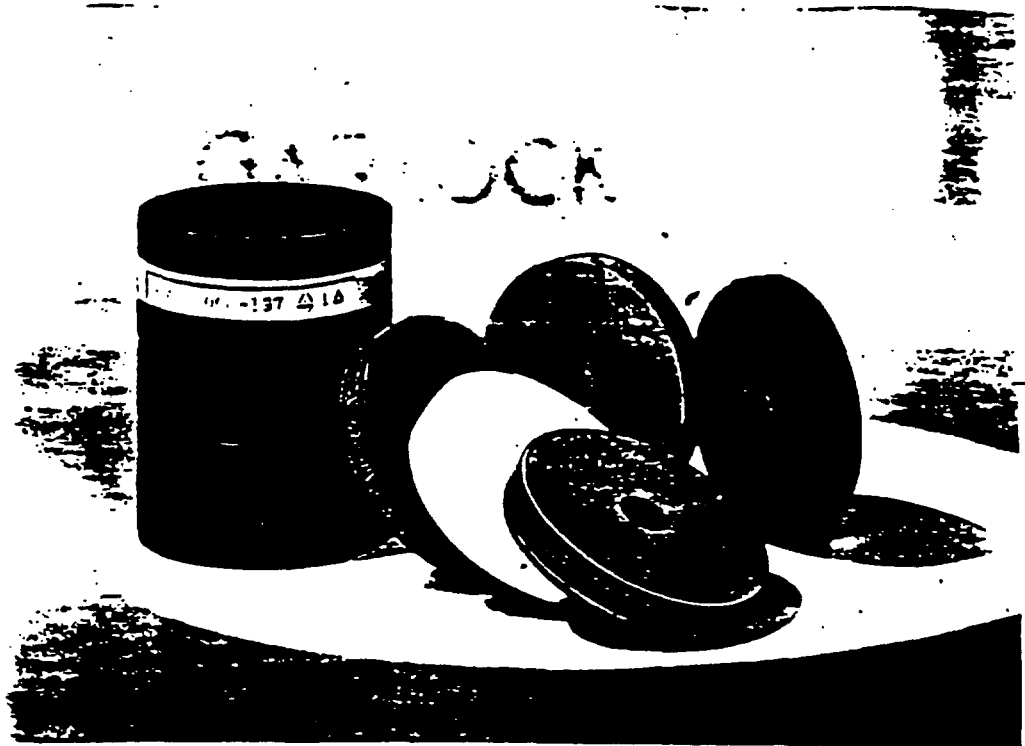
Form — All GARLOCK Tubings are obtainable in an extensive range of sizes. A few typical sizes with approximate weights per hundred feet are listed below:

I.D.	Wall Thickness	O.D.	Approximate Weight per C Feet			
			No. 1	No. 2	No. 3	No. 4
$\frac{1}{8}$	$\frac{1}{16}$	$\frac{3}{8}$	7.4 lbs.	1.3 lbs.	1.03 lbs.	1.42 lbs.
$\frac{1}{4}$	$\frac{1}{8}$	$\frac{1}{2}$	1.67 lbs.	2.94 lbs.	2.33 lbs.	3.20 lbs.
$\frac{3}{8}$	$\frac{3}{16}$	$\frac{5}{8}$	2.98 lbs.	5.23 lbs.	4.15 lbs.	5.7 lbs.
$\frac{1}{2}$	$\frac{1}{4}$	$\frac{3}{4}$	5.80 lbs.	10.2 lbs.	8.08 lbs.	11.1 lbs.
$\frac{5}{8}$	$\frac{5}{16}$	$\frac{7}{8}$	9.50 lbs.	16.7 lbs.	13.25 lbs.	18.2 lbs.
$\frac{3}{4}$	$\frac{3}{8}$	$\frac{7}{8}$	14.1 lbs.	24.8 lbs.	19.7 lbs.	26.98 lbs.
$\frac{7}{8}$	$\frac{7}{16}$	1	28.5 lbs.	50.1 lbs.	39.8 lbs.	54.5 lbs.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK PUMP VALVES

A complete line of rubber and composition Pump Valves for a wide variety of service conditions is described on the following page. This GARLOCK line provides a pump valve suitable for service against practically any liquid or pressure.

Conditions most commonly encountered are:

Cold Water	Acids
Warm Water	Alkalies
Hot Water	Fruit Juices
Gritty or Muddy Water	Cane Juices
Hot or Cold Oils	Air (Vacuum Pump)

Higher pressures and temperatures generally require the use of hard valves. For lower temperatures and pressures, softer valves are usually more suitable. The proper hardness or density of the valve, however, is also dependent to some extent upon the diameter and thickness of the valve and upon the chemical properties of the

liquids to be pumped. It should be understood, therefore, that the recommendations appearing on the following pages are general in character; they do not apply to unusual or extreme conditions.

A survey of your equipment and operating conditions by a GARLOCK Representative will insure the specification of the proper GARLOCK Pump Valve for your service. When inconvenient to have that survey made, full and complete answers to the following questions will provide the necessary information for determining the correct valve for your requirements:

1. Diameter of valve?
2. Size of hole?
3. Thickness of valve?
4. Exact nature of the liquid?
5. Temperature of the liquid?
6. Pressure against the valve?
7. Is it a straight or a curved guard pump?

THE STANDARD PACKING OF THE WORLD



GARLOCK



GARLOCK PUMP VALVES

HARD VALVES

GARLOCK 108

GARLOCK 108 is a very hard, black rubber valve recommended for service on hot water, hot oils, gasoline, syrups, alkali, lye and other solutions at temperatures up to 212° and at any pressure. GARLOCK 108 has proven in years of successful service its suitability for the high temperatures, heavy duty work for which it is recommended.

GARLOCK 155 AMBERITE

GARLOCK 155 is a very hard, Bakelite valve particularly recommended for hot or cold oil service. It will operate satisfactorily against high temperatures and pressures.

GARLOCK 156 GRAYBLACK

GARLOCK 156 is a very hard, asbestos composition pump valve particularly recommended for hot or cold oil service. It will operate satisfactorily against high temperatures and pressures.

GARLOCK 188 VALVES

GARLOCK 188 is a hard, black valve recommended for warm or cold water service at pressures from 125 pounds to 300 pounds per square inch. It is particularly recommended for the heavy duty service usually encountered on mine pumps and similar equipment.

MEDIUM VALVES

GARLOCK 182

GARLOCK 182 is a medium hard, gray rubber valve developed for cold water service at pressures from 75 pounds to 125 pounds per square inch. This valve is highly recommended for heavy duty cold water service usually found on city pumping station installations and hydrant valves.

GARLOCK 359

GARLOCK 359 is a medium hard, black valve recommended for cold water or cold oil service at pressures from 75 pounds to 125 pounds per square inch. Because of its toughness, GARLOCK 359 is particularly serviceable when used in contact with water containing sand or grit.

GARLOCK 139

GARLOCK 139 is a medium soft, gray valve recommended for cold water service at pressures from 50 to 75 pounds.

GARLOCK 175

GARLOCK 175 is a medium soft, gray valve recommended for cold water service at pressures from 50 to 75 pounds.

GARLOCK 189

GARLOCK 189 is a medium soft, white valve recommended for cold water service at pressures from 50 to 75 pounds.

SOFT VALVES

GARLOCK 154

GARLOCK 154 is a very soft, red rubber valve recommended for marine condenser and air service. It is particularly recommended for lake and ocean condenser service.

GARLOCK 151

GARLOCK 151 is a very soft, gray valve recommended for air and marine condenser service.

GARLOCK 152

GARLOCK 152 is a very soft, red valve recommended for air and marine condenser service.

GARLOCK 197

GARLOCK 197 is a very soft, white valve recommended for air and marine condenser service.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 111 DISCS

GARLOCK VALVE DISCS

Construction — GARLOCK 111 Valve Discs are manufactured from a heat-resisting asbestos and rubber compound, developed for use against the high steam pressures and temperatures encountered in valve disc service.

Service — Recommended for all globe and angle valves of the standard disc type. In addition to high steam pressures, GARLOCK 111 Valve Discs are also recommended for hot oil, hot water and many acid conditions.

Form — GARLOCK 111 Valve Discs are manufactured both in the round and oval hole type.

They are supplied in all standard sizes, and in many special sizes and shapes.

Special Discs — For special service conditions, for which GARLOCK 111 Discs may not be entirely suitable, valve discs having the necessary characteristics for that specific service are furnished. Full information as to temperature, pressure and operating conditions are necessary to permit the development and manufacture of these special discs.

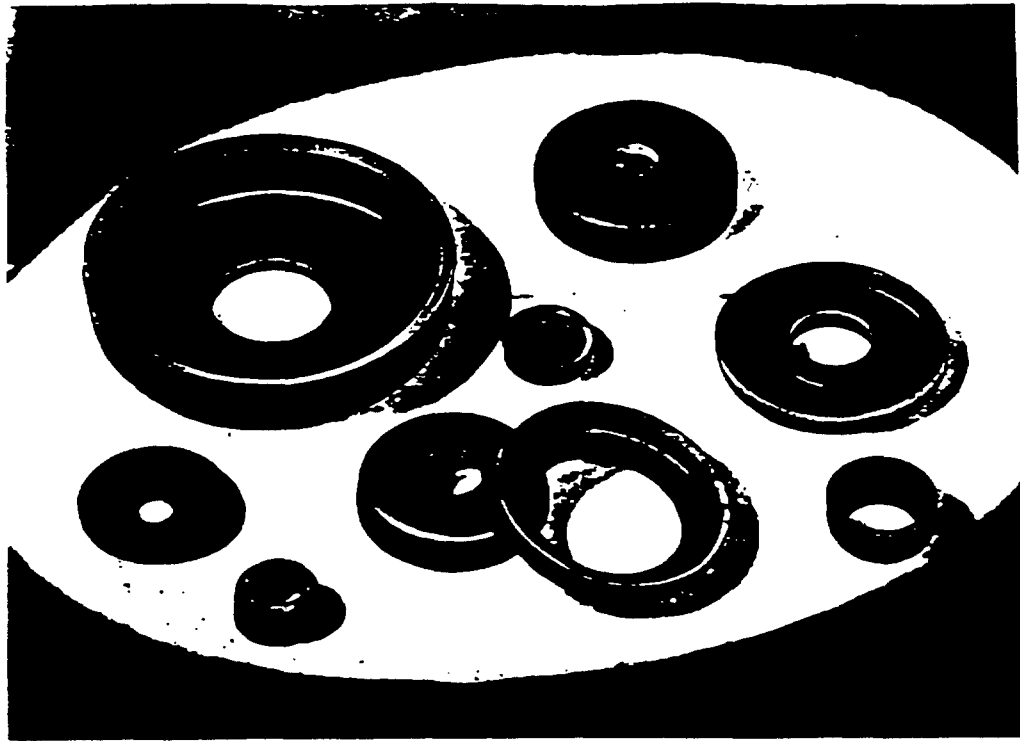
Standard sizes and list prices on GARLOCK Valve Discs are given below:

GARLOCK 111 VALVE DISCS					
Size	List Price Each	Size	List Price Each	Size	List Price Each
1/2"	\$.03	2"	\$.18	6"	\$1.00
3/4"	.04	2 1/2"	.21	7"	1.20
1"	.04	3"	.30	8"	1.40
1 1/4"	.05	3 1/2"	.40	9"	1.80
1 1/2"	.06	4"	.60	10"	2.25
1 3/4"	.09	4 1/2"	.70	12"	2.50
2"	.12	5"	.80		

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK MOLDED PACKING CUPS

Construction — GARLOCK Molded Packing Cups are made of asbestos, duck or other fabrics, frictioned with heat and oil resisting compounds varied to meet specific service conditions.

Service — Included in the GARLOCK Line are cups to meet every possible service condition including steam, air, water and oil.

GARLOCK Molded Packing Cups are recommended for service on any equipment on which

cup packings are used. A few of the most common of these applications are:

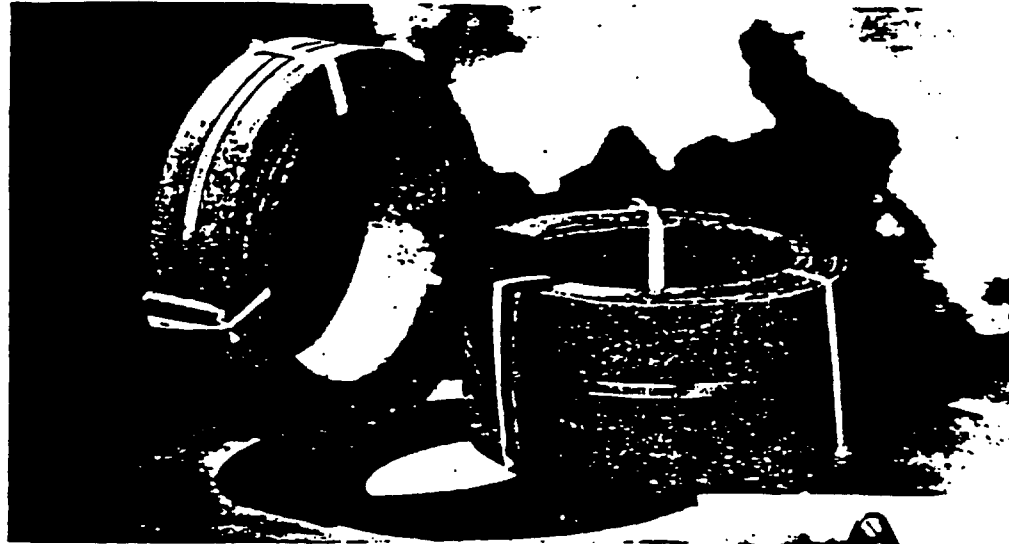
Air Hoists	Air Rams
Pneumatic Chucks	Steam Cylinders on
Hydraulic Presses	Vulcanizers
	Steam Rams

Form — GARLOCK Molded Packing Cups are produced in hundreds of different sizes, ranging in diameter from $\frac{1}{2}$ " up to 20". "U" and hat type packings can be supplied in a limited size range.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 701

INDUSTRIAL BRAKE LINING



GARLOCK 701 Industrial Brake Lining was developed to meet a real need for a rugged, serviceable and dependable lining for industrial equipment. In every respect it is a superior product.

Construction — GARLOCK Industrial Brake Lining is constructed of high quality GARLOCK Wire inserted asbestos cloth, impregnated with a special rubber compound. It is folded, molded and vulcanized under 2000 pounds pressure.

Service — GARLOCK 701 Lining is highly recommended for severe service conditions on all types of industrial equipment. Some of its

many service applications are listed below:

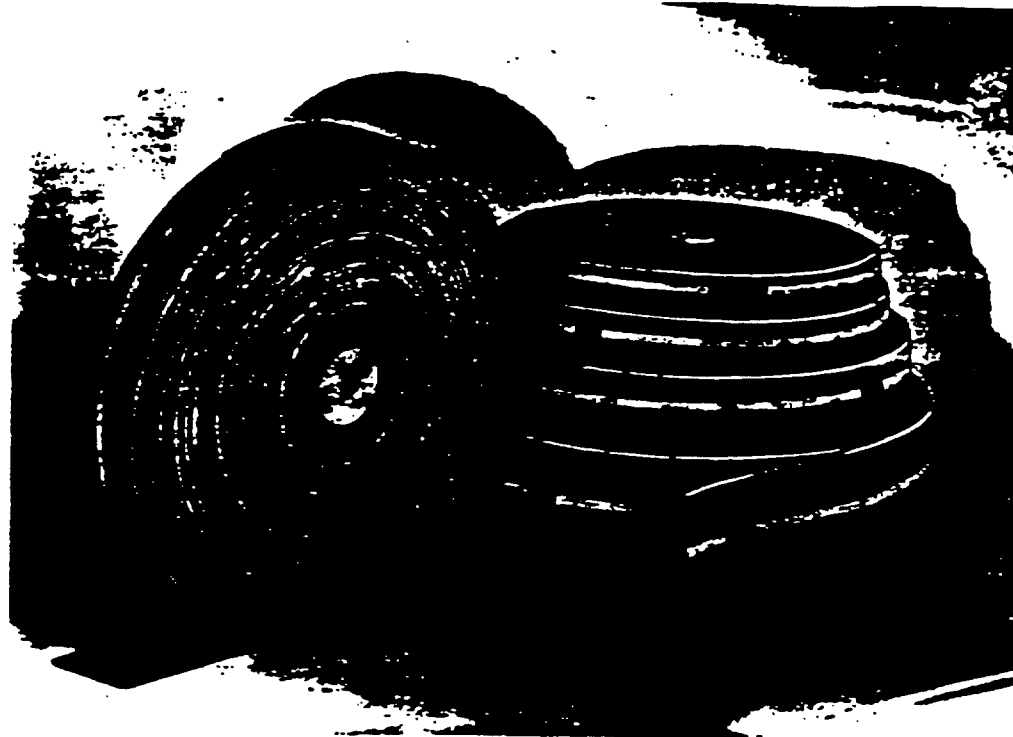
Steam Shovels	Elevators
Excavating Machines	Lift Bridges
Ditchers	Industrial Locomotives
Hoists and Derricks	Drag Lines
Concrete Mixers	Steam Rollers
Cranes	Graders
Logging Equipment	Airplane Catapults
Road Building Machinery	Car Pullers

Form — GARLOCK 701 is furnished in all standard brake lining sizes from 1" wide x 1/4" thick to 12" wide x 1" thick. Standard rolls contain 100 feet; half rolls contain 50 feet. In the larger sizes it will be furnished in short lengths cut to specified sizes.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK 725

RUBBER TRANSMISSION BELTING

With the development of GARLOCK 725 Rubber Transmission Belting a new high standard for rubber belts was established. From the specification and selection of raw materials entering into this product to the finished belt, every step in its manufacture is carried out with the sole idea of producing a quality belt.

Construction — GARLOCK Rubber Transmission Belting is constructed of two or more plies of high grade belting duck, frictioned with a special rubber compound. It is folded to size and cured under tremendous pressure.

Service — GARLOCK Belting is recommended

for all power transmission work where a flat belt is suitable. Many successful installations of GARLOCK Belting have been made on conditions where inferior rubber belts have failed. Outstanding characteristics of GARLOCK belting are:

1. Extremely long life.
2. Superior wearing qualities.
3. Unusual flexibility.
4. Exceptional gripping power.
5. Rugged strength.

Form — Furnished in all standard belt sizes from 1"-2 ply to 28"-12 ply. When ordering specify exact length desired.

THE STANDARD PACKING OF THE WORLD



GARLOCK

GARLOCK RUBBER APRONS

ACID-RESISTANT APRON

GARLOCK 7106

GARLOCK 7106 Rubber Aprons for acid service are constructed of a single ply of fine cotton fabric frictioned on both sides with a high grade, black rubber compound.

This apron is highly recommended for use in sheet and tin plate mills, chemical plants, process plants and in the many other industries

where acids are used. It also is an excellent garage apron.

GARLOCK 7106 Aprons are cut in a proper shape to give complete protection and are furnished with strongly reinforced, brass eyelets correctly placed for tie-strings.

Listed below are dimensions and weights of the two standard sizes of GARLOCK 7106 Aprons:

	Length	Width	Weight Each
Large Size	45"	32"	40 oz.
Small Size	39"	25"	28 oz.

GREASE RESISTANT APRON

GARLOCK 7663

GARLOCK 7663 Rubber Aprons for grease service are constructed of a single ply of fine cotton fabric frictioned on both sides with a high grade, black rubber compound.

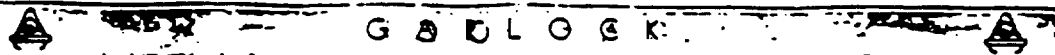
This apron is highly recommended for use in creameries and dairies, packing plants, milk handling plants and similar industries.

GARLOCK 7663 Aprons are cut in a shape which affords complete protection and are furnished with strongly reinforced, brass eyelets properly placed for the tie-strings.

Listed below are dimensions and weights of the two standard sizes of GARLOCK 7663 Aprons:

	Length	Width	Weight Each
Large Size	45"	32"	27 oz.
Small Size	39"	25"	19 oz.

THE STANDARD PACKING OF THE WORLD



GASKET AND LUBRICATING COMPOUNDS

GARLOCK GASKET PASTE

COMPOUND No. 1

GARLOCK Gasket Paste, Compound No. 1, is a development of the GARLOCK Laboratories for application to all kinds of gaskets operating against gasoline, oil and petroleum derivatives, either hot or cold. It is also an excellent compound for wiping threaded joints on pipe lines carrying the same liquids.

Outstanding advantages of GARLOCK Compound No. 1 are as follows:

1. It is not harmful to gaskets of any kind.
2. It is highly resistant to gasoline and oil.
3. It has the correct body for a seal and expands under heat, making a tight joint.
4. It will not discolor gasoline or similar clear liquids.
5. It is ready for immediate application. No thinning is necessary.
6. It will not spoil or ferment in storage.

GARLOCK Gasket Paste, Compound No. 1, is supplied in 12 ounce, 24 ounce, and 5 pound cans; also in bulk for large users.

GARLOCK LUBRICATING PASTE

COMPOUND No. 2

GARLOCK Lubricating Paste, Compound No. 2, is an external lubricant for application to rod packings working against steam, hot water, cold water, and water solutions.

Before applying packing to the stuffing box it should be heavily coated with this Compound. Subsequent applications should be made as required, either by swabbing on the rod or plunger, or under pressure with an Alemite or similar fitting.

Outstanding advantages of GARLOCK Lubricating Paste, Compound No. 2, are as follows:

1. It has high lubricating value, reducing friction to a minimum.
2. It has a long lubricating life due to its great heat resistance and its general wearing qualities.
3. It does not become water thin under heat but maintains a proper viscosity at all times.
4. It is water and steam proof and is not readily washed out.
5. It is a splendid rust and corrosion preventative which particularly recommends it for use with packings installed on new equipment.
6. It is beneficial to any packing and prolong its life in service.

GARLOCK Lubricating Paste, Compound No. 2, is supplied in 12 ounce, 24 ounce and 5 pound cans; also in bulk for large users.

GARLOCK LUBRICATING PASTE

COMPOUND No. 3

GARLOCK Lubricating Paste, Compound No. 3, is an external lubricant for application to rod packings working against gasoline, benzine, oils, ether, carbon tetrachloride, kerosene, diphenyl, and all vapors and chemicals of an oily nature.

Before applying packing to the stuffing box it should be heavily coated with this Compound. Subsequent applications of the lubricant should be made as required, either by swabbing on the rod or plunger, or under pressure with an Alemite or similar fitting.

The use of GARLOCK Lubricating Paste, Compound No. 3, accomplishes the following purposes:

1. It increases the life of the packing by making it more resistant to the deteriorating action of gasoline and other solvents.
2. It prevents seepage of insidious liquids and gases through the packing.
3. It makes possible leak proof operation without excessive gland pressure thereby reducing friction power loss.

GARLOCK Lubricating Paste, Compound No. 3, is not recommended as a rust and corrosion preventative for use on packings installed on new equipment.

GARLOCK Lubricating Paste, Compound No. 3, is supplied in 12 ounce, 24 ounce and 5 pound cans; also in bulk for large users.

THE STANDARD PACKING OF THE WORLD

GARLOCK ASBESTOS TINNING MACHINE BRUSHES

(Patented)

GARLOCK Asbestos Tinning Machine Brushes are constructed of wire inserted asbestos cloth, plied up fold upon fold. They have a raw wearing edge, which may be bevelled to suit the contour of the tinning machine rolls. The plies of the brushes are sewed together with wire stitching.

GARLOCK Asbestos Tinning Machine Brushes are furnished in two types; the solid brush and

the hollow back brush. The hollow back type is used in conjunction with a filler of asbestos or metal.

GARLOCK Asbestos Tinning Machine Brushes are furnished in a complete range of sizes for application on the rolls of tinning machines. When ordering, the width, thickness and length of brush should be specified.

CONDENSER TUBE PACKING

GARLOCK 954

Construction — GARLOCK 954 Rings are molded from specially treated unvulcanized asbestos fibrous compound. They are regularly supplied with a graphite treatment.

Service — Recommended as a condenser tube

packing to meet every requirement of the service.

Form — GARLOCK 954 Rings are furnished in sizes to suit any condenser equipment. They are easily applied with a special tool, which will be furnished on request at a nominal charge.

THE STANDARD PACKING OF THE WORLD

GARLOCK KOLUTOL PRODUCTS

GARLOCK Kolutol Packings and other Kolutol products are manufactured from special compounds, developed in the GARLOCK Laboratories, containing Thiokol. This Company has been one of the pioneers in adapting Thiokol as an ingredient of packings.

In the compounding of Kolutol products, all of the desirable and unusual characteristics of Thiokol have been retained. Kolutol products, therefore, have the ^{elasticity} resiliency of rubber, but unlike rubber, are entirely ^{impervious} impervious to the deteriorating action of oil, gasoline, benzene,

ether, carbon tetrachloride and other liquids which are rubber solvents. Kolutol products are not recommended for any service on which temperatures in excess of 180° Fahrenheit are encountered. 7:15

GARLOCK Kolutol materials are produced in a variety of forms. Constant research and experimental work is resulting in the frequent addition of new Kolutol products to those already developed. The most commonly used GARLOCK Kolutol styles are indicated below:

GARLOCK	Form	Construction
7601	Sheet	Plain Kolutol Compound
7601	Gasket	Plain Kolutol Compound
7601	Ring	Plain Kolutol Compound
7601	Tubing	Plain Kolutol Compound
7603	Sheet	Cloth Inserted Kolutol Compound
7603	Gasket	Cloth Inserted Kolutol Compound
7700	Sheet	Wire Inserted Kolutol Compound
7700	Gasket	Wire Inserted Kolutol Compound
7716	Cup	Kolutol combined with Fabric
7720	Ring	Kolutol combined with Duck
7720	Disc	Kolutol combined with Duck

GARLOCK CORD PLUGS

(Patented)

Construction — GARLOCK Cord Plugs are constructed of alternate plies of an open weave cord cloth and specially compounded rubber, vulcanized together under pressure. They are a patented product.

Service — Recommended for cleaning and scouring the inside walls of condenser tubes. Due to their sturdy construction, GARLOCK Cord Plugs can be used many times before becoming worn.

Form — GARLOCK Cord Plugs are furnished

in $\frac{3}{4}$ " thickness and in ten standard diameters. This range of sizes includes a plug to fit any standard tubes with which condensers are equipped.

The air gun for use in shooting GARLOCK Plugs is simple in design and can be made in any machine shop equipped with a lathe. Instructions as to the necessary parts and construction of the gun will be furnished on request.

The table below indicates the proper GARLOCK Plug number for tubes of different diameters and gauge.

Outside Diameter of Tube	Gauge (Birmingham or Stubbs Iron Wire)	Plug No.	Outside Diameter of Tube	Gauge (Birmingham or Stubbs Iron Wire)	Plug No.
1 "	16	1016	$\frac{3}{4}$ "	17	3417
1 "	18	1018	$\frac{3}{4}$ "	18	3418
$\frac{1}{4}$ "	16	7816	$\frac{3}{4}$ "	16	5816
$\frac{1}{4}$ "	18	7818	$\frac{3}{4}$ "	17	5817
$\frac{1}{4}$ "	16	3416	$\frac{3}{4}$ "	18	5818

THE STANDARD JACKING OF THE WORLD



SHREDDED METAL RINGS

SHREDDED METAL PACKINGS



SHREDDED METAL COIL

Construction — GARLOCK Shredded Metal Packings are produced of strands of soft metal treated with a binding compound and flake graphite.

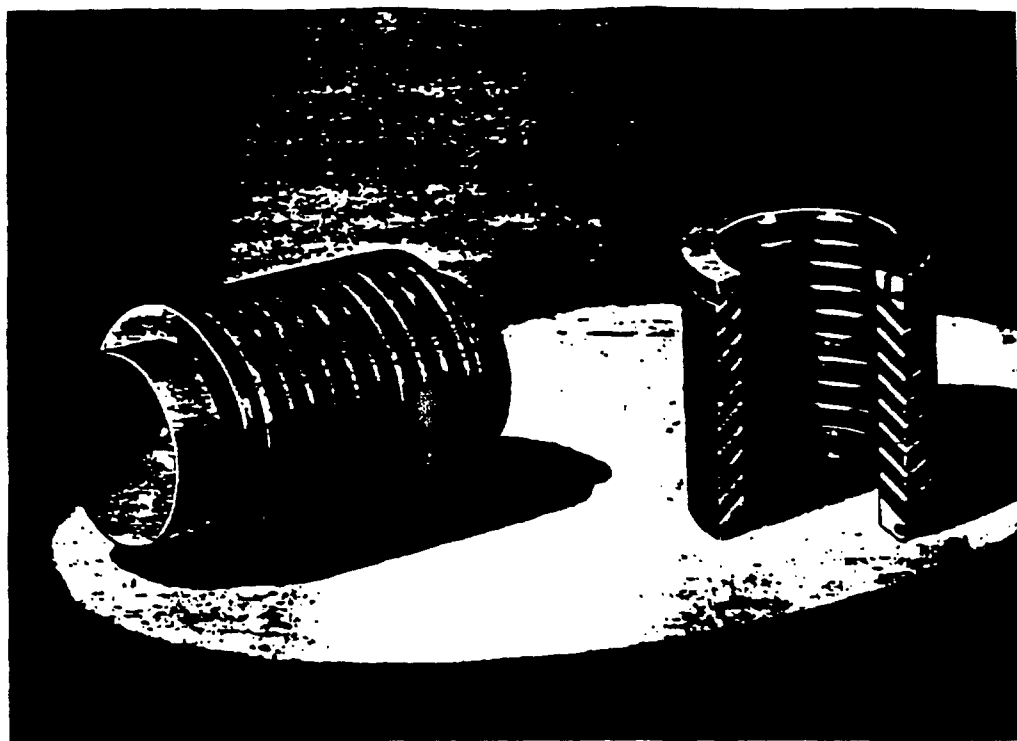
Service — Recommended for service on Corliss and reciprocating valve stems, steam and air piston rods, centrifugal pumps handling hot or cold water, small steam turbine shafts, enclosed type ammonia compressor shafts, swing joints and outside packed cold water plungers. The Shredded Metal Packings below are recommended for temperatures up to 600 degrees

Fahrenheit. Shredded Metal Ring Packings for higher temperatures are described on page 122.

Form — GARLOCK Shredded Metal Packings are manufactured from fine strand, grooved strand, or crimped strand, soft metal. They are furnished in loose form, twisted coil and formed rings, either plain or diagonal. Diagonal rings can also be furnished with a lead cone (see illustration).

Indicated below are GARLOCK styles of Shredded Metal Packings showing the forms of packing and types of strand used:

Fine Strand		Grooved Strand		Crimped Strand	
Garlock	Description	Garlock	Description	Garlock	Description
998	Straight coil, loose	992	Straight coil	999	Rolled coil (lead wool)
988	Twisted coil, rolled	982	Twisted coil	969	Plain ring
968	Plain ring	962	Plain ring	949	Diagonal ring
948	Diagonal ring	942	Diagonal ring	939	Diagonal ring, lead cone
938	Diagonal ring, lead cone	932	Diagonal ring, lead cone		



GARLOCK 7050

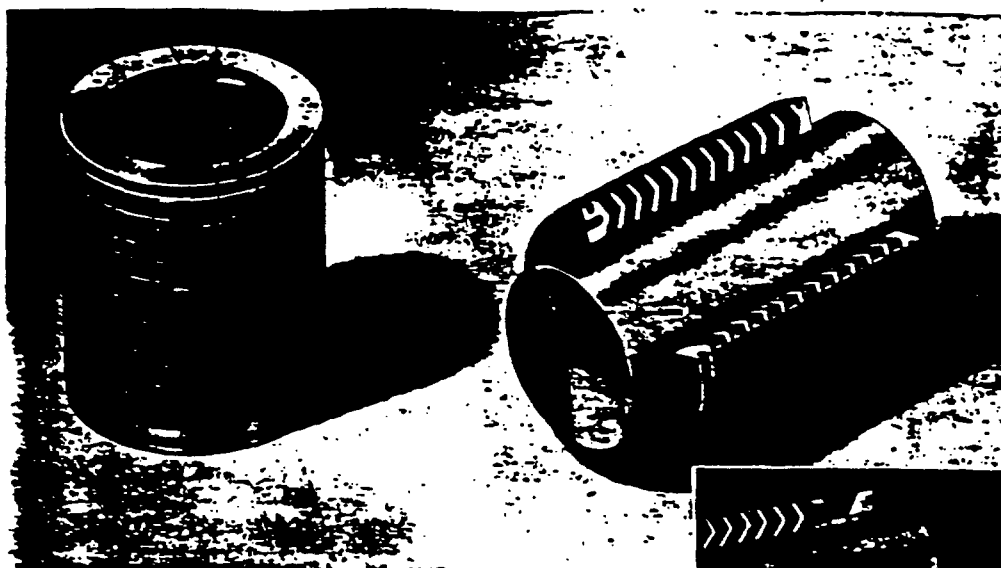
SHREDDED METAL PACKING

GARLOCK 7050 is an advanced development in Shredded Metal Packing consisting of one concave bevel bottom ring and one convex bevel top ring — both made of babbitt — and a series of concave-convex molded shredded metal rings, alternated with metal separator rings.

GARLOCK 7050 is recommended for air, steam

and gas service at temperatures up to 625 degrees Fahrenheit. Being thoroughly impregnated with graphite, GARLOCK 7050 is particularly adapted for high pressure and high speed air and gas compressor service.

Sets of GARLOCK 7050 are molded in sizes to specified rod and stuffing box dimensions.



GARLOCK 7050-C

SHREDDED METAL PACKING



GARLOCK 7050-C
WITH BRONZE ADAPTER

GARLOCK 7050-C is a special GARLOCK development in shredded metal packing consisting of one top and one bottom adapter ring made of babbitt, and a series of V shaped molded shredded metal rings, alternated with soft metal

separator rings.

GARLOCK 7050-C is recommended for high pressure and high speed air and gas compressor service, at temperatures up to 625 degrees Fahrenheit.

SPECIAL BRONZE TOP ADAPTER

The small picture above illustrates GARLOCK 7050-C combined with a special bronze top adapter. This combination is highly recom-

mended and widely used in high pressure service on enclosed type CO₂ compressors.

SPECIAL TOP AND BOTTOM BRONZE ADAPTERS AND BRONZE SEPARATOR RINGS

This special combination is particularly adapted for service on outside packed plungers of boiler

feed pumps handling high pressure hot water under the most severe conditions.

THE STANDARD PACKING OF THE



Annex.
B4

GARLOCK 934

GARLOCK 935

1/2 =
3 ounces
cubic inch.

HIGH TEMPERATURE SHREDDED METAL PACKINGS

GARLOCK 934

GARLOCK 934 is a high temperature, shredded metal ring packing molded square or rectangular in cross section from shreds of special metal floss. It is suitable for service against temperatures up to 1500 degrees Fahrenheit.

GARLOCK 934 will be furnished in rings to practically any desired rod and stuffing box

dimensions; also in sets to specified stuffing box depths.

This material is highly recommended for service on valve stems and piston rods on which high temperatures are encountered. Particularly suitable for service on the rotary shafts of soot blowers.

GARLOCK 935

GARLOCK 935 is a special high temperature shredded metal packing. It is regularly furnished in sets consisting of one concave bevel bottom ring and one convex bevel top ring — both made of Red Metal — and a series of concave-convex, molded shredded metal rings. These shredded metal rings are produced from strands of special metal floss suitable for service against temperatures up to 1500 degrees Fahrenheit.

GARLOCK 935 is often supplied without special

metal end rings for application in stuffing boxes having bevelled glands and bottoms. In ordering sets of this nature, the type and degree of bevel of both the gland and the bottom of the box must be indicated.

GARLOCK 935 can be furnished in practically any rod and stuffing box sizes. It is highly recommended for service on valve stems and piston rods operating at high temperatures; also for rotary shafts of small turbines and blowers.

THE MOST STANDARD PACKING OF THE WORLD

122

1 ounce = 28.4 grams
1 cubic inch = 16.39 cm³

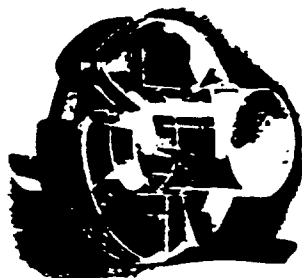
1 cm³ 1.34 = 1.34

9884 1/2 inch = 54
1/2 inch = 0.45
main 2 1/2 inch minimum 1.5



TYPES OF GARLOCK METAL PACKING RINGS

FLEXIBLE METAL RINGS



GARLOCK Flexible Type Metal Packing Rings are made up of several segments which are held to the rod with garter springs of music wire placed in grooves on the outside circumference of the ring. The segments are designated as A, B, and C Rings.

The A ring or segment, which is regularly of cast iron but which, for special service, may be made of bronze or babbitt, is the wearing ring which bears on the rod. The B ring or segment is the brass cap ring resting on top of the A ring, and the C ring or segment is the wide ring on the side toward the cylinder head. Inasmuch as the A segments are the only parts subjected to heavy wear on the rod, it is usually

possible to add years of service to a set by the renewal of A segments only.

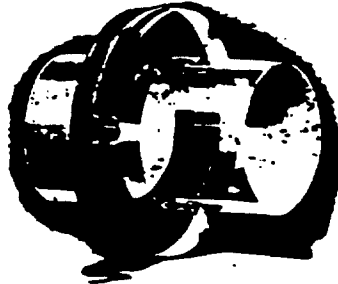
The B segments are made of brass except when the application is to be made on a very large rod, in which instance cast iron segments are furnished. The B rings do not come in contact with the rod and will show no appreciable wear after years of service.

The C segments are usually of cast iron although special service conditions may make necessary the use of bronze or babbitt. While the C rings bear on the rod and break joints with the A segments, they show little actual wear under ordinary working conditions and give years of service without replacement.

In order to insure an equal distribution of wear on the rings, the ends of all segments are radial cut, the pressure joint being made between the B segment and the periphery of the A segments. This design gives a packing ring which will not score the rod and which will give long and satisfactory service. It is mechanically correct and so constructed as to cut friction on the rod to a minimum.

TYPES OF GARLOCK METAL PACKING RINGS—CONTINUED

TANGENTIAL CUT PACKING RINGS

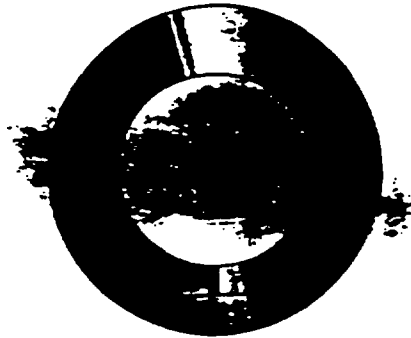


In addition to our Flexible Type Packing Rings as described on the preceding page, we are

prepared to furnish Tangential Cut Rings. This type of ring is used on rods where limited stuffing box space prohibits the use of the Flexible Type Rings.

Tangential Cut Rings are made of the same high class materials and with the same careful workmanship as our Flexible Type Rings and are guaranteed to give complete satisfaction both as to wearing and holding qualities.

TRIANGULAR CUT PACKING RINGS



GARLOCK Triangular Cut Metal Packing Rings are designed to give the same good service as our Flexible Type Rings on like conditions.

The special design is that of a perfect equilateral triangle, which causes an equal distribution of wear on the rod bearing segments.

GARLOCK Triangular Cut Rings are regularly manufactured from cast iron to meet ordinary service conditions. They can be produced, however, from bronze or alloyed metals to handle special and unusual services.

This type of ring can be used in any split or solid packing case designed for floating type rings, when the packing space permits.

Note: For Type Metal Packing Rings are described on the following page.

THE STANDARD PACKING OF THE WORLD



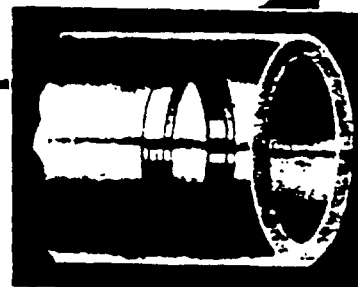
G A R L O C K



FOX TYPE PACKING RINGS

FOX TYPE PACKING RING

(Patent Applied For)



FOX TYPE PISTON RING

The Fox Type Packing Ring represents the latest development in metal packing design and construction. It is exclusively a GARLOCK product.

This ring is composed of three segments and is supplied either with garter springs or flat band springs, according to the requirements of the installation. The design of the interlocking joints of the segments insures an absolute pressure seal at the joints. Rings usually are made

of cast iron, although special bronze rings are furnished to meet certain operating conditions.

Fox Type Packing Rings can be applied in most split or solid metal packing cases. They are recommended for any service on which a good floating type metal packing is required. Exceptional service has been obtained from Fox Rings on locomotive piston rods, power rods of double acting gas engines, air, and gas compressors and steam engines.

FOX TYPE PISTON RING

(Patent Applied For)

The Fox Type Piston Ring is a companion ring to the Fox Type Packing Ring described above. It, also, is an exclusive GARLOCK product.

This piston ring consists of three interlocking segments and one stainless steel expander spring. The accurately milled joints between the segments remain in sealed relationship with each other and insure against leakage until the segments are practically worn through. Rings

are manufactured either of cast iron or bronze as conditions require.

Fox Type Piston Rings are built to generous cross sectional widths and thicknesses, insuring long wear. Equalized spring tension results in an even pressure against the cylinder wall at all points on the circumference of the ring. This means that the wear both on the cylinder wall and on the ring is uniform; cylinders will not wear out-of-round.

THE STANDARD PACKING OF THE WORLD



GARLOCK METAL PACKINGS

INSTRUCTIONS FOR ORDERING

To manufacture satisfactorily an order of metal packing it is necessary to have numerous items of detailed information that ordinarily are not required in the production of fibrous packings.

On the opposite page is shown a typical speci-

cation blank applicable to orders for metal packing. In placing orders for the types listed below it is necessary that the specification blank questions referred to in the right hand column opposite the respective GARLOCK type numbers be answered in full.

- | | |
|---|--|
| GARLOCK 791 | In ordering GARLOCK 791, answer questions 1 to 6 inclusive, 8, 19, 26 and 27. |
| GARLOCK 800 | In ordering GARLOCK 800, answer questions 1 to 6 inclusive, 8, 16, 19, 20, 23, 27 and 28. |
| GARLOCK 805
or
GARLOCK 806 | When ordering GARLOCK 805 or GARLOCK 806, answer questions 1 to 22 inclusive, and 26. |
| | When ordering GARLOCK 805 or GARLOCK 806, with screw gland, answer questions 1 to 6 inclusive, 8, 10, 14, 16 to 20 inclusive, 22 and 24 to 26 inclusive. |
| GARLOCK 808
or
GARLOCK 809 | In ordering GARLOCK 808 or GARLOCK 809, answer questions 1 to 6 inclusive, 8, 10, 15 to 20 inclusive, 26 and 27. |
| GARLOCK 810 | In ordering GARLOCK 810, answer questions 1 to 22 inclusive, and 26. |
| GARLOCK 821 | In ordering GARLOCK 821, answer questions 1 to 21 inclusive, 26 and 27. |
| GARLOCK 860 | In ordering GARLOCK 860, answer questions 1 to 15 inclusive, and 20. |
| GARLOCK 861 | In ordering GARLOCK 861, answer questions 1 to 20 inclusive, and 26. |
| GARLOCK 870 | In ordering GARLOCK 870, answer questions 1 to 6 inclusive, 8, 19, 26 and 27. |
| GARLOCK 873
or
GARLOCK 875
Combination | In ordering GARLOCK 873 or GARLOCK 875 Combination, answer questions 1 to 7 inclusive, 19, 20, 22 and 27. |



G A R L O C K

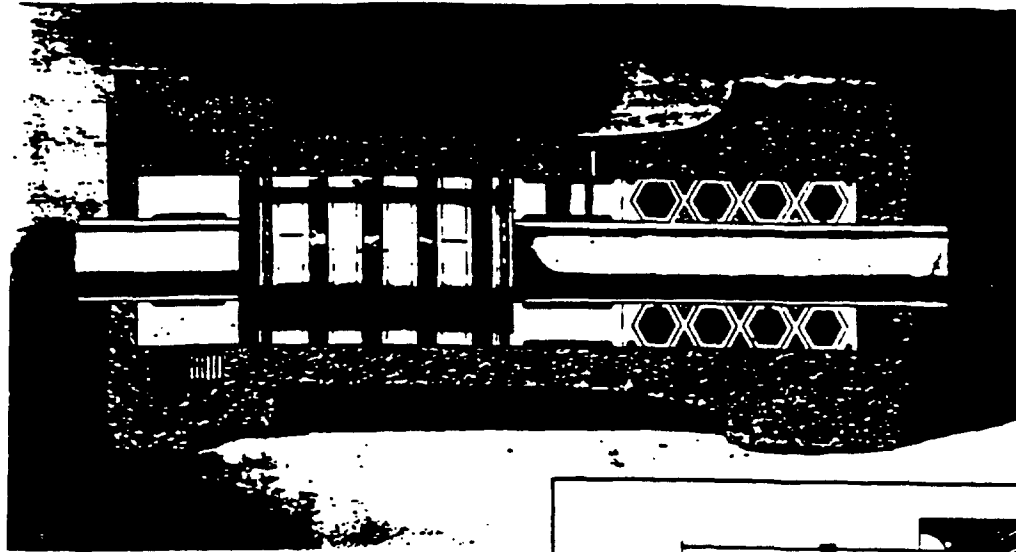


GARLOCK METAL PACKINGS

TYPICAL SPECIFICATION BLANK FOR ORDERING

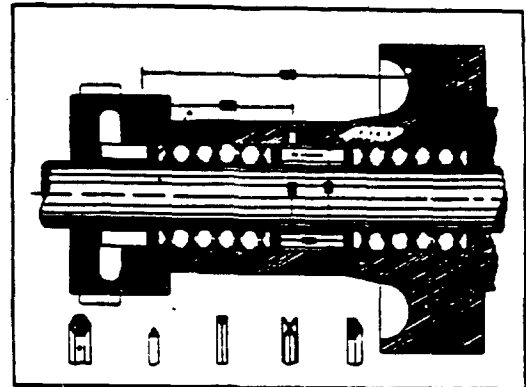
1. Name and Number of Engine?
2. Name of Rod
3. Number of Sets
4. Style Number
5. Diameter of Rod
6. Diameter of Stuffing Box, inside
7. Diameter of Stuffing Box or Flange of Gland, outside
8. Depth of Stuffing Box measured along bore
9. Is Gland Round or Elliptical?
10. Diameter of Opening into Cylinder or Chest
11. Number and Size of Stud Bolts
12. Length of Stud Bolts
13. Diameter of Stud Circle
14. Clearance between Face of Stuffing Box and Cross Head
15. Is face of Stuffing Box or Cylinder Head Machined?
16. Is Engine Vertical or Horizontal?
17. If Vertical, does Piston come through Bottom or Top of Cylinder?
18. Does Water enter Cylinder in Large Quantities?
19. Give Pressure — Steam, Air, Gas or Ammonia
20. Piston Speed
21. Is Old Gland to be left on Engine?
22. What is Largest Diameter Case can be?
23. Single or Double Acting?
24. Outside Diameter of Threads on Stuffing Box
25. Number of Threads per 1 inch on Stuffing Box
26. If Superheated Steam, give Temperature
27. Is Bottom of Box Flat or Bevelled?
28. Distance from Face of Stuffing Box to Gas Vent

THE STANDARD PACKING OF THE WORLD



GARLOCK 800

VARITEMP METAL PACKING FOR AMMONIA



GARLOCK 800 Varitemp Metal Packing, for ammonia compressor service, is built up of sections, each section consisting of one hexagonal ring and one X ring. It is applied in the stuffing box without a case. All parts are split, eliminating the necessity of disconnecting the rod to apply the packing.

The hexagonal rings are hollow metal shells filled with a fibre saturated with a high grade lubricant. When the set is in service and under pressure, the lubricant flows to the rod through properly spaced emission holes in the metal shells.

The rubber seal rings are held in place in the outer grooves of the X rings. These seal rings

prevent leakage of oil or gas past the outside of the packing.

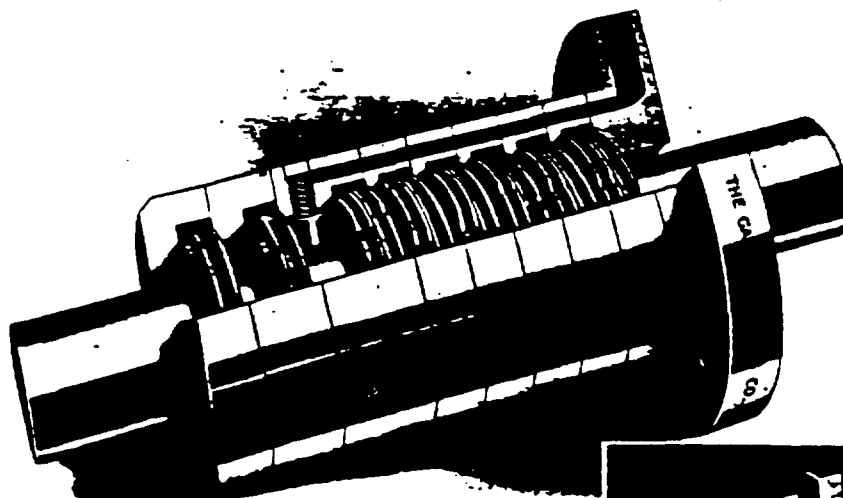
The inner grooves of the X rings, which bear on the rod, are filled with molded shredded metal. This soft metal furnishes an immediate and leak proof bearing surface; it will not cut or shoulder the rods.

The scientific design of GARLOCK 800 and the method of assembling, allow it to expand and contract with the varying temperatures prevailing in ice and refrigerating machinery. It is highly recommended for service on piston rods of single or double acting ammonia compressors of the anhydrous type.

THE STANDARD PACKING OF THE WORLD

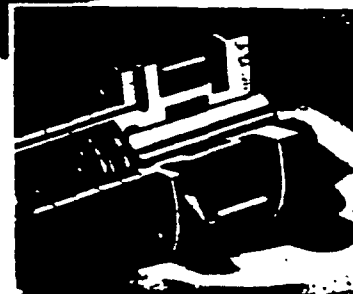


G A R L O C K



GARLOCK 875

GAS COMPRESSOR METAL PACKING



GARLOCK 875 COMBINATION

GARLOCK 875 Gas Compressor Packing was primarily designed for gas compressor service. Its suitability for that type of work has been proven in many installations under a wide range of working conditions. It is regularly furnished in an eight section case for high stage service and in a five section case for low stage service. Especially severe conditions are successfully packed with sets of more than eight sections.

GARLOCK 875 is easily applied, will not cut or score the rod and cannot blow out. When placed on piston rods in good condition, and kept well lubricated, it practically becomes an integral part of the compressor.

A special lubrication feature of GARLOCK 875 is the plug lubricator. This is a recent development by GARLOCK engineers which insures constant and proper lubrication of the rod and of all bearing surfaces of the packing. A patent on this lubricator has been applied for.

The solid ring retainer cups which hold each section of rings separately can be remachined on the surface when they become worn. This increases considerably the life of the set.

GARLOCK 875 will be furnished with either cast iron or bronze packing rings as conditions warrant.

GAS COMPRESSOR METAL PACKING

GARLOCK 875 COMBINATION

GARLOCK 875 Combination consists of a complete set of GARLOCK 875 as described above and a supplementary stuffing box packed with a diagonal cut duck and rubber packing.

GARLOCK 875 Combination is intended for service on batteries of gas compressors hooked into a single line. The supplementary fibrous set is

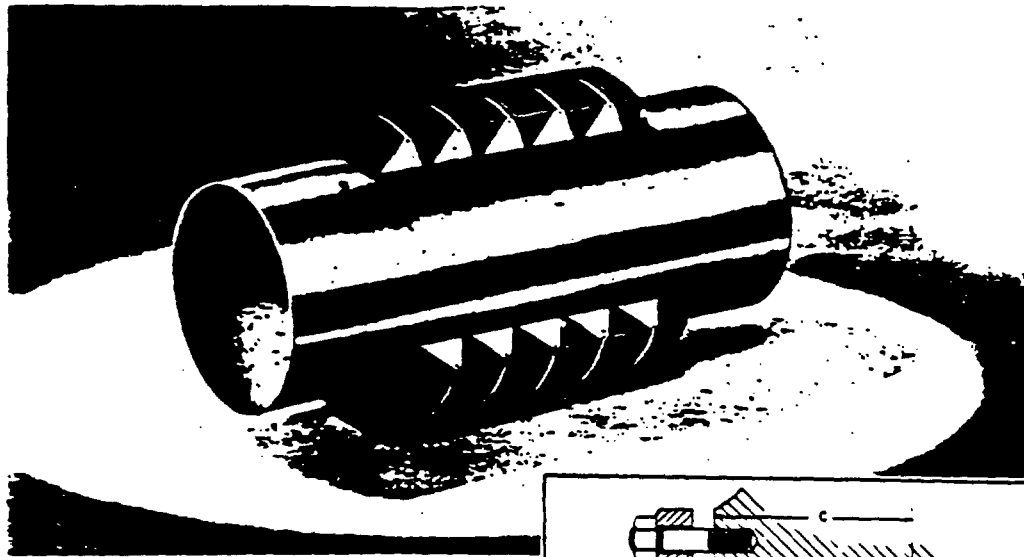
intended to function only when the compressor is idle. Its purpose is to prevent leakage through the compressor due to pressure developed by other installations working on the same line.

The gland on the supplementary box, therefore, is not to be tightened unless the compressor is idle.

THE STANDARD PACKING OF THE WORLD

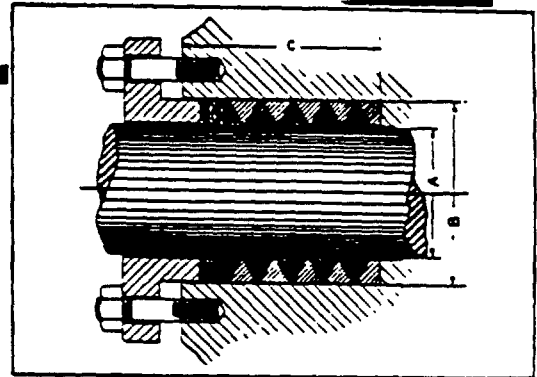


G A R L O C K



GARLOCK 870 SPECIAL

COMBINATION METAL PACKING



GARLOCK 870

GARLOCK 870

GARLOCK 870 is a combination metal packing put up in sets for application in stuffing boxes without the use of a metal case.

The wearing rings of the set are made from babbitt; the filler rings are either iron or babbitt. In addition, one or two duck and rubber rings are furnished with each set; these rings act as a cushion and prevent the packing from setting up too tightly.

GARLOCK 870 is recommended for small piston rods and valve stems on which the stuffing boxes do not provide sufficient space for the application of flexible type packing. It gives particularly fine service on steam feed rods and in sawmill work.

For high temperature service up to 1000° Fahrenheit GARLOCK 870 will be furnished with Red Metal wearing rings and asbestos cushion rings.

GARLOCK 870 SPECIAL

GARLOCK 870 Special is similar in design to regular GARLOCK 870. It differs, however, in that the filler rings are of rubber instead of iron or babbitt. The cushion rings are omitted.

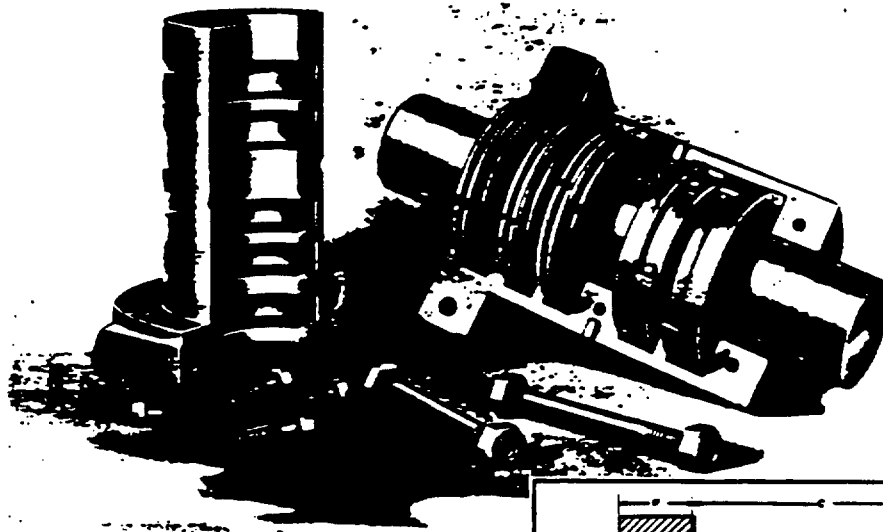
GARLOCK 870 Special is designed for service on

nigger kickers and similar equipment having an extremely long piston stroke resulting in considerable bend and whip. GARLOCK 870 Special can also be used to advantage on equipment having rods out of alignment.

THE STANDARD PACKING OF THE WORLD

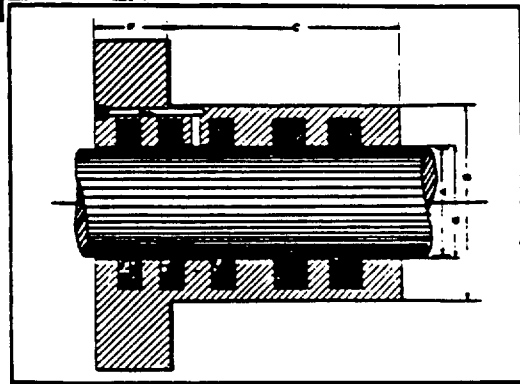


G A R L O C K



GARLOCK 860

FLEXIBLE METAL PACKING



GARLOCK 860 can be furnished either with a split or solid case; however, it is recommended that a split case be used wherever possible.

The breaker or fire check rings used in GARLOCK 860 are made from cast-iron and are furnished with a special cut which reduces the clearance space to a minimum and allows a maximum amount of wear before the segments butt ends.

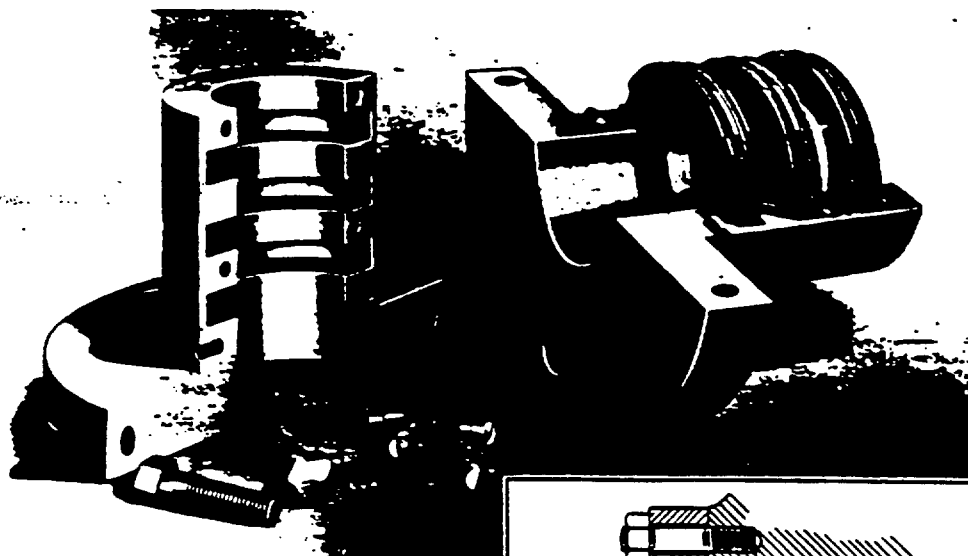
Cast-iron snap rings replace the customary steel garter springs in the breaker rings on this type of packing. Two breaker rings and three sections of special iron packing rings comprise the usual set. The number of rings can be increased or decreased to meet specific conditions.

GARLOCK 860 is highly recommended for use on piston rods of double acting gas engines.

THE STANDARD PACKING OF THE WORLD

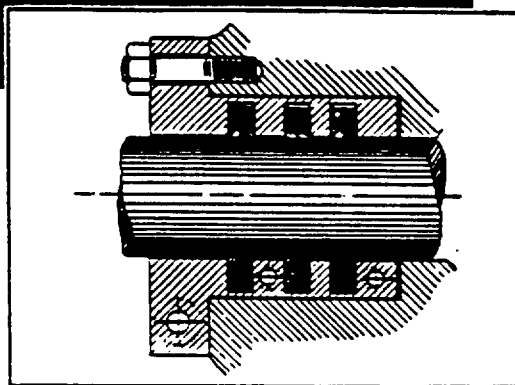


G A R L O C K



GARLOCK 861

FLEXIBLE METAL PACKING



GARLOCK 861 is a split case type, flexible metal packing with stud bolt flange. It is furnished with three sections of flexible metal rings, except where limited space necessitates the use of tangential cut rings. Suitable oil ways and drain connections are provided.

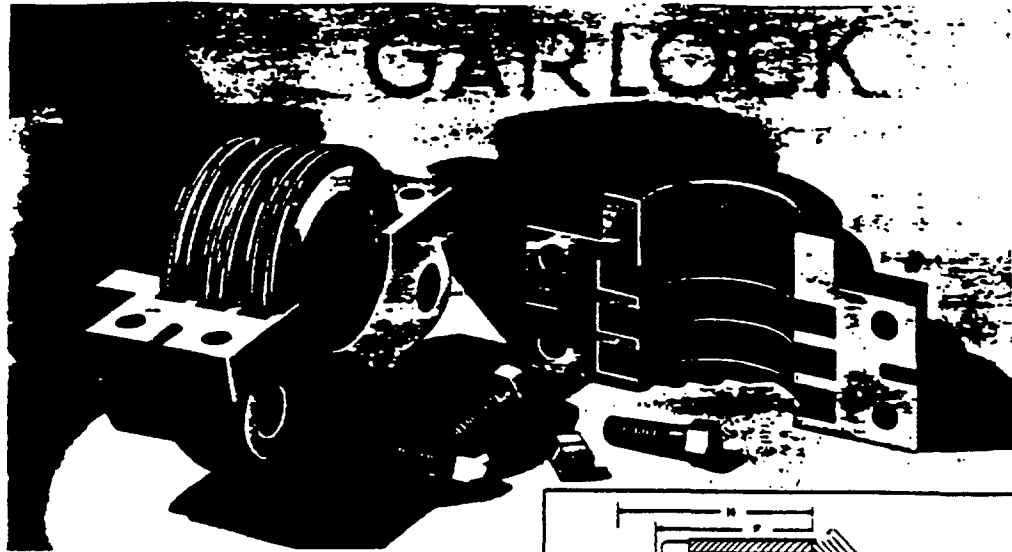
GARLOCK 861 can be furnished made up of four, five or six sections for service on high pressure air and steam rods.

This type of metal packing is particularly recommended for use as original equipment by engine builders since it eliminates the necessity of furnishing a stuffing box gland.

THE STANDARD PACKING OF THE WORLD

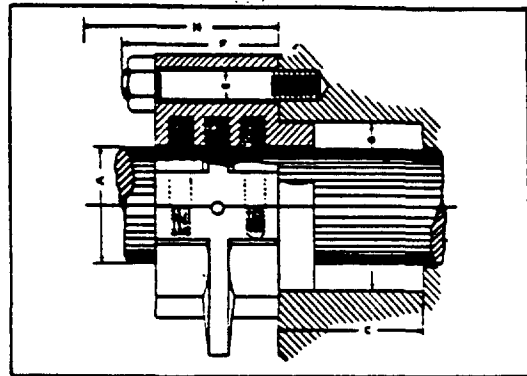


G A R L O C K



GARLOCK 805

FLEXIBLE METAL PACKING



GARLOCK 805 is a split case type, flexible ring metal packing. In its application it is not necessary to disconnect the piston, as it can be applied either by bolting the gland flange against the stuffing box or by removing the gland entirely. When the gland is removed GARLOCK 805 case is furnished with a turned hub, which enters the stuffing box approximately one inch. This hub type of case is centered around the rod, and if emergency should require, the packing case can be used for a soft packing gland.

GARLOCK 805 can be supplied in practically any

size to take care of individual applications. It is regularly furnished with three sections of rings but can be made with additional sections to meet more severe conditions. It can also be furnished in varied shapes and designs including round, square and elliptical shaped cases split on either the long or short diameter. Provision for draining condensation from the case is provided.

GARLOCK 805 is recommended for service on piston rods and valve stems of steam engines, air or gas compressors and steam driven pumps.

THE STANDARD PACKING OF THE WORLD

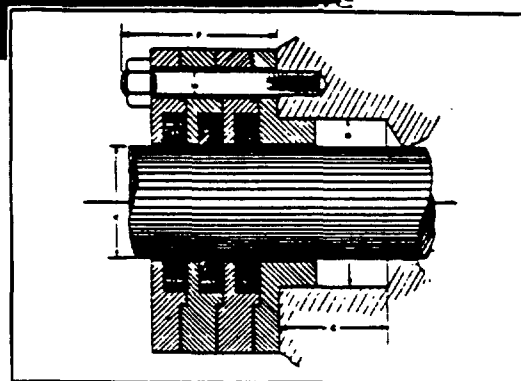


G A R L O C K



GARLOCK 806

FLEXIBLE METAL PACKING



GARLOCK 806 is an outside solid case packing regularly of the three section type. It can be manufactured, however, with any number of sections to take care of extremely high pressures.

In installing GARLOCK 806, it is necessary to disconnect the rod; renewal rings, however, can be applied by backing off the stud bolts and separating the several sections comprising the case. A minimum clearance of three inches in front of the stuffing box is required for its application.

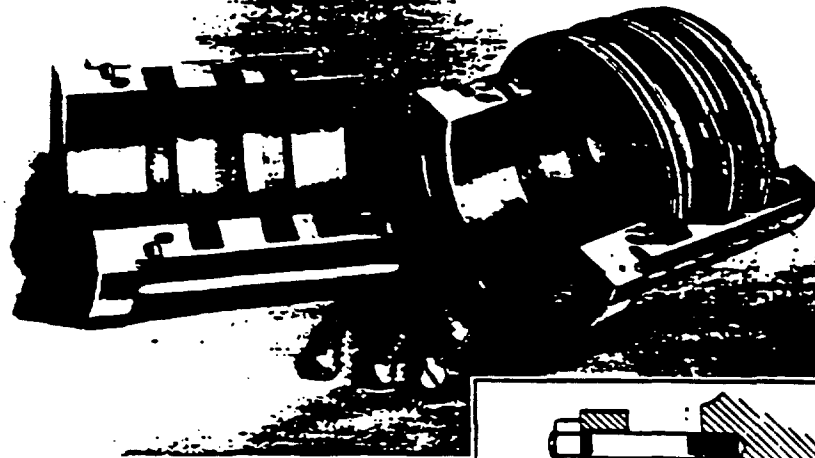
GARLOCK 806 can be installed either with or without the use of the gland. When the gland is removed, the case will be furnished with a turned hub. A connection for draining condensation is provided.

GARLOCK 806 is recommended for service on large or small piston rods and valve stems when it is possible to disconnect the rod with no great amount of labor. The cases for this type of packing can be furnished round, square or elliptical as required.

THE STANDARD PACKING OF THE WORLD

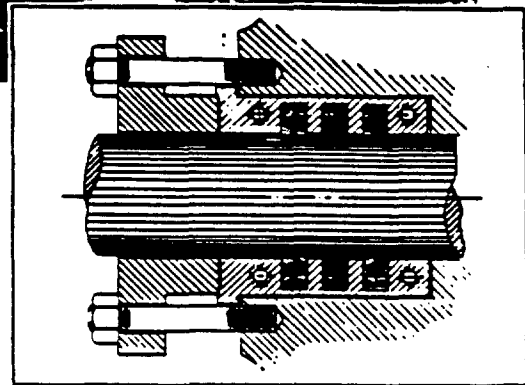


G A R L O C K



GARLOCK 808

FLEXIBLE METAL PACKING



GARLOCK 808 is a split case type metal packing. It is usually furnished with three sections of flexible rings, although limited packing space may necessitate the use of tangential cut rings. The number of rings that can be furnished in this style is governed entirely by the depth of the stuffing box.

A copper wire gasket is imbedded in the flange of the case and comes in contact with the face of the stuffing box, forming a seal. For this

flange, approximately five-eighths of an inch in front of the stuffing box is required. A recess in the flange centers the packing gland around the rod.

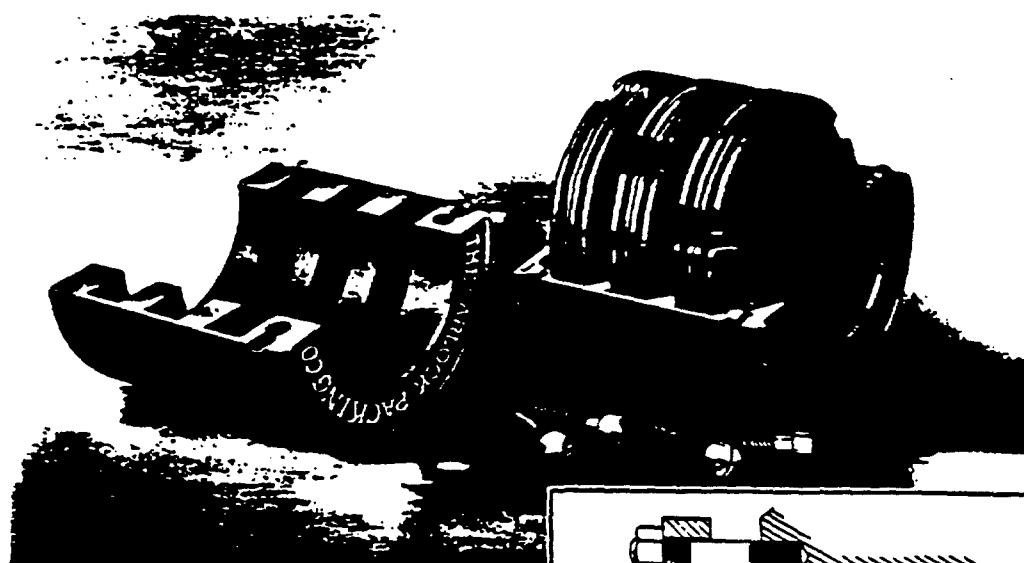
When specified, suitable drain pipe connections for taking care of condensation can be supplied.

GARLOCK 808 is recommended for service on piston rods and valve stems of steam engines, air and gas compressors or steam driven pumps.

THE STANDARD PACKING OF THE WORLD

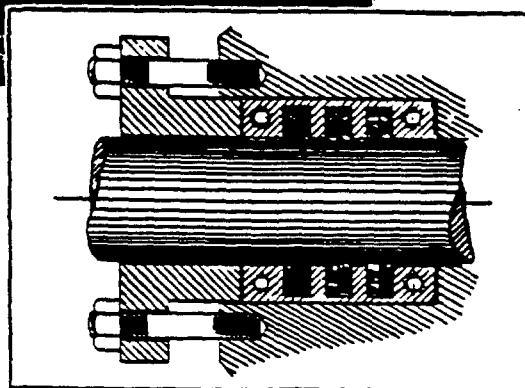


G A R L O C K



GARLOCK 809

FLEXIBLE METAL PACKING



GARLOCK 809 is a split case type of metal packing, so designed that the entire case is placed inside the stuffing box. When packing space permits, flexible type wearing rings are furnished. If packing space is limited, tangential cut rings are furnished.

To insure lasting and economical service from GARLOCK 809, the packing space should be at

least $\frac{3}{8}$ " as this allows sufficient space for a substantial wearing ring.

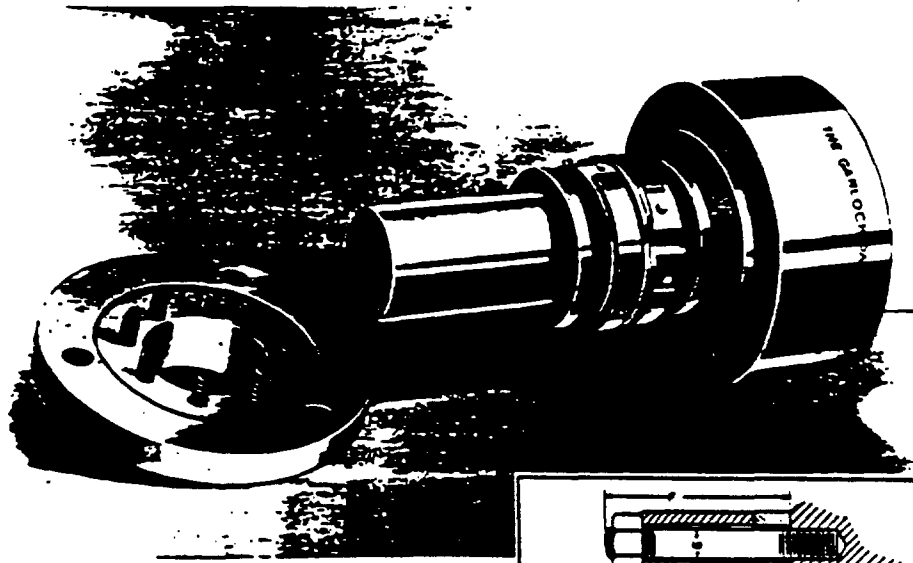
GARLOCK 809 is recommended for service on steam and air piston rods and valve stems against working pressure up to 150 pounds.

GARLOCK 809 can be furnished with additional ring sections for high pressure service, when necessary, if stuffing box depth permits.

THE STANDARD PACKING OF THE WORLD

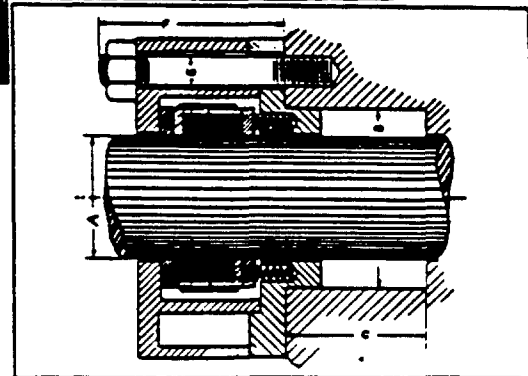


G A R L O C K



GARLOCK 810

FLEXIBLE METAL PACKING



GARLOCK 810 is constructed either with a solid or a split case, as desired. All wearing parts are babbitt and bronze metal, specially alloyed to GARLOCK specifications.

Due to the special design of the segments, GARLOCK 810 will operate under heavy loads

with no possibility of breakage. This feature makes GARLOCK 810 particularly desirable for use on large rods of reversing and blowing engines.

Excellent service can be obtained from this style of metal packing on high and low pressure steam and air rods; also on valve stems.

THE STANDARD PACKING OF THE WORLD



G A R L O C K



GARLOCK Oil Return Metal Packing is designed for service on all kinds of machinery of the enclosed crank case type including gas engines, air compressors, gas compressors, steam engines and diesel engines. It will remove all splash oil from the piston rod and return it to the crank case.

GARLOCK Oil Return Metal Packing Rings are manufactured in two designs — GARLOCK 890 and GARLOCK 891. Either of these designs can be furnished in split or solid cases. They are frequently furnished in combination sets with GARLOCK Metal Pressure Packings.

The center illustration above shows a set of

GARLOCK 890 — Type A, one of the many GARLOCK Oil Return Metal Packings. This particular installation is recommended to replace the entire stuffing box assembly on wall plates of two and four cycle internal combustion engines.

A description of the parts shown on GARLOCK 890 — Type A follows:

- A — The pressure vacuum ring which faces the cylinder side of the wall plate.
- B — Three GARLOCK 890 Oil Scraper Rings.
- C — Holes in the bottom half of the split case through which the oil is returned to the crank case.

THE STANDARD PACKING OF THE WORLD.



GARLOCK 890 OIL SCRAPER RING

GARLOCK 890 consists of a cast iron ring enclosed in a ported cage. A crimped steel spring inserted between the cage and the ring causes it to hug the rod, thus breaking the oil film. The ports on the cage provide for the return of the oil.

GARLOCK 890 can be applied without disconnecting the rod and will not cut or shoulder it.

It is equally serviceable on vertical or horizontal rods.

Due to its construction GARLOCK 890 is not recommended for rods larger than five inches in diameter. Although it occasionally can be applied in ordinary stuffing boxes, it is generally necessary to install it in GARLOCK split or solid packing cases.

GARLOCK 891 OIL SCRAPER RING

GARLOCK 891 is manufactured of cast iron and is of the tangential cut design. Its various segments are held in place by a steel garter spring in a groove on its outer circumference. The ring is ported on one side allowing the return of the oil. Rings of this construction have a continuous metal bearing surface on the rod and the sharp, scraping edges break down the oil film. They will not shoulder or cut the rod.

GARLOCK 891 Ring can be applied in almost any oil scraper stuffing box and in spaces that

prohibit the application of GARLOCK 890 Ring. It is recommended that at least three GARLOCK 891 Rings be used in a box. When applying GARLOCK 891 sufficient allowance to enable the rings to float with the rod must be provided. It is also necessary that suitable drain holes be provided to return the oil from the stuffing box to the crank case.

This type of ring, when made of bronze, will give excellent service as a water scraper or drain ring.



COMBINATION METAL PACKING

GARLOCK 791

GARLOCK 791 is a combination set of metal and fibrous packing. It is furnished without a case and the entire set is placed inside the stuffing box. As all parts are split, application can be made without disconnecting the rod.

This material consists of a special grade of babbitt fitted in either bronze or iron bevelled cups which are forced to the rod by means of

gland pressure controlled by the operator. Between the metal rings are placed two or three rings of fibrous or shredded metal packing, which act as a cushion and prevent the packing from being set up too tightly.

GARLOCK 791 is recommended for hot or cold water service on outside packed plungers.

FLEXIBLE METAL PACKING

GARLOCK 821

GARLOCK 821 is a solid, sectional case type of metal packing made up of four or more sections of cups. These cups enclose flexible metal packing rings.

GARLOCK 821 is furnished so that the entire sectional case goes inside the stuffing box. The first section is copper wire gasketed and makes contact in the bottom of the stuffing box. The balance of the sections have ground joints

insuring a tight fit when drawn up by the flange. For installations in which an unusual amount of water or condensation is present, GARLOCK 821 Rings are made of a special high grade bronze.

GARLOCK 821 can be furnished in any number of sections thus rendering satisfactory service on high pressure as well as on low pressure rods.

This style is particularly recommended for service on vertical and marine engines.



GARLOCK METAL BUSHING RINGS

GARLOCK 70
GARLOCK 71
GARLOCK 72

GARLOCK 170
GARLOCK 171
GARLOCK 172

Construction — GARLOCK Metal Bushing Rings are manufactured of cast iron, bronze or babbitt. Unless otherwise specified, babbitt rings are furnished.

Service — GARLOCK Metal Bushing Rings are recommended for use in the bottom of stuffing boxes to close the opening into the cylinder when rods have become worn or have been turned down.

Form — GARLOCK Metal Bushing Rings can be supplied in practically any size with $\frac{1}{8}$ " packing space or more. Sizes under $\frac{1}{8}$ " will be furnished solid without spring. In sizes $\frac{1}{8}$ " or over split rings with steel garter springs are furnished.

Rings are designed for usage as follows:

GARLOCK 70 — For bushing a bevelled bottom stuffing box and retaining the bevel.

GARLOCK 71 — For bushing a flat bottom stuffing box and changing the contour from flat to bevelled.

GARLOCK 72 — For bushing an oval bottom stuffing box and changing the contour from oval to bevelled.

GARLOCK 170 — For bushing a bevelled bottom stuffing box and changing the contour from bevel to flat.

GARLOCK 171 — For bushing a flat bottom stuffing box and retaining the flat bottom.

GARLOCK 172 — For bushing an oval bottom stuffing box and changing the contour from oval to flat.



GARLOCK METAL PACKINGS

HINTS FOR APPLICATION

Each individual set of Garlock Metal Packing is built to the exact measurements and specifications placed on the order. There is always a chance, however, that measurements have been incorrectly taken or rod sizes have changed between the time of taking measurements and application of the packing. To guard against this remote possibility of error, it is always desirable that each set of rings be checked prior to final application.

This check can be made by the user by rubbing one of the A or C segments on the rod until it shows bearing marks. Examination of these marks will then indicate whether the ring may be expected to wear to a proper fit within a reasonable time. If the segments show bearing marks only on the ends, the rings are too small; if the bearing is only in the center, they are too large. If the test shows either of the above mentioned faults, the packing should not be placed in service until the rings are either corrected or replaced.

In the installation of metallic packing the following procedure should be followed:

1. Snap two springs around the rod.
2. Apply the B segments of a single section under one spring.

Exception — On large rods where the number of segments comprising one section of rings is greater than for small rods, the application of two B segments followed by one A segment will provide

the spring tension necessary to hold these three parts in place until the balance of the B segments is applied.

3. Place one A segment at a time under the B segments, with the dowel pin in each A segment pointing toward the stuffing box.
4. Place the three C segments in position under the second spring. These segments should be on the pressure side of the A and B segments.
5. Draw together the A and B segments and the C segments in such way that the dowels in the A segments come in place between the ends of the C segments.
6. Assemble the remaining sections of the complete packing in the manner just described for the first section.
7. Space the several sections of rings in proper positions to match the grooves in the metallic packing case.
8. Fit one-half of the case over the ring and if possible turn this halfcase entirely around the rod. This rotation will line up the rings so that the other half of the case can be placed over them without difficulty.
9. Make sure that the ground joint between the two halves of the case is free from dirt or foreign matter; then set up the screws or bolts which hold the parts of the case together.



G A R L O C K



GARLOCK METAL PACKINGS

NOTES

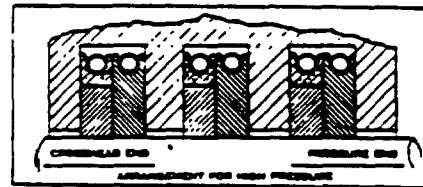
GASKETS

Several types of GARLOCK metal packing cases are equipped with copper gaskets for forming a seal between the metal packing case and the stuffing box or cylinder head. All other styles must be provided with gaskets cut from a high grade heat resisting sheet packing, such as GARLOCK 7021 or GARLOCK 900. The asbestos fibre gasket will be furnished when so specified on the order.

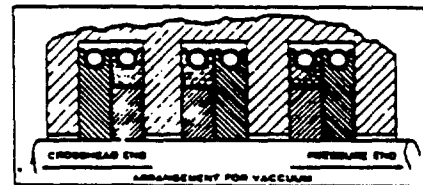
Descriptions of the various types of GARLOCK metal packings, as given on other pages of the catalog, designate the cases that are furnished with copper gaskets.

FLEXIBLE RINGS

When applying GARLOCK flexible metal packing to high pressure rods or to rods on which no vacuum is to be held, all sections must be placed with the wide or C segments facing the pressure as indicated below.



When rings are used in vacuum service, reverse the parts of the metallic packing sections nearest the cross head so that the wide or C segments will be on the cross head side. The cut below indicates a correct installation for vacuum.



TANGENTIAL RINGS

Tangential rings are applied by the method that has been described for the flexible type ring. Bear in mind that the tangential rings occupy the same relative position as the A and B rings in the flexible type. The C rings in both types are exactly the same in construction and in both instances perform the same functions.

All tangential cut rings are lettered and have their ends numbered. It is absolutely necessary that they be assembled so that the letters and numbers at the adjacent ends of any two segments are identical.

LUBRICATION

Proper lubrication with a high grade non-asphaltic lubricating oil is essential to the successful use of metal packing. No installation is complete until correct mechanical means has been provided to return or deliver the oil to the proper point on the rod.

THE STANDARD PACKING OF THE WORLD



ENGINEERING DATA

FAHRENHEIT AND CENTIGRADE CONVERSION TABLE

Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.
0	32	203	401	403	761	603	1121	803	1481	1003	1841	1203	2201	1103	2361
3	41	210	410	410	770	610	1130	810	1490	1010	1850	1210	2210	1110	2370
10	50	213	419	413	779	613	1139	813	1499	1013	1859	1213	2219	1113	2379
15	59	217	428	420	788	620	1148	820	1508	1020	1868	1220	2228	1120	2388
20	68	221	437	423	797	623	1157	823	1517	1023	1877	1223	2237	1123	2397
25	77	225	446	430	806	630	1166	830	1526	1030	1886	1230	2246	1130	2406
30	86	229	455	435	815	635	1175	835	1535	1035	1895	1235	2255	1135	2415
35	95	233	464	440	824	640	1184	840	1544	1040	1904	1240	2264	1140	2424
40	104	237	473	445	833	645	1193	845	1553	1045	1913	1245	2273	1145	2433
45	113	241	482	450	842	650	1202	850	1562	1050	1922	1250	2282	1150	2442
50	122	245	491	455	851	655	1211	855	1571	1055	1931	1255	2291	1155	2451
55	131	249	500	460	860	660	1220	860	1580	1060	1940	1260	2300	1160	2460
60	140	253	509	465	869	665	1229	865	1589	1065	1949	1265	2309	1165	2469
65	149	257	518	470	878	670	1238	870	1598	1070	1958	1270	2318	1170	2478
70	158	261	527	475	887	675	1247	875	1607	1075	1967	1275	2327	1175	2487
75	167	265	536	480	896	680	1256	880	1616	1080	1976	1280	2336	1180	2496
80	176	269	545	485	905	685	1265	885	1625	1085	1985	1285	2345	1185	2505
85	185	273	554	490	914	690	1274	890	1634	1090	1994	1290	2354	1190	2514
90	194	277	563	495	923	695	1283	895	1643	1095	2003	1295	2363	1195	2523
95	203	281	572	500	932	700	1292	900	1652	1100	2012	1300	2372	1200	2532
100	212	285	581	505	941	705	1301	905	1661	1105	2021	1305	2381	1205	2541
105	221	289	590	510	950	710	1310	910	1670	1110	2030	1310	2390	1210	2550
110	230	293	599	515	959	715	1319	915	1679	1115	2039	1315	2399	1215	2559
115	239	297	608	520	968	720	1328	920	1688	1120	2048	1320	2408	1220	2568
120	248	301	617	525	977	725	1337	925	1697	1125	2057	1325	2417	1225	2577
125	257	305	626	530	986	730	1346	930	1706	1130	2066	1330	2426	1230	2586
130	266	309	635	535	995	735	1355	935	1715	1135	2075	1335	2435	1235	2595
135	275	313	644	540	1004	740	1364	940	1724	1140	2084	1340	2444	1240	2604
140	284	317	653	545	1013	745	1373	945	1733	1145	2093	1345	2453	1245	2613
145	293	321	662	550	1022	750	1382	950	1742	1150	2102	1350	2462	1250	2622
150	302	325	671	555	1031	755	1391	955	1751	1155	2111	1355	2471	1255	2631
155	311	329	680	560	1040	760	1400	960	1760	1160	2120	1360	2480	1260	2640
160	320	333	689	565	1049	765	1409	965	1769	1165	2129	1365	2489	1265	2649
165	329	337	698	570	1058	770	1418	970	1778	1170	2138	1370	2498	1270	2658
170	338	341	707	575	1067	775	1427	975	1787	1175	2147	1375	2507	1275	2667
175	347	345	716	580	1076	780	1436	980	1796	1180	2156	1380	2516	1280	2676
180	356	349	725	585	1085	785	1445	985	1805	1185	2165	1385	2525	1285	2685
185	365	353	734	590	1094	790	1454	990	1814	1190	2174	1390	2534	1290	2694
190	374	357	743	595	1103	795	1463	995	1823	1195	2183	1395	2543	1295	2703
195	383	361	752	600	1112	800	1472	1000	1832	1200	2192	1400	2552	1300	2712
200	392														

METRIC CONVERSION TABLE

Millimetres $\times .03937$ = inches.	Cubic Centimetres $\div 29.57$ = fluid ounces (U.S.P.).	Grammes per cu. cent. $\div 35.23$ = lbs. per cubic inch.
Millimetres $\div 25.4$ = inches.	Cubic Metres $\times 35.315$ = cubic feet.	Joals $\times .7373$ = foot pounds.
Centimetres $\times .3937$ = inches.	Cubic Metres $\times 1.358$ = cubic yards.	Kilo-grammes $\times 2.2046$ = pounds.
Centimetres $\div 2.54$ = inches.	Cubic Metres $\times 264.2$ = gallons (231. cubic inches).	Kilo-grammes $\times 35.3$ = cu. avoirdupois.
Metres $\times 39.37$ = inches (Act of Congress).	Litres $\times 61.022$ = cu. in. (Act of Congress).	Kilo-grammes $\div 907.2$ = tons (2,000 lbs.).
Metres $\times 1.21$ = feet.	Litres $\times 33.81$ = fluid ounces (U.S.P.).	Kilo-grammes per sq. cent. $\times 14.223$ = lbs. per sq. in.
Metres $\times 1.094$ = yards.	Litres $\times 26.42$ = gallons (231. cu. in.).	Kilo-gram-metres $\times 7.233$ = foot lbs.
Kilometres $\times .621$ = miles.	Litres $\div 1.78$ = gallons (231. cu. in.).	Kilo-gr. per Metre $\times 672$ = lbs. per foot.
Kilometres $\times 3280.84$ = feet.	Litres $\div 28.316$ = cubic feet.	Kilo-gr. per Cu. Metre $\times .062$ = lbs. per cubic foot.
Square Millimetres $\times .00155$ = sq. inches.	Hectolitres $\times 3.531$ = cubic feet.	Tonnes $\times 1.1023$ = tons (2,000 lbs.).
Square Millimetres $\times 645.1$ = sq. inches.	Hectolitres $\times 2.84$ = bushels (2150 62 cu. in.).	Kilo-Watts $\times 1.34$ = Horse Power.
Square Centimetres $\times .155$ = sq. inches.	Hectolitres $\times 131$ = cubic yards.	Watts $\div 746$ = Horse Power.
Square Centimetres $\div 6.451$ = sq. inches.	Hectolitres $\div 26.42$ = gallons (231. cu. in.).	Watts $\times 7373$ = foot pounds per second.
Square Metres $\times 10.764$ = sq. feet.	Grammes $\times 15.432$ = grains (Act of Congress).	Calorie $\times 3.968$ = B.t.u.
Square Kilometres $\times 247.1$ = acres.	Grammes $\div 901$ = dynes.	Charal vapour $\div 9863$ = Horse Power
Hectare $\times 2.471$ = acres.	Grammes (water) $\div 29.57$ = fluid ounces.	(Centigrade $\times 1.8$) $\div 32$ = degrees Fahr.
Cubic Centimetres $\div 16.383$ = cubic inches.	Grammes $\div 28.35$ = ounces avoirdupois.	Gravity Parts = 980.66 centimetres per sec
Cubic Centimetres $\div 3.69$ = fl. drams (U.S.P.).		

THE STANDARD PACKING OF THE WORLD



GARLOCK

ENGINEERING DATA
CIRCUMFERENCES AND AREAS OF CIRCLES

Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area		
0.001	0.00785	7	21.90	13.864	15	47.12	176.71	23	72.25	415.47	31	97.381	754.764	39	122.5	1194.5
0.002	0.0314	14	22.10	14.071	16	47.51	179.67	24	73.64	420.00	32	97.781	760.864	40	122.9	1202.5
0.003	0.0589	21	22.30	14.278	17	47.90	182.72	25	75.04	424.53	33	98.181	766.964	41	123.3	1210.5
0.004	0.0863	28	22.50	14.485	18	48.29	185.78	26	76.43	429.06	34	98.581	773.064	42	123.7	1218.5
0.005	0.1137	35	22.70	14.692	19	48.68	188.84	27	77.82	433.59	35	98.981	779.164	43	124.1	1226.5
0.006	0.1411	42	22.90	14.899	20	49.08	191.90	28	79.21	438.12	36	99.381	785.264	44	124.5	1234.5
0.007	0.1685	49	23.10	15.106	21	49.47	194.96	29	80.60	442.65	37	99.781	791.364	45	124.9	1242.5
0.008	0.1959	56	23.30	15.313	22	49.87	198.02	30	81.99	447.18	38	100.181	797.464	46	125.3	1250.5
0.009	0.2233	63	23.50	15.520	23	50.26	201.08	31	83.38	451.71	39	100.581	803.564	47	125.7	1258.5
0.010	0.2507	70	23.70	15.727	24	50.65	204.14	32	84.77	456.24	40	100.981	809.664	48	126.1	1266.5
0.011	0.2781	77	23.90	15.934	25	51.04	207.20	33	86.16	460.77	41	101.381	815.764	49	126.5	1274.5
0.012	0.3055	84	24.10	16.141	26	51.43	210.26	34	87.55	465.30	42	101.781	821.864	50	126.9	1282.5
0.013	0.3329	91	24.30	16.348	27	51.82	213.32	35	88.94	469.83	43	102.181	827.964	51	127.3	1290.5
0.014	0.3603	98	24.50	16.555	28	52.21	216.38	36	90.33	474.36	44	102.581	834.064	52	127.7	1298.5
0.015	0.3877	105	24.70	16.762	29	52.60	219.44	37	91.72	478.89	45	102.981	840.164	53	128.1	1306.5
0.016	0.4151	112	24.90	16.969	30	52.99	222.50	38	93.11	483.42	46	103.381	846.264	54	128.5	1314.5
0.017	0.4425	119	25.10	17.176	31	53.38	225.56	39	94.50	487.95	47	103.781	852.364	55	128.9	1322.5
0.018	0.4699	126	25.30	17.383	32	53.77	228.62	40	95.89	492.48	48	104.181	858.464	56	129.3	1330.5
0.019	0.4973	133	25.50	17.590	33	54.16	231.68	41	97.28	497.01	49	104.581	864.564	57	129.7	1338.5
0.020	0.5247	140	25.70	17.797	34	54.55	234.74	42	98.67	501.54	50	104.981	870.664	58	130.1	1346.5
0.021	0.5521	147	25.90	18.004	35	54.94	237.80	43	100.06	506.07	51	105.381	876.764	59	130.5	1354.5
0.022	0.5795	154	26.10	18.211	36	55.33	240.86	44	101.45	510.60	52	105.781	882.864	60	130.9	1362.5
0.023	0.6069	161	26.30	18.418	37	55.72	243.92	45	102.84	515.13	53	106.181	888.964	61	131.3	1370.5
0.024	0.6343	168	26.50	18.625	38	56.11	246.98	46	104.23	519.66	54	106.581	895.064	62	131.7	1378.5
0.025	0.6617	175	26.70	18.832	39	56.50	250.04	47	105.62	524.19	55	106.981	901.164	63	132.1	1386.5
0.026	0.6891	182	26.90	19.039	40	56.89	253.10	48	107.01	528.72	56	107.381	907.264	64	132.5	1394.5
0.027	0.7165	189	27.10	19.246	41	57.28	256.16	49	108.40	533.25	57	107.781	913.364	65	132.9	1402.5
0.028	0.7439	196	27.30	19.453	42	57.67	259.22	50	109.79	537.78	58	108.181	919.464	66	133.3	1410.5
0.029	0.7713	203	27.50	19.660	43	58.06	262.28	51	111.18	542.31	59	108.581	925.564	67	133.7	1418.5
0.030	0.7987	210	27.70	19.867	44	58.45	265.34	52	112.57	546.84	60	108.981	931.664	68	134.1	1426.5
0.031	0.8261	217	27.90	20.074	45	58.84	268.40	53	113.96	551.37	61	109.381	937.764	69	134.5	1434.5
0.032	0.8535	224	28.10	20.281	46	59.23	271.46	54	115.35	555.90	62	109.781	943.864	70	134.9	1442.5
0.033	0.8809	231	28.30	20.488	47	59.62	274.52	55	116.74	560.43	63	110.181	949.964	71	135.3	1450.5
0.034	0.9083	238	28.50	20.695	48	60.01	277.58	56	118.13	564.96	64	110.581	956.064	72	135.7	1458.5
0.035	0.9357	245	28.70	20.902	49	60.40	280.64	57	119.52	569.49	65	110.981	962.164	73	136.1	1466.5
0.036	0.9631	252	28.90	21.109	50	60.79	283.70	58	120.91	574.02	66	111.381	968.264	74	136.5	1474.5
0.037	0.9905	259	29.10	21.316	51	61.18	286.76	59	122.30	578.55	67	111.781	974.364	75	136.9	1482.5
0.038	1.0179	266	29.30	21.523	52	61.57	289.82	60	123.69	583.08	68	112.181	980.464	76	137.3	1490.5
0.039	1.0453	273	29.50	21.730	53	61.96	292.88	61	125.08	587.61	69	112.581	986.564	77	137.7	1498.5
0.040	1.0727	280	29.70	21.937	54	62.35	295.94	62	126.47	592.14	70	112.981	992.664	78	138.1	1506.5
0.041	1.1001	287	29.90	22.144	55	62.74	299.00	63	127.86	596.67	71	113.381	998.764	79	138.5	1514.5
0.042	1.1275	294	30.10	22.351	56	63.13	302.06	64	129.25	601.20	72	113.781	1004.864	80	138.9	1522.5
0.043	1.1549	301	30.30	22.558	57	63.52	305.12	65	130.64	605.73	73	114.181	1010.964	81	139.3	1530.5
0.044	1.1823	308	30.50	22.765	58	63.91	308.18	66	132.03	610.26	74	114.581	1017.064	82	139.7	1538.5
0.045	1.2097	315	30.70	22.972	59	64.30	311.24	67	133.42	614.79	75	114.981	1023.164	83	140.1	1546.5
0.046	1.2371	322	30.90	23.179	60	64.69	314.30	68	134.81	619.32	76	115.381	1029.264	84	140.5	1554.5
0.047	1.2645	329	31.10	23.386	61	65.08	317.36	69	136.20	623.85	77	115.781	1035.364	85	140.9	1562.5
0.048	1.2919	336	31.30	23.593	62	65.47	320.42	70	137.59	628.38	78	116.181	1041.464	86	141.3	1570.5
0.049	1.3193	343	31.50	23.800	63	65.86	323.48	71	138.98	632.91	79	116.581	1047.564	87	141.7	1578.5
0.050	1.3467	350	31.70	24.007	64	66.25	326.54	72	140.37	637.44	80	116.981	1053.664	88	142.1	1586.5
0.051	1.3741	357	31.90	24.214	65	66.64	329.60	73	141.76	641.97	81	117.381	1059.764	89	142.5	1594.5
0.052	1.4015	364	32.10	24.421	66	67.03	332.66	74	143.15	646.50	82	117.781	1065.864	90	142.9	1602.5
0.053	1.4289	371	32.30	24.628	67	67.42	335.72	75	144.54	651.03	83	118.181	1071.964	91	143.3	1610.5
0.054	1.4563	378	32.50	24.835	68	67.81	338.78	76	145.93	655.56	84	118.581	1078.064	92	143.7	1618.5
0.055	1.4837	385	32.70	25.042	69	68.20	341.84	77	147.32	660.09	85	118.981	1084.164	93	144.1	1626.5
0.056	1.5111	392	32.90	25.249	70	68.59	344.90	78	148.71	664.62	86	119.381	1090.264	94	144.5	1634.5
0.057	1.5385	399	33.10	25.456	71	68.98	347.96	79	150.10	669.15	87	119.781	1096.364	95	144.9	1642.5
0.058	1.5659	406	33.30	25.663	72	69.37	351.02	80	151.49	673.68	88	120.181	1102.464	96	145.3	1650.5
0.059	1.5933	413	33.50	25.870	73	69.76	354.08	81	152.88	678.21	89	120.581	1108.564	97	145.7	1658.5
0.060	1.6207	420	33.70	26.077	74	70.15	357.14	82	154.27	682.74	90	120.981	1114.664	98	146.1	1666.5
0.061	1.6481	427	33.90	26.284	75	70.54	360.20	83	155.66	687.27	91	121.381	1120.764	99	146.5	1674.5
0.062	1.6755	434	34.10	26.491	76	70.93	363.26	84	157.05	691.80	92	121.781	1126.864	100	146.9	1682.5
0.063	1.7029	441	34.30	26.698	77	71.32	366.32	85	158.44	696.33	93	122.181	1132.964	101	147.3	1690.5
0.064	1.7303	448	34.50	26.905	78	71.71	369.38	86	159.83	700.86	94	122.581	1139.064	102	147.7	1698.5
0.065	1.7577	455	34.70	27.112	79	72.10	372.44	87	161.22	705.39	95	122.981	1145.164	103	148.1	1706.5
0.066																

THE STANDARD PACKING OF THE WORLD



GARLOCK



ENGINEERING DATA

CIRCUMFERENCE AND AREAS OF CIRCLES—Continued

Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area
47	147.6	1734.9	54	169.6	2290.2	61	191.6	2922.4	68	213.6	3631.6	75	235.6	4417.8	82	257.6	5282.1
1/4	148.0	1744.1	1/4	170.0	2308.8	1/4	192.0	2934.4	1/4	214.0	3648.0	1/4	236.4	4447.3	1/4	277.2	6116.7
1/2	148.4	1753.4	1/2	170.4	2311.4	1/2	192.4	2946.4	1/2	214.4	3658.4	1/2	237.1	4476.9	1/2	278.0	6151.4
3/4	148.8	1762.7	3/4	170.8	2322.1	3/4	192.8	2958.3	3/4	214.8	3671.8	3/4	237.9	4506.6	3/4	278.8	6186.2
1	149.2	1772.0	1	171.2	2332.8	1	193.2	2970.3	1	215.1	3683.2	1	238.7	4536.4	1	279.6	6221.1
1 1/4	149.6	1781.3	1 1/4	171.6	2343.5	1 1/4	193.6	2982.4	1 1/4	215.5	3696.7	1 1/4	239.5	4566.3	1 1/4	280.3	6256.1
1 1/2	150.0	1790.7	1 1/2	172.0	2354.2	1 1/2	194.0	2994.6	1 1/2	215.9	3712.2	1 1/2	240.3	4596.3	1 1/2	281.1	6291.2
1 3/4	150.4	1800.1	1 3/4	172.4	2365.0	1 3/4	194.4	3006.9	1 3/4	216.3	3725.7	1 3/4	241.1	4626.4	1 3/4	281.9	6326.4
2	150.7	1809.3	2	172.7	2375.8	2	194.7	3019.0	2	216.7	3739.2	2	241.9	4656.6	2	282.7	6361.7
1/4	151.1	1818.9	1/4	173.1	2386.6	1/4	195.1	3031.2	1/4	217.1	3752.8	1/4	242.6	4686.9	1/4	283.5	6397.1
1/2	151.5	1828.4	1/2	173.5	2397.4	1/2	195.5	3043.4	1/2	217.5	3766.4	1/2	243.4	4717.3	1/2	284.3	6432.6
3/4	151.9	1837.9	3/4	173.9	2408.3	3/4	195.9	3055.7	3/4	217.9	3780.0	3/4	244.2	4747.7	3/4	285.1	6468.2
1	152.3	1847.4	1	174.3	2419.2	1	196.3	3067.9	1	218.3	3793.6	1	245.0	4778.3	1	285.8	6503.8
1 1/4	152.7	1856.9	1 1/4	174.7	2430.1	1 1/4	196.7	3080.3	1 1/4	218.7	3807.3	1 1/4	245.8	4809.0	1 1/4	286.6	6539.6
1 1/2	153.1	1866.5	1 1/2	175.1	2441.0	1 1/2	197.1	3092.6	1 1/2	219.1	3821.0	1 1/2	246.6	4839.8	1 1/2	287.4	6575.3
1 3/4	153.5	1876.1	1 3/4	175.5	2452.0	1 3/4	197.5	3104.8	1 3/4	219.5	3834.7	1 3/4	247.4	4870.7	1 3/4	288.2	6611.3
2	153.9	1885.7	2	175.9	2463.0	2	197.9	3117.3	2	219.9	3848.4	2	248.2	4901.6	2	289.0	6647.6
1/4	154.3	1895.3	1/4	176.3	2474.0	1/4	198.3	3129.6	1/4	220.3	3862.2	1/4	249.0	4932.7	1/4	289.8	6683.8
1/2	154.7	1904.8	1/2	176.7	2485.0	1/2	198.7	3142.0	1/2	220.7	3875.9	1/2	249.8	4963.9	1/2	290.6	6720.0
3/4	155.1	1914.7	3/4	177.1	2496.1	3/4	199.0	3154.4	3/4	221.0	3889.8	3/4	250.6	4995.1	3/4	291.3	6756.4
1	155.5	1924.6	1	177.5	2507.1	1	199.4	3166.9	1	221.4	3903.6	1	251.4	5026.3	1	292.1	6792.9
1 1/4	155.9	1934.1	1 1/4	177.9	2518.2	1 1/4	199.8	3179.4	1 1/4	221.8	3917.4	1 1/4	252.1	5057.6	1 1/4	292.9	6829.6
1 1/2	156.3	1943.9	1 1/2	178.3	2529.4	1 1/2	200.2	3191.9	1 1/2	222.2	3931.3	1 1/2	252.9	5089.0	1 1/2	293.7	6866.1
1 3/4	156.7	1953.6	1 3/4	178.7	2540.6	1 3/4	200.6	3204.4	1 3/4	222.6	3945.2	1 3/4	253.6	5121.2	1 3/4	294.5	6902.9
2	157.0	1963.3	2	179.0	2551.7	2	201.0	3216.9	2	223.0	3959.2	2	254.4	5153.0	2	295.3	6939.7
1/4	157.4	1973.3	1/4	179.4	2562.9	1/4	201.4	3229.3	1/4	223.4	3973.1	1/4	255.2	5184.8	1/4	296.0	6976.7
1/2	157.8	1983.1	1/2	179.8	2574.1	1/2	201.8	3242.1	1/2	223.8	3987.1	1/2	256.0	5216.5	1/2	296.8	7013.8
3/4	158.2	1993.0	3/4	180.2	2585.4	3/4	202.2	3254.8	3/4	224.2	4001.1	3/4	256.8	5248.3	3/4	297.6	7050.9
1	158.6	2002.9	1	180.6	2596.7	1	202.6	3267.6	1	224.6	4015.1	1	257.6	5280.2	1	298.4	7088.3
1 1/4	159.0	2012.8	1 1/4	181.0	2608.0	1 1/4	203.0	3280.1	1 1/4	225.0	4029.2	1 1/4	258.4	5312.3	1 1/4	299.2	7125.5
1 1/2	159.4	2022.8	1 1/2	181.4	2619.3	1 1/2	203.4	3292.8	1 1/2	225.4	4043.2	1 1/2	259.2	5344.4	1 1/2	300.0	7163.0
1 3/4	159.8	2032.8	1 3/4	181.8	2630.7	1 3/4	203.8	3306.3	1 3/4	225.8	4057.2	1 3/4	260.0	5376.6	1 3/4	300.8	7200.5
2	160.2	2042.8	2	182.2	2642.0	2	204.2	3318.3	2	226.1	4071.3	2	260.8	5408.8	2	301.6	7238.2
1/4	160.6	2052.8	1/4	182.6	2653.4	1/4	204.6	3331.0	1/4	226.5	4085.4	1/4	261.6	5441.1	1/4	302.4	7275.9
1/2	161.0	2062.9	1/2	183.0	2664.8	1/2	205.0	3343.8	1/2	226.9	4099.6	1/2	262.4	5473.5	1/2	303.2	7313.8
3/4	161.4	2072.9	3/4	183.4	2676.3	3/4	205.4	3356.7	3/4	227.3	4114.0	3/4	263.2	5506.0	3/4	304.0	7351.7
1	161.8	2083.0	1	183.8	2687.8	1	205.8	3369.8	1	227.7	4128.2	1	264.0	5538.6	1	304.8	7389.7
1 1/4	162.2	2093.2	1 1/4	184.2	2699.3	1 1/4	206.2	3382.4	1 1/4	228.1	4142.5	1 1/4	264.8	5571.3	1 1/4	305.6	7427.9
1 1/2	162.6	2103.3	1 1/2	184.6	2710.8	1 1/2	206.6	3395.3	1 1/2	228.5	4156.7	1 1/2	265.6	5604.1	1 1/2	306.4	7466.2
1 3/4	163.0	2113.5	1 3/4	185.0	2722.4	1 3/4	207.0	3408.3	1 3/4	228.9	4171.0	1 3/4	266.4	5637.0	1 3/4	307.2	7504.4
2	163.4	2123.7	2	185.4	2733.9	2	207.4	3421.2	2	229.3	4185.3	2	267.2	5670.0	2	308.0	7542.9
1/4	163.8	2133.9	1/4	185.8	2745.5	1/4	207.8	3434.1	1/4	229.7	4199.7	1/4	268.0	5703.1	1/4	308.8	7581.3
1/2	164.2	2144.1	1/2	186.2	2757.1	1/2	208.2	3447.1	1/2	230.1	4214.1	1/2	268.8	5736.3	1/2	309.6	7620.1
3/4	164.6	2154.4	3/4	186.6	2768.8	3/4	208.6	3460.1	3/4	230.5	4228.5	3/4	269.6	5769.6	3/4	310.4	7658.8
1	165.0	2164.7	1	187.0	2780.5	1	209.0	3473.2	1	230.9	4242.9	1	270.4	5803.0	1	311.2	7697.7
1 1/4	165.4	2175.0	1 1/4	187.4	2792.2	1 1/4	209.4	3486.3	1 1/4	231.3	4257.3	1 1/4	271.2	5836.5	1 1/4	312.0	7736.6
1 1/2	165.8	2185.4	1 1/2	187.8	2803.9	1 1/2	209.8	3499.3	1 1/2	231.7	4271.8	1 1/2	272.0	5870.1	1 1/2	312.8	7775.4
1 3/4	166.2	2195.7	1 3/4	188.2	2815.6	1 3/4	210.2	3512.3	1 3/4	232.1	4286.3	1 3/4	272.8	5903.7	1 3/4	313.6	7814.7
2	166.6	2206.1	2	188.6	2827.4	2	210.6	3525.6	2	232.5	4300.8	2	273.6	5937.4	2	314.4	7853.9
1/4	167.0	2216.6	1/4	189.0	2839.2	1/4	211.0	3538.6	1/4	232.9	4315.3	1/4	274.4	5971.2	1/4	315.2	7893.3
1/2	167.4	2227.0	1/2	189.4	2851.0	1/2	211.4	3552.9	1/2	233.3	4329.9	1/2	275.2	6005.1	1/2	316.0	7932.7
3/4	167.8	2237.5	3/4	189.8	2862.8	3/4	211.8	3567.2	3/4	233.7	4344.5	3/4	276.0	6039.1	3/4	316.8	7972.2
1	168.2	2248.0	1	190.2	2874.7	1	212.2	3581.7	1	234.1	4359.1	1	276.8	6073.2	1	317.6	8011.7
1 1/4	168.6	2258.5	1 1/4	190.6	2886.6	1 1/4	212.6	3596.7	1 1/4	234.5	4373.8	1 1/4	277.6	6107.4	1 1/4	318.4	8051.3
1 1/2	169.0	2269.0	1 1/2	191.0	2898.5	1 1/2	213.0	3611.3	1 1/2	234.9	4388.6	1 1/2	278.4	6141.7	1 1/2	319.2	8091.0
1 3/4	169.4	2279.6	1 3/4	191.4	2910.3	1 3/4	213.4	3626.3	1 3/4	235.3	4403.1	1 3/4	279.2	6176.1	1 3/4	320.0	8130.7

THE STANDARD PACKING OF THE WORLD



GARLOCK



ENGINEERING DATA

STEAM TABLE

Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.
5	228	39	285	72	317	110	344	176	378	241	401
6	230	40	287	73	318	112	345	178	378	243	403
7	233	41	288	74	319	114	346	180	379	245	404
8	235	42	289	75	320	116	348	182	380	247	405
9	237	43	290	76	321	118	349	184	381	249	405
10	240	44	291	77	321	120	350	186	382	251	406
11	242	45	292	78	322	122	351	188	383	253	407
12	244	46	293	79	323	124	352	190	384	255	407
13	246	47	294	80	324	126	353	192	384	257	408
14	248	48	295	81	324	128	354	194	385	259	409
15	250	49	297	82	325	130	355	196	386	261	409
16	252	50	298	83	326	132	356	198	387	263	410
17	254	51	299	84	327	134	357	200	388	265	411
18	255	52	300	85	327	136	359	202	388	267	411
19	257	53	301	86	328	138	360	204	389	269	412
20	259	54	302	87	329	140	361	206	390	271	413
21	261	55	302	88	330	142	362	208	391	273	413
22	262	56	303	89	330	144	363	210	391	275	414
23	264	57	304	90	331	146	364	212	392	277	415
24	265	58	305	91	332	148	365	214	393	279	415
25	267	59	306	92	332	150	366	216	394	281	416
26	268	60	307	93	333	152	367	218	394	283	416
27	270	61	308	94	334	154	368	220	395	285	417
28	271	62	309	95	334	156	368	222	396	287	420
29	273	63	310	96	335	158	369	224	397	289	423
30	274	64	311	97	336	160	370	226	397	291	437
31	275	65	312	98	336	162	371	228	398	293	442
32	277	66	312	99	337	164	372	230	399	295	444
33	278	67	313	100	338	166	373	232	400	297	449
34	279	68	314	102	339	168	374	234	400	299	460
35	281	69	315	104	340	170	375	235	401	310	472
36	282	70	316	106	341	172	376	237	401	312	481
37	283	71	317	108	343	174	377	239	402	315	486
38	284										

TABLE OF WATER HEADS AND EQUIVALENT PRESSURES

(To estimate any pressure multiply the head (in feet) by .433. The result is lbs. per square inch.)

Head in Feet	Pressure lbs. per sq. in.	Head in Feet	Pressure lbs. per sq. in.	Head in Feet	Pressure lbs. per sq. in.	Head in Feet	Pressure lbs. per sq. in.
5	2.17	80	34.64	275	119.08	700	303.10
10	4.33	90	38.97	300	129.90	750	324.75
15	6.50	100	43.30	350	151.55	800	346.40
20	8.66	125	54.13	400	173.20	850	368.05
30	12.99	150	64.95	450	194.85	900	389.70
40	17.32	175	75.78	500	216.50	950	411.35
50	21.65	200	86.60	550	238.15	1000	433.00
60	25.98	225	97.43	600	259.80	1100	476.30
70	30.31	250	108.25	650	281.45	1200	519.60

THE STANDARD PACKING OF THE WORLD



GARLOCK



ENGINEERING DATA

DIMENSIONS OF GASKETS FOR STANDARD AND
LOW PRESSURE FLANGES A.S.M.E. 1928 STANDARD

Size of Pipe	Ring Gaskets		Full Faced Gaskets		Size of Pipe	Ring Gaskets		Full Faced Gaskets	
	I. D.	O. D.	I. D.	O. D.		I. D.	O. D.	I. D.	O. D.
3/4"	3/4"	2 1/4"	3/4"	3 1/4"	40"	40"	45 3/4"	40"	50 3/4"
1"	1"	2 3/4"	1"	4 1/4"	42"	42"	48"	42"	53"
1 1/4"	1 1/4"	3"	1 1/4"	4 3/4"	44"	44"	50 1/4"	44"	55 1/4"
1 1/2"	1 1/2"	3 1/4"	1 1/2"	5"	46"	46"	52 1/4"	46"	57 1/4"
2"	2"	4 1/4"	2"	6"	48"	48"	54 1/4"	48"	59 1/4"
2 1/4"	2 1/4"	4 3/4"	2 1/4"	7"	50"	50"	56 1/4"	50"	61 1/4"
3"	3"	5 1/4"	3"	7 1/4"	52"	52"	58 1/4"	52"	64"
3 1/4"	3 1/4"	6 1/4"	3 1/4"	8 1/4"	54"	54"	61"	54"	66 1/4"
4"	4"	6 3/4"	4"	9"	56"	56"	63 1/4"	56"	68 3/4"
4 1/4"	4 1/4"	7"	4 1/4"	9 1/4"	58"	58"	65 1/4"	58"	71"
5"	5"	7 3/4"	5"	10"	60"	60"	67 1/4"	60"	73"
6"	6"	8 3/4"	6"	11"	62"	62"	69 1/4"	62"	75 3/4"
7"	7"	10"	7"	12 1/4"	64"	64"	72 1/4"	64"	78"
8"	8"	11"	8"	13 1/4"	66"	66"	74 1/4"	66"	80"
9"	9"	12 1/4"	9"	15"	68"	68"	76 1/4"	68"	82 1/4"
10"	10"	13 1/4"	10"	16"	70"	70"	78 1/4"	70"	84 1/4"
12"	12"	16 1/4"	12"	19"	72"	72"	80 1/4"	72"	86 1/4"
14"	14"	17 3/4"	14"	21"	74"	74"	82 1/4"	74"	88 1/4"
15"	15"	19"	15"	22 1/4"	76"	76"	84 1/4"	76"	90 1/4"
16"	16"	20 1/4"	16"	23 1/4"	78"	78"	86 1/4"	78"	93"
18"	18"	21 3/4"	18"	25"	80"	80"	89"	80"	95 1/4"
20"	20"	23 1/4"	20"	27 1/4"	82"	82"	91 1/4"	82"	97 1/4"
22"	22"	26"	22"	29 1/4"	84"	84"	93 1/4"	84"	99 1/4"
24"	24"	28 1/4"	24"	32"	86"	86"	95 1/4"	86"	102"
26"	26"	30 1/4"	26"	34 1/4"	88"	88"	98"	88"	104 1/4"
28"	28"	32 3/4"	28"	36 1/4"	90"	90"	100 1/4"	90"	106 1/4"
30"	30"	34 3/4"	30"	38 1/4"	92"	92"	102 1/4"	92"	108 1/4"
32"	32"	38"	32"	41 1/4"	94"	94"	104 1/4"	94"	111"
34"	34"	39"	34"	43 1/4"	96"	96"	106 1/4"	96"	113 1/4"
36"	36"	41 1/4"	36"	46"	98"	98"	108 1/4"	98"	115 1/4"
38"	38"	43 3/4"	38"	48 3/4"	100"	100"	110 1/4"	100"	117 1/4"

DIMENSIONS OF GASKETS FOR MEDIUM AND
EXTRA HEAVY FLANGES A.S.M.E. 1928 STANDARD

Size of Pipe	Ring Gaskets		Full Faced Gaskets		Size of Pipe	Ring Gaskets		Full Faced Gaskets	
	I. D.	O. D.	I. D.	O. D.		I. D.	O. D.	I. D.	O. D.
1"	1"	2 1/4"	1"	4 1/4"	16"	16"	21 1/4"	16"	25 1/4"
1 1/4"	1 1/4"	3 1/4"	1 1/4"	5 1/4"	18"	18"	23 1/4"	18"	28"
1 1/2"	1 1/2"	3 3/4"	1 1/2"	6 1/4"	20"	20"	25 3/4"	20"	30 1/4"
2"	2"	4 1/4"	2"	6 3/4"	22"	22"	27 3/4"	22"	33"
2 1/4"	2 1/4"	5 1/4"	2 1/4"	7 1/4"	24"	24"	30 1/4"	24"	36"
3"	3"	5 3/4"	3"	8 1/4"	26"	26"	32 1/4"	26"	38 1/4"
3 1/4"	3 1/4"	6 1/4"	3 1/4"	9"	28"	28"	35 3/4"	28"	40 3/4"
4"	4"	7 1/4"	4"	10"	30"	30"	37 1/4"	30"	43"
4 1/4"	4 1/4"	7 3/4"	4 1/4"	10 1/2"	32"	32"	39 1/4"	32"	45 1/4"
5"	5"	8 1/4"	5"	11"	34"	34"	41 1/4"	34"	47 1/4"
6"	6"	9 1/4"	6"	12 1/4"	36"	36"	44"	36"	50"
7"	7"	11"	7"	14"	38"	38"	46 1/4"	38"	52 1/4"
8"	8"	12 1/4"	8"	15"	40"	40"	48 3/4"	40"	54 1/4"
9"	9"	13"	9"	16 1/4"	42"	42"	50 3/4"	42"	57"
10"	10"	14 1/4"	10"	17 1/2"	44"	44"	53"	44"	59 1/4"
12"	12"	16 3/4"	12"	20 1/2"	46"	46"	55 1/4"	46"	61 1/4"
14"	14"	19 1/4"	14"	23"	48"	48"	58 3/4"	48"	65"
15"	15"	20 1/4"	15"	24 1/4"					

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MEMORANDA

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Boletus

MEMORANDA

	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16		1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16
0	0.0	1.6	3.2	4.8	6.4	8.0	9.6	11.1	0	12.7	14.3	15.9	17.5	19.1	20.6	22.2	23.8
1	25.4	27.0	28.6	30.2	31.7	33.3	34.9	36.5	1	38.1	39.7	41.3	42.9	44.4	46.0	47.6	49.2
2	50.8	52.4	54.0	55.6	57.1	58.7	60.3	61.9	2	63.5	65.1	66.7	68.3	69.8	71.4	73.0	74.6
3	76.2	77.8	79.4	81.0	82.5	84.1	85.7	87.3	3	88.9	90.5	92.1	93.7	95.2	96.8	98.4	100.0
4	101.6	103.2	104.8	106.4	108.0	109.5	111.1	112.7	4	114.3	115.9	117.5	119.1	120.7	122.2	123.8	125.4
5	127.0	128.6	130.2	131.8	133.4	134.9	136.5	138.1	5	139.7	141.3	142.9	144.5	146.1	147.6	149.2	150.8
6	152.4	154.0	155.6	157.2	158.8	160.3	161.9	163.5	6	165.1	166.7	168.3	169.9	171.5	173.0	174.6	176.2
7	177.8	179.4	181.0	182.6	184.2	185.7	187.3	188.9	7	190.5	192.1	193.7	195.3	196.9	198.4	200.0	201.6
8	203.2	204.8	206.4	208.0	209.6	211.1	212.7	214.3	8	215.9	217.5	219.1	220.7	222.3	223.8	225.4	227.0
9	228.6	230.2	231.8	233.4	235.0	236.5	238.1	239.7	9	241.3	242.9	244.5	246.1	247.7	249.2	250.8	252.4
10	254.0	255.6	257.2	258.8	260.4	261.9	263.5	265.1	10	266.7	268.3	269.9	271.5	273.0	274.6	276.2	277.8
11	279.4	281.0	282.6	284.2	285.7	287.3	288.9	290.5	11	292.1	293.7	295.3	296.9	298.4	300.0	301.6	303.2
12	304.8	306.4	308.0	309.6	311.1	312.7	314.3	315.9	12	317.5	319.1	320.7	322.3	323.8	325.4	327.0	328.6
13	330.2	331.8	333.4	335.0	336.5	338.1	339.7	341.3	13	342.9	344.5	346.1	347.7	349.2	350.8	352.4	354.0
14	355.6	357.2	358.8	360.4	361.9	363.5	365.1	366.7	14	368.3	369.9	371.5	373.1	374.6	376.2	377.8	379.4
15	381.0	382.6	384.2	385.8	387.3	388.9	390.5	392.1	15	393.7	395.3	396.9	398.5	400.0	401.6	403.2	404.8
16	406.4	408.0	409.6	411.2	412.7	414.3	415.9	417.5	16	419.1	420.7	422.3	423.9	425.4	427.0	428.6	430.2
17	431.8	433.4	435.0	436.6	438.1	439.7	441.3	442.9	17	444.5	446.1	447.7	449.3	450.8	452.4	454.0	455.6
18	457.2	458.8	460.4	462.0	463.5	465.1	466.7	468.3	18	469.9	471.5	473.1	474.7	476.2	477.8	479.4	481.0
19	482.6	484.2	485.8	487.4	488.9	490.5	492.1	493.7	19	495.3	496.9	498.5	500.1	501.6	503.2	504.8	506.4
20	508.0	509.6	511.2	512.8	514.3	515.9	517.5	519.1	20	520.7	522.3	523.9	525.5	527.0	528.6	530.2	531.8
21	533.4	535.0	536.6	538.2	539.7	541.3	542.9	544.5	21	546.1	547.7	549.3	550.9	552.4	554.0	555.6	557.2
22	558.6	560.2	561.8	563.4	564.9	566.5	568.1	569.7	22	571.5	573.1	574.7	576.3	577.8	579.4	581.0	582.6
23	584.2	585.8	587.4	589.0	590.5	592.1	593.7	595.3	23	596.9	598.5	600.1	601.7	603.2	604.8	606.4	608.0

CENTIGRADE - FAHRENHEIT

Centigr.	Fahr.	Centigr.	Fahr.	Centigr.	Fahr.	Centigr.	Fahr.
100	212	480	896	770	1418	900	1614
130	302	490	914	775	1427	1000	1832
200	392	500	932	780	1436	1010	1850
210	410	510	950	785	1445	1020	1868
220	428	520	968	790	1454	1030	1886
230	446	530	986	800	1472	1040	1904
240	464	540	1004	805	1481	1050	1922
250	482	550	1022	810	1490	1060	1940
260	500	560	1040	820	1508	1070	1958
270	518	565	1049	825	1517	1080	1976
280	536	570	1058	830	1526	1090	1994
290	554	580	1076	840	1544	1095	2003
300	572	590	1094	850	1562	1100	2012
310	590	600	1112	860	1580	1110	2030
320	608	610	1130	870	1598	1120	2048
330	626	620	1148	875	1607	1130	2066
340	644	630	1166	880	1616	1140	2084
350	662	640	1184	890	1634	1150	2102
360	680	650	1202	900	1652	1160	2120
370	698	660	1220	910	1670	1170	2138
380	716	670	1238	920	1688	1180	2156
390	734	680	1256	930	1697	1190	2174
400	752	690	1274	940	1706	1200	2192
410	770	700	1292	950	1724	1205	2201
420	788	710	1310	955	1743	1210	2210
430	806	720	1328	960	1751	1220	2228
440	824	730	1346	970	1760	1230	2246
450	842	740	1364	980	1778	1240	2264
460	860	750	1382			1250	2282
470	878	760	1400				

Degres cent. $\times 9/5 + 32 = \text{Fahr.}$ Degres Fahr. $- 32 \times 5/9 = \text{cent.}$

39.37 pouces = 1 M. = 10 Dec. = 100 Cm. x 1.000
1 yard = 3 pieds = 36 pouces = 914.4 mm

LONGUEUR

1 pouce	=	0.0254 metre.
1 pied = 12 pouces	=	0.3048 metre.
1 yard = 3 pieds	=	0.9144 metre.
1 mille = 1,760 yards	=	1609.3 metres.

POIDS

1 once	=	16 drams	=	grammes: 28.35
1 livre	=	16 onces	=	1,134.56
1 quarter	=	28 livres	=	kgs 12,200
1 quintal (cwt.)	=	4 quarter	=	30,500
1 tonne	=	20 cwt.	=	1016.047

SUPERFICIE

1 pouce carré	=	m/m carrés 645.2
1 pied	=	(mètre carré) 0.0929
1 yard	=	0.8361
1 acre	=	4,046.86

CAPACITE

1 pint	=	2 cups	=	litres 0.568
1 quart	=	2 pints	=	1.136
1 gallon	=	4 quarts	=	4.546
1 peck	=	2 gallons	=	9.090
1 bushel	=	4 gallons	=	36.367
1 quarter	=	2 bushels	=	145.468

FORMULES DE CONVERSIONS

Tonnes anglaises par pouce carré	$\times 1.573$	=	Kgs par m/m carré.
Kgs par millimètre carré	$\times 0.685$	=	Tonnes anglaises par pouce carré.
Livres par pied carré	$\times 1.488$	=	Kgs par m. courant.
Kgs par mètre courant	$\times 0.672$	=	Livres par pied cour.
Livres par yard courant	$\times 0.496$	=	Kgs par m. courant.
Kgs par mètre courant	$\times 2.016$	=	Livres par yard cour.
Livres par pied cubique	$\times 16.02$	=	Kgs par mètre cube.
Kgs par mètre cube	$\times 0.0624$	=	Livres par pied cube.

MONNAIES ANGLAISES

1 livre sterling = 4 couronnes = 20 shillings = 240 pence = 960 farthings.

PLAINTIFFS
EXHIBIT

G123

PLAINTIFFS
EXHIBIT
G123
7-9-00

THIS CATALOG OF
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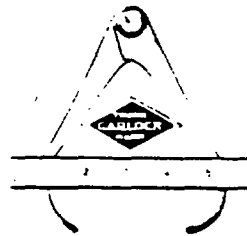
M. BRUCE POTTER, JR.

SERVICE ENGINEER
THE GARLOCK PACKING COMPANY
PALMYRA, NEW YORK

MECHANICAL
PACKING SERVICE

GARLOCK PACKINGS
AND OTHER
GARLOCK PRODUCTS

THIS GARLOCK TRADE-MARK, WHICH APPEARS ON EVERY PACKAGE OF GARLOCK
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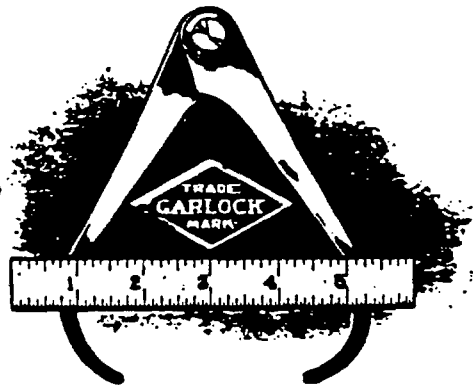


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GARLOCK PACKINGS

AND OTHER GARLOCK PRODUCTS



THE GARLOCK PACKING COMPANY

General Offices and Factories

PALMYRA, NEW YORK

In Canada

THE GARLOCK PACKING COMPANY OF CANADA, LTD.

MONTREAL, QUE.

Canadian Factory

HAMILTON, ONTARIO

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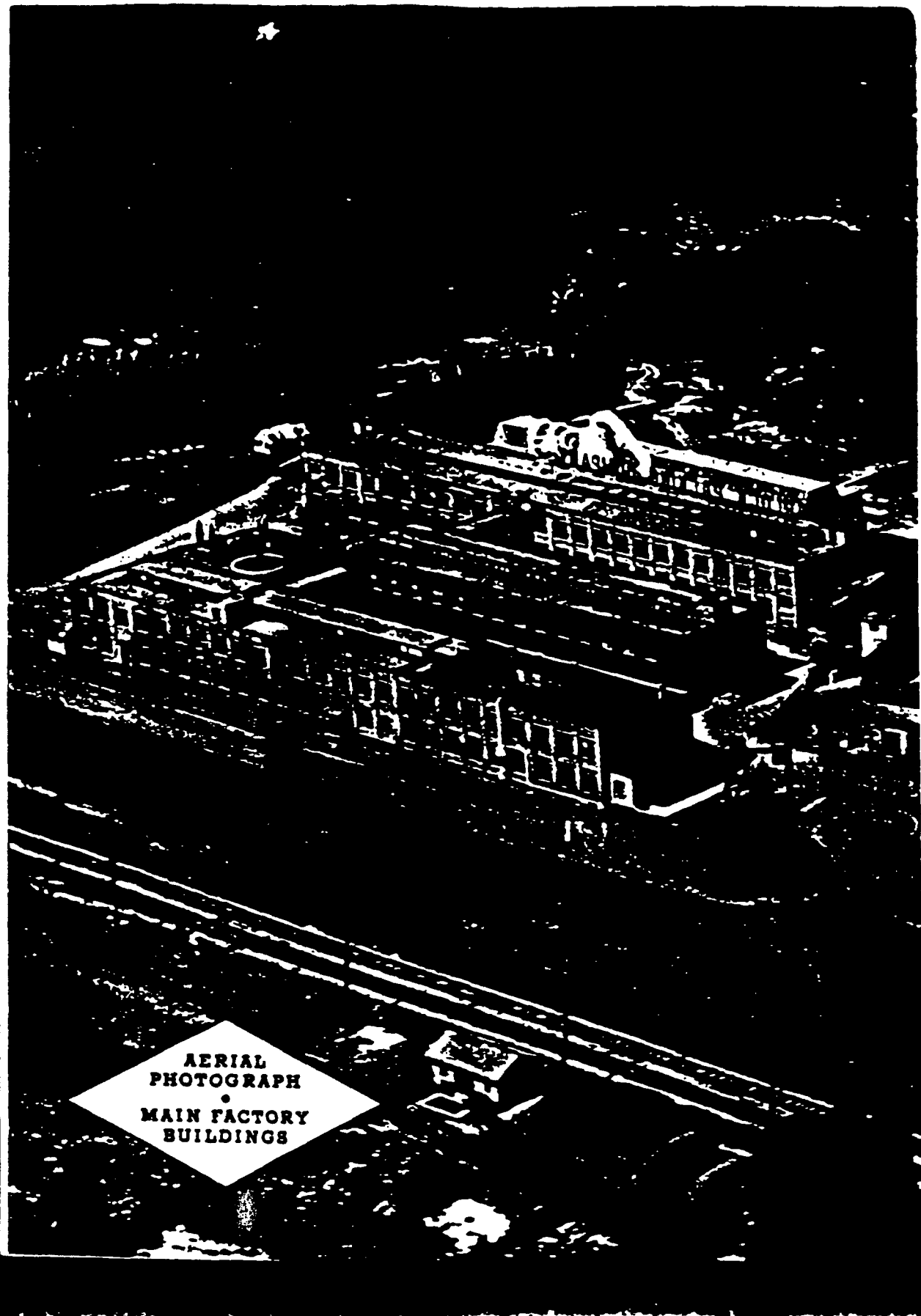


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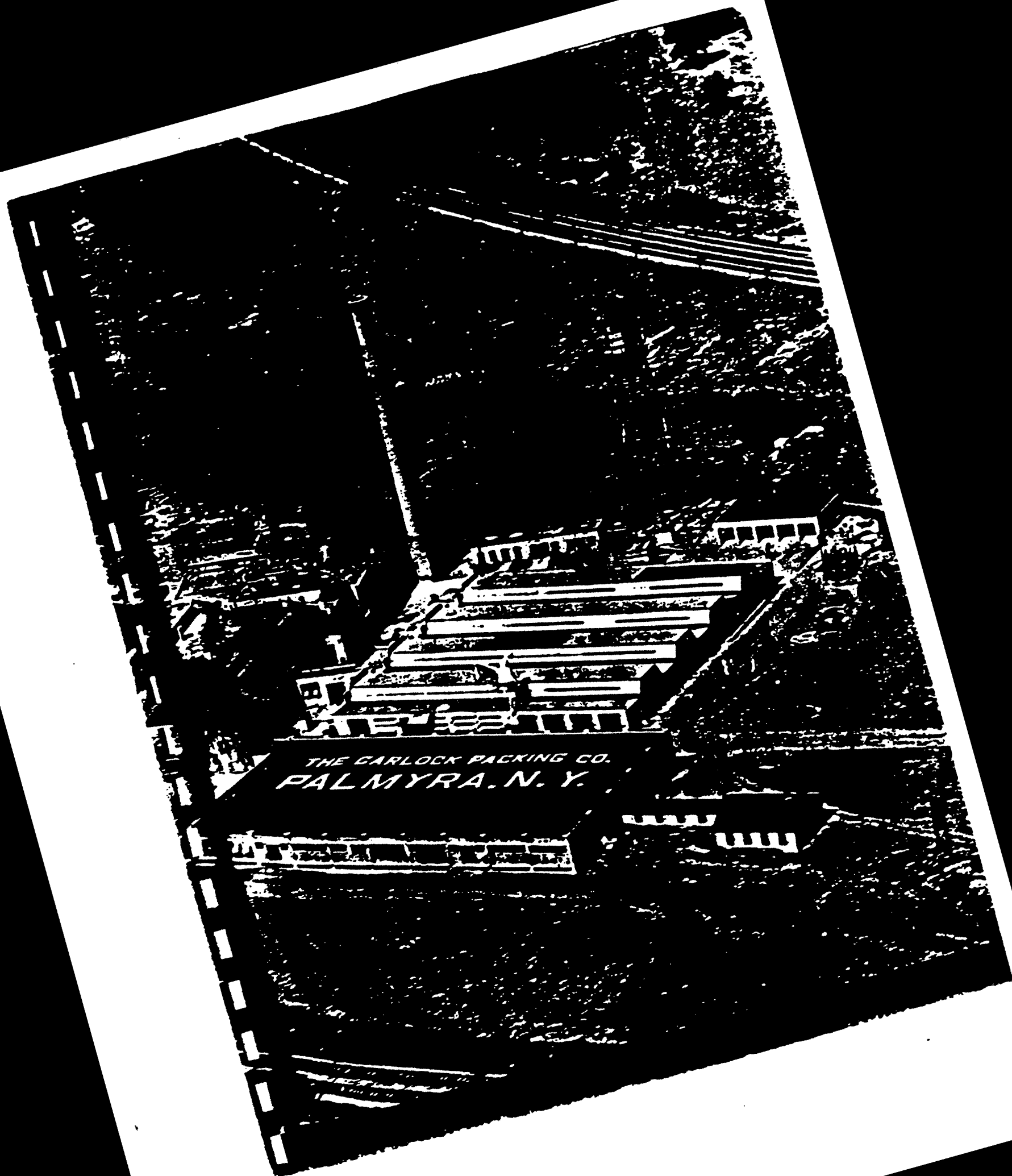
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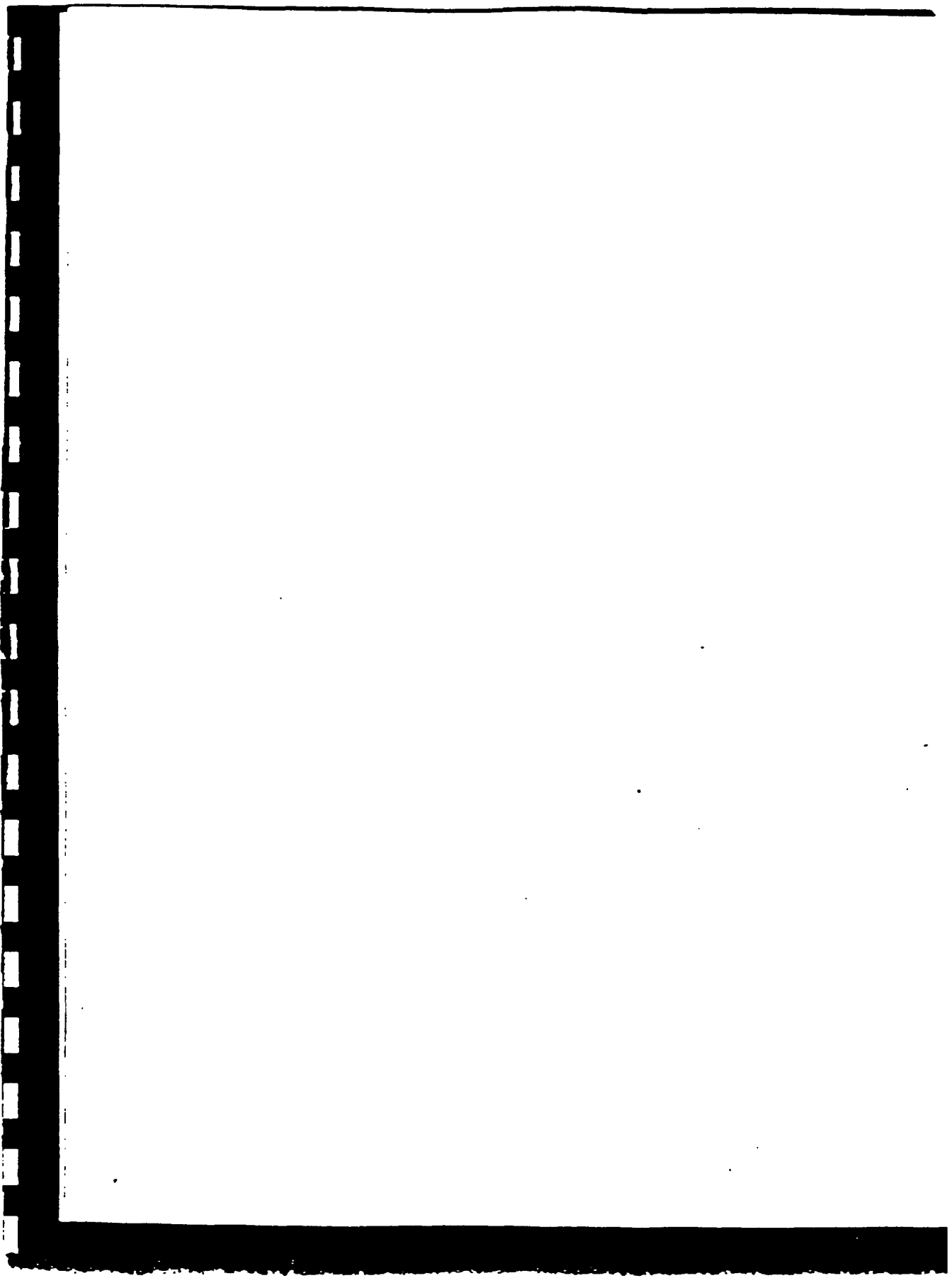
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AERIAL
PHOTOGRAPH
•
MAIN FACTORY
BUILDINGS





INTRODUCTION

SINCE 1887 The GARLOCK Packing Company has been identified prominently with the manufacture and sale of high-grade mechanical packings and immediately allied materials. Its Quality Controlled products, sold only under the registered GARLOCK name and the caliper and scale trade-mark emblem, are known in every civilized country.

In this catalog are illustrated and described those styles and types of GARLOCK materials for which there is general usage and demand. It is hoped that the book will serve the user as a complete guide and reference book for mechanical packing materials. Reference to the text and to the recommendation tables should permit the selection of a satisfactory GARLOCK product for any regular packing job.

For special equipment, or for unusual operating conditions, packings other than standard frequently are desirable or necessary. A comprehensive line of special GARLOCK materials, each designed and intended for some specific and out-of-the-ordinary equipment or service, therefore, has been developed. These special GARLOCK materials are not shown in this catalog. To include them would require a book cumbersome in size and confusing to the user.

When confronted with a condition on which satisfactory packing service is not being obtained, and for which none of the products included in this catalog appears to be suitable, the packing user is invited to call a GARLOCK Representative. Members of this corps of competent men, fully qualified by training and experience for consultation concerning packing problems, are available everywhere.

A survey by a GARLOCK Representative will determine whether the line of regular or special products contains one exactly suited to the condition on which trouble is being experienced. If not, a new material, designed to meet that condition, will be developed in the GARLOCK laboratories and manufactured in the GARLOCK factories.

To the packing users of the world this catalog and the services of the extensive field organization of GARLOCK Representatives are dedicated.

GARLOCK PACKINGS

THE GARLOCK Packing Company consistently makes every effort to place in the hands of its customers packings that are standard in every way. Through the Company's Quality Controlled method of manufacture the finished products are right in quality of material, uniform in excellence of workmanship, correct in measurements, and in general conformity with the Company's established standards.

The actual application and care of packings are responsibilities of the user. The few simple suggestions set forth below may save annoyance, trouble and expense if followed out carefully.

ROD PACKINGS Rod packings should be applied to a clean stuffing box. Each ring should be firmly seated, by tamping, as it is applied. When the stuffing box is full, the gland should be tightened with a wrench to seat the packing properly; then slacken off and retighten by hand, locking the gland a quarter turn with a wrench. Care should be taken to avoid cocking the gland.

Ammonia compressor rod packings contract during a "freeze back," making it necessary sometimes to tighten the gland to stop leakage. With the returning heat following the "freeze back" the packing expands, and unless the gland then is slackened off to compensate for this expansion the packing may be damaged. Most of the packing failures on ammonia compressors are caused by the failure to adjust the packing after a "freeze back."

Packings applied to hot water pumps sometimes cause trouble because of expansion as the temperature of the water increases. In this service packing should be watched carefully for a few days after application and the gland slackened off from time to

time if expansion or swelling of the packing has occurred.

Proper lubrication is essential. A liberal application of one of the lubricating compounds described on pages 136 and 137 to all surfaces of rod packings before installation is strongly recommended. Rods should also be swabbed with the same compound at frequent intervals. Observance of the above practice will reduce friction, prevent scored rods and add life to the packing.

GASKETS Before applying gaskets the flanges should be cleaned thoroughly. Gaskets should be cut and centered so that no portion of the inner diameter or flange of the gasket projects beyond the flange of the pipe or equipment on which the gasket is being applied.

Many gasket users wish to coat gaskets with a paste before applying them to pipe lines or equipment handling hot or cold gasoline, oil or petroleum derivatives. Inasmuch as the pastes sometimes used for this purpose actually are harmful to the gaskets, the Company developed GARLOCK Gasket Paste, Compound No. 1, for this service. Compound No. 1, which is described on page 137, has the correct body for a seal, expands under heat, will not discolor gasoline and is not harmful to gaskets.

When tightening the gasket in the flange make sure that the bolts are drawn up evenly all around. Unless this is done trouble will follow.

In the event of apparent failure of any packing at any time the Company will gladly have a competent GARLOCK Representative investigate all of the plant conditions as applying to packings, and make suitable recommendations for future packing usage.

GARLOCK PACKINGS

THE recommendations appearing on the following pages must be employed with due regard for the explanations and qualifications set forth in the succeeding paragraphs.

In preparing recommendations, the obviously simple and desirable procedure would embody the naming of one style of material for each kind of service condition described. This Company, however, has determined on the basis of its experience over the past fifty years that no single packing can be flatly and definitely recommended for universal usage with the maximum of economy and service on any given condition. The principal reasons for this situation are:

1. Variations in operating methods in relation to one installation as compared with another.
2. Variations in operating conditions as between two apparently similar installations.
3. Variations in operating requirements to be met in different installations for same service.
4. Variations in contributory service factors surrounding one installation on a certain condition as compared with another apparently duplicate installation.
5. Personal preference of individual operators for a certain type of design or material.

These circumstances have necessitated the extension of the GARLOCK recommendations to include several styles of packing for each service named. Otherwise the user might be misled in making his selection.

In making a choice of packings from the recommendation lists, the user will bear in mind the following points:

1. Each of the several styles named for a given service is in successful employment for that particular usage in hundreds of installations all over the world.
2. The style first named in each list is the one most widely used for the stated condition.
3. The styles named later in each list are successfully used for the condition stated approximately in the order of their listing.

We suggest that the intending user, who is not familiar with the proper GARLOCK product to employ for a stated condition, select the material named first in the list for that service. In so doing, he is invited to accompany his inquiry or order with a detailed statement of conditions that the correctness of his choice may be checked.

The Company maintains a record, constantly under revision, of thousands of actual installations under all kinds and classes of service ranging from the ordinary everyday applications to those of most infrequent and unusual occurrence. The information relative thereto is at the disposal of the Company's district offices and sales representatives for the benefit of all packing users.

The experience of this Company over a period of many years proves that in the great majority of cases, the best selection of a packing product can be made by affording a GARLOCK representative an opportunity to survey carefully the requirements of the job. It is recommended, therefore, that a representative of the Company be consulted concerning the selection of GARLOCK products whenever the convenience of the user will permit.

14 GENERAL SERVICE RECOMMENDATIONS

Types and Styles of Garlock Packings Commonly Used on RECIPROCATING PISTON RODS, VALVE RODS, OUTSIDE PACKED PLUNGERS and RAMS

TYPE OF PACKING	STEAM High Pressure		STEAM Low Pressure		WATER Hot		WATER—Cold High Pressure		WATER—Cold Low Pressure		GASOLINE and OIL—Hot	
	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page
FIBROUS	200	21	335	34	333	34	430	31	99	67	311	31
	330	31	430	31	430	31	50	70	430	31	4190	31
	140	23	712	57	712	57	99	67	28	68	190	31
	732	77	235	39	235	39	26	68	31	69	228	29
	731	76	988	91	988	91	11	69	731	79	238	29
	445	22	929	92	929	92	335	34	68	73	712	77
	235	23	87	93	87	93	183	73	67	94	1005	49
	377	25	368	61	368	61	440	84	988	91	7279	119
	236	34	448	82	447	83	988	91	440	34		
	928	92	448	83	1900	96	87	93	980	97		
	931	93			1906	96	980	97	43	71		
	107	96			1907	96	980	97	13	72		
	338	27			Leather	127	985	87	Leather	127		
SEMI-METALLIC	935	144	7030	144	7030-C	145	7030	144	7030	144	915	144
	934	144	962	141	7030	145	962	141	962	141	914	144
	7030	144	968	141	962	141	968	141	968	141	913	146
	962	141	969	141	969	141	969	141	969	141	7030-C	145
	968	141	944	143	969	141	944	143	944	143	7030	144
	969	141	945	143	944	143	945	143	945	143	962	141
	944	143	916	146	945	143	916	146	916	146	968	141
	945	143			916	146					969	141
	916	146										
CASE METAL	821	148	805	148								
	805	148	808	148								
	808	148	909	148								
	809	148	861	148								
	861	148	800	148								
	806	144										

CENTRIFUGAL and ROTARY SHAFTS

FIBROUS	239	28	239	28	219	28	219	28	239	28	238	29
	240	28	240	28	730	73	646	30	640	30	950	33
	730	73	730	73	646	30	140	28	140	28	968	34
	646	30	646	30	140	28	99	67	26	68		
	928	92	928	91	928	91	928	91	31	69		
	931	93	929	92	929	92	929	92	928	91		
SEMI-METALLIC			901	96	901	96	731	79	731	79		
							66	73	66	73		
							991	96				
	935	144	7030	144	7030	144	7030	144	7030	144	935	144
	934	144	962	141	962	141	962	141	962	141	934	144
	7030	144	968	141	968	141	968	141	968	141	913	146
	962	141	969	141	969	141	969	141	969	141	7030-C	145
	968	141	944	143	944	143	944	143	944	143	962	141
	969	141	945	143	945	143	945	143	945	143	968	141
	916	146	916	146	916	146	916	146	916	146	969	141

Before selecting a style of packing from the above list please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**

GENERAL SERVICE RECOMMENDATIONS 15

Types and Styles of Garlock Packings Commonly Used on RECIPROCATING PISTON RODS, VALVE RODS, OUTSIDE PACKED PLUNGERS and RAMS

TYPE OF PACKING	GASOLINE and OIL—Cold		AIR		ACIDS (Weak) and CAUSTICS		ACIDS Strong		GAS		AMMONIA	
	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page	GARLOCK Style	Page
FIBROUS	451	81	222	26	259	28	251	30	331	31	314	34
	7236	81	330	31	245	22	736	78	330	31	317	36
	927	91	245	22	255	25	924	93	731	76	336	35
	930	95	255	25	731	76			800	21	712	37
	258	29	731	76	991	98			350	35	255	39
	732	77	951	93	924	93						
	99	67			950	93						
	255	59			251	30						
	7279	139										
SEMI- METALLIC	7050-C	145	7050-C	141	7050	142	7050	142	7050-C	145	7050-C	141
	7050	142	7050	142	962	141	962	141	7050	142	7050	142
	962	141	962	141	968	141	968	141	944	145	944	145
	968	141	968	141	969	141	969	141	945	145	945	145
	969	141	969	141	916	146	916	146	916	146	916	146
	915	146	944	145								
			945	145								
CASE METAL			873	143	870	146	870	146	873	146	900	143
			805	148								
			808	148								
			809	148								
			861	148								
			806	148								
			821	148								

CENTRIFUGAL and ROTARY SHAFTS

FIBROUS	258	29	259	28	259	28	251	30	259	28	259	28
	927	91	251	93	245	22	736	78	731	76		
	930	95	731	76	255	25						
	99	67			731	76						
	731	79			991	98						
SEMI- METALLIC					950	93						
					251	30						
	7050	142	955	144	7050	142	7050	142	7050-C	145		
	962	141	7050	142	962	141	962	141	7050	142		
	968	141	944	145	968	141	968	141	962	141		
	969	141	945	145	916	146	916	146	968	141		
									969	141		
									941	147		
									944	145		
									945	145		
									916	146		

Before selecting a style of packing from the above list please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

THE STANDARD PACKING OF THE WORLD  GARLOCK

16 GENERAL SERVICE RECOMMENDATION

Types and Styles of Garlock Packings Commonly Used on GLOBE and ANGLE VALVE STEMS

TYPE OF PACKING	STEAM High Pressure		STEAM Low Pressure		WATER Hot		WATER—Cold High Pressure		WATER—Cold Low Pressure		GASOL OIL
	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style
FIBROUS	1700	17	117	11	117	11	117	11	117	11	1700
	17	17	113	11	113	11	113	11	113	11	1700
	238	14	848	10	848	10	848	10	848	10	1700
	117	11	920	91	920	91	920	91	920	91	920
	113	11	920	92	920	92	920	92	920	92	920
	848	10	333	34	333	34	333	34	333	34	333
	920	92	160	16	160	16	160	16	160	16	160
	931	93	181	18	181	18	181	18	181	18	181
	160	16	160	16	160	16	160	16	160	16	160
	160	16									
SEMI- METALLIC	933	144	904	141	904	141	904	141	904	141	933
	934	144	908	141	908	141	908	141	908	141	934
	962	141	944	143	944	143	944	143	944	143	962
	968	141	943	143	943	143	943	143	943	143	968
	944	143	916	140	916	140	916	140	916	140	944
	943	143									

SHEET PACKINGS and GASKETS

SERVICE	SHEET PACKING		GASKET	
	Garlock Style	Page	Garlock Style	Page
STEAM High Pressure	900	99	333	112
	7021	100	930	99
	902	102	7022	100
			932	102
	603	101	904	113
			607	101
STEAM Low Pressure			801	114
			602	114
			6007	114
AIR High Pressure	22	103	627	102
	44	104		
	333	103		
AIR Low Pressure	900	99	333	112
	902	102	930	99
COLD WATER High Pressure	333	103	932	102
	22	103		
COLD WATER Low Pressure	22	103	333	112
	333	103	122	101
	600	108	219	106
	139	107		
	160	107		
	170	107		

Before selecting a style of packing from the above list please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

GARLOCK  THE STANDARD PACKING OF THE WORLD

GENERAL SERVICE RECOMMENDATIONS 17

Types and Styles of Garlock Packings Commonly Used on GLOBE and ANGLE VALVES

TYPE OF PACKING	GASOLINE and OIL—Cold		AIR		ACIDS (Weak) and CAUSTICS		ACIDS Strong		GAS		AMMONIA	
	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page	Garlock Style	Page
FIBROUS	258	29	117	31	239	29	231	30	117	31	117	31
	947	91	115	31	1700	37	948	93	115	31	115	31
	930	93	17	32	924	93	180	36	1700	37	219	29
	1700	37	239	29	160	36	163	36	215	29	114	34
	117	31	180	36	163	36			239	29	160	36
	115	31	163	36					231	34	163	36
	431	81							160	36	161	36
	99	67							161	36		
SEMI- METALLIC	162	36										
	160	33										
	7030	142	7030	142	7030	142	7030	142	7030	142	7030	142
	962	141	962	141	962	141	962	141	962	141	962	141
	968	141	968	141	968	141	968	141	968	141	968	141
	915	146	944	145	916	146	916	146	944	145	944	145
			945	145					945	145	945	145
			910	146					910	146	916	146

SHEET PACKINGS and GASKETS

SERVICE	SHEET PACKING		GASKET	
	Garlock Style	Page	Garlock Style	Page
HOT WATER High Pressure	22	103	333	112
	24	104	122	101
	131	105	124	104
HOT WATER Low Pressure	22	103	931	105
	333	103	122	101
			931	105
OIL or GASOLINE Cold	902	102	932	102
	660	108	661	108
	333	103	933	103
	7601	138	7601	138
	7300	139	7300	139
	7797	139	7797	139
	7986	139	7986	139
OIL or GASOLINE Hot	7228	139	7228	139
	7300	139	7300	139
	7797	139	7797	139
	7986	139	7986	139
AMMONIA and VARIOUS ALKALI SOLUTIONS High Pressure	900	99	333	112
	902	102	930	99
AMMONIA and VARIOUS ALKALI SOLUTIONS Low Pressure	333	103	932	102
	22	103	931	103
GAS High Pressure	7021	100	122	101
	900	99	333	112
	902	102	7022	100
	623	102	930	99

Before selecting a style of packing from the above list please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

THE STANDARD PACKING OF THE WORLD  GARLOCK

18 GENERAL SERVICE RECOMMENDATIONS

GARLOCK PACKINGS Commonly Used on Services Indicated

PUMP PISTON PACKING		
SERVICE	GARLOCK Style	Page
HOT WATER	261	63
	133	123
	33 Special	64
	23	64
COLD WATER	261	63
	33 Special	64
	33	64
	133	123
CRUDE OIL, GASOLINE, MINERAL SEAL OIL	261	63
	133	123
	33 Special	64

PUMP VALVES		
SERVICE	GARLOCK Style	Page
HOT WATER—High Temperatures and Pressures	106	121
	130	121
	133	121
WARM and COLD WATER—From 143 Pounds to 300 Pounds Pressure	188	121
	7393	119
COLD WATER—From 73 Pounds to 143 Pounds Pressure	184	121
	330	121
	7364	119
COLD WATER—From 50 Pounds to 73 Pounds Pressure	130	121
	173	121
	189	121
	7790	119
	7303	119
GASOLINE, SYRUPS, ALCALY, etc.—High Temperatures and Pressures	106	121
HOT or COLD OIL—High Pressures	106	121
	130	121
	133	121
COLD OIL—From 73 Pounds to 143 Pounds Pressure	330	121
	7797	119
CONDENSER	134	121
	131	121
	138	121
	197	121
	7424	119

DIAPHRAGM SHEETS	
SERVICE	GARLOCK Style
AIR, WATER, DRY NATURAL GAS—High Pressure	7677
	7104
AIR, AMMONIA—High Pressure	7346
GASOLINE, OIL, WET NATURAL and MANUFACTURED GAS up to 150° F.—Medium Pressure	7394
	7396
AIR, WATER, DRY NATURAL GAS—Medium Pressure	7713
	619
GASOLINE, OIL, WET NATURAL and MANUFACTURED GAS up to 150° F.—Low Pressure	7604
	7396
AIR, WATER, DRY NATURAL GAS—Low Pressure	7361
	7341

LUBRICATING and GASKET COMPOUND	
SERVICE	GARLOCK Style
For Application to all kinds of Gaskets operating against Steam, Hot or Cold Gasoline, Oil, or Water	Compound No. 1
For Lubricating Rod Packings working against Steam, Hot or Cold Water and Water Solutions	Compound No. 2
For Lubricating Rod Packings working against Oil, Gasoline, Benzene, Ether, Carbon Tetrachloride and all Vapors and Chemicals of an Oily Nature	Compound No. 3
For Lubricating Rod Packings working against Steam or Water at temperatures up to 300° F.	Luball

Before selecting a style of packing from the above list please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

GARLOCK  THE STANDARD PACKING OF THE WORLD

GENERAL SERVICE RECOMMENDATIONS 19

GARLOCK PACKINGS commonly used in RAILROAD SERVICE

SERVICE	Gaskets Style	Page
Locomotive Cab Cock and Valve Stem Packing	1700	37
Locomotive Throttle Packing	330	18
	2000	19
	1200	19
American Multiple Throttle Packing	9001	40
Locomotive Air Pump Packing	177	42
	2200	41
	2243	41
	228	42
Locomotive Gauge Cock Discs	7731	50
Power Reverse Gear Cylinder Packing	1200	44
	812	44
	413-A Cups	44
Power Reverse Gear Piston Rod and Trunk Packing	310 Modified	43
	1223	43
	449-S	43
	430	43
Locomotive Front End Tape	616	48
	617	48
Standard Stoker Packing	377	47
	141	47
	7367	47
Feed Water Heater Piston Rod Packing	177	45
	330	45
	7091	45
Feed Water Heater Cylinder Packing	33 Special R.H.	46
	100 Rings	46
	261	46
	260 R.H.	46
Locomotive and Booster Engine Ball Joint Packing	1010 and 1020	31
	7114 Filler Rings	31
Locomotive Expansion Joint Packing	330	49
	1003 and 1013	49
	3430	30
	3270	30
Insulation Tape	7771	33
	7066	33
Gaskets for Railroad Service—		
Tank Hous	122	32
Booster Engines	930	32
Power Reverse Gears	932	32
Feed Water Heaters	7022	32
	7387	32
Tank Car Dome Head and Outlet Cap	7138	32

Before selecting a style of packing from the above list please note carefully the introduction to these recommendations, which appears on Page 13 of this catalog.

THE STANDARD PACKING OF THE WORLD  GARLOCK

THE GARLOCK WARRANTY. THE GARLOCK PACK
COMPANY GUARANTEES TO ITS CUSTOMERS THAT IT WILL REPL
FREE OF CHARGE INCLUDING TRANSPORTATION CHARGES BUT
COST OF INSTALLATION. ANY GARLOCK PRODUCT CLAIMED TO
DEFECTIVE EITHER IN MATERIAL OR WORKMANSHIP WHEREBY I
NOT SUITABLE UNDER PROPER USAGE AND SERVICE FOR THE P
POSE FOR WHICH DESIGNED, IF SO FOUND DEFECTIVE UPON EXA
NATION BY ITS REPRESENTATIVE.

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HIGH PRESSURE PACKING

21



GARLOCK 150 SPIRAL

GARLOCK 125 COIL

GARLOCK 200 RINGS

Construction—This high-pressure packing consists of a core of formed asbestos cloth and resilient rubber, wrapped with a cover of specially woven GARLOCK asbestos cloth. The packing is treated with a heat-resisting rubber friction and lubricated with a high-grade lubricant compounded to withstand extreme temperatures; it is furnished with an external coating of graphite.

Service—For general use against high temperatures. It is specially recommended for application to piston rods of steam engines, pumps, compressors and other similar equipment; for expansion joints, and for any other service against steam pressures up to 300 pounds per square inch.

Form—This material is obtainable in the three forms illustrated above—GARLOCK 150 Spiral, GARLOCK 125 Coil and GARLOCK 200 Ring.

GARLOCK 200 Rings are furnished cut and formed in any size to fit rod and stuffing box dimensions. When ordering, specify inside diameter, outside diameter, and quantity required.

GARLOCK 125 Coil and GARLOCK 150 Spiral are furnished in standard 12½-foot lengths and are manufactured in all packing sizes from ½" to 1½", advancing by sixteenths. Approximate footage and approximate weight per box of a few standard sizes are shown below:

GARLOCK 125 Coil		
Size	Feet per Box	Weight per Box
1½"	73 ft.	45½ lbs.
1¼"	50 ft.	61½ lbs.
1½"	50 ft.	11 lbs.
1¼"	37½ ft.	12½ lbs.
1½"	45 ft.	12½ lbs.
1¼"	12½ ft.	8½ lbs.
1"	12½ ft.	10½ lbs.

GARLOCK 150 Spiral		
Size	Feet per Box	Weight per Box
1½"	12½ ft.	3½ lbs.
1¼"	12½ ft.	19½ lbs.
1½"	12½ ft.	24½ lbs.
1¼"	12½ ft.	31½ lbs.
1½"	12½ ft.	61½ lbs.
1¼"	12½ ft.	44½ lbs.
1"	12½ ft.	10½ lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK.

ROUND DERBY PACKING

GARLOCK



GARLOCK 243 RINGS

GARLOCK
243 COIL

Construction—GARLOCK Round Derby Packing is manufactured from Canadian long fibre asbestos yarn by the braid over braid method. It receives a lubrication and graphite treatment which, by a special process, is impregnated into every strand, making a soft and pliable material.

Service—Recommended for service on piston rods of pumps handling steam, acids, gas, lye or caustic soda.

Form—GARLOCK Round Derby Packing is obtainable in the two forms illustrated above—GARLOCK

243 Coil and GARLOCK 243 Ring.

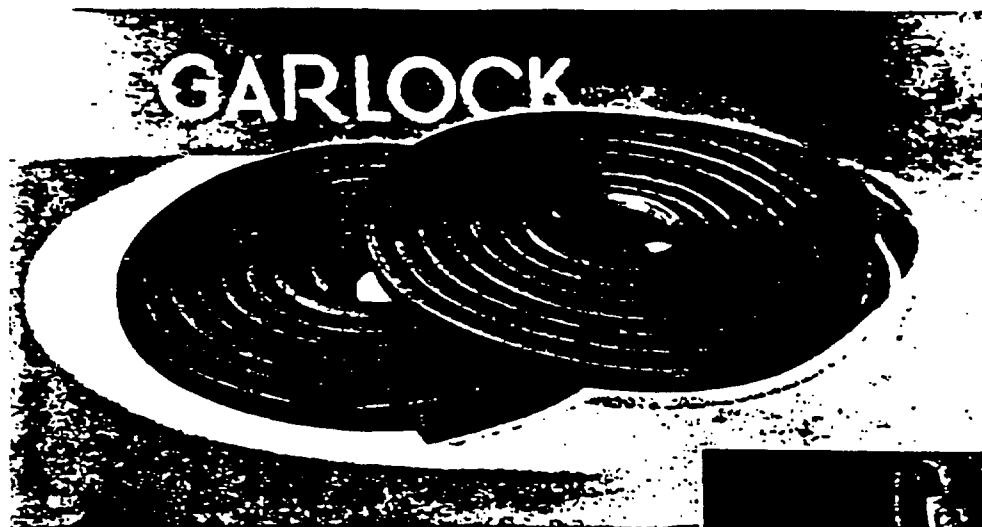
GARLOCK 243 Rings are cut from GARLOCK 243 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 243 Coil is manufactured in sizes from $\frac{1}{4}$ " to $1\frac{3}{4}$ ". Can be furnished in coil lengths or continuous length on a reel.

The table below indicates the number of coils, number of feet and approximate weight per box of a few standard sizes:

GARLOCK 243 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	4	158 ft.	5 lbs.
$\frac{3}{8}$ "	3	60 ft.	5 lbs.
$\frac{1}{2}$ "	4	68 ft.	10 lbs.
$\frac{3}{4}$ "	3	51 ft.	10 lbs.
$\frac{1}{2}$ "	3	51½ ft.	10 lbs.
$\frac{3}{4}$ "	3	81 ft.	10 lbs.
1"	2	81 ft.	10 lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 233 COIL



GARLOCK
233 RINGS

Construction—GARLOCK Square Derby Packing is manufactured from Canadian long fibre asbestos yarn by the braid over braid method. It receives a lubrication and graphite treatment which, by a special process, is impregnated into every strand, making a soft and pliable material.

Service—Recommended for service on piston rods of pumps handling steam, acids, gas, lye or caustic soda.

Form—GARLOCK Square Derby Packing is obtainable in the two forms illustrated above—GARLOCK 233 Coil and GARLOCK 233 Ring.

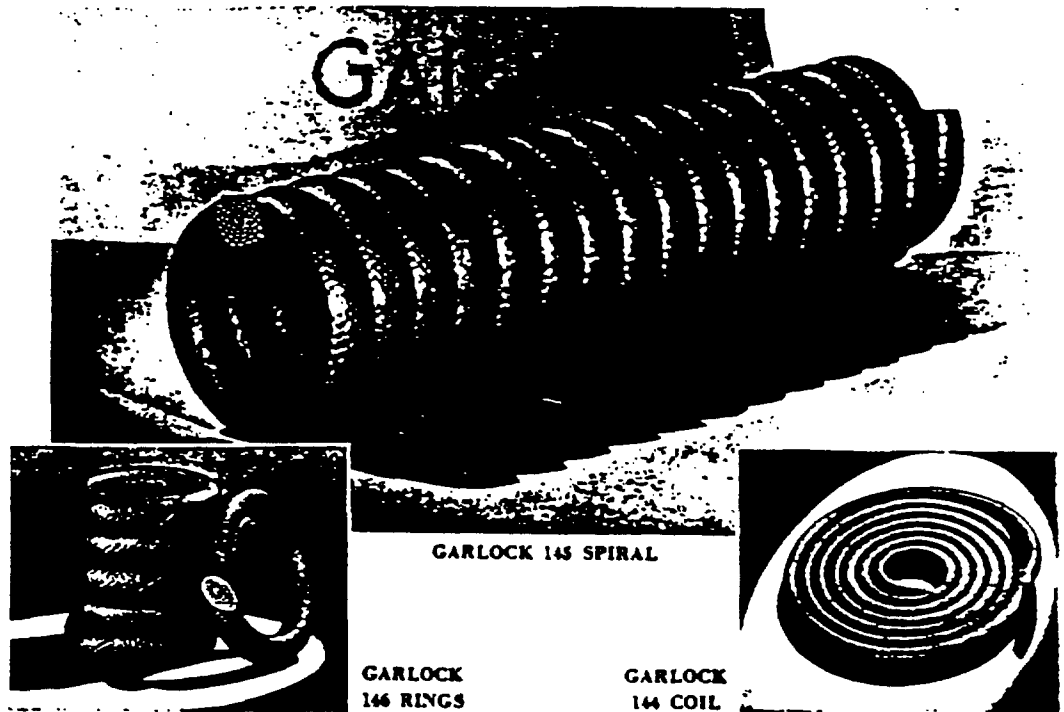
GARLOCK 233 Rings are cut from GARLOCK 233 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 233 Coil is manufactured in all packing sizes from $\frac{1}{4}$ " to $1\frac{1}{4}$ ", advancing by sixteenths. Can be furnished in coil lengths or in continuous length on reel.

The table below indicates the number of coils, number of feet and approximate weight per box of a few standard sizes:

GARLOCK 233 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	4	134 ft.	3 lbs.
$\frac{3}{8}$ "	3	100 ft.	3 lbs.
$\frac{1}{2}$ "	4	60 ft.	10 lbs.
$\frac{5}{8}$ "	3	30 ft.	10 lbs.
$\frac{3}{4}$ "	3	25 ft.	10 lbs.
$\frac{7}{8}$ "	3	21 ft.	10 lbs.
1"	2	13 $\frac{1}{4}$ ft.	10 lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK



Construction—This high-pressure packing consists of a center core of a resilient red rubber wrapped with covers of specially woven GARLOCK asbestos cloth. The packing is treated with a heat-resisting rubber friction and lubricated with a high-grade lubricant, compounded to withstand extreme temperatures; it is finished with a surface coating of graphite.

Service—For general use against high temperatures. Particularly recommended for service against saturated steam pressures up to 500 pounds per square inch, and in stuffing boxes in which condensation is present in considerable quantity.

Form—This material is obtainable in the three forms illustrated above—GARLOCK 145 Spiral, GARLOCK 144 Coil and GARLOCK 146 Ring.

GARLOCK 146 Rings are furnished cut and formed in any specified size to fit rod and stuffing box dimensions.

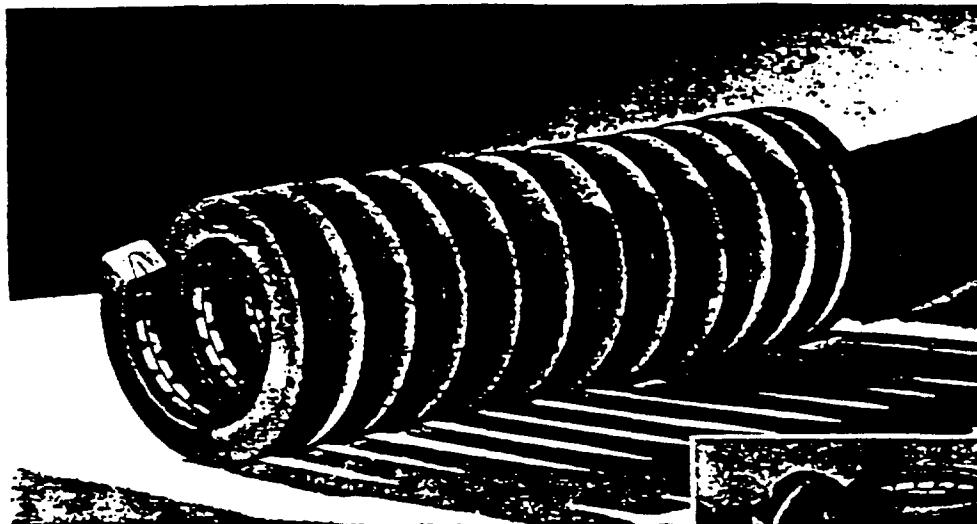
GARLOCK 145 Spiral and GARLOCK 144 Coil are finished in standard 12½-foot lengths and are manufactured in all packing sizes from 3/8" to 1½", advancing by sixteenths.

Approximate footage and approximate weight per box of a few standard sizes are shown below:

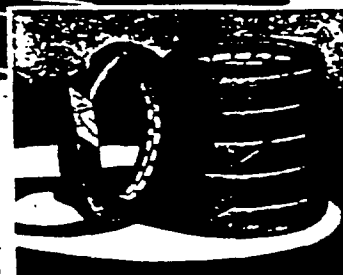
GARLOCK 144 Coil		
Size	Feet per Box	Weight per Box
1/8"	73 ft.	4½ lbs.
3/16"	30 ft.	6½ lbs.
1/4"	30 ft.	11½ lbs.
5/16"	37½ ft.	12 lbs.
3/8"	25 ft.	11½ lbs.
7/16"	18½ ft.	7½ lbs.
1"	18½ ft.	10½ lbs.

GARLOCK 145 Spiral		
Size	Feet per Box	Weight per Box
1/8"	14½ ft.	9 lbs.
3/16"	14½ ft.	14½ lbs.
1/4"	14½ ft.	24½ lbs.
5/16"	14½ ft.	4 lbs.
3/8"	14½ ft.	3½ lbs.
7/16"	14½ ft.	7½ lbs.
1"	14½ ft.	10½ lbs.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**



GARLOCK 377 SPIRAL



GARLOCK
377 RINGS

Construction—GARLOCK Metalmarine Packing consists of a nonfrictional, soft metal core with side walls, back and cushion of rubberized asbestos cloth. The special design of the metal core provides a number of small wearing surfaces so staggered as to give a pressure tight bearing on the rod. This material is supplied lubricated and with a surface graphiting.

Service—Recommended for general steam engine service, particularly on piston rods of main engines on steamships, deck engines, hoisting engines, steam shovels and dredges, steam hammers and kickers and steam niggers in the lumber industry.

Form—This material is obtainable in the two forms illustrated above—GARLOCK 377 Spiral and GARLOCK 377 Ring.

GARLOCK 377 Rings are furnished cut and formed in any specified size to fit rod and stuffing box dimensions.

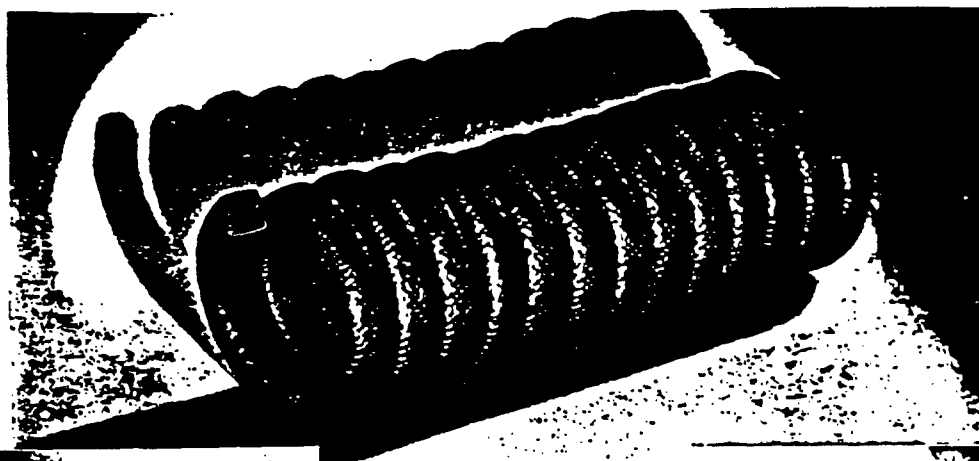
GARLOCK 377 Spiral is furnished in standard 12½-foot lengths and is manufactured in all packing sizes from ¼" to 1½", advancing by sixteenths.

Packed one spiral per box, the following list indicates the approximate net weights of a few standard sizes:

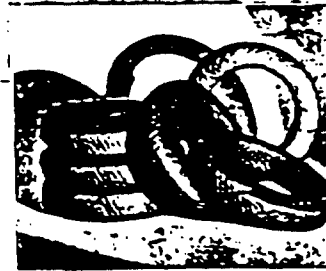
GARLOCK 377 Spiral			
Size	Weight per box	Size	Weight per box
1½"	11½ lbs.	1½"	10½ lbs.
1¼"	10½ lbs.	1¼"	10 lbs.
1⅓"	9½ lbs.	1⅓"	9½ lbs.
1⅒"	8½ lbs.		

THE STANDARD PACKING OF THE WORLD  GARLOCK

COMPRESSOR PACKING



GARLOCK 221 SPIRAL

GARLOCK
220 COILGARLOCK
222 RING

Construction—GARLOCK Compressor Packing consists of a core of formed asbestos fabric, wrapped with a cover of specially woven GARLOCK asbestos cloth. The packing is treated with a heat-resisting rubber friction and lubricated with a special lubricant compounded to withstand extreme temperature; it is furnished with an external coating of graphite.

Service—For general use against high temperature. Particularly constructed for the severe service encountered in air and gas compressor work.

Form—GARLOCK Compressor Packing is produced

in three forms—GARLOCK 221 Spiral, GARLOCK Coil and GARLOCK 222 Ring.

GARLOCK 222 Rings are furnished cut and formed in any specified size to fit rod and stuffing dimensions.

GARLOCK 220 Coil and GARLOCK 221 Spiral are furnished in standard 12½-foot lengths and are manufactured in all packing sizes from ¼" to 1½", varying by sixteenths.

Approximate footage and weight per box of a standard sizes are indicated in the following table.

GARLOCK 220 Coil		
Size	Feet per Box	Weight per Box
¼"	73 ft.	4½ lbs.
⅜"	50 ft.	6½ lbs.
½"	50 ft.	11 lbs.
⅝"	37½ ft.	18 lbs.
¾"	25 ft.	11 lbs.
7⁄8"	12½ ft.	6½ lbs.
1"	12½ ft.	9½ lbs.

GARLOCK 221 Spiral		
Size	Feet per Box	Weight per Box
¼"	12½ ft.	2½ lbs.
⅜"	12½ ft.	1½ lbs.
½"	12½ ft.	2½ lbs.
⅝"	12½ ft.	4 lbs.
¾"	12½ ft.	5½ lbs.
7⁄8"	12½ ft.	6½ lbs.
1"	12½ ft.	9½ lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 358 RINGS

GARLOCK
357 SPIRAL

GARLOCK
356 COIL

Construction—GARLOCK "O" Center Forge Packing is constructed of specially woven GARLOCK asbestos cloth frictioned with a tenacious rubber cement and formed with a hollow center. It is lubricated with a high-grade lubricant compounded to withstand high temperatures, and is finished with an external coating of graphite.

Service—Recommended for use against high temperatures particularly where extreme vibration or lateral motion, requiring a resilient packing, is encountered. Extensively used on the rods of steam hammers.

Form—This material is obtainable in the three forms

illustrated above—GARLOCK 357 Spiral, GARLOCK 356 Coil and GARLOCK 358 Ring.

GARLOCK 358 Rings are furnished cut and formed in practically any size to fit rod and stuffing box dimensions.

GARLOCK 356 Coil and GARLOCK 357 Spiral are furnished in standard 12½-foot lengths and are manufactured in all packing sizes from ¼" to 1½", advancing by sixteenths.

Approximate footage and approximate weight per box of a few standard sizes are shown below:

GARLOCK 356 Coil		
Size	Feet per Box	Weight per Box
¼"	75 ft.	4½ lbs.
⅜"	50 ft.	3½ lbs.
½"	30 ft.	10½ lbs.
⅝"	37½ ft.	11½ lbs.
¾"	45 ft.	10½ lbs.
7⁄8"	18½ ft.	8½ lbs.
1"	12½ ft.	4½ lbs.

GARLOCK 357 Spiral		
Size	Feet per Box	Weight per Box
¼"	18½ ft.	3½ lbs.
⅜"	18½ ft.	1½ lbs.
½"	12½ ft.	4½ lbs.
⅝"	12½ ft.	3½ lbs.
¾"	12½ ft.	5½ lbs.
7⁄8"	18½ ft.	8½ lbs.
1"	12½ ft.	9½ lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 234 COIL
GARLOCK 244 COIL (with wire)



GARLOCK 239 RINGS
GARLOCK 249 RINGS
(with wire)

Construction—GARLOCK Rotopac Packing is manufactured from long fibre asbestos yarn, either with or without fine wire insertion, braided square by the same method used in producing flax packing. It receives a lubrication and graphite treatment which, by a special process, is impregnated into each strand of the material.

Service—Rotopac is a high-grade centrifugal or rotary pump packing recommended for service against hot or cold water, caustic solutions and weak acids.

Form—GARLOCK 234 Coil, without wire, and GARLOCK 244 Coil, with wire insertion, are manufactured

in all packing sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by sixteenths. Both GARLOCK 234 and GARLOCK 244 can be furnished in continuous lengths on reels.

GARLOCK 239 Ring, without wire, and GARLOCK 249 Ring, with wire insertion, are cut, respectively, from GARLOCK 234 and GARLOCK 244 Coil. These rings are furnished in any specified size to fit rod and stuffing box dimensions.

The table below indicates the number of coils, approximate footage and weight per box of a few standard coil sizes:

ROTOPAC Coil						
Size	Coils per Box		Feet per Box		Weight per Box	
	234	244	234	244	234	244
$\frac{1}{8}$ "	3	3	120 ft.	120 ft.	5 lbs.	6 $\frac{1}{2}$ lbs.
$\frac{3}{16}$ "	4	3	108 ft.	81 ft.	10 $\frac{1}{4}$ lbs.	10 $\frac{1}{2}$ lbs.
$\frac{1}{4}$ "	5	3	60 ft.	60 ft.	10 $\frac{1}{2}$ lbs.	13 $\frac{1}{2}$ lbs.
$\frac{5}{16}$ "	5	2	48 ft.	36 ft.	13 $\frac{1}{2}$ lbs.	11 lbs.
$\frac{3}{8}$ "	2	2	24 ft.	24 ft.	10 lbs.	13 $\frac{1}{2}$ lbs.
$\frac{7}{16}$ "	2	2	24 ft.	24 ft.	11 $\frac{1}{2}$ lbs.	13 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	1	1	19 ft.	19 ft.	13 $\frac{1}{2}$ lbs.	16 $\frac{1}{2}$ lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 237 COIL



GARLOCK
238 RINGS

Construction—GARLOCK Thorndyke Packing is manufactured from long fibre asbestos, braided square by the same method used in producing flax packing. It is lubricated and graphited throughout.

Service—Developed and recommended for service on the shafts of centrifugal and rotary pumps handling cold oil or gasoline.

Form—GARLOCK Thorndyke Packing is obtainable in two forms—GARLOCK 237 Coil and GARLOCK 238 Ring.

GARLOCK 238 Rings are cut from GARLOCK 237 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 237 Coil is manufactured in sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by sixteenths. Can be furnished in coil lengths or in continuous length on reel.

The table below indicates the number of coils, number of feet and approximate weight per box of a few standard sizes:

GARLOCK 237 Coil			
Size	Coils per Box	Feet per Box	Weight per Lbs.
$\frac{1}{8}$ "	5	115 ft.	5 lbs.
$\frac{3}{16}$ "	4	108 $\frac{3}{4}$ ft.	10 $\frac{1}{2}$ lbs.
$\frac{1}{4}$ "	3	63 ft.	10 $\frac{1}{2}$ lbs.
$\frac{5}{16}$ "	3	44 $\frac{1}{2}$ ft.	12 $\frac{1}{2}$ lbs.
$\frac{3}{8}$ "	2	27 ft.	9 $\frac{1}{2}$ lbs.
$\frac{7}{16}$ "	2	23 $\frac{3}{4}$ ft.	10 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	1	19 $\frac{1}{4}$ ft.	15 $\frac{1}{2}$ lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK

ROTARY PUMP PACKINGS

PACIFIC SEMI-METALLIC PACKING

GARLOCK 644 COIL

GARLOCK 646 RING

Construction—Pacific Semi-Metallic Packing is manufactured from long fibre asbestos yarn and soft metal strands, braided square by the same method used in producing flax packing. It is thoroughly lubricated and graphited.

Service—Recommended for general service on centrifugal pumps.

Form—This material is supplied in two forms, GARLOCK 644 Coil and GARLOCK 646 Ring.

GARLOCK 646 Rings are cut from GARLOCK 644 Coil and are furnished to fit any rod and stuffing box dimensions.

GARLOCK 644 Coil is manufactured in all packing sizes from $\frac{3}{8}$ " to $1\frac{1}{4}$ ", advancing by sixteenths.

The table below indicates the number of coils, number of feet and approximate weight per box of a few standard sizes.

GARLOCK 644 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{2}$ "	1	74 ft.	9 $\frac{1}{2}$ lbs.
$\frac{3}{8}$ "	1	36 ft.	10 $\frac{1}{2}$ lbs.
$\frac{1}{4}$ "	1	25 ft.	11 $\frac{1}{2}$ lbs.
$\frac{3}{16}$ "	1	14 $\frac{1}{2}$ ft.	10 lbs.
$\frac{1}{8}$ "	1	13 $\frac{1}{2}$ ft.	14 $\frac{1}{2}$ lbs.
$\frac{1}{16}$ "	1	10 ft.	14 $\frac{1}{2}$ lbs.

HORNBLLENDE ACID PACKING

GARLOCK 230 COIL

GARLOCK 231 RING

Construction—GARLOCK Hornblende Acid Packing is manufactured from pure Blue Cape asbestos, braided square by the same method used in producing flax packings. It receives a thorough lubrication and graphite treatment.

Service—Developed and recommended for service on the shafts of centrifugal and rotary pumps handling acids and strong chemical solutions.

Form—GARLOCK Hornblende Acid Packing is obtainable in two forms—GARLOCK 230 Coil and GARLOCK 231 Ring.

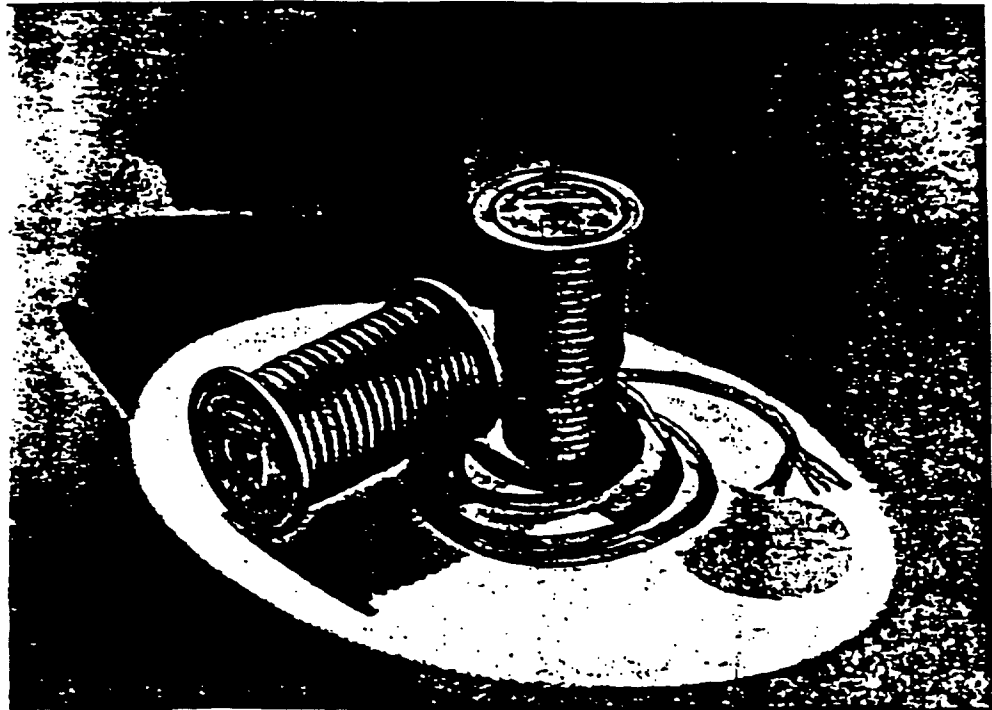
GARLOCK 231 Rings are cut from GARLOCK 230 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 230 Coil is manufactured in all packing sizes from $\frac{3}{8}$ " to $1\frac{1}{4}$ ", advancing by sixteenths. Can be furnished in coil lengths or in continuous lengths on reel.

The table below indicates the number of coils, number of feet and approximate weight per box of a few standard sizes:

GARLOCK 230 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{2}$ "	4	91 $\frac{1}{2}$ ft.	32 $\frac{1}{2}$ lbs.
$\frac{3}{8}$ "	3	81 ft.	10 $\frac{1}{2}$ lbs.
$\frac{1}{4}$ "	3	63 ft.	12 $\frac{1}{2}$ lbs.
$\frac{3}{16}$ "	2	34 ft.	11 $\frac{1}{2}$ lbs.
$\frac{1}{8}$ "	2	24 ft.	10 $\frac{1}{2}$ lbs.
$\frac{1}{16}$ "	2	22 ft.	13 $\frac{1}{2}$ lbs.
$\frac{1}{32}$ "	1	19 $\frac{1}{2}$ ft.	18 $\frac{1}{2}$ lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 117 ROUND BEAVER PACKING
GARLOCK 115 SQUARE BEAVER PACKING

Construction—GARLOCK Beaver Packing is manufactured from long fibre asbestos yarn, thoroughly lubricated with a heat-resisting compound and graphite.

Service—Recommended for use on stems of globe and angle valves operating against high-pressure steam, hot or cold water, or oil.

Form—GARLOCK 117 Round Beaver Packing is furnished either braided or twisted as specified. GARLOCK 115 Square Beaver Packing is furnished braided

only. All styles are made in standard sizes from $\frac{1}{8}$ " to $\frac{3}{4}$ ", advancing by sixteenths.

GARLOCK 117 and GARLOCK 115 are packaged on 1-pound, 2-pound and 5-pound spools. Maximum size packaged on 1-pound spools is $\frac{3}{8}$ "; maximum size on 2-pound spools is $\frac{1}{2}$ "; sizes in excess of $\frac{1}{2}$ " are packaged on 5-pound spools.

Approximate weight per hundred feet of some standard sizes of GARLOCK 117 Round Beaver Packing, both braided and twisted, are listed below:

GARLOCK 117 Braided	
Size	Weight per Hundred Feet
$\frac{1}{8}$ "	.25 lbs.
$\frac{1}{16}$ "	.875 lbs.
$\frac{3}{16}$ "	3.5 lbs.
$\frac{1}{4}$ "	7.125 lbs.
$\frac{5}{16}$ "	14.125 lbs.
$\frac{3}{8}$ "	20.125 lbs.
$\frac{1}{2}$ "	28.125 lbs.

GARLOCK 117 Twisted	
Size	Weight per Hundred Feet
$\frac{1}{8}$ "	.3125 lbs.
$\frac{1}{16}$ "	1.125 lbs.
$\frac{3}{16}$ "	4.0625 lbs.
$\frac{1}{4}$ "	7.375 lbs.
$\frac{5}{16}$ "	12.75 lbs.
$\frac{3}{8}$ "	19.875 lbs.
$\frac{1}{2}$ "	30.0625 lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK

ALABESTINE PACKING



GARLOCK 17

Construction—GARLOCK 17 is a braided asbestos packing, produced from Canadian long fibre asbestos yarn. It is treated with a heat-resisting compound and is regularly supplied with a surface lubrication of graphite.

Service—A satisfactory valve stem packing for use on small angle and globe valves, or any mechanical equipment where the stuffing boxes are small and difficult to keep steam tight. Will give long service in high-pressure work.

Form—This material is regularly furnished round in cross section. It can be furnished, however, in square form if desired; standard sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by thirty-seconds.

Usual method of packaging is on 1, 2 or 5-pound spools. Maximum size supplied on 1-pound spools is $\frac{3}{8}$ "; maximum size on 2-pound spools is $\frac{1}{2}$ ". All sizes in excess of $\frac{1}{2}$ " are furnished on 5-pound spools.

Approximate weights per hundred feet of a few standard round sizes are listed below:

GARLOCK 17			
Size	Weight per Hundred Feet	Size	Weight per Hundred Feet
$\frac{1}{8}$ "	.1875 lbs.	$\frac{3}{8}$ "	14.575 lbs.
$\frac{1}{4}$ "	.5 lbs.	$\frac{1}{2}$ "	21.5 lbs.
$\frac{3}{8}$ "	2.375 lbs.	$\frac{3}{4}$ "	29.125 lbs.
$\frac{1}{2}$ "	5.125 lbs.	1"	57.625 lbs.
$\frac{5}{8}$ "	7.875 lbs.		

GARLOCK  THE STANDARD PACKING OF THE WORLD

MILL PACKING—WIRE COVERED

GARLOCK 247 COIL

GARLOCK 250 RING

Construction—GARLOCK Mill Packing—Wire Covered—consists of a braided core of wire inserted asbestos yarn, with a cover of fine copper wire. Both the core and the copper wire cover are made by the braid over braid method. The packing is regularly supplied lubricated and graphited.

Service—Recommended for steam and oil conditions at high temperatures and for the piston rods of gas engines.

Form—GARLOCK Mill Packing—Wire Covered—is

produced in two forms—GARLOCK 247 Coil and GARLOCK 250 Ring.

GARLOCK 250 Rings are cut from GARLOCK 247 Coil in any specified size to fit rod and stuffing box.

GARLOCK 247 Coil is furnished in all packing sizes from $\frac{1}{4}$ " to $1\frac{1}{2}$ ", advancing by sixteenths. In addition to coil lengths, it can also be furnished in continuous length on reels.

Approximate footage and weight per box of a few standard sizes are listed below:

GARLOCK 247 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	4	122 ft.	10 lbs.
$\frac{3}{8}$ "	3	37 ft.	10 lbs.
$\frac{1}{2}$ "	3	39 $\frac{1}{2}$ ft.	10 lbs.
$\frac{3}{4}$ "	3	27 ft.	10 lbs.
$\frac{7}{8}$ "	2	18 ft.	10 lbs.
1"	2	13 ft.	10 lbs.
1 $\frac{1}{8}$ "	2	10 $\frac{1}{2}$ ft.	10 lbs.

MILL PACKING

GARLOCK 248 COIL

GARLOCK 251 RING

Construction—GARLOCK Mill Packing is manufactured from high-grade, wire inserted asbestos yarn. It is braided square by the braid over braid method and is regularly supplied lubricated and graphited.

Service—Recommended for steam and oil conditions at high temperatures and for the piston rods of gas engines.

Form—GARLOCK Mill Packing is produced in two forms—GARLOCK 248 Coil and GARLOCK 251 Ring.

GARLOCK 251 Rings are cut from GARLOCK 248 Coil in any specified size to fit rod and stuffing box dimensions.

GARLOCK 248 Coil is furnished in all packing sizes from $\frac{3}{8}$ " to $1\frac{1}{2}$ ", advancing by sixteenths. In addition to coil lengths, it can also be furnished in continuous length on reels.

Approximate footage and approximate weight per box of a few standard sizes are indicated below:

GARLOCK 248 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	3	100 ft.	10 lbs.
$\frac{3}{8}$ "	3	84 ft.	10 lbs.
$\frac{1}{2}$ "	3	48 $\frac{1}{2}$ ft.	10 lbs.
$\frac{3}{4}$ "	3	30 ft.	10 lbs.
$\frac{7}{8}$ "	2	20 ft.	10 lbs.
1"	2	13 $\frac{1}{2}$ ft.	10 lbs.
1 $\frac{1}{8}$ "	2	15 ft.	10 lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK

FURNACE DOOR PACKING

GARLOCK 232

Construction—GARLOCK 232 consists of a braided core of wire inserted asbestos yarn with a braided cover of fine copper wire. It is unlubricated.

Service—Recommended for use on furnace doors in

steel mills, glass plants, blast furnaces and foundries.

Form—GARLOCK 232 is furnished in all packing size from $\frac{1}{4}$ " to $1\frac{1}{2}$ " advancing by sixteenths; supplied in coil lengths or in continuous lengths on reels.

EXPANSION JOINT AND VALVE PACKING

GARLOCK 236

Construction—GARLOCK 236 is a copper wire inserted asbestos packing braided square and lubricated with a high-grade mineral oil and graphited throughout. The amount of lubricant in the packing is carefully controlled, providing ample for lubrication of moving parts but eliminating excess lubrication which is undesirable in service against high temperatures and pressures.

Service—GARLOCK 236 is recommended for general high temperature service, particularly on expansion joints and as a stem packing on steel valves.

Form—GARLOCK 236 Coil is supplied in all packing sizes from $\frac{3}{8}$ " to $1\frac{1}{4}$ " advancing by sixteenths. GARLOCK 236 Rings are supplied in any specified size.

WIRE WOUND PACKING

GARLOCK 114 COIL

GARLOCK 116 RING

Construction—GARLOCK 114 is a high-grade asbestos packing having a non-vulcanizing rubber core and a cover of braided copper wire.

Service—Recommended for service on all engines exposed to the weather, such as deck engines in marine service.

Form—GARLOCK 114 Coil is regularly furnished oval

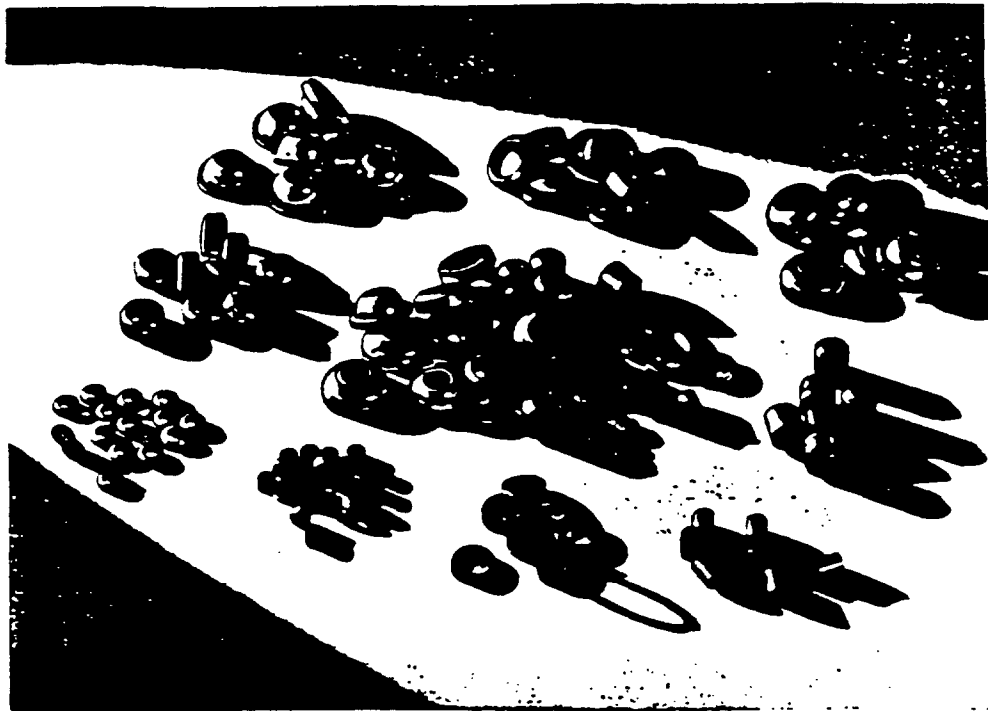
in cross section, but is also obtainable in round or square cross section. Standard sizes from $\frac{1}{4}$ " to 1"

GARLOCK 116 Rings, cut from GARLOCK 114 Coil, are furnished in any specified size.

Approximate weight and footage per box of some standard sizes are shown below:

GARLOCK 114 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	3	180 ft.	10 lbs.
$\frac{3}{8}$ "	3	60 ft.	10 lbs.
$\frac{1}{2}$ "	2	32 ft.	10 lbs.
$\frac{3}{4}$ "	2	27 ft.	10 lbs.
$\frac{7}{8}$ "	2	20 ft.	10 lbs.
$1\frac{1}{4}$ "	2	17½ ft.	10 lbs.
1"	1	11½ ft.	10 lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 166 RINGS

Construction—GARLOCK 166 Silvex Molded Rings are manufactured from a combination of asbestos, powdered aluminum, graphite and neoprene, molded into accurately sized rings with exceedingly smooth surface finish. The dense, semiflexible compound from which these rings are formed is an exclusive development of The GARLOCK Packing Company.

Service—Because of their noncorrosive qualities, their resistance to hot and cold water, steam, gasoline, kerosene, oils, refrigerating gases and mild acids, and their ability to withstand temperatures up to 750° F., GARLOCK 166 Rings are suitable for universal application on almost any equipment requiring an accurately fitting, easily assembled packing. Common usages for these rings are on electric refrigerators; gas, gasoline and kerosene lamps, stoves, heaters and other

appliances; automobile fittings; and small valves, faucets or cocks of every description.

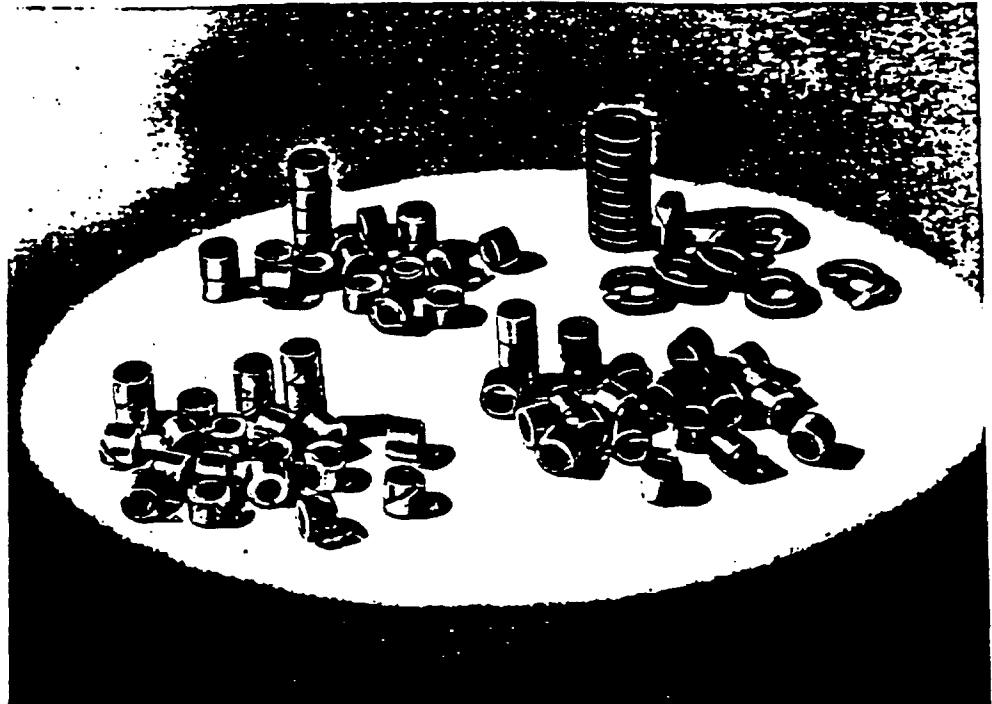
Form—GARLOCK 166 Silvex Rings are furnished in solid rings only. They are not furnished cut open. Size limitations applying to these rings are: minimum inside diameter $\frac{3}{16}$ "; maximum inside diameter $1\frac{1}{4}$ "; minimum outside diameter $\frac{5}{16}$ "; maximum outside diameter 2 "; minimum wall thickness (packing space) $\frac{3}{16}$ "; minimum ring thickness (depth) $\frac{1}{8}$ ".

Beveled rings, and rings with radii or curved surfaces to fit contours of curved fittings, are obtainable. Odd shapes, which are practicable from a manufacturing standpoint, are obtainable.

GARLOCK 166 Rings are supplied in minimum quantities of 500 rings of one size on a single order.

THE STANDARD PACKING OF THE WORLD  GARLOCK

MOLDED VALVE RINGS



GARLOCK 160—RUBBERIZED
GARLOCK 161—WAXED

GARLOCK 162—FOR GASOLINE
GARLOCK 163—OIL AND GRAPHITE

Construction—GARLOCK 160, 161, 162, and 163 Molded Valve Rings are manufactured from braided, wire inserted asbestos stock, formed around a crinkled lead center. Each ring is molded to exact size and shape. All rings have graphite finish.

Service—These molded valve rings are recommended for use on valves, faucets, steam traps and power appliances or specialties of all kinds.

GARLOCK 160 Rings are suitable for steam, hot or cold water, and acids.

GARLOCK 161 Rings, which are relatively soft, are recommended for cold water applications.

GARLOCK 162 Rings are specially treated for gasoline service.

GARLOCK 163 Rings are for application to brass valves or fittings in steam, hot or cold water, or acid

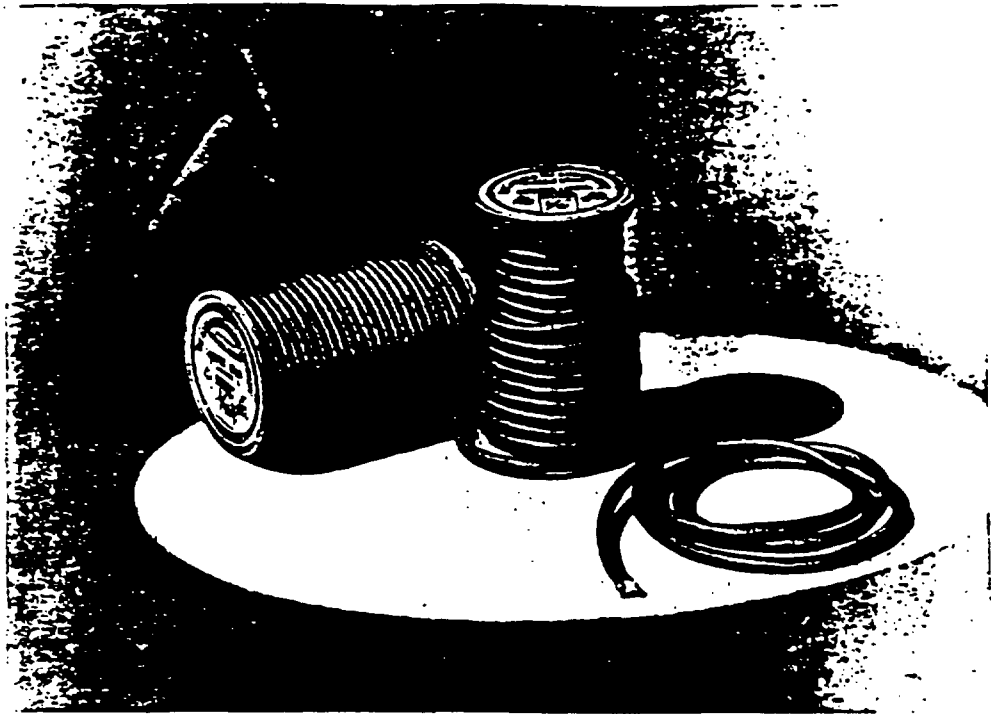
service.

Form—All types of these rings are available in a large range of sizes. All rings are cut open with a bevel joint. Solid rings are not furnished.

Orders for small quantities are accepted subject to a special charge to cover the expense of machine setup.

Coil Form—GARLOCK 160, 161, 162 and 163 material is also available in coil form, packaged on 1-pound, 2-pound and 5-pound spools. Coil is furnished square or rectangular in cross section and is governed by the following size limitations: minimum packing space is $\frac{1}{8}$ "; minimum thickness is $\frac{1}{8}$ "; maximum packing space is $\frac{1}{4}$ "; maximum thickness is not less than the width of the packing space and may be increased within reasonable limitations.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**



GARLOCK 1700

Construction—GARLOCK 1700 is braided from Canadian long fibre asbestos yarn. It receives an external graphite treatment.

Service—Recommended for service on locomotive cab cocks and on other valve stems handling high-temperature and superheated steam and oils. It is also recommended for use on valve stems operating on acid lines.

Form—GARLOCK 1700 is furnished round in cross

section; standard sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by thirty-seconds.

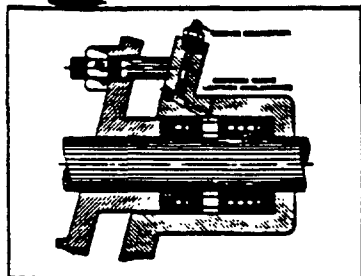
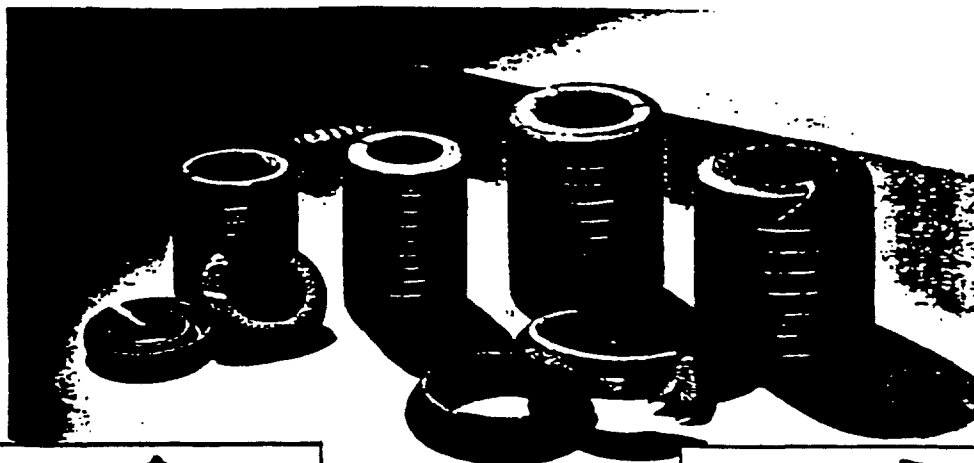
Regularly furnished on 1-pound, 2-pound or 5-pound spools. Maximum size packaged on 1-pound spools is $\frac{3}{4}$ "; maximum size on 2-pound spools, $\frac{1}{2}$ ". Sizes in excess of $\frac{1}{2}$ " are furnished on 5-pound spools.

Approximate weights per hundred feet of a few standard sizes of GARLOCK 1700 are listed below:

GARLOCK 1700			
Size	Weight per Hundred Feet	Size	Weight per Hundred Feet
$\frac{1}{8}$ "	.25 lbs.	$\frac{1}{4}$ "	7.025 lbs.
$\frac{3}{16}$ "	.3925 lbs.	$\frac{3}{8}$ "	12. lbs.
$\frac{1}{4}$ "	2.575 lbs.	$\frac{1}{2}$ "	19.875 lbs.
$\frac{5}{16}$ "	4.75 lbs.		

THE STANDARD PACKING OF THE WORLD  GARLOCK

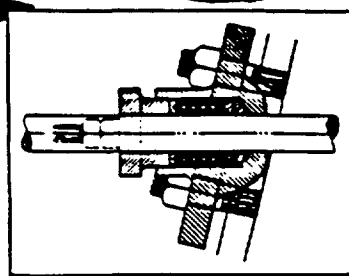
CHEVRON THROTTLE PACKING



CHEVRON
THROTTLE
PACKING
WITH
GREASE
LANTERN

GARLOCK 330 CHEVRON

TYPICAL
APPLICATION
OF
CHEVRON
THROTTLE
PACKING



Construction—GARLOCK 330 Chevron Throttle Packing is manufactured only by The GARLOCK Packing Company. Special asbestos cloth and GARLOCK rubber friction are molded under heavy pressure into the unique and exclusive Chevron shape. The hinge-like design of Chevron results in a packing entirely automatic in action. The greater the pressure on Chevron rings the tighter they pack.

Form—Chevron Throttle Packing is furnished only in sets to exact throttle stem and stuffing box sizes. Each set contains a top and bottom adapter ring and a sufficient number of intermediate Chevron rings to produce a set of the specified depth. The top and bottom rings are formed to adapt themselves either to flat or beveled gland and stuffing box.

For best service on locomotive throttles, Chevron sets should not exceed 3" in depth. When applying Chevron, therefore, it is recommended that deeper boxes be bushed to 3" in depth. This will result in the best Chevron installation and will effect a reduction

in the amount of throttle packing required per locomotive.

Chevron Throttle Packing is frequently installed with a grease lantern ring and a connection for a grease gun. An installation of this type, which permits the introduction of lubricant into the stuffing box, results in longer packing life and easier operating throttles. It represents the most desirable locomotive throttle packing arrangement.

Application—Because Chevron packing is automatic in action, heavy gland pressure is not required. After applying bottom ring, the Chevron rings should be applied one at a time and rings seated individually by using a flat tool or stick. The recess or V in the Chevron rings must be toward the pressure. Complete the application by adding the top ring. Draw up enough on gland to make sure the entire set is firmly seated in the stuffing box but do not apply excessive gland pressure on the packing at any time. To do so interferes with its automatic action.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 2000

LOCOMOTIVE THROTTLE PACKING

GARLOCK 2000

Construction—GARLOCK 2000 is a set packing composed of rings of GARLOCK 200 High Pressure Asbestos Packing.

Service—Recommended for application to throttle stuffing boxes on locomotives. It is particularly suitable for throttle boxes located above the water line.

Form—GARLOCK 2000 is furnished in a complete range of sizes for locomotive throttle installations.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.

LOCOMOTIVE THROTTLE DUO PACKING

GARLOCK 3200

Construction—GARLOCK 3200 is a combination packing consisting of GARLOCK 200 High Pressure Asbestos Packing with a soft metal insertion, duck and rubber ring at the bottom of the set.

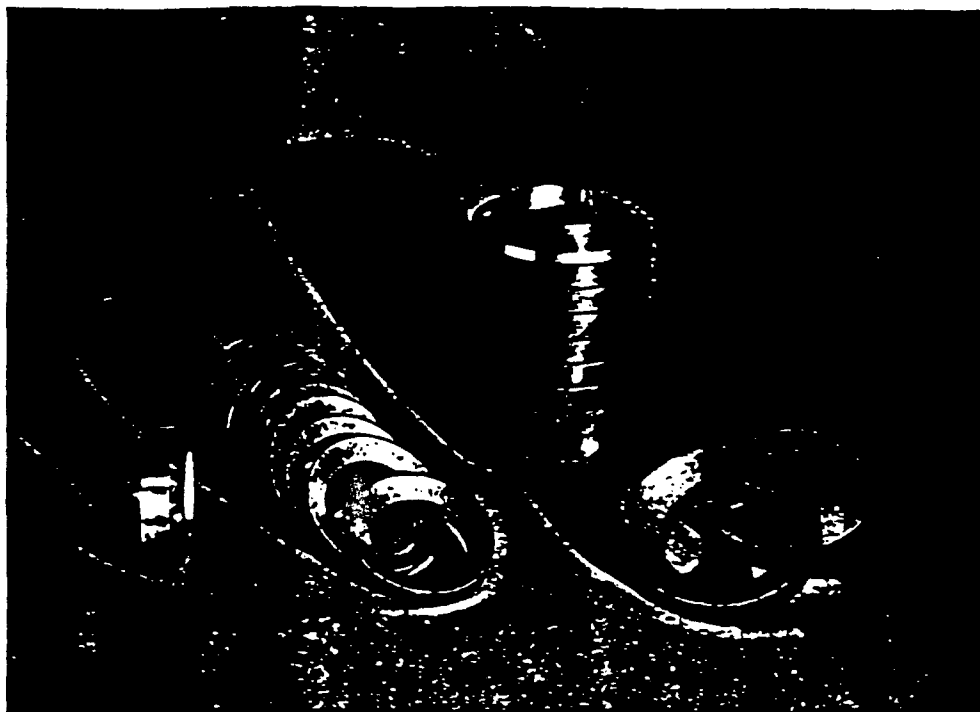
Service—Recommended for service in throttle stuffing boxes on locomotives. It is particularly suitable for throttle boxes located below the water line.

Form—GARLOCK 3200 is furnished in a complete range of sizes for locomotive throttle installations.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.

THE STANDARD PACKING OF THE WORLD  GARLOCK

40 AMERICAN MULTIPLE THROTTLE PACKING



GARLOCK 9001

Construction—GARLOCK 9001 is a special packing put up in sets, each complete set consisting of a series of concave-convex shredded metal rings, molded from strands of metal floss suitable for service against temperatures up to 1500° F., and a throat or adapter ring made either of bronze or of the regular 9001 material, as specified.

Service—GARLOCK 9001 was developed and is intended specifically for service on American Multiple Throttles.

Form—Complete sets of GARLOCK 9001 are supplied in the several sizes required to pack properly the various American Multiple Throttles designated, respectively, Types A, B, C, D, E and F. Types A, B, C and D are furnished with bronze adapter or throat rings, and Types E and F are furnished with adapter rings made of 9001 material unless otherwise specified. Orders should show Superheater Company blueprint or card number.

For replacement service, additional 9001 concave-convex rings are obtainable without adapter rings.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 2200

LOCOMOTIVE AIR PUMP PACKING

GARLOCK 2200

Construction—GARLOCK 2200 is a set packing composed of rings of GARLOCK High Pressure Asbestos Packing.

Service—Recommended for application to either the air or steam end of Westinghouse and New York Air Pumps.

Form—GARLOCK 2200 is furnished in all standard sizes for Westinghouse and New York Air Pumps. In

ordering GARLOCK 2200 for Westinghouse equipment, the size of the pump should be specified; for New York equipment, the number of the pump should be specified.

A package of GARLOCK 2200 contains sufficient packing for one stuffing box only. When ordering for a complete pump installation, it, therefore, is necessary to indicate that a complete set is desired.

GARLOCK 2245

Construction—GARLOCK 2245 is a set packing composed of rings of braided asbestos construction. The inner braiding of these rings consists of wire inserted yarn, and the outer braid is woven from pure asbestos yarn. The lubricating and graphite treatment which this material receives results in a flexible packing capable of withstanding high temperatures.

Service—Recommended for service on either the air or steam end of Westinghouse and New York Air Pumps.

Form—GARLOCK 2245 is furnished in all standard sizes for Westinghouse and New York Air Pumps. In ordering GARLOCK 2245 for Westinghouse equipment, the size of the pump should be specified; for New York equipment, the number of the pump should be specified.

A package of GARLOCK 2245 contains sufficient packing for one stuffing box only. When ordering for a complete pump installation, it, therefore, is necessary to indicate that a complete set is desired.

THE STANDARD PACKING OF THE WORLD  **GARLOCK**



GARLOCK 377

LOCOMOTIVE AIR PUMP PACKING

GARLOCK 377

Construction—GARLOCK 377 sets for air pumps are composed of rings of the asbestos and soft metal packing described on page 25.

Service—Recommended for service on air and steam rods of Westinghouse and New York Air Pumps.

Form—GARLOCK 377 Air Pump Packing is furnished in standard size sets for all Westinghouse and New York Pumps. When ordering for Westinghouse equipment the size of the pump should be specified; for New York equipment, specify the number of the pump. Each package contains sufficient packing for one stuffing box only.

GARLOCK 928
(Copper Jacketed)

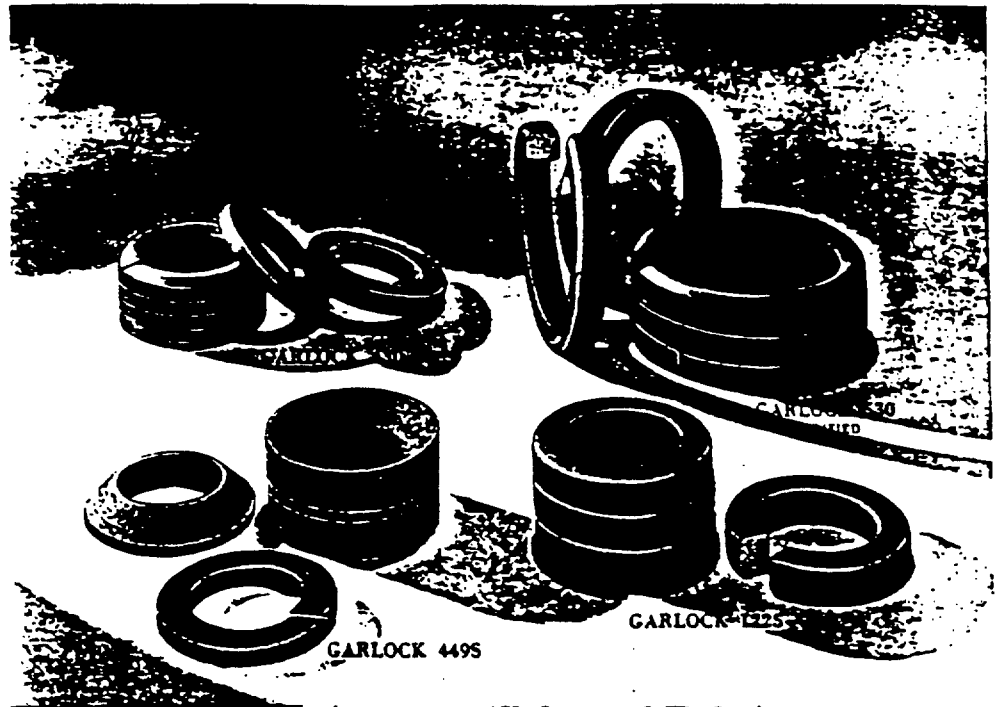
Construction—GARLOCK 928 Locomotive Air Pump Packing is made from the special, heat resistant, plastic material described on page 92, over which has been braided a strong, single cover or jacket of copper wire.

Service—This material is recommended for application to steam and air rods of Westinghouse and New

York air pumps and is particularly durable in that severe service.

Form—GARLOCK 928 Air Pump Packing is furnished in complete sets for all locomotive air pumps. When ordering for Westinghouse equipment the size of the pump should be specified; for New York pumps specify the number of the pump. Each package or set contains sufficient packing for one stuffing box only.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**



LOCOMOTIVE POWER REVERSE GEAR ROD AND TRUNK PACKINGS

GARLOCK packings are packaged in sets to fit all types of locomotive power reverse gears. Set packings particularly recommended for use on the several different gears are listed below.

Alco Gears—GARLOCK 449S, which is a combination of GARLOCK 333 and 330 duck and rubber rings, has been used on Alco gears for many years.

For types E, G and H Alco gears, GARLOCK 430 Chevron packing is highly recommended. For Type K Alco, GARLOCK 330 modified Chevron is recommended.

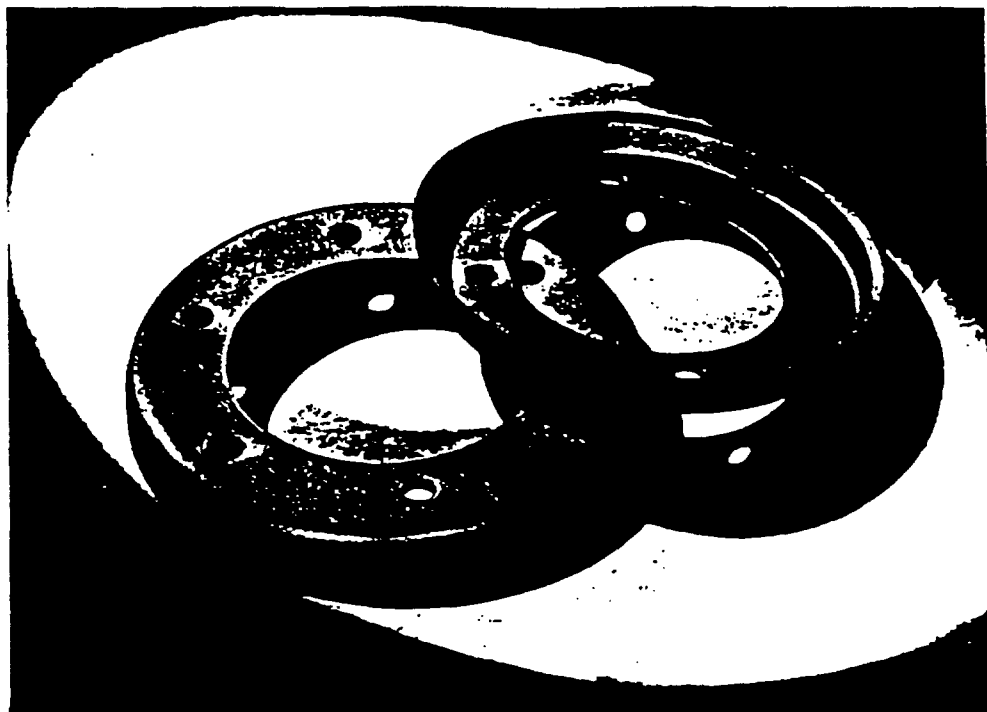
Barco Gears—For Barco gears GARLOCK 330 modified Chevron is recommended.

Franklin and Precision Gears—For Precision gears and for Franklin Types E and G gears, GARLOCK 330 modified Chevron is recommended and extensively used.

Ragonnet Gears—GARLOCK 1225 has been used extensively on Ragonnet gears for many years. This packing is a combination of GARLOCK 222 and GARLOCK 235 asbestos ring packings. An improved packing for both Type A and B Ragonnet gears is GARLOCK 430 Chevron. This material is recommended for these gears.

When ordering packing for any reverse gear specify the kind and type of gear, style of packing and number of sets required.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 813-A

POWER REVERSE GEAR CUPS

Construction—GARLOCK 813-A Cups are manufactured from GARLOCK asbestos cloth, frictioned with a high-grade heat and oil resistant compound. They are molded to the desired size and shape.

Service—Recommended for service on all types of reverse gear pistons.

Form—GARLOCK Power Reverse Gear Cups are furnished in a complete range of sizes to fit all reverse gears, including Ragonnet, Precision, Alco and Lewis.

When ordering, the size of cylinder and make of the reverse gear should be specified.

POWER REVERSE GEAR CYLINDER PACKING

GARLOCK 812

Construction—GARLOCK 812 is a duck and rubber packing constructed with diagonal plies and molded rectangular in cross section. It is lubricated and graphited.

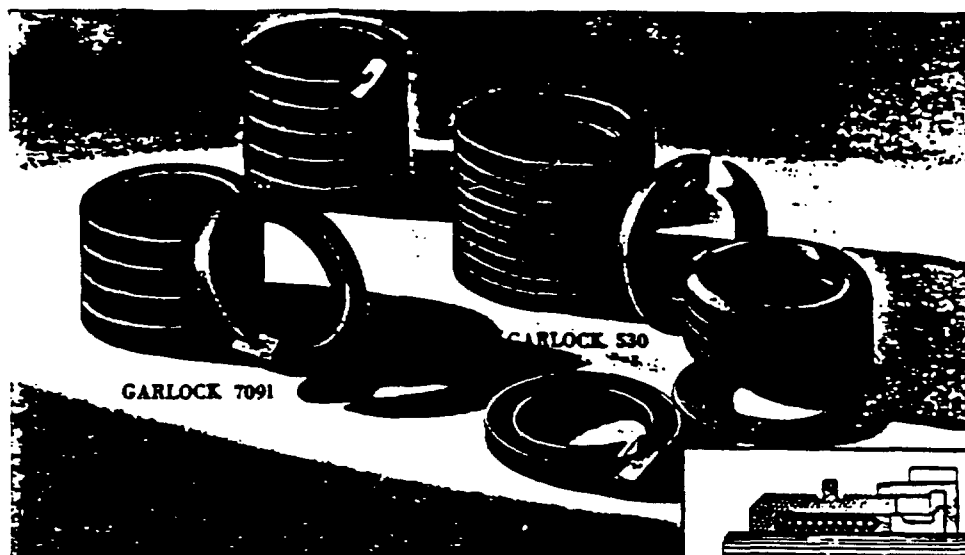
Form—GARLOCK 812 is furnished in ring form, molded to proper sizes to fit reverse gear cylinders. It is obtainable either in single rings or in sets to the proper depth.

GARLOCK 1200

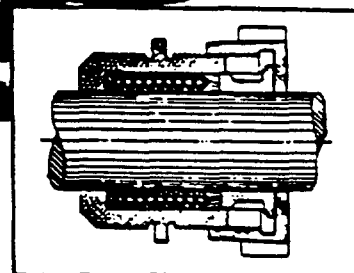
Construction—GARLOCK 1200 is a braided asbestos packing molded rectangular in cross section and lubricated with a heat-resisting compound and graphite.

Form—GARLOCK 1200 is furnished in ring form, molded to proper sizes to fit reverse gear cylinders. It can be obtained either in single rings, or in sets to the proper depth.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**



GARLOCK 530
APPLIED TO FEED
WATER PUMP



LOCOMOTIVE FEED WATER HEATER PUMP ROD PACKINGS

ELESCO PUMPS GARLOCK 330

GARLOCK 330 Chevron packing is recommended for the steam and water rods of Elesco Pumps. This material is fully described on page 81.

For Elesco pumps, GARLOCK 330 is packaged in sets of exact size to fit the rod and stuffing box. When ordering specify whether for standard or undersize rod. If for undersize rod advise whether diameter is $\frac{1}{8}$ ", $\frac{1}{16}$ " or $\frac{1}{4}$ " undersize.

GARLOCK 377

GARLOCK 377 is also used extensively on Elesco pumps. This packing, which is fully described on page 25, has a soft metal wearing surface with asbestos back and side walls. For this service GARLOCK 377 is packaged in sets to rod and stuffing box sizes.

WORTHINGTON PUMPS GARLOCK 330

GARLOCK 330 Chevron packing, as fully described on page 81, is recommended for steam and water rods of Worthington pumps.

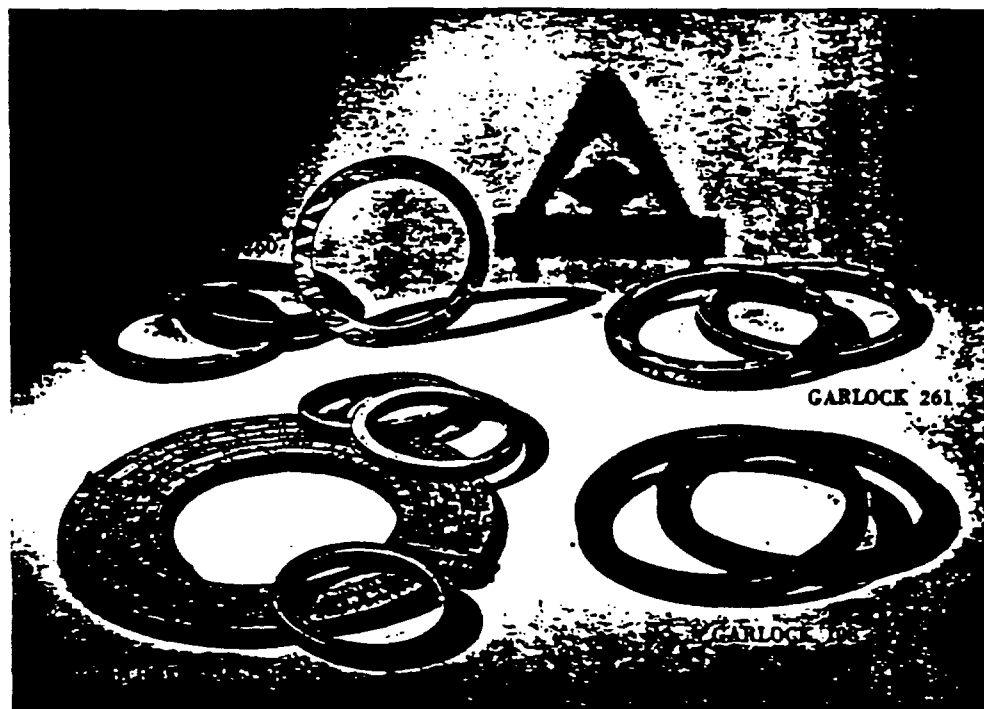
GARLOCK 330 is packaged in sets to fit standard and undersize rods of all Worthington pumps. When ordering specify type of pump and give rod diameter.

GARLOCK 7091

GARLOCK 7091 also is used on these pumps. This is a square duck packing with red rubber core and is lubricated and graphited. Furnished in coil or spiral, or in rings cut and formed to specified rod and stuffing box dimensions.

THE STANDARD PACKING OF THE WORLD  GARLOCK

46 FEED WATER PUMP CYLINDER PACKINGS



ELESCO PUMPS

For follower type pistons GARLOCK 261 Cut Open Rings or GARLOCK 33 Special Rock Hard Coil or Rings are used. Rings are packaged in sets of 3 rings each to fit CF-1, CF-2 or W-6½ pumps, either for standard or oversize cylinders.

For grooved type pistons GARLOCK 260 Rock Hard

Solid Rings are recommended. These rings are made of the same material as GARLOCK 261 except that they are cured rock hard. Packaged in 3-ring sets to fit CF-1, CF-2 and W-6½ pumps, standard or oversize cylinders. Before applying, rings must be machined to proper cylinder fit, then cut open and soaked in hot water.

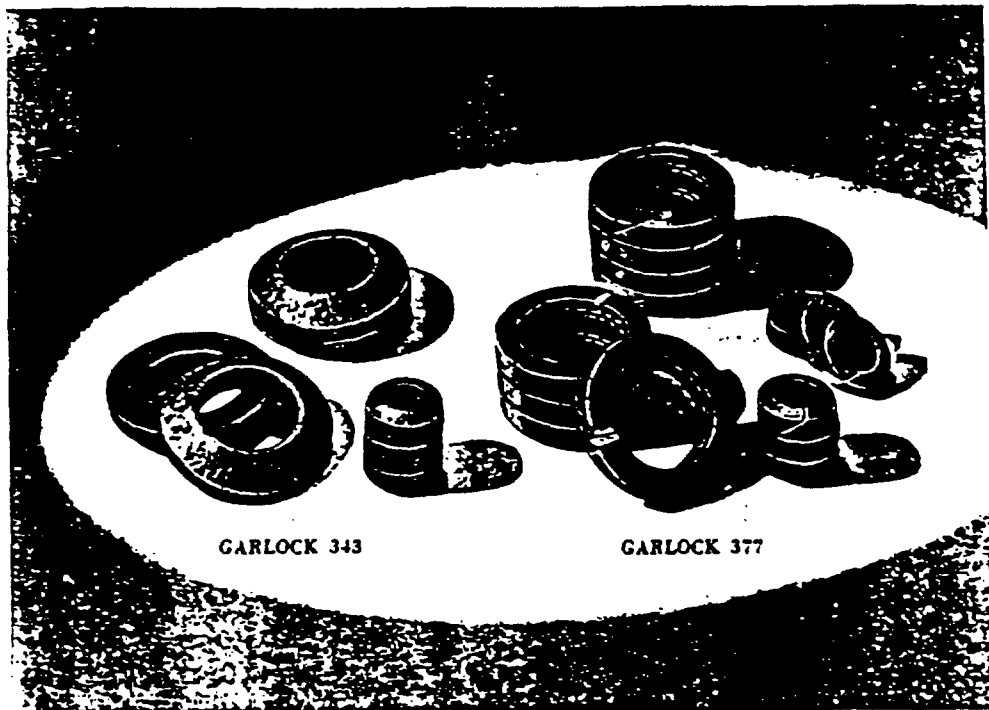
WORTHINGTON PUMPS

For follower type pistons GARLOCK 33 Special Rock Hard is recommended. This packing is produced of special materials and by carefully controlled methods which result in a product having minimum expansion in hot water service. GARLOCK 33 Special Rock Hard is furnished approximately square in cross section in ring, coil or spiral form. Rings are supplied in any

specified sizes to fit cylinders. Coils and spirals are made in all sizes from ¼" to 1¼" and are furnished in standard 15-foot lengths.

For grooved type pistons GARLOCK 108 Rings are recommended. These are very hard, glossy, black rubber, molded to exact specified sizes for standard or oversize cylinders.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 343

GARLOCK 377

STANDARD STOKER PACKINGS

STEAM END

GARLOCK 377

GARLOCK 377 is recommended for service on the steam pistons and valve rods of Standard Stoker engines. This material, which provides a soft metal wearing surface on the rod combined with an asbestos channel back, is fully described on page 25.

For Stoker Engine service GARLOCK 377 is packaged in sets, sized exactly to fit rod and stuffing box.

OIL END

GARLOCK 343

For the piston and valve rods on the oil end of Stand-

ard Stoker engines. GARLOCK 343 is recommended. This is a laminated packing in which a specially treated GARLOCK asbestos cloth is the base. GARLOCK 343 is put up in sets to fit piston and valve rods of these engines.

GARLOCK 7567

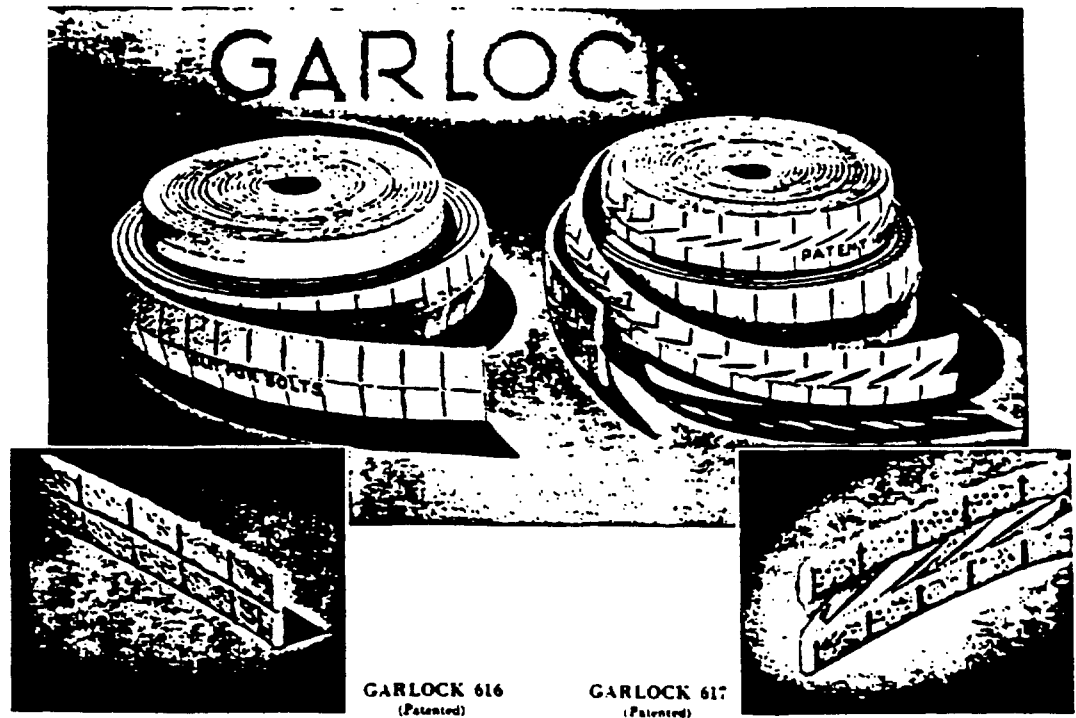
GARLOCK 7567 also gives splendid service on the oil end of piston and valve rods of Standard Stoker engines. This packing is made of special, heavy duck, plied with a binder having high resistance to oils. GARLOCK 7567 is supplied in sets to fit piston and valve rods of these stoker engines.

THE STANDARD PACKING OF THE WORLD



GARLOCK

LOCOMOTIVE FRONT END TAPE



GARLOCK 616
(Patented)

GARLOCK 617
(Patented)

LOCOMOTIVE FRONT END TAPE

GARLOCK 616

Construction—GARLOCK 616 Button Hole Tape is constructed of two parallel courses of GARLOCK wire inserted asbestos cloth, folded and joined together closely by a single ply of bonding fabric. The tape is treated with a high-grade, heat-resisting compound.

Application—When applying this tape, bolt holes are made by inserting a knife blade in the bonding fabric. One inch graduation marks printed on the tape permit holes to be cut at the bench, providing the bolt spacing is known.

Service—GARLOCK 616 is recommended for application to locomotive front ends and to large flanged tanks or other joints subject to high temperatures and pressures.

Form—This tape is obtainable in continuous lengths and in almost any width and thickness.

GARLOCK 617

Construction—GARLOCK 617 Slotted Asbestos Tape is made of two courses of GARLOCK wire inserted folded asbestos cloth, joined together by a fabric connecting member in which is cut a multiplicity of diagonal slots.

Application—The diagonal slots provided in the connector of this tape permits it to be applied readily over bolts or studs. It is not necessary to cut additional holes in the tape, regardless of the bolt spacing.

Service—GARLOCK 617 is recommended for use on front ends of locomotives and on flanged joints of large tanks of any kind where high temperatures and pressures are encountered.

Form—This tape is obtainable in continuous lengths and in practically any width or thickness, except that provision for the $\frac{1}{8}$ " wide connector must be made when specifying width.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**



EXPANSION JOINT PACKINGS

GARLOCK 1005

Construction—GARLOCK 1005 Ring and GARLOCK 1015 Coil Packings for locomotive expansion joints are made from wire inserted asbestos yarn braided hard, and given an external graphite treatment with no lubrication. The same material, lubricated and graphited, is supplied as GARLOCK 1005-A in ring form and GARLOCK 1015-A in coil.

Service—This material was developed specially for use on Mallet locomotive slip joints. It is also used on

old type ball joints and for any expansion joints operating against steam or oil.

Form—In ring form GARLOCK 1005 or GARLOCK 1005-A is furnished to any specified size. Coil forms of this material—GARLOCK 1015 and GARLOCK 1015-A are made in sizes from $\frac{1}{4}$ " to $1\frac{1}{4}$ ", and are regularly packaged in boxes of approximately 10 pounds net weight. It is also available in continuous lengths on reels.

GARLOCK 530

Construction—GARLOCK 530 Chevron Packing, which is fully described on page 81, is formed from sturdy asbestos cloth into the distinctive and exclusive Chevron shape.

Service—The ability of GARLOCK Chevron to adjust itself automatically to pressure changes and to vibra-

tion and lateral movement such as is encountered on locomotive expansion joints makes it a particularly effective packing for that severe service.

Form—GARLOCK 530 Chevron is manufactured in ring form only and is generally supplied in complete sets with top and bottom adapter rings.

THE STANDARD PACKING OF THE WORLD  GARLOCK

LOCOMOTIVE EXPANSION JOINT PACKING

GARLOCK 3250

Construction—GARLOCK 3250 is constructed of wire inserted asbestos yarn braided very hard in a square cross section by the lamination or braid over braid method. It receives an oil lubrication treatment and a thorough graphiting between each braid.

Service—Recommended for locomotive expansion joint service.

Form—GARLOCK 3250 is obtainable in two forms—Coil and Ring.

GARLOCK 3250 Rings are cut from GARLOCK 3250 Coil in any specified size.

GARLOCK 3250 Coil is manufactured in all packing sizes from $\frac{1}{4}$ " to $1\frac{1}{4}$ ", advancing by sixteenths.

GARLOCK 3270

Construction—GARLOCK 3270 is manufactured from wire inserted asbestos yarn and is braided very hard in a square cross section by the same method as used in producing flax packing. It receives a lubrication and a very heavy graphite treatment which is impregnated into every strand of the material.

Service—Recommended for locomotive expansion

joint service.

Form—GARLOCK 3270 is obtainable in two forms—Coil and Ring.

GARLOCK 3270 Rings are cut from GARLOCK 3270 Coil in any specified size.

GARLOCK 3270 Coil is manufactured in all packing sizes from $\frac{1}{4}$ " to $1\frac{1}{4}$ ", advancing by sixteenths.

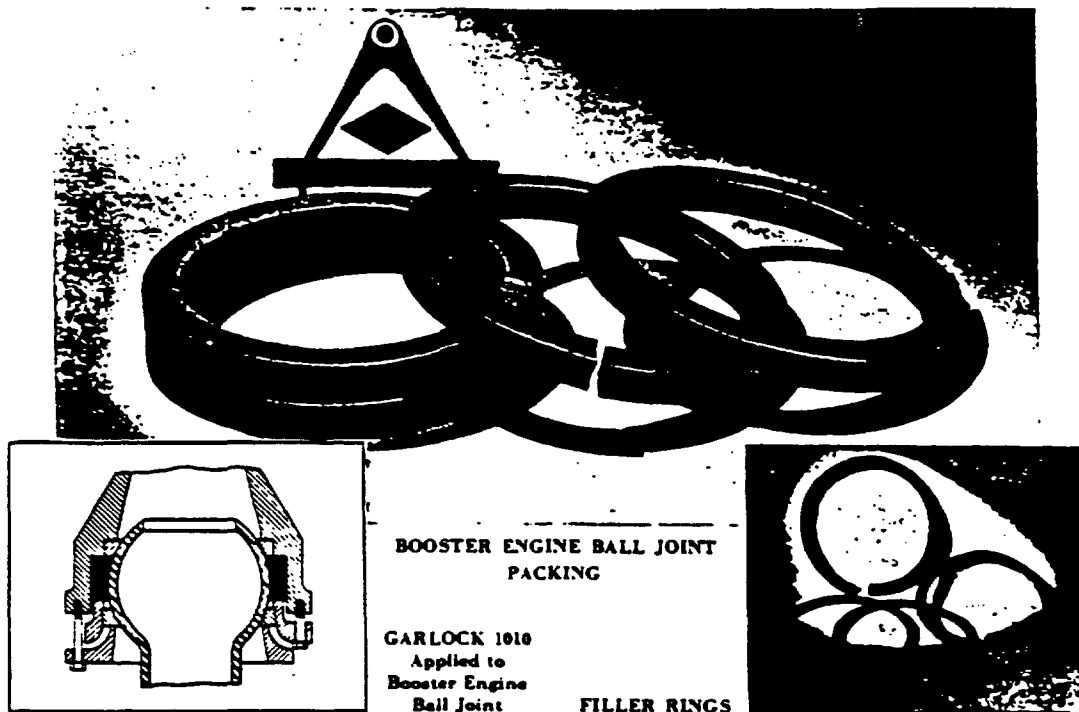
LOCOMOTIVE GAUGE COCK DISCS

GARLOCK 7751

GARLOCK 7751 Gauge Cock Discs are recommended for use on standard locomotive gauge cocks. They are manufactured from a special compound developed

specifically to withstand the severe operating conditions existing in locomotive service for which ordinary gauge cock discs are not suitable.

GARLOCK  THE STANDARD PACKING OF THE WORLD



BOOSTER ENGINE BALL JOINT
PACKING

GARLOCK 1010
Applied to
Booster Engine
Ball Joint

FILLER RINGS

GARLOCK 1010 RING
GARLOCK 1020 COIL

Construction—GARLOCK Locomotive Ball Joint Packing is made of a special asbestos cloth, folded and formed square in cross section. It receives an external treatment of lubrication and graphite.

Service—This material was developed for use on the ball joints of locomotive booster engines and on new type ball joints of Mallet locomotives. It has also been used successfully as piston rings in steam hammers and for general steam service.

Form—In ring form this material is designated GARLOCK 1010. It is also obtainable in coil—GARLOCK 1020.

For booster engine and Mallet joint service, ring form only is recommended. For that service GARLOCK 1010 is furnished in ring sets molded to the exact size and contour of the ball.

GARLOCK 1020 Coil is manufactured in all sizes above $\frac{1}{2}$ " and in any desired length.

GARLOCK 7114 FILLER RINGS FOR BOOSTER ENGINE BALL JOINTS

GARLOCK 7114 Filler Rings for booster engine ball joints are supplied in standard $\frac{1}{8}$ " thickness to fit 3" or $3\frac{1}{2}$ " joints.

These rings are intended for use in conjunction with

GARLOCK 1010 Ball Joint Packing for the purpose of taking up slack in the joint packing due either to wear of the metal parts or compression of the packing in service.

THE STANDARD PACKING OF THE WORLD  GARLOCK

52 . LOCOMOTIVE APPLIANCE GASKETS

GASKETS FOR BOOSTER ENGINES

GARLOCK Gaskets are standard on many railroads for every gasket application on locomotive booster engines. GARLOCK 950 Gaskets are recommended for some locations and GARLOCK 7022 for others. Gaskets are furnished plain or graphited.

When ordering booster engine gaskets it is only necessary to furnish the builder's part or drawing number and description. We have complete drawings and will furnish gaskets of the proper style, thickness and fit.

POWER REVERSE GEAR GASKETS

GARLOCK 952 Gaskets, as described on page 102, are recommended for use on locomotive power reverse gears. These gaskets are standard on many railroads. If desired, graphited gaskets will be supplied.

Orders for power reverse gear gaskets should specify the builder's part and drawing number, and state type of gear. This information will permit us to furnish gaskets to exact size and fit.

LOCOMOTIVE FEED WATER HEATER GASKETS

GARLOCK Gaskets are furnished cut to exact size and shape for use on Elesco and Worthington feed water heaters. For most applications on these pumps GARLOCK 7022 gaskets are recommended, plain or graphited as specified. For some locations on Worthington

pumps, however, GARLOCK Special 7397 gaskets are used. When ordering gaskets for feed water pumps specify builder's drawing and part number, and type of pump.

TANK CAR GASKETS

GARLOCK 7158 Gaskets are made of a special black rubber compound which has the characteristics necessary for tank car dome head and outlet cap service. These gaskets are soft enough to permit easy application but sufficiently hard to resist cutting. They re-

tain their high strength even after being soaked in gasoline and do not swell excessively.

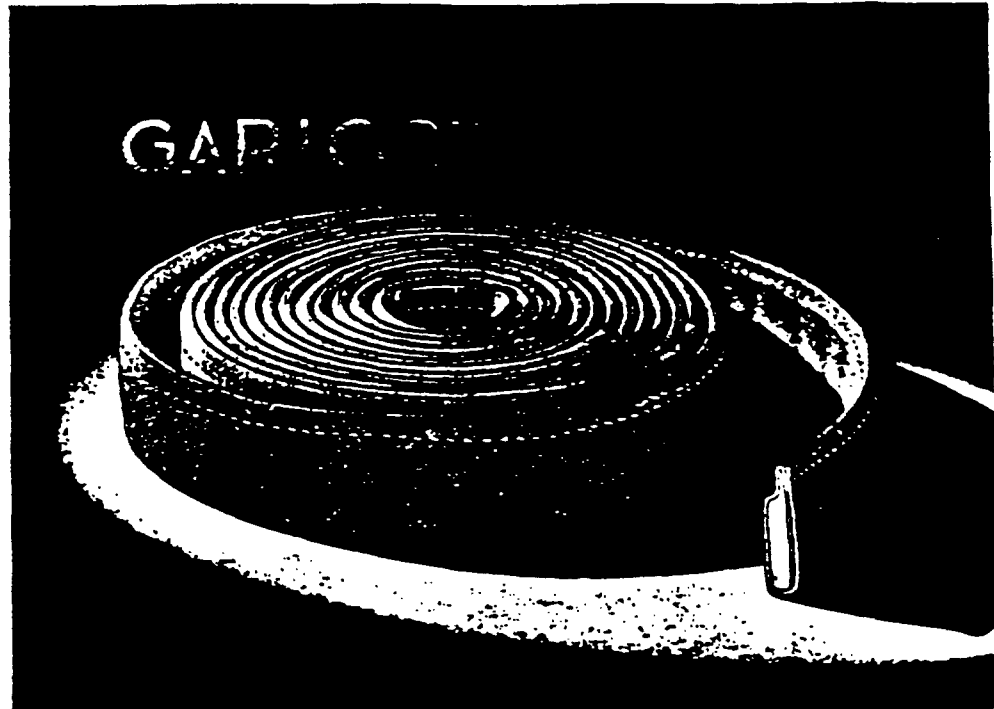
GARLOCK 7158 Gaskets are furnished in any specified size and thickness to fit dome heads or outlet caps.

TANK HOSE GASKETS

GARLOCK 122 Gaskets, as described on page 103, are recommended for tank hose connections between tender and locomotive.

These gaskets are furnished in any specified size and thickness.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 7771 TAPE

GARLOCK INSULATION TAPE

GARLOCK 7771

Construction—GARLOCK 7771 Insulation Tape consists of a center core or ribbon of asbestos fibre encased in a cover of GARLOCK asbestos cloth. In forming the cover a flap is provided along one edge through which the tape is stitched.

Service—This tape is particularly recommended for use on locomotive steam pipes. In wrapping the tape around the pipe the flap overlaps the next adjoining

course of tape $\frac{3}{8}$ ", making a smooth and complete insulating cover.

Form—GARLOCK 7771 is made in thicknesses from $\frac{3}{8}$ " up and in any suitable width. When specifying width the $\frac{3}{8}$ " flap is not included. Thus a tape having a nominal width of 2" will be $2\frac{3}{8}$ " wide including the flap. GARLOCK 7771 Tape is obtainable in continuous lengths.

GARLOCK 7066

Construction—GARLOCK 7066 Insulation Tape is made with a center ribbon of asbestos fibre encased in a core of GARLOCK asbestos cloth, stitched down the center. This tape is not made with the overlapping flap.

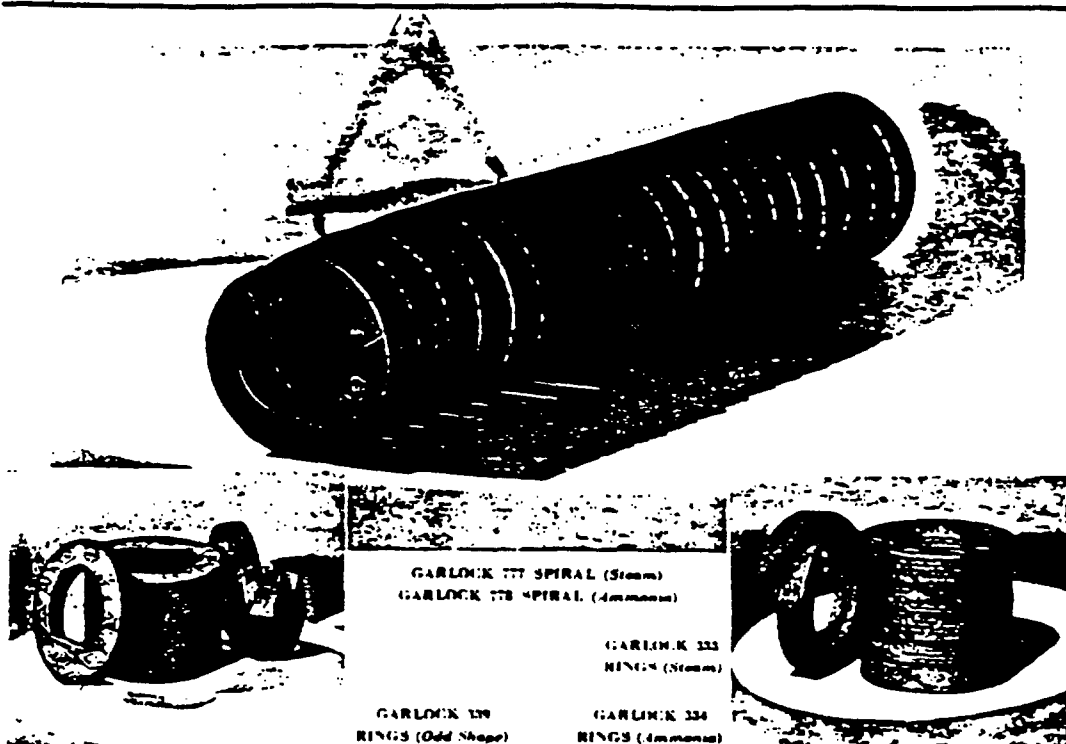
Service—GARLOCK 7066 is intended for application

to steam pipes on locomotives or in power plants.

Form—This tape is obtainable in any desired width and in thicknesses from $\frac{3}{8}$ " up. Furnished in continuous lengths if desired.

THE STANDARD PACKING OF THE WORLD  GARLOCK

LOW PRESSURE PACKING



GARLOCK 777 SPIRAL (Steam)
GARLOCK 778 SPIRAL (Ammonia)

GARLOCK 333
RINGS (Steam)

GARLOCK 339
RINGS (Odd Shape)

GARLOCK 334
RINGS (Ammonia)

Construction—GARLOCK Extra Spiral and Ring Packing is constructed of plies of closely woven duck, frictioned with a high-grade rubber compound, and finished with thick rubber covers. Although regularly lubricated and graphited, it is also furnished unlubricated and ungraphited when so specified.

Service—GARLOCK 777 Spiral, GARLOCK 333 Ring and GARLOCK 339 Ring are recommended for hot or cold water service; for steam service on piston and valve rods of engines, and for steam piston rods of pumps at pressures of 100 pounds per square inch, or less. GARLOCK 778 Spiral and GARLOCK 334 Ring are specially treated for ammonia service.

Form—This packing is regularly furnished either in spiral form—GARLOCK 777 and GARLOCK 778—or in ring form—GARLOCK 333 and GARLOCK 334. Odd shape rings, for application on rods with flat sides, are styled GARLOCK 339.

Ring forms of this packing are furnished to fit any specified rod and stuffing box size. Spiral forms of this packing are furnished in standard 12½-foot lengths and in standard thicknesses from ¼" to 1", advancing by eighths.

Footage and approximate weights per box of both dry and lubricated material are shown below:

GARLOCK 777 SPIRAL—GARLOCK 778 SPIRAL					
Lubricated and Graphited			Unlubricated and Ungraphited		
Size	Feet per Box	Weight per Box	Size	Feet per Box	Weight per Box
1"	12½ ft.	3½ lbs.	1"	12½ ft.	2½ lbs.
1½"	12½ ft.	11½ lbs.	1½"	12½ ft.	11½ lbs.
2"	12½ ft.	21½ lbs.	2"	12½ ft.	13½ lbs.
2½"	12½ ft.	31½ lbs.	2½"	12½ ft.	22½ lbs.
3"	12½ ft.	41½ lbs.	3"	12½ ft.	31½ lbs.
3½"	12½ ft.	51½ lbs.	3½"	12½ ft.	32½ lbs.
4"	12½ ft.	51½ lbs.	4"	12½ ft.	60½ lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 550 RINGS (Steam)

GARLOCK 536 RINGS (Ammonia)

Construction—GARLOCK Diagonal Cut Extra Ring Packing is constructed of plies of closely woven duck, frictioned with a specially compounded rubber; it is finished with thick rubber covers. These rings are furnished with a diagonal cut as illustrated above.

Service—GARLOCK 550 Rings are recommended for service on the piston and valve rods of engines and steam piston rods of pumps at pressures of 100 pounds per square inch or less. GARLOCK 536 Rings are specially treated for ammonia service.

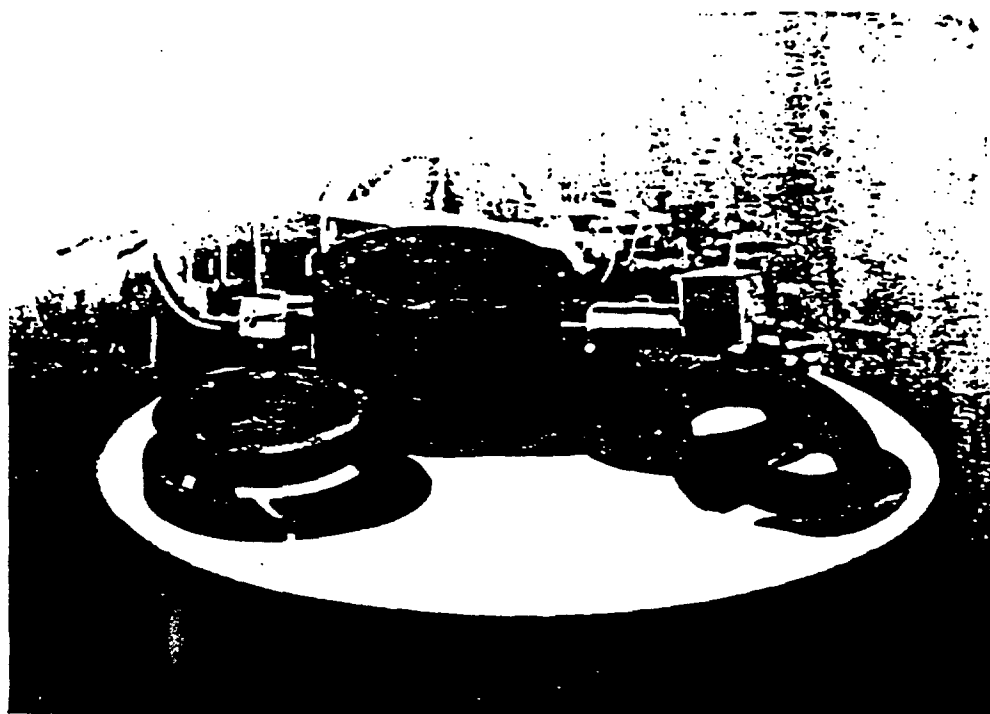
Rings of this type are designed for service in combination with plain rings, particularly on equipment having worn or scored rods.

Form—GARLOCK 550 Rings and GARLOCK 536 Rings are furnished cut to rod and stuffing box dimensions in practically any size having a packing space and thickness of $\frac{3}{4}$ " or more. They are furnished approximately square in cross section unless otherwise specified; standard thicknesses are from $\frac{1}{8}$ " to 1", advancing by eighths.

THE STANDARD PACKING OF THE WORLD



GARLOCK



GARLOCK 336 RINGS (Steam)
GARLOCK 337 RINGS (Ammonia)

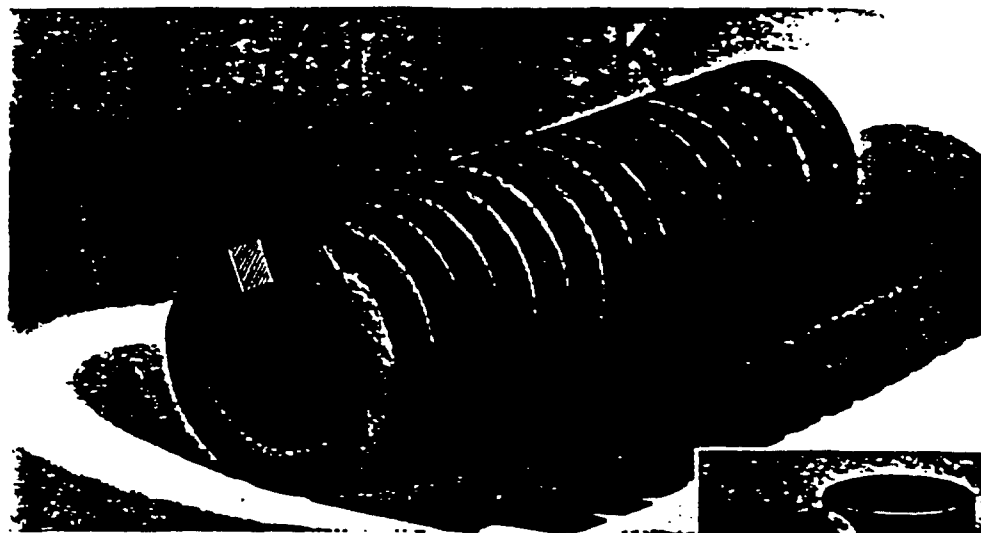
Construction—GARLOCK Extra Sectional Ring Packing is constructed of plies of closely woven duck, frictioned with a specially compounded rubber, and finished with thick rubber covers. These rings are furnished with a sectional cut as illustrated above.

Service—GARLOCK 336 Rings are recommended for steam service at pressures of 100 pounds per square inch or less. GARLOCK 337 Rings are specially treated for ammonia service.

Rings of this type are designed for service in combination with plain rings, particularly on equipment having worn or scored rods.

Form—GARLOCK 336 Rings and GARLOCK 337 Rings are furnished cut to rod and stuffing box dimensions in practically any size having a packing space of $\frac{3}{8}$ " or more. They are furnished approximately square in cross section unless otherwise specified; standard thicknesses are from $\frac{1}{4}$ " to 1", advancing by eighths.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 711 SPIRAL


GARLOCK
712 RINGS

Construction—GARLOCK "Z" Spiral Packing is constructed of diagonal plies of closely woven duck, frictioned with a specially compounded rubber.

Service—The diagonal ply construction of GARLOCK "Z" Spiral Packing results in a material of an unusually expansive nature. It is recommended for service against medium-pressure steam, hot water and ammonia, particularly on equipment having rods or plungers out of line or subject to a lateral motion.

Form—This material is supplied in two forms, GARLOCK 711 Spiral and GARLOCK 712 Ring. GARLOCK 712 Rings are cut from GARLOCK 711 Spiral and are furnished to fit any rod and stuffing box dimensions.

GARLOCK 711 Spiral is furnished in standard 12½-foot lengths and in all packing sizes from ¼" to 1½", advancing by sixteenths.

Listed below are footage and approximate weights on a few standard sizes:

GARLOCK 711 SPIRAL					
Size	Feet per Box	Weight per Box	Size	Feet per Box	Weight per Box
¼"	18½ ft.	¾ lbs.	¾"	12½ ft.	4½ lbs.
½"	18½ ft.	1¼ lbs.	1"	12½ ft.	8½ lbs.
¾"	18½ ft.	2¼ lbs.	1½"	12½ ft.	9 lbs.
1"	18½ ft.	3½ lbs.			

THE STANDARD PACKING OF THE WORLD  GARLOCK

METAL INSERTION EXTRA RING PACKING

GARLOCK 313 RING (Steam)

GARLOCK 314 RING (Ammonia)

GARLOCK 316 RING—SECTIONAL CUT (Steam)

GARLOCK 317 RING—SECTIONAL CUT (Ammonia)

Construction—GARLOCK Metal Insertion Extra Ring Packing is constructed of plies of duck and rubber with a soft metal insertion, and finished with thick rubber covers.

Service—GARLOCK 313 and GARLOCK 316 Rings are recommended for service against low pressure steam, hot or cold water.

GARLOCK 314 and GARLOCK 317 Rings are recommended for service against ammonia.

Form—GARLOCK Metal Insertion Extra Ring Packing is supplied in ring form only, to any specified rod and stuffing box sizes. Standard thicknesses are approximately $\frac{3}{8}$ " and $\frac{1}{2}$ ".

As indicated above, either plain or sectional cut rings, with regular lubrication for steam service, and with special treatment for ammonia service, are manufactured.

METAL WEDGE RING PACKING

GARLOCK 216 INNER WEDGE

GARLOCK 217 OUTER WEDGE

Construction—GARLOCK Metal Wedge Ring Packing is manufactured from high-grade duck and rubber slab stock with a triangular, soft metal wedge insert.

Service—Recommended for hydraulic service, particularly in combination with other hydraulic packings.

Form—Furnished in practically any diameters required, and in thicknesses approximating $\frac{1}{2}$ ", $\frac{3}{8}$ ", $\frac{3}{4}$ ", $\frac{1}{2}$ ", and 1". Minimum packing space, or width of packing, is $\frac{3}{8}$ ".

GARLOCK Metal Wedge Packing is manufactured in two types, designated as follows:

GARLOCK 216 Inner Wedge has the metal wedge inserted on the inner wearing surface of the ring. This type is designed for service on outside packed plungers.

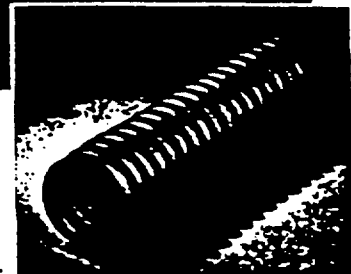
GARLOCK 217 Outer Wedge has the metal wedge on the outer wearing surface of the ring. This type is designed for service on inside packed plungers.

GARLOCK  THE STANDARD PACKING OF THE WORLD



Garlock 255 RINGS

Garlock 253 COIL



Garlock 254 SPIRAL

Construction—GARLOCK Ideal Packing consists of a round core of resilient red rubber wrapped with plies of frictioned duck. It is regularly supplied lubricated and graphited.

Service—Recommended for service on high-speed engine pistons and valve stems. It is also an excellent material for use on oil or hot water pumps.

Form—GARLOCK Ideal Packing is obtainable in the three forms illustrated above—GARLOCK 253 Coil, GARLOCK 254 Spiral and GARLOCK 255 Ring.

GARLOCK 255 Rings are furnished cut and formed in any specified size to fit rod and stuffing box dimensions.

GARLOCK 253 Coil and GARLOCK 254 Spiral are furnished in standard 18½-foot lengths and are manufactured in all packing sizes from 3/8" to 1½", advancing by sixteenths.

The table below indicates the number of feet per box and approximate weight per box of a few standard sizes:

GARLOCK 253 Coil			GARLOCK 254 Spiral		
Size	Feet per Box	Weight per Box	Size	Feet per Box	Weight per Box
3/8"	75 ft.	3½ lbs.	3/8"	18½ ft.	½ lbs.
7/16"	50 ft.	4½ lbs.	7/16"	18½ ft.	1½ lbs.
1/2"	50 ft.	4 lbs.	1/2"	18½ ft.	2 lbs.
9/16"	57½ ft.	4½ lbs.	9/16"	18½ ft.	4½ lbs.
5/8"	25 ft.	6½ lbs.	5/8"	18½ ft.	4½ lbs.
3/4"	18½ ft.	6 lbs.	3/4"	18½ ft.	6 lbs.
1"	18½ ft.	8½ lbs.	1"	18½ ft.	8½ lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK

RUBBER INSERTION EXTRA RING PACKING

GARLOCK 285 RING
GARLOCK 286 SECTIONAL RING

Construction—Rubber Insertion Extra Ring Packing consists of plies of duck and rubber with one or more central cushions of resilient rubber. Regularly furnished lubricated and graphited.

Service—Recommended for use as an ammonia rod packing.

Form—GARLOCK Rubber Insertion Extra Ring Pack-

ing is produced in standard thicknesses of approximately $\frac{3}{8}$ ", $\frac{1}{2}$ ", and $\frac{3}{4}$ ". It is supplied in the two types indicated above—GARLOCK 285 Rings and GARLOCK 286 Sectional Rings.

GARLOCK 286 Sectional Rings are usually combined alternately in sets with GARLOCK 285.

RUBBER CUSHION ELEVATOR PACKING

GARLOCK 36 COIL
GARLOCK 34 RING

Construction—GARLOCK 36 is manufactured of plies of special duck cemented together with a high-grade friction and combined with a rubber back.

Service—Particularly designed for service on hydraulic conditions of all kinds.

Form—Rubber Cushion Elevator Packing is approximately square in cross section; standard sizes $\frac{3}{8}$ " to 2", advancing by thirty-seconds. It is obtain-

able in two forms: GARLOCK 36 Coil and GARLOCK 34 Ring.

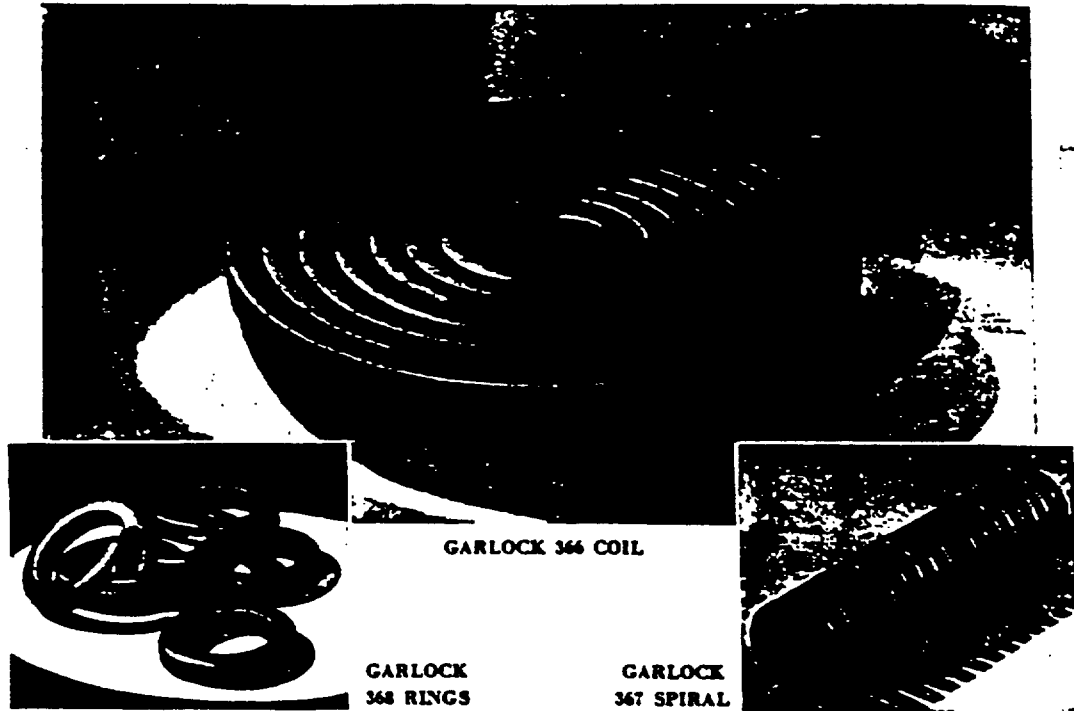
GARLOCK 36 Coil is furnished in standard lengths of $12\frac{1}{2}$ feet.

GARLOCK 34 Rings, which are cut from GARLOCK 36 Coil, are furnished in any specified size.

Listed below are approximate weights of GARLOCK 36 in some stock sizes:

GARLOCK 36 COIL					
Size	Coils per Box	Weight per Box	Size	Coils per Box	Weight per Box
$\frac{3}{8}$ "	8	8 lbs.	$\frac{3}{4}$ "	2	10 lbs.
$\frac{1}{2}$ "	5	11 lbs.	$\frac{7}{8}$ "	1	6 $\frac{1}{2}$ lbs.
$\frac{3}{4}$ "	3	10 $\frac{1}{2}$ lbs.	1"	1	8 $\frac{1}{2}$ lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 366 COIL

GARLOCK 368 RINGS

GARLOCK 367 SPIRAL

Construction—GARLOCK "O" Center Hydraulic Packing is constructed of a high-grade woven duck, frictioned with a tenacious rubber compound and formed with a hollow center. It is regularly treated with a high-grade lubricant and a surface graphiting.

Service—Recommended for use on steam hammer pistons, elevator plungers, ammonia compressors and plungers of outside packed pumps, in hot or cold water service.

Form—GARLOCK "O" Center Hydraulic Packing is obtainable in the three forms illustrated above—GAR-

LOCK 366 Coil, GARLOCK 367 Spiral and GARLOCK 368 Ring.

GARLOCK 368 Rings are furnished cut and formed in any specified size to fit rod and stuffing box dimensions.

GARLOCK 366 Coil and GARLOCK 367 Spiral are furnished in standard 12½-foot lengths and are manufactured in all packing sizes from ¼" to 1½", advancing by sixteenths.

Footage and approximate weight per box of a few standard sizes are indicated below:

GARLOCK 366 Coil			GARLOCK 367 Spiral		
Size	Feet per Box	Weight per Box	Size	Feet per Box	Weight per Box
¼"	73 ft.	3½ lbs.	¼"	18½ ft.	5½ lbs.
⅜"	50 ft.	4½ lbs.	⅜"	18½ ft.	11½ lbs.
½"	50 ft.	7½ lbs.	½"	18½ ft.	17½ lbs.
⅝"	57½ ft.	9½ lbs.	⅝"	18½ ft.	21½ lbs.
¾"	25 ft.	8½ lbs.	¾"	18½ ft.	24½ lbs.
7⁄8"	18½ ft.	8½ lbs.	7⁄8"	18½ ft.	28½ lbs.
1"	18½ ft.	8½ lbs.	1"	18½ ft.	31½ lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK

62 CUSHION CENTER HYDRAULIC PACKING



GARLOCK 274 SPIRAL

GARLOCK
273 COIL

GARLOCK
273 RING

Construction—GARLOCK Cushion Center Hydraulic Packing consists of a central soft rubber cushion placed between plies of duck and rubber laid parallel with the rod. Regularly supplied lubricated and graphited.

Service—Recommended for service on elevator plungers and on vertical hydraulic plungers having a lateral motion.

Form—GARLOCK Cushion Center Hydraulic Packing is furnished approximately square in cross section and

is obtainable in three forms—GARLOCK 273 Coil, GARLOCK 274 Spiral and GARLOCK 273 Ring.

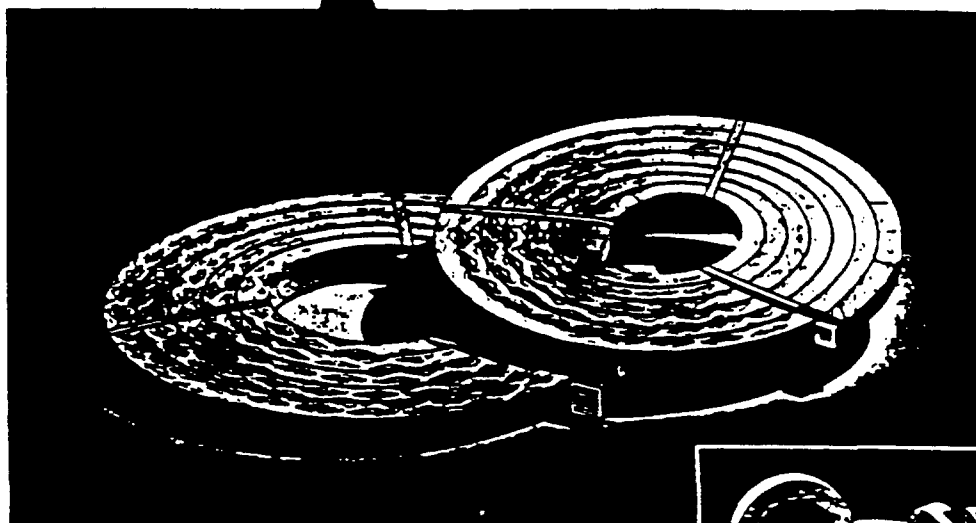
GARLOCK 273 Rings are furnished cut to any specified size to fit rod and stuffing box dimensions.

GARLOCK 273 Coil and GARLOCK 274 Spiral are furnished in standard 12½-foot lengths and are manufactured in sizes from ¼" to 1", advancing by thirty-seconds.

Approximate footage and approximate weight per box of a few standard sizes are shown below:

GARLOCK 273 Coil			GARLOCK 274 Spiral		
Size	Feet per Box	Weight per Box	Size	Feet per Box	Weight per Box
¼"	50 ft.	1½ lbs.	¼"	12½ ft.	1½ lbs.
⅜"	50 ft.	6½ lbs.	⅜"	12½ ft.	1½ lbs.
½"	50 ft.	11 lbs.	½"	12½ ft.	2½ lbs.
⅝"	37½ ft.	11½ lbs.	⅝"	12½ ft.	3½ lbs.
¾"	25 ft.	11½ lbs.	¾"	12½ ft.	7½ lbs.
⅞"	25 ft.	13½ lbs.	⅞"	12½ ft.	10½ lbs.
1"	18½ ft.	10½ lbs.	1"	12½ ft.	10½ lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 262 COIL

GARLOCK
261 RINGS

Construction—GARLOCK Special Hydraulic Packing is manufactured from a very fine cotton fabric, laid up with a high-grade white friction.

Service—Recommended for service on inside packed plungers of pumps handling either hot or cold water. It is also satisfactory for service against hot or cold oils.

Form—GARLOCK Special Hydraulic Packing is regularly furnished in two forms—GARLOCK 262 Coil and GARLOCK 261 Ring. Solid rings are styled GARLOCK 260. Both ring and coil forms are obtainable with either regular or rock hard cure.

GARLOCK 261 Rings are furnished cut and formed in any specified size. They are regularly furnished with a step joint as illustrated above. Can also be furnished with a butt or beveled joint.

GARLOCK 260 Rings are furnished solid, and in any outside diameter up to 21". Can be furnished in thicknesses of $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ " and $\frac{3}{4}$ " only.

GARLOCK 262 Coil is furnished in standard 15-foot lengths, and is manufactured in sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ ", advancing by thirty-seconds.

Number of coils and approximate weight per box of a few standard sizes are indicated below:

GARLOCK 262 COIL					
Size	Coils per Box	Weight per Box	Size	Coils per Box	Weight per Box
$\frac{1}{4}$ "	4	23½ lbs.	$\frac{3}{4}$ "	2	18½ lbs.
$\frac{3}{8}$ "	3	49½ lbs.	$\frac{1}{2}$ "	1	8½ lbs.
$\frac{1}{2}$ "	2	53½ lbs.	1"	1	11 lbs.
$\frac{5}{8}$ "	2	82½ lbs.			

THE STANDARD PACKING OF THE WORLD  GARLOCK

HYDRAULIC COIL PACKINGS

REGULAR HYDRAULIC COIL PACKING

GARLOCK 33 COIL

Construction—GARLOCK 33 Coil is a good grade hydraulic packing of duck and rubber construction.

Service—GARLOCK 33 Coil is intended particularly for use on pistons of inside packed pumps handling hot or cold water.

Form—GARLOCK 33 Coil is regularly furnished ap-

proximately square in cross section, in sizes from $\frac{1}{8}$ " to $1\frac{1}{4}$ "; standard length of coil is 15 feet.

It is obtainable with either regular or rock hard cure

The following table indicates the number of coils and approximate weight per box of a few standard sizes:

GARLOCK 33 COIL					
Size	Coils per Box	Weight per Box	Size	Coils per Box	Weight per Box
$\frac{1}{8}$ "	4	4 lbs.	$\frac{3}{8}$ "	2	9 $\frac{1}{2}$ lbs.
$\frac{1}{4}$ "	3	5 $\frac{1}{2}$ lbs.	$\frac{1}{2}$ "	1	6 $\frac{1}{2}$ lbs.
$\frac{3}{4}$ "	2	4 $\frac{1}{2}$ lbs.	1"	1	3 $\frac{1}{2}$ lbs.
$1\frac{1}{4}$ "	2	6 $\frac{1}{2}$ lbs.			

BLACK FRICTION HYDRAULIC COIL PACKING

GARLOCK 38 COIL

Construction—GARLOCK 38 Coil is a high-grade hydraulic packing, made up of plies of good quality duck and a black rubber friction.

Service—GARLOCK 38 Coil is recommended for service against cold water on the pistons of inside packed pumps.

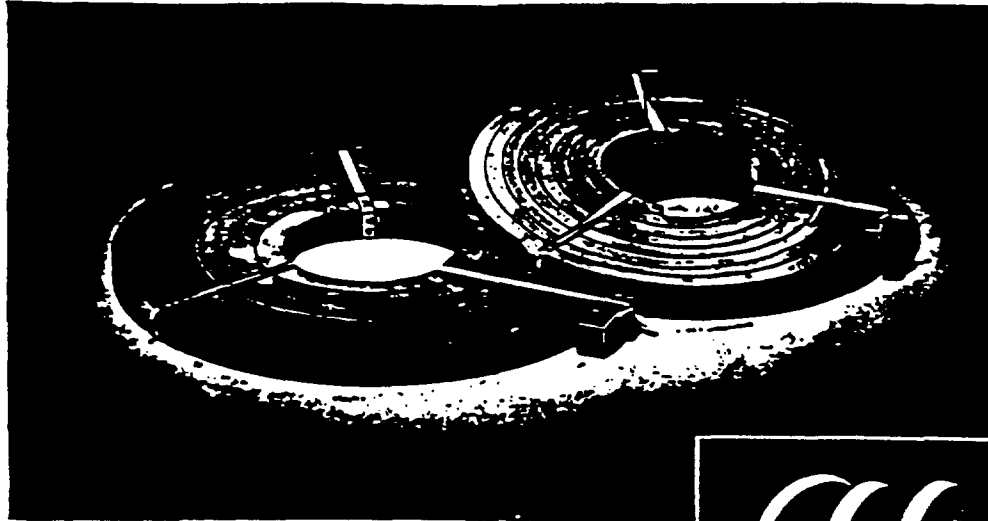
Form—GARLOCK 38 Coil is regularly furnished ap-

proximately square in cross section, in sizes $\frac{1}{8}$ " to $1\frac{1}{4}$ "; standard length of coil is 15 feet. It is obtainable with regular cure only.

In the following table, the number of coils and approximate weight per box of a few standard sizes are shown:

GARLOCK 38 COIL					
Size	Coils per Box	Weight per Box	Size	Coils per Box	Weight per Box
$\frac{1}{8}$ "	4	4 lbs.	$\frac{3}{8}$ "	2	10 $\frac{1}{2}$ lbs.
$\frac{1}{4}$ "	3	4 $\frac{1}{2}$ lbs.	$\frac{1}{2}$ "	1	6 $\frac{1}{2}$ lbs.
$\frac{3}{4}$ "	2	4 $\frac{1}{2}$ lbs.	1"	1	10 $\frac{1}{2}$ lbs.
$1\frac{1}{4}$ "	2	7 $\frac{1}{2}$ lbs.			

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 94 COIL



GARLOCK
95 RINGS

Construction—GARLOCK Square Gray Rubber Packing is a medium soft gray rubber stock containing a high percentage of rubber. Outstanding characteristics are its toughness and lasting resiliency, either in service or in stock.

Service—GARLOCK 94 Coil will give excellent service as a packing wherever a medium soft, square rubber strip is required. It is widely used in the marine trade as a porthole rubber. In ring form, it is particularly recommended as a wiper ring in sets of ammonia packing.

Form—GARLOCK 94 Coil Packing is regularly supplied square in sizes $\frac{1}{4}$ " to $1\frac{1}{4}$ ". Can also be furnished in round, rectangular or irregular cross sections. Standard length of coils is $12\frac{1}{2}$ feet; can be furnished in continuous lengths if desired.

GARLOCK 95 Ring can be supplied in practically any size desired. Is regularly furnished solid, but will be cut open when so specified.

The table below indicates the number of $12\frac{1}{2}$ -foot coils and the approximate weight per box of a few standard sizes:

GARLOCK 94 COIL					
Size	Coils per Box	Weight per Box	Size	Coils per Box	Weight per Box
$\frac{1}{4}$ "	6	4 $\frac{1}{2}$ lbs.	$\frac{3}{4}$ "	2	11 $\frac{1}{2}$ lbs.
$\frac{3}{8}$ "	4	6 lbs.	$\frac{1}{2}$ "	1	8 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	3	7 $\frac{1}{2}$ lbs.	$1\frac{1}{4}$ "	1	10 $\frac{1}{2}$ lbs.
$\frac{3}{4}$ "	2	8 $\frac{1}{2}$ lbs.			

THE STANDARD PACKING OF THE WORLD  GARLOCK

RUBBER PACKINGS

SPECIAL CYLINDER PACKING

GARLOCK 45 COIL
GARLOCK 65 RING

Construction—GARLOCK 45 is a tubular material manufactured from a high-grade, soft gray rubber compound. With each box of GARLOCK 45, connecting leads and friction tape for use in forming rings or gaskets are furnished.

Service—GARLOCK 45 is designed for use in combination with other of our hydraulic packings, or for gasket service.

Form—GARLOCK 45 Coil is regularly furnished in

12½-foot lengths; it can also be supplied in continuous lengths on reels. Standard sizes ¼" to 1", advancing by sixteenths. GARLOCK 65 Rings, which are formed from GARLOCK 45 Coil, are furnished in any specified size.

Listed below is approximate weight information applying to standard boxes of GARLOCK 45 in the stock sizes:

Size	Coils per Box	Connections per Box	Weight per Box
¼"	4	30	4½ lbs.
½"	3	20	6½ lbs.
¾"	2	15	8½ lbs.
1"	2	12	11½ lbs.

GARLOCK GAUGE GLASS WASHERS

GARLOCK Gauge Glass Washers are manufactured from a high-grade rubber stock specially compounded to obtain long life and lasting resiliency.

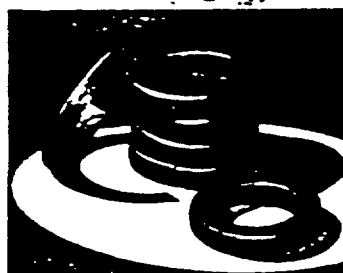
The design of these washers enables easy application.

They also reduce breakage of the glasses, and keep the connections from sputtering and leaking.

GARLOCK Gauge Glass Washers are furnished in standard sizes for ½", ¾", 1" and 1½" gauge glasses.

GARLOCK  THE STANDARD PACKING OF THE WORLD

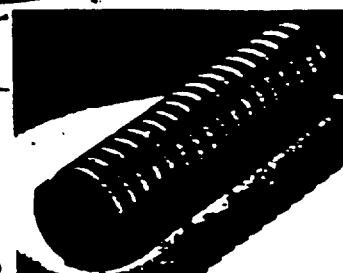
WATERPROOF HYDRAULIC FLAX PACKING 67



GARLOCK 90 COIL (Regular)
GARLOCK 90-S COIL (Soft)
GARLOCK 90-VS COIL (Very Soft)

GARLOCK 90
RINGS (Regular)
GARLOCK 90-S
RINGS (Soft)
GARLOCK 90-VS
RINGS (Very Soft)

GARLOCK 90
SPIRAL (Regular)
GARLOCK 90-S
SPIRAL (Soft)
GARLOCK 90-VS
SPIRAL (Very Soft)



Construction—GARLOCK Waterproof Hydraulic Flax Packing is manufactured from the longest fibre, imported roving, sorted and graded by flax experts. It is free from tow, coarse or short fibres. Extreme care in braiding produces an even and uniform material. The packing is thoroughly impregnated with a special graphite waterproof lubricant.

Service—This material is recommended for use on heavy hydraulic duty such as rams, accumulators, hydraulic pumps, elevator plungers or outside packed pumps handling cold water or cold oil.

Form—GARLOCK Waterproof Hydraulic Flax Packing is regularly braided square and is produced in

three densities, designated—Regular, Soft and Very Soft. It is furnished in coil, spiral or ring form.

Coil Form is furnished in sizes $\frac{1}{8}$ " to 3" and is boxed in the manner indicated in the table below. May also be produced in continuous length on reels.

Spiral Form is furnished in sizes $\frac{1}{8}$ " to 3". It is packaged one spiral length per box.

Ring Form—Rings of GARLOCK Waterproof Hydraulic Packing are furnished cut and formed in any specified size to fit rod and stuffing box dimensions.

Listed below are approximate footage and weights on some standard sizes of GARLOCK 90 Coil:

GARLOCK 90 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{8}$ "	4	164 ft.	8 lbs.
$\frac{3}{16}$ "	4	180 ft.	8 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	4	88 ft.	11 $\frac{1}{4}$ lbs.
$\frac{3}{4}$ "	1	94 ft.	7 lbs.
1"	1	26 ft.	8 lbs.
1 $\frac{1}{2}$ "	1	23 ft.	9 lbs.
2"	1	19 ft.	9 $\frac{1}{2}$ lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 25 COIL (Hard)

GARLOCK 27 COIL (Very Soft)

GARLOCK 26 COIL (Regular)

GARLOCK 36 COIL (Graphited)



Construction—GARLOCK Gold Brand Flax Packing is manufactured from the longest fibre, imported roving, sorted and graded by flax experts. It is free from tow, coarse or short fibres. Extreme care in braiding produces an even and uniform material. Gold Brand Flax is the highest grade flax packing.

Service—Gold Brand Flax Packing will give satisfactory service on heavy hydraulic duty and all cold water installations.

Form—This grade of flax is regularly braided square in sizes $\frac{1}{8}$ " to 3", and is furnished either in coil or ring form. It is obtainable with four different lubrica-

tion treatments, as follows:

GARLOCK 25 Coil is treated with a hard grease lubricant which gives a relatively firm density.

GARLOCK 26 Coil is treated with our regular flax lubricant and has a medium density.

GARLOCK 27 Coil has a heavier lubrication treatment resulting in a very soft material.

GARLOCK 36 Coil is treated with our regular flax lubricant and graphited.

Listed below are footage and approximate weights of some standard sizes:

GARLOCK 25 COIL (Hard)	GARLOCK 26 COIL (Regular)	GARLOCK 27 COIL (Very Soft)
Size	Coils per Box	Feet per Box
$\frac{1}{8}$ "	7	280 ft.
$\frac{1}{4}$ "	5	150 ft.
$\frac{3}{8}$ "	4	90 ft.
$\frac{1}{2}$ "	3	51 ft.
$\frac{3}{4}$ "	3	42 ft.
1"	3	36 ft.
1 1/2"	1	19 ft.
		Weight per Box
		9 1/2 lbs.
		9 1/2 lbs.
		9 1/2 lbs.
		9 1/2 lbs.
		11 1/2 lbs.
		12 1/2 lbs.
		9 1/2 lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD

SILVER BRAND FLAX PACKING

69



GARLOCK 30 COIL (*Hard*)
GARLOCK 31 COIL (*Regular*)

GARLOCK 32 COIL (*Very Soft*)
GARLOCK 131 COIL (*Graphited*)



Construction—GARLOCK Silver Brand Flax Packing is manufactured from good grade, long fibre flax roving. Extreme care in braiding produces an even and uniform material.

Service—Silver Brand Flax Packing will give excellent service on hydraulic and cold water conditions.

Form—Silver Brand Flax Packing is regularly braided square in sizes $\frac{1}{8}$ " to 3", and is furnished either in coil or ring form. It is obtainable with four different lubrication treatments as follows:

GARLOCK 30 Coil is treated with a hard grease lubricant which gives a relatively firm density.

GARLOCK 31 Coil is treated with our regular flax lubricant and has a medium density.

GARLOCK 32 Coil has a heavier lubricant treatment resulting in a very soft material.

GARLOCK 131 Coil is treated with our regular flax lubricant and graphited.

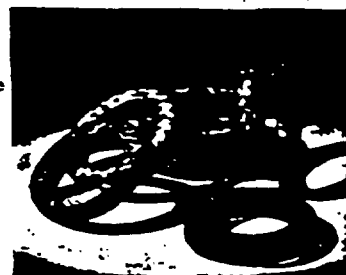
Listed below are footage and approximate weights of some standard sizes:

GARLOCK 30 COIL (<i>Hard</i>)	GARLOCK 31 COIL (<i>Regular</i>)	GARLOCK 32 COIL (<i>Very Soft</i>)
Size	Coils per Box	Feet per Box
$\frac{1}{8}$ "	7	290 ft.
$\frac{1}{4}$ "	5	150 ft.
$\frac{3}{8}$ "	4	80 ft.
$\frac{1}{2}$ "	3	51 ft.
$\frac{3}{4}$ "	3	48 ft.
1"	3	36 ft.
	1	19 ft.
		Weight per Box
		9 $\frac{1}{2}$ lbs.
		9 $\frac{1}{4}$ lbs.
		9 $\frac{1}{2}$ lbs.
		9 $\frac{1}{4}$ lbs.
		11 $\frac{1}{2}$ lbs.
		12 $\frac{1}{2}$ lbs.
		9 $\frac{1}{2}$ lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 50



Construction—GARLOCK 50 is manufactured from the longest fibre, imported roving, sorted and graded by flax experts. It is free from tow, coarse or short fibres. Extreme care in braiding produces an even and uniform material. GARLOCK 50 is processed with a special waterproof lubricant.

Service—GARLOCK 50 is recommended for heavy hydraulic duty and all cold water installations. Because

it will not discolor liquids or solutions, it is also particularly suitable for dairy and paper mill service.

Form—GARLOCK 50 is regularly braided square in sizes $\frac{1}{8}$ " to 3", and is furnished either in coil or ring form.

Listed below are footage and approximate weights of some standard sizes:

Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{8}$ "	4	164 ft.	6 lbs.
$\frac{3}{16}$ "	4	160 ft.	8 $\frac{1}{2}$ lbs.
$\frac{1}{4}$ "	4	88 ft.	11 $\frac{1}{2}$ lbs.
$\frac{5}{16}$ "	4	54 ft.	7 lbs.
$\frac{3}{8}$ "	4	36 ft.	7 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	4	24 ft.	9 lbs.
$\frac{5}{8}$ "	4	19 ft.	9 $\frac{1}{2}$ lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD

OCEAN BRAND BLENDED FLAX PACKING 71



GARLOCK 42 COIL (*Very Soft*)
GARLOCK 43 COIL (*Regular*)
GARLOCK 53 COIL (*Graphited*)



Construction—GARLOCK Ocean Brand Blended Flax Packing is manufactured from a medium grade of flax roving. The same care in braiding is used as in the manufacture of our highest grade flax packings, insuring even and uniform material.

Service—GARLOCK Ocean Brand Blended Flax Packing is designed for service in ordinary hydraulic conditions.

Form—Ocean Brand Blended Flax Packing is regularly braided square in sizes $\frac{1}{8}$ " to 3", and is fur-

nished either in coil or ring form. It is obtainable with three different lubrication treatments as follows:

GARLOCK 42 Coil has a heavy treatment of our regular flax lubricant, resulting in a very soft material.

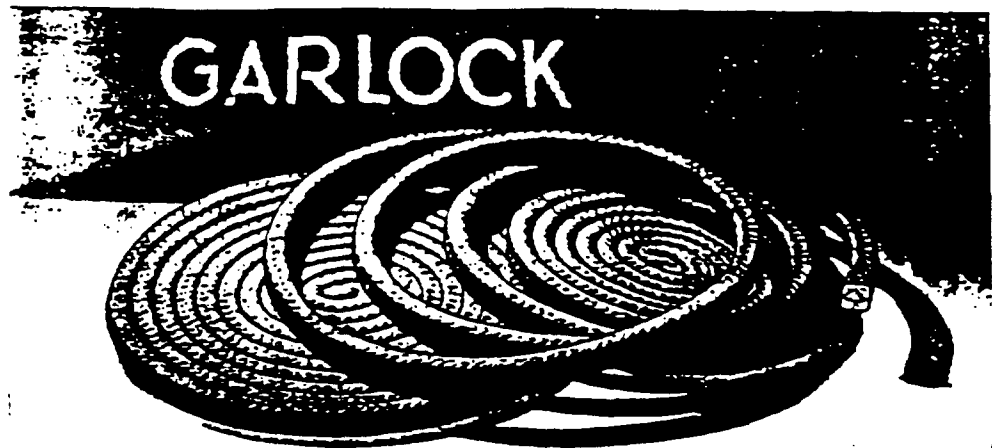
GARLOCK 43 Coil is treated with our regular flax lubricant and has a medium density.

GARLOCK 53 Coil is treated with our regular flax lubricant and graphited.

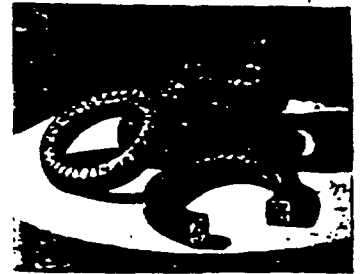
Listed below are footage and approximate weights of some standard sizes:

GARLOCK 42 COIL (<i>Very Soft</i>)		GARLOCK 43 COIL (<i>Regular</i>)	
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{8}$ "	7	287 ft.	11 lbs.
$\frac{3}{16}$ "	5	150 ft.	11 lbs.
$\frac{1}{4}$ "	4	80 ft.	11 lbs.
$\frac{5}{16}$ "	3	51 ft.	10 lbs.
$\frac{3}{8}$ "	3	44 ft.	12½ lbs.
$\frac{7}{16}$ "	3	36 ft.	14½ lbs.
$\frac{1}{2}$ "	1	19 ft.	10 lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 34 COIL (*Hard*) GARLOCK 33S COIL (*Very Soft*)
 GARLOCK 35 COIL (*Regular*) GARLOCK 32 COIL (*Graphited*)



Construction—GARLOCK Lake Brand Jute Packing is manufactured from all fine white India jute, sorted and graded carefully as to length of fibre. The same careful braiding process is used as in the manufacture of our flax packings, insuring an even and uniform material.

Service—GARLOCK Lake Brand Jute Packing will give satisfactory service on all hydraulic and cold water conditions where a jute packing generally is used.

Form—Lake Brand Jute Packing is regularly braided square in sizes $\frac{1}{4}$ " to 3", and is furnished either in coil or ring form. It is obtainable with four different

lubrication treatments as follows:

GARLOCK 34 Coil is treated with a wax lubricant which gives a relatively firm density.

GARLOCK 35 Coil is treated with our regular flax lubricant and has a medium density.

GARLOCK 33S Coil has a heavier lubrication treatment resulting in a very soft material.

GARLOCK 32 Coil is treated with our regular flax lubricant and graphited.

Listed below are footage and approximate weights of some standard sizes:

GARLOCK 34 COIL (<i>Hard</i>)	GARLOCK 35 COIL (<i>Regular</i>)	GARLOCK 33S COIL (<i>Very Soft</i>)	
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	7	287 ft.	10 lbs.
$\frac{3}{8}$ "	5	150 ft.	10 lbs.
$\frac{1}{2}$ "	4	90 ft.	10 lbs.
$\frac{3}{4}$ "	4	68 ft.	10 lbs.
1"	3	48 ft.	11 lbs.
$1\frac{1}{4}$ "	3	36 ft.	14 lbs.
1"	1	27 ft.	14 lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD

RUBBER BACK FLAX...BRAIDED COTTON 73

RUBBER BACK FLAX PACKING

GARLOCK 83 WATERPROOF HYDRAULIC COIL

GARLOCK 183 WATERPROOF HYDRAULIC RING

GARLOCK 93 UNTREATED COIL

GARLOCK 193 UNTREATED RING

Construction—GARLOCK Rubber Back Packing is a braided flax packing, manufactured from the longest fibre, imported flax roving, to which is vulcanized a good grade rubber cushion.

Service—Particularly recommended for service on cold water rods that are out of line.

Form—GARLOCK Rubber Back Flax Packing is approximately square in cross section; standard sizes $\frac{1}{4}$ " to 3". It is furnished in coil or ring form, lubricated or unlubricated, under the following style designations:

GARLOCK 83 Coil is treated with a waterproof hy-

draulic compound. Standard length of coil is $12\frac{1}{2}$ feet.

GARLOCK 183 Ring is treated with a waterproof hydraulic compound. Can be furnished in any specified size.

GARLOCK 93 Coil is untreated. Standard length of coil is $12\frac{1}{2}$ feet.

GARLOCK 193 Ring is untreated. Can be furnished in any specified size.

Listed below are number of coils and approximate weights on some standard sizes of GARLOCK 83 Coil and GARLOCK 93 Coil:

GARLOCK 83 Coil			GARLOCK 93 Coil		
Size	Coils per Box	Weight per Box	Size	Coils per Box	Weight per Box
$\frac{1}{4}$ "	10	4 $\frac{1}{2}$ lbs.	$\frac{1}{4}$ "	12	3 $\frac{1}{2}$ lbs.
$\frac{3}{8}$ "	6	3 $\frac{1}{2}$ lbs.	$\frac{3}{8}$ "	6	4 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	3	8 $\frac{1}{2}$ lbs.	$\frac{1}{2}$ "	3	6 $\frac{1}{2}$ lbs.
$\frac{3}{4}$ "	4	10 $\frac{1}{2}$ lbs.	$\frac{3}{4}$ "	4	8 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	3	11 $\frac{1}{2}$ lbs.	$\frac{1}{2}$ "	3	9 lbs.
$\frac{1}{2}$ "	1	6 $\frac{1}{2}$ lbs.	$\frac{1}{2}$ "	1	4 $\frac{1}{2}$ lbs.
1"	1	6 $\frac{1}{2}$ lbs.	1"	1	3 $\frac{1}{2}$ lbs.

BRAIDED COTTON COIL PACKING

GARLOCK 66

Construction—GARLOCK 66 is manufactured of high-grade cotton, carefully braided to produce an even and uniform material. It is thoroughly impregnated with lubrication and graphite.

Service—Particularly adapted for service on centrifugal and reciprocating pumps handling cold oil or

water.

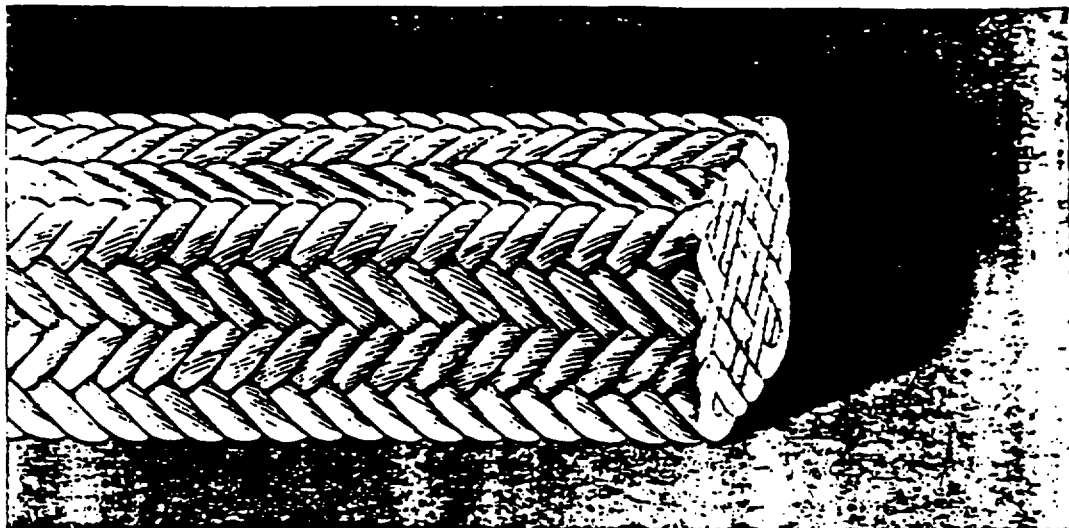
Form—This braided cotton packing is approximately square in cross section. It is furnished in sizes $\frac{1}{8}$ " to 3" in coil form, or in cut rings.

Footage and approximate weight per box of a few standard sizes are shown below:

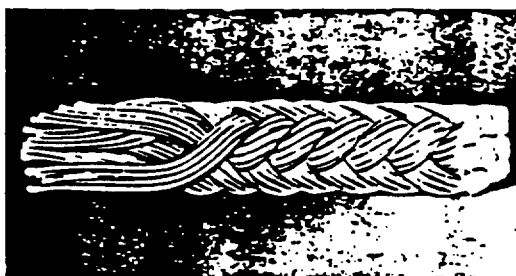
GARLOCK 66 Coil			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	7	297 ft.	10 lbs.
$\frac{3}{8}$ "	3	130 ft.	10 lbs.
$\frac{1}{2}$ "	4	80 ft.	10 lbs.
$\frac{3}{4}$ "	3	51 ft.	10 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	3	42 ft.	12 lbs.
$\frac{1}{2}$ "	3	30 ft.	14 lbs.
1"	1	27 ft.	13 lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK

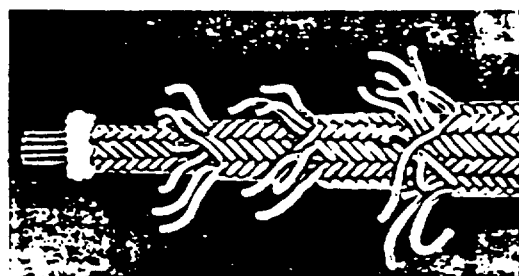
LATTICE-BRAID PACKING



LATTICE BRAID (Patented)



ORDINARY SQUARE OR FLAX BRAID



ROUND OR BRAID-OVER-BRAID

GARLOCK Lattice-Braid patented packings are distinctly new and different materials, manufactured on special machines designed solely to produce this exclusive line of packings.

In Lattice-Braid every strand in the structure passes diagonally through the packing at an angle of approximately 45 degrees. Thus, the material is braided internally as well as externally with every strand contributing to the strength of the entire structure.

This improved construction produces a packing having these outstanding features:

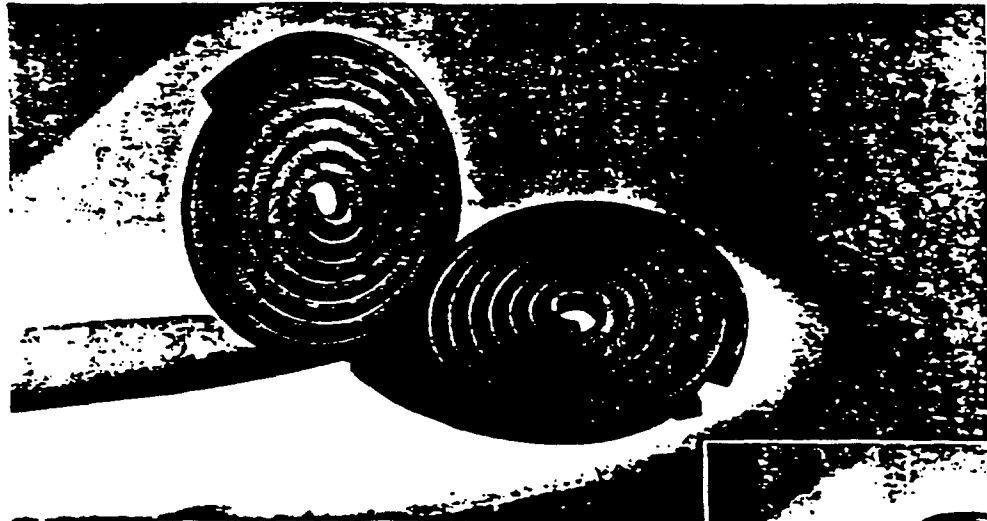
Longer life because the packing does not disintegrate when the outer strands, in contact with the moving rod or shaft, wear through.

Unusual flexibility which permits formation into rings without distortion of the packing.

A structure having a predetermined degree of porosity which permits the liquid or gas being confined to penetrate partially the body of the packing, imparting to it a semi-automatic action and making it unnecessary to apply excessive gland pressure to prevent leakage.

The accompanying drawings show the structural design of GARLOCK Lattice-Braid packing and illustrate how it differs fundamentally from the conventional square and round braided packings. The line of Lattice-Braid packings, together with the service for which each of these materials is recommended, is described on pages 75 to 79 inclusive.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 730 LATTICE-BRAID COIL
(Patented)



GARLOCK 730
RINGS

Construction—GARLOCK 730 Lattice-Braid packing is manufactured from long fibre asbestos yarn by the patented Lattice-Braid process. It is thoroughly impregnated throughout with a special GARLOCK lubricant and graphite.

Service—GARLOCK 730 is specially recommended for service on the shafts of centrifugal and rotary pumps handling hot or cold water, caustic solutions or weak acids.

Form—GARLOCK 730 Coil is manufactured in sizes

from $\frac{3}{4}$ " to 1" inclusive, advancing by sixteenths. It is available in standard coil lengths or in continuous lengths on reels.

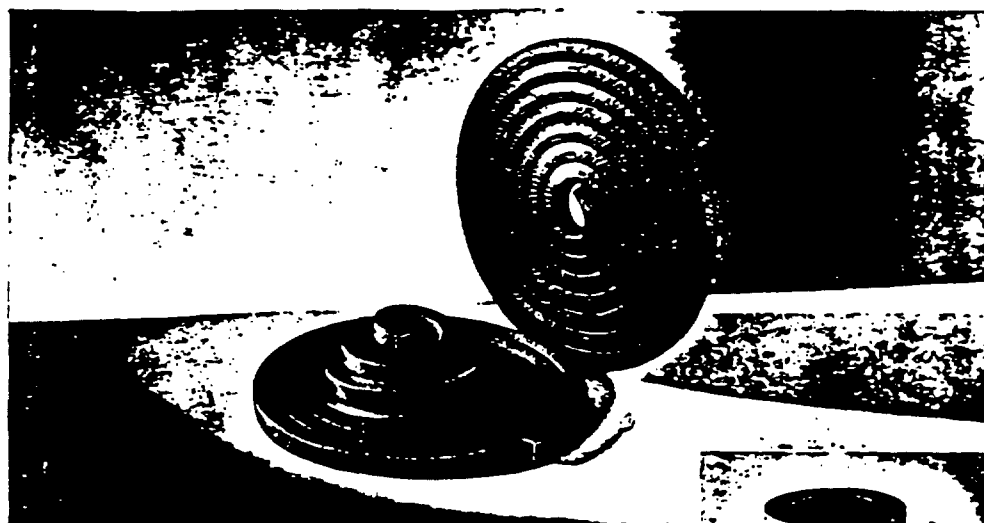
GARLOCK 730 Rings are furnished in packing space sizes from $\frac{3}{4}$ " to 1" inclusive, formed to specified rod and stuffing box dimensions.

The table below shows the number of coils and the approximate weight and footage per box of GARLOCK 730 Coil of a few standard sizes:

GARLOCK 730 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{2}$ "	4	108 ft.	18 $\frac{1}{2}$ lbs.
$\frac{3}{8}$ "	3	60 ft.	12 $\frac{1}{2}$ lbs.
$\frac{1}{4}$ "	3	48 ft.	15 $\frac{1}{2}$ lbs.
$\frac{3}{16}$ "	2	28 ft.	11 $\frac{1}{2}$ lbs.
$\frac{1}{8}$ "	2	24 ft.	13 $\frac{1}{2}$ lbs.
$\frac{1}{16}$ "	1	18 ft.	15 $\frac{1}{2}$ lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK

LATTICE-BRAID PACKING



GARLOCK 731 LATTICE-BRAID COIL
(Patented)

GARLOCK 731
RINGS

Construction—GARLOCK 731 Lattice-Braid packing is manufactured by the patented Lattice-Braid process from long fibre asbestos yarn. This material receives a special *controlled lubrication* treatment by which every strand in the packing is properly lubricated but without any excess lubrication, either external or internal.

Service—GARLOCK 731 is specially recommended for service on rods operating against steam, gas, acids, lye and caustic soda solutions.

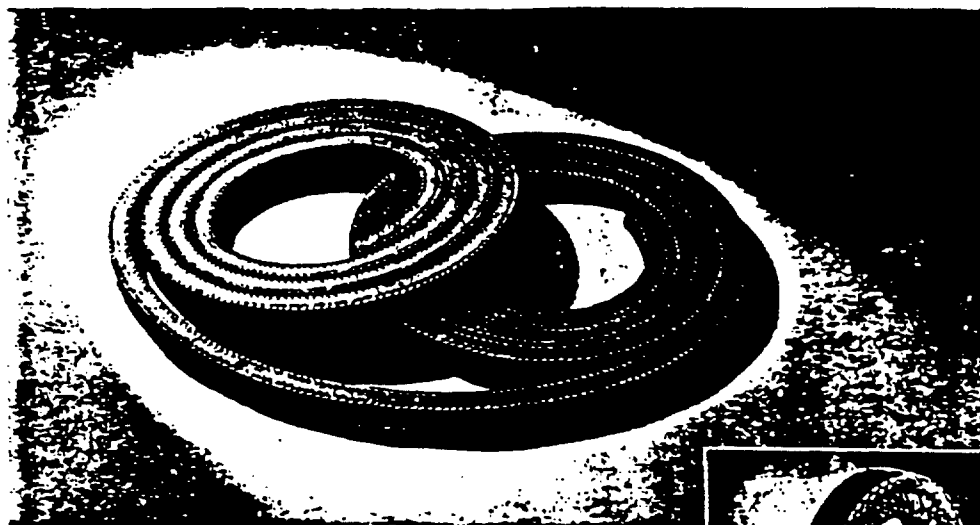
Form—GARLOCK 731 Coil is manufactured in sizes from $\frac{3}{8}$ " to 1" inclusive, advancing by sixteenths. It is available either in standard coil lengths or in continuous lengths on reels.

GARLOCK 731 Rings are furnished in packing space sizes from $\frac{3}{8}$ " to 1" inclusive, formed to fit specified rod and stuffing box dimensions.

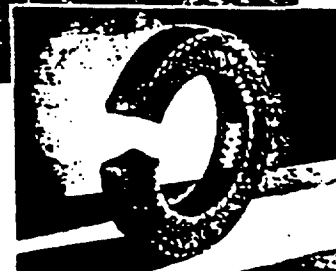
The number of coils and approximate footage and weight per box of a few standard sizes of GARLOCK 731 Coil are shown below:

GARLOCK 731 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{3}{8}$ "	4	108 ft.	11 lbs.
$\frac{7}{16}$ "	3	80 ft.	10 $\frac{1}{4}$ lbs.
$\frac{1}{2}$ "	3	48 ft.	14 lbs.
$\frac{5}{8}$ "	2	28 ft.	10 $\frac{1}{2}$ lbs.
$\frac{3}{4}$ "	2	24 ft.	11 $\frac{1}{2}$ lbs.
1"	1	19 ft.	12 $\frac{1}{2}$ lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 732 LATTICE-BRAID COIL
(Patented)



GARLOCK 732
RINGS

Construction—GARLOCK 732 Lattice-Braid packing is manufactured by the patented Lattice-Braid process from long fibre, wire-inserted asbestos yarn, reinforced and armored with copper-wire strands running diagonally through the packing in both directions from corner to corner. In this construction, the flexibility inherent in all Lattice-Braid packings is combined with extraordinary sturdiness resulting from the copper wire reinforcing strands and corners. A controlled lubrication process provides ample lubrication for every asbestos strand in this material without any excess lubrication, either external or internal.

Service—GARLOCK 732 is a high-pressure packing recommended for heavy duty service against high pressure steam or hot oil. It is a splendid expansion joint packing.

Form—GARLOCK 732 Coil is manufactured in sizes from $\frac{3}{8}$ " to 1" inclusive, advancing by sixteenths. It is available either in standard coil lengths or in continuous lengths on reels.

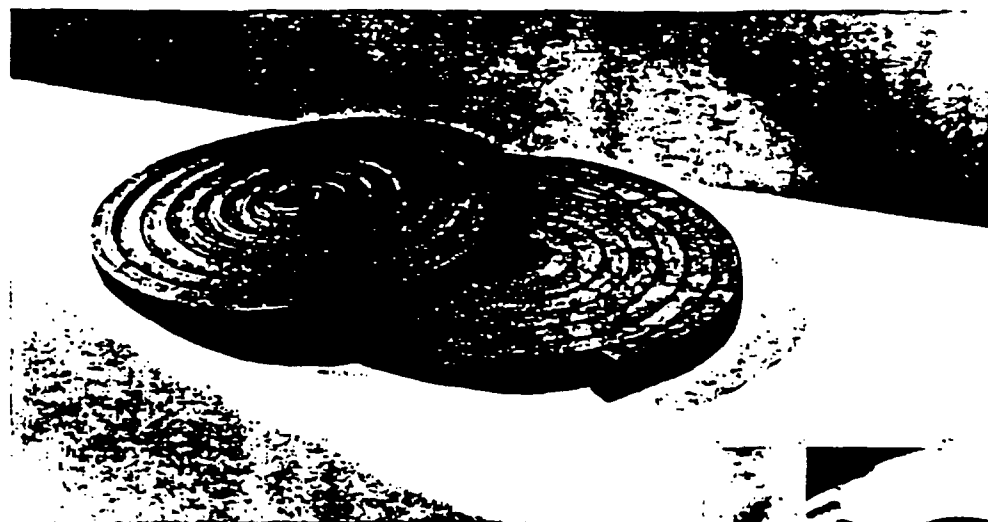
GARLOCK 732 Rings are furnished in packing space sizes from $\frac{3}{8}$ " to 1" inclusive, formed to fit specified rod and stuffing box dimensions.

The table below shows the number of coils and the approximate footage and weight per box of GARLOCK 732 Coil in a few standard sizes:

GARLOCK 732 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{8}$ "	1	34 ft.	10 $\frac{3}{4}$ lbs.
$\frac{1}{4}$ "	1	40 ft.	13 $\frac{1}{2}$ lbs.
$\frac{3}{8}$ "	1	38 ft.	13 $\frac{1}{2}$ lbs.
$\frac{1}{2}$ "	1	20 ft.	13 $\frac{3}{4}$ lbs.
$\frac{3}{4}$ "	1	18 ft.	16 lbs.
1"	1	15 ft.	17 $\frac{1}{2}$ lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK

LATTICE-BRAID PACKING



GARLOCK 736 LATTICE-BRAID COIL
(Patented)



GARLOCK 736
RINGS

Construction—GARLOCK 736 Lattice-Braid packing is manufactured by the patented Lattice-Braid process from pure, blue asbestos yarn. It is thoroughly impregnated throughout with a special GARLOCK lubricant and graphite.

Service—The blue asbestos from which GARLOCK 736 is manufactured is highly resistant to acids. This material, therefore, is specially recommended for service on the shafts of centrifugal or rotary pumps handling acids or strong chemical solutions.

Form—GARLOCK 736 Coil is manufactured in sizes from $\frac{3}{8}$ " to 1" inclusive, advancing by sixteenths. It is available either in standard coil lengths or in continuous lengths on reels.

GARLOCK 736 Rings are furnished in packing sizes from $\frac{3}{8}$ " to 1" inclusive, formed to fit specified rod and stuffing box dimensions.

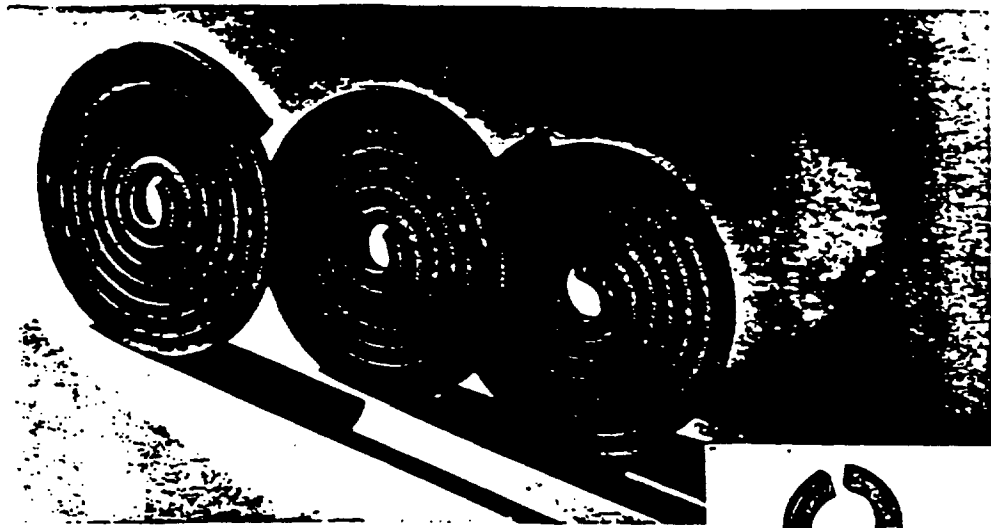
GARLOCK 736 Coil is packaged in boxes containing the number of coils and approximate footage and weight indicated in the table below:

GARLOCK 736 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{3}{8}$ "	3	81 ft.	9 lbs.
$\frac{7}{16}$ "	3	63 ft.	12 lbs.
$\frac{1}{2}$ "	2	36 ft.	21 lbs.
$\frac{5}{8}$ "	2	28 ft.	14 lbs.
$\frac{3}{4}$ "	2	24 ft.	12 lbs.
1"	1	20 ft.	15 lbs.

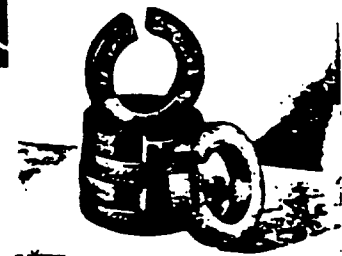
GARLOCK  THE STANDARD PACKING OF THE WORLD

LATTICE-BRAID PACKING

79



GARLOCK 731 LATTICE-BRAID COIL
(Patented)



GARLOCK 731 RINGS

Construction—GARLOCK 731 Lattice-Braid packing is manufactured by the patented Lattice-Braid process from best grade long staple cotton. It is thoroughly impregnated with a special GARLOCK lubricant and graphite.

Service—GARLOCK 731 is specially recommended for application to the shafts of centrifugal or rotary pumps handling cold oil or water.

Form—GARLOCK 731 Coil is manufactured in sizes

from $\frac{3}{4}$ " to 1" inclusive, advancing by sixteenths. It is available either in standard coil lengths or in continuous lengths on reels.

GARLOCK 731 Rings are furnished in packing sizes from $\frac{3}{8}$ " to 1", inclusive, formed to fit specified rod and stuffing box dimensions.

The table below shows number of coils and approximate footage and weight per box of GARLOCK 731 Coil in a few standard sizes:

GARLOCK 731 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{3}{4}$ "	5	150 ft.	16 lbs.
$\frac{7}{8}$ "	4	80 ft.	11 lbs.
$\frac{1}{2}$ "	3	31 ft.	10 $\frac{3}{4}$ lbs.
$\frac{3}{8}$ "	3	48 ft.	12 $\frac{1}{2}$ lbs.
$\frac{1}{4}$ "	3	36 ft.	14 $\frac{1}{2}$ lbs.
$\frac{1}{8}$ "	1	27 ft.	13 $\frac{1}{2}$ lbs.

THE STANDARD PACKING OF THE WORLD  **GARLOCK**

CHEVRON PACKING



GARLOCK CHEVRON PACKING

APPLICATION OF
GARLOCK CHEVRON
TO A SHALLOW
STUFFING BOX



Construction—GARLOCK Chevron Packing, which is manufactured only by The GARLOCK Packing Company, is produced from several different materials to meet specific service requirements. All Chevron rings are molded into the unique and exclusive hinge-like, cross-sectional shape illustrated. This design permits the packing to expand and contract automatically as pressures vary, resulting in minimum friction and wear on the rod or plunger at any pressure. The Chevron shape, which permits each ring to nest within the adjacent ring, makes possible the application of a plurality of rings in a limited packing depth, making Chevron particularly desirable for use in shallow stuffing boxes.

On unusually severe operating conditions the effective life of Chevron packing may be increased by alternating the Chevron rings with metal separator rings $\frac{1}{8}$ " thick, made of lead or other suitable metal.

Form—GARLOCK Chevron Packing is furnished in ring form only, molded accurately to any practicable

rod and stuffing box diameters. A complete set of Chevron consists of one top adapter ring, one bottom adapter ring and a sufficient number of Chevron rings to produce a set of the required depth. When so specified, adapter rings are supplied to fit beveled glands and stuffing boxes.

Application—Because GARLOCK Chevron Packing is entirely automatic in action and extremely sensitive to pressure changes, very little gland pressure is required. When applying Chevron, each ring should be inserted separately and seated firmly against the adjacent ring in the stuffing box. The gland should then be drawn up lightly and there will be no leakage on the power stroke and no gripping of the packing on the rod on the return stroke. Excessive gland pressure prevents the automatic action of the packing and shortens its serviceable life.

Service—The several types of Chevron packing and the service for which each is recommended are described on the opposite page.

GARLOCK  THE STANDARD PACKING OF THE WORLD

GARLOCK 430

(For Hot or Cold Water)

GARLOCK 430 Chevron is made of special cotton duck cloth and a GARLOCK rubber compound. It is recommended for service against hot or cold water and is an

outstanding packing for the heaviest hydraulic pressures such as rams or plungers on elevators, accumulators, presses, outside packed pumps and triplex pumps.

GARLOCK 431

(For Cold Oils and Rubber Solvents)

GARLOCK 431 Chevron receives a special oil-resistant treatment and is recommended for service against

oils and other rubber solvents at medium or low temperatures.

GARLOCK 530

(For Steam, Air or Gas)

GARLOCK 530 Chevron is made of special GARLOCK asbestos cloth and a high-grade rubber compound. It is recommended for service on piston rods, plungers or shafts operating against steam, gas or air at

high temperatures and pressures. It is an exceptionally serviceable packing on the throttle stems of steam locomotives.

GARLOCK 531

(For Hot Oils and Rubber Solvents)

GARLOCK 531 Chevron is made of asbestos cloth and is specially treated to resist the deteriorating effects

of oils and other rubber solvents at high pressures and temperatures.

GARLOCK 8051

(For Dairy Equipment)

GARLOCK 8051 Chevron is a cotton duck cloth packing made with a pure white rubber compound. It is intended primarily for use on homogenizers, viscolizers and other milk handling equipment, but is also

suitable for other low or medium temperature applications requiring a white packing to prevent discoloration of the liquids in contact with the packing.

GARLOCK 7236

(Neoprene)

GARLOCK 7236 Chevron is a cotton duck cloth packing made with Neoprene. It is for low and medium

temperature service on those applications where the oil resisting qualities of Neoprene are required.

GARLOCK 8199

(Neoprene)

GARLOCK 8199 Chevron is an asbestos cloth packing made with Neoprene and is intended for high temper-

ature service where a packing having the oil resisting qualities of Neoprene is required.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 446

Construction—GARLOCK 446 is a combination packing consisting of end rings of GARLOCK 200 high-pressure asbestos packing and center rings of GARLOCK 550 diagonal cut duck and rubber steam packing.

Service—Recommended for service on piston rods of steam engines working against pressures up to 125 pounds per square inch; also for the intermediate and

low-pressure piston rods of triple expansion marine engines.

Form—GARLOCK 446 is furnished in any required size to fit rod and stuffing box dimensions.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 449

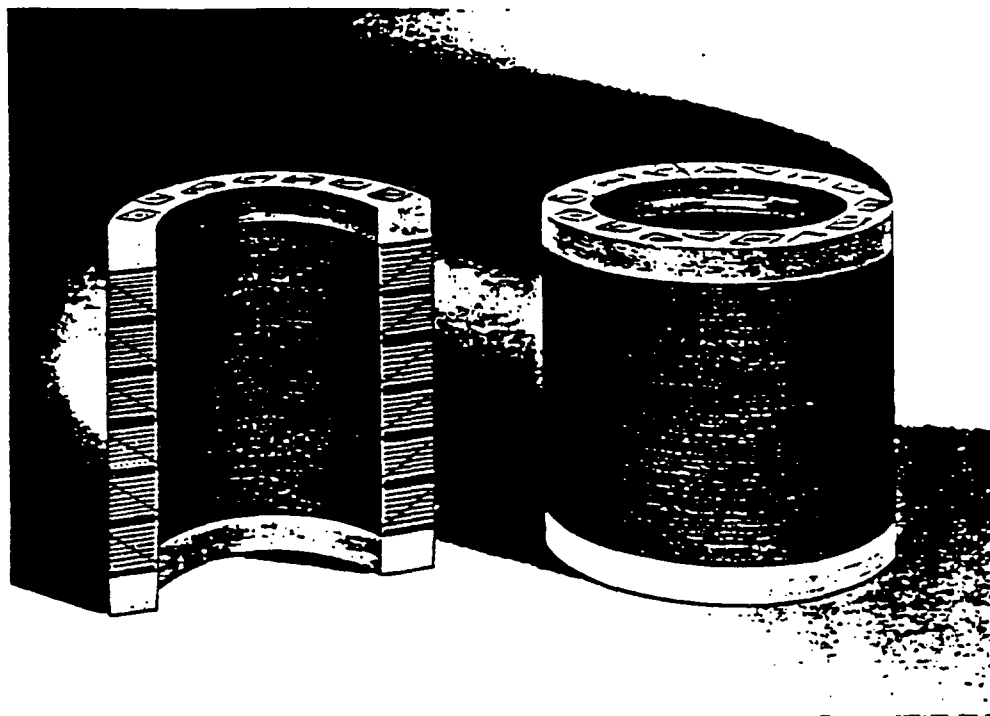
Construction—GARLOCK 449 is a combination packing consisting of end rings of GARLOCK 333 duck and rubber steam packing, and center rings of GARLOCK 350 diagonal cut duck and rubber steam packing.

Service—Recommended for service on piston rods of steam hammers at steam pressures up to 100 pounds per square inch. It is particularly recommended for

use on worn or scored rods; also on rods having considerable vibration or sway.

Form—GARLOCK 449 is furnished in any required size to fit rod and stuffing box dimensions.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.



GARLOCK 440

Construction—GARLOCK 440 is a combination packing consisting of end rings of GARLOCK 261 special hydraulic and center rings of GARLOCK 350 diagonal cut duck and rubber steam packing.

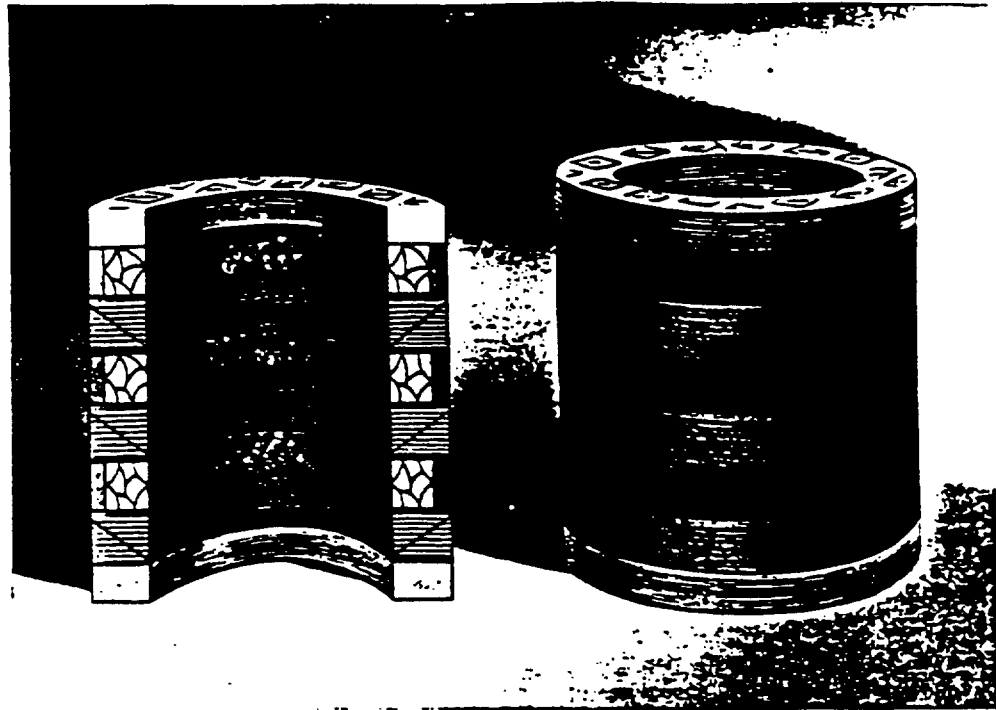
Service—Recommended for hot or cold water service on outside packed plunger pumps. Particularly

serviceable on worn or scored plungers.

Form—GARLOCK 440 is obtainable in any required size to fit rod and stuffing box dimensions.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 443

Construction—GARLOCK 443 is a combination packing consisting of end rings of GARLOCK 261 special hydraulic, and alternated center rings of GARLOCK 193 rubber back waterproof hydraulic packing and GARLOCK 330 diagonal cut duck and rubber steam packing.

Service—Recommended for service on the plungers

of outside packed pumps handling hot water.

Form—GARLOCK 443 is obtainable in any required size to fit rod and stuffing box dimensions.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.

THE STANDARD PACKING OF THE WORLD  GARLOCK

HOT WATER DUO PACKING

GARLOCK 1900

Construction—GARLOCK 1900 is a combination packing consisting of end rings of GARLOCK 261 hydraulic packing and center rings of specially constructed duck and rubber. The plies of the special center rings run horizontal with the rod.

Service—Recommended for service on outside packed

pumps conveying hot water.

Form—Sets of GARLOCK 1900 are furnished in any required size to fit rod and stuffing box dimensions.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and the depth of the stuffing box should be given.

HOT WATER DUO PACKING

GARLOCK 1906

Construction—GARLOCK 1906 is a combination packing consisting of end rings of GARLOCK 333 duck and rubber packing and alternating center rings of GARLOCK 273 cushion center duck and rubber packing, and GARLOCK 330 diagonal cut duck and rubber packing.

Service—Recommended for hot water service on the

plungers of outside packed pumps at high temperatures and medium pressures.

Form—GARLOCK 1906 is furnished in any required size to fit plunger and stuffing box dimensions.

In ordering, the diameter of the plunger, the inside diameter of the stuffing box and depth of stuffing box should be given.

HOT WATER DUO PACKING

GARLOCK 1907

Construction—GARLOCK 1907 is a combination packing consisting of end rings of GARLOCK 261 special hydraulic packing, and alternating center rings of GARLOCK 273 cushion center duck and rubber packing and GARLOCK 330 diagonal cut duck and rubber packing.

Service—Recommended for service on outside packed

plunger pumps working against hot water at high temperatures and high pressures.

Form—GARLOCK 1907 is furnished in any required size to fit plunger and stuffing box dimensions.

In ordering, the diameter of the plunger, the inside diameter of the stuffing box and depth of stuffing box should be given.

GARLOCK  THE STANDARD PACKING OF THE WORLD

HYDRAULIC DUO PACKING

GARLOCK 960

Construction—GARLOCK 960 is a combination packing consisting of end rings of GARLOCK 346 braided copper wire packing and alternated center rings of GARLOCK 216 metal inner wedge duck and rubber packing, and GARLOCK 99 waterproof hydraulic packing.

Service—Recommended for extremely high-pressure

hydraulic service on rams or plungers of presses, accumulators, and hydraulic pumps.

Form—GARLOCK 960 is furnished in any required size to fit rod and stuffing box dimensions.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.

HYDRAULIC DUO PACKING

GARLOCK 980

Construction—GARLOCK 980 is a combination packing consisting of end rings of GARLOCK 99 waterproof hydraulic packing and center rings of GARLOCK 330 diagonal cut duck and rubber packing.

Service—Recommended for cold water service on the plungers of outside packed pumps.

Form—GARLOCK 980 is furnished in any required size to fit plunger and stuffing box dimensions.

In ordering, the diameter of the plunger, the inside diameter of the stuffing box and depth of stuffing box should be given.

HYDROSTATIC DUO PACKING

GARLOCK 965

Construction—GARLOCK 965 is a combination packing consisting of soft metal rings, GARLOCK 346 braided copper wire rings, and GARLOCK 99 waterproof hydraulic rings.

Service—GARLOCK 965 is designed to hold the heaviest hydraulic pressures and is recommended for service on heavy duty rams or plungers of presses, accu-

mulators and outside packed hydraulic pumps.

Form—GARLOCK 965 is furnished in any required size to fit rod and stuffing box dimensions.

In ordering, the diameter of the rod, the inside diameter of the stuffing box and depth of stuffing box should be given.



GARLOCK 400 SLUSH PUMP PACKING

Construction—GARLOCK 400 is a combination set packing, consisting of center rings of GARLOCK 67 diagonal packing and end rings of GARLOCK 333 oil-resistant rubber.

Service—GARLOCK 400 is recommended for service on piston rods of slush pumps used extensively in the

oil fields. It is recommended for service in the most severe conditions.

Form—GARLOCK 400 is furnished in sizes to fit all standard slush pump equipment. In ordering, indicate the diameter of piston rod, inside diameter of stuffing box and depth of stuffing box.

GARLOCK 405 SLUSH PUMP PACKING

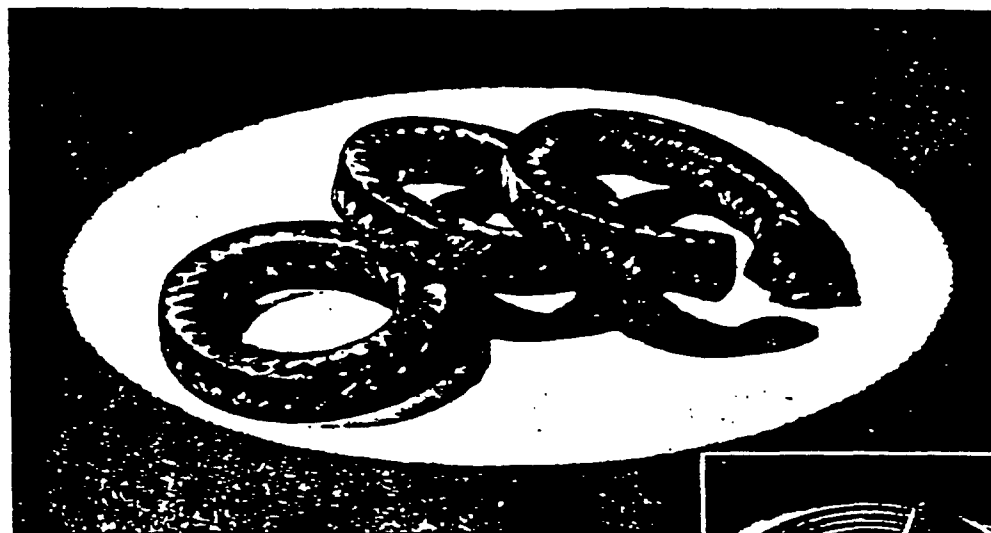
Construction—GARLOCK 405 is a combination set packing, consisting of center rings of a good grade diagonal packing and GARLOCK 151 gray rubber end rings.

Service—GARLOCK 405 is recommended for service on piston rods of slush pumps where service condi-

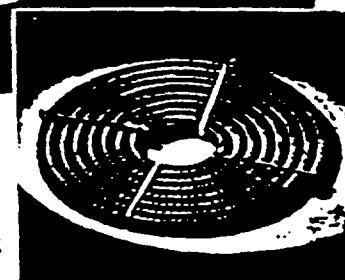
tions are not extremely severe.

Form—GARLOCK 405 is furnished in sizes to fit all standard slush pump equipment. In ordering, indicate the diameter of piston rod, inside diameter of stuffing box and depth of stuffing box.

GARLOCK  THE STANDARD PACKING OF THE WORLD



Garlock 346 RINGS



Garlock 344 COIL

Construction—GARLOCK Braided Copper Wire Packing is manufactured from fine strand copper wire, braided approximately square in cross section.

Service—Recommended as an end ring in the bottom of stuffing boxes against heavy hydraulic duty. Also used on both ends of packing sets on heavy horizontal plungers, in which service the packing frequently bears a portion of the weight of the plunger.

Form—This material is supplied in two forms—GARLOCK 344 Coil and GARLOCK 346 Ring.

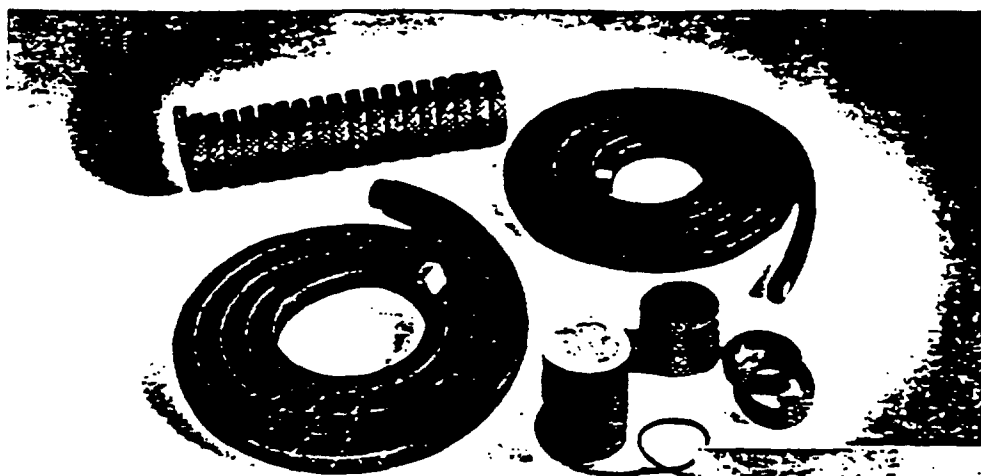
GARLOCK 346 Rings are cut from GARLOCK 344 Coil and are furnished to fit any rod and stuffing box dimensions.

GARLOCK 344 Coil is manufactured in all packing sizes from $\frac{3}{16}$ " to $1\frac{1}{4}$ ", advancing by sixteenths. It is regularly boxed in the manner indicated below, but can also be furnished in continuous length on reels.

The following table lists footage and approximate weights on some standard sizes of GARLOCK 344 Coil:

GARLOCK 344 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{3}{16}$ "	2	78 ft.	11 lbs.
$\frac{7}{16}$ "	1	28 ft.	10 lbs.
$\frac{1}{2}$ "	1	18 ft.	10 lbs.
$\frac{9}{16}$ "	1	16 ft.	14 lbs.
$\frac{5}{8}$ "	1	13 ft.	20 lbs.
$\frac{11}{16}$ "	1	11 ft.	20 lbs.
$\frac{3}{4}$ "	1	17½ ft.	41 lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK.



COIL, SPIRAL AND RING PLASTICS

LOOSE OR
BULK PLASTIC

Construction—GARLOCK Plastallic Packings are scientifically compounded to GARLOCK formulae and contain only the purest asbestos fibre, soft metals, graphite and lubricants. The ingredients used in each formula are selected and proportioned to produce a plastic material suitable for the service for which the packing is intended.

Service—Plastallic packings are made in seven different types or styles, each of which is recommended for specific service conditions. A description of each of these types, together with information concerning the operating conditions for which it is designed, appears on the following pages.

Form—GARLOCK Plastallics are manufactured in loose or bulk form, in coils, in spiral and in formed rings as indicated in the descriptions and tables covering the several types. A feature of these plastics is that most coil forms are furnished rectangular in cross section so that a single size coil fits perfectly two different packing spaces without crushing or deforming the packing. As an example, size 2X coil

which measures $\frac{1}{2}$ " x $\frac{3}{8}$ " in cross section fits a $\frac{1}{2}$ " packing space when applied with the $\frac{3}{8}$ " dimension parallel to the rod, and fits a $\frac{3}{8}$ " packing space equally well when applied with the $\frac{1}{2}$ " dimension parallel to the rod. The advantages of this out-of-square shape are apparent.

Application—The application of Plastallic packings is extremely simple. Loose or bulk form is applied by tamping the packing tightly in the stuffing box and drawing up on the gland until there is no leakage. Coil, spiral and ring forms of plastic are applied in the same manner as the corresponding forms of standard packings.

After Plastallic has been installed and the equipment placed in operation, the packing combines or amalgamates into one homogeneous mass or bushing. When, and if, additional packing is required it is not necessary to remove the packing from the stuffing box; just back off the gland, add more Plastallic and draw up on the gland enough to prevent leakage.

GARLOCK  THE STANDARD PACKING OF THE WORLD

GARLOCK 926

GARLOCK 926 Plastallic is for use against water, steam or air at temperatures below 330° F.

GARLOCK 926 in loose or bulk form is packaged in 2½-pound tin cans, each containing a coil of shredded metal for forming bottom rings in stuffing boxes. Coil form is supplied in the sizes indicated in the

table and may be identified by the red and yellow strands in the open-braided, black cover. Rings are furnished to specified diameters and thicknesses.

Size designations, nominal cross-sectional dimensions and approximate weight and footage per box of GARLOCK 926 Coil are shown below:

GARLOCK 926 COIL				
For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Feet per Box	Weight per Box
½" or smaller	0X	½" round	203 ft.	3 lbs.*
½" to ¾" inclusive	X	¾" x ¾"	30½ ft.	3 lbs.*
¾" to 1" inclusive	3-8X	¾" x 1"	24 ft.	3 lbs.*
1" to 1½" inclusive	2X	1" x 1½"	31 ft.	20½ lbs.
1½" to 2" inclusive	3X	1½" x 2"	26 ft.	21½ lbs.
2" and above	4X	2" square	20 ft.	23½ lbs.

(This size packaged on 1-lb., 2-lb., and 3-lb. spools. *Packaged on spool.

GARLOCK 927

GARLOCK 927 Plastallic is a durable packing for general use and is specially recommended for service against gasoline, kerosene, oils, ether, carbon tetrachloride, methyl chloride, mild acids and alkalis where operating temperatures do not exceed 330° F.

Loose or bulk form of GARLOCK 927 is packaged in 2½-pound tin cans, each containing a coil of shredded metal for forming bottom rings for stuffing boxes.

Coil form is made in the sizes shown in the table and may be identified by the single red strand in the black, open-braided cover. Rings are furnished to specified diameters and thicknesses.

Size designations, nominal cross-sectional dimensions and approximate weight and footage per box of GARLOCK 927 Coil are indicated below:

GARLOCK 927 COIL				
For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Feet per Box	Weight per Box
½" or smaller	0X	½" round	200 ft.	3 lbs.*
½" to ¾" inclusive	X	¾" x ¾"	40 ft.	3 lbs.*
¾" to 1" inclusive	3-8X	¾" x 1"	23½ ft.	3 lbs.*
1" to 1½" inclusive	2X	1" x 1½"	31 ft.	21 lbs.
1½" to 2" inclusive	3X	1½" x 2"	26 ft.	22½ lbs.
2" and above	4X	2" square	20 ft.	26 lbs.

(This size packaged on 1-lb., 2-lb., and 3-lb. spools. *Packaged on spool.

THE STANDARD PACKING OF THE WORLD  GARLOCK

GARLOCK 928

GARLOCK 928 Plastallic is a high temperature plastic for use against steam or oil where temperatures are in excess of 330° F.

In loose or bulk form GARLOCK 928 is packaged in 2-lb. tin cans. Coil form is furnished in the sizes indicated in the table and may be identified by the

single yellow strand in the open-braided, black cover. Rings are furnished to specified diameters and thicknesses.

Size designations, nominal cross-sectional dimensions and approximate weight and footage per box of GARLOCK 928 Coil are shown below.

GARLOCK 928 COIL				
For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Feet per Box	Weight per Box
$\frac{3}{8}$ " or smaller	0X	$\frac{7}{8}$ " round	22½ ft.	3 lbs.*
$\frac{1}{4}$ " to $\frac{1}{2}$ " inclusive	X	$1\frac{1}{4}$ " x $\frac{3}{8}$ "	24½ ft.	3 lbs.*
$\frac{3}{8}$ " to $\frac{1}{2}$ " inclusive	1-X	$1\frac{1}{2}$ " x $\frac{3}{8}$ "	23½ ft.	3 lbs.*
$\frac{1}{2}$ " to $\frac{3}{4}$ " inclusive	2X	$1\frac{1}{2}$ " x $\frac{1}{2}$ "	31 ft.	19½ lbs.
$\frac{3}{4}$ " to $\frac{1}{2}$ " inclusive	3X	$1\frac{3}{4}$ " x $\frac{1}{2}$ "	26 ft.	20 lbs.
1" and above	4X	1" square	20 ft.	23½ lbs.

*This size packaged on 1-lb., 2-lb., and 3-lb. spools.

*Packaged on spool.

GARLOCK 929

GARLOCK 929 Plastallic is a general service plastic for service against steam or water where operating temperatures do not exceed 330° F.

Loose or bulk form of GARLOCK 929 is packaged in 2½-lb. tin cans, each containing a coil of shredded metal for use in forming bottom rings in the stuffing boxes. Coil form is made in the sizes indicated in the

table and may be identified by the single green strand in the black, open-braided cover. Rings are furnished to specified diameters and thicknesses.

Size designations, nominal cross-sectional dimensions and approximate weight and footage per box of GARLOCK 929 Coil are shown below.

GARLOCK 929 COIL				
For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Feet per Box	Weight per Box
$\frac{3}{8}$ " or smaller	0X	$\frac{7}{8}$ " round	21½ ft.	3 lbs.*
$\frac{1}{4}$ " to $\frac{1}{2}$ " inclusive	X	$1\frac{1}{4}$ " x $\frac{3}{8}$ "	23½ ft.	3 lbs.*
$\frac{3}{8}$ " to $\frac{1}{2}$ " inclusive	1-X	$1\frac{1}{2}$ " x $\frac{3}{8}$ "	26 ft.	3 lbs.*
$\frac{1}{2}$ " to $\frac{3}{4}$ " inclusive	2X	$1\frac{1}{2}$ " x $\frac{1}{2}$ "	31 ft.	19 lbs.
$\frac{3}{4}$ " to $\frac{1}{2}$ " inclusive	3X	$1\frac{3}{4}$ " x $\frac{1}{2}$ "	26 ft.	20½ lbs.
1" and above	4X	1" square	20 ft.	24 lbs.

*This size packaged on 1-lb., 2-lb., and 3-lb. spools.

*Packaged on spool.

GARLOCK  THE STANDARD PACKING OF THE WORLD

GARLOCK 930

GARLOCK 930 Plastallic is a nonmetallic, plastic packing for use against gasoline, oils, kerosene, gases and mild acid or alkali solutions either at high or low operating temperatures.

GARLOCK 930 is not made in loose or bulk form. Coil form is furnished in the sizes shown in the table. Spiral form also is available, packaged one 12½-ft. spiral per box. Both coil and spiral forms may be

identified by the two red strands in the black, open-braided cover. Rings are furnished to specified diameters and thicknesses.

Size designations and nominal cross-sectional dimensions of coil and spiral forms and approximate weight and footage per box of GARLOCK 930 Coil are shown in the table below.

For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Feet per Box	Weight per Box
¾" or smaller	0X	¾" round	37½ ft.	5 lbs.*
¾" to 1" inclusive	X	1" round	98 ft.	5 lbs.*
1" to 1½" inclusive	3-8X	1½" round	44 ft.	5 lbs.*
1½" to 2" inclusive	2X	2" round	31 ft.	11½ lbs.
2" to 3" inclusive	3X	3" round	26 ft.	11½ lbs.
3" and above	4X	1" square	20 ft.	14 lbs.

*This size packaged on 1-lb., 2-lb., and 3-lb. spools. *Packaged on spool.

GARLOCK 931

GARLOCK 931 Plastallic is a nonmetallic, plastic packing for service against steam, water or air at high or low temperatures.

This material is not supplied in loose or bulk form. Coil form is furnished in the sizes indicated in the table and may be identified by the two green strands

in the black, open-braided cover. Rings are supplied to specified diameters and thicknesses.

Size designations, nominal cross-sectional dimensions and approximate weight and footage per box of GARLOCK 931 Coil are shown below.

For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Feet per Box	Weight per Box
¾" or smaller	0X	¾" round	300 ft.	5 lbs.*
¾" to 1" inclusive	X	1" round	98 ft.	5 lbs.*
1" to 1½" inclusive	3-8X	1½" round	44 ft.	5 lbs.*
1½" to 2" inclusive	2X	2" round	31 ft.	11½ lbs.
2" to 3" inclusive	3X	3" round	26 ft.	12½ lbs.
3" and above	4X	1" square	20 ft.	14½ lbs.

*This size packaged on 1-lb., 2-lb., and 3-lb. spools. *Packaged on spool.

GARLOCK 924

GARLOCK 924 is a nonmetallic, plastic packing made with pure blue asbestos fibre, recommended for use against acids and strong chemical solutions.

In loose or bulk form GARLOCK 924 is packaged in tin cans of approximately 13¼ lbs. net weight. Each can contains a coil of twisted lead strands for use in forming bottom rings in the stuffing box. Coil form is made in the sizes indicated below and may be

identified by the one yellow and one green strand in the black, open-braided cover. Rings are furnished to specified inside and outside diameters and to approximate specified thicknesses.

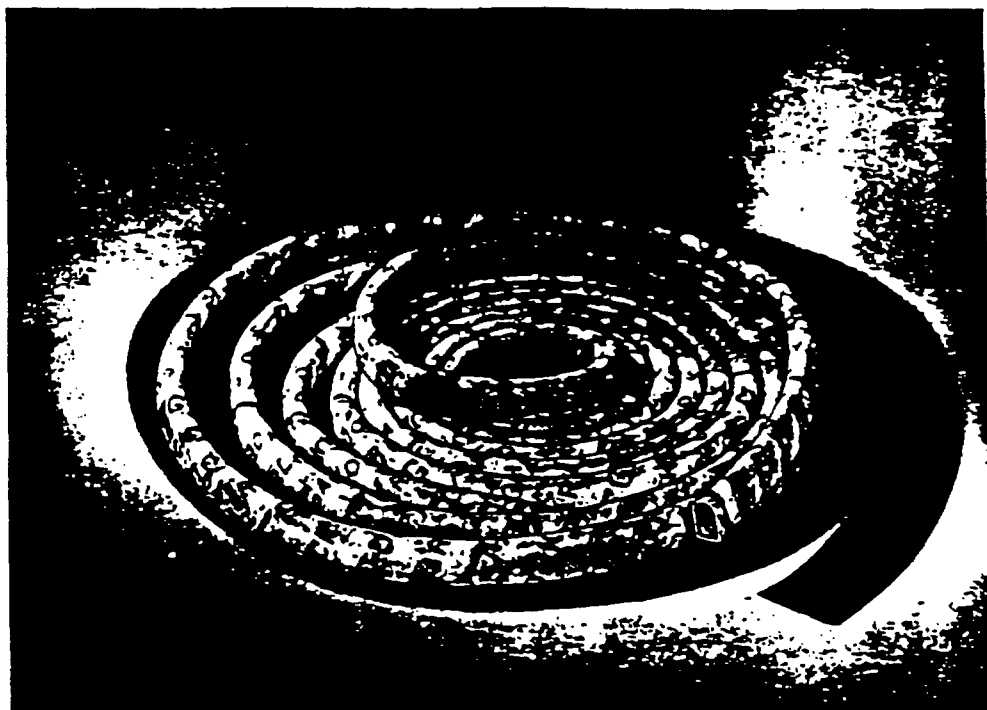
Size designations and nominal cross-sectional dimensions of GARLOCK 924 Coil and approximate weight and footage per box are shown below:

For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Feet per Box	Weight per Box
¾" or smaller	0X	¾" round	150 ft.	5 lbs.*
¾" to 1" inclusive	X	1" round	85 ft.	5 lbs.*
1" to 1½" inclusive	3-8X	1½" round	44 ft.	5 lbs.*
1½" to 2" inclusive	2X	2" round	31 ft.	11½ lbs.
2" to 3" inclusive	3X	3" round	26 ft.	12½ lbs.
3" and above	4X	1" square	20 ft.	14½ lbs.

*This size packaged on 1-lb., 2-lb., and 3-lb. spools. *Packaged on spool.

THE STANDARD PACKING OF THE WORLD  GARLOCK

STAR DIAGONAL COIL PACKING



GARLOCK 67

Construction—GARLOCK 67 is a diagonal packing having a fibrous cushion combined with diagonal wedges of duck and rubber. The component parts are held together with a braided cotton cover. It is thoroughly lubricated. For protection in handling and shipping, GARLOCK 67 is provided with a muslin cover. This should be removed before the packing is used.

Service—Recommended for service against cold water

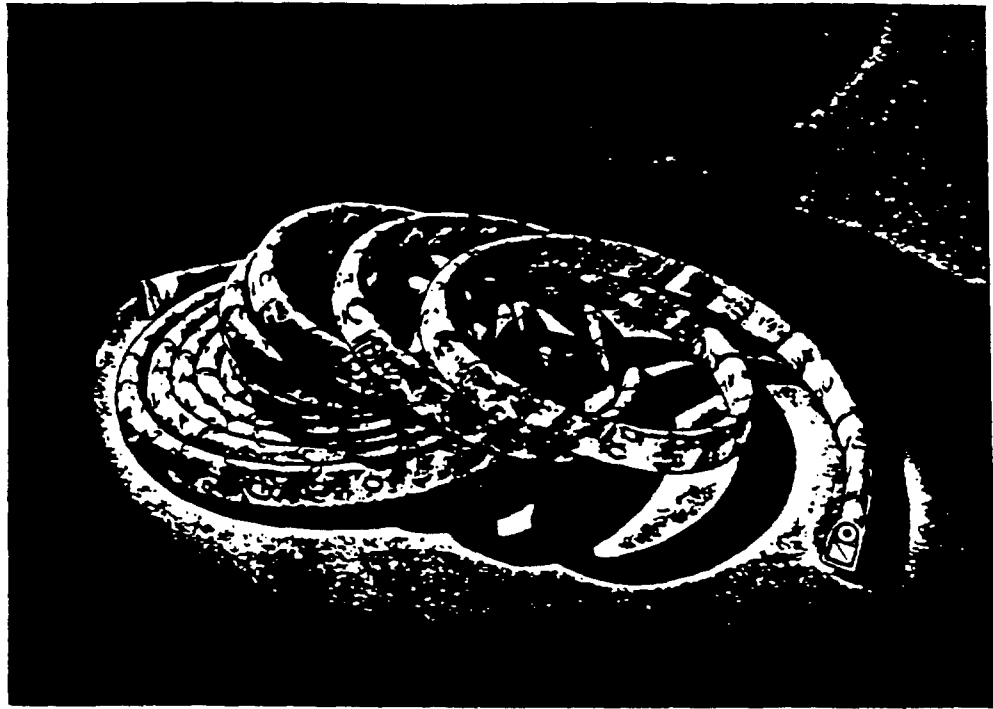
and low-pressure steam. It is particularly effective on old equipment with worn rods.

Form—GARLOCK 67 has straight sides and bottom and a rounding top, the thickness being approximately double the packing space. It is furnished in coil form in sizes $\frac{1}{4}$ " to $1\frac{1}{2}$ ", or in cut rings.

Listed below are footage and approximate weight of some standard sizes:

GARLOCK 67 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	5	100 ft.	10 lbs.
$\frac{3}{8}$ "	5	81 ft.	10 lbs.
$\frac{1}{2}$ "	5	45 ft.	10 lbs.
$\frac{3}{4}$ "	2	25 ft.	10½ lbs.
$\frac{1}{2}$ "	5	25 ft.	15 lbs.
$\frac{3}{4}$ "	4	25 ft.	20½ lbs.
$1\frac{1}{2}$ "	1	25 ft.	26½ lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 87

Construction—GARLOCK 87 is a diagonal packing having a duck-wrapped, rubber cushion combined with diagonal wedges of first-grade duck and rubber. The component parts are held together with a braided cotton cover. Packing is processed with a special lubricant. For protection in handling and shipping, GARLOCK 87 is provided with a muslin cover. This should be removed before the packing is used.

Service—Recommended for service against medium-

pressure steam, hot or cold water. It is particularly effective on equipment having rods slightly worn or out of alignment.

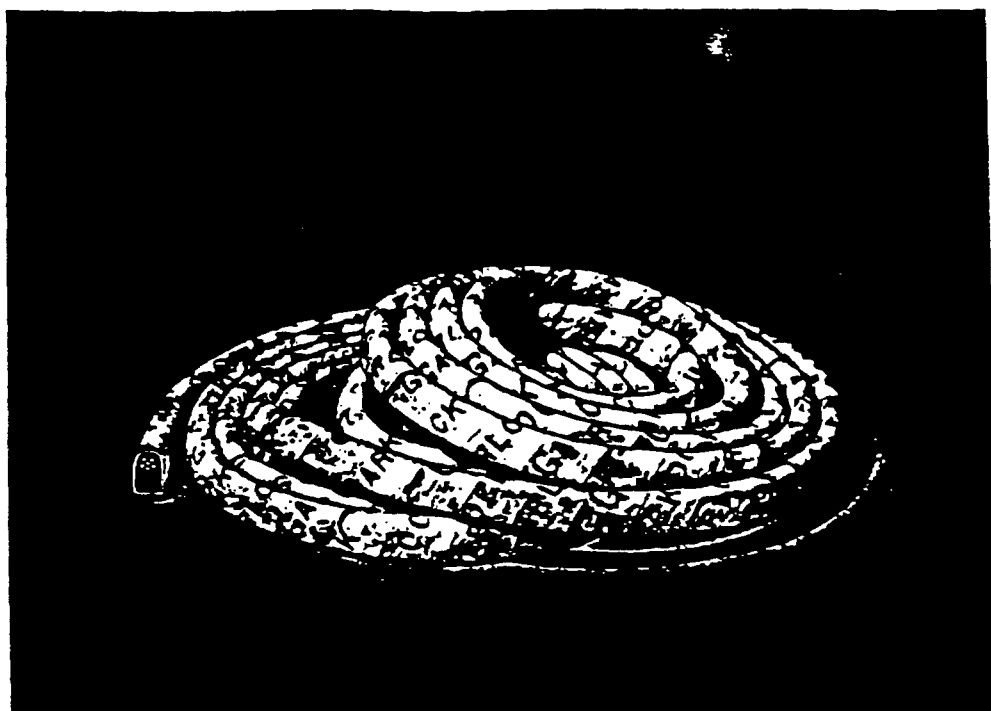
Form—GARLOCK 87 has straight sides and bottom and a rounding top, the thickness being approximately double the packing space. It is furnished in coil form in sizes $\frac{1}{4}$ " to $1\frac{1}{2}$ ", or in cut rings.

Listed below are footage and approximate weight of some standard sizes:

GARLOCK 87 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	5	100 ft.	10 lbs.
$\frac{3}{8}$ "	3	65 ft.	10 lbs.
$\frac{1}{2}$ "	3	40 $\frac{1}{2}$ ft.	10 lbs.
$\frac{3}{4}$ "	2	25 ft.	10 lbs.
$\frac{1}{2}$ "	3	25 ft.	15 lbs.
$\frac{3}{4}$ "	4	25 ft.	20 lbs.
$1\frac{1}{2}$ "	1	25 ft.	28 $\frac{1}{2}$ lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK

96 HIGH-PRESSURE DIAGONAL COIL PACKING



GARLOCK 107

Construction—GARLOCK 107 is a diagonal packing having a cushion of twisted, long fibre asbestos yarn combined with diagonal wedges of special quality duck and rubber. These parts are held in place with a braided cotton cover. The packing is given a special lubrication treatment. For protection in handling and shipping, GARLOCK 107 is provided with a muslin cover. This should be removed before the packing is used.

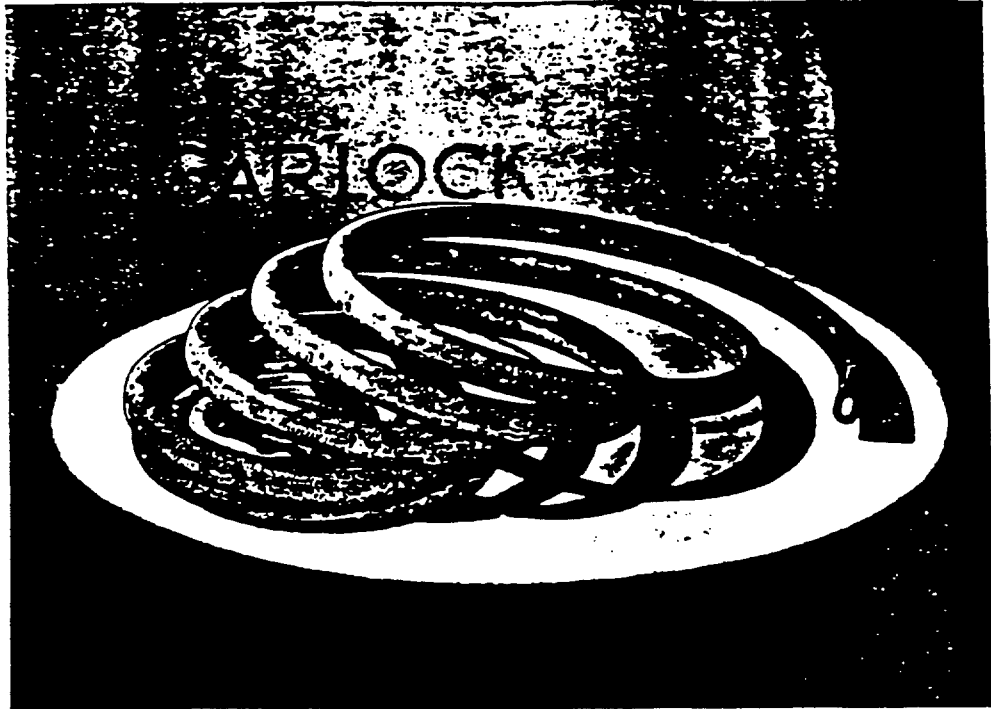
Service—Recommended for service against high-pressure steam. It is particularly effective on equipment having rods slightly worn or out of alignment.

Form—GARLOCK 107 has straight sides and bottom and a rounding top, the thickness being approximately double the packing space. It is furnished in coil form in sizes $\frac{1}{4}$ " to $1\frac{1}{2}$ ", or in cut rings.

Listed below are footage and approximate weight of some standard sizes:

GARLOCK 107 COIL			
Size	Coils per Box	Feet per Box	Weight per Box
$\frac{1}{4}$ "	3	103 ft.	10 lbs.
$\frac{3}{8}$ "	3	63 ft.	10 lbs.
$\frac{1}{2}$ "	3	40 ft.	10 lbs.
$\frac{3}{4}$ "	2	25 ft.	10 lbs.
$\frac{1}{2}$ "	3	25 ft.	14 $\frac{1}{2}$ lbs.
$\frac{3}{4}$ "	4	25 ft.	22 $\frac{1}{2}$ lbs.
$1\frac{1}{2}$ "	3	25 ft.	29 $\frac{1}{2}$ lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 80 COIL (Oval)
GARLOCK 81 COIL (Round)

Construction—Majestic Gum Core Packing consists of a core of high-grade rubber encased in a woven cover of specially processed and lubricated flax.

Service—Majestic Gum Core Packing is recommended for service on pumps working against low-pressure steam and cold water.

Form—GARLOCK 80 Coil, oval in cross section, is

regularly furnished in sizes $\frac{1}{4}$ " to $1\frac{1}{4}$ ".

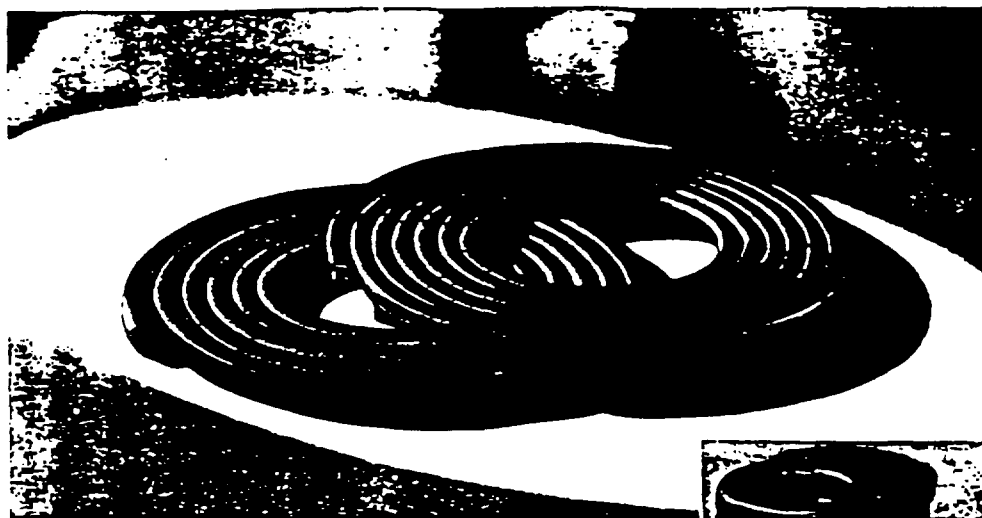
GARLOCK 81 Coil, round in cross section, is regularly furnished in sizes $\frac{1}{4}$ " to 1". Either style is obtainable in ring form.

The table below shows footage and approximate weight of some standard sizes of both styles. Approximate thickness of GARLOCK 80 (oval) is also indicated:

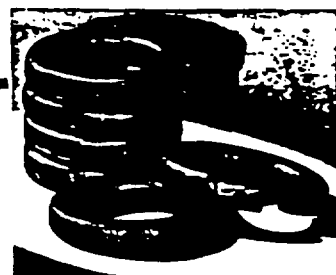
GARLOCK 80 Coil				GARLOCK 81 Coil		
Size	Thickness	Feet per Box	Weight per Box	Size	Feet per Box	Weight per Box
$\frac{1}{4}$ "	$\frac{3}{16}$ "	236 ft.	10 lbs.	$\frac{1}{4}$ "	333 ft.	10 lbs.
$\frac{3}{8}$ "	$\frac{1}{4}$ "	106 ft.	10 lbs.	$\frac{3}{8}$ "	166 ft.	10 lbs.
$\frac{1}{2}$ "	$\frac{5}{16}$ "	53 ft.	10 lbs.	$\frac{1}{2}$ "	99 ft.	10 lbs.
$\frac{5}{8}$ "	$\frac{3}{8}$ "	40 ft.	10 lbs.	$\frac{5}{8}$ "	59 ft.	10 lbs.
$\frac{3}{4}$ "	$\frac{7}{16}$ "	27 ft.	10 lbs.	$\frac{3}{4}$ "	44 ft.	10 lbs.
$\frac{7}{8}$ "	$\frac{1}{2}$ "	23 ft.	10 lbs.	$\frac{7}{8}$ "	30 ft.	10 lbs.
1"	$\frac{13}{16}$ "	16 ft.	10 lbs.	1"	24 ft.	10 lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK

FLEXOMET PACKING



GARLOCK 981 COIL

GARLOCK
991 RINGS

Construction—GARLOCK Flexomet Packing is manufactured of soft metal strands twisted to size and covered with a thin braided, fibrous cover. This braided jacket serves to keep the packing in proper condition during shipment, handling and installation. It wears away immediately on application leaving the metal bearing on the rod.

Service—Recommended for service against steam, water, and many acid and chemical solutions on rotary rods and plungers of outside packed pumps.

Form—This material is supplied in two forms—GARLOCK 981 Coil and GARLOCK 991 Ring.

GARLOCK 991 Rings are cut from GARLOCK 981 Coil, and are furnished to fit any rod and stuffing box dimensions.

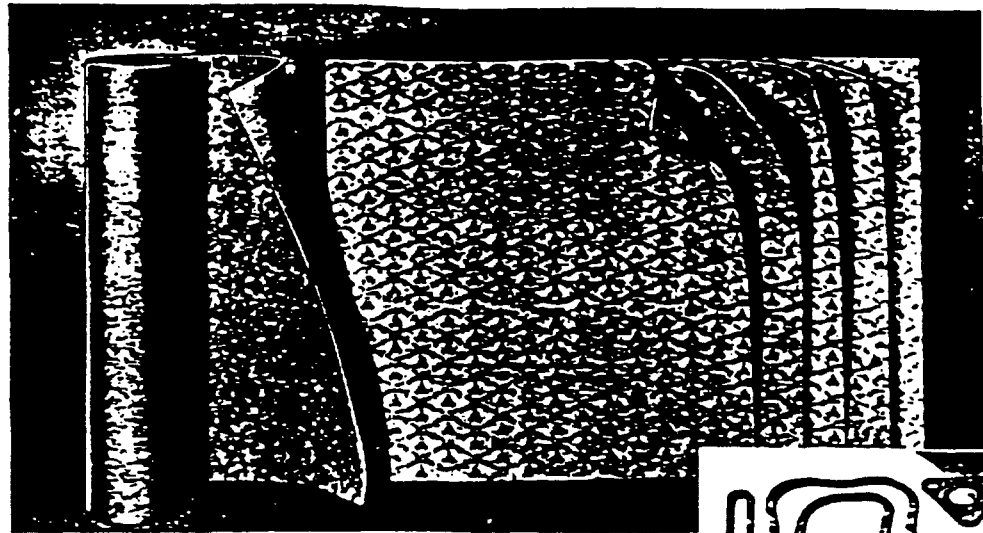
GARLOCK 981 Coil is manufactured in all packing sizes from $\frac{1}{8}$ " to 1", advancing by sixteenths.

The following table lists footage and approximate weight of some standard sizes of GARLOCK 981 Coil:

GARLOCK 981			
Size	Coils per Box	Feet per Coil	Weight per Box
$\frac{1}{8}$ "	1 (on spool)	30 ft.	11 lbs.
$\frac{3}{16}$ "	2	15 ft.	37 lbs.
$\frac{1}{4}$ "	2	15 ft.	10 lbs.
$\frac{5}{16}$ "	2	15 ft.	16½ lbs.
$\frac{3}{8}$ "	1	15 ft.	13½ lbs.
$\frac{7}{16}$ "	1	15 ft.	17½ lbs.
$\frac{1}{2}$ "	1	10 ft.	21½ lbs.

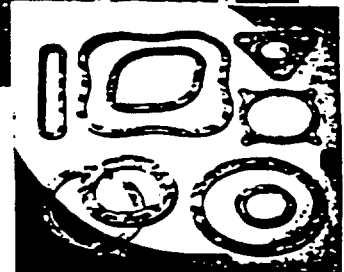
GARLOCK  THE STANDARD PACKING OF THE WORLD

COMPRESSED ASBESTOS FIBRE SHEET 99



GARLOCK 900 SHEET
GARLOCK 901 SHEET (Graphited)

GARLOCK
950 GASKETS
GARLOCK
951 GASKETS
(Graphited)



Construction—GARLOCK 900 Compressed Asbestos Fibre Sheet Packing is made of Canadian asbestos fibre, scientifically blended with superheat resisting compounds. It is bonded under tremendous pressure, resulting in a pliable sheet with high tensile strength.

Service—Recommended for use against superheated or saturated steam, air, gas, ammonia and most chemical solutions.

Form—GARLOCK Compressed Asbestos Fibre Packing is furnished in two forms—GARLOCK 900 Sheet

and GARLOCK 950 Gaskets.

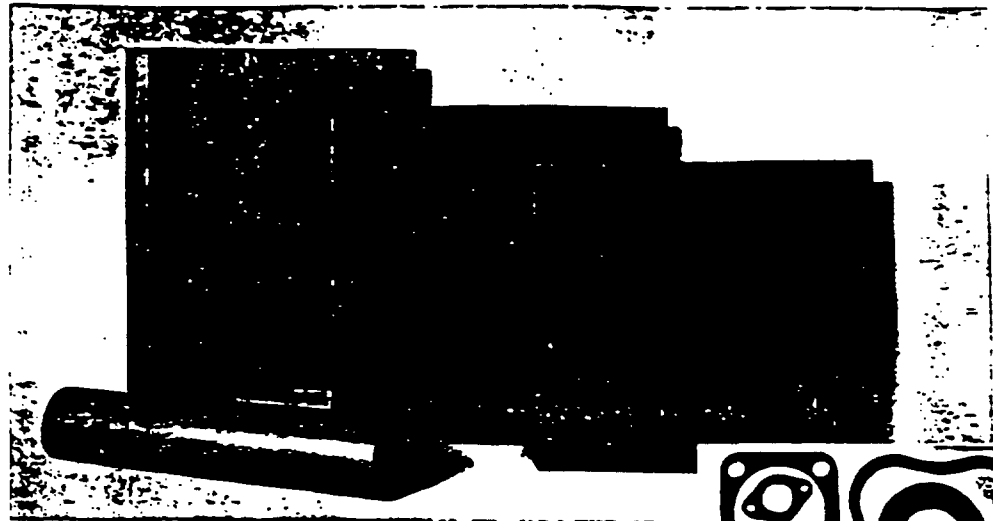
GARLOCK 950 Gaskets are cut from GARLOCK 900 Sheet Packing. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired. This material can be furnished with a graphite finish—styled GARLOCK 901 Sheet and GARLOCK 951 Gaskets.

Listed below are standard thicknesses and sheet sizes applying to GARLOCK 900 and GARLOCK 901 Sheet:

GARLOCK 900 SHEET GARLOCK 901 SHEET (Graphited)			
Standard Thicknesses		Standard Sheet Sizes	
1/8"	1/4"	40" x 40"	80" x 90"
		40" x 60"	80" x 120"
		40" x 80"	80" x 90"
		40" x 120"	80" x 120"
		60" x 60"	120" x 120"

THE STANDARD PACKING OF THE WORLD  GARLOCK

100 COMPRESSED ASBESTOS FIBRE SHEET



GARLOCK 7021 SHEET

GARLOCK
7022 GASKETS

Construction—GARLOCK 7021 Sheet Packing is made of Canadian asbestos fibre, scientifically blended with heat- and oil-resisting compounds and bonded into sheet under tremendous pressure.

Service—Recommended for use against all oil and steam conditions, particularly light oil at high temperatures, as on cracking stills and other oil and gasoline refinery equipment.

Form—This compressed asbestos fibre packing is

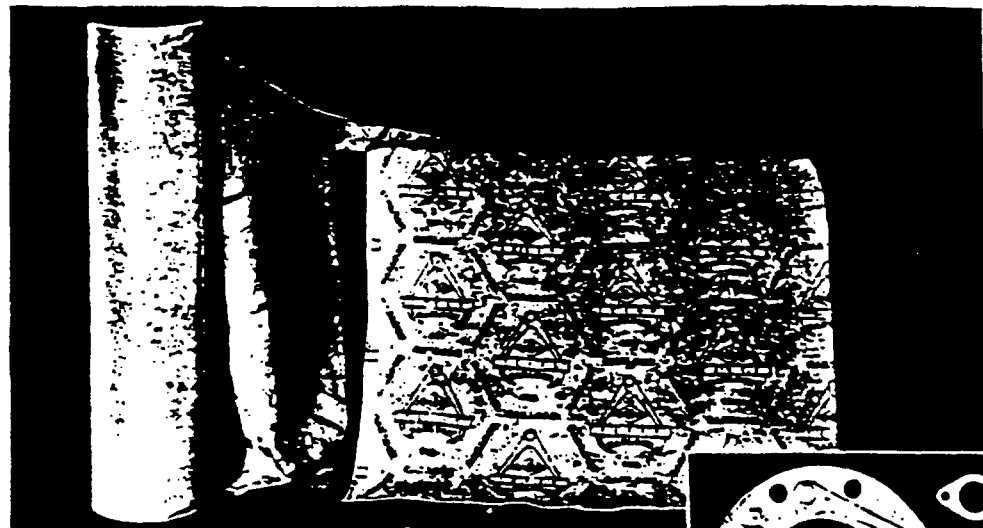
furnished in two forms—GARLOCK 7021 Sheet and GARLOCK 7022 Gaskets.

GARLOCK 7022 Gaskets are cut from GARLOCK 7021 Sheet. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired.

GARLOCK 7021 Sheet is furnished in the thicknesses and sheet sizes specified below:

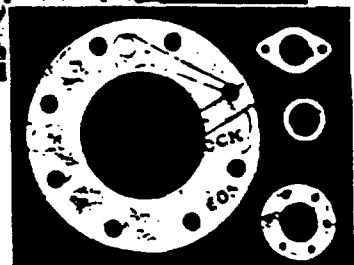
GARLOCK 7021 SHEET			
Standard Thicknesses		Standard Sheet Sizes	
1/8"	1/4"	40" x 40"	60" x 80"
3/16"	5/16"	40" x 60"	60" x 120"
1/2"	3/4"	40" x 80"	80" x 80"
		40" x 120"	80" x 120"
		60" x 60"	120" x 120"

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 605 SHEET

GARLOCK
607 GASKETS



Construction—GARLOCK High-Pressure Wire Insertion Asbestos Packing is produced from specially treated, heat-resisting asbestos cloth, woven from fine wire inserted, long fibre asbestos yarn.

Service—Recommended as a flange or cylinder head gasket in contact with high-pressure steam. Particularly suited, due to its woven construction, for service on narrow flanges and cylinder heads having many ports and bolt holes for which an ordinary gasket is not suitable.

Form—GARLOCK 605 Sheet is regularly supplied in thicknesses of $\frac{1}{32}$ ", $\frac{1}{16}$ " and $\frac{1}{8}$ "; standard width, 48".

GARLOCK 607 Gaskets are cut from GARLOCK 605 Sheet Packing. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired.

Approximate length and weight of rolls of GARLOCK 605 Sheet in standard thicknesses are listed below:

GARLOCK 605 SHEET				
Thickness	Plies	Length per Roll	Weight per Roll	Width
$\frac{1}{32}$ "	1	20 yds.	100 lbs.	48"
$\frac{1}{16}$ "	1	30 yds.	200 lbs.	48"
$\frac{1}{8}$ "	2	15 yds.	200 lbs.	48"

THE STANDARD PACKING OF THE WORLD  GARLOCK

ASBESTOS SHEET PACKINGS

OIL RESISTING COMPRESSED ASBESTOS FIBRE SHEET PACKING

GARLOCK 902 SHEET

GARLOCK 932 GASKET

Construction—GARLOCK 902 Sheet Packing is made of Canadian asbestos fibre, scientifically blended with superheat resisting compounds and bonded into sheet under tremendous pressure, and specially processed.

Service—Recommended for service against steam and oil; also methyl chloride, SO₂, and other refrigerants.

Form—This compressed asbestos fibre packing is

furnished in two forms—GARLOCK 902 Sheet and GARLOCK 932 Gaskets. Either sheet or gaskets can be furnished with a graphite finish when specified. In addition to the usual round and oval shapes, gaskets can be supplied in any odd or special shape desired.

Standard thicknesses and standard sheet sizes of GARLOCK 902 are shown below:

GARLOCK 902 SHEET				
Standard Thicknesses		Standard Sheet Sizes		
$\frac{1}{16}$ "	$\frac{1}{8}$ "	40" x 40"	60" x 30"	
$\frac{1}{8}$ "	$\frac{3}{16}$ "	40" x 60"	60" x 60"	
$\frac{3}{16}$ "	$\frac{1}{2}$ "	40" x 90"		
$\frac{1}{2}$ "		40" x 120"		
		60" x 60"		

AUTOLINE SHEET PACKING

GARLOCK 625 SHEET

GARLOCK 627 GASKET

Construction—GARLOCK Autoline Sheet Packing is a woven, high-pressure, wire inserted asbestos sheet packing treated with a red compound on one side and black on the other.

Service—Recommended for use on internal combustion engines.

Form—GARLOCK 625 Sheet is regularly supplied in

thicknesses of $\frac{1}{32}$ ", $\frac{1}{16}$ " and $\frac{1}{8}$ "; standard width, 48".

GARLOCK 627 Gaskets are cut from GARLOCK 625 Sheet Packing. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired.

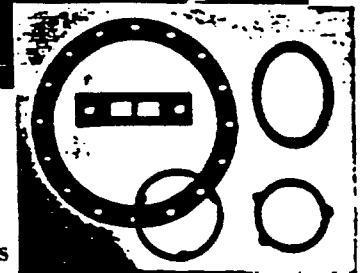
Approximate length and weight of rolls of GARLOCK 625 Sheet in standard thicknesses are listed below:

GARLOCK 625 SHEET				
Thickness	Plies	Length per Roll	Weight per Roll	Width
$\frac{1}{32}$ "	1	20 yds.	100 lbs.	48"
$\frac{1}{16}$ "	1	30 yds.	200 lbs.	48"
$\frac{1}{8}$ "	2	15 yds.	200 lbs.	48"

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 22 SHEET

GARLOCK
122 GASKETS

Construction—GARLOCK 22 is a high-grade, red rubber sheet, scientifically compounded from the best materials.

Service—GARLOCK Red Sheet Packing gives universal satisfaction in any service on which a high-quality rubber gasketing material is required. It is particularly recommended for use on hot or cold water and saturated steam joints at pressures up to 150 lbs. per square inch.

Form—GARLOCK 22 Sheet is regularly supplied in thicknesses from $\frac{1}{32}$ " up to, and including, $\frac{1}{4}$ "; standard width, 40".

GARLOCK 122 Gaskets are cut from GARLOCK 22 Sheet Packing. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired.

Approximate length and weight of rolls of GARLOCK 22 Sheet in various thicknesses are listed below:

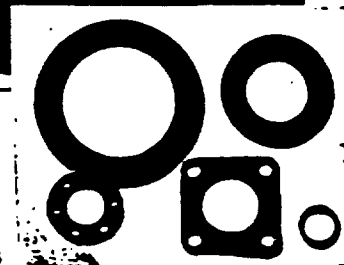
GARLOCK 22 SHEET			
Thickness	Length per Roll	Weight per Roll	Width
$\frac{1}{32}$ "	38 yds.	100 lbs.	40"
$\frac{1}{16}$ "	38 yds.	200 lbs.	40"
$\frac{3}{32}$ "	22 yds.	200 lbs.	40"
$\frac{1}{8}$ "	16 yds.	200 lbs.	40"
$\frac{3}{16}$ "	11 yds.	200 lbs.	40"
$\frac{1}{4}$ "	8 yds.	200 lbs.	40"

THE STANDARD PACKING OF THE WORLD  GARLOCK

104 WIRE INSERTION RED SHEET PACKING



GARLOCK 24 SHEET



GARLOCK
124 GASKETS

Construction—GARLOCK 24 is made from the same high-grade, red rubber compound used in the manufacture of GARLOCK 22 Red Sheet, reinforced with woven wire. This wire is made to our specifications and is specially treated to eliminate oxidation, usually present in untreated brass, iron or copper wire.

Service—GARLOCK 24 Wire Insertion Red Sheet is recommended for service on hot or cold water or saturated steam lines. It is particularly useful where gaskets with narrow flanges are required or on pipe lines

having considerable vibration.

Form—GARLOCK 24 Sheet is obtainable in any thickness from $\frac{1}{32}$ " to $\frac{1}{4}$ ". Standard width of sheet, 40".

GARLOCK 124 Gaskets are cut from GARLOCK 24 Sheet Packing. In addition to the usual round or oval shapes, they are supplied in any odd or special shapes desired.

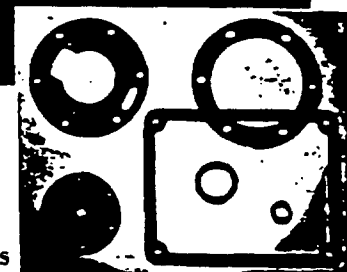
Approximate length and weight of rolls of GARLOCK 24 Sheet in the various stock thicknesses are listed below:

GARLOCK 24 SHEET			
Thickness	Length per Roll	Weight per Roll	Width
$\frac{1}{32}$ "	10 yds.	50 lbs.	40"
$\frac{1}{16}$ "	30 yds.	200 lbs.	40"
$\frac{3}{32}$ "	18 yds.	200 lbs.	40"
$\frac{1}{4}$ "	15 yds.	200 lbs.	40"

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 353 SHEET

GARLOCK
953 GASKETS

Construction—GARLOCK 353 is a high-grade, black rubber sheet, scientifically compounded to resist the deteriorating action of oils.

Service—Recommended for service against heavy or light oil, hot or cold water, steam, ammonia or alkali solutions.

Form—GARLOCK 353 Sheet is regularly supplied in thicknesses from $\frac{1}{32}$ " up to, and including, $\frac{1}{4}$ "; stand-

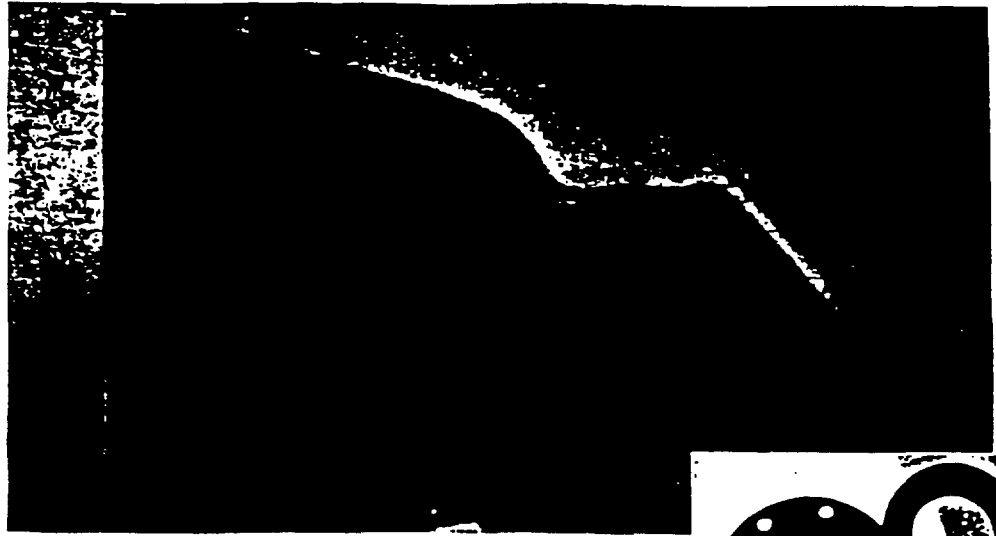
ard width, 40"

GARLOCK 953 Gaskets are cut from GARLOCK 353 Sheet Packing. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired.

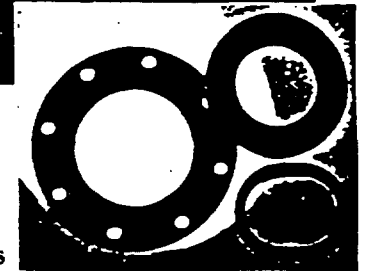
Approximate length and weight of rolls of GARLOCK 353 Sheet in various thicknesses are listed below:

GARLOCK 353 SHEET			
Thickness	Length per Roll	Weight per Roll	Width
$\frac{1}{32}$ "	40 yds.	100 lbs.	40"
$\frac{1}{16}$ "	40 yds.	200 lbs.	40"
$\frac{3}{32}$ "	30 yds.	200 lbs.	40"
$\frac{1}{8}$ "	20 yds.	200 lbs.	40"
$\frac{3}{16}$ "	15 yds.	200 lbs.	40"
$\frac{1}{4}$ "	10 yds.	200 lbs.	40"

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 19 SHEET

GARLOCK
219 GASKETS

Construction—GARLOCK 19 is manufactured from heavy-weight, high tensile duck, with covers of strong, high-grade rubber. Outstanding characteristics of this sheet are long life and lasting resiliency, either in service or in stock.

Service—Particularly recommended as a gasket material for heavy hydraulic work, as it will not creep in the flanges. Also very often used as door stripping on street cars and as apron cloths in paper mills.

Form—This material is obtainable in the two forms illustrated above—GARLOCK 19 Sheet and GARLOCK

219 Gaskets.

GARLOCK 19 Sheet is regularly furnished in thicknesses from $\frac{1}{32}$ " up to, and including, $\frac{1}{4}$ "; standard width, 40".

GARLOCK 219 Gaskets are cut from GARLOCK 19 Sheet, either in round or oval shapes or in special odd shapes to meet particular requirements.

Standard ply construction, and approximate length and weight of rolls of GARLOCK 19 Sheet are shown below:

GARLOCK 19 SHEET				
Thickness	Number of Plies	Length per Roll	Weight per Roll	Width
$\frac{1}{32}$ "	1	34 yds.	100 lbs.	40"
$\frac{1}{16}$ "	1	34 yds.	200 lbs.	40"
$\frac{1}{8}$ "	1	22 yds.	200 lbs.	40"
$\frac{3}{16}$ "	2	17 yds.	200 lbs.	40"
$\frac{1}{4}$ "	3	10 yds.	200 lbs.	40"
$\frac{5}{16}$ "	4	8 yds.	200 lbs.	40"

GARLOCK  THE STANDARD PACKING OF THE WORLD

GARLOCK 91 SHEET

Construction—GARLOCK 91 is a soft, gray rubber sheet packing containing a high percentage of rubber. It is a high-grade product, extremely tough and having lasting resiliency.

Service—This material is recommended for application to any joint against cold water or other cold

fluids. It is extensively used between glass flanges, on peep sights in tanks, and in similar service.

Form—GARLOCK 91 is supplied in thicknesses from $\frac{1}{32}$ " up to, and including, $\frac{1}{4}$ "; standard width, 40". GARLOCK 96 Gaskets are cut from this sheet and can be supplied in any shape.

GARLOCK 159 C. I. SHEET

Construction—GARLOCK 159 is a rubber sheet packing containing one or more insertions of cotton cloth. The number of plies of cloth is dependent upon the thickness of the sheet.

Service—GARLOCK 159 is recommended for application to joints operating against cold water.

Form—This sheet is furnished 40" wide, in thicknesses from $\frac{1}{32}$ " to $\frac{1}{4}$ " inclusive.

GARLOCK 169 C. O. S. SHEET

Construction—GARLOCK 169 is a gray rubber sheet packing with a cotton cloth surface on one side. The other side of the sheet is plain rubber. In thicknesses of $\frac{1}{8}$ " and greater, the sheet is made with one or more insertions of the same cloth.

Service—Recommended for use on joints against cold water.

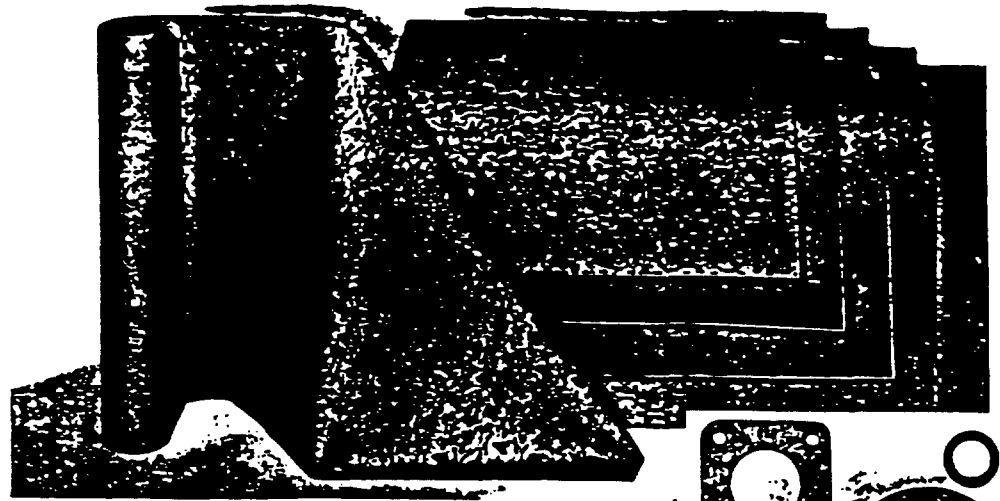
Form—GARLOCK 169 is made in thicknesses from $\frac{1}{32}$ " to $\frac{1}{4}$ " inclusive; 40" wide

GARLOCK 179 C. B. S. SHEET

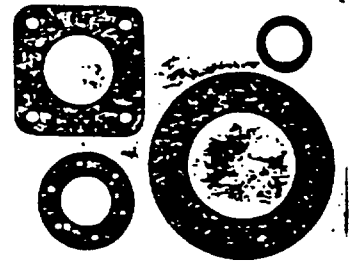
Construction—GARLOCK 179 is a rubber sheet packing with cotton cloth surface on both sides. One or more cloth insertions are also used in thicknesses of $\frac{1}{8}$ " and greater.

Service—GARLOCK 179 is recommended for use on cold water joints.

Form—Standard thicknesses from $\frac{1}{8}$ " to $\frac{1}{4}$ " inclusive. Standard width is 40".



GARLOCK 660 SHEET
(Patented)



GARLOCK
661 GASKETS

Construction—GARLOCK 660 Sheet Packing is an entirely new product made by combining cork particles with paper-making fibre into compressed sheet form. The processes by which this material is made are protected by patents.

GARLOCK 660 Sheet Packing has much greater resiliency than the conventional treated paper sheet; it closely approaches cork in compressibility. The strength of GARLOCK 660 Sheet, however, is much greater than that of cork sheet, and is almost as great as the strength of treated paper.

Service—Recommended for service against gasoline, cold oil or cold water, or for any application on which either treated paper or cork usually is used.

Form—This material is furnished in two forms—GARLOCK 660 Sheet and GARLOCK 661 Gaskets.

GARLOCK 661 Gaskets are cut from GARLOCK 660 Sheet. In addition to the usual round and oval shapes, they can be supplied in any odd or special shape desired.

GARLOCK 660 Sheet can be furnished in thicknesses from .010" to $\frac{1}{2}$ ". Thicknesses up to $\frac{1}{8}$ " can be supplied in roll lots, 36" wide, as specified below. Thicknesses $\frac{1}{4}$ " and over are furnished in 36" square sheets.

Listed below are standard thicknesses up to $\frac{1}{8}$ ", together with roll lot quantities and approximate weights per square yard:

GARLOCK 660					
Thickness	Maximum Roll Length	Weight per Square Yard	Thickness	Maximum Roll Length	Weight per Square Yard
.010"	100 yds.	.44 lbs.	.047" ($\frac{1}{2}$ ")	30 yds.	1.74 lbs.
.015" ($\frac{1}{16}$ ")	30 yds.	.62 lbs.	.062" ($\frac{1}{8}$ ")	25 yds.	2.00 lbs.
.021"	30 yds.	.82 lbs.	.095" ($\frac{3}{16}$ ")	25 yds.	3.84 lbs.
.032" ($\frac{1}{4}$ ")	30 yds.	1.18 lbs.	.125" ($\frac{1}{2}$ ")	36" sq. sheets	4.12 lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK DIAPHRAGM SHEETS

A complete line of quality diaphragm stocks for a wide variety of service conditions and an extensive range of pressures is outlined in the following pages.

All weight and pressure data given have been predicated on a single-ply insertion and a single standard thickness. In most instances, thicker sheets with addi-

tional cloth plies can be furnished; also, in some cases, sheets thinner than standard are produced.

The bursting strength test indicated on each style was conducted across a 2" circular opening and is intended only to show the comparative strength of the various stocks.

GARLOCK 7343 DIAPHRAGM SHEET

GARLOCK 7343 Diaphragm Sheet is constructed of a muslin insertion between covers of a very high-grade, pure rubber compound.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{16}$ " and a standard width of 40". The approximate weight per square yard in this thickness is 23 ounces; the bursting

strength across a 2" circular opening, approximately 70 pounds.

GARLOCK 7343 is recommended for low-pressure service against dry natural gas, air or water. It is particularly suitable where a very sensitive diaphragm is required.

THE STANDARD PACKING OF THE WORLD  GARLOCK

GARLOCK 7361 DIAPHRAGM SHEET

GARLOCK 7361 Diaphragm Sheet is constructed of a sheeting insertion between covers of a high-grade rubber compound.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{32}$ " and a standard width of 40". The approximate weight per square yard in this thickness is 30 ounces; the bursting

strength across a 2" circular opening, approximately 70 pounds.

GARLOCK 7361 is recommended for low-pressure service against dry natural gas, air or water. It is less sensitive than GARLOCK 7343, but is somewhat stronger.

GARLOCK 7603 DIAPHRAGM SHEET

GARLOCK 7603 Diaphragm Sheet is constructed of a sheeting insertion between covers of a special Thiokol compound impervious to the action of cold oil.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{32}$ " and a standard width of 40". The approximate weight per square yard in this thickness is 37 ounces; the bursting

strength across a 2" circular opening, approximately 70 pounds.

GARLOCK 7603 is recommended for low-pressure service against wet natural or manufactured gas, gasoline or oil at temperatures not exceeding 130° Fahrenheit.

GARLOCK 819 DIAPHRAGM SHEET

GARLOCK 819 Diaphragm Sheet is constructed of a duck insertion, between covers of a high-grade rubber compound.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{8}$ " and a standard width of 40". The approximate weight per square

yard in this thickness is 137 ounces; the bursting strength across a 2" circular opening, approximately 130 pounds.

GARLOCK 819 is recommended for medium pressure service against dry natural gas, air or water.

GARLOCK 7715 DIAPHRAGM SHEET

GARLOCK 7715 Diaphragm Sheet is constructed of a ply of open weave duck, between covers of a very high-grade, pure rubber compound.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{8}$ " and a standard width of 40". The approximate weight per square yard in this thickness is 93 ounces; the bursting

strength across a 2" circular opening, approximately 105 pounds.

GARLOCK 7715 is recommended for medium pressure service against dry natural gas, or water. It has extraordinary flexibility and is extremely sensitive to pressure changes.

GARLOCK  THE STANDARD PACKING OF THE WORLD

GARLOCK 7398 DIAPHRAGM SHEET

GARLOCK 7398 Diaphragm Sheet is constructed of a high-quality duck insertion between covers of a special Thiokol compound impervious to the action of cold oil.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{8}$ " only and a standard width of 40". The approximate weight per square

yard is 73 ounces; the bursting strength across a 2" circular opening, approximately 130 pounds.

GARLOCK 7398 is recommended for medium pressure service against wet natural or manufactured gas, gasoline or oil at temperatures not exceeding 150° Fahrenheit.

GARLOCK 7104 DIAPHRAGM SHEET

GARLOCK 7104 Diaphragm Sheet is constructed of a heavy duck insertion between covers of a high-grade rubber compound.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{8}$ " and a standard width of 40". The approximate weight per square yard in

this thickness is 135 ounces; the bursting strength across a 2" circular opening, approximately 220 pounds.

GARLOCK 7104 is recommended for high-pressure service against dry natural gas, air or water.

GARLOCK 7348 DIAPHRAGM SHEET

GARLOCK 7348 Diaphragm Sheet is constructed of a heavy duck insertion between covers of oil-resistant rubber.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{8}$ " and a standard width of 40". The approximate weight per square yard in this thickness is 167 ounces; the bursting

strength across a 2" circular opening, approximately 220 pounds.

GARLOCK 7348 is recommended for high-pressure service against air or ammonia vapor. It is effective on air compressor, refrigerating machine governors and similar services, where traces of oil are usually encountered.

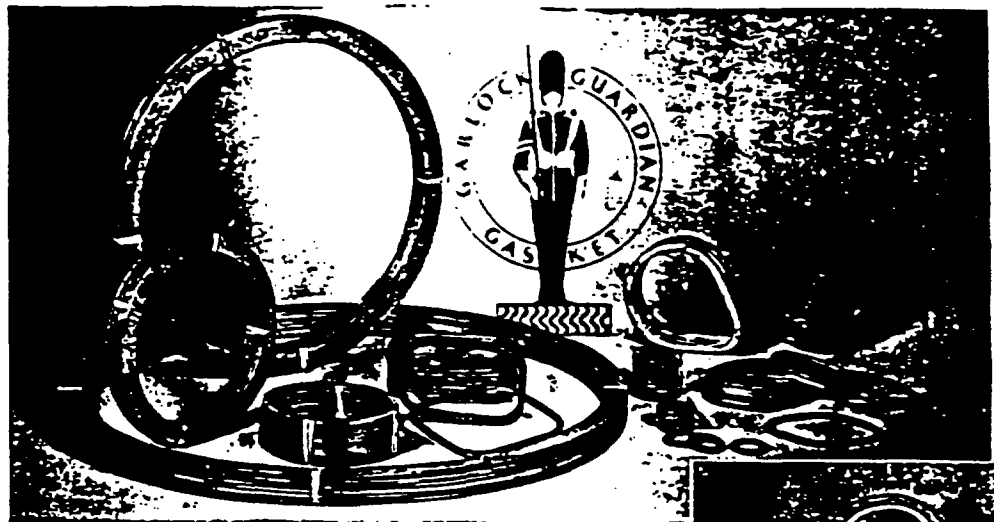
GARLOCK 7677 DIAPHRAGM SHEET

GARLOCK 7677 Diaphragm Sheet is constructed of an extra heavy duck insertion between covers of a high-grade rubber compound.

It is regularly furnished with one ply of cloth insertion in a standard thickness of $\frac{1}{8}$ " and a standard width of 40". The approximate weight per square

yard in this thickness is 132 ounces; the bursting strength across a 2" circular opening, approximately 310 pounds.

GARLOCK 7677 is recommended for service at the highest pressures against dry natural gas, air or water.



GARLOCK 555

GARLOCK 555
WITH
CENTERING
RING

Construction—GARLOCK 555 Guardian Gaskets were designed and developed in the GARLOCK factories to meet the demand for a sturdy, dependable gasket for use on severe service conditions. They are constructed of electroplated, zinc-coated, rustproof metal strip and asbestos, wound in continuous alternating layers. The inner and outer edges of the gasket are reinforced with double thicknesses of metal. For added strength, the metal strip is electrically welded. Gaskets made of stainless steel will be supplied when specified.

The metal strip used in the construction of Guardian Gaskets is formed into a shape resembling the letter M with rounded angles. This structural design, which is found in no other gasket, produces a gasket having great resiliency and rebound.

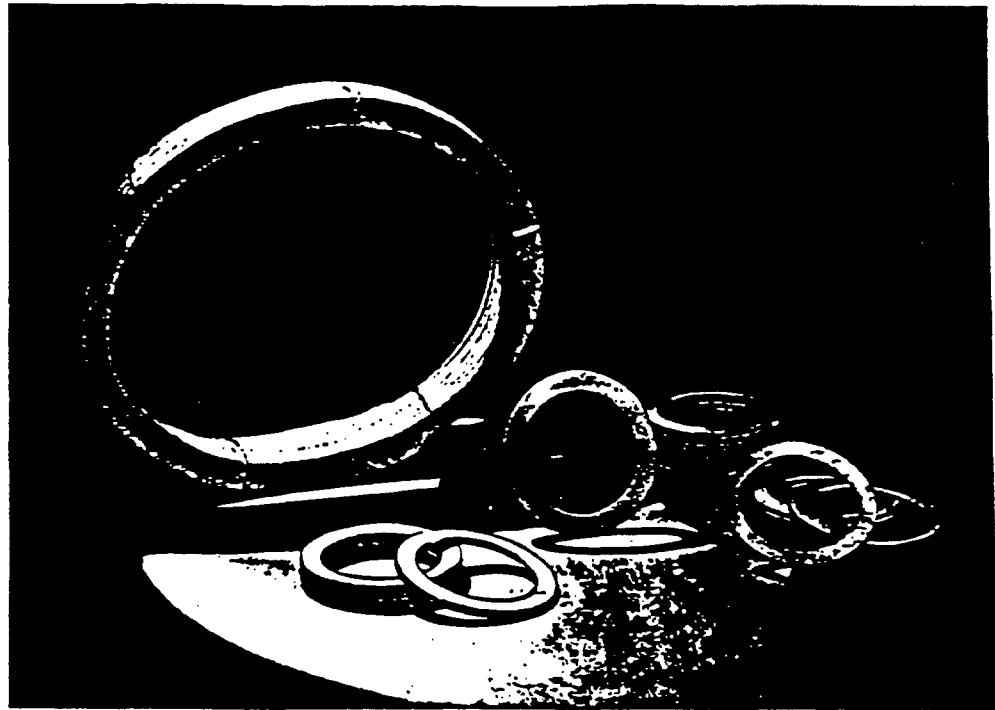
Service—GARLOCK Guardian Gaskets are recommended for use against steam, gases or liquids at high pressures and elevated temperatures. Because of their exceptional resiliency, these gaskets are particularly suitable for service on pipe lines or on other equip-

ment subject to vibration or to frequent and extreme temperature changes with the resultant expansion and contraction of the metal parts. The problem of maintaining tight joints under such conditions is simplified by the use of Guardian Gaskets.

Form—Guardian Gaskets are made in round, oval, square, diamond, pear and other shapes, without bolt holes. Standard thickness is $\frac{3}{16}$ ".

For application to raised face pipe flanges Guardian Gaskets may be obtained with a wire centering ring which is of proper diameter to fit inside the bolt circle. This arrangement allows the usage of a gasket having an inside and outside diameter to correspond with the diameters of the raised face and permits easy and exact centering of the gasket in the joint. Gaskets with centering rings for application to plain face flanges have narrower rings than otherwise would be practicable, but are fully as effective and less expensive than gaskets made with an outside diameter to fit in the bolt circle.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**



GARLOCK 604 GASKETS

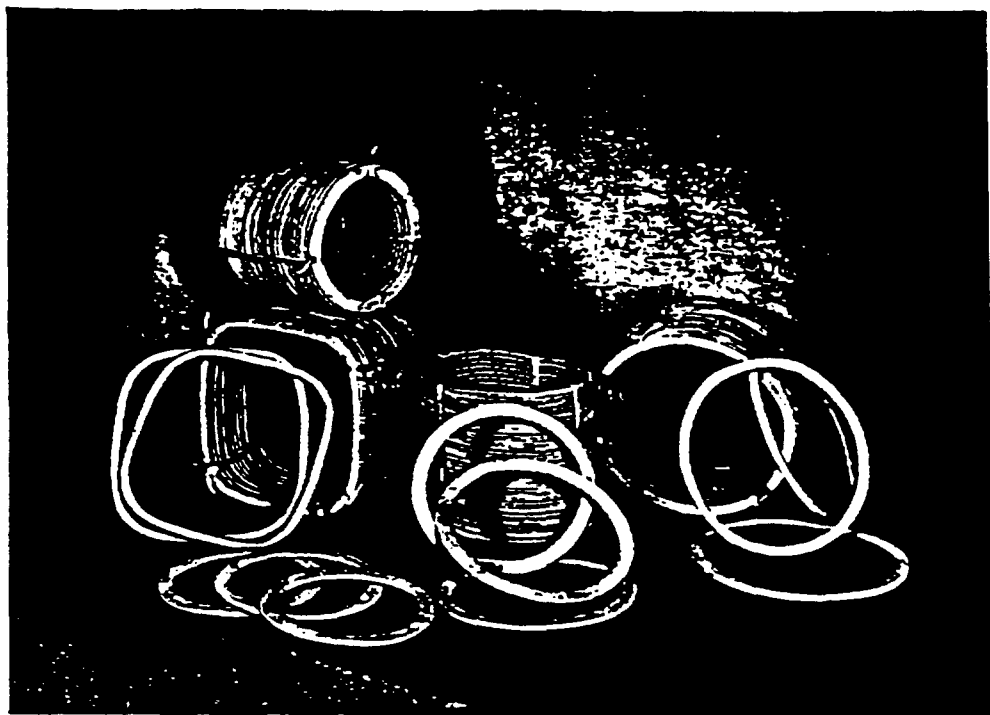
Construction—GARLOCK 604 Gaskets are manufactured of asbestos cloth woven from fine wire center, long fibre asbestos yarn. The cloth is treated with a heat-resisting compound; it is then folded and pressed to required shape and size.

Service—Recommended for handholes and man-holes of boilers, or for other high-pressure steam

service.

Form—GARLOCK 604 Gaskets are furnished in practically any size or shape desired.

When ordering gaskets, other than round or oval, a template, drawing or sample should be furnished and the required thickness designated.



TUBE PLATE GASKETS

GARLOCK 601 ROUND (*Heine*)
 GARLOCK 601 OVAL (*Heine*)
 GARLOCK 602 OVAL (*B & W*)
 GARLOCK 602 SQUARE (*B & W*)
 GARLOCK 6007 OVAL (*Edgemoor*)

Construction—These gaskets are manufactured of GARLOCK asbestos cloth woven from fine wire center, long fibre asbestos yarn. The cloth is treated with a heat-resisting compound; it is then folded and pressed to required shape and size.

Service—GARLOCK 601 Round Gaskets are recommended for service on round tube plates of Heine Water Tube Boilers.

GARLOCK 601 Oval Gaskets are recommended for service on oval tube plates of Heine Water Tube Boilers.

GARLOCK 602 Oval Gaskets are recommended for service on oval tube plates of B & W Water Tube Boilers.

GARLOCK 602 Square Gaskets are recommended for service on square tube plates of B & W Water Tube Boilers.

GARLOCK 6007 Oval Gaskets are recommended for service on the tube plates of Edgemoor Water Tube Boilers.

Form—Standard sizes are as follows:

601 Round— $3\frac{1}{2} \times 4\frac{1}{4} \times \frac{1}{8}$ thick
 601 Oval — $3\frac{1}{2} \times 4\frac{1}{4} \times \frac{1}{8} \times \frac{1}{8}$ thick
 602 Oval — $4\frac{1}{2} \times 5\frac{1}{2} \times \frac{1}{8} \times \frac{1}{8}$ thick
 602 Square— $4\frac{1}{2} \times 4\frac{1}{2} \times \frac{1}{8} \times \frac{1}{8}$ thick
 6007 Oval — $4\frac{1}{2} \times 5\frac{1}{4} \times \frac{1}{8} \times 4$ -ply thick

GARLOCK  THE STANDARD PACKING OF THE WORLD

**GARLOCK 612****ASBESTOS TAPE****GARLOCK 612**

Construction—GARLOCK 612 Asbestos Tape is a folded tape manufactured of wire inserted asbestos cloth treated with a heat-resisting compound.

Service—Recommended for service against all steam pressures on cylinder heads, heater doors and other mechanical equipment where a heat-resisting asbestos

tape is required.

Form—GARLOCK 612 is furnished in practically any width and thickness desired. There is no standard length of coil or regular box quantity. In ordering, length or amount of tape should be specified in addition to the width and thickness dimensions.

ASBESTOS TUBULAR GASKETING**GARLOCK 610 GASKETING****GARLOCK 611 FORMED GASKETS**

Construction—GARLOCK 610 is a high-pressure tubular gasketing material, constructed of GARLOCK wire inserted asbestos cloth frictioned with a heat-resisting compound and formed with a hollow center. With each box of GARLOCK 610, connecting leads and friction tape for use in forming gaskets are furnished.

Service—GARLOCK 610 is recommended for high-pressure steam service on the handholes and man-

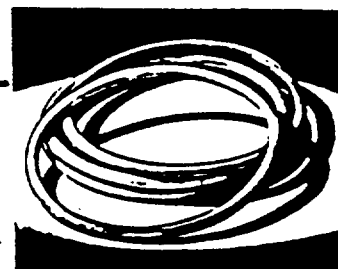
holes of boilers, heater doors and large tanks.

Form—GARLOCK 610 Gasketing is regularly furnished in 12½- and 25-foot coils; standard sizes 3/8" to 1", advancing by sixteenths. GARLOCK 611 Gaskets, which are formed from GARLOCK 610 material, are furnished in any specified size. These gaskets are not tubular.

THE STANDARD PACKING OF THE WORLD  **GARLOCK**



GARLOCK 500 GASKETING—METAL INSERTION

GARLOCK 501
GASKETS

Construction—GARLOCK 500 is a red rubber, tubular gasketing material with a soft metal tube insertion. With each box of GARLOCK 500, connecting leads and friction tape, for use in forming gaskets, are furnished.

Service—GARLOCK 500 is recommended for service against steam pressures up to 150 lbs. per square inch. It is widely used as a gasketing on manholes and handholes of boilers, heater doors and large tanks.

Form—GARLOCK 500 is regularly furnished in 12½-foot coils; it can also be supplied in continuous lengths on reels. Standard sizes are from 3/8" to 1", advancing by sixteenths.

GARLOCK 501 Gaskets, which are formed from GARLOCK 500, are furnished in any specified size.

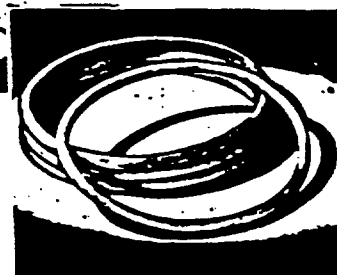
Listed below are approximate weights applying to 12½-foot coils of GARLOCK 500 in the stock sizes:

Size	Coils per Box	Connections per Box	Weight per Box
3/8"	3	30	5 lbs.
1/2"	2	20	5 5/8 lbs.
5/8"	2	13	10 1/4 lbs.
3/4"	2	12	13 1/2 lbs.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 28 GASKETING



GARLOCK 281
GASKETS

Construction—GARLOCK 28 is a tubular gasketing material manufactured from a high-grade, resilient, red rubber compound. With each box of GARLOCK 28, connecting leads and friction tape, for use in forming gaskets, are furnished.

Service—GARLOCK 28 is recommended for service against hot and cold water, low-pressure steam and air. It is widely used as a gasketing on manholes and handholes of boilers, heater doors and large tanks.

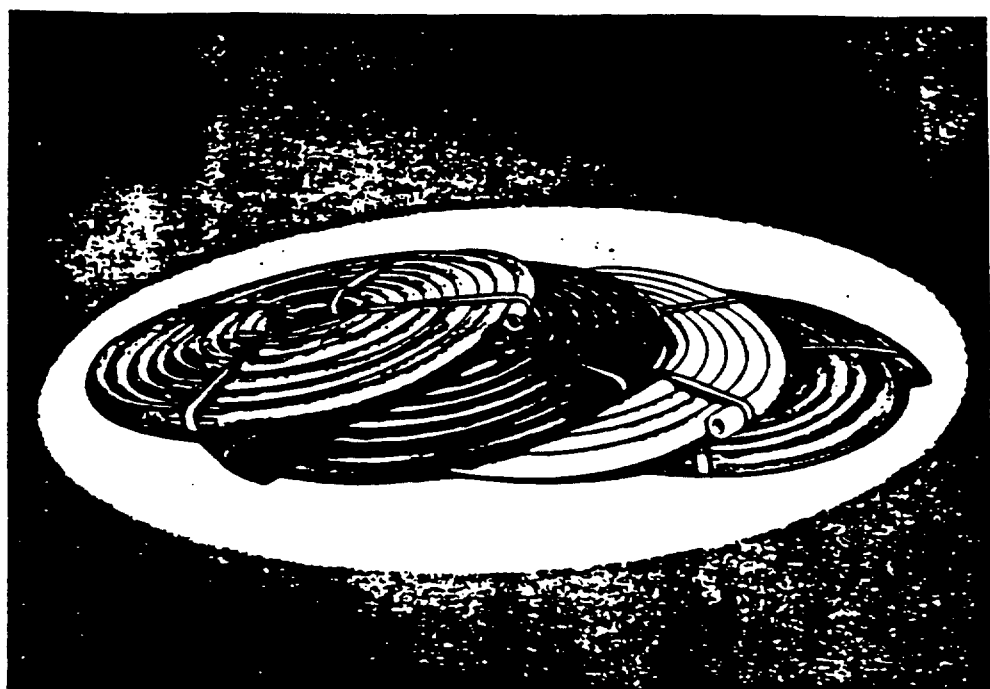
Form—GARLOCK 28 Gasketing is regularly furnished in 12½-foot coils; it can also be supplied in continuous lengths on reels. Standard sizes, ¾" to 1", advancing by sixteenths; sizes below ¾" are obtainable in solid (nontubular) construction.

GARLOCK 281 Gaskets which are formed from GARLOCK 28 are furnished in any specified size.

Listed below are approximate weights applying to 12½-foot coils of GARLOCK 28 in the stock sizes:

Size	Coils per Box	Connections per Box	Weight per Box
¾"	4	30	42½ lbs.
7⁄8"	3	20	34½ lbs.
1"	2	15	26½ lbs.
1 1⁄8"	1	12	21½ lbs.

THE STANDARD PACKING OF THE WORLD  GARLOCK



Construction—GARLOCK Tubings are manufactured from high-grade rubber stocks specially compounded to insure long life and resiliency in service. The most popular tubings in the GARLOCK line are described below, together with the service for which each is recommended.

GARLOCK No. 1 Tubing is a high-grade, soft, black stock. It is an outstanding rubber tubing and gives exceptional service in ice plants and laboratories and on any other tubing application for which a superior product is desired.

GARLOCK No. 2 Tubing is an excellent, soft, white stock, particularly suitable for use in hospitals and for general service where white tubing is required.

GARLOCK No. 3 Tubing is a semisoft, black tubing,

made from a rubber compound with oil-resisting qualities. It is a desirable tubing for use in chemical or dye works and where resistance to oil is a factor. **GARLOCK No. 4 Tubing** is a high-grade, soft, red stock which is recommended for use in laboratories, ice plants or on other service where a red tubing is desired.

GARLOCK No. 8 Tubing is a semihard stock made from neoprene which is a highly oil-resistant synthetic compound. It is recommended for use against oils and chemicals. For high-pressure service, **GARLOCK No. 8 Tubing** is manufactured with either a single or double jacket of braided copper wire.

Form—All GARLOCK Tubings are obtainable in an extensive range of sizes. Listed below are a few typical sizes with approximate weights per hundred feet.

I. D.	Wall Thickness	O. D.	Approximate Weight per C Feet				
			No. 1	No. 2	No. 3	No. 4	No. 8
1/8"	1/16"	1 1/8"	74 lb.	1 14 lb.	88 lb.	8 lb.	1 lb.
1/4"	1/8"	1 3/8"	1 07 lb.	2 36 lb.	1 83 lb.	1 8 lb.	2 22 lb.
3/8"	3/16"	1 7/8"	2 98 lb.	4 37 lb.	3 28 lb.	3 21 lb.	3 98 lb.
1/2"	1/4"	2 1/8"	3 80 lb.	6 9 lb.	6 36 lb.	6 24 lb.	7 71 lb.
5/8"	5/16"	2 3/8"	9 50 lb.	14 6 lb.	10 43 lb.	10 43 lb.	14 66 lb.
3/4"	3/8"	2 7/8"	14 1 lb.	21 7 lb.	15 5 lb.	13 21 lb.	19 79 lb.
7/8"	7/16"	3 1/8"	25 3 lb.	43 9 lb.	31 4 lb.	30 73 lb.	39 lb.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**



MOLDED RUBBER GOODS

A comprehensive line of GARLOCK rubber compounds has been developed for use in the production of rubber sheet, slab, gaskets, rings, pump valves and special molded shapes.

Outstanding in this line are numerous carbon black compounds which are exceptionally tough, light in weight and have excellent aging qualities. Such compounds are used extensively in pump valve service where a tough valve for heavy duty is required. A few of the most popular carbon black stocks are described below:

GARLOCK 7393

GARLOCK 7393 is a very hard compound suitable for pump valves operating in warm or cold water service at pressures up to 300 pounds per square inch.

GARLOCK 7862

GARLOCK 7862 is a medium hard compound. Pump

valves made from this stock are recommended for service against cold water at pressures from 75 to 125 pounds per square inch.

GARLOCK 7790

GARLOCK 7790 is a medium soft compound which makes excellent pump valves for cold water service at pressures from 50 to 75 pounds per square inch.

GARLOCK 7305

GARLOCK 7305 is slightly softer than GARLOCK 7790 and also makes a serviceable pump valve for use against cold water at 50 to 75 pounds pressure per square inch.

GARLOCK 7224

GARLOCK 7224 is a very soft compound suitable for air and marine condenser service.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK PUMP VALVES

The standard line of GARLOCK rubber and composition pump valves is shown on the following page. Other rubber compounds, specially suited for pump valve service, are described on the preceding page. Together these comprise a complete range of rubber compounds from which may be selected a pump valve suitable for practically any service.

Conditions most commonly encountered are:

Cold Water	Acids
Warm Water	Alkalies
Hot Water	Fruit Juices
Gritty or Muddy Water	Cane Juices
Hot or Cold Oils	Air (Vacuum Pump)

Higher pressures and temperatures generally require the use of hard valves. For lower temperatures and pressures, softer valves are usually more suitable. The proper hardness or density of the valve, however, is also dependent to some extent upon the diameter and thickness of the valve and upon the

chemical properties of the liquids to be pumped. It should be understood, therefore, that the recommendations appearing on the following pages are general in character; they do not apply to unusual or extreme conditions.

A survey of your equipment and operating conditions by a GARLOCK Representative will insure the specification of the proper GARLOCK Pump Valve for your service. When inconvenient to have that survey made, full and complete answers to the following questions will provide the necessary information for determining the correct valve for your requirements:

1. Diameter of valve?
2. Size of hole?
3. Thickness of valve?
4. Exact nature of the liquid?
5. Temperature of the liquid?
6. Pressure against the valve?
7. Is it a straight or a curved guard pump?

GARLOCK  THE STANDARD PACKING OF THE WORLD

HARD VALVES

GARLOCK 108

GARLOCK 108 is a very hard, black rubber valve, recommended for service on hot water, hot oils, gasoline, syrups, alkali, lye and other solutions at temperatures up to 212° and at any pressure. GARLOCK 108 has proven in years of successful service its suitability for the high temperatures, and heavy duty work for which it is recommended.

GARLOCK 135 AMBERITE

GARLOCK 135 is a very hard, Bakelite valve, particularly recommended for hot or cold oil service. It will operate satisfactorily against high temperatures and pressures.

GARLOCK 156 GRAYBLACK

GARLOCK 156 is a very hard, asbestos composition pump valve, particularly recommended for hot or cold oil service. It will operate satisfactorily against high temperatures and pressures.

GARLOCK 188 VALVES

GARLOCK 188 is a hard, black valve, recommended for warm or cold water service at pressures from 125 pounds to 300 pounds per square inch. It is particularly recommended for the heavy duty service usually encountered on mine pumps and similar equipment.

MEDIUM VALVES

GARLOCK 182

GARLOCK 182 is a medium hard, gray rubber valve, developed for cold water service at pressures from 75 pounds to 125 pounds per square inch. This valve is highly recommended for heavy duty cold water service usually found on city pumping station installations and hydrant valves.

GARLOCK 359

GARLOCK 359 is a medium hard, black valve, recommended for cold water or cold oil service at pressures from 75 pounds to 125 pounds per square inch. Because of its toughness, GARLOCK 359 is particularly serviceable when used in contact with water containing sand or grit.

GARLOCK 139

GARLOCK 139 is a medium soft, gray valve, recommended for cold water service at pressures from 50 to 75 pounds.

GARLOCK 175

GARLOCK 175 is a medium soft, gray valve, recommended for cold water service at pressures from 50 to 75 pounds.

GARLOCK 189

GARLOCK 189 is a medium soft, white valve, recommended for cold water service at pressures from 50 to 75 pounds.

SOFT VALVES

GARLOCK 154

GARLOCK 154 is a very soft, red rubber valve, recommended for marine condenser and air service. It is particularly recommended for lake and ocean condenser service.

GARLOCK 151

GARLOCK 151 is a very soft, gray valve, recommended for air and marine condenser service.

GARLOCK 152

GARLOCK 152 is a very soft, red valve, recommended for air and marine condenser service.

GARLOCK 197

GARLOCK 197 is a very soft, white valve, recommended for air and marine condenser service.

THE STANDARD PACKING OF THE WORLD  GARLOCK



Construction—GARLOCK Amberite is a laminated, phenolic material, commonly called bakelite, having unusual strength and toughness. It is highly resistant to the corrosive effects of water, mild acids and caustics, oil and oil derivatives; it will not harden, soften or swell in service; it is resilient; and it operates with a low coefficient of friction when used as a rod or cylinder packing.

Types—In the complete line of Amberite products three types of material are employed, as follows:

1. GARLOCK 155 Standard Amberite, which has a cotton duck fabric base; suitable for service where operating temperature does not exceed 250° F.

2. GARLOCK 115 Amberite, which has inner plies of wire-inserted asbestos cloth and outside covers of plain asbestos cloth; suitable for service where extremely high temperatures prevail.

3. GARLOCK 155 Graphitized Amberite, which has a cotton duck fabric base and is impregnated with graphite; suitable for service at temperatures below 250° F. where minimum friction is required.

On the following page is indicated the type of material recommended for each of the several products manufactured from GARLOCK Amberite.

GARLOCK  THE STANDARD PACKING OF THE WORLD

GARLOCK 155 SEGMENTAL ROD PACKING RINGS

Amberite segmental rod packing rings are assembled in sections, each consisting of one triangular and one radial cut ring. A complete set usually consists of three or more sections each placed in a separate cup or groove in a metal case. Regularly furnished from

GARLOCK 155 Standard Amberite but available in graphitized material when so specified.

Recommended for compressor rods on applications where metal packings commonly are used.

GARLOCK 155 SEGMENTAL PISTON RINGS

Amberite segmental piston rings usually are made in three pieces or segments with step joints, each segment equipped with a flat spring, the ends of which fit into notches in the inside face of the segment. This spring arrangement effectively forces each segment

into close contact with the cylinder wall.

GARLOCK 155 segmental piston rings are recommended for use in the compression cylinders of gas compressors.

GARLOCK 155 AMBERITE PUMP VALVES

GARLOCK 155 Amberite pump valves are described on page 121. Although not regularly furnished, pump

valves made from GARLOCK 113 wire-inserted asbestos Amberite will be supplied when specified.

GARLOCK 113 AMBERITE VALVE DISCS

GARLOCK 113 Amberite valve discs are recommended for use on globe and angle valves of standard disc type in service against the highest pressures and temperatures and may be used on many applications where ordinary valve discs are not satisfactory. They are not recommended for valves in cold service.

These discs are made with round holes only. When required for oval disc holders discs are furnished with round holes sufficiently large to fit the oval holder.

When specified, valve discs will be supplied from GARLOCK 155 Standard Amberite.

GARLOCK 155 AMBERITE PUMP RINGS

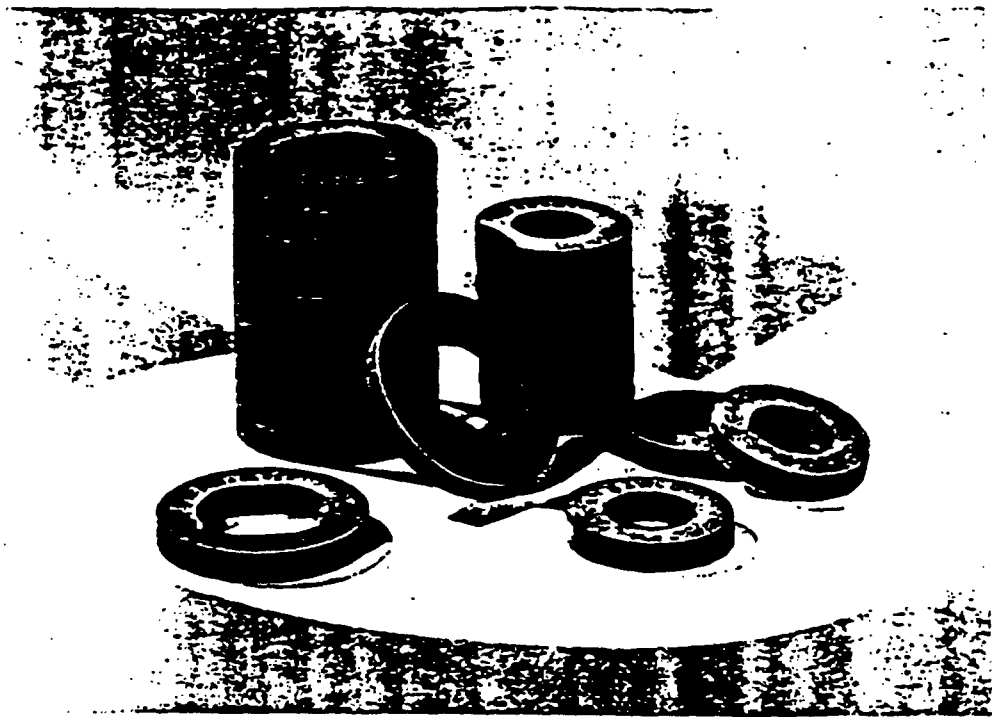
GARLOCK 155 Amberite pump rings are recommended for use on spool type pistons in pumps handling gasoline, oil, hot water, brine, weak acids or caustics where temperatures do not exceed 250° F.

rings may be had with spring wire expanders; made to cylinder size and tensioned by peening; or made oversize with a piece cut out so the ends must be sprung together to place rings in cylinder.

These rings are furnished cut open, either with a bevel or step joint, or solid, as specified. Cut open

When specified, Amberite pump rings will be supplied from GARLOCK 113 stock.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 111 DISCS

Construction—GARLOCK 111 Valve Discs are manufactured from a heat-resisting asbestos and rubber compound, developed for use against the high steam pressures and temperatures encountered in valve disc service.

Service—Recommended for all globe and angle valves of the standard disc type. In addition to high steam pressures, GARLOCK 111 Valve Discs are also recommended for hot oil, hot water and many acid conditions.

Form—GARLOCK 111 Valve Discs are manufactured both in the round- and oval-hole type. They are sup-

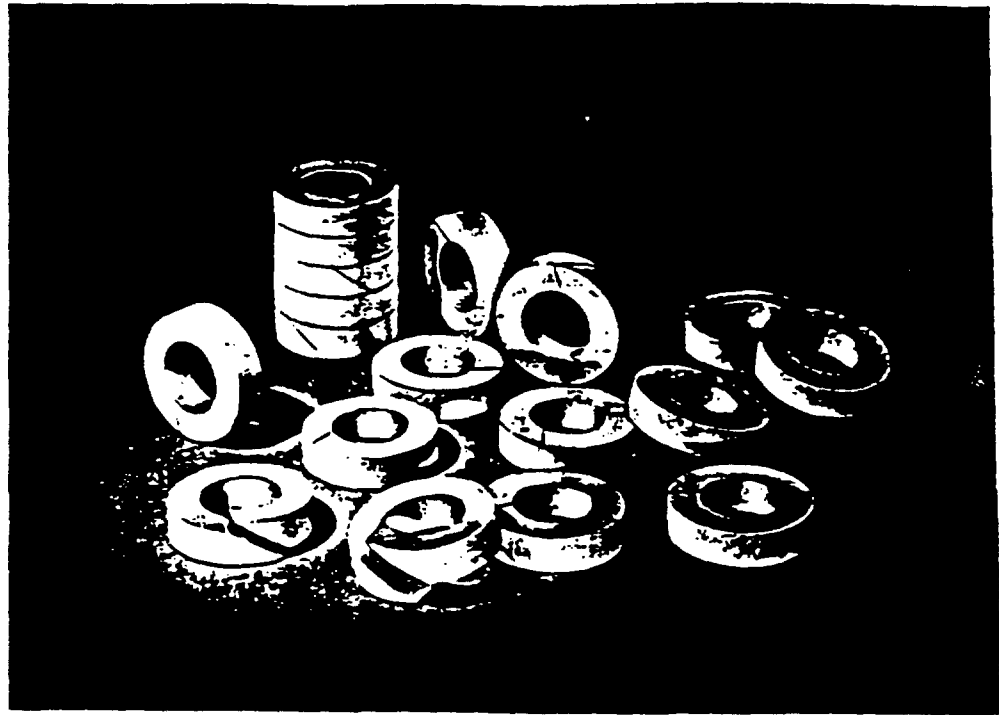
plied in all standard sizes, and in many special sizes and shapes.

Special Discs—For special service conditions, for which GARLOCK 111 Discs may not be entirely suitable, valve discs having the necessary characteristics for that specific service are furnished. Full information as to temperature, pressure and operating conditions is necessary to permit the development and manufacture of these special discs.

Standard sizes and list prices on GARLOCK Valve Discs are given below:

GARLOCK 111 VALVE DISCS					
Size	List Price Each	Size	List Price Each	Size	List Price Each
1/4"	8 00	2 1/2"	5 18	6"	\$1 00
3/8"	04	3"	24	7"	1 30
1/2"	04	3 1/2"	40	8"	1 40
3/4"	03	4"	50	9"	1 80
1"	06	5"	60	10"	2 25
1 1/4"	09	6"	70	12"	2 50
1 1/2"	12	8"	80		

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 197 RINGS

GARLOCK 197

Construction—GARLOCK 197 Polished Rod Rings are made from a high-grade, soft white rubber compound. These rings are unusually resilient, and are recommended for general polished rod service.

Form—GARLOCK 197 Rings are made in all standard polished rod sizes, or in any special size required. Rings are furnished cut open as shown in the illustration.

GARLOCK 7505

Construction—GARLOCK 7505 Polished Rod Rings are made from a tough black rubber compound with high oil-resisting qualities. While it will not compensate for rod vibration to as great an extent as the softer GARLOCK 197 ring it is recommended for any polished rod service on which a harder ring is

desired.

Form—GARLOCK 7505 Rings are made in all standard sizes for polished rod service and in any special sizes specified. Rings are cut open.

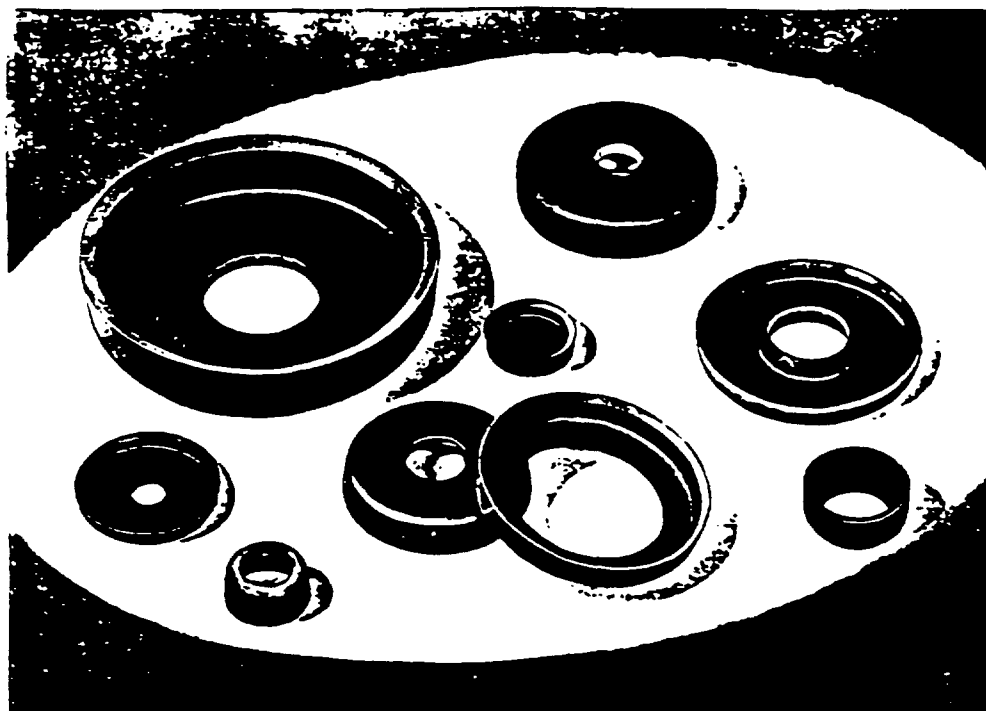
GARLOCK 182-1

Construction—GARLOCK 182-1 Polished Rod Rings are a composite rubber ring with the inner or wearing portion made of a semihard, tough compound and the outer portion of a softer, more resilient stock. The portion of the ring contacting the rod has the higher wear and oil-resisting qualities of harder

rubber while the softer rubber backing adds the necessary resiliency to the ring.

Form—GARLOCK 182-1 Rings are made in all standard or special polished rod sizes. Rings are furnished cut open.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK MOLDED PACKING CUPS

Construction—GARLOCK Molded Packing Cups are made of asbestos, duck or other fabrics, frictioned with heat- and oil-resisting compounds varied to meet specific service conditions.

Service—Included in the GARLOCK line are cups to meet every possible service condition including steam, air, water and oil.

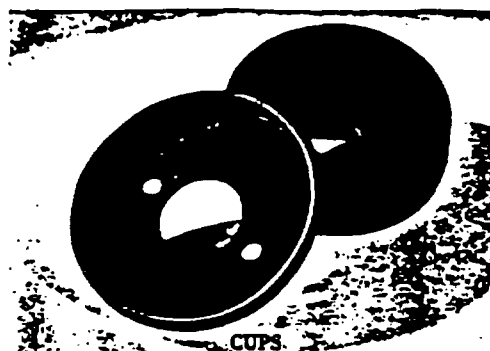
GARLOCK Molded Packing Cups are recommended for service on any equipment on which cup packings

are used. A few of the most common of these applications are:

Air Hoists	Air Rams
Pneumatic Chucks	Steam Cylinders on
Hydraulic Presses	Vulcanizers
	Steam Rams

Form—GARLOCK Molded Packing Cups are produced in hundreds of different sizes, ranging in diameter from $\frac{1}{4}$ " up to 20". "U" and hat-type packings can be supplied in a limited size range.

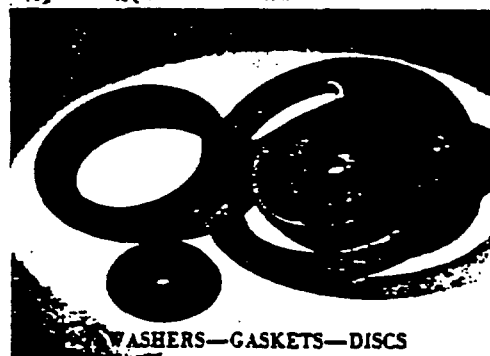
GARLOCK  THE STANDARD PACKING OF THE WORLD



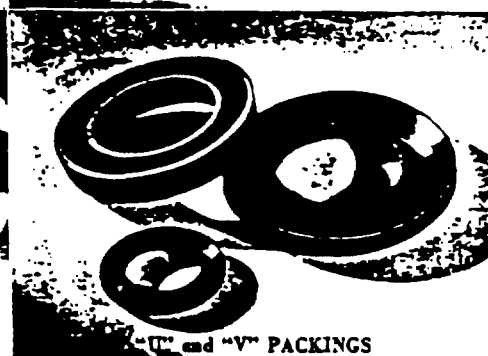
CUPS



FLANGE or HAT PACKINGS



WASHERS—GASKETS—DISCS



"U" and "V" PACKINGS

GARLOCK LEATHER PACKINGS

Construction—GARLOCK Leather Packings are made from carefully selected leather, by experienced leather packing craftsmen, using the most modern equipment, tools and methods. The complete line of GARLOCK leather packings includes Oak tanned, Chrome tanned and the exclusive BITAN leather, which combines the best qualities of vegetable (oak) tannage and mineral (chrome) tannage. From GARLOCK BITAN leather, packings of the highest grade are produced.

Service—GARLOCK Leather Packings are recommended for service against cold water in heavy hydraulic duty, hot water, oils, gasoline and benzine, air, gas, oxygen and slightly acid or alkaline solutions where low or medium temperatures prevail. Tannage, treatment, and accuracy in size and finish are vitally important factors in the service obtained from leather packings. It is necessary, therefore, to supply

complete information concerning operating conditions to insure the production of a material which will be suitable for the intended application.

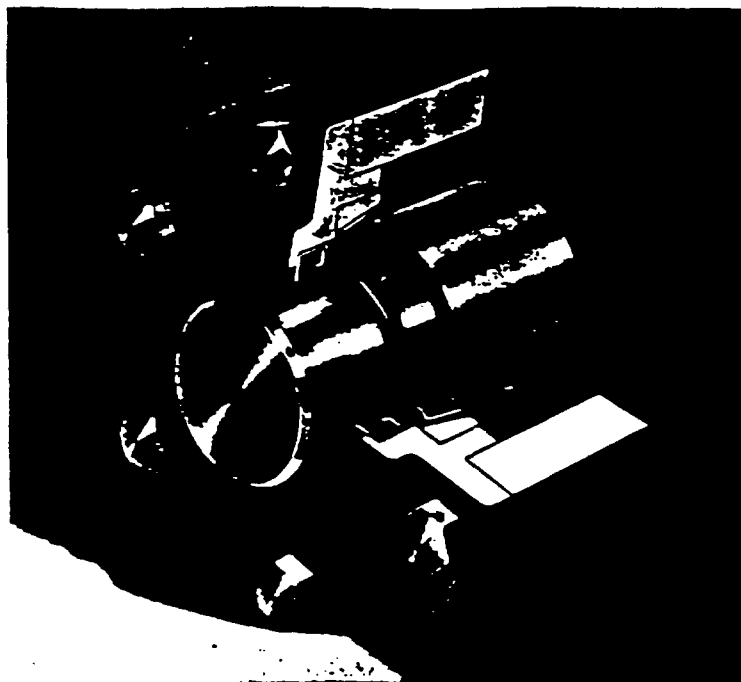
For many applications ordinary Oak or Chrome tanned leathers make satisfactory packings but where pressures are high, or where a leather packing is required to resist temperature or to operate against acid or alkaline solutions, GARLOCK BITAN should be used.

Form—GARLOCK Leather Packings are manufactured in all forms in which leather as a packing material is commonly used. These include:

Molded Cups, "U" and "V" Packings, Flange or Hat Packings, Washers, Gaskets and Discs.

Packings in any of these forms or types and in all commercially practicable sizes are made from Oak, Chrome or GARLOCK BITAN Leather.

THE STANDARD PACKING OF THE WORLD  GARLOCK



THE GARLOCK KLOZURE

(Patented)

A SUPERIOR OIL SEAL

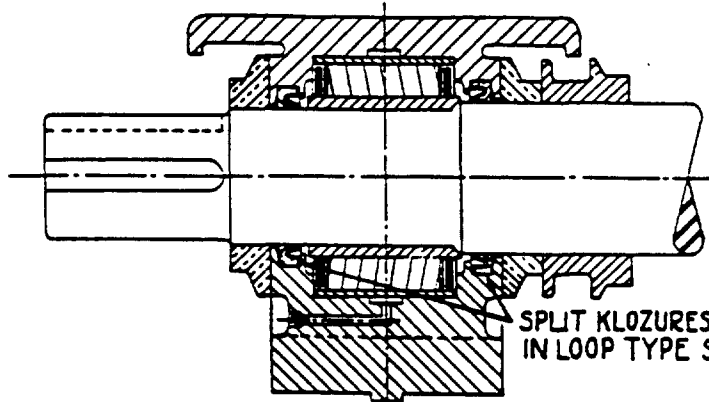
The GARLOCK KLOZURE is a patented oil seal of original and effective design developed by The GARLOCK Packing Company, and manufactured entirely in the GARLOCK factories.

The remarkable success of the GARLOCK KLOZURE may be attributed largely to the sealing or packing ring which is distinctly different from the leather, cork, felt, fibre or rubber sealing elements commonly used in oil seals. The KLOZURE sealing ring is a composition material, developed in the GARLOCK laboratories, which contains those materials having the chemical and physical properties necessary to perform satisfactorily in oil-seal service. This GARLOCK compound combines the most desirable charac-

teristics of the several other materials ordinarily used for oil-seal service plus exceptional resistance to heat. It is oil resistant, tough, durable, nonporous, resilient and nonabrasive. It is molded to exact size which is of utmost importance on applications of this nature where adjustment of the sealing or packing ring is not possible after assembly.

The standard GARLOCK KLOZURE, illustrated above, consists of this molded sealing ring assembled with a V-shaped flexible metal spring or spreader into a metal shell or case, and combined into a unit by an adapter ring over which the case is flanged, holding the sealing ring and spring firmly in place. This stand-

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK SPLIT KLOZURES APPLIED TO STEEL MILL TABLE ROLL

ard design is suitable for the majority of applications, but many variations are possible because of the simplicity of the KLOZURE assembly and the plastic nature of the sealing ring compound which lends itself to molding into a great variety of cross-sectional shapes. Some of the most common adaptations of the standard design are also illustrated.

For those installations where a unit type seal is required but on which the solid, one-piece seal cannot advantageously be applied, the Garlock Split KLOZURE was developed. This design retains all the desirable features characteristic of the regular KLOZURE with the added advantage of split construction which permits quick and easy application or removal in inaccessible locations, and makes it unnecessary to dismantle machines or remove parts which would interfere with the application or removal of a solid, one-piece seal.

GARLOCK KLOZURES are made in a complete range of sizes to fit shafts from $\frac{1}{2}$ " to 40" diameter, or larger. Thickness, or width, runs from $\frac{1}{4}$ " for small seals up to 1" for those of large shaft diameters. Double and Duplex-type KLOZURES necessarily are thicker than standard KLOZURES.

GARLOCK KLOZURES are suitable for application on any roll or ball bearing assembly where an oil seal is required. The metal case or shell of the GARLOCK KLOZURE is supplied, when so specified, of stainless steel, aluminum or brass. When desired, all metal parts are cadmium plated.



DOUBLE KLOZURE—Type V-1



DOUBLE KLOZURE—Type V-2

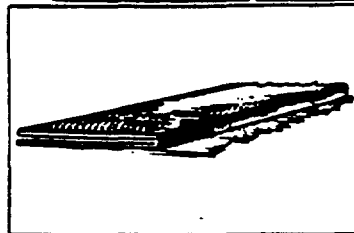


DUPLEX KLOZURE—Type V-3



FELT WASHER TYPE KLOZURE

THE STANDARD PACKING OF THE WORLD  GARLOCK



**GARLOCK INDUSTRIAL
BRAKE LINING**

GARLOCK 701
Method of Folding



GARLOCK 7910
Method of Folding

GARLOCK Industrial Brake Lining was developed to meet a real need for a rugged, serviceable lining suitable for the severe service encountered on industrial equipment. In every respect it is a superior product.

Construction—GARLOCK Industrial Brake Lining is constructed of high-grade GARLOCK asbestos cloth, wire inserted and impregnated with a special rubber compound. It is folded, molded and vulcanized under 3000 pounds pressure.

Types—GARLOCK Industrial Brake Lining is made in two types, GARLOCK 701 and GARLOCK 7910. The same materials enter into both of these products; they differ from each other only in the manner in which the asbestos cloth is folded.

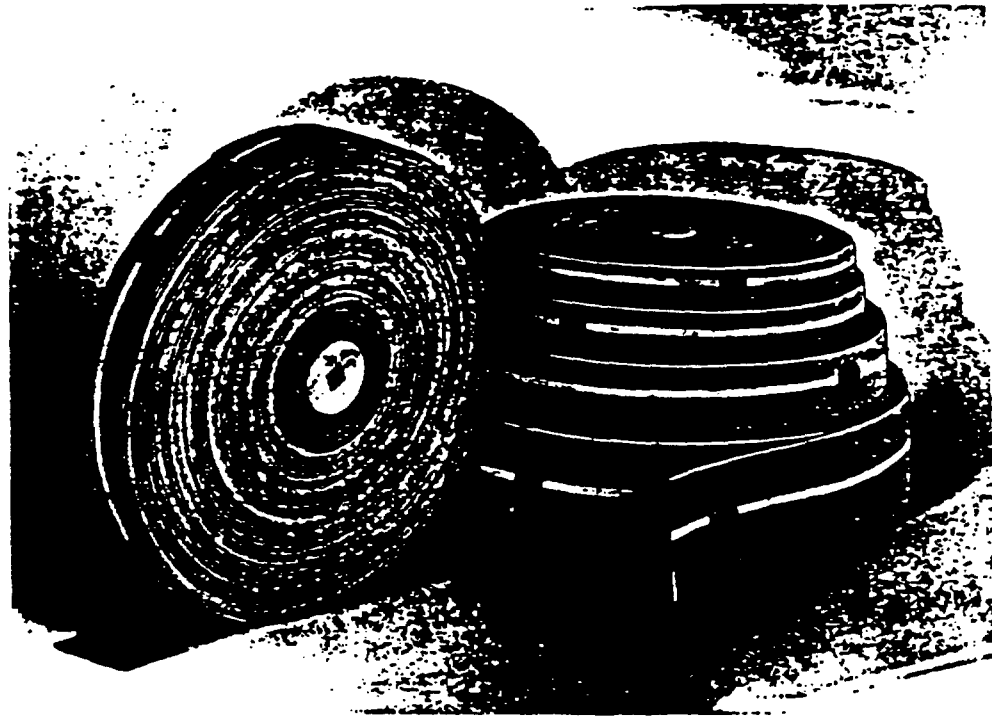
Service—GARLOCK Lining is recommended for application to all kinds and types of industrial equipment. In the majority of instances GARLOCK 701 is

used, although for certain types of service GARLOCK 7910 is the preferred type. It is desirable to consult GARLOCK representative before choosing between these two materials. One of these two linings is suitable for almost any application on equipment such as

Steam Shovels	Elevators
Excavating Machines	Lift Bridges
Ditchers	Industrial Locomotives
Hoists and Derricks	Drag Lines
Concrete Mixers	Steam Rollers
Cranes	Graders
Logging Equipment	Airplane Catapults
Road-Building Machinery	Car Pullers

Form—GARLOCK Lining is furnished in all standard brake lining sizes from 1" wide x $\frac{1}{4}$ " thick to 12" wide x 1" thick. Standard rolls contain 100 ft.; half rolls 50 ft. In the larger sizes it will be furnished cut in short lengths when so specified.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**



GARLOCK 725

With the development of GARLOCK 725 Rubber Transmission Belting a new high standard for rubber belts was established. From the specification and selection of raw materials entering into this product to the finished belt, every step in its manufacture is carried out with the sole idea of producing a quality belt.

Construction—GARLOCK Rubber Transmission Belting is constructed of two or more plies of high-grade belting duck, frictioned with a special rubber compound. It is folded to size and cured under tremendous pressure.

When so specified GARLOCK 725 will be supplied with Neoprene cover. This treatment does not affect the inherent qualities of the belt and provides greater

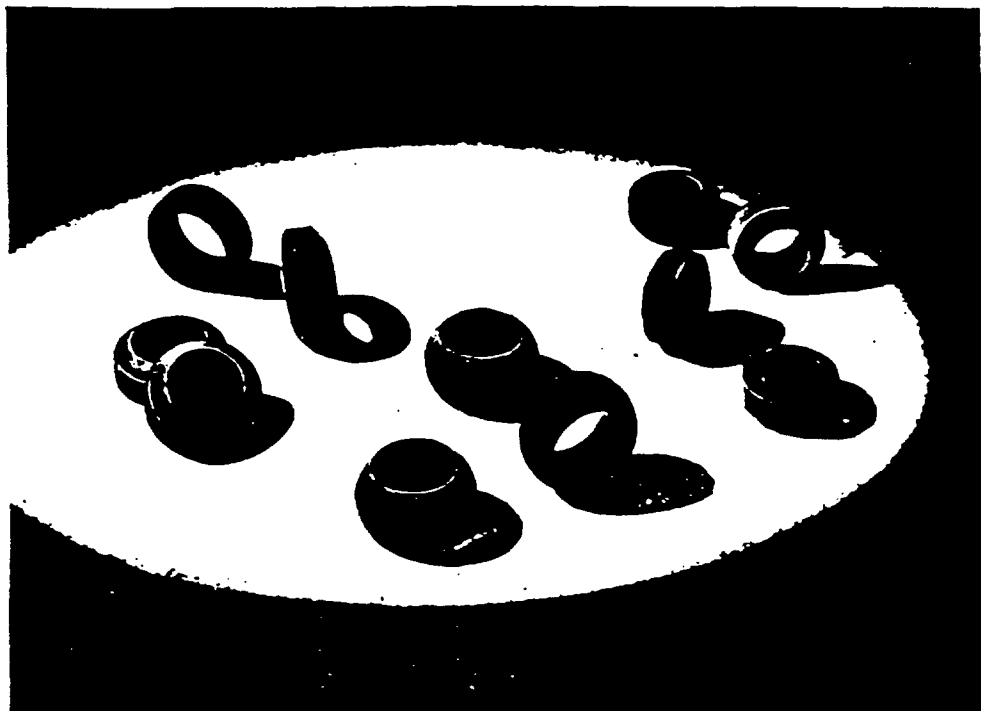
resistance to the deteriorating effects of oil and grease.

Service—GARLOCK Belting is recommended for all power transmission work where a flat belt is suitable. Many successful installations of GARLOCK Belting have been made on conditions where inferior rubber belts have failed. Outstanding characteristics of GARLOCK belting are:

1. Extremely long life.
2. Superior wearing qualities.
3. Unusual flexibility.
4. Exceptional gripping power.
5. Rugged strength.

Form—Furnished in all standard belt sizes from 1" x 2 ply to 28" x 12 ply. When ordering specify exact length desired.

THE STANDARD PACKING OF THE WORLD  GARLOCK



EVAPORATOR TUBE RUBBER GASKETS

Construction—GARLOCK Evaporator Tube Gaskets are molded from GARLOCK 95 stock. This is a medium soft gray compound containing a high percentage of rubber; it is tough and resilient and ages well either in service or in stock.

Service—GARLOCK 95 Evaporator Tube Gaskets are

recommended for any evaporator service for which a long life rubber ring is desired.

Form—Our complete mold equipment makes it possible for us to supply evaporator tube rings in all standard sizes and shapes to fit tubes from $\frac{3}{8}$ " to 2". Special sizes, shapes and compounds can be produced for special requirements.

GARLOCK  THE STANDARD PACKING OF THE WORLD



RUBBER HYDRANT VALVES

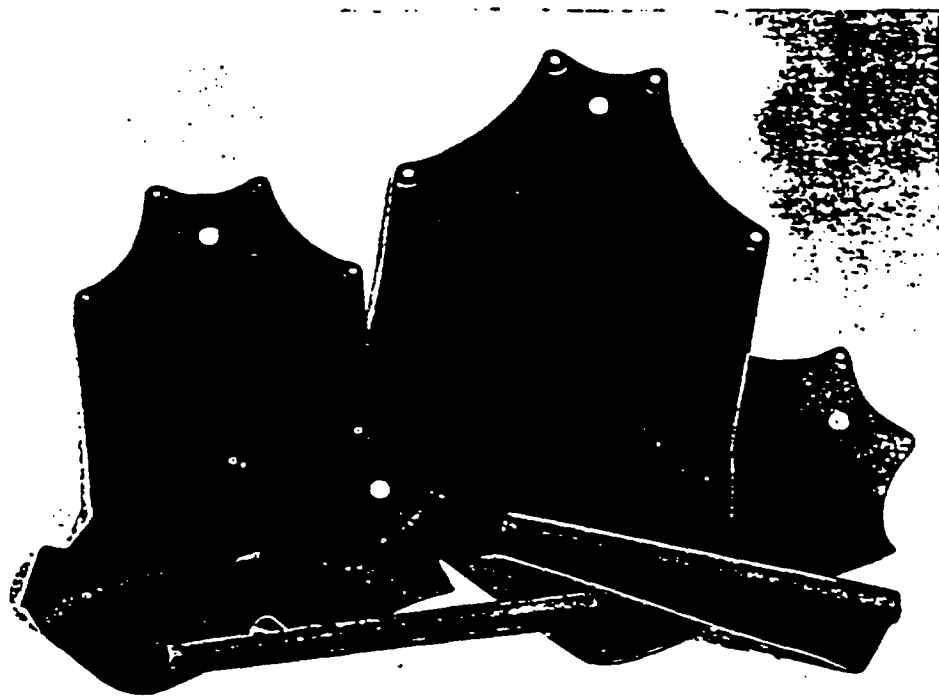
Construction—GARLOCK Rubber Hydrant Valves are molded from high-grade rubber compounds made to GARLOCK formulae. Each of the compounds used in the manufacture of hydrant valves is one which has been in the GARLOCK line for many years and has proved entirely satisfactory on the service for which recommended.

Service—For pressures below 75 pounds per square inch GARLOCK 139 or GARLOCK 175 valves are recommended. These are both medium soft compounds. For

pressures from 75 to 100 pounds GARLOCK 182, which is a medium hard compound, is recommended.

Form—GARLOCK Hydrant Valves are molded to exact size and shape to fit practically any standard hydrant. Our mold equipment includes molds for Bourbon, Cory, Darling, Detroit, Eclipse, Eddy, Iowa, Ludlow, Matthews, National, Pratt & Cady, Smith, Tamaqua, Traverse City, Vogt, Watrous, and other hydrants.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK RUBBER APRONS

GARLOCK 7106—ACID-RESISTANT APRON

GARLOCK 7106 Rubber Aprons for acid service are constructed of a single ply of fine cotton fabric frictioned on both sides with a high-grade, black rubber compound.

This apron is highly recommended for use in sheet and tin plate mills, chemical plants, process plants

and in the many other industries where acids are used. It also is an excellent garage apron.

GARLOCK 7106 Aprons are cut in a proper shape to give complete protection and are furnished with strongly reinforced brass eyelets correctly placed for tie-strings.

GARLOCK 7663—GREASE-RESISTANT APRON

GARLOCK 7663 Rubber Aprons for grease service are constructed of a single ply of fine cotton fabric frictioned on both sides with a high-grade, black rubber compound.

This apron is highly recommended for use in creameries and dairies, packing plants, milk handling plants and similar industries.

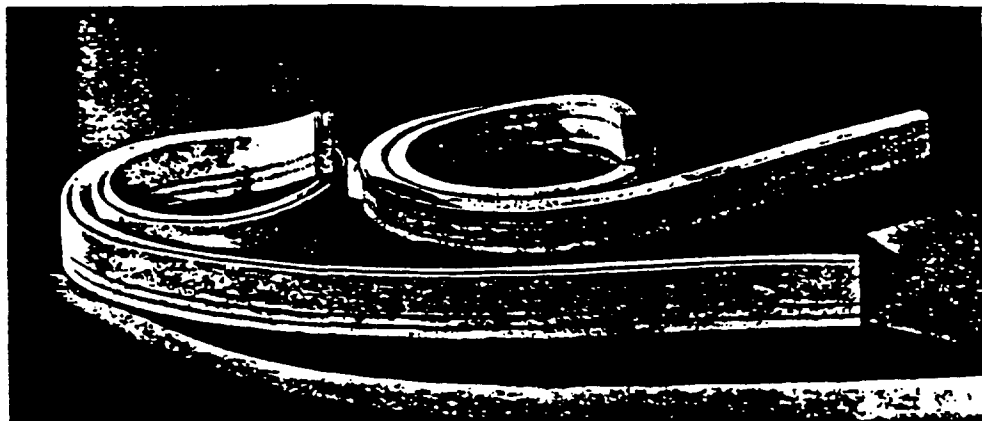
GARLOCK 7663 Aprons are cut in a shape which affords complete protection and are furnished with strongly reinforced brass eyelets properly placed for the tie-strings.

Listed below are dimensions and weights of the two standard sizes of GARLOCK Aprons:

	Length	Width	Approximate Weight Each	
Large Size	45"	32"	7106—41 oz.	7663—47 oz.
Small Size	39"	25"	7106—31 oz.	7663—39 oz.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**

ASBESTOS BRUSHES...CONDENSER RINGS 135

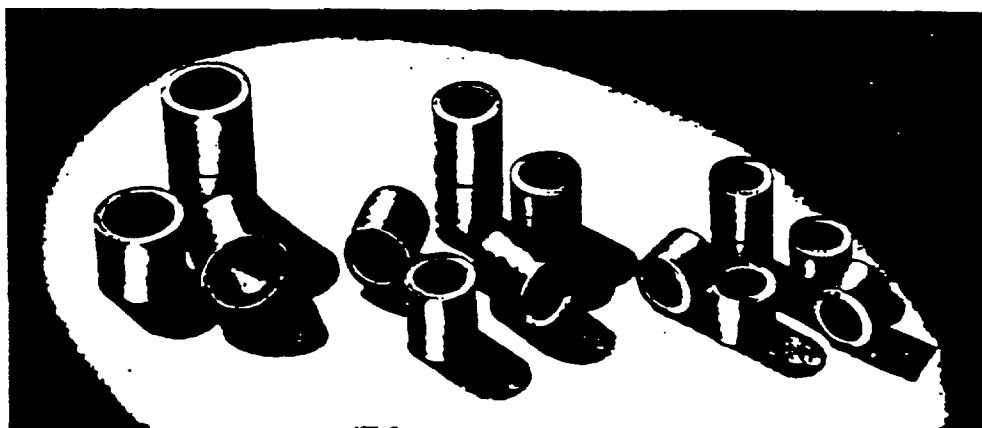


GARLOCK ASBESTOS TINNING MACHINE BRUSHES

(Patented)

GARLOCK Asbestos Tinning Machine Brushes are constructed of wire inserted asbestos cloth plied up fold upon fold. They have a raw wearing edge which may be beveled to suit the contour of the tinning machine rolls. These brushes are sewed with wire.

Brushes are made in two types—Solid and Hollow Back. The hollow back brush is used in conjunction with a filler of asbestos or metal. Furnished in a complete range of sizes for application on rolls of tinning machines. When ordering, width, thickness and length of brush should be specified.



CONDENSER TUBE PACKING

GARLOCK 954

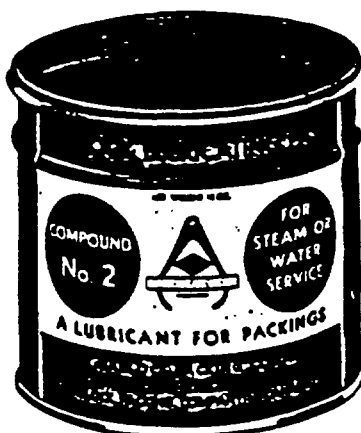
GARLOCK 954 Condenser Tube Packing Rings are molded from specially treated unvulcanized asbestos fibrous compound. They meet every requirement of condenser tube packing service.

GARLOCK 954 Rings are furnished in sizes to suit any condenser equipment. They are easily applied with a special tool which will be furnished on request at a nominal charge.

THE STANDARD PACKING OF THE WORLD  GARLOCK

GARLOCK Lubricating Pastes—To provide packing users with the correct lubricants for packings GARLOCK Lubricating Pastes have been developed. Made of the highest grade materials these pastes are the most effective and economical lubricants for packings. Their regular usage will prolong the life of packings in service.

COMPOUND NO. 2 FOR STEAM AND WATER



GARLOCK Compound No. 2 is a lubricating paste, containing graphite, for application to rod packings working against steam, hot water, cold water or water solutions. By coating the packing with No. 2 Compound at the time of installation and by making subsequent applications regularly through a pressure fitting or by swabbing the rod, the efficiency of the packing will be greatly increased. This Compound has a high lubricating value, maintains proper viscosity under heat, is steam- and waterproof, and is a rust and corrosion preventive.

Compound No. 2 is supplied in 12-ounce, 24-ounce and 3-pound cans and in bulk for large users.

COMPOUND NO. 3 FOR GASOLINE AND OILS



GARLOCK Compound No. 3 is a lubricant for rod packings operating against gasoline, benzine, oils, ether, carbon tetrachloride, kerosene, diphenyl and all vapors or chemicals of an oily nature. Before applying packing to the stuffing box it should be coated with this paste and subsequent applications should be made, as required, through a pressure fitting or by swabbing the rod. The use of No. 3 Compound on packings in this type of service increases the resistance of the packing to the deteriorating action of gasoline and other solvents, prevents seepage through the packing and makes leakproof operation possible without excessive gland pressure.

Compound No. 3 is packaged in 12-ounce, 24-ounce and 4¼-pound cans, and in bulk for large users.

GARLOCK  **THE STANDARD PACKING OF THE WORLD**

CRANDALL LUBALL FOR STEAM AND WATER

Crandall Luball is a patented packing lubricant sold exclusively by The GARLOCK Packing Company. It contains no graphite and is for application to rod packings operating against steam or water at temperatures up to 500° F. Luball should be applied externally to packings at the time of installation and subsequent applications made through pressure fitting or grease cup, with a lantern ring. This non-graphitic compound is completely water-proof, has a high lubricating value and will not corrode chromium steel rods.

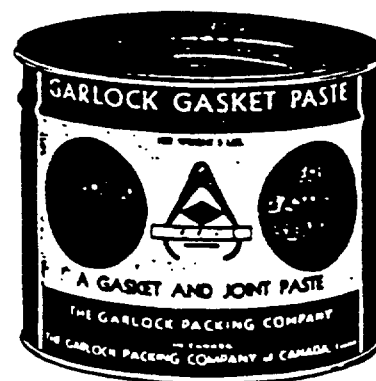
Luball is packaged in 1-pound, 5-pound and 10-pound cans, and in bulk for large users.



COMPOUND NO. 1 GASKET PASTE

GARLOCK Gasket Paste, Compound No. 1, is recommended for application to gaskets operating against steam, gasoline, oil and petroleum derivatives, either hot or cold, and for wiping threaded joints in pipe lines carrying the same liquids. No. 1 Compound is not harmful to gaskets, expands under heat making a tight joint, will not discolor gasoline or other clear liquids, requires no thinning and will not ferment in storage.

This compound is packaged in 12-ounce, 24-ounce and 5-pound cans, and in bulk for large users.



THE STANDARD PACKING OF THE WORLD  GARLOCK

GARLOCK THIOLKOL PRODUCTS

GARLOCK Thiokol Packings and other Thiokol products are manufactured from special compounds containing Thiokol, developed in the GARLOCK Laboratories. This Company has been one of the pioneers in adapting Thiokol as an ingredient of packings.

In the compounding of Thiokol products, all the desirable and unusual characteristics of Thiokol have been retained. Thiokol products, therefore, have the resiliency of rubber, but, unlike rubber, are entirely impervious to the deteriorating action of oil, gasoline, benzene, ether, carbon tetrachloride and other

liquids which are rubber solvents. Thiokol products are not recommended for any service on which temperatures in excess of 180° Fahrenheit are encountered.

GARLOCK Thiokol materials are produced in a variety of forms. Constant research and experimental work are resulting in the frequent addition of new Thiokol products to those already developed. The most commonly used GARLOCK Thiokol styles are indicated below:

GARLOCK	Form	Construction
7601	Sheet	Plain Thiokol Compound
7601	Gasket	Plain Thiokol Compound
7601	Ring	Plain Thiokol Compound
7601	Tubing	Plain Thiokol Compound
7603	Sheet	Cloth Inserted Thiokol Compound
7603	Gasket	Cloth Inserted Thiokol Compound
7700	Sheet	Wire Inserted Thiokol Compound
7700	Gasket	Wire Inserted Thiokol Compound
7762	Cup	Thiokol combined with Fabric
7720	Ring	Thiokol combined with Duck
7720	Disc	Thiokol combined with Duck

GARLOCK  THE STANDARD PACKING OF THE WORLD

GARLOCK COMPOUNDS CONTAINING NEOPRENE

Neoprene is a synthetic, plastic material which is employed by The GARLOCK Packing Company in the manufacture of several special compounds from which packings and other GARLOCK products are produced.

Materials made from these Neoprene compounds are highly resistant to hot or cold oils. They may be used

safely in service against hot oils under conditions which are destructive to ordinary rubber compounds.

The most important GARLOCK compounds containing Neoprene and the products manufactured from those compounds are listed below:

GARLOCK 7300 COMPOUND

GARLOCK 7300 is a semi-hard Neoprene compound from which sheet packing, rings, gaskets, discs, sleeves, strips and special molded shapes are produced.

GARLOCK 7797 COMPOUND

GARLOCK 7797 is a medium hard Neoprene compound available in the following forms: sheet, ring, gasket, disc, sleeve, strip and molded to special shapes.

GARLOCK 7986 COMPOUND

GARLOCK 7986 is a soft Neoprene compound from which sheet packing, rings, gaskets, discs, sleeves, strips and molded shapes are produced.

GARLOCK 7228 ASBESTOS SHEET

GARLOCK 7228 is a compressed asbestos sheet packing containing a Neoprene compound binder.

GARLOCK 7279 COIL AND RING

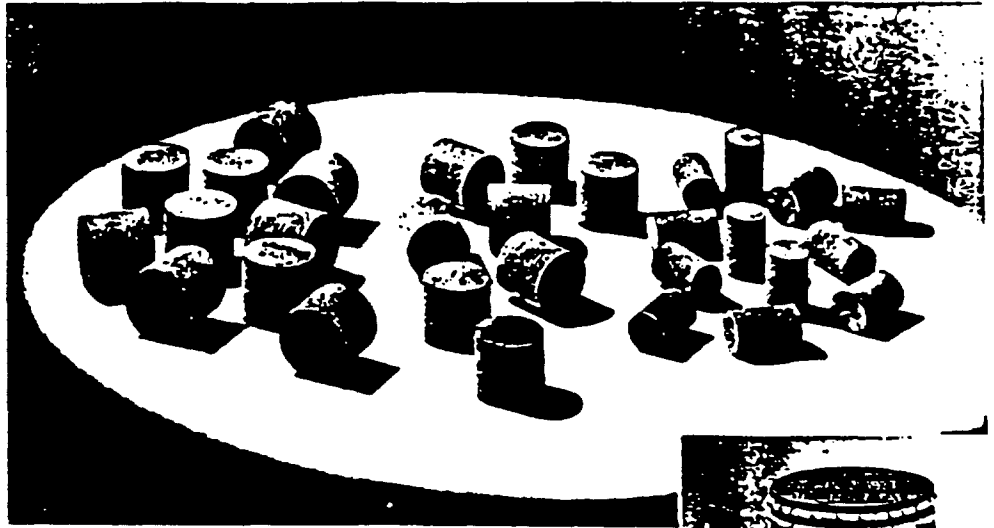
GARLOCK 7279 is a slab material consisting of laminated plies of high-grade cotton duck and Neoprene compound. Coil and ring packings are produced from this slab.

GARLOCK 7992 DIAPHRAGM SHEET

GARLOCK 7992 is a special diaphragm sheet made from a Neoprene compound.

GARLOCK 7271 MOLDED CUPS

GARLOCK 7271 is a high-grade cotton duck and Neoprene compound used for the manufacture of molded cups.



GARLOCK CORD PLUGS

(Patented)



Construction—GARLOCK Cord Plugs are constructed of alternate plies of an open weave cord cloth and specially compounded rubber, vulcanized together under pressure. They are a patented product.

Service—Recommended for cleaning and scouring the inside walls of condenser tubes. Due to their sturdy construction, GARLOCK Cord Plugs can be used many times before becoming worn.

Form—GARLOCK Cord Plugs are furnished in $\frac{3}{4}$ "

thickness and in ten standard diameters. This range of sizes includes a plug to fit any standard tubes with which condensers are equipped.

The air gun for use in shooting GARLOCK Plugs is simple in design and can be made in any machine shop equipped with a lathe. Instructions as to the necessary parts and construction of the gun will be furnished on request.

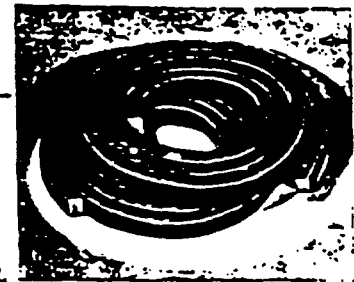
The table below indicates the proper GARLOCK Plug number for tubes of different diameters and gauge.

Outside Diameter of Tube	Gauge (Birmingham or Stubbs Iron Wire)	Plug No.	Outside Diameter of Tube	Gauge (Birmingham or Stubbs Iron Wire)	Plug No.
1"	16	1016	$\frac{3}{4}$ "	17	3417
$\frac{1}{2}$ "	18	1018	$\frac{1}{2}$ "	18	3418
$\frac{3}{8}$ "	16	7816	$\frac{1}{4}$ "	16	3816
$\frac{1}{4}$ "	18	7818	$\frac{1}{8}$ "	17	3817
$\frac{3}{16}$ "	16	3416	$\frac{1}{16}$ "	18	3818

GARLOCK  THE STANDARD PACKING OF THE WORLD



SHREDDED METAL RINGS



SHREDDED METAL COIL

Construction—GARLOCK Shredded Metal Packings are produced of strands of soft metal treated with a binding compound and flake graphite.

Service—Recommended for service on Corliss and reciprocating valve stems, steam and air piston rods, centrifugal pumps handling hot or cold water, small steam turbine shafts, enclosed type ammonia compressor shafts, swing joints and outside packed cold water plungers. The Shredded Metal Packings below are recommended for temperatures up to 600° Fahrenheit. Shredded Metal Ring Packings for higher

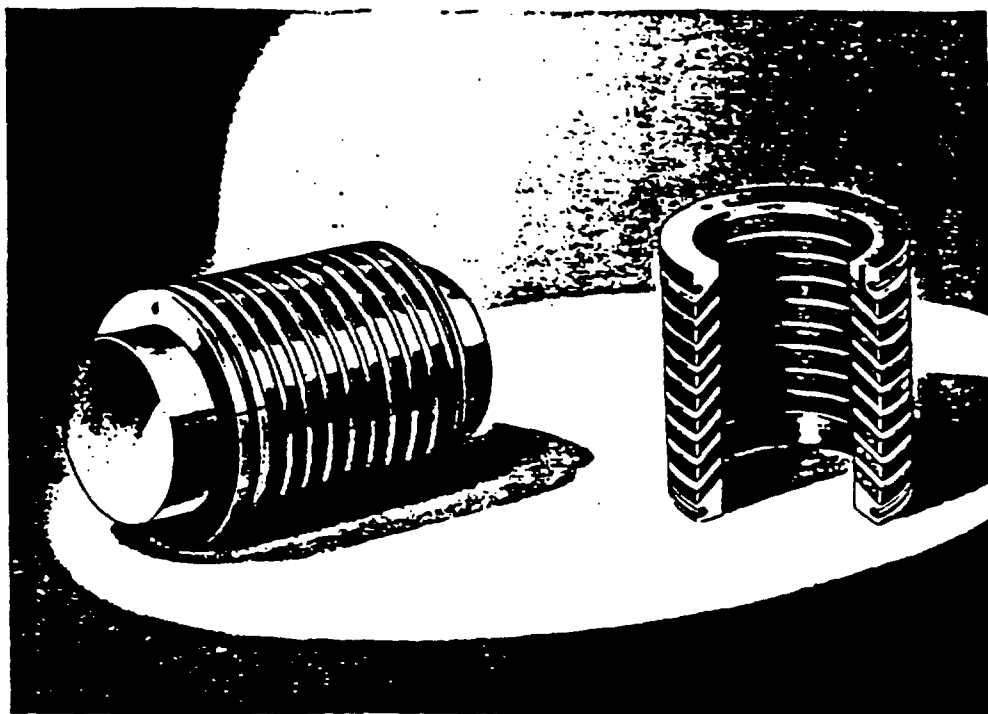
temperatures are described on page 138.

Form—GARLOCK Shredded Metal Packings are manufactured from fine strand, grooved strand, or crimped strand, soft metal. They are furnished in loose form, twisted coil and formed rings, either plain or diagonal. Diagonal rings can also be furnished with a lead cone (see illustration).

Indicated below are GARLOCK styles of Shredded Metal Packings showing the forms of packing and types of strand used:

Fine Strand		Grooved Strand		Crimped Strand	
GARLOCK	Description	GARLOCK	Description	GARLOCK	Description
996	Straight coil, loose	996	Straight coil	996	Roller coil (lead wool)
998	Twisted coil, rolled	998	Twisted coil	998	Plain ring
998	Plain ring	998	Plain ring	940	Diagonal ring
948	Diagonal ring	948	Diagonal ring	939	Diagonal ring, lead cone
938	Diagonal ring, lead cone	938	Diagonal ring, lead cone		

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 7050

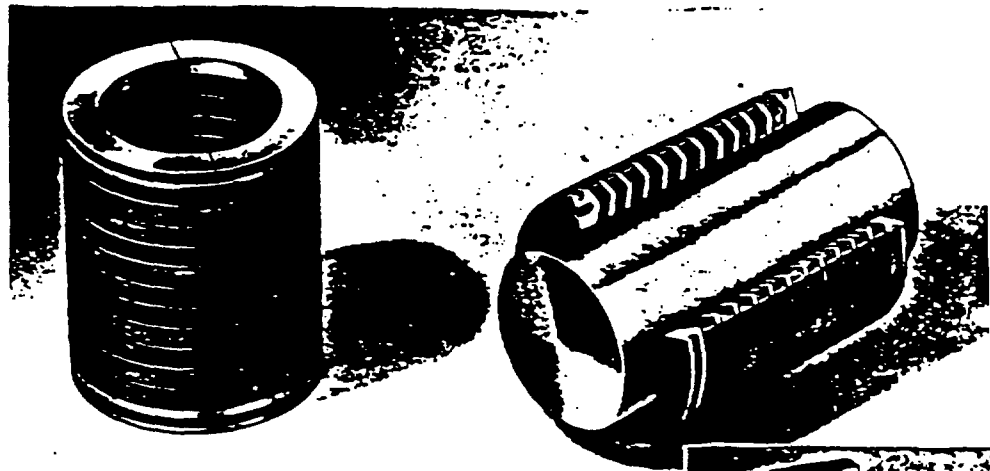
GARLOCK 7050 is an advanced development in Shredded Metal Packing, consisting of one concave bevel bottom ring and one convex bevel top ring—both made of babbitt—and a series of concave-convex molded shredded metal rings, alternated with metal separator rings.

GARLOCK 7050 is recommended for air, steam and

gas service at temperatures up to 625° Fahrenheit. Being thoroughly impregnated with graphite, GARLOCK 7050 is particularly adapted for high-pressure and high-speed air and gas compressor service.

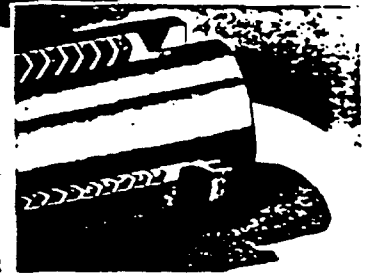
Sets of GARLOCK 7050 are molded in sizes to specified rod and stuffing box dimensions.

GARLOCK  THE STANDARD PACKING OF THE WORLD



GARLOCK 7050-C

GARLOCK 7050-C
WITH BRONZE ADAPTER



GARLOCK 7050-C is a special GARLOCK development in shredded metal packing consisting of one top and one bottom adapter ring made of babbitt, and a series of V-shaped molded shredded metal rings, alternated with soft metal separator rings.

GARLOCK 7050-C is recommended for high-pressure and high-speed air and gas compressor service, at temperatures up to 625° Fahrenheit.

SPECIAL BRONZE TOP ADAPTER

The small picture above illustrates GARLOCK 7050-C combined with a special bronze top adapter. This combination is highly recommended and widely used

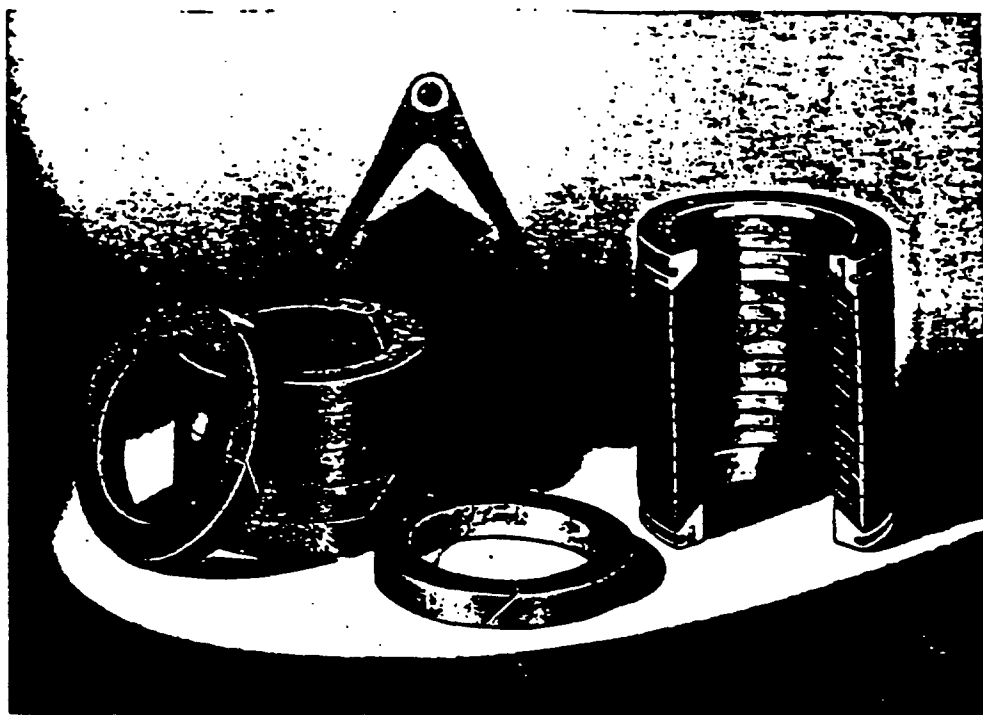
in high-pressure service on enclosed type CO₂ compressors.

SPECIAL TOP AND BOTTOM BRONZE ADAPTERS AND BRONZE SEPARATOR RINGS

This special combination is particularly adapted for service on outside packed plungers of boiler feed

pumps handling high-pressure hot water under the most severe conditions.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK 934

GARLOCK 935

HIGH TEMPERATURE SHREDDED METAL PACKINGS

GARLOCK 934

GARLOCK 934 is a high-temperature, shredded metal ring packing molded square or rectangular in cross section from shreds of special metal floss. It is suitable for service against temperatures up to 1500° Fahrenheit.

GARLOCK 934 will be furnished in rings to practically

any desired rod and stuffing box dimensions; also in sets to specified stuffing box depths.

This material is highly recommended for service on valve stems and piston rods on which high temperatures are encountered. Particularly suitable for service on the rotary shafts of soot blowers.

GARLOCK 935

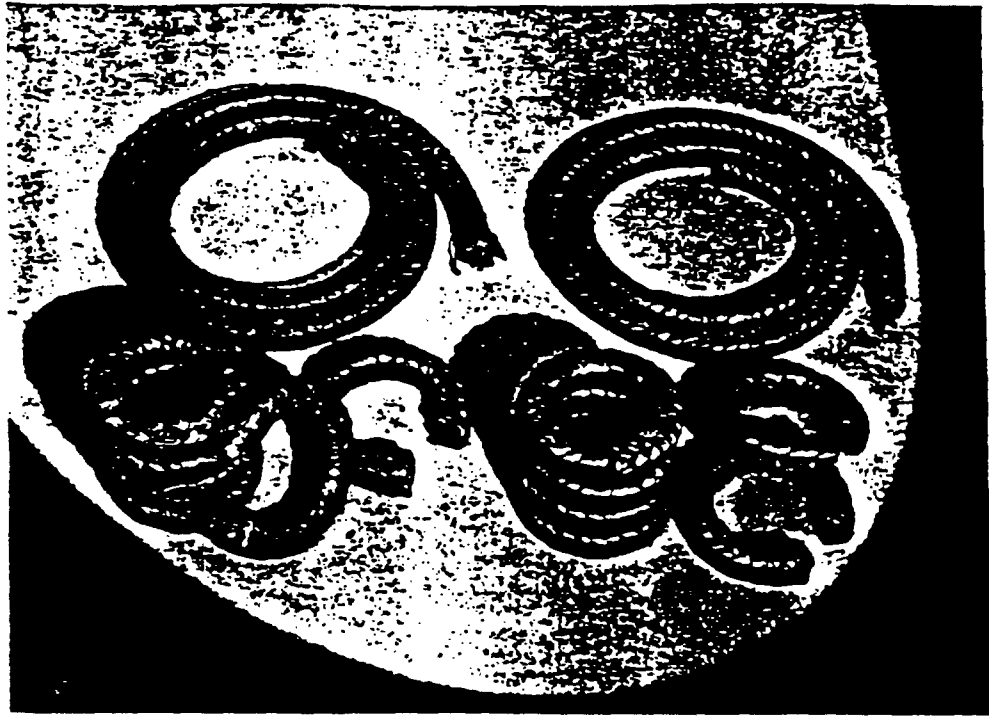
GARLOCK 935 is a special high-temperature shredded metal packing. It is regularly furnished in sets consisting of one concave bevel bottom ring and one convex bevel top ring—both made of red metal—and a series of concave-convex, molded shredded metal rings. These shredded metal rings are produced from strands of special metal floss suitable for service against temperatures up to 1500° Fahrenheit.

GARLOCK 935 is often supplied without red metal end

rings for application in stuffing boxes having beveled glands and bottoms. In ordering sets of this nature, the type and degree of bevel of both the gland and the bottom of the box must be indicated.

GARLOCK 935 can be furnished in practically any rod and stuffing box sizes. It is highly recommended for service on valve stems and piston rods operating at high temperatures; also for rotary shafts of small turbines and blowers.

GARLOCK  THE STANDARD PACKING OF THE WORLD



METAL FOIL COIL AND RING PACKINGS

GARLOCK METAL FOIL PACKINGS

GARLOCK 944

Construction—GARLOCK 944 is made from cotton strands covered with metal foil, braided over a core of resilient rubber, graphite lubricated throughout, and covered with a skeleton braided cotton jacket.

Service—GARLOCK 944 is recommended for service on rods operating against air or steam at high or low pressures, wet or dry natural gas, ammonia gas and CO₂ or SO₂ gas where temperatures do not exceed 375° F.

Form—GARLOCK 944 is square in cross section and is furnished in 12½-foot coils in packing sizes from ¼" to 1¼", advancing by sixteenths. Rings are furnished cut and formed to specified sizes.

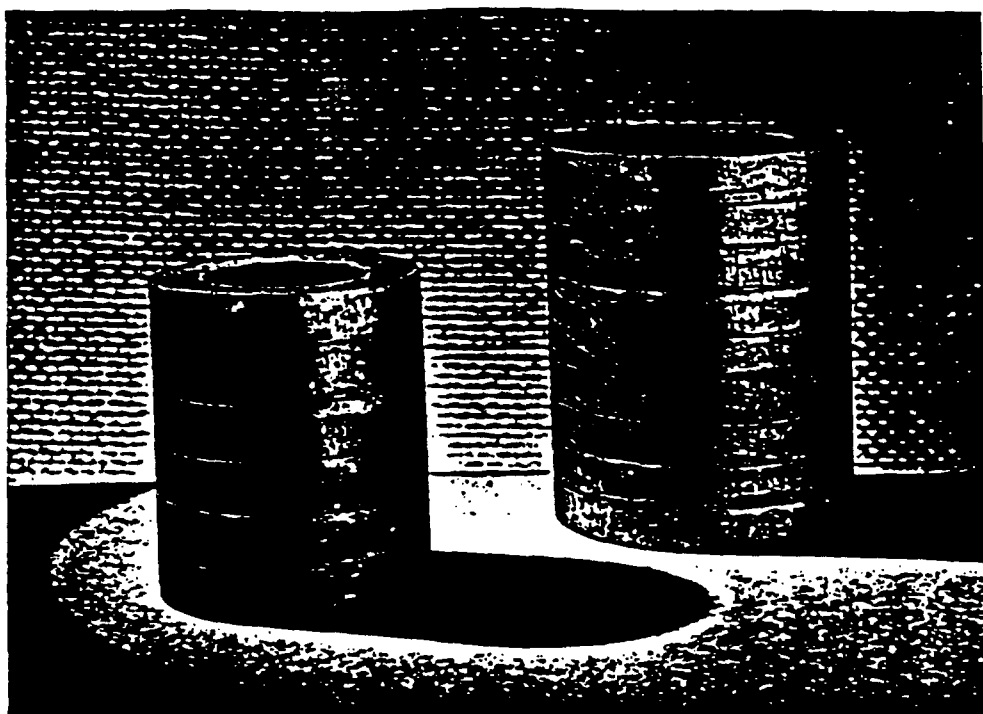
GARLOCK 945

Construction—GARLOCK 945 is braided from cotton strands covered with metal foil and thoroughly lubricated with graphite. It does not contain a rubber core.

Service—This material is recommended for application to rods in service against high or low pressure steam or air, wet or dry natural gas, ammonia gas, CO₂ gas or SO₂ gas. It is not suitable for use where operating temperatures are in excess of 375° F.

Form—GARLOCK 945 Coil is square in cross section and is furnished in all packing sizes from ¼" to 1¼" advancing by sixteenths. Coils are 12½-feet long. Formed rings are supplied to specified inside and outside diameters.

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK METAL FOIL PACKINGS

GARLOCK 915

Construction—GARLOCK 915 is a semi-metallic packing consisting of an asbestos core wrapped with aluminum foil. The aluminum foil is pleated into countless small pleats, each of which serves as a reservoir or pocket for the special lubricant and graphite with which the packing is treated. This distinctive pleated construction results in an elasticity and compressibility far in excess of that ordinarily found in semi-metallic packings.

Service—GARLOCK 915 is recommended for application to centrifugal, rotary and reciprocating pumps and to valves in hot oil service.

Form—GARLOCK 915 is furnished in spiral and ring forms. Spiral is available in sizes $\frac{3}{8}$ " to $\frac{3}{4}$ " inclusive, 12 feet long. Rings are available in sizes from $\frac{3}{4}$ " to 10" I.D. and in packing widths from $\frac{1}{4}$ " to $\frac{3}{4}$ ".

GARLOCK 916

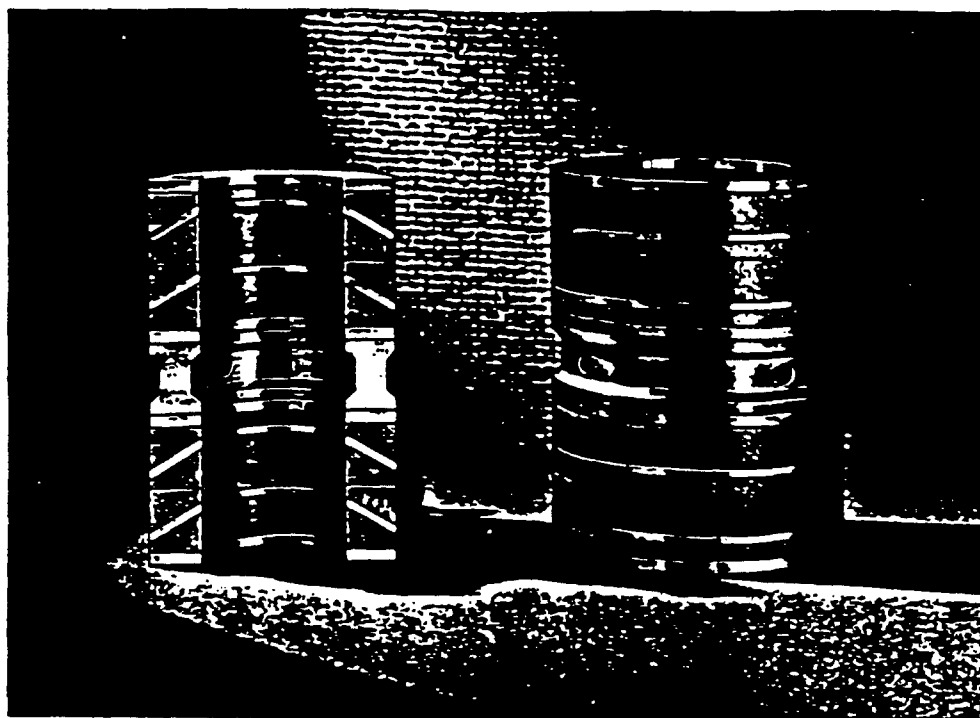
Construction—GARLOCK 916 is similar in construction to GARLOCK 915 except that it is made from lead foil instead of aluminum foil and contains no asbestos core. It is lighter in weight and more compressible than lead packings of conventional types.

Service—GARLOCK 916 is recommended for steam, air and hot or cold water service, for either reciprocating or rotary applications.

This material should not be used where operating temperatures are in excess of 600° F.

Form—GARLOCK 916 is supplied in ring form only; it is not available in coil or spiral forms. Rings are molded to specified dimensions in any size from $\frac{3}{8}$ " to 10" I.D., and in any packing width from $\frac{1}{4}$ " to $\frac{3}{4}$ ".

GARLOCK  THE STANDARD PACKING OF THE WORLD



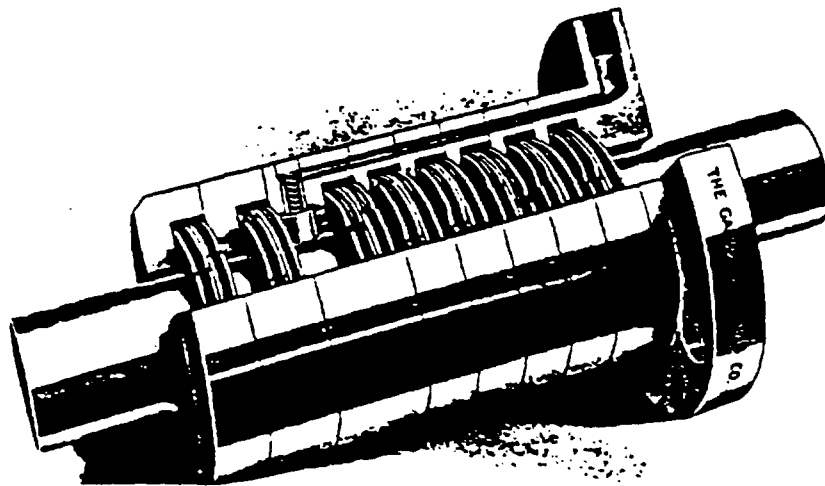
GARLOCK 941

Construction—GARLOCK 941 is a special packing made in sets to fit rotary shafts on refrigerating compressors and consists of diagonally molded shredded metal rings with machined, babbitt separator rings. Machined babbitt spacer rings are provided for application in the bottom of the stuffing box, on either side of the oil lantern and in the top of the stuffing box between the last diagonal ring and the gland. All rings are cut open for application around the shaft.

Service—GARLOCK 941 was designed specifically for service on rotary shafts of vertical refrigerating compressors. It is recommended for use on such compressors handling freon, ammonia or CO₂ gases.

Form—GARLOCK 941 is furnished only in completely assembled sets to fit shaft and stuffing box dimensions. Oil lanterns are furnished with sets only when customer so specifies.

THE STANDARD PACKING OF THE WORLD  GARLOCK



FLOATING METAL PACKINGS

For many years The GARLOCK Packing Company has manufactured in its own factories a complete line of floating metal packings. Designed by experienced engineers, made from the highest-grade, carefully selected materials, and machined by skilled mechanics to an exceptional degree of precision, GARLOCK floating metal packings are outstanding in the metal packing field.

In this catalog floating metal packings are briefly described and illustrated. A special catalog, which carries complete information on the entire line of GARLOCK metal packings, will be supplied to metal packing users upon request.

PRESSURE PACKING RINGS

Construction—GARLOCK floating metal packings are supplied in complete sets consisting of three or more sections of packing each fitted into a separate cup or groove in a metal case. The number of sections of packing required and the design of the assembly depend upon the pressure to be packed and other operating conditions. Each set of GARLOCK metal packing, therefore, is engineered to meet the service requirements of the specific application for which it is intended.

Types of Rings—Several types of metal packing rings or sections are employed in designing GARLOCK metal packing assemblies. In every instance the type of ring best suited for the specific application under consideration is selected and recommended.

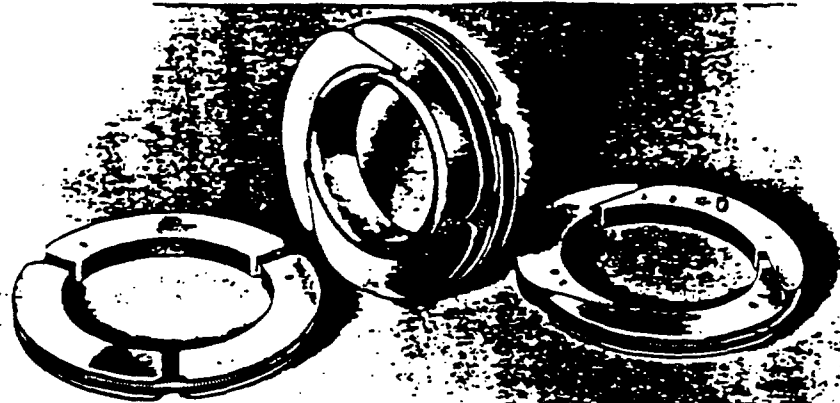
For most applications, however, metal packing sections employing the tangential cut ring are supplied.

A section of this packing consists of one tangential cut ring (A ring in the illustration) in combination with a radial cut ring (C ring in the illustration). These sections are installed with the C ring toward the pressure or cylinder and the A ring away from the pressure or cylinder.

For unusual conditions, or for other reasons, it sometimes is desirable to supply triangular cut or flexible type metal packing rings instead of the tangential cut ring. Rings of either type are assembled into sections with radial cut C rings in the same manner as tangential cut rings.

The patented Fox type ring is an exclusive GARLOCK product and differs in design from all of the conventional metal packing rings. This ring has precision-cut interlocking joints and is not assembled in combination with a radial cut ring.

GARLOCK  THE STANDARD PACKING OF THE WORLD



RADIAL RING

COMPLETE SECTION

TANGENTIAL RING

Materials—The operating conditions determine the material from which GARLOCK floating type rings are made. Each of these materials is superior in its respective field and has been selected only after complete and exhaustive research and tests have proved it to be suitable for packing usage.

For cast-iron rings a truly non-abrasive, graphitic iron is used. Under normal operating conditions this cast iron will not cut or score the softest commercial steel piston rod.

Bronze rings are supplied from bronzes of different mixtures, each of which has been thoroughly tested in service. The two lead bronzes most commonly used are made to rigid GARLOCK formulae.

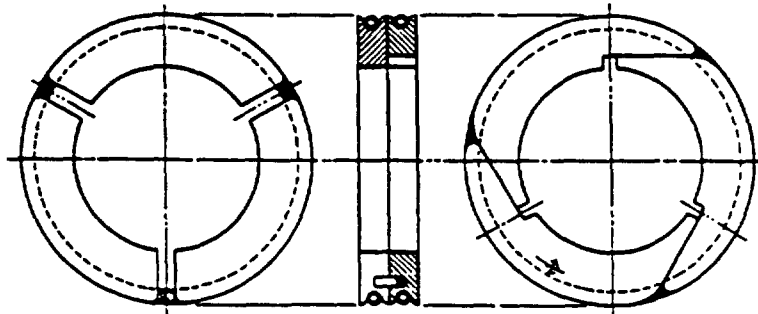
Babbitt, bakelite and carbon are also used in the production of GARLOCK floating type packing rings. These materials are recommended for specific service applications where operating conditions are such that neither cast-iron nor bronze rings are suitable.

Service—GARLOCK floating metal packings are made in a variety of assemblies designed to take care of the entire range of pressures from the lowest to the highest. Packings of this type are intended primarily for sealing steam and gases; they are not used generally against liquids.

Standard Assemblies—For many installations one of the several standard GARLOCK assemblies is applicable. Such assemblies are divided broadly into two groups—those with split cases and those with solid cases.

Split case packings can be assembled around the rod without disconnecting it. Some of the most common split case packings are GARLOCK 805, GARLOCK 806, GARLOCK 881, GARLOCK 808 and GARLOCK 809.

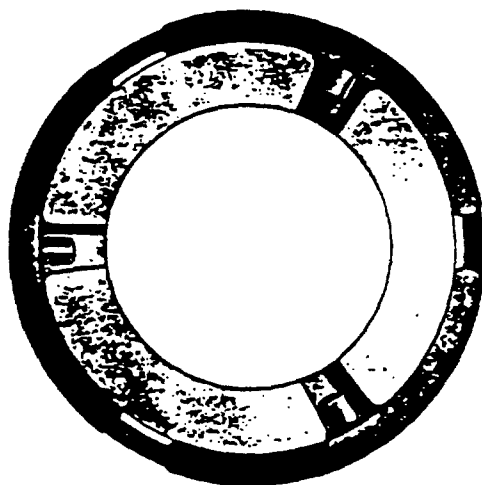
Solid case packings are supplied over the end of the rod. It is necessary, therefore, to disconnect the piston rod when making installations of packings of this



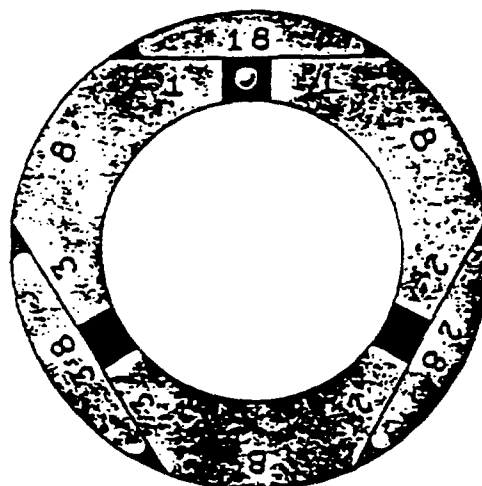
RADIAL (C) RING

TANGENTIAL (A) RING

THE STANDARD PACKING OF THE WORLD  GARLOCK



GARLOCK FLEXIBLE METAL
PACKING RING



GARLOCK TRIANGULAR CUT
PACKING RING

type. GARLOCK 821, GARLOCK 833 and GARLOCK 873 are typical solid case assemblies.

Some assemblies, such as GARLOCK 810 and GARLOCK 860, can be supplied either with split or solid case as required.

Application—GARLOCK Metal Packings can be manufactured to fit any equipment providing sufficient space for a satisfactory installation is available and the rod diameter is not too small. When necessary to do so, floating metal packings can be installed in packing spaces as small as $\frac{3}{4}$ " but for a properly engineered application a packing space of $\frac{1}{2}$ " or more should be provided. Rod diameter should not be less than $1\frac{1}{4}$ ". The stuffing box depth necessary for a good application depends upon the pressure to be packed.

When the diameter or depth of the stuffing box is insufficient to permit the installation of a set of metal packing inside of the box, an outside assembly can be designed providing there is sufficient cross-head clearance.

Renewals—When and if it becomes desirable, for any reason, to renew GARLOCK floating metal packings, it seldom is necessary to purchase complete new assemblies. Satisfactory replacement at low cost usually can be accomplished by installing new packing rings in the original case. Before doing so, however, the case should be checked for wear in the ring grooves. If wear has developed the grooves should be re-machined before installing new rings.

Metal Packing Catalog—The complete line of GARLOCK floating metal pressure packings is described in detail in the special GARLOCK Metal Packing Catalog.

In addition to pressure packings for application to piston rods, that catalog also describes other GARLOCK metal packings including:

Garlock Oil Return Metal Packing Rings which are made in several types. These rings remove excess oil from the piston rods of enclosed crankcase type gas engines, air and gas compressors, steam engines and diesel engines, and return such excess oil to the crankcase.

Breaker or Fire-Check Rings which are used as bottom rings (nearest the cylinder) on the power rods of internal combustion engines to protect the pressure packing rings from the excessive heat of the explosions in the cylinder and from the products of combustion resulting from the explosions.

Piston Rings of different types, including the exclusive Fox type rings, made of materials suitable for the intended usage.

GARLOCK  THE STANDARD PACKING OF THE WORLD

FAHRENHEIT AND CENTIGRADE CONVERSION TABLE

Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.
0	32	203	401	403	761	603	1111	803	1481	1003	1841	1203	2191	1403	2561
3	41	210	410	410	770	610	1130	810	1490	1010	1850	1210	2210	1410	2570
10	50	213	419	413	779	613	1139	813	1499	1013	1859	1213	2219	1413	2579
13	56	220	428	420	788	620	1148	820	1508	1020	1868	1220	2228	1420	2588
20	68	223	437	423	797	623	1157	823	1517	1023	1877	1223	2237	1423	2597
23	77	230	446	430	806	630	1166	830	1526	1030	1886	1230	2246	1430	2606
30	86	233	455	433	815	633	1175	833	1535	1033	1895	1233	2255	1433	2615
33	93	240	464	440	824	640	1184	840	1544	1040	1904	1240	2264	1440	2624
40	104	243	473	443	833	643	1193	843	1553	1043	1913	1243	2273	1443	2633
43	113	250	482	450	842	650	1202	850	1562	1050	1922	1250	2282	1450	2642
50	122	253	491	453	851	653	1211	853	1571	1053	1931	1253	2291	1453	2651
53	131	260	500	460	860	660	1220	860	1580	1060	1940	1260	2300	1460	2660
60	140	263	509	463	869	663	1229	863	1589	1063	1949	1263	2309	1463	2669
63	149	270	518	470	878	670	1238	870	1598	1070	1958	1270	2318	1470	2678
70	158	273	527	473	887	673	1247	873	1607	1073	1967	1273	2327	1473	2687
73	167	280	536	480	896	680	1256	880	1616	1080	1976	1280	2336	1480	2696
80	176	283	545	483	905	683	1265	883	1625	1083	1985	1283	2345	1483	2705
83	183	290	554	490	914	690	1274	890	1634	1090	1994	1290	2354	1490	2714
90	194	293	563	493	923	693	1283	893	1643	1093	2003	1293	2363	1493	2723
93	203	300	572	500	932	700	1292	900	1652	1100	2012	1300	2372	1500	2732
100	212	303	581	503	941	703	1301	903	1661	1103	2021	1303	2381	1503	2741
103	221	310	590	510	950	710	1310	910	1670	1110	2030	1310	2390	1510	2750
110	230	313	599	513	959	713	1319	913	1679	1113	2039	1313	2399	1513	2759
113	239	320	608	520	968	720	1328	920	1688	1120	2048	1320	2408	1520	2768
120	248	323	617	523	977	723	1337	923	1697	1123	2057	1323	2417	1523	2777
123	257	330	626	530	986	730	1346	930	1706	1130	2066	1330	2426	1530	2786
130	266	333	635	533	995	733	1355	933	1715	1133	2075	1333	2435	1533	2795
133	273	340	644	540	1004	740	1364	940	1724	1140	2084	1340	2444	1540	2804
140	284	343	653	543	1013	743	1373	943	1733	1143	2093	1343	2453	1543	2813
143	293	350	662	550	1022	750	1382	950	1742	1150	2102	1350	2462	1550	2822
150	302	353	671	553	1031	753	1391	953	1751	1153	2111	1353	2471	1553	2831
153	311	360	680	560	1040	760	1400	960	1760	1160	2120	1360	2480	1560	2840
160	320	363	689	563	1049	763	1409	963	1769	1163	2129	1363	2489	1563	2849
163	329	370	698	570	1058	770	1418	970	1778	1170	2138	1370	2498	1570	2858
170	338	373	707	573	1067	773	1427	973	1787	1173	2147	1373	2507	1573	2867
173	347	380	716	580	1076	780	1436	980	1796	1180	2156	1380	2516	1580	2876
180	356	383	725	583	1085	783	1445	983	1805	1183	2165	1383	2525	1583	2885
183	363	390	734	590	1094	790	1454	990	1814	1190	2174	1390	2534	1590	2894
190	374	393	743	593	1103	793	1463	993	1823	1193	2183	1393	2543	1593	2903
193	383	400	752	600	1112	800	1472	1000	1832	1200	2192	1400	2552	1600	2912
200	392														

METRIC CONVERSION TABLE

Millimeters $\times .03937$ = inches.
 Millimeters $\div 25.4$ = inches.
 Centimeters $\times .3937$ = inches.
 Centimeters $\div 2.54$ = inches.
 Meters $\times 39.37$ = inches (Act of Congress).
 Meters $\times 3.281$ = feet.
 Meters $\times 1.094$ = yards.
 Kilometers $\times .621$ = miles.
 Kilometers $\div 1.609$ = miles.
 Kilometers $\times 2952.968$ = feet.
 Square Millimeters $\times .00155$ = sq. inches.
 Square Millimeters $\div 645.1$ = sq. inches.
 Square Centimeters $\times .155$ = sq. inches.
 Square Centimeters $\div 6.451$ = sq. inches.
 Square Meters $\times 10.764$ = sq. feet.
 Square Meters $\times 107.1$ = sq. feet.
 Square Kilometers $\times 247.1$ = acres.
 Hectare $\times 2.471$ = acres.
 Cubic Centimeters $\div 16.383$ = cubic inches.

Cubic Centimeters $\div 3.38$ = U. S. P. fluid ounces.
 Cubic Centimeters $\div 29.57$ = fluid ounces (U. S. P.).
 Cubic Meters $\times 35.315$ = cubic feet.
 Cubic Meters $\times 1.358$ = cubic yards.
 Cubic Meters $\times 264.2$ = gallons (U. S. P.).
 Liters $\times 33.81$ = cu. in. (Act of Congress).
 Liters $\times 2.204$ = fluid ounces (U. S. P.).
 Liters $\times .0354$ = gallons (U. S. P.).
 Liters $\div 3.78$ = gallons (U. S. P.).
 Liters $\div 61.102$ = cubic feet.
 Hectoliters $\times 2.64$ = bushels (U. S. P.).
 Hectoliters $\times .131$ = cubic yards.
 Hectoliters $\times 2.64$ = gallons (U. S. P.).
 Grams $\times 15.432$ = grains (Act of Congress).
 Grams $\div 453.6$ = grains.
 Grams (water) $\div 29.57$ = fluid ounces.
 Grams $\div 35.23$ = ounces avoirdupois.

Grams per Cu. Cent. $\div 7.7$ = lbs. per cubic inch.
 Joules $\times .7375$ = foot pounds.
 Kilograms $\times 2.205$ = pounds.
 Kilograms $\times 35.2$ = oz. avoirdupois.
 Kilograms $\div 2.205$ = tons (2,000 lbs.).
 Kilograms per Sq. Cent. $\times 14.7$ = lbs. per sq. in.
 Kilogram-meters $\times 7.376$ = foot lbs.
 Kilograms per Meter $\times .778$ = lbs. per foot.
 Kilograms per Cu. Meter $\times .068$ = lbs. per cubic foot.
 Tonnes $\times 1.102$ = tons (2,000 lbs.).
 Kilowatts $\times 1.34$ = Horse Power.
 Watts $\times .7375$ = foot pounds per second.
 Calories $\times 3.985$ = B. T. U.
 Chiral vapor $\times .293$ = Horse Power.
 (Centigrade $\times 1.8$) $\div 32$ = degrees Fahr.
 Gravity Falls = 888.96 centimeters per sec.

THE STANDARD PACKING OF THE WORLD  GARLOCK

TABLE OF DECIMAL EQUIVALENTS
OF MILLIMETERS AND FRACTIONS OF MILLIMETERS

mm. Inches	mm. Inches	mm. Inches	mm. Inches	mm. Inches
$\frac{1}{16}$ = .00079	$\frac{1}{16}$ = .02441	12 = .47244	42 = 1.65354	72 = 2.83464
$\frac{1}{8}$ = .00157	$\frac{1}{8}$ = .04882	13 = .51181	43 = 1.69491	73 = 2.87401
$\frac{3}{16}$ = .00472	$\frac{3}{16}$ = .04398	14 = .55118	44 = 1.73428	74 = 2.91338
$\frac{1}{4}$ = .00944	$\frac{1}{4}$ = .08796	15 = .59055	45 = 1.77365	75 = 2.95275
$\frac{5}{16}$ = .01417	$\frac{5}{16}$ = .03283	16 = .62992	46 = 1.81302	76 = 2.99212
$\frac{3}{8}$ = .02834	$\frac{3}{8}$ = .06566	17 = .66929	47 = 1.85239	77 = 3.03149
$\frac{7}{16}$ = .04251	$\frac{7}{16}$ = .09849	18 = .70866	48 = 1.89176	78 = 3.07086
$\frac{1}{2}$ = .05668	$\frac{1}{2}$ = .03130	19 = .74803	49 = 1.93113	79 = 3.11023
$\frac{9}{16}$ = .07085	$\frac{9}{16}$ = .05813	20 = .78740	50 = 1.97050	80 = 3.14960
$\frac{5}{8}$ = .08502	$\frac{5}{8}$ = .08688	21 = .82677	51 = 2.00987	81 = 3.18897
$\frac{11}{16}$ = .01365	$\frac{11}{16}$ = .03307	22 = .86614	52 = 2.04924	82 = 3.22834
$\frac{3}{4}$ = .02730	$\frac{3}{4}$ = .06614	23 = .90551	53 = 2.08861	83 = 3.26771
$\frac{13}{16}$ = .04095	$\frac{13}{16}$ = .05181	24 = .94488	54 = 2.12798	84 = 3.30708
$\frac{7}{8}$ = .05460	$\frac{7}{8}$ = .03748	25 = .98425	55 = 2.16735	85 = 3.34645
$\frac{15}{16}$ = .06825	$\frac{15}{16}$ = .05313	26 = 1.02362	56 = 2.20672	86 = 3.38582
$\frac{1}{1}$ = .08190	$\frac{1}{1}$ = .06879	27 = 1.06299	57 = 2.24609	87 = 3.42519
$\frac{17}{16}$ = .01055	$\frac{17}{16}$ = .03437	28 = 1.10236	58 = 2.28546	88 = 3.46456
$\frac{1}{8}$ = .02110	$\frac{1}{8}$ = .06875	29 = 1.14173	59 = 2.32483	89 = 3.50393
$\frac{1}{4}$ = .04220	$\frac{1}{4}$ = .03750	30 = 1.18110	60 = 2.36420	90 = 3.54330
$\frac{3}{8}$ = .06330	$\frac{3}{8}$ = .05625	31 = 1.22047	61 = 2.40357	91 = 3.58267
$\frac{1}{2}$ = .08440	$\frac{1}{2}$ = .07500	32 = 1.25984	62 = 2.44294	92 = 3.62204
$\frac{5}{8}$ = .01055	$\frac{5}{8}$ = .03750	33 = 1.29921	63 = 2.48231	93 = 3.66141
$\frac{3}{4}$ = .02110	$\frac{3}{4}$ = .07500	34 = 1.33858	64 = 2.52168	94 = 3.70078
$\frac{7}{8}$ = .03165	$\frac{7}{8}$ = .05625	35 = 1.37795	65 = 2.56105	95 = 3.74015
$\frac{15}{16}$ = .04220	$\frac{15}{16}$ = .03750	36 = 1.41732	66 = 2.60042	96 = 3.77952
$\frac{1}{1}$ = .05275	$\frac{1}{1}$ = .05625	37 = 1.45669	67 = 2.63979	97 = 3.81889
$\frac{17}{16}$ = .01055	$\frac{17}{16}$ = .03750	38 = 1.49606	68 = 2.67916	98 = 3.85826
$\frac{1}{8}$ = .02110	$\frac{1}{8}$ = .07500	39 = 1.53543	69 = 2.71853	99 = 3.89763
$\frac{1}{4}$ = .04220	$\frac{1}{4}$ = .05625	40 = 1.57480	70 = 2.75790	100 = 3.93700
$\frac{3}{8}$ = .06330	$\frac{3}{8}$ = .03750	41 = 1.61417	71 = 2.79727	

10 mm. = 1 Centimeter = 0.3937 inches

10 cm. = 1 Decimeter = 3.937 inches

10 dm. = 1 Meter = 39.37 inches

25.4 mm. = 1 English inch

TABLE OF DECIMAL EQUIVALENTS
OF 8THS, 16THS, 32DS, AND 64THS OF AN INCH

8ths	16ths	32ds	64ths	8ths
$\frac{1}{8}$ = .125	$\frac{1}{16}$ = .0625	$\frac{1}{32}$ = .03125	$\frac{1}{64}$ = .015625	$\frac{1}{8}$ = .125
$\frac{2}{8}$ = .250	$\frac{2}{16}$ = .125	$\frac{2}{32}$ = .0625	$\frac{2}{64}$ = .03125	$\frac{2}{8}$ = .250
$\frac{3}{8}$ = .375	$\frac{3}{16}$ = .1875	$\frac{3}{32}$ = .09375	$\frac{3}{64}$ = .046875	$\frac{3}{8}$ = .375
$\frac{4}{8}$ = .500	$\frac{4}{16}$ = .250	$\frac{4}{32}$ = .125	$\frac{4}{64}$ = .0625	$\frac{4}{8}$ = .500
$\frac{5}{8}$ = .625	$\frac{5}{16}$ = .3125	$\frac{5}{32}$ = .15625	$\frac{5}{64}$ = .078125	$\frac{5}{8}$ = .625
$\frac{6}{8}$ = .750	$\frac{6}{16}$ = .375	$\frac{6}{32}$ = .1875	$\frac{6}{64}$ = .09375	$\frac{6}{8}$ = .750
$\frac{7}{8}$ = .875	$\frac{7}{16}$ = .4375	$\frac{7}{32}$ = .21875	$\frac{7}{64}$ = .109375	$\frac{7}{8}$ = .875
$\frac{8}{8}$ = 1.000	$\frac{8}{16}$ = .500	$\frac{8}{32}$ = .250	$\frac{8}{64}$ = .125	$\frac{8}{8}$ = 1.000
$\frac{9}{8}$ = 1.125	$\frac{9}{16}$ = .5625	$\frac{9}{32}$ = .28125	$\frac{9}{64}$ = .140625	$\frac{9}{8}$ = 1.125
$\frac{10}{8}$ = 1.250	$\frac{10}{16}$ = .625	$\frac{10}{32}$ = .3125	$\frac{10}{64}$ = .15625	$\frac{10}{8}$ = 1.250
$\frac{11}{8}$ = 1.375	$\frac{11}{16}$ = .6875	$\frac{11}{32}$ = .34375	$\frac{11}{64}$ = .171875	$\frac{11}{8}$ = 1.375
$\frac{12}{8}$ = 1.500	$\frac{12}{16}$ = .750	$\frac{12}{32}$ = .375	$\frac{12}{64}$ = .1875	$\frac{12}{8}$ = 1.500
$\frac{13}{8}$ = 1.625	$\frac{13}{16}$ = .8125	$\frac{13}{32}$ = .40625	$\frac{13}{64}$ = .203125	$\frac{13}{8}$ = 1.625
$\frac{14}{8}$ = 1.750	$\frac{14}{16}$ = .875	$\frac{14}{32}$ = .4375	$\frac{14}{64}$ = .21875	$\frac{14}{8}$ = 1.750
$\frac{15}{8}$ = 1.875	$\frac{15}{16}$ = .9375	$\frac{15}{32}$ = .46875	$\frac{15}{64}$ = .234375	$\frac{15}{8}$ = 1.875
$\frac{16}{8}$ = 2.000	$\frac{16}{16}$ = 1.000	$\frac{16}{32}$ = .500	$\frac{16}{64}$ = .250	$\frac{16}{8}$ = 2.000

GARLOCK  THE STANDARD PACKING OF THE WORLD

CIRCUMFERENCES AND AREAS OF CIRCLES

Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area
1/8	0.3927	0.0048	7	21.98	38.484	13	47.12	178.71	23	72.85	415.47	31	97.38	734.78	39	122.5	1194.1
1/4	0.7854	0.0196	8	25.12	49.087	14	55.18	246.34	24	79.27	483.61	32	105.21	839.29	40	136.0	1360.0
3/8	1.1781	0.0393	9	28.26	59.690	15	63.24	315.93	25	83.62	551.88	33	113.04	950.33	41	144.5	1644.5
1/2	1.5708	0.0589	10	31.42	70.293	16	71.30	385.52	26	87.99	618.13	34	120.87	1041.38	42	153.0	1839.0
5/8	1.9635	0.0786	11	34.56	80.896	17	79.36	455.11	27	92.38	654.38	35	128.70	1132.43	43	161.5	1934.5
3/4	2.3562	0.0982	12	37.70	91.499	18	87.42	524.70	28	96.79	690.63	36	136.53	1223.48	44	170.0	2029.0
7/8	2.7489	0.1179	13	40.84	102.102	19	95.48	594.29	29	101.17	726.88	37	144.36	1314.53	45	178.5	2124.5
1	3.1416	0.1376	14	43.98	112.705	20	103.54	663.88	30	105.55	763.13	38	152.19	1405.58	46	187.0	2219.0
1 1/8	3.5343	0.1573	15	47.12	123.308	21	111.60	733.47	31	109.96	800.38	39	160.0	1496.63	47	195.5	2314.5
1 1/4	3.9270	0.1769	16	50.26	133.911	22	119.66	803.06	32	114.37	837.63	40	168.0	1587.68	48	204.0	2409.0
1 3/8	4.3197	0.1966	17	53.40	144.514	23	127.72	872.65	33	118.78	874.88	41	176.0	1678.73	49	212.5	2504.5
1 1/2	4.7124	0.2163	18	56.54	155.117	24	135.78	942.24	34	123.19	912.13	42	184.5	1769.78	50	221.0	2600.0
1 5/8	5.1051	0.2359	19	59.68	165.720	25	143.84	1011.83	35	127.60	949.38	43	193.0	1860.83			
1 3/4	5.4978	0.2556	20	62.82	176.323	26	151.90	1081.42	36	131.99	986.63	44	201.5	1951.88			
1 7/8	5.8905	0.2753	21	65.96	186.926	27	159.96	1151.01	37	136.39	1023.88	45	210.0	2042.93			
2	6.2832	0.2950	22	69.10	197.529	28	167.92	1220.60	38	140.78	1061.13	46	218.5	2133.98			
2 1/8	6.6759	0.3147	23	72.24	208.132	29	175.98	1290.19	39	145.19	1098.38	47	227.0	2225.03			
2 1/4	7.0686	0.3344	24	75.38	218.735	30	183.94	1359.78	40	149.59	1135.63	48	235.5	2316.08			
2 3/8	7.4613	0.3541	25	78.52	229.338	31	191.90	1429.17	41	153.99	1172.88	49	244.0	2407.13			
2 1/2	7.8540	0.3738	26	81.66	239.941	32	200.00	1498.56	42	158.39	1210.13	50	252.5	2498.18			
2 5/8	8.2467	0.3935	27	84.80	250.544	33	207.96	1567.95	43	162.79	1247.38						
2 3/4	8.6394	0.4132	28	87.94	261.147	34	215.92	1637.34	44	167.19	1284.63						
2 7/8	9.0321	0.4329	29	91.08	271.750	35	223.88	1706.73	45	171.59	1321.88						
3	9.4248	0.4526	30	94.22	282.353	36	231.84	1776.12	46	175.99	1359.13						
3 1/8	9.8175	0.4723	31	97.36	292.956	37	239.80	1845.51	47	180.39	1396.38						
3 1/4	10.2102	0.4920	32	100.50	303.559	38	247.76	1914.90	48	184.79	1433.63						
3 3/8	10.6029	0.5117	33	103.64	314.162	39	255.72	1984.29	49	189.19	1470.88						
3 1/2	10.9956	0.5314	34	106.78	324.765	40	263.68	2053.68	50	193.59	1508.13						
3 5/8	11.3883	0.5511	35	109.92	335.368	41	271.64	2123.07									
3 3/4	11.7810	0.5708	36	113.06	345.971	42	279.60	2192.46									
3 7/8	12.1737	0.5905	37	116.20	356.574	43	287.56	2261.85									
4	12.5664	0.6102	38	119.34	367.177	44	295.52	2331.24									
4 1/8	12.9591	0.6299	39	122.48	377.780	45	303.48	2400.63									
4 1/4	13.3518	0.6496	40	125.62	388.383	46	311.44	2470.02									
4 3/8	13.7445	0.6693	41	128.76	398.986	47	319.40	2539.41									
4 1/2	14.1372	0.6890	42	131.90	409.589	48	327.36	2608.80									
4 5/8	14.5299	0.7087	43	135.04	420.192	49	335.32	2678.19									
4 3/4	14.9226	0.7284	44	138.18	430.795	50	343.28	2747.58									
4 7/8	15.3153	0.7481	45	141.32	441.398												
5	15.7080	0.7678	46	144.46	452.001												
5 1/8	16.1007	0.7875	47	147.60	462.604												
5 1/4	16.4934	0.8072	48	150.74	473.207												
5 3/8	16.8861	0.8269	49	153.88	483.810												
5 1/2	17.2788	0.8466	50	157.02	494.413												
5 5/8	17.6715	0.8663															
5 3/4	18.0642	0.8860															
5 7/8	18.4569	0.9057															
6	18.8496	0.9254															
6 1/8	19.2423	0.9451															
6 1/4	19.6350	0.9648															
6 3/8	20.0277	0.9845															
6 1/2	20.4204	1.0042															
6 5/8	20.8131	1.0239															
6 3/4	21.2058	1.0436															
6 7/8	21.5985	1.0633															
7	21.9912	1.0830															
7 1/8	22.3839	1.1027															
7 1/4	22.7766	1.1224															
7 3/8	23.1693	1.1421															
7 1/2	23.5620	1.1618															
7 5/8	23.9547	1.1815															
7 3/4	24.3474	1.2012															
7 7/8	24.7401	1.2209															
8	25.1328	1.2406															
8 1/8	25.5255	1.2603															
8 1/4	25.9182	1.2800															
8 3/8	26.3109	1.3000															
8 1/2	26.7036	1.3197															
8 5/8	27.0963	1.3394															
8 3/4	27.4890	1.3591															
8 7/8	27.8817	1.3788															
9	28.2744	1.3985															
9 1/8	28.6671	1.4182															
9 1/4	29.0598	1.4379															
9 3/8	29.4525	1.4576															
9 1/2	29.8452	1.4773															
9 5/8	30.2379	1.4970															
9 3/4	30.6306	1.5167															
9 7/8	31.0233	1.5364															
10	31.4160	1.5561															

CIRCUMFERENCE AND AREAS OF CIRCLES—Continued

Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area
47	147.8	1734.9	54	169.8	4090.4	61	191.8	6991.6	68	213.8	9631.6	75	235.8	1417.8	82	257.8	2094.1
1/2	148.0	1744.1	1/2	170.0	4300.8	1/2	194.0	6934.4	1/2	216.0	9643.0	1/2	238.0	1447.3	1/2	260.0	2116.7
3/4	148.4	1753.4	3/4	170.4	4311.4	3/4	194.4	6946.4	3/4	216.4	9654.6	3/4	238.4	1457.9	3/4	260.4	2127.3
1	148.8	1762.7	1	170.8	4322.1	1	194.8	6958.3	1	216.8	9666.3	1	238.8	1468.5	1	260.8	2137.9
1 1/4	149.2	1772.0	1 1/4	171.2	4332.8	1 1/4	195.2	6970.3	1 1/4	217.2	9678.1	1 1/4	239.2	1479.1	1 1/4	261.2	2148.5
1 1/2	149.6	1781.3	1 1/2	171.6	4343.3	1 1/2	195.6	6982.0	1 1/2	217.6	9689.7	1 1/2	239.6	1489.7	1 1/2	261.6	2159.1
1 3/4	150.0	1790.7	1 3/4	172.0	4354.8	1 3/4	196.0	6994.6	1 3/4	218.0	9701.3	1 3/4	240.0	1500.3	1 3/4	262.0	2169.7
2	150.4	1800.1	2	172.4	4365.9	2	196.4	7006.9	2	218.4	9713.0	2	240.4	1510.9	2	262.4	2180.3
2 1/4	150.8	1809.5	2 1/4	172.8	4376.8	2 1/4	196.8	7019.1	2 1/4	218.8	9724.7	2 1/4	240.8	1521.5	2 1/4	262.8	2190.9
2 1/2	151.2	1818.9	2 1/2	173.2	4387.4	2 1/2	197.2	7031.4	2 1/2	219.2	9736.4	2 1/2	241.2	1532.1	2 1/2	263.2	2201.5
2 3/4	151.6	1828.3	2 3/4	173.6	4397.9	2 3/4	197.6	7043.7	2 3/4	219.6	9748.1	2 3/4	241.6	1542.7	2 3/4	263.6	2212.1
3	152.0	1837.7	3	174.0	4408.3	3	198.0	7055.7	3	220.0	9759.8	3	242.0	1553.3	3	264.0	2222.7
3 1/4	152.4	1847.1	3 1/4	174.4	4418.8	3 1/4	198.4	7067.9	3 1/4	220.4	9771.5	3 1/4	242.4	1563.9	3 1/4	264.4	2233.3
3 1/2	152.8	1856.5	3 1/2	174.8	4429.1	3 1/2	198.8	7080.2	3 1/2	220.8	9783.2	3 1/2	242.8	1574.5	3 1/2	264.8	2243.9
3 3/4	153.2	1865.9	3 3/4	175.2	4439.5	3 3/4	199.2	7092.4	3 3/4	221.2	9794.9	3 3/4	243.2	1585.1	3 3/4	265.2	2254.5
4	153.6	1875.3	4	175.6	4449.9	4	199.6	7104.6	4	221.6	9806.6	4	243.6	1595.7	4	265.6	2265.1
4 1/4	154.0	1884.7	4 1/4	176.0	4460.3	4 1/4	200.0	7116.9	4 1/4	222.0	9818.3	4 1/4	244.0	1606.3	4 1/4	266.0	2275.7
4 1/2	154.4	1894.1	4 1/2	176.4	4470.8	4 1/2	200.4	7129.1	4 1/2	222.4	9830.0	4 1/2	244.4	1616.9	4 1/2	266.4	2286.3
4 3/4	154.8	1903.5	4 3/4	176.8	4481.2	4 3/4	200.8	7141.4	4 3/4	222.8	9841.7	4 3/4	244.8	1627.5	4 3/4	266.8	2296.9
5	155.2	1912.9	5	177.2	4491.6	5	201.2	7153.7	5	223.2	9853.4	5	245.2	1638.1	5	267.2	2307.5
5 1/4	155.6	1922.3	5 1/4	177.6	4502.0	5 1/4	201.6	7165.9	5 1/4	223.6	9865.1	5 1/4	245.6	1648.7	5 1/4	267.6	2318.1
5 1/2	156.0	1931.7	5 1/2	178.0	4512.4	5 1/2	202.0	7178.2	5 1/2	224.0	9876.8	5 1/2	246.0	1659.3	5 1/2	268.0	2328.7
5 3/4	156.4	1941.1	5 3/4	178.4	4522.8	5 3/4	202.4	7190.4	5 3/4	224.4	9888.5	5 3/4	246.4	1669.9	5 3/4	268.4	2339.3
6	156.8	1950.5	6	178.8	4533.2	6	202.8	7202.7	6	224.8	9900.2	6	246.8	1680.5	6	268.8	2349.9
6 1/4	157.2	1959.9	6 1/4	179.2	4543.6	6 1/4	203.2	7214.9	6 1/4	225.2	9911.9	6 1/4	247.2	1691.1	6 1/4	269.2	2360.5
6 1/2	157.6	1969.3	6 1/2	179.6	4554.0	6 1/2	203.6	7227.2	6 1/2	225.6	9923.6	6 1/2	247.6	1701.7	6 1/2	269.6	2371.1
6 3/4	158.0	1978.7	6 3/4	180.0	4564.4	6 3/4	204.0	7239.4	6 3/4	226.0	9935.3	6 3/4	248.0	1712.3	6 3/4	270.0	2381.7
7	158.4	1988.1	7	180.4	4574.8	7	204.4	7251.7	7	226.4	9947.0	7	248.4	1722.9	7	270.4	2392.3
7 1/4	158.8	1997.5	7 1/4	180.8	4585.2	7 1/4	204.8	7263.9	7 1/4	226.8	9958.7	7 1/4	248.8	1733.5	7 1/4	270.8	2402.9
7 1/2	159.2	2006.9	7 1/2	181.2	4595.6	7 1/2	205.2	7276.2	7 1/2	227.2	9970.4	7 1/2	249.2	1744.1	7 1/2	271.2	2413.5
7 3/4	159.6	2016.3	7 3/4	181.6	4606.0	7 3/4	205.6	7288.4	7 3/4	227.6	9982.1	7 3/4	249.6	1754.7	7 3/4	271.6	2424.1
8	160.0	2025.7	8	182.0	4616.4	8	206.0	7300.7	8	228.0	9993.8	8	250.0	1765.3	8	272.0	2434.7
8 1/4	160.4	2035.1	8 1/4	182.4	4626.8	8 1/4	206.4	7312.9	8 1/4	228.4	10005.5	8 1/4	250.4	1775.9	8 1/4	272.4	2445.3
8 1/2	160.8	2044.5	8 1/2	182.8	4637.2	8 1/2	206.8	7325.2	8 1/2	228.8	10017.2	8 1/2	250.8	1786.5	8 1/2	272.8	2455.9
8 3/4	161.2	2053.9	8 3/4	183.2	4647.6	8 3/4	207.2	7337.4	8 3/4	229.2	10028.9	8 3/4	251.2	1797.1	8 3/4	273.2	2466.5
9	161.6	2063.3	9	183.6	4658.0	9	207.6	7349.7	9	229.6	10040.6	9	251.6	1807.7	9	273.6	2477.1
9 1/4	162.0	2072.7	9 1/4	184.0	4668.4	9 1/4	208.0	7361.9	9 1/4	230.0	10052.3	9 1/4	252.0	1818.3	9 1/4	274.0	2487.7
9 1/2	162.4	2082.1	9 1/2	184.4	4678.8	9 1/2	208.4	7374.2	9 1/2	230.4	10064.0	9 1/2	252.4	1828.9	9 1/2	274.4	2498.3
9 3/4	162.8	2091.5	9 3/4	184.8	4689.2	9 3/4	208.8	7386.4	9 3/4	230.8	10075.7	9 3/4	252.8	1839.5	9 3/4	274.8	2508.9
10	163.2	2100.9	10	185.2	4699.6	10	209.2	7398.7	10	231.2	10087.4	10	253.2	1850.1	10	275.2	2519.5
10 1/4	163.6	2110.3	10 1/4	185.6	4710.0	10 1/4	209.6	7410.9	10 1/4	231.6	10099.1	10 1/4	253.6	1860.7	10 1/4	275.6	2530.1
10 1/2	164.0	2119.7	10 1/2	186.0	4720.4	10 1/2	210.0	7423.2	10 1/2	232.0	10110.8	10 1/2	254.0	1871.3	10 1/2	276.0	2540.7
10 3/4	164.4	2129.1	10 3/4	186.4	4730.8	10 3/4	210.4	7435.4	10 3/4	232.4	10122.5	10 3/4	254.4	1881.9	10 3/4	276.4	2551.3
11	164.8	2138.5	11	186.8	4741.2	11	210.8	7447.7	11	232.8	10134.2	11	254.8	1892.5	11	276.8	2561.9
11 1/4	165.2	2147.9	11 1/4	187.2	4751.6	11 1/4	211.2	7459.9	11 1/4	233.2	10145.9	11 1/4	255.2	1903.1	11 1/4	277.2	2572.5
11 1/2	165.6	2157.3	11 1/2	187.6	4762.0	11 1/2	211.6	7472.2	11 1/2	233.6	10157.6	11 1/2	255.6	1913.7	11 1/2	277.6	2583.1
11 3/4	166.0	2166.7	11 3/4	188.0	4772.4	11 3/4	212.0	7484.4	11 3/4	234.0	10169.3	11 3/4	256.0	1924.3	11 3/4	278.0	2593.7
12	166.4	2176.1	12	188.4	4782.8	12	212.4	7496.7	12	234.4	10181.0	12	256.4	1934.9	12	278.4	2604.3
12 1/4	166.8	2185.5	12 1/4	188.8	4793.2	12 1/4	212.8	7508.9	12 1/4	234.8	10192.7	12 1/4	256.8	1945.5	12 1/4	278.8	2614.9
12 1/2	167.2	2194.9	12 1/2	189.2	4803.6	12 1/2	213.2	7521.2	12 1/2	235.2	10204.4	12 1/2	257.2	1956.1	12 1/2	279.2	2625.5
12 3/4	167.6	2204.3	12 3/4	189.6	4814.0	12 3/4	213.6	7533.4	12 3/4	235.6	10216.1	12 3/4	257.6	1966.7	12 3/4	279.6	2636.1
13	168.0	2213.7	13	190.0	4824.4	13	214.0	7545.7	13	236.0	10227.8	13	258.0	1977.3	13	280.0	2646.7
13 1/4	168.4	2223.1	13 1/4	190.4	4834.8	13 1/4	214.4	7557.9	13 1/4	236.4	10239.5	13 1/4	258.4	1987.9	13 1/4	280.4	2657.3
13 1/2	168.8	2232.5	13 1/2	190.8	4845.2	13 1/2	214.8	7570.2	13 1/2	236.8	10251.2	13 1/2	258.8	1998.5	13 1/2	280.8	2667.9
13 3/4	169.2	2241.9	13 3/4	191.2	4855.6	13 3/4	215.2	7582.4	13 3/4	237.2	10262.9	13 3/4	259.2	2009.1	13 3/4	281.2	2678.5
14	169.6	2251.3	14	191.6	4866.0	14	215.6	7594.7	14	237.6	10274.6	14	259.6	2019.7	14	281.6	2689.1

GARLOCK  THE STANDARD PACKING OF THE WORLD

STEAM TABLE

Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.
5	228	39	283	72	317	110	344	176	378	241	403
6	230	40	287	73	318	112	345	178	378	243	404
7	233	41	288	74	319	114	346	180	379	245	404
8	235	42	289	75	320	116	348	182	380	247	405
9	237	43	290	76	321	118	349	184	381	249	405
10	240	44	291	77	321	120	350	186	382	251	406
11	242	45	292	78	322	122	351	188	383	253	407
12	244	46	293	79	323	124	352	190	384	255	407
13	246	47	294	80	324	126	353	192	384	257	408
14	248	48	295	81	324	128	354	194	385	259	409
15	250	49	297	82	325	130	355	196	386	261	409
16	252	50	298	83	326	132	356	198	387	263	410
17	254	51	299	84	327	134	357	200	388	265	411
18	255	52	300	85	327	136	358	202	388	267	411
19	257	53	301	86	328	138	360	204	389	269	412
20	259	54	302	87	329	140	361	206	390	271	413
21	261	55	302	88	330	142	362	208	391	273	413
22	262	56	303	89	330	144	363	210	391	275	414
23	264	57	304	90	331	146	364	212	392	277	415
24	265	58	305	91	332	148	365	214	393	279	415
25	267	59	306	92	332	150	366	216	394	281	416
26	268	60	307	93	333	152	367	218	394	283	416
27	270	61	308	94	334	154	368	220	395	285	417
28	271	62	309	95	334	156	368	222	396	287	418
29	273	63	310	96	335	158	369	224	397	289	418
30	274	64	311	97	336	160	370	226	397	291	419
31	275	65	312	98	336	162	371	228	398	293	419
32	277	66	312	99	337	164	372	230	399	295	420
33	278	67	313	100	338	166	373	232	400	297	420
34	279	68	314	102	339	168	374	234	400	299	421
35	281	69	315	104	340	170	375	236	401	301	422
36	282	70	316	106	341	172	376	238	401	303	422
37	283	71	317	108	343	174	377	239	402	305	423
38	284										

TABLE OF WATER HEADS AND EQUIVALENT PRESSURES

(To estimate any pressure, multiply the head (in feet) by .433. The result is lbs. per square inch.)

Head in Feet	Pressure Lbs. per Sq. In.	Head in Feet	Pressure Lbs. per Sq. In.	Head in Feet	Pressure Lbs. per Sq. In.	Head in Feet	Pressure Lbs. per Sq. In.
5	2.17	80	34.64	275	119.08	700	303.10
10	4.33	90	38.97	300	129.90	750	324.75
15	6.50	100	43.30	350	151.55	800	346.40
20	8.66	125	54.13	400	173.20	850	368.05
30	12.99	150	64.95	450	194.85	900	389.70
40	17.32	175	75.78	500	216.50	950	411.35
50	21.65	200	86.60	550	238.15	1000	433.00
60	25.98	225	97.43	600	259.80	1100	476.30
70	30.31	250	108.25	650	281.45	1200	519.60

THE STANDARD PACKING OF THE WORLD  GARLOCK

DIMENSIONS OF GASKETS FOR STANDARD AND LOW PRESSURE FLANGES A.S.M.E. 1928 STANDARD

Size of Pipe	Ring Gaskets		Full Faced Gaskets		Size of Pipe	Ring Gaskets		Full Faced Gaskets	
	I. D.	O. D.	I. D.	O. D.		I. D.	O. D.	I. D.	O. D.
3/4"	1"	2 1/4"	1"	3 1/2"	40"	40"	43 1/2"	40"	50 1/2"
1"	1 1/4"	2 3/4"	1 1/4"	4 1/2"	42"	42"	45 1/2"	42"	52 1/2"
1 1/4"	1 3/4"	3"	1 3/4"	4 3/4"	44"	44"	47 1/2"	44"	54 1/2"
1 1/2"	2"	3 1/4"	1 1/2"	5"	46"	46"	49 1/2"	46"	56 1/2"
2"	2 1/4"	3 3/4"	2"	5 1/2"	48"	48"	51 1/2"	48"	58 1/2"
2 1/2"	2 3/4"	4"	2 1/2"	6"	50"	50"	53 1/2"	50"	60 1/2"
3"	3"	4 1/4"	3"	6 1/2"	52"	52"	55 1/2"	52"	62 1/2"
3 1/2"	3 1/4"	4 3/4"	3 1/2"	7"	54"	54"	57 1/2"	54"	64 1/2"
4"	4"	5"	4"	7 1/2"	56"	56"	59 1/2"	56"	66 1/2"
4 1/2"	4 1/4"	5 1/4"	4 1/2"	8"	58"	58"	61 1/2"	58"	68 1/2"
5"	5"	5 3/4"	5"	8 1/2"	60"	60"	63 1/2"	60"	70 1/2"
6"	6"	6 3/4"	6"	9"	62"	62"	65 1/2"	62"	72 1/2"
7"	7"	7 3/4"	7"	9 1/2"	64"	64"	67 1/2"	64"	74 1/2"
8"	8"	8 3/4"	8"	10"	66"	66"	69 1/2"	66"	76 1/2"
9"	9"	9 3/4"	9"	10 1/2"	68"	68"	71 1/2"	68"	78 1/2"
10"	10"	10 3/4"	10"	11"	70"	70"	73 1/2"	70"	80 1/2"
12"	12"	12 3/4"	12"	12 1/2"	72"	72"	75 1/2"	72"	82 1/2"
14"	14"	14 3/4"	14"	13"	74"	74"	77 1/2"	74"	84 1/2"
16"	16"	16 3/4"	16"	13 1/2"	76"	76"	79 1/2"	76"	86 1/2"
18"	18"	18 3/4"	18"	14"	78"	78"	81 1/2"	78"	88 1/2"
20"	20"	20 3/4"	20"	14 1/2"	80"	80"	83 1/2"	80"	90 1/2"
22"	22"	22 3/4"	22"	15"	82"	82"	85 1/2"	82"	92 1/2"
24"	24"	24 3/4"	24"	15 1/2"	84"	84"	87 1/2"	84"	94 1/2"
26"	26"	26 3/4"	26"	16"	86"	86"	89 1/2"	86"	96 1/2"
28"	28"	28 3/4"	28"	16 1/2"	88"	88"	91 1/2"	88"	98 1/2"
30"	30"	30 3/4"	30"	17"	90"	90"	93 1/2"	90"	100 1/2"
32"	32"	32 3/4"	32"	17 1/2"	92"	92"	95 1/2"	92"	102 1/2"
34"	34"	34 3/4"	34"	18"	94"	94"	97 1/2"	94"	104 1/2"
36"	36"	36 3/4"	36"	18 1/2"	96"	96"	99 1/2"	96"	106 1/2"
38"	38"	38 3/4"	38"	19"	98"	98"	101 1/2"	98"	108 1/2"
40"	40"	40 3/4"	40"	19 1/2"	100"	100"	103 1/2"	100"	110 1/2"

DIMENSIONS OF GASKETS FOR MEDIUM AND EXTRA HEAVY FLANGES A.S.M.E. 1928 STANDARD

Size of Pipe	Ring Gaskets		Full Faced Gaskets		Size of Pipe	Ring Gaskets		Full Faced Gaskets	
	I. D.	O. D.	I. D.	O. D.		I. D.	O. D.	I. D.	O. D.
1"	1"	2 1/4"	1"	4 1/4"	16"	16"	21 1/4"	16"	23 1/2"
1 1/4"	1 1/4"	3 1/4"	1 1/4"	5 1/4"	18"	18"	23 1/4"	18"	25 1/2"
1 1/2"	1 1/2"	3 3/4"	1 1/2"	5 3/4"	20"	20"	25 1/4"	20"	27 1/2"
2"	2"	4"	2"	6"	22"	22"	27 1/4"	22"	29 1/2"
2 1/2"	2 1/2"	4 1/4"	2 1/2"	6 1/4"	24"	24"	29 1/4"	24"	31 1/2"
3"	3"	4 1/2"	3"	6 1/2"	26"	26"	31 1/4"	26"	33 1/2"
3 1/2"	3 1/2"	4 3/4"	3 1/2"	6 3/4"	28"	28"	33 1/4"	28"	35 1/2"
4"	4"	5"	4"	7"	30"	30"	35 1/4"	30"	37 1/2"
4 1/2"	4 1/2"	5 1/4"	4 1/2"	7 1/4"	32"	32"	37 1/4"	32"	39 1/2"
5"	5"	5 1/2"	5"	7 1/2"	34"	34"	39 1/4"	34"	41 1/2"
6"	6"	6 1/4"	6"	8"	36"	36"	41 1/4"	36"	43 1/2"
7"	7"	7 1/4"	7"	8 1/4"	38"	38"	43 1/4"	38"	45 1/2"
8"	8"	8 1/2"	8"	8 1/2"	40"	40"	45 1/4"	40"	47 1/2"
9"	9"	9 1/4"	9"	9 1/4"	42"	42"	47 1/4"	42"	49 1/2"
10"	10"	10 1/4"	10"	10 1/4"	44"	44"	49 1/4"	44"	51 1/2"
12"	12"	12 1/4"	12"	12 1/4"	46"	46"	51 1/4"	46"	53 1/2"
14"	14"	14 1/4"	14"	14 1/4"	48"	48"	53 1/4"	48"	55 1/2"
15"	15"	15 1/4"	15"	15 1/4"			55 1/4"	48"	57 1/2"

GARLOCK  THE STANDARD PACKING OF THE WORLD

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