

Delta Macro F

Ready-to-connect pressure booster system, constant pressure band of the supply pressure at the consumer installations, starting and stopping as a function of pressure; all pumps installed on anti-vibration mounts on a common baseplate and BoosterCommand Pro Plus control system. To DIN 1988-500.

Function:

Pressure booster system with constant pressure band of the supply pressure for drinking water applications. 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:

- 2 to 6 vertical Movitec high-pressure centrifugal pumps with wetted components made of stainless steel
- KSB IE3 motor (≥ 0.75 kW)
- KSB BoosterCommand Pro Plus 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 accumulators equipped with Flowjet flow through valve; accumulators fitted on the discharge side, with shut-off valve and drain valve
- Pressure sensor with Flowjet shut-off valve, for controlling the supply pressure and pressure gauge
- For direct connection, a pressure switch with pressure gauge and shut-off element is provided to protect the system against dry running. For indirect connection, dry running protection equipment has to be selected as supplementary equipment. For indirect connection in combination with suction lift operation, contact the manufacturer for suitable dry running protection equipment.
- 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. (For indirect connection in combination with suction lift operation, the suction-side collecting line and the swing check valves are not included.)
- 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

Operating data:

- Fluid handled:
- Fluid temperature: 60 degrees Celsius max.
- Connection type: threaded or flanged
- Stand-by pump:
- Total flow rate:
- Total head:
- Inlet pressure min.:
- Inlet pressure max.: 8 bar
- Flow rate/pump
- Head/pump
- Nominal pressure of the system: up to PN 16

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: IP54

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
- Standard Bluetooth connection for using app
- 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

Control cabinet options

Different options are available to extend the functionalities of the DeltaMacro F control cabinet:

- Inlet tank fill level monitoring
- Phase monitoring / fault message
- ProfiBus
- Bacnet
- Control cabinet lighting
- Control circuit monitoring
- Additional configurable inputs/outputs on terminal
- Core marking, component
- Core marking, power supply

Materials:

- Pump: Wetted components made of stainless steel
- Piping: Stainless steel
- Valves: Brass, stainless steel or grey cast iron, 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). The check valves and butterfly valves up to DN 50 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: DeltaMacro F
- Material price group: LD

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 DeltaMacro F

1983.560/06-EN

Subject to technical modification without prior notice

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