

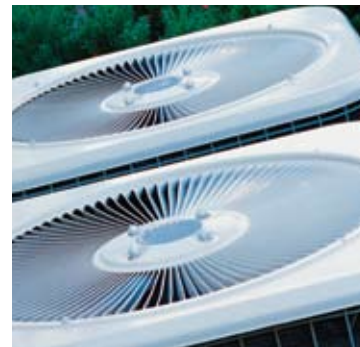


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process control
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Couplings - OEM

Catalog OEM-1, July 2008



ENGINEERING YOUR SUCCESS.

Couplings

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Introduction to Parker Couplings

Parker Hannifin has the broadest coupling product offering in the market. Whether it's quick connect, self-sealing upon disconnection, or brass or steel construction, Parker has what you need. With applications ranging from room air-conditioners to cryogenic pumps, Parker has the product you are looking for.

This complete line approach allows Parker to develop value-added assemblies that will reduce SKUs and decrease overall takt time. Combine this with the outstanding services Parker offers and anything is possible.

The Parker Advantage

- Broadest product line
- Technology leader
- Value-added assembly
- E-Commerce
- Supply chain management



5400 Series Self Sealing Steel Couplings

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5500 Series Self-Sealing Brass Couplings

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5700 Series One-Shot™ Brass Coupling

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RC04 Series Dual-Line ConnectAire™ Couplings

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RC01C Series Automotive R134a Process Couplings

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RC05 Series Multi-Purpose Process Couplings

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5400 Series Self-Sealing Steel Couplings

Parker's 5400 self-sealing steel couplings are used in fluid-transfer applications for easy maintenance on refrigeration and air conditioning systems. The couplings also allow for pre-charging of units for easy installation. Applications can include marine refrigeration and air conditioning systems, along with cryogenic units.



Applications

- General fluid-transfer applications
- Marine refrigerant and air conditioning systems
- Cryogenic systems

Base Product Part Number

- 5400-S2 Male coupling half
- 5400-S5 Female coupling half

Features and Benefits

- Self-sealing upon disconnection maintains minimum air inclusion and fluid loss.

- Field repairable allowing an internal valve to be replaced, if needed.
- Steel coupling provides durability.
- A variety of mechanical end connections available, along with sweat connections, to provide options for installation.
- Multiple sizes available, along with bulk-head mounting options, to match a coupling to a unique application.
- RoHS Compliant
- Compatible with most refrigerants, including R-410A

Specifications

See chart below.

All sizes are field repairable.

Standard Material:

Final seal – Neoprene™
Seal – Neoprene™
Body – Zinc-plated steel
Adapter – Zinc-plated steel or brass

Temp. Rating: -40°F to +250°F
-40°C to 121°C

Agency Approvals

U.L. listed; File No: SA7511

Specifications — English Units

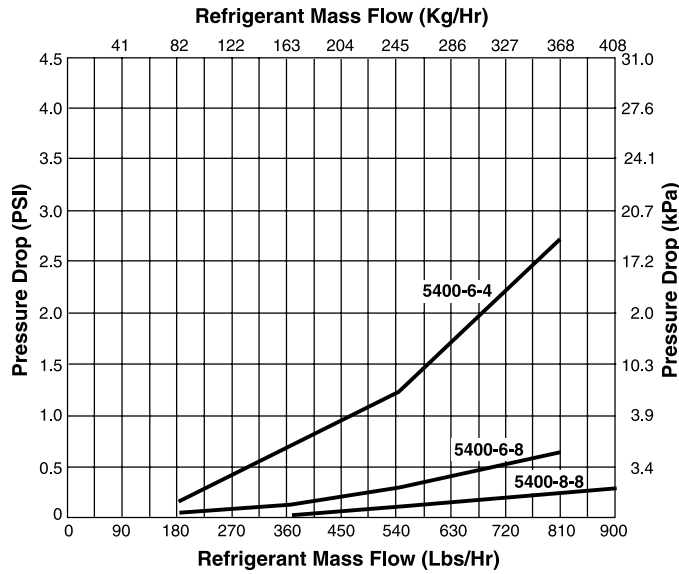
Dash Size	Part Description	Operating Pressure (psi)	Minimum Burst Pressure (psi)	Air Inclusion cc/Connect	Maximum Fluid Loss cc/Disconnect	Static Connect (psig)	Coupled (oz./yr)	Uncoupled Without Cap/Plug (oz./yr)	Uncoupled With Cap/Plug (oz./yr)	Vacuum (in. Hg.)	Rated Flow (gpm)
-4	Male half	2500	7500	0.1	0.05	150	< 0.25	< 0.5	< 0.25	-	-
-4	Female half	500	1500	0.1	0.05	150	< 0.25	< 0.5	< 0.25	-	-
-4	Whole coupling	3000	9000	0.1	0.05	150	< 0.25	< 0.5	< 0.25	28	14
-8	Male half	1750	5200	0.1	0.1	150	< 0.25	< 0.5	< 0.25	-	-
-8	Female half	750	2250	0.1	0.1	150	< 0.25	< 0.5	< 0.25	-	-
-8	Whole coupling	1750	5200	0.1	0.1	150	< 0.25	< 0.5	< 0.25	28	14
-12	Male half	800	2100	0.3	0.1	150	< 0.25	< 0.5	< 0.25	-	-
-12	Female half	750	2250	0.3	0.1	150	< 0.25	< 0.5	< 0.25	-	-
-12	Whole coupling	700	2100	0.3	0.1	150	< 0.25	< 0.5	< 0.25	28	35
-16	Male half	700	2100	0.5	0.2	150	< 0.25	< 0.5	< 0.25	-	-
-16	Female half	300	900	0.5	0.2	150	< 0.25	< 0.5	< 0.25	-	-
-16	Whole coupling	700	2100	0.5	0.2	150	< 0.25	< 0.5	< 0.25	28	75

Specifications — Metric Units

Dash Size	Part Description	Operating Pressure (bar)	Minimum Burst Pressure (bar)	Air Inclusion CC/Connect	Maximum Fluid Loss CC/Disconnect	Static Connect (bar)	Coupled (g./yr)	Uncoupled Without Cap/Plug (g./yr)	Uncoupled With Cap/Plug (g./yr)	Vacuum (mm. Hg.)	Rated Flow (lpm)
-4	Male half	179.5	517.2	0.1	0.05	10.3	7.1	14.2	7.1	-	-
-4	Female half	34.5	103.4	0.1	0.05	10.3	7.1	14.2	7.1	-	-
-4	Whole coupling	206.9	620.7	0.1	0.05	10.3	7.1	14.2	7.1	711	52.9
-8	Male half	120.7	358.6	0.1	0.1	10.3	7.1	14.2	7.1	-	-
-8	Female half	51.7	155.2	0.1	0.1	10.3	7.1	14.2	7.1	-	-
-8	Whole coupling	120.7	358.6	0.1	0.1	10.3	7.1	14.2	7.1	711	52.9
-12	Male half	55.2	144.8	0.3	0.1	10.3	7.1	14.2	7.1	-	-
-12	Female half	51.7	155.2	0.3	0.1	10.3	7.1	14.2	7.1	-	-
-12	Whole coupling	48.3	144.8	0.3	0.1	10.3	7.1	14.2	7.1	711	132.4
-16	Male half	48.3	144.8	0.5	0.2	10.3	7.1	14.2	7.1	-	-
-16	Female half	20.7	62.1	0.5	0.2	10.3	7.1	14.2	7.1	-	-
-16	Whole coupling	48.3	144.8	0.5	0.2	10.3	7.1	14.2	7.1	711	283.8

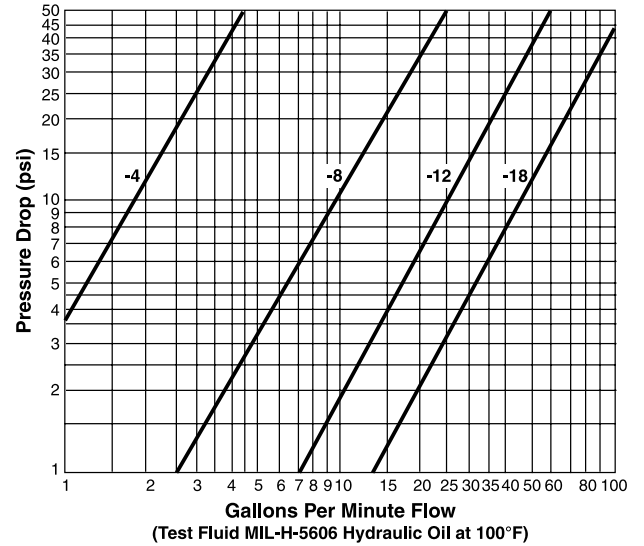
Performance Data

**Liquid Line
Pressure Drop vs. Mass Flow
Refrigerant R22**



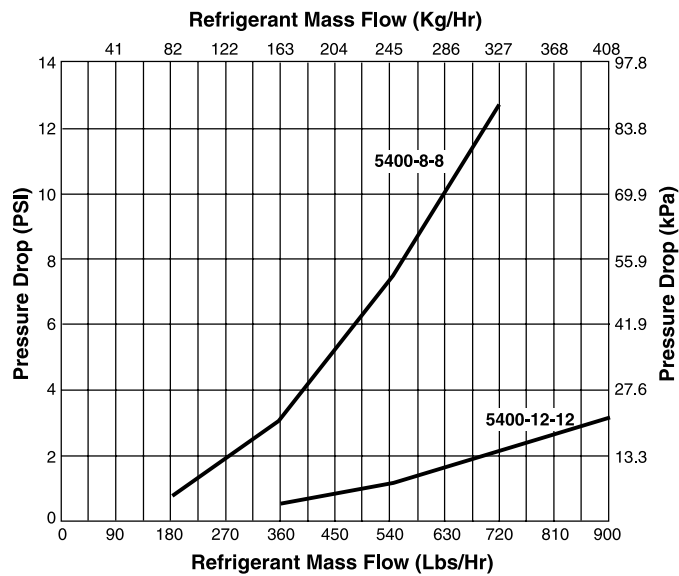
5400-6-4 — 3/8" Coupling Body (-06) with 1/4" (-04) Copper Connection, R22
 5400-6-8 — 3/8" Coupling Body (-06) with 1/2" (-08) Copper Connection, R22
 5400-8-8 — 1/2" Coupling Body (-08) with 1/2" (-08) Copper Connection, R22

Pressure Drop Versus Flow



(Test Fluid MIL-H-5606 Hydraulic Oil at 100°F)

**Suction Line
Pressure Drop vs. Mass Flow
Refrigerant R22**

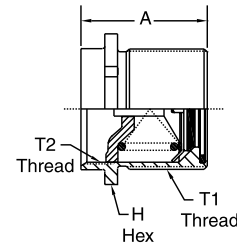


5400-8-8 — 1/2" Coupling Body (-08) with 1/2" (-08) Copper Connection, R22
 5400-12-12 — 3/4" Coupling Body (-12) with 3/4" (-12) Copper Connection, R22

Dimension Data

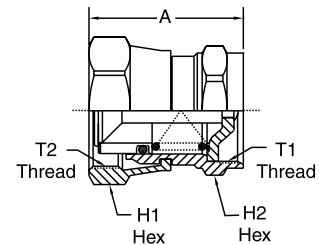
5400-S2 Male Half — No Adapter

Part Number Neoprene	Coupling Size	T1 Thread	A		H1 Hex		T2 Thread
			Inches	mm	Inches	mm	
5400-S2-4	-4	5/8 - 18UNF	1.08	27.4	0.75	19.0	1/2 - 20
5400-S2-8	-8	1 - 20UNEF	1.37	34.8	1.13	28.7	7/8 - 20
5400-S2-12	-12	1-7/16 - 16UN	1.74	44.2	1.63	41.4	1-1/4 - 18
5400-S2-16	-16	1-3/4 - 16UN	1.83	46.4	1.88	47.7	1-19/32 - 20NS



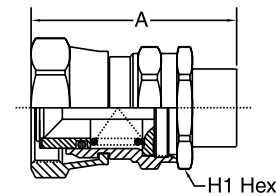
5400-S5 Female Half — No Adapter

Part Number Neoprene	Coupling Size	T1 Thread	A		H1 Hex		H2 Hex		T2 Thread
			Inches	mm	Inches	mm	Inches	mm	
5400-S5-4	-4	1/2 - 20	1.13	28.7	0.75	19.0	0.63	16.0	5/8 - 18
5400-S5-8	-8	7/8 - 20	1.63	41.4	1.19	30.2	1.00	25.4	1 - 20
5400-S5-12	-12	1-1/4 - 18	2.15	54.6	1.63	41.4	1.38	35.0	1-7/16 - 16
5400-S5-16	-16	1-19/32 - 20NS	2.37	60.2	2.00	50.8	1.75	44.4	1-3/4 - 16UN



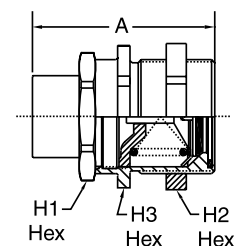
5401-S14 Female Half — Braze Tubing Adapter

Part Number Neoprene	Coupling Size	Copper Size Inches	A		H1 Hex	
			Inches	mm	Inches	mm
5401-S14-4-4	-4-4	1/4	1.57	39.8	0.63	16.0
5401-S14-6-4	-6-4	3/8	1.57	39.8	0.63	16.0
5401-S14-6-8	-6-8	3/8	2.00	50.8	1.00	30.2
5401-S14-8-8	-8-8	1/2	2.00	50.8	1.00	30.2
5401-S14-10-8	-10-8	5/8	2.00	50.8	1.00	30.2
5401-S14-10-12	-10-12	5/8	2.88	73.1	1.38	35.0
5401-S14-12-12	12-12	3/4	2.88	73.1	1.38	35.0
5401-S14-14-12	14-12	7/8	2.88	73.1	1.38	35.0
5401-S14-14-16	14-16	7/8	3.34	84.8	1.75	44.4
5401-S14-16-16	16-16	1	3.34	84.8	1.75	44.4
5401-S14-18-16	18-16	1-1/8	3.34	84.8	1.75	44.4



5401-S17 Male Half — Braze Tubing Adapter with Jam Nut

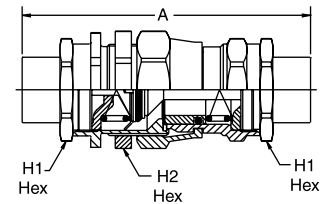
Part Number Neoprene	Coupling Size	Copper Size Inches	A		H1 Hex		H2 Hex		H3 Hex	
			Inches	mm	Inches	mm	Inches	mm	Inches	mm
5401-S17-4-4	-4-4	1/4	1.52	38.6	0.63	16.0	0.75	19.0	0.75	19.0
5401-S17-6-4	-6-4	3/8	1.52	38.6	0.63	16.0	0.75	19.0	0.75	19.0
5401-S17-6-8	-6-8	3/8	1.75	44.4	1.00	25.4	1.19	30.2	1.19	30.2
5401-S17-8-8	-8-8	1/2	1.75	44.4	1.00	25.4	1.19	30.2	1.19	30.2
5401-S17-10-8	-10-8	5/8	1.75	44.4	1.00	25.4	1.19	30.2	1.12	30.2
5401-S17-10-12	-10-12	5/8	2.47	62.7	1.38	35.0	1.56	39.6	1.62	41.4
5401-S17-12-12	12-12	3/4	2.47	62.7	1.38	35.0	1.56	39.6	1.62	41.4
5401-S17-14-12	14-12	7/8	2.47	62.7	1.38	35.0	1.56	39.6	1.62	41.4
5401-S17-14-16	14-16	7/8	2.80	71.1	1.75	44.4	2.00	50.8	1.88	47.7
5401-S17-16-16	16-16	1	2.80	71.1	1.75	44.4	2.00	50.8	1.88	47.7
5401-S17-18-16	18-16	1-1/8	2.80	71.1	1.75	44.4	2.00	50.8	1.88	47.7



Dimension Data

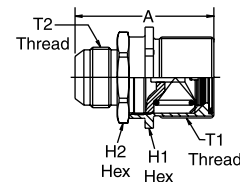
5401 Complete Coupling — Braze Tubing Adapter

Part Number Neoprene	Coupling Size	Copper Size Inches	A		H1 Hex		H2 Hex	
			Inches	mm	Inches	mm	Inches	mm
5401-4-4	4-4	1/4	2.82	71.6	0.63	16.0	0.75	19.0
5401-6-4	6-4	3/8	2.82	71.6	0.63	16.0	0.75	19.0
5401-6-8	6-8	3/8	3.37	85.6	1.00	25.4	1.19	30.2
5401-8-8	8-8	1/2	3.37	85.6	1.00	25.4	1.19	30.2
5401-10-8	10-8	5/8	3.37	85.6	1.00	25.4	1.19	30.2
5401-10-12	10-12	5/8	4.76	120.9	1.38	35.0	1.62	41.4
5401-12-12	12-12	3/4	4.76	120.9	1.38	35.0	1.62	41.4
5401-14-12	14-12	7/8	4.76	120.9	1.38	35.0	1.62	41.4
5401-14-16	14-16	7/8	5.52	140.2	1.75	44.4	1.88	47.7
5401-16-16	16-16	1	5.52	140.2	1.75	44.4	1.88	47.7
5401-18-16	18-16	1-1/8	5.52	140.2	1.75	44.4	1.88	47.7
5401-22-16	22-16	1-3/8	5.52	140.2	1.75	44.4	1.88	47.7



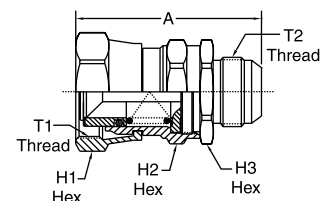
5410-S17 Male Half — SAE 37° (JIC)

Part Number Neoprene	Coupling Size	T1 Thread	A		H1 Hex		H2 Hex		T2 Thread
			Inches	mm	Inches	mm	Inches	mm	
5410-S17-4-4	4-4	5/8 - 18UNF	1.88	47.7	0.75	19.0	0.63	16.0	7/16 - 20UNF
5410-S17-6-4	6-4	5/8 - 18UNF	1.89	48.0	0.75	19.0	0.63	16.0	9/16 - 18UNF
5410-S17-6-8	6-8	1 - 20UNEF	2.18	55.3	1.13	28.7	1.00	25.4	9/16 - 18UNF
5410-S17-8-8	8-8	1 - 20UNEF	2.28	57.9	1.13	28.7	1.00	25.4	3/4 - 16UNF
5410-S17-10-12	10-12	1-7/16 - 16UN	2.75	69.8	1.63	41.4	1.38	35.0	7/8 - 14UNF
5410-S17-12-12	12-12	1-7/16 - 16UN	2.86	72.6	1.63	41.4	1.38	35.0	1-1/16 - 12UN
5410-S17-16-16	16-16	1-3/4 - 16UN	2.99	75.9	1.88	47.7	1.75	44.4	1-5/16 - 12UN



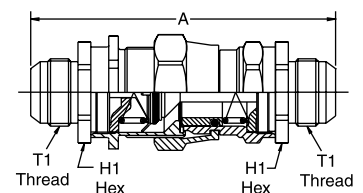
5410-S14 Female Half — SAE 37° (JIC)

Part Number Neoprene	Coupling Size	T1 Thread	A		H1		H2 Hex		H3 Hex		T2 Thread
			Inches	mm	Inches	mm	Inches	mm	Inches	mm	
5410-S14-4-4	4-4	5/8 - 18UNF	1.13	28.7	0.75	19.0	0.63	16.0	0.63	16.0	7/16 - 20UNF
5410-S14-6-4	6-4	5/8 - 18UNF	1.13	28.7	0.75	19.0	0.63	16.0	0.63	16.0	9/16 - 18UNF
5410-S14-6-8	6-8	1 - 20UNEF	1.63	41.4	1.19	30.2	1.00	25.4	1.00	25.4	9/16 - 18UNF
5410-S14-8-8	8-8	1 - 20UNEF	1.63	41.4	1.19	30.2	1.00	25.4	1.00	25.4	3/4 - 16UNF
5410-S14-10-12	10-12	1-7/16 - 16UN	2.15	54.6	1.63	41.4	1.38	35.0	1.38	35.0	7/8 - 14UNF
5410-S14-12-12	12-12	1-7/16 - 16UN	2.15	54.6	1.63	41.4	1.38	35.0	1.38	35.0	1-1/16 - 12UN
5410-S14-16-16	16-16	1-3/4 - 16UN	2.37	60.2	2.00	50.8	1.75	44.4	1.75	44.4	1-5/16 - 12UN

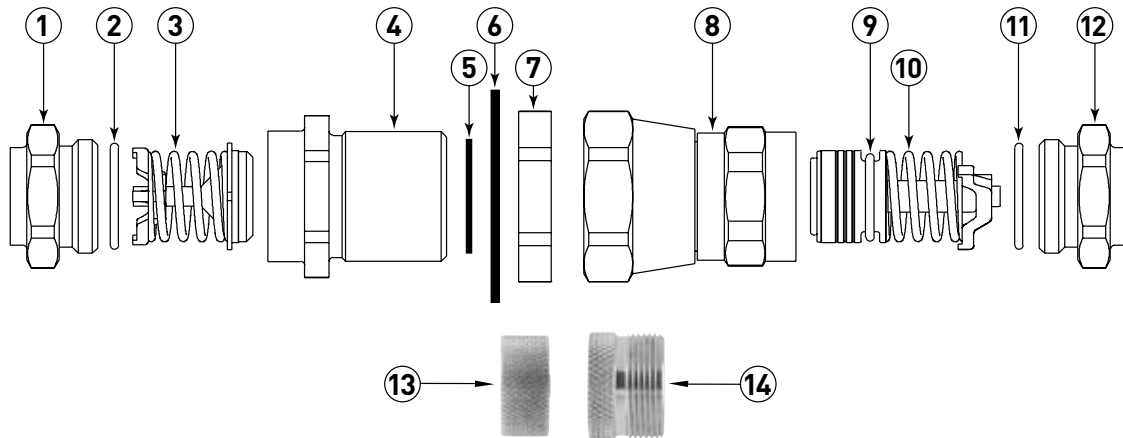


5410 Complete Coupling — SAE 37° (JIC)

Part Number Neoprene	Coupling Size	T1 Thread	A		H1 Hex	
			Inches	mm	Inches	mm
5410-4-4	4-4	7/16 - 20UNF	3.54	89.9	0.63	16.0
5410-6-4	6-4	9/16 - 18UNF	3.56	90.4	0.63	16.0
5410-6-8	6-8	9/16 - 18UNF	4.23	107.4	1.00	25.4
5410-8-8	8-8	3/4 - 16UNF	4.44	112.7	1.00	25.4
5410-10-12	10-12	7/8 - 14UNF	5.33	135.4	1.38	35.0
5410-12-12	12-12	1-1/16 - 12UN	5.54	140.7	1.38	35.0
5410-16-16	16-16	1-5/16 - 12UN	5.89	149.6	1.75	44.4



Components



Item No.	Description	Dash Size			
		-4	-8	-12	-16
		Tube O.D. Size – Inches			
		1/4" - 3/8"	1/4" - 5/8"	5/8" - 7/8"	7/8" - 1-3/8"
Typical Male Half					
1	Tubing Adapter (Brass)	202208-*-4B	202208-*-8B	202208-*-12B	202208-*-16B
2	O-Ring	22546-12	22546-17	22546-23	22546-28
3	Poppet Valve Assembly	5400-S20-4	5400-S20-8	5400-S20-12	5400-S20-16
4	Body	5400-17-4S	5400-17-8-S	5400-17-12S	5400-17-16S
5	Gasket Seal	22008-4S	22008-8S	22008-12S	22008-16S
6	Lock Washer	5400-54-4S	5400-54-8S	5400-54-12S	5400-54-16S
7	Jam Nut	5400-53-4S	5400-53-8S	5400-53-12S	5400-53-16S
Typical Female Half					
8	Union Nut and Body Assembly	5400-S16-4	5400-S16-8	5400-S16-12	5400-S16-16
9	O-Ring	22546-10	22546-112	22546-116	22546-214
10	Valve and Sleeve Assembly	5400-S19-4	5400-S19-8	5400-S19-12	5400-S19-16
11	O-Ring	22546-12	22546-17	22546-23	22546-28
12	Tubing Adapter (Brass)	202208-*-4B	202208-*-8B	202208-*-12B	202208-*-16B
13	Dust cap (S2 half)	5400-S6-4	5400-S6-8	5400-S6-12	5400-S6-16
14	Dust plug (S5 half)	5400-S8-4	5400-S8-8	5400-S8-12	5400-S8-16

* Specify O.D. Tubing size of adapter required in 16th of an inch.

Example: -4 coupling with 3/8" O.D. tubing = 6/16 or -6.

Part number is then 202208-6-4.

Maximum Bulkhead Thickness

Coupling Size	Lock Washer Installed		Lock Washer Not Used	
	Inches	mm	Inches	mm
-4	0.21	5.33	0.26	6.60
-8	0.14	3.55	0.20	5.08
-12	0.23	5.84	0.29	7.36
-16	0.10	2.54	0.16	4.06

Recommended Torque Values

Dash Size	S2 Half to S5 Half	
	Inches	N.m
-4	10 - 12	13.5 - 16.2
-8	35 - 37	47.5 - 50.1
-12	45 - 47	61.0 - 63.7
-16	65 - 67	88.1 - 90.8

Adapter Torque Value

Dash Size	Adapter	
	ft - lbs	N.m
-4	15 - 20	20.3 - 27.1
-8	35 - 45	47.5 - 61.0
-12	55 - 65	74.6 - 88.1
-16	65+	88.1+

Assembly Instructions

Step 1

After tubing or hose has been connected to adapters (1) and (12), install adapter O-rings (2) and (11)* on adapters. Be sure O-rings are not twisted.

Step 2

Generously lubricate adapter O-rings (2) and (11) with the system lubricant to prevent them from scuffing and tearing when coupling body is threaded on adapter.

Step 3

Adapter to S2 male coupling half connection.

- A. Lubricate poppet face with system lubricant. Insert poppet valve assembly (3) into body (4). Tighten body (4) on adapter (1).
- B. After body and adapter make metal-to-metal contact, torque to the value shown in the "Torque Values" table.

Step 4

Adapter to S5 female coupling half connection.

- A. Lubricate O-ring (9) liberally with system lubricant. Insert valve and sleeve assembly (10) into body (8). Tighten body (8) on adapter (12).
- B. After body and adapter make metal-to-metal contact, torque to the value shown in the "Torque Values" table.

Step 5

Coupling connection.

- A. Generously lubricate the gasket seal (5) on the 5400-S2 male coupling half with the system lubricant.
- B. Thread the union nut (8) onto the S2 male coupling half. Tighten union nut to torque values shown in the "Torque Values" table.

IMPORTANT - DO NOT rotate the S5 female coupling half body during connection.

- C. After the coupling halves are seated, keep the bodies of the S2 male coupling half (4) and that of the S5 female coupling half (8) from rotating and tighten the union nut to the torque values shown in the "Torque Values" table.

IMPORTANT - DO NOT rotate the S2 or S5 coupling half body during connection.

Bulkhead Mounting — S2 Half

Install lock washer (6) on S2 half, insert S2 male coupling half through bulkhead, and tighten jam-nut (7) so that lock-washer teeth are fully compressed.

Note: Lock washer (6) must be between hex of S2 male half and bulkhead.

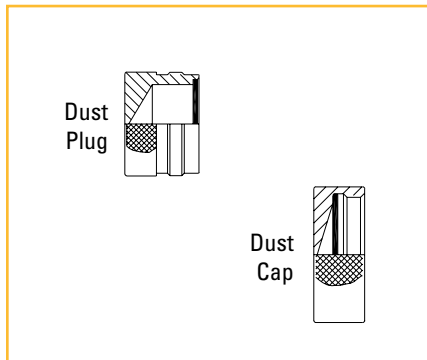
IMPORTANT - Generous lubrication is required for all gaskets and O-rings. Lubrication should match system oil and be compatible with refrigerant system.

* Specify O.D. Tubing size of adapter required in 16th of an inch.

Example:

-4 coupling with 3/8" O.D. tubing = 6/16 or -6. Part number is then 202208-6-4.

Accessories

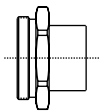


Dust Cap and Dust Plug

Coupling Size	Part Numbers	
	Dust Cap with Gasket	Dust Plug with Gasket
-4	5400-S6-4	5400-S8-4
-8	5400-S6-8	5400-S8-8
-12	5400-S6-12	5400-S8-12
-16	5400-S6-16	5400-S8-16

Adapter — Braze

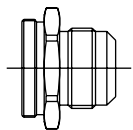
Coupling Size	Part Numbers		Thread Size P	Tube O.D. Size Inches
	O-Ring	Brass		
-4	22546-12	202208-4-4B	1/2-20	1/4
-8	22546-17	202208-8-8B	7/8-20	1/8
-12	22546-23	202208-10-12B	1-1/4 - 18	5/8
-16	22546-28	202208-14-16B	1-9/32 - 20	7/8



O-Ring Required

Adapter SAE 37° (JIC)

Coupling Size	Part Numbers			Thread Size P	Tube O.D. Size Inches
	O-Ring	Brass	Steel		
-4	22546-12	202220-4-4B	202220-4-4S	7/16 - 20	1/4
-4	22546-12	202220-6-4B	202220-6-4S	9/16 - 18	3/8
-8	22546-17	202220-6-8B	202220-6-8S	9/16 - 18	3/8
-8	22546-17	202220-8-8B	202220-8-8S	3/4 - 16	1/2
-12	22546-23	202220-10-12B	202220-10-12S	7/8 - 14	5/8
-12	22546-23	202220-12-12B	202220-12-12S	1-1/16 - 12	3/4
-16	22546-28	202220-16-16B	202220-16-16S	1-3/16 - 12	1



O-Ring Required

5500 Series Self-Sealing Brass Coupling

Parker's 5500 self-sealing brass couplings allow for pre-charging of AC and heat pump systems. The couplings provide for easy maintenance and installation on refrigeration and air conditioning systems. Applications can also include marine refrigeration and air conditioning systems, split refrigeration, and portable cooling solutions.

Application

- Portable split-system air conditioners
- Split refrigeration systems
- Marine refrigeration systems
- Refrigerated dry cleaning systems
- Beverage systems
- Compatible with most refrigerants including R-410A



Base Product Part Number

- **5502** Male coupling half
- **5505** Female coupling half

Features and Benefits

- Self-sealing upon disconnection maintains minimum air inclusion and fluid loss.

- Brass coupling provides corrosion resistance.
- Final metal-to-metal seal prevents refrigerant loss.
- Copper-sweat connections provide basic ends for brazing and eliminate the need for flux, simplifying the installation process.
- Panel mounting options are available for the unique needs of a unit.
- RoHS Compliant

Agency Approvals

UL listed; File No: SA7511

Efficient
Flow/low pressure drop design helps improve equipment efficiencies.

Easy to Connect/ Disconnect
Thread-together design allows easy connection and disconnection while under system pressure.

Simplified Installation
Copper sweat connections simplify the factory installation process (eliminating the need for flux and flux residue clean up), saving you time and money.

Corrosion Resistant
Brass body and copper connections make corrosion-related problems almost non-existent.

Low Air Inclusion and Refrigerant Loss

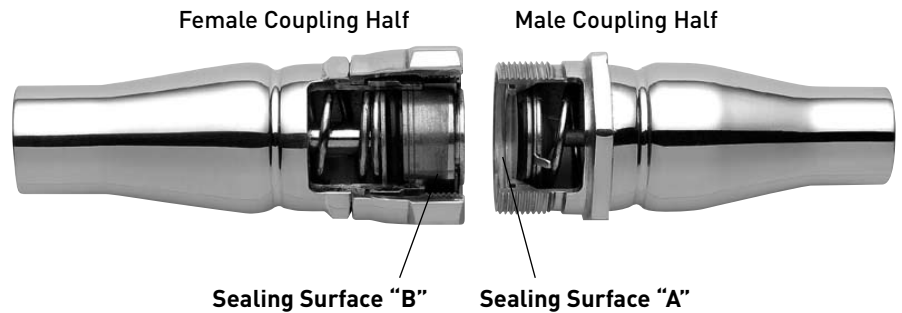
Superior Sealing
Unique self-sealing valving prevents refrigerant loss when disconnected. Metal-to-metal final seal virtually eliminates refrigerant loss when connected.

Reliable
Stringent design standards, backed by years of experience, a wide range of existing coupling applications, and extensive testing under extreme operating conditions, provide you with the assurance that the product will perform as specified.

How It Operates

Disconnected

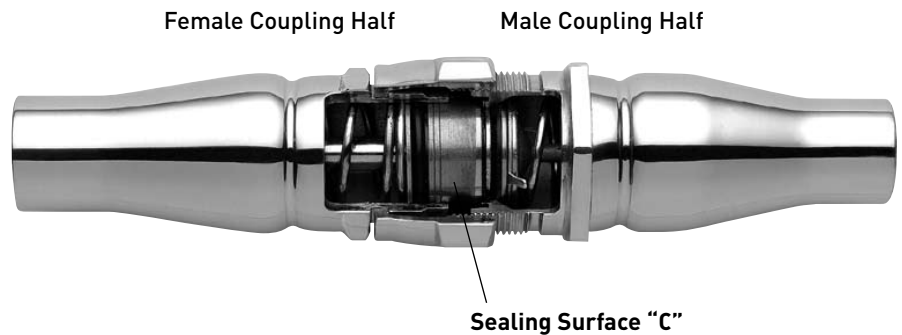
When disconnected, spring-loaded valve assemblies in the male and female coupling halves are sealed to prevent refrigerant loss and the inclusion of air or foreign materials. A spring in the male coupling half presses the bonded poppet against sealing surface “A” of the coupling body. Likewise, a spring in the female coupling half presses the sleeve against sealing surface “B” of the stem valve head. An O-ring on the female sleeve prevents leakage between the sleeve and coupling body.



Partially Connected

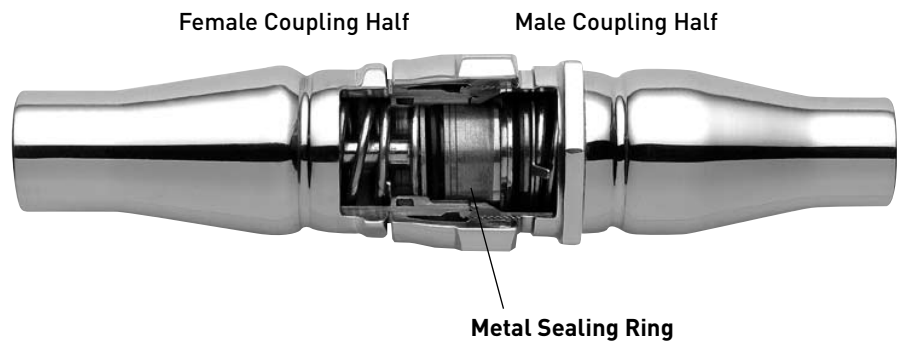
As the two coupling halves are threaded together, sealing surface “C” of the male coupling body contacts the bonded seal of the female coupling’s sleeve assembly.

At the same time, the stem valve head in the female coupling assembly contacts the male coupling’s bonded poppet, forcing air out of the coupling. During this stage, both coupling halves are sealed, preventing leakage of refrigerant.



Fully Connected

Continued tightening of the union nut (female coupling) draws the couplings together, and opens the fluid passage by forcing the male coupling’s poppet assembly and the female coupling’s sleeve assembly open. When fully coupled a metal ring located in the front of the male coupling, forms a leak-free metal to metal seal between the two coupling halves.



Specifications

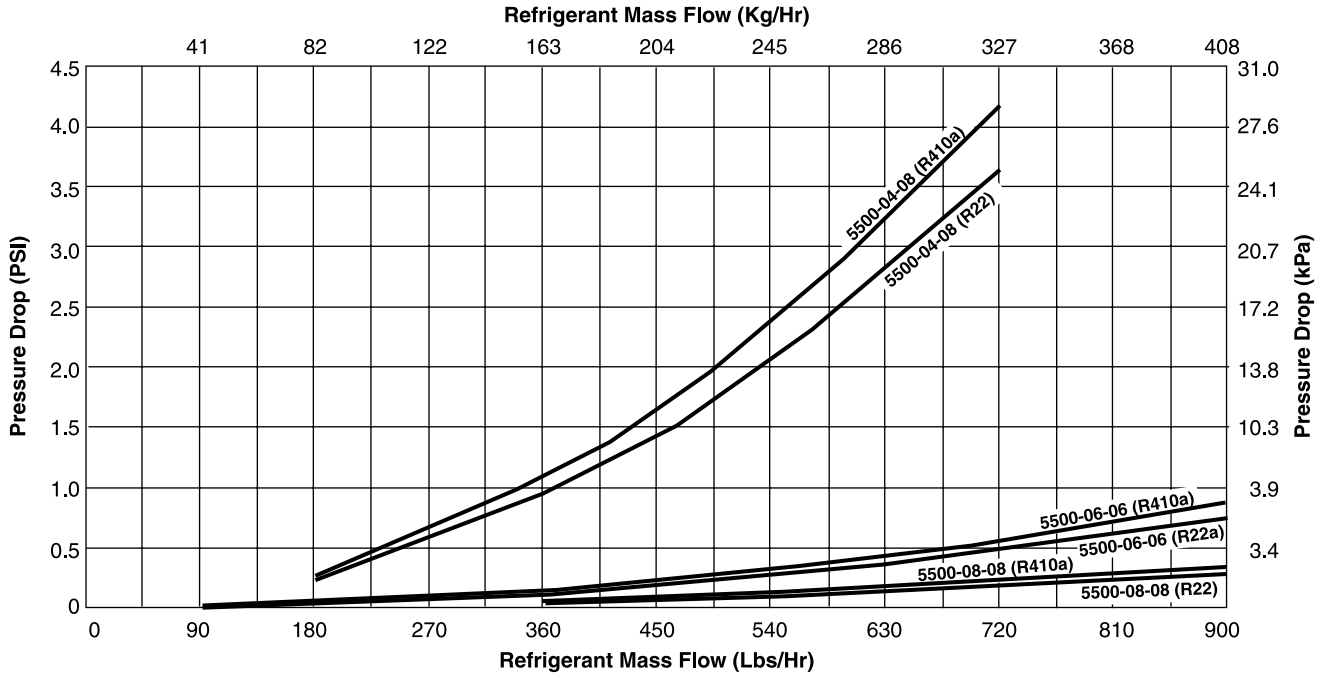
PRODUCT	5500 SERIES SELF-SEALING BRASS COUPLINGS
Operating Temperature Range	-40°F to 250°F (-40°C to +121°C)
Operating Pressure Range, Connected Male & Female Coupling -06, -08, -12 & -16 Body Sizes	Vacuum to 750 psi (52 bar)
Operating Pressure Range, Disconnected Male Coupling Half -06, -08, -12 & -16 Body Sizes Female Coupling Half -06 & -08 Body Sizes -12 Body Size -16 Body Size	Vacuum to 750 psi (52 bar) Vacuum to 600 psi (41 bar) -6 only Vacuum to 750 psi (52 bar) -8 & -12 Vacuum to 333 psi (23 bar)
Minimum Burst Pressure, Connected Male & Female Coupling -06, -08, -12 & -16 Body Sizes	2,700 psi (186 bar)
Minimum Burst Pressure, Disconnected Male Coupling Half -06, -08, -12 & -16 Body Sizes Female Coupling Half -06 Body Size -08 Body Size -12 Body Size -16 Body Size	2,700 psi (186 bar) 1,800 psi (124 bar) 2,250 psi (155 bar) 2,250 psi (155 bar) 1,000 psi (70 bar)
Maximum Air Inclusion (During Connection) Male & Female Coupling Halves -06 Body Size -08 Body Size -12 Body Size -16 Body Size	0.15 cc per connection 0.10 cc per connection 0.20 cc per connection 0.40 cc per connection
Maximum Fluid Loss (During Disconnection) Male & Female Coupling Halves -06 & -08 Body Sizes -12 Body Size -16 Body Size	0.10 cc per disconnection 0.30 cc per disconnection 0.20 cc per disconnection
MATERIALS	
Coupling Body	Brass Bar per ASTM-B16, Alloy C3600
Connections	Refrigeration Grade Copper, per ASTM-B75, Alloy C12200
Internal Assembly (Female & Male Coupling)	ASTM - B16 Alloy C360 & Zinc Trivalent Chromate Plated Steel
Bonded Poppet (Male Coupling)	Neoprene™
Bonded Sleeve (Female Coupling)	Neoprene™
MATERIAL COMPATIBILITY ⁺	
All components, bonded poppet and sleeve, and valve stem O-Ring seal are compatible with these refrigerants and refrigerant oils: R22 & mineral oil, alkylbenzene oil, polyolester oil, & PAG R134a, R404a, R407c, R410a, or R507 & polyolester oil	
Vibration Resistance	Complies with UL 109
External Leak Rate, Connected -06, -08, -12 & -16 Body Sizes	< 0.1 ounce (2.8 g) of R22 refrigerant per year at Operating Pressure Range
External Leak Rate, Disconnected -06, -08, -12 & -16 Body Sizes Without Protective Metal Cap or Plug Installed -08, -12 & -16 Body Sizes With Protective Metal Cap or Plug Installed*	< 0.50 ounce (14.2 g) of R22 refrigerant per year < 0.25 ounce (7.1 g) of R22 refrigerant per year

* Protective metal cap/plug not available for -06 coupling body size.

+ Due to the numerous manufacturers of refrigerant oils and continuous changes of additives, compatibility cannot be guaranteed.
Contact Parker for compatibility of refrigerant oils not listed.

Flow Data

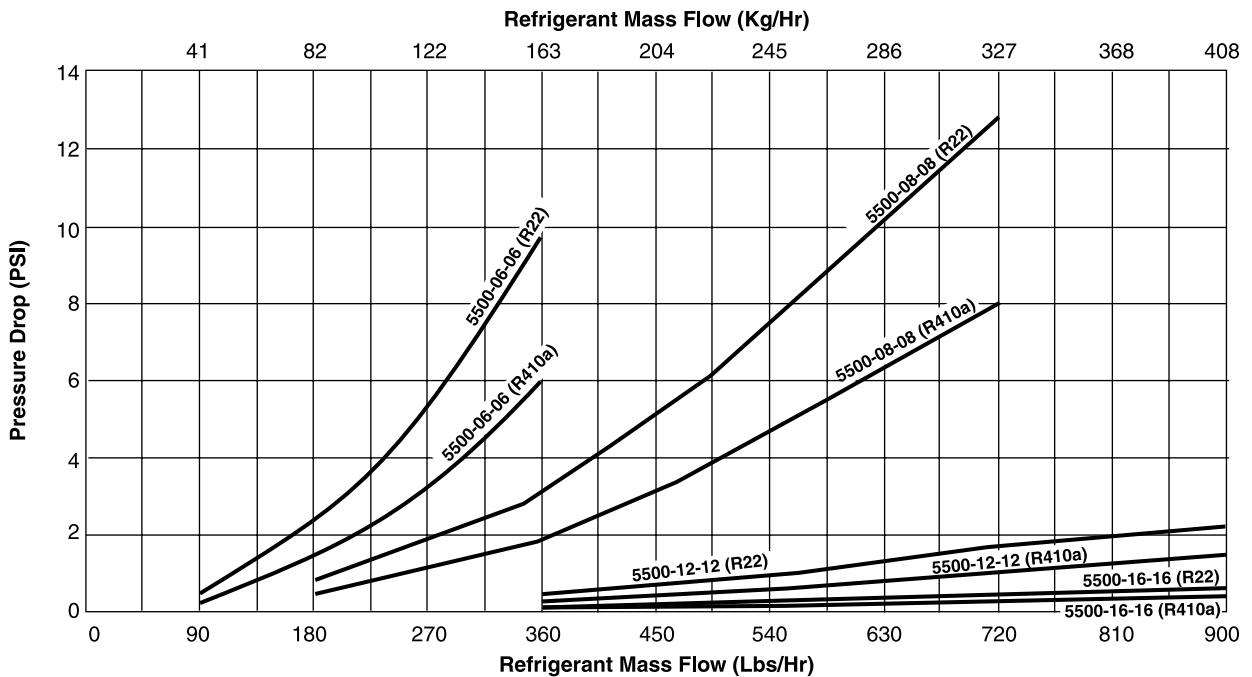
Liquid Line Pressure Drop vs. Mass Flow Refrigerant R22 and R410A



5500-04-08 — 1/2" coupling body (-08) with 1/4" (-04) copper connection, R22
 5500-06-06 — 3/8" coupling body (-06) with 3/8" (-06) copper connection, R22
 5500-08-08 — 1/2" coupling body (-08) with 1/2" (-08) copper connection, R22

5500-04-08 — 1/2" coupling body (-08) with 1/4" (-04) copper connection, R410a
 5500-06-06 — 3/8" coupling body (-06) with 3/8" (-06) copper connection, R410a
 5500-08-08 — 1/2" coupling body (-08) with 1/2" (-08) copper connection, R410a

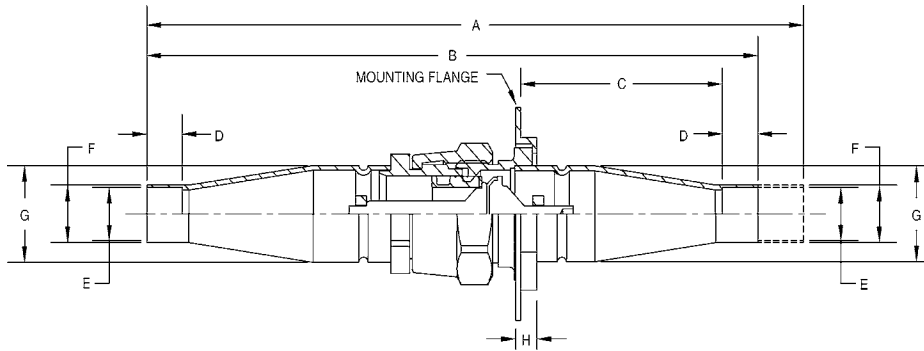
Suction Line Pressure Drop vs. Mass Flow Refrigerant R22 and R410A



5500-06-06 — 3/8" coupling body (-06) with 3/8" (-06) copper connection, R22
 5500-08-08 — 1/2" coupling body (-08) with 1/2" (-08) copper connection, R22
 5500-12-12 — 3/4" coupling body (-12) with 3/4" (-12) copper connection, R22
 5500-16-16 — 1" coupling body (-16) with 1" (16) copper connection, R22

5500-06-06 — 3/8" coupling body (-06) with 3/8" (-06) copper connection, R410a
 5500-08-08 — 1/2" coupling body (-08) with 1/2" (-08) copper connection, R410a
 5500-12-12 — 3/4" coupling body (-12) with 3/4" (-12) copper connection, R410a
 5500-16-16 — 1" coupling body (-16) with 1" (16) copper connection, R410a

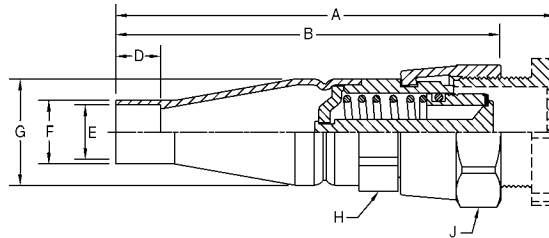
Coupling Assembly



Copper Connection		Coupling Body		Dimensions – Inches (mm)								Weight	
Inch (Dash Size*)	mm	Inch (Dash Size*)	mm	Overall Disconnected Length	Overall Connected Length	Flange to Tube End	Connection Depth	Connection I.D.	Connection O.D.	Coupling Body O.D.	Mounting Flange (Width)	With Mounting Flange Ounces (Grams)	Without Mounting Flange Ounces (Grams)
				A	B	C	D	E	F	G	H		
1/4 ODS (-04)	6.4 ODS	3/8 (-06)	9.5	5.06 (128.5)	4.77 (121.2)	N/A	0.32 (8.1)	0.25 (6.4)	0.34 (8.6)	0.71 (18.0)	0.23 (5.8)	N/A	4.18 (118.45)
3/8 ODS (-06)	9.5 ODS	3/8 (-06)	9.5	5.06 (128.5)	4.77 (121.2)	N/A	0.32 (8.1)	0.38 (9.7)	0.46 (11.7)	0.71 (18.0)	0.23 (5.8)	N/A	4.18 (118.45)
1/4 ODS (-04)	6.4 ODS	1/2 (-08)	12.7	6.95 (176.5)	6.56 (166.6)	2.64 (67.1)	0.31 (7.9)	0.25 (6.4)	0.38 (9.7)	0.92 (23.4)	0.23 (5.8)	8.44 (239.27)	7.96 (225.54)
3/8 ODS (-06)	9.5 ODS	1/2 (-08)	12.7	6.90 (174.2)	6.51 (165.4)	2.62 (66.5)	0.31 (7.9)	0.38 (9.7)	0.47 (12.0)	0.92 (23.4)	0.23 (5.8)	8.44 (239.27)	7.96 (225.54)
1/2 ODS (-08)	12.7 ODS	1/2 (-08)	12.7	6.86 (172.2)	6.47 (164.3)	2.58 (65.5)	0.38 (9.7)	0.50 (12.7)	0.59 (14.9)	0.92 (23.4)	0.23 (5.8)	8.44 (239.27)	7.96 (225.54)
5/8 ODS (-10)	15.9 ODS	1/2 (-08)	12.7	6.78 (172.2)	6.39 (162.3)	2.56 (65.0)	0.38 (9.7)	0.63 (16.0)	0.71 (17.9)	0.92 (23.4)	0.23 (5.8)	8.44 (239.27)	7.96 (225.54)
5/8 ODS (-10)	15.9 ODS	3/4 (-12)	19.1	7.79 (197.9)	7.24 (183.9)	2.71 (68.8)	0.50 (12.7)	0.63 (16.0)	0.75 (19.1)	1.32 (33.5)	0.23 (5.8)	18.60 (527.50)	17.90 (507.34)
3/4 ODS (-12)	19.1 ODS	3/4 (-12)	19.1	7.85 (199.4)	7.30 (185.4)	2.67 (67.8)	0.62 (15.7)	0.75 (19.1)	0.86 (21.7)	1.32 (33.5)	0.23 (5.8)	18.60 (527.50)	17.90 (507.34)
7/8 ODS (-14)	22.2 ODS	3/4 (-12)	19.1	7.85 (199.4)	7.30 (185.4)	2.67 (67.8)	0.75 (19.1)	0.88 (22.4)	0.97 (24.6)	1.32 (33.5)	0.23 (5.8)	18.60 (527.50)	17.90 (507.34)
7/8 ODS (-14)	22.2 ODS	1 (-16)	25.4	9.33 (237.0)	8.73 (221.7)	3.34 (84.8)	0.75 (19.1)	0.88 (22.4)	1.02 (25.8)	1.68 (42.7)	0.23 (5.8)	29.87 (846.72)	29.15 (826.35)
1 ODS (-16)	25.4 ODS	1 (-16)	25.4	9.46 (240.3)	8.86 (225.0)	3.42 (86.9)	0.88 (22.4)	1.00 (25.4)	1.12 (28.4)	1.68 (42.7)	0.23 (5.8)	29.87 (846.72)	29.15 (826.35)
1-1/8 ODS (-18)	28.6 ODS	1 (-16)	25.4	9.45 (240.0)	8.85 (224.8)	3.42 (86.9)	0.88 (22.4)	1.13 (28.7)	1.24 (31.4)	1.68 (42.7)	0.23 (5.8)	29.87 (846.72)	29.15 (826.35)

* Dash size = copper connection size x 16

Female Coupling Half



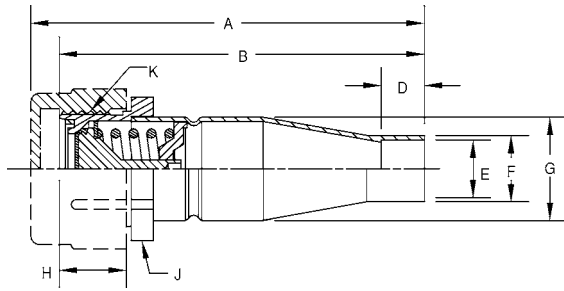
Copper Connection		Coupling Body		Part Number		Dimensions – Inches (mm)								Weight Ounces (grams)
Inch (Dash Size*)	mm	Inch (Dash Size*)	mm	Less Plug	With Plug**	Coupling Length		Connection			Coupling Body		Retaining Nut Hex ⁺	
						With Plug		Depth	I.D.	O.D.	O.D.	Hex ⁺		
						A	B	D	E	F	G	H		
1/4 ODS (-04)	6.4 ODS	3/8 (-06)	9.5	N/A	5505-04B-06	3.14 (79.8)	2.72 (69.1)	0.32 (8.1)	0.25 (6.4)	0.34 (8.6)	0.71 (18.0)	0.75 (19.1)	0.94 (23.9)	2.53 (71.73)
3/8 ODS (-06)	9.5 ODS	3/8 (-06)	9.5	N/A	5505-06B-06	3.14 (79.8)	2.72 (69.1)	0.32 (8.1)	0.38 (9.7)	0.46 (11.7)	0.71 (18.0)	0.75 (19.1)	0.94 (23.9)	2.53 (71.73)
1/4 ODS (-04)	6.4 ODS	1/2 (-08)	12.7	N/A	5505-04B-08	3.88 (98.6)	3.69 (93.7)	0.31 (7.9)	0.25 (6.4)	0.38 (9.7)	0.92 (23.4)	1.00 (25.4)	1.19 (30.2)	4.85 (137.46)
1/4 ODS (-04)	6.4 ODS	1/2 (-08)	12.7	N/A	5505-04S-08	4.04 (102.86)	3.69 (93.7)	0.31 (7.9)	0.25 (6.4)	0.38 (9.7)	0.92 (23.4)	1.00 (25.4)	1.19 (30.2)	4.85 (137.46)
3/8 ODS (-06)	9.5 ODS	1/2 (-08)	12.7	N/A	5505-06B-08	3.85 (97.8)	3.66 (93.0)	0.31 (7.9)	0.38 (9.7)	0.47 (12.0)	0.92 (23.4)	1.00 (25.4)	1.19 (30.2)	4.85 (137.46)
3/8 ODS (-06)	9.5 ODS	1/2 (-08)	12.7	N/A	5505-06S-08	4.01 (101.9)	3.66 (93.0)	0.31 (7.9)	0.38 (9.7)	0.47 (12.0)	0.92 (23.4)	1.00 (25.4)	1.19 (30.2)	4.85 (137.46)
12 ODS (-08)	12.7 ODS	1/2 (-08)	12.7	N/A	5505-08B-08	3.85 (97.8)	3.66 (93.0)	0.38 (9.7)	0.50 (12.7)	0.59 (14.9)	0.92 (23.4)	1.00 (25.4)	1.19 (30.2)	4.85 (137.46)
12 ODS (-08)	12.7 ODS	1/2 (-08)	12.7	N/A	5505-08S-08	4.01 (101.9)	3.66 (93.0)	0.38 (9.7)	0.50 (12.7)	0.59 (14.9)	0.92 (23.4)	1.00 (25.4)	1.19 (30.2)	4.85 (137.46)
5/8 ODS (-10)	15.9 ODS	1/2 (-08)	12.7	N/A	5505-10B-08	3.79 (96.3)	3.60 (91.4)	0.50 (12.7)	0.63 (16.0)	0.71 (17.9)	0.92 (23.4)	1.00 (25.4)	1.19 (30.2)	4.85 (137.46)
5/8 ODS (-10)	15.9 ODS	1/2 (-08)	12.7	N/A	5505-10S-08	3.95 (100.3)	3.60 (91.4)	0.50 (12.7)	0.63 (16.0)	0.71 (17.9)	0.92 (23.4)	1.00 (25.4)	1.19 (30.2)	4.85 (137.46)
5/8 ODS (-10)	15.9 ODS	3/4 (-12)	19.1	5505-10-12	5505-10S-12	4.64 (117.9)	4.09 (103.9)	0.50 (12.7)	0.63 (16.0)	0.75 (19.1)	1.32 (33.5)	1.38 (35.1)	1.62 (30.2)	10.58 (299.98)
3/4 ODS (-12)	19.1 ODS	3/4 (-12)	19.1	5505-12-12	5505-12S-12	4.77 (121.2)	4.19 (106.4)	0.62 (15.7)	0.75 (19.1)	0.86 (21.7)	1.32 (33.5)	1.38 (35.1)	1.62 (41.4)	10.58 (299.98)
7/8 ODS (-14)	22.2 ODS	3/4 (-12)	19.1	5505-14-12	5505-14S-12	4.77 (121.2)	4.19 (106.4)	0.75 (19.1)	0.88 (22.4)	0.97 (24.6)	1.32 (33.5)	1.38 (35.1)	1.62 (41.4)	10.58 (299.98)
7/8 ODS (-14)	22.2 ODS	1 (-16)	25.4	5505-14-16	5505-14S-16	5.48 (139.2)	4.96 (126.0)	0.75 (19.1)	0.88 (22.4)	1.02 (25.8)	1.68 (42.7)	1.69 (42.9)	2.00 (50.8)	18.34 (519.91)
1 ODS (-16)	25.4 ODS	1 (-16)	25.4	5505-16-16	5505-16S-16	5.62 (142.7)	5.01 (127.3)	0.88 (22.4)	1.00 (25.4)	1.12 (28.4)	1.68 (42.7)	1.69 (42.9)	2.00 (50.8)	18.34 (519.91)
1-1/8 ODS (-18)	28.6 ODS	1 (-16)	25.4	5505-18-16	5505-18S-16	5.52 (140.2)	5.00 (127.0)	0.88 (22.4)	1.13 (28.7)	1.24 (31.4)	1.68 (42.7)	1.69 (42.9)	2.00 (50.8)	18.34 (519.91)

* Dash size = copper connection size x 16

** "B" in the part number denotes a plastic plug. "S" in the part number denotes a steel plug.

+ Dimension is across hex flats.

Male Coupling Half



Copper Connection		Coupling Body		Part Number**		Dimensions – Inches (mm)										Weight Ounces (Grams)
Inch (Dash Size*)	mm	Inch (Dash Size*)	mm	Less Cap	With Cap**	Coupling Length		Tube Depth			Coupling Body				Thread Size	
						(with cap)		Depth	I.D.	O.D.	O.D.	Thread Length	Hex Diameter ⁺			
						A	B	D	E	F	G	H	J	K		
1/4 ODS (-04)	6.4 ODS	3/8 (-06)	9.5	N/A	5502-04B-06	2.58 (65.5)	2.40 (61.0)	0.32 (8.1)	0.25 (6.4)	0.34 (8.6)	0.71 (18.0)	0.49 (12.4)	0.83 (21.1)	M20-1.5	1.65 (6.72)	
3/8 ODS (-06)	9.5 ODS	3/8 (-06)	9.5	N/A	5502-06B-06	2.58 (65.5)	2.40 (61.0)	0.32 (8.1)	0.38 (9.7)	0.46 (11.7)	0.71 (18.0)	0.49 (12.4)	0.83 (21.1)	M20-1.5	1.65 (6.72)	
1/4 ODS (-04)	6.4 ODS	1/2 (-08)	12.7	N/A	5502-04B-08	3.31 (84.1)	3.26 (82.8)	0.31 (7.9)	0.25 (6.4)	0.38 (9.7)	0.92 (23.4)	0.62 (15.7)	1.13 (28.7)	1"-20	3.11 (88.08)	
1/4 ODS (-04)	6.4 ODS	1/2 (-08)	12.7	N/A	5502-04S-08	3.47 (88.1)	3.26 (82.8)	0.31 (7.9)	0.25 (6.4)	0.38 (9.7)	0.92 (23.4)	0.62 (15.7)	1.13 (28.7)	1"-20	3.11 (88.08)	
3/8 ODS (-06)	9.5 ODS	1/2 (-08)	12.7	N/A	5502-06B-08	3.29 (83.6)	3.24 (82.3)	0.31 (7.9)	0.38 (9.7)	0.47 (12.0)	0.92 (23.4)	0.62 (15.7)	1.13 (28.7)	1"-20	3.11 (88.08)	
3/8 ODS (-06)	9.5 ODS	1/2 (-08)	12.7	N/A	5502-06S-08	3.45 (87.6)	3.24 (82.3)	0.31 (7.9)	0.38 (9.7)	0.47 (12.0)	0.92 (23.4)	0.62 (15.7)	1.13 (28.7)	1"-20	3.11 (88.08)	
1/2 ODS (-08)	12.7 ODS	1/2 (-08)	12.7	N/A	5502-08B-08	3.25 (82.6)	3.20 (81.3)	0.38 (9.7)	0.50 (12.7)	0.59 (14.9)	0.92 (23.4)	0.62 (15.7)	1.13 (28.7)	1"-20	3.11 (88.08)	
1/2 ODS (-08)	12.7 ODS	1/2 (-08)	12.7	N/A	5502-08S-08	3.41 (86.6)	3.20 (81.3)	0.38 (9.7)	0.50 (12.7)	0.59 (14.9)	0.92 (23.4)	0.62 (15.7)	1.13 (28.7)	1"-20	3.11 (88.08)	
5/8 ODS (-10)	15.9 ODS	1/2 (-08)	12.7	N/A	5502-10B-08	3.23 (82.0)	3.18 (80.8)	0.50 (12.7)	0.63 (16.0)	0.71 (17.9)	0.92 (23.4)	0.62 (15.7)	1.13 (28.7)	1"-20	3.11 (88.08)	
5/8 ODS (-10)	15.9 ODS	1/2 (-08)	12.7	N/A	5502-10S-08	3.91 (99.3)	3.18 (80.8)	0.50 (12.7)	0.63 (16.0)	0.71 (17.9)	0.92 (23.4)	0.62 (15.7)	1.13 (28.7)	1"-20	3.11 (88.08)	
5/8 ODS (-10)	15.9 ODS	3/4 (-12)	19.1	5502-10-12	5502-10S-12	3.91 (117.9)	3.70 (103.9)	0.50 (12.7)	0.63 (16.0)	0.75 (19.1)	1.32 (33.5)	0.99 (25.1)	1.63 (41.4)	1-7/16"-16	7.31 (207.36)	
3/4 ODS (-12)	19.1 ODS	3/4 (-12)	19.1	5502-12-12	5502-12S-12	3.96 (100.6)	3.75 (95.3)	0.62 (15.7)	0.75 (19.1)	0.86 (21.7)	1.32 (33.5)	0.99 (25.1)	1.63 (41.4)	1-7/16"-16	7.31 (207.36)	
7/8 ODS (-14)	22.2 ODS	3/4 (-12)	19.1	5502-14-12	5502-14S-12	3.96 (100.6)	3.75 (95.3)	0.75 (19.1)	0.88 (22.4)	0.97 (24.6)	1.32 (33.5)	0.99 (25.1)	1.63 (41.4)	1-7/16"-16	7.31 (207.36)	
7/8 ODS (-14)	22.2 ODS	1 (-16)	25.4	5502-14-16	5502-14S-16	4.68 (118.9)	4.37 (111.0)	0.75 (19.1)	0.88 (22.4)	1.02 (25.8)	1.68 (42.7)	1.03 (26.2)	1.88 (47.8)	1-3/4"-16	10.81 (306.44)	
1 ODS (-16)	25.4 ODS	1 (-16)	25.4	5502-16-16	5502-16S-16	4.76 (120.9)	4.45 (113.0)	0.88 (22.4)	1.00 (25.4)	1.12 (28.4)	1.68 (42.7)	1.03 (26.2)	1.88 (47.8)	1-3/4"-16	10.81 (306.44)	
1-1/8 ODS (-18)	28.6 ODS	1 (-16)	25.4	5502-18-16	5502-18S-16	4.76 (120.9)	4.45 (113.0)	0.88 (22.4)	1.13 (28.7)	1.24 (31.4)	1.68 (42.7)	1.03 (26.2)	1.88 (47.8)	1-3/4"-16	10.81 (306.44)	

* Dash size = copper connection size x 16

** "B" in the part number denotes a plastic cap. "S" in the part number denotes a steel cap.

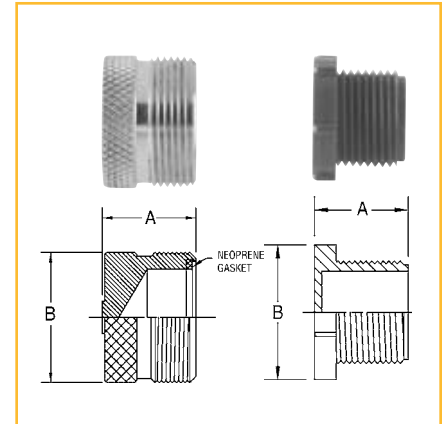
+ Dimension is across hex flats.

Accessories

Protective Plugs (Bulk package, 25/package)

Coupling Body Size		Part Number	Dimensions – Inches (mm)		Weight Ounces (Grams)
Inch (Dash Size*)	mm		Length	Diameter	
			A	B	
Plastic					
3/8 (-06)	9.5	5410-06-BULK	0.72 (18.3)	1.04 (26.4)	0.09 (2.68)
1/2 (-08)	12.7	5410-08-BULK	0.04 (9.9)	1.20 (30.5)	0.07 (1.90)
Steel					
1/2 (-08)	12.7	5400-S8-08-BULK	0.72 (18.3)	1.00 (25.4)	1.48 (41.92)
3/4 (-12)	19.1	5400-S8-12-BULK	1.13 (28.7)	1.44 (36.6)	4.84 (137.34)
1 (-16)	25.4	5400-S8-16-BULK	1.25 (31.8)	1.75 (44.5)	7.93 (224.76)

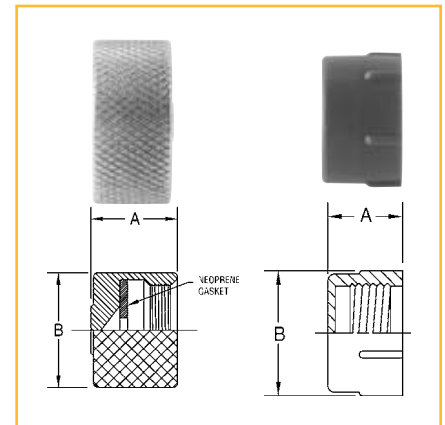
* Dash size = copper connection size x 16



Protective Caps (Bulk package, 25/package)

Coupling Body Size		Part Number	Dimensions – Inches (mm)		Weight Ounces (Grams)
Inch (Dash Size*)	mm		Length	Diameter	
			A	B	
Plastic					
3/8 (-06)	9.5	5409-06-BULK	0.55 (14.0)	0.93 (23.6)	0.04 (1.12)
1/2 (-08)	12.7	5409-08-BULK	0.50 (12.7)	1.01 (25.7)	0.06 (1.70)
Steel					
1/2 (-08)	12.7	5400-S6-08-BULK	0.56 (14.2)	1.13 (28.7)	1.08 (30.58)
3/4 (-12)	19.1	5400-S6-12-BULK	0.56 (14.2)	1.63 (41.4)	2.38 (67.48)
1 (-16)	25.4	5400-S6-16-BULK	0.75 (19.1)	2.00 (50.8)	4.98 (141.20)

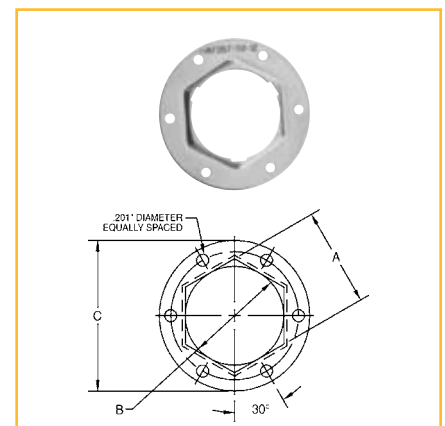
* Dash size = copper connection size x 16



Mounting Flange (Steel)

Coupling Body Size		Part Number	Dimensions – Inches (mm)			Weight Ounces (Grams)
Inch (Dash Size*)	mm		Hex Diameter A	Bolt Circle Diameter B	Outside Diameter C	
3/8 (-06)	9.5	N/A	N/A	N/A	N/A	N/A
1/2 (-08)	12.7	150-22-08	1.13 (28.7)	1.69 (42.9)	2.00 (50.8)	0.48 (13.73)
3/4 (-12)	19.1	150-22-12	1.63 (41.4)	2.12 (53.9)	2.50 (63.5)	0.71 (20.16)
1 (-16)	25.4	150-22-16	1.88 (47.8)	2.38 (60.5)	2.75 (69.9)	0.72 (20.37)

* Dash size = copper connection size x 16



How to Order

5502

Coupling
Type

Product Type

5502 = Male Coupling Half
5505 = Female Coupling Half

04

Copper
Connection Size

Copper Connection (Denoted xx/16)

-04 = 1/4"
-06 = 3/8"
-08 = 1/2"
-10 = 5/8"
-12 = 3/4"
-14 = 7/8"
-16 = 1"
-18 = 1-1/8"

B

Cap
Requirements

Cap

Apply to -12 & -16 Only
B = Includes Plastic Protective Cap or Plug
S = Includes Steel Protective Cap or Plug

06

Coupling
Body Size

Coupling Body Size (Denoted xx/16)

-06 = 3/8"
-08 = 1/2"
-12 = 3/4"
-16 = 1"

5700 Series One-Shot™ Brass Couplings

Parker's 5700 one-shot brass couplings allow for easy installation of pre-charged systems and provide nearly full flow when completely connected. Applications typically include split air conditioning systems, split heat pumps, manufactured homes, and pre-charged line sets.

Application

- Split air conditioning systems
- Split heat pumps
- Manufactured homes

Base Product Part Number

- **5780** Female coupling half without charge port
- **5781** Female coupling half with charge port
- **5782** Male coupling half without charge port
- **5783** Male coupling half with charge port

Features and Benefits

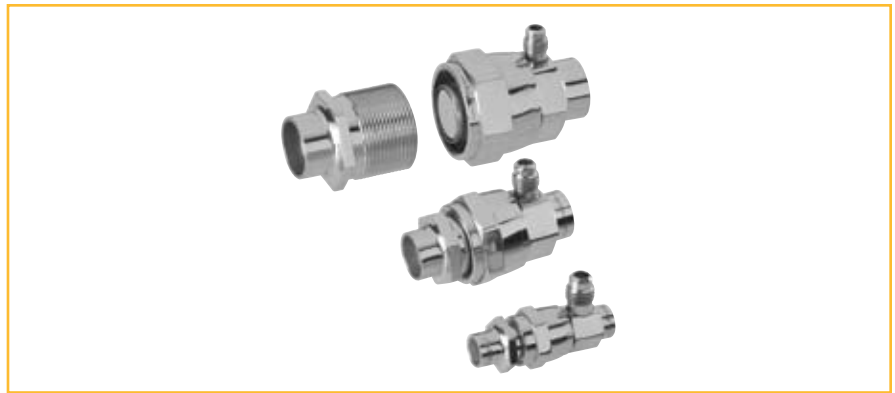
- Single-use coupling contains a diaphragm that is pierced upon connection and folded back into the coupling to provide a high flow path and low pressure drop.
- Final metal-to-metal seal prevents air inclusion.
- Brass coupling provides corrosion resistance.
- Brass sweat connections and panel-mounting options are available for the unique needs of a unit.
- Male/female charge ports can be included for easy system diagnostics.
- Stub kits (FD57) are also available with copper connections.
- Compatible with all refrigerants
- RoHS compliant

Agency Approvals

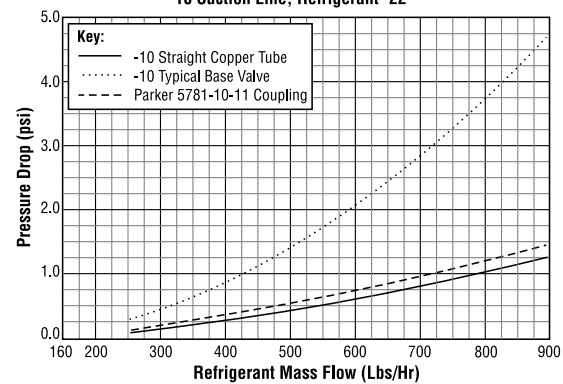
UL listed; File No: SA7511

Pressure Drop Comparison

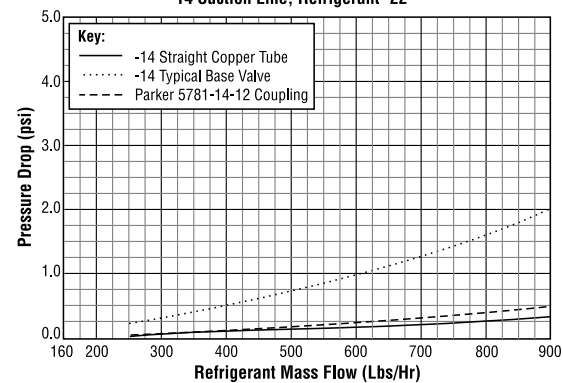
The graphs below show significant reduction in pressure drop and associated efficiency gains utilizing Parker 5700 Series Couplings vs. standard base valves.



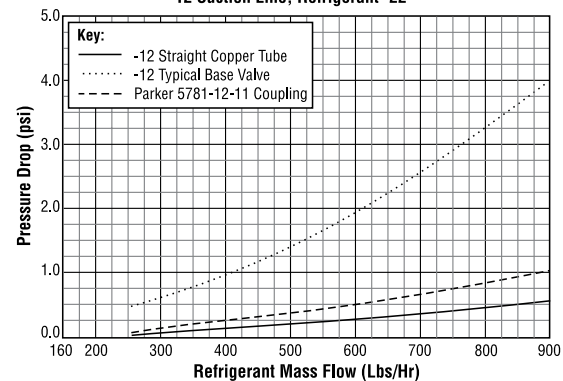
Pressure Drop vs. Mass Flow
-10 Suction Line, Refrigerant -22



Pressure Drop vs. Mass Flow
-14 Suction Line, Refrigerant -22



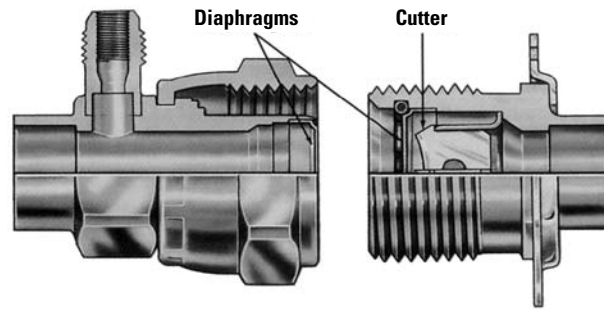
Pressure Drop vs. Mass Flow
-12 Suction Line, Refrigerant -22



Technical Information

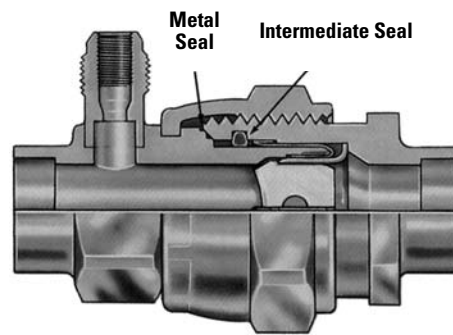
Design and Operation

A complete 5780 series coupling consists of the combination of male and female coupling halves. Either coupling half is available with or without a charging port, depending on the particular application.



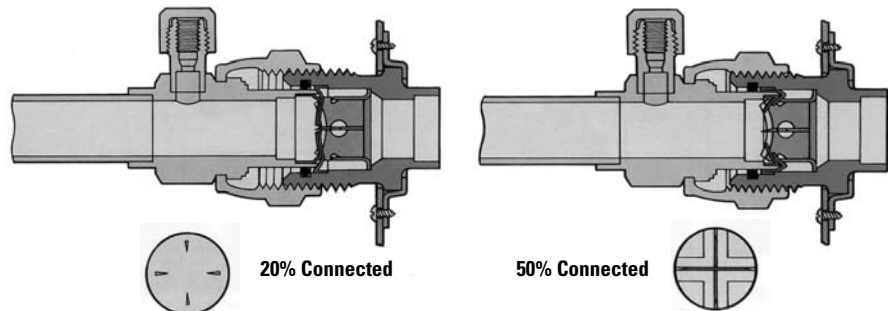
Coupling Halves Before Connection

Diaphragms in the coupling halves provide a seal that prevents refrigerant loss before connection. The male half (right unit) contains a cutter blade, the metal refrigerant sealing diaphragm and intermediate synthetic rubber seal which prevent loss of refrigerant while the coupling is being connected. The female half (left unit) contains a metal diaphragm which is a leakproof metal closure.



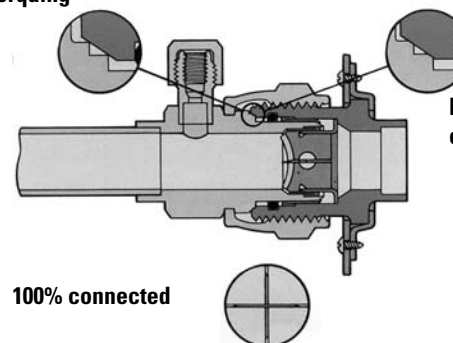
Coupling Halves Connected

Tightening the union nut draws the coupling halves together, piercing and folding both metal diaphragms back and opening the fluid passage, thereby providing minimal restriction to flow. When fully coupled, a metal seal forms a permanent leakproof joint between the two coupling halves preventing the loss of refrigerant to the atmosphere.



The cutaway views below show male and female coupling halves joined at 20%, 50%, and 100% connection. Note the way the cutter blades pierce the diaphragms and fold them back out of the flow path. Also note the difference in the final sealing area before and after torquing.

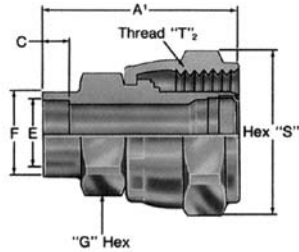
Final sealing area connected prior to torquing



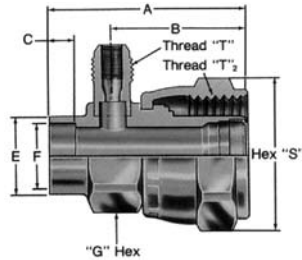
100% connected

Dimensions

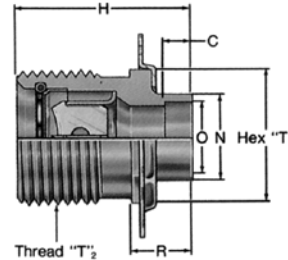
5780-Size Female Half without Charge Port



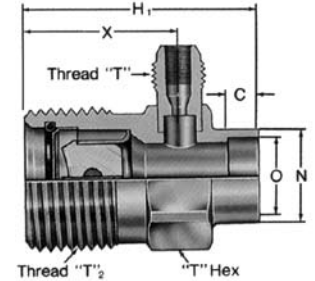
5781-Size Female Half with Charge Port



5782-Size Male Half without Charge Port



5783-Size Male Half with Charge Port



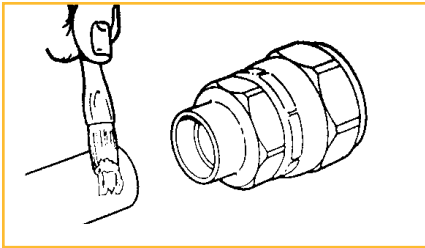
Dimensional Data – English Units

Basic Cplg. Size	O.D. Tubing Size Inches	Cplg. Dash Size	Thread "T"	Thread "T2"	Dimensions – Inches														
					A	A1	B	C	E	F	G	H	H1	N	O	R	S	T	X
-6	1/4	-4-6	7/16"-20	5/8"-18	1.55	1.30	1.06	0.19	0.25	0.38	0.62	1.21	1.46	0.38	0.25	0.50	0.81	0.75	0.98
-6	5/16	-5-6	7/16"-20	5/8"-18	1.55	1.30	1.06	0.19	0.32	0.44	0.62	1.21	1.46	0.44	0.32	0.50	0.81	0.75	0.98
-6	3/8	-6-6	7/16"-20	5/8"-18	1.55	1.30	1.06	0.19	0.38	0.50	0.62	1.21	1.51	0.50	0.38	0.50	0.81	0.75	0.98
-10	1/2	-8-10	7/16"-20	1-1/16"-12	1.81	1.56	1.24	0.25	0.50	0.62	1.00	1.37	1.66	0.62	0.50	0.52	1.31	1.06	1.10
-10	5/8	-10-10	7/16"-20	1-1/16"-12	1.86	1.61	1.24	0.25	0.62	0.75	1.00	1.43	-	0.75	0.62	0.56	1.31	1.06	-
-10	3/4	-12-10	7/16"-20	1-1/16"-12	1.92	1.67	1.24	0.25	0.75	0.91	1.00	1.52	1.66	0.91	0.75	0.65	1.31	1.06	1.10
-11	1/2	-8-11	7/16"-20	1-1/8"-12	1.85	1.60	1.28	0.25	0.50	0.62	1.00	1.48	1.78	0.62	0.50	0.50	1.31	1.12	1.21
-11	5/8	-10-11	7/16"-20	1-1/8"-12	1.90	1.65	1.28	0.25	0.62	0.75	1.00	1.54	1.84	0.75	0.62	0.56	1.31	1.12	1.22
-11	3/4	-12-11	7/16"-20	1-1/8"-12	1.96	1.71	1.28	0.25	0.75	0.91	1.00	1.63	1.84	0.91	0.75	0.65	1.31	1.12	1.22
-11	7/8	-14-11	7/16"-20	1-1/8"-12	2.06	1.81	1.28	0.31	0.88	0.98	1.00	1.70	1.92	1.03	0.88	0.72	1.31	1.12	1.22
-12	3/4	-12-12	7/16"-20	1-7/16"-16	2.26	2.01	1.60	0.25	0.75	0.91	1.38	1.78	-	0.91	0.75	0.63	1.69	1.44	-
-12	7/8	-14-12	7/16"-20	1-7/16"-16	2.36	2.11	1.60	0.31	0.88	1.03	1.38	1.87	-	1.03	0.88	0.72	1.69	1.44	-
-12	1-1/8	-18-12	7/16"-20	1-7/16"-16	2.43	2.18	1.60	0.31	1.12	1.28	1.38	1.98	-	1.28	1.12	0.84	1.69	1.44	-

Dimensional Data – Metric Units

Basic Cplg. Size	O.D. Tubing Size Inches	Cplg. Dash Size	Thread "T"	Thread "T2"	Dimensions – mm														
					A	A1	B	C	E	F	G	H	H1	N	O	R	S	T	X
-6	1/4	-4-6	7/16"-20	5/8"-18	39.37	33.02	26.92	4.83	6.35	9.65	15.75	30.73	37.08	9.65	6.35	12.70	20.57	19.05	24.89
-6	5/16	-5-6	7/16"-20	5/8"-18	39.37	33.02	26.92	4.83	8.13	11.18	15.75	30.73	37.08	11.18	8.13	12.70	20.57	19.05	24.89
-6	3/8	-6-6	7/16"-20	5/8"-18	39.37	33.02	26.92	4.83	9.65	12.70	15.75	30.73	38.35	12.70	9.65	12.70	20.57	19.05	24.89
-10	1/2	-8-10	7/16"-20	1-1/16"-12	45.97	39.62	31.50	6.35	12.70	15.75	25.40	34.80	42.16	15.75	12.70	13.21	33.27	26.92	27.94
-10	5/8	-10-10	7/16"-20	1-1/16"-12	47.24	40.89	31.50	6.35	15.75	19.05	25.40	36.32	-	19.05	15.75	14.22	33.27	26.92	-
-10	3/4	-12-10	7/16"-20	1-1/16"-12	48.77	42.42	31.50	6.35	19.05	23.11	25.40	38.61	42.16	23.11	19.05	16.51	33.27	26.92	27.94
-11	1/2	-8-11	7/16"-20	1-1/8"-12	46.99	40.64	32.51	6.35	12.70	15.75	25.40	37.59	45.21	15.75	12.70	12.70	33.27	28.45	30.73
-11	5/8	-10-11	7/16"-20	1-1/8"-12	48.26	41.91	32.51	6.35	15.75	19.05	25.40	39.12	46.74	19.05	15.75	14.22	33.27	28.45	30.99
-11	3/4	-12-11	7/16"-20	1-1/8"-12	49.78	43.43	32.51	6.35	19.05	23.11	25.40	41.40	46.74	23.11	19.05	16.51	33.27	28.45	30.99
-11	7/8	-14-11	7/16"-20	1-1/8"-12	52.32	45.97	32.51	7.87	22.35	24.89	25.40	43.18	48.77	26.16	22.35	18.29	33.27	28.45	30.99
-12	3/4	-12-12	7/16"-20	1-7/16"-16	57.40	51.05	40.64	6.35	19.05	23.11	35.05	45.21	-	23.11	19.05	16.00	42.93	36.58	-
-12	7/8	-14-12	7/16"-20	1-7/16"-16	59.94	53.59	40.64	7.87	22.35	26.16	35.05	47.50	-	26.16	22.35	18.29	42.93	36.58	-
-12	1-1/8	-18-12	7/16"-20	1-7/16"-16	61.72	55.37	40.64	7.87	28.45	32.51	35.05	50.29	-	32.51	28.45	21.34	42.93	36.58	-

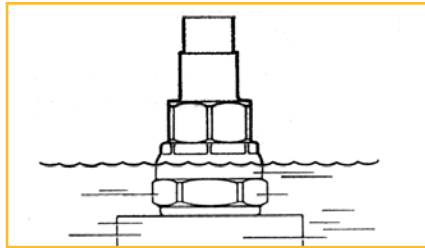
Factory Brazing Instructions



Step 1

Sparingly apply paste flux to the copper tube.

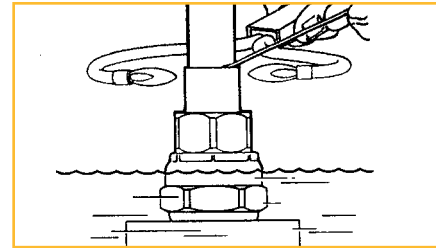
Note: Liquid flux or excessive flux can run inside the coupling and cause corrosion.



Step 2

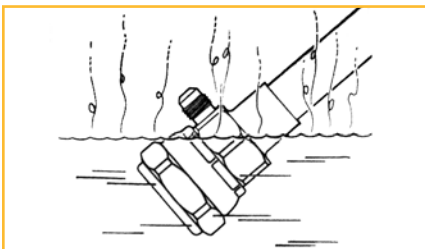
Immerse the coupling diaphragm end into a flowing cool water bath.

- 5780 and 57781 female halves: Water level should be halfway up the nut and the nut hex fully immersed.
- 5782 and 5783 male halves: Water level should fully cover the threads.



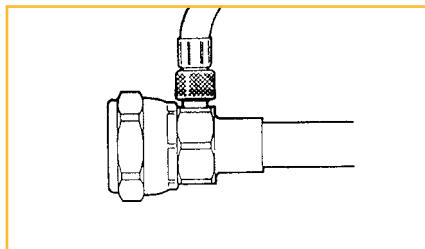
Step 3

Use a double tip torch to promote even heating and reduce braze time.



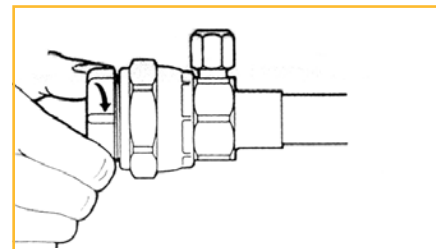
Step 4

After the alloy solidifies, quench the tubing and coupling to reduce the temperature below 400°F. Make sure the water does not enter the open charge port in the 5781 or 5783 half.



Step 5

The couplings can be subjected to unit test pressures up to 300 psig. If pressures in excess of 300 psig are used, the protector caps and plugs should be installed.



Step 6

Protector caps and plugs should be installed finger tight. Overtightening can damage the diaphragm. The diaphragm and O-ring can be lubricated with refrigerant oil prior to installing the protector caps or plugs as added assurance of proper lubrication when connected at unit installation.

Male-Half Installation Procedure

Male half (5782) should be mounted with the hex on the inside of the unit held in place with the appropriate mounting flange. Sheet metal opening, screw hole diameter, and mounting bolt circle dimensions are included in the chart below.

Coupling Part Number	Coupling Hex Size	Recommended Sheet Metal Opening		Flange Part Number	Mounting Bolt Circle		Screw Hole Diameter	
		Inches	mm		Inches	mm	Inches	mm
5782-Size-6	3/4"	0.656	16.6	5700-22-6	1.44	36.5	0.201	5.10
5782-Size-6	3/4"	0.656	16.6	5706-22-6	1.44	36.5	0.153	3.88
5782-Size-10	1-1/16"	1.094	27.7	FD67-1110-10	1.69	42.9	0.201	5.10
5782-Size-10	1-1/16"	1.094	27.7	FD67-1008-12	1.69	42.9	0.153	3.88
5782-Size-11	1-1/8"	1.156	29.3	150-22-8	1.69	42.9	0.201	5.10
5782-Size-11	1-1/8"	1.156	29.3	5700-22-10	1.69	42.9	0.153	3.88
5782-Size-12	1-7/16"	1.469	37.3	FD57-1110-12	2.12	53.8	0.201	5.10
5782-Size-12	1-7/16"	1.469	37.6	FD57-1111-12	2.12	53.8	0.153	3.88

Line-Set Field Installation Instructions

Step 1

Apply refrigerant oil to the entire surface of diaphragm, o-ring, and threaded area of male coupling assembly. The amount of lubricant used must cover all designated surfaces sufficiently. Ideal application is a small applicator brush saturated with lubricant and applied liberally. An alternate lubricant for this application is a refrigerant compatible silicone grease product like Dow Corning DC200/60,000 cst.

Step 2

Ensure that the coupling halves are held in proper alignment with each other prior to starting the threads of the female coupling nut onto the male half. The coupling end faces should be parallel with each other and visually in line with each other, this allows the female

coupling nut to be easily threaded on by hand for the initial 2-3 rotation of the union nut. These initial rotations will bring the diaphragm in contact and a sharp increase in torque will be felt when they come into contact.

If the nut will not start by hand, adjust the position of the line set to ensure proper coupling alignment and eliminate/minimize all side-load force on the coupling during assembly.

Step 3

Using appropriate size wrenches, reference table below for the female coupling body and female union nut, tighten the female union nut while preventing rotation of the female body with respect to the male half. The nut should be tightened until a definite increase in resistance, metal to metal contact occurs, is felt (at

this point, the nut will have covered most of the threads on the male body). It is important to ensure the male and female coupling bodies **DO NOT ROTATE** during any portion of the wrench installation.

Step 4

Using a permanent marker or scribe, mark a line lengthwise from the female coupling union nut to either the bulkhead or female coupling body. Then tighten an additional one (1) wrench flat (60°); refer to the marking on the union nut to confirm the rotation has occurred. This final rotation is necessary to ensure the formation of the leak-proof seal, between the male and female couplings.

Step 5

Repeat step 1 through 4 for all connections.

Size Designation	Torque Values Union Nut Min-Max		Male Coupling Hex Size		Female Coupling Union Nut Hex Size		Female Coupling Body Hex Size	
	Ft. Lbs	N.m	Inches	mm	Inches	mm	Inches	mm
-Copper-06	10-12	13.5 - 16.2	3/4	19.05	11/16	17.46	5/8	15.87
-Copper-10	35-45	47.5 - 61.0	1-1/16	26.98	1-5/16	33.33	1	25.40
-Copper-11	35-45	47.5 - 61.0	1-1/8	28.57	1-5/6	46.55	1	25.40
-Copper-12	50-65	67.8 - 88.1	1-7/16	36.51	1-3/8	34.9	1-11/16	42.86

Reconnection Instructions

Note: The O-ring is only an intermediate seal during the initial connection of a precharged unit/line set combination. The O-ring is only used for sealing between the time the diaphragm is pierced and the final metal-to-metal seal is made.

The final leak-proof seal is a metal-to-metal connection made between the male and female coupling bodies.

Step 1

Upon disconnection, remove O-ring.

Step 2

If O-ring is missing from groove, insure O-ring is not lodged inside coupling halves and reconnect without O-ring.

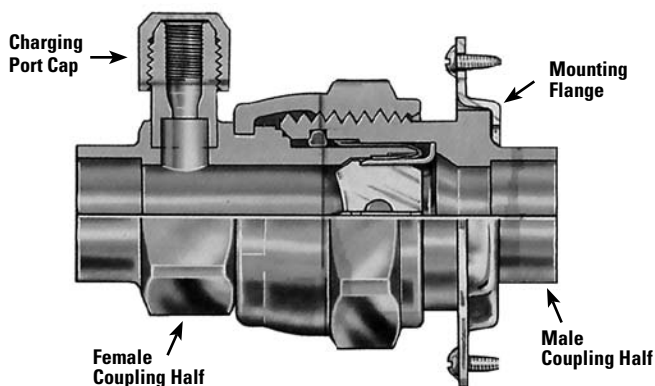
Step 3

Carefully wipe coupling seats and threaded surfaces with a clean cloth, to prevent the inclusion of dirt or any foreign material in the system.

Step 4

Lubricate male half diaphragm with system-compatible refrigerant oil. Thread coupling halves together by hand to insure proper mating of threads. Use proper size wrenches (on coupling body hex and on union nut) and tighten until

Order Options



coupling bodies seat or seal or a definite resistance is felt.

Step 5

Using a marker, mark a line lengthwise from the coupling union nut to the bulkhead. Then tighten an additional one (1) wrench flat (60°); the misalignment of the line will show the amount the coupling has been tightened. This final rotation is necessary to insure the formation of a leakproof joint.

If a torque wrench is used, the following torque values are recommended:

Coupling Size	Ft/Lbs	N.m
-6	10 - 12	13.5 - 16.2
-10	35 - 45	47.5 - 61.0
-11	35 - 45	47.5 - 61.0
-12	55 - 65	74.6 - 88.1

Basic Coupling Size	O.D. Tube Size Inches	Female Coupling Half without Charging Port (Includes Plug)	Female Coupling Half with Charging Valve Port less Cap and Core (Includes Plug)	Male Coupling Half with Protector Cap less Mounting Flange	Male Coupling Half with Charging Valve Port less Cap and Core (Includes Plug)	Mounting Flanges for 5782 Couplings Only		Charging Port Cap	Charging Valve Core
						Bolt Hole Dia. 0.15 (#10 Screw)	Bolt Hole Port (#14 Screw)		
-6	1/4	5780-4-6	5781-4-6	5782-4-6	5783-4-6	5706-22-6	5700-22-6	221014-4B	222034-4
-6	5/16	5780-5-6	5781-5-6	5782-5-6	—	5706-22-6	5700-22-6	221014-4B	222034-4
-6	3/8	5780-6-6	5781-6-6	5782-6-6	5783-6-6	5706-22-6	5700-22-6	221014-4B	222034-4
-10	1/2	5780-8-10	5781-8-10	5782-8-10	5783-8-10	FD67-1008-12	FD57-1111-10	221014-4B	222034-4
-10	5/8	5780-10-10	5781-10-10	5782-10-10	—	FD67-1008-12	FD57-1111-10	221014-4B	222034-4
-10	3/4	5780-12-10	5781-12-10	5782-12-10	5783-12-10	FD67-1008-12	FD57-1111-10	221014-4B	222034-4
-11	1/2	5780-8-11	5781-8-11	5782-8-11	5783-8-11	5700-22-10	150-22-8	221014-4B	222034-4
-11	5/8	5780-10-11	5781-10-11	5782-10-11	—	5700-22-10	150-22-8	221014-4B	222034-4
-11	3/4	5780-12-11	5781-12-11	5782-12-11	5783-12-11	5700-22-10	150-22-8	221014-4B	222034-4
-11	7/8	5780-14-11	5781-14-11	5782-14-11	5783-14-11	5700-22-10	150-22-8	221014-4B	222034-4
-12	3/4	5780-12-12	5781-12-12	5782-12-12	—	FD57-1111-12	FD57-1110-12	221014-4B	222034-4
-12	7/8	5780-14-12	5781-14-12	5782-14-12	—	FD57-1111-12	FD57-1110-12	221014-4B	222034-4
-12	1-1/8	5780-18-12	5781-18-12	5782-18-12	—	FD57-1111-12	FD57-1110-12	221014-4B	222034-4

FD57 Series Stub Kit Couplings

Parker's FD57 series stub kit couplings combine the 5700 series couplings with unique copper connections. The additional copper creates a drop-in replacement and allows copper-to-copper brazing.

Application

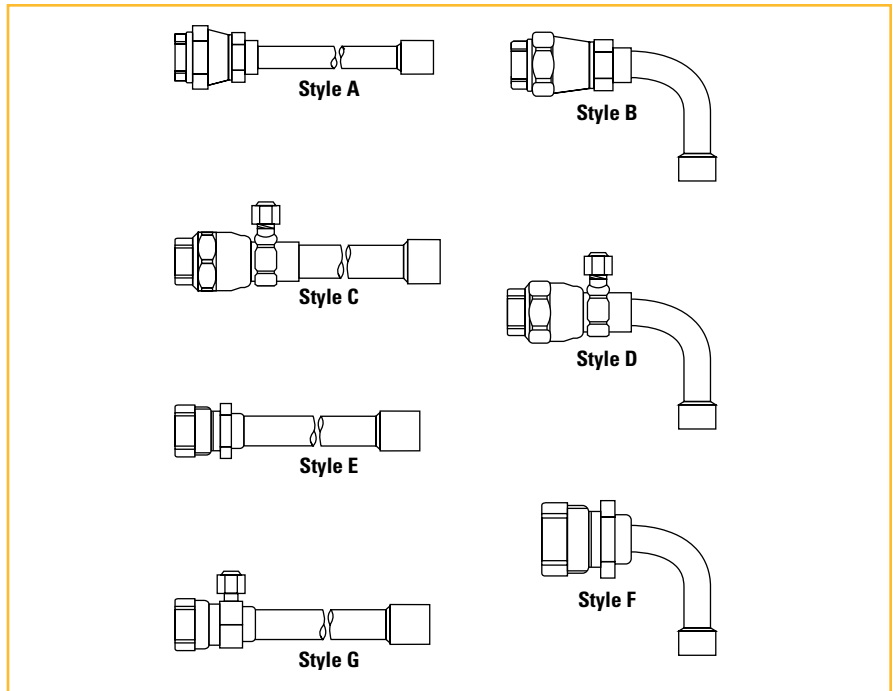
- Factory precharged heat pump and split-type air conditioning systems.

Base Product Part Number

- FD57 - XXXX - Copper size - coupling size

Features and Benefits

- Easy installation of replacement units.
- Direct copper braze capability.



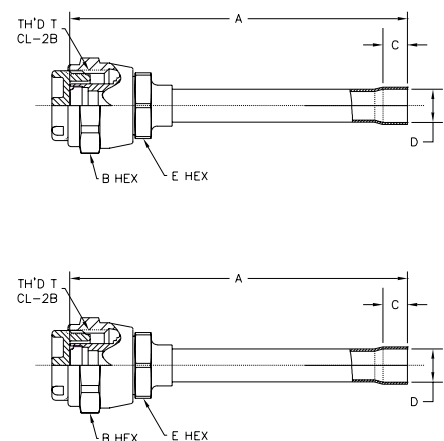
Agency Approvals

UL Recognized;
File No. SA7511

Style A

5780 Series Coupling with Straight/Belled Copper Configuration

Part Number	Dimensions – Inches					
	Thread T	A Ref.	B Ref.	C Ref.	D Ref.	E Ref.
FD57-1127-04-06	5/8"-18	4.09	0.81	0.31	0.25	0.62
FD57-1127-06-06	5/8"-18	4.09	0.81	0.31	0.38	0.62
FD57-1127-08-10	1-1/16"-12	5.28	1.31	0.38	0.50	1.00
FD57-1127-08-11	1-1/8"-12	5.32	1.31	0.38	0.50	1.00
FD57-1127-10-10	1-1/16"-12	5.73	1.31	0.50	0.62	1.00
FD57-1127-12-11	1-1/8"-12	5.83	1.31	0.62	0.75	1.00

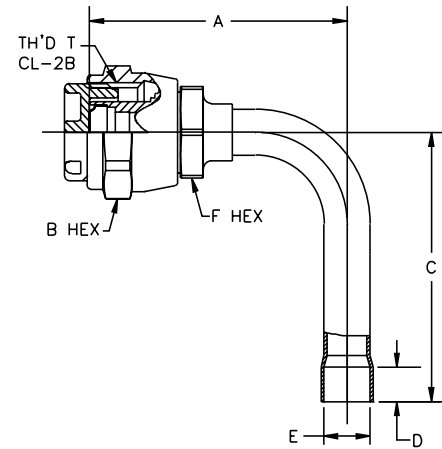


Dimensions

Style B

5780 Series Coupling with Bent/Belled Copper Configuration

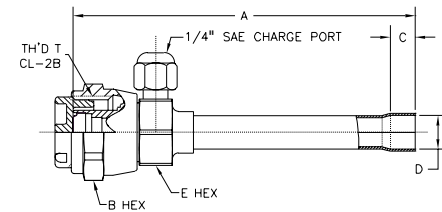
Part Number	Thread T	Dimensions – Inches					
		A Ref.	B Ref.	C Ref.	D Ref.	E Ref.	F Ref.
FD57-1128-06-06	5/8"-18	2.30	0.81	2.16	0.31	0.38	0.62
FD57-1128-08-10	1-1/16"-12	2.81	1.31	2.94	0.38	0.50	1.00
FD57-1128-08-11	1-1/8"-12	2.85	1.31	2.94	0.38	0.50	1.00
FD57-1128-10-10	1-1/16"-12	2.86	1.31	3.34	0.50	0.62	1.00
FD57-1128-10-11	1-1/8"-12	2.90	1.31	3.34	0.50	0.62	1.00
FD57-1128-12-11	1-1/8"-12	2.96	1.31	3.34	0.62	0.75	1.00



Style C

5781 Series Coupling with Straight/Belled Copper Configuration

Part Number	Thread T	Dimensions – Inches				
		A Ref.	B Ref.	C Ref.	D Ref.	E Ref.
FD57-1084-06-06	5/8"-18	7.42	0.81	0.75	0.375	0.62
FD57-1084-10-10	1-1/16"-12	7.86	1.31	0.75	0.625	1.00
FD57-1084-14-11	1-1/8"-12	8.00	1.31	0.75	0.875	1.00
FD57-1084-12-11	1-1/8"-12	7.96	1.31	0.75	0.750	1.00
FD57-1084-10-11	1-1/8"-12	7.90	1.31	0.75	0.625	1.00
FD57-1129-04-06	5/8"-18	4.34	0.81	0.31	0.25	0.62
FD57-1129-05-06	5/8"-18	4.34	0.81	0.31	0.31	0.62
FD57-1129-06-06	5/8"-18	4.34	0.81	0.31	0.38	0.62
FD57-1129-08-10	1-1/16"-12	5.53	1.31	0.38	0.50	1.00
FD57-1129-10-10	1-1/16"-12	5.98	1.31	0.50	0.62	1.00
FD57-1129-10-11	1-1/8"-12	6.02	1.31	0.50	0.62	1.00
FD57-1129-12-11	1-1/8"-12	6.08	1.31	0.62	0.75	1.00
FD57-1129-12-12	1-1/16"-12	6.38	1.69	0.62	0.75	1.38
FD57-1129-14-11	1-1/8"-12	4.03	1.31	0.75	0.88	1.00
FD57-1129-14-12	1-1/16"-12	4.03	1.69	0.75	0.88	1.38
FD57-1129-18-11	1-1/8"-12	4.03	1.31	0.91	1.12	1.00
FD57-1147-06-06	5/8"-18	4.34	0.81	0.31	0.38	0.62
FD57-1147-06-11	1-1/8"-12	4.50	1.31	0.31	0.38	1.00
FD57-1147-08-10	1-1/16"-12	5.53	1.31	0.38	0.50	1.00
FD57-1157-06-06	5/8"-18	5.55	0.81	0.31	3/8	0.62

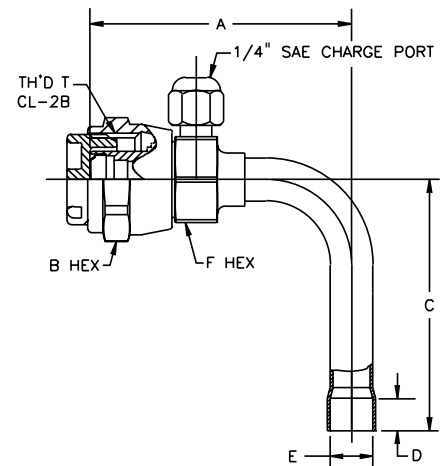


Dimensions

Style D

5781 Series Coupling with Bent/Belled Copper Configuration

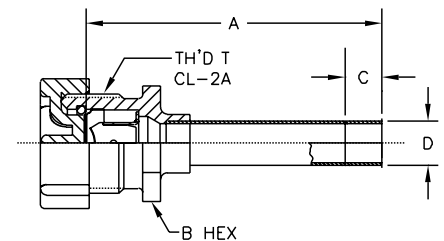
Part Number	Thread T	Dimensions – Inches					
		A Ref.	B Ref.	C Ref.	D Ref.	E Ref.	F Ref.
FD57-1130-06-06	5/8"-18	2.55	0.81	2.16	0.31	0.38	0.62
FD57-1130-08-10	1-1/16"-12	3.06	1.31	2.94	0.38	0.50	1.00
FD57-1130-10-10	1-1/16"-12	3.11	1.31	3.34	0.50	0.62	1.00
FD57-1130-12-11	1-1/8"-12	3.21	1.31	3.34	0.62	0.75	1.00
FD57-1130-12-12	1-1/16"-12	3.51	1.69	3.34	0.62	0.75	1.38
FD57-1130-14-11	1-1/8"-12	3.81	1.31	2.97	0.75	0.88	1.00
FD57-1130-14-12	1-1/16"-12	4.11	1.69	2.97	0.75	0.88	1.38
FD57-1145-10-11	1-1/8"-12	3.15	1.31	3.34	0.50	0.62	1.00
FD57-1145-12-11	1-1/8"-12	4.71	1.31	4.50	0.62	0.75	1.00
FD57-1145-14-11	1-1/8"-12	3.81	1.31	2.97	0.75	0.88	1.00
FD57-1145-18-11	1-1/8"-12	3.81	1.31	3.45	0.91	1.12	1.00
FD57-1148-06-06	3/4"-18	2.55	0.81	2.16	0.31	0.38	0.62
FD57-1148-08-10	1-1/16"-12	3.06	1.31	2.94	0.38	0.50	1.00



Style E

5782 Series Coupling with Straight/Belled Copper Configuration

Part Number	Thread T	Dimensions – Inches			
		A Ref.	B Ref.	C Ref.	D Ref.
FD57-1115-06-06	5/8"-18	7.08	0.75	0.75	0.375
FD57-1115-10-11	1-1/8"-12	7.54	1.12	0.75	0.625
FD57-1131-04-06	5/8"-18	4.00	0.75	0.31	0.25
FD57-1131-05-06	5/8"-18	4.00	0.75	0.31	0.31
FD57-1131-06-06	5/8"-18	4.00	0.75	0.31	0.38
FD57-1131-08-10	1-1/16"-12	5.09	1.06	0.38	0.50
FD57-1131-10-10	1-1/16"-12	5.55	1.06	0.50	0.62
FD57-1131-10-11	1-1/8"-12	5.66	1.12	0.50	0.62
FD57-1131-12-12	1-1/16"-12	5.90	1.44	0.62	0.75
FD57-1131-14-11	1-1/8"-12	5.72	1.12	0.75	0.88
FD57-1131-14-12	1-1/16"-12	5.89	1.44	0.75	0.88
FD57-1146-06-06	5/8"-18	3.14	0.87	0.38	0.38
FD57-1146-06-11	1-1/8"-12	3.30	1.30	0.38	1.12
FD57-1146-08-10	1-1/16"-12	3.22	1.23	0.50	1.06

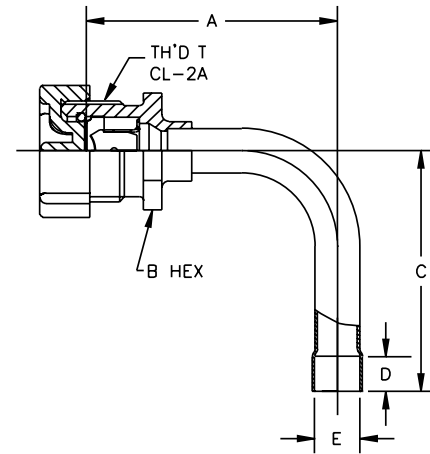


Dimensions

Style F

5782 Series Coupling with Bent/Belled Copper Configuration

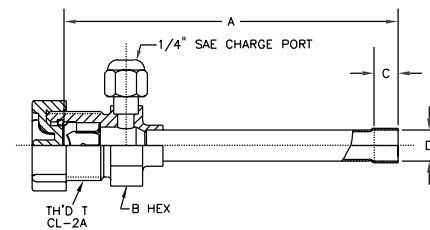
Part Number	Thread T	Dimensions – Inches				
		A Ref.	B Ref.	C Ref.	D Ref.	E Ref.
FD57-1132-06-06	5/8" -18	2.21	0.75	2.16	0.31	0.38
FD57-1132-10-10	1-1/16" -12	2.68	1.06	3.34	0.50	0.62
FD57-1132-12-11	1-1/8" -12	2.88	1.12	3.34	0.62	0.75
FD57-1132-14-11	1-1/8" -12	3.45	1.12	2.97	0.75	0.88



Style G

5783 Series Coupling with Straight/Belled Copper Configuration

Part Number	Thread T	Dimensions – Inches			
		A Ref.	B Ref.	C Ref.	D Ref.
FD57-1133-06-06	5/8" -18	4.25	0.62	0.31	0.38
FD57-1133-10-11	1-1/8" -12	5.96	1.12	0.5	0.62
FD57-1133-12-11	1-1/8" -12	5.96	1.12	0.62	0.75
FD57-1133-14-11	1-1/8" -12	5.94	1.12	0.75	0.88
FD57-1158-06-06	5/8" -18	5.46	0.62	0.31	3/8



RC04 Series Dual-Line ConnectAire™ Couplings

Parker's RC04 dual-line ConnectAire™ couplings are used to connect liquid and suction line for mini-split air conditioning and heat pump systems. Applications up to 2 tons can also include portable air conditioners, split refrigeration systems, remote condensing units, and beverage cases.

Application

- Split refrigeration systems
- Mini-split air conditioning and heat pump systems up to 2-tons
- Portable air conditioners

Base Product Part Number

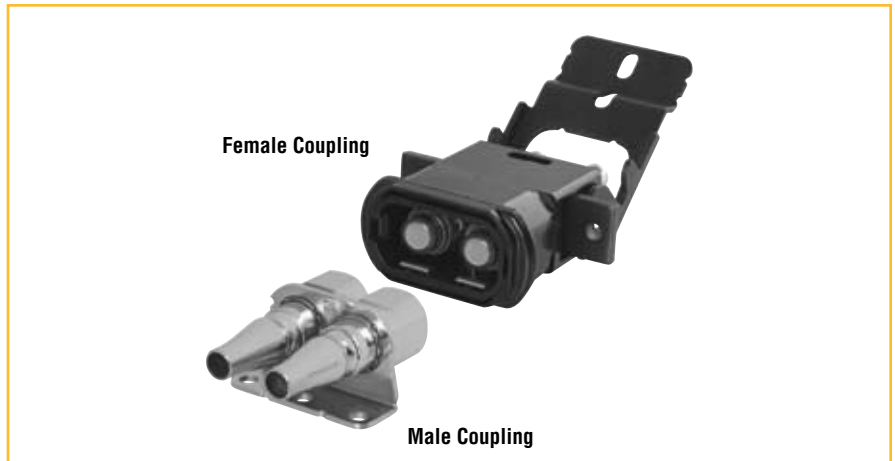
- **RC04-A01-6666, A02-6666, A01-6664**
Male Coupling
- **RC04-B02-6664, B02-6666, B04-6666 & B05-6565**
Female Coupling

Features and Benefits

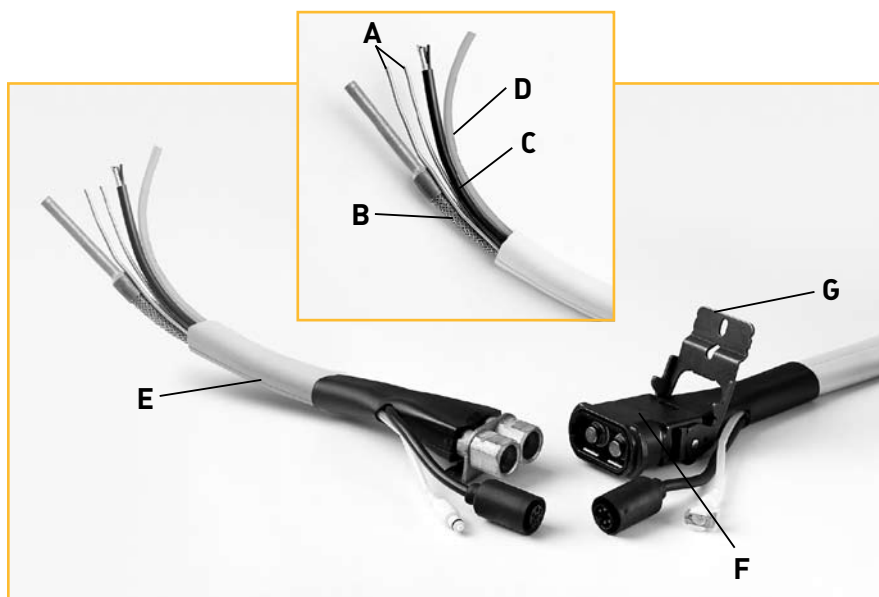
- Simultaneously and quickly connects both liquid and vapor lines without the use of tools.
- Self-sealing upon disconnection maintains minimum air inclusion and fluid loss.
- Brass coupling provides corrosion resistance.
- Copper-sweat connections provide basic ends for brazing and eliminate the need for flux, simplifying the installation process.
- Panel mounting options are available for the unique needs of a unit.

Specifications

Coupling Size	-6
Maximum Operating Pressure bar (psi)	27.6 (400)
Minimum Burst Pressure bar (psi)	137.9 (2000)
Vacuum Microns	50
Air Inclusion Per. Valve (cc. max.)	0.025
Operating Temperature Range °C (°F)	-40C to +121°C (-40°F to +250°F)
R22 Connected Leakage/Effusion Rating	<0.1 oz./yr.
Reusable Connections	>1000

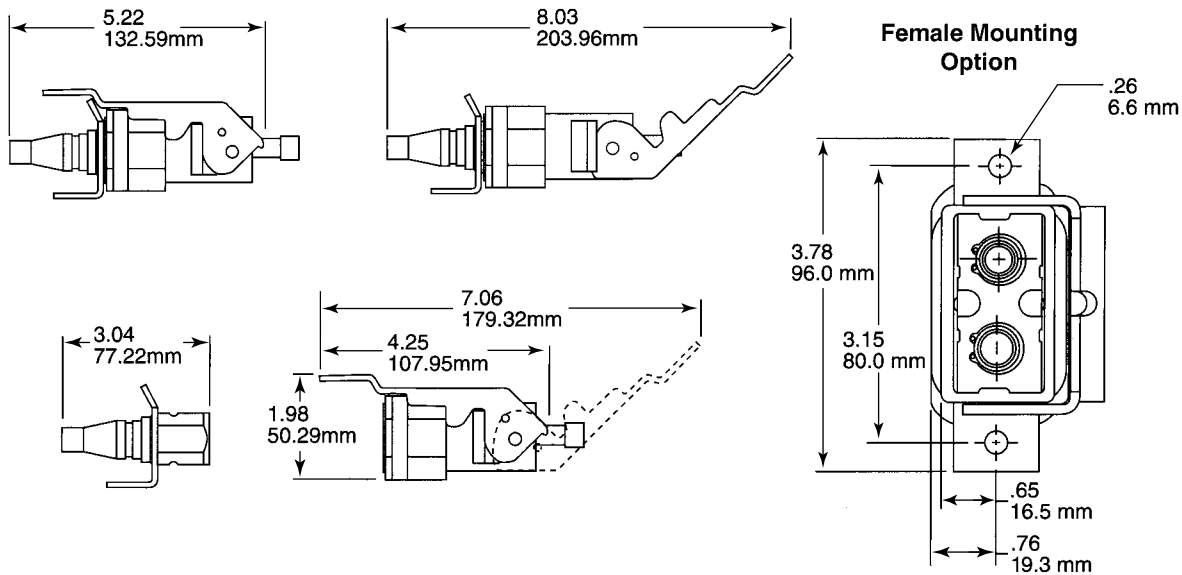


How ConnectAire™ Works in a Line-set Application



- A – Liquid Line (High Pressure)** — Liquid or capillary lines.
- B – Vapor Line (Low Pressure)** — Flexible, stainless steel line with copper tube end for easy factory installation.
- C – Electrical** — Wiring harnesses custom-made to your exact specifications.
- D – Condensate** — Flexible condensate line for water drainage.
- E – Cover** — Flexible protective case.
- F – Release Sleeve** — Sleeve retracts for connection and disconnection.
- G – Handle** — Movable handle locks couplings together.

Dimension Data



Installation Instructions

To Connect:

Step 1

Ensure that the handle (G) on the female coupling is in a reclined position away from the mating male coupling.

Step 2

Retract the release sleeve (F) on female coupling and insert the mating male coupling, located on the outside unit.

Step 3

Release the release sleeve to lock the male coupling into place.

Step 4

Fold the female coupling handle (G) towards the male coupling half and push until the handle seals behind the release sleeve and flat against the entire coupling assembly.

Step 5

Connect the auxiliary electrical (C) and condensate (D) lines.

Step 6

Connect the electrical power cord from the A/C unit into the appropriate electrical wall outlet and start the A/C unit.

To Disconnect:

Step 1

Shut down the A/C unit and unplug the electrical power cord from the wall outlet.

Step 2

Wait five minutes for the line pressure between the indoor compressor unit and outdoor condensing unit to equalize.

Step 3

Pull the female coupling handle (G) up and toward the female coupling to the "full back" position.

Step 4

Retract the release sleeve (F) on the female coupling to release the male coupling half from the female half.

Step 5

Disconnect the auxiliary electrical (C) and condensate (D) lines.

Step 6

The indoor compressor unit can now be moved to another location.

Options

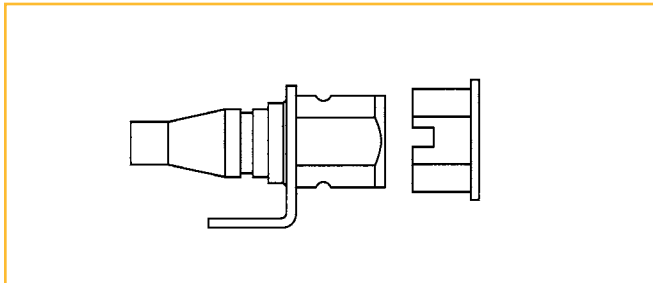
Female Mounting Option



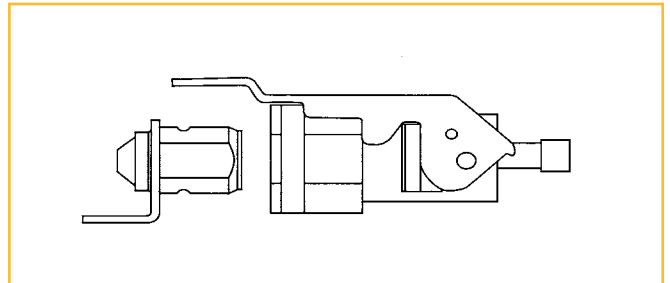
Protective Transition Boot



Protective Cap for Male Half



Protective Plug for Female Half



RC01C Series Automotive R134a Service Coupling

Parker's RC01C automotive service coupling provides easy evacuating and charging of HFC-134a mobile air conditioning systems.

Application

- Evacuating and charging of HFC-134a air conditioning systems

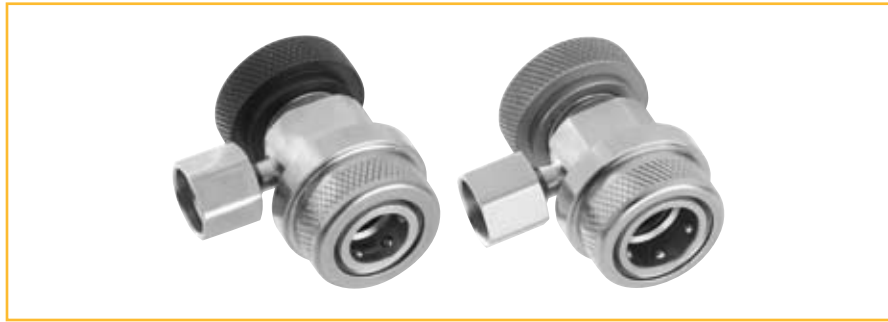
Base Product Part Number

- **RC01C-002**
Lowside field service coupling
- **RC01C-003**
Highside field service coupling

*See the following page for brass and plated part numbers and configurations.

Features and Benefits

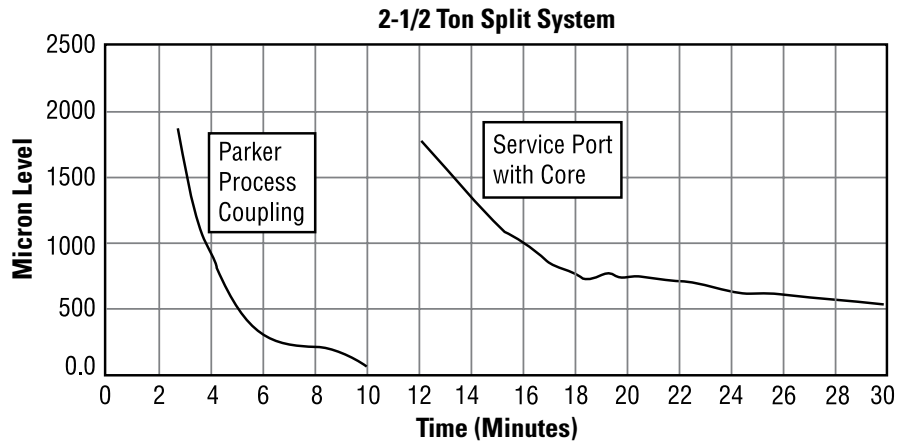
- Safety feature prevents coupling from flowing unless connected to service port.
- Brass coupling, with or without plating, provides corrosion resistance.
- Red anodized knob on the high side and blue anodized knob on the low side, along with distinct sizes, assist in preventing cross-contamination between sections of the system.



Agency Approvals

RC01C – UL recognized;
File No. SA7511
U.S. Patent No. RE34,781

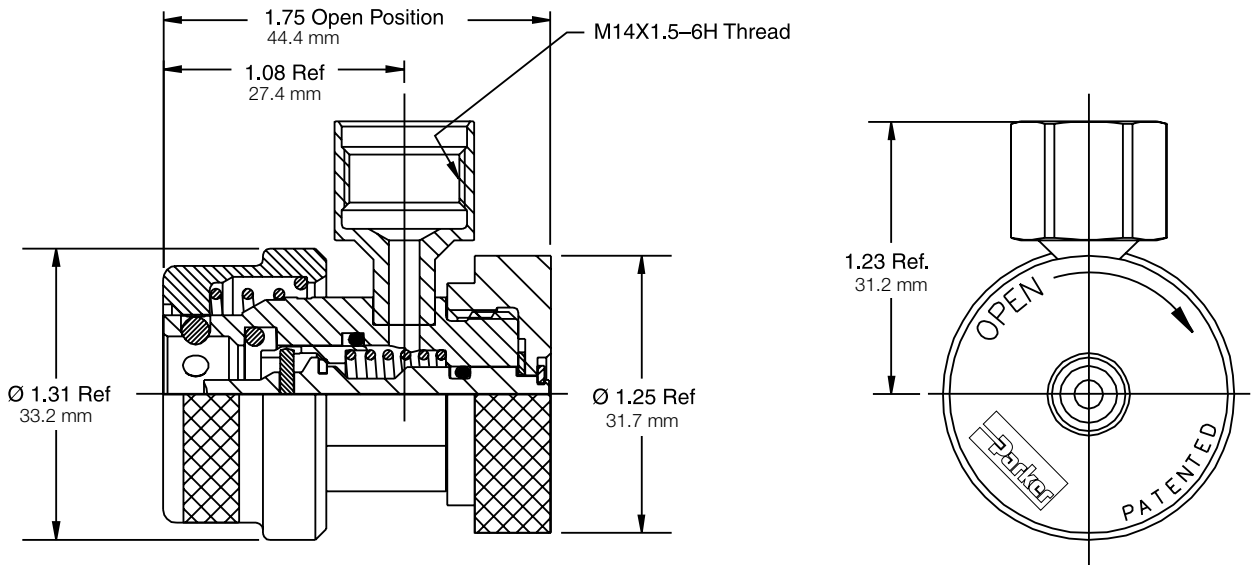
Vacuum Compression



Dimensions

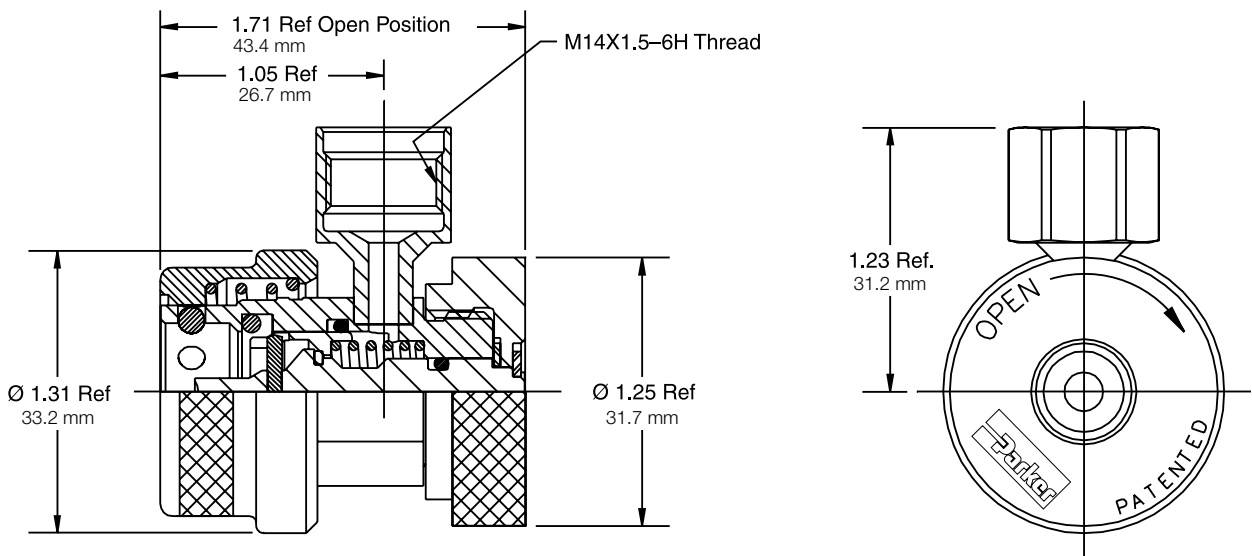
RC01C-002 Service Coupling Assembly

Low Side, R134a



RC01C-003 Service Coupling Assembly

High Side, R134a



Finish	Side Port	System Side	Part Number
Plated	14 mm Female	Low Side	RC01C-002
Plated	14 mm Female	High Side	RC01C-003
Plated	5/8" - 18 Male	Low Side	RC01C-006
Plated	5/8" - 18 Male	High Side	RC01C-007
Plated	7/16" - 20 Male	Low Side	RC01C-011
Plated	7/16" - 20 Male	High Side	RC01C-012

Finish	Side Port	System Side	Part Number
Brass	14 mm Female	Low Side	RC01C-021
Brass	14 mm Female	High Side	RC01C-022
Brass	7/16" - 20 Male	Low Side	RC01C-023
Brass	7/16" - 20 Male	High Side	RC01C-024

RC05 Series Multi-Purpose Process Coupling

Parker's RC05 multi-purpose process coupling provides rapid in-plant processing of air conditioning and heat pump systems. A service adapter also provides access for evacuation and charging of units in the field.

Application

- Residential split-system air conditioners and heat pumps
- Packaged air conditioners and heat pumps
- Ice making systems

Base Product Part Number

RC05

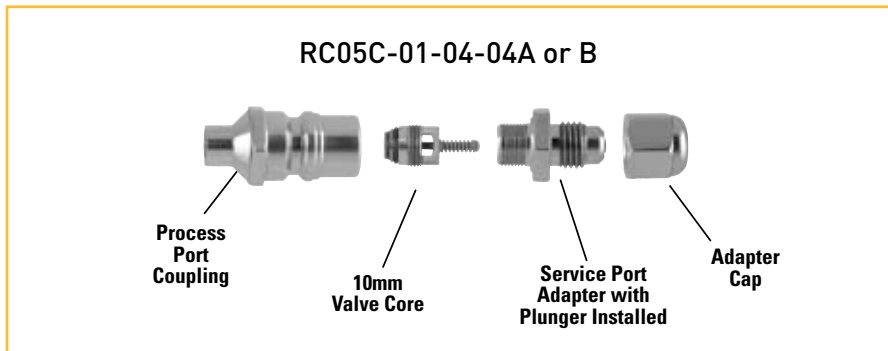
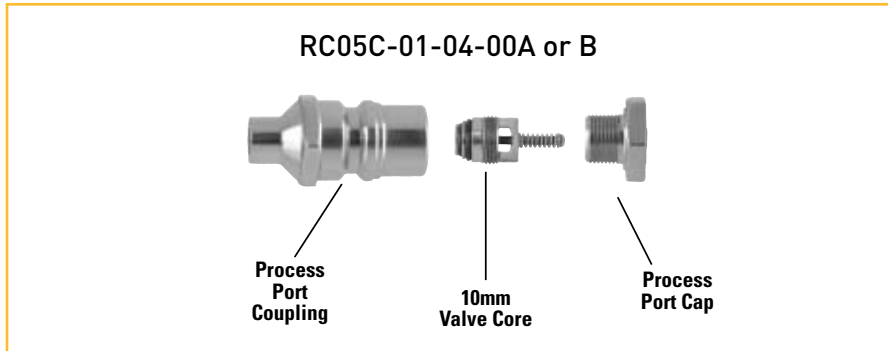
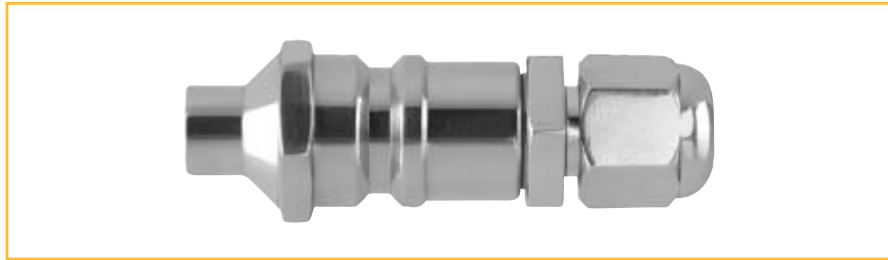
Features and Benefits

- Valve core is installed in the process port coupling to eliminate accidental removal in the field, reducing the potential for injury and refrigerant loss.
- Optional adapter converts process coupling to a standard field service port, eliminating the need for a separate service port and additional braze joints.
- Distinct coupling interfaces, one for R-22 and one for R-410A, prevent cross-contamination of refrigerant.
- Frontloaded valve core allows for easy brazing and high flow.
- Brass coupling provides corrosion resistance.
- Connects to a steel female coupling with a ball latch to provide consistent sealing and easy connection/disconnection force.
- Compact design provides mounting flexibility, along with minimum air inclusion and fluid loss.

Agency Approvals

File No. SA7511

Patent No. 6,848,670



Features and Performance

Features	
Combined Process and Service Port	Yes
Flow Performance Equivalent To:	1/4" Tube
Female Coupling Latch Type	Ball Latch
Valve Core can be Installed After Brazing	Yes
R-22 and R-410A Versions	Yes
7/16"-20 or 1/2"-20 Service Threads	Yes
Performance	
Flow Rate at 75 psi (SCFM) (1)/(3)	28 (PCU Female)
Air Inclusion (cc)	1.70 (Spl. PCU Female)
Fluid Loss Upon Disconnection (cc)	1.50 (Spl. PCU Female)
Force to Connect Female (lbs) at Zero psi	7 (PCU Female)
Force to Connect Female (lbs) at 125 psi	5 (PCU Female) (6)
Dimensions	
Length of Male Port (with cap installed)	2.08" With Adapter
Max. Diameter of Male Port (with cap installed)	0.69" (5)
Max. Diameter of Female Coupling	1.19" (Without Collar)

CLIMATE CONTROL

- Accumulators
- CO₂ controls
- Electronic controllers
- Filter-driers
- Hand shut-off valves
- Heat exchangers
- Hose & fittings
- Pressure regulating valves
- Refrigerant distributors
- Safety relief valves
- Solenoid valves
- Thermostatic expansion valves



AEROSPACE

- Flight control systems & components
- Fluid conveyance systems
- Fluid metering delivery & atomization devices
- Fuel systems & components
- Hydraulic systems & components
- Inert nitrogen generating systems
- Pneumatic systems & components
- Wheels & brakes



ELECTROMECHANICAL

- AC/DC drives & systems
- Electric actuators, gantry robots & slides
- Electrohydrostatic actuation systems
- Electromechanical actuation systems
- Human machine interfaces
- Linear motors
- Stepper motors, servo motors, drives & controls
- Structural extrusions



FILTRATION

- Analytical gas generators
- Compressed air & gas filters
- Condition monitoring
- Engine air, fuel & oil filtration & systems
- Hydraulic, lubrication & coolant filters
- Process, chemical, water & microfiltration filters
- Nitrogen, hydrogen & zero air generators



FLUID & GAS HANDLING

- Brass fittings & valves
- Diagnostic equipment
- Fluid conveyance systems
- Industrial hose
- PTFE & PFA hose, tubing & plastic fittings
- Quick disconnects
- Rubber & thermoplastic hose & couplings
- Tube fittings & adapters



HYDRAULICS

- Diagnostic equipment
- Hydraulic cylinders & accumulators
- Hydraulic motors & pumps
- Hydraulic systems
- Hydraulic valves & controls
- Power take-offs
- Quick disconnects
- Rubber & thermoplastic hose & couplings
- Tube fittings & adapters



PNEUMATICS

- Air preparation
- Brass fittings & valves
- Manifolds
- Pneumatic actuators, grippers, valves, controls & accessories
- Quick disconnects
- Rotary actuators
- Rubber & thermoplastic hose & couplings
- Structural extrusions
- Thermoplastic tubing & fittings
- Vacuum generators, cups & sensors



PROCESS CONTROL

- Analytical sample conditioning products & systems
- Fluoropolymer chemical delivery fittings, valves & pumps
- High purity gas delivery fittings, valves & regulators
- Instrumentation fittings, valves & regulators
- Medium pressure fittings & valves
- Process control manifolds



SEALING & SHIELDING

- Dynamic seals
- Elastomeric o-rings
- EMI shielding
- Extruded & precision-cut, fabricated elastomeric seals
- Homogeneous & inserted elastomeric shapes
- High temperature metal seals
- Metal & plastic retained composite seals
- Thermal management

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