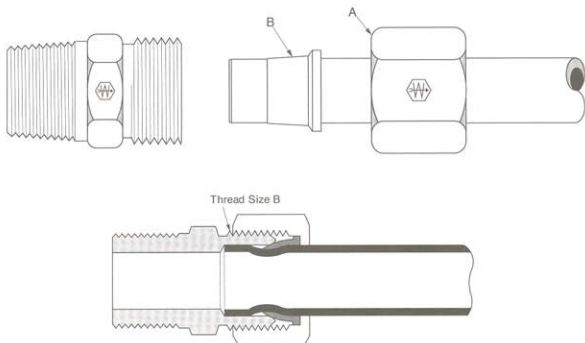
 Refer to safety information regarding proper selection of tubing and tube fittings on page 1.



Tube O.D.	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1
Thread Size-B	5/16-24	3/8-24	7/16-24	1/2-24	9/16-24	5/8-24	11/16-20	13/16-18	1-18	1-1/4-18

• Typical Application

Instrumentation, hydraulic and pneumatic systems.

• Pressure

Working pressure up to 2000 psi with a 4:1 safety factor depending on tube size. When using plastic tubing, use the working pressure for type used.

• Vibration

Good resistance - use long nut when greater vibration resistance is needed.

• Temperature Range

-65°F to +250°F (-53°C to +121°C) with metal tubing. When using compatible plastic tubing do not exceed the tubing temperature range. (Refer to tubing temperature range.)

• Material

CA360 Brass.

• Used With

Aluminum, copper and Weatherhead plastic tubing. Plastic tubing, except for PT230, requires 2030x insert. Not recommended for steel tubing. See page 28-32 for material compatibility, and pages 33-35 for plastic tubing.

• Advantages

Selfaligning - no need to disassemble fitting to line up sleeve on tube. Low cost. Easy to assemble, no flaring. Available with long or short nut. Broad selection of styles and sizes.

• Conformance

An exclusive item with Weatherhead, user approvals only.

• How to Order

Selfalign fittings are ordered as complete assemblies (body, nut and sleeve). To order assembly supplied with long nuts, simply add the prefix "1" to the catalog number. Example: 681x4 with long nut becomes 1681x4. Nuts and sleeves can be ordered separately by catalog number. To order bodies only (less nut and sleeve), prefix catalog number with the letter "B" and drop suffix number. Example: B68x4.

• NOTE

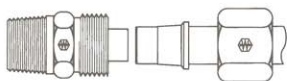
Refer to current price list for availability of cataloged items. Quotations and delivery of non-stock items supplied on request. Configurations and dimensions subject to change without notice.

• Assembly Instructions

1. Cut tubing to desired length.
2. Slide nut and then sleeve on tube. Threaded end of nut "A" and small end of sleeve "B" must face toward fitting.
3. Insert tubing into fitting body. Be sure tubing is bottomed on fitting shoulder.
4. Lubricate threads and assemble nut to fitting body.
5. Tighten with wrench to the "ring grip" point.
 - a. Ring Grip is the point when the cutting edge of the sleeve grips the tube. This is determined by turning tube slowly but firmly by hand while tightening the nut with a wrench until tube can no longer be turned by hand and a sharp increase in torque is noticed.
6. Tighten additional turns past "ring grip" as indicated on chart. Ref. to page 55.

Label Set: CL-500 (non-adhesive)

SELFALIGN® ASSEMBLY DATA CHART

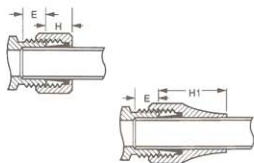


Fitting Size	Annealed Copper and Soft Aluminum Tubing		Nylon Tubing			
			Type "T" Thin Wall		Type "H" Thick Wall	
	Wall	Turns*	Wall	Turns*	Wall	Turns*
2	.030	1-1/3	—	—	—	—
3	.030	1-1/3	.023	1-2/3	.039	1-1/3
4	.030	1-2/3	.030	2	.050	1-2/3
5	.032	1-2/3	.036	1-2/3	.062	2-2/3
6	.032	2	.040	1-2/3	.075	2
8	.032	2	—	—	—	—
10	.035	2	—	—	—	—
12	.049	2	—	—	—	—
16	.065	2-1/4	—	—	—	—

*Turns from "Ring Grip".

Ring Grip is the point when the cutting edge of the sleeve grips the tube. This is determined by turning tube slowly but firmly by hand while tightening the nut with a wrench until tube can no longer be turned by hand and a sharp increase in torque is noted.

NUT ASSEMBLY COMPARISON



Tube O.D.	E Tube Stop Depth	H (Std. Nut)	H1 (Long Nut)
1/8	.19	.24	—
3/16	.22	.25	.49
1/4	.25	.35	.61
5/16	.28	.30	.70
3/8	.31	.31	.75
1/2	.38	.36	.83
5/8	.38	.41	.92
3/4	.44	.41	1.14

NOTE: H and H1 are hand tight dimensions.

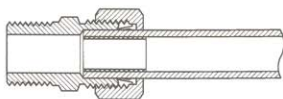


Illustration shows Selfalign® fitting used with soft plastic tubing and brass insert.

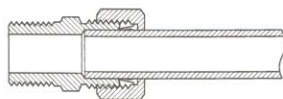
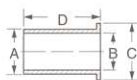


Illustration shows Selfalign® fitting used on rigid plastic tubing, no insert.

**Tube Supports for Plastic
Tubing**


Use only with PT200 and PT240 Tubing.

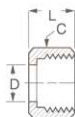
* For tubing with .126 I.D./ .062 wall.

** For tubing with .170 I.D./ .040 wall.

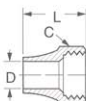
Tube O.D.	Catalog Number	Dia. A	Dia. B	Dia. C	Length D
1/4	2030x4*	1/8	3/32	11/64	19/32
1/4	2030x44**	11/64	9/64	7/32	17/32
5/16	2030x5	3/16	5/32	15/64	5/8
3/8	2030x6	1/4	7/32	11/32	41/64
1/2	2030x8	3/8	11/32	7/16	13/16
5/8	2030x10	1/2	29/64	35/64	13/16
3/4	2030x12	9/16	33/64	11/16	1-1/32

Sleeve

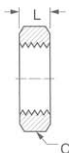

Tube O.D.	Catalog Number	D	F	L
1/8	601x2	.130	.25	.20
3/16	601x3	.193	.31	.20
1/4	601x4	.256	.38	.26
5/16	601x5	.318	.44	.26
3/8	601x6	.381	.50	.26
1/2	601x8	.507	.62	.30
5/8	601x10	.630	.72	.36
3/4	601x12	.755	.88	.38
1	601x16	1.005	1.19	.50

Nut


Tube O.D.	Catalog Number	Hex C	D	L
1/8	611x2	3/8	.14	.38
3/16	611x3	7/16	.19	.38
1/4	611x4	1/2	.26	.44
5/16	611x5	9/16	.32	.44
3/8	611x6	5/8	.38	.44
1/2	611x8	13/16	.51	.52
5/8	611x10	15/16	.64	.56
3/4	611x12	1-3/16	.76	.56

Long Nut


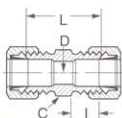
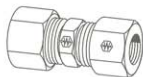
Tube O.D.	Catalog Number	Hex C	D	L
3/16	1611x3	7/16	.193	.62
1/4	1611x4	9/16	.260	.75
3/8	1611x6	11/16	.380	.88

Bulkhead Nut


Tube O.D.	Catalog Number	Hex C	L
1/4	0102x4	9/16	.25
5/16	0102x5	5/8	.25
3/8	0102x6	11/16	.25
1/2	0102x8	15/16	.38

Use on 741x Bulkhead Unions. Ref. page 58.

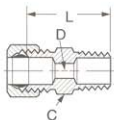
Union



Assembly with long nut **1621x**

Tube O.D.	Catalog Number	Hex C	D	I	L
1/8	621x2	5/16	.094	.25	.66
3/16	621x3	3/8	.125	.28	.76
1/4	621x4	7/16	.188	.31	.79
5/16	621x5	1/2	.250	.34	.88
3/8	621x6	9/16	.312	.38	.97
1/2	621x8	11/16	.406	.44	1.10
5/8	621x10	13/16	.500	.50	1.25

Male Connector

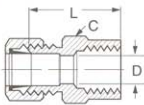


Assembly with long nut **1681x**

* Available only as assembly with long nut.

Tube O.D.	Male Pipe Thread	Catalog Number	Hex C	D	L
1/8	1/16	681x2x1	3/8	.094	.78
1/8	1/8	681x2	7/16	.094	.78
3/16	1/8	681x3	7/16	.125	.84
1/4	1/8	681x4	7/16	.188	.88
1/4	1/4	681x4x4	9/16	.188	1.06
5/16	1/8	681x5	1/2	.234	.91
5/16	1/4	681x5x4	9/16	.250	1.09
3/8	1/8	681x6x2	9/16	.250	.97
3/8	1/4	681x6	9/16	.312	1.17
3/8	3/8	681x6x6	11/16	.312	1.16
3/8	1/2	681x6x8	7/8	.312	1.34
1/2	1/4	681x8x4	11/16	.281	1.22
1/2	3/8	681x8	11/16	.406	1.22
1/2	1/2	681x8x8	7/8	.406	1.41
5/8	1/2	681x10	7/8	.500	1.50
1	1	1681x16*	1-3/8	.875	2.00

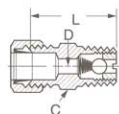
Female Connector



Assembly with long nut **1661x**

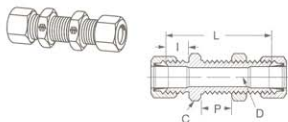
Tube O.D.	Fem. Pipe Thread	Catalog Number	Hex C	D	L
1/8	1/8	661x2	9/16	.094	.75
3/16	1/8	661x3	9/16	.125	.78
1/4	1/8	661x4	9/16	.188	.78
1/4	1/4	661x4x4	11/16	.188	1.03
5/16	1/8	661x5	9/16	.250	.81
3/8	1/8	661x6x2	9/16	.312	.84
3/8	1/4	661x6	11/16	.312	1.06
1/2	3/8	661x8	13/16	.406	1.12

Male Ball Check Connector



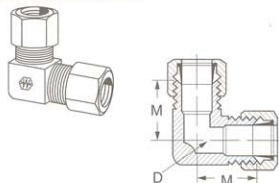
Assembly with long nut **1631x**. Min. pressure 3 psi. Ball and spring position may be reversed to change flow/check direction. Ballcheck valves are neither tested nor adjusted prior to sale.

Tube O.D.	Male Pipe Thread	Catalog Number	Hex C	D	L
1/4	1/8	631x4	7/16	.125	.88
3/8	1/4	631x6	9/16	.219	1.16

Bulkhead Union


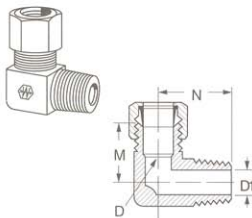
Assembly with long nut **1741x**
For Bulkhead Nuts, ref. page 56.

Tube O.D.	Catalog Number	Hex C	D	I	L	Max. P
1/4	741x4	9/16	.188	.33	1.58	.52

90° Union Elbow


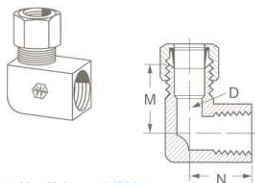
Assembly with long nut **1651x**

Tube O.D.	Catalog Number	D	M
1/4	651x4	.188	.60
3/8	651x6	.312	.73

90° Male Elbow


Assembly with long nut **1691x**.
*Available only as assembly with long nut.

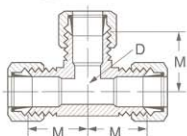
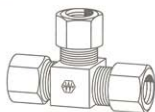
Tube O.D.	Male Pipe Thread	Catalog Number	D	D1	M	N
1/8	1/16	691x2x1	.109	.125	.54	.66
1/8	1/8	691x2	.094	.219	.60	.67
3/16	1/8	691x3	.125	.188	.62	.69
1/4	1/8	691x4	.188	.219	.62	.75
1/4	1/4	691x4x4	.188	.219	.62	.75
5/16	1/8	691x5	.250	.250	.62	.75
5/16	1/4	691x5x4	.250	.312	.69	.84
3/8	1/8	691x6x2	.312	.234	.69	.69
3/8	1/4	691x6	.312	.344	.75	.94
3/8	3/8	691x6x6	.312	.438	.84	.94
3/8	1/2	691x6x8	.312	.531	1.06	1.12
1/2	1/4	691x8x4	.406	.312	.84	.94
1/2	3/8	691x8	.406	.406	.94	1.12
1/2	1/2	691x8x8	.406	.531	.94	1.31
5/8	1/2	691x10	.500	.562	1.06	1.31
1	1	1691x16*	.875	.938	1.31	1.62

90° Female Elbow


Assembly with long nut **1701x**

Tube O.D.	Fem. Pipe Thread	Catalog Number	D	M	N
3/16	1/8	701x3	.125	.69	.56
1/4	1/8	701x4	.188	.69	.56

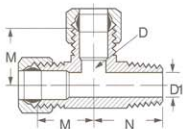
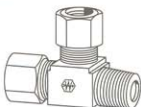
Union Tee



Assembly with long nut [1641x](#)

Tube O.D.	Catalog Number	D	M
3/16	641x3	.125	.60
1/4	641x4	.188	.62
5/16	641x5	.250	.60
3/8	641x6	.312	.73
1/2	641x8	.406	.94

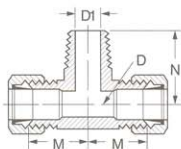
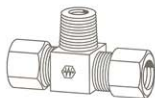
Male Run Tee



Assembly with long nut [1711x](#)

Tube O.D.	Male Pipe Thread	Catalog Number	D	D1 Opt.	M	N
3/16	1/8	711x3	.125	.219	.62	.69
1/4	1/8	711x4	.188	.219	.62	.75
3/8	1/4	711x6	.312	.344	.75	.94

Male Branch Tee



Assembly with long nut [1721x](#)

Tube O.D.	Male Pipe Thread	Catalog Number	D	D1	M	N
1/4	1/8	721x4	.188	.219	.62	.75
1/4	1/4	721x4x4x4	.188	.281	.78	.85
3/8	1/4	721x6	.312	.344	.75	.94
1/2	3/8	721x8	.406	.406	.94	1.12