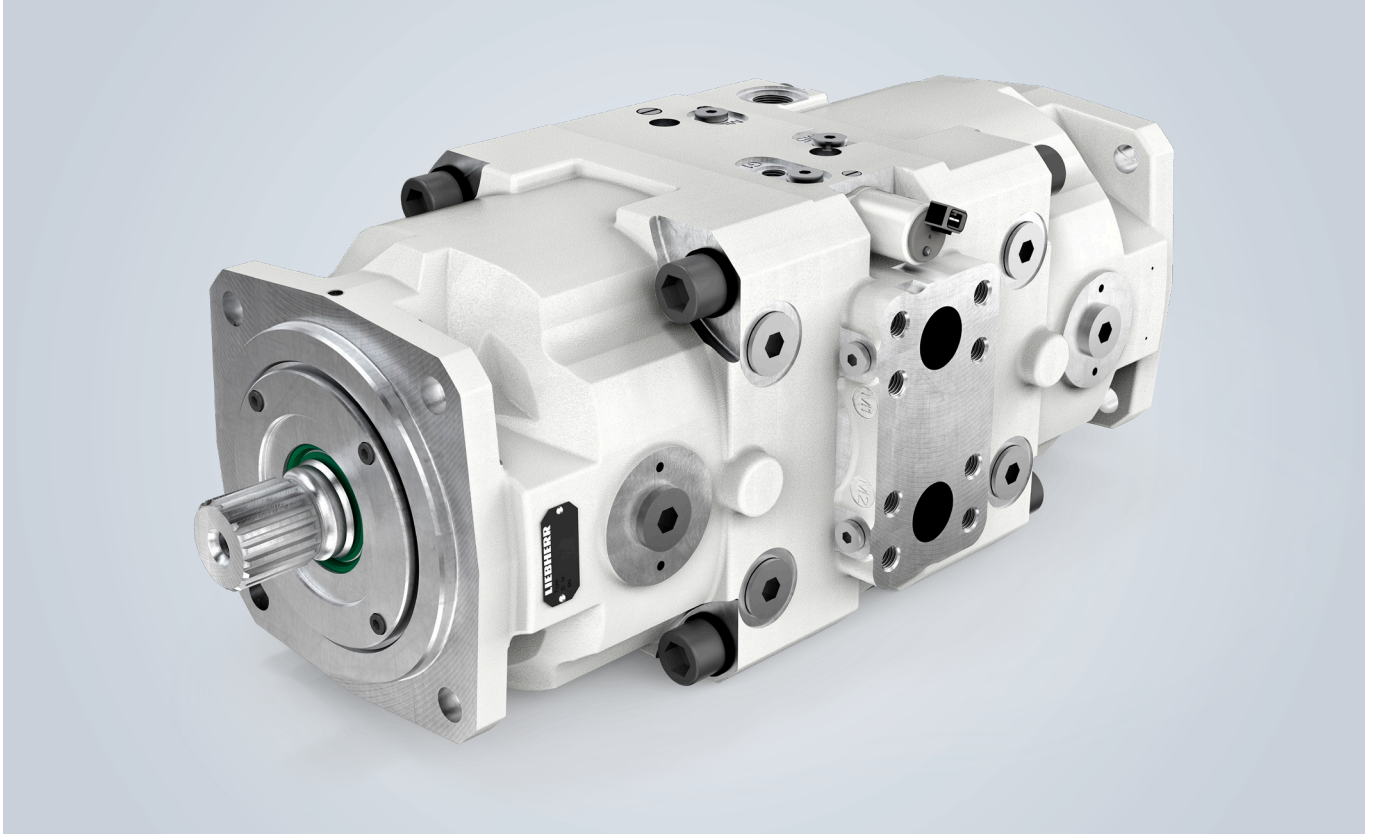


Short description

Axial piston motor DMVA



The Liebherr axial piston double motors in the DMVA series are designed as swashplates for open and closed circuits and were specially developed for use in mobile machinery in harsh environments.

The inverse drive with a swivel angle of 22° is very efficient and has a very high power density, making it ideal for applications that require a variable displacement to hydraulic motor.

These flanged variable displacement double motors are available in nominal sizes from 165–108 to 215–165. The nominal pressure of the units is 6,527 psi (450 bar) and the maximum pressure is 7,252 psi (500 bar) absolute.

The driving gears are adjustable individually or in parallel. A shared connecting plate simplifies hydraulic line installation. The DMVA series is available with the most common controls. Speed sensor or preparation for speed sensor available on request.

The through-drive capability can be used for mounting a brake or tandem units (axial piston multi-circuit motor).

Valid for:

DMVA 165–108
DMVA 165–165
DMVA 165–215
DMVA 215–165

Features:

Axial piston double motor
D series
Open and closed circuit

Control types:

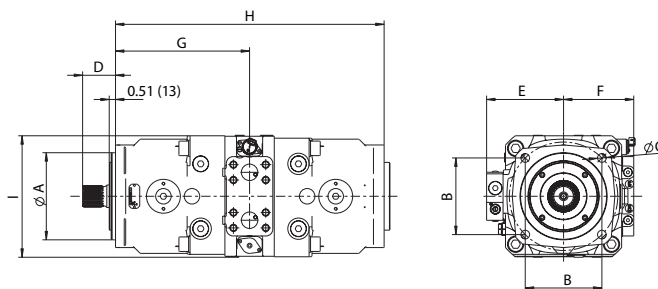
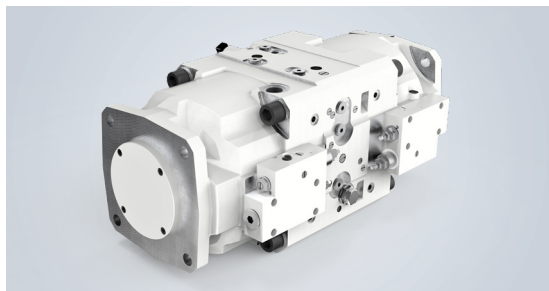
Various control types can be selected

Pressure range:

Nominal pressure $p_N = 6,527$ psi (450 bar)
Maximum pressure $p_{max} = 7,252$ psi (500 bar)

LIEBHERR

Axial piston motor DMVA



DMVA double motor variable displacement, open and closed circuits, nominal pressure 6,527 psi (450 bar), maximum pressure 7,252 psi (500 bar)

Nominal size			165 - 108	165 - 165	215 - 165	165 - 215
Displacement to hydraulic motor	$V_{g \max}$	inch ³ (cm ³)	10.24 + 6.57 (167.8 + 107.7)	10.24 + 10.24 (167.8 + 167.8)	13.21 + 10.24 (216.5 + 167.8)	10.24 + 13.21 (167.8 + 216.5)
Max. speed	at $V_{g \max}$ and $\Delta p = 6,237$ psi (430 bar), n_{\max}	rpm	3,000	3,000	2,700	2,700
Max. speed	at $V_g/V_{g \max} = 0.04$ (0.65) and $\Delta p = 2,901$ psi (200 bar), n_{\max}	rpm	4,500	4,500	4,100	4,100
Displacement flow to hydraulic motor	at n_{\max} , $Q_{V \max}$	US.liq.gal/min (l/min)	218 (827)	266 (1,007)	274 (1,038)	274 (1,038)
Output power	$\Delta p = 6,237$ psi (430 bar), P_{\max}	hp (kW)	795 (593)	968 (722)	998 (744)	998 (744)
Output torque	$\Delta p = 6,237$ psi (430 bar), T_{\max}	lbf-ft (Nm)	1,390 (1,885)	1,694 (2,297)	1,941 (2,631)	1,941 (2,631)
Available controls			EL, EL-DA, SD-DA			

Technical data

Product dimensions [inch (mm)]*			165 - 108	165 - 165	215 - 165	165 - 215
Splined shaft profile	DIN 5480 involute gear hub profile		W45 x 2 x 21	W45 x 2 x 21	W50 x 2 x 24	W45 x 2 x 24
Centering diameter	A, h8 tolerance fit		7.09 (180)	7.09 (180)	7.87 (200)	7.09 (180)
Connection diameter, screws	B		6.24 (158.4)	6.24 (158.4)	6.96 (176.8)	6.24 (158.4)
Fastening holes	C		0.71 (18)	0.71 (18)	0.87 (22)	0.71 (18)
Splined shaft length	D		2.68 (68)	2.68 (68)	2.56 (65)	2.68 (68)
Width dimension, control	E		6.26 (159)	6.26 (159)	6.77 (172)	6.77 (172)
Width dimension, SAE flange	F		5.71 (145)	5.71 (145)	5.47 (139)	5.47 (139)
Connection length, SAE flange	G		10.91 (277)	10.91 (277)	12.60 (320)	11.14 (283)
Total length	H		21.54 (547.2)	22.32 (567)	24.25 (616)	24.09 (612)
Total width	I		9.72 (247)	9.92 (252)	12.68 (322)	12.68 (322)
Pressure connection	SAE J518 (6000 psi)		1 1/4"	1 1/4"	1 1/2"	1 1/2"
Leakage oil connection	ISO 9974-1		M26 x 1.5	M26 x 1.5	M33 x 2 / M26 x 1.5	M33 x 2 / M26 x 1.5

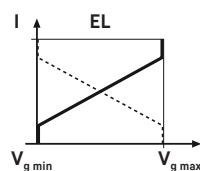
* The dimensions can vary depending on the configuration and additional equipment (installation drawing available upon request).

Note:

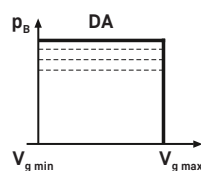
Through-drive possible

Control - Other control function combinations possible upon request.

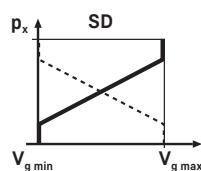
Electrical regulation with proportional magnet
(positive or negative characteristic)



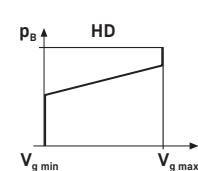
Pressure cut-off



Hydraulic regulation
Dependent on steering pressure (positive or
negative characteristic)



Hydraulic regulation,
dependent on high pressure



Type code

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

1. Motor type

Double / D series / motor / variable displacement / flange-mounted DMVA

2. Type of circuit

Open 0

Closed 6

3. Nominal size (per driving gear)

	165-108	165-165	165-215	215-165	
	■	■	■	■	

4. Residual displacement to hydraulic motor (other values upon request)

	Enter values in inch ³ (cm ³) for both axial piston units separated by "/, e.g.: 000 / 055
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5. Control

Electro-proportional regulation	■	■	□	□	EL
Electro-proportional regulation / pressure cut-off	■	■	■	■	EL / DA
Hydraulic regulation, dependent on steering pressure / pressure cut-off	□	■	□	□	SD / DA
High-pressure dependent regulation	□	■	□	□	HD

6. Design

	■	■	■	■	1
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7. Direction of rotation (viewed towards the drive shaft)

Alternating	■	■	■	■	W
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8. Mounting flange (other mounting flanges upon request)

DIN / ISO 3019-2	■	■	■	■	31...
Special flange	□	□	□	□	51...

9. Shaft end

Splined shaft DIN 5480	■	■	■	■	1
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10. Connections

ISO 6162-2 / SAE J518-2, high-pressure connection 6000 psi	■	■	■	■	A
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11. Accessories

Without add-on parts	■	■	■	■	0
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12. Through drive

No through drive	■	■	■	■	0
Special through-drive	□	■	■	■	K

13. Valve

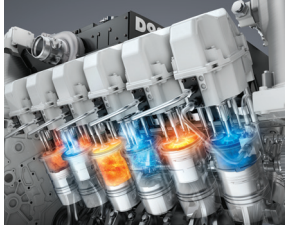
Without valve	■	■	■	■	0
Flushing, closed circuit	■	■	■	■	S0

14. Sensors

Without sensor	■	■	■	■	0
With speed sensor	■	■	■	■	D
With angle sensor	■	■	■	■	W

■ Available □ On request - Not available

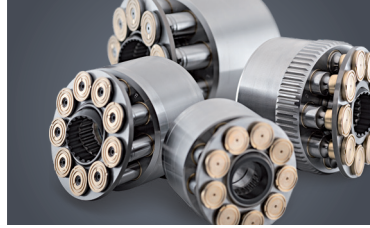
Components



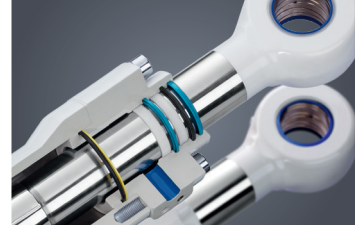
Diesel engines



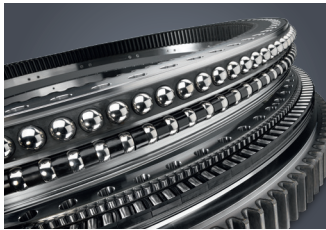
Injection systems



Axial piston hydraulics



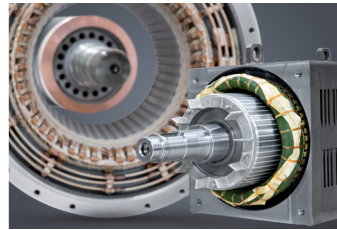
Hydraulic cylinders



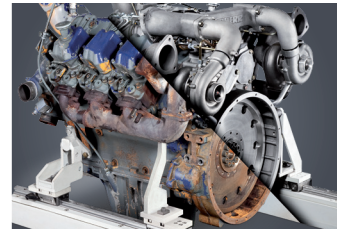
Large diameter bearings



Gearboxes and rope winches



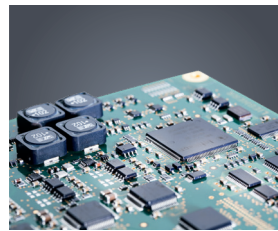
Electrical machines



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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Liebherr-Components AG · Postfach 222 · 5415 Nussbaumen, Schweiz
+41 56 296 43 00 · components@liebherr.com · www.liebherr.com

