

Series description: Wilo-Stratos GIGA



Design

High-efficiency inline pump with EC motor and electronic duty adaptation in glanded construction. Version as single-stage low-pressure centrifugal pump with flange connection and mechanical shaft seal.

Application

Pumping of heating water (acc. to VDI 2035), cold water and water/glycol mixtures without abrasive substances in heating, cold water and cooling systems.

Type key

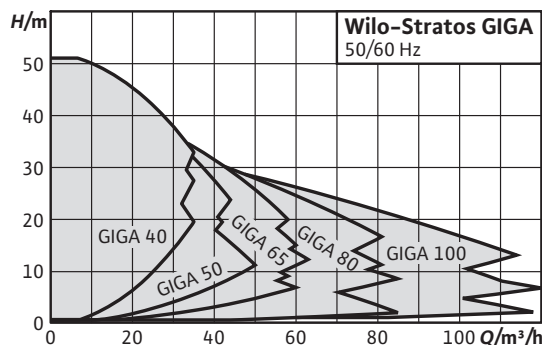
Example	Wilo-Stratos GIGA 40/1-51/4.5
Stratos	High-efficiency pump
GIGA	Inline single pump
40	Nominal flange diameter DN
1-51	Nominal delivery head range in [m]
4.5	Rated motor power P_2 in kW
-R1	Version without differential pressure sensor

Special features/product advantages

- Innovative high-efficiency pump for maximum overall efficiency based on a new Wilo glanded design
- High-efficiency EC motor (efficiency above IE4 limit values acc. to IEC TS 60034-31 Ed.1)
- Highly efficient hydraulics, optimally adapted to the EC motor technology, with optimised efficiency, minimum efficiency index (MEI) ≥ 0.7 according to ErP Directive 2009/125/EC [Commission Regulation (EU) 547/2012].
- Integrated electronic control
- Control range is up to three times as high as for conventional electronically controlled pumps
- Extremely compact and space-saving design
- Simple operation thanks to tried-and-tested red-button technology and display
- Optional interfaces for bus communication using plug-in IF-Modules
- Integrated dual pump management
- Fault management tailored to HVAC applications
- Access disable on the pump
- High standard of corrosion protection thanks to cataphoretic coating
- Condensate drainage as standard
- Pump bases with threaded hole for installation in the foundation

Technical data

- Permitted temperature range of the fluid $-20\text{ }^{\circ}\text{C}$ to $+140\text{ }^{\circ}\text{C}$
- Mains connection
 - $3\sim 380\text{ V} - 3\sim 480\text{ V}$ ($\pm 10\%$), 50 Hz/60 Hz
- Protection class IP 55
- Max. operating pressure 16 bar up to $+120\text{ }^{\circ}\text{C}$, 13 bar up to $+140\text{ }^{\circ}\text{C}$



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
- Installation and operating instructions

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- Pump
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Options

- Version ...-R1 without differential pressure sensor

Accessories

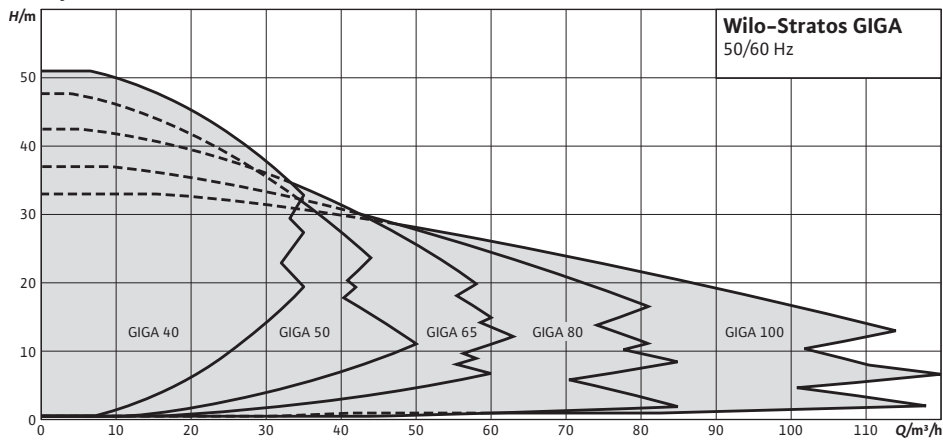
- Three mounting brackets with fixation material for installation on a base
- Installation aid for mechanical seal
- IR-Monitor
- IR-Stick
- IF-Module PLR for connecting to PLR/interface converter
- IF-Module LON for connection to the LONWORKS network
- BACnet IF-Module
- Modbus IF-Module
- CAN IF-Module
- 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.
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- 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-Stratos GIGA

Pump curves



Technical data: Wilo-Stratos GIGA

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}	16 bar (up to +120 °C) bar 13 bar (up to +140 °C) bar
Special version for operating pressure	p_{max}	–
Temperature range at max. ambient temperature +40 °C		–20...+140 °C (depending on the fluid)
Max. ambient temperature		40 °C
Installation in closed buildings		•
Outdoor installation		–

Pipe connections

Nominal connection diameters DN	40 – 100
Flanges (according to EN 1092-2)	PN 16

Materials

Pump housing	EN-GJL-250
Lantern	EN-GJL-250
Impeller	PPS-GF40
Impeller (special version)	–
Pump shaft	1.4122
Mechanical seal	AQ1EGG
Other mechanical seals	On request

Electrical connection

Mains connection	3~480 V, 50/60 Hz 3~440 V, 50/60 Hz 3~400 V, 50/60 Hz 3~380 V, 50/60 Hz
Speed range	rpm

Motor/electronics

Motor technology	EC 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)	•

Technical data: Wilo-Stratos GIGA

Installation options

Pipe installation (≤ 15 kW motor power)	•
Support-bracket mounting	•

Product list: Wilo-Stratos GIGA

Type	title_range_add_on_pl	Nominal flange diameter	Overall length	Nominal motor power	Weight approx.	Art no.
			<i>L₀ / mm</i>	<i>P₂ / kW</i>	<i>m / kg</i>	
Stratos GIGA 40/1-25/1,6-R1	Without differential pressure sensor	DN 40	280	1.60	38	2117158
Stratos GIGA 40/1-25/1,6	With differential pressure sensor	DN 40	280	1.60	38	2117130
Stratos GIGA 40/1-32/2,3-R1	Without differential pressure sensor	DN 40	280	2.40	38	2117157
Stratos GIGA 40/1-32/2,3	With differential pressure sensor	DN 40	280	2.40	38	2117129
Stratos GIGA 40/1-39/3,0-R1	Without differential pressure sensor	DN 40	280	3	38	2117156
Stratos GIGA 40/1-39/3,0	With differential pressure sensor	DN 40	280	3	38	2117128
Stratos GIGA 40/1-45/3,8-R1	Without differential pressure sensor	DN 40	280	3.80	38	2117155
Stratos GIGA 40/1-45/3,8	With differential pressure sensor	DN 40	280	3.80	38	2117127
Stratos GIGA 40/1-51/4,5-R1	Without differential pressure sensor	DN 40	280	4.40	38	2117154
Stratos GIGA 40/1-51/4,5	With differential pressure sensor	DN 40	280	4.40	38	2117126
Stratos GIGA 50/1-14/0,8-R1	Without differential pressure sensor	DN 50	280	0.80	39	2117162
Stratos GIGA 50/1-14/0,8	With differential pressure sensor	DN 50	280	0.80	39	2117134
Stratos GIGA 50/1-20/1,2-R1	Without differential pressure sensor	DN 50	280	1.30	39	2117161
Stratos GIGA 50/1-20/1,2	With differential pressure sensor	DN 50	280	1.30	39	2117133
Stratos GIGA 50/1-26/1,9-R1	Without differential pressure sensor	DN 50	280	1.90	39	2117160
Stratos GIGA 50/1-26/1,9	With differential pressure sensor	DN 50	280	1.90	39	2117132
Stratos GIGA 50/1-33/2,6-R1	Without differential pressure sensor	DN 50	280	2.60	39	2117159
Stratos GIGA 50/1-33/2,6	With differential pressure sensor	DN 50	280	2.60	39	2117131
Stratos GIGA 50/1-38/3,0-R1	Without differential pressure sensor	DN 50	280	2.60	39	2117165
Stratos GIGA 50/1-38/3,0	With differential pressure sensor	DN 50	280	2.60	39	2117137
Stratos GIGA 50/1-44/3,8-R1	Without differential pressure sensor	DN 50	280	3.10	39	2117164
Stratos GIGA 50/1-44/3,8	With differential pressure sensor	DN 50	280	3.10	39	2117136
Stratos GIGA 50/1-50/4,5-R1	Without differential pressure sensor	DN 50	280	4.20	39	2117163
Stratos GIGA 50/1-50/4,5	With differential pressure sensor	DN 50	280	4.20	39	2117135
Stratos GIGA 65/1-8/0,6-R1	Without differential pressure sensor	DN 65	340	0.60	44	2117168
Stratos GIGA 65/1-8/0,6	With differential pressure sensor	DN 65	340	0.60	44	2117140
Stratos GIGA 65/1-12/1,2-R1	Without differential pressure sensor	DN 65	340	1.10	44	2117167
Stratos GIGA 65/1-12/1,2	With differential pressure sensor	DN 65	340	1.10	44	2117139
Stratos GIGA 65/1-17/1,9-R1	Without differential pressure sensor	DN 65	340	1.70	44	2117166
Stratos GIGA 65/1-17/1,9	With differential pressure sensor	DN 65	340	1.70	44	2117138

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Type	title_range_add_ on_pl	Nominal flange diameter	Overall length	Nominal motor power	Weight approx.	Art no.
			<i>L₀ /mm</i>	<i>P₂ /kW</i>	<i>m /kg</i>	
Stratos GIGA 65/1-21/2,3-R1	Without differential pressure sensor	DN 65	340	2.30	43	2117170
Stratos GIGA 65/1-21/2,3	With differential pressure sensor	DN 65	340	2.30	43	2117142
Stratos GIGA 65/1-27/3,0-R1	Without differential pressure sensor	DN 65	340	3.10	43	2117169
Stratos GIGA 65/1-27/3,0	With differential pressure sensor	DN 65	340	3.10	43	2117141
Stratos GIGA 65/1-34/3,0-R1	Without differential pressure sensor	DN 65	340	3.10	43	2117173
Stratos GIGA 65/1-34/3,0	With differential pressure sensor	DN 65	340	3.10	43	2117145
Stratos GIGA 65/1-38/3,8-R1	Without differential pressure sensor	DN 65	340	3.80	43	2117172
Stratos GIGA 65/1-38/3,8		DN 65	340	3.80	43	2117144
Stratos GIGA 65/1-42/4,5-R1	Without differential pressure sensor	DN 65	340	4.60	43	2117171
Stratos GIGA 65/1-42/4,5	With differential pressure sensor	DN 65	340	4.60	43	2117143