

Short Description

# Variable Plug-In Motors CMVE



The Liebherr axial piston motor CMVE series is developed for the open circuit in swash plate design. The variable plug-in motors are available in nominal sizes ranging from 85 to 165 cm<sup>3</sup>. The nominal pressure is 380 bar and maximum pressure 400 bar.

#### **Special Features of the CMVE:**

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

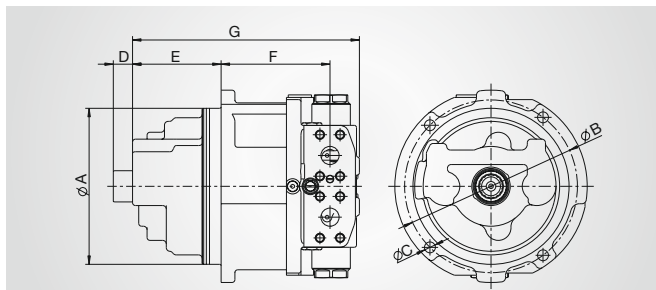
Speed sensor or preparation for speed sensor are available on request.

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# LIEBHERR

# Technical Data Series C:

## CMVE variable displacement plug-in motor



### CMVE

variable displacement, open and closed circuit, nominal pressure 380 bar, maximum pressure 400

Nominal size		85	108	135	165
Displacement	$V_{g \max}$ [cm <sup>3</sup> ]	85.2	108	135.7	165.9
Max. speed	at $V_{g \max}$ and $\Delta p = 360$ bar, $n_{\max}$ [rpm]	3,900	3,470	3,250	3,000
Max. speed	at $V_g/V_{g \max} = 0.65$ and $\Delta p = 200$ bar, $n_{\max}$ [rpm]	5,000	4,500	4,550	4,200
Flow	at $n_{\max}$ , $Q_{l \max}$ [l/min]	332	375	441	498
Output power	$\Delta p = 360$ bar, $P_{\max}$ [kW]	199	225	265	299
Output torque	$\Delta p = 360$ bar, $T_{\max}$ [Nm]	488	619	778	951
Available controls		ZH, DA			

### Technical Data

Product dimensions (mm)*		85	108	135	165
Splined shaft profile (internal gear)	DIN 5480 Tol. 9H/9g	W32 x 1.25 x 24	N35 x 2 x 16	W40 x 2 x 18	N40 x 2 x 18
Centering diameter	A fit h8	200	215	226	240
Screw connection diameter	B	222**	238**	248**	265**
Fastening bores	C	13	15	15	17
Splined shaft length	D	24.5	26.5	31.5	37.5
Insertion length	E	117	122	132	137
Connection length, SAE flanges	F	135	150	160	182
Overall length	G	303	312.5	332.5	374
Pressure ports	SAE J518 (6,000 psi)/ISO	M33 x 2	1"	1"	1 1/4"
Oil leakage port	ISO 9974-1	M26 x 1.5	M26 x 1.5	M26 x 1.5	M26 x 1,5

\* Dimensions may vary according to configuration and additional equipment (installation drawing on request).  
 \*\* 4-hole special attachment flange.

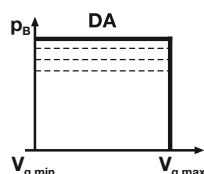
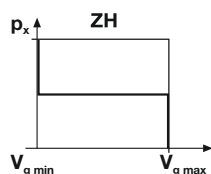
### Note:

Integrated brake valve with automatic brake release, flushing, pressure limiting valves and internal multi-disk brake. This motor is mainly intended for installation in a mechanical travel drive.

### Control/regulation

Hydraulic two point control

Pressure control or pressure cut-off

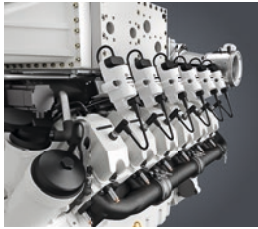


# Type code for CMVE motors

					CMVE	0	/													
<b>Motor type</b>					Variable displacement plug-in motor, series C	CMVE														
<b>Circuit type</b>					Open	0														
<b>Nominal size</b>						85	108	135	165											
<b>Minimum displacement</b> (Other values on request)						•	•	•	•											
$V_{g\ min} = 38.6\ cm^3$						•	-	-	-											
$V_{g\ min} = 44.9\ cm^3$						•	-	-	-											
$V_{g\ min} = 50.25\ cm^3$						•	-	-	-											
$V_{g\ min} = 53.9\ cm^3$						•	-	-	-											
$V_{g\ min} = 65\ cm^3$						-	•	-	-											
$V_{g\ min} = 75\ cm^3$						-	•	-	-											
$V_{g\ min} = 79\ cm^3$						-	-	-	•											
$V_{g\ min} = 81\ cm^3$						-	-	-	•											
$V_{g\ min} = 106\ cm^3$						-	-	-	•											
$V_{g\ min} = 117\ cm^3$						-	-	-	•											
<b>Control / regulation</b>																				
Hydraulic two point control						•	•	•	•	ZH										
Pressure control or pressure cut-off						•	-	-	-	DH										
<b>Design</b>										1										
<b>Direction of rotation (looking at input shaft)</b>																				
Right						-	-	-	-	R										
Left						-	-	-	-	L										
Alternating						•	•	•	•	W										
<b>Mounting flange</b>																				
Non-standard flange						•	•	•	•	51...										
<b>Shaft end</b>																				
Splined shaft DIN 5480						•	•	•	•	1										
Splined shaft SAE J744						○	○	○	○	2										
<b>Connections</b>																				
High-pressure ports: SAE (6,000 PSI) Oil leakage and control pressure ports: metric (DIN 3852)						-	•	•	•	A										
High-pressure ports: SAE (3,000 PSI) Oil leakage and control pressure ports: metric (DIN 3852)						○	○	○	○	B										
All ports: metric thread						•	-	-	-	C										
<b>Additional equipment</b>																				
No attachment						○	○	○	○	0										
Multi-disc brakes						•	•	•	•	L										
<b>Through-drive</b>																				
Without through-drive (closed)						•	•	•	•	0										
Non-standard through-drive						-	-	-	-	K										
<b>Valve</b>																				
None						○	○	○	○	0										
High pressure relief valve						○	○	○	○	OH										
Hydraulically adjustable high pressure relief valve						○	○	○	○	OX										
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										
High pressure relief valve with brake valve						•	•	•	•	BH										
<b>Sensor</b>																				
None						•	•	•	•	0										
With speed sensor						○	○	○	○	D										
With swash plate angle sensor						○	○	○	○	W										
With pressure sensor						○	○	○	○	P										

- Available
- On request
- Not available

# Liebherr Components



Gas engines



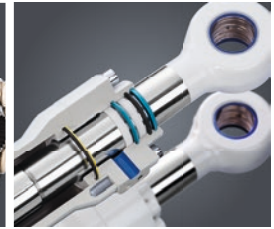
Diesel engines



Fuel injection systems



Axial piston hydraulics



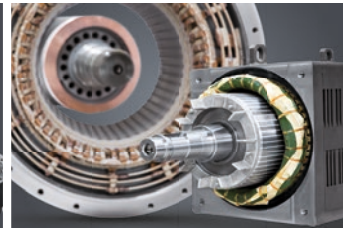
Hydraulic cylinders



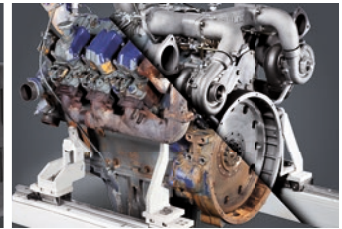
Slewing bearings



Gearboxes and winches



Electric machines



Remanufacturing



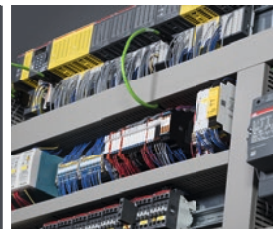
Human-machine interfaces and gateways



Control electronics and sensor technology



Power electronics



Control cabinets



Software

From A to Z – the components division of the Liebherr Group offers a broad range 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 to our customers at Liebherr-

Components AG and the regional sales and distribution branches.

Liebherr is your partner for joint success: from the product idea to development, manufacture and commissioning right through to customer service solutions like remanufacturing.

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