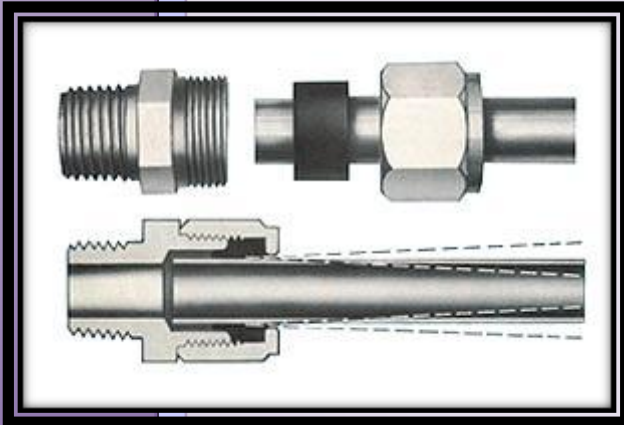
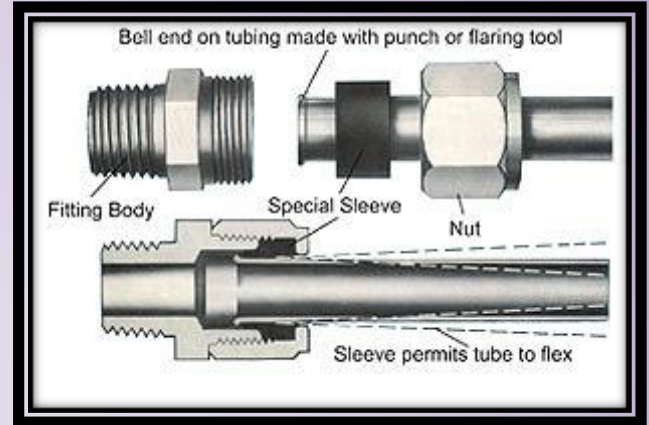


VIBRA - LOK



ASSEMBLED WITHOUT BELLED TUBE

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ASSEMBLED WITH BELLED TUBE

Studies of tubing failure resulting from vibration have shown this failure in the majority of cases to be caused by fracture of the tubing at the point of connection. These fractures are the result of either fatigue of the metal caused by constant vibration and shock, or of distortion of the tube in making the joint.

The **Pioneer** Vibra-Lok fitting makes a joint that is virtually indestructible by vibration and will withstand considerable shock and major tube movement. In the Vibra-Lok fitting. The tubing is cushioned against all such damage by the elastic sleeve.

The sleeve of the Vibra-Lok fitting is made of a special composition Buna-N elastic sealing materials. This elastic sleeve forms a cushion between tubing and fitting. It assures a positive, pressure tight seal, permits the tube to flex back and forth in the fitting. Seal design compensate for tube misalignment and tube surface defects during assembly. Special Vibra-Lok sleeves resist deterioration and retain flexibility over a wide temperature range.

Sizes :

Tube Size	3/16"	1/4"	1/4"	5/16"	3/8"	3/8"	3/8"	1/2"	1/2"	5/8"
Thread Size	1/8"	1/8"	1/4"	1/4"	1/8"	1/4"	3/8"	3/8"	1/2"	1/2"

Fittings available	:	Straight Connectors, Stud Elbow, Branch Tee, Run Tee, Female Stud, Union-Straight Elbow Tee - Available in above tube size & thread size combination.
Maximum Working Pressure	:	1000 psi
Material	:	Elbows and Tees : Brass Forgings - S.A.E. Ca377 Connectors, Unions, Nuts : Stress relieved bar stock - S.A.E. 360 Sleeves : Special elastic sealing material Buna-N used for temperatures from sub-zero to 275oF / 135oC. The sleeve has extreme resistance to deterioration by oil and gasoline. High temperature sleeves made of Viton for use from sub-zero to 450oF / 232oC. Sleeves are compatible for gasoline, oil, diesel fuel, lubricants, vacuum, air and water service.
Compatible Tubing	:	All types of seamed and seamless metal tubing Copper, Aluminum, Thin Wall Steel (Bundy or G.M.), Stainless Steel and Glass.

Assembly Instructions For Lower pressure Applications :

1. Slip tube nut and sleeve over tube.
2. Insert tubing in fitting body as far as it will go and tighten nut until stop is reached. Cut the tube cleanly and squarely removing all burns.
3. There is no danger of overt-tightening. The elastic sleeve ordinarily will extrude slightly around the tube at the end of the nut. This extrusion further aids in isolating the tube from the nut.

Assembly Instructions For Higher pressure Applications :

1. Consult pressure chart to determine if tubing should be belled for your particular application. FIG A.
2. Slip the nut and sleeve over tubing. The sleeve should be positioned near end of tubing Applications just behind the surface to be belled. FIG. B.
3. Bell tubing with standard 45 o flaring tool or 90 o punch. The size of bell should be approximately that shown in FIG. C.

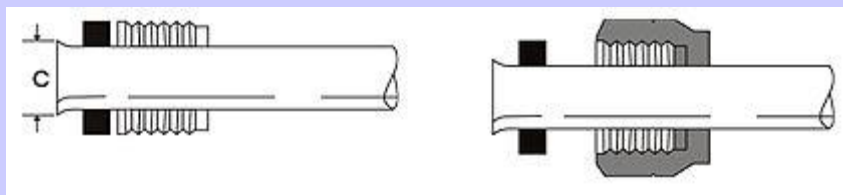
Remark Instructions : All Vibra-Lok fittings can be reassembled repeatedly. New sleeves can easily be added to retain original fitting performance.

PRESSURE CHART :

Condition - Static Pressure						
Tube O.D.	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"
Tube Not Belled in PSI	500	500	450	350	200	-
Tube Belled or Flared in PSI	1000	1000	900	700	500	400
Condition - Minor Surges and / or Vibration						
Tube O.D.	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"
Tube Not Belled in PSI	400	400	325	225	150	-
Tube Belled or Flared in PSI	800	800	700	500	375	300
Condition - Severe Vibration or Shock						
Tube O.D.	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"
Tube Not Belled in PSI	300	300	225	175	100	-
Tube Belled or Flared in PSI	600	600	500	400	250	100

In high Pressure applications & Sizes larger than 1/2" OD, the tube end should belled or flared.

Sleeve Positions and Recommended Size of Bell :



Tube O.D.	1/8"	3/16"	1/4"	5/16"	3/8"	1/2"	5/8"	3/4"	7/8"
Bell Diameter 'C'	.190-.160	.255-.255	.318-.288	.381-.351	.444-.414	.569-.539	.694-.664	.819.789	.944-.914