



# ***Axial Piston Pump Series PV***

*Design 45*

*Variable Displacement*

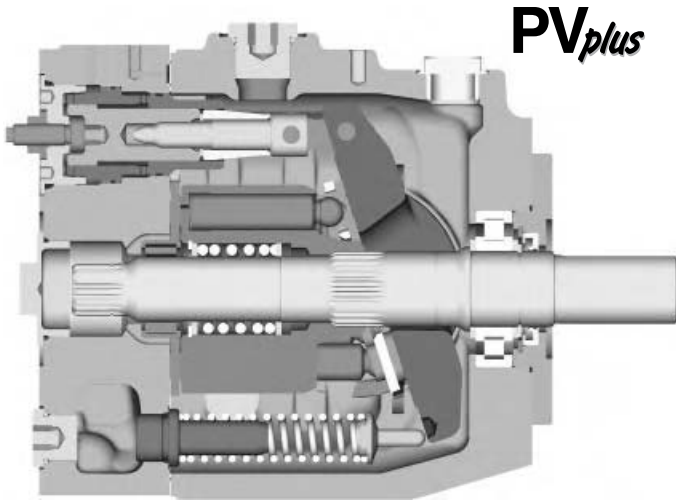
*Catalogue HY30-3245/UK  
February 2007*



**Introduction**

**With thru drive for single and multiple pumps**

Swash plate type for open circuit



**Technical Features**

- Low noise level
- Fast response (eg. PV046: upstroke <70ms, downstroke <40ms)
- Service-friendly
- High self-priming speed
- Compact design
- Thru drive for 100% nominal torque

**Technical Data**

Size		PV016	PV020	PV023	PV032	PV040	PV046
Max. Displacement	[cm <sup>3</sup> /rev.]	16	20	23	32	40	46
Output flow at 1500 min <sup>-1</sup>	[l/min]	24	30	34,5	48	60	69
Nominal pressure p <sub>N</sub>	[bar]	350	350	350	350	350	350
Max. pressure p <sub>max</sub> <sup>1)</sup>	[bar]	420	420	420	420	420	420
Max. Case drain pressure	[bar]	2	2	2	2	2	2
Min. Inlet pressure	[bar]	0,8	0,8	0,8	0,8	0,8	0,8
Max. Inlet pressure	[bar]	16	16	16	16	16	16
Input power at 1500 min <sup>-1</sup> and 350 bar	[kW]	15,5	19,5	22,5	31	39	45
Max speed <sup>2)</sup>	[min <sup>-1</sup> ]	3000	3000	3000	2800	2800	2800
Moment of inertia	[kgm <sup>2</sup> ]	0,0017	0,0017	0,0017	0,0043	0,0043	0,0043
Weight	[kg]	19	19	19	30	30	30

1) Maximum 20% of the working cycle.

2) The maximum speed ratings are shown for an inlet pressure of 1 bar (absolute) and for a fluid viscosity of  $\nu = 30 \text{ mm}^2/\text{s}$

**General Information**

**Fluid recommendations**

Premium quality hydraulic mineral fluid are recommended, like HLP oils to DIN 51522, part 2.

**Viscosity**

The normal operating viscosity should range between 16 and 100 mm<sup>2</sup>/s (cSt). Max. start-up viscosity is 800 mm<sup>2</sup>/s (cSt).

**Seals**

NBR (nitrile) seals are used for operation with hydraulic fluids based on mineral oil. For synthetic fluids, such as phosphoric acid esters, Fluorocarbon seal are required.

**Filtration**

For maximum pump and system component functionality and life, the system should be protected from contamination by effective filtration.

Fluid cleanliness should be in accordance with ISO classification ISO 4406:1999. The quality of filter elements should be in accordance with ISO standards.

Minimum requirement for filtration rate x (mm); General hydraulic systems for satisfactory operation: Class 20/18/15, according to ISO 4406:1999

Hydraulic systems with maximised component life and functionality:

Class 18/16/13, according to ISO 4406:1999





code			compensator style
0	0	1	no compensator
compensator version			
M	M		standard pressure compensator, no control port
M	R		remote pressure compensator, control port on compensator body side
M	F		flow (load sensing) compensator, load sensing port on compensator body side
compensator variation			
		C	standard variation, no topside interface for pilot valves
		1	topside NG6 / CETOP 3 interface for pilot valves

code			compensator style
electro hydraulic control			
F	P	V	closed loop displacement control only, no pressure compensation
function			
U	P		closed loop proportional displacement control with pressure compensation
compensator version			
		R	remote pressure compensation, NG6 / CETOP 3 interface for pilot valves
		D	version UPR, with proportional pilot valve type PVACPPU..35 mounted
		G	version UPD, with pressure sensor for closed loop pressure and power control

displacement		code	compensator style
power control			
016	032		nominal power at 1.500 rev/min
023	046		
		B	3 kW
		C	4 kW
		D	5,5 kW
		E	7,5 kW
		G	11 kW
		H	15 kW
		K	18,5 kW
		M	22 kW
		S	30 kW
function			
		L	power control
		C	power control and load sensing
compensator version			
		C	integrated, adjustable pressure compensation
		1	topside NG6 / CETOP 3 interface

**Note:**

**Compensator differential  $\Delta p$**  is factory pre-set to:

remote compensators, power control **15 ± 1 bar**

load sensing comp. (not power control) (codes ...MF\*) **10 ± 1 bar**



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***Fluid Power Solutions***