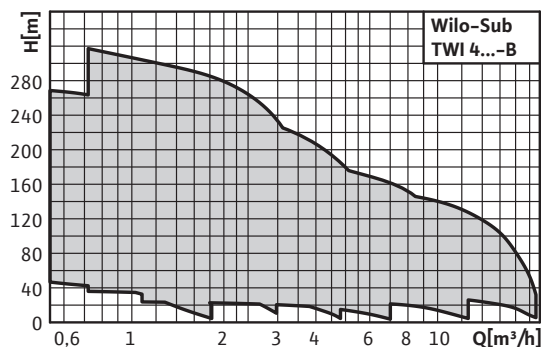


Series description: Wilo-Sub TWI 4...-B



Design

Submersible pump, multistage

Application

- For water and potable water supply from boreholes and rainwater storage
- Process water supply
- For municipal water supply, sprinkling and irrigation
- Pressure boosting
- Lowering the water level
- For pumping water in industrial applications
- For pumping water without long-fibre and abrasive constituents

Type key

Materials

- Hydraulic housing: 1.4301 stainless steel
- Impellers: 1.4301 stainless steel
- Hydraulics shaft: 1.4057 stainless steel
- Motor housing: 1.4301 stainless steel
- Motor shaft: 1.4305 stainless steel

Description/design

Submersible-motor pump for vertical or horizontal installation.

Hydraulics

Multistage submersible-motor pump with 4" NEMA connection and radial or semi-axial impellers with sectional construction. Integrated non-return valve. All parts in contact with the fluid are made of corrosion-free materials.

Motor

Series description: Wilo-Sub TWI 4-...-B

e.g.	Wilo-Sub TWI 4.01-09-B
TWI	Submersible pump
4	Diameter of the hydraulic unit in inches ["]
01	Nominal volume flow [m ³ /h]
09	Number of hydraulic stages
B	Series generation

Special features/product advantages

- Easy maintenance due to rapid installation and dismantling
- Integrated non-return valve
- Vertical and horizontal installation possible

Technical data

- Mains connection: 1~230 V, 50 Hz or 3~400 V, 50 Hz
- Immersed operating mode: S1
- Fluid temperature: 3-30 °C
- Minimum flow rate at motor: 0.1 m/s
- Max. sand content: 50 g/m³
- Max. number of starts: 20/h
- Max. immersion depth: 350 m
- Protection class: IP 68
- Pressure connection: Rp 1¼ - Rp 2

Equipment/function

- Multistage submersible-motor pump with radial impellers
- Integrated non-return valve
- NEMA coupling
- Single-phase or three-phase motor
- Hermetically cast motors

Corrosion-free single-phase or three-phase AC motor for direct starting. Sealed and hermetically cast motor, resin-impregnated, with enamel-insulated winding, self-lubricating bearing, with water-glycol filling.

Cooling

The motor is cooled by the fluid. The motor must always be operated in submerged state. The limit values for the max. fluid temperature and the minimum flow rate must not be exceeded. Vertical installation is possible optionally with or without cooling jacket. Cooling jacket is required for horizontal installation.

Pressure shroud

The pressure shroud is used for direct installation of the unit in the pipe system. Standard models are without mounted non-return valves. The maximum inlet pressure is 10 bar.

General notes - ErP (ecological design-) directive

Minimum Efficiency Index (MEI) ≥ 0

- The benchmark for most efficient water pumps is MEI ≥ 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

Configuration

- No suction mode is possible with these units!
- The unit must be fully immersed in water during operation.

Scope of delivery

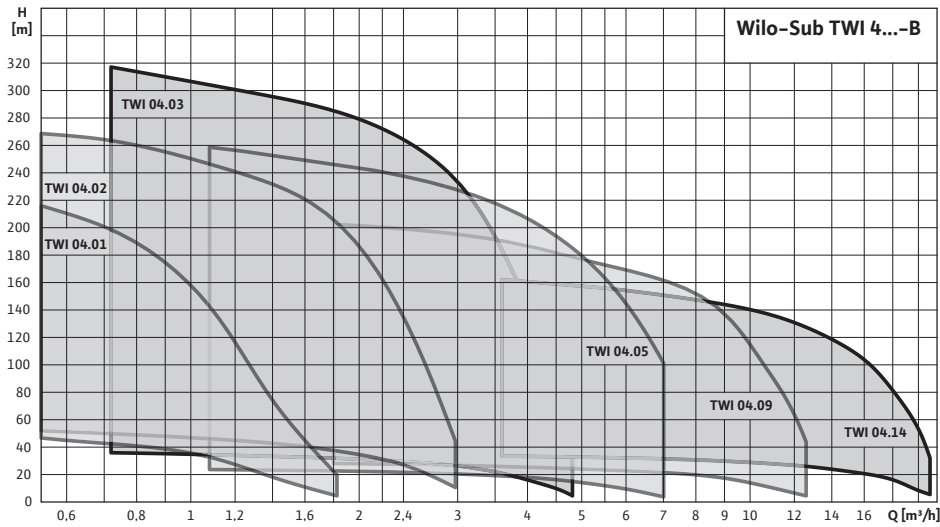
- Hydraulics + motor fully assembled
- 1.5/2.5 m connecting cable approved for potable water (cross-section: 4x1.5 mm²)
- Single-phase version including switchbox with capacitor, thermal motor protection and On/Off switch
- Installation and operating instructions

Options

- Hydraulics in 1.4401 stainless steel
- Three-phase AC motor in 1.4401 stainless steel
- 60 Hz version
- Single-phase motor without soft starter, with integrated lightning and overload protection up to 1.1 kW

Duty chart: Wilo-Sub TWI 4...-B

Pump curves



1~230 V, 50 Hz, $\rho = 1 \text{ kg/dm}^3$, $\nu = 1 \times 10^{-6} \text{ m}^2/\text{s}$,
ISO 9906 Annex A, η = pump efficiency

Equipment/function: Wilo-Sub TWI 4-...-B

Design

NEMA connection	•
Standardised connection	–
Integrated non-return valve	•
Without non-return valve	–
Single-phase AC motor	•
Three-phase motor	•
Direct activation	•
Star-delta activation	–
FC operation	•
Motor with cast stator	•
Rewindable motor	–
Oil motor filling	–
Water-glycol motor filling	•
Potable water motor filling	–
Hydraulics/motor preassembled	•

Application

Horizontal installation	•
Vertical installation	•

Equipment/function

Motor temperature monitoring, PT100	optional
Motor temperature monitoring, PTC	optional
Capacitor box for 1~230 V	•
Dry-running protection system	optional
Integrated lightning protection	–

Accessories

Bearing brackets for horizontal installation	–
Cooling jacket	optional
Non-return valve	–
Pressure shroud	optional

Materials

Pump housing	1.4301
Pump housing (special version)	1.4404
Impeller	1.4301
Impeller (special version)	1.4404
Motor housing	1.4301
Motor housing (special version)	1.4401

• = available, – = not available