



PRODUCT CATALOG

ENGINEERING | INNOVATION | SERVICE

World Wide Fittings Inc.™



Mission:

To consistently meet customer requirements in a efficient manner with continuous improvement to our quality system.

Quality is about more than product performance. It's about people and processes performing, too. At World Wide, we approach our work with intense attention to detail that starts with manufacturing and continues until the part is delivered to you, error-free. It's the only way to ensure our customers' success.

You are only a click away from ordering quality fittings. You can find us at www.worldwidefittings.com. Our professional staff will help you with the orders.

World Wide Fittings Management

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SAFETY INFORMATION

WARNING

Selection of proper tubing, tube fittings, and proper installation is essential to the proper operation and safe use of products and related equipment.

IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED WITHIN THIS CATALOG CAN CAUSE DEATH, PERSONAL INJURY, AND PROPERTY DAMAGE.

World Wide Fittings has prepared this document and other information to provide product and / or system options for further analysis by users having technical expertise. Due to the variety of operating conditions and applications for these products, the user through its own analysis and testing, is solely responsible for making the final selection of the products and assuring that all performance, safety, and warning requirement of the application are met. Below are some of the factors which should be considered when specifying components and equipment for your application.

TYPE OF MEDIA
TUBE SIZE
INSIDE DIAMETER
PRESSURE
SAFETY FACTOR

TUBING MATERIAL
WALL THICKNESS
TEMPERATURE
NECESSARY FLOW RATE

The products described herein, including product specification, designs, pricing, and availability, are subject to change by World Wide Fittings Corporation at time without notice.

TUBE FITTING THREAD CHART

Dash No.	Tube Size	Flareless 7000 - 8000		37° Flare 5000	Pipe 3000	Face-seal 4000	Swivel Adapters 9000	Straight Thread "O" Ring Boss	7/8 Taper Pressure Plugs 100 P	Metric	BSPP
1	1/16"	-	-	-	1/16-27	-	-	-	1/16-27	M8 X 1.0	1/16-28
2	1/8"	5/16-24	5/16-24	5/16-24	1/8-27	-	1/8-27	5/16-24	1/8-27	M10 X 1.0	1/8-28
3	3/16"	3/8-24	3/8-24	3/8-24	-	-	-	3/8-24	-	M12 X 1.5	
4	1/4"	7/16-20	1/2-20	7/16-20	1/4-18	9/16-18	1/4-18	7/16-20	1/4-18	M14 X 1.5	1/4-19
5	5/16"	1/2-20	9/16-18	1/2-20	-	-	-	1/2-20	-	M16 X 1.5	
6	3/8"	9/16-18	5/8-18	9/16-18	3/8-18	11/16-16	3/8-18	9/16-18	3/8-18	M18 X 1.5	3/8-19
8	1/2"	3/4-16	3/4-16	3/4-16	1/2-14	13/16-16	1/2-14	3/4-16	1/2-14	M20 X 1.5	1/2-14
10	5/8"	7/8-14	15/16-16	7/8-14	-	1-14	7/8-14	7/8-14	-	M22 X 1.5	5/8-14
12	3/4"	1-1/16-12	1-1/16-16	1-1/16-12	3/4-14	1-3/16-12	3/4-14	1-1/16-12	3/4-14	M27 X 2.0	3/4-14
14	7/8"	1-3/16-12	1-3/16-16	1-3/16-12	-	-	-	1-3/16-12	-	M30 X 2.0	
16	1"	1-5/16-12	1-5/16-16	1-5/16-12	1-11-1/2	1-7/6-12	1-11-12	1-5/16-12	1-11-1/2	M33 X 2.0	1-16
20	1-1/4"	1-5/8-12	1-5/8-16	1-5/8-12	1-1/4-11-1/2	1-11/16-12	1-1/4-11-1/2	1-5/8-12	1-1/4-11-1/2	M42 X 2.0	1-1/4-11
24	1-1/2"	1-7/8-12	1-7/8-16	1-7/8-12	1-1/2-11-1/2	2-12	1-1/2-11-1/2	1-7/8-12	1-1/2-11-1/2	M48 X 2.0	1-1/2-11
32	2"	2-1/2-12	2-1/2-12	2-1/2-12	2-11-1/2	-	2-11-1/2	2-1/2-12	2-11-1/2	M60 X 2.0	2-11

PRODUCT SPECIFICATION / INTERCHANGEABILITY

World Wide Fittings products are manufactured from various manufacturing processes which include cold heading, impact extrusion, hot and cold forging, and the conventional methods of making tube fittings on screw machines. World Wide products meet the SAE - J514, ASME Standard, NFPA Standard, and Military Standard - MIL - F - 18866, Class 1 for hydraulic and pneumatic fittings. World Wide Fittings 4000 Series "O" Ring Face Seal Fittings meet or exceed the requirements of the SAE - J1453 Specification.

Most of World Wide Fittings products fall under the Federal Supply Class #4730. All World Wide Fittings products are interchangeable with our competition's provided their fittings are made to the applicable SAE, ASME, NFPA, and Military Standards.

HOW TO ORDER

When specifying hydraulic fittings, the hose or tubing, as well as the thread sizes, are measured in sixteenths of an inch. When ordering tube fittings, customers must always specify the tube ends first followed by the opposite pipe, SAE straight thread, or female swivel end.

Customers who want to order fittings as "bodies only" that are normally sold as assemblies, must include the prefix letter "B" in front of the fitting number. Fittings which are sold as "bodies only" may be ordered as "assemblies" by including the prefix number "3" in front of the fitting number.

When ordering 3000 and 9000 Series fittings where tube ends are not present, refer to the proper fitting section and the individual listing of the fitting to be assured of ordering the correct part configuration.

(Contact World Wide Fittings when ordering fittings in configurations which are nonstandard or not listed in this catalog.)

EXAMPLE:

<i>B</i>	<i>7405</i>	<i>X 04 X 04</i>
<i>Body Only</i>	<i>Fitting</i>	<i>1/4" Tube O.D.</i>
<i>Prefix</i>	<i>Number</i>	<i>1/4" Male Pipe Thread</i>
<i>3</i>	<i>F5515</i>	<i>X 08 X 08</i>
<i>Assembly</i>	<i>Fitting</i>	<i>1/2" Tube O.D.</i>
<i>Prefix</i>	<i>Number</i>	<i>1/2" Male Straight Thread</i>

PORT AND THREAD ASSEMBLIES

Hydraulic tube and pipe fittings are most commonly used with three different types of port threads:
1) SAE Straight Thread "O" Ring 2) ISO Metric Thread "O" Ring 3) National Pipe Thread

SAE STRAIGHT THREAD "O" RING PORTS

SAE straight threads can be machined for either adjustable or nonadjustable hydraulic fittings. Carefully machined internal and external UN/UNF straight threads provide the holding power for hydraulic fittings when installed in high pressure hydraulic systems.

SAE straight threads sealing power comes from the use of a high quality 90-durometer Buna-N "O" Ring as specified by SAE-J514. During assembly, the straight threads provide adjustability on shape fittings where maneuverability and alignment are necessary for tube line routing.

After the hydraulic fittings with the SAE straight thread have been properly installed, the hydraulic "O" Ring provides a high pressure seal by becoming seated between the angular groove in the female port and the male end of the hydraulic fittings.

ASSEMBLY INSTRUCTIONS

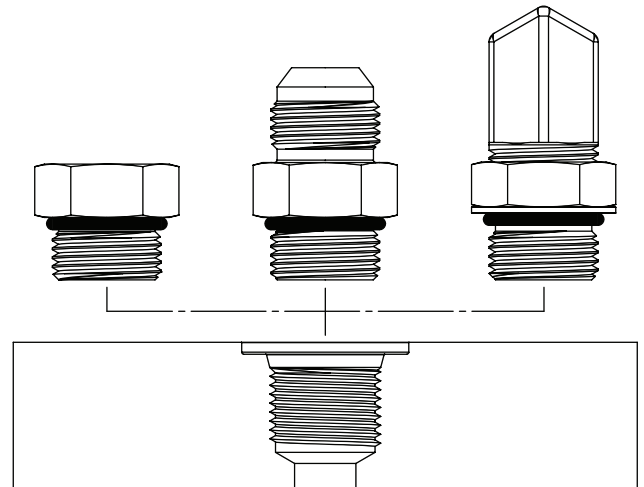
1. Inspect the hydraulic fitting and mating port to ensure that there is no foreign matter present or nicks in the "O" Ring to cause a leak.
2. Lubricate the "O" Ring with a light coating of oil or hydraulic fluid.
3. On the fittings adjustable thread, back the locknut off as far as possible and screw the fitting into the port until the flat back-up washer makes contact with the face of the port.
4. Align the adjustable fitting with the end of the tube assembly by unscrewing the fitting to the proper direction. (Do not unscrew the fitting more than one full turn.)
5. Using a wrench to hold the fitting in the desired position, tighten the locknut to the proper torque value as shown in the torque chart for adjustable SAE threads.
6. Visually inspect the fitting assembly to confirm that the "O" Ring has seated properly in the female ports angular seating groove and the back-up washer is seated flat against the face of the port.

Inspect threads before assembly to be assured that the male thread and female port are free of burrs and other foreign matter.

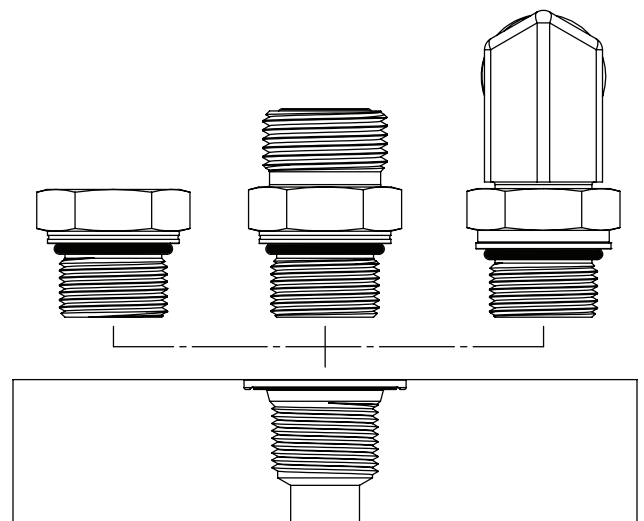
Lubricate the hydraulic "O" Ring before installing the fitting to prevent the "O" Ring from possible damage during installation.

Hydraulic fittings machined from forgings may have higher assembly torque values than are shown in the chart below.

(See drawing below for example of proper installation.)



Straight thread adjustable and non-adjustable assembly



Metric thread adjustable and non-adjustable assembly

PORT AND THREAD ASSEMBLIES

The charts below shows the approximate assembly torque values for hydraulic fittings and “O” Ring plugs with adjustable and non-adjustable SAE straight threads and ISO metric threads.

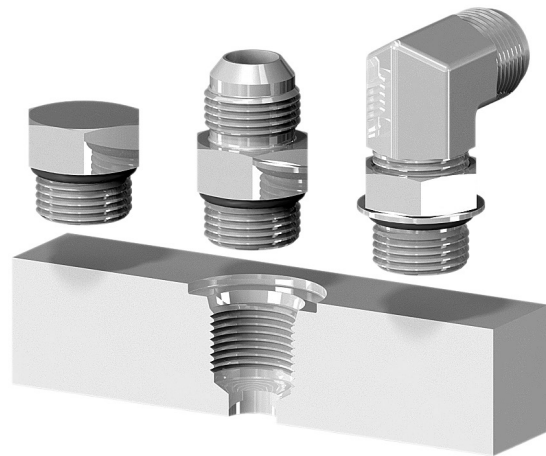
J1926-2 ORFS ADJUSTABLE & NON-ADJUSTABLE		
STUD END QUALIFICATION TORQUE		
<i>DASH SIZE</i>	<i>THREAD</i>	<i>TORQUE [N·m]¹ +10% - 0%</i>
3	3/8-24	10 ⁽²⁾
4	7/16-20	20 ⁽²⁾
5	1/2-20	40
6	9/16-18	45
8	3/4-16	85
10	7/8-14	115
12	1-1/16-12	170
14	1-3/16-12	215
16	1-5/16-12	270
20	1-5/8-12	285
24	1-7/8-12	370
32	2-1/2-12	540

1. To convert from N·m to lb.ft, multiply by 0.737.
2. These values are for adjustable stud end. Nonadjustable values are 15 and 35 for sizes 3/8-24 and 7/16-20, respectively.

J1926-3 JIC, FLARELESS ADJUSTABLE & NON-ADJUSTABLE		
STUD END QUALIFICATION TORQUE		
<i>DASH SIZE</i>	<i>THREAD</i>	<i>TORQUE [N·m]¹ +10% - 0%</i>
2	5/16-24	8
3	3/8-24	10
4	7/16-20	18
5	1/2-20	25
6	9/16-18	30
8	3/4-16	50
10	7/8-14	60
12	1-1/16-12	95
14	1-3/16-12	125
16	1-5/16-12	150
20	1-5/8-12	200
24	1-7/8-12	210
32	2-1/2-12	300

1. To convert from N·m to lb.ft, multiply by 0.737.

J1926-4			
TEST TORQUE FOR INTERNAL HEX PORT PLUGS AND TEST TORQUES FOR HEAVY-DUTY (S-SERIES) EXTERNAL HEX PLUG SCREWS			
<i>DASH SIZE</i>	<i>PORT OR PLUG THREAD SIZES</i>	<i>PLUG</i>	
		<i>INTERNAL HEX</i>	<i>EXTERNAL HEX</i>
		<i>TORQUE [N·m] +10% - 0%</i>	
2	5/16-24	7	12
3	3/8-24	14	20
4	7/16-20	20	35
5	1/2-20	27	40
6	9/16-18	45	45
8	3/4-16	85	85
10	7/8-14	110	110
12	1-1/16-12	170	170
14	1-3/16-12	235	235
16	1-5/16-12	310	270
20	1-5/8-12	340	340
24	1-7/8-12	420	420
32	2-1/2-12	510	510



Straight Thread Port Assembly

PORT AND THREAD ASSEMBLIES

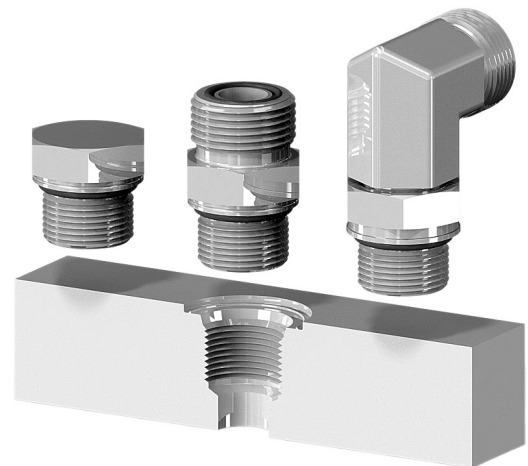
ISO 6149-2 ORFS ADJUSTABLE & NON-ADJUSTABLE	
TORQUES FOR STUD END QUALIFICATION TEST	
THREAD	TORQUE [N·m] +10% - 0%
M8 X 1	10
M10 X 1	20
M12 X 1.5	35
M14 X 1.5	45
M16 X 1.5	55
M18 X 1.5	70
M20 X 1.5 ^a	80
M22 X 1.5	100
M27 X 2.0	170
M30 X 2.0	215
M33 X 2.0	310
M42 X 2.0	330
M48 X 2.0	420
M60 X 2.0	500

a. For plugs for cartridge valve cavities only (see ISO 6149-4 and ISO 7789).

ISO 6149-3 JIC, FLARELESS ADJUSTABLE & NON-ADJUSTABLE	
TORQUES FOR STUD END QUALIFICATION TEST	
THREAD	TORQUE [N·m] +10% - 0%
M8 X 1	8
M10 X 1	15
M12 X 1.5	25
M14 X 1.5	35
M16 X 1.5	40
M18 X 1.5	45
M22 X 1.5	60
M27 X 2.0	100
M30 X 2.0	130
M33 X 2.0	160
M42 X 2.0	210
M48 X 2.0	260
M60 X 2.0	315

ISO 6149-4		
TORQUES FOR PLUG QUALIFICATION TEST		
THREAD	PLUG	
	INTERNAL HEX	EXTERNAL HEX
	TORQUE [N·m] +10% - 0%	
M8 X 1	8	10
M10 X 1	15	20
M12 X 1.5	22	35
M14 X 1.5	45	45
M16 X 1.5	55	55
M18 X 1.5	70	70
M20 X 1.5 ^a	80	80
M22 X 1.5	100	100
M27 X 2.0	170	170
M30 X 2.0	215	215
M33 X 2.0	310	310
M42 X 2.0	330	330
M48 X 2.0	420	420
M60 X 2.0	500	500

a. For cartridge valve cavity applications only (see ISO 7789).



Metric Thread Port Assembly

PORT AND THREAD ASSEMBLIES

DRYSEAL PIPE THREADS

NPTF threads are formed to have a 3/4" taper with tightly machined tolerances to provide contact at the crest and root of the thread as well as the flank. The metal to metal seal of the thread crest, root, and flank, together provide a complete seal to help prevent the possibility of spiral leakage.

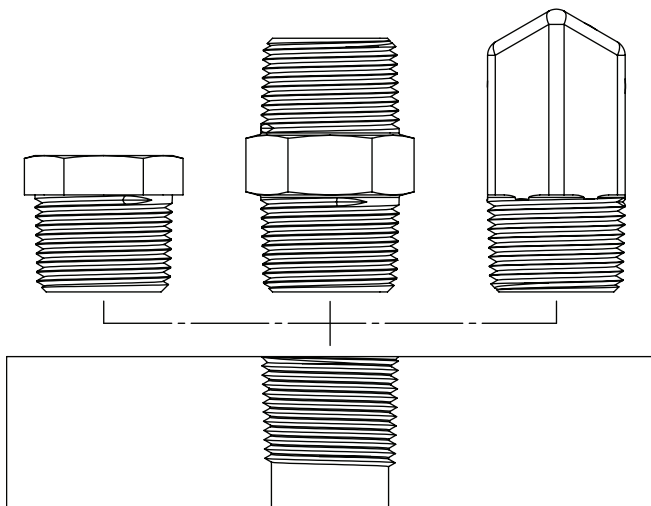
NPTF threads also provide the holding power for the connection while in high pressure service, which limits the reliability of the seal which the threads are making with the female port.

For high pressure applications where constant vibration is running through the hydraulic systems, hydraulic fittings with SAE straight threads which connect to female or male ports are recommended.

ASSEMBLY INSTRUCTIONS

1. Visually inspect the fitting and the mating port and remove any burrs or foreign matter which may be present.
2. Apply thread sealant if needed to the male threads. Do not apply thread sealant to the beginning 1/3rd of the male threads so as to keep the hydraulic system free from being contaminated by sealant which enters the system from the fitting connection.
3. Install the fitting to the finger-tight position. Using a wrench turn the fitting approximately 2 - 2 1/2 turns past the finger-tight position.

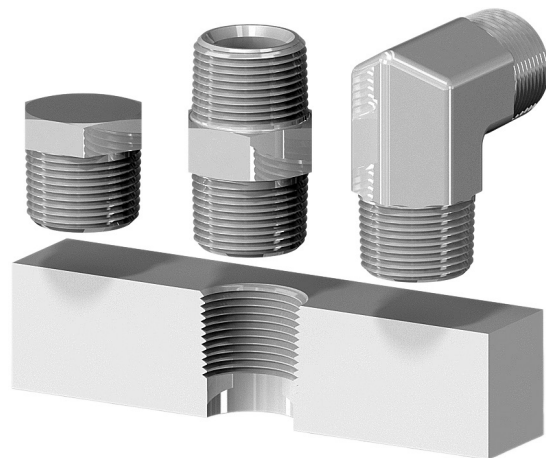
(See drawing below for example of proper installation.)



Pipe thread assembly

TAPERED PIPE THREAD SIZE	
NPTF	T.F.F.T.
1/8-27	2 - 3
1/4-18	2 - 3
3/8-18	2 - 3
1/2-14	2 - 3
3/4-14	2 - 3
1-11-1/2	1.5 - 2.5
1-1/4-11-1/2	1.5 - 2.5
1-1/2-11-1/2	1.5 - 2.5
2-11-1/2	1.5 - 2.5

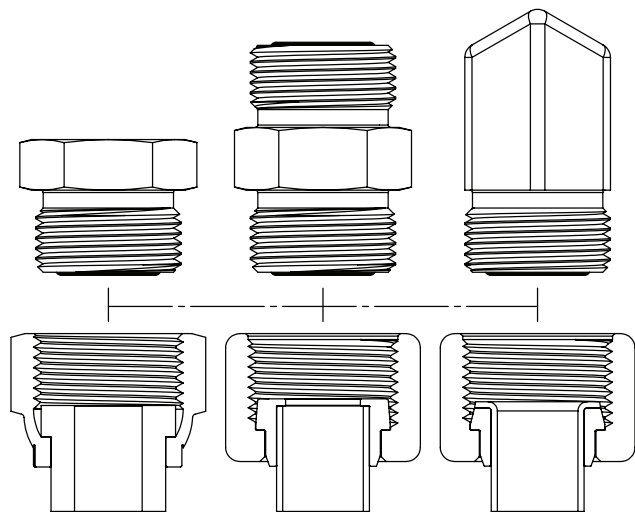
Assembly turns from finger tight (T.F.F.T.) values for steel, stainless steel and brass pipe fittings.



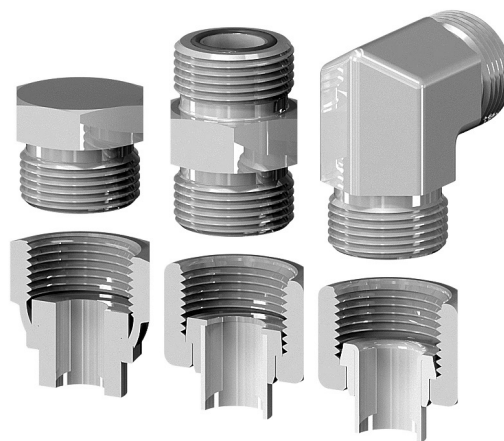
Pipe Thread Port Assembly

PORT AND THREAD ASSEMBLIES

J1453-2 & J1453-3				
FACE SEAL END QUALIFICATION TORQUE				
NOMINAL METRIC TUBE OD MM	INCH TUBE OD OR HOSE ID DASH SIZE	NOMINAL INCH TUBE OD MM	"O" RING FACE SEAL END THREAD INCH	TORQUE [N·m]
6	4	6.35	9/16-18	25
8	5	7.94	5/8-18	30
10	6	9.52	11/16-16	40
12	8	12.70	13/16-16	55
16	10	15.88	1-14	60
20	12	19.05	1-3/16-12	90
22	14	22.23	1-5/16-12	115
25	16	25.40	1-7/16-12	125
30	20	31.75	1-11/16-12	170
38	24	38.10	2-12	200



Face Seal thread assembly



Face Seal Thread Assembly

TUBING SELECTION

TUBING DESIGN PRESSURES

FOR STEEL AND STAINLESS STEEL TUBING BASED ON 4 - 1 SAFETY FACTOR

TUBE O.D.	WALL THICKNESS	TUBE I.D.	STEEL C1010	STAINLESS 304 & 316
0.125	0.028	0.069	6661	7994
0.125	0.035	0.055	8445	10134
0.188	0.028	0.132	4245	5094
0.188	0.035	0.118	5435	6521
0.188	0.049	0.090	7839	9407
0.250	0.028	0.194	3104	3725
0.250	0.035	0.180	3965	4758
0.250	0.049	0.152	5753	6903
0.250	0.065	0.120	7819	9382
0.250	0.083	0.084	9964	11957
0.313	0.028	0.257	2433	2919
0.313	0.035	0.243	3098	3718
0.313	0.049	0.215	4486	5383
0.313	0.065	0.183	6131	7357
0.313	0.083	0.147	7982	9579
0.313	0.095	0.123	9156	10987
0.375	0.028	0.319	2004	2405
0.375	0.035	0.305	2547	3056
0.375	0.049	0.277	3675	4410
0.375	0.065	0.245	5021	6025
0.375	0.083	0.209	6575	7890
0.375	0.095	0.185	7607	9128
0.375	0.109	0.157	8771	10526
0.500	0.035	0.430	1871	2245
0.500	0.049	0.402	2684	3221
0.500	0.065	0.370	3654	4385
0.500	0.083	0.334	4786	5744
0.500	0.095	0.310	5558	6670
0.500	0.109	0.282	6467	7760
0.500	0.120	0.260	7179	8615
0.500	0.134	0.232	8071	9685
0.500	0.148	0.204	8932	10719
0.500	0.188	0.124	11051	13262
0.625	0.035	0.555	1478	1773
0.625	0.049	0.527	2111	2534
0.625	0.065	0.495	2863	3436
0.625	0.083	0.459	3741	4489

TUBE O.D.	WALL THICKNESS	TUBE I.D.	STEEL C1010	STAINLESS 304 & 316
0.625	0.095	0.435	4342	5210
0.625	0.109	0.407	5055	6067
0.625	0.120	0.385	5623	6748
0.625	0.134	0.357	6350	7620
0.750	0.035	0.680	1221	1465
0.750	0.049	0.652	1739	2087
0.750	0.065	0.620	2351	2821
0.750	0.083	0.584	3064	3676
0.750	0.095	0.560	3551	4261
0.750	0.109	0.532	4132	4958
0.750	0.120	0.510	4595	5514
0.750	0.134	0.482	5193	6231
0.750	0.148	0.454	5796	6955
0.750	0.188	0.374	7521	9026
0.875	0.035	0.805	1040	1248
0.875	0.049	0.777	1478	1773
0.875	0.065	0.745	1993	2392
0.875	0.083	0.709	2591	3110
0.875	0.095	0.685	3000	3600
0.875	0.109	0.657	3487	4184
0.875	0.120	0.635	3876	4651
0.875	0.134	0.607	4378	5253
0.875	0.148	0.579	4887	5864
1.000	0.035	0.930	906	1087
1.000	0.049	0.902	1285	1542
1.000	0.065	0.870	1730	2076
1.000	0.083	0.834	2244	2693
1.000	0.095	0.810	2596	3115
1.000	0.109	0.782	3013	3616
1.000	0.120	0.760	3347	4016
1.000	0.134	0.732	3778	4533
1.000	0.148	0.704	4216	5059
1.000	0.156	0.688	4468	5362
1.000	0.188	0.624	5494	6592
1.000	0.220	0.560	6532	7838
1.250	0.049	1.152	1018	1222
1.250	0.065	1.120	1367	1641

TUBING SELECTION

TUBING DESIGN PRESSURES

FOR STEEL AND STAINLESS STEEL TUBING BASED ON 4 - 1 SAFETY FACTOR

TUBE O.D.	WALL THICKNESS	TUBE I.D.	STEEL C1010	STAINLESS 304 & 316
1.250	0.083	1.084	1769	2123
1.250	0.095	1.060	2042	2451
1.250	0.109	1.032	2367	2840
1.250	0.120	1.010	2625	3150
1.250	0.134	0.982	2959	3551
1.250	0.148	0.954	3298	3958
1.250	0.156	0.938	3494	4193
1.250	0.188	0.874	4291	5149
1.250	0.220	0.810	5107	6128
1.500	0.065	1.370	1130	1356
1.500	0.083	1.334	1459	1751
1.500	0.095	1.310	1683	2019
1.500	0.109	1.282	1947	2336
1.500	0.120	1.260	2158	2589
1.500	0.134	1.232	2429	2915
1.500	0.148	1.204	2704	3245
1.500	0.156	1.188	2863	3436
1.500	0.188	1.124	3510	4212
1.500	0.220	1.060	4174	5008
1.500	0.250	1.000	4808	5769
2.000	0.065	1.870	839	1007
2.000	0.083	1.834	1080	1296
2.000	0.095	1.810	1244	1492
2.000	0.109	1.782	1436	1724
2.000	0.120	1.760	1589	1907
2.000	0.134	1.732	1786	2143
2.000	0.148	1.704	1985	2382
2.000	0.156	1.688	2100	2520
2.000	0.188	1.624	2566	3079
2.000	0.220	1.560	3043	3652
2.000	0.250	1.500	3500	4200
2.000	0.281	1.438	3980	4776

When using thick walled tubing where flaring is impractical, the use of **Flareless Fittings** is recommended. Pressures listed above are given in PSI.

Selection of hydraulic tubing size is calculated by evaluating several different factors.

These factors include:

1. Type of fluid in the application
2. Maximum working pressure
3. Type of service (Normal, Severe, Hazardous)
4. Operating Temperature of application
5. Flow rate of application

Tubing design pressures can be calculated using one of three equations as shown in SAE - J1065. The values which are shown in the tubing design pressure chart were calculated using (LAME'S) equation. Values as shown in the tubing design pressure chart are given using a safety factor of 4 to 1, which is rated for normal service.

LAME'S equation

$$P = S \left(\frac{D^2 - d^2}{D^2 + d^2} \right)$$

D = Outside tube diameter (Inches)

d = Inside tube diameter (Inches)

P = Recommended design pressure

S = Allowable stress of material (PSI)

** Values for allowable stress of materials

- C1010 Steel tubing: 12,500 PSI
 - 304 and 316 Stainless tubing: 15,000 PSI
- ** Tubing design pressure values have not been derated for severity of service or elevated operating temperatures.
- ** Consult your tubing supplier for detailed information regarding pressure and temperature ratings for tubing.

TUBING SELECTION

1010 STEEL TUBING WALL THICKNESS

TUBE O.D.	6:1 SAFETY FACTOR					8:1 SAFETY FACTOR				
	WORKING PRESSURES (PSI)					WORKING PRESSURES (PSI)				
	1000	2000	3000	4000	5000	1000	2000	3000	4000	5000
1/8	.028	.028	.028	.028	.035	.028	.028	.028	.035	-
3/16	.030	.030	.030	-	-	.030	.030	-	-	-
1/4	.030	.030	.042	.058	-	.030	.035	.058	-	-
5/16	.032	.032	.058	.065	-	.032	.049	.065	-	-
3/8	.032	.042	.083	-	-	.032	.058	-	-	-
1/2	.032	.058	-	-	-	.042	.072	-	-	-
5/8	.035	.072	-	-	-	.049	.095	-	-	-
3/4	.049	.083	-	-	-	.058	.109	-	-	-
7/8	.049	.095	-	-	-	.065	-	-	-	-
1	.058	.109	-	-	-	.072	-	-	-	-
1-1/4	.072	-	-	-	-	.095	-	-	-	-
1-1/2	.083	-	-	-	-	.109	-	-	-	-
2	.109	-	-	-	-	-	-	-	-	-

304 & 316 STAINLESS STEEL TUBING WALL THICKNESS

TUBE O.D.	6:1 SAFETY FACTOR					8:1 SAFETY FACTOR				
	WORKING PRESSURES (PSI)					WORKING PRESSURES (PSI)				
	1000	2000	3000	4000	5000	1000	2000	3000	4000	5000
1/8	.028	.028	.028	.028	.035	.028	.028	.028	.028	.035
3/16	.030	.030	.030	.030	.035	.030	.030	.030	.035	-
1/4	.030	.030	.030	.042	.058	.030	.030	.035	.058	.065
5/16	.032	.032	.035	.058	.065	.032	.032	.049	.065	-
3/8	.032	.042	.065	.083	-	.032	.042	.058	-	-
1/2	.032	.042	.065	.083	-	.032	.058	.083	-	-
5/8	.035	.058	.083	.095	-	.035	.065	-	-	-
3/4	.035	.065	.095	-	-	.049	.083	-	-	-
7/8	.049	.072	.109	-	-	.049	.095	-	-	-
1	.049	.083	.120	-	-	.058	.109	-	-	-
1-1/4	.058	.109	-	-	-	.065	.134	-	-	-
1-1/2	.065	.120	-	-	-	.083	-	-	-	-
2	.083	-	-	-	-	.109	-	-	-	-

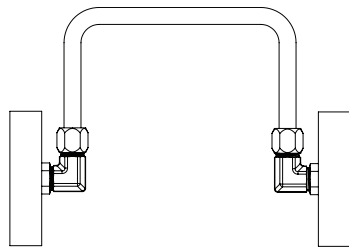
TUBE LINE FABRICATION

TUBE LINE FABRICATION

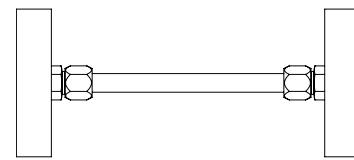
Equipment which makes use of hydraulic or pneumatic fluid lines must be properly designed for efficiency, ease of assembly, and leak free operation. Consider the following points when designing a fluid system.

1. Proper routing of lines to avoid pressure drops and excessive strain on joints.
2. Make joints accessible for easy installation and future maintenance.
3. Have tube supports installed to further eliminate strain on tube lines and excess noise from the system.

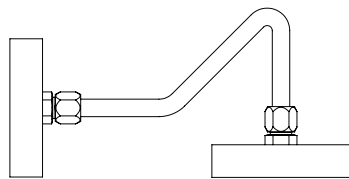
** Refer to drawings of fluid line fabrications for examples of proper and improper routing.



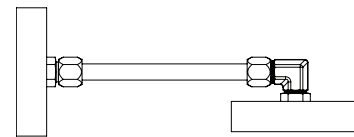
Correct routing



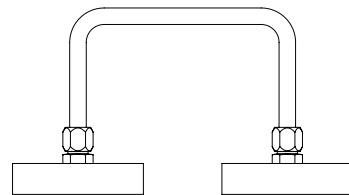
Incorrect routing



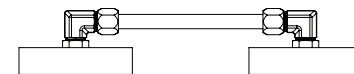
Correct routing



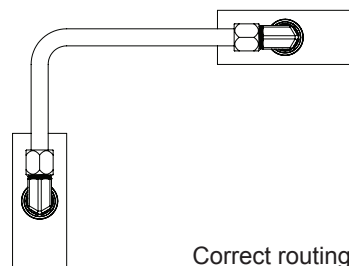
Incorrect routing



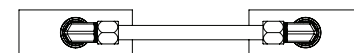
Correct routing



Incorrect routing



Correct routing



Incorrect routing



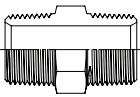




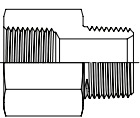
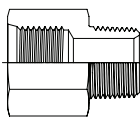
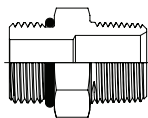
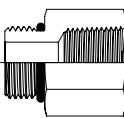
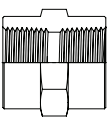
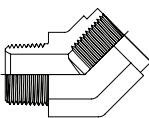
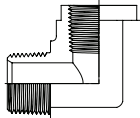
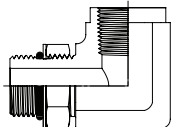
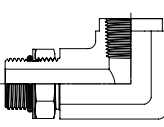
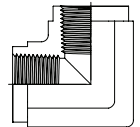
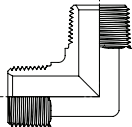
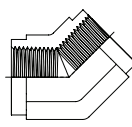
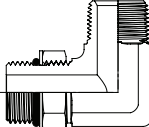
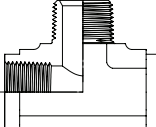
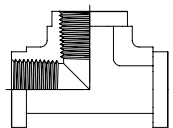
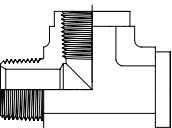
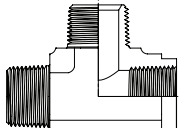
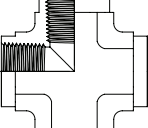
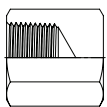
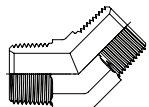
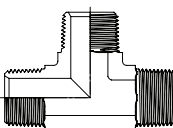
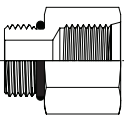
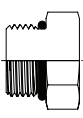
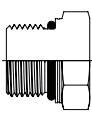
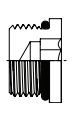
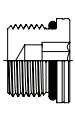
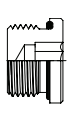
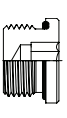




Steel Pipe Fittings

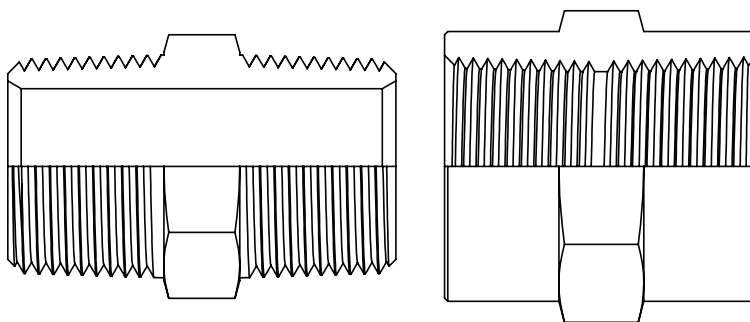
3000 SERIES

3000 SERIES - STEEL PIPE FITTINGS

A

<p>0404 Page 20</p>  <p>0404 Male Pipe Braze Connector</p>	<p>Page 20</p>  <p>100P 7/8" Taper Pressure Plug</p>	<p>5404 Page 21</p>  <p>3069 Hexagon Pipe Nipple</p>	<p>5406 Page 22</p>  <p>3109 Reducer Bushing</p>	<p>5406-P Page 23</p>  <p>3159 Hexagon Outside Head Pipe Plug</p>	<p>5406-HP Page 23</p>  <p>3169 Hex Socket Plug</p>	<p>5406-SHP Page 24</p>  <p>3179 Square Inside Head Pipe Plug</p>
<p>5405 Page 24</p>  <p>3209 Adapter</p>	<p>6404 Page 25</p>  <p>3239 Female Straight to Male Pipe Adapter</p>	<p>6401 Page 26</p>  <p>3249 Male SAE to Male Pipe Adapter</p>	<p>6405 Page 27</p>  <p>3269 Straight Thread "O" Ring Adapter</p>	<p>5000 Page 28</p>  <p>3309 Hexagon Pipe Coupling</p>	<p>5503 Page 29</p>  <p>F3359 45° Street Elbow</p>	<p>5502 Page 30</p>  <p>F3409 90° Street Elbow</p>
<p>6805 Page 31</p>  <p>F3459 90° Straight Thread Elbow</p>	<p>6805-L Page 31</p>  <p>F3469 90° Straight Thread Elbow Long</p>	<p>5504 Page 32</p>  <p>F3509 90° Female Pipe Elbow</p>	<p>5500 Page 32</p>  <p>F3529 90° Male Pipe Elbow</p>	<p>5505 Page 33</p>  <p>F3559 45° Female Pipe Elbow</p>	<p>6806 Page 34</p>  <p>F3569 90° Str. Thr. Male to Male Pipe Elbow</p>	<p>5604 Page 34</p>  <p>F3609 Male Branch Tee</p>
<p>5605 Page 35</p>  <p>F3709 Female Pipe Tee</p>	<p>5602 Page 35</p>  <p>F3759 Male Run Tee</p>	<p>5603 Page 36</p>  <p>F3809 Female Run Tee</p>	<p>5652 Page 36</p>  <p>F3959 Female Pipe Cross</p>	<p>5406-C Page 37</p>  <p>5406C Pipe Cap</p>	<p>5501 Page 37</p>  <p>5501 45° Male Pipe Elbow</p>	<p>5600 Page 38</p>  <p>5600 Male Pipe Tee</p>
<p>6410 Page 38</p>  <p>6410 Male SAE to Female SAE Adapter</p>	<p>6408 Page 40</p>  <p>7237S External Hex Port Plug</p>	<p>8555-P Page 40</p>  <p>7237M External Hex Port Plug - Metric</p>	<p>6408-H Page 41</p>  <p>7238 Internal Hex Port Plug</p>	<p>Page 41</p>  <p>7238M Internal Hex Port Plug - Metric</p>	<p>8555-H Page 42</p>  <p>7240G DIN BSP Plug</p>	<p>9522-H Page 42</p>  <p>7240M DIN Metric Plug</p>
<p>Page 165</p>  <p>7629 90 Durometer "O" Ring</p>	<p>Page 166</p>  <p>7269M 90 Durometer Metric "O" Ring</p>					

3000 SERIES - STEEL PIPE FITTINGS



3000 Series Assembly

A

CONSTRUCTION

Straight pipe fittings are machined from cold drawn bar stock. Shape fittings (elbows, tees, and crosses) are made from forgings. 3000 Series pipe fittings are machined with NPTF threads for greater holding power and resistance to leakage.

APPLICATIONS

For use in lubrication, instrumentation, and most high pressure hydraulic systems.

PRESSURE RATINGS

Working pressures up to 5000 PSI - Working Pressure will vary depending on Tube & Fitting Size.
(For applications using extreme pressures at 5000 PSI or above, contact World Wide Fittings.)

MATERIAL

Steel - 12L14, 1045
Stainless Steel - Type 316

PLATING

Clear Zinc Trivalent
Passivated

HOW TO ORDER

3000 Series pipe fittings are available in sizes 1/8" through 2"
(Contact World Wide Fittings for availability of specific shapes and sizes.)

CONFORMANCE

3000 Series fittings meet SAE J514 specifications.

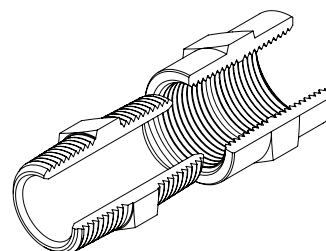
ASSEMBLY INSTRUCTIONS

Dryseal Threads:

1. Inspect the male and female threads for cleanliness.
2. Lightly lubricate the male and female threads.
3. Using a wrench turn the fitting approximately 2 - 2 1/2 turns past the finger-tight position.
(Thread sealant may be applied for added protection against leakage.)

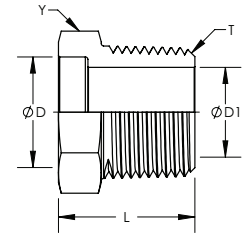
SAE "O" Ring Threads:

1. Inspect the male and female SAE straight threads for cleanliness.
2. Lubricate the hydraulic "O" Ring before installing the fitting to prevent the "O" Ring from possible damage during installation. Install the fitting to the finger-tight position.
3. Using a wrench tighten the fitting to the proper torque value.



Description: Male Pipe Braze Connector
WWF Part No.: 0404
WWF Stainless Part No.: 0404-SS
SAE: /

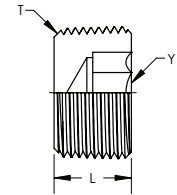
Air-Way: 0404
Parker: /
Aeroquip: 73056
Gates: /



WWF	Y HEX	T	D	D1	L
0404X04X02	0.500	1/8-27	0.256	0.188	0.563
0404X06X04	0.625	1/4-18	0.381	0.281	0.813
0404X08X06	0.813	3/8-18	0.506	0.406	0.844
0404X10X08	0.938	1/2-14	0.631	0.531	1.078
0404X12X12	1.125	3/4-14	0.757	0.719	1.094
0404X16X16	1.375	1-11-1/2	1.007	0.938	1.313
0404X20X20	1.688	1-1/4-11-1/2	1.258	1.250	1.406
0404X24X24	2.000	1-1/2-11-1/2	1.508	1.500	1.500
0404X32X32	2.625	2-11-1/2	2.008	1.938	1.781

Description: Hex Socket Plug
WWF Part No.: 100P
WWF Stainless Part No.: /
SAE: /

Air-Way: /
Parker: /
Aeroquip: /
Gates: /

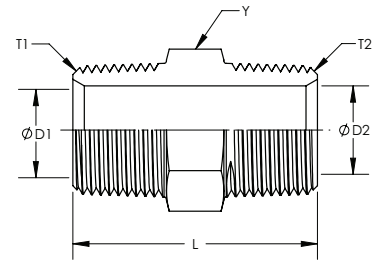


WWF	Y HEX	T	L
100PX01	0.156	1/16-27	0.250
100PX02	0.188	1/8-27	0.250
100PX04	0.250	1/4-18	0.406
100PX06	0.313	3/8-18	0.406
100PX08	0.375	1/2-14	0.531
100PX12	0.563	3/4-14	0.531
100PX16	0.625	1-11-1/2	0.656
100PX20	0.750	1-1/4-11-1/2	0.656
100PX24	0.750	1-1/2-11-1/2	0.656
100PX32	1.000	2-11-1/2	0.656

3000 SERIES

Description: **Hexagon Pipe Nipple**
 WWF Part No.: **3069**
 WWF Part Stainless No.: **5404-SS**
 SAE: **140137**

Air-Way: 5404
 Parker: FF
 Aeroquip: 2083
 Gates: MP-MP



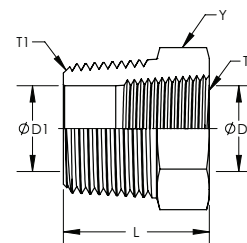
A

WWF	Y HEX	T1	D1	T2	D2	L
3069X02X02	0.438	1/8-27	0.188	1/8-27	0.188	1.060
3069X04X02	0.625	1/4-18	0.281	1/8-27	0.188	1.260
3069X04X04	0.625	1/4-18	0.281	1/4-18	0.281	1.450
3069X06X02	0.750	3/8-18	0.406	1/8-27	0.188	1.260
3069X06X04	0.750	3/8-18	0.406	1/4-18	0.281	1.450
3069X06X06	0.750	3/8-18	0.406	3/8-18	0.406	1.450
3069X08X02	0.875	1/2-14	0.531	1/8-27	0.188	1.510
3069X08X04	0.875	1/2-14	0.531	1/4-18	0.281	1.700
3069X08X06	0.875	1/2-14	0.531	3/8-18	0.406	1.700
3069X08X08	0.875	1/2-14	0.531	1/2-14	0.531	1.890
3069X12X06	1.125	3/4-14	0.719	3/8-18	0.406	1.770
3069X12X08	1.125	3/4-14	0.719	1/2-14	0.531	1.960
3069X12X12	1.125	3/4-14	0.719	3/4-14	0.719	1.960
3069X16X06	1.375	1-11-1/2	0.938	3/8-18	0.406	1.960
3069X16X08	1.375	1-11-1/2	0.938	1/2-14	0.531	2.150
3069X16X12	1.375	1-11-1/2	0.938	3/4-14	0.719	2.150
3069X16X16	1.375	1-11-1/2	0.938	1-11-1/2	0.938	2.340
3069X20X12	1.750	1-1/4-11-1/2	1.250	3/4-14	0.719	2.260
3069X20X16	1.750	1-1/4-11-1/2	1.250	1-11-1/2	0.938	2.450
3069X20X20	1.750	1-1/4-11-1/2	1.250	1-1/4-11-1/2	1.250	2.480
3069X24X12	2.000	1-1/2-11-1/2	1.500	3/4-14	0.719	2.360
3069X24X16	2.000	1-1/2-11-1/2	1.500	1-11-1/2	0.938	2.550
3069X24X20	2.000	1-1/2-11-1/2	1.500	1-1/4-11-1/2	1.250	2.580
3069X24X24	2.000	1-1/2-11-1/2	1.500	1-1/2-11-1/2	1.500	2.610
3069X32X20	2.500	2-11-1/2	1.938	1-1/4-11-1/2	1.250	2.760
3069X32X24	2.500	2-11-1/2	1.938	1-1/2-11-1/2	1.500	2.790
3069X32X32	2.500	2-11-1/2	1.938	2-11-1/2	1.938	2.820

3000 SERIES

Description: **Reducer Bushing**
 WWF Part No.: **3109**
 WWF Stainless Part No.: **5406-SS**
 SAE: **140140**

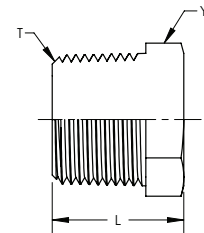
Air-Way: 5406
 Parker: PTR
 Aeroquip: 2081
 Gates: MP-FPS



WWF	Y HEX	T1	D1	T2	D2	L
3109X04X02	0.625	1/4-18	0.281	1/8-27	0.332	0.850
3109X06X02	0.750	3/8-18	0.332	1/8-27	0.332	0.850
3109X06X04	0.750	3/8-18	0.406	1/4-18	0.438	0.850
3109X08X02	0.875	1/2-14	0.332	1/8-27	0.332	1.100
3109X08X04	0.875	1/2-14	0.438	1/4-18	0.438	1.100
3109X08X06	0.875	1/2-14	0.531	3/8-18	0.563	1.100
3109X12X02	1.125	3/4-14	0.332	1/8-27	0.332	1.170
3109X12X04	1.125	3/4-14	0.438	1/4-18	0.438	1.170
3109X12X06	1.125	3/4-14	0.563	3/8-18	0.563	1.170
3109X12X08	1.125	3/4-14	0.703	1/2-14	0.703	1.170
3109X16X04	1.375	1-11-1/2	0.438	1/4-18	0.438	1.360
3109X16X06	1.375	1-11-1/2	0.563	3/8-18	0.563	1.360
3109X16X08	1.375	1-11-1/2	0.703	1/2-14	0.703	1.360
3109X16X12	1.375	1-11-1/2	0.906	3/4-14	0.906	1.360
3109X20X04	1.750	1-1/4-11-1/2	0.438	1/4-18	0.438	1.470
3109X20X06	1.750	1-1/4-11-1/2	0.563	3/8-18	0.563	1.470
3109X20X08	1.750	1-1/4-11-1/2	0.703	1/2-14	0.703	1.470
3109X20X12	1.750	1-1/4-11-1/2	0.906	3/4-14	0.906	1.470
3109X20X16	1.750	1-1/4-11-1/2	1.141	1-11-1/2	1.141	1.470
3109X24X06	2.000	1-1/2-11-1/2	0.563	3/8-18	0.563	1.570
3109X24X08	2.000	1-1/2-11-1/2	0.703	1/2-14	0.703	1.570
3109X24X12	2.000	1-1/2-11-1/2	0.906	3/4-14	0.906	1.570
3109X24X16	2.000	1-1/2-11-1/2	1.141	1-11-1/2	1.141	1.570
3109X24X20	2.000	1-1/2-11-1/2	1.484	1-1/4-11-1/2	1.484	1.570
3109X32X20	2.500	2-11-1/2	1.484	1-1/4-11-1/2	1.484	1.750
3109X32X24	2.500	2-11-1/2	1.744	1-1/2-11-1/2	1.744	1.750

Description: Hexagon Outside Head Pipe Plug
WWF Part No.: 3159
WWF Stainless Part No.: 5406-P-SS
SAE: 130109E

Air-Way: 5406-P
Parker: HP
Aeroquip: 2082
Gates: MP-PLUG

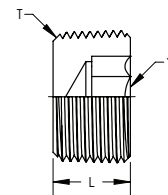


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WWF	Y HEX	T	L
3159X02	0.438	1/8-27	0.568
3159X04	0.563	1/4-18	0.751
3159X06	0.688	3/8-18	0.782
3159X08	0.875	1/2-14	0.972
3159X12	1.063	3/4-14	1.064
3159X16	1.313	1-11-1/2	1.254
3159X20	1.750	1-1/4-11-1/2	1.469
3159X24	2.000	1-1/2-11-1/2	1.570
3159X32	2.500	2-11-1/2	1.750

Description: Hex Socket Plug
WWF Part No.: 3169
WWF Stainless Part No.: 5406-HP-SS
SAE: 130109

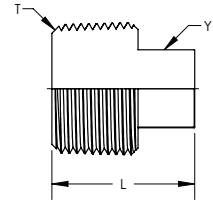
Air-Way: 5406-HP
Parker: HHP
Aeroquip: 2222
Gates: /



WWF	Y HEX	T	L
3169X01	0.156	1/16-27	0.300
3169X02	0.188	1/8-27	0.300
3169X04	0.250	1/4-18	0.460
3169X06	0.313	3/8-18	0.460
3169X08	0.375	1/2-14	0.610
3169X12	0.563	3/4-14	0.620
3169X16	0.625	1-11-1/2	0.770
3169X20	0.750	1-1/4-11-1/2	0.830
3169X24	1.000	1-1/2-11-1/2	0.830
3169X32	1.000	2-11-1/2	0.830

Description: Square Inside Head Pipe Plug
WWF Part No.: 3179
WWF Stainless Part No.: 5406-SHP-SS
SAE: 130109A

Air-Way: 5406-SHP
Parker: SHP-S
Aeroquip: /
Gates: /

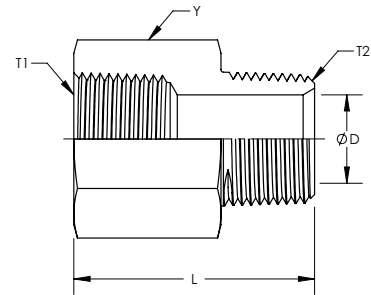


WWF	Y HEX	T	L
3179X02	0.281	1/8-27	0.587
3179X04	0.375	1/4-18	0.800
3179X06	0.438	3/8-18	0.832
3179X08	0.563	1/2-14	1.075
3179X12	0.625	3/4-14	1.145
3179X16	0.813	1-11-1/2	1.370
3179X20	0.938	1-1/4-11-1/2	1.400

Description: Adapter
WWF Part No.: 3209
WWF Stainless Part No.: 5405-SS
SAE: 140139

Air-Way: 5405
Parker: FG
Aeroquip: 2040
Gates: MP-FPL

**Reversed
Reversed**



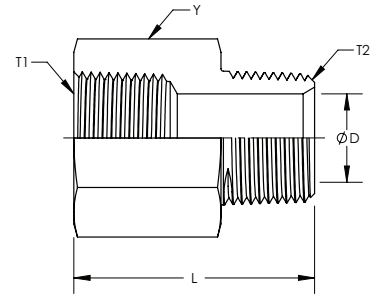
WWF	Y HEX	T1	D	T2	L
3209X02X02	0.625	1/8-27	0.188	1/8-27	1.040
3209X04X02	0.750	1/4-18	0.188	1/8-27	1.210
3209X04X04	0.750	1/4-18	0.281	1/4-18	1.390
3209X04X06	0.750	1/4-18	0.406	3/8-18	1.410
3209X06X04	0.875	3/8-18	0.281	1/4-18	1.440
3209X06X06	0.875	3/8-18	0.406	3/8-18	1.440
3209X06X08	1.125	3/8-18	0.531	1/2-14	1.870
3209X08X02	1.125	1/2-14	0.188	1/8-27	1.490
3209X08X04	1.125	1/2-14	0.281	1/4-18	1.680
3209X08X06	1.125	1/2-14	0.406	3/8-18	1.680
3209X08X08	1.125	1/2-14	0.531	1/2-14	1.870
3209X12X04	1.375	3/4-14	0.281	1/4-18	1.740
3209X12X06	1.375	3/4-14	0.406	3/8-18	1.740

Continued on page 25

Continued from page 24

Description: **Adapter**
 WWF Part No.: **3209** **Reversed**
 WWF Stainless Part No.: **5405-SS** **Reversed**
 SAE: **140139**

Air-Way: 5405
 Parker: FG
 Aeroquip: 2040
 Gates: MP-FPL

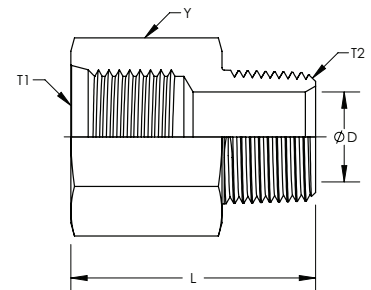


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WWF	Y HEX	T1	D	T2	L
3209X12X08	1.375	3/4-14	0.531	1/2-14	1.930
3209X12X12	1.375	3/4-14	0.719	3/4-14	1.930
3209X12X16	1.375	3/4-14	0.719	1-11-1/2	1.360
3209X16X12	1.625	1-11-1/2	0.719	3/4-14	2.180
3209X16X16	1.625	1-11-1/2	0.938	1-11-1/2	2.370
3209X16X20	1.750	1-11-1/2	0.938	1-1/4-11-1/2	2.490
3209X20X16	2.000	1-1/4-11-1/2	0.938	1-11-1/2	2.460
3209X24X20	2.375	1-1/2-11-1/2	1.250	1-1/4-11-1/2	2.500
3209X32X24	2.875	2-11-1/2	1.500	1-1/2-11-1/2	2.630

Description: **Female Straight to Male Pipe Adapter**
 WWF Part No.: **3239**
 WWF Stainless Part No.: **6404-SS**
 SAE: /

Air-Way: 6404
 Parker: FHG5
 Aeroquip: 2246-[R]
 Gates: FB-MP



WWF	Y HEX	T1	D	T2	L
3239X04X02	0.688	7/16-20	0.188	1/8-27	1.130
3239X04X04	0.688	7/16-20	0.281	1/4-18	1.320
3239X05X02	0.750	1/2-20	0.188	1/8-27	1.370
3239X06X04	0.875	9/16-18	0.281	1/4-18	1.590
3239X06X06	0.875	9/16-18	0.406	3/8-18	1.400
3239X06X08	0.875	9/16-18	0.531	1/2-14	1.450
3239X08X06	1.000	3/4-16	0.406	3/8-18	1.500
3239X08X08	1.000	3/4-16	0.531	1/2-14	1.690
3239X10X08	1.125	7/8-14	0.531	1/2-14	1.820
3239X12X12	1.375	1-1/16-12	0.719	3/4-14	1.960
3239X16X16	1.625	1-5/16-12	0.938	1-11-1/2	2.220

3000 SERIES

Description: **Male SAE to Male Pipe Adapter**

WWF Part No.: **3249**

WWF Stainless Part No.: **6401-SS**

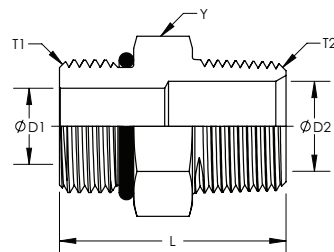
SAE: /

Air-Way: 6401

Parker: F50F

Aeroquip: /

Gates: /

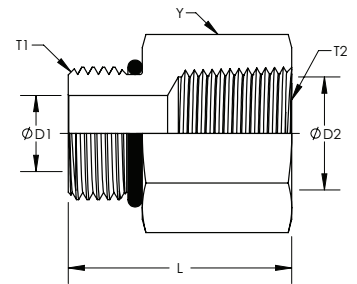


WWF	Y HEX	T1	D1	T2	D2	L
3249X04X02	0.563	7/16-20	0.172	1/8-27	0.188	1.040
3249X04X04	0.563	7/16-20	0.172	1/4-18	0.281	1.230
3249X05X04	0.625	1/2-20	0.234	1/4-18	0.281	1.230
3249X06X04	0.688	9/16-18	0.297	1/4-18	0.281	1.261
3249X06X06	0.750	9/16-18	0.297	3/8-18	0.406	1.261
3249X06X08	0.875	9/16-18	0.297	1/2-14	0.531	1.481
3249X08X06	0.875	3/4-16	0.391	3/8-18	0.406	1.338
3249X08X08	0.875	3/4-16	0.391	1/2-14	0.531	1.528
3249X08X12	1.125	3/4-16	0.391	3/4-14	0.719	1.760
3249X10X04	1.000	7/8-14	0.484	1/4-18	0.281	1.280
3249X10X06	1.000	7/8-14	0.484	3/8-18	0.406	1.460
3249X10X08	1.000	7/8-14	0.484	1/2-14	0.531	1.650
3249X10X12	1.125	7/8-14	0.484	3/4-14	0.719	1.650
3249X12X06	1.250	1-1/16-12	0.609	3/8-18	0.406	1.624
3249X12X08	1.250	1-1/16-12	0.609	1/2-14	0.531	1.814
3249X12X12	1.250	1-1/16-12	0.609	3/4-14	0.719	1.814
3249X16X12	1.500	1-5/16-12	0.844	3/4-14	0.719	1.844
3249X16X16	1.500	1-5/16-12	0.844	1-11-1/2	0.938	2.114
3249X20X20	1.875	1-5/8-12	1.078	1-1/4-11-1/2	1.250	2.144
3249X24X24	2.000	1-7/8-12	1.313	1-1/2-11-1/2	1.500	2.244
3249X32X32	2.750	2-1/2-12	1.781	2-11-1/2	1.938	2.434

3000 SERIES

Description: **Straight Thread "O" Ring Adapter**
 WWF Part No.: **3269**
 WWF Stainless Part No.: **6405-SS**
 SAE: **/**

Air-Way: 6405
 Parker: F5OG
 Aeroquip: 2216-[R]
 Gates: MB-FP



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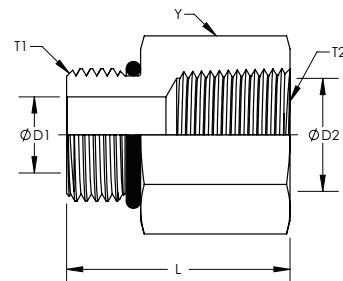
WWF	Y HEX	T1	D1	T2	D2	L
3269X04X02	0.563	7/16-20	0.172	1/8-27	0.332	1.000
3269X04X04	0.750	7/16-20	0.172	1/4-18	0.438	1.205
3269X04X06	0.875	7/16-20	0.172	3/8-18	0.563	1.351
3269X05X02	0.625	1/2-20	0.234	1/8-27	0.332	0.980
3269X05X04	0.750	1/2-20	0.234	1/4-18	0.438	1.205
3269X06X02	0.750	9/16-18	0.297	1/8-27	0.332	1.025
3269X06X04	0.750	9/16-18	0.297	1/4-18	0.438	1.235
3269X06X06	0.875	9/16-18	0.297	3/8-18	0.563	1.301
3269X06X08	1.125	9/16-18	0.297	1/2-14	0.703	1.642
3269X08X02	0.875	3/4-16	0.391	1/8-27	0.332	1.121
3269X08X04	0.875	3/4-16	0.391	1/4-18	0.438	1.331
3269X08X06	0.875	3/4-16	0.391	3/8-18	0.563	1.341
3269X08X08	1.125	3/4-16	0.391	1/2-14	0.703	1.710
3269X08X12	1.375	3/4-16	0.391	3/4-14	0.906	1.760
3269X10X04	1.000	7/8-14	0.484	1/4-18	0.438	1.402
3269X10X06	1.000	7/8-14	0.484	3/8-18	0.563	1.412
3269X10X08	1.125	7/8-14	0.484	1/2-14	0.703	1.632
3269X10X12	1.375	7/8-14	0.484	3/4-14	0.906	1.700
3269X12X04	1.250	1-1/16-12	0.609	1/4-18	0.438	1.550
3269X12X06	1.250	1-1/16-12	0.609	3/8-18	0.563	1.560
3269X12X08	1.250	1-1/16-12	0.609	1/2-14	0.703	1.780
3269X12X12	1.375	1-1/16-12	0.609	3/4-14	0.906	1.790
3269X12X16	1.625	1-1/16-12	0.609	1-11-1/2	1.141	2.033
3269X14X12	1.375	1-3/16-12	0.719	3/4-14	0.906	1.764
3269X16X06	1.500	1-5/16-12	0.844	3/8-18	0.563	1.573
3269X16X08	1.500	1-5/16-12	0.844	1/2-14	0.703	1.793
3269X16X12	1.500	1-5/16-12	0.844	3/4-14	0.906	1.803
3269X16X16	1.625	1-5/16-12	0.844	1-11-1/2	1.141	2.033
3269X16X20	2.000	1-5/16-12	0.844	1-1/4-11-1/2	1.484	2.286
3269X20X12	1.875	1-5/8-12	1.078	3/4-14	0.906	1.876
3269X20X16	1.875	1-5/8-12	1.078	1-11-1/2	1.141	2.106
3269X20X20	2.000	1-5/8-12	1.078	1-1/4-11-1/2	1.484	2.126
3269X20X24	2.375	1-5/8-12	1.078	1-1/2-11-1/2	1.744	2.291

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A Description: **Straight Thread "O" Ring Adapter**
 WWF Part No.: **3269**
 WWF Stainless Part No.: **6405-SS**
 SAE: **/**

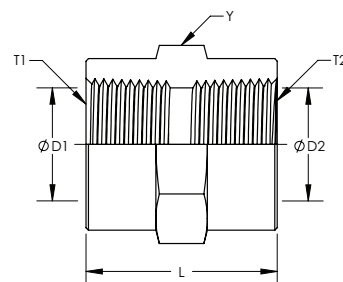
Air-Way: 6405
 Parker: F5OG
 Aeroquip: 2216-[R]
 Gates: MB-FP



WWF	Y HEX	T1	D1	T2	D2	L
3269X24X12	2.125	1-7/8-12	1.313	3/4-14	0.906	1.881
3269X24X16	2.125	1-7/8-12	1.313	1-11-1/2	1.141	2.111
3269X24X20	2.125	1-7/8-12	1.313	1-1/4-11-1/2	1.484	2.131
3269X24X24	2.375	1-7/8-12	1.313	1-1/2-11-1/2	1.744	2.131
3269X32X32	2.875	2-1/2-12	1.781	2-11-1/2	2.213	2.231

Description: **Hexagon Pipe Coupling**
 WWF Part No.: **3309**
 WWF Stainless Part No.: **5000-SS**
 SAE: **140138**

Air-Way: 5000
 Parker: GG
 Aeroquip: 2096
 Gates: FP-FP



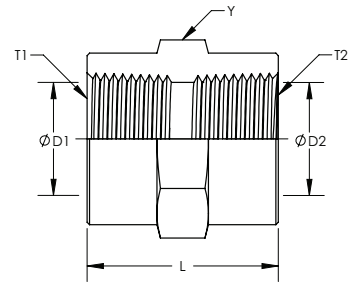
WWF	Y HEX	T1	D1	T2	D2	L
3309X02X02	0.625	1/8-27	0.332	1/8-27	0.332	0.750
3309X04X02	0.750	1/4-18	0.438	1/8-27	0.332	1.130
3309X04X04	0.750	1/4-18	0.438	1/4-18	0.438	1.130
3309X06X02	0.875	3/8-18	0.563	1/8-27	0.332	1.130
3309X06X04	0.875	3/8-18	0.563	1/4-18	0.438	1.130
3309X06X06	0.875	3/8-18	0.563	3/8-18	0.563	1.130
3309X08X04	1.125	1/2-14	0.703	1/4-18	0.438	1.500
3309X08X06	1.125	1/2-14	0.703	3/8-18	0.563	1.500
3309X08X08	1.125	1/2-14	0.703	1/2-14	0.703	1.500
3309X12X06	1.375	3/4-14	0.906	3/8-18	0.563	1.530
3309X12X08	1.375	3/4-14	0.906	1/2-14	0.703	1.530
3309X12X12	1.375	3/4-14	0.906	3/4-14	0.906	1.530
3309X16X08	1.625	1-11-1/2	1.141	1/2-14	0.703	1.890
3309X16X12	1.625	1-11-1/2	1.141	3/4-14	0.906	1.890
3309X16X16	1.625	1-11-1/2	1.141	1-11-1/2	1.141	1.890

Continued on page 29

Continued from page 28

Description: **Hexagon Pipe Coupling**
 WWF Part No.: **3309**
 WWF Stainless Part No.: **5000-SS**
 SAE: **140138**

Air-Way: 5000
 Parker: GG
 Aeroquip: 2096
 Gates: FP-FP

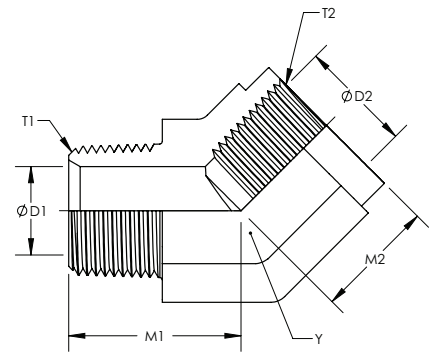


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WWF	Y HEX	T1	D1	T2	D2	L
3309X20X16	2.000	1-1/4-11-1/2	1.484	1-11-1/2	1.141	1.930
3309X20X20	2.000	1-1/4-11-1/2	1.484	1-1/4-11-1/2	1.484	1.930
3309X24X20	2.375	1-1/2-11-1/2	1.744	1-1/4-11-1/2	1.484	1.930
3309X24X24	2.375	1-1/2-11-1/2	1.744	1-1/2-11-1/2	1.744	1.930
3309X32X24	2.875	2-11-1/2	2.213	1-1/2-11-1/2	1.744	1.960
3309X32X32	2.875	2-11-1/2	2.213	2-11-1/2	2.213	1.960

Description: **45° Street Elbow**
 WWF Part No.: **F3359**
 WWF Stainless Part No.: **5503-SS**
 SAE: **140339**

Air-Way: 5503
 Parker: CD45
 Aeroquip: 2088
 Gates: /

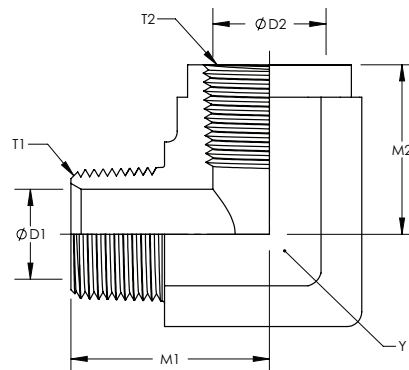


WWF	Y HEX	T1	M1	D1	T2	M2	D2
F3359X02X02	0.563	1/8-27	0.720	0.188	1/8-27	0.470	0.332
F3359X04X04	0.750	1/4-18	1.050	0.281	1/4-18	0.620	0.438
F3359X06X06	0.875	3/8-18	1.060	0.406	3/8-18	0.720	0.563
F3359X08X08	1.063	1/2-14	1.340	0.531	1/2-14	0.910	0.703
F3359X12X12	1.313	3/4-14	1.380	0.719	3/4-14	0.970	0.906
F3359X16X16	1.625	1-11-1/2	1.720	0.938	1-11-1/2	1.120	1.141
F3359X20X20	1.875	1-1/4-11-1/2	1.800	1.250	1-1/4-11-1/2	1.630	1.484
F3359X24X24	2.562	1-1/2-11-1/2	2.060	1.500	1-1/2-11-1/2	1.690	1.744
F3359X32X32	2.812	2-11-1/2	2.150	1.938	2-11-1/2	2.190	2.213

3000 SERIES

Description: **90° Street Elbow**
 WWF Part No.: **F3409**
 WWF Stainless Part No.: **5502-SS**
 SAE: **140239**

Air-Way: 5502
 Parker: CD
 Aeroquip: 2089
 Gates: MP-FP90

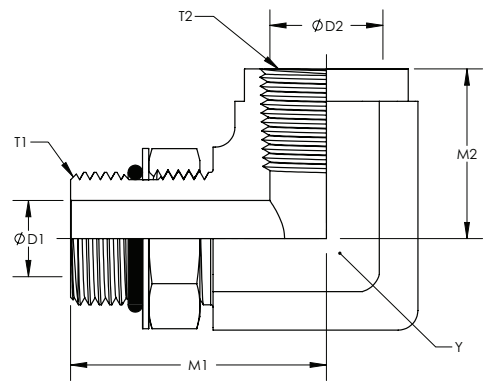


WWF	Y HEX	T1	M1	D1	T2	M2	D2
F3409X02X02	0.563	1/8-27	0.780	0.188	1/8-27	0.660	0.332
F3409X02X04	0.750	1/8-27	0.900	0.188	1/4-18	0.880	0.438
F3409X04X02	0.563	1/4-18	1.090	0.281	1/8-27	0.670	0.332
F3409X04X04	0.750	1/4-18	1.090	0.281	1/4-18	0.880	0.438
F3409X04X06	0.875	1/4-18	1.220	0.281	3/8-18	1.020	0.563
F3409X04X08	1.063	1/4-18	1.280	0.281	1/2-14	1.230	0.703
F3409X06X02	0.750	3/8-18	1.220	0.406	1/8-27	0.800	0.332
F3409X06X04	0.750	3/8-18	1.220	0.406	1/4-18	1.010	0.438
F3409X06X06	0.875	3/8-18	1.220	0.406	3/8-18	1.020	0.563
F3409X06X08	1.063	3/8-18	1.280	0.406	1/2-14	1.230	0.703
F3409X08X04	0.875	1/2-14	1.470	0.531	1/4-18	1.000	0.438
F3409X08X06	0.875	1/2-14	1.470	0.531	3/8-18	1.010	0.563
F3409X08X08	1.063	1/2-14	1.470	0.531	1/2-14	1.230	0.703
F3409X08X12	1.313	1/2-14	1.590	0.531	3/4-14	1.360	0.906
F3409X12X08	1.063	3/4-14	1.590	0.719	1/2-14	1.230	0.703
F3409X12X12	1.313	3/4-14	1.590	0.719	3/4-14	1.360	0.906
F3409X16X12	1.313	1-11-1/2	1.970	0.938	3/4-14	1.360	0.906
F3409X16X16	1.625	1-11-1/2	1.970	0.938	1-11-1/2	1.620	1.141
F3409X16X20	1.875	1-11-1/2	2.350	0.938	1-1/4-11-1/2	1.700	1.484
F3409X20X16	1.625	1-1/4-11-1/2	2.380	1.250	1-11-1/2	1.680	1.141
F3409X20X20	1.875	1-1/4-11-1/2	2.380	1.250	1-1/4-11-1/2	1.700	1.484
F3409X24X20	1.875	1-1/2-11-1/2	2.640	1.500	1-1/4-11-1/2	2.080	1.484
F3409X24X24	2.562	1-1/2-11-1/2	2.640	1.500	1-1/2-11-1/2	2.080	1.744
F3409X32X32	2.812	2-11-1/2	3.000	1.938	2-11-1/2	2.390	2.213

3000 SERIES

Description: **90° Straight Thread Elbow**
 WWF Part No.: **F3459**
 WWF Stainless Part No.: **6805-SS**
 SAE: /

Air-Way: 6805
 Parker: AOEG
 Aeroquip: 206801-[R]
 Gates: /

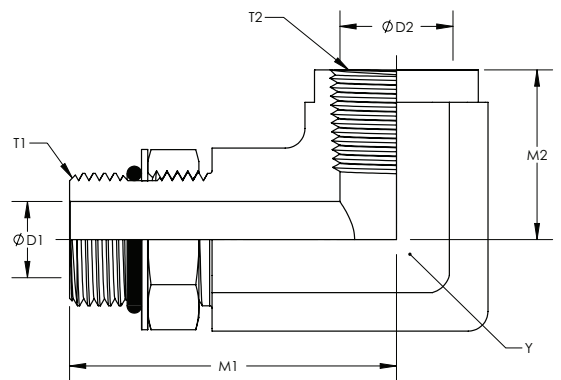


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WWF	Y HEX	T1	M1	D1	T2	M2	D2
F3459X04X02	0.563	7/16-20	1.190	0.172	1/8-27	0.660	0.332
F3459X04X04	0.750	7/16-20	1.260	0.172	1/4-18	0.880	0.438
F3459X06X04	0.750	9/16-18	1.320	0.297	1/4-18	0.880	0.438
F3459X06X06	0.875	9/16-18	1.410	0.297	3/8-18	1.020	0.563
F3459X08X06	0.875	3/4-16	1.540	0.391	3/8-18	1.020	0.563
F3459X08X08	1.063	3/4-16	1.620	0.391	1/2-14	1.230	0.703
F3459X10X06	0.875	7/8-14	1.700	0.484	3/8-18	1.020	0.563
F3459X10X08	1.063	7/8-14	1.780	0.484	1/2-14	1.230	0.703
F3459X12X08	1.063	1-1/16-12	1.940	0.609	1/2-14	1.230	0.703
F3459X12X12	1.313	1-1/16-12	2.050	0.609	3/4-14	1.360	0.906
F3459X14X12	1.313	1-3/16-12	2.000	0.719	3/4-14	1.360	0.906
F3459X16X12	1.313	1-5/16-12	2.050	0.844	3/4-14	1.360	0.906
F3459X16X16	1.625	1-5/16-12	2.250	0.844	1-11-1/2	1.620	1.141
F3459X20X20	1.875	1-5/8-12	2.390	1.078	1-1/4-11-1/2	1.700	1.484
F3459X24X24	2.562	1-7/8-12	2.890	1.313	1-1/2-11-1/2	2.080	1.744

Description: **90° Straight Thread Elbow Long**
 WWF Part No.: **F3469**
 WWF Stainless Part No.: **6805-L-SS**
 SAE: /

Air-Way: 6805-L
 Parker: AOE4G
 Aeroquip: 206804-[R]
 Gates: /

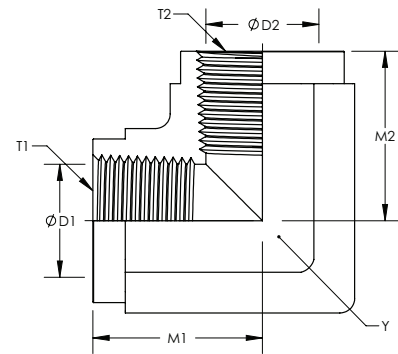


WWF	Y HEX	T1	M1	D1	T2	M2	D2
F3469X08X08	1.063	3/4-16	2.100	0.391	1/2-14	1.230	0.703
F3469X10X08	1.063	7/8-14	2.260	0.484	1/2-14	1.230	0.703
F3469X12X12	1.313	1-1/16-12	2.620	0.609	3/4-14	1.360	0.906
F3469X16X16	1.625	1-5/16-12	3.060	0.844	1-11-1/2	1.620	1.141

3000 SERIES

A Description: **90° Female Pipe Elbow**
 WWF Part No.: **F3509**
 WWF Stainless Part No.: **5504-SS**
 SAE: **140238**

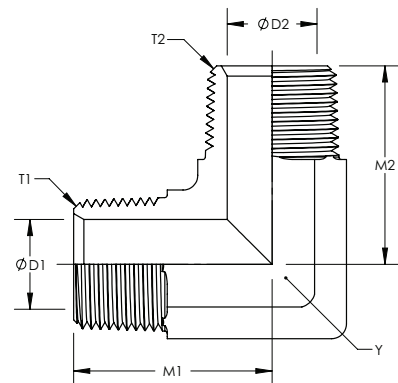
Air-Way: 5504
 Parker: DD
 Aeroquip: 2087
 Gates: FP-FP90



WWF	Y HEX	T1	M1	D1	T2	M2	D2
F3509X02X02	0.563	1/8-27	0.660	0.332	1/8-27	0.660	0.332
F3509X04X02	0.750	1/4-18	0.880	0.438	1/8-27	0.670	0.332
F3509X04X04	0.750	1/4-18	0.880	0.438	1/4-18	0.880	0.438
F3509X06X04	0.875	3/8-18	1.020	0.563	1/4-18	1.010	0.438
F3509X06X06	0.875	3/8-18	1.020	0.563	3/8-18	1.020	0.563
F3509X08X04	1.063	1/2-14	1.230	0.703	1/4-18	1.000	0.438
F3509X08X06	1.063	1/2-14	1.230	0.703	3/8-18	1.010	0.563
F3509X08X08	1.063	1/2-14	1.230	0.703	1/2-14	1.230	0.703
F3509X12X08	1.313	3/4-14	1.360	0.906	1/2-14	1.350	0.703
F3509X12X12	1.313	3/4-14	1.360	0.906	3/4-14	1.360	0.906
F3509X16X12	1.625	1-11-1/2	1.620	1.141	3/4-14	1.390	0.906
F3509X16X16	1.625	1-11-1/2	1.620	1.141	1-11-1/2	1.620	1.141
F3509X20X20	1.875	1-1/4-11-1/2	1.700	1.484	1-1/4-11-1/2	1.700	1.484
F3509X24X24	2.562	1-1/2-11-1/2	2.080	1.744	1-1/2-11-1/2	2.080	1.744

Description: **90° Male Pipe Elbow**
 WWF Part No.: **F3529**
 WWF Stainless Part No.: **5500-SS**
 SAE: **140237**

Air-Way: 5500
 Parker: CR
 Aeroquip: 2085
 Gates: MP-MP90



WWF	Y HEX	T1	M1	D1	T2	M2	D2
F3529X02X02	0.438	1/8-27	0.780	0.188	1/8-27	0.780	0.188
F3529X04X02	0.563	1/4-18	1.090	0.281	1/8-27	0.900	0.188
F3529X04X04	0.563	1/4-18	1.090	0.281	1/4-18	1.090	0.281
F3529X06X04	0.750	3/8-18	1.220	0.406	1/4-18	1.220	0.281
F3529X06X06	0.750	3/8-18	1.220	0.406	3/8-18	1.220	0.406
F3529X08X04	0.875	1/2-14	1.470	0.531	1/4-18	1.280	0.281

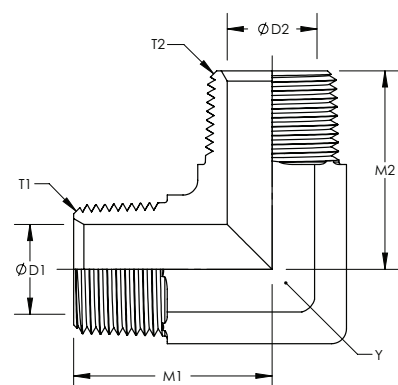
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3000 SERIES

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Description: **90° Male Pipe Elbow**
 WWF Part No.: **F3529**
 WWF Stainless Part No.: **5500-SS**
 SAE: **140237**

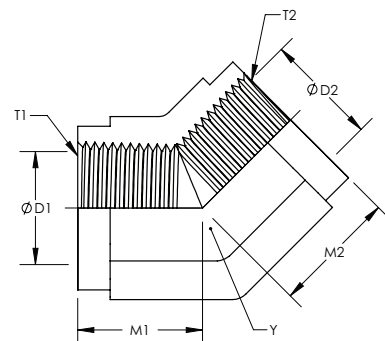
Air-Way: 5500
 Parker: CR
 Aeroquip: 2085
 Gates: MP-MP90



WWF	Y HEX	T1	M1	D1	T2	M2	D2
F3529X08X06	0.875	1/2-14	1.470	0.531	3/8-18	1.280	0.406
F3529X08X08	0.875	1/2-14	1.470	0.531	1/2-14	1.470	0.531
F3529X12X08	1.063	3/4-14	1.590	0.719	1/2-14	1.590	0.531
F3529X12X12	1.063	3/4-14	1.590	0.719	3/4-14	1.590	0.719
F3529X16X08	1.313	1-11-1/2	1.970	0.938	1/2-14	1.780	0.531
F3529X16X12	1.313	1-11-1/2	1.970	0.938	3/4-14	1.780	0.719
F3529X16X16	1.313	1-11-1/2	1.970	0.938	1-11-1/2	1.970	0.938
F3529X20X20	1.625	1-1/4-11-1/2	2.380	1.250	1-1/4-11-1/2	2.380	1.250
F3529X24X24	1.875	1-1/2-11-1/2	2.640	1.500	1-1/2-11-1/2	2.640	1.500

Description: **45° Female Pipe Elbow**
 WWF Part No.: **F3559**
 WWF Stainless Part No.: **5505-SS**
 SAE: **140338**

Air-Way: 5505
 Parker: DD45
 Aeroquip: /
 Gates: /

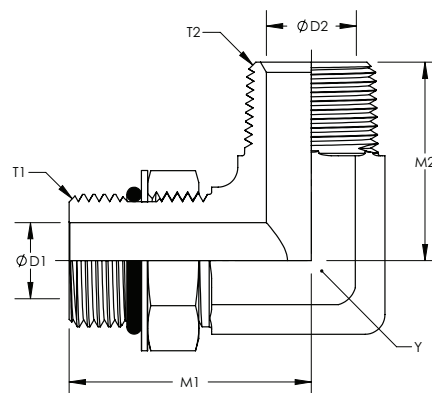


WWF	Y HEX	T1	M1	D1	T2	M2	D2
F3559X02X02	0.563	1/8-27	0.500	0.332	1/8-27	0.500	0.332
F3559X04X04	0.750	1/4-18	0.690	0.438	1/4-18	0.690	0.438
F3559X06X06	0.875	3/8-18	0.750	0.563	3/8-18	0.750	0.563
F3559X08X08	1.063	1/2-14	0.940	0.703	1/2-14	0.940	0.703
F3559X12X12	1.313	3/4-14	1.000	0.906	3/4-14	1.000	0.906
F3559X16X16	1.625	1-11-1/2	1.190	1.141	1-11-1/2	1.190	1.141

3000 SERIES

Description: **90° Straight Thread Male to Male Pipe Elbow**
 WWF Part No.: **F3569**
 WWF Stainless Part No.: **6806-SS**
 SAE: /

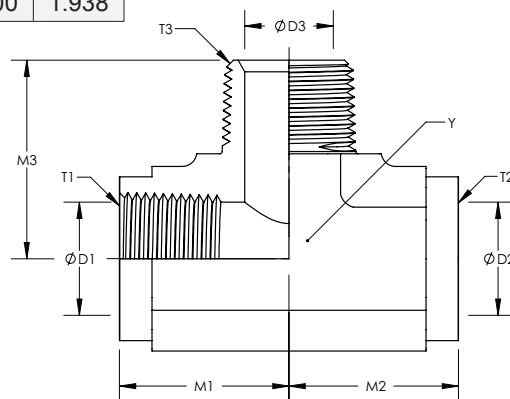
Air-Way: 6806
 Parker: /
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2
F3569X04X02	0.438	7/16-20	1.030	0.172	1/8-27	0.780	0.188
F3569X04X04	0.563	7/16-20	1.190	0.172	1/4-18	1.090	0.281
F3569X05X02	0.563	1/2-20	1.130	0.234	1/8-27	0.780	0.188
F3569X06X04	0.563	9/16-18	1.250	0.297	1/4-18	1.090	0.281
F3569X06X06	0.750	9/16-18	1.320	0.297	3/8-18	1.220	0.406
F3569X06X08	0.875	9/16-18	1.410	0.297	1/2-14	1.470	0.531
F3569X08X06	0.750	3/4-16	1.450	0.391	3/8-18	1.220	0.406
F3569X08X08	0.875	3/4-16	1.540	0.391	1/2-14	1.470	0.531
F3569X10X08	0.875	7/8-14	1.700	0.484	1/2-14	1.470	0.531
F3569X12X12	1.063	1-1/16-12	1.940	0.609	3/4-14	1.590	0.719
F3569X14X12	1.313	1-3/16-12	2.000	0.719	3/4-14	1.690	0.719
F3569X16X12	1.313	1-5/16-12	2.050	0.844	3/4-14	1.780	0.719
F3569X16X16	1.313	1-5/16-12	2.050	0.844	1-11-1/2	1.970	0.938
F3569X20X20	1.625	1-5/8-12	2.250	1.078	1-1/4-11-1/2	2.380	1.250
F3569X24X24	1.875	1-7/8-12	2.390	1.313	1-1/2-11-1/2	2.640	1.500
F3569X32X32	2.500	2-1/2-12	2.890	1.781	2-11-1/2	3.000	1.938

Description: **Male Branch Tee**
 WWF Part No.: **F3609**
 WWF Stainless Part No.: **5604-SS**
 SAE: **140425**

Air-Way: 5604
 Parker: MMS
 Aeroquip: 2091
 Gates: FP-FP-MP

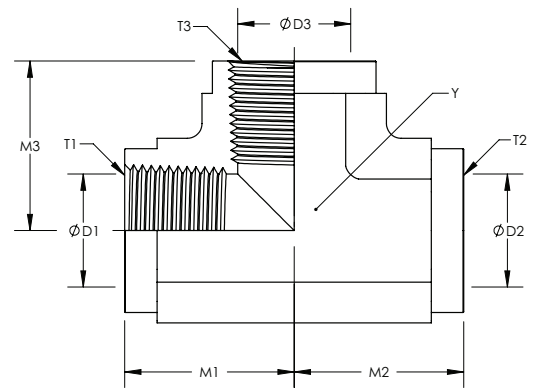


WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F3609X02X02X02	0.563	1/8-27	0.660	0.332	1/8-27	0.660	0.332	1/8-27	0.780	0.188
F3609X04X04X04	0.750	1/4-18	0.880	0.438	1/4-18	0.880	0.438	1/4-18	1.090	0.281
F3609X06X06X06	0.875	3/8-18	1.020	0.563	3/8-18	1.020	0.563	3/8-18	1.220	0.406
F3609X08X08X08	1.063	1/2-14	1.230	0.703	1/2-14	1.230	0.703	1/2-14	1.470	0.531
F3609X12X12X12	1.313	3/4-14	1.360	0.906	3/4-14	1.360	0.906	3/4-14	1.590	0.719
F3609X16X16X16	1.625	1-11-1/2	1.620	1.141	1-11-1/2	1.620	1.141	1-11-1/2	1.970	0.938
F3609X20X20X20	1.875	1-1/4-11-1/2	1.700	1.484	1-1/4-11-1/2	1.700	1.484	1-1/4-11-1/2	2.380	1.250
F3609X24X24X24	2.562	1-1/2-11-1/2	2.080	1.744	1-1/2-11-1/2	2.080	1.744	1-1/2-11-1/2	2.640	1.500

3000 SERIES

Description: **Female Pipe Tee**
 WWF Part No.: **F3709**
 WWF Stainless Part No.: **5605-SS**
 SAE: **140438**

Air-Way: 5605
 Parker: MMO
 Aeroquip: 2090
 Gates: FP-FP-FP

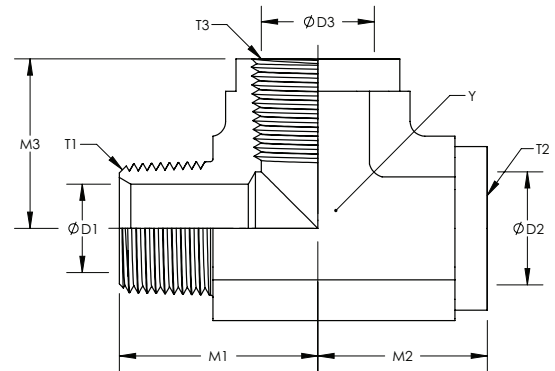


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WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F3709X02X02X02	0.563	1/8-27	0.660	0.332	1/8-27	0.660	0.332	1/8-27	0.660	0.332
F3709X04X04X04	0.750	1/4-18	0.880	0.438	1/4-18	0.880	0.438	1/4-18	0.880	0.438
F3709X06X04X06	0.875	3/8-18	1.020	0.563	1/4-18	1.010	0.438	3/8-18	1.020	0.563
F3709X06X06X06	0.875	3/8-18	1.020	0.563	3/8-18	1.020	0.563	3/8-18	1.020	0.563
F3709X08X08X08	1.063	1/2-14	1.230	0.703	1/2-14	1.230	0.703	1/2-14	1.230	0.703
F3709X12X12X12	1.313	3/4-14	1.360	0.906	3/4-14	1.360	0.906	3/4-14	1.360	0.906
F3709X16X16X16	1.625	1-11-1/2	1.620	1.141	1-11-1/2	1.620	1.141	1-11-1/2	1.620	1.141
F3709X20X20X20	1.875	1-1/4-11-1/2	1.700	1.484	1-1/4-11-1/2	1.700	1.484	1-1/4-11-1/2	1.700	1.484
F3709X24X24X24	2.562	1-1/2-11-1/2	2.080	1.744	1-1/2-11-1/2	2.080	1.744	1-1/2-11-1/2	2.080	1.744
F3709X32X32X32	2.812	2-11-1/2	2.390	2.213	2-11-1/2	2.390	2.213	2-11-1/2	2.390	2.213

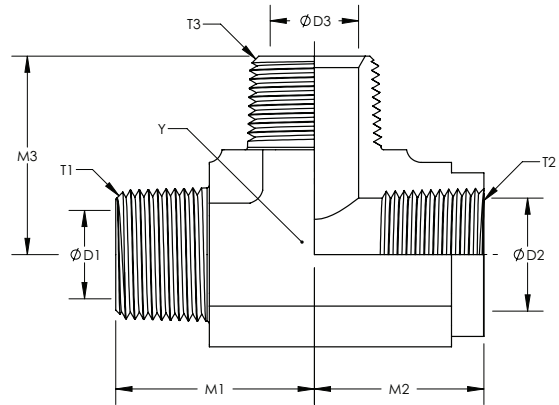
Description: **Male Run Tee**
 WWF Part No.: **F3759**
 WWF Stainless Part No.: **5602-SS**
 SAE: **140424**

Air-Way: 5602
 Parker: MRO
 Aeroquip: 2092
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F3759X02X02X02	0.563	1/8-27	0.780	0.188	1/8-27	0.660	0.332	1/8-27	0.660	0.332
F3759X04X04X04	0.750	1/4-18	1.090	0.281	1/4-18	0.880	0.438	1/4-18	0.880	0.438
F3759X06X06X06	0.875	3/8-18	1.220	0.406	3/8-18	1.020	0.563	3/8-18	1.020	0.563
F3759X08X08X08	1.063	1/2-14	1.470	0.531	1/2-14	1.230	0.703	1/2-14	1.230	0.703
F3759X12X12X12	1.313	3/4-14	1.590	0.719	3/4-14	1.360	0.906	3/4-14	1.360	0.906
F3759X16X16X16	1.625	1-11-1/2	1.970	0.938	1-11-1/2	1.620	1.141	1-11-1/2	1.620	1.141
F3759X20X20X20	1.875	1-1/4-11-1/2	2.380	1.250	1-1/4-11-1/2	1.700	1.484	1-1/4-11-1/2	1.700	1.484
F3759X24X24X24	2.562	1-1/2-11-1/2	2.640	1.500	1-1/2-11-1/2	2.080	1.744	1-1/2-11-1/2	2.080	1.744

3000 SERIES



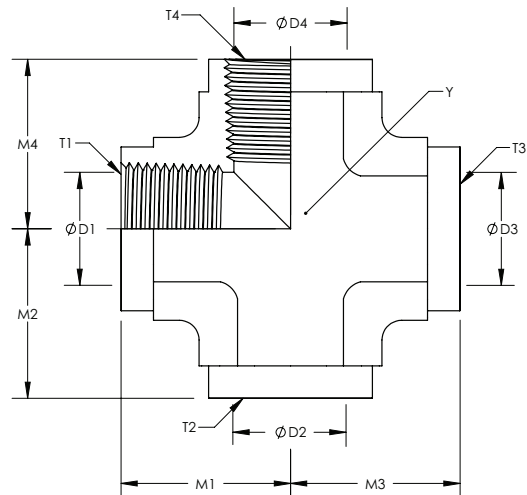
Description: Female Run Tee
WWF Part No.: F3809
WWF Stainless Part No.: 5603-SS
SAE: /

Air-Way: 5603
Parker: /
Aeroquip: 2093
Gates: /

WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F3809X02X02X02	0.563	1/8-27	0.780	0.188	1/8-27	0.660	0.332	1/8-27	0.780	0.188
F3809X04X04X04	0.750	1/4-18	1.090	0.281	1/4-18	0.880	0.438	1/4-18	1.090	0.281
F3809X06X06X06	0.875	3/8-18	1.220	0.406	3/8-18	1.020	0.563	3/8-18	1.220	0.406
F3809X08X08X08	1.063	1/2-14	1.470	0.531	1/2-14	1.230	0.703	1/2-14	1.470	0.531
F3809X12X12X12	1.313	3/4-14	1.590	0.719	3/4-14	1.360	0.906	3/4-14	1.590	0.719
F3809X16X16X16	1.625	1-11-1/2	1.970	0.938	1-11-1/2	1.620	1.141	1-11-1/2	1.970	0.938
F3809X20X20X20	1.875	1-1/4-11-1/2	2.380	1.250	1-1/4-11-1/2	1.700	1.484	1-1/4-11-1/2	2.380	1.250
F3809X24X24X24	2.562	1-1/2-11-1/2	2.640	1.500	1-1/2-11-1/2	2.080	1.744	1-1/2-11-1/2	2.640	1.500

Description: Female Pipe Cross
WWF Part No.: F3959
WWF Stainless Part No.: 5652-SS
SAE: 140538

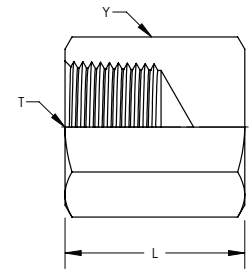
Air-Way: 5652
Parker: KMMOO
Aeroquip: 2080
Gates: /



WWF	Y HEX	T1 / T3	M1 / M3	D1 / D3	T2 / T4	M2 / M4	D2 / D4
F3959X02X02X02X02	0.563	1/8-27	0.660	0.332	1/8-27	0.660	0.332
F3959X04X04X04X04	0.750	1/4-18	0.880	0.438	1/4-18	0.880	0.438
F3959X06X06X06X06	0.875	3/8-18	1.020	0.563	3/8-18	1.020	0.563
F3959X08X08X08X08	1.063	1/2-14	1.230	0.703	1/2-14	1.230	0.703
F3959X12X12X12X12	1.313	3/4-14	1.360	0.906	3/4-14	1.360	0.906
F3959X16X16X16X16	1.625	1-11-1/2	1.620	1.141	1-11-1/2	1.620	1.141
F3959X20X20X20X20	1.875	1-1/4-11-1/2	1.700	1.484	1-1/4-11-1/2	1.700	1.484
F3959X24X24X24X24	2.562	1-1/2-11-1/2	2.080	1.744	1-1/2-11-1/2	2.080	1.744
F3959X32X32X32X32	2.812	2-11-1/2	2.390	2.213	2-11-1/2	2.390	2.213

Description: **Pipe Cap**
WWF Part No.: **5406C**
WWF Stainless Part No.: /
SAE: /

Air-Way: 5406-C
Parker: /
Aeroquip: /
Gates: /

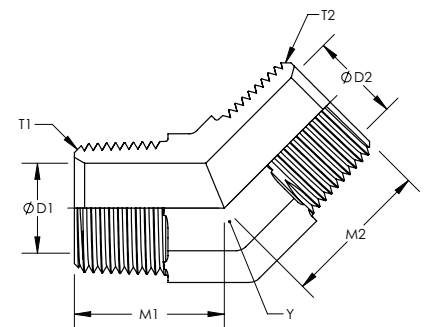


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WWF	Y HEX	T	L
5406CX04	0.750	1/4-18	0.910
5406CX06	0.875	3/8-18	1.030
5406CX08	1.063	1/2-14	1.340
5406CX12	1.250	3/4-14	1.440
5406CX16	1.625	1-11-1/2	1.610

Description: **45° Male Pipe Elbow**
WWF Part No.: **5501**
WWF Stainless Part No.: **5501-SS**
SAE: /

Air-Way: 5501
Parker: /
Aeroquip: 2247
Gates: /



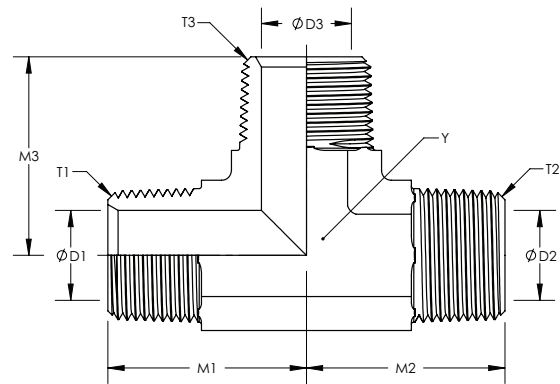
WWF	Y HEX	T1	M1	D1	T2	M2	D2
5501X04X04	0.563	1/4-18	0.860	0.281	1/4-18	0.860	0.281
5501X06X06	0.750	3/8-18	0.950	0.406	3/8-18	0.950	0.406
5501X08X08	0.875	1/2-14	1.170	0.531	1/2-14	1.170	0.531
5501X12X12	1.063	3/4-14	1.200	0.719	3/4-14	1.200	0.719
5501X16X16	1.313	1-11-1/2	1.480	0.938	1-11-1/2	1.480	0.938
5501X20X20	1.625	1-1/4-11-1/2	1.670	1.250	1-1/4-11-1/2	1.670	1.250
5501X24X24	1.875	1-1/2-11-1/2	1.770	1.500	1-1/2-11-1/2	1.770	1.500

3000 SERIES

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Description: **Male Pipe Tee**
 WWF Part No.: **5600**
 WWF Stainless Part No.: **5600-SS**
 SAE: **140437**

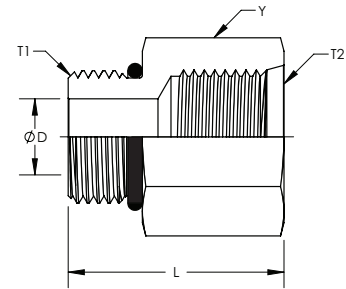
Air-Way: 5600
 Parker: RRS
 Aeroquip: 2257
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
5600X02X02X02	0.438	1/8-27	0.780	0.188	1/8-27	0.780	0.188	1/8-27	0.780	0.188
5600X04X04X04	0.563	1/4-18	1.090	0.281	1/4-18	1.090	0.281	1/4-18	1.090	0.281
5600X06X06X06	0.750	3/8-18	1.220	0.406	3/8-18	1.220	0.406	3/8-18	1.220	0.406
5600X08X08X08	0.875	1/2-14	1.470	0.531	1/2-14	1.470	0.531	1/2-14	1.470	0.531
5600X12X12X12	1.063	3/4-14	1.590	0.719	3/4-14	1.590	0.719	3/4-14	1.590	0.719
5600X16X16X16	1.313	1-11-1/2	1.970	0.938	1-11-1/2	1.970	0.938	1-11-1/2	1.970	0.938

Description: **Male SAE to Female SAE Adapter**
 WWF Part No.: **6410**
 WWF Stainless Part No.: **6410-SS**
 SAE: /

Air-Way: 6410
 Parker: F50G5
 Aeroquip: FF1010
 Gates: /



WWF	Y HEX	T1	D	T2	L
6410X02X04	0.688	5/16-24	0.063	7/16-20	1.130
6410X04X02	0.563	7/16-20	0.172	5/16-24	1.080
6410X04X04	0.688	7/16-20	0.172	7/16-20	1.080
6410X04X06	0.813	7/16-20	0.172	9/16-18	1.240
6410X04X08	1.063	7/16-20	0.172	3/4-16	1.350
6410X05X04	0.688	1/2-20	0.234	7/16-20	1.080
6410X05X06	0.813	1/2-20	0.234	9/16-18	1.240
6410X06X04	0.688	9/16-18	0.297	7/16-20	1.120
6410X06X06	0.813	9/16-18	0.297	9/16-18	1.160
6410X06X08	1.063	9/16-18	0.297	3/4-16	1.380
6410X08X04	0.875	3/4-16	0.391	7/16-20	1.160
6410X08X06	0.875	3/4-16	0.391	9/16-18	1.160
6410X08X08	1.063	3/4-16	0.391	3/4-16	1.470
6410X08X10	1.125	3/4-16	0.391	7/8-14	1.560

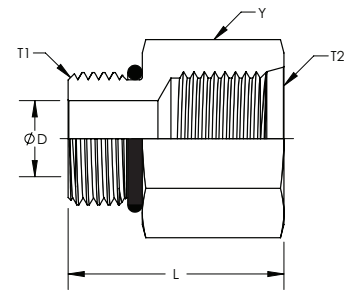
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3000 SERIES

Continued from page 38

Description: **Male SAE to Female SAE Adapter**
 WWF Part No.: **6410**
 WWF Stainless Part No.: **6410-SS**
 SAE: **/**

Air-Way: 6410
 Parker: F50G5
 Aeroquip: FF1010
 Gates: **/**

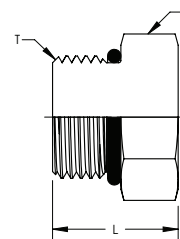


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WWF	Y HEX	T1	D	T2	L
6410X08X12	1.375	3/4-16	0.391	1-1/16-12	1.730
6410X10X04	1.000	7/8-14	0.484	7/16-20	0.910
6410X10X06	1.000	7/8-14	0.484	9/16-18	1.270
6410X10X08	1.063	7/8-14	0.484	3/4-16	1.380
6410X10X10	1.125	7/8-14	0.484	7/8-14	1.690
6410X10X12	1.375	7/8-14	0.484	1-1/16-12	1.790
6410X12X06	1.250	1-1/16-12	0.609	9/16-18	1.000
6410X12X08	1.250	1-1/16-12	0.609	3/4-16	1.480
6410X12X10	1.250	1-1/16-12	0.609	7/8-14	1.570
6410X12X12	1.375	1-1/16-12	0.609	1-1/16-12	1.730
6410X12X16	1.625	1-1/16-12	0.609	1-5/16-12	1.880
6410X14X12	1.375	1-3/16-12	0.719	1-1/16-12	1.730
6410X16X08	1.500	1-5/16-12	0.844	3/4-16	1.000
6410X16X10	1.500	1-5/16-12	0.844	7/8-14	1.570
6410X16X12	1.500	1-5/16-12	0.844	1-1/16-12	1.730
6410X16X14	1.625	1-5/16-12	0.844	1-3/16-12	1.730
6410X16X16	1.625	1-5/16-12	0.844	1-5/16-12	1.730
6410X16X20	2.125	1-5/16-12	0.844	1-5/8-12	1.970
6410X20X06	1.875	1-5/8-12	1.078	9/16-18	1.000
6410X20X08	1.875	1-5/8-12	1.078	3/4-16	1.000
6410X20X10	1.875	1-5/8-12	1.078	7/8-14	1.000
6410X20X12	1.875	1-5/8-12	1.078	1-1/16-12	1.000
6410X20X16	1.875	1-5/8-12	1.078	1-5/16-12	1.730
6410X20X24	2.250	1-5/8-12	1.078	1-7/8-12	1.980
6410X24X12	2.125	1-7/8-12	1.313	1-1/16-12	1.000
6410X24X16	2.125	1-7/8-12	1.313	1-5/16-12	1.730
6410X24X20	2.125	1-7/8-12	1.313	1-5/8-12	1.790
6410X32X20	2.750	2-1/2-12	1.781	1-5/8-12	1.000
6410X32X24	2.750	2-1/2-12	1.781	1-7/8-12	1.800

Description: External Hex Port Plug
WWF Part No.: 7237S
WWF Stainless Part No.: 6408-SS
SAE: 090109A

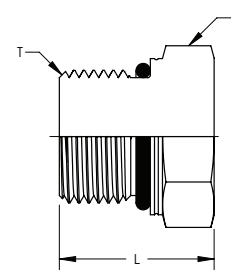
Air-Way: 6408
Parker: P5ON
Aeroquip: 900598
Gates: MB-PLUG



WWF	Y HEX	T	L
7237X02S	0.438	5/16-24	0.600
7237X03S	0.500	3/8-24	0.600
7237X04S	0.563	7/16-20	0.670
7237X05S	0.625	1/2-20	0.670
7237X06S	0.688	9/16-18	0.730
7237X08S	0.875	3/4-16	0.800
7237X10S	1.000	7/8-14	0.930
7237X12S	1.250	1-1/16-12	1.090
7237X14S	1.375	1-3/16-12	1.090
7237X16S	1.500	1-5/16-12	1.120
7237X20S	1.875	1-5/8-12	1.200
7237X24S	2.125	1-7/8-12	1.270
7237X32S	2.750	2-1/2-12	1.430

Description: External Hex Port Plug - Metric
WWF Part No.: 7237M
WWF Stainless Part No.: 8555-P-SS
SAE: 62M0109A

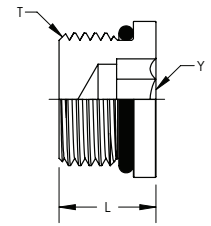
Air-Way: 8555-P
Parker: P87OMN
Aeroquip: /
Gates: /



WWF	Y HEX	T	L
7237XM10	0.551	M10X1.0	0.669
7237XM12	0.669	M12X1.5	0.728
7237XM14	0.748	M14X1.5	0.768
7237XM16	0.866	M16X1.5	0.866
7237XM18	0.945	M18X1.5	0.945
7237XM22	1.063	M22X1.5	1.024
7237XM27	1.260	M27X2.0	1.240
7237XM33	1.614	M33X2.0	1.338
7237XM42	1.969	M42X2.0	1.438

Description: Internal Hex Port Plug
WWF Part No.: 7238
WWF Stainless Part No.: 6408-H-SS
SAE: 090109B

Air-Way: 6408-H
Parker: HP50N
Aeroquip: FF2138
Gates: /

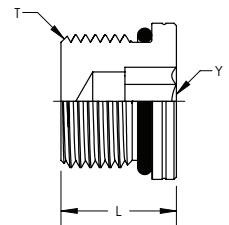


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WWF	Y HEX	T	L
7238X02	0.125	5/16-24	0.405
7238X03	0.156	3/8-24	0.405
7238X04	0.188	7/16-20	0.472
7238X05	0.219	1/2-20	0.472
7238X06	0.250	9/16-18	0.508
7238X08	0.313	3/4-16	0.587
7238X10	0.375	7/8-14	0.657
7238X12	0.563	1-1/16-12	0.776
7238X14	0.563	1-3/16-12	0.776
7238X16	0.625	1-5/16-12	0.776
7238X20	0.750	1-5/8-12	0.776
7238X24	0.750	1-7/8-12	0.776
7238X32	0.750	2-1/2-12	0.776

Description: Internal Hex Port Plug - Metric
WWF Part No.: 7238M
WWF Stainless Part No.: /
SAE: 62M0109B

Air-Way: /
Parker: VSTI M-OR
Aeroquip: /
Gates: /

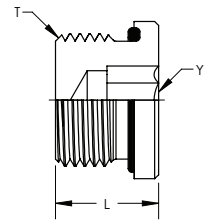


WWF	Y HEX	T	L
7238XM08	0.157	M8X1.0	0.512
7238XM10	0.197	M10X1.0	0.531
7238XM12	0.236	M12X1.5	0.610
7238XM14	0.236	M14X1.5	0.630
7238XM16	0.315	M16X1.5	0.689
7238XM18	0.315	M18X1.5	0.748
7238XM22	0.394	M22X1.5	0.787
7238XM27	0.472	M27X2.0	0.925
7238XM33	0.551	M33X2.0	0.964
7238XM42	0.669	M42X2.0	0.984

A Description: **DIN BSP Plug**
 WWF Part No.: **7240G**
 WWF Stainless Part No.: **8555-H-SS**
 SAE: /

Air-Way: 8555-H
 Parker: VSTI R-ED
 Aeroquip: /
 Gates: /

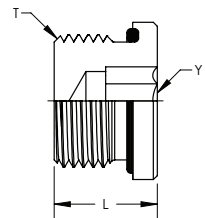
WWF	Y HEX	T	L
7240X02G	0.197	G 1/8A	0.472
7240X04G	0.236	G 1/4A	0.669
7240X06G	0.315	G 3/8A	0.669
7240X08G	0.394	G 1/2A	0.748
7240X12G	0.472	G 3/4A	0.827
7240X16G	0.669	G1 A	0.886
7240X20G	0.866	G1 1/4A	0.886
7240X24G	0.945	G1 1/2A	0.886



Description: **DIN Metric Plug**
 WWF Part No.: **7240M**
 WWF Stainless Part No.: **9522-H-SS**
 SAE: /

Air-Way: 9522-H
 Parker: VSTI M-ED
 Aeroquip: /
 Gates: /

WWF	Y HEX	T	L
7240XM10	0.197	M10X1.0	0.472
7240XM12	0.236	M12X1.5	0.669
7240XM14	0.236	M14X1.5	0.669
7240XM16	0.315	M16X1.5	0.669
7240XM18	0.315	M18X1.5	0.669
7240XM22	0.394	M22X1.5	0.748
7240XM27	0.472	M27X2.0	0.827
7240XM33	0.669	M33X2.0	0.886
7240XM42	0.866	M42X2.0	0.886
7240XM48	0.945	M48X2.0	0.886



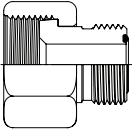

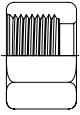
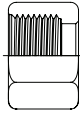
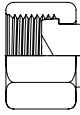


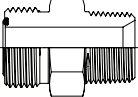
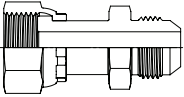


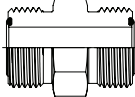
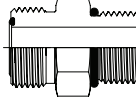
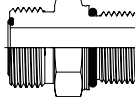
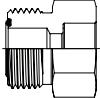
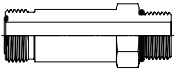
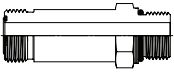
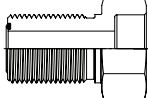
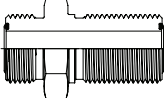
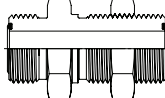
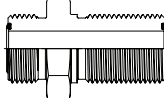
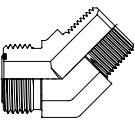
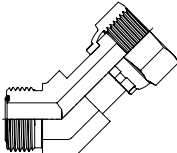
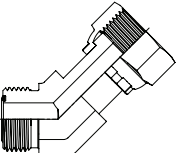
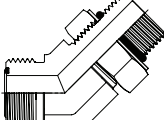
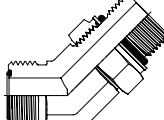
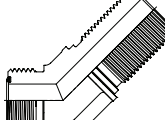
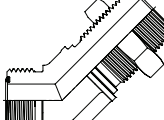
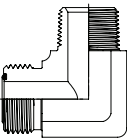
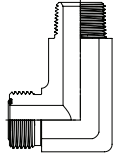
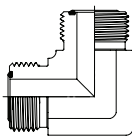
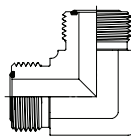
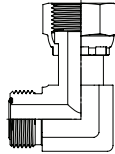
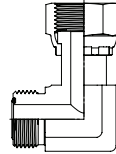
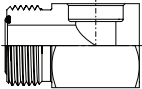
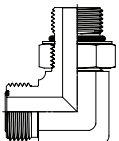
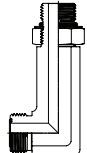
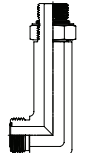
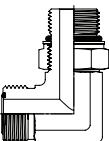
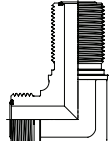
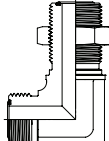
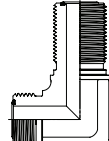


Steel "O" Ring Face Seal Fittings

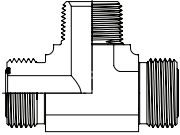

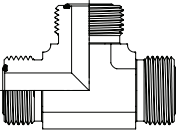
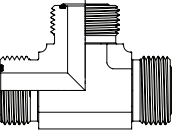
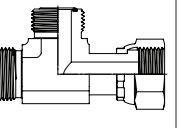
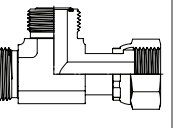
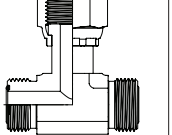
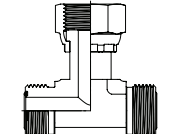
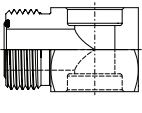
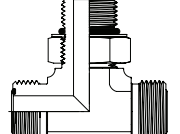
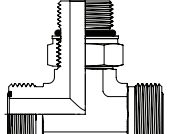
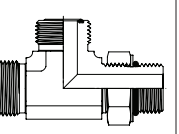
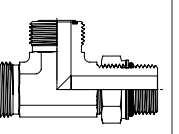
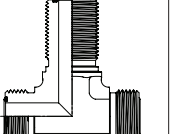
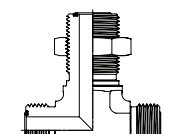
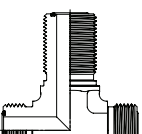
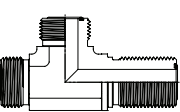
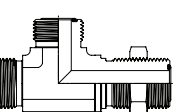
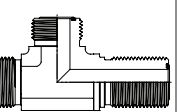
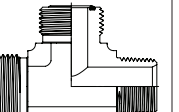
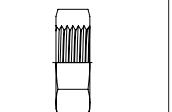
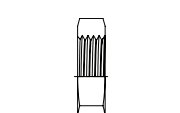
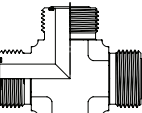
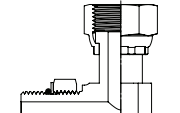


4000 SERIES

4000 SERIES - STEEL "O" RING FACE SEAL FITTINGS

B

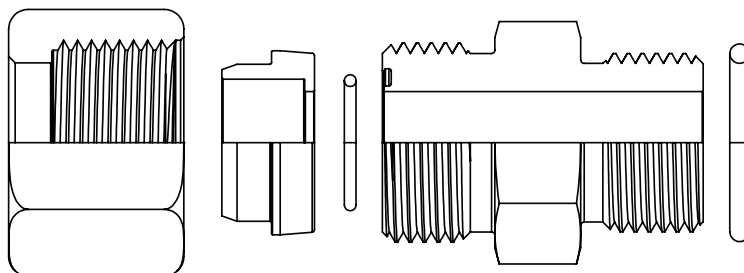
<p>FS2406 Page 52</p>  <p>4015 Reducer</p>	<p>POR</p>  <p>4100 Male Weld Spud</p>	<p>FS0318 Page 53</p>  <p>4105 Standard Nut</p>	<p>MFS0318 Page 53</p>  <p>4105MH Metric Hex Nut</p>	<p>FS0304-C Page 54</p>  <p>4129 Cap Assembly</p>	<p>FS0319 Page 54</p>  <p>4165 Sleeve</p>	<p>Page 55</p>  <p>4165PF Mechanical Sleeve</p>
<p>FS2404 Page 55</p>  <p>4205 Male Connector</p>	<p>FS6504 Page 56</p>  <p>4213 Female Swivel to Male JIC</p>	<p>FS2408 Page 57</p>  <p>4229 Plug</p>	<p>POR</p>  <p>4300 Male Braze Spud</p>	<p>FS2403 Page 57</p>  <p>4305 Union Straight</p>	<p>FS6400 Page 58</p>  <p>4314 Stud Straight</p>	<p>FS7640 Page 59</p>  <p>4314M Stud Straight - Metric</p>
<p>FS0403 Page 60</p>  <p>4315 Braze-On Straight</p>	<p>FS6400-L Page 61</p>  <p>4316 Stud Straight Long</p>	<p>FS7640-L Page 61</p>  <p>4316M Stud Straight Long Metric</p>	<p>POR</p>  <p>4324 Male Braze Bulkhead Connector</p>	<p>FS2700 Page 62</p>  <p>4325 Bulkhead Straight</p>	<p>FS2700-LN Page 62</p>  <p>4325LN Bulkhead Straight With Locknut</p>	<p>FS2700-MH Page 63</p>  <p>4325MH Bulkhead Straight Metric Hex</p>
<p>FS2503 Page 63</p>  <p>4355 45° Male Elbow</p>	<p>FS6502 Page 64</p>  <p>4356 45° Swivel Elbow</p>	<p>FS6502-MH Page 64</p>  <p>4356MH 45° Swivel Elbow Metric Hex</p>	<p>FS6802 Page 65</p>  <p>4365 45° Adjustable Stud Elbow</p>	<p>FS7300 Page 66</p>  <p>4365M 45° Adjustable Stud Elbow - Metric</p>	<p>FS2702 Page 66</p>  <p>4375 45° Bulkhead Elbow</p>	<p>FS2702-LN Page 67</p>  <p>4375LN 45° Bulkhead Elbow With Locknut</p>
<p>FS2501 Page 67</p>  <p>4405 90° Male Elbow</p>	<p>FS2501-L Page 68</p>  <p>4405L 90° Male Elbow Long</p>	<p>FS2500 Page 69</p>  <p>4505 90° Union Elbow</p>	<p>FS2500-MH Page 69</p>  <p>4505MH 90° Union Elbow Metric Hex</p>	<p>FS6500 Page 70</p>  <p>4506 90° Swivel Elbow</p>	<p>FS6500-MH Page 70</p>  <p>4506MH 90° Swivel Elbow Metric Hex</p>	<p>POR</p>  <p>4514 Male Braze 90° Elbow</p>
<p>FS6801 Page 71</p>  <p>4515 90° Adjustable Stud Elbow</p>	<p>FS6801-L Page 72</p>  <p>4515L 90° Adjustable Stud Elbow - Long</p>	<p>FS6801-LL Page 72</p>  <p>4515LL 90° Adjustable Stud Elbow - Extra Long</p>	<p>FS7205 Page 73</p>  <p>4515M 90° Adjustable Stud Elbow - Metric</p>	<p>FS2701 Page 74</p>  <p>4525 90° Bulkhead Elbow</p>	<p>FS2701-LN Page 74</p>  <p>4525LN 90° Bulkhead Elbow With Locknut</p>	<p>FS2701-MH Page 75</p>  <p>4525MH 90° Bulkhead Elbow Metric Hex</p>

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<p>FS2601 Page 75</p>  <p>4605 Male Branch Tee</p>	<p>FS4000 Page 76</p>  <p>4629 "O" Ring</p>	<p>FS2603 Page 76</p>  <p>4705 Union Tee</p>	<p>FS2603-MH Page 77</p>  <p>4705MH Union Tee Metric Hex</p>	<p>FS6602 Page 78</p>  <p>4706 Swivel Run Tee</p>	<p>FS6602-MH Page 78</p>  <p>4706MH Swivel Run Tee Metric Hex</p>	<p>FS6600 Page 79</p>  <p>4707 Swivel Branch Tee</p>
<p>FS6600-MH Page 79</p>  <p>4707MH Swivel Branch Tee Metric Hex</p>	<p>POR</p>  <p>4714 Male Braze Branch Tee</p>	<p>FS6803 Page 80</p>  <p>4715 Adjustable Stud Branch Tee</p>	<p>FS7210 Page 81</p>  <p>4715M Adjustable Stud Branch Tee - Metric</p>	<p>FS6804 Page 82</p>  <p>4716 Adjustable Stud Run Tee</p>	<p>FS7215 Page 83</p>  <p>4716M Adjustable Stud Run Tee - Metric</p>	<p>FS2703 Page 84</p>  <p>4725 Bulkhead Branch Tee</p>
<p>FS2703-LN Page 84</p>  <p>4725LN Bulkhead Branch Tee With Locknut</p>	<p>FS2703-MH Page 85</p>  <p>4725MH Bulkhead Branch Tee - Metric Hex</p>	<p>FS2704 Page 85</p>  <p>4726 Bulkhead Run Tee</p>	<p>FS2704-LN Page 86</p>  <p>4726LN Bulkhead Run Tee With Locknut</p>	<p>FS2704-MH Page 86</p>  <p>4726MH Bulkhead Run Tee Metric Hex</p>	<p>Page 87</p>  <p>4755 Male Run Tee</p>	<p>Page 87</p>  <p>4924 Straight Thread Locknut</p>
<p>FS0306 Page 88</p>  <p>4925 Bulkhead Locknut</p>	<p>FS2650 Page 88</p>  <p>4955 Union Cross</p>	<p>FS6809 Page 89</p>  <p>FS6809 Swivel 90° Adjustable Stud Elbow</p>	<p>Page 165</p>  <p>7629 90 Durometer "O" Ring</p>	<p>Page 166</p>  <p>7269M 90 Durometer Metric "O" Ring</p>		

B

4000 SERIES - STEEL "O" RING FACE SEAL FITTINGS



4000 Series Assembly

CONSTRUCTION

4000 Series "O" Ring Face Seal Fittings consist of four main components: Bodies, "O" Rings, Nuts, and Sleeves.

Bodies - Straight bodies are machined from bar stock. Shape fittings (elbows, tees, & crosses) are made from forgings.

"O" Rings - Buna-N, 90 Durometer

Nuts - "O" Ring Face Seal Tube Nuts in sizes 1/4", 3/8", 1/2", 3/4", 5/8", and 1" are Cold Formed in 1010 steel.

"O" Ring Face Seal Tube Nuts in sizes 1-1/4", 1-1/2", & 2" are hot forged from 1045.

Sleeves - "O" Ring Face Seal Sleeves are machined from 12L14 bar stock.

APPLICATIONS

For use with most high pressure applications. Applications containing continuous mechanical shock.

PRESSURE RATINGS

Working pressures up to 6000 PSI - depending on tube and fitting size. (For applications using extreme pressures at 5000 PSI or above, contact World Wide Fittings.)

MATERIAL

Steel - 12L14, 1045.

"O" Ring - Buna-N 90 Durometer, Viton.

PLATING

Clear Zinc Trivalent.

TEMPERATURE RANGE

-30° F to 275° F

(Viton "O" Rings available upon request for high temperature applications. Contact World Wide Fittings for details.)

HOW TO ORDER

Tubing sizes are measured in sixteenths of an inch. When ordering, the tube end of the fitting must be specified first followed by the pipe thread or straight thread end. All fittings in this section are ordered as bodies only unless specified by customers when ordering.

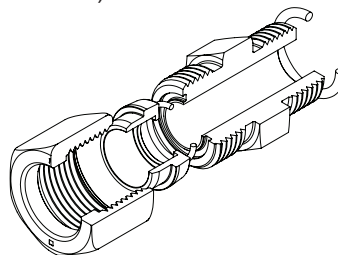
(Contact World Wide when ordering fittings as assemblies or configurations which are non-standard.)

CONFORMANCE

4000 Series fittings meet SAE J1453 Specifications.

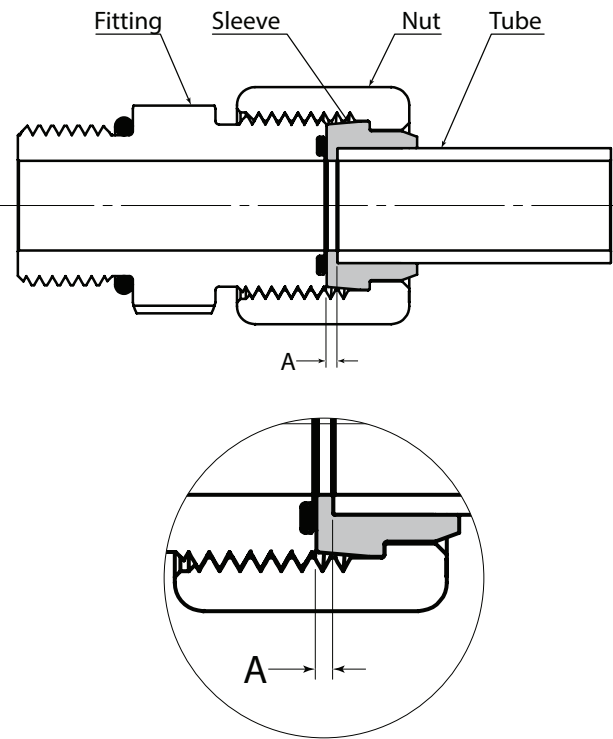
ASSEMBLY INSTRUCTIONS

1. Measure the needed length of tubing to be cut. When measuring be sure to leave room at the end of your tube for the sleeve which will be brazed on to the end of the tubing.
2. Cut the length of tubing making sure the ends of the tubes are square. Remove all burrs and foreign matter from the ends of the tubing where brazing is to be done.
3. Clamp the tube to be brazed in a vise and slide the tube nut on to the tube with the open end of the nut facing the tube end. Apply flux to the outside of the tube end. When applying flux to the tail end of the sleeve, be sure to coat the OD, ID, & braze ring.
4. Slide the sleeve with the brazing ring on to the tube end and apply heat uniformly around the sleeve and the tube end. As the flux reaches the proper brazing temperature it will become clear in color. When the proper brazing temperature is maintained the braze ring will melt and the sleeve will settle down on the end of the tube. Should the sleeve not settle on to the tube apply a slight pressure to the sleeve to force the sleeve down onto the tube.
5. After the tube cools, remove the assembly from the vise and inspect the braze joint. The braze material should have formed a continuous fillet completely around the tube. Should visible gaps be noticeable, the braze joint may not be complete and would fail if put into service. Re-brazing is recommended to correct the problem.
6. Remove any excess flux & residue from the brazed assembly.
7. Install the "O" Ring Face Seal fitting body to the piece of equipment. Line the ends of your tube assembly up with the fitting bodies. Visually inspect the ends of the fitting bodies to make sure the "O" Ring seals are in place. Bring the nut at each end up to the fitting body and tighten to the finger-tight position. Using a torque wrench, tighten the Face Seal tube nuts to the proper torque.
(Refer to the assembly torque charts during installation of 4000 series fittings from the port and thread assemblies section.)



4000 SERIES - STEEL "O" RING FACE SEAL FITTINGS

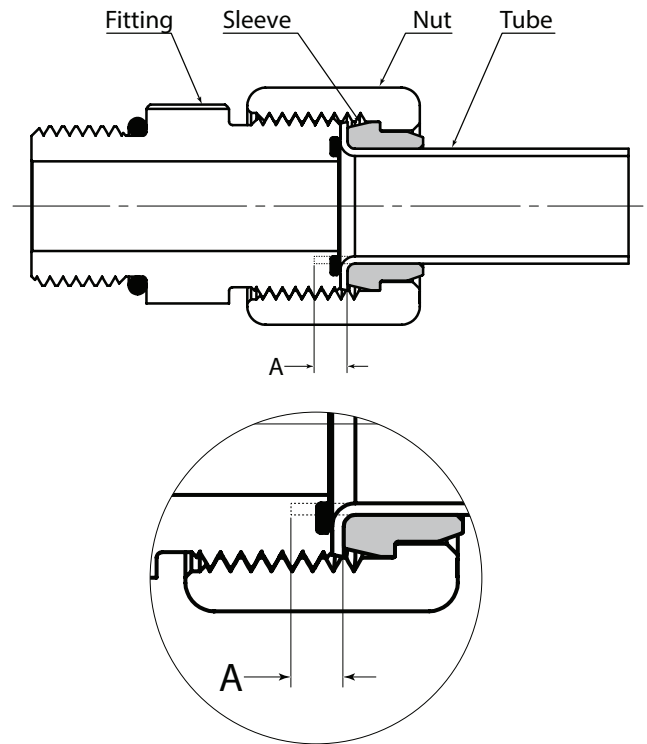
Correct assembly



Tube length allowance
(See table below)

Nominal Tube O.D.		A (in.)
Inch	Metric	
1/4	6	0.04
3/8	8, 10	0.04
1/2	12	0.04
5/8	14, 15, 16	0.06
3/4	18, 20	0.06
1	22, 25	0.06
1-1/4	28, 30, 32	0.06
1-1/2	35, 38	0.06

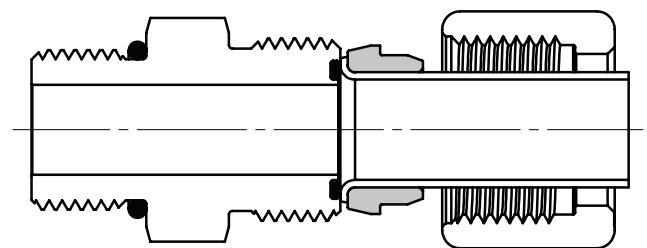
Correct assembly



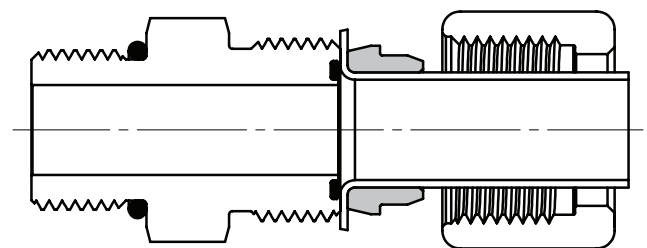
Tube length allowance
(See page 50 for extra cut-off length)

B

Incorrect assembly



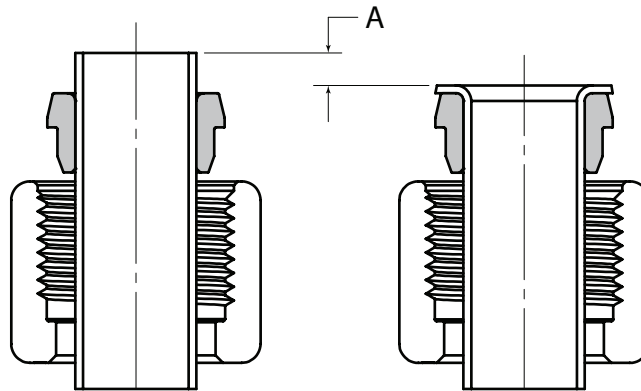
Underflanged assembly



Overflanged assembly

4000 SERIES - STEEL "O" RING FACE SEAL FITTINGS

B



Extra cut-off length - "A"

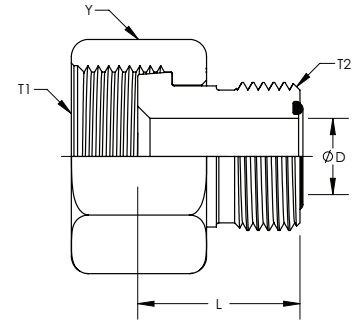
Extra tube cut-off length guide for inch tube

Tube O.D. (inch)	Tube Wall Thickness - inch										
	.028	.035	.049	.065	.083	.095	.109	.120	.134	.156	.188
1/4	3/16	13/16	5/32								
3/8		9/16	9/64	5/32	5/32	5/32					
1/2		5/32	9/64	9/64	9/64	9/64					
5/8			5/32	5/32	7/64	11/64	5/32	11/64			
3/4		5/32	5/32	5/32	1/8	7/64	9/64	5/32	11/64		
1		9/64	9/64	9/64	9/64	7/64	11/64	11/64	3/16		
1-1/4					5/32	7/64	7/64	1/8	5/32	11/64	11/64
1-1/2				11/64	11/64	3/16	3/16	3/16	3/16	15/64	7/32

4000 SERIES

Description: **Reducer**
 WWF Part No.: **4015**
 WWF Stainless Part No.: /
 SAE: **520123**

Air-Way: FS2406
 Parker: TRLON
 Aeroquip: FF2281T
 Gates: /

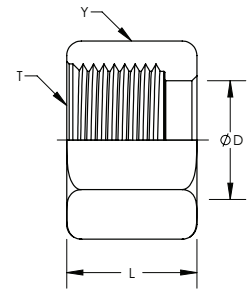


WWF	Y HEX	D	T1	T2	L
4015X06X04	0.813	0.177	11/16-16	9/16-18	0.768
4015X08X04	0.938	0.177	13/16-16	9/16-18	0.866
4015X08X06	0.938	0.256	13/16-16	11/16-16	0.886
4015X10X04	1.125	0.177	1-14	9/16-18	0.906
4015X10X06	1.125	0.256	1-14	11-16-16	0.945
4015X10X08	1.125	0.374	1-14	13/16-16	1.004
4015X12X04	1.375	0.177	1-3/16-12	9/16-18	0.984
4015X12X06	1.375	0.256	1-3/16-12	11/16-16	1.024
4015X12X08	1.375	0.374	1-3/16-12	13/16-16	1.083
4015X12X10	1.375	0.492	1-3/16-12	1-14	1.161
4015X12X16	1.375	0.610	1-3/16-12	1-7/16-12	1.239
4015X16X08	1.625	0.374	1-7/16-12	13/16-16	1.150
4015X16X10	1.625	0.492	1-7/16-12	1-14	1.260
4015X16X12	1.625	0.610	1-7/16-12	1-3/16-12	1.299
4015X20X12	1.875	0.610	1-11/16-12	1-3/16-12	1.319
4015X20X16	1.875	0.807	1-11/16-12	1-7/16-12	1.338
4015X20X24	1.875	1.024	1-11/16-12	2-12	1.514
4015X24X12	2.250	0.610	2-12	1-3/16-12	1.321
4015X24X16	2.250	0.807	2-12	1-7/16-12	1.338
4015X24X20	2.250	1.024	2-12	1-11/16-12	1.338

4000 SERIES

Description: **Standard Nut**
 WWF Part No.: **4105**
 WWF Stainless Part No.: /
 SAE: **520110**

Air-Way: FS0318
 Parker: BL
 Aeroquip: FC2326
 Gates: /

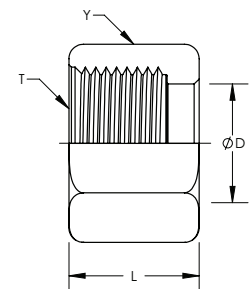


B

WWF	Y HEX	T	D	L
4105X04	0.688	9/16-18	0.413	0.590
4105X06	0.813	11/16-16	0.533	0.669
4105X08	0.938	13/16-16	0.653	0.787
4105X10	1.125	1-14	0.831	0.945
4105X12	1.375	1-3/16-12	0.951	1.043
4105X16	1.625	1-7/16-12	1.146	1.083
4105X20	1.875	1-11/16-12	1.417	1.083
4105X24	2.250	2-12	1.732	1.083

Description: **Metric Hex Nut**
 WWF Part No.: **4105MH**
 WWF Stainless Part No.: /
 SAE: **52M0110A**

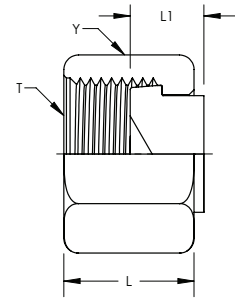
Air-Way: MFS0318
 Parker: BML
 Aeroquip: /
 Gates: /



WWF	Y HEX	T	D	L
4105X04MH	0.669	9/16-18	0.413	0.590
4105X06MH	0.866	11/16-16	0.533	0.669
4105X08MH	0.945	13/16-16	0.653	0.787
4105X10MH	1.181	1-14	0.831	0.945
4105X12MH	1.417	1-3/16-12	0.951	1.043
4105X16MH	1.614	1-7/16-12	1.146	1.083
4105X20MH	1.969	1-11/16-12	1.417	1.083
4105X24MH	2.362	2-12	1.732	1.083

Description: **Cap Assembly**
 WWF Part No.: **4129**
 WWF Stainless Part No.: /
 SAE: **520112**

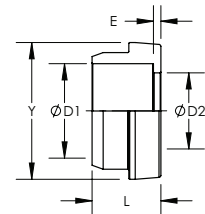
Air-Way: FS0304-C
 Parker: FNL
 Aeroquip: FF9863
 Gates: /



WWF	Y HEX	L1	T	L
4129X04	0.688	0.354	9/16-18	0.661
4129X06	0.813	0.413	11/16-16	0.740
4129X08	0.938	0.472	13/16-16	0.866
4129X10	1.125	0.531	1-14	1.024
4129X12	1.375	0.590	1-3/16-12	1.122
4129X16	1.625	0.630	1-7/16-12	1.161
4129X20	1.875	0.630	1-11/16-12	1.161
4129X24	2.250	0.630	2-12	1.161

Description: **Sleeve**
 WWF Part No.: **4165**
 WWF Stainless Part No.: /
 SAE: **520115**

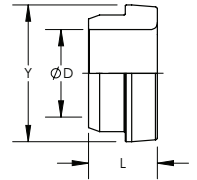
Air-Way: FS0319
 Parker: TL
 Aeroquip: FC1229
 Gates: /



WWF	Y	D1	D2	E	L
4165X04	0.502	0.256	0.177	0.039	0.374
4165X06X04	0.620	0.256	0.177	0.079	0.413
4165X06X05	0.620	0.318	0.216	0.079	0.413
4165X06	0.620	0.381	0.256	0.039	0.374
4165X08X06	0.744	0.381	0.256	0.138	0.472
4165X08	0.744	0.506	0.374	0.039	0.374
4165X10	0.923	0.631	0.492	0.059	0.413
4165X12X10	1.096	0.631	0.492	0.216	0.571
4165X12	1.096	0.757	0.610	0.059	0.551
4165X16X12	1.346	0.757	0.610	0.177	0.669
4165X16	1.346	1.007	0.807	0.059	0.610
4165X20X16	1.596	1.007	0.807	0.059	0.610
4165X20	1.596	1.258	1.024	0.059	0.610
4165X24	1.909	1.508	1.260	0.059	0.610

4000 SERIES

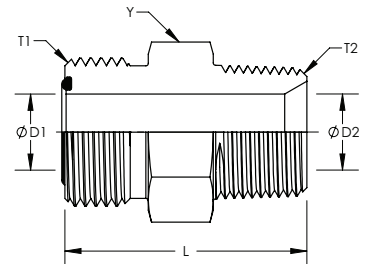
Description: **Mechanical Sleeve**
 WWF Part No.: **4165PF**
 WWF Stainless Part No.: /
 SAE: /
 Air-Way: /
 Parker: TPL
 Aeroquip: /
 Gates: /



B

WWF	Y	D	L
4165X04PF	0.502	0.256	0.295
4165X06PF	0.620	0.381	0.332
4165X08PF	0.744	0.506	0.415
4165X10PF	0.923	0.631	0.415
4165X12PF	1.096	0.757	0.475
4165X16PF	1.346	1.007	0.529
4165X20PF	1.596	1.258	0.551
4165X24PF	1.909	1.508	0.532

Description: **Male Connector**
 WWF Part No.: **4205**
 WWF Stainless Part No.: /
 SAE: /
 Air-Way: FS2404
 Parker: FLO
 Aeroquip: FF2031T
 Gates: MFFOR-MP



WWF	Y HEX	T1	D1	T2	D2	L
4205X04X02	0.625	9/16-18	0.177	1/8-27	0.188	1.080
4205X04X04	0.625	9/16-18	0.177	1/4-18	0.281	1.260
4205X04X06	0.750	9/16-18	0.177	3/8-18	0.406	1.320
4205X04X08	0.875	9/16-18	0.177	1/2-14	0.531	1.520
4205X06X02	0.750	11/16-16	0.256	1/8-27	0.188	1.160
4205X06X04	0.750	11/16-16	0.256	1/4-18	0.281	1.340
4205X06X06	0.750	11/16-16	0.256	3/8-18	0.406	1.340
4205X06X08	0.875	11/16-16	0.256	1/2-14	0.531	1.540
4205X08X04	0.875	13/16-16	0.374	1/4-18	0.281	1.450
4205X08X06	0.875	13/16-16	0.374	3/8-18	0.406	1.450
4205X08X08	0.875	13/16-16	0.374	1/2-14	0.531	1.640
4205X08X12	1.125	13/16-16	0.374	3/4-14	0.719	1.690

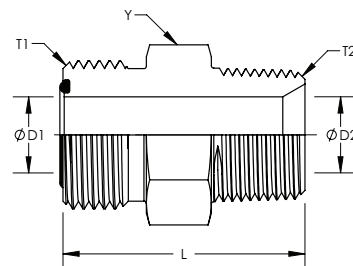
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4000 SERIES

Continued from page 55

Description: **Male Connector**
 WWF Part No.: **4205**
 WWF Stainless Part No.: /
 SAE: /

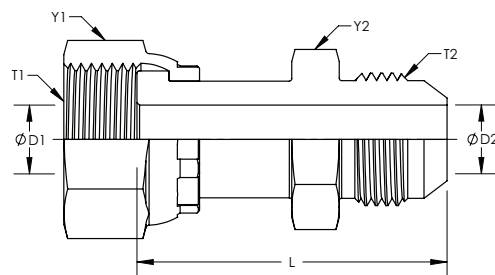
Air-Way: FS2404
 Parker: FLO
 Aeroquip: FF2031T
 Gates: MFFOR-MP



WWF	Y HEX	T1	D1	T2	D2	L
4205X08X16	1.375	13/16-16	0.374	1-11-1/2	0.938	1.900
4205X10X08	1.063	1-14	0.492	1/2-14	0.531	1.820
4205X10X12	1.125	1-14	0.492	3/4-14	0.719	1.850
4205X12X08	1.250	1-3/16-12	0.610	1/2-14	0.531	1.930
4205X12X12	1.250	1-3/16-12	0.610	3/4-14	0.719	1.940
4205X12X16	1.375	1-3/16-12	0.610	1-11-1/2	0.938	2.060
4205X16X12	1.500	1-7/16-12	0.807	3/4-14	0.719	2.000
4205X16X16	1.500	1-7/16-12	0.807	1-11-1/2	0.938	2.190
4205X16X20	1.688	1-7/16-12	0.807	1-1/4-11-1/2	1.250	2.244
4205X20X12	1.750	1-11/16-12	1.024	3/4-14	0.719	2.080
4205X20X16	1.750	1-11/16-12	1.024	1-11-1/2	0.938	2.270
4205X20X20	1.750	1-11/16-12	1.024	1-1/4-11-1/2	1.250	2.300
4205X24X24	2.125	2-12	1.260	1-1/2-11-1/2	1.500	2.440

Description: **Female Swivel to Male JIC**
 WWF Part No.: **4213**
 WWF Stainless Part No.: /
 SAE: /

Air-Way: FS6504
 Parker: XHL6
 Aeroquip: FF2209T
 Gates: FFORX-MJ

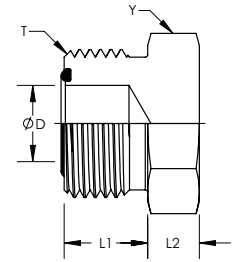


WWF	Y1 HEX	Y2 HEX	T1	D1	T2	D2	L
4213X04X04	0.688	0.625	9/16-18	0.157	7/16-20	0.172	1.574
4213X06X06	0.813	0.750	11/16-16	0.256	9/16-18	0.297	1.658
4213X08X08	0.938	0.875	13/16-16	0.354	3/4-16	0.391	2.055
4213X10X10	1.125	1.063	1-14	0.453	7/8-14	0.484	2.254
4213X12X12	1.375	1.250	1-3/16-12	0.551	1-1/16-12	0.609	2.478
4213X16X16	1.625	1.500	1-7/16-12	0.787	1-5/16-12	0.844	2.840
4213X20X20	1.875	1.875	1-11/16-12	1.024	1-5/8-12	1.078	2.887

4000 SERIES

Description: **Plug**
 WWF Part No.: **4229**
 WWF Stainless Part No.: /
 SAE: **520109**

Air-Way: FS2408
 Parker: PNLO
 Aeroquip: FF9767
 Gates: MFFOR-PLUG

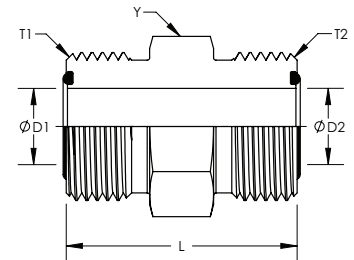


B

WWF	Y HEX	T	D	L1	L2
4229X04	0.625	9/16-18	0.177	0.394	0.256
4229X06	0.750	11/16-16	0.256	0.433	0.315
4229X08	0.875	13/16-16	0.374	0.512	0.354
4229X10	1.063	1-14	0.492	0.610	0.413
4229X12	1.250	1-3/16-12	0.610	0.669	0.413
4229X16	1.500	1-7/16-12	0.807	0.689	0.413
4229X20	1.750	1-11/16-12	1.024	0.689	0.413
4229X24	2.125	2-12	1.260	0.689	0.413

Description: **Union Straight**
 WWF Part No.: **4305**
 WWF Stainless Part No.: /
 SAE: **520101**

Air-Way: FS2403
 Parker: HLO
 Aeroquip: FF2000T
 Gates: /

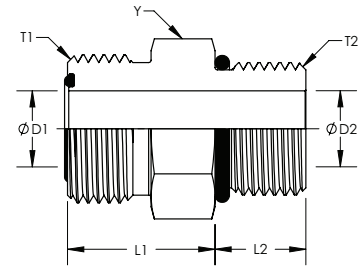


WWF	Y HEX	T1	D1	T2	D2	L
4305X04X04	0.625	9/16-18	0.177	9/16-18	0.177	1.083
4305X06X04	0.750	11/16-16	0.256	9/16-18	0.177	1.181
4305X06X06	0.750	11/16-16	0.256	11/16-16	0.256	1.220
4305X08X06	0.875	13/16-16	0.374	11/16-16	0.256	1.319
4305X08X08	0.875	13/16-16	0.374	13/16-16	0.374	1.398
4305X10X08	1.063	1-14	0.492	13/16-16	0.374	1.575
4305X10X10	1.063	1-14	0.492	1-14	0.492	1.673
4305X12X08	1.250	1-3/16-12	0.610	13/16-16	0.374	1.693
4305X12X10	1.250	1-3/16-12	0.610	1-14	0.492	1.791
4305X12X12	1.250	1-3/16-12	0.610	1-3/16-12	0.610	1.850
4305X16X12	1.500	1-7/16-12	0.807	1-3/16-12	0.610	1.929
4305X16X16	1.500	1-7/16-12	0.807	1-7/16-12	0.807	1.949
4305X20X16	1.750	1-11/16-12	1.024	1-7/16-12	0.807	2.027
4305X20X20	1.750	1-11/16-12	1.024	1-11/16-12	1.024	2.027
4305X24X20	2.125	2-12	1.260	1-11/16-12	1.024	2.087
4305X24X24	2.125	2-12	1.260	2-12	1.260	2.087

4000 SERIES

Description: **Stud Straight**
 WWF Part No.: **4314**
 WWF Stainless Part No.: **/**
 SAE: **520120**

Air-Way: FS6400
 Parker: F5OLO
 Aeroquip: FF1852T
 Gates: MFFOR-MB

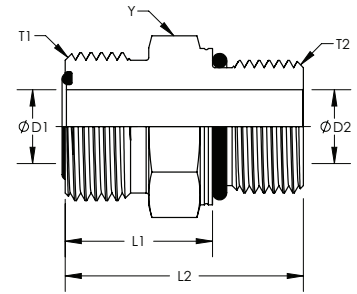


WWF	Y HEX	T1	L1	D1	T2	L2	D2
4314X04X04	0.625	9/16-18	0.709	0.177	7/16-20	0.433	0.177
4314X04X05	0.625	9/16-18	0.728	0.177	1/2-20	0.433	0.236
4314X04X06	0.750	9/16-18	0.748	0.177	9/16-18	0.472	0.295
4314X04X08	0.875	9/16-18	0.768	0.177	3/4-16	0.551	0.394
4314X06X04	0.750	11/16-16	0.905	0.256	7/16-20	0.433	0.177
4314X06X05	0.750	11/16-16	0.787	0.256	1/2-20	0.433	0.236
4314X06X06	0.750	11/16-16	0.787	0.256	9/16-18	0.472	0.295
4314X06X08	0.875	11/16-16	0.807	0.256	3/4-16	0.551	0.394
4314X06X10	1.063	11/16-16	0.886	0.256	7/8-14	0.630	0.492
4314X06X12	1.250	11/16-16	0.945	0.256	1-1/16-12	0.728	0.610
4314X08X04	0.875	13/16-16	1.004	0.374	7/16-20	0.433	0.177
4314X08X06	0.875	13/16-16	1.004	0.374	9/16-18	0.472	0.295
4314X08X08	0.875	13/16-16	0.886	0.374	3/4-16	0.551	0.394
4314X08X10	1.063	13/16-16	0.964	0.374	7/8-14	0.630	0.492
4314X08X12	1.250	13/16-16	1.024	0.374	1-1/16-12	0.728	0.610
4314X08X16	1.500	13/16-16	1.063	0.374	1-5/16-12	0.728	0.846
4314X10X06	1.063	1-14	1.161	0.492	9/16-18	0.472	0.295
4314X10X08	1.063	1-14	1.220	0.492	3/4-16	0.551	0.394
4314X10X10	1.063	1-14	1.063	0.492	7/8-14	0.630	0.492
4314X10X12	1.250	1-14	1.122	0.492	1-1/16-12	0.728	0.610
4314X10X16	1.500	1-14	1.181	0.492	1-5/16-12	0.728	0.846
4314X12X06	1.250	1-3/16-12	1.299	0.610	9/16-18	0.472	0.295
4314X12X08	1.250	1-3/16-12	1.358	0.610	3/4-16	0.551	0.394
4314X12X10	1.250	1-3/16-12	1.358	0.610	7/8-14	0.630	0.492
4314X12X12	1.250	1-3/16-12	1.191	0.610	1-1/16-12	0.728	0.610
4314X12X16	1.500	1-3/16-12	1.220	0.610	1-5/16-12	0.728	0.846
4314X16X08	1.500	1-7/16-12	1.398	0.807	3/4-16	0.551	0.394
4314X16X10	1.500	1-7/16-12	1.398	0.807	7/8-14	0.630	0.492
4314X16X12	1.500	1-7/16-12	1.417	0.807	1-1/16-12	0.728	0.610
4314X16X16	1.500	1-7/16-12	1.260	0.807	1-5/16-12	0.728	0.846
4314X16X20	1.875	1-7/16-12	1.338	0.807	1-5/8-12	0.728	1.083
4314X16X24	2.125	1-7/16-12	1.398	0.807	1-7/8-12	0.728	1.319
4314X20X16	1.875	1-11/16-12	1.555	1.024	1-5/16-12	0.728	0.846
4314X20X20	1.875	1-11/16-12	1.338	1.024	1-5/8-12	0.728	1.083
4314X20X24	2.125	1-11/16-12	1.398	1.024	1-7/8-12	0.728	1.319
4314X24X20	2.125	2-12	1.614	1.260	1-5/8-12	0.728	1.083
4314X24X24	2.125	2-12	1.398	1.260	1-7/8-12	0.728	1.319

4000 SERIES

Description: **Stud Straight - Metric**
 WWF Part No.: **4314M**
 WWF Stainless Part No.: /
 SAE: **52M0187**

Air-Way: FS7640
 Parker: F87OMLO
 Aeroquip: /
 Gates: /



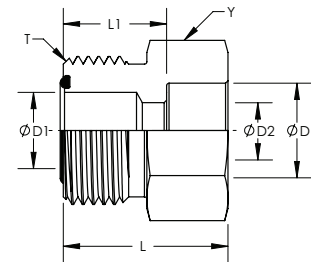
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WWF	Y HEX	T1	L1	D1	T2	L2	D2
4314X04XM12	0.669	9/16-18	0.688	0.177	M12X1.5	1.122	0.157
4314X04XM14	0.748	9/16-18	0.728	0.177	M14X1.5	1.161	0.236
4314X06XM12	0.748	11/16-16	0.826	0.256	M12X1.5	1.260	0.157
4314X06XM14	0.748	11/16-16	0.826	0.256	M14X1.5	1.260	0.236
4314X06XM16	0.866	11/16-16	0.826	0.256	M16X1.5	1.318	0.275
4314X06XM18	0.944	11/16-16	0.866	0.256	M18X1.5	1.417	0.354
4314X06XM22	1.063	11/16-16	0.886	0.256	M22X1.5	1.476	0.472
4314X08XM14	0.866	13/16-16	0.944	0.374	M14X1.5	1.378	0.236
4314X08XM16	0.866	13/16-16	0.944	0.374	M16X1.5	1.438	0.275
4314X08XM18	0.944	13/16-16	0.944	0.374	M18X1.5	1.496	0.354
4314X08XM22	1.063	13/16-16	0.964	0.374	M22X1.5	1.555	0.472
4314X08XM27	1.260	13/16-16	1.024	0.374	M27X2.0	1.752	0.590
4314X10XM16	1.063	1-14	1.063	0.492	M16X1.5	1.555	0.275
4314X10XM18	1.063	1-14	1.063	0.492	M18X1.5	1.614	0.354
4314X10XM22	1.063	1-14	1.063	0.492	M22X1.5	1.653	0.472
4314X10XM27	1.260	1-14	1.122	0.492	M27X2.0	1.850	0.590
4314X12XM22	1.260	1-3/16-12	1.181	0.610	M22X1.5	1.771	0.472
4314X12XM27	1.260	1-3/16-12	1.181	0.610	M27X2.0	1.909	0.590
4314X12XM33	1.614	1-3/16-12	1.299	0.610	M33X2.0	2.027	0.787
4314X16XM27	1.614	1-7/16-12	1.318	0.807	M27X2.0	2.047	0.590
4314X16XM33	1.614	1-7/16-12	1.318	0.807	M33X2.0	2.047	0.787
4314X16XM42	1.969	1-7/16-12	1.417	0.807	M42X2.0	2.145	1.024
4314X20XM33	1.811	1-11/16-12	1.397	1.024	M33X2.0	2.126	0.787
4314X20XM42	1.969	1-11/16-12	1.397	1.024	M42X2.0	2.145	1.024
4314X24XM42	1.969	2-12	1.397	1.260	M42X2.0	2.145	1.024
4314X24XM48	2.165	2-12	1.397	1.260	M48X2.0	2.244	1.260

4000 SERIES

Description: **Braze-On Straight**
 WWF Part No.: **4315**
 WWF Stainless Part No.: /
 SAE: **520104**

Air-Way: FS0403
 Parker: LOHB3
 Aeroquip: FF1851T
 Gates: /

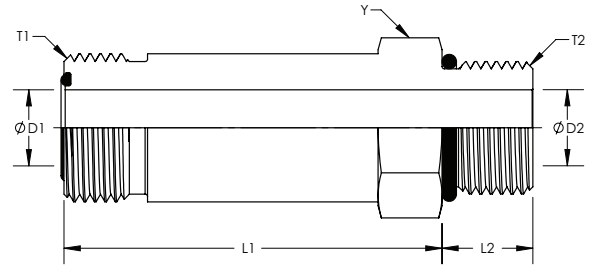


WWF	Y HEX	T	D	D1	D2	L1	L
4315X04X04	0.625	9/16-18	0.256	0.177	0.177	0.531	0.866
4315X04X05	0.625	9/16-18	0.318	0.177	0.177	0.531	0.866
4315X04X06	0.625	9/16-18	0.381	0.177	0.177	0.531	0.866
4315X06X04	0.750	11/16-16	0.256	0.177	0.177	0.571	0.905
4315X06X06	0.750	11/16-16	0.381	0.256	0.256	0.571	0.905
4315X06X08	0.750	11/16-16	0.506	0.256	0.256	0.571	0.905
4315X08X06	0.875	13/16-16	0.381	0.256	0.256	0.630	0.964
4315X08X08	0.875	13/16-16	0.506	0.374	0.374	0.630	0.964
4315X08X10	0.875	13/16-16	0.631	0.374	0.374	0.630	0.964
4315X08X12	1.063	13/16-16	0.757	0.374	0.374	0.630	1.130
4315X10X10	1.063	1-14	0.631	0.492	0.492	0.748	1.102
4315X10X12	1.063	1-14	0.757	0.492	0.492	0.748	1.240
4315X12X10	1.250	1-3/16-12	0.631	0.610	0.492	0.827	1.181
4315X12X12	1.250	1-3/16-12	0.757	0.610	0.610	0.827	1.319
4315X12X14	1.375	1-3/16-12	0.882	0.610	0.610	0.827	1.322
4315X12X16	1.250	1-3/16-12	1.007	0.610	0.610	0.827	1.378
4315X16X12	1.500	1-7/16-12	0.757	0.807	0.610	0.964	1.457
4315X16X16	1.500	1-7/16-12	1.007	0.807	0.807	0.964	1.516
4315X16X20	1.750	1-7/16-12	1.258	0.807	0.807	0.964	1.516
4315X20X16	1.750	1-11/16-12	1.007	1.024	0.807	0.964	1.516
4315X20X20	1.750	1-11/16-12	1.258	1.024	1.024	0.964	1.516
4315X20X24	2.125	1-11/16-12	1.508	1.024	1.024	0.964	1.516
4315X24X24	2.125	2-12	1.508	1.260	1.260	0.964	1.516

4000 SERIES

Description: **Stud Straight Long**
 WWF Part No.: **4316**
 WWF Stainless Part No.: /
 SAE: **521720**

Air-Way: FS6400-L
 Parker: FF5OLO
 Aeroquip: FF1854T
 Gates: MFFOR-MBL

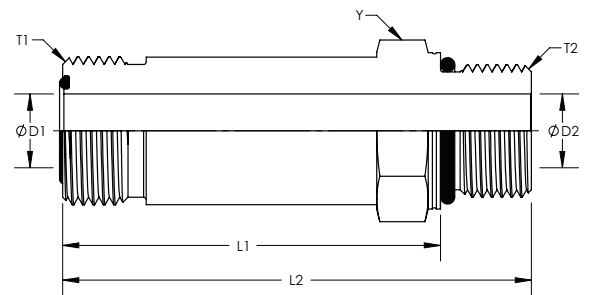


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WWF	Y HEX	T1	L1	D1	T2	L2	D2
4316X04X04	0.625	9/16-18	1.634	0.177	7/16-20	0.433	0.177
4316X06X04	0.750	11/16-16	1.791	0.256	7/16-20	0.433	0.177
4316X06X06	0.750	11/16-16	1.791	0.256	9/16-18	0.472	0.295
4316X06X08	0.875	11/16-16	2.047	0.256	3/4-16	0.551	0.394
4316X08X08	0.875	13/16-16	2.126	0.374	3/4-16	0.551	0.394
4316X08X12	1.250	13/16-16	2.854	0.374	1-1/16-12	0.728	0.610
4316X10X10	1.063	1-14	2.500	0.492	7/8-14	0.630	0.492
4316X10X12	1.250	1-14	2.972	0.492	1-1/16-12	0.728	0.610
4316X12X10	1.250	1-3/16-12	3.031	0.610	7/8-14	0.630	0.492
4316X12X12	1.250	1-3/16-12	3.031	0.610	1-1/16-12	0.728	0.610
4316X12X16	1.500	1-3/16-12	3.386	0.610	1-5/16-12	0.728	0.846
4316X16X12	1.500	1-7/16-12	3.405	0.807	1-1/16-12	0.728	0.610
4316X16X16	1.500	1-7/16-12	3.405	0.807	1-5/16-12	0.728	0.846

Description: **Stud Straight Long - Metric**
 WWF Part No.: **4316M**
 WWF Stainless Part No.: /
 SAE: **52M1787**

Air-Way: FS7640-L
 Parker: /
 Aeroquip: /
 Gates: /

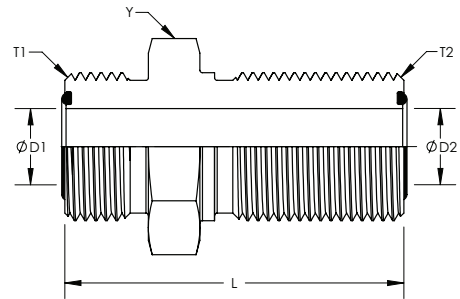


WWF	Y HEX	T1	L1	D1	T2	L2	D2
4316X04XM12	0.669	9/16-18	1.634	0.177	M12X1.5	2.067	0.157
4316X06XM12	0.748	11/16-16	1.791	0.256	M12X1.5	2.224	0.157
4316X06XM16	0.866	11/16-16	1.791	0.256	M16X1.5	2.283	0.276
4316X10XM22	1.063	1-14	2.500	0.492	M22X1.5	3.090	0.472
4316X12XM27	1.260	1-3/16-12	3.031	0.610	M27X2.0	3.760	0.590

4000 SERIES

Description: **Bulkhead Straight**
 WWF Part No.: **4325**
 WWF Stainless Part No.: /
 SAE: **520601**

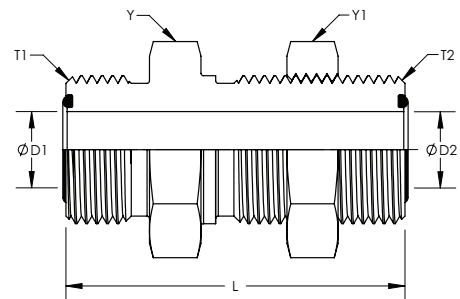
Air-Way: FS2700
 Parker: WLO
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	D1	T2	D2	L
4325X04X04	0.813	9/16-18	0.177	9/16-18	0.177	1.890
4325X06X06	1.000	11/16-16	0.256	11/16-16	0.256	2.087
4325X06X08	1.125	11/16-16	0.256	13/16-16	0.374	2.224
4325X08X08	1.125	13/16-16	0.374	13/16-16	0.374	2.303
4325X08X10	1.313	13/16-16	0.374	1-14	0.492	2.520
4325X10X08	1.313	1-14	0.492	13/16-16	0.374	2.461
4325X10X10	1.313	1-14	0.492	1-14	0.492	2.618
4325X12X12	1.500	1-3/16-12	0.610	1-3/16-12	0.610	2.716
4325X16X12	1.750	1-7/16-12	0.807	1-3/16-12	0.610	2.736
4325X16X16	1.750	1-7/16-12	0.807	1-7/16-12	0.807	2.756
4325X20X20	2.000	1-11/16-12	1.024	1-11/16-12	1.024	2.756
4325X24X24	2.375	2-12	1.260	2-12	1.260	2.756

Description: **Bulkhead Straight With Locknut**
 WWF Part No.: **4325LN**
 WWF Stainless Part No.: /
 SAE: **520601**

Air-Way: FS2700-LN
 Parker: WF5OLO-WLN
 Aeroquip: FF1994T
 Gates: /

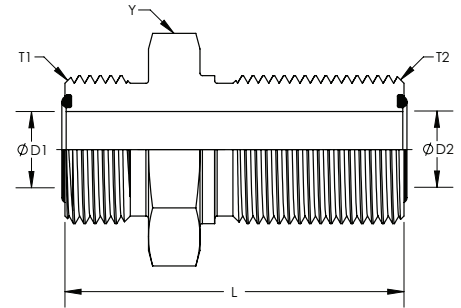


WWF	Y HEX	Y1 HEX	T1	D1	T2	D2	L
4325X04X04LN	0.813	0.813	9/16-18	0.177	9/16-18	0.177	1.890
4325X06X06LN	1.000	1.000	11/16-16	0.256	11/16-16	0.256	2.087
4325X08X08LN	1.125	1.125	13/16-16	0.374	13/16-16	0.374	2.303
4325X10X10LN	1.313	1.313	1-14	0.492	1-14	0.492	2.618
4325X12X12LN	1.500	1.500	1-3/16-12	0.610	1-3/16-12	0.610	2.716
4325X16X16LN	1.750	1.750	1-7/16-12	0.807	1-7/16-12	0.807	2.756
4325X20X20LN	2.000	2.000	1-11/16-12	1.024	1-11/16-12	1.024	2.756
4325X24X24LN	2.375	2.375	2-12	1.260	2-12	1.260	2.756

4000 SERIES

Description: **Bulkhead Straight Metric Hex**
 WWF Part No.: **4325MH**
 WWF Stainless Part No.: /
 SAE: **52M0601**

Air-Way: FS2700-MH
 Parker: WMLO
 Aeroquip: /
 Gates: /

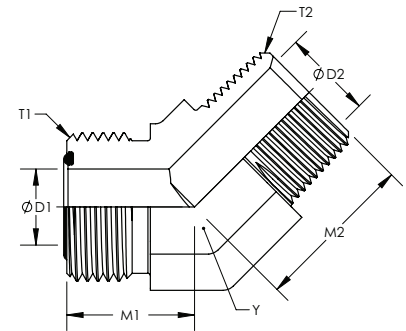


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WWF	Y HEX	T1	D1	T2	D2	L
4325X04X04MH	0.866	9/16-18	0.177	9/16-18	0.177	1.890
4325X06X06MH	1.063	11/16-16	0.256	11/16-16	0.256	2.087
4325X08X08MH	1.181	13/16-16	0.374	13/16-16	0.374	2.303
4325X10X10MH	1.417	1-14	0.492	1-14	0.492	2.618
4325X12X12MH	1.614	1-3/16-12	0.610	1-3/16-12	0.610	2.716
4325X16X16MH	1.811	1-7/16-12	0.807	1-7/16-12	0.807	2.756
4325X20X20MH	1.969	1-11/16-12	1.024	1-11/16-12	1.024	2.756

Description: **45° Male Elbow**
 WWF Part No.: **4355**
 WWF Stainless Part No.: /
 SAE: /

Air-Way: FS2503
 Parker: VLO
 Aeroquip: FF2093T
 Gates: /

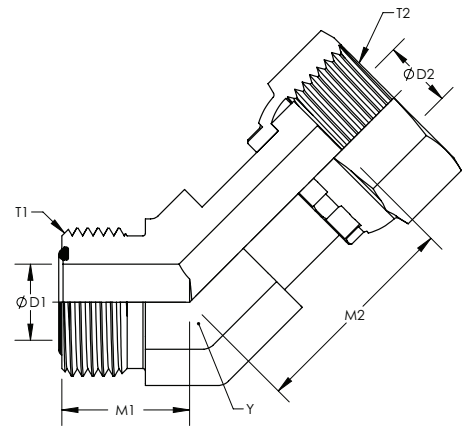


WWF	Y HEX	T1	M1	D1	T2	M2	D2
4355X04X02	0.563	9/16-18	0.630	0.177	1/8-27	0.640	0.188
4355X04X04	0.563	9/16-18	0.630	0.177	1/4-18	0.860	0.281
4355X06X04	0.669	11/16-16	0.748	0.256	1/4-18	0.860	0.281
4355X06X06	0.669	11/16-16	0.748	0.256	3/8-18	0.950	0.406
4355X06X08	0.750	11/16-16	0.748	0.256	1/2-14	1.170	0.531
4355X08X06	0.750	13/16-16	0.800	0.374	3/8-18	0.950	0.406
4355X08X08	0.875	13/16-16	0.860	0.374	1/2-14	1.170	0.531
4355X08X12	1.063	13/16-16	0.860	0.374	3/4-14	1.300	0.719
4355X10X08	1.063	1-14	0.925	0.492	1/2-14	1.170	0.531
4355X12X08	1.188	1-3/16-12	1.024	0.610	1/2-14	1.170	0.531
4355X12X12	1.188	1-3/16-12	1.024	0.610	3/4-14	1.300	0.719
4355X16X16	1.438	1-7/16-12	1.181	0.807	1-11-1/2	1.480	0.938
4355X20X20	1.625	1-11/16-12	1.260	1.024	1-1/4-11-1/2	1.670	1.250

4000 SERIES

Description: **45° Swivel Elbow**
 WWF Part No.: **4356**
 WWF Stainless Part No.: /
 SAE: /

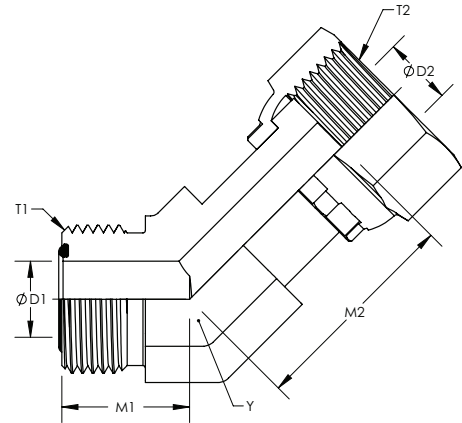
Air-Way: FS6502
 Parker: V6LO
 Aeroquip: FF2133T
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2
4356X04X04	0.563	9/16-18	0.630	0.177	9/16-18	0.990	0.157
4356X06X06	0.669	11/16-16	0.748	0.256	11/16-16	1.120	0.256
4356X08X08	0.750	13/16-16	0.807	0.374	13/16-16	1.320	0.354
4356X10X10	1.063	1-14	0.925	0.492	1-14	1.440	0.453
4356X12X12	1.188	1-3/16-12	1.024	0.610	1-3/16-12	1.730	0.551
4356X16X16	1.438	1-7/16-12	1.181	0.807	1-7/16-12	1.870	0.787

Description: **45° Swivel Elbow Metric Hex**
 WWF Part No.: **4356MH**
 WWF Stainless Part No.: /
 SAE: /

Air-Way: FS6502-MH
 Parker: /
 Aeroquip: /
 Gates: /

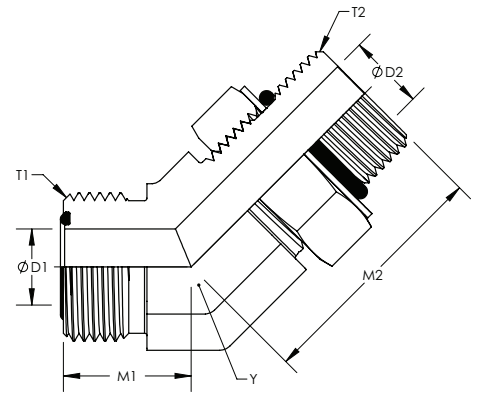


WWF	Y HEX	T1	M1	D1	T2	M2	D2
4356X06X06MH	0.669	11/16-16	0.748	0.256	11/16-16	1.102	0.256

4000 SERIES

Description: **45° Adjustable Stud Elbow**
 WWF Part No.: **4365**
 WWF Stainless Part No.: /
 SAE: **520320**

Air-Way: FS6802
 Parker: V5OLO
 Aeroquip: FF2068T
 Gates: MFFOR-MB45



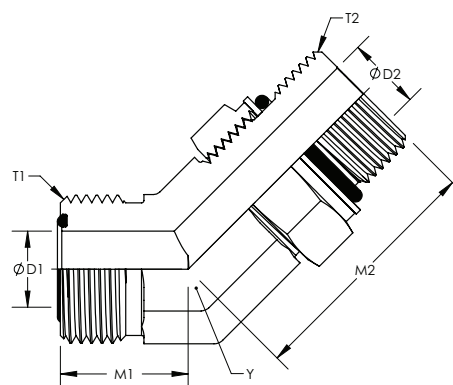
B

WWF	Y HEX	T1	M1	D1	T2	M2	D2
4365X04X03	0.563	9/16-18	0.630	0.177	3/8-24	1.102	0.118
4365X04X04	0.563	9/16-18	0.630	0.177	7/16-20	1.181	0.177
4365X04X06	0.669	9/16-18	0.689	0.177	9/16-18	1.300	0.295
4365X06X04	0.669	11/16-16	0.748	0.256	7/16-20	1.220	0.177
4365X06X06	0.669	11/16-16	0.748	0.256	9/16-18	1.300	0.295
4365X06X08	0.750	11/16-16	0.748	0.256	3/4-16	1.438	0.394
4365X06X10	1.063	11/16-16	0.787	0.256	7/8-14	1.752	0.492
4365X08X06	0.750	13/16-16	0.807	0.374	9/16-18	1.280	0.295
4365X08X08	0.750	13/16-16	0.807	0.374	3/4-16	1.438	0.394
4365X08X10	1.063	13/16-16	0.846	0.374	7/8-14	1.752	0.492
4365X08X12	1.188	13/16-16	0.886	0.374	1-1/16-12	1.969	0.610
4365X10X08	1.063	1-14	0.925	0.492	3/4-16	1.575	0.394
4365X10X10	1.063	1-14	0.925	0.492	7/8-14	1.752	0.492
4365X10X12	1.188	1-14	0.964	0.492	1-1/16-12	1.969	0.610
4365X12X08	1.188	1-3/16-12	1.024	0.610	3/4-16	1.634	0.394
4365X12X10	1.188	1-3/16-12	1.024	0.610	7/8-14	1.811	0.492
4365X12X12	1.188	1-3/16-12	1.024	0.610	1-1/16-12	1.969	0.610
4365X12X16	1.438	1-3/16-12	1.161	0.610	1-5/16-12	2.067	0.846
4365X16X12	1.438	1-7/16-12	1.181	0.807	1-1/16-12	2.028	0.610
4365X16X16	1.438	1-7/16-12	1.181	0.807	1-5/16-12	2.067	0.846
4365X16X20	1.625	1-7/16-12	1.260	0.807	1-5/8-12	2.106	1.082
4365X20X16	1.625	1-11/16-12	1.260	1.024	1-5/16-12	2.106	0.846
4365X20X20	1.625	1-11/16-12	1.260	1.024	1-5/8-12	2.106	1.082
4365X24X24	1.875	2-12	1.457	1.260	1-7/8-12	2.106	1.319

4000 SERIES

Description: **45° Adjustable Stud Elbow - Metric**
 WWF Part No.: **4365M**
 WWF Stainless Part No.: /
 SAE: **52M0387**

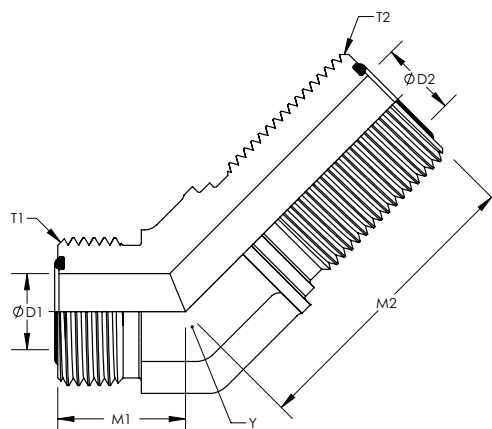
Air-Way: FS7300
 Parker: V87OMLO
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2
4365X04XM14	0.669	9/16-18	0.689	0.177	M14X1.5	1.240	0.236
4365X06XM14	0.669	11/16-16	0.748	0.256	M14X1.5	1.240	0.236
4365X06XM16	0.669	11/16-16	0.748	0.256	M16X1.5	1.319	0.276
4365X06XM18	0.748	11/16-16	0.748	0.256	M18X1.5	1.457	0.354
4365X08XM18	0.748	13/16-16	0.807	0.374	M18X1.5	1.457	0.354
4365X10XM22	0.945	1-14	0.925	0.492	M22X1.5	1.732	0.472
4365X16XM33	1.417	1-7/16-12	1.181	0.807	M33X2.0	2.067	0.787
4365X20XM42	1.614	1-11/16-12	1.260	1.024	M42X2.0	2.126	1.024

Description: **45° Bulkhead Elbow**
 WWF Part No.: **4375**
 WWF Stainless Part No.: /
 SAE: **520801**

Air-Way: FS2702
 Parker: WNLO
 Aeroquip: /
 Gates: /

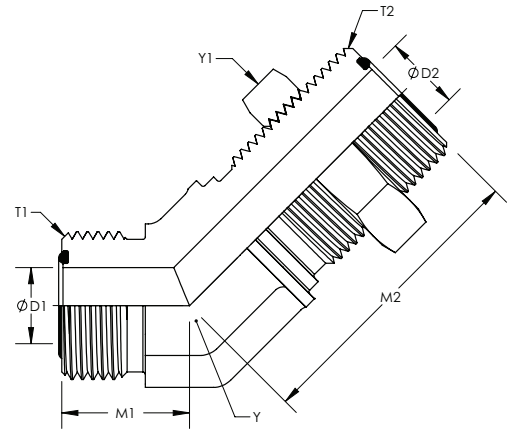


WWF	Y HEX	T1	M1	D1	T2	M2	D2
4375X04X04	0.563	9/16-18	0.630	0.177	9/16-18	1.732	0.177
4375X06X06	0.669	11/16-16	0.748	0.256	11/16-16	1.909	0.256
4375X08X08	0.750	13/16-16	0.807	0.374	13/16-16	2.008	0.374
4375X10X08	1.063	1-14	0.925	0.492	13/16-16	2.126	0.374
4375X10X10	1.063	1-14	0.925	0.492	1-14	2.224	0.492
4375X12X12	1.188	1-3/16-12	1.024	0.610	1-3/16-12	2.382	0.610
4375X16X16	1.438	1-7/16-12	1.181	0.807	1-7/16-12	2.560	0.807
4375X20X20	1.625	1-11/16-12	1.260	1.024	1-11/16-12	2.638	1.024
4375X24X24	1.875	2-12	1.457	1.260	2-12	2.638	1.260

4000 SERIES

Description: **45° Bulkhead Elbow With Locknut**
 WWF Part No.: **4375LN**
 WWF Stainless Part No.: /
 SAE: **520801**

Air-Way: FS2702-LN
 Parker: WNLO-WLN
 Aeroquip: FF2144T
 Gates: /

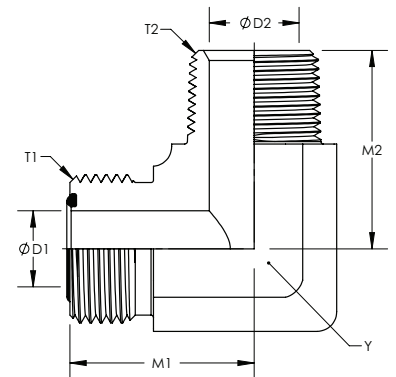


B

WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2
4375X04X04LN	0.563	0.813	9/16-18	0.630	0.177	9/16-18	1.732	0.177
4375X06X06LN	0.669	1.000	11/16-16	0.748	0.256	11/16-16	1.909	0.256
4375X08X08LN	0.750	1.125	13/16-16	0.807	0.374	13/16-16	2.008	0.374
4375X10X08LN	1.063	1.125	1-14	0.925	0.492	13/16-16	2.126	0.374
4375X10X10LN	1.063	1.313	1-14	0.925	0.492	1-14	2.224	0.492
4375X12X12LN	1.188	1.500	1-3/16-12	1.024	0.610	1-3/16-12	2.382	0.610
4375X16X16LN	1.438	1.750	1-7/16-12	1.181	0.807	1-7/16-12	2.560	0.807
4375X20X20LN	1.625	2.000	1-11/16-12	1.260	1.024	1-11/16-12	2.638	1.024
4375X24X24LN	1.875	2.375	2-12	1.457	1.260	2-12	2.638	1.260

Description: **90° Male Elbow**
 WWF Part No.: **4405**
 WWF Stainless Part No.: /
 SAE: /

Air-Way: FS2501
 Parker: CLO
 Aeroquip: FF2032T
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2
4405X04X02	0.563	9/16-18	0.846	0.177	1/8-27	0.800	0.188
4405X04X04	0.563	9/16-18	0.846	0.177	1/4-18	1.120	0.281
4405X04X06	0.750	9/16-18	0.972	0.177	3/8-18	1.220	0.406
4405X04X08	0.875	9/16-18	1.070	0.177	1/2-14	1.470	0.531
4405X06X04	0.669	11/16-16	0.984	0.256	1/4-18	1.090	0.281
4405X06X06	0.750	11/16-16	0.984	0.256	3/8-18	1.220	0.406
4405X06X08	0.875	11/16-16	1.150	0.256	1/2-14	1.470	0.531
4405X08X04	0.750	13/16-16	1.102	0.374	1/4-18	1.220	0.281
4405X08X06	0.750	13/16-16	1.102	0.374	3/8-18	1.220	0.406
4405X08X08	0.875	13/16-16	1.102	0.374	1/2-14	1.470	0.531

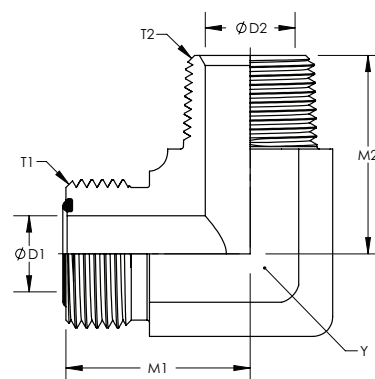
Continued on page 68

4000 SERIES

Continued from page 67

Description: **90° Male Elbow**
 WWF Part No.: **4405**
 WWF Stainless Part No.: /
 SAE: /

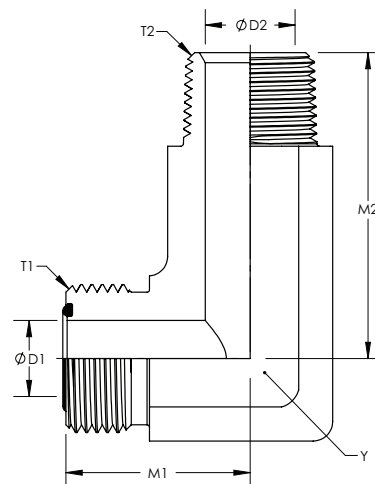
Air-Way: FS2501
 Parker: CLO
 Aeroquip: FF2032T
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2
4405X08X12	1.063	13/16-16	1.327	0.374	3/4-14	1.590	0.719
4405X10X08	1.063	1-14	1.319	0.492	1/2-14	1.470	0.531
4405X10X12	1.188	1-14	1.410	0.492	3/4-14	1.590	0.719
4405X10X16	1.313	1-14	1.555	0.492	1-11-1/2	1.970	0.938
4405X12X08	1.188	1-3/16-12	1.476	0.610	1/2-14	1.590	0.531
4405X12X12	1.188	1-3/16-12	1.476	0.610	3/4-14	1.590	0.719
4405X12X16	1.313	1-3/16-12	1.620	0.610	1-11-1/2	1.970	0.938
4405X16X12	1.438	1-7/16-12	1.634	0.807	3/4-14	1.780	0.719
4405X16X16	1.438	1-7/16-12	1.634	0.807	1-11-1/2	1.970	0.938
4405X20X16	1.625	1-11/16-12	1.752	1.024	1-11-1/2	2.350	0.938
4405X20X20	1.625	1-11/16-12	1.752	1.024	1-1/4-11-1/2	2.380	1.250

Description: **90° Male Elbow Long**
 WWF Part No.: **4405L**
 WWF Stainless Part No.: /
 SAE: /

Air-Way: FS2501-L
 Parker: /
 Aeroquip: /
 Gates: /

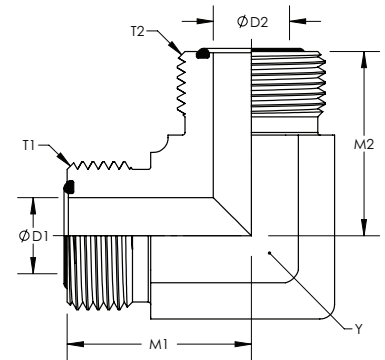


WWF	Y HEX	T1	M1	D1	T2	M2	D2
4405X08X08L	0.875	13/16-16	1.102	0.374	1/2-14	1.820	0.531
4405X12X12L	1.188	1-3/16-12	1.476	0.610	3/4-14	2.440	0.719

4000 SERIES

Description: **90° Union Elbow**
 WWF Part No.: **4505**
 WWF Stainless Part No.: /
 SAE: **520201**

Air-Way: FS2500
 Parker: ELO
 Aeroquip: FF2035T
 Gates: /

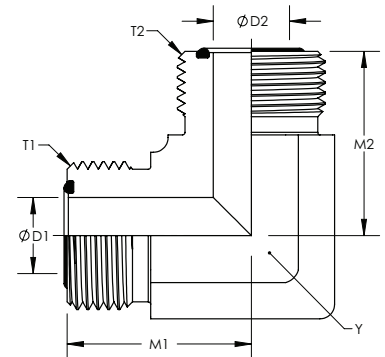


B

WWF	Y HEX	T1	M1	D1	T2	M2	D2
4505X04X04	0.563	9/16-18	0.846	0.177	9/16-18	0.846	0.177
4505X06X04	0.669	11/16-16	0.984	0.256	9/16-18	0.925	0.177
4505X06X06	0.669	11/16-16	0.984	0.256	11/16-16	0.984	0.256
4505X08X08	0.750	13/16-16	1.102	0.374	13/16-16	1.102	0.374
4505X10X10	1.063	1-14	1.319	0.492	1-14	1.319	0.492
4505X12X08	1.188	1-3/16-12	1.476	0.610	13/16-16	1.338	0.374
4505X12X12	1.188	1-3/16-12	1.476	0.610	1-3/16-12	1.476	0.610
4505X16X16	1.438	1-7/16-12	1.634	0.807	1-7/16-12	1.634	0.807
4505X20X20	1.625	1-11/16-12	1.752	1.024	1-11/16-12	1.752	1.024
4505X24X24	1.875	2-12	1.929	1.260	2-12	1.929	1.260

Description: **90° Union Elbow Metric Hex**
 WWF Part No.: **4505MH**
 WWF Stainless Part No.: /
 SAE: **52M0201**

Air-Way: FS2500-MH
 Parker: EMLO
 Aeroquip: /
 Gates: /

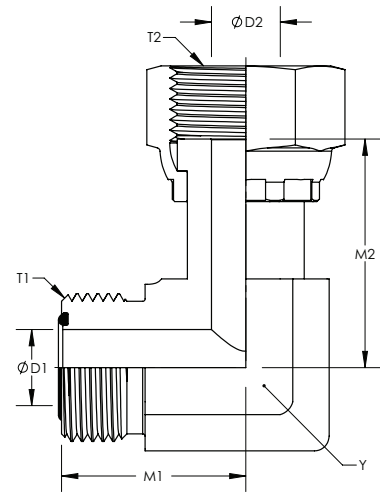


WWF	Y HEX	T1	M1	D1	T2	M2	D2
4505X10X10MH	0.945	1-14	1.319	0.492	1-14	1.319	0.492

4000 SERIES

Description: **90° Swivel Elbow**
 WWF Part No.: **4506**
 WWF Stainless Part No.: /
 SAE: **520221**

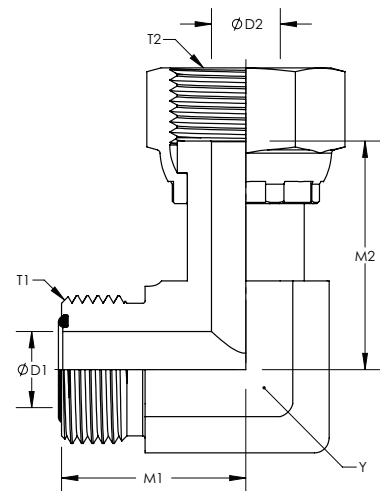
Air-Way: FS6500
 Parker: C6LO
 Aeroquip: FF2098T
 Gates: MFFOR-FFORX90



WWF	Y HEX	T1	M1	D1	T2	M2	D2
4506X04X04	0.563	9/16-18	0.846	0.177	9/16-18	1.043	0.157
4506X04X06	0.669	9/16-18	0.925	0.177	11/16-16	1.142	0.256
4506X06X06	0.669	11/16-16	0.984	0.256	11/16-16	1.142	0.256
4506X08X06	0.750	13/16-16	1.102	0.374	11/16-16	1.378	0.256
4506X08X08	0.750	13/16-16	1.102	0.374	13/16-16	1.496	0.354
4506X08X12	1.188	13/16-16	1.338	0.374	1-3/16-16	1.831	0.551
4506X10X10	1.063	1-14	1.319	0.492	1-14	1.614	0.453
4506X12X12	1.188	1-3/16-12	1.476	0.610	1-3/16-12	1.831	0.551
4506X16X16	1.438	1-7/16-12	1.634	0.807	1-7/16-12	2.106	0.787
4506X20X20	1.625	1-11/16-12	1.752	1.024	1-11/16-12	2.283	1.024
4506X24X20	1.875	2-12	1.929	1.260	1-11/16-12	2.401	1.024
4506X24X24	1.875	2-12	1.929	1.260	2-12	2.401	1.260

Description: **90° Swivel Elbow Metric Hex**
 WWF Part No.: **4506MH**
 WWF Stainless Part No.: /
 SAE: **52M0221**

Air-Way: FS6500-MH
 Parker: C6MLO
 Aeroquip: /
 Gates: /

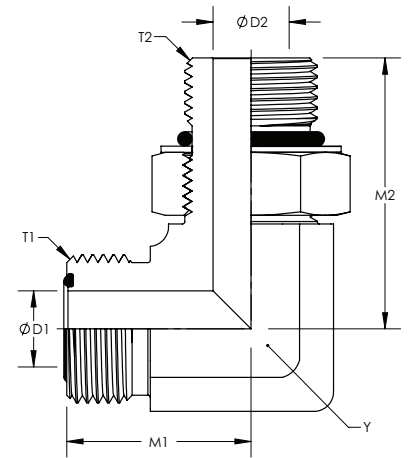


WWF	Y HEX	T1	M1	D1	T2	M2	D2
4506X04X04MH	0.551	9/16-18	0.846	0.177	9/16-18	1.043	0.157
4506X06X06MH	0.669	11/16-16	0.984	0.256	11/16-16	1.142	0.256
4506X10X10MH	0.945	1-14	1.319	0.492	1-14	1.614	0.453
4506X12X12MH	1.063	1-3/16-12	1.476	0.610	1-3/16-12	1.831	0.551
4506X16X16MH	1.417	1-7/16-12	1.634	0.807	1-7/16-12	2.106	0.787

4000 SERIES

Description: **90° Adjustable Stud Elbow**
 WWF Part No.: **4515**
 WWF Stainless Part No.: **/**
 SAE: **520220**

Air-Way: **FS6801**
 Parker: **C5OLO**
 Aeroquip: **FF1868T**
 Gates: **MFFOR-MB90**



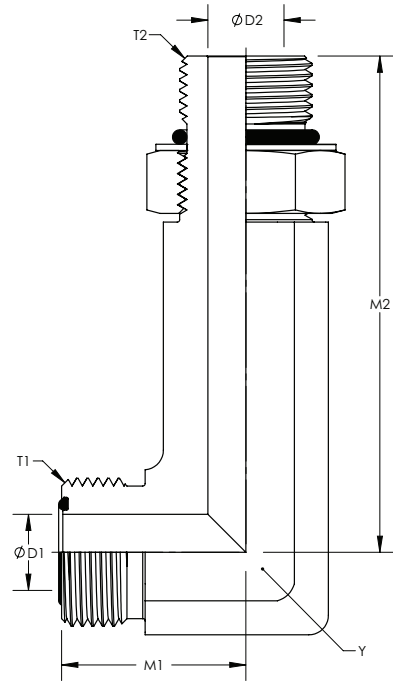
WWF	Y HEX	T1	M1	D1	T2	M2	D2
4515X04X04	0.563	9/16-18	0.846	0.177	7/16-20	1.299	0.177
4515X04X05	0.669	9/16-18	0.925	0.177	1/2-20	1.398	0.236
4515X04X06	0.669	9/16-18	0.925	0.177	9/16-18	1.457	0.295
4515X04X08	0.750	9/16-18	0.984	0.177	3/4-16	1.594	0.394
4515X06X04	0.669	11/16-16	0.984	0.256	7/16-20	1.378	0.177
4515X06X05	0.669	11/16-16	0.984	0.256	1/2-20	1.378	0.236
4515X06X06	0.669	11/16-16	0.984	0.256	9/16-18	1.457	0.295
4515X06X08	0.750	11/16-16	1.043	0.256	3/4-16	1.594	0.394
4515X06X10	1.063	11/16-16	1.181	0.256	7/8-14	1.969	0.492
4515X06X12	1.188	11/16-16	1.280	0.256	1-1/16-12	2.165	0.610
4515X06X16	1.438	11/16-16	1.417	0.256	1-5/16-12	2.342	0.846
4515X08X04	0.750	13/16-16	1.102	0.374	7/16-20	1.358	0.177
4515X08X06	0.750	13/16-16	1.102	0.374	9/16-18	1.438	0.295
4515X08X08	0.750	13/16-16	1.102	0.374	3/4-16	1.594	0.394
4515X08X10	1.063	13/16-16	1.240	0.374	7/8-14	1.969	0.492
4515X08X12	1.188	13/16-16	1.338	0.374	1-1/16-12	2.165	0.610
4515X08X16	1.438	13/16-16	1.476	0.374	1-5/16-12	2.342	0.846
4515X10X08	1.063	1-14	1.319	0.492	3/4-16	1.811	0.394
4515X10X10	1.063	1-14	1.319	0.492	7/8-14	1.969	0.492
4515X10X12	1.188	1-14	1.417	0.492	1-1/16-12	2.165	0.610
4515X12X08	1.188	1-3/16-12	1.476	0.610	3/4-16	1.831	0.394
4515X12X10	1.188	1-3/16-12	1.476	0.610	7/8-14	2.008	0.492
4515X12X12	1.188	1-3/16-12	1.476	0.610	1-1/16-12	2.165	0.610
4515X12X16	1.438	1-3/16-12	1.614	0.610	1-5/16-12	2.342	0.846
4515X16X12	1.438	1-7/16-12	1.634	0.807	1-1/16-12	2.303	0.610
4515X16X14	1.438	1-7/16-12	1.634	0.807	1-3/16-12	2.303	0.669
4515X16X16	1.438	1-7/16-12	1.634	0.807	1-5/16-12	2.342	0.846
4515X16X20	1.625	1-7/16-12	1.752	0.807	1-5/8-12	2.441	1.083
4515X20X12	1.625	1-11/16-12	1.752	1.024	1-1/16-12	2.402	0.610
4515X20X16	1.625	1-11/16-12	1.752	1.024	1-5/16-12	2.441	0.846
4515X20X20	1.625	1-11/16-12	1.752	1.024	1-5/8-12	2.441	1.083
4515X20X24	1.875	1-11/16-12	1.929	1.024	1-7/8-12	2.598	1.319
4515X24X20	1.875	2-12	1.929	1.260	1-5/8-12	2.598	1.083
4515X24X24	1.875	2-12	1.929	1.260	1-7/8-12	2.598	1.319

4000 SERIES

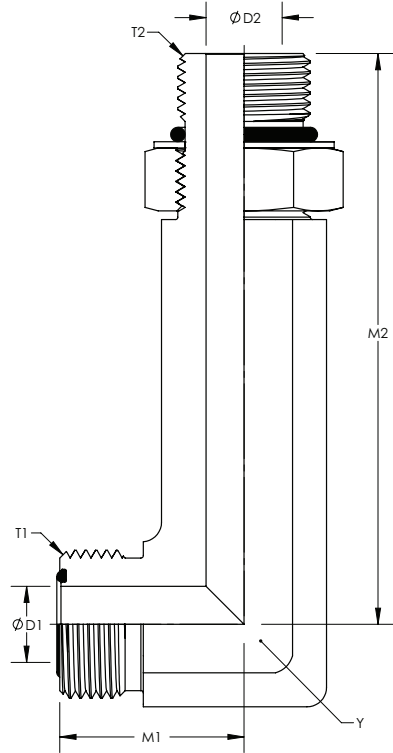
B

Description: **90° Adjustable Stud Elbow Long**
 WWF Part No.: **4515L**
 WWF Stainless Part No.: /
 SAE: **521520**

Air-Way: FS6801-L
 Parker: CC5OLO
 Aeroquip: FF2227T
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2
4515X04X04L	0.563	9/16-18	0.846	0.177	7/16-20	2.224	0.177
4515X06X06L	0.669	11/16-16	0.984	0.256	9/16-18	2.618	0.295
4515X08X08L	0.750	13/16-16	1.102	0.374	3/4-16	2.953	0.394
4515X10X10L	1.063	1-14	1.319	0.492	7/8-14	3.504	0.492
4515X12X12L	1.188	1-3/16-12	1.476	0.610	1-1/16-12	3.976	0.610
4515X16X16L	1.438	1-7/16-12	1.634	0.807	1-5/16-12	4.508	0.846
4515X20X20L	1.625	1-11/16-12	1.752	1.024	1-5/8-12	4.980	1.083



Description: **90° Adjustable Stud Elbow Extra Long**
 WWF Part No.: **4515LL**
 WWF Stainless Part No.: /
 SAE: /

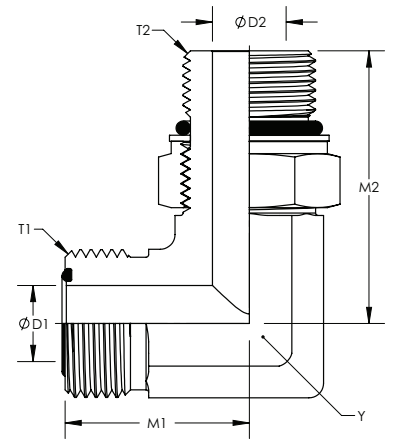
Air-Way: FS6801-LL
 Parker: /
 Aeroquip: /
 Gates: /

WWF	Y HEX	T1	M1	D1	T2	M2	D2
4515X10X10LL	1.063	1-14	1.319	0.492	7/8-14	3.990	0.492

4000 SERIES

Description: **90° Adjustable Stud Elbow - Metric**
 WWF Part No.: **4515M**
 WWF Stainless Part No.: /
 SAE: **52M0287**

Air-Way: FS7205
 Parker: C87OMLO
 Aeroquip: /
 Gates: /

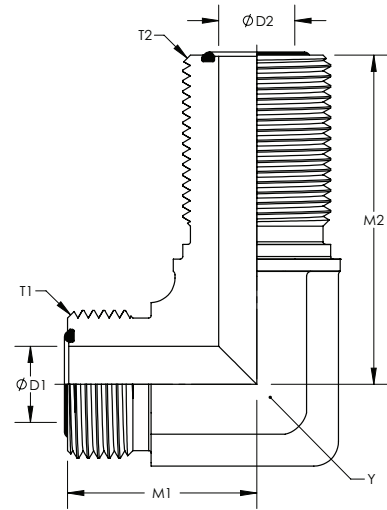


WWF	Y HEX	T1	M1	D1	T2	M2	D2
4515X04XM12	0.551	9/16-18	0.846	0.177	M12X1.5	1.299	0.157
4515X04XM14	0.669	9/16-18	0.925	0.177	M14X1.5	1.398	0.236
4515X06XM12	0.669	11/16-16	0.984	0.256	M12X1.5	1.398	0.157
4515X06XM14	0.669	11/16-16	0.984	0.256	M14X1.5	1.398	0.236
4515X06XM16	0.669	11/16-16	0.984	0.256	M16X1.5	1.476	0.276
4515X06XM18	0.748	11/16-16	1.043	0.256	M18X1.5	1.614	0.354
4515X08XM14	0.748	13/16-16	1.102	0.374	M14X1.5	1.417	0.236
4515X08XM16	0.748	13/16-16	1.102	0.374	M16X1.5	1.496	0.276
4515X08XM18	0.748	13/16-16	1.102	0.374	M18X1.5	1.614	0.354
4515X08XM22	0.945	13/16-16	1.240	0.374	M22X1.5	1.929	0.472
4515X08XM30	1.417	13/16-16	1.476	0.374	M30X2.0	2.342	0.669
4515X10XM18	0.945	1-14	1.319	0.492	M18X1.5	1.870	0.354
4515X10XM22	0.945	1-14	1.319	0.492	M22X1.5	1.929	0.472
4515X10XM27	1.063	1-14	1.417	0.492	M27X2.0	2.185	0.590
4515X12XM22	1.063	1-3/16-12	1.476	0.610	M22X1.5	1.929	0.472
4515X12XM27	1.063	1-3/16-12	1.476	0.610	M27X2.0	2.185	0.590
4515X16XM33	1.417	1-7/16-12	1.634	0.807	M33X2.0	2.342	0.787
4515X20XM33	1.614	1-11/16-12	1.752	1.024	M33X2.0	2.441	0.787
4515X20XM42	1.614	1-11/16-12	1.752	1.024	M42X2.0	2.480	1.024
4515X20XM48	1.969	1-11/16-12	1.929	1.024	M48X2.0	2.815	1.260

4000 SERIES

Description: 90° Bulkhead Elbow
WWF Part No.: 4525
WWF Stainless Part No.: /
SAE: 520701

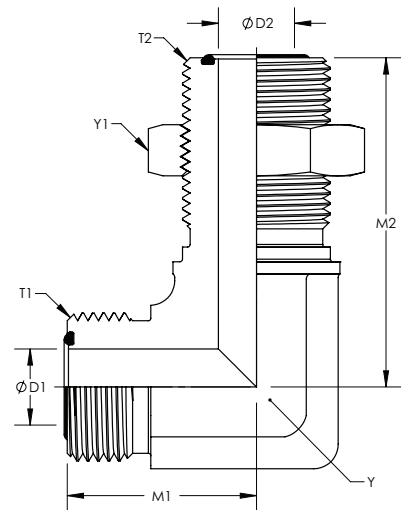
Air-Way: FS2701
Parker: WELO
Aeroquip: /
Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2
4525X04X04	0.563	9/16-18	0.886	0.177	9/16-18	1.850	0.177
4525X06X06	0.669	11/16-16	1.023	0.256	11/16-16	2.047	0.256
4525X08X08	0.750	13/16-16	1.142	0.374	13/16-16	2.185	0.374
4525X10X10	1.063	1-14	1.358	0.492	1-14	2.480	0.492
4525X12X12	1.188	1-3/16-12	1.516	0.610	1-3/16-12	2.638	0.610
4525X16X16	1.438	1-7/16-12	1.673	0.807	1-7/16-12	2.795	0.807
4525X20X20	1.625	1-11/16-12	1.791	1.024	1-11/16-12	2.972	1.024
4525X24X24	1.875	2-12	1.949	1.260	2-12	3.130	1.260

Description: 90° Bulkhead Elbow With Locknut
WWF Part No.: 4525LN
WWF Stainless Part No.: /
SAE: 520701

Air-Way: FS2701-LN
Parker: WELO-WLN
Aeroquip: FF2030T
Gates: /

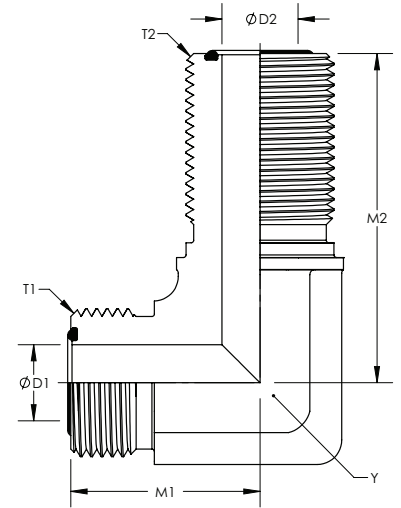


WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2
4525X04X04LN	0.563	0.813	9/16-18	0.886	0.177	9/16-18	1.850	0.177
4525X06X06LN	0.669	1.000	11/16-16	1.023	0.256	11/16-16	2.047	0.256
4525X08X08LN	0.750	1.125	13/16-16	1.142	0.374	13/16-16	2.185	0.374
4525X10X10LN	1.063	1.313	1-14	1.358	0.492	1-14	2.480	0.492
4525X12X12LN	1.188	1.500	1-3/16-12	1.516	0.610	1-3/16-12	2.638	0.610
4525X16X16LN	1.438	1.750	1-7/16-12	1.673	0.807	1-7/16-12	2.795	0.807
4525X20X20LN	1.625	2.000	1-11/16-12	1.791	1.024	1-11/16-12	2.972	1.024
4525X24X24LN	1.875	2.375	2-12	1.949	1.260	2-12	3.130	1.260

4000 SERIES

Description: **90° Bulkhead Elbow Metric Hex**
 WWF Part No.: **4525MH**
 WWF Stainless Part No.: /
 SAE: **52M0701**

Air-Way: FS2701-MH
 Parker: WEMLO
 Aeroquip: /
 Gates: /

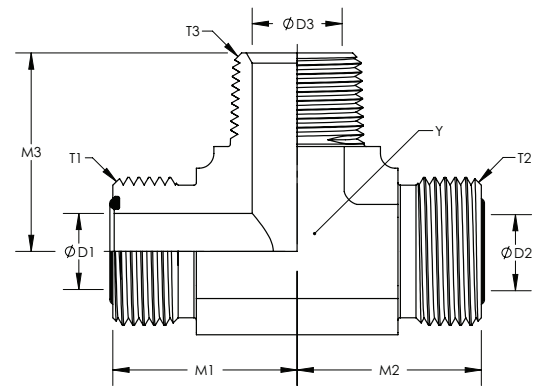


B

WWF	Y HEX	T1	M1	D1	T2	M2	D2
4525X10X10MH	0.945	1-14	1.358	0.492	1-14	2.480	0.492
4525X12X12MH	1.063	1-3/16-12	1.516	0.610	1-3/16-12	2.638	0.610
4525X16X16MH	1.417	1-7/16-12	1.673	0.807	1-7/16-12	2.795	0.807

Description: **Male Branch Tee**
 WWF Part No.: **4605**
 WWF Stainless Part No.: /
 SAE: **520425**

Air-Way: FS2601
 Parker: SLO
 Aeroquip: FF2001T
 Gates: /

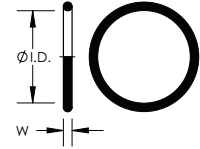


WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4605X04X04X04	0.563	9/16-18	0.846	0.177	9/16-18	0.846	0.177	1/4-18	1.090	0.281
4605X06X06X04	0.669	11/16-16	0.984	0.256	11/16-16	0.984	0.256	1/4-18	1.090	0.281
4605X06X06X06	0.750	11/16-16	0.984	0.256	11/16-16	0.984	0.256	3/8-18	1.220	0.406
4605X08X08X06	0.750	13/16-16	1.102	0.374	13/16-16	1.102	0.374	3/8-18	1.220	0.406
4605X08X08X08	0.875	13/16-16	1.102	0.374	13/16-16	1.102	0.374	1/2-14	1.470	0.531
4605X12X12X12	1.188	1-3/16-12	1.476	0.610	1-3/16-12	1.476	0.610	3/4-14	1.590	0.719
4605X16X16X16	1.438	1-7/16-12	1.634	0.807	1-7/16-12	1.634	0.807	1-11-1/2	1.970	0.938
4605X20X20X20	1.625	1-11/16-12	1.752	1.024	1-11/16-12	1.752	1.024	1-1/4-11-1/2	2.380	1.250

4000 SERIES

Description: **"O" Ring**
 WWF Part No.: **4629**
 WWF Stainless Part No.: /
 SAE: /

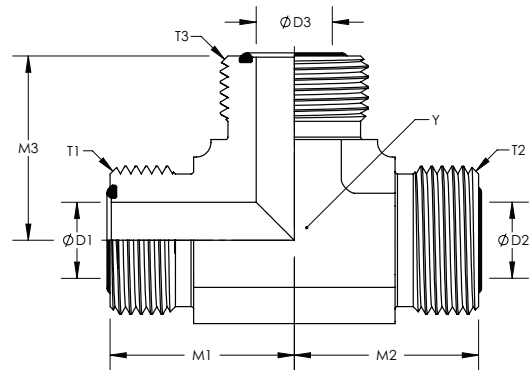
Air-Way: FS4000
 Parker: "O" Ring
 Aeroquip: /
 Gates: ORFF



WWF	I.D.	W
4629X04	0.301	0.070
4629X06	0.364	0.070
4629X08	0.489	0.070
4629X10	0.614	0.070
4629X12	0.739	0.070
4629X16	0.926	0.070
4629X20	1.176	0.070
4629X24	1.489	0.070

Description: **Union Tee**
 WWF Part No.: **4705**
 WWF Stainless Part No.: /
 SAE: **520401**

Air-Way: FS2603
 Parker: JLO
 Aeroquip: FF1898T
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4705X04X04X04	0.563	9/16-18	0.846	0.177	9/16-18	0.846	0.177	9/18-18	0.846	0.177
4705X06X06X06	0.669	11/16-16	0.984	0.256	11/16-16	0.984	0.256	11/16-16	0.984	0.256
4705X06X06X08	0.750	11/16-16	1.043	0.256	11/16-16	1.043	0.256	13/16-16	1.102	0.374
4705X08X06X08	0.750	13/16-16	1.102	0.374	11-16-16	1.043	0.256	13/16-16	1.102	0.374
4705X08X08X06	0.750	13/16-16	1.102	0.374	13/16-16	1.102	0.374	11/16-16	1.043	0.256
4705X08X08X08	0.750	13/16-16	1.102	0.374	13/16-16	1.102	0.374	13/16-16	1.102	0.374
4705X10X10X10	1.063	1-14	1.319	0.492	1-14	1.319	0.492	1-14	1.319	0.492
4705X10X10X12	1.188	1-14	1.417	0.492	1-14	1.417	0.492	1-3/16-12	1.476	0.610
4705X12X12X04	1.188	1-3/16-12	1.476	0.610	1-3/16-12	1.476	0.610	9/16-18	1.201	0.177
4705X12X12X06	1.188	1-3/16-12	1.476	0.610	1-3/16-12	1.476	0.610	11/16-16	1.280	0.256
4705X12X12X12	1.188	1-3/16-12	1.476	0.610	1-3/16-12	1.476	0.610	1-3/16-12	1.476	0.610
4705X12X12X16	1.438	1-3/16-12	1.614	0.610	1-3/16-12	1.614	0.610	1-7/16-12	1.634	0.807

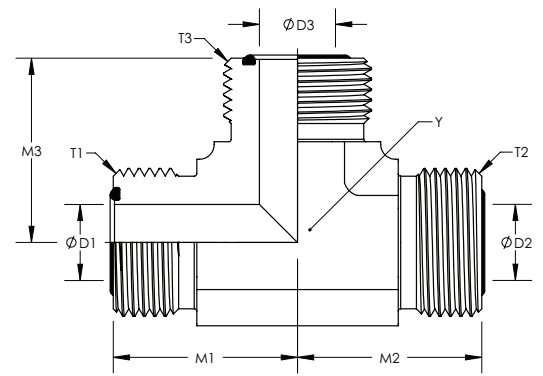
Continued on page 77

4000 SERIES

Continued from page 76

Description: **Union Tee**
 WWF Part No.: **4705**
 WWF Stainless Part No.: /
 SAE: **520401**

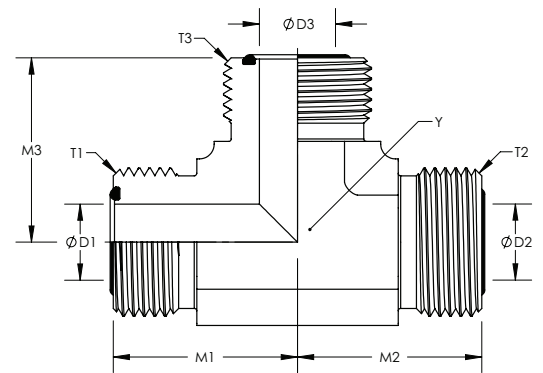
Air-Way: FS2603
 Parker: JLO
 Aeroquip: FF1898T
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4705X16X16X12	1.438	1-7/16-12	1.634	0.807	1-7/16-12	1.634	0.807	1-3/16-12	1.614	0.610
4705X16X16X16	1.438	1-7/16-12	1.634	0.807	1-7/16-12	1.634	0.807	1-7/16-12	1.634	0.807
4705X20X20X16	1.625	1-11/16-12	1.752	1.024	1-11/16-12	1.752	1.024	1-7/16-12	1.752	0.807
4705X20X20X20	1.625	1-11/16-12	1.752	1.024	1-11/16-12	1.752	1.024	1-11/16-12	1.752	1.024
4705X24X24X24	1.875	2-12	1.929	1.260	2-12	1.929	1.260	2-12	1.929	1.260

Description: **Union Tee Metric Hex**
 WWF Part No.: **4705MH**
 WWF Stainless Part No.: /
 SAE: **52M0401**

Air-Way: FS2603-MH
 Parker: JMLO
 Aeroquip: /
 Gates: /



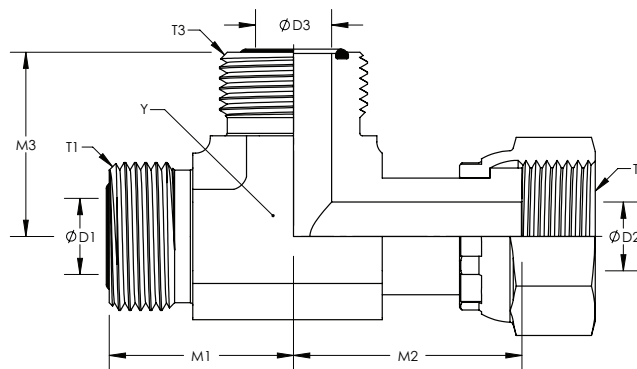
WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4705X16X16X16MH	1.417	1-7/16-12	1.634	0.807	1-7/16-12	1.634	0.807	1-7/16-12	1.634	0.807
4705X20X20X20MH	1.614	1-11/16-12	1.752	1.024	1-11/16-12	1.752	1.024	1-11/16-12	1.752	1.024

B

4000 SERIES

Description: **Swivel Run Tee**
 WWF Part No.: **4706**
 WWF Stainless Part No.: /
 SAE: **520432**

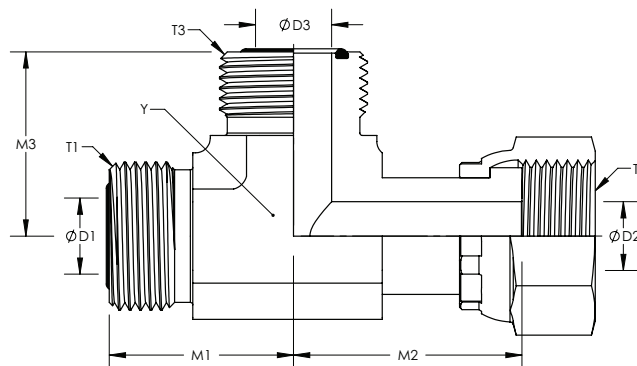
Air-Way: FS6602
 Parker: R6LO
 Aeroquip: FF2114T
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4706X04X04X04	0.563	9/16-18	0.846	0.177	9/16-18	1.043	0.157	9/16-18	0.846	0.177
4706X06X06X06	0.669	11/16-16	0.984	0.256	11/16-16	1.142	0.256	11/16-16	0.984	0.256
4706X06X06X08	0.750	11/16-16	1.043	0.256	11/16-16	1.378	0.256	13/16-16	1.102	0.374
4706X08X08X08	0.750	13/16-16	1.102	0.374	13/16-16	1.496	0.354	13/16-16	1.102	0.374
4706X10X10X10	1.063	1-14	1.319	0.492	1-14	1.614	0.453	1-14	1.319	0.492
4706X12X10X10	1.188	1-3/16-12	1.476	0.610	1-14	1.732	0.453	1-14	1.417	0.492
4706X12X12X10	1.188	1-3/16-12	1.476	0.610	1-3/16-12	1.831	0.551	1-14	1.417	0.492
4706X12X12X12	1.188	1-3/16-12	1.476	0.610	1-3/16-12	1.831	0.551	1-3/16-12	1.476	0.610
4706X16X16X16	1.438	1-7/16-12	1.634	0.807	1-7/16-12	2.106	0.787	1-7/16-12	1.634	0.807
4706X20X20X20	1.625	1-11/16-12	1.752	1.024	1-11/16-12	2.283	1.024	1-11/16-12	1.752	1.024
4706X24X24X24	1.875	2-12	1.929	1.260	2-12	2.401	1.260	2-12	1.929	1.260

Description: **Swivel Run Tee Metric Hex**
 WWF Part No.: **4706MH**
 WWF Stainless Part No.: /
 SAE: **52M0432**

Air-Way: FS6602-MH
 Parker: R6MLO
 Aeroquip: /
 Gates: /

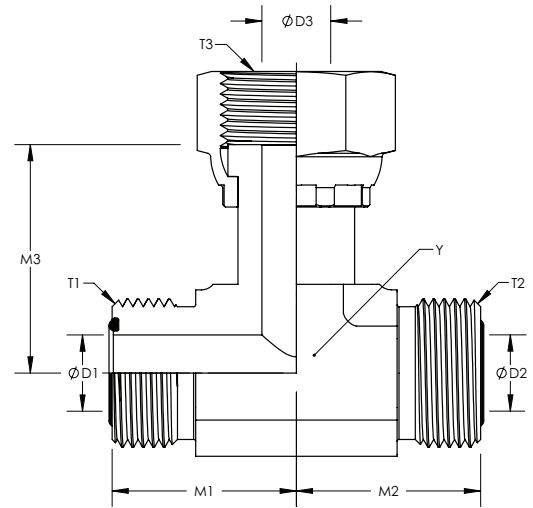


WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4706X04X04X04MH	0.551	9/16-18	0.846	0.177	9/16-18	1.043	0.157	9/16-18	0.846	0.177
4706X06X06X06MH	0.669	11/16-16	0.984	0.256	11/16-16	1.142	0.256	11/16-16	0.984	0.256
4706X10X10X10MH	0.945	1-14	1.319	0.492	1-14	1.614	0.453	1-14	1.319	0.492
4706X12X12X12MH	1.063	1-3/16-12	1.476	0.610	1-3/16-12	1.831	0.551	1-3/16-12	1.476	0.610
4706X16X16X16MH	1.417	1-7/16-12	1.634	0.807	1-7/16-12	2.106	0.787	1-7/16-12	1.634	0.807
4706X20X20X20MH	1.614	1-11/16-12	1.752	1.024	1-11/16-12	2.283	1.024	1-11/16-12	1.752	1.024

4000 SERIES

Description: **Swivel Branch Tee**
 WWF Part No.: **4707**
 WWF Stainless Part No.: /
 SAE: **520433**

Air-Way: FS6600
 Parker: S6LO
 Aeroquip: FF1857T
 Gates: MFFOR-MFFOR-FFORX

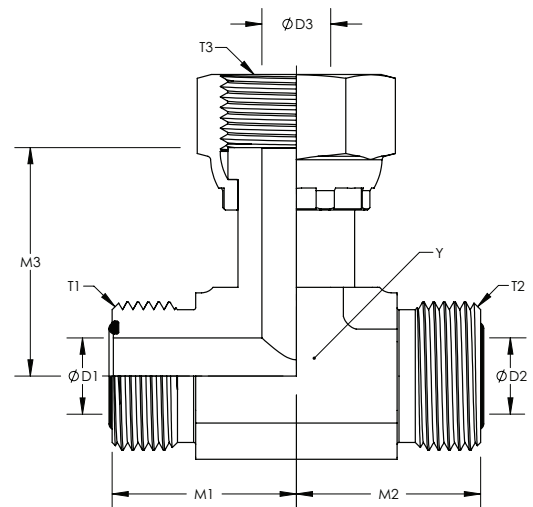


B

WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4707X04X04X04	0.563	9/16-18	0.846	0.177	9/16-18	0.846	0.177	9/18-18	1.043	0.157
4707X06X06X06	0.669	11/16-16	0.984	0.256	11/16-16	0.984	0.256	11/16-16	1.142	0.256
4707X08X08X08	0.750	13/16-16	1.102	0.374	13/16-16	1.102	0.374	13/16-16	1.496	0.354
4707X10X10X10	1.063	1-14	1.319	0.492	1-14	1.319	0.492	1-14	1.614	0.453
4707X12X12X12	1.188	1-3/16-12	1.476	0.610	1-3/16-12	1.476	0.610	1-3/16-12	1.831	0.551
4707X16X16X16	1.438	1-7/16-12	1.634	0.807	1-7/16-12	1.634	0.807	1-7/16-12	2.106	0.787
4707X20X20X20	1.625	1-11/16-12	1.752	1.024	1-11/16-12	1.752	1.024	1-11/16-12	2.283	1.024
4707X24X24X24	1.875	2-12	1.929	1.260	2-12	1.929	1.260	2-12	2.401	1.260

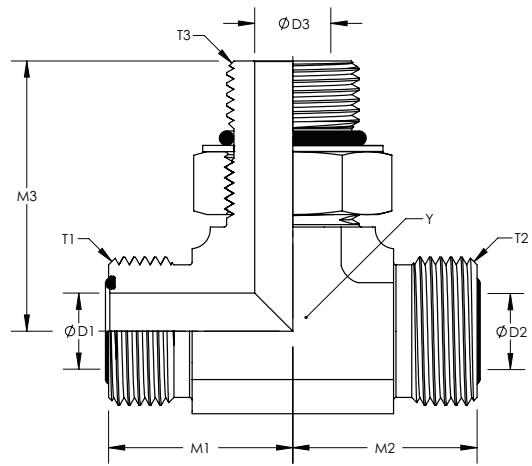
Description: **Swivel Branch Tee Metric Hex**
 WWF Part No.: **4707MH**
 WWF Stainless Part No.: /
 SAE: **52M0433**

Air-Way: FS6600-MH
 Parker: S6MLO
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4707X10X10X10MH	0.945	1-14	1.319	0.492	1-14	1.319	0.492	1-14	1.614	0.453
4707X12X12X12MH	1.063	1-3/16-12	1.476	0.610	1-3/16-12	1.476	0.610	1-3/16-12	1.831	0.551
4707X20X20X20MH	1.614	1-11/16-12	1.752	1.024	1-11/16-12	1.752	1.024	1-11/16-12	2.283	1.024

4000 SERIES



Description: Adjustable Stud Branch Tee
WWF Part No.: 4715
WWF Stainless Part No.: /
SAE: 520429

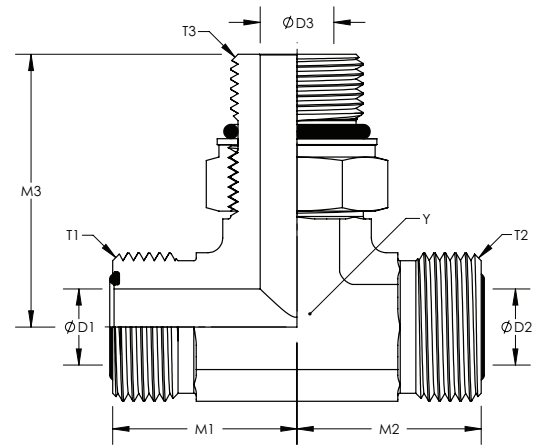
Air-Way: FS6803
Parker: S5OLO
Aeroquip: FF1861T
Gates: MFFOR-MFFOR-MB

WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4715X04X04X04	0.563	9/16-18	0.846	0.177	9/16-18	0.846	0.177	7/16-20	1.299	0.177
4715X06X06X06	0.669	11/16-16	0.984	0.256	11/16-16	0.984	0.256	9/16-18	1.457	0.295
4715X06X06X08	0.750	11/16-16	1.043	0.256	11/16-16	1.043	0.256	3/4-16	1.594	0.393
4715X08X08X06	0.750	13/16-16	1.102	0.374	13/16-16	1.102	0.374	9/16-18	1.438	0.295
4715X08X08X08	0.750	13/16-16	1.102	0.374	13/16-16	1.102	0.374	3/4-16	1.594	0.393
4715X10X10X10	1.063	1-14	1.319	0.492	1-14	1.319	0.492	7/8-14	1.969	0.492
4715X12X12X10	1.188	1-3/16-12	1.476	0.610	1-3/16-12	1.476	0.610	7/8-14	2.008	0.492
4715X12X12X12	1.188	1-3/16-12	1.476	0.610	1-3/16-12	1.476	0.610	1-1/16-12	2.165	0.610
4715X12X12X16	1.438	1-3/16-12	1.614	0.610	1-3/16-12	1.614	0.610	1-5/16-12	2.342	0.846
4715X16X16X16	1.438	1-7/16-12	1.634	0.807	1-7/16-12	1.634	0.807	1-5/16-12	2.342	0.846
4715X16X16X20	1.625	1-7/16-12	1.752	0.807	1-7/16-12	1.752	0.807	1-5/8-12	2.441	1.083
4715X20X20X20	1.625	1-11/16-12	1.752	1.024	1-11/16-12	1.752	1.024	1-5/8-12	2.441	1.083
4715X24X24X24	1.875	2-12	1.929	1.260	2-12	1.929	1.260	1-7/8-12	2.598	1.319

4000 SERIES

Description: **Adjustable Stud Branch Tee - Metric**
 WWF Part No.: **4715M**
 WWF Stainless Part No.: /
 SAE: **52M0489**

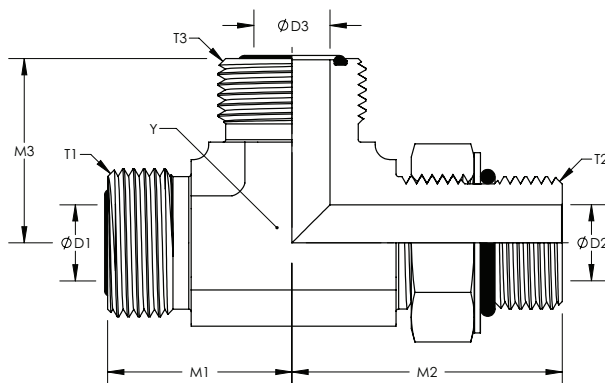
Air-Way: FS7210
 Parker: S87OMLO
 Aeroquip: /
 Gates: /



B

WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4715X04X04XM12	0.551	9/16-18	0.846	0.177	9/16-18	0.846	0.177	M12X1.5	1.299	0.157
4715X04X04XM14	0.669	9/16-18	0.925	0.177	9/16-18	0.925	0.177	M14X1.5	1.397	0.236
4715X06X06XM14	0.669	11/16-16	0.984	0.256	11/16-16	0.984	0.256	M14X1.5	1.397	0.236
4715X06X06XM16	0.669	11/16-16	0.984	0.256	11/16-16	0.984	0.256	M16X1.5	1.476	0.276
4715X08X08XM14	0.748	13/16-16	1.102	0.374	13/16-16	1.102	0.374	M14X1.5	1.417	0.236
4715X08X08XM18	0.748	13/16-16	1.102	0.374	13/16-16	1.102	0.374	M18X1.5	1.614	0.354
4715X08X08XM22	0.945	13/16-16	1.240	0.374	13/16-16	1.240	0.374	M22X1.5	1.929	0.472
4715X10X10XM22	0.945	1-14	1.319	0.492	1-14	1.319	0.492	M22X1.5	1.929	0.472
4715X12X12XM27	1.063	1-3/16-12	1.476	0.610	1-3/16-12	1.476	0.610	M27X2.0	2.185	0.590
4715X16X16XM33	1.417	1-7/16-12	1.634	0.807	1-7/16-12	1.634	0.807	M33X2.0	2.342	0.787
4715X20X20XM42	1.614	1-11/16-12	1.752	1.024	1-11/16-12	1.752	1.024	M42X2.0	2.480	1.024
4715X24X24XM48	1.969	2-12	1.929	1.260	2-12	1.929	1.260	M48X2.0	2.815	1.260

4000 SERIES



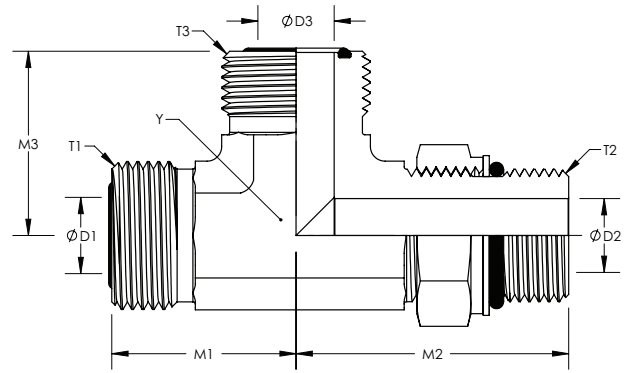
Description: Adjustable Stud Run Tee
WWF Part No.: 4716
WWF Stainless Part No.: /
SAE: 520428
Air-Way: FS6804
Parker: R5OLO
Aeroquip: FF1865T
Gates: MFFOR-MB-MFFOR

WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4716X04X04X04	0.563	9/16-18	0.846	0.177	7/16-20	1.299	0.177	9/18-18	0.846	0.177
4716X04X04X06	0.669	9/16-18	0.925	0.177	7/16-20	1.378	0.177	11/16-16	0.984	0.256
4716X04X06X04	0.669	9/16-18	0.925	0.177	9/16-18	1.457	0.295	9/18-18	0.925	0.177
4716X06X04X06	0.669	11/16-16	0.984	0.256	7/16-20	1.378	0.177	11/16-16	0.984	0.256
4716X06X06X06	0.669	11/16-16	0.984	0.256	9/16-18	1.457	0.295	11/16-16	0.984	0.256
4716X08X06X08	0.750	13/16-16	1.102	0.374	9/16-18	1.438	0.295	13/16-16	1.102	0.374
4716X08X08X08	0.750	13/16-16	1.102	0.374	3/4-16	1.594	0.394	13/16-16	1.102	0.374
4716X08X08X12	1.188	13/16-16	1.338	0.374	3/4-16	1.831	0.394	1-3/16-12	1.476	0.610
4716X08X10X08	1.063	13/16-16	1.240	0.374	7/8-14	1.969	0.492	13/16-16	1.240	0.374
4716X08X12X08	1.188	13/16-16	1.338	0.374	1-1/16-12	2.165	0.610	13/16-16	1.338	0.374
4716X08X16X08	1.438	13/16-16	1.476	0.374	1-5/16-12	2.342	0.846	13/16-16	1.476	0.374
4716X10X10X08	1.063	1-14	1.319	0.492	7/8-14	1.969	0.492	13/16-16	1.240	0.374
4716X10X10X10	1.063	1-14	1.319	0.492	7/8-14	1.969	0.492	1-14	1.319	0.492
4716X10X12X10	1.188	1-14	1.417	0.492	1-1/16-12	2.165	0.610	1-14	1.417	0.492
4716X10X12X12	1.188	1-14	1.417	0.492	1-1/16-12	2.165	0.610	1-3/16-12	1.476	0.610
4716X12X12X12	1.188	1-3/16-12	1.476	0.610	1-1/16-12	2.165	0.610	1-3/16-12	1.476	0.610
4716X12X12X16	1.438	1-3/16-12	1.614	0.610	1-1/16-12	2.303	0.610	1-7/16-12	1.634	0.807
4716X12X16X12	1.438	1-3/16-12	1.614	0.610	1-5/16-12	2.342	0.846	1-3/16-12	1.614	0.610
4716X12X16X16	1.438	1-3/16-12	1.614	0.610	1-5/16-12	2.342	0.846	1-7/16-12	1.634	0.807
4716X16X12X10	1.438	1-7/16-12	1.634	0.807	1-1/16-12	2.303	0.610	1-14	1.555	0.492
4716X16X16X12	1.438	1-7/16-12	1.634	0.807	1-5/16-12	2.342	0.846	1-3/16-12	1.614	0.610
4716X16X16X16	1.438	1-7/16-12	1.634	0.807	1-5/16-12	2.342	0.846	1-7/16-12	1.634	0.807
4716X16X16X20	1.625	1-7/16-12	1.752	0.807	1-5/16-12	2.441	0.846	1-11/16-12	1.752	1.024
4716X16X20X08	1.625	1-7/16-12	1.752	0.807	1-5/8-12	2.441	1.083	13/16-16	1.594	0.374
4716X20X20X20	1.625	1-11/16-12	1.752	1.024	1-5/8-12	2.441	1.083	1-11/16-12	1.752	1.024
4716X24X24X24	1.875	2-12	1.929	1.260	1-7/8-12	2.598	1.319	2-12	1.929	1.260

4000 SERIES

Description: **Adjustable Stud Run Tee - Metric**
 WWF Part No.: **4716M**
 WWF Stainless Part No.: /
 SAE: **52M0488**

Air-Way: FS7215
 Parker: R87OMLO
 Aeroquip: /
 Gates: /



B

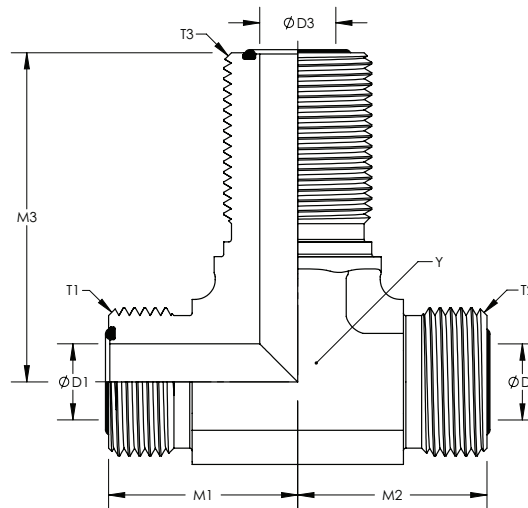
WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4716X04XM12X04	0.551	9/16-18	0.846	0.177	M12X1.5	1.299	0.157	9/16-18	0.846	0.177
4716X04XM14X04	0.669	9/16-18	0.945	0.177	M14X1.5	1.398	0.236	9/16-18	0.945	0.177
4716X06XM14X06	0.669	11/16-16	0.984	0.256	M14X1.5	1.398	0.236	11/16-16	0.984	0.256
4716X06XM16X06	0.669	11/16-16	0.984	0.256	M16X1.5	1.476	0.275	11/16-16	0.984	0.256
4716X08XM14X08	0.748	13/16-16	1.102	0.374	M14X1.5	1.417	0.236	13/16-16	1.102	0.374
4716X08XM18X08	0.748	13/16-16	1.102	0.374	M18X1.5	1.614	0.354	13/16-16	1.102	0.374
4716X08XM22X08	0.945	13/16-16	1.240	0.374	M22X1.5	1.929	0.472	13/16-16	1.240	0.374
4716X08XM33X20	1.614	13/16-16	1.752	0.374	M33X2.0	2.480	0.787	1-11/16-12	1.752	1.024
4716X10XM22X10	0.945	1-14	1.319	0.492	M22X1.5	1.929	0.472	1-14	1.319	0.492
4716X12XM27X12	1.063	1-3/16-12	1.476	0.610	M27X2.0	2.185	0.590	1-3/16-12	1.476	0.610
4716X16XM33X16	1.417	1-7/16-12	1.634	0.807	M33X2.0	2.342	0.787	1-7/16-12	1.634	0.807
4716X20XM42X20	1.614	1-11/16-12	1.752	1.024	M42X2.0	2.480	1.024	1-11/16-12	1.752	1.024
4716X24XM48X24	1.969	2-12	1.929	1.260	M48X2.0	2.815	1.260	2-12	1.929	1.260

4000 SERIES

B

Description: **Bulkhead Branch Tee**
 WWF Part No.: **4725**
 WWF Stainless Part No.: /
 SAE: **520959**

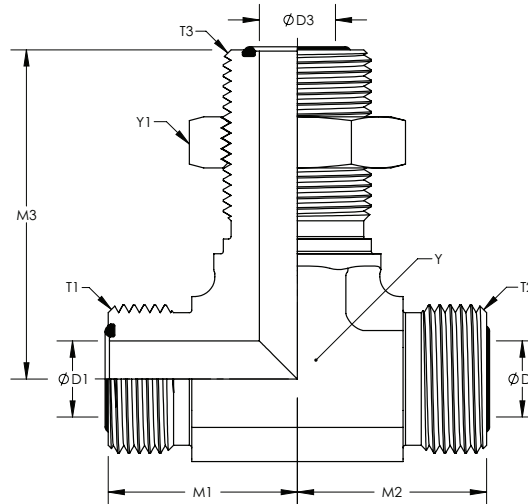
Air-Way: FS2703
 Parker: WJLO
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4725X04X04X04	0.563	9/16-18	0.886	0.177	9/16-18	0.886	0.177	9/16-18	1.850	0.177
4725X06X06X06	0.669	11/16-16	1.024	0.256	11/16-16	1.024	0.256	11/16-16	2.047	0.256
4725X08X08X08	0.750	13/16-16	1.142	0.374	13/16-16	1.142	0.374	13/16-16	2.185	0.374
4725X10X10X10	1.063	1-14	1.358	0.492	1-14	1.358	0.492	1-14	2.480	0.492
4725X12X12X12	1.188	1-3/16-12	1.516	0.610	1-3/16-12	1.516	0.610	1-3/16-12	2.637	0.610
4725X16X16X16	1.438	1-7/16-12	1.673	0.807	1-7/16-12	1.673	0.807	1-7/16-12	2.795	0.807
4725X20X20X20	1.625	1-11/16-12	1.791	1.024	1-11/16-12	1.791	1.024	1-11/16-12	2.972	1.024
4725X24X24X24	1.875	2-12	1.949	1.260	2-12	1.949	1.260	2-12	3.130	1.260

Description: **Bulkhead Branch Tee With Locknut**
 WWF Part No.: **4725LN**
 WWF Stainless Part No.: /
 SAE: **520959**

Air-Way: FS2703-LN
 Parker: WJLO-WLN
 Aeroquip: FF2033T
 Gates: /

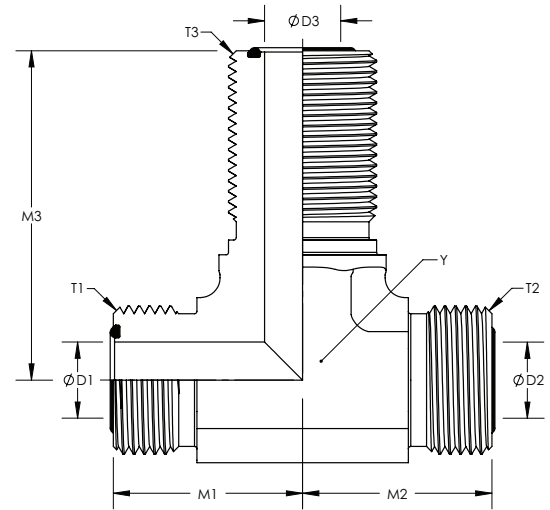


WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4725X04X04X04LN	0.563	0.813	9/16-18	0.886	0.177	9/16-18	0.886	0.177	9/16-18	1.850	0.177
4725X06X06X06LN	0.669	1.000	11/16-16	1.024	0.256	11/16-16	1.024	0.256	11/16-16	2.047	0.256
4725X08X08X08LN	0.750	1.125	13/16-16	1.142	0.374	13/16-16	1.142	0.374	13/16-16	2.185	0.374
4725X10X10X10LN	1.063	1.313	1-14	1.358	0.492	1-14	1.358	0.492	1-14	2.480	0.492
4725X12X12X12LN	1.188	1.500	1-3/16-12	1.516	0.610	1-3/16-12	1.516	0.610	1-3/16-12	2.637	0.610
4725X16X16X16LN	1.438	1.750	1-7/16-12	1.673	0.807	1-7/16-12	1.673	0.807	1-7/16-12	2.795	0.807
4725X20X20X20LN	1.625	2.000	1-11/16-12	1.791	1.024	1-11/16-12	1.791	1.024	1-11/16-12	2.972	1.024
4725X24X24X24LN	1.875	2.375	2-12	1.949	1.260	2-12	1.949	1.260	2-12	3.130	1.260

4000 SERIES

Description: **Bulkhead Branch Tee Metric Hex**
 WWF Part No.: **4725MH**
 WWF Stainless Part No.: /
 SAE: **52M0959**

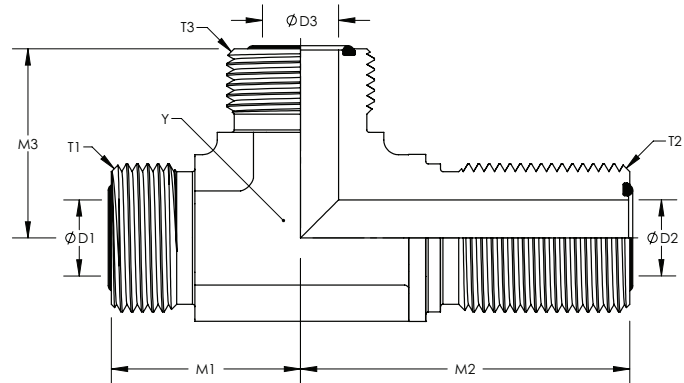
Air-Way: FS2703-MH
 Parker: WJMLO
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4725X04X04X04MH	0.551	9/16-18	0.886	0.177	9/16-18	0.886	0.177	9/16-18	1.850	0.177

Description: **Bulkhead Run Tee**
 WWF Part No.: **4726**
 WWF Stainless Part No.: /
 SAE: **520958**

Air-Way: FS2704
 Parker: WJJLO
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4726X04X04X04	0.563	9/16-18	0.886	0.177	9/16-18	1.850	0.177	9/16-18	0.886	0.177
4726X06X06X06	0.669	11/16-16	1.024	0.256	11/16-16	2.047	0.256	11/16-16	1.024	0.256
4726X08X08X08	0.750	13/16-16	1.142	0.374	13/16-16	2.185	0.374	13/16-16	1.142	0.374
4726X10X10X10	1.063	1-14	1.358	0.492	1-14	2.480	0.492	1-14	1.358	0.492
4726X12X12X12	1.188	1-3/16-12	1.516	0.610	1-3/16-12	2.637	0.610	1-3/16-12	1.516	0.610
4726X16X16X16	1.438	1-7/16-12	1.673	0.807	1-7/16-12	2.795	0.807	1-7/16-12	1.673	0.807
4726X20X20X20	1.625	1-11/16-12	1.791	1.024	1-11/16-12	2.972	1.024	1-11/16-12	1.791	1.024
4726X24X24X24	1.875	2-12	1.949	1.260	2-12	3.130	1.260	2-12	1.949	1.260

B

4000 SERIES

Description:

**Bulkhead Run Tee
With Locknut
4726LN**

WWF Part No.:

/

WWF Stainless Part No.:

/

SAE:

520958

Air-Way:

FS2704-LN

Parker:

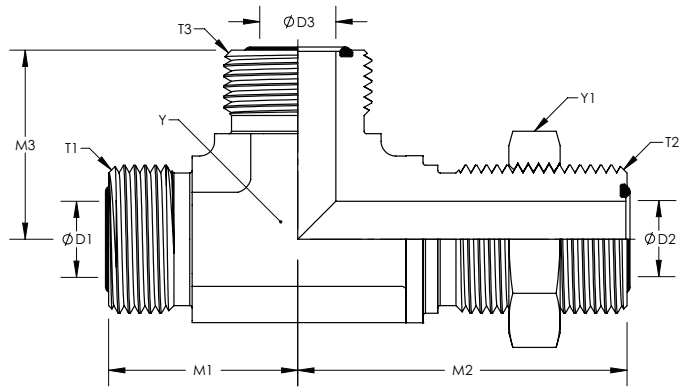
WJJLO-WLN

Aeroquip:

FF2174T

Gates:

/



WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4726X04X04X04LN	0.563	0.813	9/16-18	0.886	0.177	9/16-18	1.850	0.177	9/16-18	0.886	0.177
4726X06X06X06LN	0.669	1.000	11/16-16	1.024	0.256	11/16-16	2.047	0.256	11/16-16	1.024	0.256
4726X08X08X08LN	0.750	1.125	13/16-16	1.142	0.374	13/16-16	2.185	0.374	13/16-16	1.142	0.374
4726X10X10X10LN	1.063	1.313	1-14	1.358	0.492	1-14	2.480	0.492	1-14	1.358	0.492
4726X12X12X12LN	1.188	1.500	1-3/16-12	1.516	0.610	1-3/16-12	2.637	0.610	1-3/16-12	1.516	0.610
4726X16X16X16LN	1.438	1.750	1-7/16-12	1.673	0.807	1-7/16-12	2.795	0.807	1-7/16-12	1.673	0.807
4726X20X20X20LN	1.625	2.000	1-11/16-12	1.791	1.024	1-11/16-12	2.972	1.024	1-11/16-12	1.791	1.024
4726X24X24X24LN	1.875	2.375	2-12	1.949	1.260	2-12	3.130	1.260	2-12	1.949	1.260

Description:

**Bulkhead Run Tee
Metric Hex
4726MH**

WWF Part No.:

/

WWF Stainless Part No.:

/

SAE:

52M0958

Air-Way:

FS2704-MH

Parker:

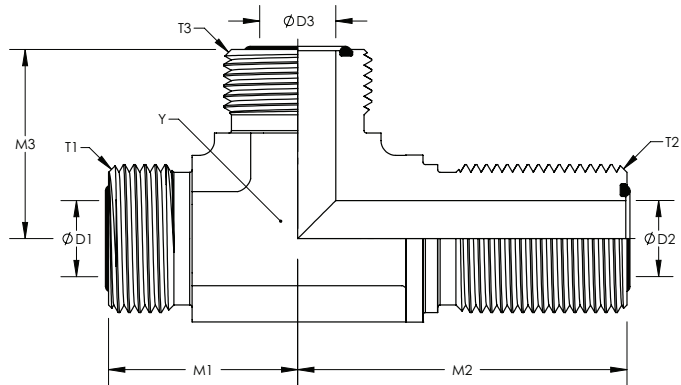
WJJMLO

Aeroquip:

/

Gates:

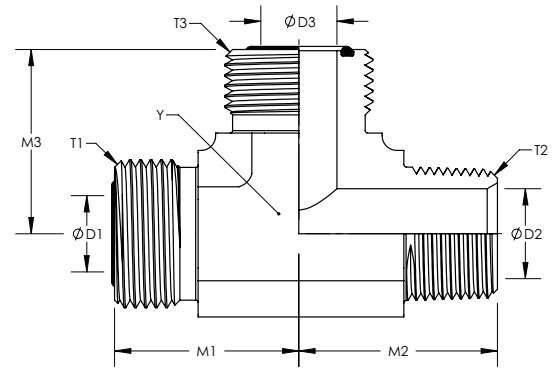
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WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4726X08X08X08MH	0.748	13/16-16	1.142	0.374	13/16-16	2.185	0.374	13/16-16	1.142	0.374
4726X10X10X10MH	0.945	1-14	1.358	0.492	1-14	2.480	0.492	1-14	1.358	0.492

4000 SERIES

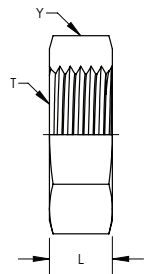
Description: **Male Run Tee**
 WWF Part No.: **4755**
 WWF Stainless Part No.: /
 SAE: /
 Air-Way: /
 Parker: /
 Aeroquip: /
 Gates: /



B

WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
4755X04X04X04	0.563	9/16-18	0.846	0.177	1/4-18	1.090	0.281	9/16-18	0.846	0.177
4755X06X04X06	0.669	11/16-16	0.980	0.256	1/4-18	1.090	0.281	11/16-16	0.980	0.256
4755X06X06X06	0.750	11/16-16	0.980	0.256	3/8-18	1.220	0.406	11/16-16	0.980	0.256
4755X08X08X08	0.875	13/16-16	1.102	0.374	1/2-14	1.470	0.531	13/16-16	1.102	0.374

Description: **Straight Thread Locknut**
 WWF Part No.: **4924**
 WWF Stainless Part No.: /
 SAE: /
 Air-Way: /
 Parker: /
 Aeroquip: /
 Gates: /

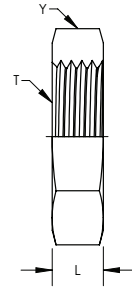


WWF	Y HEX	T	L
4924X04	0.625	7/16-20	0.315
4924X06	0.750	9/16-18	0.335
4924X08	0.938	3/4-16	0.405
4924X10	1.063	7/8-14	0.453
4924X12	1.375	1-1/16-12	0.504
4924X16	1.625	1-5/16-12	0.535
4924X20	1.875	1-5/8-12	0.535
4924X24	2.125	1-7/8-12	0.535

4000 SERIES

Description: **Bulkhead Locknut**
 WWF Part No.: **4925**
 WWF Stainless Part No.: /
 SAE: **520118**

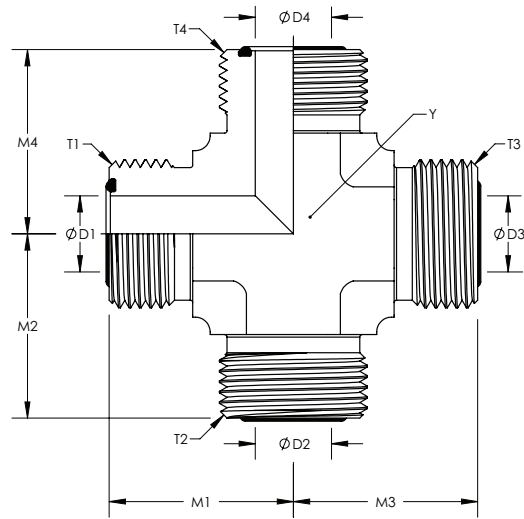
Air-Way: FS0306
 Parker: WLNL
 Aeroquip: FF9768
 Gates: /



WWF	Y HEX	T	L
4925X04	0.813	9/16-18	0.275
4925X06	1.000	11/16-16	0.315
4925X08	1.125	13/16-16	0.354
4925X10	1.313	1-14	0.413
4925X12	1.500	1-3/16-12	0.413
4925X16	1.750	1-7/16-12	0.413
4925X20	2.000	1-11/16-12	0.413
4925X24	2.375	2-12	0.413

Description: **Union Cross**
 WWF Part No.: **4955**
 WWF Stainless Part No.: /
 SAE: **520501**

Air-Way: FS2650
 Parker: KLO
 Aeroquip: /
 Gates: /

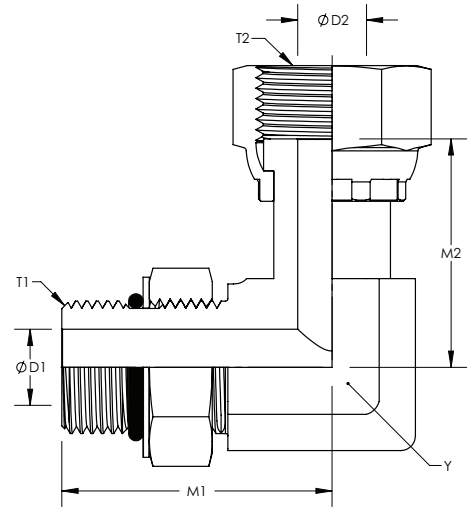


WWF	Y HEX	T1 / T3	M1 / M3	D1 / D4	T2 / T4	M2 / M4	D2 / D4
4955X04X04X04X04	0.563	9/16-18	0.846	0.177	9/16-18	0.846	0.177
4955X06X06X06X06	0.669	11/16-16	0.984	0.256	11/16-16	0.984	0.256
4955X08X08X08X08	0.750	13/16-16	1.102	0.374	13/16-16	1.102	0.374
4955X10X10X10X10	1.063	1-14	1.319	0.492	1-14	1.319	0.492
4955X12X12X12X12	1.188	1-3/16-12	1.476	0.610	1-3/16-12	1.476	0.610
4955X16X16X16X16	1.438	1-7/16-12	1.634	0.807	1-7/16-12	1.634	0.807
4955X20X20X20X20	1.625	1-11/16-12	1.752	1.024	1-11/16-12	1.752	1.024
4955X24X24X24X24	1.875	2-12	1.929	1.260	2-12	1.929	1.260

4000 SERIES

Description: **Swivel 90° Adjustable Stud Elbow**
 WWF Part No.: **FS6809**
 WWF Stainless Part No.: /
 SAE: **520281**


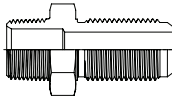
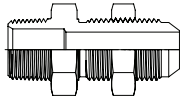
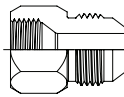


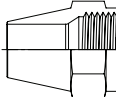


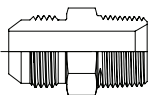

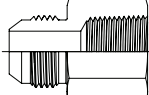
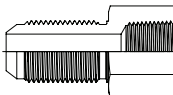
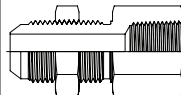
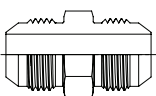
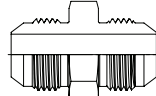
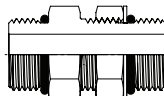
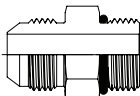
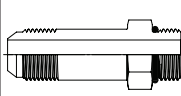
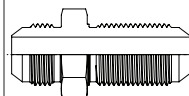
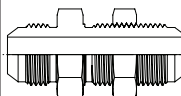
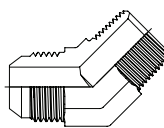
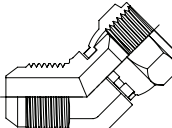
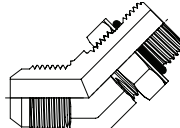
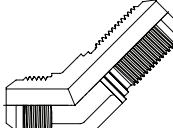
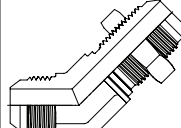
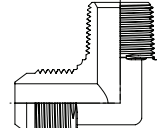
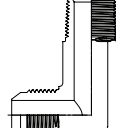
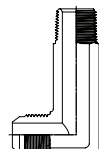
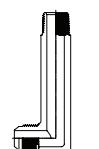
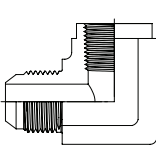
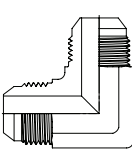
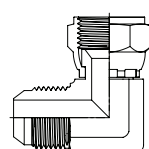
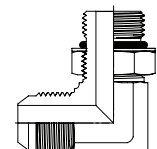
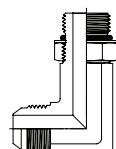
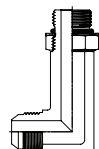
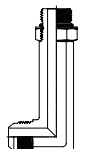
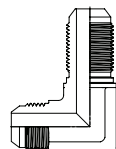
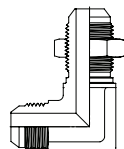
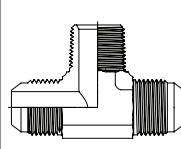
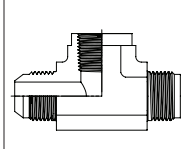
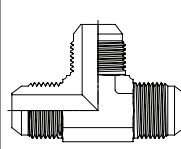
Air-Way: FS6809
 Parker: /
 Aeroquip: /
 Gates: /



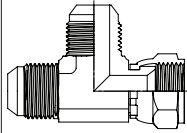
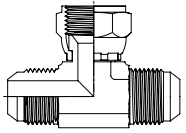
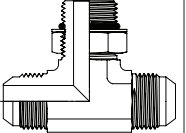
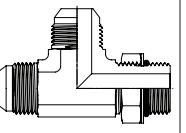
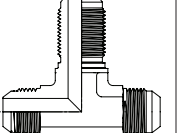
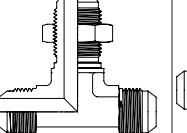
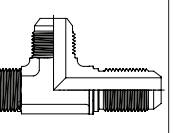
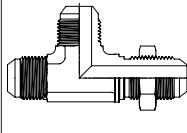
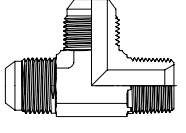
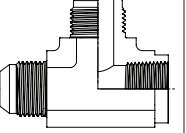
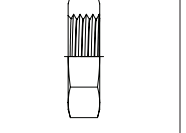
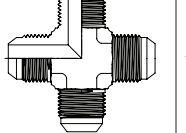
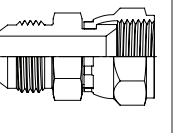
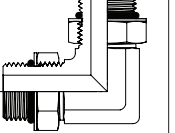
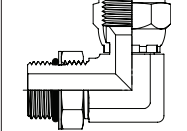
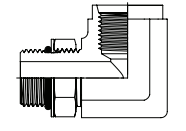
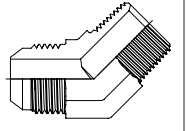
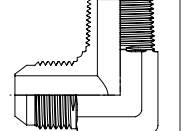
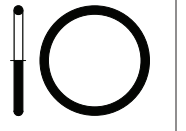
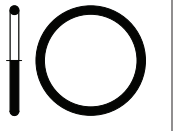
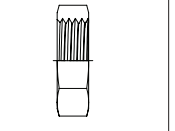
B

WWF	Y HEX	T1	M1	D1	T2	M2	D2
FS6809X04X04	0.563	7/16-20	1.299	0.177	9/16-18	1.043	0.157
FS6809X06X06	0.669	9/16-18	1.457	0.295	11/16-16	1.142	0.256
FS6809X08X08	0.750	3/4-16	1.594	0.394	13/16-16	1.496	0.354
FS6809X10X10	1.063	7/8-14	1.969	0.492	1-14	1.614	0.453
FS6809X12X12	1.188	1-1/16-12	2.165	0.610	1-3/16-12	1.831	0.551
FS6809X16X16	1.438	1-5/16-12	2.342	0.846	1-7/16-12	2.106	0.787
FS6809X20X20	1.625	1-5/8-12	2.441	1.083	1-11/16-12	2.283	1.024

5000 SERIES - STEEL 37° FLARE (JIC) FITTINGS

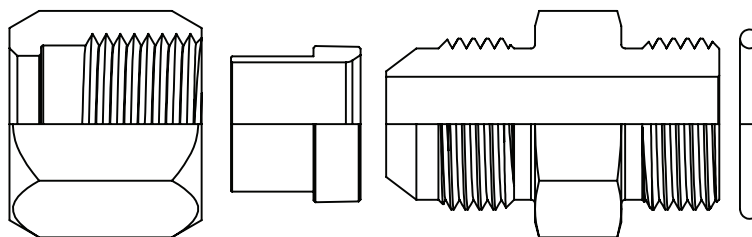
<p>0403 Page 96</p>  <p>0403 Male JIC Braze Connector</p>	<p>2706 Page 96</p>  <p>2706 Male JIC to Male Pipe Bulkhead</p>	<p>2706-LN Page 97</p>  <p>2706LN Male JIC to Male Pipe Bulkhead With Locknut</p>	<p>2406 Page 97</p>  <p>5015 Tube End Reducer (1 Piece)</p>	<p>0318 Page 99</p>  <p>5105 Short Nut</p>	<p>M0318 Page 99</p>  <p>5105MH Short Nut Metric Hex</p>	<p>0304 Page 100</p>  <p>5115 Long Nut</p>
<p>0304-C Page 100</p>  <p>5129 Cap</p>	<p>0319 Page 101</p>  <p>5165 Sleeve</p>	<p>2404 Page 101</p>  <p>5205 Male Connector</p>	<p>2408 Page 103</p>  <p>5229 Plug</p>	<p>2405 Page 104</p>  <p>5255 Female Connector</p>	<p>2705 Page 105</p>  <p>5275 Female Bulkhead Connector</p>	<p>2705-LN Page 105</p>  <p>5275LN Female Bulkhead Connector With Locknut</p>
<p>2403 Page 106</p>  <p>5305 Union</p>	<p>2403-LH Page 107</p>  <p>5306 Large Hex Union</p>	<p>3474 Page 107</p>  <p>5314 Adjustable Union</p>	<p>6400 Page 108</p>  <p>5315 Straight Thread Connector Short</p>	<p>6400-L Page 110</p>  <p>5316 Straight Thread Connector Long</p>	<p>2700 Page 110</p>  <p>5325 Bulkhead Union</p>	<p>2700-LN Page 111</p>  <p>5325LN Bulkhead Union With Locknut</p>
<p>2503 Page 111</p>  <p>F5355 45° Male Elbow</p>	<p>6502 Page 113</p>  <p>F5356 45° Swivel Elbow</p>	<p>6802 Page 113</p>  <p>F5365 45° Straight Thread Elbow</p>	<p>2702 Page 115</p>  <p>F5375 45° Bulkhead Elbow</p>	<p>2702-LN Page 115</p>  <p>F5375LN 45° Bulkhead Elbow With Locknut</p>	<p>2501 Page 116</p>  <p>F5405 90° Male Elbow</p>	<p>2501-L Page 118</p>  <p>F5425 90° Male Long Elbow</p>
<p>2501-LL Page 119</p>  <p>F5435 90° Male Extra Long Elbow</p>	<p>2501-LLL Page 120</p>  <p>F5445 90° Male Extra Extra Long Elbow</p>	<p>2502 Page 121</p>  <p>F5455 90° Female Elbow</p>	<p>2500 Page 122</p>  <p>F5505 90° Union Elbow</p>	<p>6500 Page 123</p>  <p>F5506 90° Swivel Elbow</p>	<p>6801 Page 124</p>  <p>F5515 90° Straight Thread Elbow</p>	<p>6801-L Page 126</p>  <p>F5515L 90° Straight Thread Elbow Long</p>
<p>6801-LL Page 127</p>  <p>F5515LL 90° Straight Thread Elbow Extra Long</p>	<p>6801-LLL Page 128</p>  <p>F5515LLL 90° Straight Thread Elbow Extra Extra Long</p>	<p>2701 Page 128</p>  <p>F5525 90° Bulkhead Elbow</p>	<p>2701-LN Page 129</p>  <p>F5525LN 90° Bulkhead Elbow With Locknut</p>	<p>2601 Page 129</p>  <p>F5605 Male Branch Tee</p>	<p>2602 Page 131</p>  <p>F5655 Female Branch Tee</p>	<p>2603 Page 132</p>  <p>F5705 Union Tee</p>

5000 SERIES - STEEL 37° FLARE (JIC) FITTINGS

<p>6602 Page 133</p>  <p>F5706 Swivel Run Tee</p>	<p>6600 Page 134</p>  <p>F5707 Swivel Branch Tee</p>	<p>6803 Page 135</p>  <p>F5715 Straight Thread Branch Tee</p>	<p>6804 Page 136</p>  <p>F5716 Straight Thread Run Tee</p>	<p>2703 Page 137</p>  <p>F5725 Bulkhead Branch Tee</p>	<p>2703-LN Page 137</p>  <p>F5725LN Bulkhead Branch Tee With Locknut</p>	<p>2704 Page 138</p>  <p>F5726 Bulkhead Run Tee</p>
<p>2704-LN Page 138</p>  <p>F5726LN Bulkhead Run Tee With Locknut</p>	<p>2605 Page 139</p>  <p>F5755 Male Run Tee</p>	<p>2606 Page 140</p>  <p>F5805 Female Run Tee</p>	<p>0306 Page 140</p>  <p>5924 Bulkhead Locknut</p>	<p>2650 Page 141</p>  <p>F5955 Cross</p>	<p>6504 Page 141</p>  <p>6504 Female Swivel to Male JIC</p>	<p>6807 Page 142</p>  <p>6807 Adjustable ORB Union Elbow</p>
<p>6809 Page 142</p>  <p>6809 90° Female Swivel to Male ORB</p>	<p>6815 Page 143</p>  <p>6815 90° Male ORB to Female ORB</p>	<p>7100 Page 143</p>  <p>7100 45° Male Elbow</p>	<p>7200 Page 144</p>  <p>7200 90° Male Elbow</p>	<p>Page 165</p>  <p>7629 90 Durometer "O" Ring</p>	<p>Page 166</p>  <p>7269M 90 Durometer Metric "O" Ring</p>	<p>0306-N Page 144</p>  <p>8924 Straight Thread Locknut</p>

C

5000 SERIES - STEEL 37° FLARE (JIC) FITTINGS



5000 Series Assembly

C CONSTRUCTION

5000 Series Fittings consist of three main components: Bodies, Nuts, and Sleeves.

Bodies – Straight bodies are machined from bar stock. Shape fittings (elbows, tees, & crosses) are made from forgings.

Tube Nuts – Tube Nuts in sizes 1/4", 3/8", 1/2", 5/8", 3/4", 1", are Cold Formed in 1010 steel. Tube Nuts in sizes 1/8", 3/16", 5/16", 7/8", 1-1/4", 1-1/2", & 2" are hot forged from 1045.

Tube Sleeves – Tube Sleeves for 5000 series fittings are machined from 12L14 bar stock.

APPLICATIONS

For use with machine tools, agricultural and earth moving machinery, instrumentation, chemical processing systems, and most other high pressure hydraulic applications.

PRESSURE RATINGS

Working pressures up to 5000 PSI. Working pressures will vary depending on tube and fitting size.

(For applications using extreme pressures at 5000 PSI or above, contact World Wide Fittings.)

MATERIAL

Steel – Bar Stock 12L14, 1045

Cold Formed 1010

Stainless Steel – Type 316

PLATING

Clear Zinc Trivalent

Passivated

HOW TO ORDER

Tubing sizes are measured in sixteenths of an inch. Available sizes are 1/8" through 2". When ordering, the tube end of the fitting must be specified first followed by the pipe thread or straight thread end. All fittings in this section are ordered as bodies only unless specified by customers when ordering.

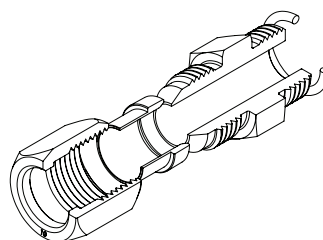
(Contact World Wide for details on ordering fittings preassembled with nuts and sleeves.)

CONFORMANCE

5000 Series Fittings Meet SAE J514 and MS (Military Specifications).

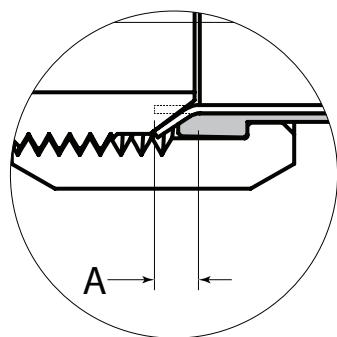
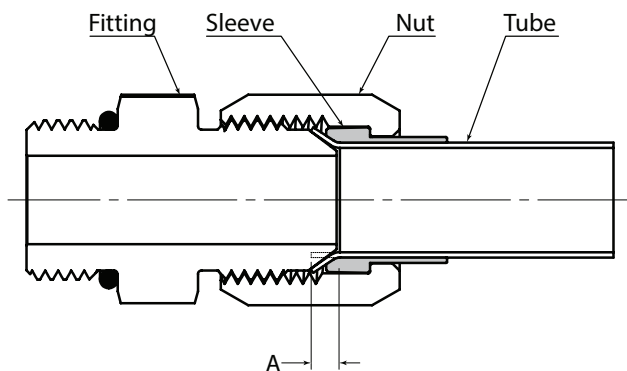
ASSEMBLY INSTRUCTIONS

1. Cut the tubing to the desired length making sure the ends are square. Remove all burrs from the tubing ends and clean thoroughly.
2. Slide the tube nut on the tubing making sure that the open end of the nut is facing the tube end. Then slide the tube sleeve on the tubing making sure the seat of the sleeve is facing the tube end.
3. Using a 37° flaring tool, flare the tubing end. Inspect the flared end for dimensions that are out of tolerance and may cause underflare, overflare, and excessive wall thinning which can interfere with the operation and quality of the assembled fitting. (For examples of underflaring and overflaring refer to the tube flaring drawings.)
4. Pull the sleeve up to the flared end and then pull the tube nut up and over the sleeve and flared end.
5. Lubricate the threads on both the nut and the fitting body, align the flared end against the nose of the fitting and assemble to the finger-tight position.
6. Using a wrench tighten the assembly until the nut is snug, then tighten the nut an additional one to two flats further. (Refer to the assembly torque charts during installation of 5000 series fittings from the port and thread assemblies section.)



5000 SERIES - STEEL 37° FLARE (JIC) FITTINGS

Correct assembly

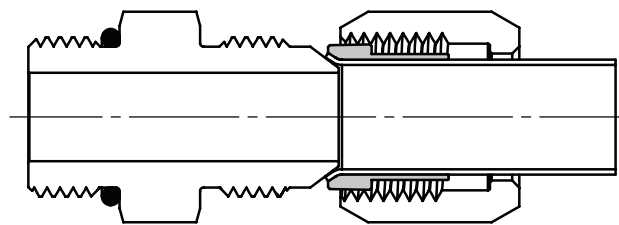


Tube length allowance
(See table below)

Nominal Tube O.D.		A
Inch	Metric	
1/8	-	0.07
3/16	-	0.08
1/4	6	0.09
5/16	8	0.08
3/8	10	0.08
1/2	12	0.12
5/8	14, 15, 16	0.13
3/4	18, 20	0.15
7/8	22	0.15
1	25	0.15
1-1/4	30, 32	0.20
1-1/2	38	0.18
2	42	0.28

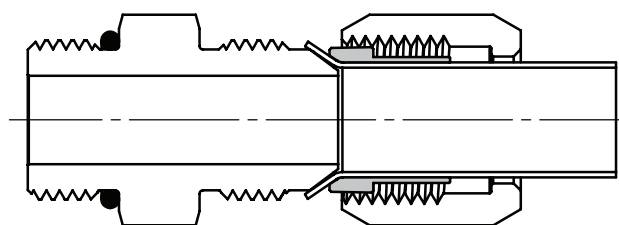
Tube length allowance table

Incorrect assembly



Under flared assembly

Underflaring reduces contact area causing excessive nose collapse and leakage; or in extreme cases, tube pull out under pressure.

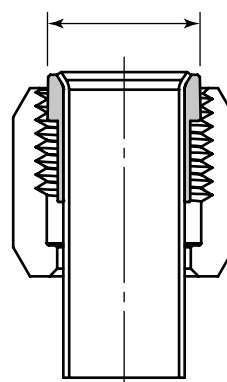


Over flared assembly

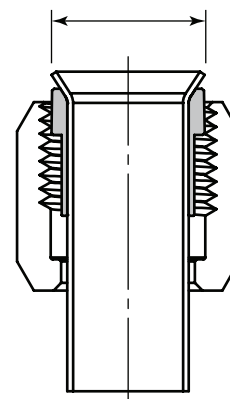
Overflaring causes tube nut thread interference, either preventing assembly altogether, or giving a false sense of joint tightness resulting in leakage.

Min. Flare O.D. should at least equal sleeve seat O.D.

Max. Flare O.D. should not exceed sleeve seat O.D.



Minimum Flare



Maximum Flare

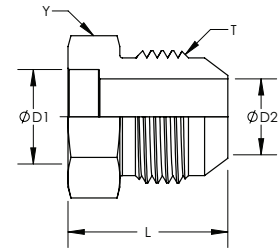
Comparing flare O.D. with sleeve seat and O.D.

C

5000 SERIES

Description: **Male JIC Braze Connector**
 WWF Part No.: **0403**
 WWF Stainless Part No.: **0403-SS**
 SAE: /

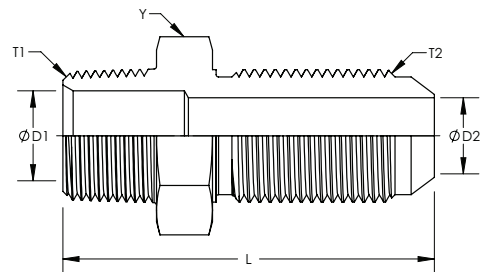
Air-Way: 0403
 Parker: /
 Aeroquip: 73014
 Gates: MJ-FBO



WWF	Y HEX	T	D1	D2	L
0403X04X04	0.500	7/16-20	0.256	0.172	0.800
0403X05X05	0.563	1/2-20	0.318	0.234	0.800
0403X06X04	0.500	9/16-18	0.381	0.172	0.800
0403X06X06	0.625	9/16-18	0.381	0.297	0.840
0403X06X08	0.813	3/4-16	0.381	0.297	0.940
0403X08X06	0.625	9/16-18	0.506	0.297	0.840
0403X08X08	0.813	3/4-16	0.506	0.391	0.940
0403X10X08	0.813	3/4-16	0.631	0.391	0.940
0403X10X10	0.938	7/8-14	0.631	0.484	1.100
0403X12X12	1.125	1-1/16-12	0.757	0.609	1.280
0403X14X14	1.250	1-3/16-12	0.882	0.609	1.310
0403X16X16	1.375	1-5/16-12	1.007	0.844	1.330
0403X16X20	1.688	1-5/8-12	1.007	0.844	1.330
0403X20X16	1.375	1-5/16-12	1.258	0.844	1.330
0403X20X20	1.688	1-5/8-12	1.258	1.078	1.450
0403X24X24	2.000	1-7/8-12	1.508	1.313	1.650
0403X32X32	2.625	2-1/2-12	2.008	1.781	2.050

Description: **Male JIC to Male Pipe Bulkhead**
 WWF Part No.: **2706**
 WWF Stainless Part No.: **2706-SS**
 SAE: /

Air-Way: 2706
 Parker: WFTX
 Aeroquip: /
 Gates: MJBKHD-MP

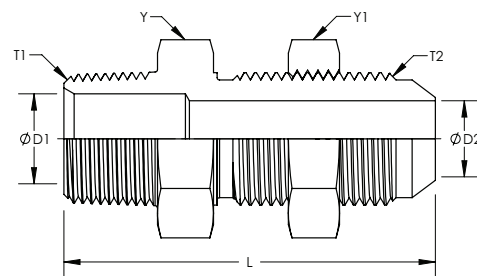


WWF	Y HEX	T1	D1	T2	D2	L
2706X02X04	0.688	1/8-27	0.188	7/16-20	0.172	1.900
2706X04X04	0.688	1/4-18	0.281	7/16-20	0.172	2.080
2706X06X06	0.813	3/8-18	0.406	9/16-18	0.297	2.184
2706X08X08	1.000	1/2-14	0.531	3/4-16	0.391	2.560
2706X12X12	1.375	3/4-14	0.719	1-1/16-12	0.609	2.976
2706X16X16	1.625	1-11-1/2	0.938	1-5/16-12	0.844	3.169
2706X24X24	2.125	1-1/2-11-1/2	1.500	1-7/8-12	1.313	3.437

Description: Male JIC to Male Pipe Bulkhead
With Locknut

WWF Part No.: **2706LN**
WWF Stainless Part No.: **2706-LN-SS**
SAE: /

Air-Way: 2706-LN
Parker: WFTX-WLN
Aeroquip: 2240
Gates: /

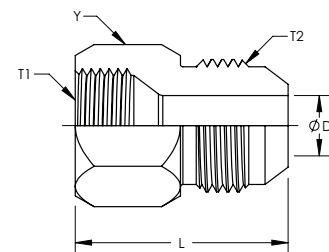


WWF	Y HEX	Y1 HEX	T1	D1	T2	D2	L
2706X04X04LN	0.688	0.688	1/4-18	0.281	7/16-20	0.172	2.080
2706X06X06LN	0.813	0.813	3/8-18	0.406	9/16-18	0.297	2.184
2706X08X08LN	1.000	1.000	1/2-14	0.531	3/4-16	0.391	2.560
2706X12X12LN	1.375	1.375	3/4-14	0.719	1-1/16-12	0.609	2.976
2706X16X16LN	1.625	1.625	1-11-1/2	0.938	1-5/16-12	0.844	3.169

Description: Tube End Reducer (1 Piece)

WWF Part No.: **5015**
WWF Stainless Part No.: **2406-SS**
SAE: **070123**

Air-Way: 2406
Parker: TRTX
Aeroquip: 2215
Gates: MJ-FJ



WWF	Y HEX	T1	D	T2	L
5015X04X02	0.563	7/16-20	0.063	5/16-24	1.042
5015X04X06	0.688	7/16-20	0.172	9/16-18	1.150
5015X04X08	0.813	7/16-20	0.391	3/4-16	1.251
5015X05X04	0.625	1/2-20	0.172	7/16-20	1.159
5015X06X04	0.688	9/16-18	0.172	7/16-20	1.175
5015X06X06	0.688	9/16-18	0.297	9/16-18	1.181
5015X06X08	0.813	9/16-18	0.297	3/4-16	1.282
5015X08X04	0.875	3/4-16	0.172	7/16-20	1.300
5015X08X06	0.875	3/4-16	0.297	9/16-18	1.306
5015X08X10	0.938	3/4-16	0.391	7/8-14	1.508
5015X08X12	1.125	3/4-16	0.609	1-1/16-12	1.614
5015X08X16	1.375	3/4-16	0.844	1-5/16-12	1.661
5015X10X04	1.000	7/8-14	0.172	7/16-20	1.394
5015X10X06	1.000	7/8-14	0.297	9/16-18	1.400
5015X10X08	1.000	7/8-14	0.391	3/4-16	1.501

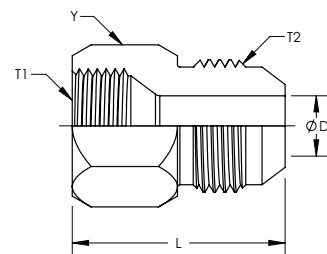
Continued on page 98

5000 SERIES

Continued from page 97

Description: **Tube End Reducer (1 Piece)**
 WWF Part No.: **5015**
 WWF Stainless Part No.: **2406-SS**
 SAE: **070123**

Air-Way: 2406
 Parker: TRTX
 Aeroquip: 2215
 Gates: MJ-FJ

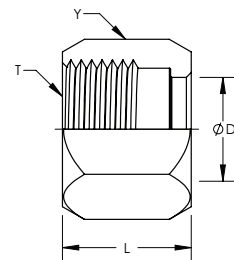


WWF	Y HEX	T1	D	T2	L
5015X10X12	1.125	7/8-14	0.484	1-1/16-12	1.708
5015X12X04	1.250	1-1/16-12	0.172	7/16-20	1.456
5015X12X06	1.250	1-1/16-12	0.297	9/16-18	1.462
5015X12X08	1.250	1-1/16-12	0.391	3/4-16	1.563
5015X12X10	1.250	1-1/16-12	0.484	7/8-14	1.664
5015X12X16	1.500	1-1/16-12	0.844	1-5/16-12	1.817
5015X12X20	1.688	1-1/16-12	1.078	1-5/8-12	1.864
5015X14X06	1.375	1-3/16-12	0.297	9/16-18	1.525
5015X14X08	1.375	1-3/16-12	0.391	3/4-16	1.626
5015X14X10	1.375	1-3/16-12	0.484	7/8-14	1.727
5015X14X12	1.375	1-3/16-12	0.609	1-1/16-12	1.833
5015X16X04	1.500	1-5/16-12	0.172	7/16-20	1.566
5015X16X06	1.500	1-5/16-12	0.297	9/16-18	1.572
5015X16X08	1.500	1-5/16-12	0.391	3/4-16	1.673
5015X16X10	1.500	1-5/16-12	0.484	7/8-14	1.774
5015X16X12	1.500	1-5/16-12	0.609	1-1/16-12	1.880
5015X16X14	1.500	1-5/16-12	0.719	1-3/16-12	1.906
5015X16X20	1.688	1-5/16-12	1.078	1-5/8-12	1.974
5015X16X24	2.000	1-5/16-12	1.313	1-7/8-12	2.099
5015X20X12	2.000	1-5/8-12	0.609	1-1/16-12	1.926
5015X20X16	2.000	1-5/8-12	0.844	1-5/16-12	1.973
5015X20X24	2.000	1-5/8-12	1.313	1-7/8-12	2.145
5015X24X12	2.250	1-7/8-12	0.609	1-1/16-12	2.052
5015X24X16	2.250	1-7/8-12	0.844	1-5/16-12	2.099
5015X24X20	2.250	1-7/8-12	1.078	1-5/8-12	2.146
5015X24X32	2.625	1-7/8-12	1.313	2-1/2-12	2.521
5015X32X24	2.875	2-1/2-12	1.313	1-7/8-12	2.521

5000 SERIES

Description: **Short Nut**
 WWF Part No.: **5105**
 WWF Stainless Part No.: **0318-SS**
 SAE: **070110**

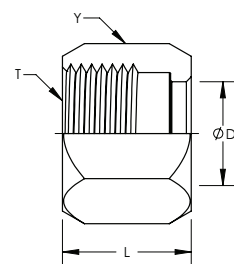
Air-Way: 0318
 Parker: BTX
 Aeroquip: 1290
 Gates: TSN



WWF	Y HEX	T	D	L
5105X02	0.375	5/16-24	0.179	0.550
5105X03	0.438	3/8-24	0.241	0.610
5105X04CF	0.563	7/16-20	0.304	0.620
5105X05CF	0.625	1/2-20	0.373	0.680
5105X06CF	0.688	9/16-18	0.439	0.730
5105X08CF	0.875	3/4-16	0.568	0.850
5105X10CF	1.000	7/8-14	0.696	0.980
5105X12CF	1.250	1-1/16-12	0.832	1.030
5105X14CF	1.375	1-3/16-12	0.959	1.090
5105X16CF	1.500	1-5/16-12	1.087	1.130
5105X20CF	2.000	1-5/8-12	1.344	1.230
5105X24CF	2.250	1-7/8-12	1.614	1.420
5105X32CF	2.875	2-1/2-12	2.164	1.750

Description: **Short Nut Metric Hex**
 WWF Part No.: **5105MH**
 WWF Stainless Part No.: **M0318-SS**
 SAE: /

Air-Way: M0318
 Parker: /
 Aeroquip: /
 Gates: /



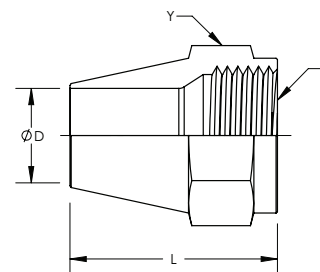
WWF	Y HEX	T	D	L
5105X04MH	0.551	7/16-20	0.304	0.620
5105X05MH	0.669	1/2-20	0.373	0.680
5105X06MH	0.748	9/16-18	0.439	0.730
5105X08MH	0.866	3/4-16	0.568	0.850
5105X10MH	1.063	7/8-14	0.696	0.980
5105X12MH	1.260	1-1/16-12	0.832	1.030
5105X14MH	1.417	1-3/16-12	0.959	1.090
5105X16MH	1.614	1-5/16-12	1.087	1.130
5105X20MH	1.969	1-5/8-12	1.344	1.230
5105X24MH	2.362	1-7/8-12	1.614	1.420
5105X32MH	2.952	2-1/2-12	2.164	1.750

C

5000 SERIES

Description: **Long Nut**
 WWF Part No.: **5115**
 WWF Stainless Part No.: **0304-SS**
 SAE: **070111**

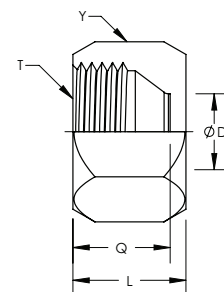
Air-Way: 0304
 Parker: /
 Aeroquip: /
 Gates: /



WWF	Y HEX	T	D	L
5115X02	0.375	5/16-24	0.130	0.840
5115X03	0.438	3/8-24	0.193	0.940
5115X04	0.563	7/16-20	0.255	1.000
5115X05	0.625	1/2-20	0.318	1.060
5115X06	0.688	9/16-18	0.380	1.090
5115X08	0.875	3/4-16	0.505	1.280
5115X10	1.000	7/8-14	0.631	1.480
5115X12	1.250	1-1/16-12	0.756	1.660
5115X14	1.375	1-3/16-12	0.881	1.810
5115X16	1.500	1-5/16-12	1.006	1.940
5115X20	2.000	1-5/8-12	1.260	2.190
5115X24	2.250	1-7/8-12	1.510	2.310
5115X32	2.875	2-1/2-12	2.014	2.750

Description: **Cap**
 WWF Part No.: **5129**
 WWF Stainless Part No.: **0304-C-SS**
 SAE: **070112**

Air-Way: 0304-C
 Parker: FNTX
 Aeroquip: 210292
 Gates: FJ-CAP

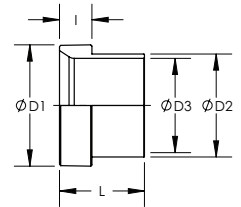


WWF	Y HEX	T	D	Q	L
5129X02	0.375	5/16-24	0.063	0.438	0.500
5129X03	0.438	3/8-24	0.125	0.500	0.563
5129X04CF	0.563	7/16-20	0.172	0.531	0.594
5129X05	0.625	1/2-20	0.234	0.547	0.609
5129X06CF	0.688	9/16-18	0.297	0.563	0.625
5129X08CF	0.875	3/4-16	0.391	0.625	0.750
5129X10CF	1.000	7/8-14	0.484	0.719	0.844
5129X12CF	1.250	1-1/16-12	0.609	0.781	0.906
5129X14	1.375	1-3/16-12	0.719	0.844	0.969
5129X16CF	1.500	1-5/16-12	0.844	0.859	1.016
5129X20CF	2.000	1-5/8-12	1.078	0.906	1.063
5129X24CF	2.250	1-7/8-12	1.313	1.031	1.188
5129X32CF	2.875	2-1/2-12	1.781	1.281	1.438

5000 SERIES

Description: **Sleeve**
 WWF Part No.: **5165**
 WWF Stainless Part No.: **0319-SS**
 SAE: **070115**

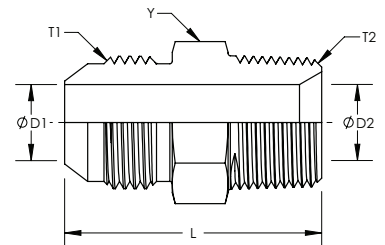
Air-Way: 0319
 Parker: TX
 Aeroquip: 900605
 Gates: TS



WWF	D1	D2	D3	I	L
5165X02	0.267	0.172	0.130	0.120	0.340
5165X03	0.329	0.234	0.193	0.140	0.340
5165X04CF	0.383	0.297	0.255	0.140	0.410
5165X05CF	0.445	0.366	0.318	0.160	0.440
5165X06CF	0.502	0.432	0.380	0.170	0.500
5165X08CF	0.682	0.563	0.505	0.220	0.560
5165X10CF	0.797	0.690	0.631	0.240	0.660
5165X12CF	0.972	0.826	0.756	0.260	0.680
5165X14CF	1.097	0.953	0.881	0.260	0.760
5165X16CF	1.222	1.081	1.006	0.280	0.780
5165X20CF	1.534	1.339	1.260	0.310	0.910
5165X24CF	1.784	1.609	1.510	0.340	1.120
5165X32CF	2.409	2.159	2.014	0.410	1.190

Description: **Male Connector**
 WWF Part No.: **5205**
 WWF Stainless Part No.: **2404-SS**
 SAE: **070102**

Air-Way: 2404
 Parker: FTX
 Aeroquip: 2021-[R]
 Gates: MJ-MP



WWF	Y HEX	T1	D1	T2	D2	L
5205X02X02	0.438	5/16-24	0.063	1/8-27	0.188	1.110
5205X02X04	0.625	5/16-24	0.063	1/4-18	0.281	1.320
5205X03X02	0.438	3/8-24	0.125	1/8-27	0.188	1.140
5205X03X04	0.625	3/8-24	0.125	1/4-18	0.281	1.350
5205X04X02	0.500	7/16-20	0.172	1/8-27	0.188	1.220
5205X04X04	0.563	7/16-20	0.172	1/4-18	0.281	1.420
5205X04X06	0.750	7/16-20	0.172	3/8-18	0.406	1.420

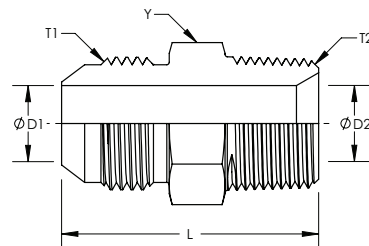
Continued on page 102

5000 SERIES

Continued from page 101

Description: **Male Connector**
 WWF Part No.: **5205**
 WWF Stainless Part No.: **2404-SS**
 SAE: **070102**

Air-Way: 2404
 Parker: FTX
 Aeroquip: 2021-[R]
 Gates: MJ-MP



WWF	Y HEX	T1	D1	T2	D2	L
5205X04X08	0.875	7/16-20	0.172	1/2-14	0.531	1.680
5205X05X02	0.563	1/2-20	0.234	1/8-27	0.188	1.220
5205X05X04	0.563	1/2-20	0.234	1/4-18	0.281	1.420
5205X05X06	0.813	1/2-20	0.234	3/8-18	0.406	1.420
5205X06X02	0.625	9/16-18	0.297	1/8-27	0.188	1.240
5205X06X04	0.625	9/16-18	0.297	1/4-18	0.281	1.430
5205X06X06	0.750	9/16-18	0.297	3/8-18	0.406	1.430
5205X06X08	0.875	9/16-18	0.297	1/2-14	0.531	1.690
5205X06X12	1.125	9/16-18	0.297	3/4-14	0.719	1.750
5205X08X02	0.813	3/4-16	0.391	1/8-27	0.188	1.340
5205X08X04	0.813	3/4-16	0.391	1/4-18	0.281	1.530
5205X08X06	0.813	3/4-16	0.391	3/8-18	0.406	1.530
5205X08X08	0.875	3/4-16	0.391	1/2-14	0.531	1.790
5205X08X12	1.125	3/4-16	0.391	3/4-14	0.719	1.850
5205X08X16	1.375	3/4-16	0.391	1-11-1/2	0.938	2.050
5205X10X04	0.938	7/8-14	0.484	1/4-18	0.281	1.700
5205X10X06	0.938	7/8-14	0.484	3/8-18	0.406	1.700
5205X10X08	0.938	7/8-14	0.484	1/2-14	0.531	1.890
5205X10X12	1.125	7/8-14	0.484	3/4-14	0.719	1.950
5205X10X16	1.375	7/8-14	0.484	1-11-1/2	0.938	2.150
5205X12X06	1.125	1-1/16-12	0.609	3/8-18	0.406	1.870
5205X12X08	1.125	1-1/16-12	0.609	1/2-14	0.531	2.060
5205X12X12	1.125	1-1/16-12	0.609	3/4-14	0.719	2.060
5205X12X16	1.375	1-1/16-12	0.609	1-11-1/2	0.938	2.250
5205X12X20	1.688	1-1/16-12	0.609	1-1/4-11-1/2	1.250	2.360
5205X12X24	2.000	1-1/16-12	0.609	1-1/2-11-1/2	1.500	2.460
5205X14X08	1.250	1-3/16-12	0.719	1/2-14	0.531	2.090
5205X14X12	1.250	1-3/16-12	0.719	3/4-14	0.719	2.090
5205X16X08	1.375	1-5/16-12	0.844	1/2-14	0.531	2.110
5205X16X12	1.375	1-5/16-12	0.844	3/4-14	0.719	2.110
5205X16X16	1.375	1-5/16-12	0.844	1-11-1/2	0.938	2.300
5205X16X20	1.688	1-5/16-12	0.844	1-1/4-11-1/2	1.250	2.400
5205X16X24	2.000	1-5/16-12	0.844	1-1/2-11-1/2	1.500	2.510
5205X20X16	1.688	1-5/8-12	1.078	1-11-1/2	0.938	2.420

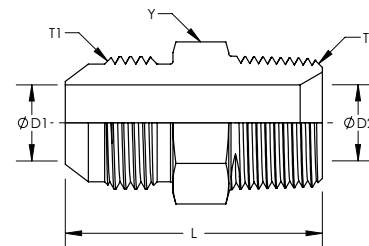
Continued on page 103

5000 SERIES

Continued from page 102

Description: **Male Connector**
 WWF Part No.: **5205**
 WWF Stainless Part No.: **2404-SS**
 SAE: **070102**

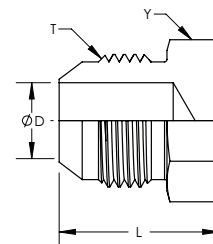
Air-Way: 2404
 Parker: FTX
 Aeroquip: 2021-[R]
 Gates: MJ-MP



WWF	Y HEX	T1	D1	T2	D2	L
5205X20X20	1.688	1-5/8-12	1.078	1-1/4-11-1/2	1.250	2.450
5205X20X24	2.000	1-5/8-12	1.078	1-1/2-11-1/2	1.500	2.550
5205X20X32	2.625	1-5/8-12	1.078	2-11-1/2	1.938	2.730
5205X24X16	2.000	1-7/8-12	1.313	1-11-1/2	0.938	2.620
5205X24X20	2.000	1-7/8-12	1.313	1-1/4-11-1/2	1.250	2.650
5205X24X24	2.000	1-7/8-12	1.313	1-1/2-11-1/2	1.500	2.680
5205X24X32	2.500	1-7/8-12	1.313	2-11-1/2	1.938	2.860
5205X32X20	2.625	2-1/2-12	1.781	1-1/4-11-1/2	1.250	3.050
5205X32X24	2.625	2-1/2-12	1.781	1-1/2-11-1/2	1.500	3.080
5205X32X32	2.625	2-1/2-12	1.781	2-11-1/2	1.938	3.110

Description: **Plug**
 WWF Part No.: **5229**
 WWF Stainless Part No.: **2408-SS**
 SAE: **070109**

Air-Way: 2408
 Parker: PNTX
 Aeroquip: 900599
 Gates: MJ-PLUG

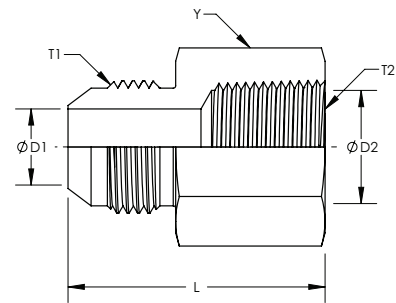


WWF	Y HEX	T	D	L
5229X02	0.438	5/16-24	0.063	0.700
5229X03	0.438	3/8-24	0.125	0.730
5229X04	0.500	7/16-20	0.172	0.800
5229X05	0.563	1/2-20	0.234	0.800
5229X06	0.625	9/16-18	0.297	0.840
5229X08	0.813	3/4-16	0.391	0.940
5229X10	0.938	7/8-14	0.484	1.100
5229X12	1.125	1-1/16-12	0.609	1.280
5229X14	1.250	1-3/16-12	0.719	1.310
5229X16	1.375	1-5/16-12	0.844	1.330
5229X20	1.688	1-5/8-12	1.078	1.450
5229X24	2.000	1-7/8-12	1.313	1.650
5229X32	2.625	2-1/2-12	1.781	2.050

5000 SERIES

Description: **Female Connector**
 WWF Part No.: **5255**
 WWF Stainless Part No.: **2405-SS**
 SAE: **070103**

Air-Way: 2405
 Parker: GTX-S
 Aeroquip: 2022-[R]
 Gates: MJ-FP

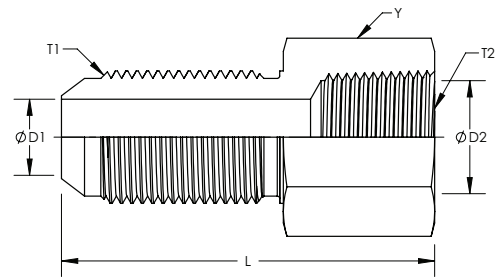


WWF	Y HEX	T1	D1	T2	D2	L
5255X02X02	0.563	5/16-24	0.063	1/8-27	0.332	1.120
5255X03X02	0.563	3/8-24	0.125	1/8-27	0.332	1.130
5255X04X02	0.563	7/16-20	0.172	1/8-27	0.332	1.190
5255X04X04	0.750	7/16-20	0.172	1/4-18	0.438	1.390
5255X04X06	0.875	7/16-20	0.172	3/8-18	0.563	1.450
5255X04X08	1.125	7/16-20	0.172	1/2-14	0.703	1.680
5255X05X02	0.563	1/2-20	0.234	1/8-27	0.332	1.170
5255X05X04	0.750	1/2-20	0.234	1/4-18	0.438	1.390
5255X06X02	0.750	9/16-18	0.297	1/8-27	0.332	1.190
5255X06X04	0.750	9/16-18	0.297	1/4-18	0.438	1.400
5255X06X06	0.875	9/16-18	0.297	3/8-18	0.563	1.460
5255X06X08	1.125	9/16-18	0.297	1/2-14	0.703	1.690
5255X08X04	0.875	3/4-16	0.391	1/4-18	0.438	1.550
5255X08X06	0.875	3/4-16	0.391	3/8-18	0.563	1.560
5255X08X08	1.125	3/4-16	0.391	1/2-14	0.703	1.790
5255X08X12	1.375	3/4-16	0.391	3/4-14	0.906	1.850
5255X10X06	1.125	7/8-14	0.484	3/8-18	0.563	1.670
5255X10X08	1.125	7/8-14	0.484	1/2-14	0.703	1.890
5255X10X12	1.375	7/8-14	0.484	3/4-14	0.906	1.950
5255X10X16	1.625	7/8-14	0.484	1-11-1/2	1.141	2.200
5255X12X08	1.375	1-1/16-12	0.609	1/2-14	0.703	2.050
5255X12X12	1.375	1-1/16-12	0.609	3/4-14	0.906	2.060
5255X12X16	1.625	1-1/16-12	0.609	1-11-1/2	1.141	2.300
5255X14X12	1.375	1-3/16-12	0.719	3/4-14	0.906	2.060
5255X16X12	1.625	1-5/16-12	0.844	3/4-14	0.906	2.120
5255X16X16	1.625	1-5/16-12	0.844	1-11-1/2	1.141	2.350
5255X16X20	2.000	1-5/16-12	0.844	1-1/4-11-1/2	1.484	2.440
5255X20X16	2.000	1-5/8-12	1.078	1-11-1/2	1.141	2.470
5255X20X20	2.000	1-5/8-12	1.078	1-1/4-11-1/2	1.484	2.490
5255X20X24	2.375	1-5/8-12	1.078	1-1/2-11-1/2	1.744	2.490
5255X24X20	2.375	1-7/8-12	1.313	1-1/4-11-1/2	1.484	2.620
5255X24X24	2.375	1-7/8-12	1.313	1-1/2-11-1/2	1.744	2.620
5255X32X32	2.875	2-1/2-12	1.781	2-11-1/2	2.213	2.970

5000 SERIES

Description: **Female Bulkhead Connector**
 WWF Part No.: **5275**
 WWF Stainless Part No.: **2705-SS**
 SAE: /

Air-Way: 2705 **Reversed**
 Parker: WGTX
 Aeroquip: /
 Gates: /

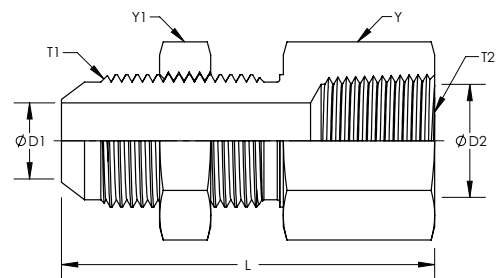


WWF	Y HEX	T1	D1	T2	D2	L
5275X02X04	0.750	5/16-24	0.063	1/4-18	0.438	2.010
5275X04X02	0.688	7/16-20	0.172	1/8-27	0.332	1.840
5275X04X04	0.750	7/16-20	0.172	1/4-18	0.438	2.090
5275X04X06	0.875	7/16-20	0.172	3/8-18	0.563	2.140
5275X06X04	0.813	9/16-18	0.297	1/4-18	0.438	2.170
5275X06X06	0.875	9/16-18	0.297	3/8-18	0.563	2.230
5275X08X06	1.000	3/4-16	0.391	3/8-18	0.563	2.390
5275X08X08	1.125	3/4-16	0.391	1/2-14	0.703	2.620
5275X10X08	1.125	7/8-14	0.484	1/2-14	0.703	2.760
5275X12X08	1.375	1-1/16-12	0.609	1/2-14	0.703	2.910
5275X12X12	1.375	1-1/16-12	0.609	3/4-14	0.906	2.990
5275X16X16	1.625	1-5/16-12	0.844	1-11-1/2	1.141	3.240
5275X20X20	2.000	1-5/8-12	1.078	1-1/4-11-1/2	1.484	3.340
5275X24X24	2.375	1-7/8-12	1.313	1-1/2-11-1/2	1.744	3.400

C

Description: **Female Bulkhead Connector With Locknut**
 WWF Part No.: **5275LN**
 WWF Stainless Part No.: **2705-LN-SS**
 SAE: /

Air-Way: 2705-LN **Reversed**
 Parker: WGTX-WLN
 Aeroquip: 2239
 Gates: /

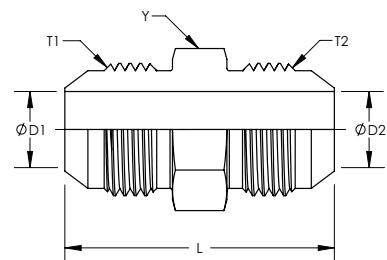


WWF	Y HEX	Y1 HEX	T1	D1	T2	D2	L
5275X02X04LN	0.750	0.563	5/16-24	0.063	1/4-18	0.438	2.010
5275X04X02LN	0.688	0.688	7/16-20	0.172	1/8-27	0.332	1.840
5275X04X04LN	0.750	0.688	7/16-20	0.172	1/4-18	0.438	2.090
5275X04X06LN	0.875	0.688	7/16-20	0.172	3/8-18	0.563	2.140
5275X06X04LN	0.813	0.813	9/16-18	0.297	1/4-18	0.438	2.170
5275X06X06LN	0.875	0.813	9/16-18	0.297	3/8-18	0.563	2.230
5275X08X06LN	1.000	1.000	3/4-16	0.391	3/8-18	0.563	2.390
5275X08X08LN	1.125	1.000	3/4-16	0.391	1/2-14	0.703	2.620
5275X10X08LN	1.125	1.125	7/8-14	0.484	1/2-14	0.703	2.760
5275X12X12LN	1.375	1.375	1-1/16-12	0.609	3/4-14	0.906	2.990
5275X16X16LN	1.625	1.625	1-5/16-12	0.844	1-11-1/2	1.141	3.240
5275X20X20LN	2.000	1.875	1-5/8-12	1.078	1-1/4-11-1/2	1.484	3.340

5000 SERIES

Description: **Union**
 WWF Part No.: **5305**
 WWF Stainless Part No.: **2403-SS**
 SAE: **070101**

Air-Way: 2403
 Parker: HTX
 Aeroquip: 2027
 Gates: MJ-MJ

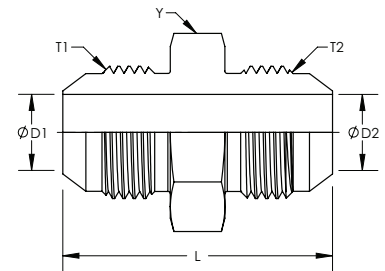


WWF	Y HEX	T1	D1	T2	D2	L
5305X02X02	0.438	5/16-24	0.063	5/16-24	0.063	1.170
5305X03X03	0.438	3/8-24	0.125	3/8-24	0.125	1.230
5305X04X02	0.500	7/16-20	0.172	5/16-24	0.063	1.270
5305X04X04	0.500	7/16-20	0.172	7/16-20	0.172	1.370
5305X05X05	0.563	1/2-20	0.234	1/2-20	0.234	1.370
5305X06X04	0.625	9/16-18	0.297	7/16-20	0.172	1.400
5305X06X06	0.625	9/16-18	0.297	9/16-18	0.297	1.410
5305X08X04	0.813	3/4-16	0.391	7/16-20	0.172	1.510
5305X08X06	0.813	3/4-16	0.391	9/16-18	0.297	1.520
5305X08X08	0.813	3/4-16	0.391	3/4-16	0.391	1.620
5305X10X04	0.938	7/8-14	0.484	7/16-20	0.172	1.670
5305X10X06	0.938	7/8-14	0.484	9/16-18	0.297	1.680
5305X10X08	0.938	7/8-14	0.484	3/4-16	0.391	1.780
5305X10X10	0.938	7/8-14	0.484	7/8-14	0.484	1.880
5305X12X08	1.125	1-1/16-12	0.609	3/4-16	0.391	1.950
5305X12X10	1.125	1-1/16-12	0.609	7/8-14	0.484	2.050
5305X12X12	1.125	1-1/16-12	0.609	1-1/16-12	0.609	2.160
5305X14X14	1.250	1-3/16-12	0.719	1-3/16-12	0.719	2.210
5305X16X08	1.375	1-5/16-12	0.844	3/4-16	0.391	2.000
5305X16X10	1.375	1-5/16-12	0.844	7/8-14	0.484	2.100
5305X16X12	1.375	1-5/16-12	0.844	1-1/16-12	0.609	2.200
5305X16X16	1.375	1-5/16-12	0.844	1-5/16-12	0.844	2.250
5305X20X12	1.688	1-5/8-12	1.078	1-1/16-12	0.609	2.340
5305X20X16	1.688	1-5/8-12	1.078	1-5/16-12	0.844	2.380
5305X20X20	1.688	1-5/8-12	1.078	1-5/8-12	1.078	2.430
5305X24X12	2.000	1-7/8-12	1.313	1-1/16-12	0.609	2.530
5305X24X16	2.000	1-7/8-12	1.313	1-5/16-12	0.844	2.580
5305X24X20	2.000	1-7/8-12	1.313	1-5/8-12	1.078	2.620
5305X24X24	2.000	1-7/8-12	1.313	1-7/8-12	1.313	2.750
5305X32X32	2.625	2-1/2-12	1.781	2-1/2-12	1.781	3.400

5000 SERIES

Description: **Large Hex Union**
 WWF Part No.: **5306**
 WWF Stainless Part No.: **2403-LH-SS**
 SAE: **070119**

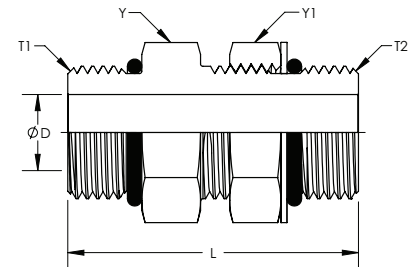
Air-Way: 2403-LH
 Parker: LHTX
 Aeroquip: 202712
 Gates: /



WWF	Y HEX	T1	D1	T2	D2	L
5306X04X04	0.688	7/16-20	0.172	7/16-20	0.172	1.370
5306X05X05	0.750	1/2-20	0.234	1/2-20	0.234	1.370
5306X06X06	0.813	9/16-18	0.297	9/16-18	0.297	1.410
5306X08X04	1.000	3/4-16	0.391	7/16-20	0.172	1.510
5306X08X08	1.000	3/4-16	0.391	3/4-16	0.391	1.620
5306X10X10	1.125	7/8-14	0.484	7/8-14	0.484	1.880
5306X12X12	1.375	1-1/16-12	0.609	1-1/16-12	0.609	2.160
5306X14X14	1.500	1-3/16-12	0.719	1-3/16-12	0.719	2.210
5306X16X16	1.625	1-5/16-12	0.844	1-5/16-12	0.844	2.250
5306X20X20	1.875	1-5/8-12	1.078	1-5/8-12	1.078	2.430
5306X24X24	2.125	1-7/8-12	1.313	1-7/8-12	1.313	2.750

Description: **Adjustable Union**
 WWF Part No.: **5314**
 WWF Stainless Part No.: **3474-SS**
 SAE: /

Air-Way: 3474
 Parker: /
 Aeroquip: /
 Gates: /

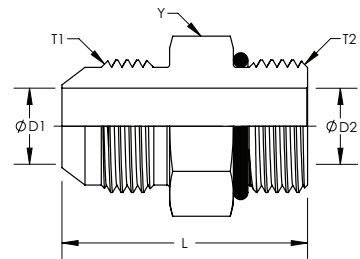


WWF	Y HEX	Y1 HEX	T1	D	T2	L
5314X04X04	0.563	0.563	7/16-20	0.172	7/16-20	1.470
5314X06X06	0.688	0.688	9/16-18	0.297	9/16-18	1.560
5314X08X08	0.875	0.875	3/4-16	0.391	3/4-16	1.760
5314X10X10	1.000	1.000	7/8-14	0.484	7/8-14	2.040
5314X12X12	1.250	1.250	1-1/16-12	0.609	1 1/16-12	2.330
5314X16X16	1.500	1.500	1-5/16-12	0.844	1 5/16-12	2.360
5314X20X20	1.875	1.875	1-5/8-12	1.078	1 5/8-12	2.310
5314X24X24	2.125	2.125	1-7/8-12	1.313	1-7/8-12	2.420
5314X32X32	2.750	2.750	2-1/2-12	1.781	2-1/2-12	2.590

5000 SERIES

Description: **Straight Thread Connector Short**
 WWF Part No.: **5315**
 WWF Stainless Part No.: **6400-SS**
 SAE: **070120**

Air-Way: 6400
 Parker: F5OX
 Aeroquip: 202702-[R]
 Gates: MB-MJ



WWF	Y HEX	T1	D1	T2	D2	L
5315X02X02	0.438	5/16-24	0.063	5/16-24	0.063	1.060
5315X03X03	0.500	3/8-24	0.125	3/8-24	0.125	1.100
5315X04X02	0.563	7/16-20	0.172	5/16-24	0.063	1.170
5315X04X03	0.563	7/16-20	0.172	3/8-24	0.125	1.170
5315X04X04	0.563	7/16-20	0.172	7/16-20	0.172	1.230
5315X04X05	0.625	7/16-20	0.172	1/2-20	0.234	1.230
5315X04X06	0.688	7/16-20	0.172	9/16-18	0.297	1.290
5315X04X08	0.875	7/16-20	0.172	3/4-16	0.391	1.370
5315X04X10	1.000	7/16-20	0.172	7/8-14	0.484	1.490
5315X04X12	1.250	7/16-20	0.172	1-1/16-12	0.609	1.660
5315X05X04	0.563	1/2-20	0.234	7/16-20	0.172	1.230
5315X05X05	0.625	1/2-20	0.234	1/2-20	0.234	1.230
5315X05X06	0.688	1/2-20	0.234	9/16-18	0.297	1.290
5315X06X04	0.625	9/16-18	0.297	7/16-20	0.172	1.270
5315X06X05	0.625	9/16-18	0.297	1/2-20	0.234	1.270
5315X06X06	0.688	9/16-18	0.297	9/16-18	0.297	1.300
5315X06X08	0.875	9/16-18	0.297	3/4-16	0.391	1.380
5315X06X10	1.000	9/16-18	0.297	7/8-14	0.484	1.500
5315X06X12	1.250	9/16-18	0.297	1-1/16-12	0.609	1.660
5315X08X04	0.813	3/4-16	0.391	7/16-20	0.172	1.490
5315X08X06	0.813	3/4-16	0.391	9/16-18	0.297	1.440
5315X08X08	0.875	3/4-16	0.391	3/4-16	0.391	1.480
5315X08X10	1.000	3/4-16	0.391	7/8-14	0.484	1.600
5315X08X12	1.250	3/4-16	0.391	1-1/16-12	0.609	1.760
5315X08X16	1.500	3/4-16	0.391	1-5/16-12	0.844	1.790
5315X08X20	1.875	3/4-16	0.391	1-5/8-12	1.078	1.870
5315X10X04	1.000	7/8-14	0.484	7/16-20	0.172	1.650
5315X10X06	0.938	7/8-14	0.484	9/16-18	0.297	1.710
5315X10X08	0.938	7/8-14	0.484	3/4-16	0.391	1.640
5315X10X10	1.000	7/8-14	0.484	7/8-14	0.484	1.700
5315X10X12	1.250	7/8-14	0.484	1-1/16-12	0.609	1.860
5315X10X16	1.500	7/8-14	0.484	1-5/16-12	0.844	1.890
5315X12X06	1.125	1-1/16-12	0.609	9/16-18	0.297	1.860

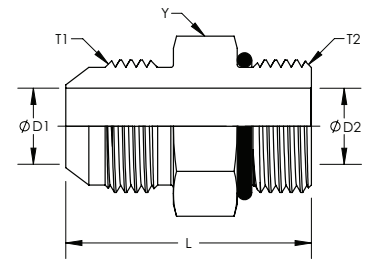
Continued on page 109

5000 SERIES

Continued from page 108

Description: **Straight Thread Connector Short**
 WWF Part No.: **5315**
 WWF Stainless Part No.: **6400-SS**
 SAE: **070120**

Air-Way: 6400
 Parker: F5OX
 Aeroquip: 202702-[R]
 Gates: MB-MJ



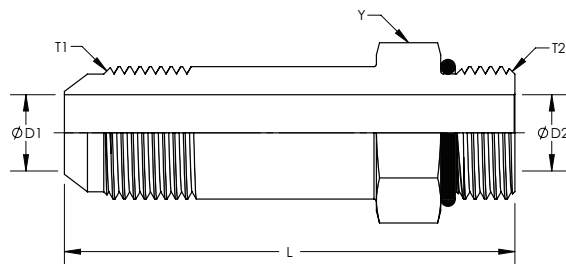
WWF	Y HEX	T1	D1	T2	D2	L
5315X12X08	1.125	1-1/16-12	0.609	3/4-16	0.391	1.940
5315X12X10	1.125	1-1/16-12	0.609	7/8-14	0.484	1.880
5315X12X12	1.250	1-1/16-12	0.609	1-1/16-12	0.609	1.970
5315X12X14	1.375	1-1/16-12	0.609	1-3/16-12	0.719	1.960
5315X12X16	1.500	1-1/16-12	0.609	1-5/16-12	0.844	1.990
5315X12X20	1.875	1-1/16-12	0.609	1-5/8-12	1.078	2.080
5315X14X12	1.250	1-3/16-12	0.719	1-1/16-12	0.609	1.990
5315X14X14	1.375	1-3/16-12	0.719	1-3/16-12	0.719	1.990
5315X14X16	1.500	1-3/16-12	0.719	1-5/16-12	0.844	2.020
5315X16X08	1.375	1-5/16-12	0.844	3/4-16	0.391	2.010
5315X16X10	1.375	1-5/16-12	0.844	7/8-14	0.484	2.070
5315X16X12	1.375	1-5/16-12	0.844	1-1/16-12	0.609	2.040
5315X16X14	1.375	1-5/16-12	0.844	1-3/16-12	0.719	2.040
5315X16X16	1.500	1-5/16-12	0.844	1-5/16-12	0.844	2.040
5315X16X20	1.875	1-5/16-12	0.844	1-5/8-12	1.078	2.120
5315X16X24	2.125	1-5/16-12	0.844	1-7/8-12	1.313	2.200
5315X20X16	1.688	1-5/8-12	1.078	1-5/16-12	0.844	2.330
5315X20X20	1.875	1-5/8-12	1.078	1-5/8-12	1.078	2.170
5315X20X24	2.125	1-5/8-12	1.078	1-7/8-12	1.313	2.240
5315X24X16	2.750	1-7/8-12	1.313	1-5/16-12	0.844	2.530
5315X24X20	2.125	1-7/8-12	1.313	1-5/8-12	1.078	2.530
5315X24X24	2.125	1-7/8-12	1.313	1-7/8-12	1.313	2.370
5315X24X32	2.750	1-7/8-12	1.313	2-1/2-12	1.781	2.530
5315X32X20	2.625	2-1/2-12	1.781	1-5/8-12	1.078	2.940
5315X32X24	2.750	2-1/2-12	1.781	1-7/8-12	1.313	2.940
5315X32X32	2.750	2-1/2-12	1.781	2-1/2-12	1.781	2.780

C

5000 SERIES

Description: **Straight Thread Connector Long**
 WWF Part No.: **5316**
 WWF Stainless Part No.: **6400-L-SS**
 SAE: **071702**

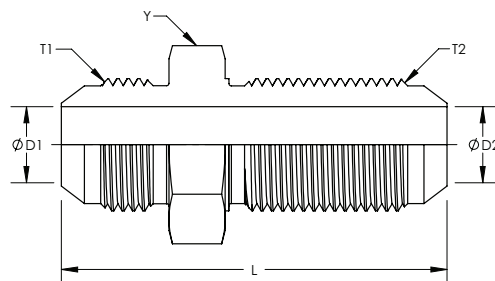
Air-Way: 6400-L
 Parker: FF50-X
 Aeroquip: 202713-[R]
 Gates: /



WWF	Y HEX	T1	D1	T2	D2	L
5316X04X04	0.563	7/16-20	0.172	7/16-20	0.172	2.080
5316X05X05	0.625	1/2-20	0.234	1/2-20	0.234	2.140
5316X06X06	0.688	9/16-18	0.297	9/16-18	0.297	2.310
5316X06X08	0.875	9/16-18	0.297	3/4-16	0.391	2.600
5316X08X08	0.875	3/4-16	0.391	3/4-16	0.391	2.700
5316X08X10	1.000	3/4-16	0.391	7/8-14	0.484	2.940
5316X10X10	1.000	7/8-14	0.484	7/8-14	0.484	3.040
5316X12X12	1.250	1-1/16-12	0.609	1-1/16-12	0.609	3.610
5316X14X14	1.375	1-3/16-12	0.719	1-3/16-12	0.719	3.800
5316X16X16	1.500	1-5/16-12	0.844	1-5/16-12	0.844	3.980
5316X20X16	1.875	1-5/8-12	1.078	1-5/16-12	0.844	4.690
5316X20X20	1.875	1-5/8-12	1.078	1-5/8-12	1.078	4.690

Description: **Bulkhead Union**
 WWF Part No.: **5325**
 WWF Stainless Part No.: **2700-SS**
 SAE: **070601**

Air-Way: 2700
 Parker: WTX
 Aeroquip: 2041-1-[R]
 Gates: MJ-BKHD

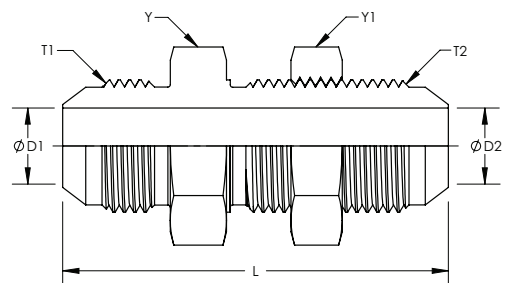


WWF	Y HEX	T1	D1	T2	D2	L
5325X04X04	0.688	7/16-20	0.172	7/16-20	0.172	2.070
5325X04X06	0.813	7/16-20	0.172	9/16-18	0.297	2.170
5325X05X05	0.750	1/2-20	0.234	1/2-20	0.234	2.070
5325X06X04	0.813	9/16-18	0.297	7/16-20	0.172	2.170
5325X06X06	0.813	9/16-18	0.297	9/16-18	0.297	2.180
5325X08X08	1.000	3/4-16	0.391	3/4-16	0.391	2.440
5325X10X10	1.125	7/8-14	0.484	7/8-14	0.484	2.740
5325X12X12	1.375	1-1/16-12	0.609	1-1/16-12	0.609	3.090
5325X14X14	1.500	1-3/16-12	0.719	1-3/16-12	0.719	3.120
5325X16X16	1.625	1-5/16-12	0.844	1-5/16-12	0.844	3.140
5325X20X20	1.875	1-5/8-12	1.078	1-5/8-12	1.078	3.310
5325X24X24	2.125	1-7/8-12	1.313	1-7/8-12	1.313	3.520

5000 SERIES

Description: **Bulkhead Union With Locknut**
 WWF Part No.: **5325LN**
 WWF Stainless Part No.: **2700-LN-SS**
 SAE: **070601**

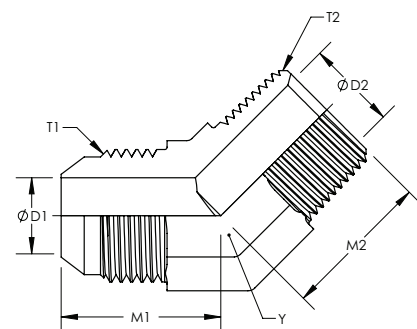
Air-Way: 2700-LN
 Parker: WTX-WLN
 Aeroquip: 2041-[R]
 Gates: /



WWF	Y HEX	Y1 HEX	T1	D1	T2	D2	L
5325X04X04LN	0.688	0.688	7/16-20	0.172	7/16-20	0.172	2.070
5325X05X05LN	0.750	0.750	1/2-20	0.234	1/2-20	0.234	2.070
5325X06X06LN	0.813	0.813	9/16-18	0.297	9/16-18	0.297	2.180
5325X08X08LN	1.000	1.000	3/4-16	0.391	3/4-16	0.391	2.440
5325X10X10LN	1.125	1.125	7/8-14	0.484	7/8-14	0.484	2.740
5325X12X12LN	1.375	1.375	1-1/16-12	0.609	1-1/16-12	0.609	3.090
5325X14X14LN	1.500	1.500	1-3/16-12	0.719	1-3/16-12	0.719	3.120
5325X16X16LN	1.625	1.625	1-5/16-12	0.844	1-5/16-12	0.844	3.140
5325X20X20LN	1.875	1.875	1-5/8-12	1.078	1-5/8-12	1.078	3.310
5325X24X24LN	2.125	2.125	1-7/8-12	1.313	1-7/8-12	1.313	3.520

Description: **45° Male Elbow**
 WWF Part No.: **F5355**
 WWF Stainless Part No.: **2503-SS**
 SAE: **070302**

Air-Way: 2503
 Parker: VTX
 Aeroquip: 2023-[R]
 Gates: MJ-MP45



WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5355X02X02	0.438	5/16-24	0.690	0.063	1/8-27	0.520	0.188
F5355X03X02	0.438	3/8-24	0.690	0.125	1/8-27	0.520	0.188
F5355X04X02	0.438	7/16-20	0.720	0.172	1/8-27	0.640	0.188
F5355X04X04	0.563	7/16-20	0.820	0.172	1/4-18	0.860	0.281
F5355X04X06	0.750	7/16-20	0.850	0.172	3/8-18	0.950	0.406
F5355X04X08	0.875	7/16-20	0.870	0.172	1/2-14	1.170	0.531
F5355X05X02	0.563	1/2-20	0.770	0.234	1/8-27	0.640	0.188
F5355X05X04	0.563	1/2-20	0.820	0.234	1/4-18	0.860	0.281
F5355X06X02	0.563	9/16-18	0.830	0.297	1/8-27	0.670	0.188
F5355X06X04	0.563	9/16-18	0.830	0.297	1/4-18	0.860	0.281
F5355X06X06	0.750	9/16-18	0.870	0.297	3/8-18	0.950	0.406

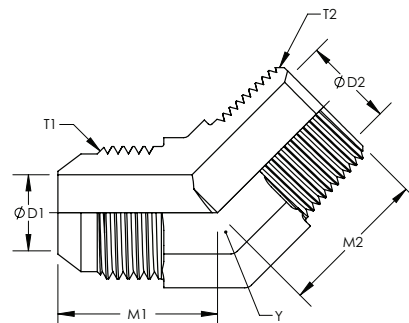
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5000 SERIES

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Description: **45° Male Elbow**
 WWF Part No.: **F5355**
 WWF Stainless Part No.: **2503-SS**
 SAE: **070302**

Air-Way: 2503
 Parker: VTX
 Aeroquip: 2023-[R]
 Gates: MJ-MP45

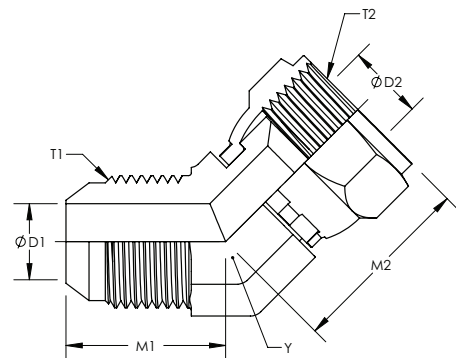


WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5355X06X08	0.875	9/16-18	0.880	0.297	1/2-14	1.170	0.531
F5355X06X12	1.063	9/16-18	0.930	0.297	3/4-14	1.200	0.719
F5355X08X04	0.750	3/4-16	0.980	0.391	1/4-18	0.950	0.281
F5355X08X06	0.750	3/4-16	0.980	0.391	3/8-18	0.950	0.406
F5355X08X08	0.875	3/4-16	0.990	0.391	1/2-14	1.170	0.531
F5355X08X12	1.063	3/4-16	1.040	0.391	3/4-14	1.200	0.719
F5355X10X06	0.875	7/8-14	1.110	0.484	3/8-18	0.980	0.406
F5355X10X08	0.875	7/8-14	1.110	0.484	1/2-14	1.170	0.531
F5355X10X12	1.063	7/8-14	1.160	0.484	3/4-14	1.200	0.719
F5355X12X08	1.063	1-1/16-12	1.280	0.609	1/2-14	1.200	0.531
F5355X12X12	1.063	1-1/16-12	1.280	0.609	3/4-14	1.200	0.719
F5355X12X16	1.313	1-1/16-12	1.420	0.609	1-11-1/2	1.480	0.938
F5355X14X12	1.313	1-3/16-12	1.450	0.719	3/4-14	1.300	0.719
F5355X16X08	1.313	1-5/16-12	1.470	0.844	1/2-14	1.290	0.531
F5355X16X12	1.313	1-5/16-12	1.470	0.844	3/4-14	1.290	0.719
F5355X16X16	1.313	1-5/16-12	1.470	0.844	1-11-1/2	1.480	0.938
F5355X16X20	1.625	1-5/16-12	1.540	0.844	1-1/4-11-1/2	1.670	1.250
F5355X20X16	1.625	1-5/8-12	1.590	1.078	1-11-1/2	1.640	0.938
F5355X20X20	1.625	1-5/8-12	1.590	1.078	1-1/4-11-1/2	1.670	1.250
F5355X20X24	1.875	1-5/8-12	1.650	1.078	1-1/2-11-1/2	1.770	1.500
F5355X24X20	1.875	1-7/8-12	1.780	1.313	1-1/4-11-1/2	1.740	1.250
F5355X24X24	1.875	1-7/8-12	1.780	1.313	1-1/2-11-1/2	1.770	1.500
F5355X32X32	2.500	2-1/2-12	2.220	1.781	2-11-1/2	2.110	1.938

5000 SERIES

Description: **45° Swivel Elbow**
 WWF Part No.: **F5356**
 WWF Stainless Part No.: **6502-SS**
 SAE: **070321**

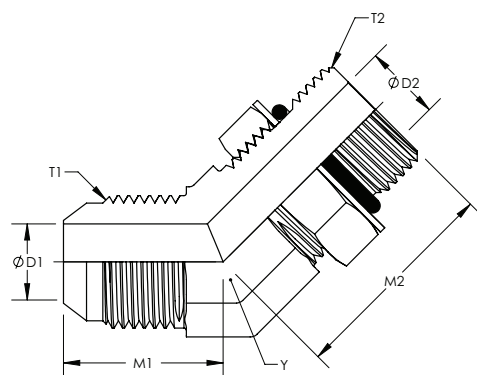
Air-Way: 6502
 Parker: V6X
 Aeroquip: 2070-[R]
 Gates: MJ-FJX45



WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5356X02X02	0.438	5/16-24	0.690	0.063	5/16-24	0.940	0.063
F5356X04X04	0.438	7/16-20	0.720	0.172	7/16-20	0.940	0.172
F5356X05X05	0.563	1/2-20	0.770	0.234	1/2-20	1.000	0.234
F5356X06X06	0.563	9/16-18	0.830	0.297	9/16-18	1.120	0.297
F5356X08X08	0.750	3/4-16	0.980	0.391	3/4-16	1.280	0.391
F5356X10X10	0.875	7/8-14	1.110	0.484	7/8-14	1.440	0.484
F5356X12X12	1.063	1-1/16-12	1.280	0.609	1-1/16-12	1.500	0.609
F5356X14X14	1.313	1-3/16-12	1.450	0.719	1-3/16-12	1.620	0.719
F5356X16X16	1.313	1-5/16-12	1.470	0.844	1-5/16-12	1.750	0.844
F5356X20X20	1.625	1-5/8-12	1.590	1.078	1-5/8-12	2.030	1.078
F5356X24X24	1.875	1-7/8-12	1.780	1.313	1-7/8-12	2.250	1.313
F5356X32X32	2.500	2-1/2-12	2.220	1.781	2-1/2-12	2.910	1.781

Description: **45° Straight Thread Elbow**
 WWF Part No.: **F5365**
 WWF Stainless Part No.: **6802-SS**
 SAE: **070320**

Air-Way: 6802
 Parker: V5OX
 Aeroquip: 2061-[R]
 Gates: MB-MJ45



WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5365X02X02	0.438	5/16-24	0.690	0.063	5/16-24	0.880	0.063
F5365X04X04	0.438	7/16-20	0.720	0.172	7/16-20	1.050	0.172
F5365X04X05	0.563	7/16-20	0.770	0.172	1/2-20	1.050	0.234
F5365X04X06	0.563	7/16-20	0.820	0.172	9/16-18	1.140	0.297
F5365X04X08	0.750	7/16-20	0.850	0.172	3/4-16	1.300	0.391
F5365X05X04	0.563	1/2-20	0.770	0.234	7/16-20	1.050	0.172
F5365X05X05	0.563	1/2-20	0.770	0.234	1/2-20	1.050	0.234
F5365X05X06	0.563	1/2-20	0.820	0.234	9/16-18	1.140	0.297
F5365X06X04	0.563	9/16-18	0.830	0.297	7/16-20	1.080	0.172
F5365X06X05	0.563	9/16-18	0.830	0.297	1/2-20	1.080	0.234

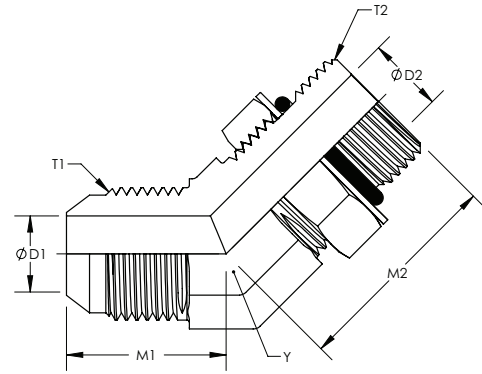
Continued on page 114

5000 SERIES

Continued from page 113

Description: **45° Straight Thread Elbow**
 WWF Part No.: **F5365**
 WWF Stainless Part No.: **6802-SS**
 SAE: **070320**

Air-Way: 6802
 Parker: V5OX
 Aeroquip: 2061-[R]
 Gates: MB-MJ45

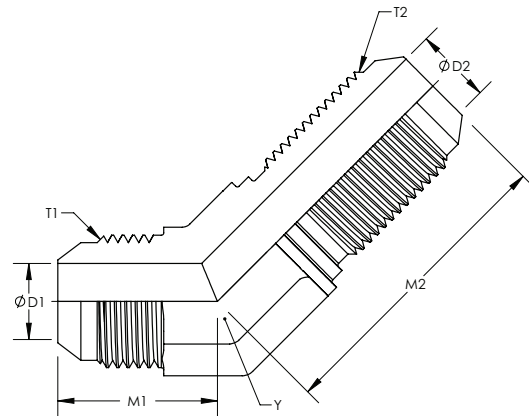


WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5365X06X06	0.563	9/16-18	0.830	0.297	9/16-18	1.140	0.297
F5365X06X08	0.750	9/16-18	0.870	0.297	3/4-16	1.300	0.391
F5365X06X10	0.875	9/16-18	0.880	0.297	7/8-14	1.520	0.484
F5365X08X06	0.750	3/4-16	0.980	0.391	9/16-18	1.170	0.297
F5365X08X08	0.750	3/4-16	0.980	0.391	3/4-16	1.300	0.391
F5365X08X10	0.875	3/4-16	0.990	0.391	7/8-14	1.520	0.484
F5365X08X12	1.063	3/4-16	1.040	0.391	1-1/16-12	1.730	0.609
F5365X10X08	0.875	7/8-14	1.110	0.484	3/4-16	1.360	0.391
F5365X10X10	0.875	7/8-14	1.110	0.484	7/8-14	1.520	0.484
F5365X10X12	1.063	7/8-14	1.160	0.484	1-1/16-12	1.730	0.609
F5365X12X08	1.063	1-1/16-12	1.280	0.609	3/4-16	1.410	0.391
F5365X12X10	1.063	1-1/16-12	1.280	0.609	7/8-14	1.570	0.484
F5365X12X12	1.063	1-1/16-12	1.280	0.609	1-1/16-12	1.730	0.609
F5365X12X16	1.313	1-1/16-12	1.420	0.609	1-5/16-12	1.860	0.844
F5365X14X14	1.313	1-3/16-12	1.450	0.719	1-3/16-12	1.860	0.719
F5365X16X12	1.313	1-5/16-12	1.470	0.844	1-1/16-12	1.860	0.609
F5365X16X16	1.313	1-5/16-12	1.470	0.844	1-5/16-12	1.860	0.844
F5365X16X20	1.625	1-5/16-12	1.540	0.844	1-5/8-12	1.910	1.078
F5365X20X16	1.625	1-5/8-12	1.590	1.078	1-5/16-12	1.910	0.844
F5365X20X20	1.625	1-5/8-12	1.590	1.078	1-5/8-12	1.910	1.078
F5365X24X24	1.875	1-7/8-12	1.780	1.313	1-7/8-12	1.910	1.313
F5365X32X32	2.500	2-1/2-12	2.220	1.781	2-1/2-12	1.860	1.781

5000 SERIES

Description: **45° Bulkhead Elbow**
 WWF Part No.: **F5375**
 WWF Stainless Part No.: **2702-SS**
 SAE: **070801**

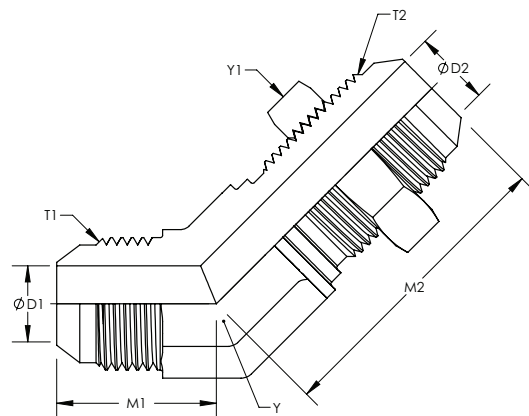
Air-Way: 2702
 Parker: WNTX
 Aeroquip: 2042-1
 Gates: MJ-BKHD45



WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5375X03X03	0.438	3/8-24	0.690	0.125	3/8-24	1.420	0.125
F5375X04X04	0.438	7/16-20	0.720	0.172	7/16-20	1.530	0.172
F5375X05X05	0.563	1/2-20	0.770	0.234	1/2-20	1.660	0.234
F5375X06X06	0.563	9/16-18	0.830	0.297	9/16-18	1.670	0.297
F5375X08X06	0.750	3/4-16	0.980	0.391	9/16-18	1.830	0.297
F5375X08X08	0.750	3/4-16	0.980	0.391	3/4-16	1.940	0.391
F5375X10X10	0.875	7/8-14	1.110	0.484	7/8-14	2.170	0.484
F5375X12X12	1.063	1-1/16-12	1.280	0.609	1-1/16-12	2.440	0.609
F5375X16X16	1.313	1-5/16-12	1.470	0.844	1-5/16-12	2.560	0.844
F5375X20X20	1.625	1-5/8-12	1.590	1.078	1-5/8-12	2.650	1.078
F5375X24X24	1.875	1-7/8-12	1.780	1.313	1-7/8-12	2.670	1.313

Description: **45° Bulkhead Elbow With Locknut**
 WWF Part No.: **F5375LN**
 WWF Stainless Part No.: **2702-LN-SS**
 SAE: **070801**

Air-Way: 2702-LN
 Parker: WNTX-WLN
 Aeroquip: 2042
 Gates: /

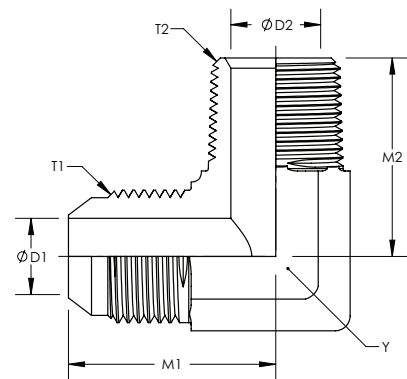


WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2
F5375X03X03LN	0.438	0.375	3/8-24	0.690	0.125	3/8-24	1.420	0.125
F5375X04X04LN	0.438	0.688	7/16-20	0.720	0.172	7/16-20	1.530	0.172
F5375X05X05LN	0.563	0.750	1/2-20	0.770	0.234	1/2-20	1.660	0.234
F5375X06X06LN	0.563	0.813	9/16-18	0.830	0.297	9/16-18	1.670	0.297
F5375X08X06LN	0.750	0.813	3/4-16	0.980	0.391	9/16-18	1.830	0.297
F5375X08X08LN	0.750	1.000	3/4-16	0.980	0.391	3/4-16	1.940	0.391
F5375X10X10LN	0.875	1.125	7/8-14	1.110	0.484	7/8-14	2.170	0.484
F5375X12X12LN	1.063	1.375	1-1/16-12	1.280	0.609	1-1/16-12	2.440	0.609
F5375X16X16LN	1.313	1.625	1-5/16-12	1.470	0.844	1-5/16-12	2.560	0.844
F5375X20X20LN	1.625	1.875	1-5/8-12	1.590	1.078	1-5/8-12	2.650	1.078
F5375X24X24LN	1.875	2.125	1-7/8-12	1.780	1.313	1-7/8-12	2.670	1.313

5000 SERIES

Description: **90° Male Elbow**
 WWF Part No.: **F5405**
 WWF Stainless Part No.: **2501-SS**
 SAE: **070202**

Air-Way: 2501
 Parker: CTX
 Aeroquip: 2024-[R]
 Gates: MJ-MP90



WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5405X02X02	0.438	5/16-24	0.770	0.063	1/8-27	0.720	0.188
F5405X02X04	0.563	5/16-24	0.940	0.063	1/4-18	1.090	0.281
F5405X03X02	0.438	3/8-24	0.830	0.125	1/8-27	0.720	0.188
F5405X04X02	0.438	7/16-20	0.890	0.172	1/8-27	0.780	0.188
F5405X04X04	0.563	7/16-20	1.050	0.172	1/4-18	1.090	0.281
F5405X04X06	0.750	7/16-20	1.120	0.172	3/8-18	1.220	0.406
F5405X04X08	0.875	7/16-20	1.210	0.172	1/2-14	1.470	0.531
F5405X04X12	1.063	7/16-20	1.300	0.172	3/4-14	1.590	0.719
F5405X05X02	0.563	1/2-20	0.950	0.234	1/8-27	0.780	0.188
F5405X05X04	0.563	1/2-20	1.050	0.234	1/4-18	1.090	0.281
F5405X05X06	0.750	1/2-20	1.120	0.234	3/8-18	1.220	0.406
F5405X05X08	0.875	1/2-20	1.210	0.234	1/2-14	1.470	0.531
F5405X06X02	0.563	9/16-18	1.060	0.297	1/8-27	0.900	0.188
F5405X06X04	0.563	9/16-18	1.060	0.297	1/4-18	1.090	0.281
F5405X06X06	0.750	9/16-18	1.140	0.297	3/8-18	1.220	0.406
F5405X06X08	0.875	9/16-18	1.220	0.297	1/2-14	1.470	0.531
F5405X06X12	1.063	9/16-18	1.310	0.297	3/4-14	1.590	0.719
F5405X08X02	0.750	3/4-16	1.250	0.391	1/8-27	1.030	0.188
F5405X08X04	0.750	3/4-16	1.250	0.391	1/4-18	1.220	0.281
F5405X08X06	0.750	3/4-16	1.250	0.391	3/8-18	1.220	0.406
F5405X08X08	0.875	3/4-16	1.330	0.391	1/2-14	1.470	0.531
F5405X08X12	1.063	3/4-16	1.420	0.391	3/4-14	1.590	0.719
F5405X08X16	1.313	3/4-16	1.520	0.391	1-11-1/2	1.970	0.938
F5405X10X06	0.875	7/8-14	1.450	0.484	3/8-18	1.280	0.406
F5405X10X08	0.875	7/8-14	1.450	0.484	1/2-14	1.470	0.531
F5405X10X12	1.063	7/8-14	1.540	0.484	3/4-14	1.590	0.719
F5405X10X16	1.313	7/8-14	1.640	0.484	1-11-1/2	1.970	0.938
F5405X12X06	1.063	1-1/16-12	1.660	0.609	3/8-18	1.400	0.406
F5405X12X08	1.063	1-1/16-12	1.660	0.609	1/2-14	1.590	0.531
F5405X12X12	1.063	1-1/16-12	1.660	0.609	3/4-14	1.590	0.719
F5405X12X16	1.313	1-1/16-12	1.760	0.609	1-11-1/2	1.970	0.938
F5405X12X20	1.625	1-1/16-12	1.970	0.609	1-1/4-11-1/2	2.380	1.250
F5405X12X24	1.875	1-1/16-12	2.110	0.609	1-1/2-11-1/2	2.640	1.500

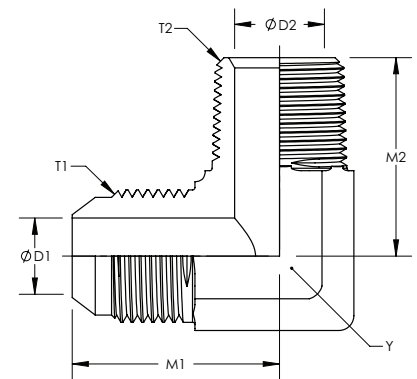
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5000 SERIES

Continued from page 116

Description: **90° Male Elbow**
 WWF Part No.: **F5405**
 WWF Stainless Part No.: **2501-SS**
 SAE: **070202**

Air-Way: 2501
 Parker: CTX
 Aeroquip: 2024-[R]
 Gates: MJ-MP90



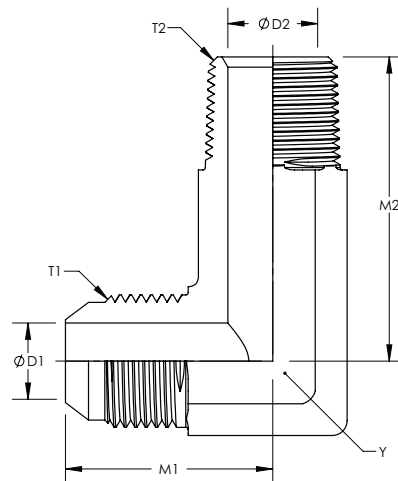
WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5405X14X12	1.313	1-3/16-12	1.800	0.719	3/4-14	1.690	0.719
F5405X16X08	1.313	1-5/16-12	1.810	0.844	1/2-14	1.780	0.531
F5405X16X12	1.313	1-5/16-12	1.810	0.844	3/4-14	1.780	0.719
F5405X16X16	1.313	1-5/16-12	1.810	0.844	1-11-1/2	1.970	0.938
F5405X16X20	1.625	1-5/16-12	2.010	0.844	1-1/4-11-1/2	2.380	1.250
F5405X16X24	1.875	1-5/16-12	2.160	0.844	1-1/2-11-12	2.640	1.500
F5405X20X12	1.625	1-5/8-12	2.060	1.078	3/4-14	2.160	0.719
F5405X20X16	1.625	1-5/8-12	2.060	1.078	1-11-1/2	2.350	0.938
F5405X20X20	1.625	1-5/8-12	2.060	1.078	1-1/4-11-1/2	2.380	1.250
F5405X20X24	1.875	1-5/8-12	2.200	1.078	1-1/2-11-12	2.640	1.500
F5405X24X16	1.875	1-7/8-12	2.330	1.313	1-11-1/2	2.580	0.938
F5405X24X20	1.875	1-7/8-12	2.330	1.313	1-1/4-11-1/2	2.610	1.250
F5405X24X24	1.875	1-7/8-12	2.330	1.313	1-1/2-11-12	2.640	1.500
F5405X24X32	2.500	1-7/8-12	2.810	1.313	2-11-1/2	3.000	1.938
F5405X32X24	2.500	2-1/2-12	3.060	1.781	1-1/2-11-12	2.970	1.500
F5405X32X32	2.500	2-1/2-12	3.060	1.781	2-11-1/2	3.000	1.938

C

5000 SERIES

Description: **90° Male Long Elbow**
 WWF Part No.: **F5425**
 WWF Stainless Part No.: **2501-L-SS**
 SAE: **071502**

Air-Way: 2501-L
 Parker: CCTX
 Aeroquip: 202411-[R]
 Gates: /

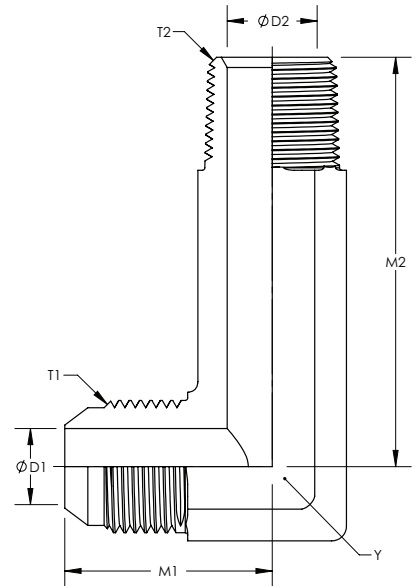


WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5425X04X02	0.438	7/16-20	0.890	0.172	1/8-27	1.170	0.188
F5425X04X04	0.563	7/16-20	1.050	0.172	1/4-18	1.580	0.281
F5425X05X02	0.563	1/2-20	0.950	0.234	1/8-27	1.170	0.188
F5425X05X04	0.563	1/2-20	1.050	0.234	1/4-18	1.580	0.281
F5425X06X02	0.563	9/16-18	1.060	0.297	1/8-27	1.390	0.188
F5425X06X04	0.563	9/16-18	1.060	0.297	1/4-18	1.580	0.281
F5425X06X06	0.750	9/16-18	1.140	0.297	3/8-18	1.820	0.406
F5425X06X08	0.875	9/16-18	1.220	0.297	1/2-14	2.170	0.531
F5425X08X04	0.750	3/4-16	1.250	0.391	1/4-18	1.820	0.281
F5425X08X06	0.750	3/4-16	1.250	0.391	3/8-18	1.820	0.406
F5425X08X08	0.875	3/4-16	1.330	0.391	1/2-14	2.170	0.531
F5425X08X12	1.063	3/4-16	1.420	0.391	3/4-14	2.440	0.719
F5425X10X08	0.875	7/8-14	1.450	0.484	1/2-14	2.170	0.531
F5425X10X12	1.063	7/8-14	1.540	0.484	3/4-14	2.440	0.719
F5425X12X12	1.063	1-1/16-12	1.660	0.609	3/4-14	2.440	0.719
F5425X12X16	1.313	1-1/16-12	1.760	0.609	1-11-1/2	3.010	0.938
F5425X14X12	1.313	1-3/16-12	1.800	0.719	3/4-14	2.590	0.719
F5425X16X16	1.313	1-5/16-12	1.810	0.844	1-11-1/2	3.010	0.938
F5425X20X20	1.625	1-5/8-12	2.060	1.078	1-1/4-11-1/2	3.690	1.250
F5425X24X24	1.875	1-7/8-12	2.330	1.313	1-1/2-11-1/2	4.100	1.500

5000 SERIES

Description: **90° Male Extra Long Elbow**
 WWF Part No.: **F5435**
 WWF Stainless Part No.: **2501-LL-SS**
 SAE: **071602**

Air-Way: 2501-LL
 Parker: CCCTX
 Aeroquip: 202413-[R]
 Gates: /

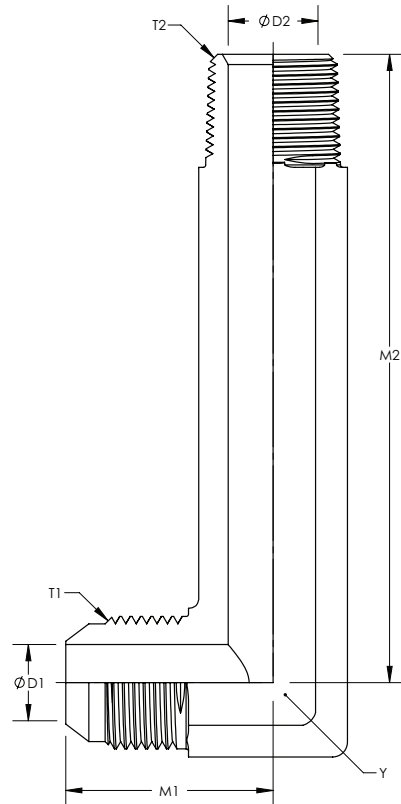


WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5435X04X02	0.438	7/16-20	0.890	0.172	1/8-27	1.560	0.188
F5435X04X04	0.563	7/16-20	1.050	0.172	1/4-18	2.070	0.281
F5435X05X02	0.563	1/2-20	0.950	0.234	1/8-27	1.630	0.188
F5435X05X04	0.563	1/2-20	1.050	0.234	1/4-18	2.070	0.281
F5435X06X04	0.563	9/16-18	1.060	0.297	1/4-18	2.070	0.281
F5435X06X06	0.750	9/16-18	1.140	0.297	3/8-18	2.420	0.406
F5435X06X08	0.875	9/16-18	1.220	0.297	1/2-14	2.870	0.531
F5435X08X06	0.750	3/4-16	1.250	0.391	3/8-18	2.420	0.406
F5435X08X08	0.875	3/4-16	1.330	0.391	1/2-14	2.870	0.531
F5435X10X08	0.875	7/8-14	1.450	0.484	1/2-14	2.870	0.531
F5435X12X08	1.063	1-1/16-12	1.660	0.609	1/2-14	3.280	0.531
F5435X12X12	1.063	1-1/16-12	1.660	0.609	3/4-14	3.280	0.719
F5435X14X12	1.313	1-3/16-12	1.800	0.719	3/4-14	3.500	0.719
F5435X16X16	1.313	1-5/16-12	1.810	0.844	1-11-1/2	4.050	0.938
F5435X20X20	1.625	1-5/8-12	2.060	1.078	1-1/4-11-1/2	5.000	1.250

5000 SERIES

C

Description: **90° Male Extra Extra Long Elbow**
 WWF Part No.: **F5445**
 WWF Stainless Part No.: **2501-LLL-SS**
 SAE: /
 Air-Way: 2501-LLL
 Parker: /
 Aeroquip: 202414-[R]
 Gates: /

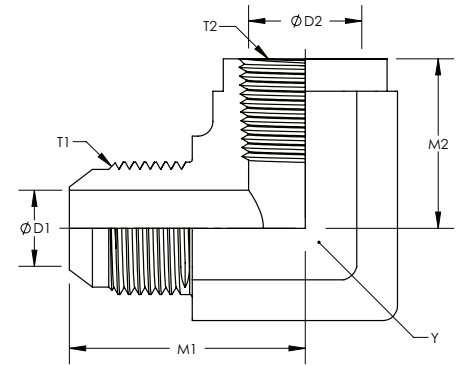


WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5445X04X02	0.438	7/16-20	0.890	0.172	1/8-27	2.310	0.188
F5445X04X04	0.563	7/16-20	1.050	0.172	1/4-18	3.060	0.281
F5445X05X02	0.563	1/2-20	0.950	0.234	1/8-27	2.310	0.188
F5445X06X04	0.563	9/16-18	1.060	0.297	1/4-18	3.060	0.281
F5445X06X06	0.750	9/16-18	1.140	0.297	3/8-18	3.750	0.406
F5445X08X06	0.750	3/4-16	1.250	0.391	3/8-18	3.750	0.406
F5445X08X08	0.875	3/4-16	1.330	0.391	1/2-14	4.500	0.531
F5445X10X08	0.875	7/8-14	1.450	0.484	1/2-14	4.500	0.531
F5445X12X12	1.063	1-1/16-12	1.660	0.609	3/4-14	5.030	0.719
F5445X16X16	1.313	1-5/16-12	1.810	0.844	1-11-1/2	6.340	0.938

5000 SERIES

Description: **90° Female Elbow**
 WWF Part No.: **F5455**
 WWF Stainless Part No.: **2502-SS**
 SAE: **070203**

Air-Way: 2502
 Parker: DTX
 Aeroquip: 2025-[R]
 Gates: MJ-FP90



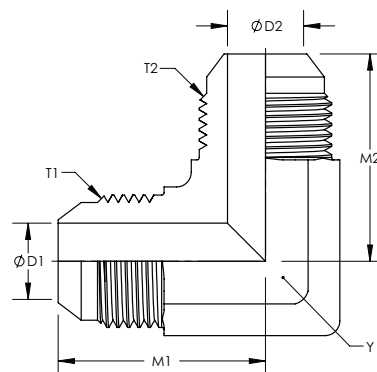
WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5455X02X02	0.563	5/16-24	1.000	0.063	1/8-27	0.660	0.332
F5455X03X02	0.563	3/8-24	1.030	0.125	1/8-27	0.660	0.332
F5455X04X02	0.563	7/16-20	1.080	0.172	1/8-27	0.660	0.332
F5455X04X04	0.750	7/16-20	1.220	0.172	1/4-18	0.880	0.438
F5455X04X06	0.875	7/16-20	1.290	0.172	3/8-18	1.020	0.563
F5455X04X08	1.063	7/16-20	1.400	0.172	1/2-14	1.230	0.703
F5455X05X02	0.563	1/2-20	1.080	0.234	1/8-27	0.660	0.332
F5455X05X04	0.750	1/2-20	1.220	0.234	1/4-18	0.880	0.438
F5455X05X06	0.875	1/2-20	1.290	0.234	3/8-18	1.020	0.563
F5455X06X02	0.563	9/16-18	1.230	0.297	1/8-27	0.670	0.332
F5455X06X04	0.750	9/16-18	1.230	0.297	1/4-18	0.880	0.438
F5455X06X06	0.875	9/16-18	1.310	0.297	3/8-18	1.020	0.563
F5455X06X08	1.063	9/16-18	1.410	0.297	1/2-14	1.230	0.703
F5455X08X04	0.875	3/4-16	1.420	0.391	1/4-18	1.010	0.438
F5455X08X06	0.875	3/4-16	1.420	0.391	3/8-18	1.020	0.563
F5455X08X08	1.063	3/4-16	1.520	0.391	1/2-14	1.230	0.703
F5455X08X12	1.313	3/4-16	1.650	0.391	3/4-14	1.360	0.906
F5455X10X06	1.063	7/8-14	1.640	0.484	3/8-18	1.010	0.563
F5455X10X08	1.063	7/8-14	1.640	0.484	1/2-14	1.230	0.703
F5455X10X12	1.313	7/8-14	1.770	0.484	3/4-14	1.360	0.906
F5455X12X08	1.313	1-1/16-12	1.890	0.609	1/2-14	1.350	0.703
F5455X12X12	1.313	1-1/16-12	1.890	0.609	3/4-14	1.360	0.906
F5455X12X16	1.625	1-1/16-12	2.120	0.609	1-11-1/2	1.620	1.141
F5455X14X12	1.313	1-3/16-12	1.860	0.719	3/4-14	1.420	0.906
F5455X16X12	1.313	1-5/16-12	2.170	0.844	3/4-14	1.390	0.906
F5455X16X16	1.625	1-5/16-12	2.170	0.844	1-11-1/2	1.620	1.141
F5455X16X20	1.875	1-5/16-12	2.280	0.844	1-1/4-11-1/2	1.700	1.484
F5455X20X20	1.875	1-5/8-12	2.330	1.078	1-1/4-11-1/2	1.700	1.484
F5455X24X24	2.562	1-7/8-12	2.890	1.313	1-1/2-11-1/2	2.080	1.744
F5455X32X32	2.812	2-1/2-12	3.300	1.781	2-11-1/2	2.390	2.213

C

5000 SERIES

Description: **90° Union Elbow**
 WWF Part No.: **F5505**
 WWF Stainless Part No.: **2500-SS**
 SAE: **070201**

Air-Way: 2500
 Parker: ETX
 Aeroquip: 2039
 Gates: /

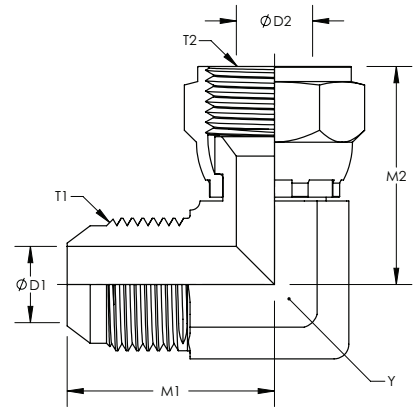


WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5505X02X02	0.438	5/16-24	0.770	0.063	5/16-24	0.770	0.063
F5505X03X03	0.438	3/8-24	0.830	0.125	3/8-24	0.830	0.125
F5505X04X04	0.438	7/16-20	0.890	0.172	7/16-20	0.890	0.172
F5505X05X04	0.563	1/2-20	0.950	0.234	7/16-20	0.950	0.172
F5505X05X05	0.563	1/2-20	0.950	0.234	1/2-20	0.950	0.234
F5505X06X04	0.563	9/16-18	1.060	0.297	7/16-20	1.050	0.172
F5505X06X05	0.563	9/16-18	1.060	0.297	1/2-20	1.050	0.234
F5505X06X06	0.563	9/16-18	1.060	0.297	9/16-18	1.060	0.297
F5505X08X04	0.750	3/4-16	1.250	0.391	7/16-20	1.120	0.172
F5505X08X06	0.750	3/4-16	1.250	0.391	9/16-18	1.140	0.297
F5505X08X08	0.750	3/4-16	1.250	0.391	3/4-16	1.250	0.391
F5505X10X08	0.875	7/8-14	1.450	0.484	3/4-16	1.330	0.391
F5505X10X10	0.875	7/8-14	1.450	0.484	7/8-14	1.450	0.484
F5505X12X08	1.063	1-1/16-12	1.660	0.609	3/4-16	1.420	0.391
F5505X12X10	1.063	1-1/16-12	1.660	0.609	7/8-14	1.540	0.484
F5505X12X12	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.660	0.609
F5505X14X14	1.313	1-3/16-12	1.800	0.719	1-3/16-12	1.800	0.719
F5505X16X12	1.313	1-5/16-12	1.810	0.844	1-1/16-12	1.760	0.609
F5505X16X16	1.313	1-5/16-12	1.810	0.844	1-5/16-12	1.810	0.844
F5505X20X20	1.625	1-5/8-12	2.060	1.078	1-5/8-12	2.060	1.078
F5505X24X24	1.875	1-7/8-12	2.330	1.313	1-7/8-12	2.330	1.313
F5505X32X32	2.500	2-1/2-12	3.060	1.781	2-1/2-12	3.060	1.781

5000 SERIES

Description: **90° Swivel Elbow**
 WWF Part No.: **F5506**
 WWF Stainless Part No.: **6500-SS**
 SAE: **070221**

Air-Way: 6500
 Parker: C6X
 Aeroquip: 2071-[R]
 Gates: MJ-FJX90



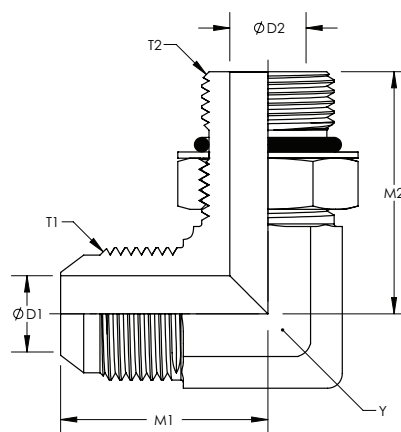
WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5506X02X02	0.438	5/16-24	0.770	0.063	5/16-24	0.970	0.063
F5506X03X03	0.438	3/8-24	0.830	0.125	3/8-24	1.000	0.125
F5506X04X04	0.438	7/16-20	0.890	0.172	7/16-20	1.000	0.172
F5506X04X06	0.563	7/16-20	1.050	0.172	9/16-18	1.250	0.297
F5506X05X05	0.563	1/2-20	0.950	0.234	1/2-20	1.060	0.234
F5506X06X04	0.563	9/16-18	1.060	0.297	7/16-20	1.240	0.172
F5506X06X06	0.563	9/16-18	1.060	0.297	9/16-18	1.250	0.297
F5506X06X08	0.750	9/16-18	1.140	0.297	3/4-16	1.380	0.391
F5506X08X06	0.750	3/4-16	1.250	0.391	9/16-18	1.290	0.297
F5506X08X08	0.750	3/4-16	1.250	0.391	3/4-16	1.380	0.391
F5506X08X10	0.875	3/4-16	1.330	0.391	7/8-14	1.620	0.484
F5506X08X12	1.063	3/4-16	1.420	0.391	1-1/16-12	1.750	0.609
F5506X10X08	0.875	7/8-14	1.450	0.484	3/4-16	1.520	0.391
F5506X10X10	0.875	7/8-14	1.450	0.484	7/8-14	1.620	0.484
F5506X10X12	1.063	7/8-14	1.540	0.484	1-1/16-12	1.750	0.609
F5506X12X08	1.063	1-1/16-12	1.660	0.609	3/4-16	1.550	0.391
F5506X12X10	1.063	1-1/16-12	1.660	0.609	7/8-14	1.630	0.484
F5506X12X12	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.750	0.609
F5506X12X16	1.313	1-1/16-12	1.760	0.609	1-5/16-12	2.000	0.844
F5506X14X14	1.313	1-3/16-12	1.800	0.719	1-3/16-12	1.780	0.719
F5506X16X12	1.313	1-5/16-12	1.810	0.844	1-1/16-12	1.910	0.609
F5506X16X16	1.313	1-5/16-12	1.810	0.844	1-5/16-12	2.000	0.844
F5506X20X20	1.625	1-5/8-12	2.060	1.078	1-5/8-12	2.310	1.078
F5506X24X24	1.875	1-7/8-12	2.330	1.313	1-7/8-12	2.590	1.313
F5506X32X32	2.500	2-1/2-12	3.060	1.781	2-1/2-12	3.380	1.781

C

5000 SERIES

Description: **90° Straight Thread Elbow**
 WWF Part No.: **F5515**
 WWF Stainless Part No.: **6801-SS**
 SAE: **070220**

Air-Way: 6801
 Parker: C5OX
 Aeroquip: 2062-[R]
 Gates: MB-MJ90



WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5515X02X02	0.438	5/16-24	0.770	0.063	5/16-24	0.940	0.063
F5515X03X03	0.438	3/8-24	0.830	0.125	3/8-24	0.940	0.125
F5515X04X02	0.438	7/16-20	0.890	0.172	5/16-24	0.920	0.063
F5515X04X03	0.438	7/16-20	0.890	0.172	3/8-24	1.030	0.125
F5515X04X04	0.438	7/16-20	0.890	0.172	7/16-20	1.030	0.172
F5515X04X05	0.563	7/16-20	0.950	0.172	1/2-20	1.130	0.234
F5515X04X06	0.563	7/16-20	1.050	0.172	9/16-18	1.250	0.297
F5515X04X08	0.750	7/16-20	1.120	0.172	3/4-16	1.450	0.391
F5515X05X04	0.563	1/2-20	0.950	0.234	7/16-20	1.130	0.172
F5515X05X05	0.563	1/2-20	0.950	0.234	1/2-20	1.130	0.234
F5515X05X06	0.563	1/2-20	1.050	0.234	9/16-18	1.250	0.297
F5515X05X08	0.750	1/2-20	1.120	0.234	3/4-16	1.450	0.391
F5515X06X04	0.563	9/16-18	1.060	0.297	7/16-20	1.190	0.172
F5515X06X05	0.563	9/16-18	1.060	0.297	1/2-20	1.190	0.234
F5515X06X06	0.563	9/16-18	1.060	0.297	9/16-18	1.250	0.297
F5515X06X08	0.750	9/16-18	1.140	0.297	3/4-16	1.450	0.391
F5515X06X10	0.875	9/16-18	1.220	0.297	7/8-14	1.700	0.484
F5515X06X12	1.063	9/16-18	1.310	0.297	1-1/16-12	1.940	0.609
F5515X08X04	0.750	3/4-16	1.250	0.391	7/16-20	1.260	0.172
F5515X08X06	0.750	3/4-16	1.250	0.391	9/16-18	1.320	0.297
F5515X08X08	0.750	3/4-16	1.250	0.391	3/4-16	1.450	0.391
F5515X08X10	0.875	3/4-16	1.330	0.391	7/8-14	1.700	0.484
F5515X08X12	1.063	3/4-16	1.420	0.391	1-1/16-12	1.940	0.609
F5515X08X16	1.313	3/4-16	1.520	0.391	1-5/16-12	2.050	0.844
F5515X10X06	0.875	7/8-14	1.450	0.484	9/16-18	1.410	0.297
F5515X10X08	0.875	7/8-14	1.450	0.484	3/4-16	1.540	0.391
F5515X10X10	0.875	7/8-14	1.450	0.484	7/8-14	1.700	0.484
F5515X10X12	1.063	7/8-14	1.540	0.484	1-1/16-12	1.940	0.609
F5515X10X16	1.313	7/8-14	1.640	0.484	1-5/16-12	2.050	0.844
F5515X12X06	1.063	1-1/16-12	1.660	0.609	9/16-18	1.490	0.297
F5515X12X08	1.063	1-1/16-12	1.660	0.609	3/4-16	1.620	0.391

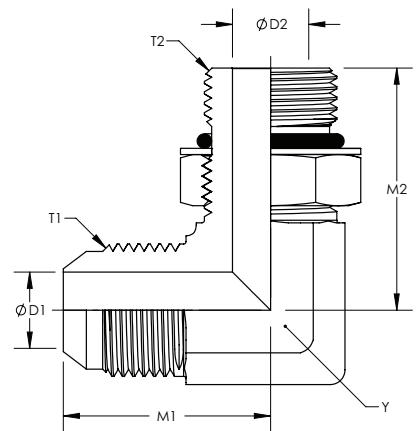
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5000 SERIES

Continued from page 124

Description: **90° Straight Thread Elbow**
 WWF Part No.: **F5515**
 WWF Stainless Part No.: **6801-SS**
 SAE: **070220**

Air-Way: 6801
 Parker: C5OX
 Aeroquip: 2062-[R]
 Gates: MB-MJ90



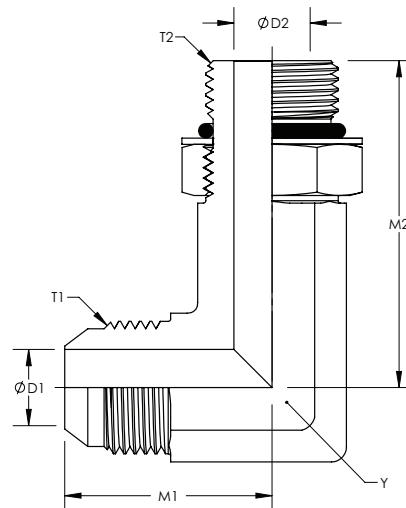
WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5515X12X10	1.063	1-1/16-12	1.660	0.609	7/8-14	1.780	0.484
F5515X12X12	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.940	0.609
F5515X12X14	1.313	1-1/16-12	1.770	0.609	1-3/16-12	2.000	0.719
F5515X12X16	1.313	1-1/16-12	1.760	0.609	1-5/16-12	2.050	0.844
F5515X12X20	1.625	1-1/16-12	1.970	0.609	1-5/8-12	2.250	1.078
F5515X14X12	1.313	1-3/16-12	1.800	0.719	1-1/16-12	2.000	0.609
F5515X14X14	1.313	1-3/16-12	1.800	0.719	1-3/16-12	2.000	0.719
F5515X16X08	1.313	1-5/16-12	1.810	0.844	3/4-16	1.730	0.391
F5515X16X10	1.313	1-5/16-12	1.810	0.844	7/8-14	1.890	0.484
F5515X16X12	1.313	1-5/16-12	1.810	0.844	1-1/16-12	2.050	0.609
F5515X16X14	1.313	1-5/16-12	1.810	0.844	1-3/16-12	2.050	0.719
F5515X16X16	1.313	1-5/16-12	1.810	0.844	1-5/16-12	2.050	0.844
F5515X16X20	1.625	1-5/16-12	2.010	0.844	1-5/8-12	2.250	1.078
F5515X16X24	1.875	1-5/16-12	2.160	0.844	1-7/8-12	2.390	1.313
F5515X20X12	1.625	1-5/8-12	2.060	1.078	1-1/16-12	2.250	0.609
F5515X20X16	1.625	1-5/8-12	2.060	1.078	1-5/16-12	2.250	0.844
F5515X20X20	1.625	1-5/8-12	2.060	1.078	1-5/8-12	2.250	1.078
F5515X20X24	1.875	1-5/8-12	2.200	1.078	1-7/8-12	2.390	1.313
F5515X24X16	1.875	1-7/8-12	2.330	1.313	1-5/16-12	2.390	0.844
F5515X24X20	1.875	1-7/8-12	2.330	1.313	1-5/8-12	2.390	1.078
F5515X24X24	1.875	1-7/8-12	2.330	1.313	1-7/8-12	2.390	1.313
F5515X32X24	2.500	2-1/2-12	3.060	1.781	1-7/8-12	2.890	1.313
F5515X32X32	2.500	2-1/2-12	3.060	1.781	2-1/2-12	2.890	1.781

C

5000 SERIES

Description: **90° Straight Thread Elbow Long**
 WWF Part No.: **F5515L**
 WWF Stainless Part No.: **6801-L-SS**
 SAE: **071520**

Air-Way: 6801-L
 Parker: CC5OX
 Aeroquip: /
 Gates: /

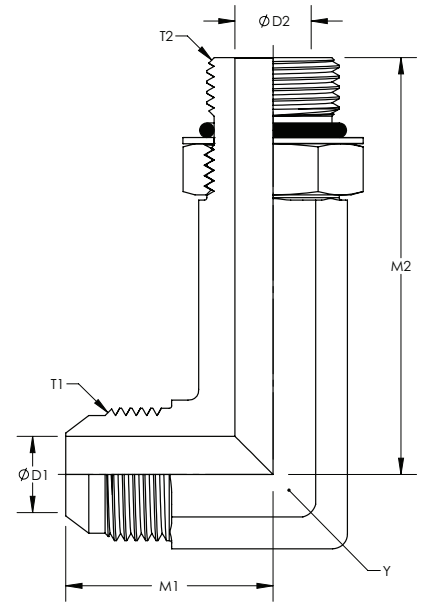


WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5515X04X04L	0.438	7/16-20	0.890	0.172	7/16-20	1.540	0.172
F5515X04X06L	0.563	7/16-20	1.050	0.172	9/16-18	1.660	0.297
F5515X06X06L	0.563	9/16-18	1.060	0.297	9/16-18	1.660	0.297
F5515X06X08L	0.750	9/16-18	1.140	0.297	3/4-16	1.970	0.391
F5515X08X08L	0.750	3/4-16	1.250	0.391	3/4-16	1.970	0.391
F5515X08X10L	0.875	3/4-16	1.330	0.391	7/8-14	2.260	0.484
F5515X10X08L	0.875	7/8-14	1.450	0.484	3/4-16	2.100	0.391
F5515X10X10L	0.875	7/8-14	1.450	0.484	7/8-14	2.260	0.484
F5515X12X12L	1.063	1-1/16-12	1.660	0.609	1-1/16-12	2.620	0.609
F5515X16X16L	1.313	1-5/16-12	1.810	0.844	1-5/16-12	3.060	0.844

5000 SERIES

Description: **90° Straight Thread Elbow Extra Long**
 WWF Part No.: **F5515LL**
 WWF Stainless Part No.: **6801-LL-SS**
 SAE: **071620**

Air-Way: 6801-LL
 Parker: /
 Aeroquip: /
 Gates: /



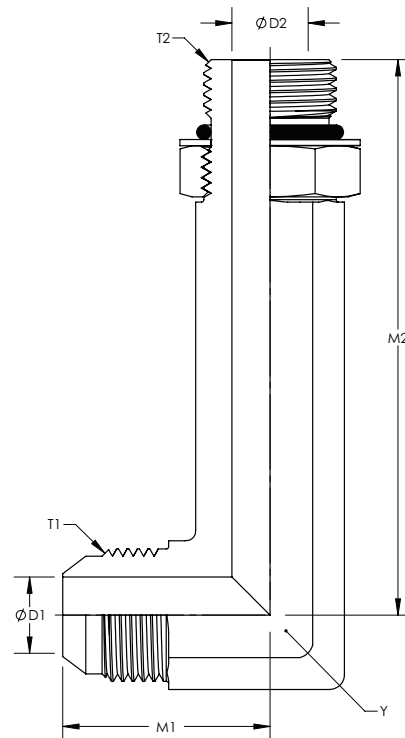
WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5515X04X04LL	0.438	7/16-20	0.890	0.172	7/16-20	1.730	0.172
F5515X04X06LL	0.563	7/16-20	1.050	0.172	9/16-18	2.080	0.297
F5515X06X06LL	0.563	9/16-18	1.060	0.297	9/16-18	2.080	0.297
F5515X06X08LL	0.750	9/16-18	1.140	0.297	3/4-16	2.480	0.391
F5515X08X06LL	0.750	3/4-16	1.250	0.391	9/16-18	2.350	0.297
F5515X08X08LL	0.750	3/4-16	1.250	0.391	3/4-16	2.480	0.391
F5515X08X10LL	0.875	3/4-16	1.330	0.391	7/8-14	2.890	0.484
F5515X10X08LL	0.875	7/8-14	1.450	0.484	3/4-16	2.730	0.391
F5515X10X10LL	0.875	7/8-14	1.450	0.484	7/8-14	2.890	0.484
F5515X12X12LL	1.063	1-1/16-12	1.660	0.609	1-1/16-12	3.340	0.609
F5515X12X16LL	1.313	1-1/16-12	1.760	0.609	1-5/16-12	3.720	0.844
F5515X16X12LL	1.313	1-5/16-12	1.810	0.844	1-1/16-12	3.720	0.609
F5515X16X16LL	1.313	1-5/16-12	1.810	0.844	1-5/16-12	3.720	0.844
F5515X20X20LL	1.625	1-5/8-12	2.060	1.078	1-5/8-12	4.410	1.078

5000 SERIES

C

Description: **90° Straight Thread Elbow Extra Extra Long**
 WWF Part No.: **F5515LLL**
 WWF Stainless Part No.: **6801-LLL-SS**
 SAE: **072120**

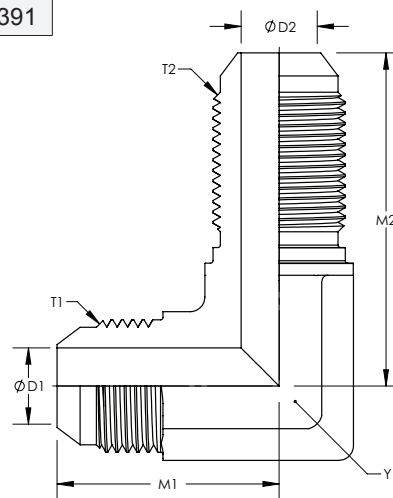
Air-Way: 6801-LLL
 Parker: /
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5515X04X04LLL	0.438	7/16-20	0.890	0.172	7/16-20	2.440	0.172
F5515X06X06LLL	0.563	9/16-18	1.060	0.297	9/16-18	2.910	0.297
F5515X06X08LLL	0.750	9/16-18	1.140	0.297	3/4-16	3.530	0.391
F5515X08X08LLL	0.750	3/4-16	1.250	0.391	3/4-16	3.530	0.391

Description: **90° Bulkhead Elbow**
 WWF Part No.: **F5525**
 WWF Stainless Part No.: **2701-SS**
 SAE: **070701**

Air-Way: 2701
 Parker: WETX
 Aeroquip: 2043-1-[R]
 Gates: MJ-BKHD90

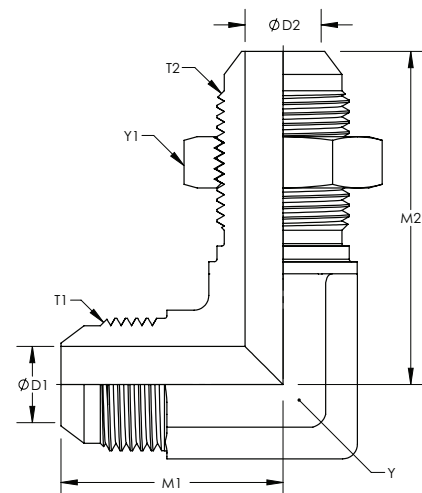


WWF	Y HEX	T1	M1	D1	T2	M2	D2
F5525X03X03	0.438	3/8-24	0.940	0.125	3/8-24	1.500	0.125
F5525X04X04	0.438	7/16-20	0.970	0.172	7/16-20	1.590	0.172
F5525X05X05	0.563	1/2-20	1.060	0.234	1/2-20	1.720	0.234
F5525X06X06	0.563	9/16-18	1.090	0.297	9/16-18	1.810	0.297
F5525X08X08	0.750	3/4-16	1.360	0.391	3/4-16	2.110	0.391
F5525X10X10	0.875	7/8-14	1.560	0.484	7/8-14	2.390	0.484
F5525X12X12	1.063	1-1/16-12	1.780	0.609	1-1/16-12	2.670	0.609
F5525X16X16	1.313	1-5/16-12	1.940	0.844	1-5/16-12	2.800	0.844
F5525X20X20	1.625	1-5/8-12	2.170	1.078	1-5/8-12	3.120	1.078

5000 SERIES

Description: **90° Bulkhead Elbow With Locknut**
 WWF Part No.: **F5525LN**
 WWF Stainless Part No.: **2701-LN-SS**
 SAE: **070701**

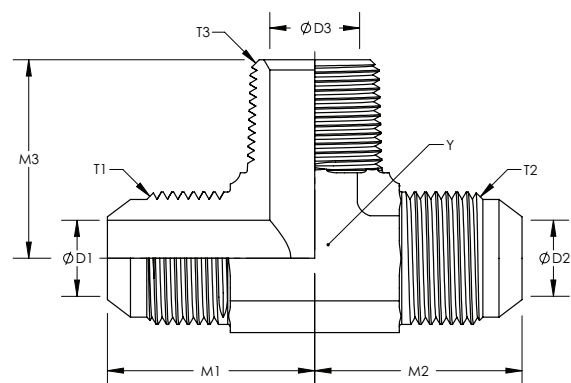
Air-Way: 2701-LN
 Parker: WETX-WLN
 Aeroquip: 2043-[R]
 Gates: /



WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2
F5525X03X03LN	0.438	0.625	3/8-24	0.940	0.125	3/8-24	1.500	0.125
F5525X04X04LN	0.438	0.688	7/16-20	0.970	0.172	7/16-20	1.590	0.172
F5525X05X05LN	0.563	0.750	1/2-20	1.060	0.234	1/2-20	1.720	0.234
F5525X06X06LN	0.563	0.813	9/16-18	1.090	0.297	9/16-18	1.810	0.297
F5525X08X08LN	0.750	1.000	3/4-16	1.360	0.391	3/4-16	2.110	0.391
F5525X10X10LN	0.875	1.125	7/8-14	1.560	0.484	7/8-14	2.390	0.484
F5525X12X12LN	1.063	1.375	1-1/16-12	1.780	0.609	1-1/16-12	2.670	0.609
F5525X16X16LN	1.313	1.625	1-5/16-12	1.940	0.844	1-5/16-12	2.800	0.844
F5525X20X20LN	1.625	1.875	1-5/8-12	2.170	1.078	1-5/8-12	3.120	1.078

Description: **Male Branch Tee**
 WWF Part No.: **F5605**
 WWF Stainless Part No.: **2601-SS**
 SAE: **070425**

Air-Way: 2601
 Parker: STX
 Aeroquip: 2030-[R]
 Gates: MJ-MJ-MP



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F5605X03X03X02	0.438	3/8-24	0.830	0.125	3/8-24	0.830	0.125	1/8-27	0.720	0.188
F5605X04X04X02	0.438	7/16-20	0.890	0.172	7/16-20	0.890	0.172	1/8-27	0.780	0.188
F5605X04X04X04	0.563	7/16-20	1.050	0.172	7/16-20	1.050	0.172	1/4-18	1.090	0.281
F5605X04X04X06	0.750	7/16-20	1.120	0.172	7/16-20	1.120	0.172	3/8-18	1.220	0.406
F5605X05X05X02	0.563	1/2-20	0.950	0.234	1/2-20	0.950	0.234	1/8-27	0.780	0.188
F5605X05X05X04	0.563	1/2-20	1.050	0.234	1/2-20	1.050	0.234	1/4-18	1.090	0.281
F5605X06X06X04	0.563	9/16-18	1.060	0.297	9/16-18	1.060	0.297	1/4-18	1.090	0.281
F5605X06X06X06	0.750	9/16-18	1.140	0.297	9/16-18	1.140	0.297	3/8-18	1.220	0.406

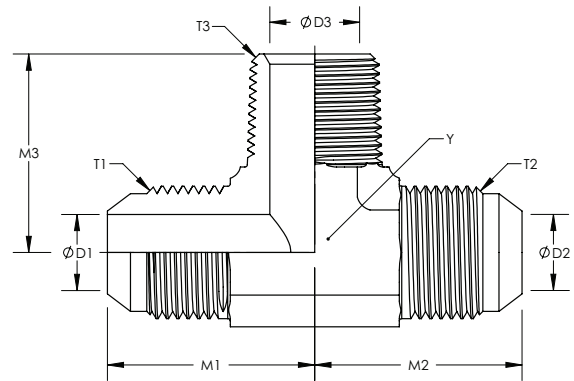
Continued on page 130

5000 SERIES

Continued from page 129

Description: **Male Branch Tee**
 WWF Part No.: **F5605**
 WWF Stainless Part No.: **2601-SS**
 SAE: **070425**

Air-Way: 2601
 Parker: STX
 Aeroquip: 2030-[R]
 Gates: MJ-MJ-MP

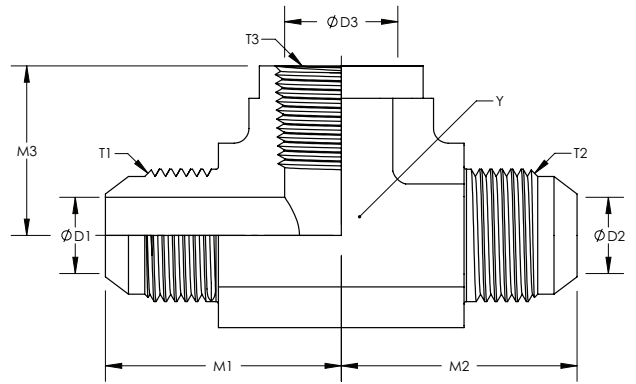


WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F5605X06X06X08	0.875	9/16-18	1.220	0.297	9/16-18	1.220	0.297	1/2-14	1.470	0.531
F5605X08X08X04	0.750	3/4-16	1.250	0.391	3/4-16	1.250	0.391	1/4-18	1.220	0.281
F5605X08X08X06	0.750	3/4-16	1.250	0.391	3/4-16	1.250	0.391	3/8-18	1.220	0.406
F5605X08X08X08	0.875	3/4-16	1.330	0.391	3/4-16	1.330	0.391	1/2-14	1.470	0.531
F5605X08X08X12	1.063	3/4-16	1.420	0.391	3/4-16	1.420	0.391	3/4-14	1.590	0.719
F5605X10X10X06	0.875	7/8-14	1.450	0.484	7/8-14	1.450	0.484	3/8-18	1.280	0.406
F5605X10X10X08	0.875	7/8-14	1.450	0.484	7/8-14	1.450	0.484	1/2-14	1.470	0.531
F5605X10X10X12	1.063	7/8-14	1.540	0.484	7/8-14	1.540	0.484	3/4-14	1.590	0.719
F5605X12X12X08	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.660	0.609	1/2-14	1.590	0.531
F5605X12X12X12	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.660	0.609	3/4-14	1.590	0.719
F5605X12X12X16	1.313	1-1/16-12	1.760	0.609	1-1/16-12	1.760	0.609	1-11-1/2	1.970	0.938
F5605X14X14X12	1.313	1-3/16-12	1.800	0.719	1-3/16-12	1.800	0.719	3/4-14	1.690	0.719
F5605X16X16X12	1.313	1-5/16-12	1.810	0.844	1-5/16-12	1.810	0.844	3/4-14	1.780	0.719
F5605X16X16X16	1.313	1-5/16-12	1.810	0.844	1-5/16-12	1.810	0.844	1-11-1/2	1.970	0.938
F5605X20X20X20	1.625	1-5/8-12	2.060	1.078	1-5/8-12	2.060	1.078	1-1/4-11-1/2	2.380	1.250
F5605X24X24X24	1.875	1-7/8-12	2.330	1.313	1-7/8-12	2.330	1.313	1-1/2-11-1/2	2.640	1.500
F5605X32X32X32	2.500	2-1/2-12	3.060	1.781	2-1/2-12	3.060	1.781	2-11-1/2	3.000	1.938

5000 SERIES

Description: **Female Branch Tee**
 WWF Part No.: **F5655**
 WWF Stainless Part No.: **2602-SS**
 SAE: **070427**

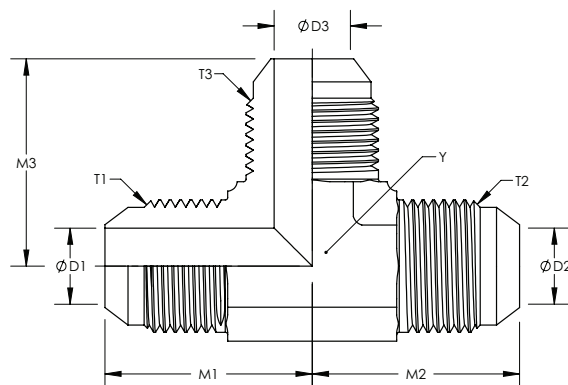
Air-Way: 2602
 Parker: OTX
 Aeroquip: 2031-[R]
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F5655X04X04X02	0.563	7/16-20	1.080	0.172	7/16-20	1.080	0.172	1/8-27	0.660	0.332
F5655X04X04X04	0.750	7/16-20	1.220	0.172	7/16-20	1.220	0.172	1/4-18	0.880	0.438
F5655X05X05X02	0.563	1/2-20	1.080	0.234	1/2-20	1.080	0.234	1/8-27	0.660	0.332
F5655X06X06X04	0.750	9/16-18	1.230	0.297	9/16-18	1.230	0.297	1/4-18	0.880	0.438
F5655X06X06X06	0.875	9/16-18	1.310	0.297	9/16-18	1.310	0.297	3/8-18	1.020	0.563
F5655X08X08X04	0.875	3/4-16	1.420	0.391	3/4-16	1.420	0.391	1/4-18	1.010	0.438
F5655X08X08X06	0.875	3/4-16	1.420	0.391	3/4-16	1.420	0.391	3/8-18	1.020	0.563
F5655X08X08X08	1.063	3/4-16	1.520	0.391	3/4-16	1.520	0.391	1/2-14	1.230	0.703
F5655X10X10X08	1.063	7/8-14	1.640	0.484	7/8-14	1.640	0.484	1/2-14	1.230	0.703
F5655X10X10X12	1.313	7/8-14	1.770	0.484	7/8-14	1.770	0.484	3/4-14	1.360	0.906
F5655X12X12X08	1.313	1-1/16-12	1.890	0.609	1-1/16-12	1.890	0.609	1/2-14	1.350	0.703
F5655X12X12X12	1.313	1-1/16-12	1.890	0.609	1-1/16-12	1.890	0.609	3/4-14	1.360	0.906
F5655X12X12X16	1.625	1-1/16-12	2.120	0.609	1-1/16-12	2.120	0.609	1-11-1/2	1.620	1.141
F5655X14X14X12	1.313	1-3/16-12	1.860	0.719	1-3/16-12	1.860	0.719	3/4-14	1.420	0.906
F5655X16X16X12	1.625	1-5/16-12	2.170	0.844	1-5/16-12	2.170	0.844	3/4-14	1.390	0.906
F5655X16X16X16	1.625	1-5/16-12	2.170	0.844	1-5/16-12	2.170	0.844	1-11-1/2	1.620	1.141
F5655X20X20X20	1.875	1-5/8-12	2.330	1.078	1-5/8-12	2.330	1.078	1-1/4-11-1/2	1.700	1.484
F5655X24X24X24	2.562	1-7/8-12	2.890	1.313	1-7/8-12	2.890	1.313	1-1/2-11-1/2	2.080	1.744
F5655X32X32X32	2.812	2-1/2-12	3.300	1.781	2-1/2-12	3.300	1.781	2-11-1/2	2.390	2.213

C

5000 SERIES



Description: **Union Tee**
 WWF Part No.: **F5705**
 WWF Stainless Part No.: **2603-SS**
 SAE: **070401**

Air-Way: 2603
 Parker: JTX
 Aeroquip: 2033
 Gates: MJ-MJ-MJ

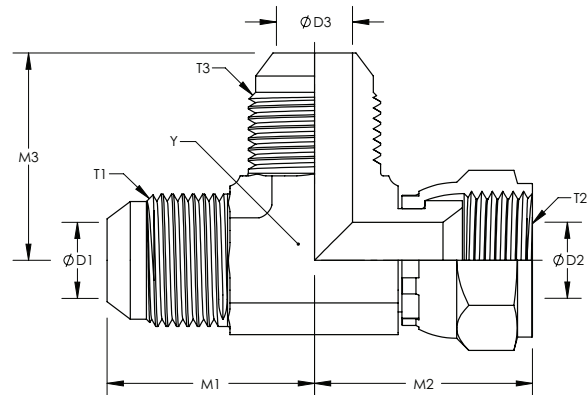
C

WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F5705X02X02X02	0.438	5/16-24	0.770	0.063	5/16-24	0.770	0.063	5/16-24	0.770	0.063
F5705X03X03X03	0.438	3/8-24	0.830	0.125	3/8-24	0.830	0.125	3/8-24	0.830	0.125
F5705X04X04X04	0.438	7/16-20	0.890	0.172	7/16-20	0.890	0.172	7/16-20	0.890	0.172
F5705X04X04X06	0.563	7/16-20	1.050	0.172	7/16-20	1.050	0.172	9/16-18	1.060	0.297
F5705X05X05X05	0.563	1/2-20	0.950	0.234	1/2-20	0.950	0.234	1/2-20	0.950	0.234
F5705X06X06X04	0.563	9/16-18	1.060	0.297	9/16-18	1.060	0.297	7/16-20	1.050	0.172
F5705X06X06X06	0.563	9/16-18	1.060	0.297	9/16-18	1.060	0.297	9/16-18	1.060	0.297
F5705X06X06X08	0.750	9/16-18	1.140	0.297	9/16-18	1.140	0.297	3/4-16	1.250	0.391
F5705X08X08X08	0.750	3/4-16	1.250	0.391	3/4-16	1.250	0.391	3/4-16	1.250	0.391
F5705X08X08X10	0.875	3/4-16	1.330	0.391	3/4-16	1.330	0.391	7/8-14	1.450	0.484
F5705X08X08X12	1.063	3/4-16	1.420	0.391	3/4-16	1.420	0.391	1-1/16-12	1.660	0.609
F5705X08X10X10	0.875	3/4-16	1.330	0.391	7/8-14	1.450	0.484	7/8-14	1.450	0.484
F5705X10X08X08	0.875	7/8-14	1.450	0.484	3/4-16	1.330	0.391	3/4-16	1.330	0.391
F5705X10X10X08	0.875	7/8-14	1.450	0.484	7/8-14	1.450	0.484	3/4-16	1.330	0.391
F5705X10X10X10	0.875	7/8-14	1.450	0.484	7/8-14	1.450	0.484	7/8-14	1.450	0.484
F5705X12X10X12	1.063	1-1/16-12	1.660	0.609	7/8-14	1.540	0.484	1-1/16-12	1.660	0.609
F5705X12X12X08	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.660	0.609	3/4-16	1.420	0.391
F5705X12X12X12	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.660	0.609	1-1/16-12	1.660	0.609
F5705X12X12X16	1.313	1-1/16-12	1.760	0.609	1-1/16-12	1.760	0.609	1-5/16-12	1.810	0.844
F5705X14X14X14	1.313	1-3/16-12	1.800	0.719	1-3/16-12	1.800	0.719	1-3/16-12	1.800	0.719
F5705X16X12X20	1.625	1-5/16-12	2.010	0.844	1-1/16-12	1.970	0.609	1-5/8-12	2.060	1.078
F5705X16X16X12	1.313	1-5/16-12	1.810	0.844	1-5/16-12	1.810	0.844	1-1/16-12	1.760	0.609
F5705X16X16X16	1.313	1-5/16-12	1.810	0.844	1-5/16-12	1.810	0.844	1-5/16-12	1.810	0.844
F5705X16X16X20	1.625	1-5/16-12	2.010	0.844	1-5/16-12	2.010	0.844	1-5/8-12	2.060	1.078
F5705X20X16X16	1.625	1-5/8-12	2.060	1.078	1-5/16-12	2.010	0.844	1-5/16-12	2.010	0.844
F5705X20X20X20	1.625	1-5/8-12	2.060	1.078	1-5/8-12	2.060	1.078	1-5/8-12	2.060	1.078
F5705X24X24X24	1.875	1-7/8-12	2.330	1.313	1-7/8-12	2.330	1.313	1-7/8-12	2.330	1.313
F5705X32X32X32	2.500	2-1/2-12	3.060	1.781	2-1/2-12	3.060	1.781	2-1/2-12	3.060	1.781

5000 SERIES

Description: **Swivel Run Tee**
 WWF Part No.: **F5706**
 WWF Stainless Part No.: **6602-SS**
 SAE: **070432**

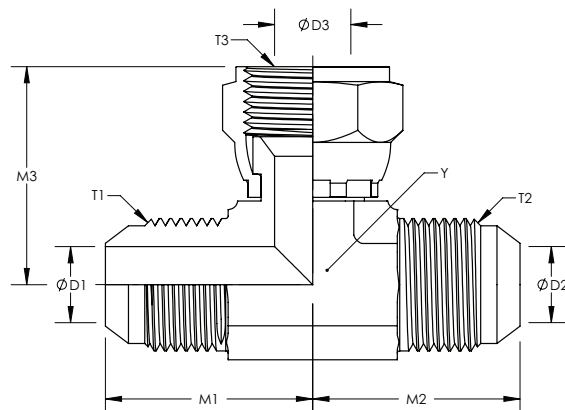
Air-Way: 6602
 Parker: R6X
 Aeroquip: 203102-[R]
 Gates: MJ-FJX-MJ



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F5706X03X03X03	0.438	3/8-24	0.830	0.125	3/8-24	1.000	0.125	3/8-24	0.830	0.125
F5706X04X04X04	0.438	7/16-20	0.890	0.172	7/16-20	1.000	0.172	7/16-20	0.890	0.172
F5706X04X08X08	0.750	7/16-20	1.120	0.172	3/4-16	1.380	0.391	3/4-16	1.250	0.391
F5706X05X05X05	0.563	1/2-20	0.950	0.234	1/2-20	1.060	0.234	1/2-20	0.950	0.234
F5706X06X06X04	0.563	9/16-18	1.060	0.297	9/16-18	1.250	0.297	7/16-20	1.050	0.172
F5706X06X06X06	0.563	9/16-18	1.060	0.297	9/16-18	1.250	0.297	9/16-18	1.060	0.297
F5706X08X06X08	0.750	3/4-16	1.250	0.297	9/16-18	1.290	0.297	3/4-16	1.250	0.391
F5706X08X08X06	0.750	3/4-16	1.250	0.391	3/4-16	1.380	0.391	9/16-18	1.140	0.297
F5706X08X08X08	0.750	3/4-16	1.250	0.391	3/4-16	1.380	0.391	3/4-16	1.250	0.391
F5706X08X08X12	1.063	3/4-16	1.420	0.391	3/4-16	1.550	0.391	1-1/16-12	1.660	0.609
F5706X10X08X10	0.875	7/8-14	1.450	0.391	3/4-16	1.520	0.391	7/8-14	1.450	0.484
F5706X10X10X06	0.875	7/8-14	1.450	0.484	7/8-14	1.620	0.484	9/16-18	1.220	0.297
F5706X10X10X08	0.875	7/8-14	1.450	0.484	7/8-14	1.620	0.484	3/4-16	1.330	0.391
F5706X10X10X10	0.875	7/8-14	1.450	0.484	7/8-14	1.620	0.484	7/8-14	1.450	0.484
F5706X10X10X12	1.063	7/8-14	1.540	0.484	7/8-14	1.650	0.484	1-1/16-12	1.660	0.609
F5706X12X12X12	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.750	0.609	1-1/16-12	1.660	0.609
F5706X14X14X14	1.313	1-3/16-12	1.800	0.719	1-3/16-12	1.780	0.719	1-3/16-12	1.800	0.719
F5706X16X16X10	1.313	1-5/16-12	1.810	0.844	1-5/16-12	2.000	0.844	7/8-14	1.640	0.484
F5706X16X16X16	1.313	1-5/16-12	1.810	0.844	1-5/16-12	2.000	0.844	1-5/16-12	1.810	0.844
F5706X20X20X20	1.625	1-5/8-12	2.060	1.078	1-5/8-12	2.310	1.078	1-5/8-12	2.060	1.078
F5706X24X24X24	1.875	1-7/8-12	2.330	1.313	1-7/8-12	2.590	1.313	1-7/8-12	2.330	1.313
F5706X32X32X32	2.500	2-1/2-12	3.060	1.781	2-1/2-12	3.380	1.781	2-1/2-12	3.060	1.781

C

5000 SERIES



Description: **Swivel Branch Tee**
 WWF Part No.: **F5707**
 WWF Stainless Part No.: **6600-SS**
 SAE: **070433**

Air-Way: 6600
 Parker: S6X
 Aeroquip: 203101-[R]
 Gates: MJ-MJ-FJX

C

WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F5707X03X03X03	0.438	3/8-24	0.830	0.125	3/8-24	0.830	0.125	3/8-24	1.000	0.125
F5707X04X04X04	0.438	7/16-20	0.890	0.172	7/16-20	0.890	0.172	7/16-20	1.000	0.172
F5707X05X05X05	0.563	1/2-20	0.950	0.234	1/2-20	0.950	0.234	1/2-20	1.060	0.234
F5707X06X06X06	0.563	9/16-18	1.060	0.297	9/16-18	1.060	0.297	9/16-18	1.250	0.297
F5707X06X06X08	0.750	9/16-18	1.140	0.297	9/16-18	1.140	0.297	3/4-16	1.380	0.391
F5707X08X08X08	0.750	3/4-16	1.250	0.391	3/4-16	1.250	0.391	3/4-16	1.380	0.391
F5707X10X10X10	0.875	7/8-14	1.450	0.484	7/8-14	1.450	0.484	7/8-14	1.620	0.484
F5707X12X10X12	1.063	1-1/16-12	1.660	0.609	7/8-14	1.540	0.484	1-1/16-12	1.750	0.609
F5707X12X12X12	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.660	0.609	1-1/16-12	1.750	0.609
F5707X14X14X14	1.313	1-3/16-12	1.800	0.719	1-3/16-12	1.800	0.719	1-3/16-12	1.780	0.719
F5707X16X16X16	1.313	1-5/16-12	1.810	0.844	1-5/16-12	1.810	0.844	1-5/16-12	2.000	0.844
F5707X20X20X20	1.625	1-5/8-12	2.060	1.078	1-5/8-12	2.060	1.078	1-5/8-12	2.310	1.078
F5707X24X24X24	1.875	1-7/8-12	2.330	1.313	1-7/8-12	2.330	1.313	1-7/8-12	2.590	1.313
F5707X32X32X32	2.500	2-1/2-12	3.060	1.781	2-1/2-12	3.060	1.781	2-1/2-12	3.380	1.781

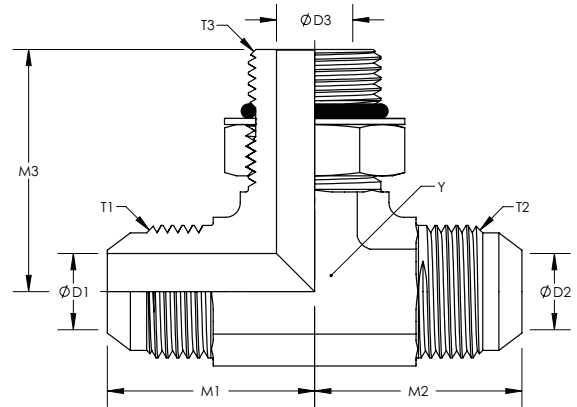
5000 SERIES

Description:
WWF Part No.:
WWF Stainless Part No.:
SAE:

Straight Thread Branch Tee
F5715
6803-SS
070429

Air-Way:
Parker:
Aeroquip:
Gates:

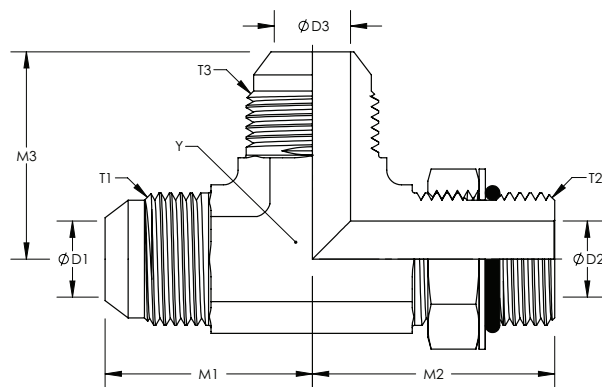
6803
S5OX
203003-[R]
MJ-MJ-MB



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F5715X02X02X02	0.438	5/16-24	0.770	0.063	5/16-24	0.770	0.063	5/16-24	0.940	0.063
F5715X04X04X03	0.438	7/16-20	0.890	0.172	7/16-20	0.890	0.172	3/8-24	0.920	0.125
F5715X04X04X04	0.438	7/16-20	0.890	0.172	7/16-20	0.890	0.172	7/16-20	1.030	0.172
F5715X04X04X06	0.563	7/16-20	1.050	0.172	7/16-20	1.050	0.172	9/16-18	1.250	0.297
F5715X05X05X05	0.563	1/2-20	0.950	0.234	1/2-20	0.950	0.234	1/2-20	1.130	0.234
F5715X06X06X04	0.563	9/16-18	1.060	0.297	9/16-18	1.060	0.297	7/16-20	1.190	0.172
F5715X06X06X06	0.563	9/16-18	1.060	0.297	9/16-18	1.060	0.297	9/16-18	1.250	0.297
F5715X06X06X08	0.750	9/16-18	1.140	0.297	9/16-18	1.140	0.297	3/4-16	1.450	0.391
F5715X08X08X06	0.750	3/4-16	1.250	0.391	3/4-16	1.250	0.391	9/16-18	1.320	0.297
F5715X08X08X08	0.750	3/4-16	1.250	0.391	3/4-16	1.250	0.391	3/4-16	1.450	0.391
F5715X08X08X10	0.875	3/4-16	1.330	0.391	3/4-16	1.330	0.391	7/8-14	1.700	0.484
F5715X10X10X08	0.875	7/8-14	1.450	0.484	7/8-14	1.450	0.484	3/4-16	1.540	0.391
F5715X10X10X10	0.875	7/8-14	1.450	0.484	7/8-14	1.450	0.484	7/8-14	1.700	0.484
F5715X10X10X12	1.063	7/8-14	1.540	0.484	7/8-14	1.540	0.484	1-1/16-12	1.940	0.609
F5715X12X10X12	1.063	1-1/16-12	1.660	0.484	7/8-14	1.540	0.484	1-1/16-12	1.940	0.609
F5715X12X12X08	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.660	0.609	3/4-16	1.620	0.391
F5715X12X12X10	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.660	0.609	7/8-14	1.780	0.484
F5715X12X12X12	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.660	0.609	1-1/16-12	1.940	0.609
F5715X12X12X16	1.313	1-1/16-12	1.760	0.609	1-1/16-12	1.760	0.609	1-5/16-12	2.050	0.844
F5715X16X12X16	1.313	1-5/16-12	1.810	0.844	1-1/16-12	1.760	0.609	1-5/16-12	2.050	0.844
F5715X16X16X12	1.313	1-5/16-12	1.810	0.844	1-5/16-12	1.810	0.844	1-1/16-12	2.050	0.609
F5715X16X16X16	1.313	1-5/16-12	1.810	0.844	1-5/16-12	1.810	0.844	1-5/16-12	2.050	0.844
F5715X20X20X20	1.625	1-5/8-12	2.060	1.078	1-5/8-12	2.060	1.078	1-5/8-12	2.250	1.078
F5715X24X24X24	1.875	1-7/8-12	2.330	1.313	1-7/8-12	2.330	1.313	1-7/8-12	2.390	1.313

C

5000 SERIES



Description: **Straight Thread Run Tee**
 WWF Part No.: **F5716**
 WWF Stainless Part No.: **6804-SS**
 SAE: **070428**

Air-Way: 6804
 Parker: R5OX
 Aeroquip: 203005-[R]
 Gates: MB-MJ-MJ

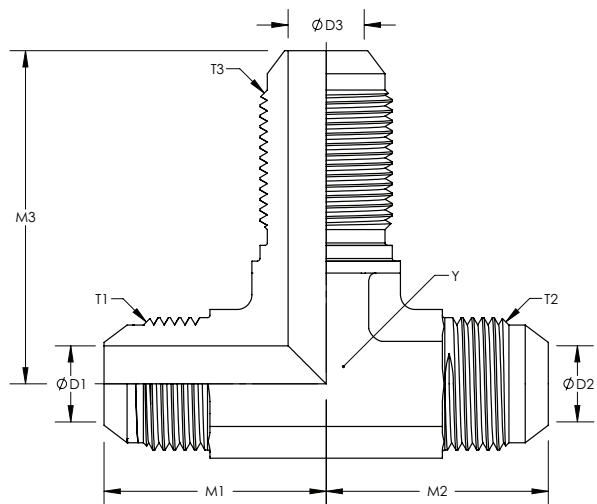
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WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F5716X04X02X04	0.438	7/16-20	0.890	0.172	5/16-24	0.920	0.063	7/16-20	0.890	0.172
F5716X04X04X04	0.438	7/16-20	0.890	0.172	7/16-20	1.030	0.172	7/16-20	0.890	0.172
F5716X04X04X06	0.563	7/16-20	1.050	0.172	7/16-20	1.190	0.172	9/16-18	1.060	0.297
F5716X04X06X04	0.563	7/16-20	1.050	0.172	9/16-18	1.250	0.297	7/16-20	1.050	0.172
F5716X04X06X06	0.563	7/16-20	1.050	0.172	9/16-18	1.250	0.297	9/16-18	1.060	0.297
F5716X05X05X05	0.563	1/2-20	0.950	0.234	1/2-20	1.130	0.234	1/2-20	0.950	0.234
F5716X06X04X06	0.563	9/16-18	1.060	0.297	7/16-20	1.190	0.172	9/16-18	1.060	0.297
F5716X06X06X06	0.563	9/16-18	1.060	0.297	9/16-18	1.250	0.297	9/16-18	1.060	0.297
F5716X06X06X08	0.750	9/16-18	1.140	0.297	9/16-18	1.320	0.297	3/4-16	1.250	0.391
F5716X06X08X06	0.750	9/16-18	1.140	0.297	3/4-16	1.450	0.391	9/16-18	1.140	0.297
F5716X08X06X08	0.750	3/4-16	1.250	0.391	9/16-18	1.320	0.297	3/4-16	1.250	0.391
F5716X08X08X04	0.750	3/4-16	1.250	0.391	3/4-16	1.450	0.391	7/16-20	1.120	0.172
F5716X08X08X08	0.750	3/4-16	1.250	0.391	3/4-16	1.450	0.391	3/4-16	1.250	0.391
F5716X08X10X08	0.875	3/4-16	1.330	0.391	7/8-14	1.700	0.484	3/4-16	1.330	0.391
F5716X08X12X08	1.063	3/4-16	1.420	0.391	1-1/16-12	1.940	0.609	3/4-16	1.420	0.391
F5716X08X16X16	1.313	3/4-16	1.520	0.391	1-5/16-12	2.050	0.844	1-5/16-12	1.810	0.844
F5716X10X10X10	0.875	7/8-14	1.450	0.484	7/8-14	1.700	0.484	7/8-14	1.450	0.484
F5716X10X10X12	1.063	7/8-14	1.540	0.484	7/8-14	1.780	0.484	1-1/16-12	1.660	0.609
F5716X10X12X10	1.063	7/8-14	1.540	0.484	1-1/16-12	1.940	0.609	7/8-14	1.540	0.484
F5716X12X10X12	1.063	1-1/16-12	1.660	0.609	7/8-14	1.780	0.484	1-1/16-12	1.660	0.609
F5716X12X12X08	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.940	0.609	3/4-16	1.420	0.391
F5716X12X12X12	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.940	0.609	1-1/16-12	1.660	0.609
F5716X12X12X16	1.313	1-1/16-12	1.760	0.609	1-1/16-12	2.050	0.609	1-5/16-12	1.810	0.844
F5716X12X16X12	1.313	1-1/16-12	1.760	0.609	1-5/16-12	2.050	0.844	1-1/16-12	1.760	0.609
F5716X16X12X16	1.313	1-5/16-12	1.810	0.844	1-1/16-12	2.050	0.609	1-5/16-12	1.810	0.844
F5716X16X16X12	1.313	1-5/16-12	1.810	0.844	1-5/16-12	2.050	0.844	1-1/16-12	1.760	0.609
F5716X16X16X16	1.313	1-5/16-12	1.810	0.844	1-5/16-12	2.050	0.844	1-5/16-12	1.810	0.844
F5716X20X20X20	1.625	1-5/8-12	2.060	1.078	1-5/8-12	2.250	1.078	1-5/8-12	2.060	1.078
F5716X24X24X24	1.875	1-7/8-12	2.330	1.313	1-7/8-12	2.390	1.313	1-7/8-12	2.330	1.313
F5716X32X32X32	2.500	2-1/2-12	3.060	1.781	2-1/2-12	2.890	1.781	2-1/2-12	3.060	1.781

5000 SERIES

Description: **Bulkhead Branch Tee**
 WWF Part No.: **F5725**
 WWF Stainless Part No.: **2703-SS**
 SAE: **070959**

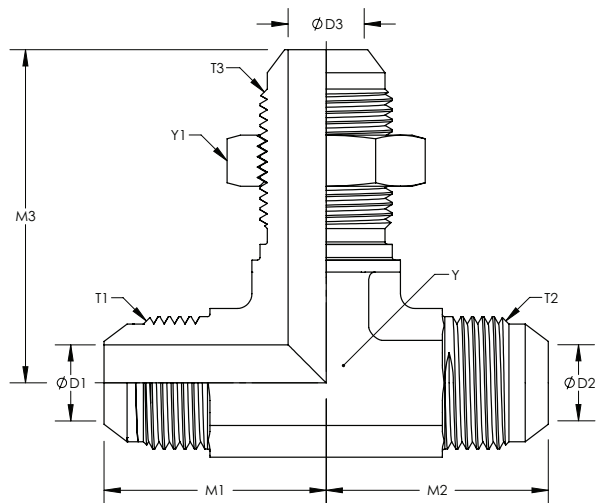
Air-Way: 2703
 Parker: WJTX
 Aeroquip: 203002-1
 Gates: MJ-MJ-MJBKHD



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F5725X03X03X03	0.438	3/8-24	0.940	0.125	3/8-24	0.940	0.125	3/8-24	1.500	0.125
F5725X04X04X04	0.438	7/16-20	0.970	0.172	7/16-20	0.970	0.172	7/16-20	1.590	0.172
F5725X04X04X06	0.563	7/16-20	1.080	0.172	7/16-20	1.080	0.172	9/16-18	1.810	0.297
F5725X05X05X05	0.563	1/2-20	1.060	0.234	1/2-20	1.060	0.234	1/2-20	1.720	0.234
F5725X06X06X06	0.563	9/16-18	1.090	0.297	9/16-18	1.090	0.297	9/16-18	1.810	0.297
F5725X08X08X08	0.750	3/4-16	1.360	0.391	3/4-16	1.360	0.391	3/4-16	2.110	0.391
F5725X10X10X10	0.875	7/8-14	1.560	0.484	7/8-14	1.560	0.484	7/8-14	2.390	0.484
F5725X12X12X12	1.063	1-1/16-12	1.780	0.609	1-1/16-12	1.780	0.609	1-1/16-12	2.670	0.609
F5725X16X16X16	1.313	1-5/16-12	1.940	0.844	1-5/16-12	1.940	0.844	1-5/16-12	2.800	0.844
F5725X20X20X20	1.625	1-5/8-12	2.170	1.078	1-5/8-12	2.170	1.078	1-5/8-12	3.120	1.078

Description: **Bulkhead Branch Tee With Locknut**
 WWF Part No.: **F5725LN**
 WWF Stainless Part No.: **2703-LN-SS**
 SAE: **070959**

Air-Way: 2703-LN
 Parker: WJTX-WLN
 Aeroquip: 203002
 Gates: /

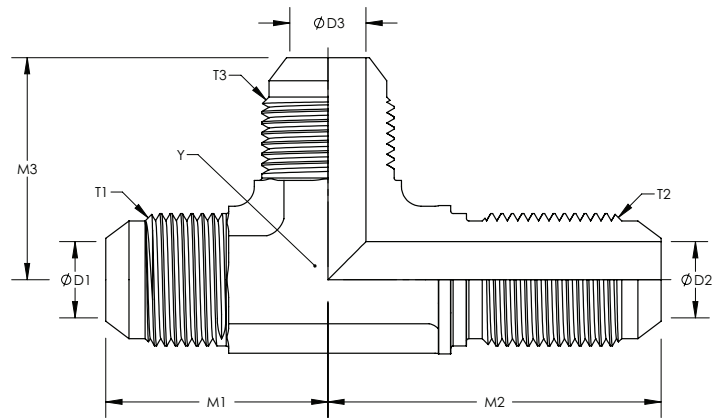


WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F5725X04X04X04LN	0.438	0.688	7/16-20	0.970	0.172	7/16-20	0.970	0.172	7/16-20	1.590	0.172
F5725X04X04X06LN	0.563	0.813	7/16-20	1.080	0.172	7/16-20	1.080	0.172	9/16-18	1.810	0.297
F5725X05X05X05LN	0.563	0.750	1/2-20	1.060	0.234	1/2-20	1.060	0.234	1/2-20	1.720	0.234
F5725X06X06X06LN	0.563	0.813	9/16-18	1.090	0.297	9/16-18	1.090	0.297	9/16-18	1.810	0.297
F5725X08X08X08LN	0.750	1.000	3/4-16	1.360	0.391	3/4-16	1.360	0.391	3/4-16	2.110	0.391
F5725X10X10X10LN	0.875	1.125	7/8-14	1.560	0.484	7/8-14	1.560	0.484	7/8-14	2.390	0.484
F5725X12X12X12LN	1.063	1.375	1-1/16-12	1.780	0.609	1-1/16-12	1.780	0.609	1-1/16-12	2.670	0.609
F5725X16X16X16LN	1.313	1.625	1-5/16-12	1.940	0.844	1-5/16-12	1.940	0.844	1-5/16-12	2.800	0.844
F5725X20X20X20LN	1.625	1.875	1-5/8-12	2.170	1.078	1-5/8-12	2.170	1.078	1-5/8-12	3.120	1.078

5000 SERIES

Description: **Bulkhead Run Tee**
 WWF Part No.: **F5726**
 WWF Stainless Part No.: **2704-SS**
 SAE: **070958**

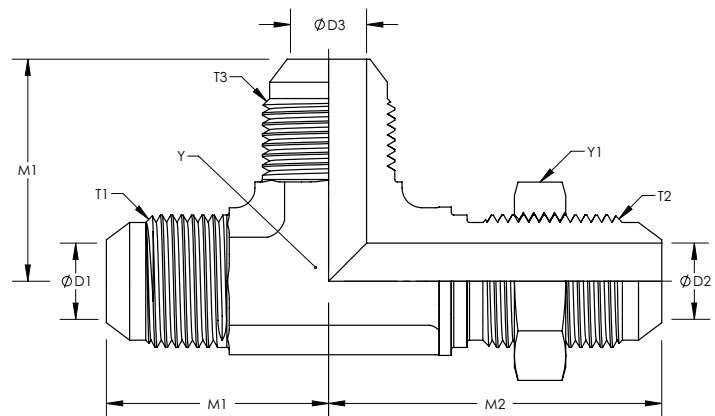
Air-Way: 2704
 Parker: WJJTX
 Aeroquip: FF1065
 Gates: MJ-MJBKHD-MJ



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F5726X03X03X03	0.438	3/8-24	0.940	0.125	3/8-24	1.500	0.125	3/8-24	0.940	0.125
F5726X04X04X04	0.438	7/16-20	0.970	0.172	7/16-20	1.590	0.172	7/16-20	0.970	0.172
F5726X04X06X04	0.563	7/16-20	1.080	0.172	9/16-18	1.810	0.297	7/16-20	1.080	0.172
F5726X06X06X06	0.563	9/16-18	1.090	0.297	9/16-18	1.810	0.297	9/16-18	1.090	0.297
F5726X08X08X08	0.750	3/4-16	1.360	0.391	3/4-16	2.110	0.391	3/4-16	1.360	0.391
F5726X08X10X08	0.875	3/4-16	1.440	0.391	7/8-14	2.390	0.484	3/4-16	1.440	0.391
F5726X10X08X08	0.875	7/8-14	1.560	0.484	3/4-16	2.270	0.391	3/4-16	1.440	0.391
F5726X10X10X10	0.875	7/8-14	1.560	0.484	7/8-14	2.390	0.484	7/8-14	1.560	0.484
F5726X12X12X12	1.063	1-1/16-12	1.780	0.609	1-1/16-12	2.670	0.609	1-1/16-12	1.780	0.609
F5726X16X16X16	1.313	1-5/16-12	1.940	0.844	1-5/16-12	2.800	0.844	1-5/16-12	1.940	0.844
F5726X20X20X20	1.625	1-5/8-12	2.170	1.078	1-5/8-12	3.120	1.078	1-5/8-12	2.170	1.078

Description: **Bulkhead Run Tee With Locknut**
 WWF Part No.: **F5726LN**
 WWF Stainless Part No.: **2704-LN-SS**
 SAE: **070958**

Air-Way: 2704-LN
 Parker: WJJTX-WLN
 Aeroquip: 203008
 Gates: /

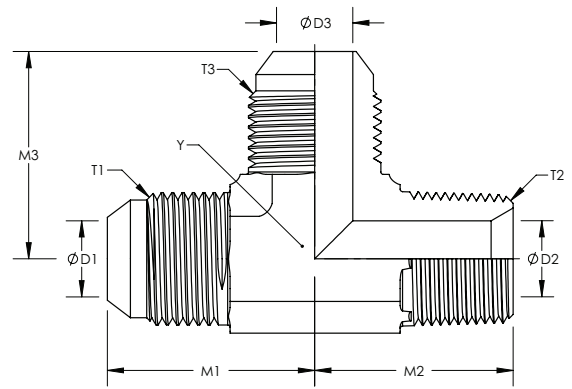


WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F5726X04X04X04LN	0.438	0.688	7/16-20	0.970	0.172	7/16-20	1.590	0.172	7/16-20	0.970	0.172
F5726X04X06X04LN	0.563	0.813	7/16-20	1.080	0.172	9/16-18	1.810	0.297	7/16-20	1.080	0.172
F5726X06X06X06LN	0.563	0.813	9/16-18	1.090	0.297	9/16-18	1.810	0.297	9/16-18	1.090	0.297
F5726X08X08X08LN	0.750	1.000	3/4-16	1.360	0.391	3/4-16	2.110	0.391	3/4-16	1.360	0.391
F5726X08X10X08LN	0.875	1.125	3/4-16	1.440	0.391	7/8-14	2.390	0.484	3/4-16	1.440	0.391
F5726X10X08X08LN	0.875	1.000	7/8-14	1.560	0.484	3/4-16	2.270	0.391	3/4-16	1.440	0.391
F5726X10X10X10LN	0.875	1.125	7/8-14	1.560	0.484	7/8-14	2.390	0.484	7/8-14	1.560	0.484
F5726X12X12X12LN	1.063	1.375	1-1/16-12	1.780	0.609	1-1/16-12	2.670	0.609	1-1/16-12	1.780	0.609
F5726X16X16X16LN	1.313	1.625	1-5/16-12	1.940	0.844	1-5/16-12	2.800	0.844	1-5/16-12	1.940	0.844
F5726X20X20X20LN	1.625	1.875	1-5/8-12	2.170	1.078	1-5/8-12	3.120	1.078	1-5/8-12	2.170	1.078

5000 SERIES

Description: **Male Run Tee**
 WWF Part No.: **F5755**
 WWF Stainless Part No.: **2605-SS**
 SAE: **070424**

Air-Way: 2605
 Parker: RTX
 Aeroquip: 2028-[R]
 Gates: /



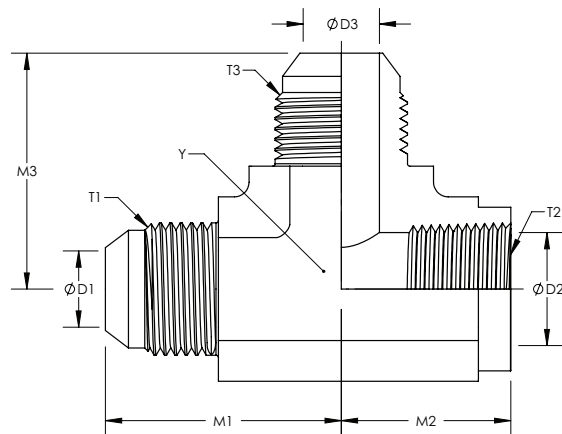
WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F5755X03X02X03	0.438	3/8-24	0.830	0.125	1/8-27	0.720	0.188	3/8-24	0.830	0.125
F5755X04X02X04	0.438	7/16-20	0.890	0.172	1/8-27	0.780	0.188	7/16-20	0.890	0.172
F5755X04X04X04	0.563	7/16-20	1.050	0.172	1/4-18	1.090	0.281	7/16-20	1.050	0.172
F5755X05X02X05	0.563	1/2-20	0.950	0.234	1/8-27	0.780	0.188	1/2-20	0.950	0.234
F5755X06X02X06	0.563	9/16-18	1.060	0.297	1/8-27	0.900	0.188	9/16-18	1.060	0.297
F5755X06X04X04	0.563	9/16-18	1.060	0.297	1/4-18	1.090	0.281	7/16-20	1.050	0.172
F5755X06X04X06	0.563	9/16-18	1.060	0.297	1/4-18	1.090	0.281	9/16-18	1.060	0.297
F5755X06X06X06	0.750	9/16-18	1.140	0.297	3/8-18	1.220	0.406	9/16-18	1.140	0.297
F5755X06X08X06	0.875	9/16-18	1.220	0.297	1/2-14	1.470	0.531	9/16-18	1.220	0.297
F5755X08X04X08	0.750	3/4-16	1.250	0.391	1/4-18	1.220	0.281	3/4-16	1.250	0.391
F5755X08X06X08	0.750	3/4-16	1.250	0.391	3/8-18	1.220	0.406	3/4-16	1.250	0.391
F5755X08X08X08	0.875	3/4-16	1.330	0.391	1/2-14	1.470	0.531	3/4-16	1.330	0.391
F5755X10X08X10	0.875	7/8-14	1.450	0.484	1/2-14	1.470	0.531	7/8-14	1.450	0.484
F5755X12X08X12	1.063	1-1/16-12	1.660	0.609	1/2-14	1.590	0.531	1-1/16-12	1.660	0.609
F5755X12X12X08	1.063	1-1/16-12	1.660	0.609	3/4-14	1.590	0.719	3/4-16	1.420	0.391
F5755X12X12X12	1.063	1-1/16-12	1.660	0.609	3/4-14	1.590	0.719	1-1/16-12	1.660	0.609
F5755X14X12X14	1.313	1-3/16-12	1.800	0.719	3/4-14	1.690	0.719	1-3/16-12	1.800	0.719
F5755X16X16X16	1.313	1-5/16-12	1.810	0.844	1-11-1/2	1.970	0.938	1-5/16-12	1.810	0.844
F5755X20X20X20	1.625	1-5/8-12	2.060	1.078	1-1/4-11-1/2	2.380	1.250	1-5/8-12	2.060	1.078
F5755X24X24X24	1.875	1-7/8-12	2.330	1.313	1-1/2-11-1/2	2.640	1.500	1-7/8-12	2.330	1.313
F5755X32X32X32	2.500	2-1/2-12	3.060	1.781	2-11-12	3.000	1.938	2-1/2-12	3.060	1.781

C

5000 SERIES

Description: **Female Run Tee**
 WWF Part No.: **F5805**
 WWF Stainless Part No.: **2606-SS**
 SAE: **070426**

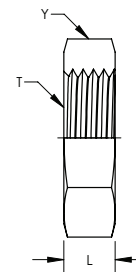
Air-Way: 2606
 Parker: MTX
 Aeroquip: 2029-[R]
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
F5805X03X02X03	0.563	3/8-24	1.030	0.125	1/8-27	0.660	0.332	3/8-24	1.030	0.125
F5805X04X02X04	0.563	7/16-20	1.080	0.172	1/8-27	0.660	0.332	7/16-20	1.080	0.172
F5805X04X04X04	0.750	7/16-20	1.220	0.172	1/4-18	0.880	0.438	7/16-20	1.220	0.172
F5805X06X04X06	0.750	9/16-18	1.230	0.297	1/4-18	0.880	0.438	9/16-18	1.230	0.297
F5805X06X06X06	0.875	9/16-18	1.310	0.297	3/8-18	1.020	0.563	9/16-18	1.310	0.297
F5805X08X06X08	0.875	3/4-16	1.420	0.391	3/8-18	1.020	0.563	3/4-16	1.420	0.391
F5805X10X08X10	1.063	7/8-14	1.640	0.484	1/2-14	1.230	0.703	7/8-14	1.640	0.484
F5805X12X12X12	1.313	1-1/16-12	1.890	0.609	3/4-14	1.360	0.906	1-1/16-12	1.890	0.609
F5805X14X12X14	1.313	1-3/16-12	1.860	0.719	3/4-14	1.420	0.906	1-3/16-12	1.860	0.719
F5805X16X16X16	1.625	1-5/16-12	2.170	0.844	1-11-1/2	1.620	1.141	1-5/16-12	2.170	0.844
F5805X20X20X20	1.875	1-5/8-12	2.330	1.078	1-1/4-11-1/2	1.700	1.484	1-5/8-12	2.330	1.078

Description: **Bulkhead Locknut**
 WWF Part No.: **5924**
 WWF Stainless Part No.: **0306-SS**
 SAE: **070118**

Air-Way: 0306
 Parker: WLN
 Aeroquip: 210212
 Gates: LN

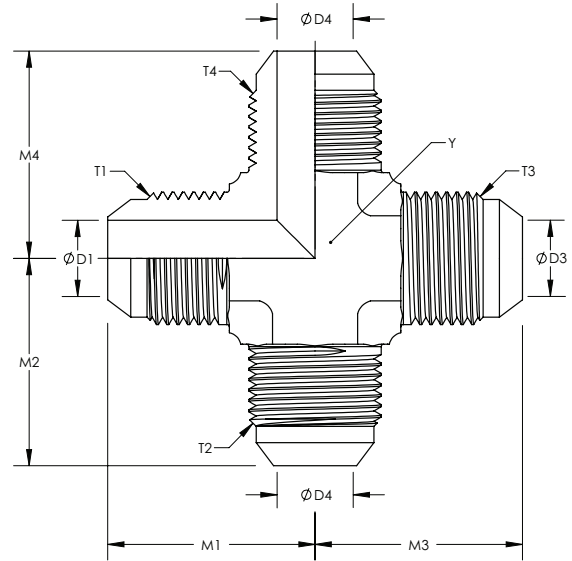


WWF	Y HEX	T	L
5924X02	0.563	5/16-24	0.220
5924X03	0.625	3/8-24	0.220
5924X04CF	0.688	7/16-20	0.280
5924X05CF	0.750	1/2-20	0.280
5924X06CF	0.813	9/16-18	0.270
5924X08CF	1.000	3/4-16	0.310
5924X10CF	1.125	7/8-14	0.360
5924X12CF	1.375	1-1/16-12	0.410
5924X14	1.500	1-3/16-12	0.410
5924X16CF	1.625	1-5/16-12	0.410
5924X20	1.875	1-5/8-12	0.410
5924X24	2.125	1-7/8-12	0.410
5924X32	2.750	2-1/2-12	0.410

5000 SERIES

Description: **Cross**
 WWF Part No.: **F5955**
 WWF Stainless Part No.: **2650-SS**
 SAE: **070501**

Air-Way: 2650
 Parker: KTX
 Aeroquip: 2020
 Gates: /

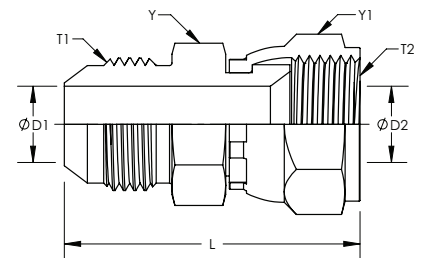


C

WWF	Y HEX	T1 / T3	M1 / M3	D1 / D3	T2 / T4	M2 / M4	D2 / D4
F5955X02X02X02X02	0.438	5/16-24	0.770	0.063	5/16-24	0.770	0.063
F5955X04X04X04X04	0.438	7/16-20	0.890	0.172	7/16-20	0.890	0.172
F5955X05X05X05X05	0.563	1/2-20	0.950	0.234	1/2-20	0.950	0.234
F5955X06X06X06X06	0.563	9/16-18	1.060	0.297	9/16-18	1.060	0.297
F5955X06X08X06X08	0.750	9/16-18	1.140	0.297	3/4-16	1.250	0.391
F5955X08X08X08X08	0.750	3/4-16	1.250	0.391	3/4-16	1.250	0.391
F5955X10X10X10X10	0.875	7/8-14	1.450	0.484	7/8-14	1.450	0.484
F5955X12X12X12X12	1.063	1-1/16-12	1.660	0.609	1-1/16-12	1.660	0.609
F5955X14X14X14X14	1.313	1-3/16-12	1.800	0.719	1-3/16-12	1.800	0.719
F5955X16X16X16X16	1.313	1-5/16-12	1.810	0.844	1-5/16-12	1.810	0.844
F5955X20X20X20X20	1.625	1-5/8-12	2.060	1.078	1-5/8-12	2.060	1.078
F5955X24X24X24X24	1.875	1-7/8-12	2.330	1.313	1-7/8-12	2.330	1.313

Description: **Female Swivel to Male JIC**
 WWF Part No.: **6504**
 WWF Stainless Part No.: **6504-SS**
 SAE: /

Air-Way: 6504
 Parker: XHX6
 Aeroquip: /
 Gates: MJ-FJX



WWF	Y HEX	Y1 HEX	T1	D1	T2	D2	L
6504X04X04	0.500	0.563	7/16-20	0.172	7/16-20	0.172	1.530
6504X06X06	0.625	0.688	9/16-18	0.297	9/16-18	0.297	1.590
6504X08X08	0.813	0.875	3/4-16	0.391	3/4-16	0.391	1.830
6504X10X10	0.938	1.000	7/8-14	0.484	7/8-14	0.484	2.170
6504X12X12	1.125	1.250	1-1/16-12	0.609	1-1/16-12	0.609	2.370
6504X16X16	1.375	1.500	1-5/16-12	0.844	1-5/16-12	0.844	2.495
6504X20X20	1.688	2.000	1-5/8-12	1.078	1-5/8-12	1.078	2.760

5000 SERIES

Description: **Adjustable ORB Union Elbow**

WWF Part No.: **6807**

WWF Stainless Part No.: **6807-SS**

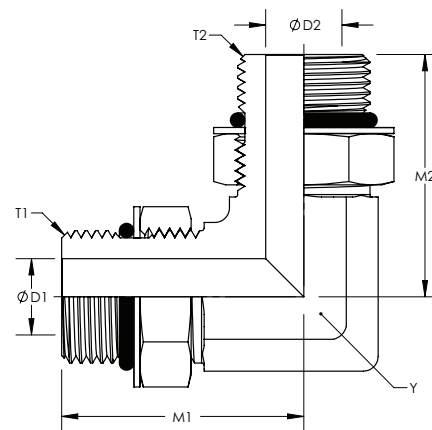
SAE: /

Air-Way: 6807

Parker: /

Aeroquip: /

Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2
6807X04X04	0.438	7/16-20	1.030	0.172	7/16-20	1.030	0.172
6807X06X06	0.563	9/16-18	1.250	0.297	9/16-18	1.250	0.297
6807X08X06	0.750	3/4-16	1.450	0.391	9/16-18	1.320	0.297
6807X08X08	0.750	3/4-16	1.450	0.391	3/4-16	1.450	0.391
6807X10X08	0.875	7/8-14	1.700	0.484	3/4-16	1.540	0.391
6807X10X10	0.875	7/8-14	1.700	0.484	7/8-14	1.700	0.484
6807X12X12	1.063	1-1/16-12	1.940	0.609	1-1/16-12	1.940	0.609
6807X16X16	1.313	1-5/16-12	2.050	0.844	1-5/16-12	2.050	0.844
6807X20X20	1.625	1-5/8-12	2.250	1.078	1-5/8-12	2.250	1.078
6807X24X24	1.875	1-7/8-12	2.390	1.313	1-7/8-12	2.390	1.313

Description: **90° Female Swivel to Male ORB**

WWF Part No.: **6809**

WWF Stainless Part No.: **6809-SS**

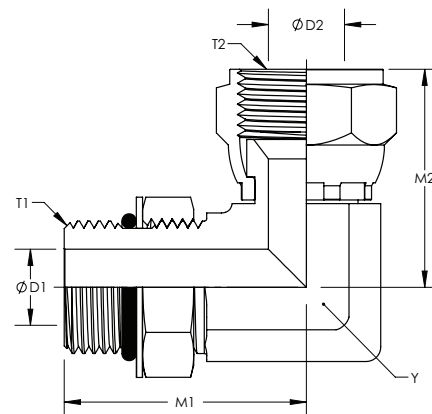
SAE: /

Air-Way: 6809

Parker: AOEX6

Aeroquip: /

Gates: /

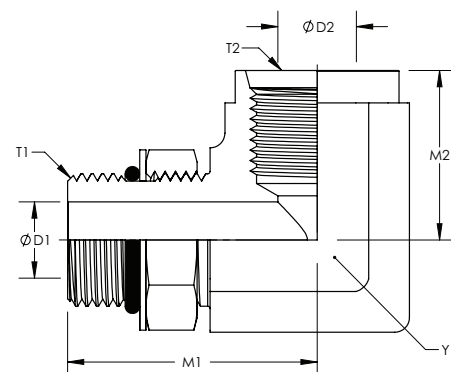


WWF	Y HEX	T1	M1	D1	T2	M2	D2
6809X04X04	0.438	7/16-20	1.030	0.172	7/16-20	1.000	0.172
6809X06X06	0.563	9/16-18	1.250	0.297	9/16-18	1.250	0.297
6809X08X08	0.750	3/4-16	1.450	0.391	3/4-16	1.380	0.391
6809X10X10	0.875	7/8-14	1.700	0.484	7/8-14	1.620	0.484
6809X12X12	1.063	1-1/16-12	1.940	0.609	1-1/16-12	1.750	0.609
6809X16X16	1.313	1-5/16-12	2.050	0.844	1-5/16-12	2.000	0.844

5000 SERIES

Description: **90° Male ORB to Female ORB**
 WWF Part No.: **6815**
 WWF Stainless Part No.: **6815-SS**
 SAE: /

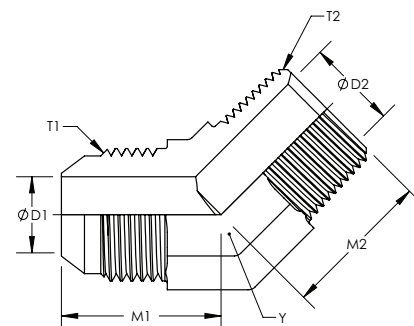
Air-Way: 6815
 Parker: /
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2
6815X04X04	0.750	7/16-20	1.260	0.172	7/16-20	0.830	0.172
6815X06X06	0.875	9/16-18	1.410	0.297	9/16-18	1.020	0.297
6815X08X08	1.063	3/4-16	1.620	0.391	3/4-16	1.230	0.391
6815X10X10	1.063	7/8-14	1.780	0.484	7/8-14	1.230	0.492
6815X12X12	1.313	1-1/16-12	2.000	0.609	1-1/16-12	1.360	0.609
6815X16X16	1.625	1-5/16-12	2.250	0.844	1-5/16-12	1.620	0.827

Description: **45° Male Elbow**
 WWF Part No.: **7100**
 WWF Stainless Part No.: /
 SAE: /

Air-Way: 7100
 Parker: /
 Aeroquip: /
 Gates: MJ-MBSPT 45° Elbow

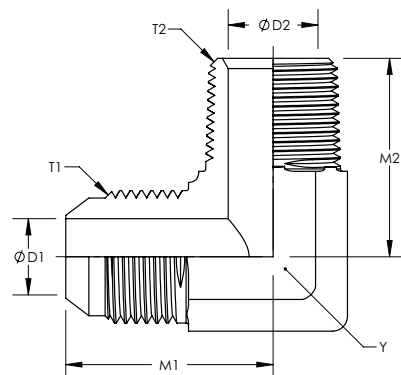


WWF	Y HEX	T1	M1	D1	T2	M2	D2
7100X04X02	0.438	7/16-20	0.720	0.172	R 1/8-28	0.642	0.188
7100X04X04	0.563	7/16-20	0.807	0.172	R 1/4-19	0.858	0.281
7100X06X04	0.563	9/16-18	0.831	0.297	R 1/4-19	0.858	0.281
7100X06X06	0.748	9/16-18	0.870	0.297	R 3/8-19	0.949	0.406
7100X08X06	0.748	3/4-16	0.980	0.391	R 3/8-19	0.949	0.406
7100X08X08	0.874	3/4-16	0.992	0.391	R 1/2-14	1.169	0.531
7100X10X08	0.874	7/8-14	1.110	0.484	R 1/2-14	1.169	0.531
7100X12X12	1.063	1-1/16-12	1.280	0.609	R 3/4-14	1.201	0.719

5000 SERIES

Description: **90° Male Elbow**
 WWF Part No.: **7200**
 WWF Stainless Part No.: /
 SAE: /

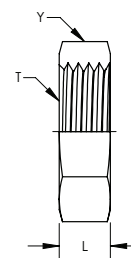
Air-Way: 7200
 Parker: /
 Aeroquip: /
 Gates: MJ-MBSPT 90° Elbow



WWF	Y HEX	T1	M1	D1	T2	M2	D2
7200X04X02	0.438	7/16-20	0.890	0.172	R 1/8-28	0.780	0.188
7200X04X04	0.563	7/16-20	1.047	0.172	R 1/4-19	1.091	0.281
7200X06X04	0.563	9/16-18	1.059	0.297	R 1/4-19	1.091	0.281
7200X06X06	0.748	9/16-18	1.142	0.297	R 3/8-19	1.220	0.406
7200X08X06	0.748	3/4-16	1.252	0.391	R 3/8-19	1.220	0.406
7200X08X08	0.874	3/4-16	1.331	0.391	R 1/2-14	1.469	0.531
7200X12X12	1.063	1-1/16-12	1.660	0.609	R 3/4-14	1.590	0.719

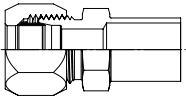
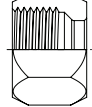
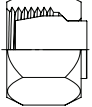
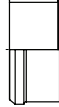
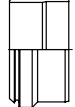
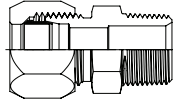
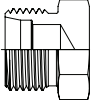
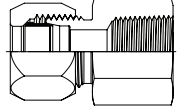
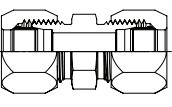
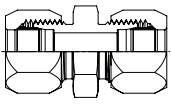
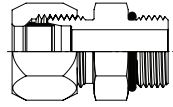
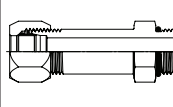
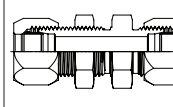
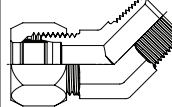
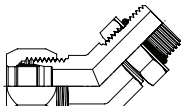
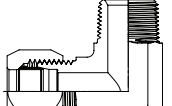
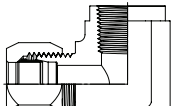
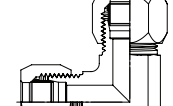
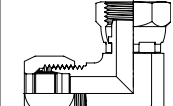
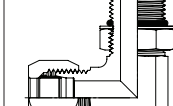
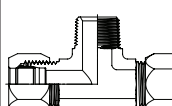


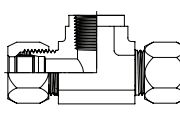
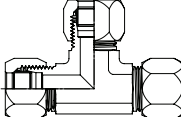
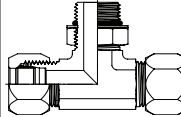
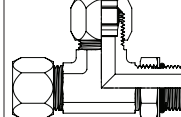
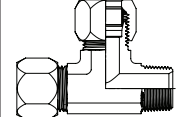
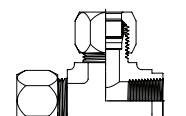
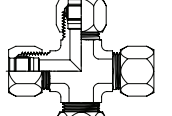
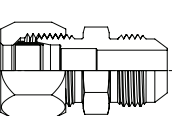
Description: **Straight Thread Locknut**
 WWF Part No.: **8924**
 WWF Stainless Part No.: **0306-N-SS**
 SAE: **070117**

Air-Way: 0306-N
 Parker: /
 Aeroquip: 210295
 Gates: /



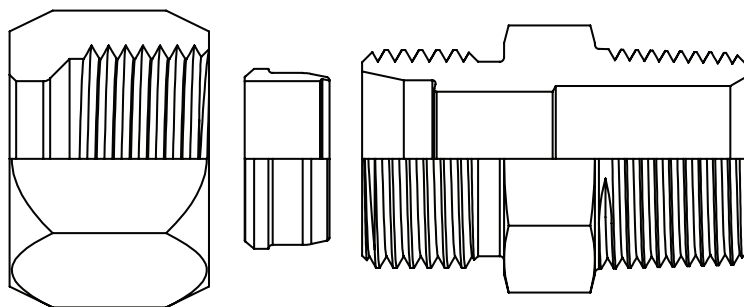
WWF	Y HEX	T	L
8924X02	0.438	5/16-24	0.220
8924X03	0.500	3/8-24	0.220
8924X04	0.563	7/16-20	0.280
8924X05	0.625	1/2-20	0.280
8924X06	0.688	9/16-18	0.270
8924X08	0.875	3/4-16	0.310
8924X10	1.000	7/8-14	0.360
8924X12	1.250	1-1/16-12	0.410
8924X14	1.375	1-3/16-12	0.410
8924X16	1.500	1-5/16-12	0.410
8924X20	1.875	1-5/8-12	0.410
8924X24	2.125	1-7/8-12	0.410
8924X32	2.750	2-1/2-12	0.410

7000 SERIES - STEEL FLARELESS FITTINGS

<p>C2406 Page 152</p>  <p>7015 Reducer</p>	<p>C0318 Page 152</p>  <p>7105 Nut</p>	<p>C0304-C Page 153</p>  <p>7129 Cap Assembly</p>	<p>Page 153</p>  <p>7165 Style "B" Ferrule</p>	<p>C0319 Page 154</p>  <p>7165A Style "A" Ferrule</p>	<p>C2404 Page 154</p>  <p>7205 Male Connector</p>	<p>C2408 Page 156</p>  <p>7229 Plug</p>
<p>C2405 Page 156</p>  <p>7255 Female Connector</p>	<p>C2403 Page 157</p>  <p>7305 Union</p>	<p>C2403-LH Page 157</p>  <p>7306 Large Hex Union</p>	<p>C6400 Page 158</p>  <p>7315 Straight Thread Connector Short</p>	<p>C6400-L Page 159</p>  <p>7316 Straight Thread Connector Long</p>	<p>C2700 Page 159</p>  <p>7325 Bulkhead Union</p>	<p>C2503 Page 160</p>  <p>7355 45° Male Elbow</p>
<p>C6802 Page 160</p>  <p>7365 45° Straight Thread Elbow</p>	<p>C2501 Page 161</p>  <p>7405 90° Male Elbow</p>	<p>C2502 Page 162</p>  <p>7455 90° Female Elbow</p>	<p>C2500 Page 163</p>  <p>7505 90° Union Elbow</p>	<p>C6500 Page 164</p>  <p>7506 90° Swivel Elbow</p>	<p>C6801 Page 164</p>  <p>7515 90° Straight Thread Elbow</p>	<p>C2601 Page 165</p>  <p>7605 Male Branch Tee</p>
<p>Page 165</p>  <p>7629 90 Durometer "O" Ring</p>	<p>Page 166</p>  <p>7269M 90 Durometer Metric "O" Ring</p>	<p>C2602 Page 166</p>  <p>7655 Female Branch Tee</p>	<p>C2603 Page 167</p>  <p>7705 Union Tee</p>	<p>C6803 Page 167</p>  <p>7715 Straight Thread Branch Tee</p>	<p>C6804 Page 168</p>  <p>7716 Straight Thread Run Tee</p>	<p>C2605 Page 168</p>  <p>7755 Male Run Tee</p>
<p>C2606 Page 169</p>  <p>7805 Female Run Tee</p>	<p>C2650 Page 169</p>  <p>7955 Cross</p>	<p>C2402 Page 170</p>  <p>C2402 Male Connector to Male JIC</p>				

D

7000 SERIES - STEEL FLARELESS FITTINGS



7000 Series Assembly

CONSTRUCTION

7000 Series Fittings consist of three main components: Bodies, Nuts, and Sleeves.

Bodies – Straight bodies are machined from bar stock. Shape fittings (elbows, tees, & crosses) are machined from forgings.

7000 Series fittings are machined with NPTF - Dryseal Pipe Threads and SAE straight threads for easy installation.

Tube Nuts – Tube nuts in sizes 1/4", 5/16", 3/8", 1/2", 5/8", 3/4", 1" are Cold Formed in 1010 steel. Tube nuts in sizes 1 1/4", 1 1/2", & 2" are hot forged from 1045.

Tube Sleeves – Flareless tube sleeves are machined from cold drawn 12L14 bar stock and are available in both SAE "A" and "B" styles (see tube sleeve drawings to view the "A" and "B" style sleeves). After machining and inspection the tube sleeves are heat treated to provide them with the necessary hardness.

CAUTION:

Stainless steel sleeves must be preset into tubing during installation.

MATERIAL

- Steel – Forged Bodies 1045
- Straight Bodies 12L14, 1045
- Cold Formed Nuts 1010
- Bar Stock Nut 12L14
- Flareless Sleeves 12L14
- Stainless Steel – Forged Bodies 316
- Stainless Steel – Straight Bodies 316
- Stainless Steel – Bar Stock Nuts 316
- Stainless Steel – Flareless Sleeves 17-4PH

PLATING

Clear Zinc Trivalent

Alternate plating finishes are available upon request. Contact World Wide Fittings for details.

APPLICATIONS

For use with applications such as: Construction machinery, Textile machinery, Machine tools, Chemical, Marine, Military, and most other high pressure hydraulic applications. Applications using thick wall tubing where flaring is not practical.

CAUTION:

7000 Flareless Fittings are NOT RECOMMENDED for use in instrumentation applications where toxic and noxious gases are present.

TEMPERATURE RANGE

-30 Degrees Fahrenheit to +450 Degrees Fahrenheit
Straight thread fittings which use "O" Rings to seal are restricted to the temperature range of the material used to construct the "O" Ring.

PRESSURE RATINGS

Working Pressure up to 8000 PSI.

CAUTION:

Working pressures will vary depending on tube and fitting size. (For applications using extreme pressures at 5000 PSI or above (or) for application with extreme pressure fluctuations, contact World Wide Fittings.)

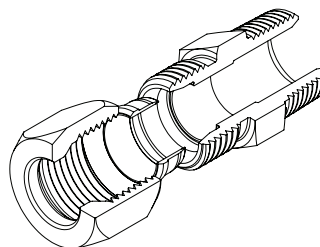
HOW TO ORDER

Tubing sizes are measured in sixteenths of an inch. Available sizes are 1/8" through 2". When ordering, the tube end of the fitting must be specified first followed by the pipe thread or straight thread end. All fittings in this section are ordered as assemblies only unless otherwise specified by customers when ordering.

(Contact World Wide Fittings when ordering fittings as bodies only or configurations which are non-standard.)

CONFORMANCE

7000 Series fittings meet SAE J514 and MS (Military Specifications).



7000 SERIES - STEEL FLARELESS FITTINGS

ASSEMBLY INSTRUCTIONS

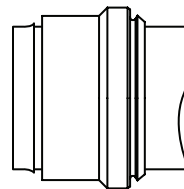
Using a presetting tool, the flareless sleeve should be preset and inspected before final assembly of the fittings is made.

All Stainless Sleeves must be preset before final installation.

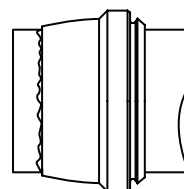
1. Cut the tubing to the desired length making sure the ends are square. (Refer to the tube penetration chart when measuring tube length.)
Remove all burrs and foreign matter from the end of the tubing and clean thoroughly.
2. Lubricate the threads of the preset body, tube nut, and outer edge of both ends of the flareless sleeve.
3. Slide the tube nut and the flareless sleeve onto the tubing making sure the open end of the nut and the leading "bite" edge of the sleeve are facing the end of the tubing.
4. Insert the tubing into the preset body until it hits the bottom or shoulder of the tool. Bring the flareless sleeve and tube nut down to the preset tool and tighten the nut to the finger-tight position.
5. Using a marker make a reference line on the tubing and tube nut. Holding the tubing firmly in the preset tool and using a wrench, tighten the tube nut an additional 1-3/4 turns past the finger-tight position. Disassemble the nut from the preset tool and inspect the flareless sleeve for the proper bite into the tube. (Refer to example drawings for correct and incorrect preset sleeves.)
6. Should the preset sleeve look acceptable, insert the tube with the preset sleeve into the fitting body to be assembled. Tighten the tube nut to the finger-tight position. Then using a wrench tighten the nut until a sudden rise in torque is felt. From the point where the sudden rise in torque started turn the nut an additional 1/3 to 1/4 turn. Your assembly is now ready for use.

(Refer to the assembly torque charts during installation of 7000 series fittings from the port and thread assemblies section.)

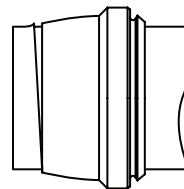
Incorrect tube / sleeve assembly



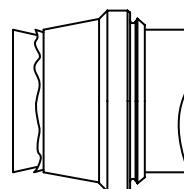
Shallow bite



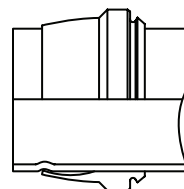
*Tube not bottomed
in fitting*



Sleeve was cocked

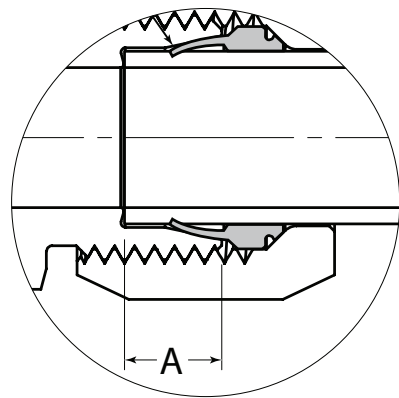
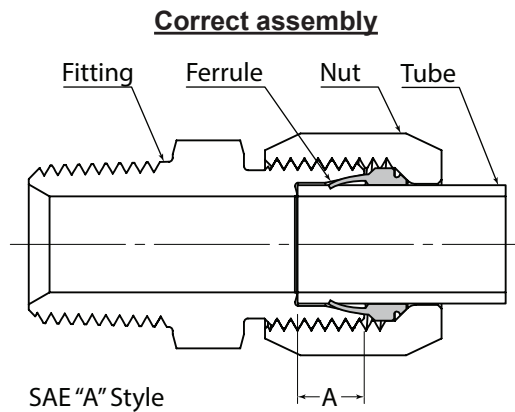


Over set sleeve



No bite

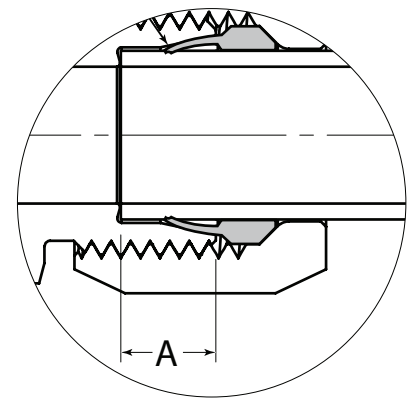
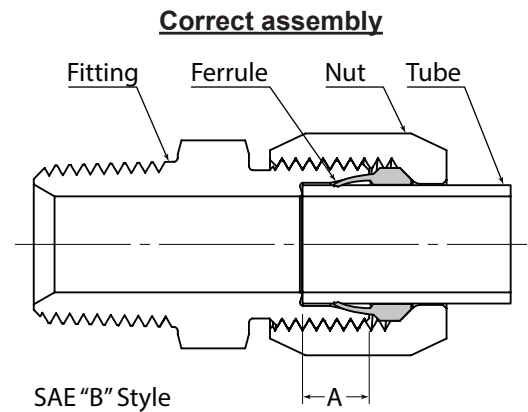
7000 SERIES - STEEL FLARELESS FITTINGS



Tube length allowance

Nominal Tube O.D.	A
1/8	0.19
3/16	0.23
1/4	0.23
5/16	0.25
3/8	0.25
1/2	0.31
5/8	0.35
3/4	0.35
7/8	0.35
1	0.42
1-1/4	0.42
1-1/2	0.49
2	0.49

Tube length allowance table



Tube length allowance

The above example shows an assembly using the **SAE "A" Style** flareless sleeve. When assembled properly the SAE "A" style flareless sleeve assembly will exhibit the following characteristics.

1. A slight indentation around the end of the tube which indicates that the tube was fully inserted during installation.
2. A visible metal lip will have been raised 75% to 100% of the thickness of the sleeves lead biting edge all the way around the tube. (See illustration above.)
3. The midsection of the sleeve behind the leading edge has a slight bow to provide contact with the internal taper of the fitting body and form a sealing point.
4. The back (tail) end of the sleeve will be in firm contact with the O.D. of the tube.

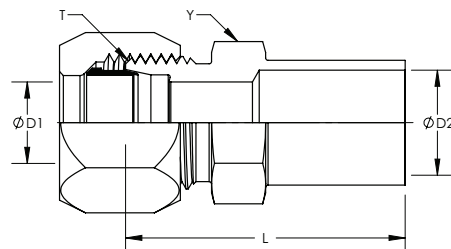
The above example shows an assembly using the **SAE "B" Style** flareless sleeve. When assembled properly the SAE "B" style flareless sleeve assembly will exhibit the following characteristics.

1. A slight indentation around the end of the tube which indicates that the tube was fully inserted during installation.
2. A metal lip will have been raised 75% to 100% of the thickness of the sleeves biting edge which is hidden under the leading end of the sleeve. (See illustration above.)
3. The midsection of the sleeve behind the leading edge has a slight bow to provide contact with the internal taper of the fitting body and form a sealing point.
4. The back (tail) end of the sleeve will be in firm contact with the O.D. of the tube.

7000 SERIES

Description: **Reducer**
 WWF Part No.: **7015**
 WWF Stainless Part No.: **C2406-SS**
 SAE: **080123**

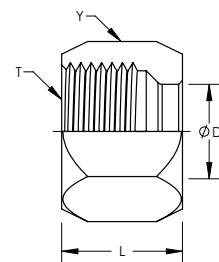
Air-Way: C2406
 Parker: TRBU
 Aeroquip: /
 Gates: /



WWF	Y HEX	T	D1	D2	L
7015X06X04	0.500	7/16-20	0.203	0.250	1.610
7015X06X12	1.125	1-1/16-12	0.656	0.250	2.000
7015X08X04	0.563	7/16-20	0.203	0.375	1.730
7015X08X06	0.625	9/16-18	0.281	0.375	1.770
7015X10X04	0.688	7/16-20	0.203	0.500	1.850
7015X10X08	0.813	3/4-16	0.422	0.500	1.960
7015X12X06	0.813	9/16-18	0.281	0.625	1.930
7015X12X08	0.813	3/4-16	0.422	0.625	2.030
7015X16X12	1.125	1-1/16-12	0.656	0.844	2.240
7015X20X16	1.375	1-5/16-12	0.875	1.031	2.280

Description: **Nut**
 WWF Part No.: **7105**
 WWF Stainless Part No.: **C0318-SS**
 SAE: **080110**

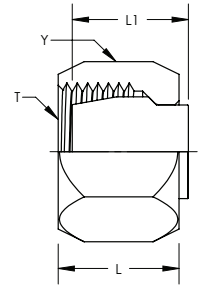
Air-Way: C0318
 Parker: BU
 Aeroquip: /
 Gates: FFN



WWF	Y HEX	T	D	L
7105X02	0.375	5/16-24	0.130	0.530
7105X03	0.438	3/8-24	0.193	0.610
7105X04	0.563	7/16-20	0.255	0.700
7105X05	0.625	1/2-20	0.318	0.720
7105X06	0.688	9/16-18	0.380	0.750
7105X08	0.875	3/4-16	0.505	0.840
7105X10	1.000	7/8-14	0.631	0.920
7105X12	1.250	1-1/16-12	0.756	0.970
7105X14	1.375	1-3/16-12	0.881	1.000
7105X16	1.500	1-5/16-12	1.006	1.050
7105X20	2.000	1-5/8-12	1.260	1.050
7105X24	2.250	1-7/8-12	1.510	1.030
7105X32	2.875	2-1/2-12	2.014	1.120

Description: **Cap Assembly**
 WWF Part No.: **7129**
 WWF Stainless Part No.: **C0304-C-SS**
 SAE: **080112**

Air-Way: C0304-C
 Parker: FNU
 Aeroquip: /
 Gates: /

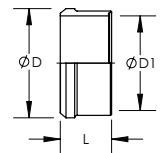


WWF	Y HEX	T	L	L1
7129X02	0.375	5/16-24	0.530	0.580
7129X04	0.563	7/16-20	0.700	0.720
7129X06	0.688	9/16-18	0.750	0.770
7129X08	0.875	3/4-16	0.840	0.930
7129X10	1.000	7/8-14	0.920	0.940
7129X12	1.250	1-1/16-12	0.970	0.930
7129X14	1.375	1-3/16-12	1.000	0.960
7129X16	1.500	1-5/16-12	1.050	1.080
7129X20	2.000	1-5/8-12	1.050	1.190

D

Description: **Style "B" Ferrule**
 WWF Part No.: **7165**
 WWF Stainless Part No.: /
 SAE: **080115B**

Air-Way: /
 Parker: /
 Aeroquip: /
 Gates: FFS

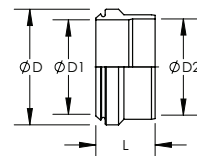


WWF	D	D1	L
7165X02	0.203	0.129	0.278
7165X03	0.313	0.190	0.278
7165X04	0.359	0.255	0.336
7165X05	0.422	0.318	0.336
7165X06	0.484	0.380	0.375
7165X08	0.625	0.506	0.375
7165X10	0.750	0.633	0.415
7165X12	0.875	0.758	0.415
7165X14	1.000	0.883	0.415
7165X16	1.125	1.008	0.415
7165X20	1.406	1.260	0.415
7165X24	1.656	1.511	0.415
7165X32	2.188	2.014	0.453

7000 SERIES

Description: **Style "A" Ferrule**
 WWF Part No.: **7165A**
 WWF Stainless Part No.: **C0319-SS**
 SAE: **080115A**

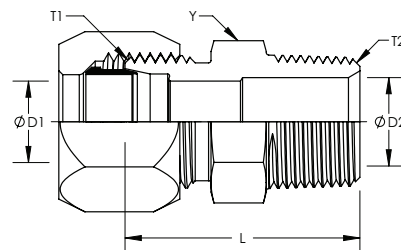
Air-Way: C0319
 Parker: TU
 Aeroquip: /
 Gates: /



WWF	D	D1	D2	L
7165AX02	0.237	0.130	0.140	0.288
7165AX03	0.307	0.193	0.205	0.329
7165AX04	0.367	0.255	0.268	0.363
7165AX05	0.430	0.318	0.330	0.367
7165AX06	0.492	0.380	0.393	0.393
7165AX08	0.663	0.505	0.521	0.429
7165AX10	0.780	0.631	0.647	0.442
7165AX12	0.925	0.756	0.772	0.475
7165AX14	1.063	0.881	0.897	0.475
7165AX16	1.188	1.006	1.022	0.475
7165AX20	1.446	1.260	1.275	0.475
7165AX24	1.694	1.510	1.524	0.475
7165AX32	2.210	2.014	2.026	0.509

Description: **Male Connector**
 WWF Part No.: **7205**
 WWF Stainless Part No.: **C2404-SS**
 SAE: **080102**

Air-Way: C2404
 Parker: FBU
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	D1	T2	D2	L
7205X02X02	0.438	5/16-24	0.094	1/8-27	0.188	1.040
7205X02X04	0.563	5/16-24	0.094	1/4-18	0.281	1.240
7205X03X02	0.438	3/8-24	0.125	1/8-27	0.188	1.090
7205X03X04	0.563	3/8-24	0.125	1/4-18	0.281	1.290
7205X04X02	0.500	7/16-20	0.203	1/8-27	0.188	1.120
7205X04X04	0.563	7/16-20	0.203	1/4-18	0.281	1.320
7205X04X06	0.750	7/16-20	0.203	3/8-18	0.406	1.330

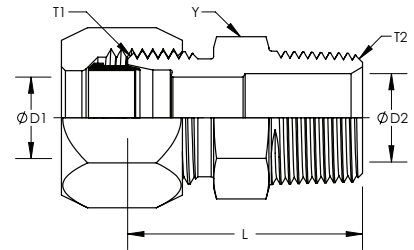
Continued on page 155

7000 SERIES

Continued from page 154

Description: **Male Connector**
 WWF Part No.: **7205**
 WWF Stainless Part No.: **C2404-SS**
 SAE: **080102**

Air-Way: C2404
 Parker: FBU
 Aeroquip: /
 Gates: /



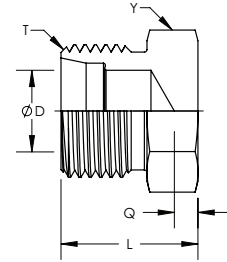
WWF	Y HEX	T1	D1	T2	D2	L
7205X04X08	0.875	7/16-20	0.203	1/2-14	0.531	1.580
7205X05X02	0.563	1/2-20	0.234	1/8-27	0.188	1.120
7205X05X04	0.563	1/2-20	0.234	1/4-18	0.281	1.320
7205X06X02	0.625	9/16-18	0.281	1/8-27	0.188	1.150
7205X06X04	0.625	9/16-18	0.281	1/4-18	0.281	1.340
7205X06X06	0.750	9/16-18	0.281	3/8-18	0.406	1.350
7205X06X08	0.875	9/16-18	0.281	1/2-14	0.531	1.600
7205X08X02	0.813	3/4-16	0.422	1/8-27	0.188	1.250
7205X08X04	0.813	3/4-16	0.422	1/4-18	0.281	1.440
7205X08X06	0.813	3/4-16	0.422	3/8-18	0.406	1.440
7205X08X08	0.875	3/4-16	0.422	1/2-14	0.531	1.690
7205X08X12	1.125	3/4-16	0.422	3/4-14	0.719	1.760
7205X08X16	1.375	3/4-16	0.422	1-11-1/2	0.938	1.950
7205X10X06	0.938	7/8-14	0.500	3/8-18	0.406	1.560
7205X10X08	0.938	7/8-14	0.500	1/2-14	0.531	1.750
7205X10X12	1.125	7/8-14	0.500	3/4-14	0.719	1.820
7205X12X08	1.125	1-1/16-12	0.656	1/2-14	0.531	1.880
7205X12X12	1.125	1-1/16-12	0.656	3/4-14	0.719	1.880
7205X14X12	1.250	1-3/16-12	0.719	3/4-14	0.719	1.880
7205X16X12	1.375	1-5/16-12	0.875	3/4-14	0.719	1.880
7205X16X16	1.375	1-5/16-12	0.875	1-11-1/2	0.938	2.070
7205X20X20	1.688	1-5/8-12	1.094	1-1/4-11-1/2	1.250	2.180
7205X24X24	2.000	1-7/8-12	1.344	1-1/2-11-1/2	1.500	2.280
7205X32X32	2.625	2-1/2-12	1.813	2-11-1/2	1.938	2.460

D

7000 SERIES

Description: **Plug**
 WWF Part No.: **7229**
 WWF Stainless Part No.: **C2408-SS**
 SAE: **080109**

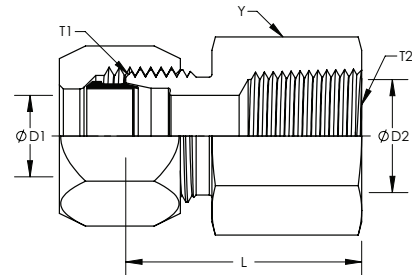
Air-Way: C2408
 Parker: PNU
 Aeroquip: /
 Gates: /



WWF	Y HEX	T	Q	D	L
7229X02	0.438	5/16-24	0.110	0.094	0.630
7229X04	0.500	7/16-20	0.110	0.203	0.710
7229X05	0.563	1/2-20	0.120	0.234	0.710
7229X06	0.625	9/16-18	0.120	0.281	0.750
7229X08	0.813	3/4-16	0.160	0.422	0.850
7229X10	0.938	7/8-14	0.160	0.500	0.970
7229X12	1.125	1-1/16-12	0.190	0.656	1.100
7229X16	1.375	1-5/16-12	0.190	0.875	1.100

Description: **Female Connector**
 WWF Part No.: **7255**
 WWF Stainless Part No.: **C2405-SS**
 SAE: **080103**

Air-Way: C2405
 Parker: GBU
 Aeroquip: /
 Gates: /

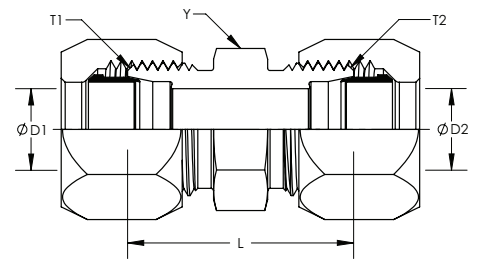


WWF	Y HEX	T1	D1	T2	D2	L
7255X02X02	0.563	5/16-24	0.094	1/8-27	0.332	1.050
7255X03X02	0.563	3/8-24	0.125	1/8-27	0.332	1.080
7255X04X02	0.563	7/16-20	0.203	1/8-27	0.332	1.090
7255X04X04	0.750	7/16-20	0.203	1/4-18	0.438	1.290
7255X05X02	0.563	1/2-20	0.234	1/8-27	0.332	1.080
7255X05X04	0.750	1/2-20	0.234	1/4-18	0.438	1.290
7255X06X04	0.750	9/16-18	0.281	1/4-18	0.438	1.310
7255X06X06	0.875	9/16-18	0.281	3/8-18	0.563	1.380
7255X06X08	1.125	9/16-18	0.281	1/2-14	0.703	1.610
7255X08X04	0.875	3/4-16	0.422	1/4-18	0.438	1.460
7255X08X06	0.875	3/4-16	0.422	3/8-18	0.563	1.470
7255X08X08	1.125	3/4-16	0.422	1/2-14	0.703	1.700
7255X10X08	1.125	7/8-14	0.500	1/2-14	0.703	1.760
7255X12X12	1.375	1-1/16-12	0.656	3/4-14	0.906	1.890
7255X14X12	1.375	1-3/16-12	0.719	3/4-14	0.906	1.860
7255X16X12	1.625	1-5/16-12	0.875	3/4-14	0.906	1.900
7255X16X16	1.625	1-5/16-12	0.875	1-11-1/2	1.141	2.130
7255X20X20	2.000	1-5/8-12	1.094	1-1/4-11-1/2	1.484	2.220

7000 SERIES

Description: **Union**
 WWF Part No.: **7305**
 WWF Stainless Part No.: **C2403-SS**
 SAE: **080101**

Air-Way: C2403
 Parker: HBU
 Aeroquip: /
 Gates: /

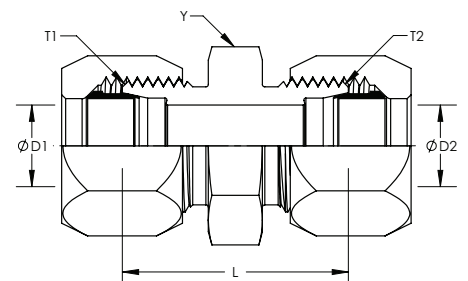


WWF	Y HEX	T1	D1	T2	D2	L
7305X02X02	0.438	5/16-24	0.094	5/16-24	0.094	1.020
7305X03X03	0.438	3/8-24	0.125	3/8-24	0.125	1.110
7305X04X04	0.500	7/16-20	0.203	7/16-20	0.203	1.180
7305X05X05	0.563	1/2-20	0.234	1/2-20	0.234	1.180
7305X06X04	0.625	9/16-18	0.281	7/16-20	0.203	1.220
7305X06X06	0.625	9/16-18	0.281	9/16-18	0.281	1.240
7305X08X06	0.813	3/4-16	0.422	9/16-18	0.281	1.330
7305X08X08	0.813	3/4-16	0.422	3/4-16	0.422	1.420
7305X10X10	0.938	7/8-14	0.500	7/8-14	0.500	1.610
7305X12X12	1.125	1-1/16-12	0.656	1-1/16-12	0.656	1.810
7305X14X14	1.250	1-3/16-12	0.719	1-3/16-12	0.719	1.810
7305X16X16	1.375	1-5/16-12	0.875	1-5/16-12	0.875	1.810
7305X20X20	1.688	1-5/8-12	1.094	1-5/8-12	1.094	1.890
7305X24X24	2.000	1-7/8-12	1.344	1-7/8-12	1.344	1.960
7305X32X32	2.625	2-1/2-12	1.813	2-1/2-12	1.813	2.110

D

Description: **Large Hex Union**
 WWF Part No.: **7306**
 WWF Stainless Part No.: **C2403-LH-SS**
 SAE: **080119**

Air-Way: C2403-LH
 Parker: LHBU
 Aeroquip: /
 Gates: /

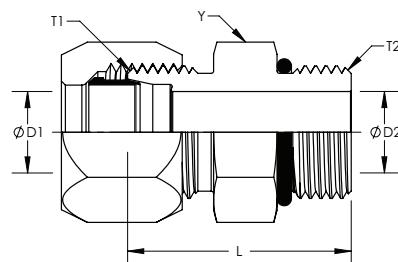


WWF	Y HEX	T1	D1	T2	D2	L
7306X04X04	0.688	7/16-20	0.203	7/16-20	0.203	1.180
7306X06X06	0.813	9/16-18	0.281	9/16-18	0.281	1.240
7306X08X08	1.000	3/4-16	0.422	3/4-16	0.422	1.420
7306X12X12	1.375	1-1/16-12	0.656	1-1/16-12	0.656	1.810
7306X16X16	1.625	1-5/16-12	0.875	1-5/16-12	0.875	1.810

7000 SERIES

Description: **Straight Thread Connector Short**
 WWF Part No.: **7315**
 WWF Stainless Part No.: **C6400-SS**
 SAE: **080120**

Air-Way: C6400
 Parker: F5BU
 Aeroquip: /
 Gates: /

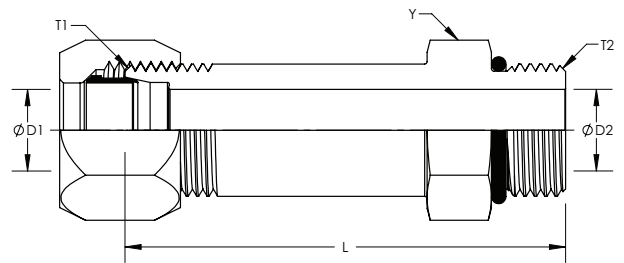


WWF	Y HEX	T1	D1	T2	D2	L
7315X03X03	0.500	3/8-24	0.125	3/8-24	0.125	1.040
7315X04X04	0.563	7/16-20	0.203	7/16-20	0.203	1.130
7315X04X05	0.625	7/16-20	0.203	1/2-20	0.234	1.130
7315X04X06	0.688	7/16-20	0.203	9/16-18	0.281	1.190
7315X05X05	0.625	1/2-20	0.234	1/2-20	0.234	1.130
7315X06X06	0.688	9/16-18	0.281	9/16-18	0.281	1.210
7315X06X08	0.875	9/16-18	0.281	3/4-16	0.422	1.290
7315X08X06	0.813	3/4-16	0.422	9/16-18	0.281	1.340
7315X08X08	0.875	3/4-16	0.422	3/4-16	0.422	1.380
7315X08X10	1.000	3/4-16	0.422	7/8-14	0.500	1.510
7315X08X12	1.250	3/4-16	0.422	1-1/16-12	0.656	1.670
7315X10X08	1.000	7/8-14	0.500	3/4-16	0.422	1.510
7315X10X10	1.000	7/8-14	0.500	7/8-14	0.500	1.570
7315X12X06	1.125	1-1/16-12	0.656	9/16-18	0.281	1.680
7315X12X10	1.125	1-1/16-12	0.656	7/8-14	0.500	1.700
7315X12X12	1.250	1-1/16-12	0.656	1-1/16-12	0.656	1.790
7315X12X16	1.500	1-1/16-12	0.656	1-5/16-12	0.875	1.820
7315X14X14	1.375	1-3/16-12	0.719	1-3/16-12	0.719	1.790
7315X16X12	1.375	1-5/16-12	0.875	1-1/16-12	0.656	1.820
7315X16X16	1.500	1-5/16-12	0.875	1-5/16-12	0.875	1.820
7315X20X20	1.875	1-5/8-12	1.094	1-5/8-12	1.094	1.900
7315X24X24	2.125	1-7/8-12	1.344	1-7/8-12	1.344	1.970
7315X32X32	2.750	2-1/2-12	1.813	2-1/2-12	1.813	2.130

7000 SERIES

Description: **Straight Thread Connector Long**
 WWF Part No.: **7316**
 WWF Stainless Part No.: **C6400-L-SS**
 SAE: **081720**

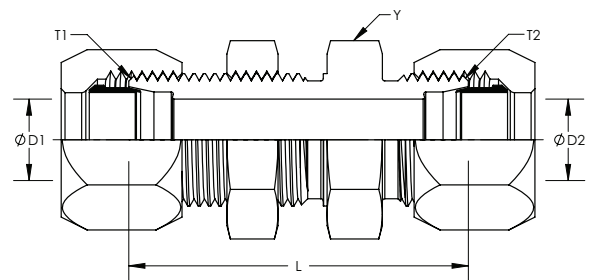
Air-Way: C6400-L
 Parker: /
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	D1	T2	D2	L
7316X04X04	0.563	7/16-20	0.203	7/16-20	0.203	2.020
7316X06X06	0.688	9/16-18	0.281	9/16-18	0.281	2.230
7316X08X08	0.875	3/4-16	0.422	3/4-16	0.422	2.620
7316X10X10	1.000	7/8-14	0.500	7/8-14	0.500	2.980

Description: **Bulkhead Union**
 WWF Part No.: **7325**
 WWF Stainless Part No.: **C2700-SS**
 SAE: **080601**

Air-Way: C2700
 Parker: WBU
 Aeroquip: /
 Gates: /



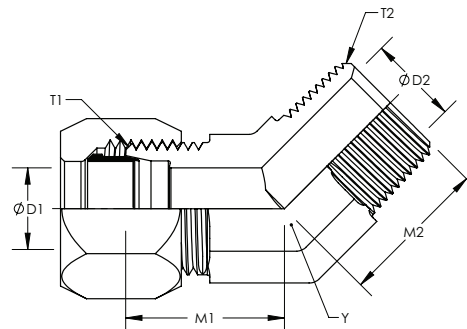
WWF	Y HEX	T1	D1	T2	D2	L
7325X03X03	0.625	3/8-24	0.125	3/8-24	0.125	1.800
7325X04X04	0.688	7/16-20	0.203	7/16-20	0.203	1.890
7325X05X05	0.750	1/2-20	0.234	1/2-20	0.234	1.890
7325X06X06	0.813	9/16-18	0.281	9/16-18	0.281	1.980
7325X08X08	1.000	3/4-16	0.422	3/4-16	0.422	2.220
7325X10X10	1.125	7/8-14	0.500	7/8-14	0.500	2.480
7325X12X12	1.375	1-1/16-12	0.656	1-1/16-12	0.656	2.720
7325X14X14	1.500	1-3/16-12	0.719	1-3/16-12	0.719	2.720
7325X16X16	1.625	1-5/16-12	0.875	1-5/16-12	0.875	2.720

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7000 SERIES

Description: **45° Male Elbow**
 WWF Part No.: **7355**
 WWF Stainless Part No.: **C2503-SS**
 SAE: **080302**

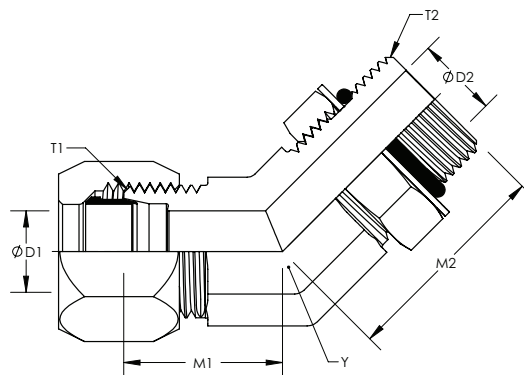
Air-Way: C2503
 Parker: VBU
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2
7355X04X02	0.438	7/16-20	0.700	0.203	1/8-27	0.640	0.188
7355X04X04	0.563	7/16-20	0.810	0.203	1/4-18	0.860	0.281
7355X05X02	0.563	1/2-20	0.750	0.234	1/8-27	0.640	0.188
7355X06X04	0.563	9/16-18	0.830	0.281	1/4-18	0.860	0.281
7355X08X06	0.750	3/4-16	0.980	0.422	3/8-18	0.950	0.406
7355X08X08	0.875	3/4-16	1.010	0.422	1/2-14	1.170	0.531
7355X08X16	1.313	3/4-16	1.210	0.422	1-11-1/2	1.480	0.938
7355X10X08	0.875	7/8-14	1.080	0.500	1/2-14	1.170	0.531
7355X12X12	1.063	1-1/16-12	1.270	0.656	3/4-14	1.200	0.719
7355X14X12	1.313	1-3/16-12	1.340	0.719	3/4-14	1.300	0.719
7355X16X16	1.313	1-5/16-12	1.360	0.875	1-11-1/2	1.480	0.938

Description: **45° Straight Thread Elbow**
 WWF Part No.: **7365**
 WWF Stainless Part No.: **C6802-SS**
 SAE: **080320**

Air-Way: C6802
 Parker: V5BU
 Aeroquip: /
 Gates: /

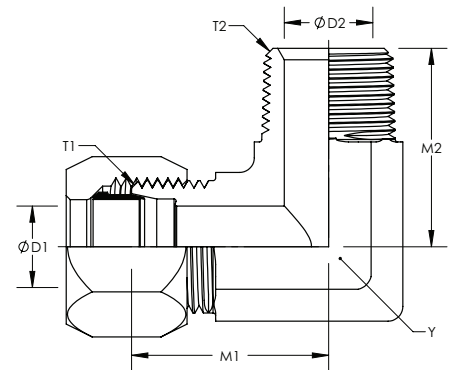


WWF	Y HEX	T1	M1	D1	T2	M2	D2
7365X08X08	0.750	3/4-16	0.980	0.422	3/4-16	1.300	0.422
7365X12X12	1.063	1-1/16-12	1.270	0.656	1-1/16-12	1.730	0.656
7365X16X16	1.313	1-5/16-12	1.360	0.875	1-5/16-12	1.860	0.875
7365X20X20	1.625	1-5/8-12	1.450	1.094	1-5/8-12	1.910	1.094

7000 SERIES

Description: **90° Male Elbow**
 WWF Part No.: **7405**
 WWF Stainless Part No.: **C2501-SS**
 SAE: **080202**

Air-Way: C2501
 Parker: CBU
 Aeroquip: /
 Gates: /



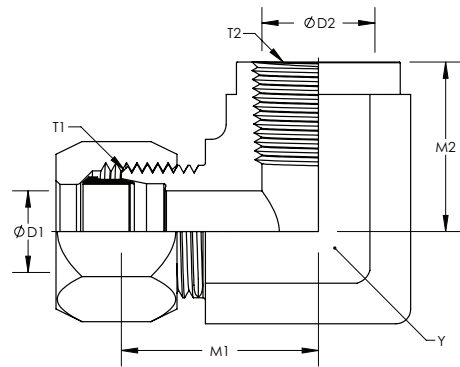
WWF	Y HEX	T1	M1	D1	T2	M2	D2
7405X02X02	0.438	5/16-24	0.770	0.094	1/8-27	0.720	0.188
7405X03X02	0.438	3/8-24	0.830	0.125	1/8-27	0.720	0.188
7405X04X02	0.438	7/16-20	0.890	0.203	1/8-27	0.780	0.188
7405X04X04	0.563	7/16-20	1.030	0.203	1/4-18	1.090	0.281
7405X05X02	0.563	1/2-20	0.950	0.234	1/8-27	0.810	0.188
7405X05X04	0.563	1/2-20	1.030	0.234	1/4-18	1.090	0.281
7405X06X02	0.563	9/16-18	1.050	0.281	1/8-27	0.900	0.188
7405X06X04	0.563	9/16-18	1.050	0.281	1/4-18	1.090	0.281
7405X06X06	0.750	9/16-18	1.140	0.281	3/8-18	1.220	0.406
7405X06X08	0.875	9/16-18	1.240	0.281	1/2-14	1.470	0.531
7405X08X04	0.750	3/4-16	1.250	0.422	1/4-18	1.220	0.281
7405X08X06	0.750	3/4-16	1.250	0.422	3/8-18	1.220	0.406
7405X08X08	0.875	3/4-16	1.350	0.422	1/2-14	1.470	0.531
7405X08X12	1.063	3/4-16	1.430	0.422	3/4-14	1.590	0.719
7405X08X16	1.313	3/4-16	1.580	0.422	1-11-1/2	1.970	0.938
7405X10X06	0.875	7/8-14	1.420	0.500	3/8-18	1.280	0.406
7405X10X08	0.875	7/8-14	1.420	0.500	1/2-14	1.470	0.531
7405X12X08	1.063	1-1/16-12	1.580	0.656	1/2-14	1.590	0.531
7405X12X12	1.063	1-1/16-12	1.580	0.656	3/4-14	1.590	0.719
7405X14X12	1.313	1-3/16-12	1.660	0.719	3/4-14	1.690	0.719
7405X16X12	1.313	1-5/16-12	1.730	0.875	3/4-14	1.780	0.719
7405X16X16	1.313	1-5/16-12	1.730	0.875	1-11-1/2	1.970	0.938
7405X20X20	1.625	1-5/8-12	1.890	1.094	1-1/4-11-1/2	2.380	1.250
7405X24X24	1.875	1-7/8-12	2.020	1.344	1-1/2-11-1/2	2.640	1.500
7405X32X32	2.500	2-1/2-12	2.450	1.813	2-11-1/2	3.000	1.938

D

7000 SERIES

Description: **90° Female Elbow**
 WWF Part No.: **7455**
 WWF Stainless Part No.: **C2502-SS**
 SAE: **080203**

Air-Way: C2502
 Parker: DBU
 Aeroquip: /
 Gates: /



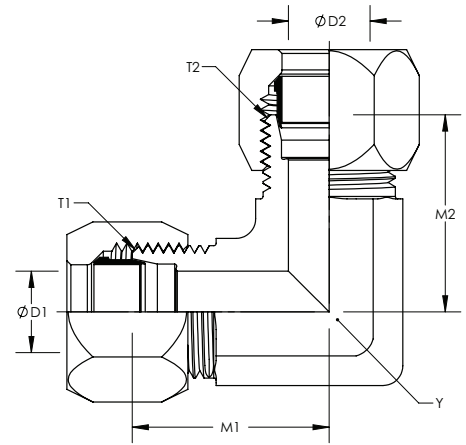
WWF	Y HEX	T1	M1	D1	T2	M2	D2
7455X03X02	0.563	3/8-24	0.830	0.125	1/8-27	0.660	0.332
7455X04X02	0.563	7/16-20	0.890	0.203	1/8-27	0.660	0.332
7455X04X04	0.750	7/16-20	1.030	0.203	1/4-18	0.880	0.438
7455X05X02	0.563	1/2-20	0.950	0.234	1/8-27	0.660	0.332
7455X06X04	0.750	9/16-18	1.050	0.281	1/4-18	0.880	0.438
7455X06X06	0.875	9/16-18	1.120	0.281	3/8-18	1.020	0.563
7455X08X04	0.875	3/4-16	1.230	0.422	1/4-18	1.010	0.438
7455X08X06	0.875	3/4-16	1.230	0.422	3/8-18	1.020	0.563
7455X08X08	1.063	3/4-16	1.350	0.422	1/2-14	1.230	0.703
7455X10X08	1.063	7/8-14	1.420	0.500	1/2-14	1.230	0.703
7455X12X12	1.313	1-1/16-12	1.580	0.656	3/4-14	1.360	0.906
7455X14X12	1.313	1-3/16-12	1.620	0.719	3/4-14	1.420	0.906
7455X16X16	1.625	1-5/16-12	1.730	0.875	1-11-1/2	1.620	1.141
7455X24X24	2.562	1-7/8-12	2.580	1.344	1-1/2-11-1/2	2.080	1.744

D

7000 SERIES

Description: **90° Union Elbow**
 WWF Part No.: **7505**
 WWF Stainless Part No.: **C2500-SS**
 SAE: **080201**

Air-Way: C2500
 Parker: EBU
 Aeroquip: /
 Gates: /



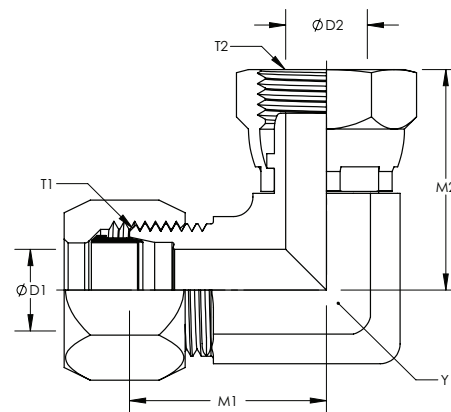
WWF	Y HEX	T1	M1	D1	T2	M2	D2
7505X03X03	0.438	3/8-24	0.830	0.125	3/8-24	0.830	0.125
7505X04X04	0.438	7/16-20	0.890	0.203	7/16-20	0.890	0.203
7505X05X05	0.563	1/2-20	0.950	0.234	1/2-20	0.950	0.234
7505X06X06	0.563	9/16-18	1.050	0.281	9/16-18	1.050	0.281
7505X08X04	0.750	3/4-16	1.250	0.422	7/16-20	1.120	0.203
7505X08X08	0.750	3/4-16	1.250	0.422	3/4-16	1.250	0.422
7505X10X10	0.875	7/8-14	1.420	0.500	7/8-14	1.420	0.500
7505X12X12	1.063	1-1/16-12	1.580	0.656	1-1/16-12	1.580	0.656
7505X14X14	1.313	1-3/16-12	1.660	0.719	1-3/16-12	1.660	0.719
7505X16X16	1.313	1-5/16-12	1.730	0.875	1-5/16-12	1.730	0.875
7505X20X20	1.625	1-5/8-12	1.890	1.094	1-5/8-12	1.890	1.094
7505X24X24	1.875	1-7/8-12	2.020	1.344	1-7/8-12	2.020	1.344

D

7000 SERIES

Description: **90° Swivel Elbow**
 WWF Part No.: **7506**
 WWF Stainless Part No.: **C6500-SS**
 SAE: **080221**

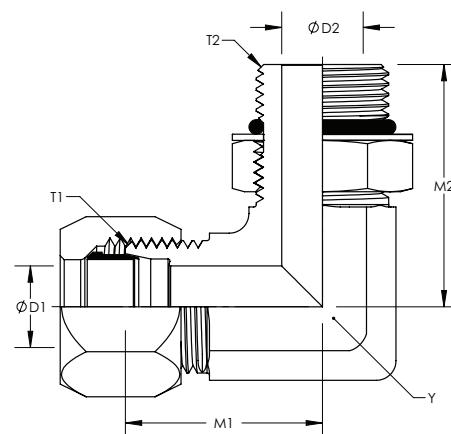
Air-Way: C6500
 Parker: C6X
 Aeroquip: 2071-[R]
 Gates: MJ-FJX90



WWF	Y HEX	T1	M1	D1	T2	M2	D2
7506X04X04	0.438	7/16-20	0.890	0.203	7/16-20	1.050	0.203
7506X06X06	0.563	9/16-18	1.050	0.281	9/16-18	1.280	0.281
7506X08X08	0.750	3/4-16	1.250	0.422	3/4-16	1.470	0.422

Description: **90° Straight Thread Elbow**
 WWF Part No.: **7515**
 WWF Stainless Part No.: **C6801-SS**
 SAE: **080220**

Air-Way: C6801
 Parker: C5BU
 Aeroquip: /
 Gates: /

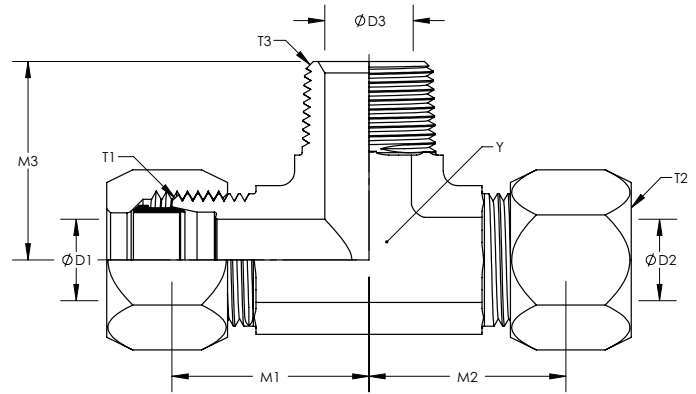


WWF	Y HEX	T1	M1	D1	T2	M2	D2
7515X02X02	0.438	5/16-24	0.770	0.094	5/16-24	0.910	0.094
7515X04X04	0.438	7/16-20	0.890	0.203	7/16-20	1.030	0.203
7515X04X06	0.563	7/16-20	1.030	0.203	9/16-18	1.250	0.281
7515X05X05	0.563	1/2-20	0.950	0.234	1/2-20	1.130	0.234
7515X06X05	0.563	9/16-18	1.050	0.281	1/2-20	1.190	0.234
7515X06X06	0.563	9/16-18	1.050	0.281	9/16-18	1.250	0.281
7515X06X08	0.750	9/16-18	1.140	0.281	3/4-16	1.450	0.422
7515X06X10	0.875	9/16-18	1.240	0.281	7/8-14	1.700	0.500
7515X08X06	0.750	3/4-16	1.250	0.422	9/16-18	1.320	0.281
7515X08X08	0.750	3/4-16	1.250	0.422	3/4-16	1.450	0.422
7515X08X10	0.875	3/4-16	1.350	0.422	7/8-14	1.700	0.500
7515X08X12	1.063	3/4-16	1.430	0.422	1-1/16-12	1.940	0.656
7515X10X10	0.875	7/8-14	1.420	0.500	7/8-14	1.700	0.500
7515X10X12	1.063	7/8-14	1.500	0.500	1-1/16-12	1.940	0.656
7515X12X08	1.063	1-1/16-12	1.580	0.656	3/4-16	1.620	0.422
7515X12X12	1.063	1-1/16-12	1.580	0.656	1-1/16-12	1.940	0.656
7515X16X16	1.313	1-5/16-12	1.730	0.875	1-5/16-12	2.050	0.875
7515X20X20	1.625	1-5/8-12	1.890	1.094	1-5/8-12	2.250	1.094
7515X24X24	1.875	1-7/8-12	2.020	1.344	1-7/8-12	2.390	1.344

7000 SERIES

Description: **Male Branch Tee**
 WWF Part No.: **7605**
 WWF Stainless Part No.: **C2601-SS**
 SAE: **080425**

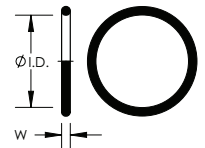
Air-Way: C2601
 Parker: SBU
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
7605X02X02X02	0.438	5/16-24	0.770	0.094	5/16-24	0.770	0.094	1/8-27	0.720	0.188
7605X04X04X02	0.438	7/16-20	0.890	0.203	7/16-20	0.890	0.203	1/8-27	0.780	0.188
7605X04X04X04	0.563	7/16-20	1.030	0.203	7/16-20	1.030	0.203	1/4-18	1.090	0.281
7605X05X05X02	0.563	1/2-20	0.950	0.234	1/2-20	0.950	0.234	1/8-27	0.810	0.188
7605X06X06X04	0.563	9/16-18	1.050	0.281	9/16-18	1.050	0.281	1/4-18	1.090	0.281
7605X08X08X06	0.750	3/4-16	1.250	0.422	3/4-16	1.250	0.422	3/8-18	1.220	0.406
7605X08X08X08	0.875	3/4-16	1.350	0.422	3/4-16	1.350	0.422	1/2-14	1.470	0.531
7605X10X08X08	0.875	7/8-14	1.420	0.500	3/4-16	1.350	0.422	1/2-14	1.470	0.531
7605X10X10X08	0.875	7/8-14	1.420	0.500	7/8-14	1.420	0.500	1/2-14	1.470	0.531
7605X12X12X12	1.063	1-1/16-12	1.580	0.656	1-1/16-12	1.580	0.656	3/4-14	1.590	0.719
7605X14X14X12	1.313	1-3/16-12	1.660	0.719	1-3/16-12	1.660	0.719	3/4-14	1.690	0.719
7605X16X16X16	1.313	1-5/16-12	1.730	0.875	1-5/16-12	1.730	0.875	1-11-1/2	1.970	0.938
7605X20X20X20	1.625	1-5/8-12	1.890	1.094	1-5/8-12	1.890	1.094	1-1/4-11-1/2	2.380	1.250

Description: **90 Durometer "O" Ring**
 WWF Part No.: **7629**
 WWF Stainless Part No.: /
 SAE: /

Air-Way: /
 Parker: "O" - Ring
 Aeroquip: /
 Gates: OR



WWF	I.D.	W
7629X02	0.239	0.064
7629X03	0.301	0.064
7629X04	0.351	0.072
7629X05	0.414	0.072
7629X06	0.468	0.078
7629X08	0.644	0.087
7629X10	0.755	0.097
7629X12	0.924	0.116
7629X14	1.048	0.116
7629X16	1.171	0.116
7629X20	1.475	0.118
7629X24	1.720	0.118
7629X32	2.337	0.118

7000 SERIES

Description: **90 Durometer Metric "O" Ring**

WWF Part No.: **7629M**

WWF Stainless Part No.: /

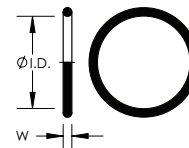
SAE: /

Air-Way: /

Parker: /

Aeroquip: /

Gates: /



WWF	I.D.	W
7629XM08	0.240	0.063
7629XM10	0.319	0.063
7629XM12	0.366	0.087
7629XM14	0.445	0.087
7629XM16	0.524	0.087
7629XM18	0.602	0.087
7629XM22	0.760	0.087
7629XM27	0.929	0.114
7629XM33	1.165	0.114
7629XM42	1.520	0.114
7629XM48	1.756	0.114

Description: **Female Branch Tee**

WWF Part No.: **7655**

WWF Stainless Part No.: **C2602-SS**

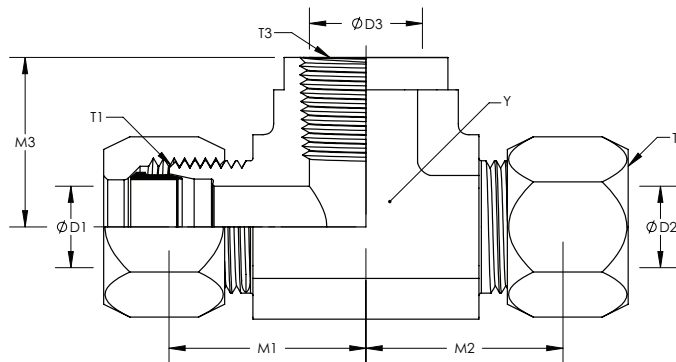
SAE: **080427**

Air-Way: C2602

Parker: OBU

Aeroquip: /

Gates: /

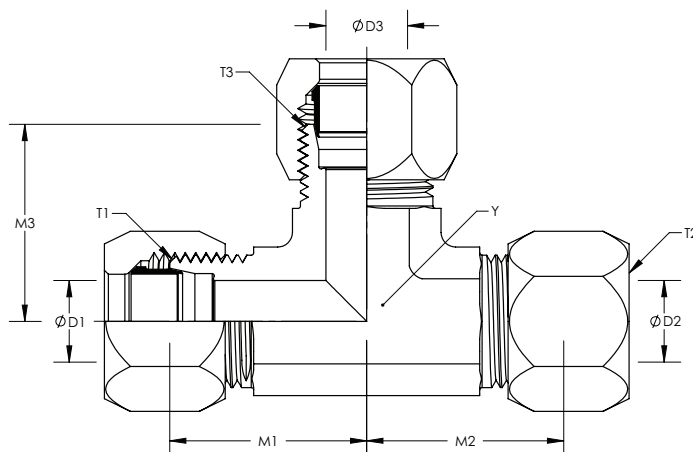


WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
7655X04X04X02	0.563	7/16-20	0.890	0.203	7/16-20	0.890	0.203	1/8-27	0.660	0.322
7655X04X04X04	0.750	7/16-20	1.030	0.203	7/16-20	1.030	0.203	1/4-18	0.880	0.438
7655X06X06X04	0.750	9/16-18	1.050	0.281	9/16-18	1.050	0.281	1/4-18	0.880	0.438
7655X06X06X06	0.875	9/16-18	1.120	0.281	9/16-18	1.120	0.281	3/8-18	1.020	0.563
7655X08X08X06	0.875	3/4-16	1.230	0.422	3/4-16	1.230	0.422	3/8-18	1.020	0.563
7655X08X08X08	1.063	3/4-16	1.350	0.422	3/4-16	1.350	0.422	1/2-14	1.230	0.703
7655X10X10X08	1.063	7/8-14	1.420	0.500	7/8-14	1.420	0.500	1/2-14	1.230	0.703
7655X12X12X12	1.313	1-1/16-12	1.580	0.656	1-1/16-12	1.580	0.656	3/4-14	1.360	0.906
7655X16X16X16	1.625	1-5/16-12	1.730	0.875	1-5/16-12	1.730	0.875	1-11-1/2	1.620	1.141
7655X20X20X20	1.875	1-5/8-12	2.080	1.094	1-5/8-12	2.080	1.094	1-1/4-11-1/2	1.700	1.484

7000 SERIES

Description: **Union Tee**
 WWF Part No.: **7705**
 WWF Stainless Part No.: **C2603-SS**
 SAE: **080401**

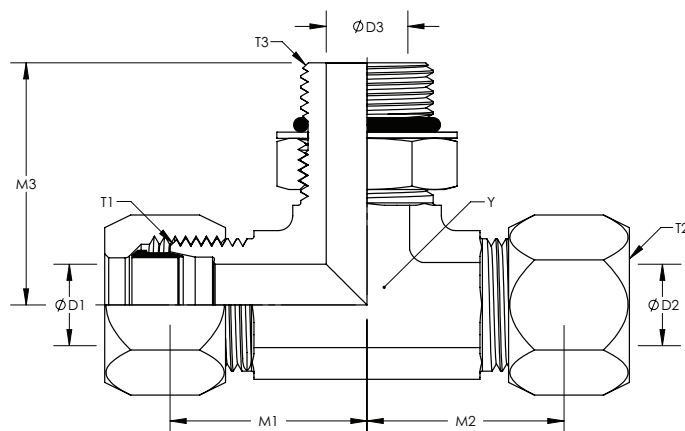
Air-Way: C2603
 Parker: JBU
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
7705X02X02X02	0.438	5/16-24	0.770	0.094	5/16-24	0.770	0.094	5/16-24	0.770	0.094
7705X03X03X03	0.438	3/8-24	0.830	0.125	3/8-24	0.830	0.125	3/8-24	0.830	0.125
7705X04X04X04	0.438	7/16-20	0.890	0.203	7/16-20	0.890	0.203	7/16-20	0.890	0.203
7705X05X05X05	0.563	1/2-20	0.950	0.234	1/2-20	0.950	0.234	1/2-20	0.950	0.234
7705X06X06X06	0.563	9/16-18	1.050	0.281	9/16-18	1.050	0.281	9/16-18	1.050	0.281
7705X08X08X06	0.750	3/4-16	1.250	0.422	3/4-16	1.250	0.422	9/16-18	1.140	0.281
7705X08X08X08	0.750	3/4-16	1.250	0.422	3/4-16	1.250	0.422	3/4-16	1.250	0.422
7705X10X10X08	0.875	7/8-14	1.420	0.500	7/8-14	1.420	0.500	3/4-16	1.350	0.422
7705X10X10X10	0.875	7/8-14	1.420	0.500	7/8-14	1.420	0.500	7/8-14	1.420	0.500
7705X12X12X12	1.063	1-1/16-12	1.580	0.656	1-1/16-12	1.580	0.656	1-1/16-12	1.580	0.656
7705X14X14X14	1.313	1-3/16-12	1.660	0.719	1-3/16-12	1.660	0.719	1-3/16-12	1.660	0.719
7705X16X16X16	1.313	1-5/16-12	1.730	0.875	1-5/16-12	1.730	0.875	1-5/16-12	1.730	0.875
7705X20X20X20	1.625	1-5/8-12	1.890	1.094	1-5/8-12	1.890	1.094	1-5/8-12	1.890	1.094
7705X24X24X24	1.875	1-7/8-12	2.020	1.344	1-7/8-12	2.020	1.344	1-7/8-12	2.020	1.344
7705X32X32X32	2.500	2-1/2-12	2.450	1.813	2-1/2-12	2.450	1.813	2-1/2-12	2.450	1.813

Description: **Straight Thread Branch Tee**
 WWF Part No.: **7715**
 WWF Stainless Part No.: **C6803-SS**
 SAE: **080429**

Air-Way: C6803
 Parker: S5BU
 Aeroquip: /
 Gates: /

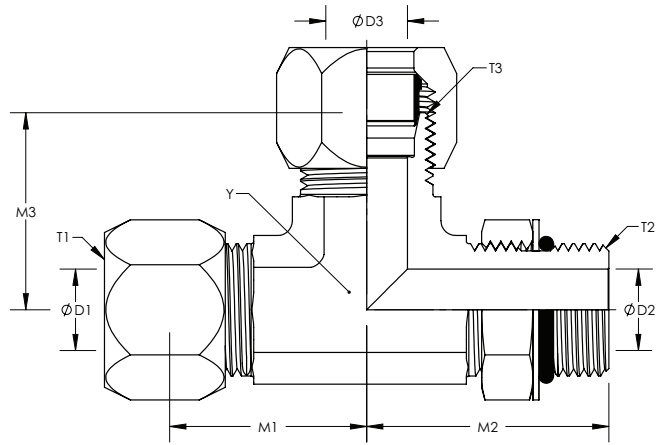


WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
7715X04X04X04	0.438	7/16-20	0.890	0.203	7/16-20	0.890	0.203	7/16-20	1.030	0.203
7715X06X06X06	0.563	9/16-18	1.050	0.281	9/16-18	1.050	0.281	9/16-18	1.250	0.281
7715X08X08X08	0.750	3/4-16	1.250	0.422	3/4-16	1.250	0.422	3/4-16	1.450	0.422

7000 SERIES

Description: **Straight Thread Run Tee**
 WWF Part No.: **7716**
 WWF Stainless Part No.: **C6804-SS**
 SAE: **080428**

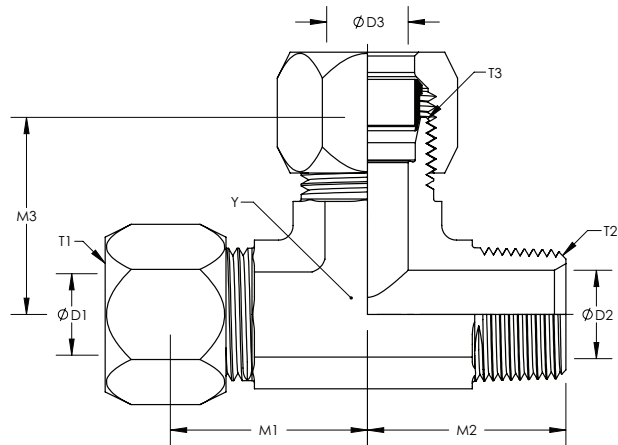
Air-Way: C6804
 Parker: R5BU
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
7716X04X04X04	0.438	7/16-20	0.890	0.203	7/16-20	1.030	0.203	7/16-20	0.890	0.203
7716X06X06X06	0.563	9/16-18	1.050	0.281	9/16-18	1.250	0.281	9/16-18	1.050	0.281
7716X08X08X08	0.750	3/4-16	1.250	0.422	3/4-16	1.450	0.422	3/4-16	1.250	0.422

Description: **Male Run Tee**
 WWF Part No.: **7755**
 WWF Stainless Part No.: **C2605-SS**
 SAE: **080424**

Air-Way: C2605
 Parker: RBU
 Aeroquip: /
 Gates: /

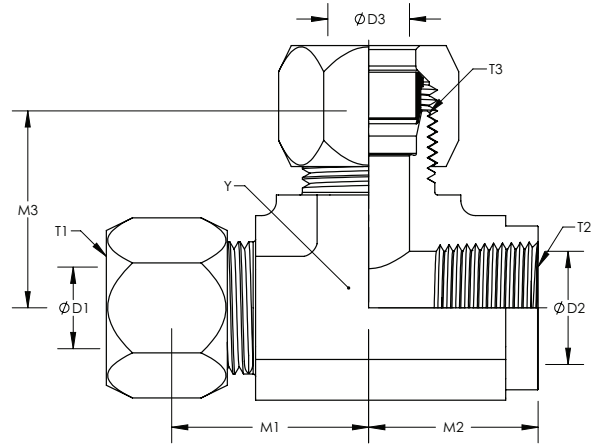


WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
7755X04X02X04	0.438	7/16-20	0.890	0.203	1/8-27	0.780	0.188	7/16-20	0.890	0.203
7755X04X04X04	0.563	7/16-20	1.030	0.203	1/4-18	1.090	0.281	7/16-20	1.030	0.203
7755X05X02X05	0.563	1/2-20	0.950	0.234	1/8-27	0.810	0.188	1/2-20	0.950	0.234
7755X06X04X06	0.563	9/16-18	1.050	0.281	1/4-18	1.090	0.281	9/16-18	1.050	0.281
7755X06X06X06	0.750	9/16-18	1.140	0.281	3/8-18	1.220	0.406	9/16-18	1.140	0.281
7755X08X06X08	0.750	3/4-16	1.250	0.422	3/8-18	1.220	0.406	3/4-16	1.250	0.422
7755X08X08X08	0.875	3/4-16	1.350	0.422	1/2-14	1.470	0.531	3/4-16	1.350	0.422
7755X10X08X10	0.875	7/8-14	1.420	0.500	1/2-14	1.470	0.531	7/8-14	1.420	0.500
7755X12X12X12	1.063	1-1/16-12	1.580	0.656	3/4-14	1.590	0.719	1-1/16-12	1.580	0.656
7755X14X12X14	1.313	1-3/16-12	1.660	0.719	3/4-14	1.690	0.719	1-3/16-12	1.660	0.719
7755X16X16X16	1.313	1-5/16-12	1.730	0.875	1-11-1/2	1.970	0.938	1-5/16-12	1.730	0.875
7755X24X24X24	1.875	1-7/8-12	2.020	1.344	1-1/2-11-1/2	2.640	1.500	1-7/8-12	2.020	1.344

7000 SERIES

Description: **Female Run Tee**
 WWF Part No.: **7805**
 WWF Stainless Part No.: **C2606-SS**
 SAE: **080426**

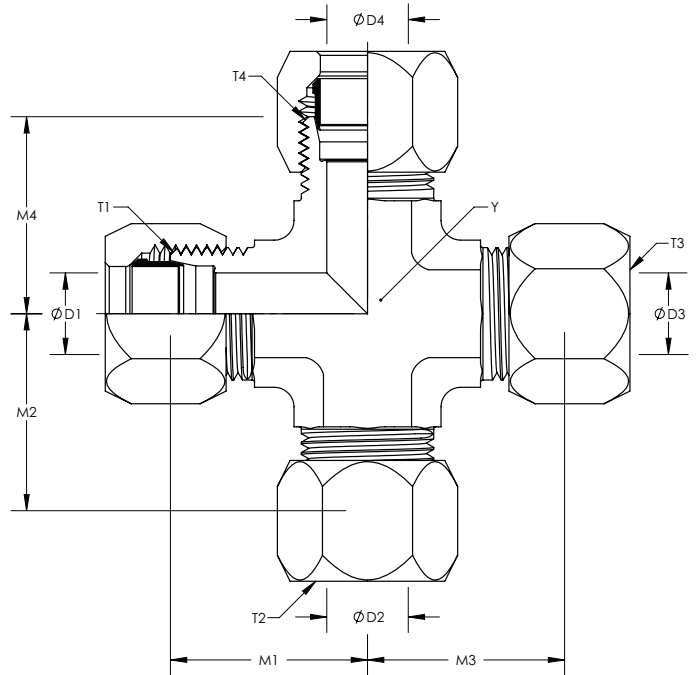
Air-Way: C2606
 Parker: MBU
 Aeroquip: /
 Gates: /



WWF	Y HEX	T1	M1	D1	T2	M2	D2	T3	M3	D3
7805X04X02X04	0.563	7/16-20	0.890	0.203	1/8-27	0.660	0.322	7/16-20	0.890	0.203
7805X04X04X04	0.750	7/16-20	1.030	0.203	1/4-18	0.880	0.438	7/16-20	1.030	0.203
7805X06X04X06	0.750	9/16-18	1.050	0.281	1/4-18	0.880	0.438	9/16-18	1.050	0.281
7805X08X06X08	0.875	3/4-16	1.230	0.422	3/8-18	1.020	0.563	3/4-16	1.230	0.422
7805X10X08X10	1.063	7/8-14	1.420	0.500	1/2-14	1.230	0.703	7/8-14	1.420	0.500
7805X12X12X12	1.313	1-1/16-12	1.580	0.656	3/4-14	1.360	0.906	1-1/16-12	1.580	0.656
7805X14X12X14	1.313	1-3/16-12	1.620	0.719	3/4-14	1.420	0.906	1-3/16-12	1.620	0.719

Description: **Cross**
 WWF Part No.: **7955**
 WWF Stainless Part No.: **C2650-SS**
 SAE: **080501**

Air-Way: C2650
 Parker: KBU
 Aeroquip: /
 Gates: /

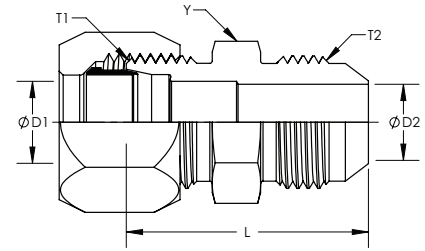


WWF	Y HEX	T1 / T3	M1 / M3	D1 / D3	T2 / T4	M2 / M4	D2 / D4
7955X04X04X04X04	0.438	7/16-20	0.890	0.203	7/16-20	0.890	0.203
7955X05X05X05X05	0.563	1/2-20	0.950	0.234	1/2-20	0.950	0.234
7955X06X06X06X06	0.563	9/16-18	1.050	0.281	9/16-18	1.050	0.281
7955X08X08X08X08	0.750	3/4-16	1.250	0.422	3/4-16	1.250	0.422
7955X10X10X10X10	0.875	7/8-14	1.420	0.500	7/8-14	1.420	0.500
7955X12X12X12X12	1.063	1-1/16-12	1.580	0.656	1-1/16-12	1.580	0.656

D

Description: Male Connector to Male JIC
WWF Part No.: C2402
WWF Stainless Part No.: C2402-SS
SAE: /

Air-Way: C2402
Parker: /
Aeroquip: /
Gates: /



WWF	Y HEX	T1	D1	T2	D2	L
C2402X04X04	0.500	7/16-20	0.203	7/16-20	0.172	1.230
C2402X06X06	0.625	9/16-18	0.281	9/16-18	0.297	1.280
C2402X08X08	0.813	3/4-16	0.422	3/4-16	0.391	1.470

D

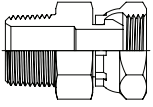
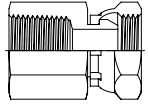
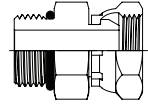
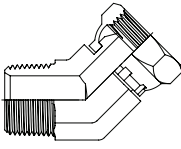
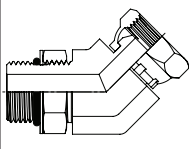
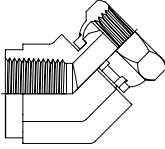
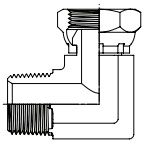
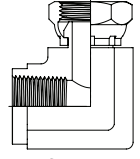
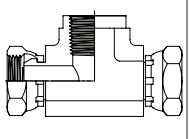
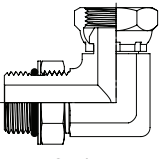
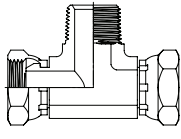
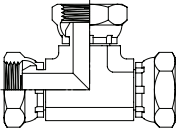



Steel Swivel Adapters

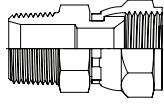
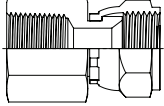
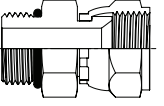
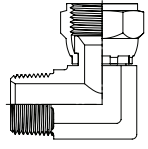
9000 SERIES

9000 SERIES - STEEL SWIVEL ADAPTERS

FEMALE PIPE SWIVEL ENDS

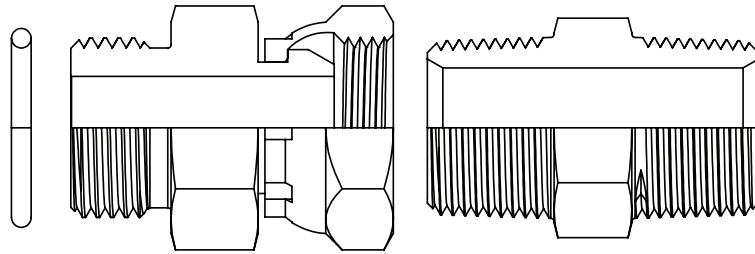
<p>1404 Page 176</p>  <p>9205 Female Adapter Union to Male Pipe</p>	<p>1405 Page 177</p>  <p>9255 Female Adapter Union to Female Pipe</p>	<p>6900 Page 178</p>  <p>9315 Female Adapter Union to Male Straight Thread</p>	<p>1503 Page 179</p>  <p>9355 45° Female Adapter Union to Male Pipe</p>	<p>6902 Page 180</p>  <p>9365 45° Female Adapter Union to Adjustable Male Straight Thread</p>	<p>1504 Page 181</p>  <p>9385 45° Female Adapter Union to Female Pipe</p>	<p>1501 Page 182</p>  <p>9405 90° Female Adapter Union to Male Pipe</p>
<p>1502 Page 183</p>  <p>9455 90° Female Adapter Union to Female Pipe</p>	<p>1602 Page 184</p>  <p>9456 Female Pipe to Female Pipe Sw. Branch Tee</p>	<p>6901 Page 185</p>  <p>9515 90° Female Adapter Union to Adjustable Male Straight Thread</p>	<p>1601 Page 186</p>  <p>9605 Male Pipe to Female Pipe Sw. Branch Tee</p>	<p>1603 Page 187</p>  <p>9705 Swivel Union Tee</p>	<p>Page 165</p>  <p>7629 90 Durometer "O" Ring</p>	

FEMALE 37° FLARE SWIVEL ENDS

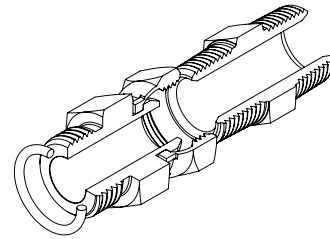
<p>6505 Page 187</p>  <p>9100 Male Pipe to Female 37° JIC Swivel</p>	<p>6506 Page 188</p>  <p>9256 Female Pipe to Female 37° JIC Swivel</p>	<p>6402 Page 188</p>  <p>9316 Str. Thr. "O" Ring to Female 37° JIC Swivel</p>	<p>6501 Page 189</p>  <p>9406 90° Male Pipe to Female 37° JIC Swivel</p>			

** All 9000 Series items are listed with the swivel ends last. Please check your requirements before ordering.

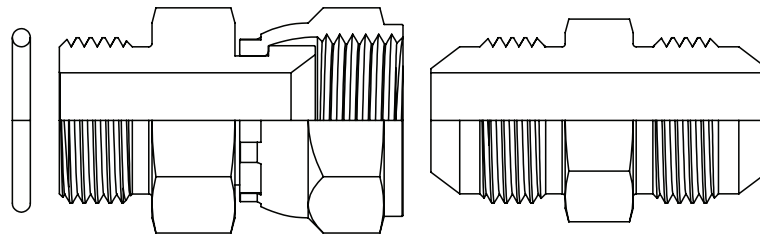
9000 SERIES - STEEL SWIVEL ADAPTERS



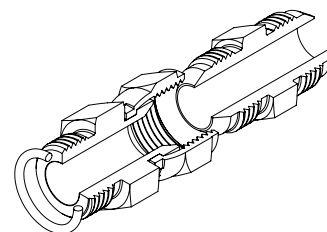
9000 Series Assembly (Female Pipe Swivel Ends)



E



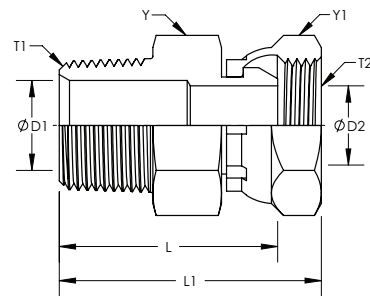
9000 Series Assembly (Female 37° Flare Swivel Ends)



9000 SERIES

Description: **Female Adapter Union to Male Pipe**
 WWF Part No.: **9205**
 WWF Stainless Part No.: **1404-SS**
 SAE: **140130**

Air-Way: 1404
 Parker: 0107
 Aeroquip: 2045-[R]
 Gates: MP-FPX

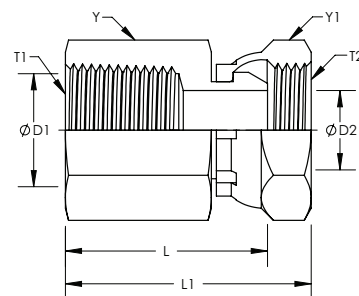


WWF	Y HEX	Y1 HEX	T1	D1	T2	D2	L	L1
9205X02X02	0.563	0.563	1/8-27	0.188	1/8-27	0.150	0.940	1.080
9205X02X04	0.688	0.688	1/8-27	0.188	1/4-18	0.220	1.050	1.240
9205X04X02	0.688	0.563	1/4-18	0.281	1/8-27	0.150	1.180	1.320
9205X04X04	0.688	0.688	1/4-18	0.281	1/4-18	0.220	1.230	1.420
9205X04X06	0.813	0.875	1/4-18	0.281	3/8-18	0.340	1.310	1.520
9205X04X08	1.000	1.000	1/4-18	0.281	1/2-14	0.460	1.420	1.700
9205X06X04	0.750	0.688	3/8-18	0.406	1/4-18	0.220	1.300	1.490
9205X06X06	0.875	0.875	3/8-18	0.406	3/8-18	0.340	1.300	1.520
9205X06X08	1.000	1.000	3/8-18	0.406	1/2-14	0.460	1.420	1.700
9205X08X04	0.875	0.688	1/2-14	0.531	1/4-18	0.220	1.520	1.710
9205X08X06	0.875	0.875	1/2-14	0.531	3/8-18	0.340	1.560	1.770
9205X08X08	1.000	1.000	1/2-14	0.531	1/2-14	0.460	1.610	1.890
9205X08X12	1.250	1.250	1/2-14	0.531	3/4-14	0.635	1.740	2.090
9205X12X06	1.125	0.875	3/4-14	0.719	3/8-18	0.340	1.560	1.770
9205X12X08	1.125	1.000	3/4-14	0.719	1/2-14	0.460	1.650	1.930
9205X12X12	1.250	1.250	3/4-14	0.719	3/4-14	0.635	1.750	2.100
9205X12X16	1.500	1.500	3/4-14	0.719	1-11-1/2	0.831	1.810	2.160
9205X12X20	1.875	1.875	3/4-14	0.719	1-1/4-11-1/2	1.087	1.860	2.280
9205X16X06	1.375	0.875	1-11-1/2	0.938	3/8-18	0.340	1.810	2.020
9205X16X12	1.500	1.250	1-11-1/2	0.938	3/4-14	0.635	1.940	2.290
9205X16X16	1.500	1.500	1-11-1/2	0.938	1-11-1/2	0.831	2.000	2.350
9205X16X20	1.875	1.875	1-11-1/2	0.938	1-1/4-11-1/2	1.087	2.050	2.470
9205X16X24	2.125	2.125	1-11-1/2	0.938	1-1/2-11-1/2	1.317	2.210	2.630
9205X20X16	1.875	1.500	1-1/4-11-1/2	1.250	1-11-1/2	0.831	2.050	2.400
9205X20X20	1.875	1.875	1-1/4-11-1/2	1.250	1-1/4-11-1/2	1.087	2.100	2.520
9205X20X24	2.125	2.125	1-1/4-11-1/2	1.250	1-1/2-11-1/2	1.317	2.090	2.510
9205X24X20	2.125	1.875	1-1/2-11-1/2	1.500	1-1/4-11-1/2	1.087	2.120	2.540
9205X24X24	2.125	2.125	1-1/2-11-1/2	1.500	1-1/2-11-1/2	1.317	2.270	2.690
9205X32X32	2.625	2.625	2-11-1/2	1.938	2-11-1/2	1.802	2.370	2.790

E

Description: Female Adapter Union to Female Pipe
WWF Part No.: 9255
WWF Stainless Part No.: /
SAE: 140131

Air-Way: 1405
Parker: 0207
Aeroquip: 2046-[R]
Gates: FP-FPX



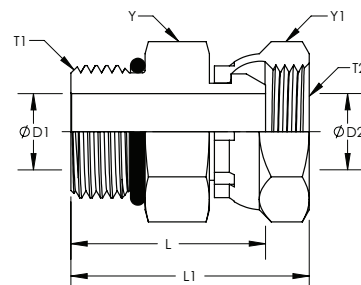
WWF	Y HEX	Y1 HEX	T1	D1	T2	D2	L	L1
9255X02X02	0.563	0.563	1/8-27	0.332	1/8-27	0.150	0.880	1.020
9255X02X04	0.688	0.688	1/8-27	0.332	1/4-18	0.220	1.100	1.290
9255X04X04	0.688	0.688	1/4-18	0.438	1/4-18	0.220	1.230	1.420
9255X04X06	0.688	0.875	1/4-18	0.438	3/8-18	0.340	1.270	1.480
9255X06X04	0.875	0.688	3/8-18	0.563	1/4-18	0.220	1.290	1.480
9255X06X06	0.875	0.875	3/8-18	0.563	3/8-18	0.340	1.310	1.520
9255X06X08	1.000	1.000	3/8-18	0.563	1/2-14	0.460	1.500	1.780
9255X08X04	1.000	0.688	1/2-14	0.703	1/4-18	0.220	1.560	1.750
9255X08X06	0.875	0.875	1/2-14	0.703	3/8-18	0.340	1.450	1.660
9255X08X08	1.000	1.000	1/2-14	0.703	1/2-14	0.460	1.560	1.840
9255X08X12	1.250	1.250	1/2-14	0.703	3/4-14	0.635	1.620	1.970
9255X12X08	1.250	1.000	3/4-14	0.906	1/2-14	0.460	1.630	1.910
9255X12X12	1.250	1.250	3/4-14	0.906	3/4-14	0.635	1.620	1.970
9255X12X16	1.500	1.500	3/4-14	0.906	1-11-1/2	0.831	1.830	2.180
9255X16X12	1.500	1.250	1-11-1/2	1.141	3/4-14	0.635	1.900	2.250
9255X16X16	1.500	1.500	1-11-1/2	1.141	1-11-1/2	0.831	2.000	2.350
9255X20X20	1.875	1.875	1-1/4-11-1/2	1.484	1-1/4-11-1/2	1.087	1.980	2.400
9255X24X24	2.125	2.125	1-1/2-11-1/2	1.744	1-1/2-11-1/2	1.317	2.100	2.520
9255X32X32	2.625	2.625	2-11-1/2	2.213	2-11-1/2	1.802	2.130	2.550

E

9000 SERIES

Description: **Female Adapter Union to Male Straight Thread**
 WWF Part No.: **9315**
 WWF Stainless Part No.: /
 SAE: **140157**

Air-Way: 6900
 Parker: 0507
 Aeroquip: 2066-[R]
 Gates: MB-FPX



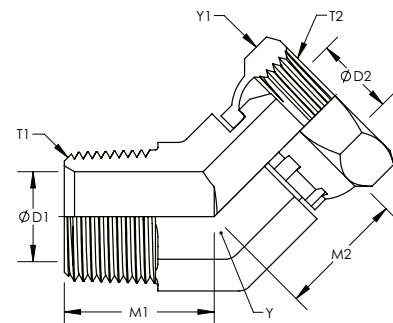
WWF	Y HEX	Y1 HEX	T1	D1	T2	D2	L	L1
9315X04X04	0.563	0.688	7/16-20	0.172	1/4-18	0.220	1.110	1.300
9315X04X06	0.688	0.875	7/16-20	0.172	3/8-18	0.340	1.150	1.360
9315X05X04	0.625	0.688	1/2-20	0.234	1/4-18	0.220	1.090	1.280
9315X06X04	0.688	0.688	9/16-18	0.297	1/4-18	0.220	1.070	1.260
9315X06X06	0.875	0.875	9/16-18	0.297	3/8-18	0.340	1.250	1.460
9315X06X08	0.813	1.000	9/16-18	0.297	1/2-14	0.460	1.290	1.570
9315X08X04	0.875	0.688	3/4-16	0.391	1/4-18	0.220	1.170	1.360
9315X08X06	0.875	0.875	3/4-16	0.391	3/8-18	0.340	1.190	1.400
9315X08X08	0.875	1.000	3/4-16	0.391	1/2-14	0.460	1.270	1.550
9315X08X12	1.000	1.250	3/4-16	0.391	3/4-14	0.635	1.410	1.760
9315X10X06	1.000	0.875	7/8-14	0.484	3/8-18	0.340	1.260	1.470
9315X10X08	1.000	1.000	7/8-14	0.484	1/2-14	0.460	1.330	1.610
9315X10X12	1.000	1.250	7/8-14	0.484	3/4-14	0.635	1.370	1.720
9315X12X06	1.250	0.875	1-1/16-12	0.609	3/8-18	0.340	1.410	1.620
9315X12X08	1.250	1.000	1-1/16-12	0.609	1/2-14	0.460	1.450	1.730
9315X12X12	1.250	1.250	1-1/16-12	0.609	3/4-14	0.635	1.600	1.950
9315X12X16	1.250	1.500	1-1/16-12	0.609	1-11-1/2	0.831	1.700	2.050
9315X14X12	1.375	1.250	1-3/16-12	0.719	3/4-14	0.635	1.610	1.960
9315X16X12	1.500	1.250	1-5/16-12	0.844	3/4-14	0.635	1.730	2.080
9315X16X16	1.500	1.500	1-5/16-12	0.844	1-11-1/2	0.831	1.710	2.060
9315X16X20	1.875	1.875	1-5/16-12	0.844	1-1/4-11-1/2	1.087	1.900	2.320
9315X20X16	1.875	1.500	1-5/8-12	1.078	1-11-1/2	0.831	1.790	2.140
9315X20X20	1.875	1.875	1-5/8-12	1.078	1-1/4-11-1/2	1.087	1.790	2.210
9315X24X20	2.125	1.875	1-7/8-12	1.313	1-1/4-11-1/2	1.087	1.750	2.170
9315X24X24	2.125	2.125	1-7/8-12	1.313	1-1/2-11-1/2	1.317	1.950	2.370
9315X32X32	2.750	2.625	2-1/2-12	1.781	2-11-1/2	1.802	2.000	2.420

E

9000 SERIES

Description: **45° Female Adapter Union to Male Pipe**
 WWF Part No.: **9355**
 WWF Stainless Part No.: /
 SAE: **140330**

Air-Way: 1503
 Parker: 3107
 Aeroquip: 2049-[R]
 Gates: MP-FPX45



WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2
9355X02X02	0.438	0.563	1/8-27	0.520	0.188	1/8-27	0.620	0.150
9355X02X04	0.563	0.688	1/8-27	0.670	0.188	1/4-18	0.730	0.220
9355X04X04	0.563	0.688	1/4-18	0.860	0.281	1/4-18	0.730	0.220
9355X04X06	0.750	0.875	1/4-18	0.950	0.281	3/8-18	0.810	0.340
9355X06X04	0.750	0.688	3/8-18	0.950	0.406	1/4-18	0.790	0.220
9355X06X06	0.750	0.875	3/8-18	0.950	0.406	3/8-18	0.810	0.340
9355X06X08	0.875	1.000	3/8-18	0.980	0.406	1/2-14	0.880	0.460
9355X08X04	0.875	0.688	1/2-14	1.170	0.531	1/4-18	0.790	0.220
9355X08X06	0.875	0.875	1/2-14	1.170	0.531	3/8-18	0.810	0.340
9355X08X08	0.875	1.000	1/2-14	1.170	0.531	1/2-14	0.880	0.460
9355X08X12	1.063	1.250	1/2-14	1.200	0.531	3/4-14	1.020	0.635
9355X12X08	1.063	1.000	3/4-14	1.200	0.719	1/2-14	1.020	0.460
9355X12X12	1.063	1.250	3/4-14	1.200	0.719	3/4-14	1.020	0.635
9355X12X16	1.313	1.500	3/4-14	1.290	0.719	1-11-1/2	1.150	0.831
9355X16X12	1.313	1.250	1-11-1/2	1.480	0.938	3/4-14	1.040	0.635
9355X16X16	1.313	1.500	1-11-1/2	1.480	0.938	1-11-1/2	1.150	0.831
9355X16X20	1.625	1.875	1-11-1/2	1.640	0.938	1-1/4-11-1/2	1.230	1.087
9355X20X16	1.625	1.500	1-1/4-11-1/2	1.670	1.250	1-11-1/2	1.200	0.831
9355X20X20	1.625	1.875	1-1/4-11-1/2	1.670	1.250	1-1/4-11-1/2	1.230	1.087
9355X24X24	1.875	2.125	1-1/2-11-1/2	1.770	1.500	1-1/2-11-1/2	1.350	1.317
9355X32X32	2.500	2.625	2-11-1/2	2.110	1.938	2-11-1/2	1.802	1.460

E

9000 SERIES

Description: **45° Female Adapter Union to Adjustable Male Straight Thread**

WWF Part No.: **9365**

WWF Stainless Part No.: /

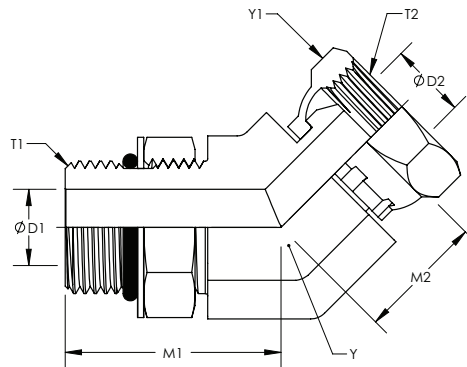
SAE: **140357**

Air-Way: 6902

Parker: 3507

Aeroquip: 2067-[R]

Gates: MB-FPX45



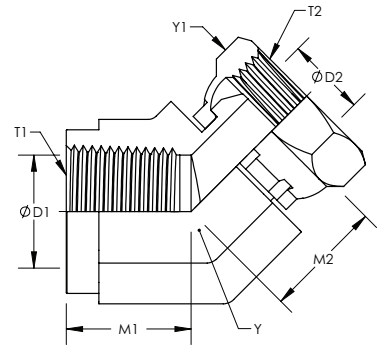
WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2
9365X04X04	0.563	0.688	7/16-20	1.080	0.172	1/4-18	0.610	0.220
9365X06X04	0.563	0.688	9/16-18	1.140	0.297	1/4-18	0.730	0.220
9365X06X06	0.750	0.875	9/16-18	1.170	0.297	3/8-18	0.810	0.340
9365X06X08	0.875	1.000	9/16-18	1.230	0.297	1/2-14	0.880	0.460
9365X08X06	0.750	0.875	3/4-16	1.300	0.391	3/8-18	0.810	0.340
9365X08X08	0.875	1.000	3/4-16	1.360	0.391	1/2-14	0.880	0.460
9365X08X12	1.063	1.250	3/4-16	1.410	0.391	3/4-14	1.020	0.635
9365X10X06	0.875	0.875	7/8-14	1.520	0.484	3/8-18	0.810	0.340
9365X10X08	0.875	1.000	7/8-14	1.520	0.484	1/2-14	0.880	0.460
9365X10X12	1.063	1.250	7/8-14	1.570	0.484	3/4-14	1.020	0.635
9365X12X06	1.063	0.875	1-1/16-12	1.730	0.609	3/8-18	0.980	0.340
9365X12X08	1.063	1.000	1-1/16-12	1.730	0.609	1/2-14	1.020	0.460
9365X12X12	1.063	1.250	1-1/16-12	1.730	0.609	3/4-14	1.020	0.635
9365X16X16	1.313	1.500	1-5/16-12	1.860	0.844	1-11-1/2	1.150	0.831
9365X20X20	1.625	1.875	1-5/8-12	1.910	1.078	1-1/4-11-1/2	1.230	1.087
9365X24X24	1.875	2.125	1-7/8-12	1.910	1.313	1-1/2-11-1/2	1.350	1.317

E

9000 SERIES

Description: **45° Female Adapter Union to Female Pipe**
 WWF Part No.: **9385**
 WWF Stainless Part No.: /
 SAE: **140331**

Air-Way: 1504
 Parker: 3207
 Aeroquip: 2050-[R]
 Gates: FP-FPX45



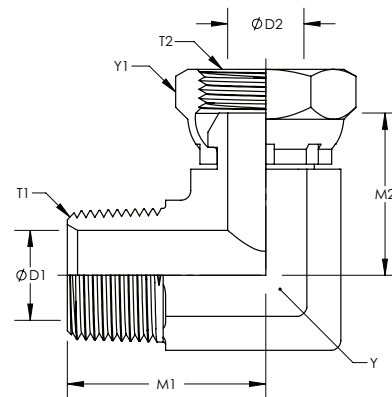
WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2
9385X02X02	0.563	0.563	1/8-27	0.500	0.332	1/8-27	0.620	0.150
9385X04X04	0.750	0.688	1/4-18	0.690	0.438	1/4-18	0.760	0.220
9385X06X04	0.875	0.688	3/8-18	0.750	0.563	1/4-18	0.770	0.220
9385X06X06	0.875	0.875	3/8-18	0.750	0.563	3/8-18	0.770	0.340
9385X08X06	1.063	0.875	1/2-14	0.940	0.703	3/8-18	0.830	0.340
9385X08X08	1.063	1.000	1/2-14	0.940	0.703	1/2-14	0.830	0.460
9385X12X12	1.313	1.250	3/4-14	1.000	0.906	3/4-14	0.960	0.635
9385X16X12	1.625	1.250	1-11-1/2	1.190	1.141	3/4-14	1.070	0.635
9385X16X16	1.625	1.500	1-11-1/2	1.190	1.141	1-11-1/2	1.180	0.831
9385X20X20	1.875	1.875	1-1/4-11-1/2	1.440	1.484	1-1/4-11-1/2	1.230	1.087
9385X24X24	2.562	2.125	1-1/2-11-1/2	1.460	1.744	1-1/2-11-1/2	1.460	1.317

E

9000 SERIES

Description: **90° Female Adapter Union to Male Pipe**
 WWF Part No.: **9405**
 WWF Stainless Part No.: **1501-SS**
 SAE: **140230**

Air-Way: 1501
 Parker: 2107
 Aeroquip: 2047-[R]
 Gates: MP-FPX90



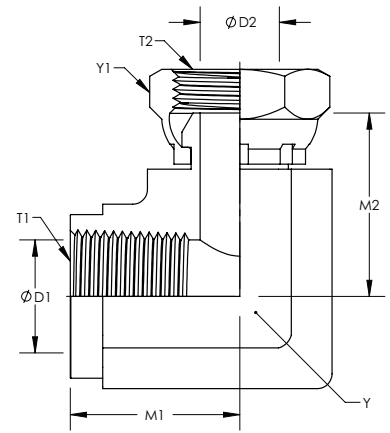
WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2
9405X02X02	0.438	0.563	1/8-27	0.720	0.188	1/8-27	0.700	0.150
9405X02X04	0.563	0.688	1/8-27	0.900	0.188	1/4-18	0.880	0.220
9405X04X02	0.563	0.563	1/4-18	1.090	0.281	1/8-27	0.770	0.150
9405X04X04	0.563	0.688	1/4-18	1.090	0.281	1/4-18	0.880	0.220
9405X04X06	0.750	0.875	1/4-18	1.220	0.281	3/8-18	0.990	0.340
9405X04X08	0.875	1.000	1/4-18	1.280	0.281	1/2-14	1.110	0.460
9405X06X04	0.750	0.688	3/8-18	1.220	0.406	1/4-18	0.990	0.220
9405X06X06	0.750	0.875	3/8-18	1.220	0.406	3/8-18	0.990	0.340
9405X06X08	0.875	1.000	3/8-18	1.280	0.406	1/2-14	1.110	0.460
9405X08X04	0.875	0.688	1/2-14	1.470	0.531	1/4-18	1.020	0.220
9405X08X06	0.875	0.875	1/2-14	1.470	0.531	3/8-18	1.040	0.340
9405X08X08	0.875	1.000	1/2-14	1.470	0.531	1/2-14	1.110	0.460
9405X08X12	1.063	1.250	1/2-14	1.590	0.531	3/4-14	1.300	0.635
9405X12X06	1.063	0.875	3/4-14	1.590	0.719	3/8-18	1.240	0.340
9405X12X08	1.063	1.000	3/4-14	1.590	0.719	1/2-14	1.240	0.460
9405X12X12	1.063	1.250	3/4-14	1.590	0.719	3/4-14	1.300	0.640
9405X12X16	1.313	1.500	3/4-14	1.780	0.719	1-11-1/2	1.540	0.831
9405X16X08	1.313	1.000	1-11-1/2	1.970	0.938	1/2-14	1.430	0.460
9405X16X12	1.313	1.250	1-11-1/2	1.970	0.938	3/4-14	1.430	0.640
9405X16X16	1.313	1.500	1-11-1/2	1.970	0.938	1-11-1/2	1.540	0.831
9405X16X20	1.625	1.875	1-11-1/2	2.350	0.938	1-1/4-11-1/2	1.730	1.087
9405X20X16	1.625	1.500	1-1/4-11-1/2	2.380	1.250	1-11-1/2	1.700	0.831
9405X20X20	1.625	1.875	1-1/4-11-1/2	2.380	1.250	1-1/4-11-1/2	1.730	1.087
9405X20X24	1.875	2.125	1-1/4-11-1/2	2.610	1.250	1-1/2-11-1/2	1.890	1.317
9405X24X20	1.875	1.875	1-1/2-11-1/2	2.640	1.500	1-1/4-11-1/2	1.770	1.087
9405X24X24	1.875	2.125	1-1/2-11-1/2	2.640	1.500	1-1/2-11-1/2	1.890	1.317
9405X32X32	2.500	2.625	2-11-1/2	3.000	1.938	2-11-1/2	2.270	1.802

E

9000 SERIES

Description: **90° Female Adapter Union to Female Pipe**
 WWF Part No.: **9455**
 WWF Stainless Part No.: /
 SAE: **140231**

 Air-Way: 1502
 Parker: 2207
 Aeroquip: 2048-[R]
 Gates: FP-FPX90



WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2
9455X02X02	0.563	0.563	1/8-27	0.660	0.332	1/8-27	0.800	0.150
9455X04X02	0.750	0.563	1/4-18	0.880	0.438	1/8-27	0.880	0.150
9455X04X04	0.750	0.688	1/4-18	0.880	0.438	1/4-18	0.990	0.220
9455X04X06	0.750	0.875	1/4-18	0.880	0.438	1/4-18	1.010	0.340
9455X06X04	0.875	0.688	3/8-18	1.020	0.563	1/4-18	1.040	0.220
9455X06X06	0.875	0.875	3/8-18	1.020	0.563	3/8-18	1.060	0.340
9455X06X08	0.875	1.000	3/8-18	1.020	0.563	1/2-14	1.130	0.460
9455X08X04	1.063	0.688	1/2-14	1.230	0.703	1/4-18	1.150	0.220
9455X08X06	1.063	0.875	1/2-14	1.230	0.703	3/8-18	1.170	0.340
9455X08X08	1.063	1.000	1/2-14	1.230	0.703	1/2-14	1.240	0.460
9455X08X12	1.063	1.250	1/2-14	1.230	0.703	3/4-14	1.240	0.635
9455X12X08	1.313	1.000	3/4-14	1.360	0.906	1/2-14	1.470	0.460
9455X12X12	1.313	1.250	3/4-14	1.360	0.906	3/4-14	1.470	0.635
9455X12X16	1.313	1.500	3/4-14	1.360	0.906	1-11-1/2	1.580	0.831
9455X16X12	1.625	1.250	1-11-1/2	1.620	1.141	3/4-14	1.620	0.635
9455X16X16	1.625	1.500	1-11-1/2	1.620	1.141	1-11-1/2	1.730	0.831
9455X20X20	1.875	1.875	1-1/4-11-1/2	1.700	1.484	1-1/4-11-1/2	1.830	1.087
9455X24X24	2.562	2.125	1-1/2-11-1/2	2.080	1.744	1-1/2-11-1/2	2.410	1.317
9455X32X32	2.812	2.625	2-11-1/2	2.390	2.213	2-11-1/2	2.570	1.802

E

9000 SERIES

Description:

**Female Pipe to Female Pipe
Swivel Branch Tee**

WWF Part No.:

9456

WWF Stainless Part No.:

/

SAE:

/

Air-Way:

1602

Parker:

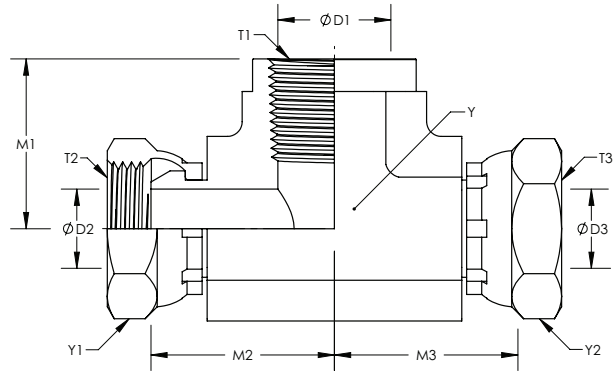
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Aeroquip:

2253-[R]

Gates:

/



WWF	Y HEX	Y1 / Y2 HEX	T1	M1	D1	T2 / T3	M2 / M3	D2 / D3
9456X02X02X02	0.563	0.563	1/8-27	0.660	0.332	1/8-27	0.800	0.150
9456X04X04X04	0.750	0.688	1/4-18	0.880	0.438	1/4-18	0.990	0.220
9456X06X06X06	0.875	0.875	3/8-18	1.020	0.563	3/8-18	1.060	0.340
9456X08X06X06	1.063	0.875	1/2-14	1.230	0.703	3/8-18	1.170	0.340
9456X08X08X08	1.063	1.000	1/2-14	1.230	0.703	1/2-14	1.240	0.460
9456X12X08X08	1.313	1.000	3/4-14	1.360	0.906	1/2-14	1.470	0.460
9456X12X12X12	1.313	1.250	3/4-14	1.360	0.906	3/4-14	1.470	0.635
9456X16X16X16	1.625	1.500	1-11-1/2	1.620	1.141	1-11-1/2	1.730	0.831
9456X20X20X20	1.875	1.875	1-1/4-11-1/2	1.700	1.484	1-1/4-11-1/2	1.830	1.087

E

9000 SERIES

Description: **90° Female Adapter Union to Adjustable Male Straight Thread 9515**

WWF Part No.: **9515**

WWF Stainless Part No.: **/**

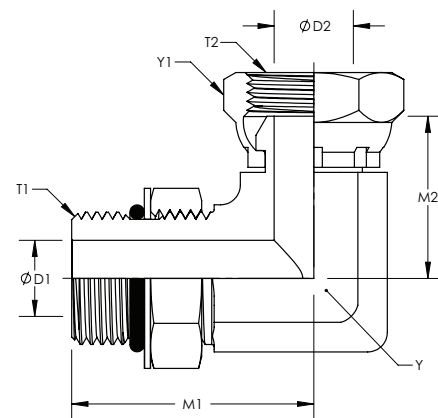
SAE: **140257**

Air-Way: **6901**

Parker: **2507**

Aeroquip: **2068-[R]**

Gates: **MB-FPX90**



WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2
9515X04X04	0.563	0.688	7/16-20	1.190	0.172	1/4-18	0.880	0.220
9515X04X06	0.750	0.875	7/16-20	1.260	0.172	3/8-18	0.990	0.340
9515X06X04	0.563	0.688	9/16-18	1.250	0.297	1/4-18	0.880	0.220
9515X06X06	0.563	0.875	9/16-18	1.250	0.297	3/8-18	0.900	0.340
9515X06X08	0.750	1.000	9/16-18	1.320	0.297	1/2-14	1.110	0.460
9515X08X04	0.750	0.688	3/4-16	1.450	0.391	1/4-18	0.970	0.220
9515X08X06	0.750	0.875	3/4-16	1.450	0.391	3/8-18	0.990	0.340
9515X08X08	0.750	1.000	3/4-16	1.450	0.391	1/2-14	1.110	0.460
9515X08X12	1.063	1.250	3/4-16	1.620	0.391	3/4-14	1.300	0.635
9515X10X06	0.875	0.875	7/8-14	1.700	0.484	3/8-18	1.040	0.340
9515X10X08	0.875	1.000	7/8-14	1.700	0.484	1/2-14	1.110	0.460
9515X10X12	1.063	1.250	7/8-14	1.780	0.484	3/4-14	1.300	0.635
9515X12X06	1.063	0.875	1-1/16-12	1.940	0.609	3/8-18	1.260	0.340
9515X12X08	1.063	1.000	1-1/16-12	1.940	0.609	1/2-14	1.300	0.460
9515X12X12	1.063	1.250	1-1/16-12	1.940	0.609	3/4-14	1.300	0.635
9515X12X16	1.313	1.500	1-1/16-12	2.050	0.609	1-11-1/2	1.540	0.831
9515X14X12	1.313	1.250	1-3/16-12	2.000	0.719	3/4-14	1.430	0.635
9515X16X12	1.313	1.250	1-5/16-12	2.050	0.844	3/4-14	1.430	0.635
9515X16X16	1.313	1.500	1-5/16-12	2.050	0.844	1-11-1/2	1.540	0.831
9515X16X20	1.625	1.875	1-5/16-12	2.250	0.844	1-1/4-11-1/2	1.730	1.087
9515X20X12	1.625	1.250	1-5/8-12	2.250	1.078	3/4-14	1.560	0.635
9515X20X16	1.625	1.500	1-5/8-12	2.250	1.078	1-11-1/2	1.700	0.831
9515X20X20	1.625	1.875	1-5/8-12	2.250	1.078	1-1/4-11-1/2	1.730	1.087
9515X24X20	1.875	1.875	1-7/8-12	2.390	1.313	1-1/4-11-1/2	1.770	1.087
9515X24X24	1.875	2.125	1-7/8-12	2.390	1.313	1-1/2-11-1/2	1.890	1.317
9515X32X32	2.500	2.625	2-1/2-12	2.890	1.781	2-11-1/2	2.270	1.802

E

9000 SERIES

Description:

**Male Pipe to Female Pipe
Swivel Branch Tee**

WWF Part No.:

9605

WWF Stainless Part No.:

/

SAE:

/

Air-Way:

1601

Parker:

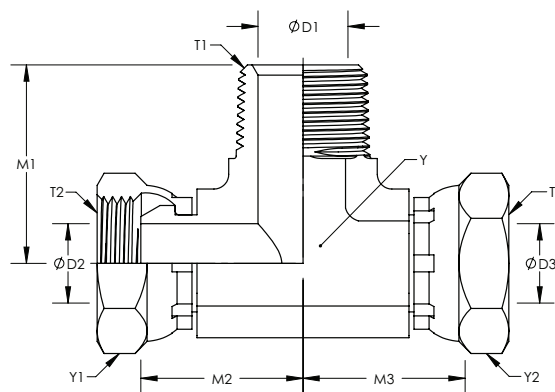
217T

Aeroquip:

2254-[R]

Gates:

FPX-FPX-MP



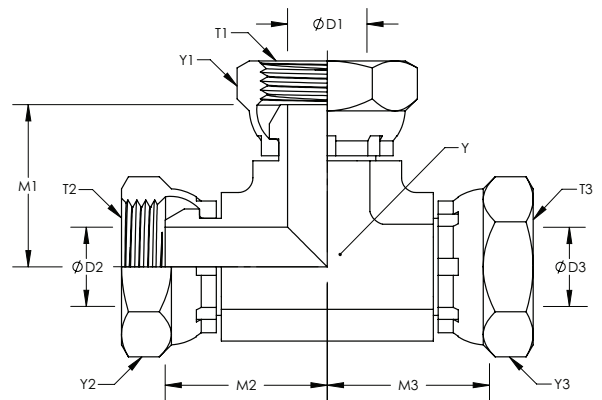
WWF	Y HEX	Y1 / Y2 HEX	T1	M1	D1	T2 / T3	M2 / M3	D2 / D3
9605X02X02X02	0.438	0.563	1/8-27	0.720	0.188	1/8-27	0.700	0.150
9605X04X04X04	0.563	0.688	1/4-18	1.090	0.281	1/4-18	0.880	0.220
9605X04X06X06	0.750	0.875	1/4-18	1.220	0.281	3/8-18	0.990	0.340
9605X06X04X04	0.750	0.688	3/8-18	1.220	0.406	1/4-18	0.990	0.220
9605X06X06X06	0.750	0.875	3/8-18	1.220	0.406	3/8-18	0.990	0.340
9605X08X04X04	0.875	0.688	1/2-14	1.470	0.531	1/4-18	1.020	0.220
9605X08X06X06	0.875	0.875	1/2-14	1.470	0.531	3/8-18	1.040	0.340
9605X08X08X08	0.875	1.000	1/2-14	1.470	0.531	1/2-14	1.110	0.460
9605X12X08X08	1.063	1.000	3/4-14	1.590	0.719	1/2-14	1.240	0.460
9605X12X12X12	1.063	1.250	3/4-14	1.590	0.719	3/4-14	1.300	0.635
9605X12X16X16	1.313	1.500	3/4-14	1.780	0.719	1-11-1/2	1.540	0.831
9605X16X12X12	1.313	1.250	1-11-1/2	1.970	0.938	3/4-14	1.430	0.635
9605X16X16X16	1.313	1.500	1-11-1/2	1.970	0.938	1-11-1/2	1.540	0.831
9605X20X20X20	1.625	1.875	1-1/4-11-1/2	2.380	1.250	1-1/4-11-1/2	1.730	1.087
9605X24X24X24	1.875	2.125	1-1/2-11-1/2	2.640	1.500	1-1/2-11-1/2	1.890	1.317

E

9000 SERIES

Description: **Swivel Union Tee**
 WWF Part No.: **9705**
 WWF Stainless Part No.: /
 SAE: /

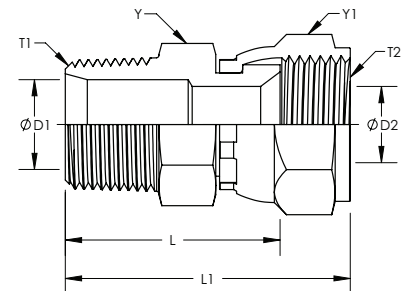
Air-Way: 1603
 Parker: 077T
 Aeroquip: 2255
 Gates: FPX-FPX-FPX



WWF	Y HEX	Y1 / Y2 / Y3 HEX	T1 / T2 / T3	M1 / M2 / M3	D1 / D2 / D3
9705X02X02X02	0.438	0.563	1/8-27	0.700	0.150
9705X04X04X04	0.563	0.688	1/4-18	0.880	0.220
9705X06X06X06	0.750	0.875	3/8-18	0.990	0.340
9705X08X08X08	0.750	1.000	1/2-14	1.110	0.460
9705X12X12X12	1.063	1.250	3/4-14	1.300	0.635
9705X16X16X16	1.313	1.500	1-11-1/2	1.540	0.831
9705X20X20X20	1.625	1.875	1-1/4-11-1/2	1.730	1.087

Description: **Male Pipe to Female 37° JIC Swivel**
 WWF Part No.: **9100**
 WWF Stainless Part No.: /
 SAE: /

Air-Way: 6505
 Parker: F6X
 Aeroquip: 2018
 Gates: FJX-MP



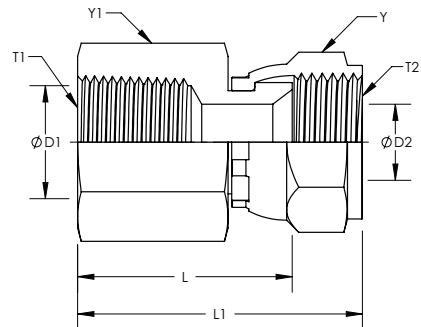
WWF	Y HEX	Y1 HEX	T1	D1	T2	D2	L	L1
9100X02X04	0.500	0.563	1/8-27	0.188	7/16-20	0.172	0.990	1.340
9100X04X04	0.563	0.563	1/4-18	0.281	7/16-20	0.172	1.200	1.550
9100X04X05	0.563	0.625	1/4-18	0.281	1/2-20	0.234	1.260	1.640
9100X04X06	0.563	0.688	1/4-18	0.281	9/16-18	0.297	1.300	1.680
9100X06X06	0.750	0.688	3/8-18	0.406	9/16-18	0.297	1.260	1.640
9100X06X08	0.875	0.875	3/8-18	0.406	3/4-16	0.391	1.310	1.740
9100X08X08	0.875	0.875	1/2-14	0.531	3/4-16	0.391	1.560	1.990
9100X08X10	1.000	1.000	1/2-14	0.531	7/8-14	0.484	1.600	2.100
9100X08X12	1.000	1.250	1/2-14	0.531	1-1/16-12	0.609	1.580	2.150
9100X12X12	1.125	1.250	3/4-14	0.719	1-1/16-12	0.609	1.720	2.290
9100X16X16	1.375	1.500	1-11-1/2	0.938	1-5/16-12	0.844	1.970	2.570
9100X20X20	1.688	2.000	1-1/4-11-1/2	1.250	1-5/8-12	1.078	2.210	2.000
9100X24X24	2.000	2.250	1-1/2-11-1/2	1.500	1-7/8-12	1.313	2.270	2.990

E

9000 SERIES

Description: **Female Pipe to Female 37° JIC Swivel**
 WWF Part No.: **9256**
 WWF Stainless Part No.: /
 SAE: /

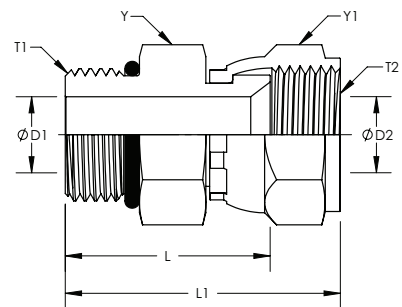
Air-Way: 6506
 Parker: G6X
 Aeroquip: 2242
 Gates: FJX-FP



WWF	Y HEX	Y1 HEX	T1	D1	T2	D2	L	L1
9256X04X04	0.563	0.750	1/4-18	0.438	7/16-20	0.172	1.170	1.520
9256X04X06	0.688	0.750	1/4-18	0.438	9/16-18	0.297	1.260	1.640
9256X06X06	0.688	0.875	3/8-18	0.563	9/16-18	0.297	1.320	1.700
9256X06X08	0.875	0.875	3/8-18	0.563	3/4-16	0.391	1.370	1.800
9256X08X06	0.688	1.125	1/2-14	0.703	9/16-18	0.297	1.540	1.920
9256X08X08	0.875	1.125	1/2-14	0.703	3/4-16	0.391	1.590	2.020
9256X08X10	1.000	1.125	1/2-14	0.703	7/8-14	0.484	1.620	2.120
9256X12X10	1.000	1.375	3/4-14	0.906	7/8-14	0.484	1.680	2.180
9256X12X12	1.250	1.375	3/4-14	0.906	1-1/16-12	0.609	1.720	2.290
9256X16X16	1.500	1.625	1-11-1/2	1.141	1-5/16-12	0.844	2.030	2.630
9256X20X20	2.000	2.000	1-1/4-11-1/2	1.484	1-5/8-12	1.078	2.200	2.840

Description: **Straight Thread "O" Ring to Female 37° JIC Swivel**
 WWF Part No.: **9316**
 WWF Stainless Part No.: /
 SAE: /

Air-Way: 6402
 Parker: F65OX
 Aeroquip: 2266
 Gates: /

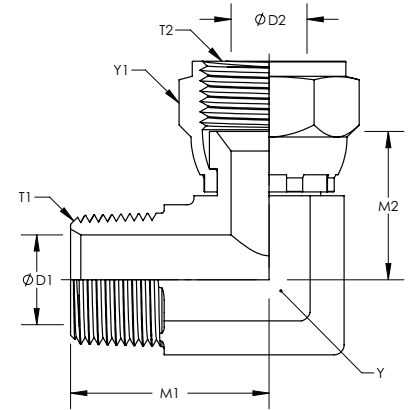


WWF	Y HEX	Y1 HEX	T1	D1	T2	D2	L	L1
9316X04X04	0.563	0.563	7/16-20	0.172	7/16-20	0.172	1.020	1.310
9316X04X06	0.563	0.688	7/16-20	0.172	9/16-18	0.297	1.090	1.420
9316X06X06	0.688	0.688	9/16-18	0.297	9/16-18	0.297	1.150	1.480
9316X06X08	0.813	0.875	9/16-18	0.297	3/4-16	0.391	1.200	1.580
9316X08X08	0.875	0.875	3/4-16	0.391	3/4-16	0.391	1.280	1.650
9316X10X10	1.000	1.000	7/8-14	0.484	7/8-14	0.484	1.430	1.880
9316X12X12	1.250	1.250	1-1/16-12	0.609	1-1/16-12	0.609	1.630	2.150
9316X16X16	1.500	1.500	1-5/16-12	0.844	1-5/16-12	0.844	1.720	2.270
9316X20X20	1.875	2.000	1-5/8-12	1.078	1-5/8-12	1.078	1.850	2.400
9316X24X24	2.125	2.250	1-7/8-12	1.313	1-7/8-12	1.313	1.990	2.670
9316X32X32	2.750	2.875	2-1/2-12	1.781	2-1/2-12	1.781	2.180	3.070

9000 SERIES

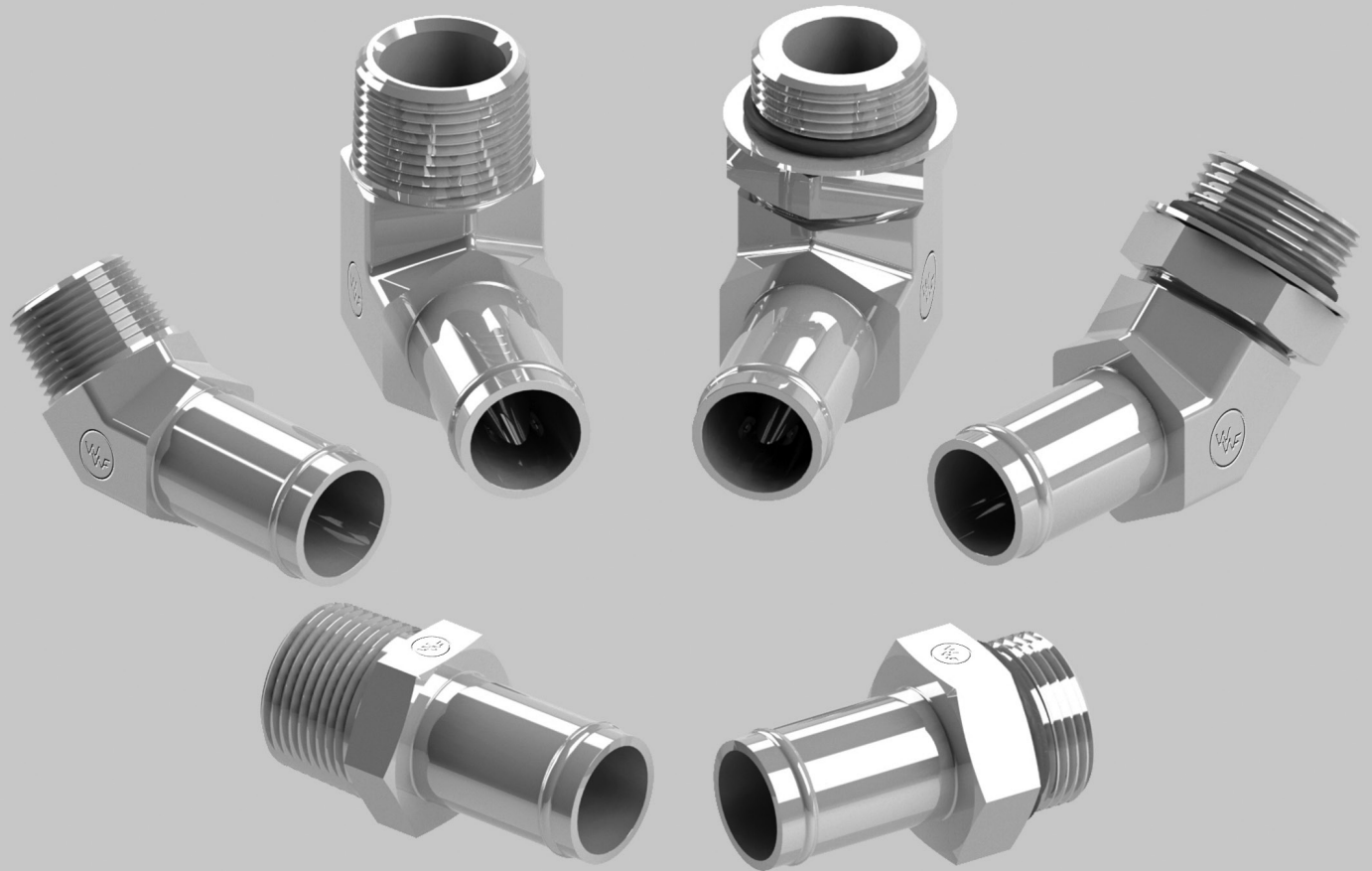
Description: **90° Male Pipe to Female 37° JIC Swivel**
 WWF Part No.: **9406**
 WWF Stainless Part No.: /
 SAE: /

Air-Way: 6501
 Parker: X6EF
 Aeroquip: 2250
 Gates: /



WWF	Y HEX	Y1 HEX	T1	M1	D1	T2	M2	D2
9406X02X04	0.438	0.563	1/8-27	1.000	0.188	7/16-20	0.410	0.172
9406X04X04	0.563	0.563	1/4-18	1.150	0.281	7/16-20	0.740	0.172
9406X04X06	0.563	0.688	1/4-18	1.250	0.281	9/16-18	0.710	0.297
9406X06X04	0.750	0.563	3/8-18	1.180	0.406	7/16-20	0.870	0.172
9406X06X06	0.750	0.688	3/8-18	1.290	0.406	9/16-18	0.840	0.297
9406X06X08	0.750	0.875	3/8-18	1.380	0.406	3/4-16	0.790	0.391
9406X08X06	0.875	0.688	1/2-14	1.420	0.531	9/16-18	1.020	0.297
9406X08X08	0.875	0.875	1/2-14	1.520	0.531	3/4-16	1.040	0.391
9406X08X10	0.875	1.000	1/2-14	1.620	0.531	7/8-14	0.970	0.484
9406X12X08	1.063	0.875	3/4-14	1.750	0.719	3/4-16	1.040	0.391
9406X12X12	1.063	1.250	3/4-14	1.750	0.719	1-1/16-12	1.020	0.609
9406X16X16	1.313	1.500	1-11-1/2	2.000	0.938	1-5/16-12	1.370	0.844
9406X20X20	1.625	2.000	1-1/4-11-1/2	2.310	1.250	1-5/8-12	1.740	1.078
9406X24X24	1.875	2.250	1-1/2-11-1/2	2.590	1.500	1-7/8-12	1.920	1.313
9406X32X32	2.500	2.875	2-11-1/2	3.380	1.938	2-1/2-12	2.050	1.781

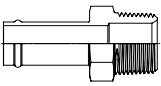
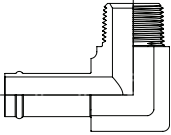
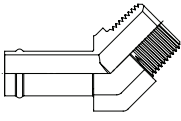
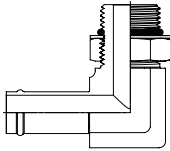
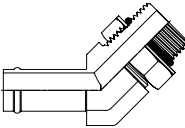
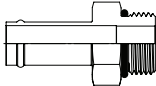


E



Steel Beaded Hose Barbs

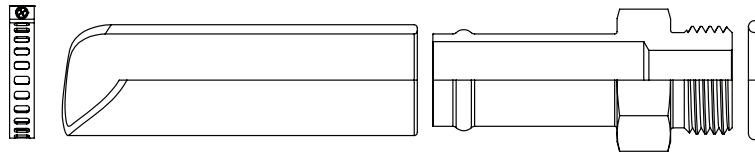
BARB END SERIES

STEEL BEADED HOSE BARBS

<p>4404 Page 194</p>  <p>4404 Male Pipe Thread Hose Connector</p>	<p>4501 Page 195</p>  <p>4501 90° Male Pipe Hose Fitting</p>	<p>4503 Page 196</p>  <p>4503 45° Male Pipe Hose Fitting</p>	<p>4601 Page 197</p>  <p>4601 90° Straight Thread Hose Fitting</p>	<p>4603 Page 198</p>  <p>4603 45° Straight Thread Hose Fitting</p>	<p>4604 Page 199</p>  <p>4604 Male Straight Thread Hose Connector</p>	<p>Page 165</p>  <p>7629 90 Durometer "O" Ring</p>
<p>Page 166</p>  <p>7269M 90 Durometer Metric "O" Ring</p>						

F

STEEL BEADED HOSE BARBS



Barb End Series Assembly

CONSTRUCTION

Straight Fittings are machined from bar stock.
Shaped Fittings (Elbows, Tees) are made from forgings.
Beaded Fittings meet SAE J1231 specifications.

APPLICATIONS

For use in low pressure automotive and hydraulic systems.

MATERIAL

Steel – 12L14, 1045

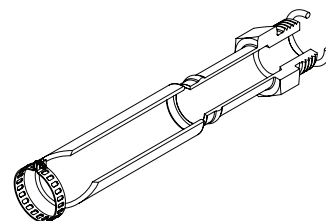
PLATING

Clear Zinc Trivalent

ASSEMBLY

Beaded Fittings are intended to be used with hose clamps.
(See SAE J1508)

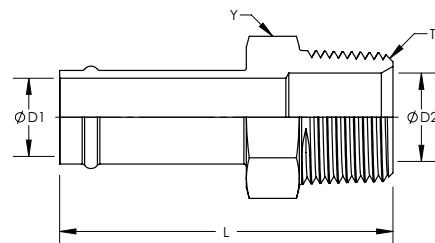
F



BARB END SERIES

Description: **Male Pipe Thread Hose Connector**
 WWF Part No.: **4404**
 WWF Stainless Part No.: /
 SAE: **430160**

Air-Way: 4404
 Parker: /
 Aeroquip: /
 Gates: /



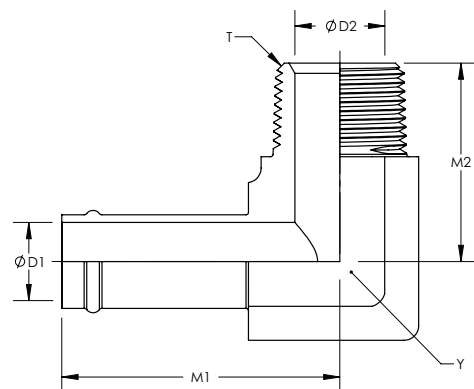
WWF	Y HEX	T	D1	D2	L
4404X04X02	0.438	1/8-27	0.189	0.189	2.080
4404X04X04	0.563	1/4-18	0.189	0.275	2.350
4404X06X02	0.625	1/8-27	0.295	0.189	2.130
4404X06X04	0.625	1/4-18	0.295	0.275	2.350
4404X06X06	0.750	3/8-18	0.295	0.405	2.350
4404X06X08	0.938	1/2-14	0.295	0.531	2.600
4404X08X04	0.750	1/4-18	0.405	0.275	2.350
4404X08X06	0.750	3/8-18	0.405	0.405	2.350
4404X08X08	0.938	1/2-14	0.405	0.531	2.600
4404X08X12	1.125	3/4-14	0.405	0.708	2.670
4404X10X06	0.875	3/8-18	0.500	0.405	2.350
4404X10X08	0.938	1/2-14	0.500	0.531	2.600
4404X10X16	1.375	1-11-1/2	0.500	0.938	2.860
4404X12X08	1.000	1/2-14	0.626	0.531	2.600
4404X12X12	1.125	3/4-14	0.626	0.708	2.670
4404X12X16	1.375	1-11-1/2	0.626	0.938	2.860
4404X16X12	1.250	3/4-14	0.842	0.708	2.670
4404X16X16	1.375	1-11-1/2	0.842	0.938	2.860
4404X20X16	1.500	1-11-1/2	1.094	0.938	2.860
4404X20X20	1.750	1-1/4-11-1/2	1.094	1.248	2.970
4404X20X24	2.000	1-1/2-11-1/2	1.094	1.496	3.070
4404X24X20	1.750	1-1/4-11-1/2	1.342	1.248	2.970
4404X24X24	2.000	1-1/2-11-1/2	1.342	1.496	3.070

F

BARB END SERIES

Description: **90° Male Pipe Hose Fitting**
 WWF Part No.: **4501**
 WWF Stainless Part No.: /
 SAE: **431460**

Air-Way: 4501
 Parker: /
 Aeroquip: FF1162-[R]
 Gates: /



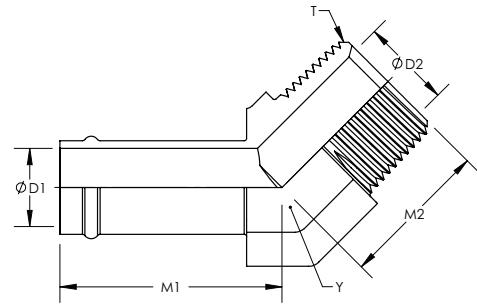
WWF	Y HEX	T	M1	D1	M2	D2
4501X04X02	0.500	1/8-27	1.887	0.189	0.779	0.189
4501X04X04	0.625	1/4-18	1.955	0.189	1.090	0.275
4501X05X04	0.625	1/4-18	1.955	0.251	1.090	0.275
4501X06X04	0.625	1/4-18	1.955	0.295	1.090	0.275
4501X06X06	0.750	3/8-18	2.023	0.295	1.220	0.405
4501X08X06	0.813	3/8-18	2.057	0.405	1.220	0.405
4501X08X08	0.938	1/2-14	2.125	0.405	1.469	0.531
4501X08X12	1.125	3/4-14	2.228	0.405	1.590	0.720
4501X10X08	0.938	1/2-14	2.125	0.500	1.469	0.531
4501X10X12	1.125	3/4-14	2.228	0.500	1.590	0.720
4501X12X08	0.938	1/2-14	2.125	0.626	1.469	0.531
4501X12X12	1.125	3/4-14	2.228	0.626	1.590	0.720
4501X12X16	1.375	1-11-1/2	2.364	0.626	1.969	0.938
4501X16X12	1.125	3/4-14	2.228	0.842	1.590	0.720
4501X16X16	1.375	1-11-1/2	2.364	0.842	1.969	0.938
4501X20X20	1.750	1-1/4-11-1/2	2.569	1.094	2.381	1.248
4501X24X24	2.000	1-1/2-11-1/2	2.705	1.342	2.641	1.496

F

BARB END SERIES

Description: **45° Male Pipe Hose Fitting**
 WWF Part No.: **4503**
 WWF Stainless Part No.: /
 SAE: **430360**

Air-Way: 4503
 Parker: /
 Aeroquip: /
 Gates: /



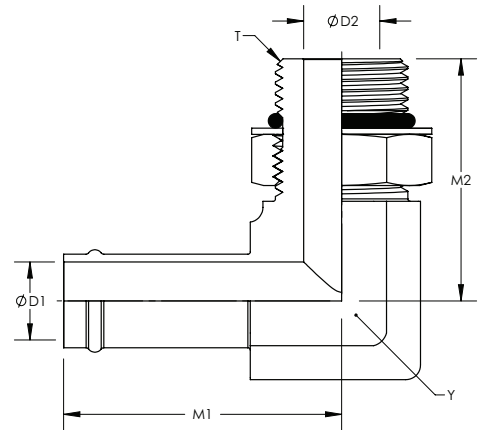
WWF	Y HEX	T	M1	D1	M2	D2
4503X04X02	0.500	1/8-27	1.680	0.189	0.633	0.189
4503X04X04	0.625	1/4-18	1.700	0.189	0.858	0.275
4503X06X04	0.625	1/4-18	1.670	0.295	0.858	0.275
4503X08X06	0.813	3/8-18	1.740	0.405	0.948	0.405
4503X08X08	0.938	1/2-14	1.720	0.405	1.173	0.531
4503X10X08	0.938	1/2-14	1.750	0.500	1.173	0.531
4503X10X12	1.125	3/4-14	1.810	0.500	1.200	0.720
4503X12X12	1.125	3/4-14	1.780	0.626	1.200	0.720
4503X12X16	1.375	1-11-1/2	1.980	0.626	1.480	0.938
4503X16X12	1.125	3/4-14	1.750	0.842	1.200	0.720
4503X16X16	1.375	1-11-1/2	1.850	0.842	1.480	0.938
4503X20X20	1.750	1-1/4-11-1/2	1.910	1.094	1.669	1.248
4503X24X24	2.000	1-1/2-11-1/2	1.950	1.342	1.771	1.496

F

BARB END SERIES

Description: **90° Straight Thread Hose Fitting**
 WWF Part No.: **4601**
 WWF Stainless Part No.: /
 SAE: **431492**

Air-Way: 4601
 Parker: /
 Aeroquip: FF1167-[R]
 Gates: /



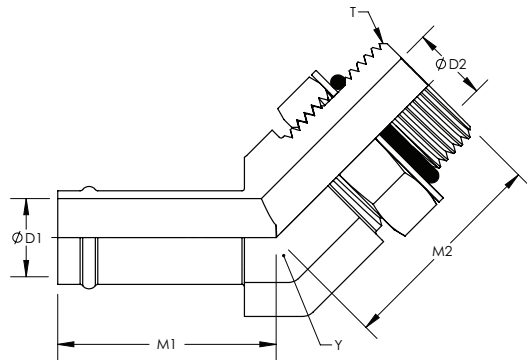
WWF	Y HEX	T	M1	D1	M2	D2
4601X04X04	0.500	7/16-20	1.752	0.188	1.031	0.172
4601X04X06	0.625	9/16-18	1.955	0.188	1.251	0.297
4601X06X04	0.500	7/16-20	1.887	0.296	1.192	0.172
4601X06X06	0.625	9/16-18	1.955	0.296	1.251	0.297
4601X06X08	0.813	3/4-16	2.057	0.296	1.448	0.391
4601X08XM22	0.984	M22X1.5	1.969	0.405	1.969	0.551
4601X08X06	0.625	9/16-18	1.955	0.406	1.251	0.297
4601X08X08	0.813	3/4-16	2.057	0.406	1.448	0.391
4601X08X10	0.938	7/8-14	2.125	0.406	1.700	0.484
4601X10XM14	0.875	M14X1.5	1.969	0.500	1.693	0.295
4601X10XM16	0.866	M16X1.5	2.000	0.500	1.431	0.354
4601X10X08	0.813	3/4-16	2.057	0.500	1.448	0.391
4601X10X10	0.938	7/8-14	2.125	0.500	1.700	0.484
4601X10X12	1.125	1-1/16-12	2.228	0.500	1.940	0.609
4601X12X08	0.938	3/4-16	2.125	0.625	1.448	0.391
4601X12X10	0.938	7/8-14	2.125	0.625	1.700	0.484
4601X12X12	1.125	1-1/16-12	2.228	0.625	1.940	0.609
4601X12X16	1.375	1-5/16-12	2.364	0.625	2.051	0.844
4601X16X10	1.125	7/8-14	2.228	0.844	1.889	0.484
4601X16X12	1.125	1-1/16-12	2.228	0.844	1.940	0.609
4601X16X16	1.375	1-5/16-12	2.364	0.844	2.051	0.844
4601X16X20	1.688	1-5/8-12	2.535	0.844	2.251	1.078
4601X20X16	1.375	1-5/16-12	2.364	1.094	2.051	0.844
4601X20X20	1.688	1-5/8-12	2.535	1.094	2.251	1.078
4601X24X20	1.688	1-5/8-12	2.535	1.344	2.251	1.078
4601X24X24	2.000	1-7/8-12	2.705	1.344	2.389	1.310

F

BARB END SERIES

Description: **45° Straight Thread Hose Fitting**
 WWF Part No.: **4603**
 WWF Stainless Part No.: /
 SAE: **430392**

Air-Way: 4603
 Parker: /
 Aeroquip: /
 Gates: /



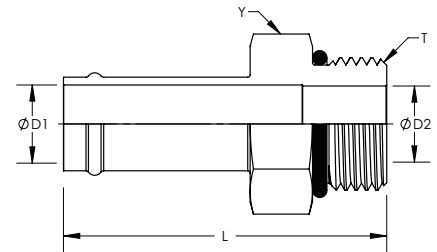
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WWF	Y HEX	T	M1	D1	M2	D2
4603X04X04	0.500	7/16-20	1.700	0.188	1.051	0.172
4603X04X06	0.625	9/16-18	1.700	0.188	1.141	0.297
4603X06X04	0.500	7/16-20	1.610	0.297	1.051	0.172
4603X06X06	0.625	9/16-18	1.690	0.297	1.141	0.297
4603X08X06	0.625	9/16-18	1.610	0.406	1.141	0.297
4603X08X08	0.813	3/4-16	1.690	0.406	1.299	0.391
4603X10XM18ZN	0.875	M18X1.5	1.893	0.500	1.460	0.354
4603X10X08	0.813	3/4-16	1.650	0.500	1.299	0.391
4603X10X10	0.938	7/8-14	1.700	0.500	1.519	0.484
4603X10X12	1.125	1-1/16-12	1.840	0.500	1.728	0.609
4603X12XM18ZN	1.063	M18X1.5	1.893	0.500	1.460	0.354
4603X12X08	0.813	3/4-16	1.620	0.625	1.299	0.391
4603X12X12	1.125	1-1/16-12	1.750	0.625	1.728	0.609
4603X12X16	1.375	1-5/16-12	1.900	0.625	1.858	0.844
4603X16X12	1.125	1-1/16-12	1.750	0.844	1.728	0.609
4603X16X16	1.375	1-5/16-12	1.860	0.844	1.858	0.844
4603X20X16	1.375	1-5/16-12	1.760	1.094	1.858	0.844
4603X20X20	1.688	1-5/8-12	1.920	1.094	1.909	1.078
4603X24X16	1.375	1-5/16-12	1.800	1.344	1.858	0.844
4603X24X20	1.688	1-5/8-12	1.920	1.344	1.909	1.078
4603X24X24	2.000	1-7/8-12	1.970	1.344	1.909	1.310

BARB END SERIES

Description: **Male Straight Thread Hose Connector**
 WWF Part No.: **4604**
 WWF Stainless Part No.: /
 SAE: **430192**

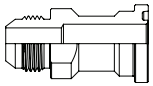
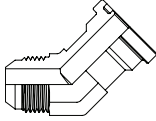
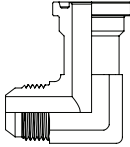
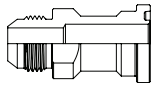
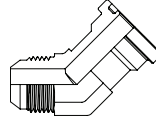
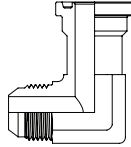
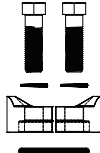
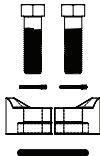
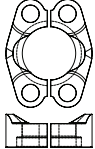
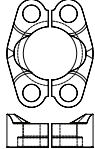
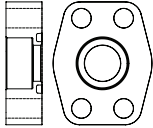
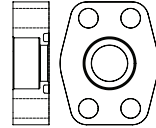
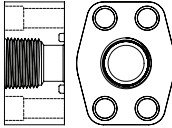
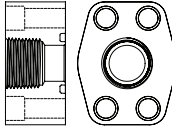
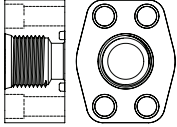
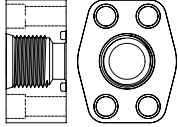
Air-Way: 4604
 Parker: /
 Aeroquip: /
 Gates: /



WWF	Y HEX	T	D1	D2	L
4604X04X04	0.563	7/16-20	0.189	0.173	2.170
4604X04X06	0.688	9/16-18	0.189	0.295	2.230
4604X06X04	0.563	7/16-20	0.295	0.173	2.170
4604X06X06	0.688	9/16-18	0.295	0.295	2.230
4604X06X08	0.875	3/4-16	0.295	0.389	2.300
4604X08X06	0.688	9/16-18	0.405	0.295	2.230
4604X08X08	0.875	3/4-16	0.405	0.389	2.300
4604X10X08	0.875	3/4-16	0.500	0.389	2.300
4604X10X10	1.000	7/8-14	0.500	0.484	2.430
4604X12X08	0.875	3/4-16	0.626	0.389	2.300
4604X12X10	1.000	7/8-14	0.626	0.484	2.430
4604X12X12	1.250	1-1/16-12	0.626	0.610	2.590
4604X12X16	1.500	1-5/16-12	0.626	0.846	2.620
4604X16X12	1.250	1-1/16-12	0.844	0.610	2.590
4604X16X16	1.500	1-5/16-12	0.844	0.846	2.620
4604X16X20	1.875	1-5/8-12	0.844	1.082	2.700
4604X20X16	1.500	1-5/16-12	1.094	0.846	2.620
4604X20X20	1.875	1-5/8-12	1.094	1.082	2.700
4604X20X24	2.125	1-7/8-12	1.094	1.299	2.770
4604X24X24	2.125	1-7/8-12	1.344	1.299	2.770
4604X32X32	2.750	2-1/2-12	1.482	1.772	2.930

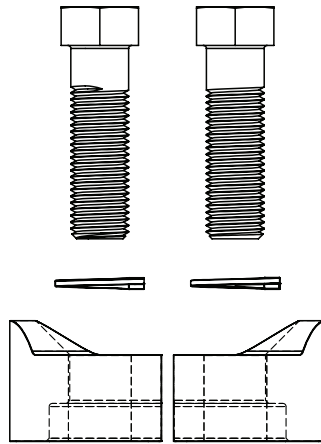
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CODE 61 & CODE 62 - FOUR BOLT STEEL FLANGE FITTINGS

<p>POR</p>  <p>1700</p> <p>JIC Flange - Straight Code 61</p>	<p>POR</p>  <p>1703</p> <p>JIC Flange 45° Elbow Code 61</p>	<p>POR</p>  <p>1704</p> <p>JIC Flange 90° Elbow Code 61</p>	<p>POR</p>  <p>1800</p> <p>JIC Flange - Straight Code 62</p>	<p>POR</p>  <p>1803</p> <p>JIC Flange 45° Elbow Code 62</p>	<p>POR</p>  <p>1804</p> <p>JIC Flange 90° Elbow Code 62</p>	<p>1901 Page 204</p>  <p>1901</p> <p>Flange Kit Code 61</p>
<p>1902 Page 204</p>  <p>1902</p> <p>Flange Kit Code 62</p>	<p>1951 Page 205</p>  <p>1951</p> <p>Flange Half Code 61</p>	<p>1952 Page 205</p>  <p>1952</p> <p>Flange Half Code 62</p>	<p>POR</p>  <p>W4</p> <p>Flat Socket Weld Pipe Code 61</p>	<p>POR</p>  <p>W42</p> <p>Flat Socket Weld Pipe Code 62</p>	<p>POR</p>  <p>W43</p> <p>NPTF Female Code 61</p>	<p>POR</p>  <p>W44</p> <p>NPTF Female Code 62</p>
<p>POR</p>  <p>W46</p> <p>SAE J 1926/1 Port Code 61</p>	<p>POR</p>  <p>W48</p> <p>SAE J 1926/1 Port Code 62</p>					

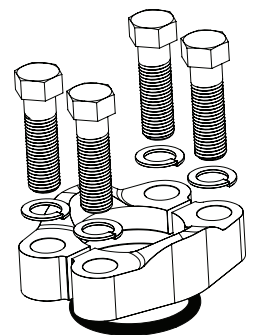
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CODE 61 & CODE 62 - FOUR BOLT STEEL FLANGE FITTINGS



Flanges Series Assembly

G

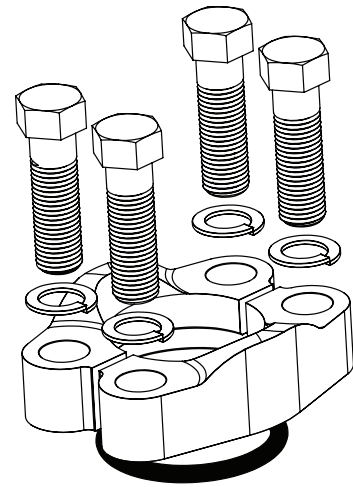


CODE 61 & CODE 62 FOUR BOLT STEEL FLANGE FITTINGS

Description: **Flange Kit - Code 61**
 WWF Part No.: **1901**
 WWF Stainless Part No.: /
 SAE: /

Air-Way: 1901
 Parker: /
 Aeroquip: /
 Gates: /

WWF	FLANGE SIZE
1901X08	1/2
1901X12	3/4
1901X16	1
1901X20	1-1/4
1901X24	1-1/2
1901X32	2
1901X40	2-1/2
1901X48	3

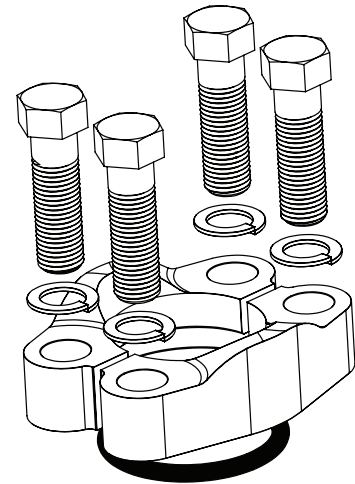


G

Description: **Flange Kit - Code 62**
 WWF Part No.: **1902**
 WWF Stainless Part No.: /
 SAE: /

Air-Way: 1902
 Parker: /
 Aeroquip: /
 Gates: /

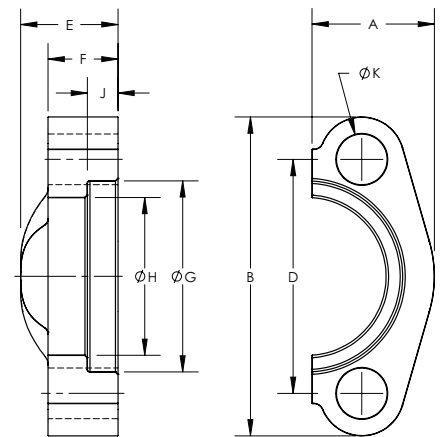
WWF	FLANGE SIZE
1902X08	1/2
1902X12	3/4
1902X16	1
1902X20	1-1/4
1902X24	1-1/2
1902X32	2



CODE 61 & CODE 62 FOUR BOLT STEEL FLANGE FITTINGS

Description: **Flange Half - Code 61**
 WWF Part No.: **1951**
 WWF Stainless Part No.: /
 SAE: /

Air-Way: 1951
 Parker: /
 Aeroquip: /
 Gates: /



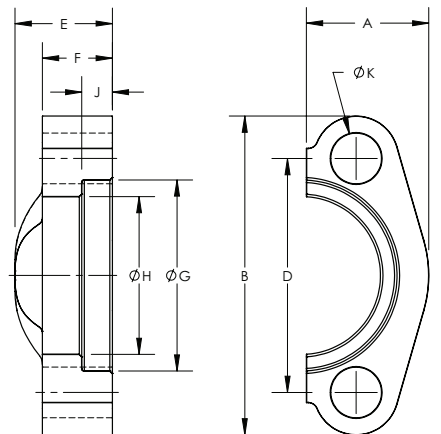
Flange Kit

WWF	WWF	FLANGE SIZE	A	B	D	E	F	G	H	J	K
1951X08	1901X08	1/2	0.860	2.125	1.500	0.750	0.500	1.219	0.955	0.245	0.344
1951X12	1901X12	3/4	0.980	2.560	1.875	0.780	0.560	1.531	1.265	0.245	0.406
1951X16	1901X16	1	1.110	2.750	2.062	0.940	0.620	1.781	1.515	0.295	0.406
1951X20	1901X20	1-1/4	1.390	3.125	2.312	0.880	0.560	2.031	1.720	0.295	0.469
1951X24	1901X24	1-1/2	1.580	3.690	2.750	1.000	0.620	2.406	2.000	0.295	0.531
1951X32	1901X32	2	1.860	4.000	3.062	1.030	0.620	2.844	2.470	0.355	0.531
1951X40	1901X40	2-1/2	2.090	4.500	3.500	1.500	0.750	3.344	2.950	0.355	0.531
1951X48	1901X48	3	2.530	5.315	4.188	1.620	0.880	4.031	3.580	0.355	0.656

G

Description: **Flange Half - Code 62**
 WWF Part No.: **1952**
 WWF Stainless Part No.: /
 SAE: /

Air-Way: 1952
 Parker: /
 Aeroquip: /
 Gates: /



Flange Kit

WWF	WWF	FLANGE SIZE	A	B	D	E	F	G	H	J	K
1952X08	1902X08	1/2	0.890	2.220	1.594	0.880	0.620	1.281	0.970	0.285	0.344
1952X12	1902X12	3/4	1.140	2.795	2.000	1.120	0.750	1.656	1.280	0.325	0.406
1952X16	1902X16	1	1.330	3.190	2.250	1.310	0.940	1.906	1.530	0.355	0.469
1952X20	1902X20	1-1/4	1.480	3.750	2.625	1.500	1.060	2.156	1.750	0.385	0.531
1952X24	1902X24	1-1/2	1.830	4.440	3.125	1.690	1.190	2.531	2.030	0.475	0.656
1952X32	1902X32	2	2.200	5.250	3.812	2.060	1.440	3.156	2.660	0.475	0.781



World Wide Fittings Corporate Headquarters & Manufacturing Facility, Niles, IL

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World Wide supplies over **300,000,000 tube and pipe fitting components annually** to the North American and foreign markets. World Wide has always been known as the best source in the industry for cold formed nuts and sleeves, forged steel flareless fittings, and SAE “O” Ring Boss plugs. The addition of steel forged JIC 37° flare, “O” Ring Face Seal, and Pipe fittings allows you to purchase multiple product lines from a **“Single Quality Source”**. This helps you to reduce your vendor base, reduce your freight cost by consolidating freight, and reduces your purchasing and accounting cost by placing a single order and paying a single invoice.

All of our hydraulic tube fittings meet the SAE and ISO standards, ASME (American Society of Mechanical Engineers), and Military Standard MIL-F-18866 Class 1. Because our methods of manufacturing include cold forming, hot forming, impact extrusion, forging, and the conventional method of producing fittings on screw machines from extruded bar-stock, we are able to design and develop many special fittings in steel and stainless steel. Our engineering and technical support insures that our product meet or exceed any design criteria that may be required.

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