

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 cm³. The nominal pressure is 350/420 bar and maximum pressure 380/450 bar, depending on its size.

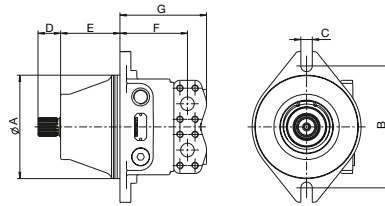
Special Features

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 ³]	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:

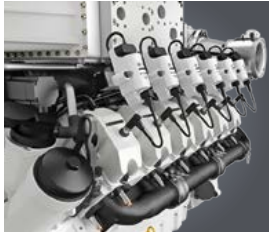
External brake valve can be attached to SAE port.

Type code for FMF motors

FMF G /											
Motor Type	Fixed displacement plug-in motor, series A										FMF
Nominal size	25	32	45	58	64	90	100	125	165	250	
	•	•	•	•	•	•	•	•	•	•	
Series											1
Control / regulation	No regulator										00
Valves											
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
Direction of rotation (looking at input shaft)											
Right	○	○	•	•	•	•	○	○	•	○	R
Left	•	•	•	○	•	•	○	○	•	○	L
Alternating	•	•	•	•	•	•	•	•	•	•	W
Mounting flange											
2-hole flange	•	•	•	•	•	•	•	•	•	•	7
Through-drive											
Without through-drive	•	•	•	•	•	•	•	•	•	•	00
Non-standard through-drive	-	-	-	-	-	-	-	-	-	-	10
Additional function											
Speed sensor	○	○	•	•	•	•	•	•	•	•	D

- Available
- On request
- Not available

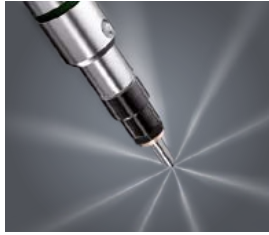
Liebherr Components



Gas engines



Diesel engines



Fuel injection systems



Axial piston hydraulics



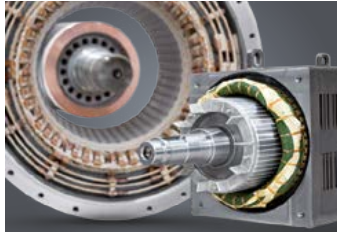
Hydraulic cylinders



Large diameter bearings



Gearboxes and winches



Electric machines



Remanufacturing



Human machine interfaces



Control electronics



Power electronics



Switchgear



Software

From A to Z, the components monitoring of the Liebherr Group offers a broad spectrum of solutions in the area of mechanical, hydraulic, electric and electronic drive system 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 contact persons for all product lines are available

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