

## Short Description

# Fixed Plug-In Motors FMF



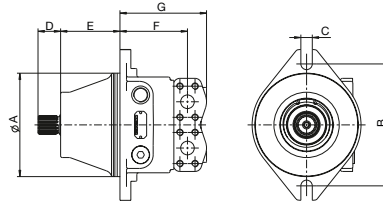
The Liebherr axial piston motor FMF series is developed for the open and closed circuit in swash plate design. The fixed plug-in motors are available in finely graded nominal sizes ranging from 25 to 250 cm<sup>3</sup>. The nominal pressure is 350/420 bar and maximum pressure 380/450 bar, depending on its size.

### Special Features

Various flushing and pressure valves for the open and closed circuit are integrated into the port plate. Speed sensor or preparation for speed sensor available on request.

# Technical Data

## Series A: FMF plug-in motor



### FMF

fixed displacement, open and closed circuit, nominal pressure 350\*/420 bar, maximum pressure 380\*/450 (\*ns 25–32, 90–250)

Nominal size		25	32	45	58	64	90	100	125	165	250
Displacement	$V_{g \max}$ [cm <sup>3</sup> ]	25	31.8	45.6	58.3	64.3	90.7	103.2	125.6	165.9	256.8
Max. speed	at $V_{g \max}$ and $\Delta p = 330$ bar, $n_{\max}$ [rpm]	5,180	5,180	4,620	4,110	4,110	3,670	3,540	3,290	3,000	2,606
Flow	at $n_{\max}$ , $q_{v \max}$ [l/min]	130	165	211	240	264	333	365	413	498	669
Output power	$\Delta p = 330$ bar, $P_{\max}$ [kW]	71	91	116	132	145	183	201	227	274	368
Output torque	$\Delta p = 330$ bar, $T_{\max}$ [Nm]	131	167	240	306	338	477	542	660	872	1,349

### Technical Data

Product dimensions (mm)*		25	32	45	58	64
Splined shaft profile	DIN 5480 Tol. 9g	W25x1.25x18	W25x1.25x18	W30x2x14	W35x2x16	W35x2x16
Centering diameter	A fit h8	135	135	160	170	170
Screw connecting pitch	B	160	160	200	200	200
Fastening bores	C	13	13	18	17	17
Splined shaft length	D	30	30	35	40	40
Insertion length		88.5	88.5	92.3	92.3	92.3
Connection length, SAE flanges	E	91	91	99.7	122.7	122.7
Overall length	F	134.5	134.5	156.2	163.7	163.7
Pressure ports	SAE J518 (6,000 psi)	1/2"	1/2"	3/4"	1"	3/4" oder 1"
Oil leakage port		M16 x 1.5	M16 x 1.5	M18 x 1.5	M18 x 1.5	M33 x 2

Product dimensions (mm)*		90	100	125	165	250
Splined shaft profile	DIN 5480 Tol. 9g	W35x2x16	W40x2x18	W40x2x18	W45x2x21	W50x2x24
Centering diameter	A fit h8	190	190	210	230	260
Screw connecting pitch	B	224	224	248	280	310
Fastening bores	C	21	21	21	26	26
Splined shaft length	D	40	45	45	50	55
Insertion length		110.5	110.5	122.8	130	145
Connection length, SAE flanges	E	124	124	142	155	163 2/3
Overall length	F	159	159	179,2	201	214
Pressure ports	SAE J518 (6,000 psi)	1"	1"	1 1/4"	1 1/4"	1 1/4"
Oil leakage port		M26 x 1.5	R 3/4"	R 3/4"	M33 x 2	M33 x 2

\* Dimensions may vary according to configuration and additional equipment (installation drawing on request).

### Note:

External brake valve can be attached to SAE port.

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# Type code for FMF motors

FMF G /											
<b>Motor Type</b>	Fixed displacement plug-in motor, series A										FMF
<b>Nominal size</b>	25	32	45	58	64	90	100	125	165	250	
	•	•	•	•	•	•	•	•	•	•	
<b>Series</b>											1
<b>Control / regulation</b>	No regulator										00
<b>Valves</b>											
None	•	○	•	•	•	○	○	○	○	○	00
High pressure relief valve	○	○	○	○	○	○	○	○	○	○	OH
Hydraulically adjustable high pressure relief valve	○	○	○	○	○	○	○	○	○	○	OX
Flushing for closed circuit	○	○	○	•	•	•	•	•	•	•	SO
Flushing for closed circuit with high pressure relief valve	○	○	○	○	○	○	○	○	○	○	SH
Flushing for open circuit	○	○	○	○	○	•	○	○	○	•	MO
Flushing for open circuit with high pressure relief valve	○	○	○	○	○	○	○	○	•	○	MH
Resuction valve with high pressure relief valve	•	•	•	•	•	○	○	○	○	○	NH
Resuction valve with hydraulically adjustable high pressure relief valve	○	•	•	•	•	○	○	○	○	○	NX
Resuction valve with high pressure relief valve with damping	○	○	•	○	○	○	○	○	○	○	NHD
Flushing for open circuit with one-rotation-direction valve	○	○	○	○	○	○	○	○	○	○	ML
One-rotation-direction valve	○	○	○	○	○	○	○	○	○	○	OL
High pressure relief valve and one-rotation-direction valve	○	○	○	○	○	○	○	○	○	○	HL
Hydraulically adjustable high pressure relief valve with one-rotation-direction valve	○	○	○	○	○	○	○	○	○	○	XL
Flushing for closed circuit with one-rotation-direction valve	○	○	○	○	○	○	○	○	○	○	SL
<b>Direction of rotation (looking at input shaft)</b>											
Right	○	○	•	•	•	•	○	○	•	○	R
Left	•	•	•	○	•	•	○	○	•	○	L
Alternating	•	•	•	•	•	•	•	•	•	•	W
<b>Mounting flange</b>											
2-hole flange	•	•	•	•	•	•	•	•	•	•	7
<b>Through-drive</b>											
Without through-drive	•	•	•	•	•	•	•	•	•	•	00
Non-standard through-drive	-	-	-	-	-	-	-	-	-	-	10
<b>Additional function</b>											
Speed sensor	○	○	•	•	•	•	•	•	•	•	D

- Available
- On request
- Not available