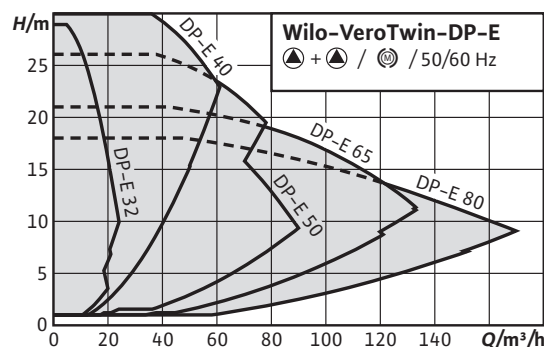


Series description: Wilo-VeroTwin-DP-E



Design

Electronically controlled glanded double pump in in-line design with flange connection and automatic power adjustment

Application

For pumping heating water (in accordance with VDI 2035), water-glycol mixtures and cooling and cold water without abrasive substances in heating, cold water and cooling water systems

Type key

Example	DP-E 40/160-4/2-R1
DP-E	In-line double pump with electronic control
40	Nominal diameter DN of the pipe connection
160	Nominal impeller diameter
4	Rated motor power P_2 in kW
2	Number of poles
R1	Version without sensor

Special features/product advantages

- High-efficiency motors as standard; from 0.75 kW nominal motor power: motors with IE2 technology
- Energy savings due to integrated electronic performance control
- Simple operation with red-button technology and display
- Various operating modes: main/standby operation and parallel operation
- Configurable signal relays for run and fault signals
- Configurable fault response tailored to HVAC applications
- Access disable on the pump
- Integrated full motor protection (TRS) with trip electronics
- Functions and operation identical to Wilo-CronoTwin-DL-E
- High corrosion protection thanks to cathaphoretic coating
- Condensate drainage holes as standard

Technical data

- Permissible temperature range -20 °C to $+120\text{ °C}$
- Mains connection
 - $3\sim 400\text{ V} \pm 10\%$, 50 Hz
 - $3\sim 380\text{ V} -5\% +10\%$, 60 Hz
- Protection class IP 55
- Nominal diameter DN 32 to DN 80
- Max. operating pressure 10 bar (special version: 16 bar)

Description/design

- Single-stage, low-pressure double pump in in-line design with
- Switchover valve
 - Mechanical seal
 - Flange connection
 - Drive with integrated electronic speed control

Materials

- Pump housing and lantern: EN-GJL-250
- Impeller: PPO-GF30
- Shaft: 1.4021
- Mechanical seal: AQEGG; other mechanical seals on request

Equipment/function

Operating modes

- $\Delta p\text{-c}$ for constant differential pressure
- $\Delta p\text{-v}$ for variable differential pressure
- PID control
- Manual control mode ($n=\text{constant}$)

Manual operation level

- Red button and display

Manual functions

- Differential pressure setpoint setting
- Speed setting (manual control mode)
- Operating mode setting
- Pump ON/OFF setting
- Configuration of all operating parameters
- Error acknowledgement

External control functions

- "Overriding Off" control input
- "External pump cycling" control input (effective only in double pump operation mode)
- Analogue input 0–10 V, 0–20 mA for manual control mode (DDC) and remote setpoint adjustment
- Analogue input 2–10 V, 4–20 mA for manual control mode (DDC) and remote setpoint adjustment
- Analogue input 0–10 V for actual value signal from pressure sensor
- Analogue input 2–10 V, 0–20 mA, 4–20 mA for actual value signal from pressure sensor

Signal and display functions

- Collective fault signal SSM
- Collective run signal SBM

Data exchange

- Infrared interface for wireless data exchange with IR-Module/IR-Stick
- Plug-in position for Wilo IF-Modules (Modbus, BACnet, CAN, PLR, LON) for connection to building automation

Safety functions

- Full motor protection with integrated trip electronics
- Access disable

Dual pump management (double pump or 2 x single pump)

- Main/standby operation (automatic fault-actuated switchover)
- Pump cycling main/standby operation after 24 hours
- Parallel operation
- Parallel operation (efficiency-optimised peak-load activation and deactivation)

Scope of delivery

- Pump

Series description: Wilo-VeroTwin-DP-E

- Installation and operating instructions

Options

- Version ...-R1 without differential pressure sensor
- H5 variant with PN16 housing (at additional charge)

Accessories

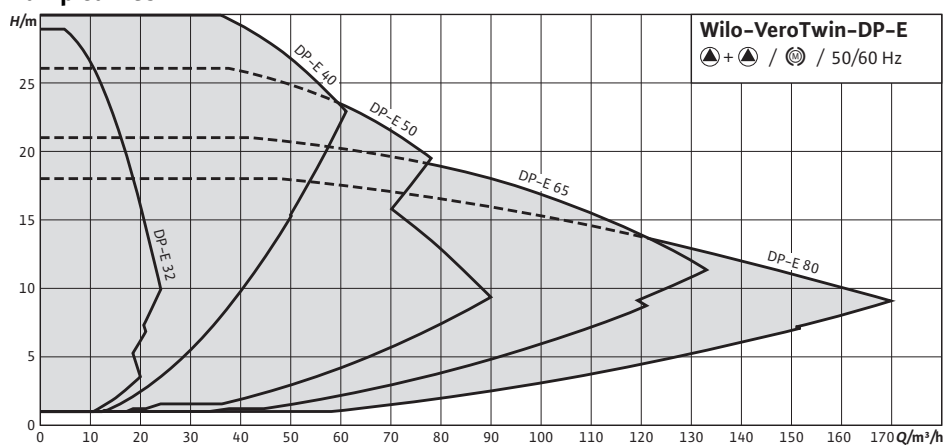
- Three mounting brackets with fixation material for installation on a base
- Blind flanges for double pump housing
- IR-Monitor, IR-Stick
- IF-Module PLR for connecting to PLR/interface converter
- IF-Module LON for connection to the LONWORKS network
- BACnet IF-Module
- Modbus IF-Module
- CAN IF-Module
- VR-HVAC control system
- Control system CCE-HVAC
- SC-HVAC control system

General notes – ErP (ecological design-) directive

- The benchmark for most efficient water pumps is $MEI \geq 0.70$
- The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.
- The operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.
- Information on benchmark efficiency is available at www.europump.org/efficiencycharts

Duty chart: Wilo-VeroTwin-DP-E

Pump curves



Technical data: Wilo-VeroTwin-DP-E

Approved fluids (other fluids on request)

Heating water (in accordance with VDI 2035)	•
Water-glycol mixtures (for 20-40 vol.% glycol and fluid temperature ≤ 40 °C)	•
Cooling and cold water	•
Heat transfer oil	Special version at additional charge

Permitted field of application

Standard version for operating pressure	p_{max}	10 bar
Special version for operating pressure	p_{max}	16 bar
Temperature range at max. ambient temperature +40 °C		-10...+120 °C (depending on the fluid)
Max. ambient temperature		40 °C
Installation in closed buildings		•
Outdoor installation		-

Pipe connections

Nominal connection diameters DN	32 - 80
Flanges (according to EN 1092-2)	PN 10 (PN 16 on request)

Materials

Pump housing	EN-GJL-250
Lantern	EN-GJL-250
Impeller	PPO-GF30
Impeller (special version)	-
Pump shaft	1.4021
Mechanical seal	AQEGG
Other mechanical seals	On request

Electrical connection

Mains connection	3~440 V, 50/60 Hz 3~400 V, 50/60 Hz 3~380 V, 50/60 Hz
Speed range	750-2900 rpm

Motor/electronics

Motor technology	Asynchronous motor
Integrated full motor protection	•
Protection class	IP 55
Insulation class	F
Emitted interference	EN 61800-3
Interference resistance	EN 61800-3
Residual-current protection device (RCD)	•

Installation options

Pipe installation (≤ 15 kW motor power)	•
---	---

Technical data: Wilo-VeroTwin-DP-E

Support-bracket mounting
