

FD86 Series

Thread to Connect

5,000 psi Dry Break – High Impulse

Fluid transfer & Hydraulic application



Danfoss Hansen FD86 Series is a thread together steel quick coupling offering dry break and high impulse technology and capabilities. The maximum operating pressure is 5,000 psi. The FD86 Series is available in either wing nut or hex nut configurations for ease of assembly and disassembly. (For higher pressure applications and additional size requirements, refer to FD96 on page 76.)

Product Features

- Tubular valve and sleeve construction for low fluid loss and air inclusion
- Thread together design using wing or hex nut allows connection and disconnection against pressures up to 750 psi
- Teflon back-up rings along with secondary metal-to-metal sealing contact provides high impulse capability up to 5,000 psi operating pressure
- Acme threads prevent galling and provide ease of connection
- Steel flange available for bulkhead mounting
- Standard seal material: Nitrile (NBR)
- Standard body material: High resistance carbon steel with zinc trivalent plating

Physical Characteristics

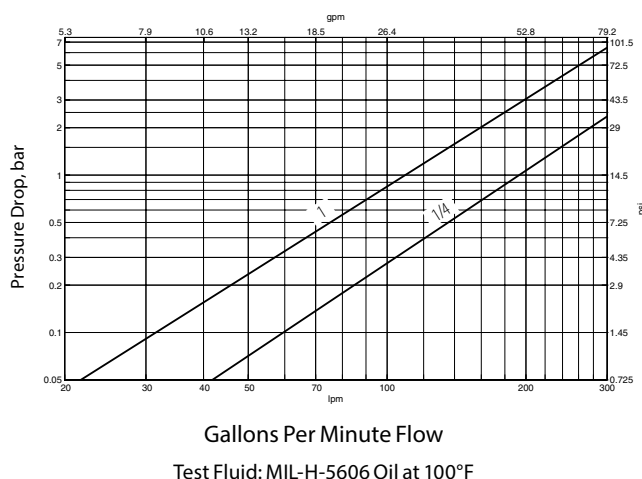
Body Size (in)	Max. Operating Pressure		Min. Burst (bar)	Vacuum Connected Only (psi)	Rated Flow (in./Hg)	Air Inclusion		Fluid Loss	
	(bar)	(psi)				(lpm)	(gpm)	cc. max.	cc.max.
1	345	5,000	1,034	15,000	28	189	50	2.90	0.72
1¼	345	5,000	1,034	15,000	28	284	75	4.61	1.00

Applications & Markets

- Hydraulic and Fluid Transfer
- Mining Equipment

Flow Data

Pressure Drop Versus Flow Graph



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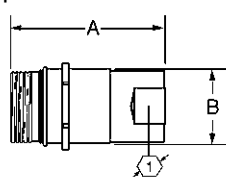


Figure 1

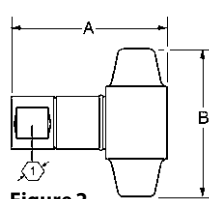


Figure 2

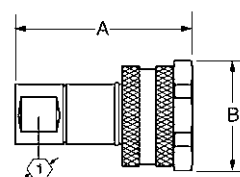


Figure 3

Dimensions (Female SAE O-Ring)

Part Number NBR	FKM	EPDM	Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions					
									A		B		Hex	
									mm	(in)	mm	(in)	mm	(in)
FD86-1008-16-16	FD86-1043-16-16	FD86-1053-16-16	Plug/Male	1	1 $\frac{5}{16}$	1 $\frac{5}{16}$ - 12	Female SAE O-Ring	1	102.4	(4.03)	53.6	(2.11)	44.5	(1.75)
FD86-1010-16-16	FD86-1044-16-16	FD86-1054-16-16	Socket/Female	1	1 $\frac{5}{16}$	1 $\frac{5}{16}$ - 12	Female SAE O-Ring	2	117.3	(4.62)	114.3	(4.50)	-	-
FD86-1006-16-16	FD86-1042-16-16	FD86-1052-16-16	Socket/Female	1	1 $\frac{5}{16}$	1 $\frac{5}{16}$ - 12	Female SAE O-Ring	3	117.3	(4.62)	71.4	(2.81)	15.8	(1.62)
FD86-1008-20-20	FD86-1043-20-20	FD86-1053-20-20	Plug/Male	1 $\frac{1}{4}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$ - 12	Female SAE O-Ring	1	105.7	(4.16)	63.0	(2.48)	57.2	(2.25)
FD86-1010-20-20	FD86-1044-20-20	FD86-1054-20-20	Socket/Female	1 $\frac{1}{4}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$ - 12	Female SAE O-Ring	2	132.6	(5.22)	133.4	(5.25)	-	-
FD86-1006-20-20	FD86-1042-20-20	FD86-1052-20-20	Socket/Female	1 $\frac{1}{4}$	1 $\frac{1}{8}$	1 $\frac{1}{8}$ - 12	Female SAE O-Ring	3	132.6	(5.22)	86.4	(3.40)	50.8	(2.00)

Dimensions (Female NPT)

Part Number NBR	FKM	EPDM	Type	Body Size	Port Size	Thread	Type	Fig.	Dimensions					
									A		B		Hex	
									mm	(in)	mm	(in)	mm	(in)
FD86-1002-16-16	FD86-1040-16-16	FD86-1050-16-16	Plug/Male	1	1 - 11 $\frac{1}{2}$	1 - 11 $\frac{1}{2}$	Female NPT	1	111.8	(4.40)	53.6	(2.11)	44.5	(1.75)
FD86-1001-16-16	FD86-1039-16-16	FD86-1049-16-16	Socket/Female	1	1 - 11 $\frac{1}{2}$	1 - 11 $\frac{1}{2}$	Female NPT	2	126.5	(4.98)	114.3	(4.50)	-	-
FD86-1004-16-16	FD86-1041-16-16	FD86-1051-16-16	Socket/Female	1	1 - 11 $\frac{1}{2}$	1 - 11 $\frac{1}{2}$	Female NPT	3	126.5	(4.98)	71.4	(2.81)	15.8	(1.62)
FD86-1002-20-20	FD86-1040-20-20	FD86-1050-20-20	Plug/Male	1 $\frac{1}{4}$	1 $\frac{1}{4}$ - 11 $\frac{1}{2}$	1 $\frac{1}{4}$ - 11 $\frac{1}{2}$	Female NPT	1	112.5	(4.43)	63.0	(2.48)	57.2	(2.25)
FD86-1001-20-20	FD86-1039-20-20	FD86-1049-20-20	Socket/Female	1 $\frac{1}{4}$	1 $\frac{1}{4}$ - 11 $\frac{1}{2}$	1 $\frac{1}{4}$ - 11 $\frac{1}{2}$	Female NPT	2	142.8	(5.62)	133.4	(5.25)	-	-
FD86-1004-20-20	FD86-1041-20-20	FD86-1051-20-20	Socket/Female	1 $\frac{1}{4}$	1 $\frac{1}{4}$ - 11 $\frac{1}{2}$	1 $\frac{1}{4}$ - 11 $\frac{1}{2}$	Female NPT	3	142.8	(5.62)	86.4	(3.40)	50.8	(2.00)

Repair Kits

Part Number NBR	FKM	EPDM	Body Size	Coupling Type
FF10596-16	FF10597-16	FF10598-16	1	Male
FF10593-16	FF10594-16	FF10595-16	1	Female
FF10596-20	FF10597-20	FF10598-20	1 $\frac{1}{4}$	Male
FF10593-20	FF10594-20	FF10595-20	1 $\frac{1}{4}$	Female

Dust Caps and Dust Plugs

Part Number Dust Cap with Chain	Dust Plug with Chain	Body Size
FD86-1018-16	FD86-1016-16	1
FD86-1018-20	FD86-1016-20	1 $\frac{1}{4}$

