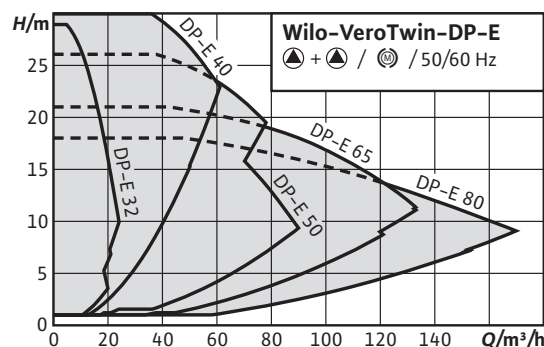


Series description: Wilo-VeroTwin-DP-E



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

- Energy savings due to integrated electronic control
- Optional interfaces for bus communication using plug-in IF-Modules
- Simple operation with red-button technology and display
- Integrated dual pump management
- Integrated full motor protection (PTC thermistor sensor) with trip electronics

Technical data

- Minimum Efficiency Index (MEI) to ≥ 0.4
- Permissible temperature range $-20\text{ }^\circ\text{C}$ to $+120\text{ }^\circ\text{C}$
- Mains connection
 - 3~400 V $\pm 10\%$, 50 Hz
 - 3~380 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

- Δp -c for constant differential pressure
- Δp -v for variable differential pressure
- PID control
- Manual control mode (n=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)
- ...-S1/-S2 variant with special mechanical shaft seals (at additional charge)

Accessories

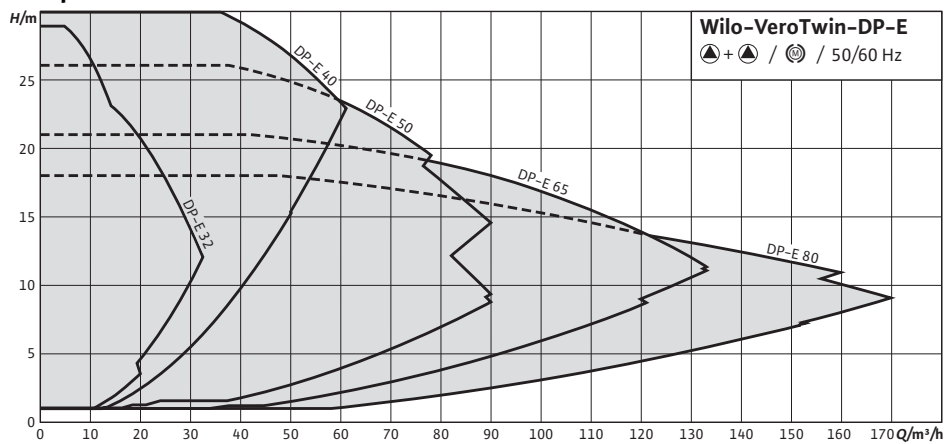
- 3 Mounting brackets with fixation material for installation on a base
- Blind flanges for double pump housing
- IR-Monitor, Wilo-IR-Stick
- IF-Module PLR for connecting to PLR/interface converter
- IF-Module LON for connection to the LONWORKS network
- IF-Module BACnet
- IF-Module Modbus
- CAN IF-Module
- VR-HVAC control system
- Control system CCE-HVAC
- Control system SCE-HVAC
- Differential pressure sensor (DDG)

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
- Pumps with a power consumption $P > 150 \text{ kW}$ or a flow rate of $Q_{BEP} < 6 \text{ m}^3/\text{h}$ are excluded from the ErP directive and thus do not have MEI values

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		-20...+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 [AISI420]
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)	•
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Technical data: Wilo-VeroTwin-DP-E

Support-bracket mounting

Product list: Wilo-VeroTwin-DP-E

Type	Minimum Efficiency Index (MEI)	Nominal flange diameter	Overall length	Nominal motor power	Weight approx.	Art no.
			<i>L₀/mm</i>	<i>P₂/kW</i>	<i>m/kg</i>	
DP-E 32/95-0,55/2-R1	≥ 0.40	DN 32	260	0.55	47	2144401
DP-E 32/95-0,55/2	≥ 0.40	DN 32	260	0.55	47	2144392
DP-E 32/105-0,75/2-R1	≥ 0.40	DN 32	260	0.75	50	2144402
DP-E 32/105-0,75/2	≥ 0.40	DN 32	260	0.75	50	2144393
DP-E 32/125-1,1/2-R1	≥ 0.40	DN 32	260	1.1	58	2144403
DP-E 32/125-1,1/2	≥ 0.40	DN 32	260	1.1	58	2144394
DP-E 32/135-1,1/2-R1	≥ 0.40	DN 32	260	1.1	58	2144404
DP-E 32/135-1,1/2	≥ 0.40	DN 32	260	1.1	58	2144395
DP-E 32/135-1,5/2-R1	≥ 0.40	DN 32	260	1.5	61	2152194
DP-E 32/135-1,5/2	≥ 0.40	DN 32	260	1.5	61	2152193
DP-E 40/115-0,55/2-R1	≥ 0.40	DN 40	250	0.55	50	2131262
DP-E 40/115-0,55/2	≥ 0.40	DN 40	250	0.55	50	2131253
DP-E 40/120-1,5/2-R1	≥ 0.40	DN 40	320	1.5	70	2109817
DP-E 40/120-1,5/2	≥ 0.40	DN 40	320	1.5	70	2109781
DP-E 40/130-2,2/2-R1	≥ 0.40	DN 40	320	2.2	75	2109818
DP-E 40/130-2,2/2	≥ 0.40	DN 40	320	2.2	75	2109782
DP-E 40/150-3/2-R1	≥ 0.40	DN 40	320	3.0	87	2109819
DP-E 40/150-3/2	≥ 0.40	DN 40	320	3.0	87	2109783
DP-E 40/160-4/2-R1	≥ 0.40	DN 40	320	4.0	103	2109820
DP-E 40/160-4/2	≥ 0.40	DN 40	320	4.0	103	2109784
DP-E 50/105-0,75/2-R1	≥ 0.40	DN 50	280	0.75	53	2144408
DP-E 50/105-0,75/2	≥ 0.40	DN 50	280	0.75	53	2144399
DP-E 50/130-2,2/2-R1	≥ 0.40	DN 50	340	2.2	76	2144405
DP-E 50/130-2,2/2	≥ 0.40	DN 50	340	2.2	76	2144396
DP-E 50/140-3/2-R1	≥ 0.40	DN 50	340	3.0	89	2144406
DP-E 50/140-3/2	≥ 0.40	DN 50	340	3.0	89	2144397
DP-E 50/150-4/2-R1	≥ 0.40	DN 50	340	4.0	105	2144407
DP-E 50/150-4/2	≥ 0.40	DN 50	340	4.0	105	2144398
DP-E 65/115-1,5/2-R1	≥ 0.40	DN 65	340	1.5	78	2144409
DP-E 65/115-1,5/2	≥ 0.40	DN 65	340	1.5	78	2144400
DP-E 65/120-3/2-R1	≥ 0.40	DN 65	340	3.0	96	2133273
DP-E 65/120-3/2	≥ 0.40	DN 65	340	3.0	96	2133265
DP-E 65/130-4/2-R1	≥ 0.40	DN 65	340	4.0	112	2133274
DP-E 65/130-4/2	≥ 0.40	DN 65	340	4.0	112	2133266
DP-E 80/115-2,2/2-R1	≥ 0.40	DN 80	360	2.2	92	2109828
DP-E 80/115-2,2/2	≥ 0.40	DN 80	360	2.2	92	2109792
DP-E	≥ 0.40	DN 80	360	3.0	99	2153455
DP-E	≥ 0.40	DN 80	360	4.0	115	2153456
DP-E	≥ 0.40	DN 80	360	3.0	99	2153461
DP-E	≥ 0.40	DN 80	360	4.0	115	2153462