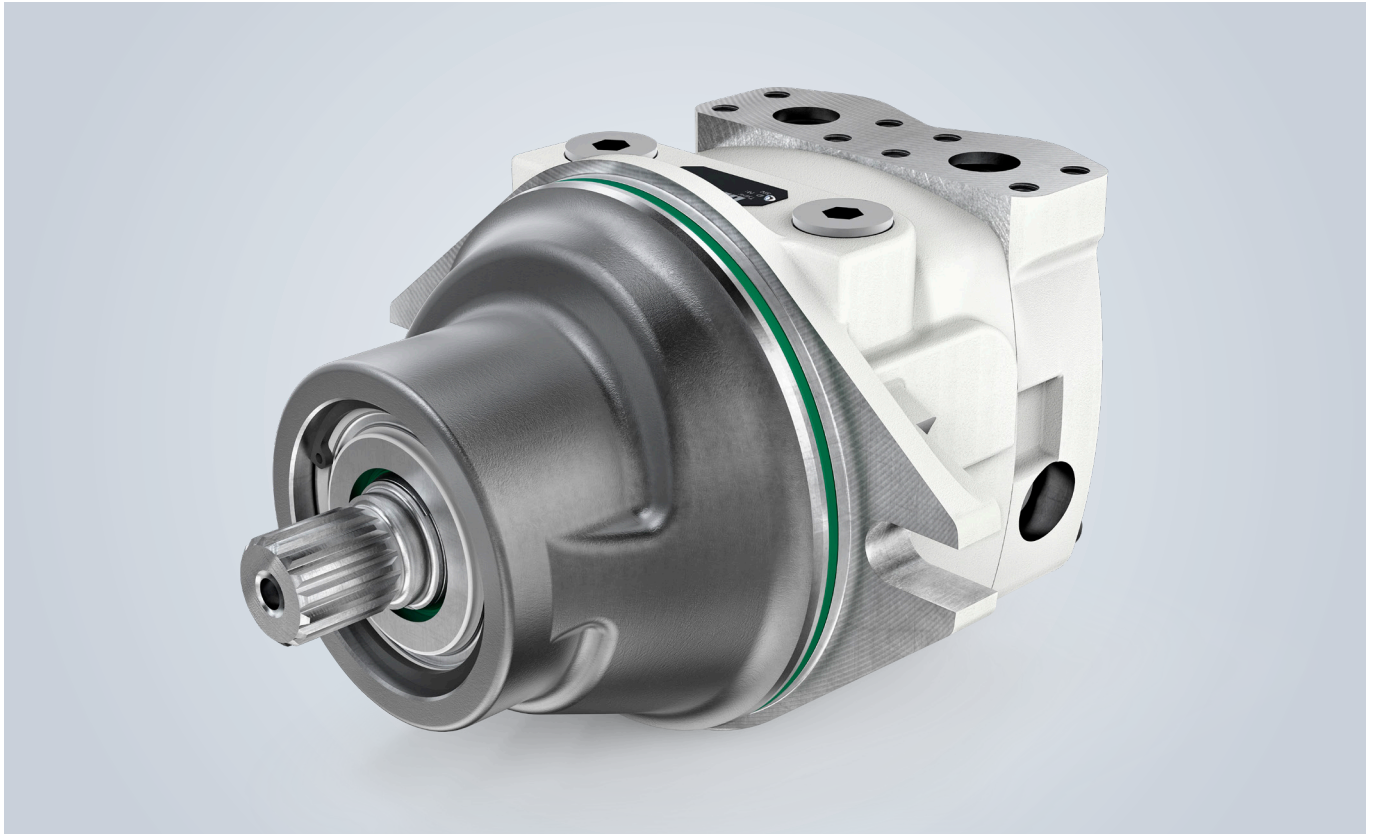


Short description

Axial piston motor FMF



The Liebherr axial piston motors in the FMF series are designed as swashplates for open and closed circuits. The constant-displacement plug-in motors are available in finely graded nominal sizes ranging from 1.53 to 15.26 inch³ (25 to 250 cm³). The nominal pressure is 5,076 or 6,092 psi (350 or 420 bar) and the maximum pressure is 5,511 or 6,527 psi (380 or 450 bar), depending on the nominal size.

Special features of the FMF:

Designed as a plug-in motor. The valves can be integrated into the connecting plate.
Speed sensor or preparation for speed sensor available on request.

Valid for:

FMF 025 / FMF 032 / FMF 045 / FMF 058 / FMF 064
FMF 090 / FMF 100 / FMF 125 / FMF 165 / FMF 250

Features:

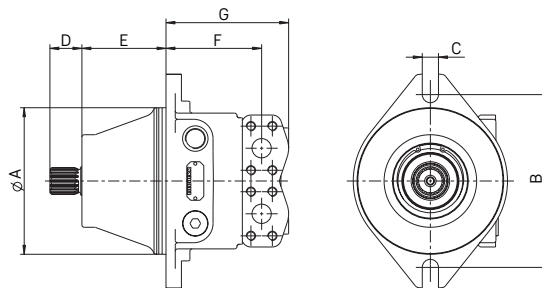
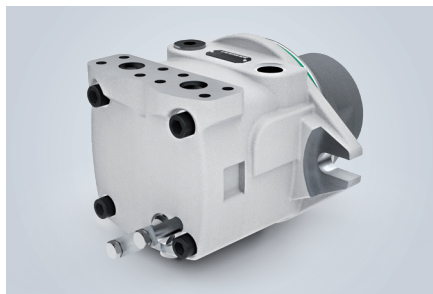
Axial piston motor (travel drive)
A series
Constant displacement
Open and closed circuit

Pressure range:

Nominal pressure, NS 025 / 032 / 090 / 100 / 125 / 165 / 250
 $p_N = 5,076$ psi (350 bar)
Nominal pressure, NS 045 / 058 / 064
 $p_N = 6,092$ psi (420 bar)
Maximum pressure, NS 025 / 032 / 090 / 100 / 125 / 165 / 250
 $p_{max} = 5,511$ psi (380 bar)
Maximum pressure, NS 045 / 058 / 064
 $p_{max} = 6,527$ psi (450 bar)

LIEBHERR

Axial piston motor FMF



FMF constant displacement, open and closed circuits, nominal pressure 5,076*/6,092 psi (350*/420 bar), maximum pressure 5,511*/6,527 psi (380*/450 bar) (* NS 25-32, 90-250)

Nominal size			25	32	45	58	64	90	100	125	165	250
Displacement to hydraulic motor	$V_{g \max}$	inch ³ (cm ³)	1.53 (25)	1.94 (31.8)	2.78 (45.6)	3.56 (58.3)	3.92 (64.3)	5.53 (90.7)	6.30 (103.2)	7.66 (125.6)	10.12 (165.9)	15.67 (256.8)
Max. speed	at $V_{g \max}$ and $\Delta p = 4,786$ psi (330 bar), n_{\max}	rpm	5,180	5,180	4,620	4,110	4,110	3,670	3,540	3,290	3,000	2,606
Displacement flow to hydraulic motor	at n_{\max} , $Q_{v \max}$	US.liq.gal/min (l/min)	34 (130)	44 (165)	56 (211)	63 (240)	70 (264)	88 (333)	96 (365)	109 (413)	132 (498)	177 (669)
Output power	$\Delta p = 4,786$ psi (330 bar), P_{\max}	hp (kW)	95 (71)	122 (91)	156 (116)	177 (132)	194 (145)	245 (183)	270 (201)	304 (227)	367 (274)	493 (368)
Output torque	$\Delta p = 4,786$ psi (330 bar), T_{\max}	lb-ft (Nm)	97 (131)	123 (167)	177 (240)	226 (306)	249 (338)	352 (477)	400 (542)	487 (660)	643 (872)	995 (1,349)

Technical data

Product dimensions [inch (mm)]*		25	32	45	58	64
Splined shaft profile	DIN 5480 involute gear hub profile	W25 x 1.25 x 18	W25 x 1.25 x 18	W30 x 2 x 14	W35 x 2 x 16	W35 x 2 x 16
Centering diameter	A, h8 tolerance fit	5.31 (135)	5.31 (135)	6.30 (160)	6.69 (170)	6.69 (170)
Connection spacing, screws	B	6.30 (160)	6.30 (160)	7.87 (200)	7.87 (200)	7.87 (200)
Fastening holes	C	0.51 (13)	0.51 (13)	0.71 (18)	0.67 (17)	0.67 (17)
Splined shaft length	D	1.18 (30)	1.18 (30)	1.38 (35)	1.57 (40)	1.57 (40)
Plug-in length	E	3.48 (88.5)	3.48 (88.5)	3.63 (92.3)	3.63 (92.3)	3.63 (92.3)
Connection length, SAE, pressure	F	3.58 (91)	3.58 (91)	3.93 (99.7)	4.83 (122.7)	4.83 (122.7)
Total length	G	5.30 (134.5)	5.30 (134.5)	6.15 (156.2)	6.44 (163.7)	6.44 (163.7)
Pressure connections	SAE J518 (6,000 psi)	1/2"	1/2"	3/4"	1"	3/4" or 1"
Leakage oil connection	ISO 9974-1	M16 x 1.5	M16 x 1.5	M18 x 1.5	M18 x 1.5	M33 x 2

Product dimensions [inch (mm)]*		90	100	125	165	250
Splined shaft profile	DIN 5480 involute gear hub profile	W35 x 2 x 16	W40 x 2 x 18	W40 x 2 x 18	W45 x 2 x 21	W50 x 2 x 24
Centering diameter	A, h8 tolerance fit	7.48 (190)	7.48 (190)	8.27 (210)	9.06 (230)	10.24 (260)
Connection spacing, screws	B	8.82 (224)	8.82 (224)	9.76 (248)	11.02 (280)	12.20 (310)
Fastening holes	C	0.83 (21)	0.83 (21)	0.83 (21)	1.02 (26)	1.02 (26)
Splined shaft length	D	1.57 (40)	1.77 (45)	1.77 (45)	1.97 (50)	2.17 (55)
Plug-in length	E	4.35 (110.5)	4.35 (110.5)	4.83 (122.8)	5.12 (130)	5.71 (145)
Connection length, SAE, pressure	F	4.88 (124)	4.88 (124)	5.59 (142)	6.10 (155)	6.42 (163) 2/3
Total length	G	6.26 (159)	6.26 (159)	7.06 (179.2)	7.91 (201)	8.43 (214)
Pressure connections	SAE J518 (6,000 psi)	1"	1"	1 1/4"	1 1/4"	1 1/4"
Leakage oil connection	ISO 9974-1	M26 x 1.5	R 3/4"	R 3/4"	M33 x 2	M33 x 2

* The dimensions can vary depending on the configuration and additional equipment (installation drawing available upon request).

Note:

An external brake valve can be attached to the SAE connection.

Type code

FMF		/	1	00			7		D
1.	2.		3.	4.	5.	6.	7.	8.	9.

1. Motor type

Travel drive / motor / fixed FMF

2. Nominal size

	25	32	45	58	64	90	100	125	165	250	
	■	■	■	■	■	■	■	■	■	■	

3. Series

	■	■	■	■	■	■	■	■	■	■	■	1
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4. Control

Without control	■	■	■	■	■	■	■	■	■	■	■	00
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5. Valve

Without valve	■	■	■	■	■	■	■	■	■	■	■	00
High-pressure limitation	□	□	□	□	□	□	□	□	□	□	□	0H
Hydraulically adjustable high-pressure limit	□	□	□	□	□	□	□	□	□	□	□	0X
Flushing, closed circuit	□	□	■	■	■	■	■	■	■	■	■	S0
Flushing, closed circuit with high-pressure limitation	□	□	□	□	□	□	□	□	□	□	□	SH
Flushing, open circuit	□	□	■	■	■	■	■	■	■	■	■	M0
Flushing, open circuit with high-pressure limitation	□	□	□	□	□	□	□	■	□	■	■	MH
Extraction with high-pressure limitation	■	■	■	■	■	■	□	□	■	□	□	NH
Extraction with hydraulically adjustable high-pressure limitation	□	■	■	■	■	■	□	□	□	□	□	NX
Extraction with high-pressure limitation and damping	□	□	■	■	■	■	□	□	□	□	□	NHD
Follow-up valve	■	■	■	□	■	■	□	□	■	□	□	OL
High-pressure limitation and follow-up valve	■	■	■	□	■	■	□	□	■	□	□	HL

6. Direction of rotation (viewed towards the drive shaft)

Right	□	□	■	■	■	■	□	□	■	□	□	R
Left	■	■	■	□	■	■	□	□	■	□	□	L
Alternating	■	■	■	■	■	■	■	■	■	■	■	W

7. Mounting flange (other mounting flanges upon request)

2-hole flange	■	■	■	■	■	■	■	■	■	■	■	7
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8. Through drive

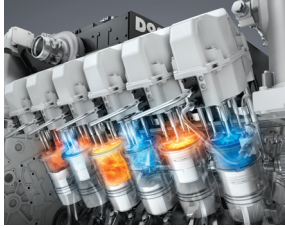
No through drive	■	■	■	■	■	■	■	■	■	■	■	00
Special through-drive	-	-	-	-	-	-	-	-	-	-	-	10

9. Sensors

Speed sensor	□	□	■	■	■	■	■	■	■	■	■	D
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■ Available □ On request - Not available

Components



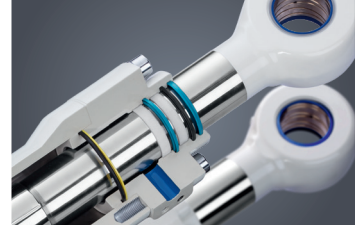
Diesel engines



Injection systems



Axial piston hydraulics



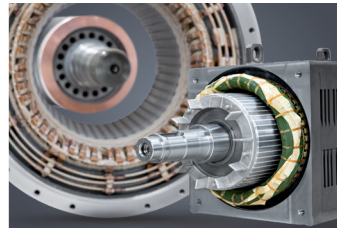
Hydraulic cylinders



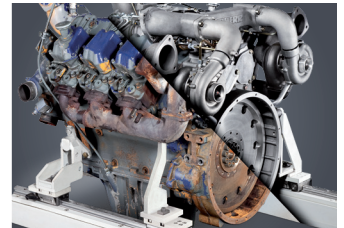
Large diameter bearings



Gearboxes and rope winches



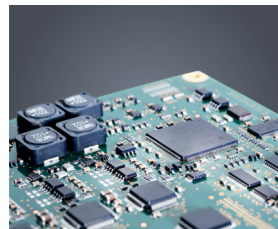
Electrical machines



Preparation of components



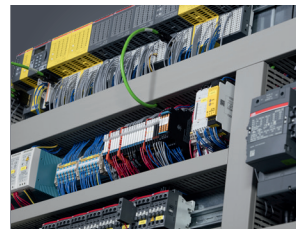
Human-machine interfaces and gateways



Control electronics and sensors



Power electronics



Switchgear



Software

From A to Z, the components division of the Liebherr Group offers a broad range of solutions for mechanical, hydraulic, electric and electronic drive and control technology. The efficient components and systems are produced at a total of ten production sites around the world to the highest standards of quality. Central contacts for all product lines are available to customers at Liebherr Component Technologies AG and our regional sales branches.

Liebherr is your partner for joint success: from product idea to development, manufacture and commissioning, right through to customer service solutions, such as preparation of components.

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