

# FD90 Series

## Diagnostic Coupling

### SAE J1502 Interchange

Diagnostic



Danfoss Hansen 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: Nitrile (NBR)
- Standard Body Material: High resistance carbon steel with Zinc trivalent plating
- Diagnostic pressure testing for hydraulic systems

#### Physical Characteristics

Coupling Body Size (in)	Max. Operating Pressure Connected		Min. Burst Pressure Connected Only		Vacuum (in./Hg)	Rated Flow		Air Inclusion cc. max.	Fluid Loss cc.max.
	(bar)	(psi)	(bar)	(psi)		(lpm)	(gpm)		
¼	483	7,000	1,931	28,000	28	1.89	0.6	0.02	0.10

#### Dimensions (Female Pipe, Valved)

Part Number (NBR)	Part Number with Dust Cap (NBR)	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions					
								A		B		Hex ①	
								mm	(in)	mm	(in)	mm	(in)
FD90-1034-02-04	FD90-1035-02-04	Plug/Male	¼	⅜	⅜ - 27	Female NPT	1	43.2	(1.70)	-	-	15.7	(0.62)
FD90-1021-02-04	—	Socket/Female	¼	⅜	⅜ - 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	¼	¼	¼ - 18	Female NPT	1	48.3	(1.90)	-	-	19.1	(0.75)
FD90-1021-04-04	—	Socket/Female	¼	¼	¼ - 18	Female NPT	2	57.2	(2.25)	25.4	(1.00)	19.1	(0.75)

#### Dimensions (Male SAE O-Ring, Valved)

Part Number (NBR)	Part Number with Dust Cap (NBR)	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions					
								A		B		Hex ①	
								mm	(in)	mm	(in)	mm	(in)
FD90-1044-03-04	FD90-1004-03-04	Plug/Male	¼	⅜	⅜ - 24	Male SAE O-Ring	3	38.6	(1.52)	-	-	15.7	(0.62)
FD90-1044-04-04	FD90-1004-04-04	Plug/Male	¼	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	¼	½	½ - 20	Male SAE O-Ring	3	33.5	(1.32)	-	-	15.7	(0.62)
FD90-1044-06-04	FD90-1004-06-04	Plug/Male	¼	9/16	9/16 - 18	Male SAE O-Ring	3	33.5	(1.32)	-	-	17.5	(0.69)

#### Dimensions (Male Pipe, Valved)

Part Number (NBR)	Part Number with Dust Cap (NBR)	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions					
								A		B		Hex ①	
								mm	(in)	mm	(in)	mm	(in)
FD90-1012-02-04	FD90-1045-02-04	Plug/Male	¼	⅜	⅜ - 27	Male NPT	4	40.6	(1.60)	-	-	15.7	(0.62)
FD90-1012-04-04	FD90-1045-04-04	Plug/Male	¼	¼	¼ - 18	Male NPT	4	37.8	(1.49)	-	-	17.5	(0.69)

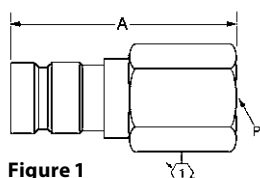


Figure 1

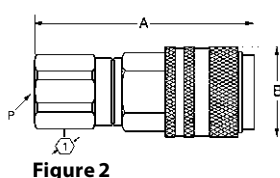


Figure 2

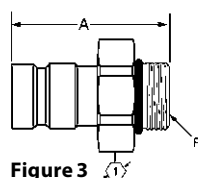


Figure 3

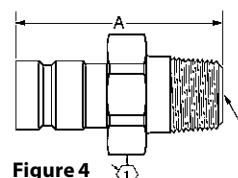


Figure 4

# FD90 Series

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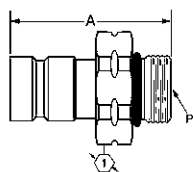


Figure 5

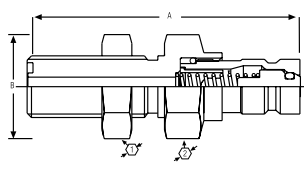


Figure 6

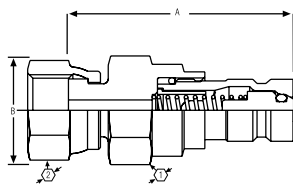


Figure 7

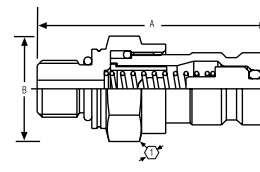


Figure 8

### Dimensions (Metric Male O-Ring, Valved)

Part Number (NBR)	Part Number with Dust Cap (NBR)	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions				Hex <sup>①</sup>	
								A		B		mm	in
FD90-1046-06-04	FD90-1047-06-04	Plug/Male	¼	M14	M14x1.5	Male O-Ring	5	38.5	(1.52)	-	-	19.1	(0.75)

### Dimensions (Female SAE O-Ring, Valved)

Part Number (NBR)	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions				Hex <sup>①</sup>	
							A		B		mm	in
FD90-1041-04-04	Socket/Female	¼	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 (NBR)	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions				Hex <sup>①</sup>	
							A		B		mm	in
FD90-1206-04-04	Plug/Male	¼	7/16	7/16 - 18	Male ORS Bulkhead	6	62.5	(2.46)	20.6	(0.81)	20.6	(0.81)

### Dimensions (Male ORS Bulkhead, Valved)

Part Number (NBR)	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions				Hex <sup>①</sup>	
							A		B		mm	in
FD90-1061-04-04	Plug/Male	¼	7/16	7/16 - 18	Female ORS Swivel	7	46.5	(1.79)	22.1	(0.87)	17.5	(0.69)
FD90-1061-06-04	Plug/Male	¼	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	¼	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 (NBR)	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions				Hex <sup>①</sup>	
							A		B		mm	in
FD90-1090-10-04	Plug/Male	¼	M10	M10x1	Metric O-Ring	8	40.1	(1.58)	18.3	(0.72)	-	-

### Dust Cap for Plug/Male Halves

Body Size	Part Number
¼	FD90-1040-04



Dust Cap for  
Plug/Male Halves