

Hydraulic & Pipe Fittings











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HPF1000

BALTIMORE • CHICAGO • LOS ANGELES

Hydraulic & Pipe **Fittings**

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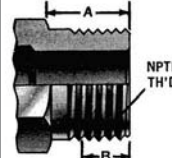
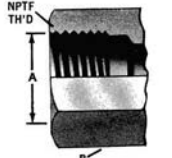
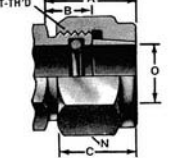
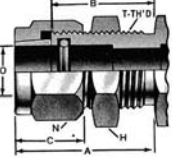
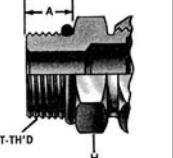
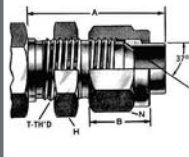
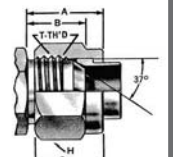
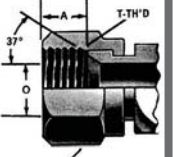
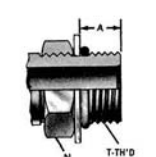


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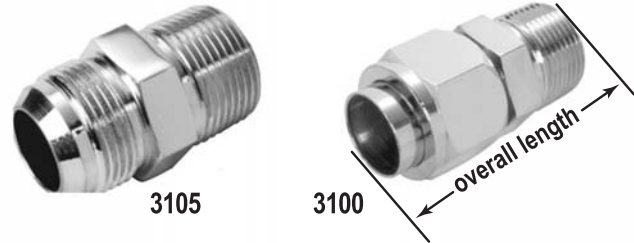


37° Flare Tube Fittings TAPERED PIPE THREAD

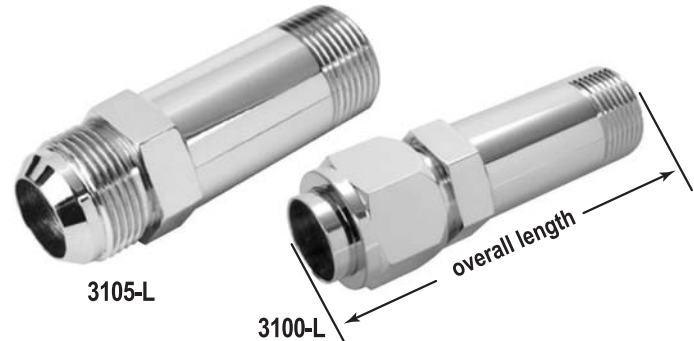
F-3105 / F-3100 • Male Connector

Body Only Part #	Complete Assy. Part #	Tube O.D.	Male Pipe Thread	Overall Length
F-3105-2-2	F-3100-2-2	1/8"	1/8"	1-13/32"
F-3105-3-2	F-3100-3-2	3/16"	1/8"	1-1/2"
F-3105-4-2	F-3100-4-2	1/4"	1/8"	1-9/16"
F-3105-4-4	F-3100-4-4	1/4"	1/4"	1-25/32"
F-3105-4-6	F-3100-4-6	1/4"	3/8"	1-13/16"
F-3105-5-2	F-3100-5-2	5/16"	1/8"	1-5/8"
F-3105-5-4	F-3100-5-4	5/16"	1/4"	1-13/16"
F-3105-6-4	F-3100-6-4	3/8"	1/4"	1-29/32"
F-3105-6-2	F-3100-6-2	3/8"	1/8"	1-23/32"
F-3105-6-6	F-3100-6-6	3/8"	3/8"	1-29/32"
F-3105-6-8	F-3100-6-8	3/8"	1/2"	2-3/32"
F-3105-8-6	F-3100-8-6	1/2"	3/8"	2-1/16"
F-3105-8-4	F-3100-8-4	1/2"	1/4"	2-1/16"
F-3105-8-8	F-3100-8-8	1/2"	1/2"	2-9/32"
F-3105-8-12	F-3100-8-12	1/2"	3/4"	2-9/32"
F-3105-10-8	F-3100-10-8	5/8"	1/2"	2-17/32"
F-3105-10-6	F-3100-10-6	5/8"	3/8"	2-11/32"
F-3105-10-12	F-3100-10-12	5/8"	3/4"	2-9/16"
F-3105-12-12	F-3100-12-12	3/4"	3/4"	2-21/32"
F-3105-12-6	F-3100-12-6	3/4"	3/8"	2-15/32"
F-3105-12-8	F-3100-12-8	3/4"	1/2"	2-21/32"
F-3105-12-16	F-3100-12-16	3/4"	1"	2-27/32"
F-3105-14-12	F-3100-14-12	7/8"	3/4"	2-13/16"
F-3105-14-16	F-3100-14-16	7/8"	1"	3"
F-3105-16-16	F-3100-16-16	1"	1"	3-1/16"
F-3105-16-12	F-3100-16-12	1"	3/4"	2-7/8"
F-3105-16-20	F-3100-16-20	1"	1-1/4"	3-5/32"
F-3105-20-20	F-3100-20-20	1-1/4"	1-1/4"	3-5/16"
F-3105-20-16	F-3100-20-16	1-1/4"	1"	3-9/32"
F-3105-20-24	F-3100-20-24	1-1/4"	1-1/2"	3-11/32"
F-3105-24-24	F-3100-24-24	1-1/2"	1-1/2"	3-25/32"
F-3105-32-32	F-3100-32-32	2"	2"	4-1/4"
F-3105-32-24	F-3100-32-24	2"	1-1/2"	4-3/16"

**F-3105 / F-3100
Male Connector Flare Tube End-
Male Pipe End**



**F-3105-L / F-3100-L
Long Male Connector
Flare Tube End-Male Pipe End**



F-3105-L / F-3100-L • Long Male Connector

Body Only Part #	Complete Assy. Part #	Tube O.D.	Male Pipe Thread	Overall Length
F-3105L-4-2	F-3100L-4-2	1/4"	1/8"	2-3/16"
F-3105L-5-2	F-3100L-5-2	5/16"	1/8"	2-11/32"
F-3105L-6-4	F-3100L-6-4	3/8"	1/4"	2-23/32"
F-3105L-8-6	F-3100L-8-6	1/2"	3/8"	3-9/32"
F-3105L-10-8	F-3100L-10-8	5/8"	1/2"	3-3/4"
F-3105L-12-12	F-3100L-12-12	3/4"	3/4"	4-3/32"
F-3105L-14-12	F-3100L-14-12	7/8"	3/4"	4-15/32"
F-3105L-16-16	F-3100L-16-16	1"	1"	4-25/32"
F-3105L-20-20	F-3100L-20-20	1-1/4"	1-1/4"	5-11/32"

**F-3105-LL / F-3100-LL
Extra Long Male Connector
Flare Tube End-Male Pipe End**

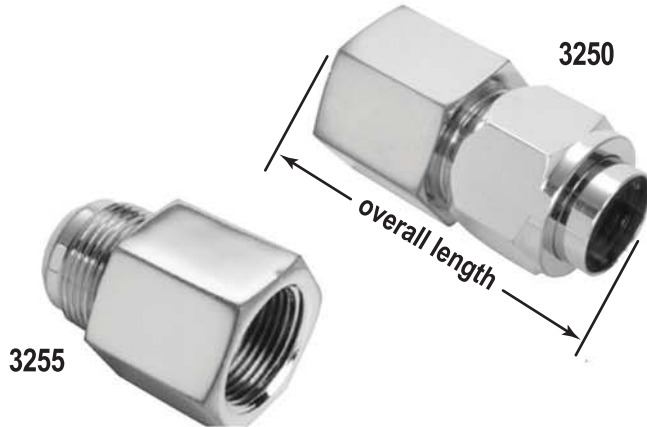


F-3105-LL / F-3100-LL • Extra Long Male Connector

Body Only Part #	Complete Assy. Part #	Tube O.D.	Male Pipe Thread	Overall Length
F-3105LL-4-2	F-3100LL-4-2	1/4"	1/8"	2-15/16"
F-3105LL-5-2	F-3100LL-5-2	5/16"	1/8"	3-7/32"
F-3105LL-6-4	F-3100LL-6-4	3/8"	1/4"	3-23/32"
F-3105LL-8-6	F-3100LL-8-6	1/2"	3/8"	4-17/32"
F-3105LL-10-8	F-3100LL-10-8	5/8"	1/2"	3-3/4"
F-3105LL-12-12	F-3100LL-12-12	3/4"	3/4"	4-3/32"
F-3105LL-14-12	F-3100LL-14-12	7/8"	3/4"	4-15/32"
F-3105LL-16-16	F-3100LL-16-16	1"	1"	6-17/32"
F-3105LL-20-20	F-3100LL-20-20	1-1/4"	1-1/4"	7-11/32"

37° Flare Tube Fittings TAPERED PIPE THREAD

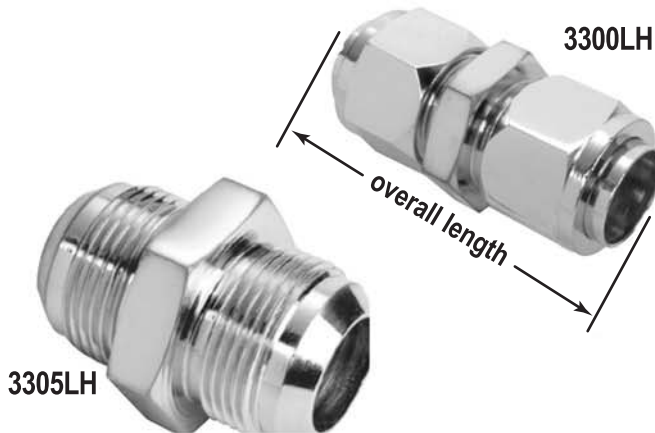
**F-3255 / F-3250
Female Connector-Flare Tube End-
Female Pipe End**



F-3255 / F-3250 • Female Connector

Body Only Part #	Complete Assy. Part #	Tube O.D.	Female Pipe Thread	Overall Length
F-3255-2-2	F-3250-2-2	1/8"	1/8"	1-13/32"
F-3255-3-2	F-3250-3-2	3/16"	1/8"	1-7/16"
F-3255-4-2	F-3250-4-2	1/4"	1/8"	1-9/16"
F-3255-4-4	F-3250-4-4	1/4"	1/4"	1-3/4"
F-3255-5-2	F-3250-5-2	5/16"	1/8"	1-19/32"
F-3255-5-4	F-3250-5-4	5/16"	1/4"	1-3/4"
F-3255-6-4	F-3250-6-4	3/8"	1/4"	1-25/32"
F-3255-6-2	F-3250-6-2	3/8"	1/8"	1-21/32"
F-3255-6-6	F-3250-6-6	3/8"	3/8"	1-7/8"
F-3255-8-6	F-3250-8-6	1/2"	3/8"	2-1/16"
F-3255-8-4	F-3250-8-4	1/2"	1/4"	2-1/16"
F-3255-8-8	F-3250-8-8	1/2"	1/2"	2-9/32"
F-3255-10-8	F-3250-10-8	5/8"	1/2"	2-7/16"
F-3255-10-6	F-3250-10-6	5/8"	3/8"	2-1/4"
F-3255-12-12	F-3250-12-12	3/4"	3/4"	2-19/32"
F-3255-12-8	F-3250-12-8	3/4"	1/2"	2-17/32"
F-3255-14-12	F-3250-14-12	7/8"	3/4"	2-23/32"
F-3255-16-16	F-3250-16-16	1"	1"	3"
F-3255-16-12	F-3250-16-12	1"	3/4"	2-13/16"
F-3255-20-20	F-3250-20-20	1-1/4"	1-1/4"	3-3/16"
F-3255-24-24	F-3250-24-24	1-1/2"	1-1/2"	3-17/32"
F-3255-32-32	F-3250-32-32	2"	2"	3-29/32"

**F-3305-LH / F-3300-LH
Large Hex Union
Flare Tube End-Flare Tube End**



F-3305LH / F-3300LH • Large Hex Union

Body Only Part #	Complete Assy. Part #	Tube O.D.	Body Hex	Overall Length
F-3305LH-4	F-3300LH-4	1/4"	11/16"	2-1/8"
F-3305LH-5	F-3300LH-5	5/16"	3/4"	2-3/16"
F-3305LH-6	F-3300LH-6	3/8"	13/16"	2-11/32"
F-3305LH-8	F-3300LH-8	1/2"	1"	2-11/16"
F-3305LH-10	F-3300LH-10	5/8"	1-1/8"	3-3/16"
F-3305LH-12	F-3300LH-12	3/4"	1-3/8"	3-3/8"
F-3305LH-16	F-3300LH-16	1"	1-5/8"	3-25/32"
F-3305LH-20	F-3300LH-20	1-1/4"	1-7/8"	4-1/8"

**F-3305 / F-3300
Union Flare Tube End-
Flare Tube End**



F-3305 / F-3300 • Union

Body Only Part #	Complete Assy. Part #	Tube O.D.	Overall Length
F-3305-4-4	F-3300-4-4	1/4"	2-1/8"
F-3305-5-5	F-3300-5-5	5/16"	2-3/16"
F-3305-6-6	F-3300-6-6	3/8"	2-11/32"
F-3305-8-8	F-3300-8-8	1/2"	2-11/16"
F-3305-10-10	F-3300-10-10	5/8"	3-3/16"
F-3305-12-12	F-3300-12-12	3/4"	3-3/8"
F-3305-14-14	F-3300-14-14	7/8"	3-5/8"
F-3305-16-16	F-3300-16-16	1"	3-25/32"
F-3305-20-20	F-3300-20-20	1-1/4"	4-1/8"
F-3305-24-24	F-3300-24-24	1-1/2"	4-15/16"
F-3305-32-32	F-3300-32-32	2"	5-5/8"

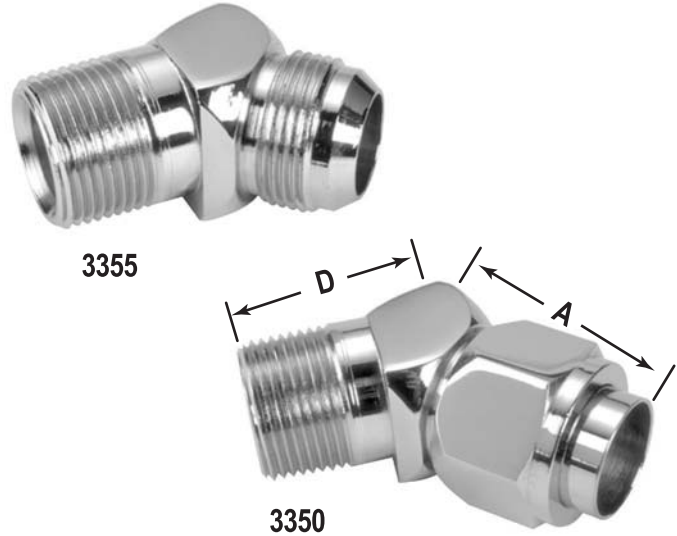


37° Flare Tube Fittings TAPERED PIPE THREAD

F-3355 / F-3350 • Male 45° Elbow

Body Only Part #	Complete Assy. Part #	Tube O.D.	Male Pipe Thread	"A" Tube Leg	"D" Male Pipe Leg
F-3355-2-2	F-3350-2-2	1/8"	1/8"	3/132"	17/32"
F-3355-3-2	F-3350-3-2	3/16"	1/8"	1-1/32"	17/32"
F-3355-4-2	F-3350-4-2	1/4"	1/8"	1-3/32"	5/8"
F-3355-4-4	F-3350-4-4	1/4"	1/4"	1-5/32"	27/32"
F-3355-5-2	F-3350-5-2	5/16"	1/8"	1-5/32"	5/8"
F-3355-5-4	F-3350-5-4	5/16"	1/4"	1-7/32"	27/32"
F-3355-6-4	F-3350-6-4	3/8"	1/4"	1-9/32"	27/32"
F-3355-6-2	F-3350-6-2	3/8"	1/8"	1-9/32"	11/16"
F-3355-6-6	F-3350-6-6	3/8"	3/8"	1-3/8"	15/16"
F-3355-6-8	F-3350-6-8	3/8"	1/2"	1-1/2"	1-5/32"
F-3355-8-6	F-3350-8-6	1/2"	3/8"	1-1/2"	15/16"
F-3355-8-4	F-3350-8-4	1/2"	1/4"	1-1/2"	15/16"
F-3355-8-8	F-3350-8-8	1/2"	1/2"	1-9/16"	1-5/32"
F-3355-8-12	F-3350-8-12	1/2"	3/4"	1-5/8"	1-3/16"
F-3355-10-8	F-3350-10-8	5/8"	1/2"	1-23/32"	1-5/32"
F-3355-10-6	F-3350-10-6	5/8"	3/8"	1-23/32"	31/32"
F-3355-10-12	F-3350-10-12	5/8"	3/4"	1-25/32"	1-3/16"
F-3355-12-12	F-3350-12-12	3/4"	3/4"	1-7/8"	1-3/16"
F-3355-12-8	F-3350-12-8	3/4"	1/2"	1-7/8"	1-7/32"
F-3355-14-12	F-3350-14-12	7/8"	3/4"	2-3/32"	1-1/4"
F-3355-16-16	F-3350-16-16	1"	1"	2-7/32"	1-15/32"
F-3355-16-12	F-3350-16-12	1"	3/4"	2-7/32"	1-1/4"
F-3355-20-20	F-3350-20-20	1-1/4"	1-1/4"	2-7/16"	1-21/32"
F-3355-24-24	F-3350-24-24	1-1/2"	1-1/2"	2-7/8"	1-3/4"
F-3355-32-32	F-3350-32-32	2"	2"	3-11/32"	2-3/32"

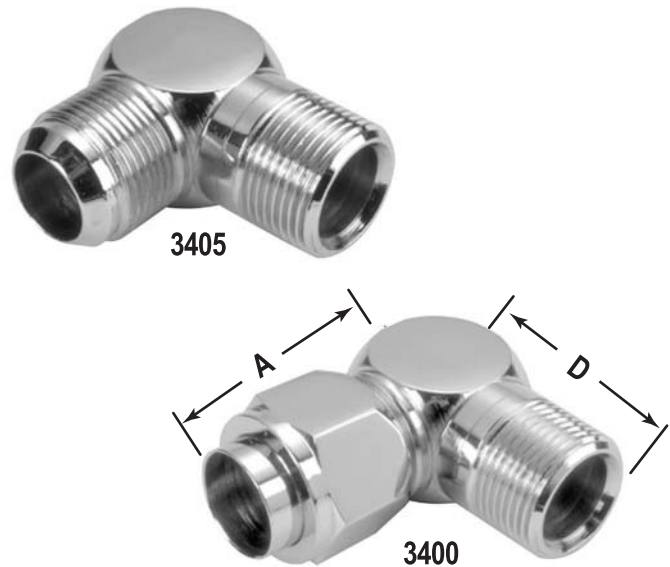
**F-3355 / F-3350
Male 45° Elbow
Flare Tube End-Male Pipe End**
(Example of Part No: F-3350-12 for 3/4" O.D. Tubing)



F-3405 / F-400 • Male Elbow

Body Only Part #	Complete Assy. Part #	Tube O.D.	Male Pipe Thread	"A" Tube Leg	"D" Male Pipe Leg
F-3405-2-2	F-3400-2-2	1/8"	1/8"	1-3/32"	23/32"
F-3405-3-2	F-3400-3-2	3/16"	1/8"	1-5/32"	23/32"
F-3405-4-2	F-3400-4-2	1/4"	1/8"	1-9/32"	25/32"
F-3405-4-4	F-3400-4-4	1/4"	1/4"	1-13/32"	1-3/32"
F-3405-4-6	F-3400-4-6	1/4"	3/8"	1-15/32"	1-7/32"
F-3405-5-2	F-3400-5-2	5/16"	1/8"	1-3/8"	25/32"
F-3405-5-4	F-3400-5-4	5/16"	1/4"	1-7/16"	1-3/32"
F-3405-6-4	F-3400-6-4	3/8"	1/4"	1-17/32"	1-3/32"
F-3405-6-2	F-3400-6-2	3/8"	1/8"	1-17/32"	7/8"
F-3405-6-6	F-3400-6-6	3/8"	3/8"	1-21/32"	1-7/32"
F-3405-6-8	F-3400-6-8	3/8"	1/2"	1-23/32"	1-15/32"
F-3405-8-6	F-3400-8-6	1/2"	3/8"	1-25/32"	1-7/32"
F-3405-8-4	F-3400-8-4	1/2"	1/4"	1-25/32"	1-5/32"
F-3405-8-8	F-3400-8-8	1/2"	1/2"	1-15/16"	1-15/32"
F-3405-8-12	F-3400-8-12	1/2"	3/4"	2-1/32"	1-9/16"
F-3405-10-8	F-3400-10-8	5/8"	1/2"	2-3/32"	1-15/32"
F-3405-10-6	F-3400-10-6	5/8"	3/8"	2-3/32"	1-3/8"
F-3405-10-12	F-3400-10-12	5/8"	3/4"	2-7/32"	1-19/32"
F-3405-12-12	F-3400-12-12	3/4"	3/4"	2-1/4"	1-19/32"
F-3405-12-8	F-3400-12-8	3/4"	1/2"	2-1/4"	1-9/16"
F-3405-12-16	F-3400-12-16	3/4"	1"	2-7/16"	1-31/32"
F-3405-14-12	F-3400-14-12	7/8"	3/4"	2-7/16"	1-11/16"
F-3405-16-16	F-3400-16-16	1"	1"	2-19/32"	1-31/32"
F-3405-16-12	F-3400-16-12	1"	3/4"	2-19/32"	1-23/32"
F-3405-16-20	F-3400-16-20	1"	1-1/4"	2-15/16"	2-3/8"
F-3405-20-20	F-3400-20-20	1-1/4"	1-1/4"	2-29/32"	2-3/8"
F-3405-20-16	F-3400-20-16	1-1/4"	1"	2-29/32"	2-3/8"
F-3405-20-24	F-3400-20-24	1-1/4"	1-1/2"	3-1/32"	2-5/8"
F-3405-24-24	F-3400-24-24	1-1/2"	1-1/2"	3-7/16"	2-5/8"
F-3405-24-20	F-3400-24-20	1-1/2"	1-1/4"	3-7/16"	2-5/8"
F-3405-32-32	F-3400-32-32	2"	2"	4-3/16"	3"
F-3405-32-24	F-3400-32-24	2"	1-1/2"	4-3/16"	3"

**F-3405 / F-3400
Male Elbow
Flare Tube End-Male Pipe End**
(Example of Part No: F-3400-12 for 3/4" O.D. Tubing)



37° Flare Tube Fittings TAPERED PIPE THREAD

F-3405-L / F-3400-L • Long Male Elbow

**F-3405L / F-3400L
Long Male Elbow
Flare Tube End-Male Pipe End**



Body Only Part #	Complete Assy. Part #	Tube O.D.	Male Pipe Thread	"A" Tube Leg	"D" Male Pipe Leg
F-3405L-4-2	F-3400L-4-2	1/4"	1/8"	1-9/32"	1-3/16"
F-3405L-4-4	F-3400L-4-4	1/4"	1/4"	1-13/32"	1-21/32"
F-3405L-5-2	F-3400L-5-2	5/16"	1/8"	1-3/8"	1-7/32"
F-3405L-5-4	F-3400L-5-4	5/16"	1/4"	1-17/16"	1-21/32"
F-3405L-6-4	F-3400L-6-4	3/8"	1/4"	1-17/32"	1-21/32"
F-3405L-6-6	F-3400L-6-6	3/8"	3/8"	1-21/32"	1-13/16"
F-3405L-8-6	F-3400L-8-6	1/2"	3/8"	1-25/32"	1-13/16"
F-3405L-8-8	F-3400L-8-8	1/2"	1/2"	1-15/16"	2-7/32"
F-3405L-8-12	F-3400L-8-12	1/2"	3/4"	2-1/32"	2-15/32"
F-3405L-10-8	F-3400L-10-8	5/8"	1/2"	2-3/32"	2-7/32"
F-3405L-12-12	F-3400L-12-12	3/4"	3/4"	2-1/4"	2-15/32"
F-3405L-14-12	F-3400L-14-12	7/8"	3/4"	2-7/16"	2-3/4"
F-3405L-16-16	F-3400L-16-16	1"	1"	2-19/32"	3-1/16"
F-3405L-20-20	F-3400L-20-20	1-1/4"	1-1/4"	2-29/32"	3-19/32"

F-3405-LL / F-3400-LL • Long Male Elbow

**F-3405LL / F-3400LL
Extra Long Male Elbow
Flare Tube End-Male Pipe End**



Body Only Part #	Complete Assy. Part #	Tube O.D.	Male Pipe Thread	"A" Tube Leg	"D" Male Pipe Leg
F-3405LL-4-2	F-3400LL-4-2	1/4"	1/8"	1-9/32"	1-19/32"
F-3405LL-4-4	F-3400LL-4-4	1/4"	1/4"	1-13/32"	2-1/8"
F-3405LL-5-2	F-3400LL-5-2	5/16"	1/8"	1-3/8"	1-21/32"
F-3405LL-5-4	F-3400LL-5-4	5/16"	1/4"	1-7/16"	2-1/8"
F-3405LL-6-4	F-3400LL-6-4	3/8"	1/4"	1-17/32"	2-1/8"
F-3405LL-6-6	F-3400LL-6-6	3/8"	3/8"	1-21/32"	2-13/32"
F-3405LL-8-6	F-3400LL-8-6	1/2"	3/8"	1-25/32"	2-13/32"
F-3405LL-8-8	F-3400LL-8-8	1/2"	1/2"	1-15/16"	2-7/8"
F-3405LL-10-8	F-3400LL-10-8	5/8"	1/2"	2-3/32"	2-7/8"
F-3405LL-12-12	F-3400LL-12-12	3/4"	3/4"	2-1/4"	3-5/32"
F-3405LL-14-12	F-3400LL-14-12	7/8"	3/4"	2-7/16"	3-3/8"
F-3405LL-16-16	F-3400LL-16-16	1"	1"	2-19/32"	4-1/8"
F-3405LL-20-20	F-3400LL-20-20	1-1/4"	1-1/4"	2-29/32"	4-13/16"

F-3405-LLL / F-3400-LLL • Long Male Elbow

**F-3405LLL / F-3400LLL
Extra Long-Long Male Elbow
Flare Tube End-Male Pipe End**



Body Only Part #	Complete Assy. Part #	Tube O.D.	Male Pipe Thread	"A" Tube Leg	"D" Male Pipe Leg
F-3405LLL-4-2	F-3400LLL-4-2	1/4"	1/8"	1-9/32"	2-7/16"
F-3405LLL-5-2	F-3400LLL-5-2	5/16"	1/8"	1-3/8"	2-15/32"
F-3405LLL-6-4	F-3400LLL-6-4	3/8"	1/4"	1-17/32"	3-5/32"
F-3405LLL-8-6	F-3400LLL-8-6	1/2"	3/8"	1-25/32"	3-19/32"
F-3405LLL-10-8	F-3400LLL-10-8	5/8"	1/2"	2-3/32"	4-5/16"
F-3405LLL-12-12	F-3400LLL-12-12	3/4"	3/4"	2-1/4"	4-23/32"
F-3405LLL-14-12	F-3400LLL-14-12	7/8"	3/4"	2-7/16"	5-1/16"
F-3405LLL-16-16	F-3400LLL-16-16	1"	1"	2-19/32"	6-5/16"
F-3405LLL-20-20	F-3400LLL-20-20	1-1/4"	1-1/4"	2-29/32"	7-1/4"

Note: 3411LL Elbows will turn above 3400 Elbows and 3400LLL Elbows will turn above 3400LL Elbows.

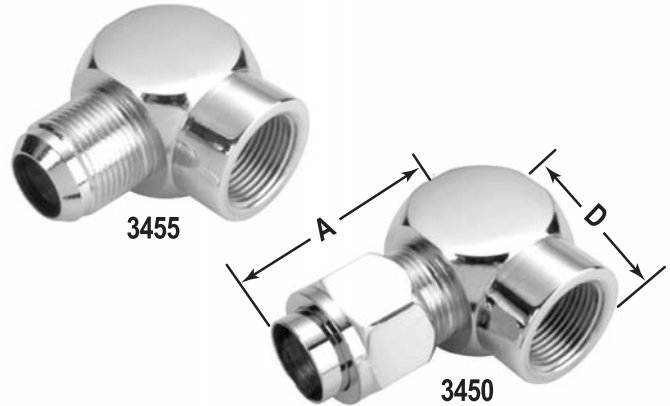


37° Flare Tube Fittings TAPERED PIPE THREAD

F-3455 / F-3450 • Female Elbow

Body Only Part #	Complete Assy. Part #	Tube O.D.	Female Pipe Thread	"A" Tube Leg	"D" Female Pipe Leg
F-3455-4-2	F-3450-4-2	1/4"	1/8"	1-7/16"	21/32"
F-3455-4-4	F-3450-4-4	1/4"	1/4"	1-9/16"	29/32"
F-3455-5-2	F-3450-5-2	5/16"	1/8"	1-15/32"	21/32"
F-3455-5-4	F-3450-5-4	5/16"	1/4"	1-19/32"	29/32"
F-3455-6-4	F-3450-6-4	3/8"	1/4"	1-11/16"	29/32"
F-3455-6-2	F-3450-6-2	3/8"	1/8"	1-17/32"	21/32"
F-3455-6-6	F-3450-6-6	3/8"	3/8"	1-25/32"	1"
F-3455-8-6	F-3450-8-6	1/2"	3/8"	1-15/16"	1"
F-3455-8-4	F-3450-8-4	1/2"	1/4"	1-27/32"	29/32"
F-3455-8-8	F-3450-8-8	1/2"	1/2"	1-31/32"	1-1/4"
F-3455-10-8	F-3450-10-8	5/8"	1/2"	2-1/4"	1-1/4"
F-3455-10-6	F-3450-10-6	5/8"	3/8"	2-5/32"	1"
F-3455-12-12	F-3450-12-12	3/4"	3/4"	2-15/32"	1-11/32"
F-3455-12-8	F-3450-12-8	3/4"	1/2"	2-1/4"	1-1/4"
F-3455-14-12	F-3450-14-12	7/8"	3/4"	2-9/16"	1-11/32"
F-3455-16-16	F-3450-16-16	1"	1"	2-15/16"	1-5/8"
F-3455-16-12	F-3450-16-12	1"	3/4"	2-19/32"	1-11/32"
F-3455-20-20	F-3450-20-20	1-1/4"	1-1/4"	3-5/32"	1-11/16"
F-3455-20-16	F-3450-20-16	1-1/4"	1"	2-29/32"	1-5/8"
F-3455-24-24	F-3450-24-24	1-1/2"	1-1/2"	3-31/32"	2-1/16"
F-3455-32-32	F-3450-32-32	2"	2"	4-13/32"	2-3/8"

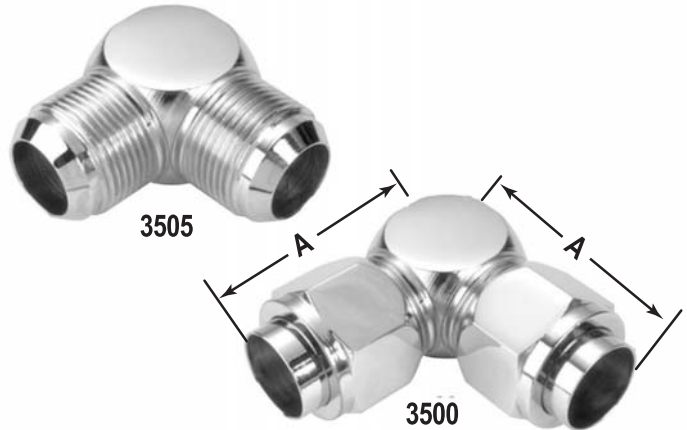
**F-3455 / F-3450
Female Elbow
Flare Tube End-Female Pipe End**



F-3505 / F-3500 • Elbow Union

Body Only Part #	Complete Assy. Part #	Tube O.D.	"A" Tube Leg
F-3505-4	F-3500-4	1/4"	1-9/32"
F-3505-5	F-3500-5	5/16"	1-3/8"
F-3505-6	F-3500-6	3/8"	1-17/32"
F-3505-8	F-3500-8	1/2"	1-25/32"
F-3505-10	F-3500-10	5/8"	2-3/32"
F-3505-12	F-3500-12	3/4"	2-1/4"
F-3505-14	F-3500-14	7/8"	2-7/16"
F-3505-16	F-3500-16	1"	2-19/32"
F-3505-20	F-3500-20	1-1/4"	2-29/32"
F-3505-24	F-3500-24	1-1/2"	3-7/16"
F-3505-32	F-3500-32	2"	4-3/16"

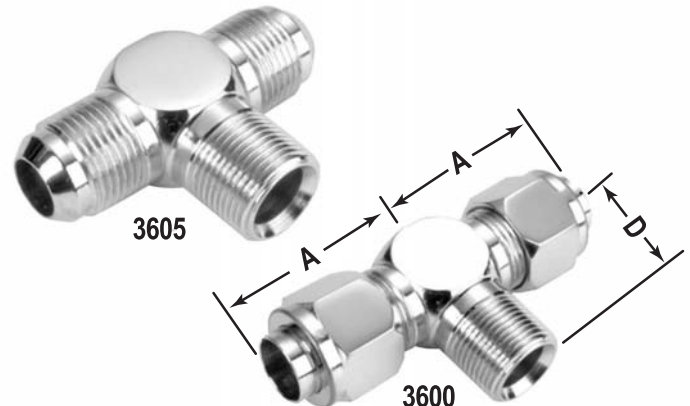
**F-3505 / F-3500
Elbow Union
Flare Tube End-Both Openings**



F-3605 / F-3600 • Male Branch Tee

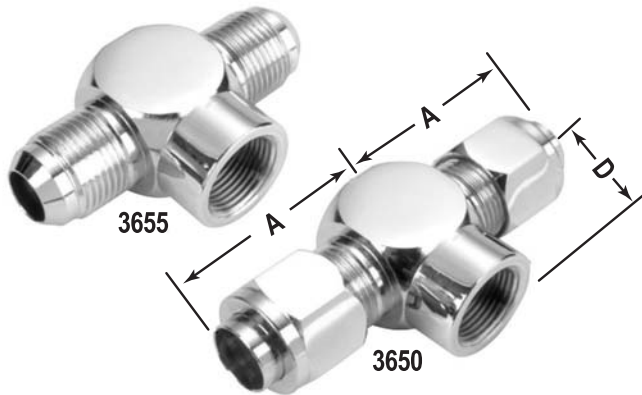
Body Only Part #	Complete Assy. Part #	Tube O.D.	Male Pipe Thread	"A" Tube Leg	"D" Male Pipe Leg
F-3605-4-4-2	F-3600-4-4-2	1/4"	1/8"	1-9/32"	25/32"
F-3605-4-4-4	F-3600-4-4-4	1/4"	1/4"	1-13/32"	1-3/32"
F-3605-5-5-2	F-3600-5-5-2	5/16"	1/8"	1-3/8"	25/32"
F-3605-5-5-4	F-3600-5-5-4	5/16"	1/4"	1-7/16"	1-3/32"
F-3605-6-6-4	F-3600-6-6-4	3/8"	1/4"	1-17/32"	1-3/32"
F-3605-6-6-2	F-3600-6-6-2	3/8"	1/8"	1-17/32"	7/8"
F-3605-6-6-6	F-3600-6-6-6	3/8"	3/8"	1-21/32"	1-7/32"
F-3605-6-6-8	F-3600-6-6-8	3/8"	1/2"	1-23/32"	1-15/32"
F-3605-8-8-6	F-3600-8-8-6	1/2"	3/8"	1-25/32"	1-7/32"
F-3605-8-8-4	F-3600-8-8-4	1/2"	1/4"	1-25/32"	1-5/32"
F-3605-8-8-8	F-3600-8-8-8	1/2"	1/2"	1-15/16"	1-15/32"
F-3605-8-8-12	F-3600-8-8-12	1/2"	3/4"	2-1/32"	1-9/16"
F-3605-10-10-8	F-3600-10-10-8	5/8"	1/2"	2-3/32"	1-15/32"
F-3605-10-10-6	F-3600-10-10-6	5/8"	3/8"	2-3/32"	1-3/8"
F-3605-10-10-12	F-3600-10-10-12	5/8"	3/4"	2-7/32"	1-19/32"
F-3605-12-12-12	F-3600-12-12-12	3/4"	3/4"	2-1/4"	1-19/32"
F-3605-12-12-8	F-3600-12-12-8	3/4"	1/2"	2-1/4"	1-9/16"
F-3605-14-14-12	F-3600-14-14-12	7/8"	3/4"	2-7/16"	1-11/16"
F-3605-16-16-16	F-3600-16-16-16	1"	1"	2-19/32"	1-31/32"
F-3605-16-16-12	F-3600-16-16-12	1"	3/4"	2-19/32"	1-23/32"
F-3605-20-20-20	F-3600-20-20-20	1-1/4"	1-1/4"	2-29/32"	2-3/8"
F-3605-24-24-24	F-3600-24-24-24	1-1/2"	1-1/2"	3-7/16"	2-5/8"
F-3605-32-32-32	F-3600-32-32-32	2"	2"	4-3/16"	3"

**F-3605 / F-3600
Male Branch Tee Flare Tube Two Ends -
Male Pipe Side Outlet**



37° Flare Tube Fittings TAPERED PIPE THREAD

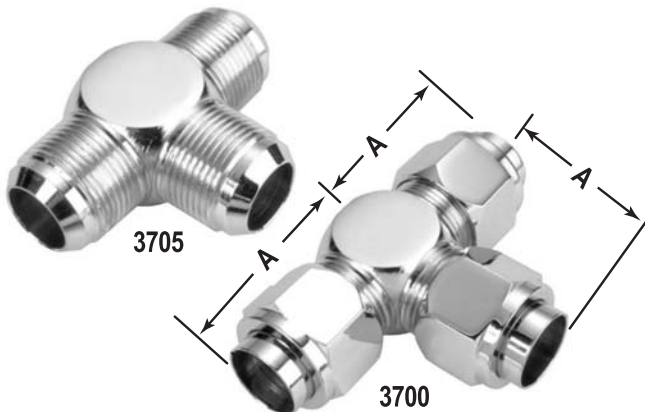
**F-3655 / F-3650 - Female Branch Tee
Flare Tube Two Ends
Female Pipe Side Outlet**



F-3655 / F-3650 • Female Branch Tee

Body Only Part #	Complete Assy. Part #	Tube O.D.	Female Pipe Thread	"A" Tube Leg	"D" Female Pipe Leg
F-3655-4-4-2	F-3650-4-4-2	1/4"	1/8"	1-7/16"	21/32"
F-3655-4-4-4	F-3650-4-4-4	1/4"	1/4"	1-9/16"	29/32"
F-3655-5-5-2	F-3650-5-5-2	5/16"	1/8"	1-15/32"	21/32"
F-3655-6-6-4	F-3650-6-6-4	3/8"	1/4"	1-11/16"	29/32"
F-3655-6-6-2	F-3650-6-6-2	3/8"	1/8"	1-17/32"	21/32"
F-3655-6-6-6	F-3650-6-6-6	3/8"	3/8"	1-25/32"	1"
F-3655-8-8-6	F-3650-8-8-6	1/2"	3/8"	1-15/16"	1"
F-3655-8-8-4	F-3650-8-8-4	1/2"	1/4"	1-27/32"	29/32"
F-3655-8-8-8	F-3650-8-8-8	1/2"	1/2"	1-31/32"	1-1/4"
F-3655-10-10-8	F-3650-10-10-8	5/8"	1/2"	2-1/4"	1-1/4"
F-3655-12-12-12	F-3650-12-12-12	3/4"	3/4"	2-15/32"	1-11/32"
F-3655-12-12-8	F-3650-12-12-8	3/4"	1/2"	2-1/4"	1-1/4"
F-3655-14-14-12	F-3650-14-14-12	7/8"	3/4"	2-9/16"	1-11/32"
F-3655-16-16-16	F-3650-16-16-16	1"	1"	2-15/16"	1-5/8"
F-3655-20-20-20	F-3650-20-20-20	1-1/4"	1-1/4"	3-5/32"	1-11/16"
F-3655-24-24-24	F-3650-24-24-24	1-1/2"	1-1/2"	3-31/32"	2-1/16"
F-3655-32-32-32	F-3650-32-32-32	2"	2"	4-13/32"	2-3/8"

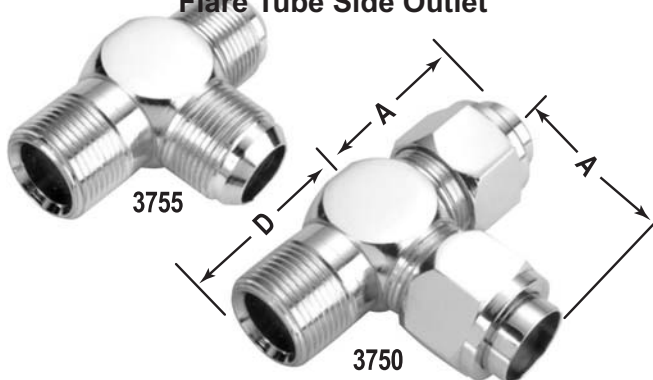
**F-3705 / F-3700 - Tee Union
Flare Tube End - All Openings**



F-3705 / F-3700 • Tee Union

Body Only Part #	Complete Assy. Part #	Tube O.D.	"A" Tube Leg
F-3705-2	F-3700-2	1/8"	1-3/32"
F-3705-3	F-3700-3	3/16"	1-5/32"
F-3705-4	F-3700-4	1/4"	1-9/32"
F-3705-5	F-3700-5	5/16"	1-3/8"
F-3705-6	F-3700-6	3/8"	1-17/32"
F-3705-8	F-3700-8	1/2"	1-25/32"
F-3705-10	F-3700-10	5/8"	2-3/32"
F-3705-12	F-3700-12	3/4"	2-1/4"
F-3705-14	F-3700-14	7/8"	2-7/16"
F-3705-16	F-3700-16	1"	2-19/32"
F-3705-20	F-3700-20	1-1/4"	2-29/32"
F-3705-24	F-3700-24	1-1/2"	3-7/16"
F-3705-32	F-3700-32	2"	4-3/16"

**F-3755 / F-3750 - Male Run Tee
Flare Tube End - Male Pipe End
Flare Tube Side Outlet**



F-3755 / F-3750 • Male Run Tee

Body Only Part #	Complete Assy. Part #	Tube O.D.	Male Pipe Thread	"A" Tube Leg	"D" Male Pipe Leg
F-3755-4-2-4	F-3750-4-2-4	1/4"	1/8"	1-9/32"	25/32"
F-3755-4-4-4	F-3750-4-4-4	1/4"	1/4"	1-13/32"	1-3/32"
F-3755-5-2-5	F-3750-5-2-5	5/16"	1/8"	1-3/8"	25/32"
F-3755-6-4-6	F-3750-6-4-6	3/8"	1/4"	1-17/32"	1-3/32"
F-3755-6-2-6	F-3750-6-2-6	3/8"	1/8"	1-17/32"	7/8"
F-3755-6-6-6	F-3750-6-6-6	3/8"	3/8"	1-21/32"	1-7/32"
F-3755-8-6-8	F-3750-8-6-8	1/2"	3/8"	1-25/32"	1-7/32"
F-3755-8-4-8	F-3750-8-4-8	1/2"	1/4"	1-25/32"	1-5/32"
F-3755-8-8-8	F-3750-8-8-8	1/2"	1/2"	1-15/16"	1-15/32"
F-3755-10-8-10	F-3750-10-8-10	5/8"	1/2"	2-3/32"	1-15/32"
F-3755-12-12-12	F-3750-12-12-12	3/4"	3/4"	2-1/4"	1-19/32"
F-3755-14-12-14	F-3750-14-12-14	7/8"	3/4"	2-7/16"	1-11/16"
F-3755-16-16-16	F-3750-16-16-16	1"	1"	2-19/32"	1-31/32"
F-3755-20-20-20	F-3750-20-20-20	1-1/4"	1-1/4"	2-29/32"	2-3/8"
F-3755-24-24-24	F-3750-24-24-24	1-1/2"	1-1/2"	3-7/16"	2-5/8"
F-3755-32-32-32	F-3750-32-32-32	2"	2"	4-3/16"	3"

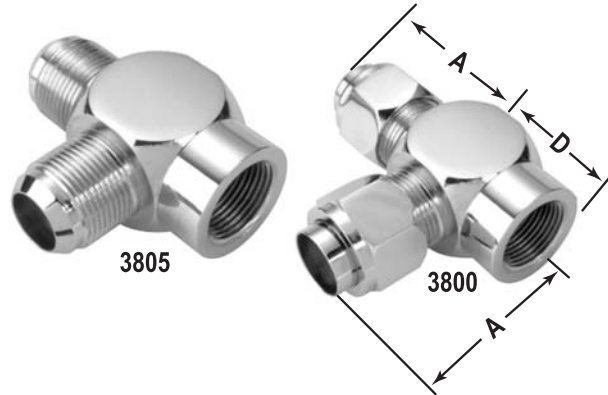


37° Flare Tube Fittings TAPERED PIPE THREAD

F-3805 / F-3800 • Female Run Tee

Body Only Part #	Complete Assy. Part #	Tube O.D.	Female Pipe Thread	"A" Tube Leg	"D" Female Pipe Leg
F-3805-4-2-4	F-3800-4-2-4	1/4"	1/8"	1-7/16"	21/32"
F-3805-5-2-5	F-3800-5-2-5	5/16"	1/8"	1-15/32"	21/32"
F-3805-6-4-6	F-3800-6-4-6	3/8"	1/4"	1-11/16"	29/32"
F-3805-8-6-8	F-3800-8-6-8	1/2"	3/8"	1-15/16"	1"
F-3805-8-8-8	F-3800-8-8-8	1/2"	1/2"	1-31/32"	1-1/4"
F-3805-10-8-10	F-3800-10-8-10	5/8"	1/2"	2-1/4"	1-1/4"
F-3805-12-12-12	F-3800-12-12-12	3/4"	3/4"	2-15/32"	1-11/32"
F-3805-14-12-14	F-3800-14-12-14	7/8"	3/4"	2-9/16"	1-11/32"
F-3805-16-16-16	F-3800-16-16-16	1"	1"	2-15/16"	1-5/8"
F-3805-20-20-20	F-3800-20-20-20	1-1/4"	1-1/4"	3-5/32"	1-11/16"
F-3805-24-24-24	F-3800-24-24-24	1-1/2"	1-1/2"	3-31/32"	2-1/16"
F-3805-32-32-32	F-3800-32-32-32	2"	2"	4-13/32"	2-3/8"

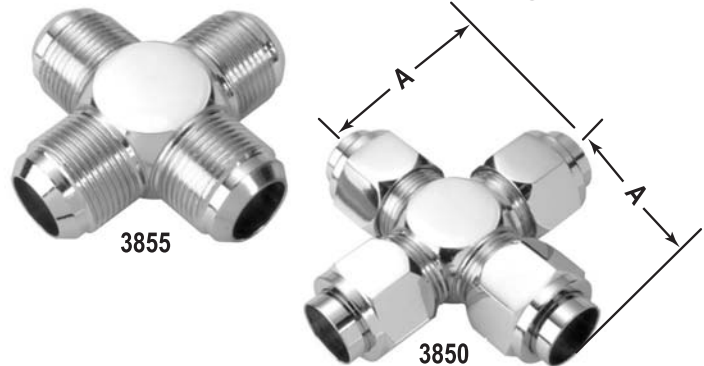
**F-3805 / F-3800 • Female Run Tee
Flare Tube End - Female Pipe End -
Flare Tube Side Outlet**



F-3855 / F-3850 • Tube Cross

Body Only Part #	Complete Assy. Part #	Tube O.D.	"A" Tube Leg
F-3855-4	F-3850-4	1/4"	1-9/32"
F-3855-5	F-3850-5	5/16"	1-3/8"
F-3855-6	F-3850-6	3/8"	1-17/32"
F-3855-8	F-3850-8	1/2"	1-25/32"
F-3855-10	F-3850-10	5/8"	2-3/32"
F-3855-12	F-3850-12	3/4"	2-1/4"
F-3855-14	F-3850-14	7/8"	2-7/16"
F-3855-16	F-3850-16	1"	2-19/32"
F-3855-20	F-3850-20	1-1/4"	2-29/32"
F-3855-24	F-3850-24	1-1/2"	3-7/16"
F-3855-32	F-3850-32	2"	4-3/16"

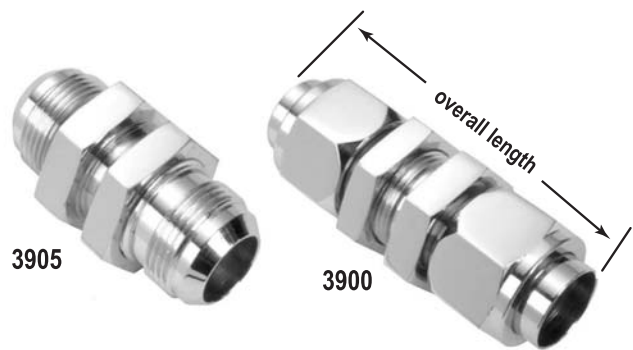
**F-3855 / F-3850 • Tube Cross
Flare Tube End - All Openings**



F-3905 / F-3900 • Bulkhead Union

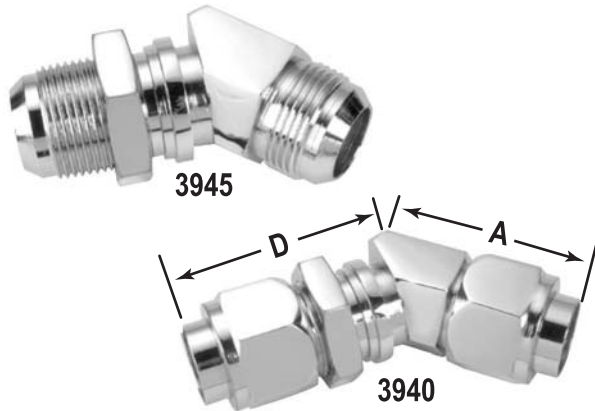
Body Only Part #	Complete Assy. Part #	Tube O.D.	Bulkhead Hole Diameter	Overall Length
F-3905-4	F-3900-4	1/4"	15/32"	2-27/32"
F-3905-5	F-3900-5	5/16"	17/32"	2-29/32"
F-3905-6	F-3900-6	3/8"	19/32"	3-1/8"
F-3905-8	F-3900-8	1/2"	25/32"	3-17/32"
F-3905-10	F-3900-10	5/8"	29/32"	4"
F-3905-12	F-3900-12	3/4"	1-3/32"	4-9/32"
F-3905-14	F-3900-14	7/8"	1-7/32"	4-9/16"
F-3905-16	F-3900-16	1"	1-11/32"	5-23/32"
F-3905-20	F-3900-20	1-1/4"	1-21/32"	5-7/32"
F-3905-24	F-3900-24	1-1/2"	1-29/32"	5-11/16"
F-3905-32	F-3900-32	2"	2-17/32"	6-17/32"

**F-3905 / 3900 • Bulkhead Union
Flare Tube - Both Ends**



37° Flare Tube Fittings TAPERED PIPE THREAD

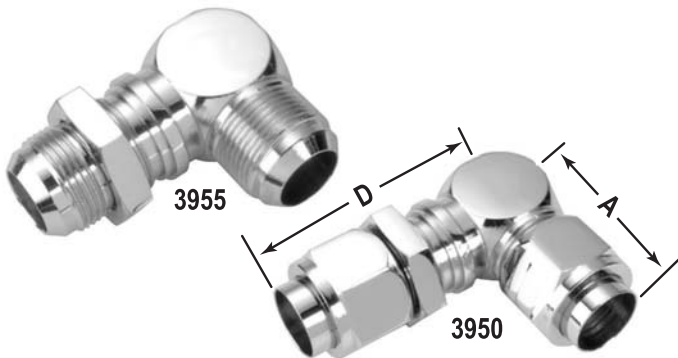
F-3945 / F-3940
Bulkhead 45° Union Elbow
Flare Tube End - Both Openings



F-3945 / F-3940 • Bulkhead 45° Union Elbow

Body Only Part #	Complete Assy. Part #	Tube O.D.	Bulkhead Hole Dia.	"A" Tube Leg	"D" Blkhd. Leg
F-3945-4	F-3940-4	1/4"	15/32"	1-3/32"	2-3/32"
F-3945-5	F-3940-5	5/16"	17/32"	1-5/32"	2-5/32"
F-3945-6	F-3940-6	3/8"	19/32"	1-9/32"	2-13/32"
F-3945-8	F-3940-8	1/2"	25/32"	1-1/2"	2-23/32"
F-3945-10	F-3940-10	5/8"	29/32"	1-23/32"	3-3/32"
F-3945-12	F-3940-12	3/4"	1-3/32"	1-7/8"	3-11/32"
F-3945-14	F-3940-14	7/8"	1-7/32"	2-3/32"	3-17/32"
F-3945-16	F-3940-16	1"	1-11/32"	2-7/32"	3-21/32"
F-3945-20	F-3940-20	1-1/4"	1-21/32"	2-7/16"	4-1/16"
F-3945-24	F-3940-24	1-1/2"	1-29/32"	2-7/8"	4-15/32"

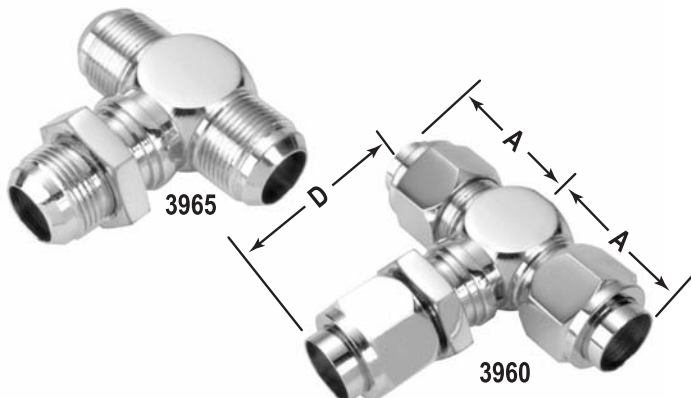
F-3955 / F-3950
Bulkhead Union Elbow
Flare Tube End - Both Openings
Maximum Bulkhead Thickness 3/8"



F-3955 / F-3950 • Bulkhead Union Elbow

Body Only Part #	Complete Assy. Part #	Tube O.D.	Bulkhead Hole Dia.	"A" Tube Leg	"D" Blkhd. Leg
F-3955-4	F-3950-4	1/4"	15/32"	1-9/32"	2-3/32"
F-3955-5	F-3950-5	5/16"	17/32"	1-13/32"	2-5/32"
F-3955-6	F-3950-6	3/8"	19/32"	1-17/32"	1-13/32"
F-3955-8	F-3950-8	1/2"	25/32"	1-7/8"	2-23/32"
F-3955-10	F-3950-10	5/8"	29/32"	2-5/32"	3-3/32"
F-3955-12	F-3950-12	3/4"	1-3/32"	2-11/32"	3-11/32"
F-3955-14	F-3950-14	7/8"	1-7/32"	2-1/2"	3-17/32"
F-3955-16	F-3950-16	1"	1-11/32"	2-21/32"	3-21/32"
F-3955-20	F-3950-20	1-1/4"	1-21/32"	3"	4-1/16"
F-3955-24	F-3950-24	1-1/2"	1-29/32"	3-7/16"	4-19/32"
F-3955-32	F-3950-32	2"	2-17/32"	4-3/16"	5-1/4"

F-3965 / F-3960
Bulkhead Tee
Flare Tube End - All Openings
Maximum Bulkhead Thickness 3/8"



F-3965 / F-3960 • Bulkhead Tee

Body Only Part #	Complete Assy. Part #	Tube O.D.	Bulkhead Hole Dia.	"A" Tube Leg	"D" Blkhd. Leg
F-3965-4	F-3960-4	1/4"	15/32"	1-9/32"	2-3/32"
F-3965-5	F-3960-5	5/16"	17/32"	1-13/32"	2-5/32"
F-3965-6	F-3960-6	3/8"	19/32"	1-17/32"	2-13/32"
F-3965-8	F-3960-8	1/2"	25/32"	1-7/8"	2-23/32"
F-3965-10	F-3960-10	5/8"	29/32"	2-5/32"	3-3/32"
F-3965-12	F-3960-12	3/4"	1-3/32"	2-11/32"	3-11/32"
F-3965-14	F-3960-14	7/8"	1-7/32"	2-1/2"	3-17/32"
F-3965-16	F-3960-16	1"	1-11/32"	2-21/32"	3-21/32"
F-3965-20	F-3960-20	1-1/4"	1-21/32"	3"	4-1/16"

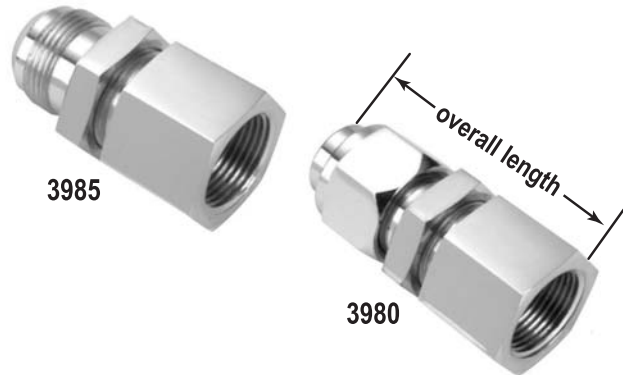


37° Flare Tube Fittings TAPERED PIPE THREAD

F-3985 / F-3980 • Female Bulkhead

Body Only Part #	Complete Assy. Part #	Tube O.D.	Female Pipe Thread	Bulkhead Hole Dia.	Overall Length
F-3985-4-2	F-3980-4-2	1/4"	1/8"	15/32"	2-9/32"
F-3985-4-4	F-3980-4-4	1/4"	1/4"	15/32"	2-15/32"
F-3985-5-2	F-3980-5-2	5/16"	1/8"	17/32"	2-5/16"
F-3985-6-4	F-3980-6-4	3/8"	1/4"	19/32"	2-5/8"
F-3985-6-6	F-3980-6-6	3/8"	3/8"	19/32"	2-23/32"
F-3985-8-6	F-3980-8-6	1/2"	3/8"	25/32"	2-29/32"
F-3985-8-8	F-3980-8-8	1/2"	1/2"	25/32"	3-1/8"
F-3985-10-8	F-3980-10-8	5/8"	1/2"	29/32"	3-11/32"
F-3985-12-12	F-3980-12-12	3/4"	3/4"	1-3/32"	3-19/32"
F-3985-14-12	F-3980-14-12	7/8"	3/4"	1-7/32"	3-21/32"
F-3985-16-16	F-3980-16-16	1"	1"	1-11/32"	3-7/8"
F-3985-20-20	F-3980-20-20	1-1/4"	1-1/4"	1-21/32"	4-1/8"
F-3985-24-24	F-3980-24-24	1-1/2"	1-1/2"	1-29/32"	4-11/32"
F-3985-32-32	F-3980-32-32	2"	2"	2-17/32"	4-27/32"

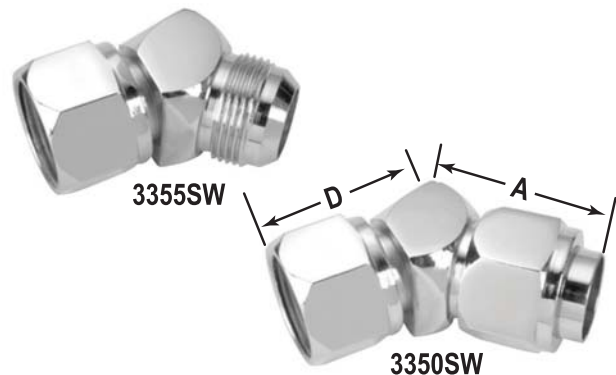
**F-3985 / F-3980
Female Bulkhead
Flare Tube End - Female Pipe End**



F-3355SW / F-3350SW • Swivel Nut 45° Elbow

Body Only Part #	Complete Assy. Part #	Tube O.D.	"A" Tube Leg	"D" Swivel Leg
F-3355SW-4	F-3350SW-4	1/4"	1-3/32"	15/16"
F-3355SW-5	F-3350SW-5	5/16"	1-5/32"	1"
F-3355SW-6	F-3350SW-6	3/8"	1-9/32"	1-1/8"
F-3355SW-8	F-3350SW-8	1/2"	1-1/2"	1-9/32"
F-3355SW-10	F-3350SW-10	5/8"	1-23/32"	1-7/16"
F-3355SW-12	F-3350SW-12	3/4"	1-7/8"	1-1/2"
F-3355SW-14	F-3350SW-14	7/8"	2-3/32"	1-5/8"
F-3355SW-16	F-3350SW-16	1"	2-7/32"	1-3/4"
F-3355SW-20	F-3350SW-20	1-1/4"	2-7/16"	2-1/32"
F-3355SW-24	F-3350SW-24	1-1/2"	2-7/8"	2-1/4"
F-3355SW-32	F-3350SW-32	2"	3-11/32"	2-29/32"

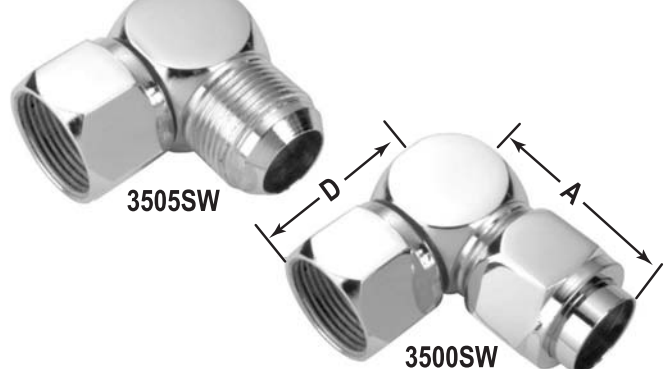
**F-3355SW / F-3350SW
Swivel Nut 45° Elbow
Flare Tube End - JIC Swivel End**



F-3505SW / F-3500SW • Swivel Nut Elbow

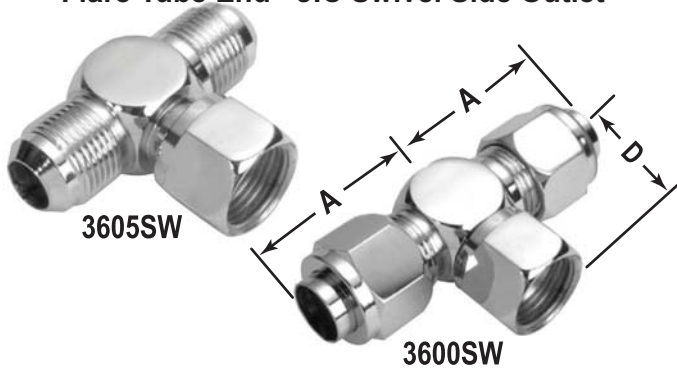
Body Only Part #	Complete Assy. Part #	Tube O.D.	"A" Tube Leg	"D" Swivel Leg
F-3505SW-4	F-3500SW-4	1/4"	1-9/32"	1"
F-3505SW-5	F-3500SW-5	5/16"	1-3/8"	1-1/16"
F-3505SW-6	F-3500SW-6	3/8"	1-17/32"	1-1/4"
F-3505SW-8	F-3500SW-8	1/2"	1-25/32"	1-3/8"
F-3505SW-10	F-3500SW-10	5/8"	2-3/32"	1-5/8"
F-3505SW-12	F-3500SW-12	3/4"	2-1/4"	1-3/4"
F-3505SW-14	F-3500SW-14	7/8"	2-7/16"	1-25/32"
F-3505SW-16	F-3500SW-16	1"	2-19/32"	2"
F-3505SW-20	F-3500SW-20	1-1/4"	2-29/32"	2-5/16"
F-3505SW-24	F-3500SW-24	1-1/2"	3-7/16"	2-19/32"
F-3505SW-32	F-3500SW-32	2"	4-3/16"	3-3/8"

**F-3505SW / F-3500SW
Swivel Nut 90° Elbow
Flare Tube End - JIC Swivel End**



37° Flare Tube Fittings TAPERED PIPE THREAD

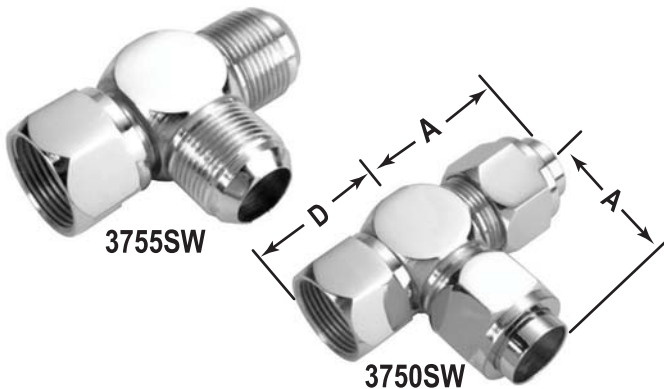
F-3605SW / F-3600SW
Swivel Nut Branch Tee Flare Tube End -
Flare Tube End - JIC Swivel Side Outlet



F-3605SW / F-3600SW • Swivel Nut Branch Tee

Body Only Part #	Complete Assy. Part #	Tube O.D.	"A" Tube Leg	"D" Swivel Leg
F-3605SW-4	F-3600SW-4	1/4"	1-9/32"	1"
F-3605SW-5	F-3600SW-5	5/16"	1-3/8"	1-1/16"
F-3605SW-6	F-3600SW-6	3/8"	1-17/32"	1-1/4"
F-3605SW-8	F-3600SW-8	1/2"	1-25/32"	1-3/8"
F-3605SW-10	F-3600SW-10	5/8"	2-3/32"	1-5/8"
F-3605SW-12	F-3600SW-12	3/4"	2-1/4"	1-3/4"
F-3605SW-14	F-3600SW-14	7/8"	2-7/16"	1-25/32"
F-3605SW-16	F-3600SW-16	1"	2-19/32"	2"
F-3605SW-20	F-3600SW-20	1-1/4"	2-29/32"	2-5/16"
F-3605SW-24	F-3600SW-24	1-1/2"	3-7/16"	2-19/32"
F-3605SW-32	F-3600SW-32	2"	4-3/16"	3-3/8"

F-3755SW / F-3750SW
Swivel Nut Run Tee Flare Tube End -
JIC Swivel End - Flare Tube Side Outlet



F-3755SW / F-3750SW • Swivel Nut Run Tee

Body Only Part #	Complete Assy. Part #	Tube O.D.	"A" Tube Leg	"D" Swivel Leg
F-3755SW-4	F-3750SW-4	1/4"	1-9/32"	1"
F-3755SW-5	F-3750SW-5	5/16"	1-3/8"	1-1/16"
F-3755SW-6	F-3750SW-6	3/8"	1-17/32"	1-1/4"
F-3755SW-8	F-3750SW-8	1/2"	1-25/32"	1-3/8"
F-3755SW-10	F-3750SW-10	5/8"	2-3/32"	1-5/8"
F-3755SW-12	F-3750SW-12	3/4"	2-1/4"	1-3/4"
F-3755SW-14	F-3750SW-14	7/8"	2-7/16"	1-25/32"
F-3755SW-16	F-3750SW-16	1"	2-19/32"	2"
F-3755SW-20	F-3750SW-20	1-1/4"	2-29/32"	2-5/16"
F-3755SW-24	F-3750SW-24	1-1/2"	3-7/16"	2-19/32"
F-3755SW-32	F-3750SW-32	2"	4-3/16"	3-3/8"

F-3105SW
Male Pipe to 37° Female Swivel



F-3255SW
Female Pipe to 37° Female Swivel



Please indicate size
Example: F-3105SW-8-8

F-A3105SW
O-Ring SAE to 37° Female Swivel



F-A3405SW
O-Ring SAE Adjustable to 37° Female Swivel
Elbow





37° Flare Tube Fittings TAPERED PIPE THREAD

F-3765 Cross
Flare Tube End -
Flare Tube End -
Male Pipe End -
Male Pipe End



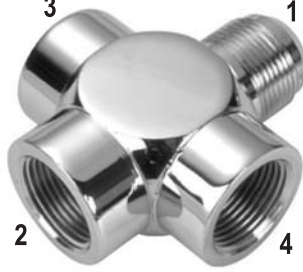
F-3775 Cross
Flare Tube End -
Flare Tube End -
Female Pipe End -
Female Pipe End



F-3785 Cross
Flare Tube End -
Male Pipe End -
Male Pipe End -
Male Pipe End



F-3795 Cross
Flare Tube End -
Female Pipe End -
Female Pipe End -
Female Pipe End



F-3815 Male Cross
Flare Tube End -
Flare Tube End -
Flare Tube End -
Male Pipe End



F-3825 Female Cross
Flare Tube End -
Flare Tube End -
Flare Tube End -
Female Pipe End



F-3865 Tee
Female Pipe End -
Male Pipe End -
Flare Tube Side Outlet



F-3875 Tee
Male Pipe End -
Male Pipe End -
Flare Tube Side Outlet



F-3885 Tee
Flare Tube End -
Female Pipe End -
Male Pipe Side Outlet



F-3895 Tee
Flare Tube End -
Male Pipe End -
Male Pipe Side Outlet



F-3915 Tee
Flare Tube End -
Male Pipe End -
Female Pipe Side Outlet



F-3925 Tee
Female Pipe End -
Female Pipe End -
Flare Tube Side Outlet



F-3935 Tee
Flare Tube End -
Female Pipe End -
Female Pipe Side Outlet

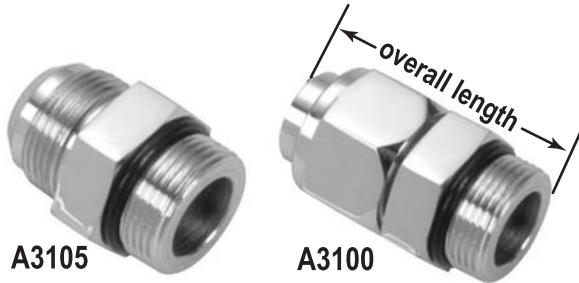


F-3995 Male Bulkhead
Flare Tube End -
Male Pipe End



37° Flare Tube Fittings SAE STRAIGHT THREAD

**F-A3105 / F-A3100 • Male Connector
Flare Tube End -
SAE Straight Thread End**



F-A3105 / F-A3100 • Male Connector

Body Only Part #	Complete Assy. Part #	Tube O.D.	Straight Thread	Overall Length
F-A3105-4-4	F-A3100-4-4	1/4"	7/16"-20	
F-A3105-4-5	F-A3100-4-5	1/4"	1/2"-20	
F-A3105-4-6	F-A3100-4-6	1/4"	9/16"-18	
F-A3105-5-5	F-A3100-5-5	5/16"	1/2"-20	
F-A3105-6-6	F-A3100-6-6	3/8"	9/16"-18	
F-A3105-6-8	F-A3100-6-8	3/8"	3/4"-16	
F-A3105-6-10	F-A3100-6-10	3/8"	7/8"-14	
F-A3105-8-8	F-A3100-8-8	1/2"	3/4"-16	
F-A3105-8-6	F-A3100-8-6	1/2"	9/16"-18	
F-A3105-8-10	F-A3100-8-10	1/2"	7/8"-14	
F-A3105-8-12	F-A3100-8-12	1/2"	1-1/16"-12	
F-A3105-8-14	F-A3100-8-14	1/2"	1-3/16"-12	
F-A3105-10-10	F-A3100-10-10	5/8"	7/8"-14	
F-A3105-10-8	F-A3100-10-8	5/8"	3/4"-16	
F-A3105-10-12	F-A3100-10-12	5/8"	1-1/16"-12	
F-A3105-12-12	F-A3100-12-12	3/4"	1-1/16"-12	
F-A3105-12-8	F-A3100-12-8	3/4"	3/4"-16	
F-A3105-12-10	F-A3100-12-10	3/4"	7/8"-14	
F-A3105-12-14	F-A3100-12-14	3/4"	1-3/16"-12	
F-A3105-12-16	F-A3100-12-16	3/4"	1-5/16"-12	
F-A3105-14-14	F-A3100-14-14	7/8"	1-3/16"-12	
F-A3105-14-16	F-A3100-14-16	7/8"	1-5/16"-12	
F-A3105-16-16	F-A3100-16-16	1"	1-5/16"-12	
F-A3105-16-12	F-A3100-16-12	1"	1-1/16"-12	
F-A3105-16-20	F-A3100-16-20	1"	1-5/8"-12	
F-A3105-20-20	F-A3100-20-20	1-1/4"	1-5/8"-12	
F-A3105-20-16	F-A3100-20-16	1-1/4"	1-5/16"-12	
F-A3105-20-24	F-A3100-20-24	1-1/4"	1-7/8"-12	
F-A3105-24-24	F-A3100-24-24	1-1/2"	1-7/8"-12	
F-A3105-24-20	F-A3100-24-20	1-1/2"	1-5/8"-12	
F-A3105-32-32	F-A3100-32-32	2"	2-1/2"-12	

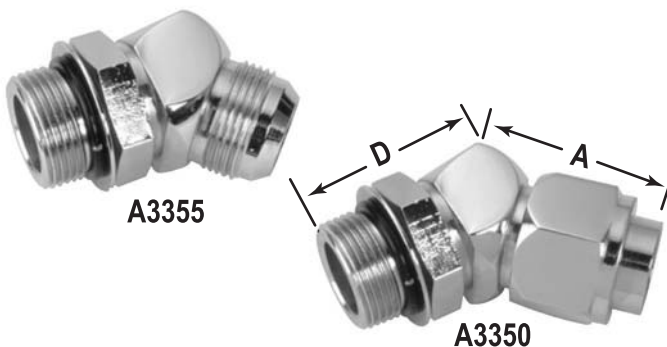
**F-A3105-L / F-A3100-L • Long Male Connector
Flare Tube End -
SAE Straight Thread End**



F-A3105L / F-A3100L • Long Male Connector

Body Only Part #	Complete Assy. Part #	Tube O.D.	Straight Thread	Overall Length
F-A3105L-4	F-A3100L-4	1/4"	7/16"-20	2-5/16"
F-A3105L-5	F-A3100L-5	5/16"	1/2"-20	2-13/32"
F-A3105L-6	F-A3100L-6	3/8"	9/16"-18	2-21/32"
F-A3105L-8	F-A3100L-8	1/2"	3/4"-16	3-3/32"
F-A3105L-10	F-A3100L-10	5/8"	7/8"-14	3-23/32"
F-A3105L-12	F-A3100L-12	3/4"	1-1/16"-12	4-1/8"
F-A3105L-14	F-A3100L-14	7/8"	1-3/16"-12	4-3/8"
F-A3105L-16	F-A3100L-16	1"	1-5/16"-12	4-19/32"
F-A3105L-20	F-A3100L-20	1-1/4"	1-5/8"-12	5-11/32"
F-A3105L-24	F-A3100L-24	1-1/2"	1-7/8"-12	5-31/32"
F-A3105L-32	F-A3100L-32	2"	2-1/2"-12	6-15/16"

**F-A3355 / F-A3350 • Male 45° Elbow
Flare Tube End -
SAE Straight Thread End**



F-A3355 / F-A3350 • Male 45° Elbow

Body Only Part #	Complete Assy. Part #	Tube O.D.	Straight Thread	"A" Tube Leg	"D" Straight Thread Leg
F-A3355-4	F-A3350-4	1/4"	7/16"-20	1-3/32"	1-1/32"
F-A3355-5	F-A3350-5	5/16"	1/2"-20	1-5/32"	1-1/32"
F-A3355-6	F-A3350-6	3/8"	9/16"-18	1-9/32"	1-1/8"
F-A3355-8	F-A3350-8	1/2"	3/4"-16	1-1/2"	1-9/32"
F-A3355-10	F-A3350-10	5/8"	7/8"-14	1-23/32"	1-1/2"
F-A3355-12	F-A3350-12	3/4"	1-1/16"-12	1-7/8"	1-23/32"
F-A3355-14	F-A3350-14	7/8"	1-3/16"-12	2-3/32"	1-25/32"
F-A3355-16	F-A3350-16	1"	1-5/16"-12	2-7/32"	1-27/32"
F-A3355-20	F-A3350-20	1-1/4"	1-5/8"-12	2-7/16"	1-29/32"
F-A3355-24	F-A3350-24	1-1/2"	1-7/8"-12	2-7/8"	1-29/32"
F-A3355-32	F-A3350-32	2"	2-1/2"-12	3-11/32"	1-27/32"



37° Flare Tube Fittings SAE STRAIGHT THREAD

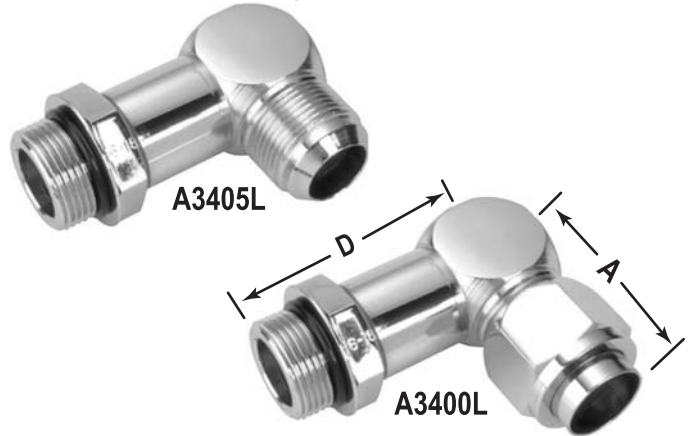
F-A3405 / F-A3400 • Male Elbow

Body Only Part #	Complete Assy. Part #	Tube O.D.	Straight Thread	"A" Tube Leg	"D" Straight Thread Leg
F-A3405-4-4	F-A3400-4-4	1/4"	7/16"-20	1-9/32"	1-1/64"
F-A3405-4-6	F-A3400-4-6	1/4"	9/16"-18	1-11/32"	1-15/64"
F-A3405-5-5	F-A3400-5-5	5/16"	1/2"-20	1-3/8"	1-5/64"
F-A3405-6-6	F-A3400-6-6	3/8"	9/16"-18	1-17/32"	1-15/64"
F-A3405-6-4	F-A3400-6-4	3/8"	7/16"-20	1-17/32"	1-5/64"
F-A3405-6-8	F-A3400-6-8	3/8"	3/4"-16	1-5/8"	1-7/16"
F-A3405-6-10	F-A3400-6-10	3/8"	7/8"-14	1-11/16"	1-11/16"
F-A3405-8-8	F-A3400-8-8	1/2"	3/4"-16	1-25/32"	1-7/16"
F-A3405-8-6	F-A3400-8-6	1/2"	9/16"-18	1-25/32"	1-19/64"
F-A3405-8-10	F-A3400-8-10	1/2"	7/8"-14	1-27/32"	1-11/16"
F-A3405-8-12	F-A3400-8-12	1/2"	1-1/16"-12	2"	1-15/16"
F-A3405-10-10	F-A3400-10-10	5/8"	7/8"-14	2-3/32"	1-11/16"
F-A3405-10-8	F-A3400-10-8	5/8"	3/4"-16	2-3/32"	1-1/2"
F-A3405-10-12	F-A3400-10-12	5/8"	1-1/16"-12	2-7/32"	1-15/16"
F-A3405-12-12	F-A3400-12-12	3/4"	1-1/16"-12	2-1/4"	1-15/16"
F-A3405-12-10	F-A3400-12-10	3/4"	7/8"-14	2-1/4"	1-13/16"
F-A3405-12-16	F-A3400-12-16	3/4"	1-5/16"-12	2-13/32"	2-1/32"
F-A3405-14-14	F-A3400-14-14	7/8"	1-3/16"-12	2-7/16"	2"
F-A3405-16-16	F-A3400-16-16	1"	1-5/16"-12	2-19/32"	2-1/32"
F-A3405-16-12	F-A3400-16-12	1"	1-1/16"-12	2-19/32"	2-1/16"
F-A3405-20-20	F-A3400-20-20	1-1/4"	1-5/8"-12	2-29/32"	2-1/4"
F-A3405-24-24	F-A3400-24-24	1-1/2"	1-7/8"-12	3-7/16"	2-3/8"
F-A3405-24-20	F-A3400-24-20	1-1/2"	1-5/8"-12	3-7/16"	2-3/8"
F-A3405-32-32	F-A3400-32-32	2"	2-1/2"-12	4-3/16"	2-7/8"

**F-A3405 / F-A3400 • Male Elbow
Flare Tube End -
SAE Straight Thread End**



**F-A3405L / F-A3400L • Long Male Elbow
Flare Tube End -
SAE Straight Thread End**



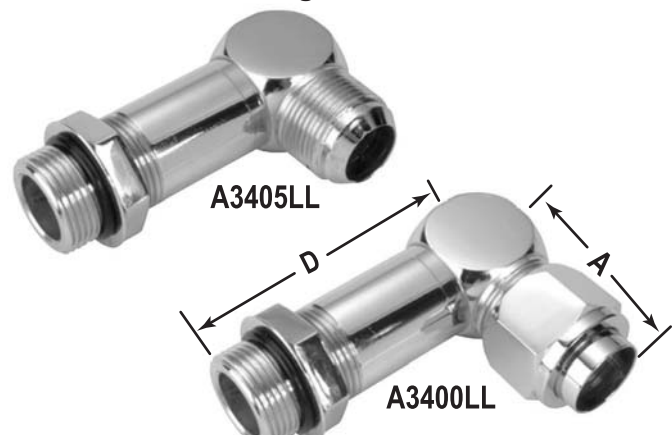
F-A3405L / F-A3400L • Long Male Elbow

Body Only Part #	Complete Assy. Part #	Tube O.D.	Straight Thread	"A" Tube Leg	"D" Straight Thread Leg
F-A3405L-4	F-A3400L-4	1/4"	7/16"-20	1-9/32"	1-3/16"
F-A3405L-6	F-A3400L-6	3/8"	9/16"-18	1-17/32"	1-21/32"
F-A3405L-8	F-A3400L-8	1/2"	3/4"-16	1-25/32"	1-13/16"
F-A3405L-10	F-A3400L-10	5/8"	7/8"-14	2-3/32"	2-7/32"
F-A3405L-12	F-A3400L-12	3/4"	1-1/16"-12	2-1/4"	2-15/32"
F-A3405L-16	F-A3400L-16	1"	1-5/16"-12	2-19/32"	3-1/16"

F-A3405LL / F-A3400LL • Extra Long Male Elbow

Body Only Part #	Complete Assy. Part #	Tube O.D.	Straight Thread	"A" Tube Leg	"D" Straight Thread Leg
F-A3405LL-4	F-A3400LL-4	1/4"	7/16"-20	1-9/32"	1-23/32"
F-A3405LL-6	F-A3400LL-6	3/8"	9/16"-18	1-17/32"	2-1/16"
F-A3405LL-8	F-A3400LL-8	1/2"	3/4"-16	1-25/32"	2-1/2"
F-A3405LL-10	F-A3400LL-10	5/8"	7/8"-14	2-3/32"	2-7/8"
F-A3405LL-12	F-A3400LL-12	3/4"	1-1/16"-12	2-1/4"	3-11/32"
F-A3405LL-16	F-A3400LL-16	1"	1-5/16"-12	2-19/32"	3-3/4"

**F-A3405LL / F-A3400LL • Extra Long Male Elbow
Flare Tube End -
SAE Straight Thread End**



37° Flare Tube Fittings SAE STRAIGHT THREAD

**F-A3605 / F-A3600 • Male Branch Tee
Flare Tube Ends -
SAE Straight Thread Side Outlet**



F-A3605 / F-A3600 • Male Elbow

Body Only Part #	Complete Assy. Part #	Tube O.D.	Straight Thread	"A" Tube Leg	"D" Straight Thread Leg
F-A3605-4	F-A3600-4	1/4"	7/16"-20	1-9/32"	1-1/64"
F-A3605-5	F-A3600-5	5/16"	1/2"-20	1-3/8"	1-5/64"
F-A3605-6	F-A3600-6	3/8"	9/16"-18	1-17/32"	1-15/64"
F-A3605-8	F-A3600-8	1/2"	3/4"-16	1-25/32"	1-7/16"
F-A3605-10	F-A3600-10	5/8"	7/8"-14	2-3/32"	1-11/16"
F-A3605-12	F-A3600-12	3/4"	1-1/16"-12	2-1/4"	1-15/16"
F-A3605-14	F-A3600-14	7/8"	1-3/16"-12	2-7/16"	2"
F-A3605-16	F-A3600-16	1"	1-5/16"-12	2-19/32"	2-1/32"
F-A3605-20	F-A3600-20	1-1/4"	1-5/8"-12	2-29/32"	2-1/4"
F-A3605-24	F-A3600-24	1-1/2"	1-7/8"-12	3-7/16"	2-3/8"
F-A3605-32	F-A3600-32	2"	2-1/2"-12	4-3/16"	2-7/8"

**F-A3755 / F-A3750 • Male Run Tee
Flare Tube End - SAE Straight Thread End
Flare Tube Side Outlet**



F-A3755 / F-A3750 • Male Rub Tee

Body Only Part #	Complete Assy. Part #	Tube O.D.	Straight Thread	"A" Tube Leg	"D" Straight Thread Leg
F-A3755-4	F-A3750-4	1/4"	7/16"-20	1-9/32"	1-1/64"
F-A3755-5	F-A3750-5	5/16"	1/2"-20	1-3/8"	1-5/64"
F-A3755-6	F-A3750-6	3/8"	9/16"-18	1-17/32"	1-15/64"
F-A3755-8	F-A3750-8	1/2"	3/4"-16	1-25/32"	1-7/16"
F-A3755-10	F-A3750-10	5/8"	7/8"-14	2-3/32"	1-11/16"
F-A3755-12	F-A3750-12	3/4"	1-1/16"-12	2-1/4"	1-15/32"
F-A3755-14	F-A3750-14	7/8"	1-3/16"-12	2-7/16"	2"
F-A3755-16	F-A3750-16	1"	1-5/16"-12	2-19/32"	2-1/32"
F-A3755-20	F-A3750-20	1-1/4"	1-5/8"-12	2-29/32"	2-1/4"
F-A3755-24	F-A3750-24	1-1/2"	1-7/8"-12	3-7/16"	2-3/8"
F-A3755-32	F-A3750-32	2"	2-1/2"-12	4-3/16"	2-7/8"

All fittings conform to JIC Hydraulic Standards



Components & Accessories NUTS & SLEEVES

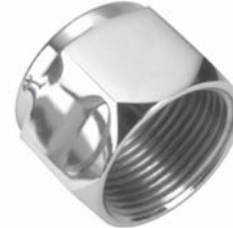
3205 • Tube Nut 3-Piece Type Used with 3165 Sleeve

Part #	Tube O.D.	JIC Thread	Hex Size	Length
F-3205-2	1/8"	5/16"-24	3/8"	17/32"
F-3205-3	3/16"	3/8"-24	1/2"	19/32"
F-3205-4	1/4"	7/16"-20	9/16"	5/8"
F-3205-5	5/16"	1/2"-20	5/8"	11/16"
F-3205-6	3/8"	9/16"-18	11/16"	23/32"
F-3205-8	1/2"	3/4"-16	7/8"	27/32"
F-3205-10	5/8"	7/8"-14	1"	31/32"
F-3205-12	3/4"	1-1/16"-12	1-1/4"	1-1/32"
F-3205-14	7/8"	1-3/16"-12	1-3/8"	1-3/32"
F-3205-16	1"	1-5/16"-12	1-1/2"	1-1/8"
F-3205-20	1-1/4"	1-5/8"-12	2"	1-7/32"
F-3205-24	1-1/2"	1-7/8"-12	2-1/4"	1-13/32"
F-3205-32	2"	2-1/2"-12	2-7/8"	1-3/4"

3165 • Tube Sleeve Used with 3205 Nut

Part #	Tube O.D.	Length
F-3165-2	1/8"	11/32"
F-3165-3	3/16"	11/32"
F-3165-4	1/4"	13/32"
F-3165-5	5/16"	7/16"
F-3165-6	3/8"	1/2"
F-3165-8	1/2"	9/16"
F-3165-10	5/8"	21/32"
F-3165-12	3/4"	11/16"
F-3165-14	7/8"	3/4"
F-3165-16	1"	25/32"
F-3165-20	1-1/4"	29/32"
F-3165-24	1-1/2"	1-1/8"
F-3165-32	2"	1-3/16"

3205 Tube Nut 3-Piece Type Used with 3165 Sleeve



3165 • Tube Sleeve Used with 3205 Nut



2205-S 2-Piece Tube Short Nut



2205S • 2-Piece Tube Short Nut

Part #	Tube O.D.	JIC Thread	Hex Size	Length
F-2205S-4	1/4"	7/16"-20	9/16"	9/16"
F-2205S-5	5/16"	1/2"-20	5/8"	19/32"
F-2205S-6	3/8"	9/16"-18	11/16"	39/64"
F-2205S-8	1/2"	3/4"-16	7/8"	3/4"
F-2205S-10	5/8"	7/8"-14	1"	7/8"
F-2205S-12	3/4"	1-1/16"-12	1-1/4"	31/32"
F-2205S-14	7/8"	1-3/16"-12	1-3/8"	1-1/8"
F-2205S-16	1"	1-5/16"-12	1-1/2"	1-1/8"
F-2205S-20	1-1/4"	1-5/8"-12	2"	1-1/4"
F-2205S-24	1-1/2"	1-7/8"-12	2-1/4"	1-1/2"
F-2205S-32	2"	2-1/2"-12	2-7/8"	1-7/8"

2205 2-Piece Tube Nut



2205 • 2-Piece Tube Nut

Part #	Tube O.D.	JIC Thread	Hex Size	Length
F-2205-4	1/4"	7/16"-20	9/16"	23/32"
F-2205-5	5/16"	1/2"-20	5/8"	13/16"
F-2205-6	3/8"	9/16"-18	11/16"	7/8"
F-2205-8	1/2"	3/4"-16	7/8"	1-3/32"
F-2205-10	5/8"	7/8"-14	1"	1-9/32"
F-2205-12	3/4"	1-1/16"-12	1-1/4"	1-15/32"
F-2205-14	7/8"	1-3/16"-12	1-3/8"	1-11/16"
F-2205-16	1"	1-5/16"-12	1-1/2"	1-25/32"
F-2205-20	1-1/4"	1-5/8"-12	2"	2-3/32"
F-2205-24	1-1/2"	1-7/8"-12	2-1/4"	2-1/4"
F-2205-32	2"	2-1/2"-12	2-7/8"	3"

37° Flare Tube Fittings COMPONENTS

3208
37° Flare Bulkhead Nut



3208 • 37° Flare Bulkhead Nut

Part #	Tube O.D.	JIC Thread	Hex Size	Length
F-3208-4	1/4"	7/16"-20	11/16"	1/4"
F-3208-5	5/16"	1/2"-20	3/4"	1/4"
F-3208-6	3/8"	9/16"-18	13/16"	17/64"
F-3208-8	1/2"	3/4"-16	1"	5/16"
F-3208-10	5/8"	7/8"-14	1-1/8"	23/32"
F-3208-12	3/4"	1-1/16"-12	1-3/8"	13/32"
F-3208-14	7/8"	1-3/16"-12	1-1/2"	13/32"
F-3208-16	1"	1-5/16"-12	1-5/8"	13/32"
F-3208-20	1-1/4"	1-5/8"-12	1-7/8"	13/32"
F-3208-24	1-1/2"	1-7/8"-12	2-1/8"	13/32"
F-3208-32	2"	2-1/2"-12	2-3/4"	13/32"

**2205C • Cap Nut
to Cap Flared Fitting Tube End**



2205C • Cap Nut to Cap Flared Fitting Tube End

Part #	Tube O.D.	JIC Thread	Hex Size	Length
F-2205C-2	1/8"	5/16"-24	3/8"	1/2"
F-2205C-3	3/16"	3/8"-24	1/2"	9/16"
F-2205C-4	1/4"	7/16"-20	9/16"	19/32"
F-2205C-5	5/16"	1/2"-20	5/8"	39/64"
F-2205C-6	3/8"	9/16"-18	11/16"	5/8"
F-2205C-8	1/2"	3/4"-16	7/8"	3/4"
F-2205C-10	5/8"	7/8"-14	1"	27/32"
F-2205C-12	3/4"	1-1/16"-12	1-1/4"	29/32"
F-2205C-14	7/8"	1-3/16"-12	1-3/8"	31/32"
F-2205C-16	1"	1-5/16"-12	1-1/2"	1-1/16"
F-2205C-20	1-1/4"	1-5/8"-12	2"	1-1/16"
F-2205C-24	1-1/2"	1-7/8"-12	1-1/4"	1-3/16"
F-2205C-32	2"	2-1/2"-12	2-7/8"	1-7/16"

**3105P • Tube Plug
Screws into Nut to Plug Line**



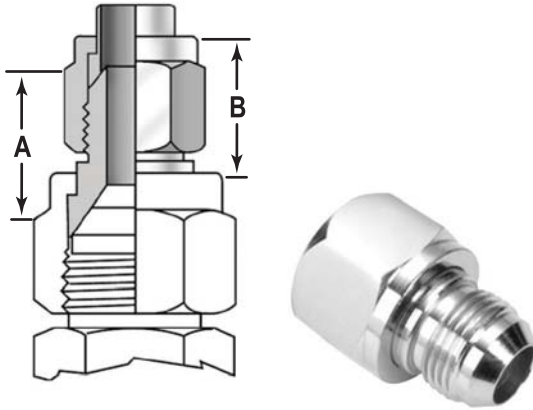
3105P • Tube Plug Screws into Nut to Plug Line

Part #	Tube O.D.	JIC Thread	Hex Size	Length
F-3105P-4	1/4"	7/16"-20	1/2"	47/64"
F-3105P-5	5/16"	1/2"-20	9/16"	49/64"
F-3105P-6	3/8"	9/16"-18	5/8"	13/16"
F-3105P-8	1/2"	3/4"-16	13/16"	15/16"
F-3105P-10	5/8"	7/8"-14	15/16"	1-7/64"
F-3105P-12	3/4"	1-1/16"-12	1-1/8"	1-13/64"
F-3105P-14	7/8"	1-3/16"-12	1-1/4"	1-15/64"
F-3105P-16	1"	1-5/16"-12	1-3/8"	1-9/32"
F-3105P-20	1-1/4"	1-5/8"-12	1-11/16"	1-25/64"
F-3105P-24	1-1/2"	1-7/8"-12	2"	1-31/64"
F-3105P-32	2"	2-1/2"-12	2-5/8"	2-3/64"

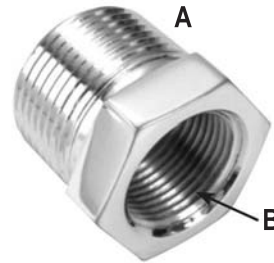


Adapters STEEL PIPE FITTINGS

**3140
Flare Tube End
Reducers**



**HB
Hex Bushings**



F-3145 / F-3140 • Flare Tube End Reducers

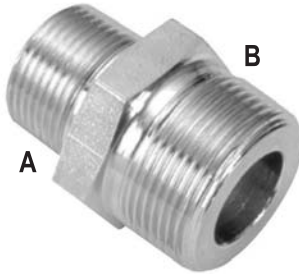
Reducer Only	Part #	Tube End Reduction	"A" Length Between Flare Noses	"B" Length Between Nut Shoulders
F-3145-5-4	F-3140-5-4	5/16" to 1/4"	13/16"	23/32"
F-3145-6-4	F-3140-6-4	3/8" to 1/4"	29/32"	27/32"
F-3145-8-4	F-3140-8-4	1/2" to 1/4"	29/32"	25/32"
F-3145-8-5	F-3140-8-5	1/2" to 5/16"	29/32"	27/32"
F-3145-8-6	F-3140-8-6	1/2" to 3/8"	29/32"	27/32"
F-3145-10-4	F-3140-10-4	5/8" to 1/4"	15/16"	3/4"
F-3145-10-6	F-3140-10-6	5/8" to 3/8"	15/16"	13/16"
F-3145-10-8	F-3140-10-8	5/8" to 1/2"	1"	31/32"
F-3145-12-4	F-3140-12-4	3/4" to 1/4"	31/32"	7/8"
F-3145-12-6	F-3140-12-6	3/4" to 3/8"	31/32"	29/32"
F-3145-12-8	F-3140-12-8	3/4" to 1/2"	1-1/16"	1-1/32"
F-3145-12-10	F-3140-12-10	3/4" to 5/8"	1-1/32"	1-1/8"
F-3145-14-6	F-3140-14-6	7/8" to 3/8"	1"	7/8"
F-3145-14-8	F-3140-14-8	7/8" to 1/2"	1-3/32"	1"
F-3145-14-10	F-3140-14-10	7/8" to 5/8"	1-3/16"	1-5/32"
F-3145-14-12	F-3140-14-12	7/8" to 3/4"	1-7/32"	1-3/16"
F-3145-16-5	F-3140-16-5	1" to 5/16"	1"	29/32"
F-3145-16-6	F-3140-16-6	1" to 3/8"	1-1/32"	7/8"
F-3145-16-8	F-3140-16-8	1" to 1/2"	1-5/32"	1-1/32"
F-3145-16-10	F-3140-16-10	1" to 5/8"	1-1/4"	1-3/16"
F-3145-16-12	F-3140-16-12	1" to 3/4"	1-11/32"	1-1/4"
F-3145-20-8	F-3140-20-8	1-1/4" to 1/2"	1-3/16"	1-1/8"
F-3145-20-12	F-3140-20-12	1-1/4" to 3/4"	1-13/32"	1-9/32"
F-3145-20-16	F-3140-20-16	1-1/4" to 1"	1-7/16"	1-13/32"
F-3145-24-8	F-3140-24-8	1-1/2" to 1/2"	1-5/16"	1-1/16"
F-3145-24-10	F-3140-24-10	1-1/2" to 5/8"	1-1/2"	1-7/32"
F-3145-24-12	F-3140-24-12	1-1/2" to 3/4"	1-1/2"	1-1/4"
F-3145-24-16	F-3140-24-16	1-1/2" to 1"	1-11/16"	1-3/8"
F-3145-24-20	F-3140-24-20	1-1/2" to 1-1/4"	1-9/16"	1-7/16"
F-3145-32-16	F-3140-32-16	2" to 1"	1-9/16"	1-7/16"
F-3145-32-20	F-3140-32-20	2" to 1-1/4"	1-11/16"	1-1/2"
F-3145-32-24	F-3140-32-24	2" to 1-1/2"	1-13/16"	1-3/4"

HB • Hex Bushings

Part #	"A" Male Pipe Thread	"B" Female Pipe Thread	Hex Size	Length
F-4-2HB	1/4"	1/8"	5/8"	27/32"
F-6-2HB	3/8"	1/8"	3/4"	27/32"
F-6-4HB	3/8"	1/4"	3/4"	27/32"
F-8-2HB	1/2"	1/8"	7/8"	1-7/64"
F-8-4HB	1/2"	1/4"	7/8"	1-7/64"
F-8-6HB	1/2"	3/8"	7/8"	1-7/64"
F-12-2HB	3/4"	1/8"	1-1/8"	1-3/16"
F-12-4HB	3/4"	1/4"	1-1/8"	1-3/16"
F-12-6HB	3/4"	3/8"	1-1/8"	1-3/16"
F-12-8HB	3/4"	1/2"	1-1/8"	1-11/64"
F-16-4HB	1"	1/4"	1-3/8"	1-23/64"
F-16-6HB	1"	3/8"	1-3/8"	1-23/64"
F-16-8HB	1"	1/2"	1-3/8"	1-23/64"
F-16-12HB	1"	3/4"	1-3/8"	1-23/64"
F-20-4HB	1-1/4"	1/4"	1-3/4"	1-15/32"
F-20-6HB	1-1/4"	3/8"	1-3/4"	1-15/32"
F-20-8HB	1-1/4"	1/2"	1-3/4"	1-15/32"
F-20-12HB	1-1/4"	3/4"	1-3/4"	1-15/32"
F-20-16HB	1-1/4"	1"	1-3/4"	1-15/32"
F-24-4HB	1-1/2"	1/4"	2"	1-37/64"
F-24-6HB	1-1/2"	3/8"	2"	1-37/64"
F-24-8HB	1-1/2"	1/2"	2"	1-37/64"
F-24-12HB	1-1/2"	3/4"	2"	1-37/64"
F-24-16HB	1-1/2"	1"	2"	1-37/64"
F-24-20HB	1-1/2"	1-1/4"	2"	1-37/64"
F-32-6HB	2"	3/8"	2-1/2"	1-3/4"
F-32-8HB	2"	1/2"	2-1/2"	1-3/4"
F-32-12HB	2"	3/4"	2-1/2"	1-3/4"
F-32-16HB	2"	1"	2-1/2"	1-3/4"
F-32-20HB	2"	1-1/4"	2-1/2"	1-3/4"
F-32-24HB	2"	1-1/2"	2-1/2"	1-3/4"

Adapters TAPERED PIPE THREAD

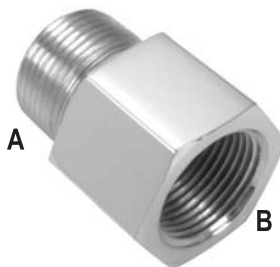
**RPN
Reducing Pipe Nipples**



RPN • Reducing Pipe Nipples

Part #	"A" Male Pipe Thread	"B" Male Pipe Thread	Hex Size	Length
F-2-4RPN	1/8"	1/4"	9/16"	1-7/32"
F-2-6RPN	1/8"	3/8"	11/16"	1-1/4"
F-4-6RPN	1/4"	3/8"	11/16"	1-13/32"
F-4-8RPN	1/4"	1/2"	7/8"	1-5/8"
F-6-8RPN	3/8"	1/2"	7/8"	1-5/8"
F-6-12RPN	3/8"	3/4"	1-1/16"	1-11/16"
F-8-12RPN	1/2"	3/4"	1-1/16"	1-7/8"
F-8-16RPN	1/2"	1"	1-3/8"	2-3/32"
F-12-16RPN	3/4"	1"	1-3/8"	2-3/32"
F-12-20RPN	3/4"	1-1/4"	1-3/4"	2-5/32"
F-16-20RPN	1"	1-1/4"	1-3/4"	2-11/32"
F-16-24RPN	1"	1-1/2"	2"	2-7/16"
F-20-24RPN	1-1/4"	1-1/2"	2"	2-15/32"
F-20-32RPN	1-1/4"	2"	2-1/2"	2-21/32"
F-24-32RPN	1-1/2"	2"	2-1/2"	2-11/16"

**PRC
Pipe Reducing Connectors**



PRC • Pipe Reducing Connectors

Part #	"A" Male Pipe Thread	"B" Female Pipe Thread	Hex Size	Length
F-2-4PRC	1/8"	1/4"	3/4"	1-3/32"
F-2-6PRC	1/8"	3/8"	7/8"	1-9/32"
F-4-4PRC	1/4"	1/4"	3/4"	1-5/16"
F-4-2PRC	1/4"	1/8"	5/8"	1"
F-4-6PRC	1/4"	3/8"	7/8"	1-1/2"
F-4-8PRC	1/4"	1/2"	1-1/8"	1-5/8"
F-6-6PRC	3/8"	3/8"	7/8"	1-3/8"
F-6-4PRC	3/8"	1/4"	3/4"	1-1/4"
F-6-8PRC	3/8"	1/2"	1-1/8"	1-5/8"
F-6-12PRC	3/8"	3/4"	1-3/8"	1-3/4"
F-8-8PRC	1/2"	1/2"	1-1/8"	1-13/16"
F-8-4PRC	1/2"	1/4"	7/8"	1-1/2"
F-8-6PRC	1/2"	3/8"	7/8"	1-11/16"
F-8-12PRC	1/2"	3/4"	1-3/8"	1-15/16"
F-8-16PRC	1/2"	1"	1-5/8"	2-3/16"
F-12-12PRC	3/4"	3/4"	1-3/8"	1-27/32"
F-12-6PRC	3/4"	3/8"	1-1/16"	1-1/2"
F-12-8PRC	3/4"	1/2"	1-1/8"	1-9/16"
F-12-16PRC	3/4"	1"	1-5/8"	2-3/16"
F-12-20PRC	3/4"	1-1/4"	2"	2-11/32"
F-16-16PRC	1"	1"	1-5/8"	2-1/4"
F-16-8PRC	1"	1/2"	1-3/8"	1-5/8"
F-16-12PRC	1"	3/4"	1-3/8"	1-15/16"
F-16-20PRC	1"	1-1/4"	2"	2-13/32"
F-20-20PRC	1-1/4"	1-1/4"	2"	2-3/8"
F-20-12PRC	1-1/4"	3/4"	1-3/4"	2"
F-20-16PRC	1-1/4"	1"	1-3/4"	2-1/8"
F-20-24PRC	1-1/4"	1-1/2"	2-3/8"	2-9/16"
F-24-24PRC	1-1/2"	1-1/2"	2-3/8"	2-13/32"
F-24-20PRC	1-1/2"	1-1/4"	2"	2-1/4"
F-24-32PRC	1-1/2"	2"	3"	2-3/4"
F-32-32PRC	2"	2"	3"	2-3/4"
F-32-20PRC	2"	1-1/4"	2-1/2"	2-3/8"



Adapters TAPERED PIPE THREAD

PN • Pipe Nipples

Part #	Male Pipe Thread	Hex Size	Length	Bore
F-2PN	1/8"	7/16"	15/16"	3/16"
F-4PN	1/4"	9/16"	1-3/8"	9/32"
F-6PN	3/8"	11/16"	1-13/32"	13/32"
F-8PN	1/2"	7/8"	1-13/16"	35/64"
F-12PN	3/4"	1-1/16"	1-7/8"	23/32"
F-16PN	1"	1-3/8"	2-7/32"	15/16"
F-20PN	1-1/4"	1-3/4"	2-13/32"	1-1/4"
F-24PN	1-1/2"	2"	2-19/32"	1-15/32"
F-32PN	2"	2-1/2"	2-13/16"	1-3/4"

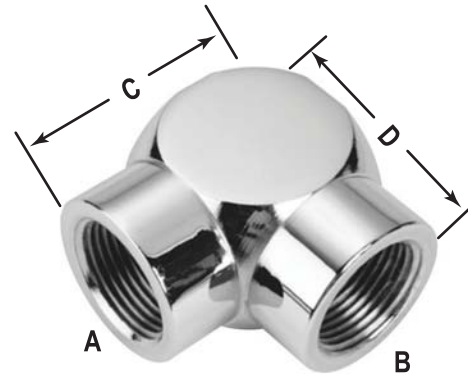
**PN
Pipe Nipples**



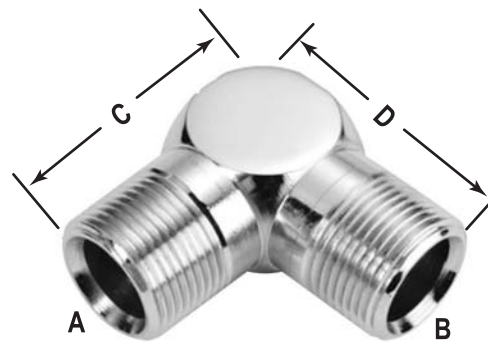
FPE • Female Pipe Elbows

Part #	"A" Female Pipe Thread	"B" Female Pipe Thread	"C" Female Pipe Leg	"D" Female Pipe Leg
F-2-2FPE	1/8"	1/8"	21/32"	21/32"
F-2-4FPE	1/8"	1/4"	25/32"	29/32"
F-2-6FPE	1/8"	3/8"	27/32"	31/32"
F-4-4FPE	1/4"	1/4"	29/32"	29/32"
F-4-6FPE	1/4"	3/8"	31/32"	31/32"
F-4-8FPE	1/4"	1/2"	1-1/32"	1-1/4"
F-6-6FPE	3/8"	3/8"	31-32"	31/32"
F-6-8FPE	3/8"	1/2"	1-1/32"	1-1/4"
F-6-12FPE	3/8"	3/4"	1-5/32"	1-11/32"
F-8-8FPE	1/2"	1/2"	1-1/4"	1-1/4"
F-8-12FPE	1/2"	3/4"	1-3/8"	1-11/32"
F-8-16FPE	1/2"	1"	1-9/16"	1-5/8"
F-12-12FPE	3/4"	3/4"	1-11/32"	1-11/32"
F-12-16FPE	3/4"	1"	1-17/32"	1-5/8"
F-12-20FPE	3/4"	1-1/4"	1-23/32"	1-11/16"
F-16-16FPE	1"	1"	1-5/8"	1-5/8"
F-16-20FPE	1"	1-1/4"	1-13/16"	1-11/16"
F-16-24FPE	1"	1-1/2"	1-15/16"	2-1/16"
F-20-20FPE	1-1/4"	1-1/4"	1-11/16"	1-11/16"
F-20-24FPE	1-1/4"	1-1/2"	1-13/16"	2-1/16"
F-24-24FPE	1-1/4"	1-1/2"	2-1/16"	2-1/16"
F-32-32FPE	2"	2"	2-3/8"	2-3/8"

**FPE
Female Pipe Elbows**



**MPE
Male Pipe Elbows**



MPE • Male Pipe Elbows

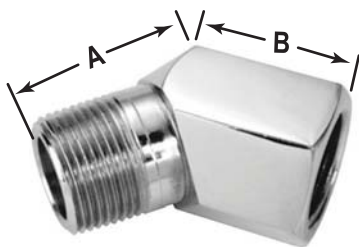
Part #	"A" Male Pipe Thread	"B" Male Pipe Thread	"C" Male Pipe Leg	"D" Male Pipe Leg
F-2-2MPE	1/8"	1/8"	25/32"	25/32"
F-2-4MPE	1/8"	1/4"	27/32"	1-3/32"
F-4-4MPE	1/4"	1/4"	1-3/32"	1-3/32"
F-4-6MPE	1/4"	3/8"	1-5/32"	1-7/32"
F-6-6MPE	3/8"	3/8"	1-7/32"	1-7/32"
F-6-8MPE	3/8"	1/2"	1-9/32"	1-15/32"
F-8-8MPE	1/2"	1/2"	1-15/32"	1-15/32"
F-8-12MPE	1/2"	3/4"	1-19/32"	1-19/32"
F-12-12MPE	3/4"	3/4"	1-19/32"	1-19/32"
F-12-16MPE	3/4"	1"	1-23/32"	1-31/32"
F-16-16MPE	1"	1"	1-31/32"	1-31/32"
F-20-20MPE	1-1/4"	1-1/4"	2-3/8"	2-3/8"
F-24-24MPE	1-1/2"	1-1/2"	2-5/8"	2-5/8"
F-32-32MPE	2"	2"	3"	3"

Adapters TAPERED PIPE THREAD

**SE
Street Elbows**



**45SE
45° Street Elbows**



**MPT
Male Pipe Tee**



**PT
Pipe Tees**



SE • Street Elbows

Part #	Male Pipe Thread	Female Pipe Thread	"A" Male Pipe Leg	"B" Female Pipe Leg
F-2-2SE	1/8"	1/8"	13/16"	21/32"
F-2-4SE	1/8"	1/4"	15/16"	29/32"
F-2-6SE	1/8"	3/8"	1"	31/32"
F-4-4SE	1/4"	1/4"	1-3/16"	29/32"
F-4-2SE	1/4"	1/8"	1-1/16"	21/32"
F-4-6SE	1/4"	3/8"	1-1/4"	31/32"
F-6-6SE	3/8"	3/8"	1-5/16"	31/32"
F-6-4SE	3/8"	1/4"	1-3/16"	29/32"
F-6-8SE	3/8"	1/2"	1-3/8"	1-1/4"
F-8-8SE	1/2"	1/2"	1-1/2"	1-1/4"
F-8-6SE	1/2"	3/8"	1-7/16"	31/32"
F-8-12SE	1/2"	3/4"	1-5/8"	1-11/32"
F-12-12SE	3/4"	3/4"	1-21/32"	1-11/32"
F-12-8SE	3/4"	1/2"	1-17/32"	1-1/4"
F-12-16SE	3/4"	1"	1-25/32"	1-5/8"
F-16-16SE	1"	1"	2-1/16"	1-5/8"
F-16-12SE	1"	3/4"	1-7/8"	1-11/32"
F-16-20SE	1"	1-1/4"	2-9/32"	1-11/16"
F-20-20SE	1-1/4"	1-1/4"	2-1/2"	1-11/16"
F-24-24SE	1-1/2"	1-1/2"	2-3/4"	2-1/16"
F-32-32SE	2"	2"	3-1/8"	2-3/8"

45SE • 45° Street Elbows

Part #	Male Pipe Thread	Female Pipe Thread	"A" Male Pipe Leg	"B" Female Pipe Leg
F-2-45SE	1/8"	1/8"	11/16"	5/8"
F-4-45SE	1/4"	1/4"	15/16"	27/32"
F-6-45SE	3/8"	3/8"	1"	31/32"
F-8-45SE	1/2"	1/2"	1-1/4"	1-3/32"
F-12-45SE	3/4"	3/4"	1-11/32"	1-1/4"
F-16-45SE	1"	1"	1-11/16"	1-7/16"
F-20-45SE	1-1/4"	1-1/4"	1-13/16"	1-5/8"
F-24-45SE	1-1/2"	1-1/2"	1-31/32"	1-11/16"
F-32-45SE	2"	2"	2-15/32"	2-3/16"

MPT • Male Pipe Tee

Part #	"A" Male Pipe Thread	"A" Male Pipe Leg
F-2MPT	1/8"	25/32"
F-4MPT	1/4"	1-3/32"
F-6MPT	3/8"	1-7/32"
F-8MPT	1/2"	1-15/32"
F-12MPT	3/4"	1-19/32"
F-16MPT	1"	1-31/32"
F-20MPT	1-1/4"	2-3/8"

PT • Pipe Tees

Part #	"A" Female Pipe Thread	"A" Male Pipe Leg
F-2PT	1/8"	21/32"
F-4PT	1/4"	29/32"
F-6PT	3/8"	31/32"
F-8PT	1/2"	1-1/4"
F-12PT	3/4"	1-11/32"
F-16PT	1"	1-5/8"
F-20PT	1-1/4"	1-11/16"
F-24PT	1-1/2"	2-1/16"
F-32PT	2"	2-3/8"



Adapters TAPERED PIPE THREAD

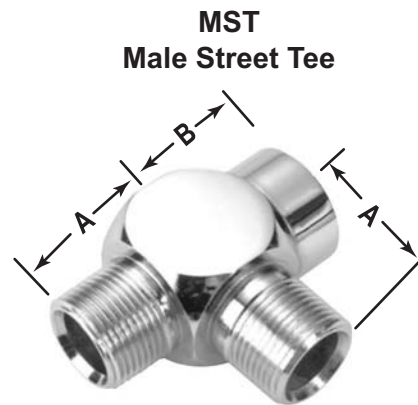
ST • Street Tees

Part #	Male Pipe Thread	Female Pipe Thread	"A" Male Pipe Leg	"B" Female Pipe Leg
F-2ST	1/8"	1/8"	13/16"	21/32"
F-4ST	1/4"	1/4"	1-3/16"	29/32"
F-6ST	3/8"	3/8"	1-5/16"	31/32"
F-8ST	1/2"	1/2"	1-1/2"	1-1/4"
F-12ST	3/4"	3/4"	1-21/32"	1-11/32"
F-16ST	1"	1"	2-1/16"	1-5/8"
F-20ST	1-1/4"	1-1/4"	2-1/2"	1-11/16"
F-24ST	1-1/2"	1-1/2"	2-3/4"	2-1/16"
F-32ST	2"	2"	3-1/8"	2-3/8"



MST • Male Street Tee

Part #	Male Pipe Thread	Female Pipe Thread	"A" Male Pipe Leg	"B" Female Pipe Leg
F-2MST	1/8"	1/8"	13/16"	21/32"
F-4MST	1/4"	1/4"	1-3/16"	29/32"
F-6MST	3/8"	3/8"	1-5/16"	31/32"
F-8MST	1/2"	1/2"	1-1/2"	1-1/4"
F-12MST	3/4"	3/4"	1-21/32"	1-11/32"
F-16MST	1"	1"	2-1/16"	1-5/8"
F-20MST	1-1/4"	1-1/4"	2-1/2"	1-11/16"



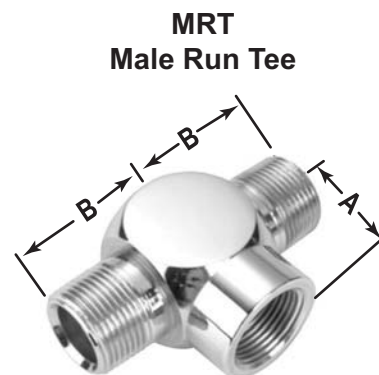
FRT • Female Run Tee

Part #	Male Pipe Thread	Female Pipe Thread	"A" Male Pipe Leg	"B" Female Pipe Leg
F-2FRT	1/8"	1/8"	13/16"	21/32"
F-4FRT	1/4"	1/4"	1-3/16"	29/32"
F-6FRT	3/8"	3/8"	1-5/16"	31/32"
F-8FRT	1/2"	1/2"	1-1/2"	1-1/4"
F-12FRT	3/4"	3/4"	1-21/32"	1-11/32"
F-16FRT	1"	1"	1-5/8"	1-5/8"
F-20FRT	1-1/4"	1-1/4"	2-1/2"	1-11/16"
F-24FRT	1-1/2"	1-1/2"	2-3/4"	2-1/16"



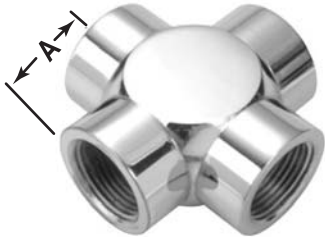
MRT • Male Run Tee

Part #	Male Pipe Thread	Female Pipe Thread	"A" Male Pipe Leg	"B" Female Pipe Leg
F-2MRT	1/8"	1/8"	13/16"	21/32"
F-4MRT	1/4"	1/4"	1-3/16"	29/32"
F-6MRT	3/8"	3/8"	1-5/16"	31/32"
F-8MRT	1/2"	1/2"	1-1/2"	1-1/4"
F-12MRT	3/4"	3/4"	1-21/32"	1-11/32"
F-16MRT	1"	1"	2-1/16"	1-5/8"
F-20MRT	1-1/4"	1-1/4"	2-1/2"	1-11/16"



Adapters PIPE FITTINGS

FPC
Female Pipe Cross



FPC • Female Pipe Cross

Part #	Female Pipe Thread	"A" Female Pipe Leg
F-2FPC	1/8"	21/32"
F-4FPC	1/4"	29/32"
F-6FPC	3/8"	31/32"
F-8FPC	1/2"	1-1/4"
F-12FPC	3/4"	1-11/32"
F-16FPC	1"	1-5/8"
F-20FPC	1-1/4"	1-11/16"
F-24FPC	1-1/2"	2-1/16"
F-32FPC	2"	2-3/8"

PC
Pipe Couplings



PC • Pipe Couplings

Part #	Female Pipe Thread	Hex Size	Length
F-2PC	1/8"	5/8"	7/8"
F-4PC	1/4"	3/4"	1-1/8"
F-6PC	3/8"	15/16"	1-7/32"
F-8PC	1/2"	1-1/8"	1-5/8"
F-12PC	3/4"	1-3/8"	1-11/16"
F-16PC	1"	1-5/8"	1-15/16"
F-20PC	1-1/4"	2"	2"
F-24PC	1-1/2"	2-3/8"	2-1/16"
F-32PC	2"	3"	2-1/16"

RPC
Reducing Pipe Couplings



RPC • Reducing Pipe Couplings

Part #	"A" Female Pipe Thread	"B" Female Pipe Thread	Hex Size	Length
F-4-2RPC	1/4"	1/8"	3/4"	1"
F-6-4RPC	3/8"	1/4"	1"	1-3/16"
F-8-4RPC	1/2"	1/4"	1-1/8"	1-15/32"
F-8-6RPC	1/2"	3/8"	1-1/8"	1-15/32"
F-12-8RPC	3/4"	1/2"	1-3/8"	1-21/32"

PU
Pipe Unions



PU • Pipe Unions

Part #	Female Pipe Thread	Hex Size	Length
F-2PU	1/8"	1-1/8"	1-11/16"
F-4PU	1/4"	1-3/8"	1-27/32"
F-6PU	3/8"	1-5/8"	2"
F-8PU	1/2"	1-7/8"	2-3/16"
F-12PU	3/4"	2-1/8"	2-11/32"
F-16PU	1"	2-3/8"	2-1/2"
F-20PU	1-1/4"	2-7/8"	2-5/8"
F-24PU	1-1/2"	3-1/4" OCT.	2-15/16"
F-32PU	2"	4" OCT.	3-1/4"



Adapters PIPE FITTINGS

HHP • Hollow Hex Plugs

Part #	Male Pipe Thread	Internal Hex	Length
F-2HHP	1/8"	3/16"	3/8"
F-4HHP	1/4"	1/4"	7/16"
F-6HHP	3/8"	5/16"	1/2"
F-8HHP	1/2"	3/8"	9/16"
F-12HHP	3/4"	9/16"	5/8"
F-16HHP	1"	5/8"	3/4"
F-20HHP	1-1/4"	3/4"	13/16"
F-24HHP	1-1/2"	1"	53/64"
F-32HHP	2"	1"	15/16"

HHP Hollow Hex Plugs



HP • Hex Plugs

Part #	Male Pipe Thread	Hex Size	Length
F-2HP	1/8"	7/16"	9/16"
F-4HP	1/4"	5/8"	25/32"
F-6HP	3/8"	3/4"	25/32"
F-8HP	1/2"	7/8"	31/32"
F-12HP	3/4"	1-1/8"	1-1/16"
F-16HP	1"	1-3/8"	1-1/4"
F-20HP	1-1/4"	1-3/4"	1-5/16"
F-24HP	1-1/2"	2"	1-5/16"
F-32HP	2"	2-1/2"	1-3/4"

HP Hex Plugs



SHP • Square Head Plugs

Part #	Male Pipe Thread	Square Size	Length
F-2SHP	1/8"	9/32"	5/8"
F-4SHP	1/4"	3/8"	25/32"
F-6SHP	3/8"	7/16"	13/16"
F-8SHP	1/2"	9/16"	1-1/32"
F-12SHP	3/4"	5/8"	1-1/16"
F-16SHP	1"	13/16"	29-32"

SHP Square Head Plugs



SPN • Seamless Pipe Nipples

Part #	Male Pipe Thread	"L" Close Nipple Length	Length* to 6"x1/2" Increments
F-2SPN x L	1/8"	3/4"	1-1/2"-6"
F-4SPN x L	1/4"	7/8"	1-1/2"-6"
F-6SPN x L	3/8"	1"	1-1/2"-6"
F-8SPN x L	1/2"	1-1/8"	1-1/2"-6"
F-12SPN x L	3/4"	1-3/8"	2"-6"
F-16SPN x L	1"	1-1/2"	2"-6"
F-20SPN x L	1-1/4"	1-5/8"	2"-6"
F-24SPN x L	1-1/2"	1-3/4"	2-1/2"-6"
F-32SPN x L	2"	2"	2-1/2"-6"

SPN Seamless Pipe Nipples - Extra Heavy Pipe

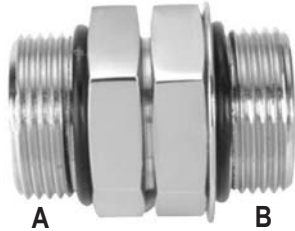


*Longer lengths available upon request.

* Example of Part Number: F-8SPN x 3"

Adapters STRAIGHT THREADS

AAU
SAE Male x SAE Male Union



AAU • SAE Male x SAE Male Union

Part #	"A" Straight Thread Male	"B" Straight Thread Male	Overall Length
F-2-AAU	7/16"-20	7/16"-20	1-7/32"
F-6-AAU	9/16"-18	9/16"-18	1-13/32"
F-8-AAU	3/4"-16	3/4"-16	1-9/16"
F-10-AAU	7/8"-14	7/8"-14	1-13/16"
F-12-AAU	1-1/16"-12	1-1/16"-12	2-1/8"
F-16-AAU	1-5/16"-12	1-5/16"-12	2-1/8"
F-20-AAU	1-5/8"-12	1-5/8"-12	2-1/8"
F-24-AAU	1-7/8"-12	1-7/8"-12	2-27/64"
F-32-AAU	2-1/2"-12	2-1/2"-12	2-19/32"

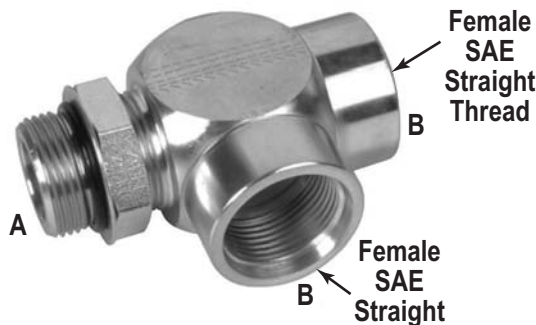
ASE
SAE Male x Female Pipe Elbow



ASE • SAE Male x Female Pipe Elbow

Part #	"A" Straight Thread Male	"B" Female Pipe NPT
F-4-4ASE	7/16"-20	1/4" NPT
F-6-6ASE	9/16"-18	3/8" NPT
F-8-8ASE	3/4"-16	1/2" NPT
F-12-12ASE	1-1/16"-12	3/4" NPT
F-16-16ASE	1-5/16"-12	1" NPT
F-20-20ASE	1-5/8"-12	1-1/4" NPT
F-24-24ASE	1-7/8"-12	1-1/2" NPT
F-32-32ASE	2-1/2"-12	2" NPT

AST
SAE Male x SAE Female x SAE Female



AST • SAE Male x SAE Female x SAE Female

Part #	"A" Straight Thread Male	"B" Straight Thread Female SAE
F-4-4AST	7/16"-20	7/16"-20
F-6-6AST	9/16"-18	9/16"-18
F-8-8AST	3/4"-16	3/4"-16
F-12-12AST	1-1/16"-12	1-1/16"-12
F-16-16AST	1-5/16"-12	1-5/16"-12
F-20-20AST	1-5/8"-12	1-5/8"-12
F-24-24AST	1-7/8"-12	1-7/8"-12
F-32-32AST	2-1/2"-12	2-1/2"-12

AHHP
"O"-Ring Hollow Hex Plug



AHHP • "O"-Ring Hollow Hex Plug

Part #	Male Straight Thread	Length
F-4-AHHP	7/16"-20	15/32"
F-6-AHHP	9/16"-18	1/2"
F-8-AHHP	3/4"-16	37/64"
F-10-AHHP	7/8"-14	37/64"
F-12-AHHP	1-1/16"-12	49/64"
F-16-AHHP	1-5/16"-12	49/64"
F-20-AHHP	1-5/8"-12	49/64"
F-24-AHHP	1-7/8"-12	49/64"
F-32-AHHP	2-1/2"-12	49/64"

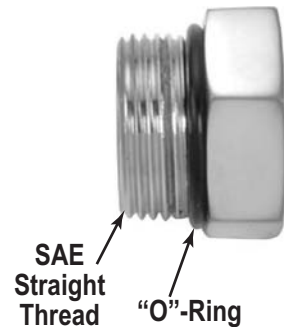


Adapters STRAIGHT THREADS

STP • SAE Straight Thread Plug

Part #	Male Straight Thread	Length
F-4STP	7/16"-20	43/64"
F-5STP	1/2"-20	43/64"
F-6STP	9/16"-18	47/64"
F-8STP	3/4"-16	51/64"
F-10STP	7/8"-14	15/16"
F-12STP	1-1/16"-12	1-3/32"
F-14STP	1-3/16"-12	1-3/32"
F-16STP	1-5/16"-12	1-13/64"
F-20STP	1-5/8"-12	1-13/64"
F-24STP	1-7/8"-12	1-17/64"
F-32STP	2-1/2"-12	1-7/16"

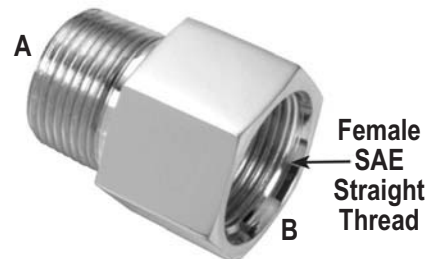
**STP
SAE Straight Thread Plug with "O"-Ring to Plug
Straight Thread Boss
*(Not counter-bored)***



**PAC • Male Pipe Thread to SAE
Straight Thread Port Connector**

Part #	"A" Male Pipe Thread	"B" Female Straight Thread	Overall Length
F-2-4PAC	1/8"	7/16"-20	1-3/8"
F-2-5PAC	1/8"	1/2"-20	1-3/8"
F-4-6PAC	1/4"	9/16"-18	1-9/16"
F-6-8PAC	3/8"	3/4"-16	1-9/16"
F-8-10PAC	1/2"	7/8"-14	1-13/16"
F-12-12PAC	3/4"	1-1/16"-12	1-31/32"
F-12-14PAC	3/4"	1-3/16"-12	2-1/32"
F-16-16PAC	1"	1-5/16"-12	2-5/32"
F-20-20PAC	1-1/4"	1-5/8"-12	2-1/4"
F-24-24PAC	1-1/2"	1-7/8"-12	2-9/32"
F-32-32PAC	2"	2-1/2"-12	2-5/16"

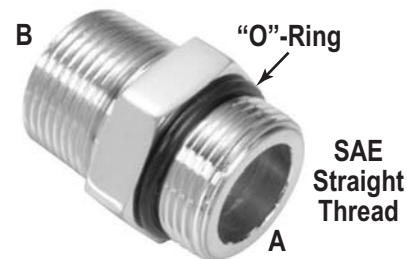
**PAC
Male Pipe Thread to SAE Straight Thread
Port Connector**



**APN • Male Connector SAE
Straight Thread to Male Pipe Thread**

Part #	"A" Male Straight Thread	"B" Male Pipe Thread	Overall Length
F-4-2APN	7/16"-20	1/8"	1"
F-4-4APN	7/16"-20	1/4"	1-3/16"
F-5-2APN	1/2"-20	1/8"	1"
F-5-4APN	1/2"-20	1/4"	1-3/16"
F-6-4APN	9/16"-18	1/4"	1-1/4"
F-6-2APN	9/16"-18	1/8"	1-1/32"
F-6-6APN	9/16"-18	3/8"	1-1/4"
F-8-6APN	3/4"-16	3/8"	1-5/16"
F-8-8APN	3/4"-16	1/2"	1-17/32"
F-10-8APN	7/8"-14	1/2"	1-9/16"
F-12-12APN	1-1/16"-12	3/4"	1-3/4"
F-14-12APN	1-3/16"-12	3/4"	1-3/4"
F-16-16APN	1-5/16"-12	1"	1-15/16"
F-20-20APN	1-5/8"-12	1-1/4"	2"
F-24-24APN	1-7/8"-12	1-1/2"	2-1/16"
F-32-32APN	2-1/2"-12	2"	2-5/32"

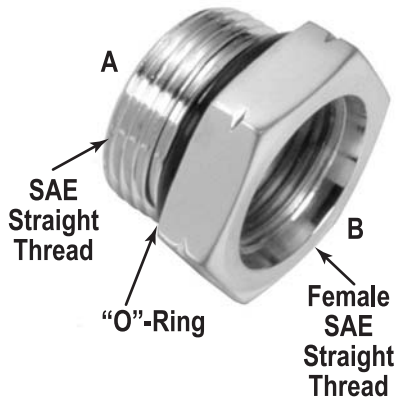
**APN
Male Connector SAE Straight Thread
to Male Pipe Thread**



P
a
g
e

Adapters STRAIGHT THREADS

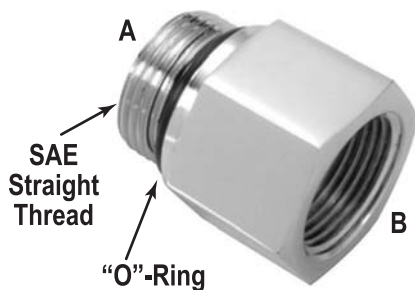
ARC
SAE Straight Thread to SAE
Straight Thread Port Bushing



ARC • SAE Straight Thread to SAE
Straight Thread Port Bushing

Part #	"A" Straight Thread Male	"B" Straight Thread Female	Overall Length
F-4-6ARC	7/16"-20	9/16"-18	1-1/8"
F-6-4ARC	9/16"-18	7/16"-20	1-1/32"
F-6-8ARC	9/16"-18	3/4"-16	1-5/16"
F-8-4ARC	3/4"-16	7/16"-20	3/4"
F-8-6ARC	3/4"-16	9/16"-18	1-1/8"
F-10-8ARC	7/8"-14	3/4"-16	1-5/16"
F-10-12ARC	7/8"-14	1-1/16"-12	1-5/8"
F-12-8ARC	1-1/16"-12	3/4"-16	1"
F-12-10ARC	1-1/16"-12	7/8"-14	1-17/32"
F-14-6ARC	1-3/16"-12	9/16"-18	1"
F-14-10ARC	1-3/16"-12	7/8"-14	1"
F-14-12ARC	1-3/16"-12	1-1/16"-12	1-21/32"
F-16-8ARC	1-5/16"-12	3/4"-16	1"
F-16-12ARC	1-5/16"-12	1-1/16"-12	1"
F-16-14ARC	1-5/16"-12	1-3/16"-12	1-21/32"
F-16-20ARC	1-5/16"-12	1-5/8"-12	1-31/32"
F-20-10ARC	1-5/8"-12	7/8"-14	1"
F-20-12ARC	1-5/8"-12	1-1/16"-12	1"
F-20-16ARC	1-5/8"-12	1-5/16"-12	1"
F-20-24ARC	1-5/8"-12	1-7/8"-12	1-7/8"
F-24-16ARC	1-7/8"-12	1-5/16"-12	1"
F-24-20ARC	1-7/8"-12	1-5/8"-12	1-19/32"
F-32-20ARC	2-1/2"-12	1-5/8"-12	1"
F-32-24ARC	2-1/2"-12	1-7/8"-12	1"

APC
Female Connector SAE
Straight Thread to Female Pipe Thread



APC • Female Connector SAE
Straight Thread to Female Pipe Thread

Part #	"A" Male Straight Thread	"B" Female Pipe Thread	Overall Length
F-4-2APC	7/16"-20	1/8"	1"
F-4-4APC	7/16"-20	1/4"	1-13/32"
F-5-2APC	1/2"-20	1/8"	1"
F-6-4APC	9/16"-18	1/4"	1-3/16"
F-8-6APC	3/4"-16	3/8"	1-5/16"
F-8-4APC	3/4"-16	1/4"	1-3/64"
F-8-8APC	3/4"-16	1/2"	1-17/32"
F-10-8APC	7/8"-14	1/2"	1-35/64"
F-10-4APC	7/8"-14	1/4"	13/16"
F-10-6APC	7/8"-14	3/8"	1-9/32"
F-10-12APC	7/8"-14	3/4"	1-21/32"
F-12-12APC	1-1/16"-12	3/4"	1-11/16"
F-12-6APC	1-1/16"-12	3/8"	1"
F-12-8APC	1-1/16"-12	1/2"	1-15/32"
F-14-12APC	1-3/16"-12	3/4"	1-5/8"
F-14-8APC	1-3/16"-12	1/2"	1"
F-16-16APC	1-5/16"-12	1"	1-29/32"
F-16-6APC	1-5/16"-12	3/8"	1"
F-16-8APC	1-5/16"-12	1/2"	1"
F-16-12APC	1-5/16"-12	3/4"	1-11/16"
F-20-20APC	1-5/8"-12	1-1/4"	2"
F-20-12APC	1-5/8"-12	3/4"	1"
F-20-16APC	1-5/8"-12	1"	1"
F-24-24APC	1-7/8"-12	1-1/2"	2-3/32"
F-24-20APC	1-7/8"-12	1-1/4"	1-29/32"
F-32-32APC	2-1/2"-12	2"	2-1/32"

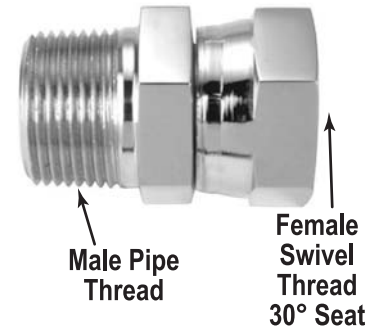


Adapters TAPERED PIPE THREAD

M-UAD • Male Union Swivel Adapter

Part #	Male Pipe Thread	Female Swivel Thread	Deduct from Assy. OAL
F-2M-2UAD	1/8"	1/8"	27/32"
F-2M-4UAD	1/8"	1/4"	1"
F-4M-4UAD	1/4"	1/4"	1-7/32"
F-4M-6UAD	1/4"	3/8"	1-9/32"
F-6M-4UAD	3/8"	1/4"	1-9/32"
F-6M-6UAD	3/8"	3/8"	1-9/32"
F-6M-8UAD	3/8"	1/2"	1-11/32"
F-8M-6UAD	1/2"	3/8"	1-1/2"
F-8M-8UAD	1/2"	1/2"	1-9/16"
F-8M-12UAD	1/2"	3/4"	1-5/8"
F-12M-8UAD	3/4"	1/2"	1-9/16"
F-12M-12UAD	3/4"	3/4"	1-5/8"
F-12M-16UAD	3/4"	1"	1-23/32"
F-16M-12UAD	1"	3/4"	1-7/8"
F-16M-16UAD	1"	1"	1-29/32"
F-16M-20UAD	1"	1-1/4"	2"
F-20M-20UAD	1-1/4"	1-1/4"	2-1/32"
F-20M-24UAD	1-1/4"	1-1/2"	2-1/16"
F-24M-24UAD	1-1/2"	1-1/2"	2-3/32"
F-32M-32UAD	2"	2"	2-9/32"

**M-UAD • Male Union Swivel Adapter
Male Pipe to Female NPSM Swivel**



F-UAD • Female Union Swivel Adapter

Part #	Female Pipe Thread	Female Swivel Thread	Deduct from Assy. OAL
F-2F-2UAD	1/8"	1/8"	3/4"
F-4F-4UAD	1/4"	1/4"	1-3/16"
F-6F-4UAD	3/8"	1/4"	1-7/32"
F-6F-6UAD	3/8"	3/8"	1-7/32"
F-8F-4UAD	1/2"	1/4"	1-5/16"
F-8F-6UAD	1/2"	3/8"	1-11/32"
F-8F-8UAD	1/2"	1/2"	1-13/32"
F-12F-12UAD	3/4"	3/4"	1-9/16"
F-16F-12UAD	1"	3/4"	1-25/32"
F-16F-16UAD	1"	1"	1-15/16"
F-20F-20UAD	1-1/4"	1-1/4"	1-15/16"
F-24F-24UAD	1-1/2"	1-1/2"	1-15/16"
F-32F-32UAD	2"	2"	2-3/8"

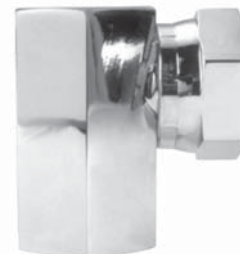
**F-UAD
Female Union Swivel Adapter
Female Pipe to Female NPSM Swivel**



FE-UAD • Female Union Elbow Swivel Adapter

Part #	Female Pipe Thread	Female Swivel Thread	Deduct from Assy. OAL
F-2FE-2UAD	1/8"	1/8"	13/32"
F-4FE-4UAD	1/4"	1/4"	3/4"
F-6FE-6UAD	3/8"	3/8"	7/8"
F-8FE-8UAD	1/2"	1/2"	15/16"
F-12FE-12UAD	3/4"	3/4"	1-3/16"
F-16FE-16UAD	1"	1"	1-5/16"
F-20FE-20UAD	1-1/4"	1-1/4"	1-1/2"
F-24FE-24UAD	1-1/2"	1-1/2"	1-5/8"

**FE-UAD
Female Union Elbow Swivel Adapter
Female Pipe to Female NPSM Swivel**



Adapters TAPERED PIPE THREAD

ME-UAD
Male Union Elbow Swivel Adapter
Male Pipe to Female NPSM Swivel



ME-UAD • Male Union Elbow Swivel Adapter

Part #	Male Pipe Thread	Female Swivel Thread	Deduct from Assy. OAL
F-2ME-2UAD	1/8"	1/8"	17/32"
F-2ME-4UAD	1/8"	1/4"	11/16"
F-4ME-4UAD	1/4"	1/4"	3/4"
F-4ME-6UAD	1/4"	3/8"	7/8"
F-6ME-4UAD	3/8"	1/4"	7/8"
F-6ME-6UAD	3/8"	3/8"	7/8"
F-6ME-8UAD	3/8"	1/2"	15/16"
F-8ME-4UAD	1/2"	1/4"	29/32"
F-8ME-6UAD	1/2"	3/8"	15/16"
F-8ME-8UAD	1/2"	1/2"	15/16"
F-8ME-12UAD	1/2"	3/4"	1-3/16"
F-12ME-6UAD	3/4"	3/8"	1-1/32"
F-12ME-8UAD	3/4"	1/2"	1-1/16"
F-12ME-12UAD	3/4"	3/4"	1-3/16"
F-16ME-8UAD	1"	1/2"	1-1/8"
F-16ME-12UAD	1"	3/4"	1-5/16"
F-16ME-16UAD	1"	1"	1-5/16"
F-16ME-20UAD	1"	1-1/4"	1-1/2"
F-20ME-20UAD	1-1/4"	1-1/4"	1-1/2"
F-24ME-20UAD	1-1/2"	1-1/4"	1-5/8"
F-24ME-24UAD	1-1/2"	1-1/2"	1-5/8"
F-32ME-32UAD	2"	2"	2"

SM-UAD
SAE Straight Thread Male Union Adapter
Male SAE Thread to Female NPSM Swivel



SM-UAD • SAE Straight Thread Male

Part #	SAE Straight Thread	Female Swivel Thread	Deduct from Assy. OAL
F-4SM-4UAD	7/16"-20	1/4"	1"
F-5SM-4UAD	1/2"-20	1/4"	1"
F-6SM-4UAD	9/16"-18	1/4"	1-1/32"
F-6SM-6UAD	9/16"-18	3/8"	1-3/32"
F-6SM-8UAD	9/16"-18	1/2"	1-1/4"
F-8SM-4UAD	3/4"-16	1/4"	1-3/32"
F-8SM-6UAD	3/4"-16	3/8"	1-1/8"
F-8SM-8UAD	3/4"-16	1/2"	1-1/4"
F-8SM-12UAD	3/4"-16	3/4"	1-3/8"
F-10SM-6UAD	7/8"-14	3/8"	1-1/8"
F-10SM-8UAD	7/8"-14	1/2"	1-5/16"
F-10SM-12UAD	7/8"-14	3/4"	1-3/8"
F-12SM-8UAD	1-1/6"-12	1/2"	1-13/32"
F-12SM-12UAD	1-1/6"-12	3/4"	1-15/32"
F-14SM-12UAD	1-3/16"-12	3/4"	1-1/2"
F-16SM-16UAD	1-3/16"-12	1"	1-1/2"
F-20SM-16UAD	1-5/8"-12	1"	1-17/32"
F-20SM-20UAD	1-5/8"-12	1-1/4"	1-17/32"
F-24SM-24UAD	1-7/8"-12	1-1/2"	1-11/16"



Adapters TAPERED PIPE THREAD

SME-UAD • SAE Straight Thread Male Union Elbow

Part #	SAE Straight Thread	Female Swivel Thread	Deduct from Assy. OAL
F-4SME-4UAD	7/16"-20	1/4"	3/4"
F-6SME-4UAD	9/16"-18	1/4"	3/4"
F-6SME-6UAD	9/16"-18	3/8"	7/8"
F-6SME-8UAD	9/16"-18	1/2"	15/16"
F-8SME-6UAD	3/4"-16	3/8"	7/8"
F-8SME-8UAD	3/4"-16	1/2"	15/16"
F-8SME-12UAD	3/4"-16	3/4"	1-3/16"
F-10SME-6UAD	7/8"-14	3/8"	29/32"
F-10SME-8UAD	7/8"-14	1/2"	15/16"
F-10SME-12UAD	7/8"-14	3/4"	1-3/16"
F-12SME-8UAD	1-1/16"-12	1/2"	1"
F-12SME-12UAD	1-1/16"-12	3/4"	1-3/16"
F-14SME-12UAD	1-3/16"-12	3/4"	1-3/16"
F-16SME-16UAD	1-5/16"-12	1"	1-5/16"
F-16SME-12UAD	1-5/16"-12	3/4"	1-5/16"
F-20SME-20UAD	1-5/8"-12	1-1/4"	1-1/2"
F-20SME-12UAD	1-5/8"-12	3/4"	1-1/2"
F-24SME-24UAD	1-7/8"-12	1-1/2"	1-11/16"

SME-UAD
SAE Straight Thread Male Union
Elbow Swivel Adapter
Male SAE Thread to Female NPSM Swivel



MT-UAD • Male Union Tee Swivel Adapter

Part #	Male Pipe Thread	Female Swivel Thread	Deduct from Assy. OAL
F-2MT-2UAD	1/8"	1/8"	17/32"
F-4MT-4UAD	1/4"	1/4"	3/4"
F-6MT-6UAD	3/8"	3/8"	7/8"
F-8MT-8UAD	1/2"	1/2"	15/16"
F-12MT-12UAD	3/4"	3/4"	1-3/16"
F-16MT-16UAD	1"	1"	1-5/16"
F-20MT-20UAD	1-1/4"	1-1/4"	1-1/2"

MT-UAD
Male Union Tee Swivel Adapter
Male Pipe Branch, Female NPSM
Swivels on Run



MEX-UAD • Male 45° Union Elbow Swivel Adapter

Part #	Male Pipe Thread	Female Swivel Thread	Deduct from Assy. OAL
F-2MEX-2UAD	1/8"	1/8"	7/16"
F-4MEX-4UAD	1/4"	1/4"	21/32"
F-6MEX-6UAD	3/8"	3/8"	11/16"
F-8MEX-8UAD	1/2"	1/2"	25/32"
F-8MEX-6UAD	1/2"	3/8"	25/32"
F-12MEX-12UAD	3/4"	3/4"	31/32"
F-12MEX-8UAD	3/4"	1/2"	7/8"
F-16MEX-16UAD	1"	1"	1-1/16"
F-16MEX-12UAD	1"	3/4"	1-1/32"
F-20MEX-20UAD	1-1/4"	1-1/4"	1-1/8"
F-24MEX-24UAD	1-1/2"	1-1/2"	1-7/32"

MEX-UAD
Male 45° Union Elbow Swivel Adapter
Male Pipe to Female NPSM Swivel



Adapters TAPERED PIPE THREAD

FT-UAD

**Female Union Tee Swivel Adapter
Female Pipe to Female NPSM Swivel**

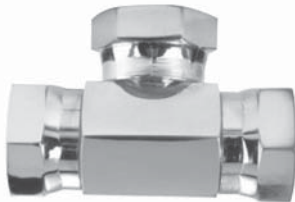


FT-UAD • Female Union Tee Swivel Adapter

Part #	Female Pipe Thread	Female Swivel Thread	Deduct from Assy. OAL
F-4FT-4UAD	1/4"	1/4"	3/4"
F-6FT-6UAD	3/8"	3/8"	7/8"
F-8FT-8UAD	1/2"	1/2"	15/16"
F-12FT-12UAD	3/4"	3/4"	1-3/16"
F-16FT-16UAD	1"	1"	1-5/16"

T-UAD

**Female Union Tee Swivel Adapter
Female Pipe Branch,
Female NPSM Swivels on Run**



T-UAD • Female Union Tee Swivel Adapter

Part #	Female Pipe Thread	Female Swivel Thread	Deduct from Assy. OAL
F-2T-2UAD	1/8"	5/8"	17/32"
F-4T-4UAD	1/4"	7/8"	3/4"
F-6T-6UAD	3/8"	15/16"	7/8"
F-8T-8UAD	1/2"	1-1/16"	1-5/16"
F-12T-12UAD	3/4"	1-5/16"	1-3/16"
F-16T-16UAD	1"	1-15/32"	1-5/16"

FEX-UAD

**45° Union Elbow Swivel Adapter
Female Pipe to Female NPSM Swivel**



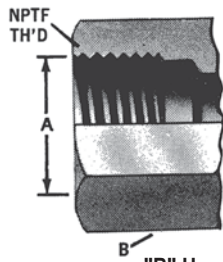
FEX-UAD • Female 45° Union Elbow Swivel Adapter

Part #	Female Pipe Thread	Female Swivel Thread	Deduct from Assy. OAL
F-4FEX-4UAD	1/4"	1/4"	21/32"
F-6FEX-6UAD	3/8"	3/8"	11/16"
F-8FEX-8UAD	1/2"	1/2"	25/32"
F-12FEX-12UAD	3/4"	3/4"	31/32"
F-16FEX-16UAD	1"	1"	1-1/16"



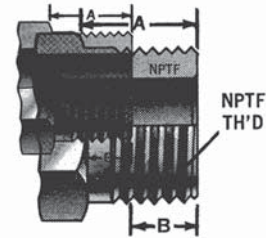
Available Fitting Ends-Types (SPECIFICATIONS & IDENTIFICATION)

Female Pipe Thread End (Dry Seal)



Size	Thread NPTF	"A"	"B" Hex Size (Str. Connectors)	"B" Dia. (Elbows, Tees, Crosses)
2	1/8"	13/32"	9/16", 5/8"	5/8"
4	1/4"	35/64"	3/4"	7/8"
6	3/8"	43/64"	7/8"	1"
8	1/2"	27/32"	1-1/8"	1-1/8"
12	3/4"	1-3/64"	1-3/8"	1-3/8"
16	1"	1-5/16"	1-5/8"	1-3/4"
20	1-1/4"	1-21/32"	2"	2-1/8"
24	1-1/2"	1-29/32"	2-3/8"	2-3/8"
32	2"	2-3/8"	3"	3"

Male Pipe Thread End (Dry Seal)

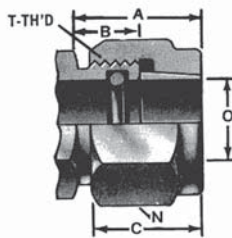


Size	Thread NPTF	"A"	"B" Min. Full Thread
2	1/8"	24/64"	5/16"
4	1/4"	9/16"	15/32"
6	3/8"	9/16"	1/2"
8	1/2"	3/4"	21/32"
12	3/4"	3/4"	21/32"
16	1"	15/16"	25/32"
20	1-1/4"	31/32"	13/16"
24	1-1/2"	1"	13/16"
32	2"	1-1/32"	13/16"

"O"-Ring Seal End

Tube End with "O"-Ring seal, and tapered split-ring sleeve and nut for gripping the tubing.

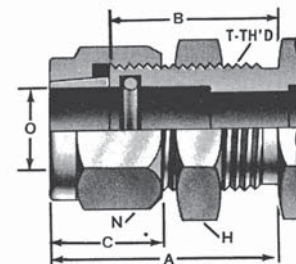
Includes nut, split ring, O-Ring and backup washer.



Size	T Thread	"A"	"B"	"C"	"N" Hex	"O" Bore
2	3/8"-24	9/16"	9/32"	15/16"	1/2"	1/8"
4	1/2"-20	23/32"	13/32"	41/64"	5/8"	1/4"
5	9/16"-18	23/32"	13/32"	41/64"	11/16"	5/16"
6	5/8"-18	25/32"	15/32"	11/16"	3/4"	3/8"
8	7/8"-14	31/32"	17/32"	29/32"	1"	1/2"
10	1"-14	1-3/32"	19/32"	31/32"	1-1/8"	5/8"
12	1-1/8"-12	1-7/32"	11/16"	1-3/32"	1-1/4"	3/4"
14	1-1/4"-12	1-1/4"	11/16"	1-1/8"	1-3/8"	7/8"
16	1-1/2"-12	1-13/32"	3/4"	1-7/32"	1-5/8"	1"
20	1-3/4"-12	1-21/32"	7/8"	1-7/16"	2"	1-1/4"
24	2"-12	1-25/32"	7/8"	1-5/8"	2-1/4"	1-1/2"
32	2-5/8"-12	2-5/32"	1"	2-1/16"	3"	2"

"O"-Ring Seal Bulkhead End

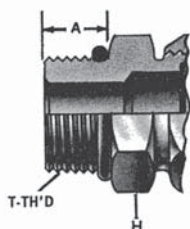
Same features as "O"-Ring Seal except has provisions for passing through a Bulkhead and is held in Bulkhead by a lock nut (1/2" Maximum Bulkhead Thickness).



Size	T Thread	"A"	"B"	"C"	"H" Hex	"N" Hex	"O" Bore
4	1/2"-20	1-15/32"	1-5/32"	41/64"	3/4"	5/8"	1/4"
5	9/16"-18	1-15/32"	1-5/32"	41/64"	13/16"	11/16"	5/16"
6	5/8"-18	1-9/16"	1-1/4"	11/16"	7/8"	3/4"	3/8"
8	7/8"-14	1-25/32"	1-11/32"	29/32"	1-1/8"	1"	1/2"
10	1"-14	1-31/32"	1-15/32"	31/32"	1-1/4"	1-1/8"	5/8"
12	1-1/8"-12	2-1/8"	1-19/32"	1-3/32"	1-3/8"	1-1/4"	3/4"
14	1-1/4"-12	2-5/32"	1-19/32"	1-1/8"	1-1/2"	1-3/8"	7/8"
16	1-1/2"-12	2-5/16"	1-21/32"	1-7/32"	1-3/4"	1-5/8"	1"
20	1-3/4"-12	2-9/16"	1-25/32"	1-7/16"	2"	2"	1-1/4"
24	2"-12	2-11/16"	1-25/32"	1-5/8"	2-1/4"	2-1/4"	1-1/2"
32	2-5/8"-12	3-3/32"	1-15/16"	2-1/16"	3"	2-7/8"	2"

SAE Straight Thread "O"-Ring Type End

(Connectors)



For use with SAE Internal Thread "O"-Ring Boss

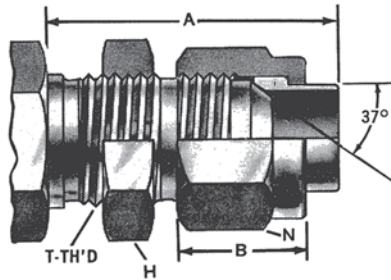
SAE Straight Thread "O"-Ring Type End

Size	T Thread	"A"	"H" Hex
2	5/16"-24	19/64"	7/16"
4	7/16"-20	23/64"	9/16"
5	1/2"-20	23/64"	5/8"
6	9/16"-18	25/64"	11/16"
8	3/4"-16	7/16"	7/8"
10	7/8"-14	1/2"	1"
12	1-1/16"-12	19/32"	1-1/4"
14	1-3/16"-12	19/32"	1-3/8"
16	1-5/16"-12	19/32"	1-1/2"
20	1-5/8"-12	19/32"	1-7/8"
24	1-7/8"-12	19/32"	2-1/8"
32	2-1/2"-12	19/32"	2-7/8"

Available Fitting Ends-Types (SPECIFICATIONS & IDENTIFICATION)

JIC 37° Flare Male Bulkhead End

Has same uses as JIC 37° Flare male except has provisions for passing through a Bulkhead and is held in bulkhead with a Lock Nut (3/8" Maximum Bulkhead Thickness).

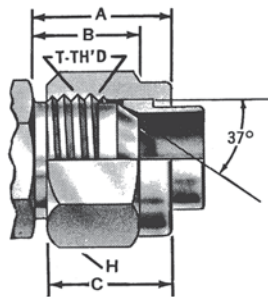


JIC 37° • Flare Male Bulkhead End

Size	Thread	"A" Str. Fttg.	"B"	"H" Hex	"N" Hex
4	7/16"-20	1-5/8"	5/8"	11/16"	9/16"
5	1/2"-20	1-5/8"	11/16"	3/4"	5/8"
6	9/16"-18	1-23/32"	23/32"	13/16"	11/16"
8	3/4"-16	2"	27/32"	1"	7/8"
10	7/8"-14	2-1/4"	31/32"	1-1/8"	1"
12	1-1/16"-12	2-3/8"	1-1/32"	1-3/8"	1-1/4"
14	1-3/16"-12	2-1/2"	1-3/32"	1-1/2"	1-3/8"
16	1-5/16"-12	2-9/16"	1-1/8"	1-5/8"	1-1/2"
20	1-5/8"-12	2-11/16"	1-7/32"	1-7/8"	2"
24	1-7/8"-12	2-15/16"	1-13/32"	2-1/8"	2-1/4"
32	2-1/2"-12	3-1/4"	1-3/4"	2-3/4"	2-7/8"

JIC 37° Flare Male End

May be used with F-3205 Tube Nut, F-3165 Tube Sleeve, F-2205 Tube Nut, F-2205S Tube Nut or F2205C Cap.

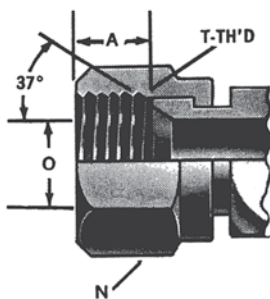


May also be joined directly to the Female JIC 37° Swivel Fitting as an adapter.

JIC 37° • Flare Male End

Size	Thread	"A"	"B"	"C"	"H" Hex
2	5/16"-24	3/4"	7/16"	17/32"	3/8"
3	3/8"-24	25/32"	15/32"	19/32"	7/16"
4	7/16"-20	15/16"	9/16"	5/8"	9/16"
5	1/2"-20	31/32"	9/16"	11/16"	5/8"
6	9/16"-18	1-1/32"	9/16"	23/32"	11/16"
8	3/4"-16	1-3/16"	21/32"	27/32"	7/8"
10	7/8"-14	1-13/32"	3/4"	31/32"	1"
12	1-1/16"-12	1-15/32"	7/8"	1-1/32"	1-1/4"
14	1-3/16"-12	1-5/8"	29/32"	1-3/32"	1-3/8"
16	1-5/16"-12	1-11/16"	29/32"	1-1/8"	1-1/2"
20	1-5/8"-12	1-13/16"	31/32"	1-7/32"	2"
24	1-7/8"-12	2-3/16"	1-3/32"	1-13/32"	2-1/4"
32	2-1/2"-12	2-15/32"	1-3/4"	1-11/32"	2-7/8"

Female JIC • 37° Swivel End

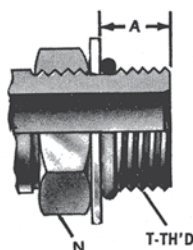


Female JIC 37° Swivel End

Size	Thread	"A"	"N" Hex	"O" Bore
4	7/16"-20	11/32"	9/16"	11/64"
5	1/2"-20	3/8"	5/8"	15/64"
6	9/16"-18	3/8"	11/16"	19/64"
8	3/4"-16	27/64"	7/8"	25/64"
10	7/8"-14	1/2"	1"	31/64"
12	1-1/16"-12	9/16"	1-1/4"	39/64"
14	1-3/16"-12	37/64"	1-3/8"	23/32"
16	1-5/16"-12	19/32"	1-1/2"	27/32"
20	1-5/8"-12	5/8"	2"	1-5/64"
24	1-7/8"-12	47/64"	2-1/4"	1-5/16"
32	2-1/2"-12	15/16"	2-7/8"	1-25/32"

SAE Adjustable Straight Thread "O"-Ring Type End (Elbows & Tees)

For same use as SAE Straight Thread "O"-Ring Type, but provides for 360° positioning for Tees and Elbows with Lock Nut.



May also be used with AND 100050 Port

SAE Adjustable Straight Thread "O"-Ring Type End

Size	Thread	"A"	"N" Hex
2	5/16"-24	19/64"	7/16"
4	7/16"-20	23/64"	9/16"
5	1/2"-20	23/64"	5/8"
6	9/16"-18	23/64"	11/16"
8	3/4"-16	7/16"	7/8"
10	7/8"-14	1/2"	1"
12	1-1/16"-12	19/32"	1-1/4"
14	1-3/16"-12	19/32"	1-3/8"
16	1-5/16"-12	19/32"	1-1/2"
20	1-5/8"-12	19/32"	1-7/8"
24	1-7/8"-12	19/32"	2-1/8"
32	2-1/2"-12	19/32"	2-3/4"

**TERMS AND CONDITIONS OF THE
SALES ORDER
FOR SVI INTERNATIONAL, INC.**

1. **GENERAL.** The terms and conditions of sales order outlined herein shall apply to the sale by SVI INTERNATIONAL, INC. (hereinafter referred to as "Company") of the items described on the facing page (hereinafter referred to as "Merchandise") to Purchaser.
2. **DELIVERY.** Delivery shall be deemed to be complete when the Merchandise has been shipped F.O.B. Company's plants in DeKalb, Illinois, Duarte, California; and Baltimore, Maryland ("Company's plants"). Shipments are subject to delays from causes or contingencies beyond the reasonable control of the Company. When otherwise not specified, shipments will be made in standard containers via carrier which, in the judgment of the Company, will result in the most practical method. Title and right of possession will pass to the Purchaser upon receipt by the carrier at the shipping point. If a customer of the Company should specify a specific carrier's method of shipment (i.e. UPS Next Day Air) and that carrier does not perform to the customer's expectations, freight credit to a customer's account will not be issued unless the Company can first obtain a credit.
3. **RISK OF LOSS.** Identification of the Merchandise under Uniform Commercial Code (hereinafter referred to as "UCC") Section 2-501 shall take place at the moment of shipment F.O.B. Company's plants. Risk of loss shall pass to the Purchaser when the Merchandise is shipped from the Company's plants.
4. **TITLE.** Title to the merchandise shall transfer to the Purchaser when the Merchandise is shipped from the Company's plants.
5. **WARRANTIES.** The Company guarantees its products to be free from defects in workmanship and raw materials for a period of one year from date of purchase. THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY AND ALL WARRANTIES EXPRESS OR IMPLIED. COMPANY DOES NOT WARRANT THE MERCHANDISE IS MERCHANTABILITY OR FIT FOR ANY PARTICULAR PURPOSE. Company's liability for breach of the terms of this Agreement, including any warranty, is limited to either refund of the invoice price of the Merchandise or at Company's option, replacement of the Merchandise free of charge, including transportation charges but not including the cost of labor. Purchaser has not relied on any statement or upon the conduct of Company with respect to the prospective use of the merchandise. Company shall not be liable for and Purchaser waives any and all claims for any loss or damage, directly or indirectly, arising from the use of the Merchandise and for punitive, incidental or consequential damages, including, but not limited to, damages to property, for loss of use, loss of time, loss of profit or loss of income. The Company does not authorize the sale of our products under any other warranty, expressed or implied.
6. **SETOFF.** All claims for money due or to become due from the Company shall be subject to deduction by the Company for any setoff or counterclaim arising out of this or any other claims of the Company or its affiliated companies, whether such setoff or counterclaim arose before or after any assignment by Purchaser.
7. **INDEMNIFICATION.** Purchaser agrees to indemnify the Company and hold it harmless from and against all claims, liability, loss, damage or expense, including reasonable counsel fees, arising from or by reason of any modifications or alterations made by Purchaser. If a customer of the Company modifies or alters any part, in any manner whatsoever, or uses any part in departure from recommended performance specifications, said customer agrees to indemnify and hold the Company harmless from and against all liability and expenses based on damage to property or injury to or death of any person arising out of or attributable to such modified or altered part. Further, the Company will not accept any such modified or altered part for credit to a customer's account.
8. **FREIGHT POLICY.** Freight charges on individual orders less than \$3,000 in net value are prepaid and added to invoice or collect F.O.B. shipping point. Freight charges (standard ground service and continental US only) on individual orders more than \$3,000 net value are paid by the Company F.O.B. shipping point. Note: customers with C.O.D. terms are responsible for all carrier C.O.D. fees regardless of order net value.
9. **RETURN POLICY.** To return parts for credit or inspection Purchaser must first contact the Company to obtain a Return Goods Authorization number (RGA#). Once Purchaser has obtained an RGA# the parts can be returned freight prepaid only. The RGA# must be on the outside of the container in a highly visible location. All parts must be returned freight prepaid and the shipment must include a letter of explanation giving the specific reason for return including details as to the conditions under which the part or parts operated. Note: parts returned without an RGA#, freight collect or without written explanation may be refused. Parts which have been used in any way or manner, including any installation or incorporation into a lift or hoist, shall NOT be eligible for return whether or not an RGA has been assigned.
10. **RESTOCK CHARGE.** Returns are subject to up to twenty-five (25%) restocking charge. Refusals are subject to the same restocking charge plus the cost of outbound and return freight charges and/or fees incurred by the Company due to shipment refusal.
11. **PRICES AND PAYMENTS.** All prices are subject to change without notice. All prices are F.O.B. shipping point. The Company standard terms are net 30 days, C.O.D. company check, C.O.D. cash, VISA, MasterCard, Discover or American Express. However, if in the judgment of the Company, the financial condition of the Purchaser at any time does not justify shipment according to standard terms of payment, the Company may require full or partial payment in advance.
12. **INTERPRETATION.** This sales order is intended by the parties as a complete and exclusive statement of the terms of their agreement. It supersedes all prior agreements, written or oral. No course of prior dealings between the parties and no usage of the trade shall be relevant to supplement or explain any terms used in this sales order. Acceptance or acquiescence in a course of performance rendered under this purchase order shall not be relevant to determine the meaning of this sales order even though the accepting or acquiescing party has knowledge of the nature of the performance and opportunity for objection. Whenever a term defined by the UCC is used in this sales order the definition contained in the UCC shall control.
13. **MODIFICATION.** This sales order can be modified or rescinded only by a writing signed by both parties.
14. **WAIVER.** No claim or right arising out of a breach of this sales order can be discharged in whole or in part by a waiver or renunciation of the claim or right unless such waiver or renunciation is supported by consideration and is in writing signed by the aggrieved party.
15. **ASSIGNMENT.** No right or interest in this sales order shall be assigned by either party without the written consent of the other and no delegation of any obligation owed, or of the performance of any obligation by either the Company or Purchaser shall be made without the written consent of the other party. Any attempted assignment or delegation not made in conformity with this paragraph shall be wholly void and totally ineffective for all purposes.
16. **TIME TO PERFORM AND BRING ACTION.** Time is of the essence of this sales order. Any action for breach of this sales order shall be commenced within two (2) years after the cause of action has accrued. Any party who loses any litigation shall reimburse the other party for costs including reasonable attorneys fees. The exclusive jurisdiction for any legal action shall be the Circuit Court of DeKalb County, Illinois.
17. **APPLICABLE LAW.** This sales order shall be governed by the UCC of Illinois as effective and in force on the date of this sales order.