

FD90 Series Diagnostic Coupling SAE J1502 Interchange



Eaton's FD90 Series diagnostic coupling is designed to connect and disconnect pressure gauges to hydraulic systems, eliminating the need for permanent gauges. The maximum operating pressure is 7,000 psi.

Product Features

- Automatic sleeve for one hand push-to-connect operation
- Flush face valving provides minimal fluid loss and low air inclusion
- Self-sealing valve design allows connection and disconnection at 500 psi
- Broad range of end configurations for system accessibility
- Standard seal material: Buna-N
- Standard seal material: High resistance carbon steel with zinc trivalent plating

Applications & Markets

- Diagnostic pressure testing for hydraulic systems

Physical Characteristics

Coupling Body Size (in)	Max. Operating Pressure (bar) (psi)		Min. Burst Pressure Connected (bar) (psi)		Vacuum Connected Only (in./Hg)	Rated Flow (lpm) (gpm)		Air Inclusion (cc. max.)	Fluid Loss (cc. max.)
	bar	psi	bar	psi					
1/4	483	7,000	1,931	28,000	28	1.89	0.6	0.02	0.10

Dimensions (Female Pipe, Valved)

Part Number Buna-N	Part Number with Dust Cap Buna-N	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions					
								A		B		Hex Ⓛ	
								mm	(in)	mm	(in)	mm	(in)
FD90-1034-02-04	FD90-1035-02-04	Plug/Male	1/4	1/8	1/8 - 27	Female NPT	1	43.2	(1.70)	-	-	15.7	(0.62)
FD90-1021-02-04	—	Socket/Female	1/4	1/8	1/8 - 27	Female NPT	2	49.5	(1.95)	25.4	(1.00)	19.1	(0.75)
FD90-1034-04-04	FD90-1035-04-04	Plug/Male	1/4	1/4	1/4 - 18	Female NPT	1	48.3	(1.90)	-	-	19.1	(0.75)
FD90-1021-04-04	—	Socket/Female	1/4	1/4	1/4 - 18	Female NPT	2	57.2	(2.25)	25.4	(1.00)	19.1	(0.75)

Dimensions (Male SAE O-Ring, Valved)

Part Number Buna-N	Part Number with Dust Cap Buna-N	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions					
								A		B		Hex Ⓛ	
								mm	(in)	mm	(in)	mm	(in)
FD90-1044-03-04	FD90-1004-03-04	Plug/Male	1/4	3/8	3/8 - 24	Male SAE O-Ring	3	38.6	(1.52)	-	-	15.7	(0.62)
FD90-1044-04-04	FD90-1004-04-04	Plug/Male	1/4	7/16	7/16 - 20	Male SAE O-Ring	3	40.1	(1.58)	-	-	15.7	(0.62)
FD90-1044-05-04	FD90-1004-05-04	Plug/Male	1/4	1/2	1/2 - 20	Male SAE O-Ring	3	33.5	(1.32)	-	-	15.7	(0.62)
FD90-1044-06-04	FD90-1004-06-04	Plug/Male	1/4	9/16	9/16 - 18	Male SAE O-Ring	3	33.5	(1.32)	-	-	17.5	(0.69)

Dimensions (Male Pipe, Valved)

Part Number Buna-N	Part Number with Dust Cap Buna-N	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions					
								A		B		Hex Ⓛ	
								mm	(in)	mm	(in)	mm	(in)
FD90-1012-02-04	FD90-1045-02-04	Plug/Male	1/4	1/8	1/8 - 27	Male NPT	4	40.6	(1.60)	-	-	15.7	(0.62)
FD90-1012-04-04	FD90-1045-04-04	Plug/Male	1/4	1/4	1/4 - 18	Male NPT	4	37.8	(1.49)	-	-	17.5	(0.69)

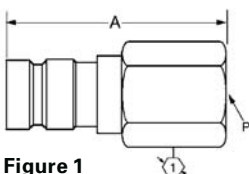


Figure 1

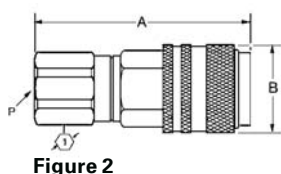


Figure 2

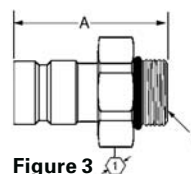


Figure 3

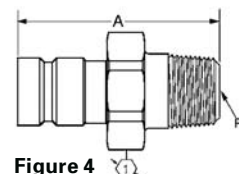


Figure 4

FD90 Series Diagnostic Coupling SAE J1502 Interchange

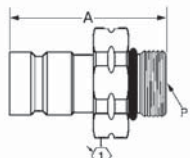


Figure 5

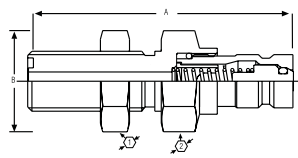


Figure 6

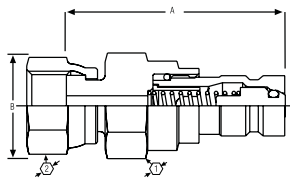


Figure 7

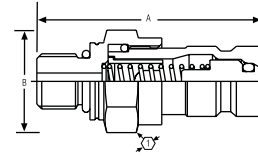


Figure 8

Dimensions (Metric Male O-Ring, Valved)

Part Number Buna-N	Part Number with Dust Cap Buna-N	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions		Hex ①			
								A	B				
								mm	(in)	mm	(in)	mm	(in)
FD90-1046-06-04	FD90-1047-06-04	Plug/Male	1/4	M14	M14x1.5	Male O-Ring	5	38.5	(1.52)	-	-	19.1	(0.75)

Dimensions (Female SAE O-Ring, Valved)

Part Number Buna-N	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions		Hex ①				
							A	B					
								mm	(in)	mm	(in)	mm	(in)
FD90-1041-09-04	Socket/Female	1/4	7/16	7/16 - 20	Female SAE O-Ring	2	55.9	(2.20)	25.40	(1.00)	19.1	(0.75)	

Dimensions (Male ORS Bulkhead, Valved)

Part Number Buna-N	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions		Hex ①				
							A	B					
								mm	(in)	mm	(in)	mm	(in)
FD90-1206-04-04	Plug/Male	1/4	9/16	9/16 - 18	Male ORS Bulkhead	6	62.5	(2.46)	20.6	(0.81)	20.6	(0.81)	

Dimensions (Male ORS Bulkhead, Valved)

Part Number Buna-N	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions		Hex ①				
							A	B					
								mm	(in)	mm	(in)	mm	(in)
FD90-1061-04-04	Plug/Male	1/4	9/16	9/16 - 18	Female ORS Swivel	7	46.5	(1.79)	22.1	(0.87)	17.5	(0.69)	
FD90-1061-06-04	Plug/Male	1/4	11/16	11/16 - 16	Female ORS Swivel	7	46.5	(1.83)	23.9	(0.94)	20.6	(0.81)	
FD90-1061-08-04	Plug/Male	1/4	13/16	13/16 - 16	Female ORS Swivel	7	49.0	(1.93)	27.4	(1.08)	23.9	(0.94)	

Dimensions (Male Metric O-Ring, Valved)

Part Number Buna-N	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions		Hex ①				
							A	B					
								mm	(in)	mm	(in)	mm	(in)
FD90-1090-10-04	Plug/Male	1/4	M10	M10x1	Mertic O-Ring	8	40.1	(1.58)	18.3	(0.72)	—	—	

Dust Cap for Plug/Male Halves

Body Size	Part Number
1/4	FD90-1040-04-04



Dust Cap for
Plug/Male Halves



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