Lightweight Swivel Hose Ends for Teflon Hose



Because today's fuels contain a wide variety of unpublished additives and increasing amounts of alcohol, accelerated hose degradation including: vapor, weeping, and swelling can occur with traditional rubber based hose products. This issue is best addressed by using PTFE (Teflon) lined hose which is inert to all fluids used in motor vehicles. This type of hose has long been the standard for -3AN and -4AN high pressure brake and hydraulic applications, however in the larger -6AN and -8AN sizes it lacks popularity due to a limited range of hose fittings (usually heavy steel non-swivel industrial type fittings). This is why we are happy to announce the immediate availability of our range of -4AN, -6AN and -8AN light alloy swivel hose ends specific for industry standard PFTE (Teflon) lined stainless steel braided exterior hose. We are currently stocking fittings in our house color (black/silver) and will likely have (red/blue) in the near future. ***Link to Hose***

Straight Hose End For Teflon Hose



-AN size	part #	price $
-4AN	TS-4T	$6.65
-6AN	TS-6T	$6.95
-8AN	TS-8T	$8.20

45 Degree Hose End For Teflon Hose



-AN size	part #	price $
-4AN	T45-4T	$13.75
-6AN	T45-6T	$16.80
-8AN	T45-8T	$20.55

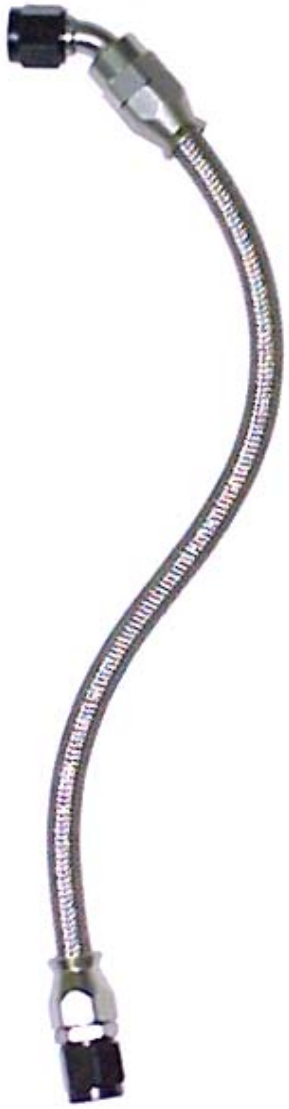
swivel type hose end

90 Degree Hose End For Teflon Hose



-AN size	part #	price $
-4AN	T90-4T	$13.75
-6AN	T90-6T	$16.80
-8AN	T90-8T	$20.55

swivel type hose end



MOCAL oil control systems

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phone (941) 355-0005 fax (941) 355-4683

Prices subject to change without notice.

Straight Female to -AN Hose



-A-	-B-	Part #
-3AN	-3AN	FS-3T
-4AN	-4AN	FS-4T
-6AN	-6AN	FS-6T
-8AN	-8AN	FS-8T
-3AN	1/8BSP	ABS3ST
-3AN	1/8 Smiths*	ABS3STF
-4AN	1/4BSP	ABS4ST
-6AN	3/8BSP	
-8AN	1/2BSP	
-3AN	10mm x 1.0	
-4AN	12mm x 1.5	
-6AN	14mm x 1.5	

*Refers to the special sealing surface found on Smiths brand gauges. Thread is BSP, but seal is flat with a raised "tit".

45 Degree Female to -AN Hose



-A-	-B-	Part #
-3AN	-3AN	F45-3T
-4AN	-4AN	F45-4T
-6AN	-6AN	F45-6T
-8AN	-8AN	F45-8T
-3AN	1/8BSP	ABS345
-3AN	1/8 Smiths*	ABS345F
-4AN	1/4BSP	ABS445
-6AN	3/8BSP	
-8AN	1/2BSP	
-3AN	10mm x 1.0	

*Refers to the special sealing surface found on Smiths brand gauges. Thread is BSP, but seal is flat with a raised "tit".

90 Degree Female to -AN Hose



-A-	-B-	Part #
-3AN	-3AN	F90-3T
-4AN	-4AN	F90-4T
-6AN	-6AN	F90-6T
-8AN	-8AN	F90-8T
-3AN	1/8BSP	ABS390
-3AN	1/8 Smiths*	ABS390F
-4AN	1/4BSP	ABS490
-6AN	3/8BSP	
-8AN	1/2BSP	
-3AN	10mm x 1.0	

*Refers to the special sealing surface found on Smiths brand gauges. Thread is BSP, but seal is flat with a raised "tit".

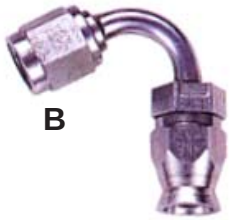
Fittings for Teflon Interior Hose

We stock a variety of reuseable hose end fittings suitable for (TFE) Teflon interior hose. Reuseable TFE hose ends are 3 piece construction consisting of: nipple (main fitting part), sleeve (olive), and socket (nut). Most are constructed in mild steel with a plated sliver or gold finish.

Applications for TFE hose are: hydraulic brake & clutch, fuel & oil pressure gauges, power steering, nitrous oxide, suspension shock, and fire system plumbing. Hose and fittings are available in AN -3, -4, -6, -8 sizes, with AN -3 and -4 being most popular.

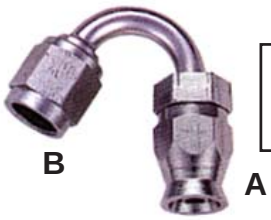
Link to Hose

120 Degree Female to -AN Hose



-A-	-B-	Part #
-3AN	-3AN	TBA
-4AN	-4AN	TBA

150 Degree Female to -AN Hose



-A-	-B-	Part #
-3AN	-3AN	TBA
-4AN	-4AN	TBA

180 Degree Female to -AN Hose



-A-	-B-	Part #
-3AN	-3AN	TBA
-4AN	-4AN	TBA

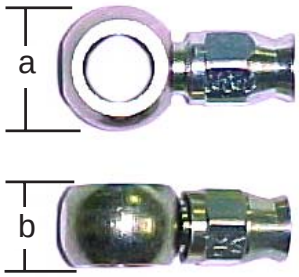
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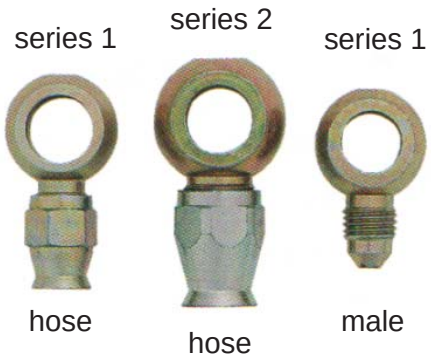
Prices subject to change without notice.

Speciality Banjo Fittings for -3AN / -4AN TFE Hose

We can supply a wide range of banjo fittings for teflon lined (TFE) hose. Common applications include: high pressure hydraulic brake & clutch lines, turbo oil feed lines, fuel & oil pressure gauge lines, nitrous lines. Banjos are available in male (to connect to female hose ends) or direct to hose versions. The "series" refers to the "ball" end size: series 1 ball end diameter (a) = .650-700" and profile across flats (b) = .325"- .400"; series 2 ball end diameter (a) = .750" and profile across flats (b) = .450"-.500". ***Link to Hose***

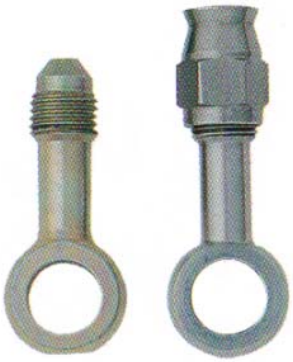


Banjo - Short Neck



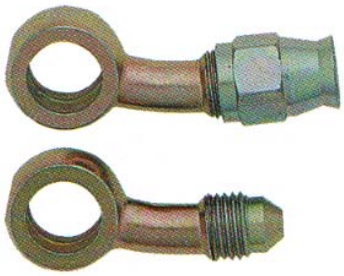
Bolt Size	Series	End Fitting	Part#
10mm, 3/8"	1	-3 hose	BJ103HS
10mm, 3/8"	1 or 2	-3 male	BJ103MS
7/16"	2	-3 hose	BJ7/163HS
7/16"	2	-3 male	BJ7/163MS
7/16"	2	-4 hose	BJ7/164HS
7/16"	2	-4 male	BJ7/164MS
12mm	2	-3 hose	BJ123HS
12mm	2	-3 male	BJ123MS
12mm	2	-4 hose	BJ124HS
12mm	2	-4 male	BJ124MS

Banjo - Extended Neck



Bolt Size	Series	End Fitting	Part#
10mm, 3/8"	1	-3 hose	BJ103HE
10mm, 3/8"	1	-3 male	BJ103ME
10mm, 3/8"	1	-4 hose	BJ104HE
10mm, 3/8"	1	-4 male	BJ104ME
7/16"	2	-3 hose	BJ7/163HE
7/16"	1 or 2	-3 male	BJ7/163ME
7/16"	2	-4 hose	BJ7/164HE
7/16"	2	-4 male	BJ7/164ME
12mm	1*	-3 male	BJ123ME

Banjo - 20 Degree Side Bent Neck



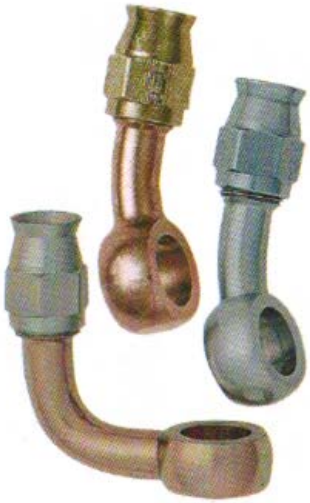
Bolt Size	Series	End Fitting	Part#
10mm, 3/8"	1	-3 hose	CALL
10mm, 3/8"	1	-3 male	CALL

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Banjo - Bent Neck 20 Degree, 35/40 Degree, 90 Degree



Banjo to -AN Hose

20 degree

Bolt Size	Series	End Fitting	Part#
10mm, 3/8'	1	-3 hose	BJ103HE2
10mm, 3/8"	1	-3 male	BJ103ME2
10mm, 3/8'	1	-4 hose	BJ104HE2
10mm, 3/8'	1	-4 male	BJ104ME2
7/16	2	-3 hose	BJ7/163HE2
7/16	2	-3 male	BJ7/163ME2
7/16	2	-4 hose	BJ7/164HE2
7/16	2	-4 male	BJ7/164ME2



Banjo to -AN Male

35/40 degree

Bolt Size	Series	End Fitting	Part#
10mm, 3/8"	1	-3 hose	BJ103HE3
10mm, 3/8"	1	-3 male	BJ103ME3
10mm, 3/8"	1	-4 hose	BJ104HE3
10mm, 3/8"	1	-4 male	BJ104ME3
7/16"	1*	-3 hose	BJ7/163HE3
7/16"	1*	-3 male	BJ7/163ME3
12mm	1*	-3 male	BJ123ME3

Note: (1*) ball diameter .750", flat to flat .400"

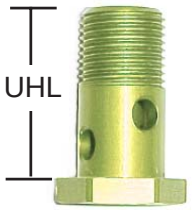
90 degree

Bolt Size	Series	End Fitting	Part#
10mm, 3/8"	1	-3 hose	BJ103HE9
10mm, 3/8"	1	-3 male	BJ103ME9
10mm, 3/8"	1	-4 hose	BJ104HE9
10mm, 3/8"	1	-4 male	BJ104ME9
7/16"	1*	-3 hose	BJ7/163HE9
7/16"	1*	-3 male	BJ7/163ME9
12mm	1*	-3 male	BJ123ME9

Note: (1*) ball diameter .750", flat to flat .400"

Speciality Banjo Fittings for -3AN / -4AN TFE Hose (continued)

Banjo Bolt (STEEL)



UHL= under head length

Thread	Series	UHL	Part#
1/8" BSP	1, 2	.975"	BJB1/8
3/8"-24	1, 2	.950"	BJB3/8
3/8"-24	1	.775"	BJB3/8S
7/16"-20	2	1.150"	BJB7/16
M10x1.5	1	.775"	BJBM10
M8x1.0*	1	.775	BJBM10/8*
M10x1.0	1	.775"	BJBM101
M10x1.25	1	.775"	BJB1012
M10x1.0	2	.945"	BJBM101L
M10x1.5	2	.945"	BJBM10L
M12x1.25	2	.950	BJBM1212S
M12x1.0	2	.950	BJBM121S
M12x1.5	2	.950	BJBM12S

*special bolt for 3/8", 10mm banjos with 8mm 1.0 thread.

Banjo Bolt Double (STEEL)



UHL= under head length

Thread	Series	UHL	Part#
1/8" BSP	2	1.550"	BJB1/8D
3/8"-24	1	1.175"	BJB3/8D
3/8"-24	2	1.550"	BJB3/8DL
7/16"-20			BJB7/16D
M10x1.0	2	1.550"	BJBM101D
M10x1.25	2	1.550"	BJB1012D
M12x1.5			BJBM12D

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Things to Know

Before getting into the next section of hose fittings and adaptors, it would be a good idea to review the terms and specifications listed below.

Under Head Length Distance from under hex to end of fitting or flair- important when threading into (female) ports so the fitting does not "bottom" on the hex prior to contacting the flair sealing surface.

Seals on Thread Taper contact seal with sealant or tape (NPT).

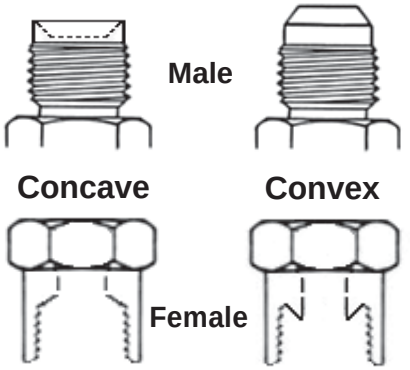
Seals on Flair -using one of each (concave & convex) flair to seal- angle may vary, but needs to be consistent between both sealing surfaces.

Convex Male flair seals common on -AN (male) and some metric (male) unions and some threaded ports. Convex male > seals on > Concave female

Concave Female flair seal common on -AN hose ends, most metric (male) unions and some threaded ports. Concave male < seals on < Convex female

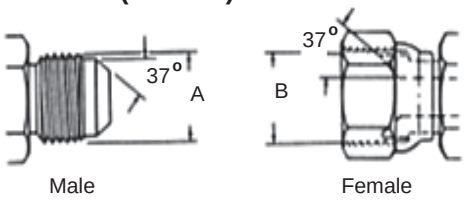
Flat -no sealing surface; use crush-washer under hex head.

Inverted Flair (or reverse flair) is a term used in place of concave and convex, but always refers to- concave on male and convex on female.

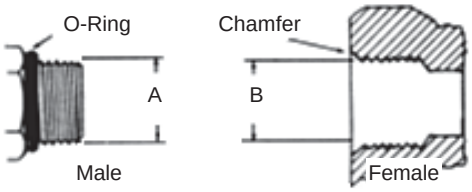


Globe Seal BSP & Metric (female) hose ends- use a radius sealing surface designed seal on a range of fixed angles.

-AN/JIC (SAE 37)



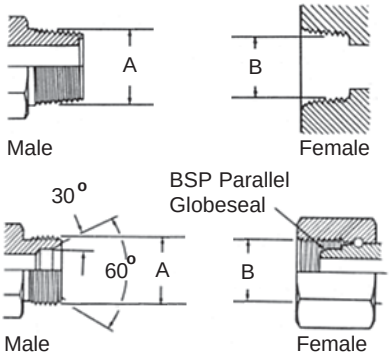
O-Ring Boss (ORB)



Inch Size	Dash Size	Nominal Thread Size	Male Thread O.D. (A) (inches)	Female Thread O.D. (B) (inches)
1/8	2	5/16-24	.31	.27
3/16	3	3/8-24	.38	.34
1/4	4	7/16-20	.44	.39
5/16	5	1/2-20	.50	.45
3/8	6	9/16-18	.56	.51
1/2	8	3/4-16	.75	.69
5/8	10	7/8-14	.88	.81
3/4	12	11/16-12	1.06	.98
1	16	1 5/16-12	1.31	1.23
1 1/4	20	1 5/8-12	1.63	1.54

SAE 37 degree flair, aka -AN (Air Force/Navy) or JIC, is considered universal for aftermarket automotive plumbing. ORB version is similar thread but seals with o-ring rather than flair. SAE 45 seals on 45 degree flair and is similar in thread to SAE 37 (except -12 which is 14tpi). SAE45 is commonly used in automotive a/c plumbing.

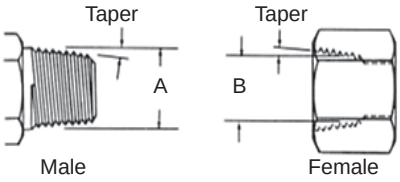
British Standard Pipe (BSP)



Inch Size	Dash Size	Nominal Thread Size	Male Thread O.D. (A) (inches)	Female Thread I.D. (B) (inches)
1/8	2	1/8-28	.38	.35
1/4	4	1/4-19	.52	.47
3/8	6	3/8-19	.65	.60
1/2	8	1/2-14	.82	.75
5/8	10	5/8-14	.88	.80
3/4	12	3/4-14	1.04	.97

Very common British thread. The female could also have a 60 degree convex seat instead of globeseal.

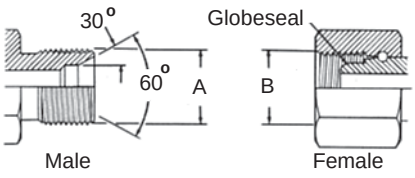
National Pipe Tapered (NPT)



NPT or NPTF is a popular American thread type often referred to as "pipe thread". NPT fittings are designed to seal with some thread deformation and use of teflon liquid or tape.

Inch Size	Dash Size	Nominal Thread Size	Male Thread O.D. (A) (inches)	Female Thread O.D. (B) (inches)
1/8	2	1/8-27	.41	.38
1/4	4	1/4-18	.54	.49
3/8	6	3/8-18	.68	.63
1/2	8	1/2-14	.84	.77
3/4	12	3/4-14	1.05	.98
1	16	1-11 1/2	1.32	1.24

Metric DIN 7631 Series



Used throughout European car fluid systems. Radius "Globeseal" on female adapts to a variety of sealing flair angles. Some male ends have convex flair, but concave is more common.

Metric Thread Size	Male Thread O.D. (A) mm / inch	Male Thread I.D. (B) mm / inch
M10 x 1.0	10 / .39	8.5 / .33
M12 x 1.5	12 / .47	10.5 / .41
M14 x 1.5	14 / .55	12.5 / .49
M16 x 1.5	16 / .63	14.5 / .57
M18 x 1.5	18 / .71	16.5 / .65
M20 x 1.5	20 / .78	18.5 / .73
M22 x 1.5	22 / .87	20.5 / .81
M26 x 1.5	26 / 1.02	24.5 / .96
M30 x 1.5	30 / 1.18	28.5 / 1.12

A  B  A

CONVEX (cv) CONCAVE (cc)

(CT) CIRCLIP & THREAD (T) THREAD

Male Hose Ends

-A-	-B-	Part #
-3AN	3/8-24 (flat) / .37(uh)	HET1-3
-3AN	3/8-24 (cv) / .70 (uh)	HETX1-3
-3AN	3/8-24 (cc) / .37 (uh)	HETC1-3
-3AN	10mm x 1.0 (flat) / .37 (uh)	HET2-31
-3AN	10mm x 1.0 (cc) / .37 (uh)	HETC2-31
-3AN	10mm x 1.0 (cv) / .37 (uh)	HETX2-31
-3AN	10mm x 1.25 (flat) / .37 (uh)	HET2-32
-4AN	7/16-20 (flat)	HET1-4
-4AN	12mm x 1.0 (flat)	HET2-41
-3AN	1/8 NPT	HET8-3

(cv) CONVEX, (cc) CONCAVE, (flat) no flair, (uh) under hex length

Male Bulkhead Hose Ends

-A-	-B-	Part #
-3AN	3/8-24 (T)	
-3AN	10mm x 1.0 (T)	
-3AN	10mm x 1.0 (CT)	
-3AN	7/16-20 (T)	
-4AN	7/16-20 (T)	
-4AN	12mm x 1.0 (T)	

Many, Many More to Follow

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