

FD99 Series

High Pressure Flush Face
ISO 16028 Interchange



The FD99 High Pressure Flush Face Series is designed for those applications where quick and easy connections and non-spill performance are critical. Ideal for use where global interchangeability and high pressure applications a must. The high pressure design and reduced pressure drop exceeds industry standards for ISO 16028 standards. The FD99 Series is available in sizes from 1/4" through 1-1/2" to best meet your specific size requirements.

Product Features

- Meets dimensional requirements of ISO 16028
- Push-to-connect latching
- Dual flush-face valving with non-spill design
- Safety sleeve lock
- Anti-extrusion Teflon® seal
- Body material – High resistance carbon steel with zinc trivalent chromate plating
- Standard seal material – Nitrile/Teflon®, additional material available on request

Physical Characteristics

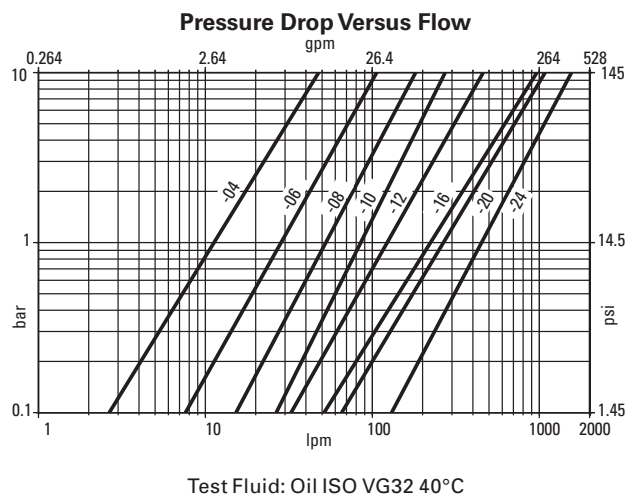
ISO Size	Body Size	Max. Operating Pressure						Min. Burst Pressure						Rated Flow L/min (gpm)	Fluid Loss cc.	Force to Connect N (lbs.)	
		Connected		Male Half		Female Half		Connected		Male Half		Female Half					
		bar	(psi)	bar	(psi)	bar	(psi)	bar	(psi)	bar	(psi)	bar	(psi)	bar	(psi)		
6.3	1/4	420	(6,090)	420	(6,090)	420	(6,090)	1,260	(18,270)	1,260	(18,270)	1,260	(18,270)	12	(3.2)	.006	160 (36)
10.0	3/8	350	(5,075)	350	(5,075)	350	(5,075)	1,000	(14,500)	1,000	(14,500)	1,000	(14,500)	23	(6.1)	.012	160 (36)
12.5	1/2	330	(4,785)	330	(4,785)	330	(4,785)	1,000	(14,500)	1,000	(14,500)	1,000	(14,500)	45	(11.9)	.020	200 (45)
16.0	5/8	330	(4,785)	330	(4,785)	330	(4,785)	1,000	(14,500)	1,000	(14,500)	1,000	(14,500)	74	(19.5)	.026	200 (45)
19.0	3/4	330	(4,785)	330	(4,785)	330	(4,785)	1,000	(14,500)	1,000	(14,500)	1,000	(14,500)	100	(26.4)	.032	200 (45)
25.0	1	300	(4,350)	300	(4,350)	300	(4,350)	800	(11,600)	800	(11,600)	800	(11,600)	189	(50.0)	.035	280 (63)
27.0	1 1/4	300	(4,350)	300	(4,350)	300	(4,350)	800	(11,600)	800	(11,600)	800	(11,600)	225	(59.6)	.017	490 (110)
31.5	1 1/2	270	(3,915)	270	(3,915)	270	(3,915)	800	(11,600)	800	(11,600)	700	(10,150)	288	(76.3)	.050	580 (131)



Applications

- Hydraulic fluid transfer
- Agriculture equipment
- High impulse hydraulics
- Construction equipment and implements

Flow Data



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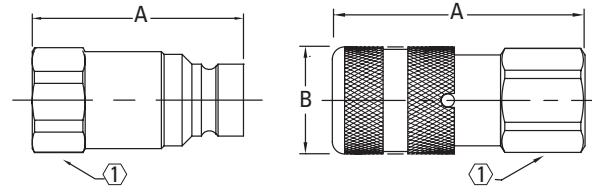
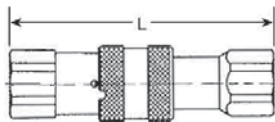


Figure 1

Figure 2

Dimensions (NPT)

Part Number	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions					
							A		B		Hex ①	
							mm	(in)	mm	(in)	mm	(in)
FD99-1001-04-04	Female	1/4	1/4	1/4-18	Female NPT	2	53.1	(2.09)	28.0	(1.10)	27	(1.06)
FD99-1002-04-04	Male	1/4	1/4	1/4-18	Female NPT	1	50.9	(1.89)			22	(.87)
FD99-1001-06-06	Female	3/8	3/8	3/8-18	Female NPT	2	64.8	(2.55)	32.0	(1.26)	30	(1.18)
FD99-1002-06-06	Male	3/8	3/8	3/8-18	Female NPT	1	60.0	(2.36)			27	(1.06)
FD99-1001-08-06	Female	3/8	1/2	1/2-14	Female NPT	2	69.8	(2.75)	32.0	(1.26)	30	(1.18)
FD99-1002-08-06	Male	3/8	1/2	1/2-14	Female NPT	1	62.5	(2.46)			27	(1.06)
FD99-1001-08-08	Female	1/2	1/2	1/2-14	Female NPT	2	76.8	(3.02)	38.0	(1.50)	36	(1.47)
FD99-1002-08-08	Male	1/2	1/2	1/2-14	Female NPT	1	68.0	(2.68)			36	(1.47)
FD99-1001-12-08	Female	1/2	3/4	3/4-14	Female NPT	2	83.8	(3.30)	38.0	(1.50)	36	(1.42)
FD99-1002-12-08	Male	1/2	3/4	3/4-14	Female NPT	1	70.5	(2.78)			36	(1.42)
FD99-1001-12-10	Female	5/8	3/4	3/4-14	Female NPT	2	84.0	(3.31)	42.0	(1.65)	41	(1.61)
FD99-1002-12-10	Male	5/8	3/4	3/4-14	Female NPT	1	73.0	(2.87)			36	(1.42)
FD99-1001-12-12	Female	3/4	3/4	3/4-14	Female NPT	2	95.8	(3.77)	48.0	(1.89)	46	(1.81)
FD99-1002-12-12	Male	3/4	3/4	3/4-14	Female NPT	1	83.7	(3.30)			46	(1.81)
FD99-1001-16-12	Female	3/4	1	1-11 1/2	Female NPT	2	98.8	(3.89)	48.0	(1.89)	46	(1.81)
FD99-1002-16-12	Male	3/4	1	1-11 1/2	Female NPT	1	83.7	(3.30)			46	(1.81)
FD99-1001-16-16	Female	1	1	1-11 1/2	Female NPT	2	104.8	(4.13)	55.0	(2.17)	55	(2.17)
FD99-1002-16-16	Male	1	1	1-11 1/2	Female NPT	1	96.8	(3.84)			55	(2.17)
FD99-1001-20-16	Female	1	1 1/4	1 1/4-11 1/2	Female NPT	2	105.8	(4.17)	55.0	(2.17)	55	(2.17)
FD99-1002-20-16	Male	1	1 1/4	1 1/4-11 1/2	Female NPT	1	90.0	(3.54)			55	(2.17)
FD99-1001-20-20	Female	1 1/4	1 1/4	1 1/4-11 1/2	Female NPT	2	125.1	(4.93)	65.0	(2.56)	55	(2.17)
FD99-1002-20-20	Male	1 1/4	1 1/4	1 1/4-11 1/2	Female NPT	1	105.0	(4.13)			55	(2.17)
FD99-1001-24-24	Female	1 1/2	1 1/2	1 1/2-11 1/2	Female NPT	2	132.4	(5.21)	80.0	(3.15)	65	(2.56)
FD99-1002-24-24	Male	1 1/2	1 1/2	1 1/2-11 1/2	Female NPT	1	111.1	(4.37)			65	(2.56)



Connected Length

Body Size	Port Size	Connected Length "L"	
		mm	(in)
1/4	1/4	90.2	(3.55)
3/8	3/8	109.0	(4.29)
3/8	1/2	116.2	(4.58)
3/8	5/8	121.3	(4.78)
1/2	1/2	127.5	(5.02)
1/2	3/4	137.0	(5.39)
3/4	3/4	160.5	(6.32)
5/8	3/4	139.4	(5.49)
3/4	1	160.5	(6.32)
1	1 1/4	173.0	(6.81)
1 1/4	1 1/4	206.9	(8.15)
1 1/2	1 1/2	215.0	(8.46)

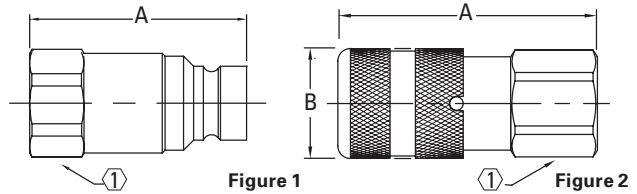
Dust Caps and Dust Plugs

Body Size	Part Number	Coupling Type	Cap Material
1/4 - 1/4	FD89-1009-04	Female	PVC
3/8 - 3/8	FD89-1009-06-06	Female	PVC
1/2 - 3/8	FD89-1009-08-06	Female	PVC
1/2 - 1/2	FD89-1009-08-08	Female	PVC
3/4 - 1/2	FD89-1009-12-08	Female	PVC
3/4	FD89-1009-12	Female	PVC
1	FD89-1009-16	Female	PVC
1 1/4	FD89-1009-20	Female	PVC
1 1/2	FD89-1009-24	Female	Aluminum

Body Size	Part Number	Coupling Type	Cap Material
1/4 - 1/4	FD89-1008-04	Male	PVC
3/8 - 3/8	FD89-1008-06-06	Male	PVC
1/2 - 3/8	FD89-1008-08-06	Male	PVC
1/2 - 1/2	FD89-1008-08-08	Male	PVC
3/4 - 1/2	FD89-1008-12-08	Male	PVC
3/4	FD89-1008-12	Male	PVC
1	FD89-1008-16	Male	PVC
1 1/4	FD89-1008-20	Male	PVC
1 1/2	FD89-1008-24	Male	Aluminum

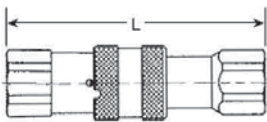
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Dimensions (NPT)

Part Number	Coupling Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions A		B		Hex Ⓛ	
							mm	(in)	mm	(in)	mm	(in)
FD99-1004-06-04	Female	1/4	3/8	9/16-18 UNF	SAE O-ring	2	56.1	(2.21)	28.0	(1.10)	27	(1.06)
FD99-1005-06-04	Male	1/4	3/8	9/16-18 UNF	SAE O-ring	1	50.9	(2.00)			22	(.87)
FD99-1004-06-06	Female	3/8	3/8	9/16-18 UNF	SAE O-ring	2	64.8	(2.55)	32.0	(1.26)	30	(1.18)
FD99-1005-06-06	Male	3/8	3/8	9/16-18 UNF	SAE O-ring	1	60.0	(2.36)			27	(1.06)
FD99-1004-08-06	Female	3/8	1/2	3/4-16 UNF	SAE O-ring	2	69.8	(2.75)	32.0	(1.26)	30	(1.18)
FD99-1005-08-06	Male	3/8	1/2	3/4-16 UNF	SAE O-ring	1	62.5	(2.46)			27	(1.06)
FD99-1004-08-08	Female	1/2	1/2	3/4-16 UNF	SAE O-ring	2	76.8	(3.02)	38.0	(1.50)	36	(1.42)
FD99-1005-08-08	Male	1/2	1/2	3/4-16 UNF	SAE O-ring	1	68.0	(2.68)			36	(1.18)
FD99-1004-10-06	Female	3/8	5/8	7/8-14 UNF	SAE O-ring	2	71.8	(2.83)	32.0	(1.26)	30	(1.18)
FD99-1005-10-06	Male	3/8	5/8	7/8-14 UNF	SAE O-ring	1	65.5	(2.58)			30	(1.18)
FD99-1004-10-08	Female	1/2	5/8	7/8-14 UNF	SAE O-ring	2	78.8	(3.10)	38.0	(1.50)	36	(1.42)
FD99-1005-10-08	Male	1/2	5/8	7/8-14 UNF	SAE O-ring	1	70.0	(2.76)			36	(1.42)
FD99-1004-12-08	Female	1/2	3/4	1 1/16-12 UN	SAE O-ring	2	83.8	(3.30)	38.0	(1.50)	36	(1.42)
FD99-1005-12-08	Male	1/2	3/4	1 1/16-12 UN	SAE O-ring	1	72.5	(2.85)			36	(1.42)
FD99-1004-12-10	Female	5/8	3/4	1 1/16-12 UN	SAE O-ring	2	84.0	(3.31)	42.0	(1.65)	41	(1.61)
FD99-1005-12-10	Male	5/8	3/4	1 1/16-12 UN	SAE O-ring	1	73.0	(2.87)			37	(1.42)
FD99-1004-12-12	Female	3/4	3/4	1 1/16-12 UN	SAE O-ring	2	98.8	(3.89)	48.0	(2.89)	46	(1.81)
FD99-1005-12-12	Male	3/4	3/4	1 1/16-12 UN	SAE O-ring	1	83.7	(3.30)			46	(1.81)
FD99-1004-16-12	Female	3/4	1	1 5/16-12 UN	SAE O-ring	2	98.8	(3.89)	48.0	(1.89)	46	(1.81)
FD99-1005-16-12	Male	3/4	1	1 5/16-12 UN	SAE O-ring	1	83.7	(3.03)			46	(1.81)
FD99-1004-16-16	Female	1	1	1 5/16-12 UN	SAE O-ring	2	104.8	(4.13)	55.0	(2.17)	55	(2.17)
FD99-1005-16-16	Male	1	1	1 5/16-12 UN	SAE O-ring	1	96.8	(3.81)			55	(2.17)
FD99-1004-20-16	Female	1	1 1/4	1 5/8-12 UN	SAE O-ring	2	105.8	(4.17)	55.0	(2.17)	55	(2.17)
FD99-1005-20-16	Male	1	1 1/4	1 5/8-12 UN	SAE O-ring	1	90.0	(3.54)			55	(2.17)
FD99-1004-20-20	Female	1 1/4	1 1/4	1 5/8-12 UN	SAE O-ring	2	125.1	(4.93)	65.0	(2.56)	55	(2.17)
FD99-1005-20-20	Male	1 1/4	1 1/4	1 5/8-12 UN	SAE O-ring	1	105.0	(4.13)			55	(2.17)
FD99-1004-24-24	Female	1 1/2	1 1/2	1 7/8-12 UN	SAE O-ring	2	132.4	(5.21)	80.0	(3.15)	65	(2.56)
FD99-1005-24-25	Male	1 1/2	1 1/2	1 7/8-12 UN	SAE O-ring	1	111.1	(4.37)			65	(2.56)



Connected Length

Body Size	Port Size	Connected Length "L"	
		mm	(in)
1/4	1/4	96.2	(3.79)
3/8	3/8	109.0	(4.29)
3/8	1/2	116.5	(4.59)
3/8	5/8	121.3	(4.78)
1/2	1/2	127.5	(5.02)
1/2	3/4	139.0	(5.47)
1/2	5/8	131.5	(5.18)
3/4	3/4	166.5	(6.32)
5/8	3/4	139.5	(5.49)
3/4	1	161.0	(6.34)
1	1	178.6	(7.03)
1	1 1/4	173.0	(6.81)
1 1/4	1 1/4	206.9	(8.15)
1 1/2	1 1/2	215.0	(8.46)

Dust Caps and Dust Plugs

Body Size	Part Number	Coupling Type	Cap Material
3/8 - 1/4	FD89-1009-04	Female	PVC
3/8 - 3/8	FD89-1009-06-06	Female	PVC
1/2 - 3/8	FD89-1009-08-06	Female	PVC
3/8 - 1/2	FD89-1009-08-08	Female	PVC
3/4 - 1/2	FD89-1009-12-08	Female	PVC
3/4	FD89-1009-12	Female	PVC
1	FD89-1009-16	Female	PVC
1 1/4	FD89-1009-20	Female	PVC
1 1/2	FD89-1009-24	Female	Aluminum

Body Size	Part Number	Coupling Type	Cap Material
3/8 - 1/4	FD89-1008-04	Male	PVC
3/8 - 3/8	FD89-1008-06-06	Male	PVC
1/2 - 3/8	FD89-1008-08-06	Male	PVC
1/2 - 1/2	FD89-1008-08-08	Male	PVC
3/4 - 1/2	FD89-1008-12-08	Male	PVC
3/4	FD89-1008-12	Male	PVC
1	FD89-1008-16	Male	PVC
1 1/4	FD89-1008-20	Male	PVC
1 1/2	FD89-1008-24	Male	Aluminum