**KSB Delta Primo VC**

Standard frequency inverter for continuously variable speed control of each pump and BoosterCommand Pro(+) control system, constant supply pressure at the consumer installation, ready-to-connect package system, starting as a function of pressure, stopping as a function of demand; all pumps installed on anti-vibration mounts. To DIN 1988-500.

**Function:**

Pressure booster system for adjustable, constant supply pressure for drinking water applications. Every pump is speed-controlled with operating hours evenly distributed among the pumps. The system is started and stopped as a function of pressure. The control system is parameterised at the factory for the specific customer requirements.

**Features:**

- Vertical Movitec high-pressure centrifugal pumps with wetted components made of stainless steel

- KSB IE3 motor (>= 0.75 kW)

- Cabinet-mounted frequency inverter per pump

- BoosterCommand Pro(+) control system with password protection against unauthorised access

- One length-adjusting check valve per pump to facilitate maintenance and one lockable shut-off valve on the suction side and discharge side of each pump

- 8-litre membrane-type accumulator equipped with Flowjet flow through valve; accumulator fitted on the discharge side, with shut-off valve and drain valve

- Pressure sensor with Flowjet shut-off valve, for controlling the supply pressure

- Pressure sensor for dry running protection of the system, with Flowjet shut-off valve

- Pressure gauge for pressure indication

- Lockable master switch at the control cabinet

- Suction-side and discharge-side manifolds with threaded or round flange connection on one side

- All components mounted on one baseplate

- Pumps mounted on the baseplate with anti-vibration mounts

- Foot set for height compensation for installation on uneven surfaces

**Pump data:**

- Fluid handled:

- Fluid temperature: 60 degrees Celsius max.

- Connection type:

- Number of pumps:

- Number of stages:

- Stand-by pump:

- Pump flow rate:

- Pump head:

- Inlet pressure min.:

- Pump head at Q = 0:

- Nominal pressure of the system: up to PN 16

**Operating data of the system:**

- Total flow rate

- Start-up pressure

- Discharge pressure / setpoint:

- Discharge pressure at Q = 0:

**Motor/electronics:**

- International Efficiency (IE): IE3 >= 0.75 kW

- Power supply: 3~ 400 V, 50 Hz

- Power input P1 per pump:

- Nominal speed:

- Current input max.:

- System enclosure: IP55

**Monitoring / open-loop control / closed-loop control:**

- Functional monitoring of the pressure sensor

- Manual or automatic fault acknowledgement

- Integrated motor protection

- Pipe rupture detection: system stops when the set pressure cannot be reached.

- Functional check run with adjustable parameters

- Adjustable base load/peak load operation

- Operation with/without stand-by pump can be selected

**Operation/display:**

- Backlit colour display with sensitive navigation button for symbol indication of operation / fault / fault message
- Menu navigation with symbol display, display of operating parameters and setting of setpoint and operating mode of pumps
- Standard Bluetooth connection for using app

- Display of pump status and actual pressure value

- Operating hours counter for each pump

- Operating hours counter for overall system

- Start-stop cycles counter per pump

**Communication/interfaces:**

- 1 digital input for external dry running protection

- 2 volt-free digital outputs for a general fault message (alert or warning)

- 1 volt-free digital output per pump for Pump in operation

- 1 volt-free digital output per pump for Pump fault

- Emergency operation-0-automatic switch per pump

- Display indicating:

 o System pressure

 o Status of dry running protection

 o Inlet pressure

 o Alerts and warnings (incl. history)

 o Colour LEDs at the control system for trouble-free operation (green), warnings (yellow) and alerts (red)

Bus systems (standard):
- Modbus RTU

Bus systems (optional):

- BACnet MS/TP

- Profibus DP

**Materials:**

- Pump: Wetted components made of stainless steel

- Piping: Stainless steel

- Valves: Brass or stainless steel, suitable for drinking water

- Baseplate: Steel, powder-coated

**Certification:**

The system is suitable for drinking water and certified to ACS (France) and WRAS (United Kingdom). All components and materials are approved by DVGW.

Pressure booster systems are subjected to hydraulic testing with sterile water at the factory; they are closed after testing. During the test KSB continuously monitors the test water quality. Test certificate available on request.

**Dimensions and connections:**

- Suction side and discharge side

- Dimensions L x W x H:

**Purchase order information:**

- Make: KSB

- Type series: KSB Delta Primo VC

- Material price group: LB

**Material number:**

**Note:**

Prior to commissioning in drinking water applications the system has to be flushed at the site in accordance with the requirements of the German TrinkwV drinking water ordinance and of DIN EN 806 (to prevent microbial contamination).

This also applies if the system has been at standstill for a prolonged period of time.

**Typical tender for KSB Delta Primo VC**

**1983.557/04-EN**

**Subject to technical modification without prior notice**

**14 October 2021**