

FD15 Series Oil Sampling Valve

Diagnostic



Danfoss Hansen FD15 Series Oil Sampling Valve is designed for in-line sampling of system fluids without system shutdown, usually in less than one minute, and without fluid contamination.

Product Features

- Standard seal material: Nitrile (NBR)
- Corrosion resistant plated steel with brass internal components
- Operating Temperature Range: -65°F to +275°F (-53°C to +135°C)
- Minimum Burst Pressure: 12,000 psi
- Minimum Particle Restriction: 500 microns
- Maximum Torque to Operate: 10 in. lbs.

- FD15-1000-04 is qualified to the MIL-V-81940/2-1
- Note: This valve is not intended for aerospace applications.

Applications & Markets

- Engine oil
- Lubricating oil
- Transmission fluid and hydraulic fluids in mobile construction equipment, military vehicles, trucks and stationary equipment

Operation

- For best results, Danfoss FD15 Oil Sampling Valves should be installed in dynamic fluid lines in low pressure and return lines. If only one sampling point can be chosen, it should be in the return line, upstream of any return line filter. This will insure a representative sample of all components in the fluid system for their present condition.

Instructions

1. Remove metal dustcover on discharge port.
2. Discharge approximately 200 ml of oil to flush valve by turning knurled knob $\frac{1}{4}$ turn to the right. Dispose of this sample in the appropriate manner.
3. Locate clean oil sample bottle under discharge port. (Sample bottles are usually supplied by the oil analysis lab.)
4. Turn knurled knob $\frac{1}{4}$ turn to the right until bottle is filled to the desired level. The knob can be backed off to throttle the rate of flow.
5. When bottle is filled let go of the knurled knob, the valve will close automatically. Replace metal dustcover wrench tight.

Notes

As required in MIL-V-81940/2-1 this valve's flow rate is between 100 and 1500 milliliters per minute at pressures from 0–50 psi. (MIL-V-81940/2-1 applies only to pressures from 50–300 psi.)

The $\frac{1}{4}$ " NPTF version is qualified to MIL-V-81940/2-1 and its performance is representative of the other inlet port configurations listed above. QPL-81940-9 6-5-89

FD15 Series Oil Sampling Valve

**Male Pipe Thread
50-300 psi**

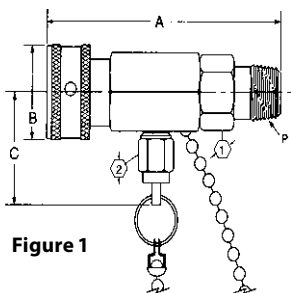


Figure 1

**Male SAE O-Ring Thread
50-300 psi**

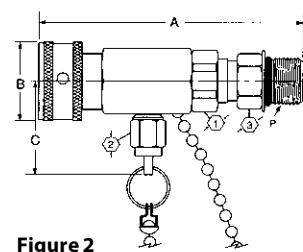


Figure 2

Dimensions (Male Pipe Thread)

Part Number NBR	Sampling Type	Port Size	Thread	Type	Fig.	Dimensions						
						A	B	C	Hex ①	Hex ②	Hex ③	
						mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	
FD15-1000-02	50-300 psi	1/8	1/8-27	Male Pipe Thread	1	61.5 (2.42)	25.4 (1.00)	33.0 (1.30)	17.5 (.69)	9.7 (.38)	-	-
FD15-1000-04	50-300 psi	1/4	1/4-18	Male Pipe Thread	1	65.0 (2.56)	25.4 (1.00)	33.0 (1.30)	17.5 (.69)	9.7 (.38)	-	-

Dimensions (Male SAE O-Ring Thread)

Part Number NBR	Sampling Type	Port Size	Thread	Type	Fig.	Dimensions						
						A	B	C	Hex ①	Hex ②	Hex ③	
						mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	
FD15-1002-04	50-300 psi	7/16	7/16-20	Male SAE O-Ring Thread	2	70.9 (2.79)	25.4 (1.00)	33.0 (1.30)	17.5 (.69)	9.7 (.38)	14.2 (.56)	

Dimensions (Male Pipe Thread)

Part Number NBR	Sampling Type	Port Size	Thread	Type	Fig.	Dimensions						
						A	B	C	Hex ①	Hex ②	Hex ③	
						mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	
FD15-1026-04	0-50 psi	1/4	1/4-18	Male Pipe Thread	3	65.0 (2.56)	25.4 (1.00)	33.0 (1.30)	17.5 (.69)	9.7 (.38)	-	-

Dimensions (Male SAE O-Ring Thread)

Part Number NBR	Sampling Type	Port Size	Thread	Type	Fig.	Dimensions						
						A	B	C	Hex ①	Hex ②	Hex ③	
						mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	
FD15-1025-04	0-50 psi	7/16	7/16-20	Male SAE O-Ring Thread	4	70.9 (2.79)	25.4 (1.00)	33.0 (1.30)	17.5 (.69)	9.7 (.38)	14.2 (.56)	

**Male Pipe Thread
0-50 psi**

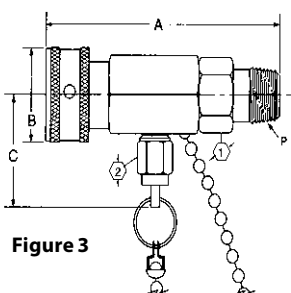


Figure 3

**Male SAE O-Ring Thread
0-50 psi**

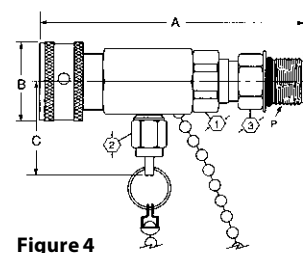


Figure 4