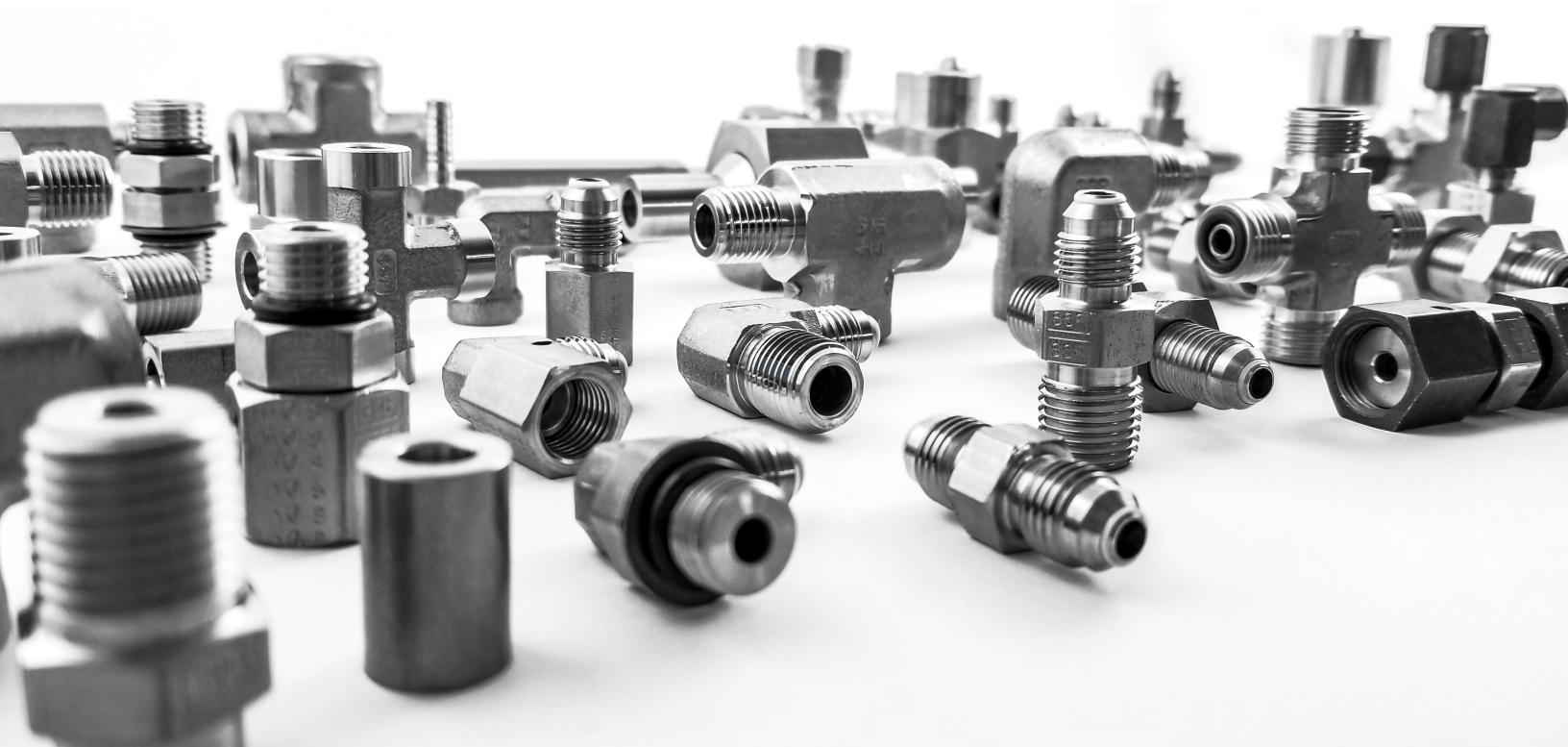


Quick Reference Guide



Industrial Fittings

- 37° Flared Fittings
JIC and Ultraflare
- O-ring Face Seal Fittings
SAE, NavSea and HP Series
- SAE Tube Fittings
- Threaded Pipe Fittings
- Weld and Braze
- Pipe Swivels
- Koncentric Fittings



At SSP, we are proud to be an American manufacturing success story.

100% of our products are made in America. All of our manufacturing is performed in our 165,000 sq. ft. facility located near Cleveland, Ohio.

Our facility is the largest vertically integrated, single-site operation in the industry. In addition to manufacturing and assembly, we have closed die forging, tool & die design, product engineering and testing operations under the same roof with customer service and management.

Made in America is good business. Not only do we make everything in America, we use American suppliers too. Buying American allows us to have better quality control and a more reliable supply chain. We can work more closely within our walls and with our suppliers to improve quality, reduce costs, and shorten lead times, which means faster service and better products for you.

Support where it counts. SSP products and services are supported by more than 4000 people and 350 distributor locations around the globe. For a distributor near you, contact SSP Customer Service or visit www.mySSP.com/distributors.

SSP Industry Standard Products.
Made Better.



Technical Information

TUBE FITTING Feature	Soft-Seal ORFS	SAE 37° Flared	UltraFlare™	SAE Flareless
Pressures	Very high	Medium to high	High	Medium
Temperatures	Nitrile/Buna: -30° to 250°F	Stainless: -425° to 1200°F	PTFE/Teflon®: -100° to 450°F	Stainless: -425° to 1200°F
	Viton®: -15° to 400°F	Brass: -40° to 400°F		Monel®: -65° to 800°F
		Monel®: -65° to 800°F		
Materials	T316/316L stainless steel	T316/316L stainless steel	T316/316L stainless steel	T316/316L stainless steel
		M405 Monel®		(17-4 ph stainless for ferrule)
		CA377/CA360/CA345 brass		M405 Monel
Size Available (Tubing OD)	NavSea: 1/8" - 2"	1/8" - 2"	1/4" - 1"	1/8" - 2"
	SAE: 1/4" - 1 1/2"	6mm - 38mm	6mm - 25mm	
Tube Compatibility	Welded or Seamless	Welded or Seamless	Welded or Seamless	Seamless only
	Inch or metric	Inch or metric	Inch or metric	Inch only
	All thickness	Thin to medium thickness	Thin to medium thickness	Medium to heavy thickness
Seal Reliability	Excellent	Good	Very good	Very good
	Elastomeric seal	Metal-to-metal seal	PTFE seal reinforces metal-to-metal seal	Metal to metal seal
	High tolerance to minor surface imperfections and damage	Low tolerance to minor surface imperfections and damage	Medium tolerance to surface imperfections	Sealing surfaces are less prone to damage
	High tolerance to assembly variation	Low tolerance to assembly variation	Medium tolerance to assembly variation like under-flaring or torquing	Low tolerance to assembly variation
Specification Conformance	SAE J1453: NavSea 710	SAE J514; MIL-F-18866	SAE J514 (partial)	SAE J514; MIL-F-18866
	ISO 8434-3	ISO 8434-2	NASA GP-425 (partial)	

HOSE FITTINGS	Hose / Tubing	Fitting System	Temperature	Working Pressure (per specification)
Hydraulic	SAE 100R1 AT/ DIN 20 022 type 1SN	AH402	-40 to 212°F	3000 psi
	SAE 100R2 AT/ DIN 20 022 type 2St	AH407	-40 to 212°F	5000 psi
	SAE 100R2 AT/ DIN 20 022 type 2SN	AH300	-40 to 212°F	5000 psi
	SAE 100R5, J1402	AH200 & 202	-40 to 212°F	3000 psi
	SAE 100R9 A	AH437	-40 to 212°F	4500 psi
	SAE100R12 A	AH477	-40 to 250°F	4000 psi
	MIL -H-24135/1	AH407	-40 to 212°F	5000 psi
Teflon	MIL -H-52471	AH477	-40 to 250°F	4000 psi
	SAE 100R14	AH900	-65 to 400° F	1500 psi
Push-On	MIL -H-27267	AH920	-65 to 400° F	1500 psi
	Push-Lok / Socketless Style	H802	-40 to 200°F	350 psi
	SAE 100R4	H808	-40 to 212°F	300 psi
	Gum Rubber	M2HC	-15 to 150°F	300 psi
	kynar	MHC	-40 to 260°F	100 psi
	Nylon Tubing	MHC	-40 to 200°F	100 psi
	Polyethylene	MHC	-100 to 175°F	100 psi
	PTFE	MHC	-100 to 450°F	100 psi
	Silicone	M2HC	-60 to 400°F	
	Tygon®	M2HC	-40 to 125°F	300 psi
Weld-On Flexible Metal	Vinyl	MHC	-40 to 180°F	
	Stainless Steel	BH		2700 psi

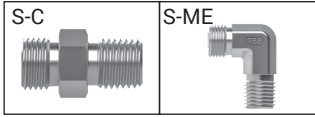
PIPE FITTING Feature	Threaded Tapered	Threaded Straight	Pipe Swivel	Weld & Braze	Koncentrik®
Pressures	Very high to 7,200 psi	High to 6,000 psi	High to 6,000 psi	Very high to 12,000 psi	Very high to 10,000psi
Temperatures	Stainless: -425° to 1200°F	Nitrile/Buna: -30° to 250°F	Stainless: -425° to 1200°F	Stainless: -425° to 1200°F	PTFE/Teflon®: -100° to 450°F
	Brass: -40° to 400°F	Viton®: -15° to 400°F		Monel®: -65° to 800°F	
	Monel®: -65° to 800°F				
Materials	316/316L stainless steel	316/316L stainless steel	316/316L stainless steel	316/316L stainless steel	316/316L stainless steel
	M405 Monel®			M405 Monel®	M405 Monel®
	CA377/CA360/CA345 brass				
Size Available (nominal)	1/8" - 2"	#4 - #32	#4 - #32	1/8" - 2"	1/8" - 2" & #4 - #32
Seal Reliability	Good in static systems	Excellent in static systems	Good in static & dynamic systems	Excellent	Very good
	Poor in dynamic systems	Very good in dynamic systems	Low tolerance to damage along sealing angles	Permanently brazed or welded joints are leak-free & high resistant to vibration	PTFE seal reinforced by metal-to-metal seal
	Medium tolerance to minor thread imperfections	Medium tolerance to thread & taper angle imperfections	Medium tolerance to thread imperfections	Sealing surfaces are less prone to damage	Medium tolerance to surface imperfections
	Medium tolerance to assembly variation			Low tolerance to assembly variation	Medium tolerance to assembly variation like under-torquing
Specification Conformance (design & thread)	J514, MIL-F-18866	SAE 1926, ISO 11926	SAE J514	ANSI B31.3	ANSI B31.1.0 Power Piping
	ANSI B1.20.1 JIS B0203	UN/UNF/UNEF; ANSI B1.1.ISO 263	ANSI B1.20.1		ANSI B16.11 Forged Steel Fittings Socket Welded & Threaded
	BS 21, ISO 7/1	BSPP ISO 228/1, BS 2779, DIN 259, JIS B0202			

O-Ring Face Seal

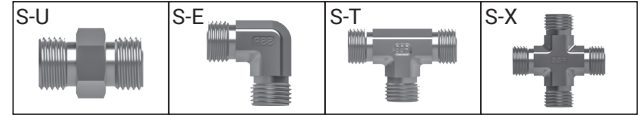
Soft-Seal SAE SAE J1453



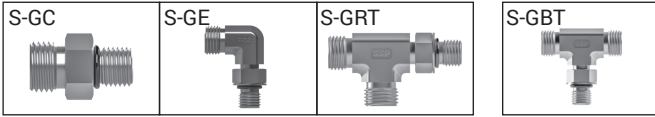
Tube To Male Pipe



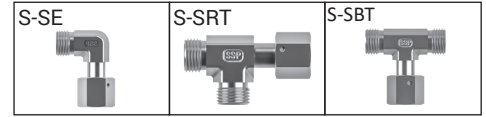
Tube to Tube Union



Tube to ORing Boss



Tube to Swivel



Sleeves



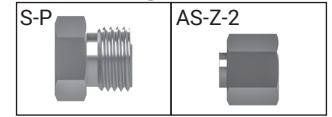
Nuts



Rings



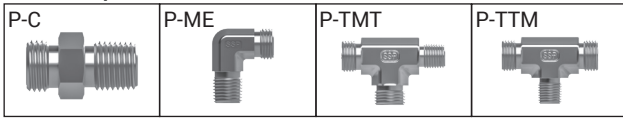
Cap & Plug



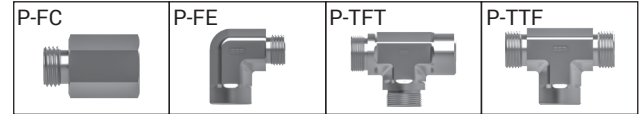
Soft-Seal Nav-Sea NavSea 710



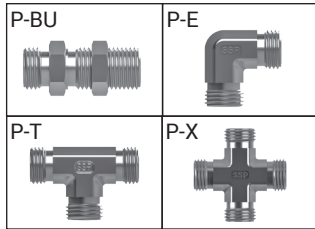
Male Pipe



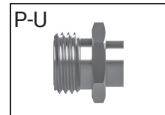
Female Pipe



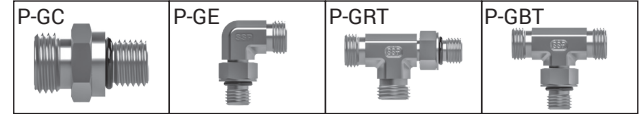
Union



Tube Socket



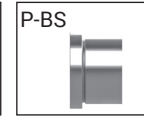
O-Ring Boss



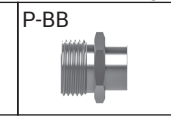
Tail Sleeve



Blank Tail



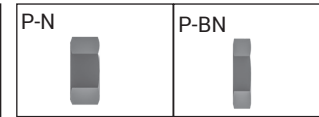
Blank Body



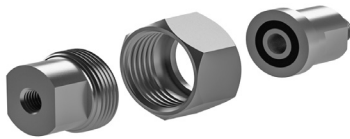
Ring



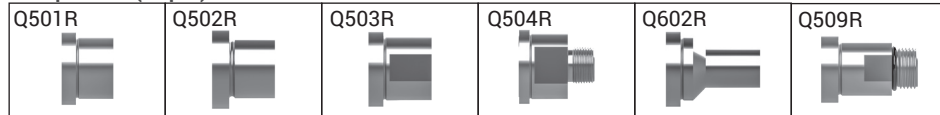
Nuts



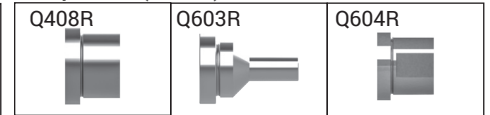
Soft-Seal High Pressure Union



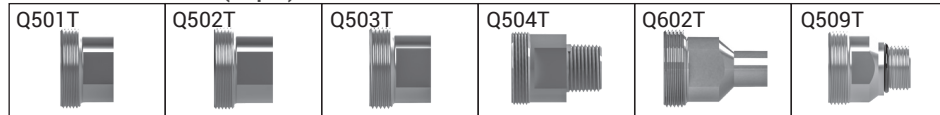
Tailpiece (Pipe)



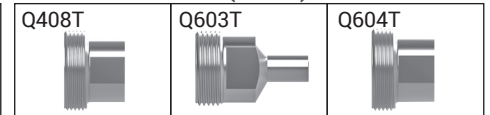
Tailpiece (Tube)



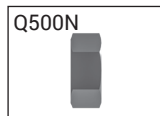
Threaded Piece (Pipe)



Threaded Piece (Tube)



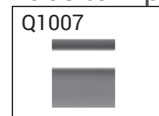
Nut



Rings



Tube to Pipe



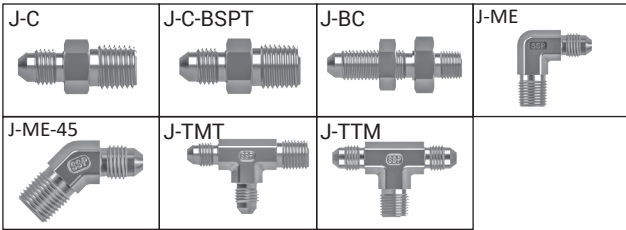
37° Flared Fittings

JIC 37° Flared

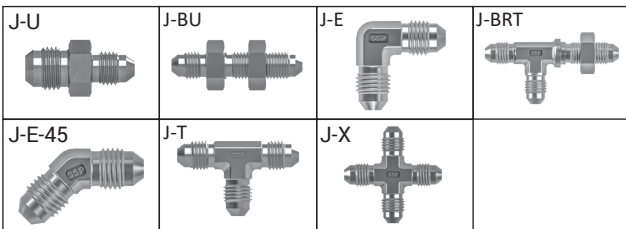
MS515 Series/SAE J514,
MIL F-18866



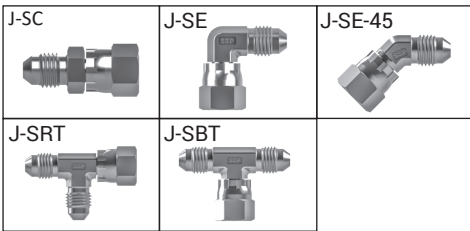
Male Pipe



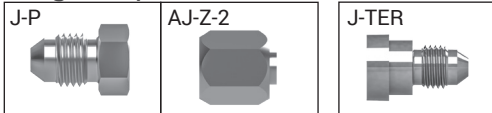
Tube Union



Swivel

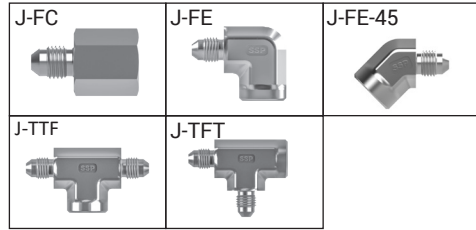


Plug & Cap

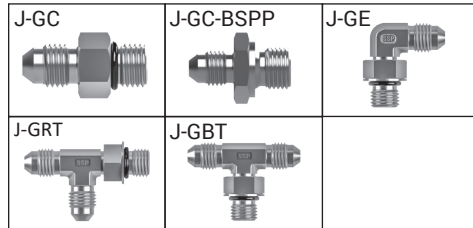


Reducer

Female Pipe



O-Ring Boss



Swivel Adapter



Sleeve Nut

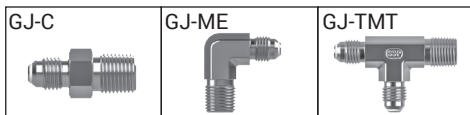


UltraFlare®

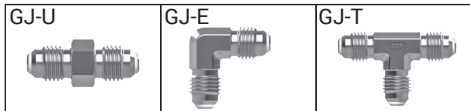
Partial NASA GP 425



Male Pipe



Union



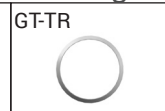
Sleeve



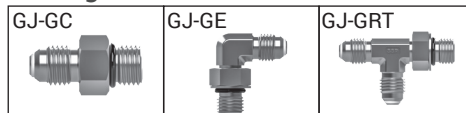
Nut



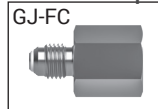
Seal Ring



O-Ring Boss



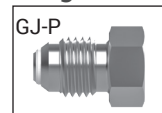
Female Pipe



Swivel



Plug



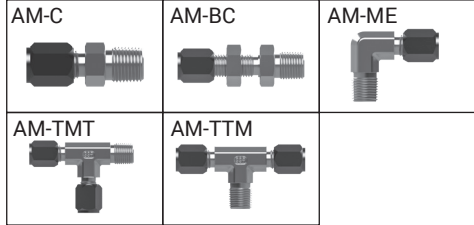
Tube Fittings

SAE FLARELESS

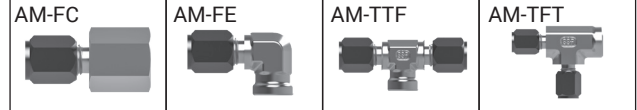
MS518 Series/SAE J514,
MIL F18866



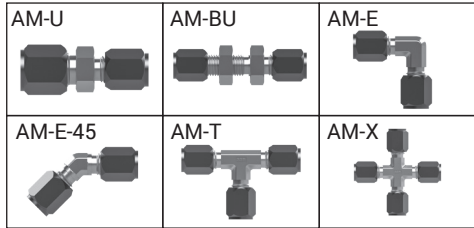
Male Pipe



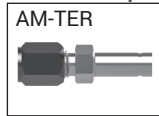
Female Pipe



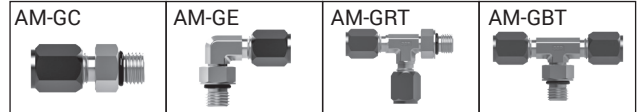
Union



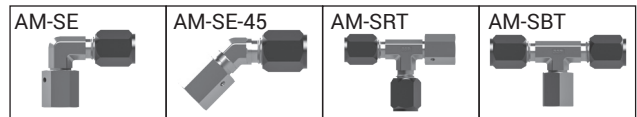
Tube Adapter



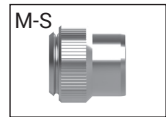
O-Ring Boss



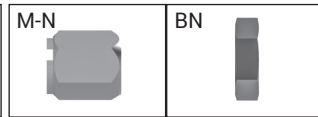
Swivel



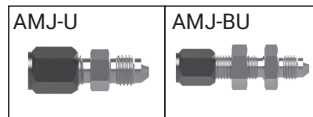
Sleeve



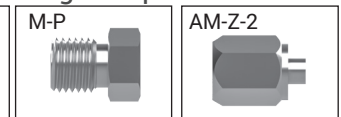
Nut



Flared



Plug & Cap

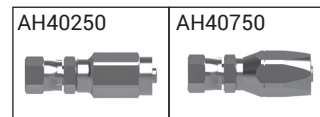


Hose Fittings

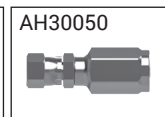
Hydraulic

Swivel

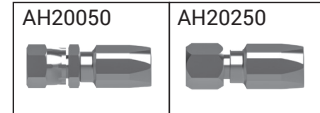
SAE 100R1



SAE 100R2

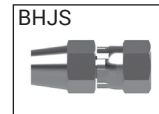


SAE 100R5

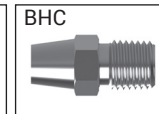


Weld-On

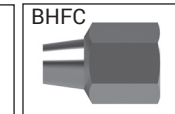
Swivel



Male Pipe



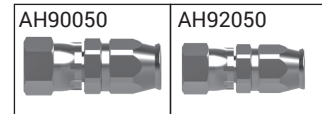
Female Pipe



Teflon®

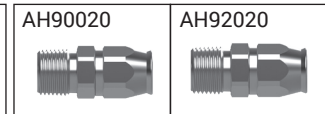
Swivel

SAE 100R14



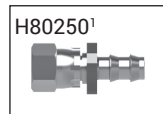
Male Pipe

SAE 100R14

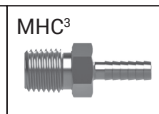
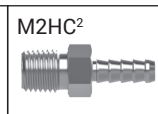
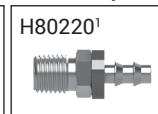


Push-On

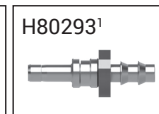
Swivel



Male Pipe



Tube Stub



¹ For push lock style no clamp hoses

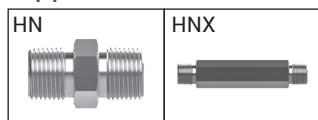
² For Soft plastic or rubber tubing

³ For true ID plastic tubing and reinforced rubber hose

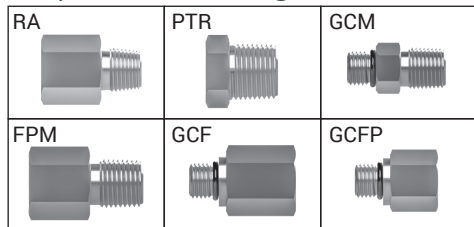
Pipe Fittings and Adapters

Standard & 10K Pipe Fittings
ASME B31.3

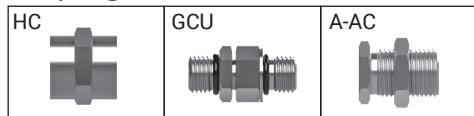
Nipples



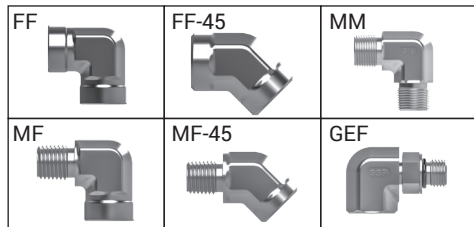
Adapters and Bushings



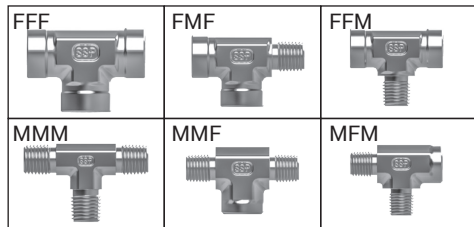
Coupling



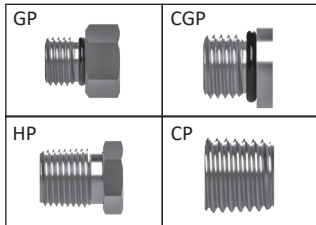
Elbow



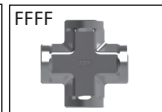
Tee



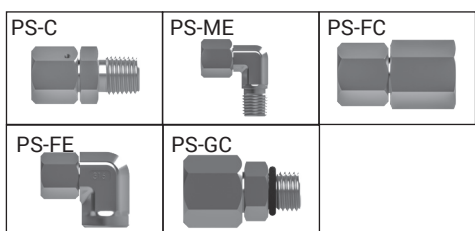
Cap & Plug



Cross

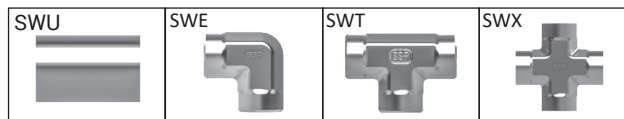


Swivel Adapters, SAE J514

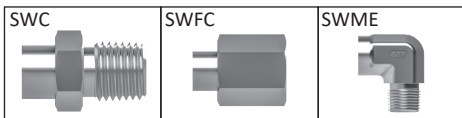


Weld & Braze Adapters

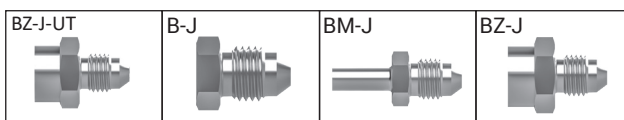
Tube Socket Weld Union



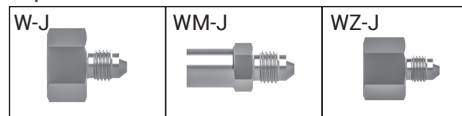
Weld to Threaded Pipe



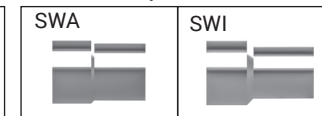
Tube Socket Weld to Flare



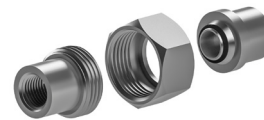
Pipe Socket Weld to Flare



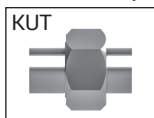
Tube to Pipe



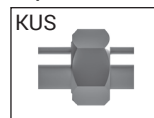
Koncentrik® Unions ASME B31.1, B16.11



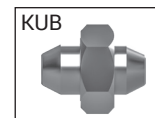
Female Pipe



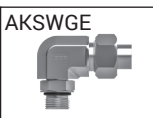
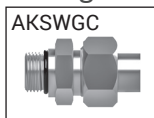
Pipe Socket



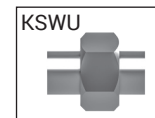
Butt Weld



O-Ring Boss



Tube Socket



Tailpiece

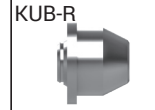
FNPT



Socket Weld



Butt Weld



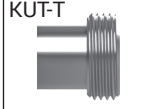
Tube

Socket Weld

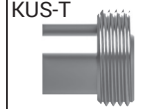


Threaded Piece

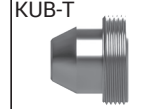
FNPT



Socket Weld



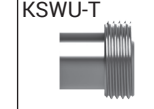
Butt Weld



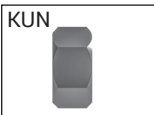
Straight Thread



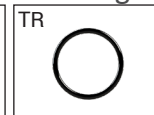
Tube Socket Weld



Nut



Seal Ring



SSP

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