



# Production Control Units, Inc.

2280 West Dorothy Lane, Dayton, Ohio 45439-1892

Phone (937) 299-5594 FAX: (937) 299-4843

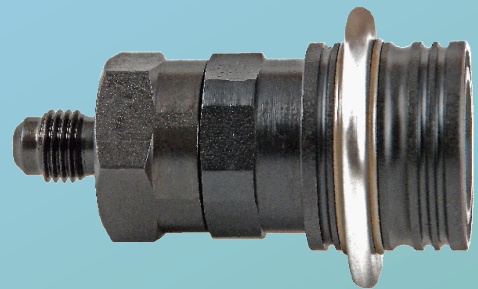
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## SERVICE BULLETIN

### for

## Series 25 Couplers

## Model EPF



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# Production Control Units, Inc.-Coupler Products

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 PCU Web Site: www.pcuinc.com - E-mail: couplers@pcuinc.com

## Coupler Application Data Inquiry

Company \_\_\_\_\_ Phone # \_\_\_\_\_

Contact \_\_\_\_\_ Fax # \_\_\_\_\_

Address \_\_\_\_\_ E-mail \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Country \_\_\_\_\_ Zip \_\_\_\_\_

Type & brand name for current coupler \_\_\_\_\_

Customer product manufactured \_\_\_\_\_

### Type of coupler required

Size and type of tube or port to be sealed \_\_\_\_\_

Straight    Swaged    Expanded    Other \_\_\_\_\_

Length of tube or port available for coupler \_\_\_\_\_

Quantity required \_\_\_\_\_

Delivery due date \_\_\_\_\_

### How will the coupler be used?

Refrigerant processing

What type of refrigerant? (HFC-134a, HP62, R-22, etc.) \_\_\_\_\_

Oil processing

What type of oil (Mineral, Polyol Ester, PAG, etc.) \_\_\_\_\_ (Attach MSDS)

Leak Burst testing

Maximum pressure & type of test media? (Air, Helium, etc.) \_\_\_\_\_

Vacuum

What level of vacuum needs to be achieved? \_\_\_\_\_

What Oil be present during vacuum pump down? \_\_\_\_\_

If "yes", what type of oil? \_\_\_\_\_

### Additional process information

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

NOTE: The Data Inquiry form is available in pdf format on our web site at  
[www.PCUInc.com](http://www.PCUInc.com)



## GENERAL DESCRIPTION

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 its "lock position".

Because of the unique design of the Series 25 Couplers 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 500 psig.

## COUPLER FEATURES & SPECIFICATIONS

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

**STRONG:** Holds pressures from 25 microns up to 500 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 25 Coupler assembly can be built with a variety of seal compounds to satisfy your application.

## MAINTENANCE INSTRUCTIONS

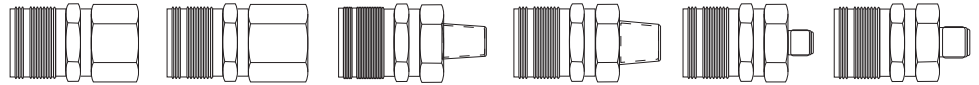
Coupler life is dependent upon a regular scheduled maintenance program. The application and its risk potential should determine frequency. PCU cannot determine a maintenance schedule due to the many factors involved: temperature, proper size selection, fluid compatibility, pressure, mechanical loads, 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 25 MODEL EPF COUPLERS

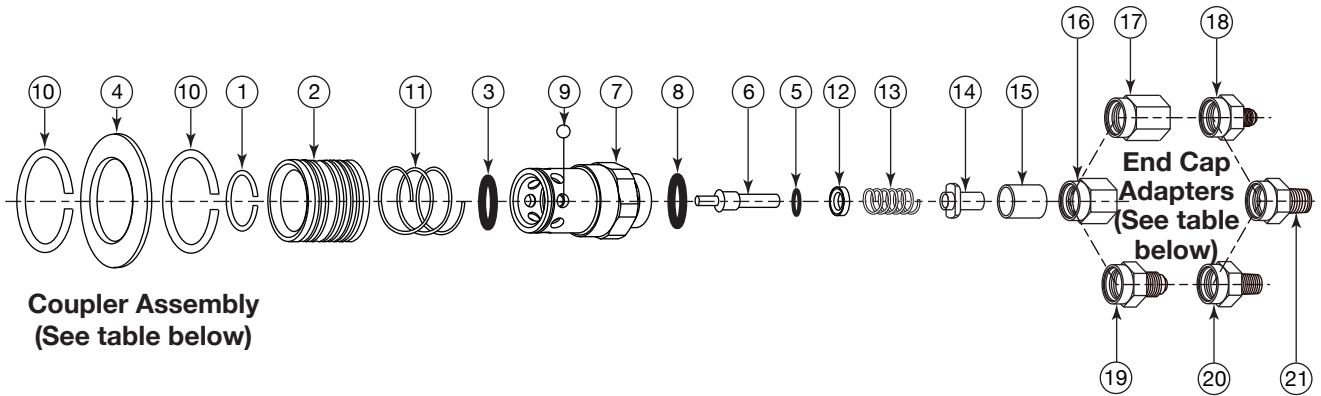
The basic Series 25 Model EPF coupler, less end cap adapter, consists of fifteen parts which must be assembled in correct order to assure proper functioning of the unit. Although all units are tested in our plant at 500 psig air and less than 50 microns vacuum, Production Control Units, Inc. cannot be responsible for any malfunction of the Series 25 Coupler or Nipple due to faulty servicing of the unit in the field by people other than PCU field engineers.

### NEOPRENE SEALS

1/4" FPT ADAPTER	3/8" FPT ADAPTER	1/4" MPT ADAPTER	3/8" MPT ADAPTER	1/4" SAE FL ADAPTER	3/8" SAE FL ADAPTER
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COUPLER ASSEMBLY	<b>62PF211</b>	<b>62PF311</b>	<b>62PF231</b>	<b>62PF331</b>	<b>62PF221</b>	<b>62PF321</b>
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**Coupler Assembly**  
(See table below)

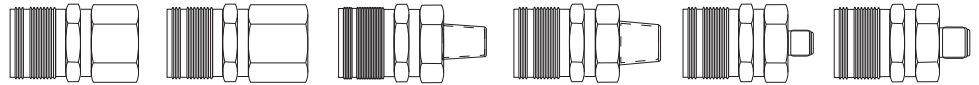
End Cap Adapters			
16.	61830 - 1/4" FPT	19.	61821 - 3/8" SAE FL
17.	61869 - 3/8" FPT	20.	61845 - 1/4" MPT
18.	61829 - 1/4" SAE FL	21.	61870 - 3/8" MPT

### REPLACEMENT PARTS LIST

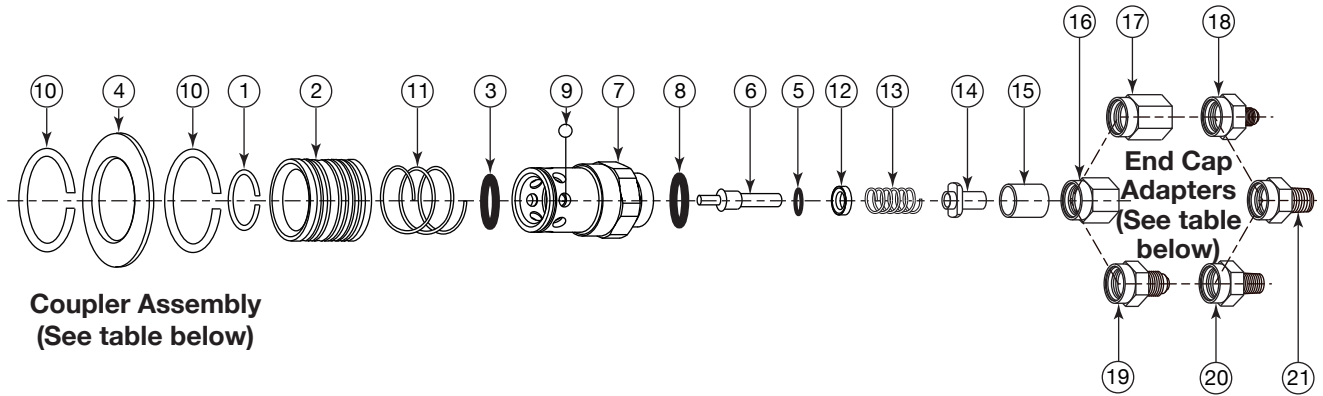
Coupler Assembly <b>NEOPRENE SEALS</b>			
Item	Description	Qty/Unit	Part Number
1.	Retaining Ring	1	61832
2.	Sleeve	1	61831
3.	O-Ring	1	61834
4.	Ring	1	47921
5.	O-Ring	1	61843
6.	Stem	1	61886
7.	Coupler Body	1	61835
8.	O-Ring	1	61822
9.	Ball	8	61833
10.	Retaining Ring	2	66814
11.	Spring	1	61801
12.	Retainer	1	61840
13.	Spring	1	61802
14.	Perch	1	61825
15.	Spacer	1	61837

### BUNA-N (NITRILE) SEALS

1/4" FPT ADAPTER	3/8" FPT ADAPTER	1/4" MPT ADAPTER	3/8" MPT ADAPTER	1/4" SAE FL ADAPTER	3/8" SAE FL ADAPTER
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COUPLER ASSEMBLY	<b>62PF212</b>	<b>62PF312</b>	<b>62PF232</b>	<b>62PF332</b>	<b>62PF222</b>	<b>62PF322</b>
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**Coupler Assembly**  
(See table below)

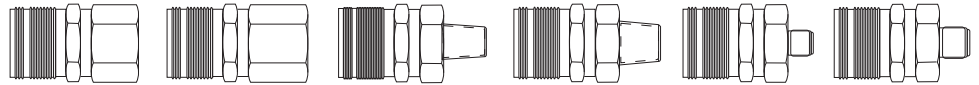
End Cap Adapters			
16.	61830 - 1/4" FPT	19.	61821 - 3/8" SAE FL
17.	61869 - 3/8" FPT	20.	61845 - 1/4" MPT
18.	61829 - 1/4" SAE FL	21.	61870 - 3/8" MPT

### REPLACEMENT PARTS LIST

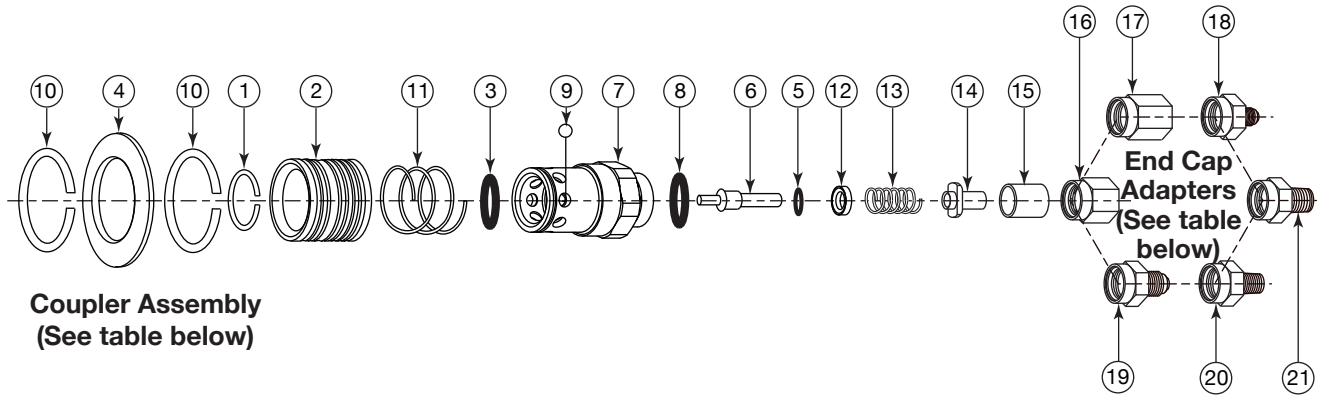
Coupler Assembly <b>BUNA-N (NITRILE) SEALS</b>			
Item	Description	Qty/Unit	Part Number
1.	Retaining Ring	1	61832
2.	Sleeve	1	61831
3.	O-Ring	1	61848
4.	Ring	1	47921
5.	O-Ring	1	61847
6.	Stem	1	61886
7.	Coupler Body	1	61835
8.	O-Ring	1	61846
9.	Ball	8	61833
10.	Retaining Ring	2	66814
11.	Spring	1	61801
12.	Retainer	1	61840
13.	Spring	1	61802
14.	Perch	1	61825
15.	Spacer	1	61837

### FLUOROCARBON SEALS

1/4" FPT ADAPTER	3/8" FPT ADAPTER	1/4" MPT ADAPTER	3/8" MPT ADAPTER	1/4" SAE FL ADAPTER	3/8" SAE FL ADAPTER
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COUPLER ASSEMBLY	<b>62PF213</b>	<b>62PF313</b>	<b>62PF233</b>	<b>62PF333</b>	<b>62PF223</b>	<b>62PF323</b>
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**Coupler Assembly**  
(See table below)

End Cap Adapters			
16.	61830 - 1/4" FPT	19.	61821 - 3/8" SAE FL
17.	61869 - 3/8" FPT	20.	61845 - 1/4" MPT
18.	61829 - 1/4" SAE FL	21.	61870 - 3/8" MPT

### REPLACEMENT PARTS LIST

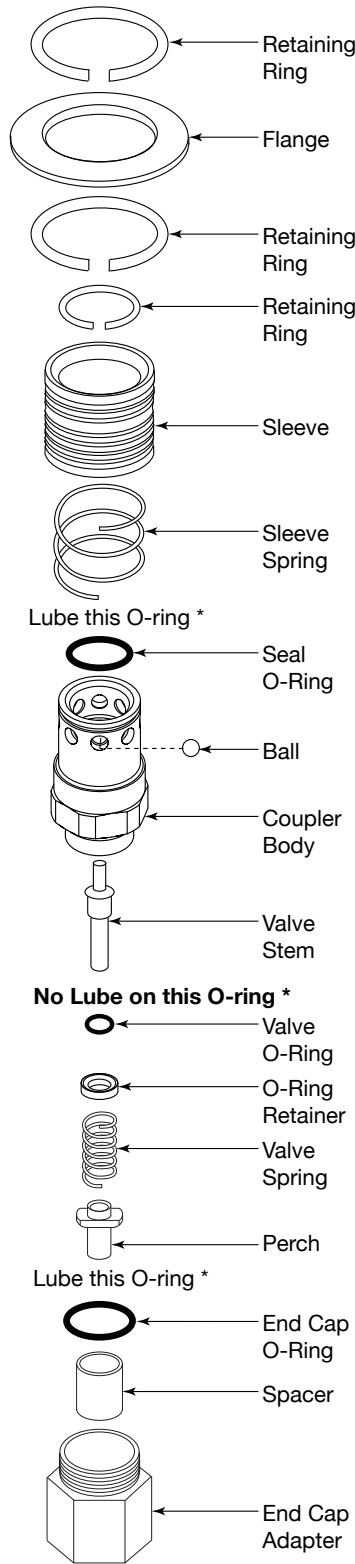
Coupler Assembly <b>FLUOROCARBON SEALS</b>			
Item	Description	Qty/Unit	Part Number
1.	Retaining Ring	1	61832
2.	Sleeve	1	61831
3.	O-Ring	1	61854
4.	Ring	1	47921
5.	O-Ring	1	61853
6.	Stem	1	61886
7.	Coupler Body	1	61835
8.	O-Ring	1	61852
9.	Ball	8	61833
10.	Retaining Ring	2	66814
11.	Spring	1	61801
12.	Retainer	1	61840
13.	Spring	1	61802
14.	Perch	1	61825
15.	Spacer	1	61837
16.	End Cap	1	See Table "End Cap Adapters Above"



**SERIES 25 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. The Ring Insertion Tool (PCU Part # A-21585) is helpful in accomplishing this. 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

<b>250 Coupler Service Tool Kit #460-00250</b>	
625-00810	O-Ring Insertion Tool
A-21587	Magnetized Ball Assembly Tool
A-21591	Snap Ring Pusher Tool
A-21599	Retaining Ring Pliers



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

 <p>Series 25</p>	 <p>Series 86</p>	 <p>Series 87</p>	 <p>Series 91</p>
 <p>Series 93</p>	 <p>Series 98</p>	 <p>Series 100 &amp; 101</p>	 <p>Series 109</p>
 <p>Series 250</p>	 <p>Series 410</p>	 <p>Series 500</p>	 <p>Series 250 Evac &amp; Charge</p>
 <p>Series 13000</p>	 <p>Series 104</p>	 <p>Series 106</p>	 <p>Series 106 Adapter</p>

Call our Coupler & Specialty Tooling Team for more information.

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