

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 cm³. 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.

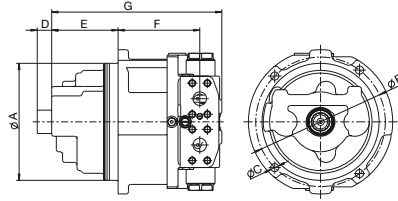
Speed sensor or preparation for speed sensor are available on request.

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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 ³]	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} , $q_{v \max}$ [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	M33x2	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.

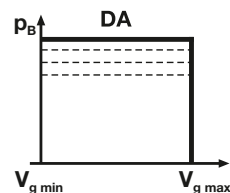
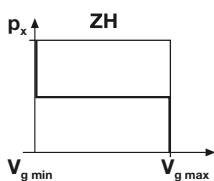
Note:

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	/														
Motor type	Variable displacement plug-in motor, series C	CMVE																
Circuit type	Open	0																
Nominal size			85	108	135	165												
Minimum displacement (Other values on request)																		
$V_{g\ min} = 38,6\ cm^3$			•	-	-	-												
$V_{g\ min} = 44,9\ cm^3$			•	-	-	-												
$V_{g\ min} = 50,25\ cm^3$			•	-	-	-												
$V_{g\ min} = 53,9\ cm^3$			•	-	-	-												
$V_{g\ min} = 65\ cm^3$			-	•	-	-												
$V_{g\ min} = 75\ cm^3$			-	•	-	-												
$V_{g\ min} = 79\ cm^3$			-	-	-	•												
$V_{g\ min} = 81\ cm^3$			-	-	•	-												
$V_{g\ min} = 106\ cm^3$			-	-	-	•												
$V_{g\ min} = 117\ cm^3$			-	-	-	•												
Control / regulation																		
Hydraulic two point control			•	•	•	•	ZH											
Pressure control or pressure cut-off			•	-	-	-	DH											
Design																		
							1											
Direction of rotation (looking at input shaft)																		
Right			-	-	-	-	R											
Left			-	-	-	-	L											
Alternating			•	•	•	•	W											
Mounting flange																		
Non-standard flange			•	•	•	•	51...											
Shaft end																		
Splined shaft DIN 5480			•	•	•	•	1											
Splined shaft SAE J744			•	•	•	•	2											
Connections																		
High-pressure ports: SAE (6,000 PSI)			-	•	•	•	A											
Oil leakage and control pressure ports: metric (DIN 3852)			-	•	•	•	A											
High-pressure ports: SAE (3,000 PSI)			•	•	•	•	B											
Oil leakage and control pressure ports: metric (DIN 3852)			•	•	•	•	B											
All ports: metric thread			•	-	-	-	C											
Additional equipment																		
No attachment			•	•	•	•	0											
Multi-disc brakes			•	•	•	•	L											
Through-drive																		
Without through-drive (closed)			•	•	•	•	0											
Non-standard through-drive			-	-	-	-	K											
Valve																		
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											
Sensor																		
None			•	•	•	•	0											
With speed sensor			•	•	•	•	D											
With swash plate angle sensor			•	•	•	•	W											
With pressure sensor			•	•	•	•	P											