Short Description

Variable Pumps DPVG

The Liebherr axial piston pump DPVG series is developed for the closed circuit in swash plate design. The variable pumps are available in nominal sizes ranging from 85 to 280 cm^3. The nominal pressure is 450 bar and maximum pressure 500 bar.

Special features of the DPVG:
Thanks to the hydrostatic swash plate bearing, the axial piston pump DPVG for the closed circuit impresses with its reliability and endurance even under thoughest conditions. The hydrostatic swash plate design is available in sizes 85 and 280, further sizes are in development. Due to the inverted piston design with a 22° swivel angle, high efficiency and power density are obtained. The DPVG series is available with the most common controls.

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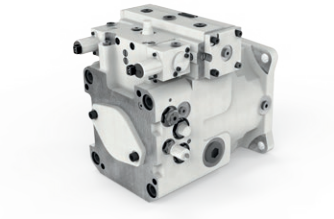
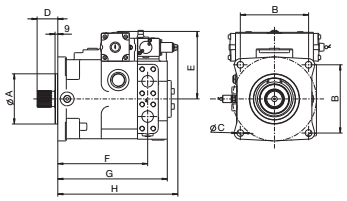
Technical Data

Series D: variable displacement pump DPVG





DPVG

variable displacement, closed circuit, nominal pressure 450 bar, maximum pressure 500 bar

Nominal size		**85**	**108**	**165**	**280**
Displacement	$V_{g\,max}$ [cm³]	85.2	107.7	167.8	283.4
Max. speed	at $V_{g\,max}$, n_{max} [rpm]	3,300	3,000	2,700	2,500
Volumetric flow	at n_{max}, $q_{v\,max}$ [l/min]	281	323	453	709
Drive power	Δp = 430 bar, P_{max} [kW]	201	232	325	508
Drive torque	Δp = 430 bar, T_{max} [Nm]	583	737	1,149	1,940
Available controls		EL, EL/DA, SD, TCH, TCE, DZH			

Technical Data

Product dimensions (mm) *		**85**	**108**	**165**	**280**
Splined shaft profile	DIN 5480 Tol. 9g	W35x2x16	W45x2x21	W45x2x21	W55x2x26
Centering diameter	A Passung e8	160	152	200	165,1
Screw connecting diameter	B	141,4	161,6	176,8	224,5
Fastening bores	C	17	21	21	22
Splined shaft length	D	50	55	60	68
Height adjustment	E	177,6	190	205	225,5
SAE connection length, pressure	F	223,5	223	270	295,5
Length without/with integrated feed pump	G	271.5 / 322.5	268 / 315.5	322/381	360 / -
Overall length	H	340,6	330,5	358,5	395
Pressure ports	SAE J518 (6,000 psi)	1"	1"	1 1/4"	1 1/2"
Oil leakage port	ISO 9974-1	M26x1.5	M33x2	M42x2	M42x2

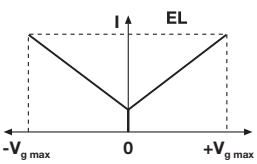
* Dimensions may vary according to configuration and additional equipment (installation drawing on request).

Note:

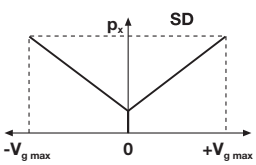
Various mounting flanges are possible (SAE J617a, SAE J744, DIN/ISO 3019-2).
With/without integrated feed pump; integrated pressure limiting valve is possible.
Through-drive for pumps up to the same size as the installed pump is possible.
HD ports are possible at the side or underneath.

Control / regulation Other control function combinations available on request.

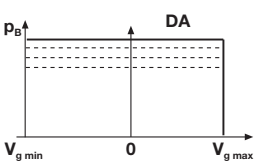
Electric proportional adjustment



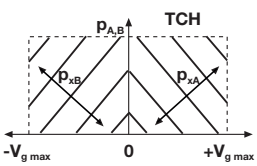
Hydraulic proportional adjustment depending on control pressure



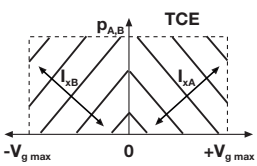
Pressure cut-off



Torque control, hydraulic, with pressure cut-off



Torque control, electric, with pressure cut-off



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Type code for DPVG pumps

	DPV	G	/													
Pump type																
Variable displacement pump, series D	DPV															
Circuit type																
Closed	G															
Nominal size																
	85	108	165	280												
	•	•	•	•												
Minimum displacement																
$V_{g\,max}$ = 0 cm³	•	•	•	•	000											
Control / regulation (Other controls on request)																
Electric proportional adjustment / pressure cut-off	○	•	•	•	EL / DA											
Electric proportional adjustment	○	○	○	○	EL											
Hydraulic proportional adjustment depending on control pressure	○	○	○	○	SD											
Torque control, hydraulic, with pressure cut-off	•	○	○	•	TCH											
Torque control, electric, with pressure cut-off	•	○	•	•	TCE											
Speed control, hydraulic	○	○	○	○	DZH											
Speed control, electric	○	○	○	○	DZE											
Preparation for electro-hydraulic control	○	○	○	○	EHC0											
Integrated electro-hydraulic control	○	○	○	○	EHC1											
Design																
					1											
Direction of rotation (looking at input shaft)																
Right	•	•	•	•	R											
Left	•	•	•	•	L											
Mounting flange (Other mounting flanges on request)																
Diesel engine flange SAE 1 (SAE J617a)	○	○	○	○	11											
Diesel engine flange SAE 2 (SAE J617a)	○	○	○	○	12											
Diesel engine flange SAE 3 (SAE J617a)	○	○	○	○	13											
Diesel engine flange SAE 4 (SAE J617a)	○	○	○	-	14											
SAE D (SAE J744)	○	○	○	-	24											
SAE E (SAE J744)	-	-	○	•	25											
DIN / ISO 3019-2	•	•	•	○	31 ...											
Transmission flange	○	○	○	○	41 ...											
Non-standard flange	○	○	○	○	51 ...											
Shaft end																
Splined shaft DIN 5480	•	•	•	•	1											
Splined shaft SAE J744	○	○	○	○	2											
Connections																
High-pressure port: SAE (6,000 PSI)	•	•	•	•												
Suction port: SAE (500 PSI)	•	•	•	○	A											
Oil leakage and control pressure ports: metric (DIN 3852)	•	•	•	•												
High-pressure port: SAE (3,000 PSI), Suction port: SAE (500 PSI), Oil leakage and control pressure ports: metric (DIN 3852)	○	○	○	○	B											
All ports: metric thread	○	○	○	○	C											
Attachments																
No attachment	•	•	•	•	0											
With impeller	-	-	-	-	I											
External pump	○	○	○	○	F											
Integrated feed pump (Other nominal sizes on request)																
Without feed pump	•	•	○	•	00											
With feed pump, Vg = 30 cm³	•	•	○	○	30											
With feed pump, Vg = 40 cm³	•	•	○	○	40											
With feed pump, Vg = 50 cm³	○	○	•	○	50											
With feed pump, attached filter and cold start valve	•	○	○	○	F											
Through-drive																
Without through-drive	○	○	•	○	0											
SAE A	○	○	○	○	A											
SAE B	•	•	•	•	B											
SAE C	○	○	○	○	C											
SAE D	○	○	•	○	D											
SAE E	○	○	○	○	E											
Non-standard flange with through-drive	○	○	○	○	K											
Valve																
High pressure limiting valve with feed function	•	•	•	•	NS-DB											
High pressure limiting valve with feed function with feed pressure valve	•	•	•	•	NS-DB-DS											
Sensor technology																
Without	•	•	•	•	0											
With swash plate angle sensor	○	○	○	○	W											
With pressure sensor	○	○	○	○	P											
With speed sensor	○	○	○	○	D											

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