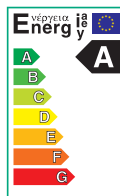


Series overview Wilo-Stratos-D



Design

Self regulating dual volute Inline, ECM (Electronically Communicated) type

Application

Hot and chilled water hydronics, air conditioning, solar and geothermal systems

Model Numbers

Example: **Wilo-Stratos-D 3.0x3-40**

Stratos High-efficiency pump, electronically controlled

D Dual volute

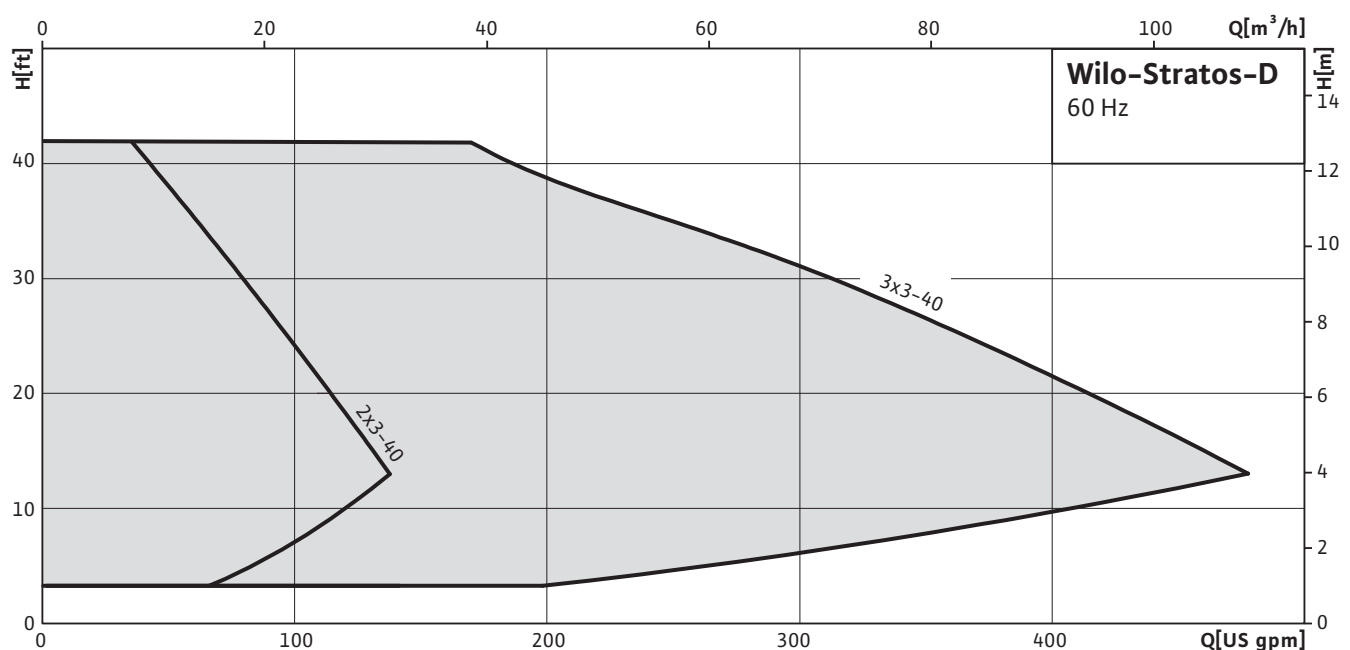
3.0 Flange size [in]

3-40 Min/max discharge head [ft]

Special features/product benefits

- Energy efficiency class A
- Maximum efficiency with ECM technology
- Up to 80% energy savings compared to standard uncontrolled pumps
- Ease of installation with front access to wiring and programming "Red Button", position adjustable LCD viewing screen
- Cataphoresis coated cast iron volute for corrosion prevention
- External control and monitoring via optional IR interface modules (LONworks, BACnet, 0-10 Vdc, Ext Off, Ext Min and SBM Run Signal)
- Remote control and access to data logger via IR infra-red device
- Built in overload fault contacts (opens on over/under voltage, dry run, locked rotor, overload and over temperature)

Duty chart



Heating, air-conditioning, cooling

High-efficiency pumps (dual pumps)

Series overview Wilo-Stratos-D

Equipment/function

Operating modes

- Manual control mode (constant speed)
- Δp -c for constant differential pressure
- Δp -v for variable differential pressure
- Δp -T for temperature-controlled differential pressure (programmable via Infra-red device, LON or BacNet)

Manual functions

- Operating mode setting
- Differential-pressure setpoint setting
- Setting automatic setback operation
- Pump ON/OFF setting
- Speed setting (manual control mode)

Automatic functions

- Stageless power adjustment depending on the operating mode
- Automatic setback operation
- Deblocking function
- Soft start
- Full motor protection with integrated overload shut down

External control functions

- "External Off" control input (possible with optional Stratos IF-Modules)
- "External Min" control input (possible with optional Stratos IF-Modules)
- "Analogue In 0 - 10 V" control input (remote speed adjustment) (possible with optional Stratos IF-Modules)
- "Analogue In 0 - 10 V" control input (remote setpoint adjustment) (possible with optional Stratos IF-Modules)

Signal and display functions

- Collective fault signal (potential-free NC contact)
- Individual run signal (potential-free NO contact) (possible with optional Stratos IF-Modules)
- Fault signal light
- LC display for pump data and fault codes

Data exchange

- Infrared interface for wireless data exchange with IR-Module/IR-Stick
- Serial digital interface BACnet MS/TP Slave for connection to building automation BA via BUS system RS485 (possible with IF-Modules Stratos).
- Serial digital LON interface for connection to a LONWorks network (possible with Stratos IF-Modules)

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

- Main/standby mode (automatic fault-actuated switchover/time-dependent pump cycling): Various combinations with Stratos IF-Modules (accessories) possible
- Parallel operation (efficiency-optimised peak load activation and deactivation): Various combinations with Stratos IF-Modules (accessories) possible

Scope of delivery

- Pump
- Flange gaskets
- Operating instructions

Accessories

- IR-Module
- IR-Stick
- IF-Modules Stratos: BACnet, LONworks, Ext. Off, Ext. Min, SBM, Ext. Off/SBM

| Equipment/function | |
|--|--|
| Wilco-Stratos-D | |
| Operating modes | |
| Manual control mode (constant speed) | • |
| Δp -c for constant differential pressure | • |
| Δp -v for variable differential pressure | • |
| Δp -T for temperature-controlled differential pressure | • |
| Manual functions | |
| Operating mode setting | • |
| Differential-pressure setpoint setting | • |
| Setting automatic setback operation | • |
| Pump ON/OFF setting | • |
| Speed setting (manual control mode) | • |
| Automatic functions | |
| Infinitely variable power adjustment depending on the operating mode | • |
| Automatic setback operation | • |
| Deblocking function | • |
| Soft start | • |
| Integrated overload protection | • |
| External control functions | |
| "Analogue In 0 ... 10 V" control input (remote speed adjustment) | • (Possible with optional Interface Module) |
| "Analogue In 0 ... 10 V" control input (remote adjustment setpoint) | • (Possible with optional Interface Module) |
| Signal and display functions | |
| Collective fault signal (potential-free NC contact) | • |
| Fault signal light | • |
| LCD screen for the display of pump data and fault codes | • |
| Data exchange | |
| Infra-red remote control for wireless data exchange and/or pump adjustment via USB stick or PDA type IR device | • |
| Serial digital LON interface for connection to a LON-WORKS network | • (Possible with optional Interface Module) |
| Serial digital BACnet S/TP interface for connection to an RS485 bus system | • (Possible with optional Interface Module) |
| Dual pump management (dual pump or 2 x single pump) | |
| Main/standby mode (automatic fault-actuated switchover/time-dependent pump cycling) | • |
| Parallel operation (efficiency-optimised peak load cut-in and out) | • |
| Equipment/scope of delivery | |
| Flange gasket | • (only for 2" HV model) |
| Installation and operating instructions | • |

• = available, - = not available

Heating, air-conditioning, cooling

High-efficiency pumps (dual pumps)

Technical data Wilo-Stratos-D

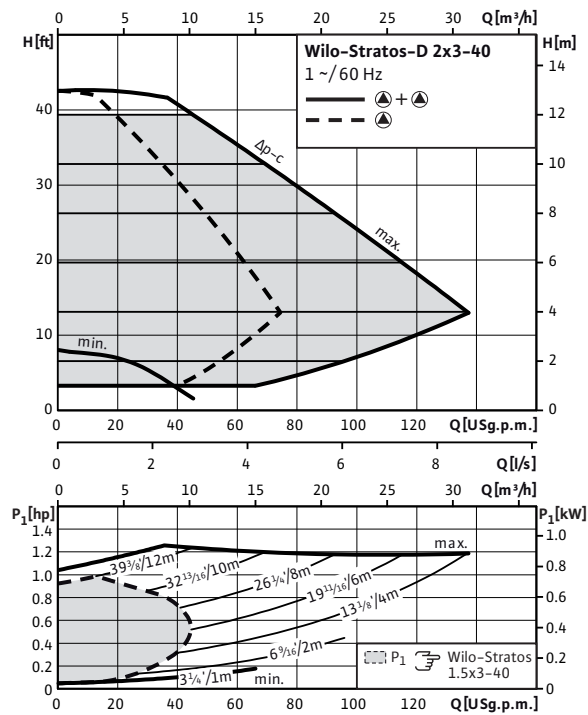
| | Wilo-Stratos-D... | |
|---|-------------------------------------|------------------------------------|
| | 2x3-40 | 3x3-40 |
| Approved fluids (other fluids on request) | | |
| Heating water | • | • |
| Water glycol mixtures up to 50% concentration | • | • |
| Power | | |
| Max. head H_{max} | 43 ft | 43 ft |
| Max. head H_{max} | 13 m | 13 m |
| Max. flow Q_{max} | 136 US GPM | 480 US GPM |
| Max. flow Q_{max} | 31 m ³ /h | 109 m ³ /h |
| Permitted field of application | | |
| Temperature range for applications in heating, ventilation & air-conditioning systems at max. ambient temperature of +40 °C | +14 to +230 °F (-10 to +110 °C) | |
| Max. ambient temperature T | 104 °F | |
| Max. ambient temperature T | 40 °C | |
| Pipe connections | | |
| Nominal flange diameter D_{fl} | 2 " | 3 " |
| Non ANSI flange (oval, rotated 90°) | - | - |
| Non ANSI flange (oval) | - | - |
| HV pump flange | • | - |
| 125# ANSI flange | - | • |
| Electrical connection | | |
| Input power - single phase U | 230 V | 230 V |
| Input frequency f | 60 Hz | 60 Hz |
| Motor/electronics | | |
| Speed control | Frequency converter | |
| Degree of protection | Enclosure 2 | |
| Insulation class | H | H |
| Materials | | |
| Pump volute | Grey cast iron (EN-GJL-250) | |
| Impeller | Engineered composite (PPS - 40% GF) | Engineered composite (PP - 50% GF) |
| Pump shaft | Stainless steel (X46Cr13) | |
| Bearing | Carbon, metal impregnated | |
| Minimum suction head | | |
| Minimum suction head at 122 °F (50°C) | 7.1 psi | 10.0 psi |
| Minimum suction head at 203 °F (95°C) | 17.1 psi | 21.3 psi |
| Minimum suction head at 230 °F (110°C) | 25.6 psi | 32.7 psi |

• = available, - = not available

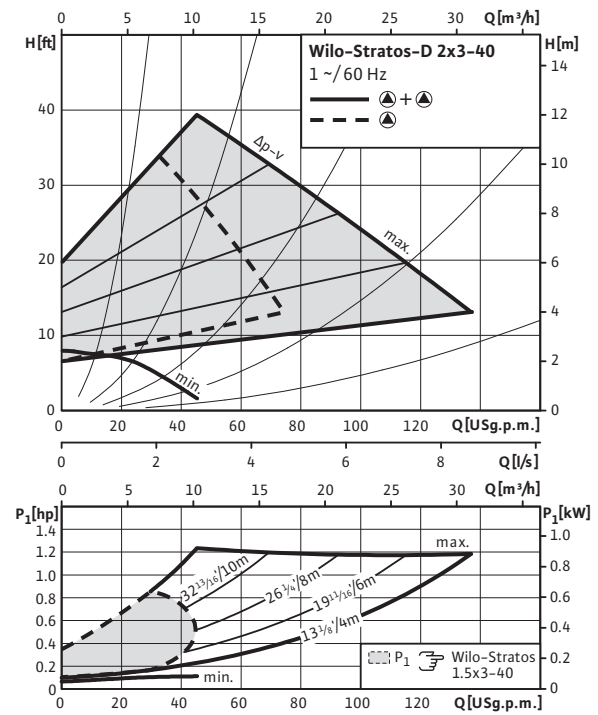
Pump curves Wilo-Stratos-D

Wilo-Stratos-D 2x3-40

Δp -c (constant)

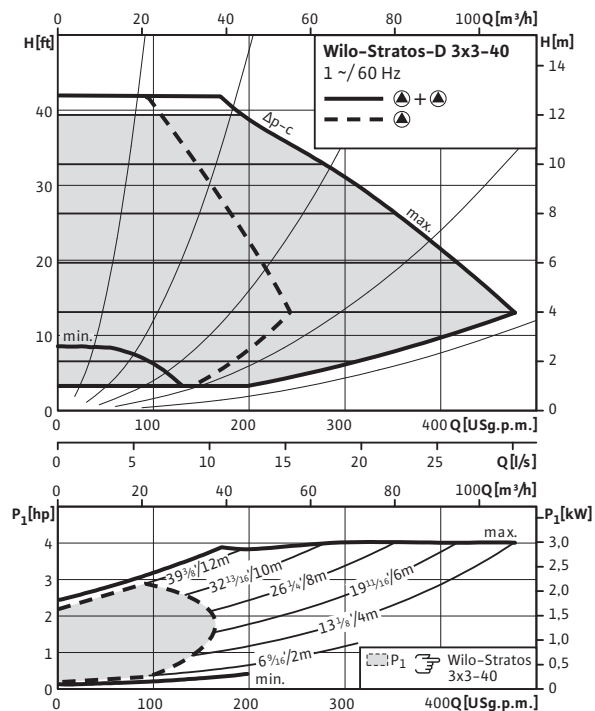


Δp -v (variable)

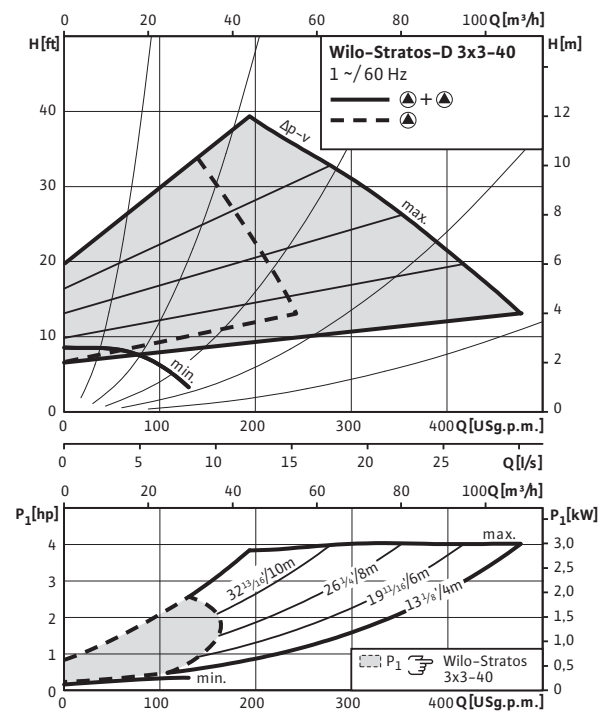


Wilo-Stratos-D 3x3-40

Δp -c (constant)



Δp -v (variable)



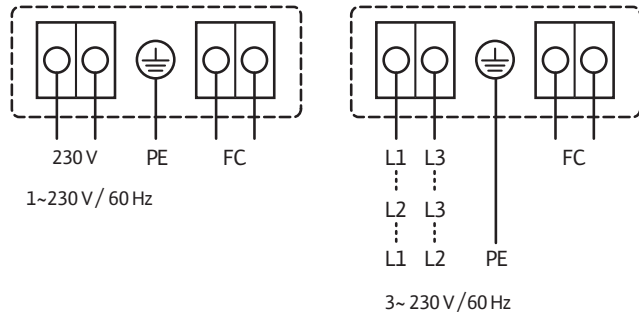
Heating, air-conditioning, cooling

High-efficiency pumps (dual pumps)

Wiring diagram, motor data Wilo-Stratos-D

Wiring diagram

FC: Collective fault signal (NC contact rating 1 A, 250 V~)

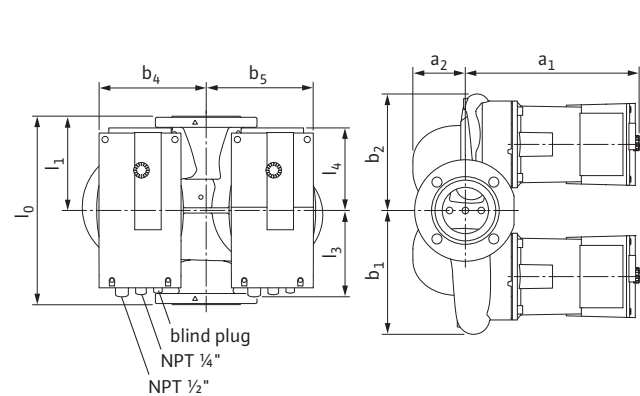


Motor data

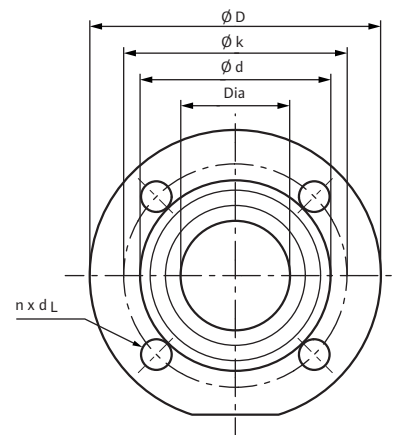
| Wilo-Stratos-D... | Rated motor power (per motor) | Speed | Power consumption 1~230 V (per motor) | Current at 1~230V | Current at 3~230V | Thermal protection | Threaded cable connection |
|-------------------|-------------------------------|-------------|---------------------------------------|-------------------|-------------------|--------------------|---------------------------|
| | P_2 | n | P_1 | I | | – | – |
| | hp | rpm | W | A | | | – |
| 2x3-40 | 0.469 | 1400 - 4600 | 25 - 470 | 0.20 - 2.05 | 0.20 - 2.05 | integrated | 1xNPT 1/4" 1xNPT 1/2" |
| 3x3-40 | 1.743 | 900 - 3300 | 40 - 1550 | 0.32 - 6.80 | 0.32 - 6.80 | integrated | 1xNPT 1/4" 1xNPT 1/2" |

Dimensions, weights Wilo-Stratos-D

Dimension drawing



Dimension drawing flange



Dimensions, weights

| Wilo-Stratos-D... | Nominal flange diameter | | Overall length | | Dimensions | | | | | | | | | |
|-------------------|-------------------------|----|----------------|-----|----------------|-----|--------------------------------|-----|-------------------------------|-----|----------------------------------|-----|---------------------------------|-----|
| | Dia | | l ₀ | | l ₁ | | l ₃ | | l ₄ | | a ₁ | | a ₂ | |
| | In. | mm | In. | mm | In. | mm | In. | mm | In. | mm | In. | mm | In. | mm |
| 2x3-40 | 2 | 50 | 10 | 254 | 5 | 127 | 6 ⁹ / ₁₆ | 166 | 4 ³ / ₄ | 120 | 9 ¹⁵ / ₁₆ | 252 | 2 ⁷ / ₁₆ | 62 |
| 3x3-40 | 3 | 80 | 14 | 356 | 7 | 178 | 7 ⁵ / ₈ | 193 | 6 ¹ / ₈ | 156 | 12 ¹⁵ / ₁₆ | 329 | 3 ¹⁵ / ₁₆ | 100 |

Dimensions, weights

| Wilo-Stratos-D... | Dimensions | | | | | | | | Weight approx. | |
|-------------------|---------------------------------|-----|---------------------------------|-----|---------------------------------|-----|---------------------------------|-----|----------------|------|
| | b ₁ | | b ₂ | | b ₄ | | b ₅ | | m | |
| | In. | mm | In. | mm | In. | mm | In. | mm | lbs | kg |
| 2x3-40 | 5 ¹⁵ / ₁₆ | 151 | 5 ¹¹ / ₁₆ | 144 | 5 ¹¹ / ₁₆ | 145 | 5 ¹¹ / ₁₆ | 145 | 59.52 | 27.0 |
| 3x3-40 | 9 ¹ / ₄ | 235 | 8 ¹¹ / ₁₆ | 221 | 8 | 203 | 8 | 203 | 134.48 | 61.0 |

Flange dimensions

| Wilo-Stratos-D... | Flange | Nominal flange diameter | | Pump flange dimensions | | | | | | | |
|-------------------|------------------------------|-------------------------|----|--------------------------------|-----|--------------------------------|-----|-----|-----|------------------------------------|-----------|
| | | Dia | | ø d | | | | ø k | | n x ø d _L | |
| | | In. | mm | In. | mm | In. | mm | In. | mm | pcs. x In. | pcs. x mm |
| 2x3-40 | Non ANSI (round) | 2 | 50 | 5 ¹ / ₄ | 133 | 3 ⁷ / ₁₆ | 87 | 4 | 102 | 4 x 9 ⁹ / ₁₆ | 4 x 14 |
| 3x3-40 | ANSI R.F Class 125 ASTMA 126 | 3 | 80 | 7 ⁹ / ₁₆ | 192 | 5 ¹ / ₁₆ | 128 | 6 | 152 | 4 x 3 ³ / ₄ | 4 x 19 |