Schlumberger

Floor Choke Manifold

Control flow rates and reduce well pressure prior to processing

Applications

- Onshore and offshore oil and gas well testing and cleanup after drilling or workover operations
- Flow back after stimulation or workover operations
- Bleedoff operations

Features

- Allows fast choke changes without interrupting the flow
- Controls flow with a calibrated orifice for flow rate reference
- Ensures reliability in harsh environments with seal design
- Provides two flow paths, one through a fixed choke and the other through an adjustable choke that can be converted to a fixed choke
- Enables fluid sampling, real-time pressure and temperature monitoring, and chemical injection
- Offers models with single- or double-block isolation within the portfolio
- Complies with API Spec 6A, H_2S (NACE MR0175), DNV, BS† 7072, Fluid Class DD specifications, and European Pressure Equipment Directive 97/23
- Offers the option to winterize any model

Controlled pressure and increased reliability

- Reduces effluent pressure before flow enters process equipment, which helps control the well and increases safety
- Ensures reliable shut-in in harsh-environment operations

Flow rate and well pressure control

The floor choke manifold (FMF) is used to control the flow rate and reduce well pressure before the flow enters the processing equipment. The FMF includes an adjustable choke box, a fixed choke box, and several pressure or sampling ports and thermowells to monitor pressure, temperature, and fluid characteristics. The FMF design allows the well to flow through calibrated chokes for flow rate reference, as well as through adjustable chokes. The well can also be placed in a shut-in condition if required. Dual flow paths allow fast choke changes without interrupting the flow. Because an adjustable choke can be converted to a fixed choke, fixed chokes can be installed in both flow paths if necessary. Reservoir behavior can be monitored at the choke manifold by installing pressure and temperature gauges, recorders, and wireless sensors. Combining this data with flow rate measurements and reservoir fluid properties enables you to characterize well performance.

Single-block choke manifold.

FMF models and sizes are available for different well pressures, temperatures, and flow rates. The FMFs use a proven metal-to-metal, double-sealing design for harsh-environment operations, and they comply with all applicable environmental requirements. All FMFs are manufactured under type approval or design verification review and are provided with a Certificate of Conformity and full quality file.

† British Standard Code of Practice for Inspection and Repair of Offshore Containers

Floor Choke Manifold

Double-block choke manifold.

Specifications

Model	Nominal Size, in	Working Pressure, psi [MPa]	Temperature Class, degF [degC]	Inlet and Outlet Connections	API Flange on Tee	Bypass	Isolation	CE Marked
FMF-F	3⅛	5,000 [34]	–20 to 250 [–29 to 121]	3-in Fig 1002 female and male	3⅛ RX35	No	Single	No
FMF-FC	4¹⁄₁₆	5,000 [34]	–20 to 250 [–29 to 121]	API flange 4¹⁄₁₆ RX39	4¹⁄₁₆ RX39	No	Single	No
FMF-FCB	4¹⁄₁₆	5,000 [34]	–20 to 250 [–29 to 121]	4-in Fig 1002 female and male	4¹⁄₁₆ RX39	Yes	Single	No
FMF-FCC	4¹⁄₁₆	5,000 [34]	–50 to 350 [–46 to 177]	API flange 4¹⁄₁₆ RX39	4¹⁄₁₆ RX39	No	Single	No
FMF-BG	3¹⁄₁₆	10,000 [69]	–20 to 250 [–29 to 121]	3-in Fig 1502 female and male	3¹⁄₁₆ BX154	Yes	Single	No
FMF-G	3¹⁄₁₆	10,000 [69]	–20 to 250 [–29 to 121]	3-in Fig 1502 female and male	3¹⁄₁₆ BX154	No	Single	No
FMF-GK	3¹⁄₁₆	10,000 [69]	–20 to 250 [–29 to 121]	3-in Fig 1502 female and male	3¹⁄₁₆ BX154	No	Single	No
FMF-GB	3¹⁄₁₆	10,000 [69]	–20 to 250 [–29 to 121]	API flange 3¹⁄₁₆ BX154	3¹⁄₁₆ BX154	No	Single	No
FMF-GC	4¹⁄₁₆	10,000 [69]	–20 to 250 [–29 to 121]	API flange 4¹⁄₁₆ BX155	4¹⁄₁₆ BX155	No	Single	Yes
FMF-GCC	4¹⁄₁₆	10,000 [69]	–20 to 250 [–29 to 121]	API flange 4¹⁄₁₆ BX155	4¹⁄₁₆ BX155	No	Single	Yes
FMF-GN	4¹⁄₁₆	10,000 [69]	–20 to 250 [–29 to 121]	API flange 4¹⁄₁₆ BX155	4¹⁄₁₆ BX155	No	Double	Yes
FMF-GP	4¹⁄₁₆	10,000 [69]	–20 to 350 [–29 to 177]	API flange 4¹⁄₁₆ BX155	4¹⁄₁₆ BX155	No	Single	Yes
FMF-GHD	3¹⁄₁₆	10,000 [69]	–20 to 350 [–29 to 177]	Grayloc D-31 HUB	3¹⁄₁₆ BX154	No	Double	Yes
FMF-GNN	4¹⁄₁₆	10,000 [69]	–20 to 350 [–29 to 177]	API flange 4¹⁄₁₆ BX155	4¹⁄₁₆ BX155	No	Double	Yes + NORSOK
FMF-GNO	4¹⁄₁₆	10,000 [69]	–20 to 350 [–29 to 177]	API flange 4¹⁄₁₆ BX155	4¹⁄₁₆ BX155	No	Double	No
FMF-GF	3¹⁄₁₆	10,000 [69]	–20 to 350 [–29 to 177]	3-in Fig 1502 female and male†	3¹⁄₁₆ BX154	No	Double	Yes
FMF-GNP	4¹⁄₁₆	10,000 [69]	–20 to 350 [–29 to 177]	API flange 4¹⁄₁₆ BX155	4¹⁄₁₆ BX155	No	Double	No
FMF-GHA	3¹⁄₁₆	10,000 [69]	–20 to 350 [–29 to 177]	3-in Fig 1502 female and male	3¹⁄₁₆ BX154	No	Single	Yes
FMF-HD	3¹⁄₁₆	15,000 [103]	–20 to 350 [–29 to 177]	API flange 3¹⁄₁₆ BX154	3¹⁄₁₆ BX154	No	Single	No
FMF-HDK	3¹⁄₁₆	15,000 [103]	–20 to 350 [–29 to 177]	API flange 3¹⁄₁₆ BX154	3¹⁄₁₆ BX154	No	Single	No
FMF-HL	3¹⁄₁₆	15,000 [103]	–20 to 350 [–29 to 177]	API flange 3¹⁄₁₆ BX154	3¹⁄₁₆ BX154	Yes	Double	Yes
FMF-HFBA	3¹⁄₁₆	15,000 [103]	–20 to 350 [–29 to 177]	API flange 3¹⁄₁₆ BX154	3¹⁄₁₆ BX154	No	Double‡	No
FMF-HN	3¹⁄₁₆	15,000 [103]	–20 to 350 [–29 to 177]	API flange 3¹⁄₁₆ BX154	3¹⁄₁₆ BX154	No	Double	Yes
FMF-HPA	3¹⁄₁₆	15,000 [103]	–50 to 350 [–46 to 177]	API flange 4¹⁄₁₆ BX155	4¹⁄₁₆ BX155	No	Double	No
FMF-HPB	3¹⁄₁₆	15,000 [103]	–50 to 350 [–46 to 177]	API flange 4¹⁄₁₆ BX155	4¹⁄₁₆ BX155	No	Double	No
FMF-HPC	3¹⁄₁₆	15,000 [103]	–20 to 350 [–29 to 177]	API flange 4¹⁄₁₆ BX155	4¹⁄₁₆ BX155	No	Double	No

All specification are subject to change without notice.

† Optional connections, Grayloc D-31 HUB and 4-in Fig 1502, are available.

‡ The two flow paths of the FMF-HFBA do not recombine.

Floor Choke Manifold

Specifications

Model	Skid Temperature Class, degF [degC]	Max. Choke Size (Fixed or Adjustable), in [mm]	Adjustable Choke Type	Tapping Points Number and Type Upstream (US) and Downstream (DS)	Dimensions, (L × W × H), ft [m]	Weight, lbm [kg]
FMF-F	–20 [–29]	2 [50.8]	Needle and seat	3 × ½ NPT	6.23 × 5.90 × 3.28 [1.90 × 1.80 × 1.00]	3,800 [1,724]
FMF-FC	–20 [–29]	3 [76.2]	Needle and seat	3 × ½ NPT	7.55 × 7.05 × 3.94 [2.30 × 2.15 × 1.20]	6,504 [2,950]
FMF-FCB	–4 [–20]	3 [76.2]	Needle and seat	3 × ½ NPT	9.22 × 8.89 × 3.56 [2.81 × 2.71 × 1.085]	6,613 [3,000]
FMF-FCC	–50 [–46]	3 [76.2]	Needle and seat	3 × ½ NPT	8.85 × 6.92 × 7.77 [2.70 × 2.11 × 2.36]	7,000 [3,175]
FMF-BG	–20 [–29]	2 [50.8]	Needle and seat	3 × ½ NPT	8.44 × 7.35 × 3.28 [2.57 × 2.24 × 1.00]	5,512 [2,500]
FMF-G	–20 [–29]	2 [50.8]	Needle and seat	3 × ½ NPT	6.55 × 6.55 × 3.28 [2.00 × 2.00 × 1.00]	4,500 [2,041]
FMF-GK	–4 [–20]	2 [50.8]	Needle and seat	3 × ½ NPT	6.55 × 6.55 × 3.28 [2.00 × 2.00 × 1.00]	4,500 [2,041]
FMF-GB	–20 [–29]	2 [50.8]	Needle and seat	3 × ½ NPT	6.55 × 6.55 × 3.28 [2.00 × 2.00 × 1.00]	4,500 [2,041]
FMF-GC	–20 [–29]	3 [76.2]	Needle and seat	3 × ½ NPT	8.86 × 6.89 × 3.28 [2.70 × 2.10 × 1.00]	8,900 [4,036]
FMF-GCC	–4 [–20]	3 [76.2]	Needle and seat	3 × ½ NPT	8.86 × 6.89 × 7.22 [2.70 × 2.10 × 2.20]	10,604 [4,810]
FMF-GN	–4 [–20]	3 [76]	Needle and seat	3 (US), 5 (DS) × ½ NPT	15.3 × 7.2 × 7.35 [4.66 × 2.2 × 2.24]	17,372 [7,880]
FMF-GP	–20 [–29]	3 [76]	External sleeve	3 × ½ NPT	8.8 × 7.2 × 7.68 [2.7 × 2.2 × 2.34]	9,259 [4,200]
FMF-GHD	–4 [–20]	2 [50.8]	Needle and seat	6 × ½ NPT	13.1 × 6.4 × 3.9 [4.0 × 1.95 × 1.18]	13,228 [6,000]
FMF-GNN	–4 [–20]	3 [76]	External sleeve	7 (US), 11 (DS) × ½ NPT	15.1 × 7.2 × 6.56 [4.6 × 2.2 × 2]	17,637 [8,000]
FMF-GNO	–4 [–20]	3 [76]	Needle and seat	6 × 9⁄16 autoclave	15.4 × 7.2 × 7.68 [4.7 × 2.19 × 2.34]	16,690 [7,570]
FMF-GF	–4 [–20]	2 [50.8]	Needle and seat	9 (US), 15 (DS) × ½ NPT	13.1 × 8 × 4.2 [3.99 × 2.44 × 1.29]	11,133 [5,050]
FMF-GNP	–4 [–20]	1.9 [48]	External sleeve	10 × 9⁄16 autoclave	20 × 8 × 8.5 [6.06 × 2.44 × 2.59]	27,556 [12,500]
FMF-GHA	–4 [–20]	2 [50.8]	Needle and seat	3 × ½ NPT	8.6 × 7 × 4.2 [2.62 × 2.16 × 1.27]	6,350 [2,880]
FMF-HD	–20 [–29]	2 [50.8]	Needle and seat	3 × 9⁄16 autoclave	8.35 × 7.03 × 3.89 [2.55 × 2.15 × 1.18]	6,592 [2,990]
FMF-HDK	–4 [–20]	2 [50.8]	Needle and seat	3 × 9⁄16 autoclave	8.43 × 7.05 × 4.17 [2.57 × 2.15 × 1.27]	6,614 [3,000]
FMF-HL	–4 [–20]	2 [50.8]	Optional	6 × 9⁄16 autoclave	14.17 × 6.34 × 6.76 [4.32 × 1.93 × 2.06]	16,535 [7,500]
FMF-HFBA	–20 [–29]	2 [50.8]†	Drilling choke	5 × 9⁄16 autoclave total‡	13.8 × 5.9 × 4.4 [4.2 × 1.8 × 1.34]	15,432 [7,000]
FMF-HN	–20 [–29]	2 [50.8]	Needle and seat	7 (US), 11 (DS) × 9⁄16 autoclave	14.1 × 6.36 × 6.75 [4.32 × 1.94 × 2.06]	20,000 [9,071]
FMF-HPA	–4 [–20]	Fixed: 2 [50.8] Adjustable: 2.8 [71.1]	External sleeve	14 × 9⁄16 autoclave	13.125 × 8 × 8.82 [4 × 2.438 × 2.691]	29,500 [13,381]
FMF-HPB	–4 [–20]	Fixed: 2 [50.8] Adjustable: 2.8 [71.1]	External sleeve	15 × 9⁄16 autoclave	13.125 × 8 × 8.82 [4 × 2.438 × 2.691]	32,000 [14,515]
FMF-HPC	–4 [–20]	Fixed: 2 [50.8] Adjustable: 2.8 [71.1]	External sleeve	14 × 9⁄16 autoclave	13.125 × 8 × 8.82 [4 × 2.438 × 2.691]	26,000 [11,793]

All specifications are subject to change without notice.

† FMF-HFBA drilling choke has no choke beans. Choke size is default.

‡ The two flow paths of the FMF-HFBA do not recombine.

slb.com/well-testing-control-equipment

Schlumberger

Other company, product, and service names are the properties of their respective owners.
Copyright © 2022 Schlumberger. All rights reserved. 22-RPIN-1206230