

Production Control Units, Inc.

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SERVICE BULLETIN for Series 250 Two-Way Shutoff Valved Nipples and Couplers Models 64 and 65

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Service Bulletin SB250-64_65



Production Control Units, Inc.-Coupler Products

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Coupler Application Data Inquiry

Company		Phone #	
Contact		Fax #	
Address		E-mail	
City	. State	Country	. Zip
Type & brand name for current co	oupler		
Customer product manufactured			
	Type of coupler re	quired	
Size and type of tube or port to be	e sealed		
☐ Straight ☐ Swaged	□ Expanded □ C	ther	
Length of tube or port available for	or coupler		
Quantity required			
Delivery due date			
н	ow will the coupler	be used?	
Refrigerant processing What type of refrigerant? (Oil processing What type of oil (Mineral, R Leak Burst testing Maximum pressure & type Vacuum What level of vacuum need What Oil be present during If "yes", what type of oil?	Polyol Ester, PAG, et of test media? (Air, l ds to be achieved? _ g vacuum pump dow	c.) Helium, etc.) n?	(Attach MSDS)
Ad	dditional process in	formation	

Along with your request for quote, please provide (1) copy of print showing area to be sealed, and (3) quality sample parts.



SERIES 250 Two-Way Shutoff Valved Nipples and Couplers

GENERAL DESCRIPTION

Models 64 and 65 Series 250 is the same flow and internal components as Models 61 and 62 however it is NOT interchangeable. Use these models when there are two fluids or more which should not be mixed. Models 64 and 65 are nickel plated for color difference from Models 61 and 62 which are black in color.

These tough, compact, lightweight PCU couplers utilize heat-treated parts for interchangeability and long life oxide and nickel finishes resist corrosion. They provide a large, unrestricted flow rate for a variety of production uses while minimizing process material loss during coupling/uncoupling.

An eight (8) ball detent lock provides instant positive coupling. Simply pull back the grooved locking ring on the coupler, slide the coupler over the Nipple and push together until the lock ring snaps to it's "lock position".

Because of the unique design of the Series 250 Couplers and Nipple assemblies, they are able to be built using inexpensive O-ring seals which provide positive leak-tight shutoff. They will hold pressure from vacuum to 1000 psig.

COUPLER FEATURES & SPECIFICATIONS

SAFE: Positive ball-lock action prevents blow-off or premature loss of sealed connection.

STRONG: Holds pressures form 25 microns up to 1000 psig, minimum proof pressure 4000 psig.

MANY APPLICATIONS: Seal compounds can be easily changed for many uses with oils, refrigerants, water, air, and vacuum.

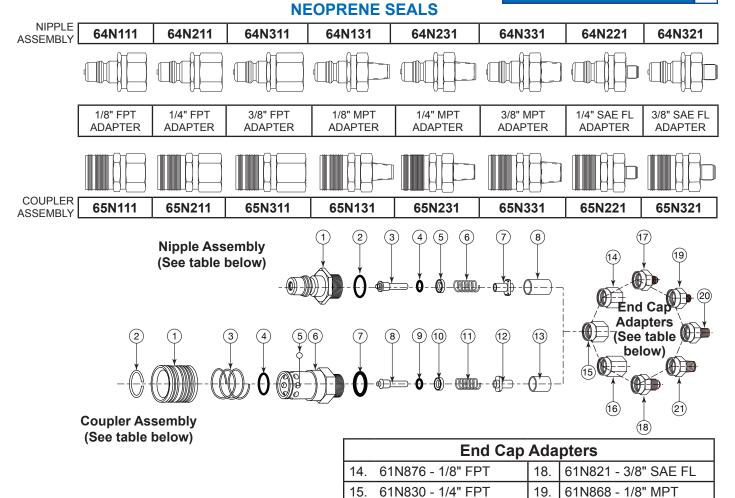
The standard Series 250 Coupler and Nipple assembly can be built with a variety of seal compounds to satisfy your application. Neoprene compound is generally used for R-22, R410, R404a and compressed air. Buna-N is generally used for HFC-134a with lubricants.

MAINTENANCE INSTRUCTIONS

Coupler life is dependent upon a regular scheduled maintenance program. The application and its risk potential should determine frequency. PCU cannot determine a maintenance schedule due to the many factors involved: temperature, proper size selection, fluid compatibility, pressure, mechanical loads, user responsibility. User must establish a maintenance program based on previous service life. There are several factors that must be included when setting up a maintenance program: visual inspection for cracked, defective parts and excessively worn components; dirt or particle buildup in seal and clamping areas; thorough cleaning and proper lubrication; replace worn out and defective seals.

SERIES 250 TWO-WAY SHUTOFF VALVED COUPLERS AND NIPPLES

The basic Series 250 Two-Way Shutoff Valved coupler, less end cap adapter, consists of thirteen parts and the basic Series 250 Two-way Shutoff Valved Nipple, less end cap adapter, consists of eight parts, both of which must be assembled in correct order to assure proper functioning of the unit. Although all units are tested in our plant at 1000 psig air and less than 50 microns vacuum, Production Control Units, Inc.cannot be responsible for any malfunction of the Series 250 Coupler or Nipple due to faulty servicing of the unit in the field by people other than PCU filed engineers.



REPLACEMENT PARTS LIST

61N869 - 3/8" FPT

61N829 - 1/4" SAE FL

16.

17.

	Nipple Assembly NEOPRENE SEALS		
1.	Nipple Body	102640-001	
2.	End Cap O-Ring	61822	
3.	Nipple Valve Stem	61N844	
4.	Valve O-Ring	61843	
5.	O-Ring Retainer	61840	
6.	Nipple Valve Spring	61804	
7.	Perch	61825	
8.	Nipple Spacer	61824	

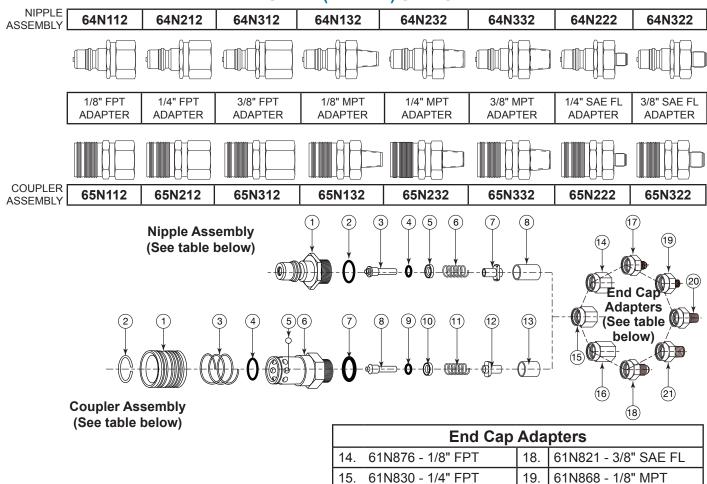
Coupler Assembly NEOPRENE SEALS		
1.	Coupler Sleeve	61N831
2.	Retaining Ring	61832
3.	Coupler Sleeve Spring	61801
4.	O-Ring	102417-1
5.	Ball (8) Req'd	61833
6.	Coupler Body	102416-004
7.	End Cap O-Ring	61822
8.	Coupler Valve Stem	61N863
9.	Valve O-Ring	61843
10.	O-Ring Retainer	61840
11.	Coupler Valve Spring	61802
12.	Perch	61825
13.	Coupler Spacer	61837

20.

21.

61N845 - 1/4" MPT

BUNA-N (NITRILE) SEALS



REPLACEMENT PARTS LIST

61N869 - 3/8" FPT

61N829 - 1/4" SAE FL

16.

17.

	Nipple Assembly BUNA-N (NITRILE) SEALS		
1.	Nipple Body	102640-001	
2.	End Cap O-Ring	61846	
3.	Nipple Valve Stem	61N844	
4.	Valve O-Ring	61847	
5.	O-Ring Retainer	61840	
6.	Nipple Valve Spring	61804	
7.	Perch	61825	
8.	Nipple Spacer	61824	

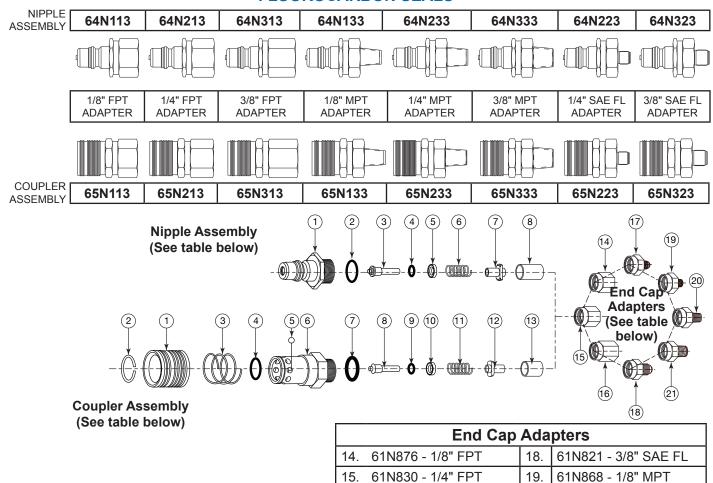
	Coupler Assembly BUNA-N (NITRILE) SEALS		
1.	Coupler Sleeve	61N831	
2.	Retaining Ring	61832	
3.	Coupler Sleeve Spring	61801	
4.	O-Ring	102417-2	
5.	Ball (8) Req'd	61833	
6.	Coupler Body	102416-004	
7.	End Cap O-Ring	61846	
8.	Coupler Valve Stem	61N863	
9.	Valve O-Ring	61847	
10.	O-Ring Retainer	61840	
11.	Coupler Valve Spring	61802	
12.	Perch	61825	
13.	Coupler Spacer	61837	

20.

21.

61N845 - 1/4" MPT

SERIES 250 Two-Way Shutoff Valved Nipples and Couplers FLUOROCARBON SEALS



REPLACEMENT PARTS LIST

61N869 - 3/8" FPT

61N829 - 1/4" SAE FL

16.

17.

Nipple Assembly FLUOROCARBON SEALS			
1. Nipple Body 102640-001			
2.	End Cap O-Ring	61852	
3.	Nipple Valve Stem	61N844	
4.	Valve O-Ring	61853	
5.	O-Ring Retainer	61840	
6.	Nipple Valve Spring	61804	
7.	Perch	61825	
8.	Nipple Spacer	61824	

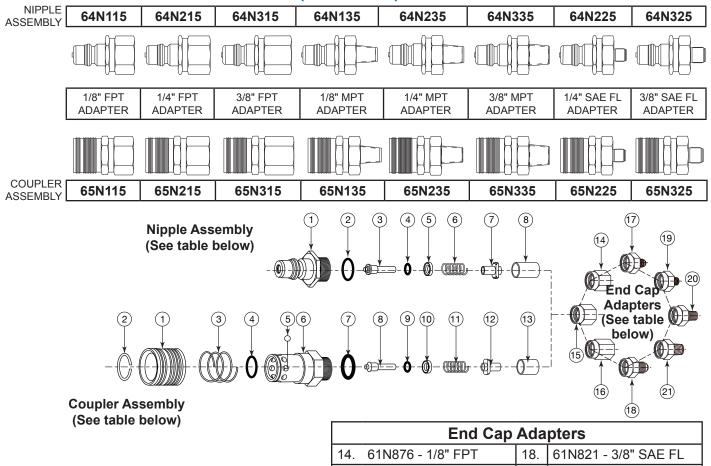
	Coupler Assembly FLUOROCARBON SEALS		
1.	Coupler Sleeve	61N831	
2.	Retaining Ring	61832	
3.	Coupler Sleeve Spring	61801	
4.	O-Ring	102417-3	
5.	Ball (8) Req'd	61833	
6.	Coupler Body	102416-004	
7.	End Cap O-Ring	61852	
8.	Coupler Valve Stem	61N863	
9.	Valve O-Ring	61853	
10.	O-Ring Retainer	61840	
11.	Coupler Valve Spring	61802	
12.	Perch	61825	
13.	Coupler Spacer	61837	

20.

21.

61N845 - 1/4" MPT

R410a (NEOPRENE) SEALS

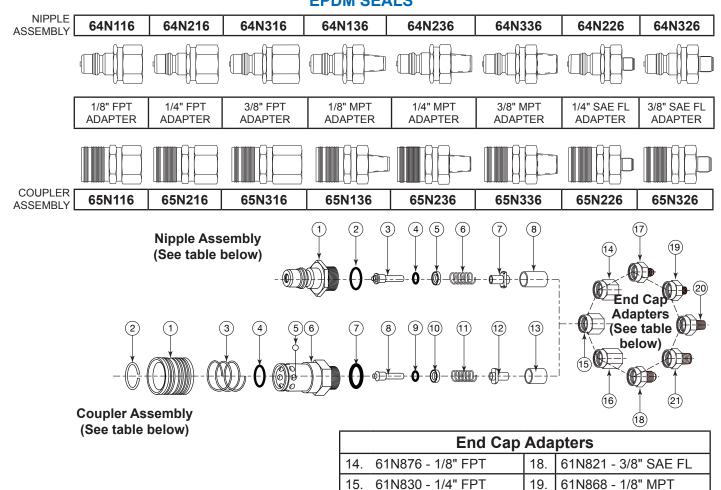


15.	61N830 - 1/4" FPT	19.	61N868 - 1/8" MP I
16.	61N869 - 3/8" FPT	20.	61N845 - 1/4" MPT
17.	61N829 - 1/4" SAE FL	21.	61N870 - 3/8" MPT

REPLACEMENT PARTS LIST

	Nipple Assembly NEOPRENE SEALS		
1.	Nipple Body	102640-001	
2.	End Cap O-Ring	61822	
3.	Nipple Valve Stem	61N844	
4.	Valve O-Ring	OR010-C1278	
5.	O-Ring Retainer	61840	
6.	Nipple Valve Spring	61804	
7.	Perch	61825	
8.	Nipple Spacer	61824	

	Coupler Assembly NEOPRENE SEALS		
1.	Coupler Sleeve	61N831	
2.	Retaining Ring	61832	
3.	Coupler Sleeve Spring	61801	
4.	O-Ring	OR113-C1278	
5.	Ball (8) Req'd	61833	
6.	Coupler Body	102416-004	
7.	End Cap O-Ring	61822	
8.	Coupler Valve Stem	61N863	
9.	Valve O-Ring	OR010-C1278	
10.	O-Ring Retainer	61840	
11.	Coupler Valve Spring	61802	
12.	Perch	61825	
13.	Coupler Spacer	61837	



REPLACEMENT PARTS LIST

61N869 - 3/8" FPT

61N829 - 1/4" SAE FL

16.

17.

Nipple Assembly EPDM SEALS		
1.	Nipple Body	102640-001
2.	End Cap O-Ring	61871
3.	Nipple Valve Stem	61N844
4.	Valve O-Ring	61873
5.	O-Ring Retainer	61840
6.	Nipple Valve Spring	61804
7.	Perch	61825
8.	Nipple Spacer	61824

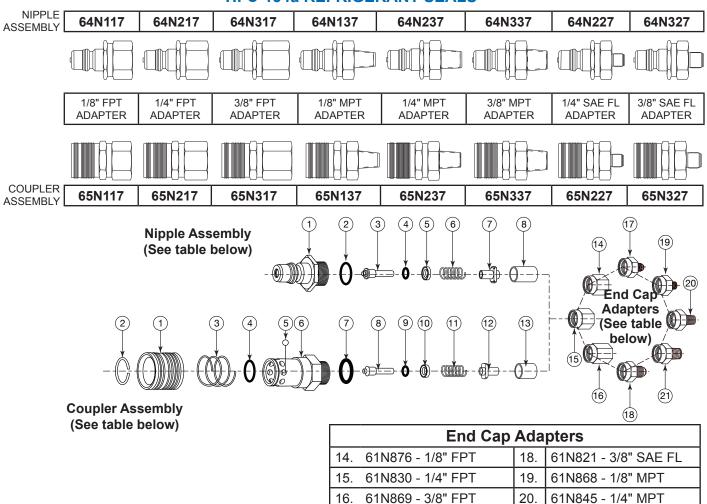
Coupler Assembly EPDM SEALS		
1.	Coupler Sleeve	61N831
2.	Retaining Ring	61832
3.	Coupler Sleeve Spring	61801
4.	O-Ring	102417-6
5.	Ball (8) Req'd	61833
6.	Coupler Body	102416-004
7.	End Cap O-Ring	61871
8.	Coupler Valve Stem	61N863
9.	Valve O-Ring	61873
10.	O-Ring Retainer	61840
11.	Coupler Valve Spring	61802
12.	Perch	61825
13.	Coupler Spacer	61837

20.

21.

61N845 - 1/4" MPT

HFC-134a REFRIGERANT SEALS



REPLACEMENT PARTS LIST

61N869 - 3/8" FPT

61N829 - 1/4" SAE FL

16.

17.

Nipple Assembly HFC-134a REFRIGERANT SEALS			
1.	Nipple Body	102640-001	
2.	End Cap O-Ring	61879	
3.	Nipple Valve Stem	61N844	
4.	Valve O-Ring	61880	
5.	O-Ring Retainer	61840	
6.	Nipple Valve Spring	61804	
7.	Perch	61825	
8.	Nipple Spacer	61824	

	Coupler Assembly HFC-134a REFRIGERANT SEALS		
1.	Coupler Sleeve	61N831	
2.	Retaining Ring	61832	
3.	Coupler Sleeve Spring	61801	
4.	O-Ring	102417-2	
5.	Ball (8) Req'd	61833	
6.	Coupler Body	102416-004	
7.	End Cap O-Ring	61879	
8.	Coupler Valve Stem	61N863	
9.	Valve O-Ring	61880	
10.	O-Ring Retainer	61840	
11.	Coupler Valve Spring	61802	
12.	Perch	61825	
13.	Coupler Spacer	61837	

21.

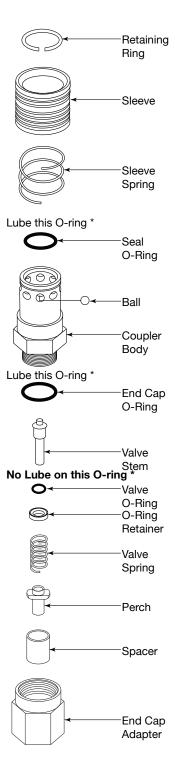
61N845 - 1/4" MPT



SERIES 250 COUPLER ASSEMBLY

DISASSEMBLY - COUPLER

Holding the coupler assembly in one hand, pull the sleeve back with thumb and forefinger of same hand to expose the end of the coupler body. Using retaining ring pliers (PCU Part # A-21599) or a pointed tool, pry the retaining ring from the groove on the coupler body. Set aside. Insert Ball Assembly Tool (PCU Part # A-21587) to hold balls in place while removing coupler sleeve and sleeve spring. If you don't have a Ball Assembly Tool, carefully remove coupler sleeve and spring over a shop rag or towel to keep balls from rolling away. Remove balls and set aside. Place coupler body in a vise clamping on the hex. Use a 1" open-end wrench (or equivalent) on end cap adapter. Loosen until the end cap adapter can be removed by hand. Remove the coupler assembly from the vise. Holding the coupler body with its related parts threaded end up. remove the spacer and set aside. Tilt the coupler body down and slide out the valve assembly. (Note: Tap valve assembly loose if stuck.) Check and remove perch, spring, O-ring retainer, and valve O-ring from valve stem. Discard all O-rings. With a pointed tool, pry seal O-ring from inside coupler body, being careful not to scratch O-ring groove.



REASSEMBLY - COUPLER

Lubricate O-ring with PCU Lubricant #490-00134 before inserting seal O-ring in groove inside coupler body. Press firmly against inner diameter to ensure proper placement of seal. After parts have all been inspected, pick up valve stem and slide new valve O-ring over stem and upon shouldered portion of the valve stem. (Do not lube this O-ring.) Next, position the O-ring retainer behind the O-ring, making certain the cupped portion of the O-ring retainer is next to the O-ring. Slide the valve spring over the valve stem until it comes in contact with the flat side of the O-ring retainer. Slide the perch onto the valve stem, short end first, pushing it under the spring. Pick up the coupler body, holding it threaded end down, and slide the valve assembly up into the coupler body, valve stem first. Tilt the coupler body until the threaded end is pointing up, allowing the valve assembly to drop into place. Ensure that the valve assembly remained intact, then insert spacer into the coupler body until it comes in contact with the shoulders of the perch. Pick up the end cap adapter and screw the adapter to the coupler assembly. Set torque wrench, using approximately 35 to 40 foot lbs. torque. Turn assembly over. Using the Ball Assembly Tool (PCU Part # A-21587), insert the balls (8) into the holes in the coupler body. If the Ball Assembly Tool is not available, use O-ring grease or petroleum jelly in ball holes to hold balls in place. Slide sleeve spring over end of coupler body; place sleeve over spring, large diameter first. Push retaining ring into groove in coupler body using fingers or you may use the small diameter of the Ball Assembly Tool and push down on the retaining ring until the retaining ring snaps into the groove on the coupler body. Remove assembly tool, if used; this completes assembly.

* Use PCU O-ring lubricant 490-00134

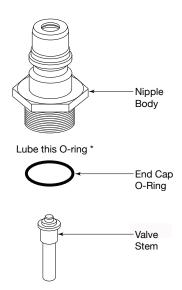
250 Coupler Service Tool Kit #460-00250				
625-00810	O-Ring Insertion Tool			
21587	Magnetized Ball Assembly Tool			
21599	Retaining Ring Pliers			



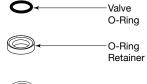
SERIES 250 NIPPLE ASSEMBLY

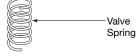
DISASSEMBLY - NIPPLE

To disassemble the nipple assembly, place nipple body in a vise, clamping on the 1" hex. Use a 1" open-end wrench (or equivalent) on end cap adapter. Loosen until the end cap adapter can be removed by hand. Set end cap adapter aside. Remove nipple assembly from vise. Holding the nipple body with its related parts threaded end up, remove the spacer and set aside. Tilt nipple body down and slide out valve assembly (NOTE: Tap valve assembly loose if stock.) Check and remove perch, spring, O-ring retainer, and valve O-ring from valve stem. Discard O-rings.

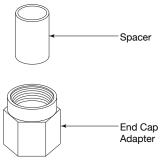


No Lube on this O-ring *









* Use PCU O-ring lubricant 490-00134

REASSEMBLY - NIPPLE

After parts have been inspected, pick up valve stem in one hand and slide valve O-ring (No Lubrication) over stem and upon shouldered portion of the valve stem. Next, position the O-ring retainer behind the O-ring, making certain that the cupped portion of the O-ring retainer is next to the O-ring. Slide the valve spring over the valve stem until it comes in contact with the O-ring retainer. Slide the perch onto the valve stem, with its long end over the stem. Pick up the nipple body, holding it with the threaded end down, and slide the valve assembly up into the nipple body, valve stem first. As the valve assembly is slid into the nipple body, tilt the nipple body until the threaded end is pointing up to allow the valve assembly to drop into place. Holding the nipple body in that position, pick up spacer and slide it down into the nipple body until it comes in contact with the shoulders of the perch. Lubricate end cap O-ring with PCU Lubricant #490-00134 and slide over nipple body threads until it drops into groove. Screw the end cap adapter to the nipple body. Set torque wrench, using approximately 35 to 40 foot lbs. torque. Reassembly of the Series 250 Nipple is now complete.



WE SPECIALIZE IN CUSTOM COUPLERS & TOOLING TO SUIT YOUR APPLICATION.



Call our Coupler & Specialty Tooling Team for more information.

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Email: couplers@PCUInc.com