

TECHNICAL INFORMATION

316 STAINLESS STEEL ADAPTERS

PRESSURE RATINGS

The hydraulic tube fittings represented by Stainless Adapters Inc. conform to the performance requirements specified in SAE J514, SAE J518, SAE J1453, SAE J1926/ISO 11926 and related standards.

The working pressure ratings listed below are based on a 4:1 design factor for minimum burst. As specified in SAE J514, these are dynamic pressure ratings and the fittings are capable of passing a cyclic endurance (impulse) test for one million cycles at 133 % of the corresponding working pressure.

The rated working pressure for any fitting is based on the lowest pressure rated fitting end. For example, a fitting may include one -4 (1/4") male 37-degree tube end and one -6 (3/8") male pipe end. From the tables below, the rated working pressure for the -4 male 37-degree tube end is 34.5 MPa (5,000 psi) and the rated working pressure of the -6 (3/8") male pipe end is 21 MPa (3,000 psi). The rated working pressure of the fitting would be 21 MPa (3,000 psi).

For proper performance, the design of any hydraulic system should take into consideration the rated working pressures for each of the components of the system, including standard ratings for hose and tubing components and assemblies. For any application, testing should be performed to assure safe and satisfactory performance.

Pressure Ratings for Fittings With NPTF Pipe Threads and Adapter Unions							
Nominal Pipe Size		Thread Size		Working Pressures			
Nom SAE Dash Size	Nom Inch Pipe O.D.	Dryseal Pipe Thread (NPTF ¹) Male and Female	Straight Pipe Thread (NPSM ²) Female Swivels	Fittings With NPTF Pipe Threads		Adapter Unions	
				MPa	psi	MPa	psi
-2	1/8	1/8-27	1/8-27	34.5	5,000	34.5	5,000
-4	1/4	1/4-18	1/4-18	27.5	4,000	34.5	5,000
-6	3/8	3/8-18	3/8-18	21	3,000	27.6	4,000
-8	1/2	1/2-14	1/2-14	21	3,000	24.1	3,500
-12	3/4	3/4-14	3/4-14	17	2,500	15.5	2,250
-16	1	1-11-1/2	1-11-1/2	14	2,000	13.8	2,000
-20	1 1/4	1-1/4-11-1/2	1-1/4-11-1/2	8	1,150	11.2	1,625
-24	1 1/2	1-1/2-11-1/2	1-1/2-11-1/2	7	1,000	8.6	1,250
-32	2	2-11-1/2	2-11-1/2	7	1,000	7.8	1,125

1) Dryseal American Standard Taper Pipe Thread

2) American Standard Straight Pipe Thread for Mechanical Joints

■ Temperature Rating

Material	Identify	Max. Temperature °F(°C)
316 Stainless Steel	SS	1000(537)
Brass	B	400(204)
Carbon Steel	C	375(190)



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TECHNICAL INFORMATION**316 STAINLESS STEEL ADAPTERS**

Pressure Ratings

37° Flare SAE J514

Allowable Working Pressure Ratings (Capable of 4 to 1 Min. Burst)

Nom.SAE Dash Size	Nom.Tube O.D Inches	37°Flare Straight Thread	Nom.Pipe Size	SAE St. Threads Union and Bulkhead (psi)	Fittings with Pipe Threads (psi)
2	1/8	5/16" - 24	1/8"	5000	5000
3	3/16	3/8" - 24	1/8"	5000	5000
4	1/4	7/16" - 20	1/8"	5000	5000
5	5/16	1/2" - 20	1/8"	5000	5000
6	3/8	9/16" - 18	1/4"	5000	5000
8	1/2	3/4" - 16	3/8"	4500	4000
10	5/8	7/8" - 14	1/2"	3500	3000
12	3/4	1 1/16" - 12	3/4"	3500	3000
14	7/8	1 3/16" - 12	3/4"	3000	2500
16	1	1 5/16" - 12	1"	3000	2000
20	1 1/4	1 5/8" - 12	1 1/4"	2500	1150
24	1 1/2	1 7/8" - 12	1 1/2"	2000	1000
32	2	2 1/2" - 12	2"	1500	1000

JIC threads conform to SAE J514 specifications

NPT

Size Designator	NPT Size	316 Stainless Steel			
		Male		Female	
		psig	bar	psig	bar
1	1/16	11000	757	6700	461
2	1/8	10000	689	6500	447
4	1/4	8000	551	6600	454
6	3/8	7800	537	5300	365
8	1/2	7700	530	4900	337
12	3/4	7300	502	4600	316
16	1	5300	365	4400	303
20	1 1/4	6000	413	5000	344
24	1 1/2	5000	344	4600	316
32	2	3900	268	3900	268

NPT threads meet the requirements of ASME/ANSIB.1.20.1



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PIPE FITTINGS

316 STAINLESS STEEL ADAPTERS

HEX PIPE COUPLING

PART	(A) FNPT SIZE	(B) FNPT SIZE	(A) FNPT THREAD	(B) FNPT THREAD	(L)	
SS5000-02-02	1/8	1/8	1/8-27	1/8-27	.748	----
SS5000-04-04	1/4	1/4	1/4-18	1/4-18	1.129	----
SS5000-06-04	3/8	1/4	3/8-18	1/4-18	1.129	----
SS5000-06-06	3/8	3/8	3/8-18	3/8-18	1.129	----
SS5000-08-06	1/2	3/8	1/2-14	3/8-18	1.500	----
SS5000-08-08	1/2	1/2	1/2-14	1/2-14	1.500	----
SS5000-12-12	3/4	3/4	3/4-14	3/4-14	1.531	----
SS5000-16-08	1	1/2	1-11 1/2	1/2-14	1.889	----
SS5000-16-12	1	3/4	1-11 1/2	3/4-14	1.889	----
SS5000-16-16	1	1	1-11 1/2	1-11 1/2	1.889	----

SWAGELOK: SS-XHGG-X / SSP: XHC / PARKER: XGG-SS / AEROQUIP: 259-2096-X-X

HEX PIPE NIPPLE

PART	(A) MNPT SIZE	(B) MNPT SIZE	(A) MNPT THREAD	(B) MNPT THREAD	L	
SS5404-02-02	1/8	1/8	1/8-27	1/8-27	1.059	----
SS5404-04-02	1/4	1/8	1/4-18	1/8-27	1.259	----
SS5404-04-04	1/4	1/4	1/4-18	1/4-18	1.448	----
SS5404-06-04	3/8	1/4	3/8-18	1/4-18	1.448	----
SS5404-06-06	3/8	3/8	3/8-18	3/8-18	1.448	----
SS5404-08-04	1/2	1/4	1/2-14	1/4-18	1.700	----
SS5404-08-06	1/2	3/8	1/2-14	3/8-18	1.700	----
SS5404-08-08	1/2	1/2	1/2-14	1/2-14	1.889	----
SS5404-12-04	3/4	1/4	3/4-14	1/4-18	1.771	----
SS5404-12-06	3/4	3/8	3/4-14	3/8-18	1.771	----
SS5404-12-08	3/4	1/2	3/4-14	1/2-14	1.960	----
SS5404-12-12	3/4	3/4	3/4-14	3/4-14	1.960	----
SS5404-16-08	1	1/2	1-11 1/2	1/2-14	2.090	----
SS5404-16-12	1	3/4	1-11 1/2	3/4-14	2.149	----
SS5404-16-16	1	1	1-11 1/2	1-11 1/2	2.338	----

SWAGELOK: SS-X-HN-X / SSP: XHN / PARKER: X-XFF-SS / AEROQUIP: 259-2083-X-X

PIPE NIPPLE

PART	(A) MNPT SIZE	(A) MNPT THREAD	(L)	
SSCN-04	1/4	1/4-18	1.120	----
SSCN-06	3/8	3/8-18	1.125	----
SSCN-08	1/2	1/2-14	1.507	----
SSCN-12	3/4	3/4-14	1.500	----
SSCN-16	1	1-11 1/2	1.880	----

SWAGELOK: SS-X-CN / PARKER: X-X MCN-SS / AEROQUIP: 259-2083-X-X

STEEL PIPE FITTINGS

316 STAINLESS STEEL ADAPTERS

MALE NPT X FEMALE NPT EXPANDER



PART	(A) MNPT SIZE	(B) FNPT SIZE	(A) MNPT THREAD	(B) FNPT THREAD	(L)	
SS5405-02-02	1/8	1/8	1/8-27	1/8-27	1.039	----
SS5405-02-04	1/8	1/4	1/8-27	1/4-18	1.208	----
SS5405-04-04	1/4	1/4	1/4-18	1/4-18	1.389	----
SS5405-04-06	1/4	3/8	1/4-18	3/8-18	1.440	----
SS5405-04-08	1/4	1/2	1/4-18	1/2-14	1.681	----
SS5405-06-06	3/8	3/8	3/8-18	3/8-18	1.440	----
SS5405-06-08	3/8	1/2	3/8-18	1/2-14	1.681	----
SS5405-06-12	3/8	1/2	3/8-18	3/4-14	1.740	----
SS5405-08-08	1/2	1/2	1/2-14	1/2-14	1.870	----
SS5405-08-12	1/2	3/4	1/2-14	3/4-14	1.929	----
SS5405-08-16	1/2	1	1/2-14	1-11 1/2	2.181	----
SS5405-12-12	3/4	3/4	3/4-14	3/4-14	1.929	----
SS5405-12-16	3/4	1	3/4-14	1-11 1/2	2.181	----
SS5405-16-16	1	1	1-11 1/2	1-11 1/2	2.370	----

SWAGELOK: SS-X-RA-X / SSP: XXXRA / PARKER: X-XFG-SS / AEROQUIP: 259-2040-X-X

MALE NPT X FEMALE NPT BUSHING/ REDUCER



PART	(A) MNPT SIZE	(B) FNPT SIZE	(A) MNPT THREAD	(B) FNPT THREAD	(L)	
SS5406-04-02	1/4	1/8	1/4-18	1/8-27	.850	----
SS5406-06-04	3/8	1/4	3/8-18	1/4-18	.850	----
SS5406-08-04	1/2	1/4	1/2-14	1/4-18	1.098	----
SS5406-08-06	1/2	3/8	1/2-14	3/8-18	1.098	----
SS5406-12-04	3/4	1/4	3/4-14	1/4-18	1.169	----
SS5406-12-06	3/4	3/8	3/4-14	3/8-18	1.169	----
SS5406-12-08	3/4	1/2	3/4-14	1/2-14	1.169	----
SS5406-16-04	1	1/4	1-11 1/2	1/4-18	.940	----
SS5406-16-06	1	3/8	1-11 1/2	3/8-18	.940	----
SS5406-16-08	1	1/2	1-11 1/2	1/2-14	.940	----
SS5406-16-12	1	3/4	1-11 1/2	3/4-14	.940	----
SS5406-20-12	1-1/4	3/4	1-1/4-11 1/2	3/4-14	1.47	----

SWAGELOK: SS-XRB-X / SSP: XXXRA / PARKER: XXXPTR-SS / AEROQUIP: 259-2081-X-X

HEX PIPE PLUG



PART	(A) MNPT SIZE	(A) MNPT THREAD	HEX SIZE	(L)	(L)	
SS5406-P-04	1/4	1/4-18	9/16	.751	.850	----
SS5406-P-06	3/8	3/8-18	11/16	.779	.850	----
SS5406-P-08	1/2	1/2-14	7/8	1.118	1.098	----
SS5406-P-12	3/4	3/4-14	1-1/8	1.169	1.098	----
SS5406-P-16	1	1-11 1/2	1-3/8	1.397	1.169	----

SWAGELOK: SS-X-P / SSP: XXXRA / PARKER: X-HHP-SS / AEROQUIP: 259-2082-X

HOLLOW HEX PIPE PLUG



PART	(A) MNPT SIZE	(A) MNPT THREAD	HEX SIZE	(L)	(L)	
SS5406-HHP-04	1/4	1/4-18	1/4	.460	.850	----
SS5406-HHP-06	3/8	3/8-18	5/16	.460	.850	----
SS5406-HHP-08	1/2	1/2-14	3/8	.610	1.098	----
SS5406-HHP-12	3/4	3/4-14	9/16	.618	1.098	----
SS5406-HHP-16	1	1-11 1/2	5/8	.771	1.169	----

SWAGELOK: SS-X-HP / SSP: XCP / PARKER: X-HP-SS / AEROQUIP: 259-2222-X

STEEL PIPE FITTINGS

316 STAINLESS STEEL ADAPTERS

HEX PIPE CAP

PART	(A) FNPT SIZE	(A) FNPT THREAD	HEX	(L)	
SS5406-C-04	1/4	1/4-18	3/4	.811	----
SS5406-C-06	3/8	3/8-18	7/8	.811	----
SS5406-C-08	1/2	1/2-14	1	1.000	----
SS5406-C-12	3/4	3/4-14	1-5/16	1.129	----
SS5406-C-16	1	1-11 1/2	1-5/8	1.500	----

SWAGELOK: SS-X-C / SSP: XMM / PARKER: XCR-SS /
AEROQUIP: 259-2085-X-X

MALE PIPE ELBOW 90°

PART	(A) MNPT SIZE	(B) MNPT SIZE	(A) MNPT THREAD	(B) MNPT THREAD	(L)	
SS5500-02-02	1/8	1/8	1/8-27	1/8-27	.748	----
SS5500-04-04	1/4	1/4	1/4-18	1/4-18	1.129	----
SS5500-06-06	3/8	3/8	3/8-18	3/8-18	1.129	----
SS5500-08-08	1/2	1/2	1/2-14	1/2-14	1.129	----
SS5500-12-12	3/4	3/4	3/4-14	3/4-14	1.500	----
SS5500-16-16	1	1	1-11 1/2	1-11 1/2	1.500	----

SWAGELOK: SS-X-ME / SSP: XMM / PARKER: XCR-SS /
AEROQUIP: 259-2085-X-X

MALE NPT X FEMALE NPT STREET ELBOW 90°

PART	(A) MNPT SIZE	(B) FNPT SIZE	(A) MNPT THREAD	(B) FNPT THREAD	
SS5502-02-02	1/8	1/8	1/8-27	1/8-27	----
SS5502-04-04	1/4	1/4	1/4-18	1/4-18	----
SS5502-06-06	3/8	3/8	3/8-18	3/8-18	----
SS5502-08-08	1/2	1/2	1/2-14	1/2-14	----
SS5502-12-12	3/4	3/4	3/4-14	3/4-14	----
SS5502-16-16	1	1	1-11 1/2	1-11 1/2	----

SWAGELOK: SS-X-ME / SSP: XMM / PARKER: XCR-SS /
AEROQUIP: 259-2085-X-X



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STEEL PIPE FITTINGS

316 STAINLESS STEEL ADAPTERS

FEMALE PIPE ELBOW 90°



PART	(A) FNPT SIZE	(B) FNPT SIZE	(A) FNPT THREAD	(B) FNPT THREAD	
SS5504-02-02	1/8	1/8	1/8-27	1/8-27	----
SS5504-04-04	1/4	1/4	1/4-18	1/4-18	----
SS5504-06-06	3/8	3/8	3/8-18	3/8-18	----
SS5504-08-08	1/2	1/2	1/2-14	1/2-14	----
SS5504-12-12	3/4	3/4	3/4-14	3/4-14	----
SS5504-16-16	1	1	1-11 1/2	1-11 1/2	----

SWAGELOK: SS-X-E / SSP: XFF / PARKER: XDD-SS / AEROQUIP: 259-2087-X-X

MALE PIPE TEE



PART	(A) MNPT SIZE	(B) MNPT SIZE	(C) MNPT SIZE	(A) MNPT THREAD	(B) MNPT THREAD	(C) MNPT THREAD	
SS5600-04-04-04	1/4	1/4	1/4	1/4-18	1/4-18	1/4-18	----
SS5600-06-06-06	3/8	3/8	3/8	3/8-18	3/8-18	3/8-18	----
SS5600-08-08-08	1/2	1/2	1/2	1/2-14	1/2-14	1/2-14	----
SS5600-12-12-12	3/4	3/4	3/4	3/4-14	3/4-14	3/4-14	----
SS5600-16-16-16	1	1	1	1-11 1/2	1-11 1/2	1-11 1/2	----

SWAGELOK: SS-X-MT / SSP: XMMM / PARKER: XRRS-SS / AEROQUIP: 259-2257-X-X

FEMALE PIPE TEE



PART	(A) FNPT SIZE	(B) FNPT SIZE	(C) FNPT SIZE	(A) FNPT THREAD	(B) FNPT THREAD	(C) FNPT THREAD	
SS5605-02-02-02	1/8	1/8	1/8	1/8-27	1/8-27	1/8-27	----
SS5605-04-04-04	1/4	1/4	1/4	1/4-18	1/4-18	1/4-18	----
SS5605-06-06-06	3/8	3/8	3/8	3/8-18	3/8-18	3/8-18	----
SS5605-08-08-08	1/2	1/2	1/2	1/2-14	1/2-14	1/2-14	----
SS5605-12-12-12	3/4	3/4	3/4	3/4-14	3/4-14	3/4-14	----
SS5605-16-16-16	1	1	1	1-11 1/2	1-11 1/2	1-11 1/2	----

SWAGELOK: SS-X-T / SSP: XFF / PARKER: XMMO-SS / AEROQUIP: 259-2090-X-X



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