



## Data sheet

### Hydraulic data

Maximum operating pressure $P_N$	10 bar
Head max $H_{max}$	13.1 m
Flow max $Q_{max}$	35.3 m³/h
Minimum suction head at 50 °C $m$	5 m
Minimum suction head at 95 °C $m$	12 m
Minimum suction head at 110 °C	18 m
Min. fluid temperature $T_{min}$	-10 °C
Max. fluid temperature $T_{max}$	90 °C
Min. ambient temperature $T_{min}$	-10 °C
Max. ambient temperature $T_{max}$	40 °C

### Motor data

Energy efficiency index (EEI)	≤0.17
Mains connection	1~230 V ±10%, 50/60 Hz
Min current $I_{min}$	0.2 A
Max current $I_{max}$	2.46 A
Rated power $P_2$	470 W
Min. speed $n_{min}$	650 1/min
Max. speed $n_{max}$	3350 1/min
Power consumption $P_{1 min}$	10 W
Power consumption $P_{1 max}$	560 W
Emitted interference	EN 61800-3;2004+A1;2012 /residential area (C1)
Interference resistance	EN 61800-3;2004+A1;2012 /industrial environment (C2)
Insulation class	F
Protection class	IPX4D
Threaded cable connection	5 x M16x1.5

### Installation dimensions

Pipe connection on the suction side $DN_s$	DN 50
Pipe connection on the discharge side $DN_d$	DN 50
Port-to-port length $L_0$	280 mm

**Materials**

Pump housing	Grey cast iron
Impeller	PPS-GF40
Shaft	1.4028, DLC-coated
Bearing	Carbon, antimony-impregnated

## Equipment/function

### Function

Control mode	Δp-v for variable differential pressure
	Δp-c for constant differential pressure
	Q limit for limiting the maximum volume flow
	Dynamic Adapt plus
	ΔT-const. for constant differential temperature control
	T-const. for constant temperature control
	Constant Q for constant volume flow control
	Multi Flow Adaptation
	Δ T-const. for constant differential temperature control
	User-defined PID control
	Constant speed (n-const.)
Special features of the series	Heating/Cooling switching
	Night set back
	Heat quantity measurement
	Cooling quantity measurement
	Key locking function
	No-Flow Stop
	Reset function to factory setting
	Adjustable volume flow limiter
	Ability to save and restore configured pump settings (3 restoration points)
Multi pump operation	Main/Standby
	Parallel operation
Measurement value logging	Heat and cooling capacity measurement
Display	Setpoint
	Actual delivery head
	Actual volume flow
	Actual power consumption
	Energy consumption
	Temperature (version "-R7": current fluid temperature possible with Stratos MAXO temperature sensor)
	Warning messages in plain text (display status: yellow)
	Error messages in plain text (display: red)
	Pump venting (display status: blue)
	Control mode
	Active influences (e.g. STOP)

### Function

Display (can also be selected)	Speed
	Heating quantity
	Cooling quantity
	Operating hours
	Mains voltage
	Warning message
Pump venting function	Error message
	Yes

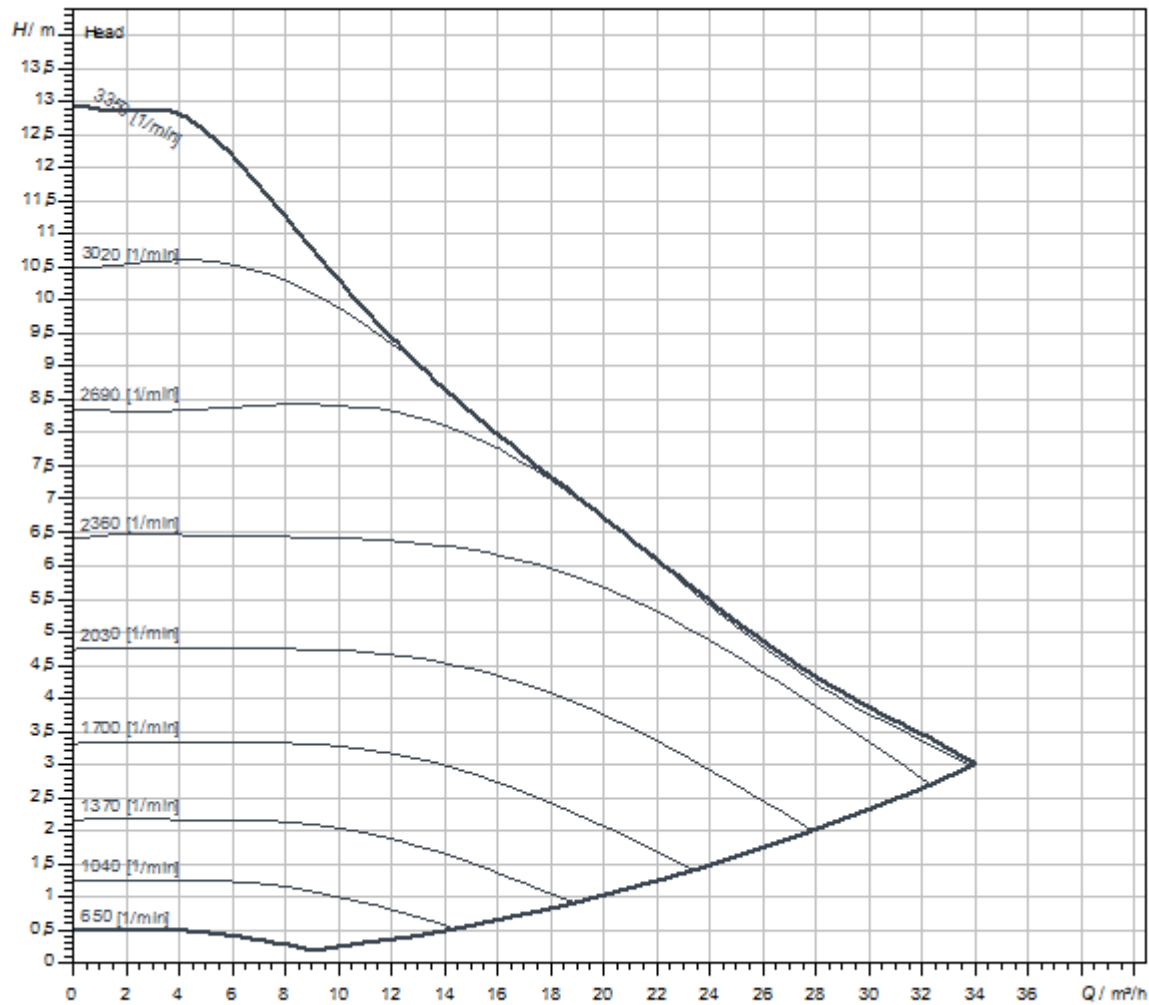
### Equipment

Approvals and labels	CE
	VDE
	EAC
Cold water insulation shell	As accessories
Display	Graphic colour display (4.3 inches)
Display information	Comfort Version: LCD display (large) for showing the head, flow volume, actual und cumulated current.
Pump control	Electronic-controlled pump (high efficiency pump)
Quick electrical connection	Wilo Connector
Thermal insulation shell	Yes
Blocking-current proof motor	yes
Particle filter	yes
Key lock	yes

## Connectivity

Access via the Wilo-Assistant app	Yes
Analogue signal as standard	0-10 V
	2-10 V
	4-20 mA
	0-20 mA
	PT1000
Bus communication via additional accessories	BACnet MS/TP
	LON
	Modbus RTU
	CANopen
	PLR
	BACnet IP
	Modbus TCP
Connection for Wilo-Smart Cloud	Via Wilo-Smart Gateway
Digital input	Ext. OFF
	Ext. MIN
	Ext. MAX
	MANUAL (BMS-OFF)
	Key lock
	Switchover between heating/cooling mode
Digital output	SSM
	SBM
wire data exchange and remote operation	Bluetooth

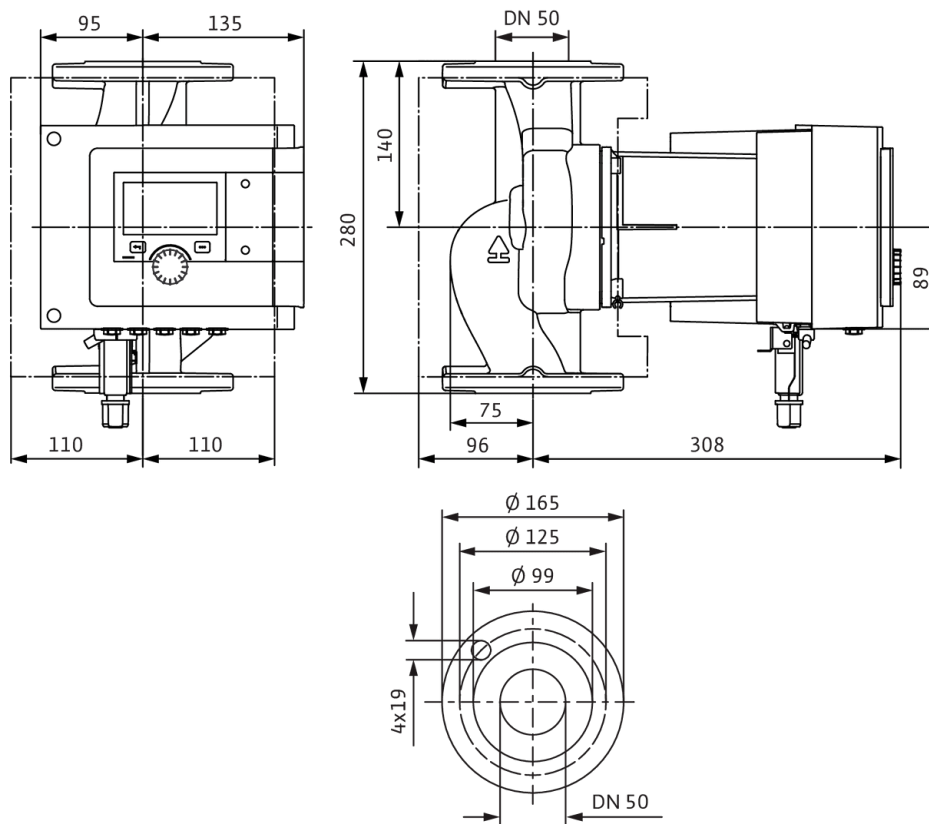
Pump curves



Fluid media	Water 100 %
Fluid temperature T	20,00 °C
speed at duty point <i>n</i> hydr. @ OP	2.498 1/min

## Dimensions and dimensions drawings

### Stratos MAXO 50/0,5-12 PN6/10-R7



## Tender text

Premium smart-pump Wilo-Stratos MAXO-R7 (R7 = without internal temperature sensor)

High efficiency in-line glandless pump with EC motor and electronic power adjustment. Can be used for chilled water, heating water and water/glycol mixtures. Energy efficiency index (EEI) between  $\leq 0.17$  and  $\leq 0.19$  depending on pump type.

### Control modes:

- > Permanent, automatic performance adjustment according to system requirements without setpoint specification **Wilo Dynamic Adapt plus** (factory setting). Up to 20% energy savings compared to dp-v control mode.
- > Constant temperature (**T-const.**)
- > Constant differential temperature (**dT-const.**)
- > Needs-based volume flow optimisation of the feeder pump through connectivity and communication between multiple pumps (**Multi-Flow Adaptation**).
- > Constant volume flow (**Q-const.**)
- > Differential pressure control (dp-c) to a remote point in the pipe network (**index circuit evaluator**)
- > Constant differential pressure (**dp-c**)
- > Variable differential pressure (**dp-v**) with the option to set the nominal duty point
- > Constant speed (**n-const.**)
- > User-defined **PID** control

### Functions:

- > Heat quantity measurement (**available with accessory Wilo fluid temperature sensor or analogue temperature sensors e.g. 2x PT1000**)
- > Cooling quantity measurement (**available with accessory Wilo fluid temperature sensor or analogue temperature sensors e.g. 2x PT1000**)
- > Pump automatically deactivates when no flow is detected (**No-Flow Stop**)
- > Switchover between heating and cooling mode (automatic, external or manual) (**automatic, available with the accessory Wilo fluid temperature sensor**)
- > Adjustable volume flow limiter using the Q-Limit function (**Q<sub>min.</sub> and Q<sub>max.</sub>**)
- > Operating modes of twin-head pumps: Efficiency-optimised **parallel operation** for dp-c and dp-v, main and standby operation
- > Ability to save and restore configured pump settings (**3 restoration points**)
- > **Fault and warning messages** shown in plain text with advice on resolving the issue
- > **Pump venting function** for automatic venting of the rotor chamber
- > Automatic night setback (**available with the accessory Wilo fluid temperature sensor**)
- > Automatic **deblocking function** and integrated **full motor protection**
- > **Dry-running detection**

### Display:

- > Control mode
- > Setpoint
- > Volume flow
- > Temperature (**available with accessory Wilo fluid temperature sensor**)
- > Power consumption
- > Electric consumption
- > Active influences (e.g. STOP, No-Flow Stop)

**Version:**

- > 2 configurable **analogue inputs**: 0–10 V, 2–10 V, 0–20 mA, 4–20 mA and commercially available PT1000; +24 V DC power supply
- > 2 configurable **digital inputs** (Ext. OFF, Ext. Min, Ext. Max, heating/cooling, manual override (uncoupled from building automation), operation lock (key lock and remote operation configuration protection))
- > 2 configurable **signal relays** for **run signals and fault messages**
- > **Slot for Wilo-CIF modules** with interfaces for building automation BA (optional accessories: CIF modules Modbus RTU, Modbus TCP, BACnet MS/TP, BACnet IP, LON, PLR, CANopen)
- > Wilo Net as a Wilo system bus for communication between Wilo products, e.g. **Multi-Flow Adaptation**; twin-head pump operation and Wilo-Smart Gateway
- > Automatic **emergency operation** with definable pump speed for exceptional circumstances, e.g. bus communication or sensor value malfunction
- > **Graphic colour display** (4.3 inches) with one-button manual operation
- > Use the Wilo-Assistant app to read and set operating data and –among other things– set up a commissioning protocol through the Bluetooth interface (no further accessories required)
- > Integrated **dual pump management** (twin-head pumps are prewired) when using 2 single pumps as twin-head pump unit (connection via Wilo Net)
- > Cable break detection when using an analogue signal (in connection with 2 – 10 V or 4 – 20 mA)
- > Outdoor installation with weather protection possible in accordance with the installation and operating instructions
- > Pre-set date and time
- > Thermal insulation shell for heating applications

**Scope of delivery**

- > Pump
- > Optimised Wilo-Connector the same for all sizes
- > 2x threaded cable gland M16 x 1.5
- > 2x gaskets for threaded connection
- > Thermal insulation shell
- > Installation and operating instructions

**Optional accessories:**

- > ClimaForm cold insulation to avoid the formation of condensate
- > CIF module: Modbus TCP, Modbus RTU, BACnet IP, BACnet MS/TP, LON, PLR, CANopen
- > PT 1000 (B) pipe contact sensor (for domestic hot water)
- > PT 1000 (AA) sensor for installation in immersion well
- > Differential pressure sensor
- > Smart Gateway
- > Wilo fluid temperature sensor (can be retrofitted for recording and displaying the fluid temperature, heat and cooling quantity and using the temperature-controlled control modes T-const., dT-const.)

**Operating Data**

Min. fluid temperature $T_{\min}$	-10 °C
Max. fluid temperature $T_{\max}$	90 °C
Min. ambient temperature $T_{\min}$	-10 °C
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Maximum operating pressure $PN$	10 bar
Minimum suction head at 50 °C $m$	5 m
Minimum suction head at 95 °C $m$	12 m
Minimum suction head at 110 °C	18 m



**Motor data**

Energy efficiency index (EEI)	≤0.17
Emitted interference	EN 61800-3;2004+A1;2012 /residential area (C1)
Interference resistance	EN 61800-3;2004+A1;2012 /industrial environment (C2)
Mains connection	1~230 V, 50/60 Hz
Power consumption $P_{1\max}$	560 W
Min. speed $n_{\min}$	650 1/min
Max. speed $n_{\max}$	3350 1/min
Protection class motor	IPX4D
Threaded cable connection	5 x M16x1.5

**Materials**

Pump housing	Grey cast iron
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**Ordering information**

Brand	Wilo
Product description	Stratos MAXO 50/0,5-12 PN6/10-R7
Net weight, approx. $m$	18.8 kg
Article number	<b>2217956</b> 