

# DEFU M

## Duplex pressure booster, frequency-controlled

Fully automatic, non self-priming, frequency-controlled duplex pressure boosting system made from stainless steel (1.4301) for particle-free water. Due to frequency adjustment, the system keeps the selected operating pressure extremely constant even with changing flow requirements. Pressure surges in the system are avoided by the intelligent control system, thus continuous partial load operation is provided in wide flow ranges. The system operates much more energy-efficiently and quietly than unregulated systems. The set pressure can be adjusted with the optionally available

### BENEFITS

- Reduction of energy demand and operating costs by up to 30 % compared to unregulated systems
- Lower maintenance costs and longer unit service life by avoiding pressure surges in the system
- Very quiet operation due to frequency control
- Operating voltage and frequency suitable for almost all international networks
- Integrated control of media temperature
- Energy Efficiency Class IE5
- Redundancy of the pumps and sensors enables maximum operational reliability

### APPLICATIONS

- Increases the pressure in the water supply pipe to a constant value, can be installed upstream or downstream of water softening, reverse osmosis or other water treatment installations



DEFU 2x5 M

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### DESCRIPTION

#### Scope of delivery

- Two stainless steel (1.4301, AISI 304) centrifugal pumps with variable-speed drive (VSD = FU) on stainless steel frame
- Incl. two diaphragm vessels, two pressure gauges, two pressure transmitters with integrated temperature measurement and two check valves as well as shut-off valves for each pump on suction and pressure side
- Master-master controller
- Terminal box with main switch and terminals for mains connection and potential-free dry-running protection switch
- Operating and collective fault signal for each pump as potential-free change-over contacts
- Piping and fittings in stainless steel 1.4301

#### Master-Master controller

- Demand-dependent changeover of the pumps at each start up
- Switch on of second pump if target pressure is not reached by one pump
- Automatic switch over at failure of one pump
- Monitoring of the allowed water temperature
- Change of set value by optional available external programming device

#### Optionally available

- Communication adapter for DEFU series (390 766)
- Adapter kit for connecting stainless steel pipes to PVC pipes
- Pump version made of stainless steel 1.4404 (AISI 316)

### CONDITIONS OF USE

Typically particle-free water, non-aggressive, or non-explosive media without abrasive or long-fibered components. The pumped medium must not attack the pump materials chemically.

Operating pressure 0 – 10 bar

Operating temperature 2 – 40 °C

### TECHNICAL DATA OF SERIES

Voltage 3 x 380 - 500 V

Frequency 50 - 60 Hz

Protection class IP 44

Target pressure 4.0 bar

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Product name	El. load	Hydraulic connection	Dimensions in mm	Pump cap. / head	Item number
Nom. Vol. m <sup>3</sup> /h	kW	suction / pressure	W x D x H	m <sup>3</sup> /h / m	
<b>DEFU 2x1 M</b>	2 x 1.1	Rp 1½" / Rp 1½"	620 x 810 x 1,015	0.2 – 4.4 / 65 – 39	440 392
<b>DEFU 2x3 M</b>	2 x 1.1	Rp 1½" / Rp 1½"	620 x 810 x 1,015	0.4 – 9.0 / 65 – 39	440 393
<b>DEFU 2x5 M</b>	2 x 1.1	Rp 2" / Rp 2"	620 x 810 x 1,015	0.5 – 14.0 / 55 – 36	440 394
<b>DEFU 2x10 M</b>	2 x 4.0	DN 65 / DN 65	660 x 960 x 1,015	1.0 – 25.0 / 68 – 54	440 395
<b>DEFU 2x15 M</b>	2 x 4.0	DN 100 / DN 100	740 x 1,060 x 1,165	2.0 – 40.0 / 48 – 39	440 407
<b>DEFU 2x25 M</b>	2 x 7.5	DN 100 / DN 100	740 x 1,060 x 1,165	3.0 – 60.0 / 48 – 38	440 408