Product Fact Sheet

# Hydrokraft®
# PVZ-Series pump with KBF proportional valve
## PVZ-130/180 and PVZ-250/360

## Superior performance, reliability and control

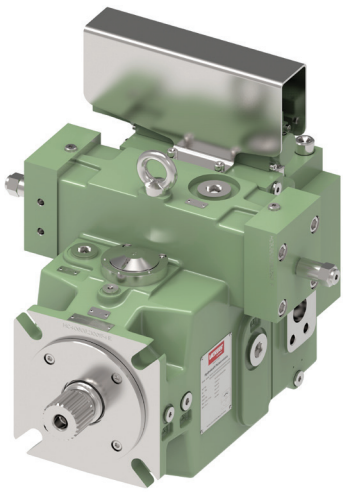
Everllence Copenhagen utilizes hydraulic piston pumps to take over the duties of the camshaft at the heart of their ship engine's electro-hydraulic system. The high performing pumps control fuel injection and exhaust valve actuation that otherwise would be controlled by mechanical components. By providing 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 300 bar, maximum 450 bar 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 & 250/360 Hydrokraft Pumps and KBF Valves are certified for marine applications. Contact your sales representative for information.



AM443564799572en-000104

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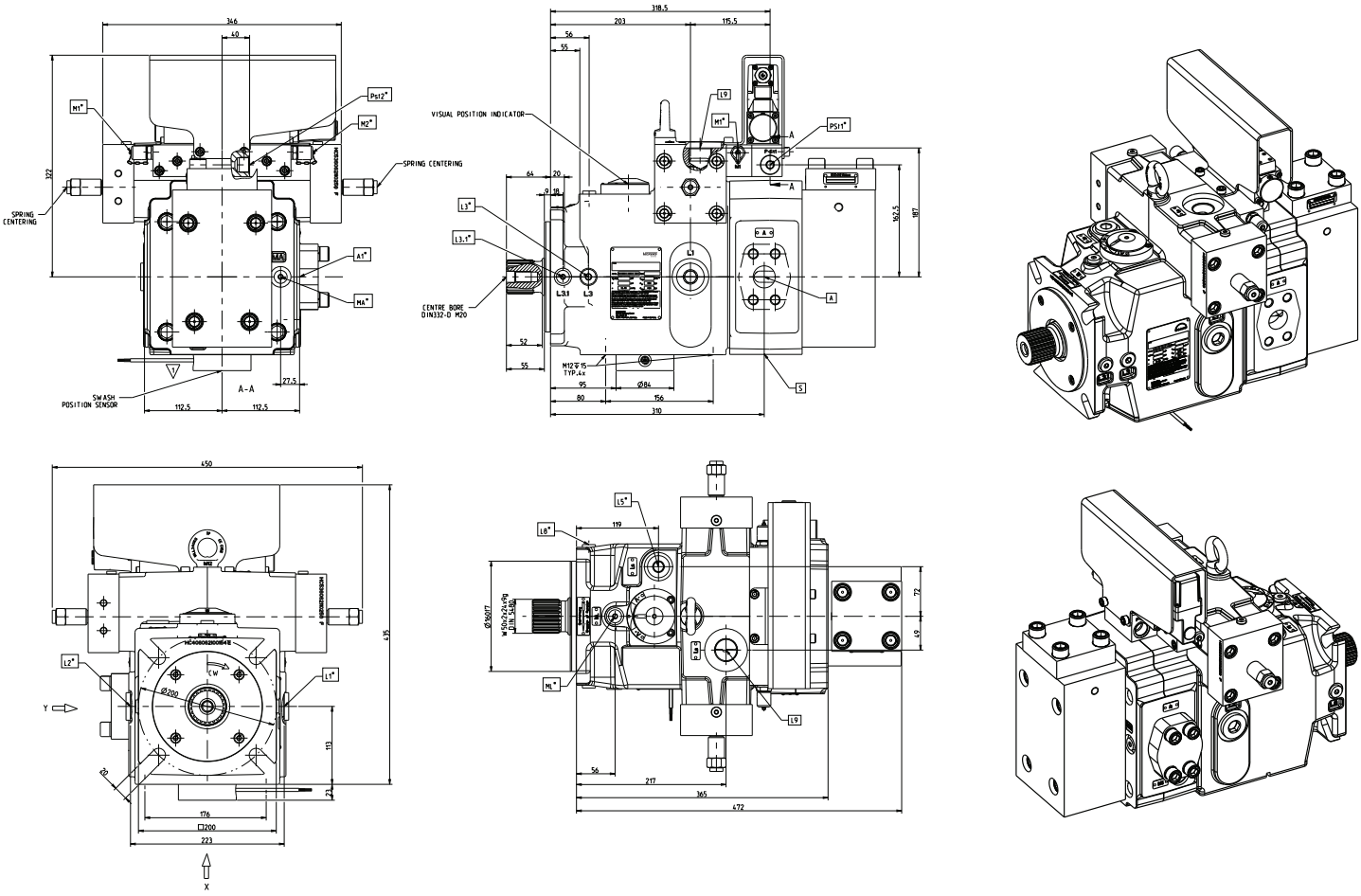
# PVZ-Series pump with KBF proportional valve

## PVZ-130 Pump

General Dimensions




### Danfoss PVZ-130 Part Number / Model Code

| | | |
|---|---|---|
| Part Number | **HC806162130200K** (with KBF Valve), **HC806162130200W** (without KBF Valve) | |
| Modelcode | PVZS-130M05R00N1RM2SKNMSPK00C00000000000000M0110 | |
| 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 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 |

### Everllence Part Number

| | |
|---|---|
| Part Number | **6240926-4** (with KBF Valve) |
| | **6240288-8** (without KBF Valve) |

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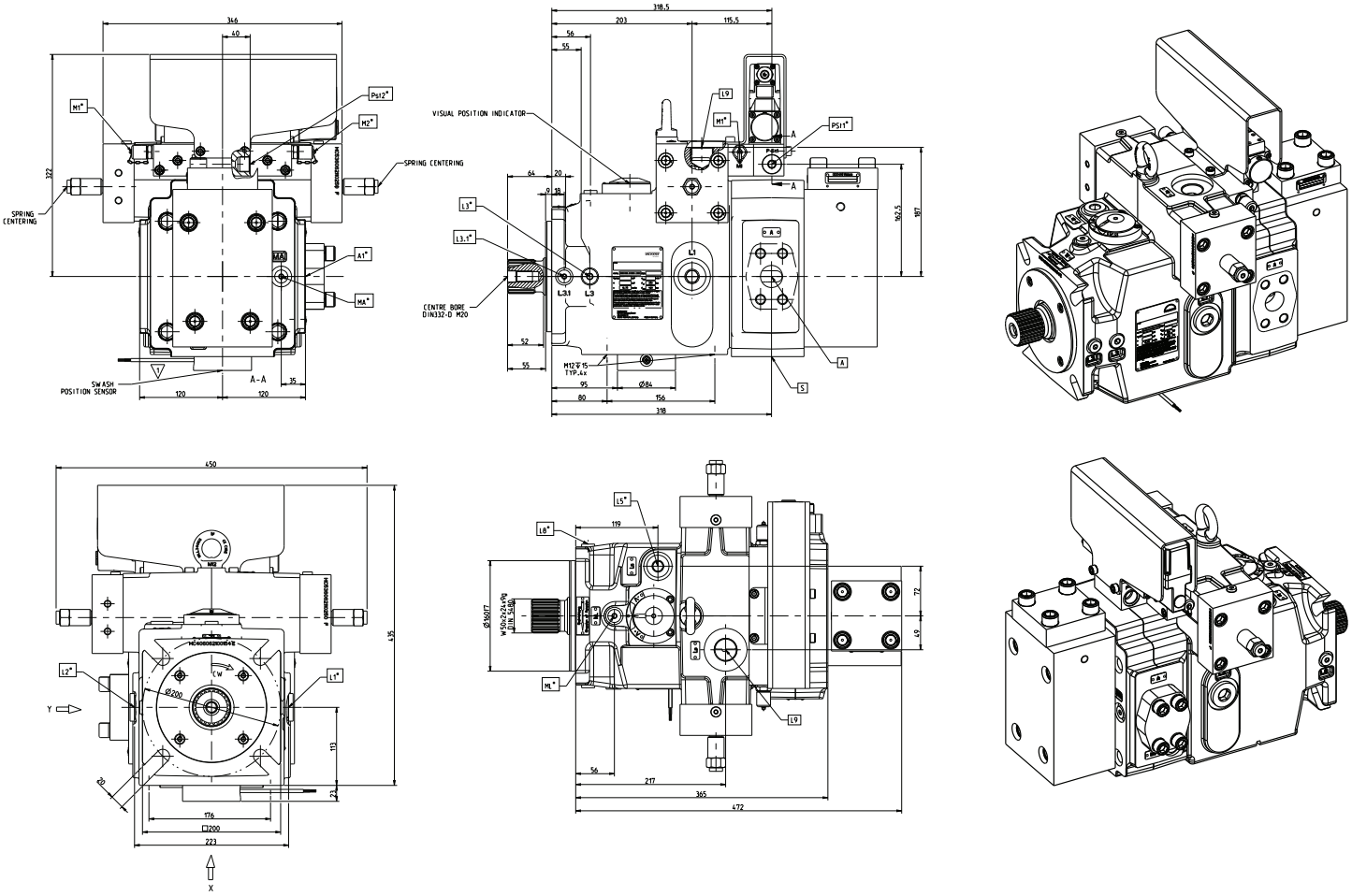
# PVZ-Series pump with KBF proportional valve

## PVZ-180 Pump

General Dimensions




## Danfoss PVZ-180 Part Number / Model Code

| | | |
|---|---|---|
| Part Number | HC806162180200K (with KBF Valve), HC806162180200W (without KBF Valve) | |
| Modelcode | PVZS-180M05R00N1RM2SKNMSPK00C00000000000000M0110 | |
| 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 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 |

## Everllence Part Number

| | |
|---|---|
| Part Number | **6241860-8** (with KBF Valve) |
| | **6241284-5** (without KBF Valve) |

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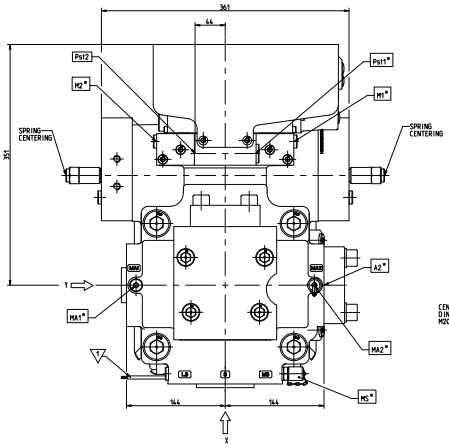
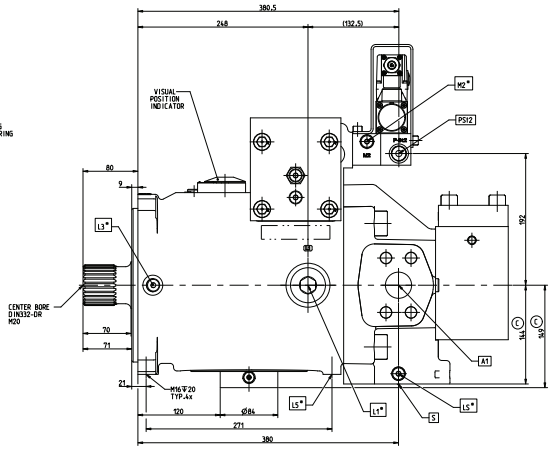
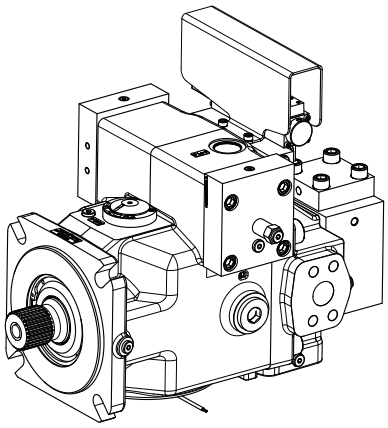
# PVZ-Series pump with KBF proportional valve

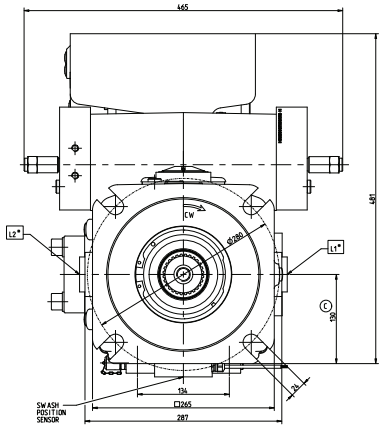
## PVZ-250 Pump

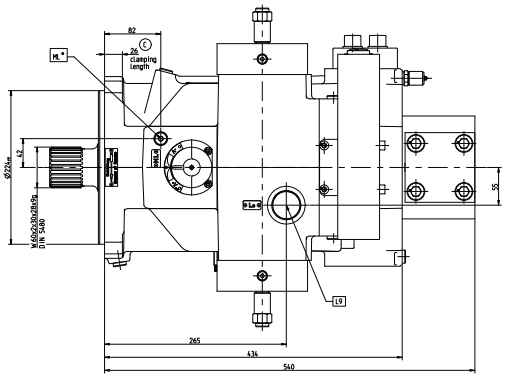
General Dimensions

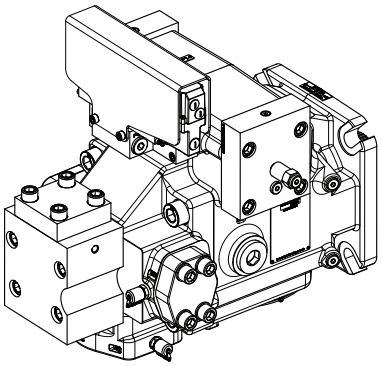












## Danfoss PVZ-250 Part Number / Model Code

| | | |
|---|---|---|
| Part Number | **HC806172250200K** (with KBF Valve), **HC806172250200W** (without KBF Valve) | |
| Modelcode | PVZS-250M07R00N1R05SKNMSPK00C00000000000000M0310 | |
| Modelcode Description | 250 PVZ* Displ 250cc | K With CETOP 3 KBF Valve |
| | S Single Unit | 00 Without Electronics |
| | 05 ISO 160 4 Hole Flange 250, 360 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.250, 360 cc | 0 Control Voltage Not Applicable |
| | N 4…20mA Position Sensor | 0000 No Customer Adjustment Spec. |
| | M Painted Marine color | M01 Special Features |
| | SP Proportional valve Control 250, 360 cc | 10 Design Number |

## Everllence Part Number

| | |
|---|---|
| Part Number | **6500539-8** (with KBF Valve) |
| | **6500537-4** (without KBF Valve) |

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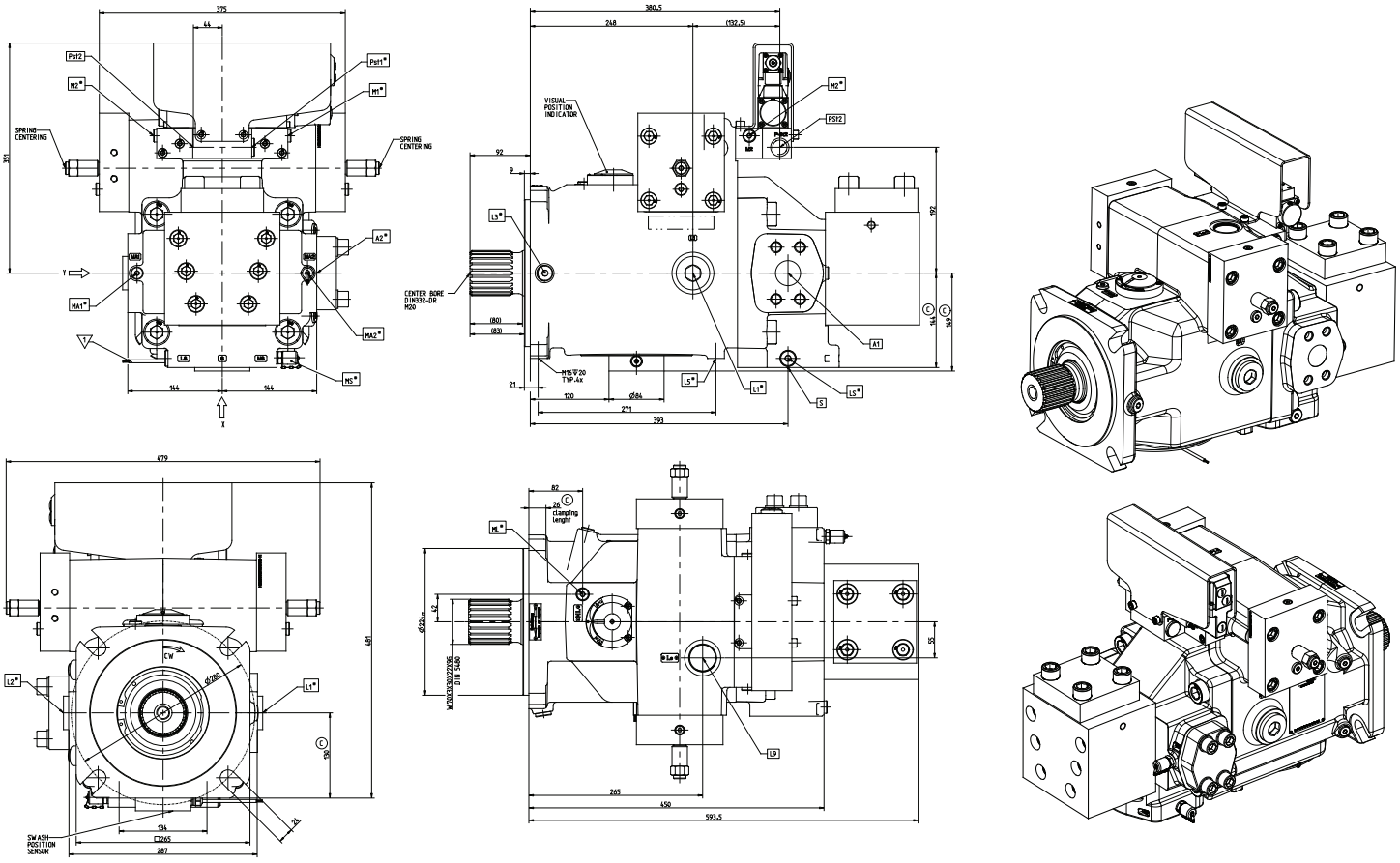
# PVZ-Series pump with KBF proportional valve

## PVZ-360 Pump

General Dimensions



### Danfoss PVZ-360 Part Number / Model Code

| | | |
|---|---|---|
| Part Number | **HC806172360200K** (with KBF Valve), **HC806172360200W** (without KBF Valve) | |
| Modelcode | PVZS-360M07R00N1R05SKNMSPK00C00000000000000M0310 | |
| Modelcode Description | 360 PVZ* Displ 180cc | K With CETOP 3 KBF Valve |
| | S Single Unit | 00 Without Electronics |
| | 05 ISO 160 4 Hole Flange 250, 360 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.250, 360 cc | 0 Control Voltage Not Applicable |
| | N 4…20mA Position Sensor | 0000 No Customer Adjustment Spec. |
| | M Painted Marine color | M01 Special Features |
| | SP Proportional valve Control 250, 360 cc | 10 Design Number |

### Everllence Part Number

| | |
|---|---|
| Part Number | **6462633-0** (with KBF Valve) |
| | **6460341-8** (without KBF Valve) |

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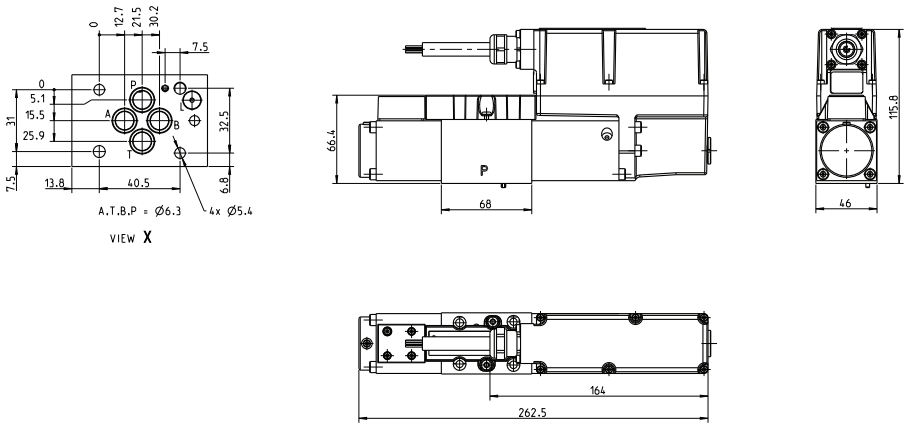
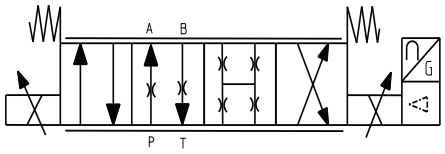
# PVZ-Series pump with KBF proportional valve

## KBF Proportional Valve

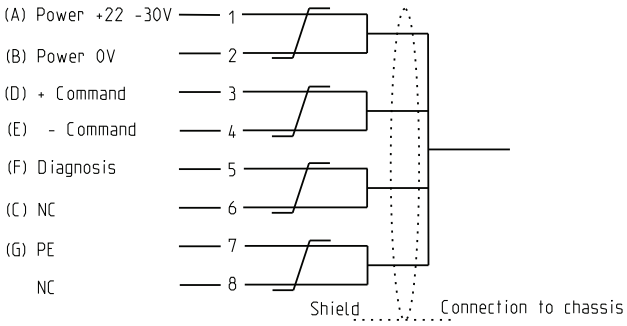
### Drawing




### 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 | 858AN00131A |
| 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 |

### Everllence Part Number

| | |
|---|---|
| Part Number | 5795820-0 |


**Contact info**

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For additional questions, please contact your sales representative.


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