

Hydrokraft®

PVZ-130/180 with KBF proportional valve

Reliable, efficient control and actuation for ship engines



Superior **performance,** **reliability** and **control**

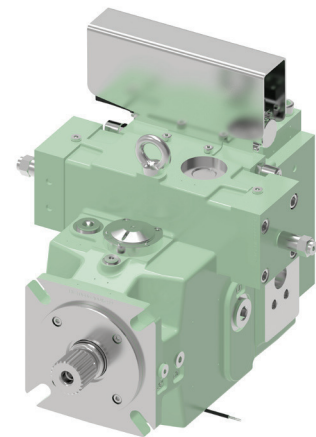
MAN Energy Solutions utilizes hydraulic piston pumps to take over the duties of the camshaft at the heart of their ship engine's electro-hydraulic system. The high performing pumps control fuel injection and exhaust valve actuation that otherwise would be controlled by mechanical components. By providing continuously variable fuel injection and valve timing via hydraulic pumps, the camshaft-less design has unlimited flexibility, enabling the intelligent engine to reduce fuel consumption and emissions.

The two-stroke engines are designed to run around the clock for years and the Hydrokraft PVZ pump is a perfect match to accompany these ships on their long journey. Pushing durability to new levels, the PVZ pump is engineered to perform its job for 48,000 hours in harmony with the ships engine speed. In addition, when a ship is running astern, the direction of engine rotation needs to be reversed. Since the pumps are also driven by the engine's crankshaft, they are designed for both clockwise and counterclockwise operation.

Features

The Hydrokraft PVZ pump with integrated KBF proportional valves is a proven solution for new installations and a drop-in replacement for existing ship engine applications.

- Designed for drop-in replacement for competitor pump
- Continuous operating pressure of 300bar, maximum 450bar according marine classification guidelines
- Built-in control via a Vickers by Danfoss KBF proportional valve
- Heavy-duty design ensures a 48,000-hour service life, while operating at full ratings
- Valve plate design enables the pumps to run both clockwise and counterclockwise
- Additional check-valve block prevents cavitations during reverse operation



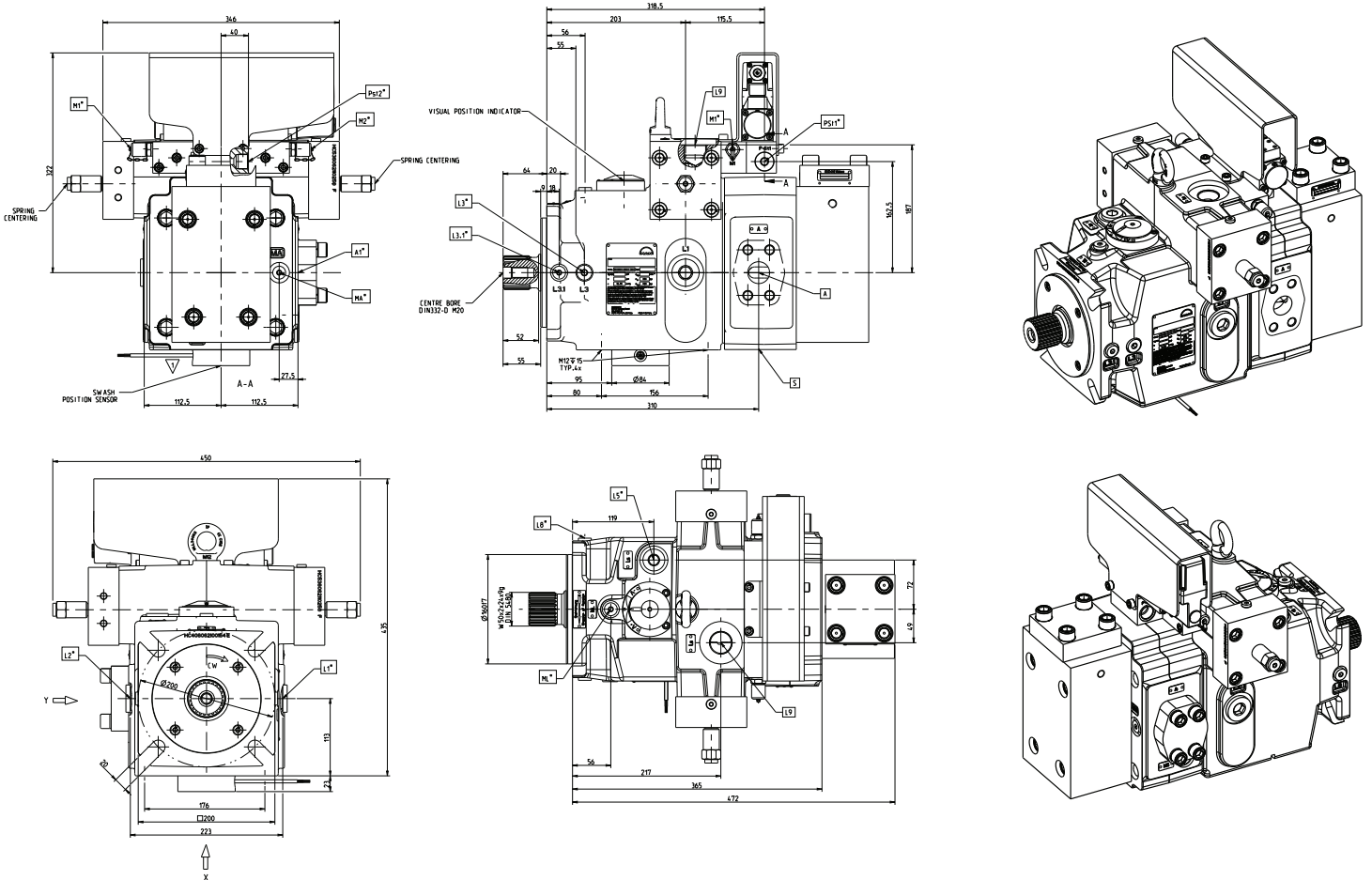
Hydrokraft pump with integrated proportional valve used for fuel injection control and exhaust valve actuation

Certifications

PVZ-130/180 Hydrokraft Pumps and KBF Valves are certified for marine applications. Contact your sales representative for information.

PVZ-130 Pump

General Dimensions



Danfoss PVZ-130 Part Number / Model Code

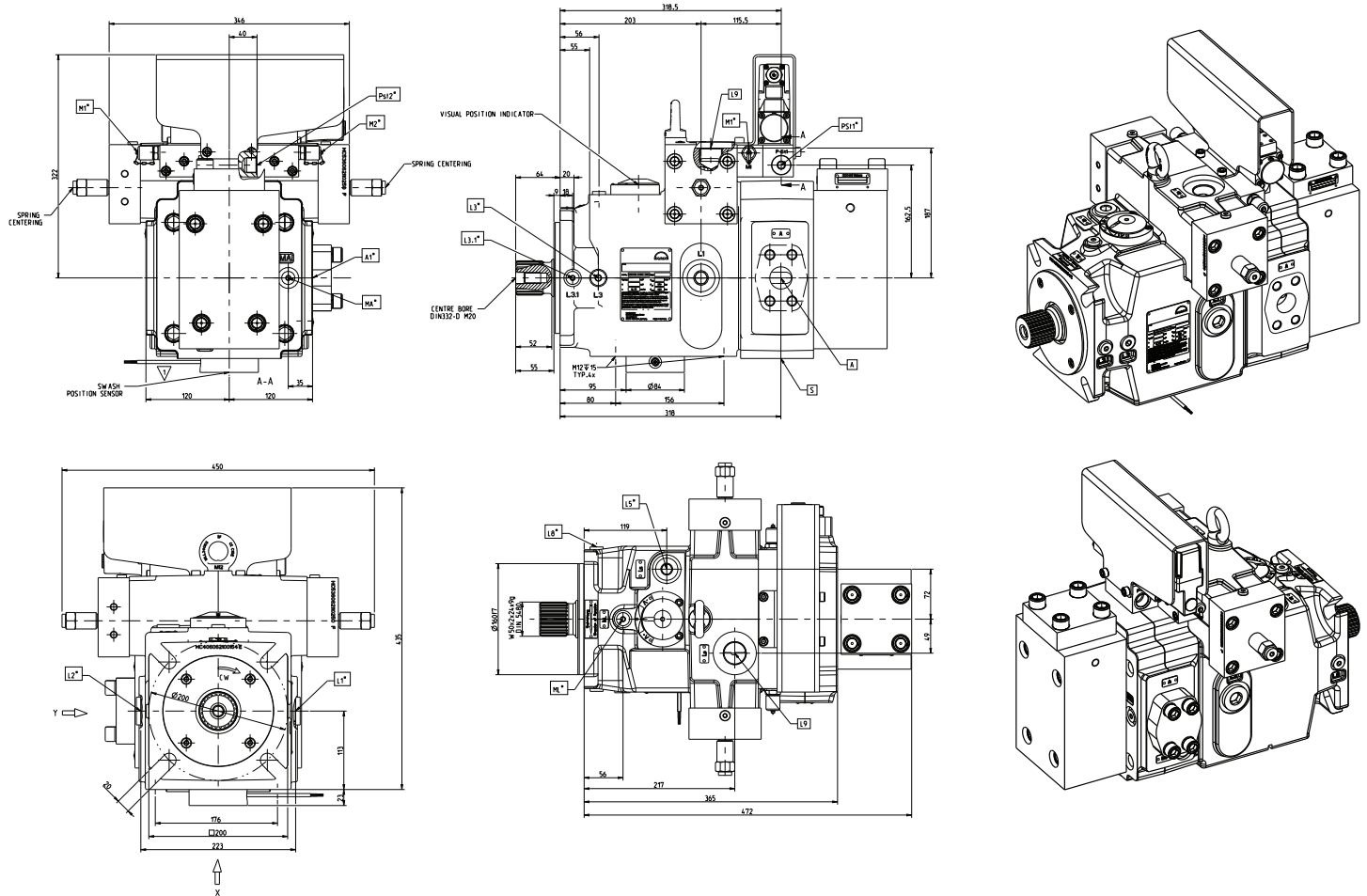
Part Number	HC806162130200K (with KBF Valve), HC806162130200W (without KBF Valve)	
Modelcode	PVZS-130M05R00N1RM2SKNMSPK00C000000000000M0110	
Modelcode Description	130 PVZ* Displ 130cc	K With CETOP 3 KBF Valve
	S Single Unit	00 Without Electronics
	05 ISO 160 4 Hole Flange 130,180 cc	C Over Center
	R Right Hand Rotation	0 No Extra Function
	0 No Adjustment Stops	0 Not Applicable
	0N Valve Block	000 No Power Control
	1 A & B Ports SAE, Metric Thread	0 No Pilot Oil Filter
	R A & B Ports Radial	0 No Unloading Valve
	M2 Splined Shaft ISO	0 No Position Monitoring
	S Single Shaft Seal	0 No Electric Motor
	K FKM seals incl. HP bearing lubric.130,180 cc	0 Control Voltage Not Applicable
	N Contactless Novotechnik 4...20mA Position Sensor	0000 No Customer Adjustment Spec.
	M Painted Marine color	M01 Special Features
	SP Proportional valve Control 130,180 cc	10 Design Number

MAN Part Number

Part Number	6240926 (with KBF Valve)
	6240288 (without KBF Valve)

PVZ-180 Pump

General Dimensions



Danfoss PVZ-180 Part Number / Model Code

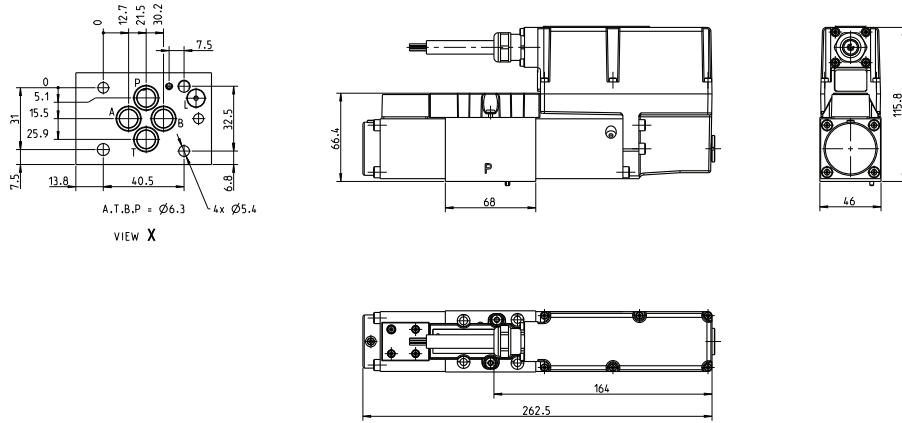
Part Number	HC806162180200K (with KBF Valve), HC806162180200W (without KBF Valve)	
Modelcode	PVZS-180M05R00N1RM2SKNMSPK00C000000000000M0110	
Modelcode Description	180 PVZ* Displ 180cc	K With CETOP 3 KBF Valve
	S Single Unit	00 Without Electronics
	05 ISO 160 4 Hole Flange 130,180 cc	C Over Center
	R Right Hand Rotation	0 No Extra Function
	0 No Adjustment Stops	0 Not Applicable
	0N Valve Block	000 No Power Control
	1 A & B Ports SAE, Metric Thread	0 No Pilot Oil Filter
	R A & B Ports Radial	0 No Unloading Valve
	M2 Splined Shaft ISO	0 No Position Monitoring
	S Single Shaft Seal	0 No Electric Motor
	K FKM seals incl. HP bearing lubric.130,180 cc	0 Control Voltage Not Applicable
	N Contactless Novotechnik 4...20mA Position Sensor	0000 No Customer Adjustment Spec.
	M Painted Marine color	M01 Special Features
	SP Proportional valve Control 130,180 cc	10 Design Number

MAN Part Number

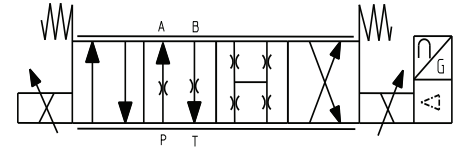
Part Number	6241860 (with KBF Valve)
	6241284 (without KBF Valve)

KBF Proportional Valve

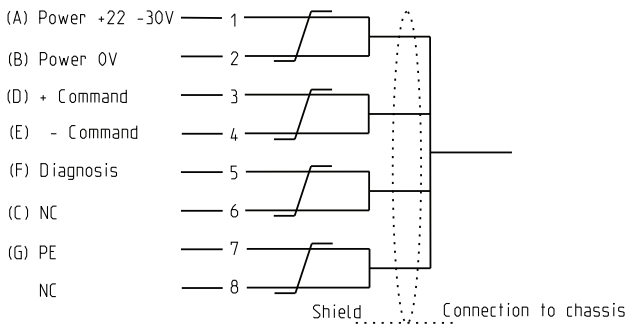
Drawing



Schematic



Pinout Diagram



Specifications

- Marine certified cable - length 6.5 meter
- Signal 4-20mA
- Nominal Pressure max. 350bar (P,A,B); T=160bar
- Unique serial number allows traceability

Danfoss KBF Valve Part Number / Model Code

Part Number	HC000000317510
Modelcode	KBFDG4V-3-9C18N-Z-M4-PC7-H7-12-EN151
Modelcode Description	KBF - PROPORTIONAL VALVE
	DG4V3 - DIRECTIONAL CONTROL WITH INTEGRAL AMPLIFIER, D03/NG6
	9 - CLOSED CENTER ALL PORTS, ZERO/UNDERLAP
	C - SPRING CENTERED DUAL SOLENOID
	18 - 18 L/MIN
	N - METER-IN AND METER-OUT
	_ - N/A
	Z - STANDARD, NO MANUAL OVERRIDE
	_ - STANDARD AS PER ANSIB93.9
	M4 - 4-20 MA CURRENT DEMAND SIGNAL, 4-20MA CURRENT MONITOR
	PC7 - 7-PIN CONNECTOR WITHOUT PLUG
	H - 24 VDC AMPLIFIER SUPPLY
	7 - FOR ALL OTHER SPOOLS
	12 - 12 DESIGN
	EN151- SPECIAL FEATURE

MAN Part Number

Part Number	5795820
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Contact info

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 For additional questions, please contact your sales representative.

