

Colt Industries



Garlock Inc
Mechanical Packing Division
Construction Products
1666 Division Street
Palmyra, New York 14522
315/597-4811

September 13, 1978

Celanese Chemical Co.,
Box 428,
Bishop, Texas. 78343

ATTENTION: Mr. Mark A. Hanson

Gentlemen:

We have reviewed the Call Report of our Mr. H. Corn, which included pictures and small material samples from the Garlock expansion joints in service for two (2) years on pre-heated combustion air for furnaces at your plant.

Although there is no evidence of leakage, it is apparent that the dry heat has heat aged the rubber cover so it is now beginning to crack and get quite hard. The cover material was chlorobutyl rubber, which has a top operating temperature of 300°F. It appears that this temperature was exceeded, probably because of the high ambient temperature in this area. The remainder of the materials used in your expansion joints have a high enough temperature rating that we do not believe the cover cracking will cause a complete failure of the joint.

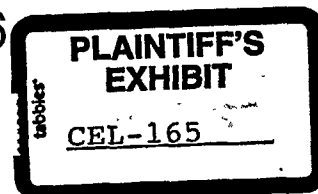
In non-metallic expansion joints, it is desirable to have a setback, so that the joint is not located right at the duct ID, as is the case in this installation. We therefore feel that a belt type joint located at the flange OD would make for a better installation. We propose that 3" x 4" mounting angles be used with a belt type joint having a radius corner design. This is shown in the attached drawing.

Furthermore, we propose that you use a Series "800" expansion joint with a TFE/fiberglass cover rather than the chlorobutyl cover currently in service.

The price for the Series "800" belt type expansion joint would be \$517.66 net each, not including the angle iron mounting frames but including the retaining bars.

CONT'D....

001996



Page 2
Celanese Chemical Co.
September 13, 1978

If you prefer Garlock to furnish the 3" x 4" mounting angle frames, the additional cost would be \$250.00 net each joint. These mounting frames would be pre-drilled and would include the 6" radius corners. It would be necessary for you to flame cut the corners from your existing flanges, bolt in the mounting angle irons and mount the Series "800" belt over the mounting frame.

Very truly yours,

(D B Keep) ip

D. B. Keep
Director - Engineering & Sales

DBK/ip
Encl.

CC: Ekholm & Henderson, Inc.
9730 Town Park, Suite 101A,
Houston, Texas. 77036 (encl. 1)
Mr. H. Corn - Garlock Inc. (encl. 1)

001997

No 240041 50129

SHIP TO: CELANESE CHEMICAL COMPANY

☐ AIR FREIGHT - MP RAILWAY, CHEMCEL, TEXAS
V ☒ MOTOR TRUCK - BISHOP, TEXAS
S ☐ RAILWAY EXP. - BISHOP, TEXAS
A ☐ PARCEL POST - BOX 1238, KINGSVILLE, TEXAS 78363

SUBJECT TO ALL THE TERMS AND CONDITIONS ON THE FACE AND BACK HEREOF AND ATTACHED HERETO BY BUYER, ALL OF WHICH ARE A PART OF THIS ORDER. 191

TOTAL AMOUNT	39.002
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001998

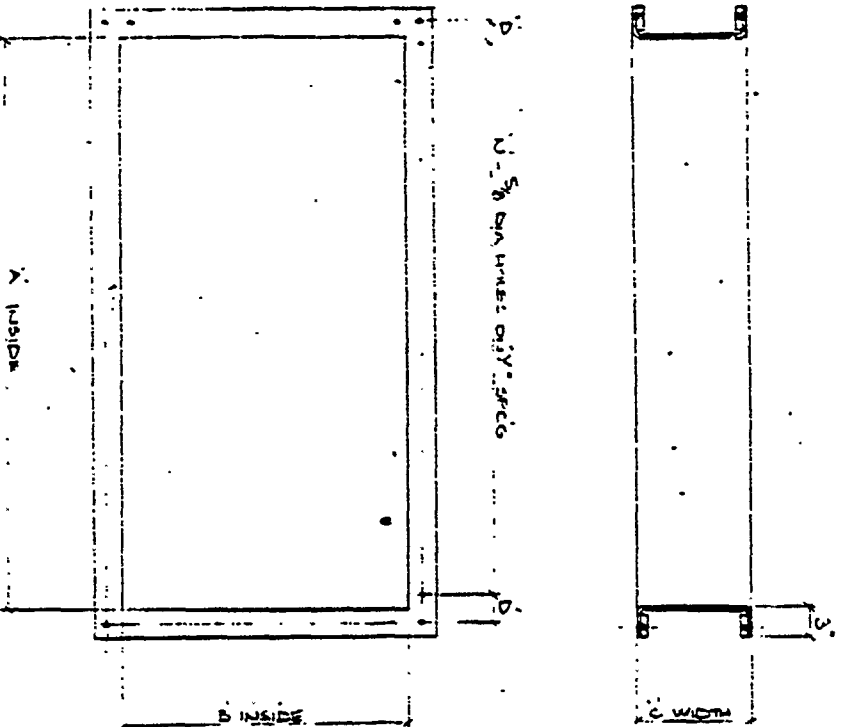
BY

"C. A. Robbins"

DESCRIPTION	QUANTITY	UNIT OF MEAS.	UNIT PRICE	AMOUNT
Celanese "Conditions of Order" will apply. Acceptance of this order constitutes certification by the Vendor that the prices listed hereon do not exceed those permitted under the Federal Government's Wage Price Guideline now in effect during the term of this order. BILLING: All Bills on this project will be paid directly by Celanese Chemical Company, Division of Celanese Corporation. Address your bills directly to Celanese Chemical Company, P.O. Box 1359, Kingsville, Texas 78363, Attention: R.E. Mansell. Your bills must be identified with the Celanese purchase order and item numbers. If this requirement is not met, your bills must be returned for correction. Send the original invoice only. No, extra copies are required or desired. Celanese will make any additional copies, if needed. All invoices charging freight are to be supported by original receipted FREIGHT BILLS. EQUAL OPPORTUNITY CLAUSE: Vendor agrees to comply with all the terms and conditions of Form Gen. 2425, titled "Celanese Corporation Equal Opportunity Clause" which is attached and made a part hereof. Vendors Data and Drawings to be furnished as per Form No. #690, attached. The attached, circled "Standard Purchasing Clauses" will apply-Nos. 3,6,8,9,11,12,14,15,26,33,34,36, 38,41,42, and 44.				
001999				

000200

CONFIDENTIAL. THIS DOCUMENT AND THE INFORMATION HEREIN IS CONFIDENTIAL AND MAY NOT BE DISCLOSED TO ANY PERSON OR ORGANIZATION EXCEPT AS PERMITTED IN WRITING BY DAVY POWERGAS INC. ALL CONTENTS OF THIS DOCUMENT AND ALL COPIES OF IT ARE THE PROPERTY OF DAVY POWERGAS INC. AND ARE LENT UPON THE EXPRESS CONDITION THAT THEY ARE SUBJECT TO RETURN UPON DEMAND.



FOOT	EXPLANATIONS												DESIGN PRESS	DESIGN TEMP	INLET SIZE	INLET LENGTH	INLET LATERAL	SERIAL
	A	B	C	D	E	F	G	H	I	J	K	L						
FT 5	10-34	2-58	9-24	2-12	5-23	2-12	5-23	2-12	5-23	2-12	5-23	2-12	35 W.C.	300°F	2	1/2"	1/4"	A/C
FT 8	11"	11"	5-17 1/4"	-	-	-	-	-	-	-	-	-	21 W.C.	650°F (4 state)	95	1/2"	2"	"
FT 9	2-44	5-7	6-34	3-27	4-12	2-12	5-23	2-12	5-23	2-12	5-23	2-12	21 W.C.	A/C	1	1/4"	1/4"	"
FT 10	6-14	5-17	6-2	2-12	5-23	2-12	5-23	2-12	5-23	2-12	5-23	2-12	30 W.C.	300°F	1	1/4"	1/4"	"

- GENERAL NOTES:
1. CLAMPING BY R3 SHALL BE SUPPLIED BY LWF/1000000
 2. BUNTS SHALL BE SUPPLIED BY DUCTWORK VENDOR

REV	DESCRIPTION OF MODIFICATION MADE	BY	APPROV	DATE	DRAWN BY	DATE	CHECKED BY	DATE	SERVICE	AIR DUCTWORK	EXP. L. P. C. T. Q. U. I. T. Y. E. S. S. A. G. A. I. N.	CLIENT	HE 2530-21	REV	4207-01-V0107	SHEET NO. 1 OF 1	DAVY Powergas Inc.

INVOICING
Serial
Part

CELANESE CHEMICAL COMPANY
A DIVISION OF
P. O. BOX 1238, KINGSVILLE, TEXAS 78363

MUST BE SHOWN ON ALL SHIPMENTS,
INVOICES, AND OTHER DOCUMENTS.

No. 0021-50129 Sup

DATE 9-19-75	SHIPPING DATE 11-10-75	SHIP TO JOBSITE-DISHOP, TEXAS	TERMS OF PAYMENT Net 30 Days
QUOTES	ORDER NO. R64A2	W.O./EST./ACCT. NO. 2-1929-149-402	

SHIP TO: CELANESE CHEMICAL COMPANY

V
E
N
D
O
R

GARLOCK, INC.
MECHANICAL RUBBER DIVISION
DIVISION STREET
PALMYRA, NEW YORK 14522

- ☐ RAIL FREIGHT - MP RAILWAY, CIEMCEL, TEXAS
☒ MOTOR TRUCK - BISHOP, TEXAS
☐ RAILWAY EXP. - BISHOP, TEXAS
☐ PARCEL POST - BOX 1238, KINGSVILLE, TEXAS 78363

DESCRIPTION	QUANTITY	UNIT OF MEASURE	UNIT PRICE	AMOUNT
This supplement is issued to change original purchase as follows: Tag No. HE-2530-21 Expansion Joint MK-EJ-8 Joint Type Revised From Fiberglass/Silicone to Series 800 REVISED UNIT PRICE 530.00 ea. PREVIOUS UNIT PRICE 355.00-ea. NET UNIT PRICE INCREASE 175.00 ea.	95	ea.		16,625.00
Change Drawing 4207-01-V0705, Sheet 1 of 1, Revision 0, Dated 7-9-75 to read: 4207-01-V0701, Sheet 1 of 1, Revision 1, Dated 9-8-75.			N/C	
RECAP FOR ACCOUNTING PURPOSES ONLY Previous P.O. Total 39,902.00 Added this Supp. "A" 16,625.00 Revised P.O. Total 56,527.00				

SUBJECT TO ALL THE TERMS AND CONDITIONS ON THE FACE AND BACK HEREOF AND ATTACHED HERETO BY BUYER, ALL OF WHICH ARE A PART OF THIS ORDER. 444 TOTAL AMOUNT pb

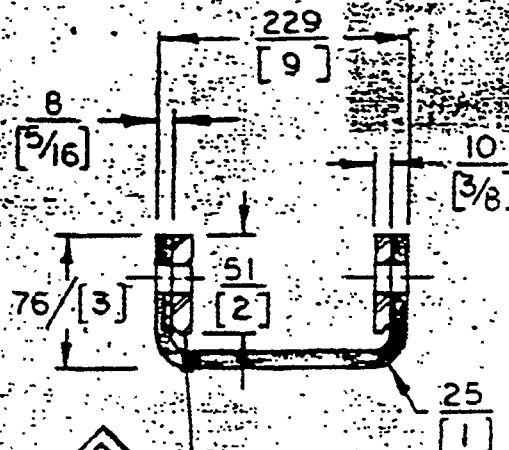
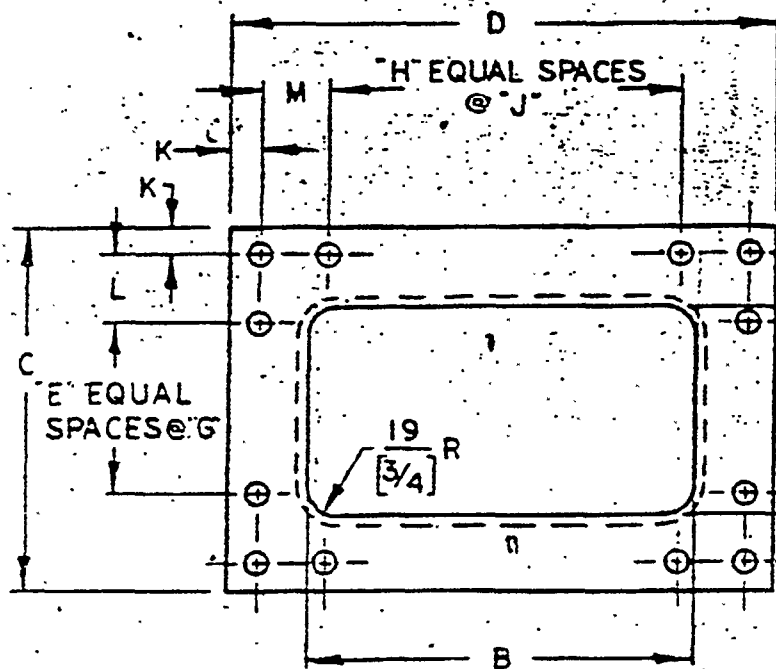
RECEIPTS							PAYMENTS				
DATE	CARRIER	P.P.	COLLECT	PRO NO	WT.	REC'D BY	INVOICE DATE	QUANTITY	AMOUNT	PAY TO DATE	VOUCHER NO

002001

BY R. C. Robbins
C. A. Robbins

TITLE EXPANSION JOINT - STYLE 8400

CUSTOMER: CELANESE CHEMICAL Co. PROJECT NO. 4207
CUSTOMER ORDER NO. 040041-50129 GARLOCK ORDER NO. 511-5-01424



METRIC

*PLEASE REVISE JNT MK ET-8 TO SERIES 8J8 UNDER SUPPLEMENT TO FOLLOW

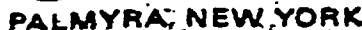
*: 650°F FOR SHORT DURATION

ITEM NO.	A	B	C	D	E	G	H	J	K	L	M	DIA HOLES	NO. HOLES	TAG NO.
2 REZ	2' 5 1/2"	10' 3 3/4"	2' 11 1/2"	10' 9 3/4"	1"	2 1/2"	4"	2 1/2"	1 5/8"	2 1/8"	2 5/8"	5/8"	128	MK-ES-5
45 REZ	11"	11"	17"	17"	-	-	-	-	1 1/8"	7 7/8"	7 7/8"	5/8"	8	MK-ES-8

ITEM NO.	MATERIAL	TEMPERATURE		FLUID	PRESSURE		MOVEMENTS		
		°C MAX.	°F MAX.		BAR	PSI	COMP.	ELONG.	TRANS.
1	ASBESTOS CHLOR. BUTYL	300	500	AIR		35" H.G.	2	1/2	± 1 1/2
2	FIBERGLASS SILICONE	650	1200	AIR		21" H.G.	2	1/2	± 2

THIRD ANGLE PROJECTION THIS DRAWING IS MILLIMETER OR MILLIMETER/[INCH]
PROJECTION DUAL DIMENSIONED [INCH]

DRAWN BY [Signature] APPROVED BY [Signature]



ISSUE

DATE _____

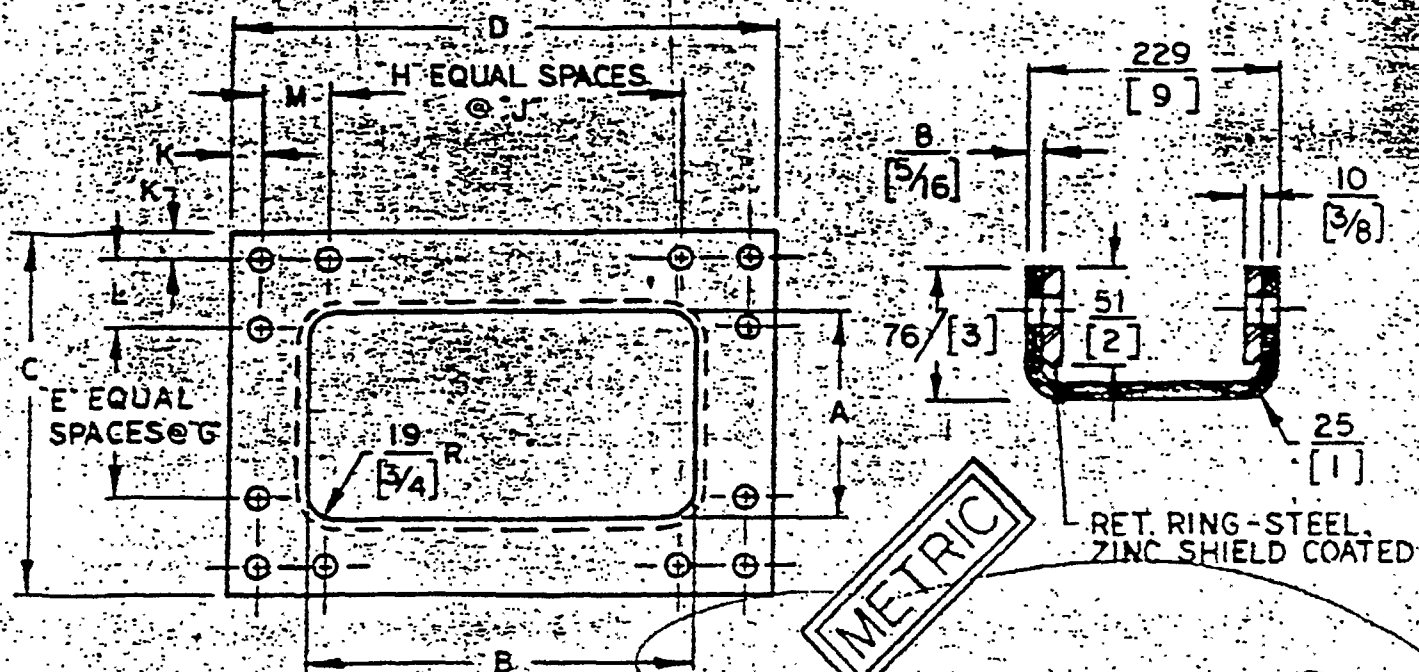
SKETCH NO. 92966

TITLE EXPANSION JOINT - STYLE 8400

CUSTOMER: CELANESE CHEMICAL Co. PROJECT No. 4207

CUSTOMER ORDER NO. 040041-50129

GARLOCK ORDER NO. 511-5-014 28



* ~~65°F~~ FOR SHORT DURATION

USE INT 68 TO SERIES END

ITEM NO.	A	B	C	D	E	G	H	J	K	L	M	DIA HOLES	NO. HOLES	TAG NO.
2 REG	[2'5 1/2"]	[10'3 3/4"]	[2'11 1/2"]	[10'9 3/4"]	1)	[2 1/2]	49	[2 1/2]	[1 5/8]	[2 1/4]	[2 5/8]	[5/8]	128	MK-EJ-5
95 REG	[11"]	[11"]	[17"]	[17"]	—	[—]	—	[—]	[1 1/4]	[7 3/4]	[7 3/4]	[5/8]	8	MK-EJ-8

ITEM NO.	MATERIAL	TEMPERATURE		FLUID	PRESSURE		MOVEMENTS		
		°C MAX.	°F MAX.		BARS	PSI	COMP.	ELONG.	TRANS.
1	ASBESTOS & CHLOROBUTYL		300	AIR		35" H.G.	[2]	[1/2]	[± 1 1/2]
2	FIBERGLASS SILICONE		600 *	AIR		21" H.G.	[2]	[1/2]	[± 2]


 THIRD ANGLE PROJECTION
 THIS DRAWING IS DUAL DIMENSIONED

MILLIMETER
INCH

 OR MILLIMETER/[INCH]

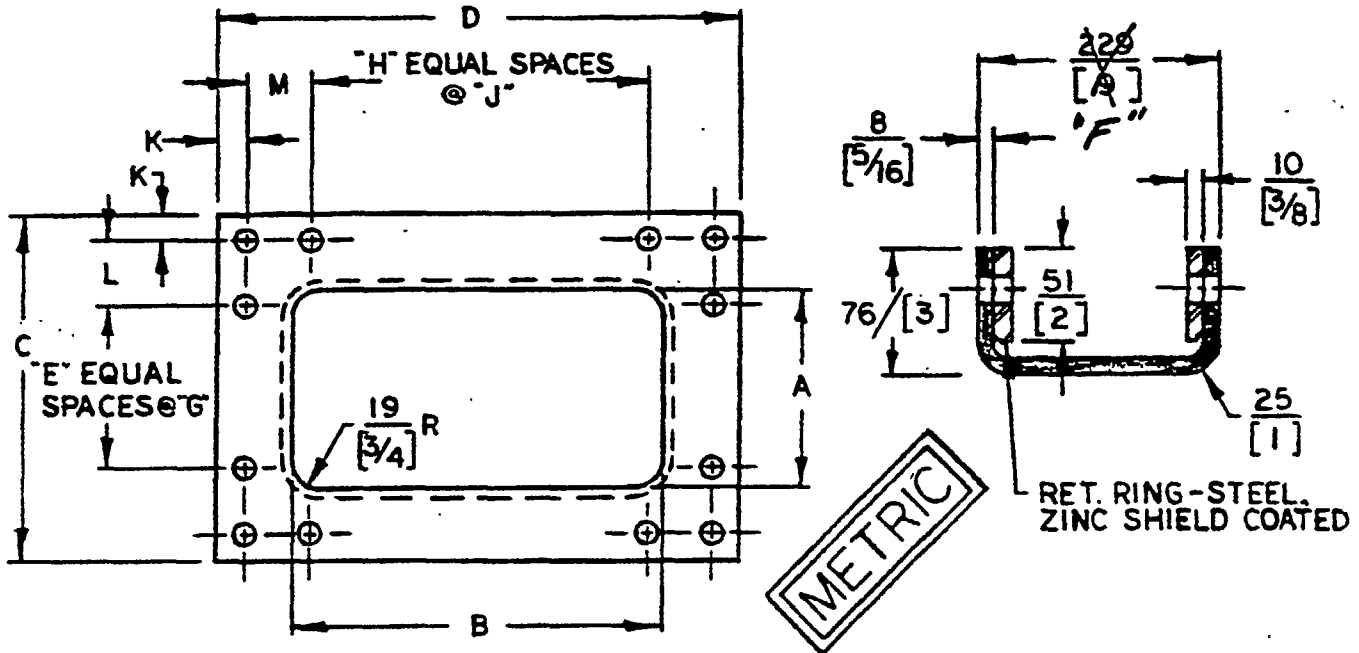
DRAWN BY	<i>P. S. S. S.</i>	APPROVED BY
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2	ITEM 2 TRANS.
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SKETCH NO. 92966
002003

TITLE EXPANSION JOINT - STYLE 8400

CUSTOMER: CELANESE CHEMICAL CO. PROJECT NO. 4207
CUSTOMER ORDER NO. 040041-50129 GARLOCK ORDER NO. 511-5-01424



ITEM NO.	A	B	C	D	E	G	H	J	K	L	M	DIA HOLES	NO. HOLES	TAG NO.
1	[2'5 1/2"]	[10'33 1/4"]	[2'11 1/2"]	[10'9 3/4"]	11	[2 1/2]	49	[2 1/2]	[1 5/16]	[2'1 1/4"]	[2'5 1/4"]	[5/8]	128	MK-ES-
2	[11"]	[11"]	[17"]	[17"]	-	[11"]	-	[11"]	[1 1/4]	[7 7/16]	[7 7/16]	[5/8]	8	MK-ES-

THIS IS WHERE THEY CHANGE TO 800 SER.

ITEM NO.	MATERIAL	TEMPERATURE		FLUID	PRESSURE		MOVEMENTS			"F"
		°C MAX.	°F MAX.		BARS	PSI	COMP.	ELONG.	TRANS.	
1	ASBESTOS & CHLOROBUTYL		300	AIR		35" H.G.	[2]	[1/2]	[± 1 1/2]	9"
2	FIBERGLASS HIGH TEMP ELASTOMER		600	AIR		21" H.G.	[2]	[1/2]	[± 2]	10 5/16" 800 SER.

THIRD ANGLE PROJECTION THIS DRAWING IS DUAL DIMENSIONED MILLIMETER OR MILLIMETER/[INCH]

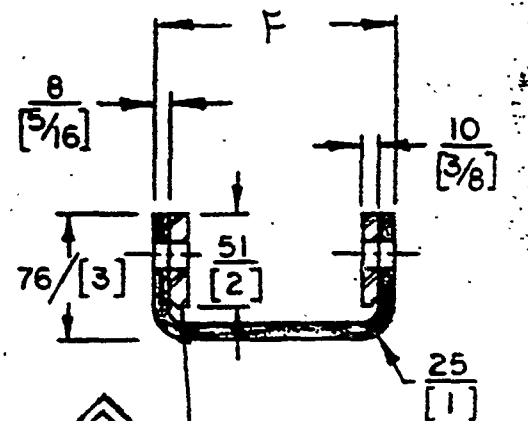
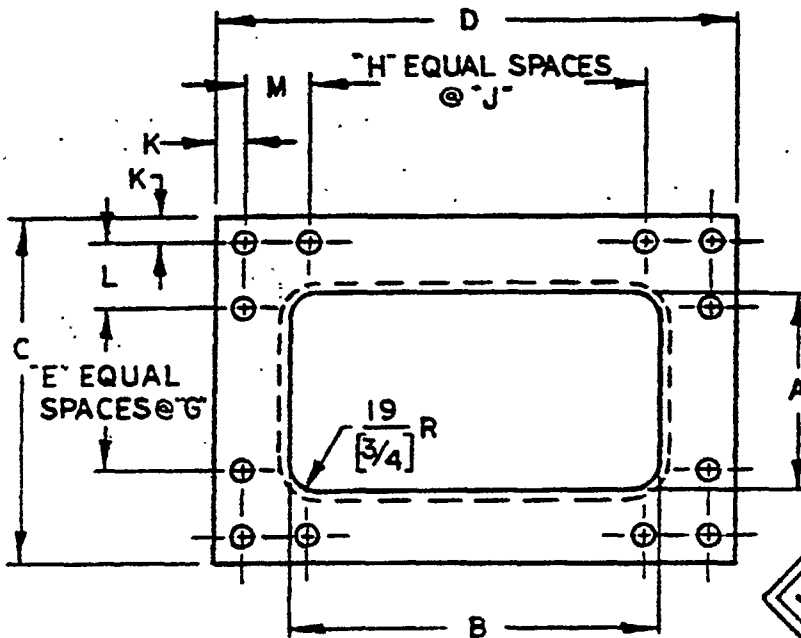
DRAWN BY Reddick APPROVED BY
2 ITEM 2 TRANS. 3 ITEM 2 TRANS. WAS 9 SKETCH NO. 92966
002004

TITLE EXPANSION JOINT - STYLE 8400

CUSTOMER: CELANESE CHEMICAL CO. PROJECT NO. 4207

CUSTOMER ORDER NO. 040041-50129

GARLOCK ORDER NO. 511-5-01424



METRIC

RET. RING-STEEL,
ZINC SHIELD COATED

ITEM NO.	A	B	C	D	E	G	H	J	K	L	M	DIA HOLES	NO. HOLES	TAG NO.
1	2'5 1/2"	10'3 3/4"	2'11 1/2"	10'9 3/4"	11	2 1/2	49	2 1/2	1 5/8	2 1/4	2 5/16	5/8	128	MK-EJ-3
2	11"	11"	17"	17"	-	-	-	-	1 1/4	7 7/16	7 7/16	5/8	8	MK-EJ-5

ITEM NO.	MATERIAL	TEMPERATURE		FLUID	PRESSURE		MOVEMENTS			"F"	
		°C MAX.	°F MAX.		BARS	PSI	COMP.	ELONG.	TRANS.		
1	ASBESTOS CHLOROBUTYL		300	AIR		35" H.G.	2	1/2	± 1 1/2	9"	
2	FIBERGLASS HIGH TEMP. ELASTOMER		800	AIR		21" H.G.	2	1/2	± 2	10 5/16"	800 SERIES

THIRD ANGLE PROJECTION THIS DRAWING IS DUAL DIMENSIONED MILLIMETER OR MILLIMETER/[INCH]

DRAWN BY Reddy APPROVED BY

2 ITEM 2 TRANS. 3 ITEM 2 F.F. WAS 9 4 8000 WAC 111

SKETCH NO. 92966
002005

DEC 3 '75

SHEET
ISSUE
DATE

SKETCH NO. 92766

EXCEPT ON REQUEST.
TITLE EXPANSION JOINT - STYLE 8400

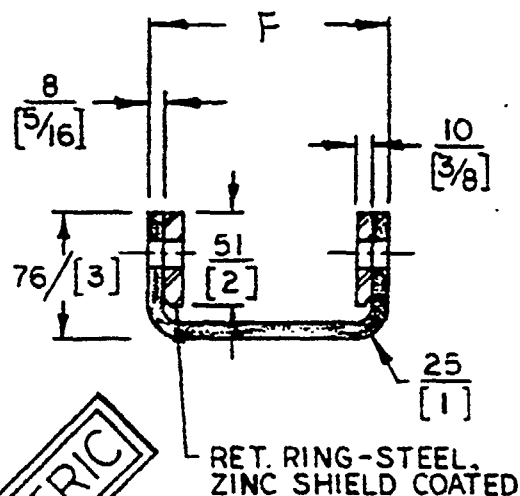
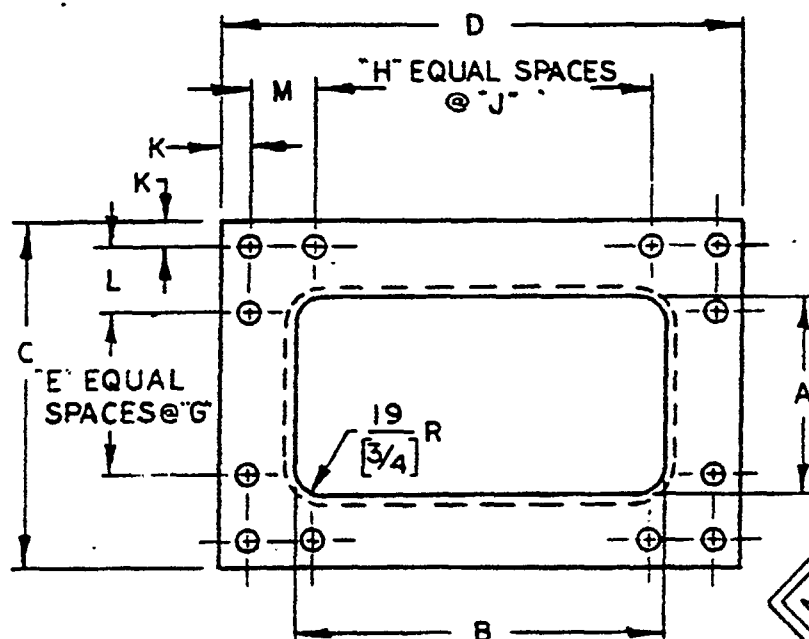
Supersedes Previous

DEC 3 1955

CUSTOMER: CELANESE CHEMICAL CO. PROJECT No. 4207

CUSTOMER ORDER NO. 040041-50129

GARLOCK ORDER NO. 511-5-01424



ITEM NO.	A	B	C	D	E	G	H	J	K	L	M	DIA HOLES	NO. HOLES	TAG NO.
1	[2'5½"]	[10'3¾"]	[7'11½"]	[10'9¾"]	1)	[2½]	49	[2½]	[15½]	[21½]	[25½]	[5/8]	128	MX-EJ-5
2	[11"]	[11"]	[17"]	[17"]	—	[—]	—	[—]	[1½]	[7¾]	[7¾]	[5/8]	8	MX-EJ-8

002006

ITEM NO.	MATERIAL	TEMPERATURE		FLUID	PRESSURE		MOVEMENTS			"F"	
		°C MAX.	°F MAX.		BARS	PSI	COMP.	ELONG.	TRANS.		
1	ASBESTOS CHLOROBUTYL		300	AIR		35" W.G.				9"	
							[2]	[1/2]	[± 1 1/2]		
2	FIBERGLASS + HIGH TEMP ELASTOMER		800	AIR		21" W.G.				10 5/16"	800 SERIE
							[1/2]	[1/4]	[± 1/2]		

THIRD ANGLE PROJECTION

THIS DRAWING IS
DUAL DIMENSIONED

MILLIMETER
[INCH]

OR MILLIMETER/[INCH]

DRAWN BY

APPROVED BY

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2 ITEM 2 7/10/11
W/11/11

3 ITEM#2
F-E WAS 9

4) 3000

5 W.G.
W.A. & H.C.

SKETCH NO.

92 366