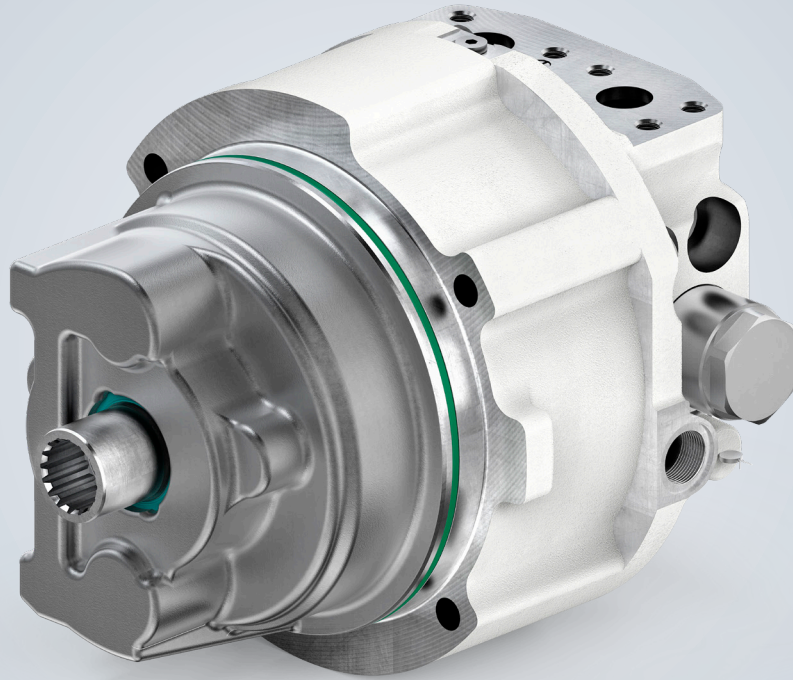


Short description

Axial piston motor CMVE



The Liebherr axial piston motors in the CMVE series are designed as swashplates for open circuits. The variable-displacement plug-in motors are available in nominal sizes ranging from 5.19 to 10.07 inch³ (85 to 165 cm³). The nominal pressure of the units is 5,511 psi (380 bar) and the maximum pressure is 5,802 psi (400 bar) absolute.

Special features of the CMVE:

The travel motor with hydraulic two point control is a very compact drive unit thanks to the integrated design of the holding brake and brake valve.

A speed sensor or preparation for a sensor is available as an option on request.

Valid for:

CMVE 085 involute gear hub profile
CMVE 108 involute gear hub profile
CMVE 135 involute gear hub profile
CMVE 165 involute gear hub profile

Features:

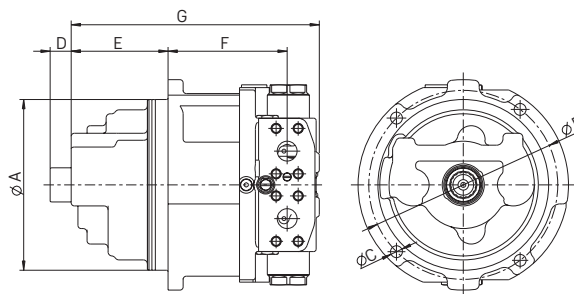
Axial piston motor (plug-in)
C series
Open and closed circuit

Pressure range:

Nominal pressure p_N = 5,511 psi (380 bar)
Maximum pressure p_{max} = 5,802 psi (400 bar)

LIEBHERR

Axial piston motor CMVE



CMVE variable displacement, open circuit, nominal pressure 5,511 psi (380 bar), maximum pressure 5,802 psi (400 bar)

Nominal size			85	108	135	165
Displacement to hydraulic motor	$V_{g \max}$	inch ³ (cm ³)	5.20 (85.2)	6.59 (108)	8.28 (135.7)	10.12 (165.9)
Max. speed	at $V_{g \max}$ and $\Delta p = 5,221$ psi (360 bar), n_{\max}	rpm	3,900	3,470	3,250	3,000
Max. speed	at $V_g/V_{g \max} = 0.04$ (0.65) and $\Delta p = 2,901$ psi (200 bar), n_{\max}	rpm	5,000	4,500	4,550	4,200
Displacement flow to hydraulic motor	at n_{\max} , $q_{v \max}$	US.liq.gal/min (l/min)	88 (332)	99 (375)	117 (441)	132 (498)
Output power	$\Delta p = 5,221$ psi (360 bar), P_{\max}	hp (kW)	267 (199)	302 (225)	355 (265)	401 (299)
Output torque	$\Delta p = 5,221$ psi (360 bar), T_{\max}	lbf-ft (Nm)	360 (488)	457 (619)	574 (778)	701 (951)
Available controls			ZH, DA			

Technical data

Product dimensions [inch (mm)]*			85	108	135	165
Splined shaft profile (internal gear)	DIN 5480 involute gear hub profile		W32 x 1.25 x 24	N35 x 2 x 16	W40 x 2 x 18	N40 x 2 x 18
Centering diameter	A, h8 tolerance fit		7.87 (200)	8.46 (215)	8.90 (226)	9.45 (240)
Connection diameter, screws	B		8.74 (222)**	9.37 (238)**	9.76 (248)**	10.43 (265)**
Fastening holes	C		0.51 (13)	0.59 (15)	0.59 (15)	0.67 (17)
Splined shaft length	D		0.96 (24.5)	1.04 (26.5)	1.24 (31.5)	1.48 (37.5)
Plug-in length	E		4.61 (117)	4.80 (122)	5.20 (132)	5.39 (137)
Connection length, SAE flange	F		5.31 (135)	5.91 (150)	6.30 (160)	7.17 (182)
Total length	G		11.93 (303)	12.30 (312.5)	13.09 (332.5)	14.72 (374)
Pressure connections	SAE J518 (6,000 psi)/ISO		M33 x 2	1"	1"	1 1/4"
Leakage oil connection	ISO 9974-1		M26 x 1.5	M26 x 1.5	M26 x 1.5	M26 x 1.5

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

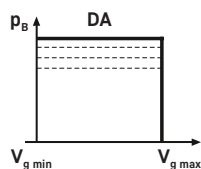
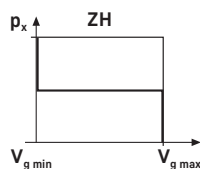
** 4-hole special fastening flange.

Note:

Integrated brake valve with automatic brake release, flushing, pressure limiting valves, and internal multi-disc brake. This motor is designed in particular for installation in a mechanical travel gearbox.

Control

Two-position hydraulically operated Pressure control or pressure cut-off



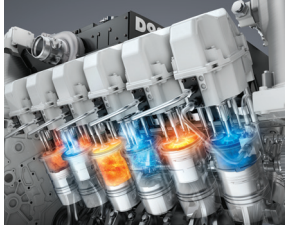
Type code

CMVE	0			/		1	W	51...						
1.	2.	3.	4.		5.	6.	7.	8.	9.	10.	11.	12.	13.	14.

1. Motor type							
C series / motor / variable displacement / plug-in					CMVE		
2. Type of circuit							
Open					0		
3. Nominal size							
			85	108	135	165	
			■	■	■	■	
4. Residual displacement from hydraulic pump (other values upon request)							
$V_{g\ min} = 2.36\ inch^3\ (38.6\ cm^3)$			■	-	-	-	
$V_{g\ min} = 2.74\ inch^3\ (44.9\ cm^3)$			■	-	-	-	
$V_{g\ min} = 3.07\ inch^3\ (50.25\ cm^3)$			■	-	-	-	
$V_{g\ min} = 3.29\ inch^3\ (53.9\ cm^3)$			■	-	-	-	
$V_{g\ min} = 3.97\ inch^3\ (65\ cm^3)$			-	■	-	-	
$V_{g\ min} = 4.58\ inch^3\ (75\ cm^3)$			-	■	-	-	
$V_{g\ min} = 4.82\ inch^3\ (79\ cm^3)$			-	-	-	■	
$V_{g\ min} = 4.94\ inch^3\ (81\ cm^3)$			-	-	■	-	
$V_{g\ min} = 6.47\ inch^3\ (106\ cm^3)$			-	-	-	■	
$V_{g\ min} = 7.14\ inch^3\ (117\ cm^3)$			-	-	-	■	
$V_{g\ min} = 7.93\ inch^3\ (130\ cm^3)$			-	-	-	■	
5. Control							
Two-position hydraulically operated			■	■	■	■	ZH
Pressure cut-off			■	□	□	□	DA
6. Design							
			■	■	■	■	1
7. Direction of rotation (viewed towards the drive shaft)							
alternating			■	■	■	■	W
8. Mounting flange (other mounting flanges upon request)							
Special flange			■	■	■	■	51...
9. Shaft end							
Splined shaft DIN 5480			-	■	-	■	1
Splined shaft DIN 5480, hollow shaft (enter "hollow shaft" in the order text)			-	■	-	■	1
Splined shaft SAE J744			□	□	□	□	2
10. Connections							
High-pressure connections: SAE J518 (6,000 psi) Leakage oil + steering pressure connections: metric (ISO 9974-1)			■	■	■	■	A
High-pressure connections: SAE J518 (3,000 psi) Leakage oil + steering pressure connections: metric (ISO 9974-1)			□	□	□	□	B
All connections: metric thread (ISO 9974-1)			■	-	-	-	C
11. Add-on parts							
No add-on parts			□	□	□	□	0
Multi-disk brake			■	■	■	■	L
12. Through drive							
No through drive			■	■	■	■	0
Special through-drive			-	-	-	-	K
13. Valve							
Without valve			□	□	□	□	0
High-pressure limitation			□	□	□	□	OH
Hydraulically adjustable high-pressure limit			□	□	□	□	OX
Flushing, open circuit			□	□	□	□	MO
Flushing, open circuit with high-pressure limitation			□	□	□	□	MH
Extraction with high-pressure limitation			□	□	□	□	NH
Extraction with hydraulically adjustable high-pressure limitation			□	□	□	□	NX
High-pressure limitation with brake valve			■	■	■	■	BH
14. Sensors							
Without sensor			■	■	■	■	0
With speed sensor			□	□	□	□	D

■ Available □ On request - Not available

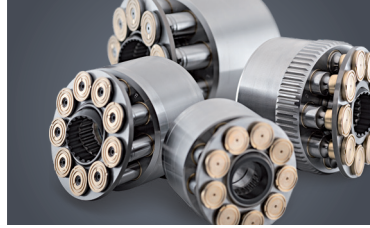
Components



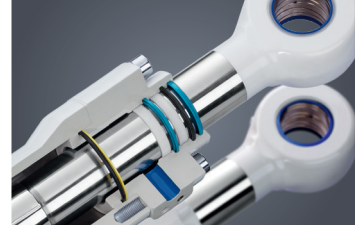
Diesel engines



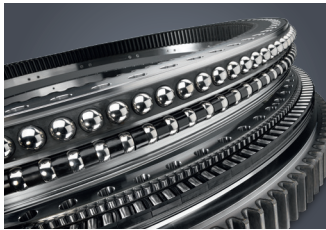
Injection systems



Axial piston hydraulics



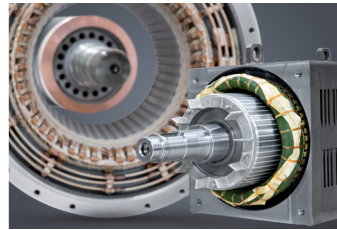
Hydraulic cylinders



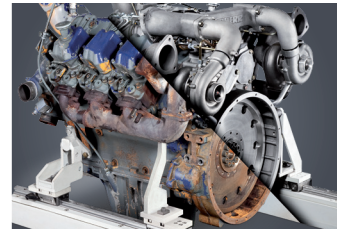
Large diameter bearings



Gearboxes and rope winches



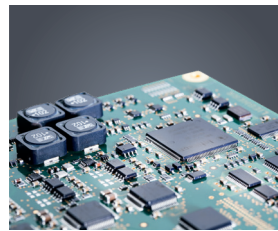
Electrical machines



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.

components.liebherr.com

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