

U. S. Flexible Metallic Tubing Co.

Since 1905

KEFLEX MANUFACTURING DIVISION

General Offices—63 Main St., San Francisco 5, Calif.

Factory—Los Angeles

Sales Offices—Agents in Principal Cities of United States and Canada

TYPE 7 Q WITH BRASS FEMALE
THREADED ENDS
Working Pres. 300 PSI Maximum
Temp. 300 F



Nom. I.P.S.	Overall Length	Max. O.D.	Wt. #
1/4"-1.00"-1.25"	6.50"	2.00"	2
1.50"	6.50"	2.50"	3
2.00"	6.50"	3.00"	4
2.50"	6.50"	3.50"	5
3.00"	6.50"	4.00"	6

TYPE 7Q-T WITH COPPER TUBE ENDS
Maximum Pres. 200 PSI Maximum
Temp. 300 F



To Fit Copper Tubing		Overall Length	Max. O.D.	Wt. #
Nominal I.D.	Actual O.D.			
1/4"	1/4"	6.50"	2.00"	115
1/2"	1/2"	6.50	2.00	115
3/4"	3/4"	6.50	2.00	115
1"	1"	6.50	2.00	115
1 1/4"	1 1/4"	10.00	3.00	414
1 1/2"	1 1/2"	10.75	3.50	519
1 3/4"	1 3/4"	11.50	4.00	614

TYPE 11Q-T WITH COPPER TUBE ENDS
Maximum Pres. 150 PSI Maximum
Temp. 300 F



To Fit Copper Tubing		Overall Length	Max. O.D.	Wt. #
Normal I.D.	Actual O.D.			
3/8"	7/8"	4.50"	1.50"	114
1	1 1/4"	4.50	1.50	114
1 1/4	1 3/4"	4.50	1.75	134
1 1/2	1 7/8"	4.50	2.25	2
2	2 1/4"	6.80	2.75	4

TYPE QAB ANCHOR BASE ONLY



Size	0.75"	1.00"	1.50"	2.00"
C/L to Base	1.25	1.50	1.75	1.75
H—Total Depth or Height	3.38	4.13	4.63	4.63
L—Base Length	4.00	4.88	5.38	5.38
W—Base Width	3.00	2.00	3.00	3.00

KEFLEX QUADRA-SIDE EXPANSION COMPENSATORS

FOR STEAM AND HOT WATER HEATING SYSTEMS

KEFLEX Type 7 Q and 7Q-T packless type, expansion compensators are designed to compensate for both expansion and contraction in low or high temperature heating supply lines as well as for fin tube baseboard radiators and convectors.

Type 7 Q has square brass ends with female tapered pipe threads.

Type 7Q-T has female copper tube ends for soldering to copper pipe.

The bellows section, made from highly flexible, multi-ply (two or more plies), Type 321 or 347 stabilized stainless steel, is protected from torsion, squirm, misalignment; and external damage by a square, brass, telescoping case having positive stops against over compression.

The force to compress KEFLEX Quadra-Side Compensators is less than 100 lb; Standard units will accommodate a total traverse of 2 in.; 1 1/4 in. in compression and 1/4 in. in extension. Units for traverse in compression of 3/4 in., 2 in. and 3 in. are available with proportionate extension. Made in sizes 1/4 in. through 3 in.

All KEFLEX Quadra-Side Compensators are provided with a removable screw, set for the indicated traverse in compression.

KEFLEX TYPE 11Q-T QUADRA-SIDE EXPANSION COMPENSATORS

USED WITH CONVECTOR AND FIN TUBE BASEBOARD RADIATION UNITS IN SCHOOLS, HOSPITALS, OFFICES AND COMMERCIAL INSTALLATIONS

KEFLEX Type 11Q-T, packless type, expansion compensators are designed for use in low pressure heating systems where maximum test pressures do not exceed 150 psig. They will compensate for expansion in compression up to 3/4 in. and 1/4 in. in extension—a total traverse to 1 in.

The bellows section, made from Type 321 or 347 stainless steel, is enclosed in a square brass case which slides over a square guide to provide positive protection against torsion, squirm and external damage during installation. Sizes: 1/4 in., 1/2 in., 3/4 in., 1 in. and 2 in. Maximum Working Pressure 100 psig. Maximum Temperature 300 F.

KEFLEX TYPE QAB INTERMEDIATE ANCHOR BRACKET

Type QAB is a heavy bronze bracket for use with KEFLEX Type 7 Q Dual Expansion Compensators as an Intermediate Anchor. The bracket is provided with two holes to facilitate attaching to floor, wall or ceiling. A set screw cinches the bracket tightly to the 7 Q unit and limits the movement to each individual compensator. Suggested for use in long runs of fin tube piping where lines should be segmented between the main anchors.

KEFLEX VIBRATION ABSORBERS

The high flexibility of KEFLEX Vibration Absorbers makes them extremely suitable to absorb vibration from pumps, chillers, and compressors. Keflex Vibration Absorbers are packless type as they have a bellows made from laminated stainless steel, type 321 or 347.

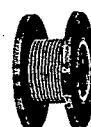
They may also be used as low pressure expansion joints (75 psig) where axial movements of 1/4 in. in compression and 1/4 in. in extension are desired. A lateral movement of 1/4 in. is also obtainable. The close face to face or overall length measurement permits their use in very close quarters where longer lengths of flexible hose would be impracticable.

KEFLEX Type 301 Vibration Absorbers are designed for higher pressure service than Type 151, or Type 71. Reinforcements have been added to withstand pressures over 150 psig. A liner is not standard equipment but is available if required. Dual units with long spacer nipple for lateral movement or correction of misalignment are furnished to specification.

Type 71-21V is fitted with carbon steel mechanical flanges having special elongated bolt holes on series 15 bolt circle. Keflex reattachable flanges may be applied jobsite in making emergency repairs.

Type 151 is fitted with either carbon steel weld ends or 150 lb type rigid flanges having special elongated bolt holes on a series 15 bolt circle to permit easy installation.

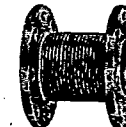
Type 301 is furnished with either carbon steel weld ends or 150 lb type lap joint flanges; 300 lb type flanges are also available.



71-21V



151-2V



151-12V



301-2V

301-14V
301-4-14V (braided)

TYPE	71-21V	151-2V	151-12V	301-2V	301-14V 301-4-14V (braided)
Overall Length	4.75"	11.00"	4.75"	11.00"	11.00"
Sizes 1/4"-3/4" In.	4.75"	11.00"	4.75"	11.00"	11.00"
Max. Work Press. psig	75	150	150	300	300
Max. Temperature Fahr.	300	300	300	300	300
Traverse Compression	0.50"	0.50"	0.50"	0.50"	0.50"
Extension	0.125"	0.125"	0.125"	0.125"	0.125"
Lateral Deflection	0.125"	0.125"	0.125"	0.125"	0.125"

U. S. FLEXIBLE CONNECTORS

BRONZE METAL HOSE with High Tensile Bronze Braid

Install as near to pump as possible in each suction and discharge line for chilled water, hot water, steam, and force pump systems.



FLEXIBLE "BMH" Connectors

FLEXIBLE "BMH" CONNECTORS

BMHN—IPT Nipples Brazed on.
BMHF—125# Cast Iron Flanges Threaded on Nipples.

Suggested Lengths for Average Installations:

Hose I.D. (Inches)	Overall Length	Working Pressure PSI	Approx. Offset Motion	
			Intermitt.	Permanent
1/4"	10"	750	1/4"	1/4"
1/2"	11"	500	1/4"	1/4"
3/4"	12"	350	1/4"	1/4"
1"	13"	250	1/4"	1/4"
1 1/4"	15"	150	1/4"	1/4"
1 1/2"	17"	100	1/4"	1/4"
2"	20"	75	1/4"	1/4"
2 1/2"	25"	50	1/4"	1/4"
3"	30"	35	1/4"	1/4"
3 1/2"	35"	25	1/4"	1/4"
4"	40"	15	1/4"	1/4"



"USF" BRONZE VIBRATION ABSORBERS

"USF" BRONZE VIBRATION ABSORBERS WITH COPPER TUBE ENDS

DAMPEN NOISE PREVENT PIPE LEAKAGE ABSORB VIBRATION CORRECT MISALIGNMENT	To Fit Copper Tubing		Part Number Female Sweat Couplings	L.D. Flex Hose	Overall Unit Length	Working Pressure and Motion same as BMH Flex Connectors
	Nominal I.D.	Actual O.D.				
1/4"	1/4"	1/4"	USF-4	1/4"	8 1/4"	
	1/4"	1/4"	USF-5	1/4"	11 1/4"	
	1/4"	1/4"	USF-6	1/4"	13 1/4"	
	1/4"	1/4"	USF-10	1/4"	14 1/4"	
1/2"	1/2"	1/2"	USF-11	1/2"	17"	
	1/2"	1/2"	USF-12	1/2"	20"	
	1/2"	1/2"	USF-13	1/2"	24"	
	1/2"	1/2"	USF-14	1/2"	27"	
3/4"	3/4"	3/4"	USF-15	3/4"	32 1/4"	
	3/4"	3/4"	USF-16	3/4"	35 1/4"	
	3/4"	3/4"	USF-17	3/4"	38 1/4"	
	3/4"	3/4"	USF-18	3/4"	41"	