

Application Data

Important Safety Information

Read this page before using any of the information in this catalog.

This catalog is designed to be used as a guide in selecting the proper hose for the applications listed herein. It contains many cautions, warnings, guidelines, and directions for the safe and proper use of Boston hose. All these directions and footnotes should be read and understood before specifying or using any of these hoses.

Throughout this catalog, potentially harmful situations are highlighted with the following symbols.

 This symbol is used to indicate imminently hazardous situations which, if not avoided, will result in serious injury or death.

 This symbol is used to indicate potentially hazardous situations which, if not avoided, could result in serious injury or death.

 This symbol is used to indicate potentially hazardous situations which, if not avoided, may result in property or equipment damage.

Some of the most common problems in the chemical hose industry result from improper hose and coupling

selection, improper assembly techniques, failure to correctly inspect and test hose assemblies, and improper cleaning practices and hose assembly storage techniques.

In turn, these situations can lead to material leakage, spraying, spattering, end blow-offs, explosions, and other situations that may result in serious personal injury and property damage.

Personal injuries caused by improper hose assembly specification, installation, and usage could include cuts and abrasions, serious burns, irreparable eye damage, or even death.

Therefore, for your safety and the safety of others working around you, Eaton strongly urges you to read and comply with all safety information printed in this publication.

 **WARNING:** Failure to properly follow the manufacturer's recommended procedures for the care, maintenance and storage of a particular hose may result in its failure to perform in the manner intended and may result in serious injury, death, and damage to property.

 **WARNING:** Testing can be dangerous and should be done only by trained personnel using proper tools and procedures. Failure to follow such procedures might result in serious injury, death, or damage to property.

Consult the coupling manufacturer to make sure you choose the correct coupling and proper assembly for the application, or contact Eaton Technical Support.

Before using any hoses in this catalog, consult the safety section in this catalog, and Chemical Compatibility Chart on page 21 or Boston Hose Chemical Resistance Guidelines. If you do not have the most recent copy, contact Eaton Customer Support at 1-888-258-0222.

Selection of Hose

Selection of the proper Boston hose for an application is essential to the proper operation and safe use of the hose and related equipment. Inappropriate hose selection may result in hose leakage, bursting, or other failure which may cause serious bodily injury or property damage from spraying

fluids or flying projectiles. To avoid serious bodily injury or property damage resulting from selection of the wrong hose, you should carefully review the information in this catalog. Some of the factors to consider in proper hose selection are:

- hose size
- hose length
- hose ends
- fluid conveyed
- bends
- temperature
- hose pressure
- static head pressure
- installation design

These factors and the supplemental information contained in this catalog should be considered in selecting the proper hose for your application. If you have any questions regarding the proper hose for your application, please contact Eaton at 1-888-258-0222.

Application Data

Important Safety Information

Proper Selection of Hose Ends

Selection of the proper Boston hose end or coupling is essential to the proper operation and safe use of hose assemblies and related equipment. Inadequate attention to the selection of the end fittings may result in hose leakage, bursting, or other failure which may cause serious bodily injury or property damage from spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from selection of an incompatible hose end or coupling, you should carefully review the information in this catalog. Some of the factors which are involved in the selection of the proper hose couplings are:

- fluid compatibility
- temperature
- installation design
- hose size
- corrosion requirements
- fluid conveyed

The given hose and hose end selection factors and the other information contained in this catalog should be considered by you in selecting the proper hose end fitting for your application.

If you have any questions regarding the use of hose/hose ends, please contact Eaton Technical Support at 1-888-258-0222.

Hose Installation

Proper installation is essential to the proper operation and safe use of the hose assembly and related equipment.

Improper hose assembly installation may result in serious injury or property damage caused by spraying fluids or flying projectiles. In order to avoid serious bodily injury or property damage resulting from improper hose assembly installation carefully review the information in this catalog. Some of the factors to be considered when installing a hose assembly are:

- hose elongation or contraction
- proper bend radius/hose routing under pressure
- elbows and adapters to relieve strain
- protection from rubbing or abrasion high temperature sources
- protection against excessive movement
- twisting from pressure spikes/surges

These hose assembly installation factors and the other information in this catalog should be considered by you before installing the hose assembly. If you have any questions regarding proper hose installation, please contact Eaton Technical Support at 1-888-258-0222.

Hose Maintenance

Proper maintenance of the hose is essential to the safe use of the hose and related equipment. Hose should be stored in a dry place. Hose should also be visually inspected. Any hose that has a cut or gouge in the cover that exposes the reinforcement should be retired from service. Hoses should also be inspected for kinking or broken reinforcement. If the outside diameter of the hose is reduced by 20% or more, the hose should be repaired or removed from service. Inadequate attention to hose maintenance may result in hose leakage, bursting, or other failure which may cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances.

Coll-O-Crimp Hose, Hose Ends and Assembly Equipment Compatibility

The Coll-O-Crimp Equipment Package, Coll-O-Crimp Hose Ends and Coll-O-Crimp Hose have been engineered and designed as a complete hose assembly system. Each component of the Coll-O-Crimp hose assembly system is compatible with other Coll-O-Crimp components to which it relates. Component compatibility, along with the use of quality components, insures the production of reliable hose assemblies when assembled properly. The use or intermixing of fittings and hose not specifically engineered and designed for use with each other and Coll-O-Crimp equipment is not recommended and may result in the production of unsafe or unreliable hose assemblies. This can result in hose assembly leakage, hose separation or other failures which can cause serious bodily injury or property damage from spraying fluids, flying projectiles, or other substances.

Charts

Conversion Chart

INCHES			INCHES			INCHES			INCHES		
FRACTIONS	DECIMALS	MM	FRACTIONS	DECIMALS	MM	FRACTIONS	DECIMALS	MM	FRACTIONS	DECIMALS	MM
—	.0004	.0100	—	.3937	10.0000	7/8	.8750	22.2250	—	1.6535	42.0000
—	.0040	.1000	13/32	.4060	10.3190	57/64	.8906	22.6220	1-31/32	1.6562	42.0690
—	.0100	.2500	—	.4130	10.5000	—	.9055	23.0000	1-11/16	1.6875	42.8630
1/64	.0156	.3970	27/64	.4220	10.7160	29/32	.9062	23.0190	—	1.6929	43.0000
—	.0197	.5000	—	.4331	11.0000	59/64	.9220	23.4160	1-23/32	1.7190	43.6560
—	.0295	.7500	7/16	.4380	11.1130	15/16	.9375	23.8130	—	1.7323	44.0000
1/32	.0313	.7940	29/64	.4530	11.5090	—	.9449	24.0000	1-3/4	1.7500	44.4500
—	.0394	1.0000	15/32	.4690	11.9060	61/64	.9530	24.2090	—	1.7717	45.0000
3/64	.0469	1.1910	—	.4724	12.0000	31/32	.9690	24.6060	1-25/32	1.7810	45.2440
—	.0590	1.5000	31/64	.4840	12.3030	—	.9843	25.0000	—	1.8110	46.0000
1/16	.0620	1.5880	—	.4920	12.5000	63/64	.9844	25.0030	1-13/16	1.8125	46.0380
5/64	.0781	1.9840	1/2	.5000	12.7000	1	1.0000	25.4000	1-27/32	1.8440	46.8310
—	.0787	2.0000	—	.5118	13.0000	—	1.0236	26.0000	—	1.8504	47.0000
3/32	.0940	2.3810	33/64	.5156	13.0970	1-1/32	1.0312	26.1940	1-7/8	1.8750	47.6250
—	.0984	2.5000	17/32	.5310	13.4940	1-1/16	1.0620	26.9880	—	1.8898	48.0000
7/64	.1090	2.7780	35/64	.5470	13.8910	—	1.0630	27.0000	1-29/32	1.9062	48.4190
—	.1181	3.0000	—	.5512	14.0000	1-3/32	1.0940	27.7810	—	1.9291	49.0000
1/8	.1250	3.1750	9/16	.5630	14.2880	—	1.1024	28.0000	1-15/16	1.9375	49.2130
—	.1378	3.5000	—	.5710	14.5000	1-1/8	1.1250	28.5750	—	1.9685	50.0000
9/64	.1410	3.5720	37/64	.5790	14.6840	—	1.1417	29.0000	1-31/32	1.9690	50.0060
5/32	.1560	3.9690	—	.5906	15.0000	1-5/32	1.1560	29.3690	2	2.0000	50.8000
—	.1575	4.0000	19/32	.5940	15.0810	—	1.1811	30.0000	—	2.0079	51.0000
11/64	.1720	4.3660	39/64	.6090	15.4780	1-3/16	1.1875	31.1630	2-1/32	2.0313	51.5940
—	.1770	4.5000	5/8	.6250	15.8750	1-7/32	1.2190	30.9560	—	2.0472	52.0000
3/16	.1875	4.7630	—	.6299	16.0000	—	1.2205	31.0000	2-1/16	2.0620	52.3880
—	.1969	5.0000	41/64	.6406	16.2720	1-1/4	1.2500	31.7500	—	2.0866	53.0000
13/64	.2030	5.1590	—	.6496	16.5000	—	1.2598	32.0000	2-3/32	2.0940	53.1810
—	.2165	5.5000	21/32	.6560	16.6690	1-9/32	1.2810	32.5440	2-1/8	2.1250	53.9750
7/32	.2190	5.5560	—	.6693	17.0000	—	1.2992	33.0000	—	2.1260	54.0000
15/64	.2340	5.9530	43/64	.6720	17.0660	1-5/16	1.3120	33.3380	2-5/32	2.1560	54.7690
—	.2362	6.0000	11/16	.6875	17.4630	—	1.3386	34.0000	—	2.1650	55.0000
1/4	.2500	6.3500	45/64	.7030	17.8590	1-11/32	1.3440	34.1310	2-3/16	2.1875	55.5630
—	.2559	6.5000	—	.7087	18.0000	1-3/8	1.3750	34.9250	—	2.2047	56.0000
17/64	.2656	6.7470	23/32	.7190	18.2560	—	1.3779	35.0000	2-7/32	2.2190	56.3560
—	.2756	7.0000	—	.7283	18.5000	1-13/32	1.4060	35.7190	—	2.2440	57.0000
9/32	.2810	7.1440	47/64	.7340	18.6530	—	1.4173	36.0000	2-1/4	2.2500	57.1500
—	.2953	7.5000	—	.7480	19.0000	1-7/16	1.4380	36.5130	2-9/32	2.2810	57.9440
19/64	.2970	7.5410	3/4	.7500	19.0500	—	1.4567	37.0000	—	2.2835	58.0000
5/16	.3120	7.9380	49/64	.7656	19.4470	1-15/32	1.4690	37.3060	2-5/16	2.3120	58.7380
—	.3150	8.0000	25/32	.7810	19.8440	—	1.4961	38.0000	—	2.3228	59.0000
21/64	.3280	8.3340	—	.7874	20.0000	1-1/2	1.5000	38.1000	2-11/32	2.3440	59.5310
—	.3350	8.5000	51/64	.7970	20.2410	1-17/32	1.5310	38.8940	—	2.3622	60.0000
11/32	.3440	8.7310	13/16	.8125	20.6380	—	1.5354	39.0000	2-3/8	2.3750	60.3250
—	.3543	9.0000	—	.8268	21.0000	1-9/16	1.5620	39.6880	—	2.4016	61.0000
23/64	.3590	9.1280	53/64	.8280	21.0340	—	1.5748	40.0000			
—	.3740	9.5000	27/32	.8440	21.4310	1-19/32	1.5940	40.4810			
3/8	.3750	9.5250	55/64	.8590	21.8280	—	1.6142	41.0000			
25/64	.3910	9.9220	—	.8662	22.0000	1-5/8	1.6250	41.2750			

Charts

Conversion Chart

INCHES			INCHES			INCHES			INCHES		
FRACTIONS	DECIMALS	MM	FRACTIONS	DECIMALS	MM	FRACTIONS	DECIMALS	MM	FRACTIONS	DECIMALS	MM
2-13/32	2.4060	61.1190	3-1/4	3.2500	82.5500	4-1/4	4.2500	107.9500	1/4	.2500	6.3500
2-7/16	2.4380	61.9130	—	3.2677	83.0000	4-5/16	4.3120	109.5380	—	.2559	6.5000
—	2.4409	62.0000	3-9/32	3.2810	83.3440	—	4.3307	110.0000	17/64	.2656	6.7470
2-15/32	2.4690	62.7060	—	3.3071	84.0000	4-3/8	4.3750	111.1250	—	.2756	7.0000
—	2.4803	63.0000	3-5/16	3.3120	84.1377	4-7/16	4.4380	112.7130	9/32	.2810	7.1440
2-1/2	2.5000	63.5000	3-11/32	3.3440	84.9314	4-1/2	4.5000	114.3000	—	.2953	7.5000
—	2.5197	64.0000	—	3.3464	85.0000	—	4.5275	115.0000	19/64	.2970	7.5410
2-17/32	2.5310	64.2940	3-3/8	3.3750	85.7250	4-9/16	4.5620	115.8880	5/16	.3120	7.9380
—	2.5590	65.0000	—	3.3858	86.0000	4-5/8	4.6250	117.4750	—	.3150	8.0000
2-9/16	2.5620	65.0880	3-13/32	3.4060	86.5190	4-11/16	4.6875	119.0630	21/64	.3280	8.3340
2-19/32	2.5940	65.8810	—	3.4252	87.0000	—	4.7244	120.0000	—	.3350	8.5000
—	2.5984	66.0000	3-7/16	3.4380	87.3130	4-3/4	4.7500	120.6500	11/32	.3440	8.7310
2-5/8	2.6250	66.6750	—	3.4646	88.0000	4-13/16	4.8125	122.2380	—	.3543	9.0000
—	2.6380	67.0000	3-15/32	3.4690	88.1060	4-7/8	4.8750	123.8250	23/64	.3590	9.1280
2-21/32	2.6560	67.4690	3-1/2	3.5000	88.9000	—	4.9212	125.0000	—	.3740	9.5000
—	2.6772	68.0000	—	3.5039	89.0000	4-15/16	4.9375	125.4130	3/8	.3750	9.5250
2-11/16	2.6875	68.2630	3-17/32	3.5310	89.6940	5	5.0000	127.0000	25/64	.3910	9.9220
—	2.7165	69.0000	—	3.5433	90.0000	—	.0004	.0100	—	.3937	10.0000
2-23/32	2.7190	69.0560	3-9/16	3.5620	90.4877	—	.0100	.2500	13/32	.4060	10.3190
2-3/4	2.7500	69.8500	—	3.5827	91.0000	1/64	.0156	.3970	—	.4130	10.5000
—	2.7559	70.0000	3-19/32	3.5940	91.2810	—	.0197	.5000	27/64	.4220	10.7160
2-25/32	2.7810	70.6439	—	3.6220	92.0000	—	.0295	.7500	—	.4331	11.0000
—	2.7953	71.0000	3-5/8	3.6250	92.0750	—	.0040	.1000	7/16	.4380	11.1130
2-13/16	2.8125	71.4376	3-21/32	3.6560	92.8960	1/32	.0313	.7940	29/64	.4530	11.5090
—	2.8346	72.0000	—	3.6614	93.0000	—	.0394	1.0000	15/32	.4690	11.9060
2-27/32	2.8440	72.2314	3-11/16	3.6875	93.6630	3/64	.0469	1.1910	—	.4724	12.0000
—	2.8740	73.0000	—	3.7008	94.0000	—	.0590	1.5000	31/64	.4840	12.3030
2-7/8	2.8750	73.0250	3-23/32	3.7190	94.4560	1/16	.0620	1.5880	—	.4920	12.5000
2-29/32	2.9062	73.8190	—	3.7401	95.0000	5/64	.0781	1.9840	1/2	.5000	12.7000
—	2.9134	74.0000	3-3/4	3.7500	92.2500	—	.0787	2.0000	—	.5118	13.0000
2-15/16	2.9375	74.6130	—	3.7795	96.0000	3/32	.0940	2.3810	33/64	.5156	13.0970
—	2.9527	75.0000	3-25/32	3.7810	96.0440	—	.0984	2.5000	17/32	.5310	13.4940
2-31/32	2.9690	75.4060	3-13/16	3.8125	96.8380	7.64	.1090	2.7780	35/64	.5470	13.8910
—	2.9921	76.0000	—	3.8189	97.0000	—	.1181	3.0000	—	.5512	14.0000
3	3.0000	76.2000	3-26/32	3.8440	97.6310	1/8	.1250	3.1750	9/16	.5630	14.2880
3-1/32	3.0312	76.9940	—	3.8583	98.0000	—	.1378	3.5000	—	.5710	14.5000
—	3.0315	77.0000	3-7/8	3.8750	98.4250	9/64	.1410	3.5720	37/64	.5790	14.6840
3-1/16	3.0620	77.7880	—	3.8976	99.0000	5/32	.1560	3.9690	—	.5906	15.0000
—	3.0709	78.0000	3-29/32	3.9062	99.2190	—	.1575	4.0000	19/32	.5940	15.0810
3-3/32	3.0940	78.5810	—	3.9370	100.0000	11/64	.1720	4.3660	39/64	.6090	15.4780
—	3.1102	79.0000	3-15/16	3.9375	100.0130	—	.1770	4.5000	5/8	.6250	15.8750
3-1/8	3.1250	79.3750	3-31/32	3.9690	100.8060	3/16	.1875	4.7630	—	.6299	16.0000
—	3.1496	80.0000	—	3.9764	101.0000	—	.1969	5.0000	41/64	.6406	16.2720
3-5/32	3.1560	80.1690	4	4.0000	101.6000	13/64	.2030	5.1590	—	.6496	16.5000
3/16	3.1875	80.9630	4-1/16	4.0620	103.1880	—	.2165	5.5000	21/32	.6560	16.6690
—	3.1890	81.0000	4-1/8	4.1250	104.7750	7/32	.2190	5.5560	—		
3-7/32	3.2190	81.7560	—	4.1338	105.0000	15/64	.2340	5.9530	—		
—	3.2283	82.0000	4-3/16	4.1875	106.3630	—	.2362	6.0000	—		