

Series description: Wilo-Yonos PICO-STG



Design

Glandless circulation pump with screwed connection, blocking-current proof EC motor and integrated electronic power control.

Application

Primary circuits of solar and geothermal energy systems

Type key

Example: **Wilo-Yonos PICO-STG 25/1-7.5-180**

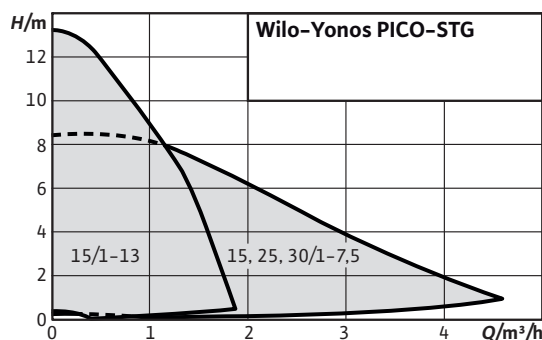
| | |
|-------------------|--|
| Yonos PICO | High-efficiency pump (screw-end pump), electronically controlled |
| -STG | For solar and geothermal energy systems |
| 25/ | Nominal connection diameter |
| 1-7.5 | Nominal delivery head range [m] |
| 180 | Port-to-port length |

Special features/product advantages

- Red button for setting the control mode $\Delta p-v$ or the fixed speed
- External speed control via integrated interface PWM 1 (geothermal) and PWM 2 (solar)
- Flexible connection cable with Wilo-Connector
- Pump housing with cataphoretic coating protects against corrosion due to condensation formation
- Operation and fault display via ring LED

Technical data

- Energy Efficiency Index (EEI) ≤ 0.23
- Fluid temperature +15 °C to +95 °C
- Mains connection 1~230 V, 50 Hz
- Protection class IP X4 D
- Screwed connection Rp $\frac{1}{2}$, Rp 1 and Rp $\frac{1}{4}$
- Max. operating pressure 10 bar



Equipment/function

Operating modes

- $\Delta p-v$ for variable differential pressure
- Manual control mode (n=constant)
- External speed control with PWM 1 or PWM 2 signal

Manual functions

- Setting the operating mode
- Setting of pump output (delivery head)
- Setting the PWM mode

Automatic functions

- Infinitely variable power adjustment according to the operating mode
- Automatic deblocking function

Signal and display functions

- Display of the operation or of faults

Equipment

- Wrench attachment point on pump body
- Quick electrical connection with Wilo-Connector via flexible cable
- Blocking-current proof motor
- Cataphoretically-coated pump housing

Materials

- Pump housing: Grey cast iron (EN-GJL-200)
- Impeller: Plastic (PP - 40 % GF)
- Pump shaft: Stainless steel
- Bearing: Carbon, metal impregnated

Scope of delivery

- Pump
- Wilo-Connector
- Gaskets
- Installation and operating instructions

Options

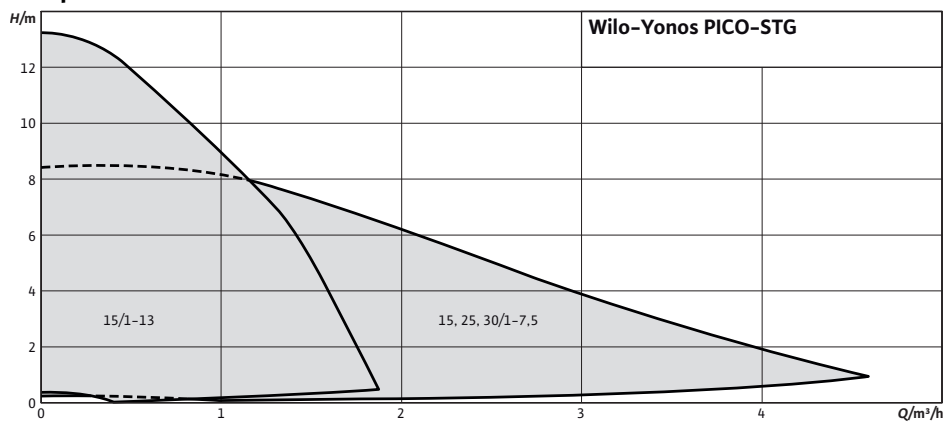
- Yonos PICO-STG...130 version with short port-to-port length of 130 mm

Accessories

- Screwed connections
- Adapter fittings
- Thermal insulation
- Angle plug with 2 m connecting cable
- PWM signal cable

Duty chart: Wilo-Yonos PICO-STG

Pump curves

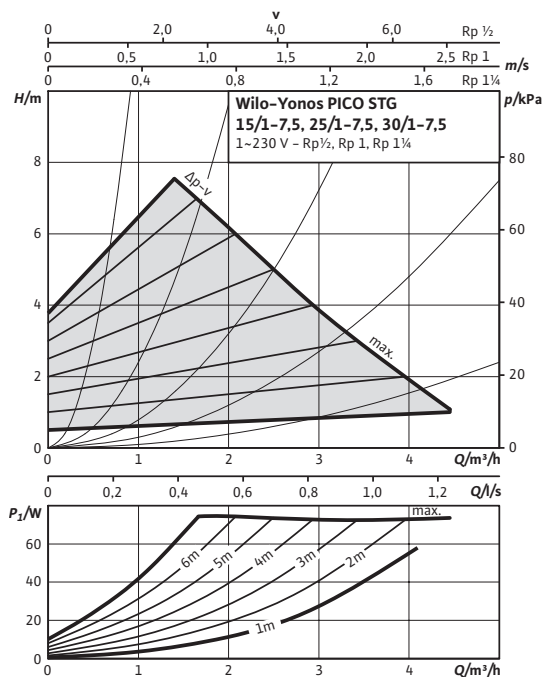


Product list: Wilo-Yonos PICO-STG

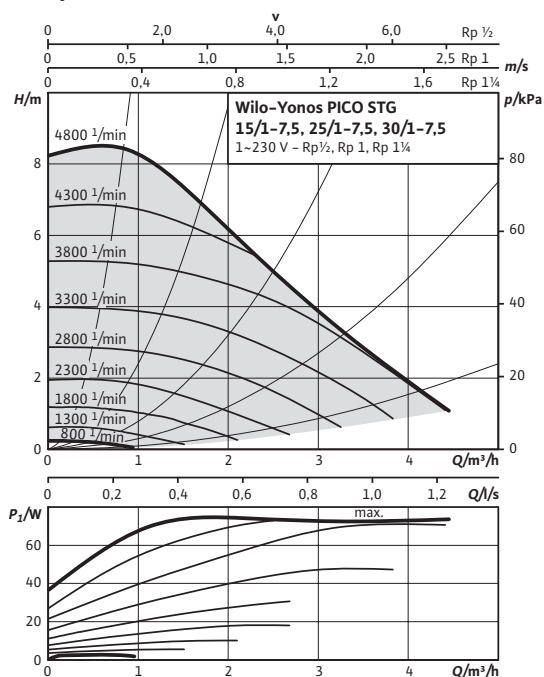
| Type | Max. volume flow | Energy efficiency index (EEI) | Threaded pipe union | Rated pressure | Overall length | Mains connection | Gross weight | Pieces per pallet | Art no. |
|-------------------------|------------------|-------------------------------|---------------------|----------------|----------------|-------------------|--------------|-------------------|---------|
| | $Q_{max}/m^3/h$ | | | PN/bar | $L0/mm$ | | m/kg | | |
| Yonos PICO-STG 15/1-7.5 | 2.5 | ≤ 0.23 | Rp ½ | 10 | 130 | 1~230 V, 50/60 Hz | 1.8 | 202 | 4527505 |
| Yonos PICO-STG 15/1-13 | 2.5 | ≤ 0.23 | Rp ½ | 10 | 130 | 1~230 V, 50/60 Hz | 1.8 | 48 | 4527506 |
| Yonos PICO-STG 15/1-13 | 2.5 | ≤ 0.23 | Rp ½ | 10 | 180 | 1~230 V, 50/60 Hz | 1.8 | 48 | 4527507 |
| Yonos PICO-STG 25/1-7.5 | 2.5 | ≤ 0.23 | Rp 1 | 10 | 180 | 1~230 V, 50/60 Hz | 1.8 | 202 | 4527504 |
| Yonos PICO-STG 30/1-7.5 | 2.5 | ≤ 0.23 | Rp 1¼ | 10 | 180 | 1~230 V, 50/60 Hz | 1.8 | 202 | 4527214 |

Data sheet: Wilo-Yonos PICO-STG 15/1-7.5

Pump curves $\Delta p-v$ (variable)



Pump curves $n = \text{constant}$



Approved fluids (other fluids on request)

| | |
|---|---|
| Heating water (in accordance with VDI 2035) | • |
| Water-glycol mixtures (max. 1:1; above 20% admixture, the pumping data must be checked) | • |

Permitted field of application

| | | |
|--|-----------|--------|
| Maximum permissible operating pressure | P_{max} | 10 bar |
|--|-----------|--------|

Pipe connections

| | |
|---------------------|--------------|
| Threaded pipe union | Rp ½ |
| Thread | G 1 |
| Overall length | L_0 130 mm |

Motor/electronics

| | |
|-------------------------------|---------------------------------------|
| Electromagnetic compatibility | EN 61800-3 |
| Emitted interference | EN 61000-6-3 |
| Interference resistance | EN 61000-6-2 |
| Speed control | Frequency converter |
| Protection class | IP X4D |
| Insulation class | F |
| Mains connection | 1~230 V, 50/60 Hz |
| Speed | n 800 - 4800 rpm |
| Power consumption | P_1 4 - 75 W |
| Current consumption | I max. 0.66 A |
| Motor protection | Not required (blocking-current proof) |

Materials

| | |
|--------------|-----------------------------|
| Pump housing | Grey cast iron (EN-GJL-200) |
| Impeller | Plastic (PP - 40% GF) |
| Pump shaft | Stainless steel |
| Bearing | Carbon, metal impregnated |

Minimum suction head at suction port for avoiding cavitation at water pumping temperature

| | |
|--|------------------|
| Minimum suction head at 50 / 95 / 110 °C | 0.5 / 4.5 / 10 m |
|--|------------------|

Information for order placements

| | |
|---------|-------------------------|
| Make | Wilo |
| Type | Yonos PICO-STG 15/1-7.5 |
| Art no. | 4527505 |

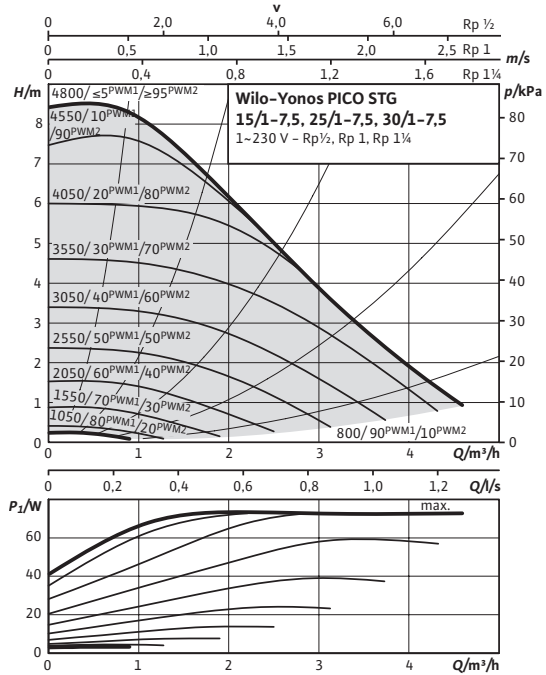
Data sheet: Wilo-Yonos PICO-STG 15/1-7.5

Pump curves PWM1 / PWM2 (external signal)

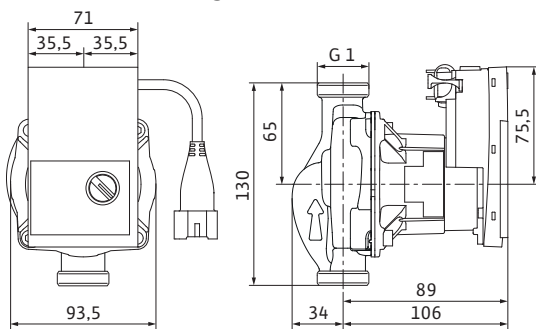
Weight approx.

m

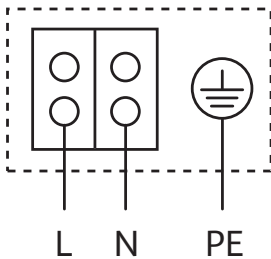
2 kg



Dimension drawing Yonos PICO STG 15/1-7.5 130



Terminal diagram

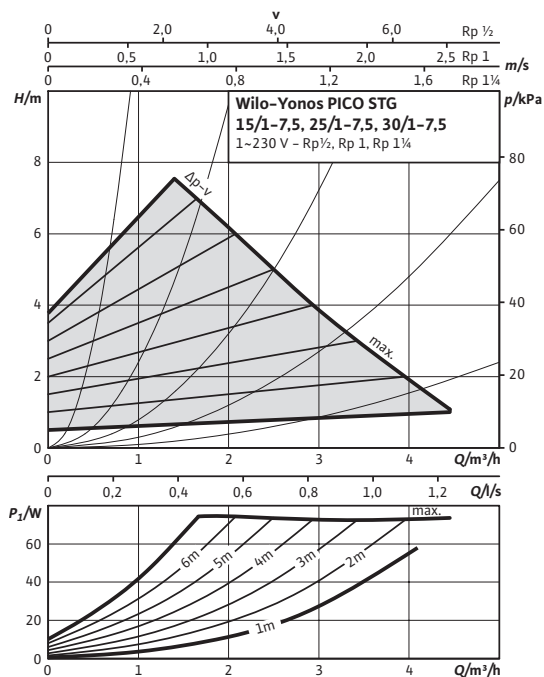


Blocking current-proof motor

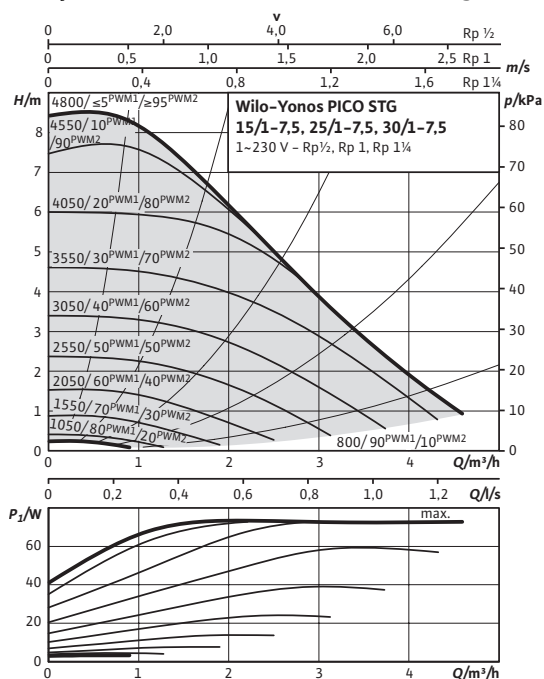
Single-phase motor (EM) 2-pole - 1~230 V, 50 Hz

Data sheet: Wilo-Yonos PICO-STG 25/1-7.5

Pump curves $\Delta p-v$ (variable)



Pump curves PWM1 / PWM2 (external signal)



Approved fluids (other fluids on request)

Heating water (in accordance with VDI 2035)

Water-glycol mixtures (max. 1:1; above 20% admixture, the pumping data must be checked)

Permitted field of application

Maximum permissible operating pressure P_{max} 10 bar

Pipe connections

Threaded pipe union Rp 1

Thread G 1½

Overall length L_0 180 mm

Motor/electronics

Electromagnetic compatibility EN 61800-3

Emitted interference EN 61000-6-3

Interference resistance EN 61000-6-2

Speed control Frequency converter

Protection class IP X4D

Insulation class F

Mains connection 1~230 V, 50/60 Hz

Speed n 800 - 4800 rpm

Power consumption P_1 4 - 75 W

Current consumption I max. 0.66 A

Motor protection Not required (blocking-current proof)

Materials

Pump housing Grey cast iron (EN-GJL-200)

Impeller Plastic (PP - 40% GF)

Pump shaft Stainless steel

Bearing Carbon, metal impregnated

Minimum suction head at suction port for avoiding cavitation at water pumping temperature

Minimum suction head at 50 / 95 / 110 °C 0.5 / 4.5 / 10 m

Information for order placements

Make Wilo

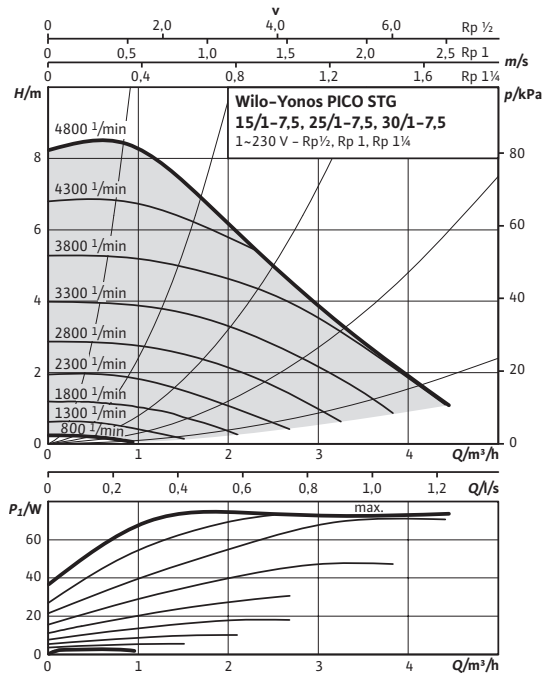
Type Yonos PICO-STG 25/1-7.5

Art no. 4527504

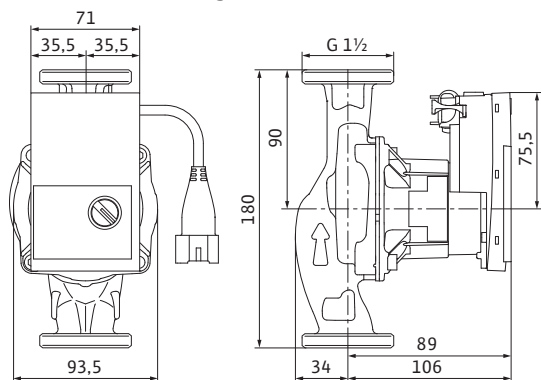
Data sheet: Wilo-Yonos PICO-STG 25/1-7.5

Pump curves n = constant

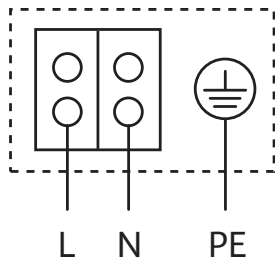
| | | |
|----------------|---|------|
| Weight approx. | m | 2 kg |
|----------------|---|------|



Dimension drawing Yonos PICO STG 25/1-7.5 180



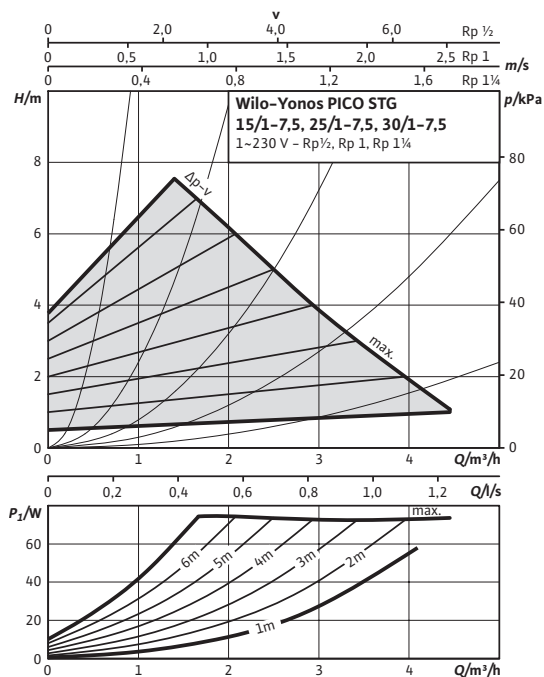
Terminal diagram



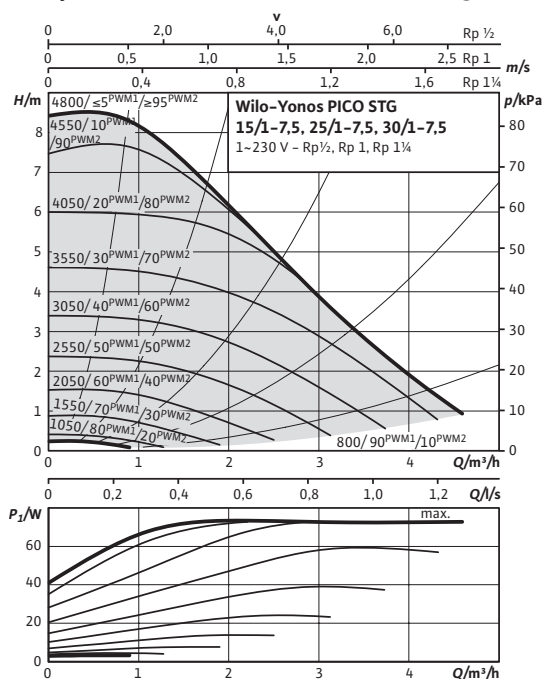
Blocking current-proof motor
 Single-phase motor (EM) 2-pole - 1-230 V, 50 Hz

Data sheet: Wilo-Yonos PICO-STG 30/1-7.5

Pump curves $\Delta p-v$ (variable)



Pump curves PWM1 / PWM2 (external signal)



Approved fluids (other fluids on request)

| | |
|---|---|
| Heating water (in accordance with VDI 2035) | • |
| Water-glycol mixtures (max. 1:1; above 20% admixture, the pumping data must be checked) | • |

Permitted field of application

| | | |
|--|-----------|--------|
| Maximum permissible operating pressure | P_{max} | 10 bar |
|--|-----------|--------|

Pipe connections

| | | |
|---------------------|-------|--------|
| Threaded pipe union | Rp 1¼ | |
| Thread | G 2 | |
| Overall length | L_0 | 180 mm |

Motor/electronics

| | | |
|-------------------------------|---------------------------------------|----------------|
| Electromagnetic compatibility | EN 61800-3 | |
| Emitted interference | EN 61000-6-3 | |
| Interference resistance | EN 61000-6-2 | |
| Speed control | Frequency converter | |
| Protection class | IP X4D | |
| Insulation class | F | |
| Mains connection | 1~230 V, 50/60 Hz | |
| Speed | n | 800 - 4800 rpm |
| Power consumption | P_1 | 4 - 75 W |
| Current consumption | I | max. 0.66 A |
| Motor protection | Not required (blocking-current proof) | |

Materials

| | |
|--------------|-----------------------------|
| Pump housing | Grey cast iron (EN-GJL-200) |
| Impeller | Plastic (PP - 40% GF) |
| Pump shaft | Stainless steel |
| Bearing | Carbon, metal impregnated |

Minimum suction head at suction port for avoiding cavitation at water pumping temperature

| | |
|--|----------------|
| Minimum suction head at 50 / 95 / 110 °C | 0.5 / 3 / 10 m |
|--|----------------|

Information for order placements

| | |
|---------|-------------------------|
| Make | Wilo |
| Type | Yonos PICO-STG 30/1-7.5 |
| Art no. | 4527214 |

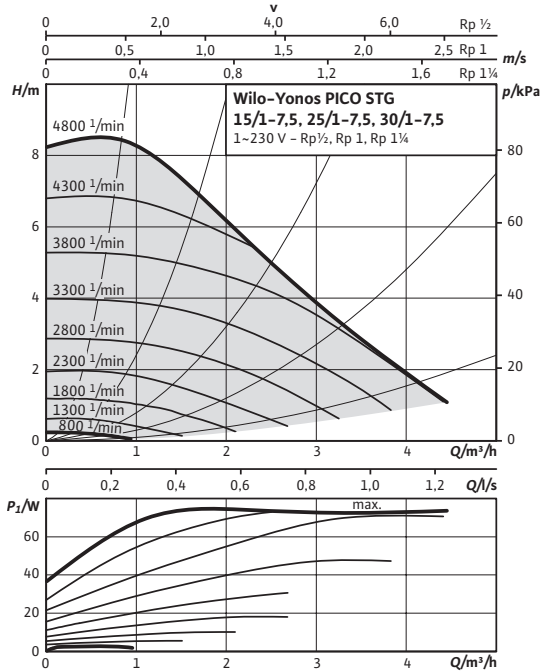
Data sheet: Wilo-Yonos PICO-STG 30/1-7.5

Pump curves n = constant

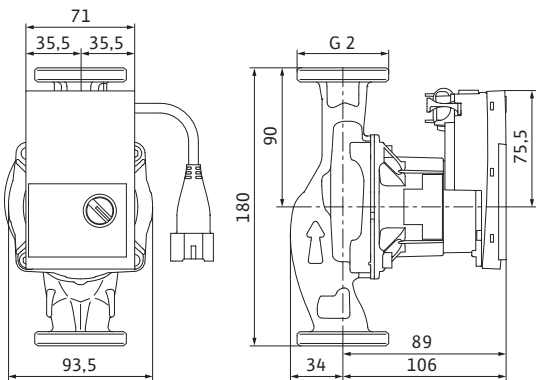
Weight approx.

m

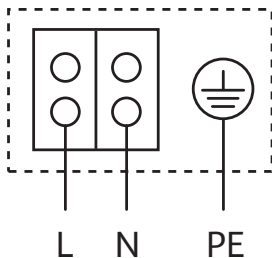
2 kg



Dimension drawing Yonos PICO STG 30/1-7.5 180



Terminal diagram

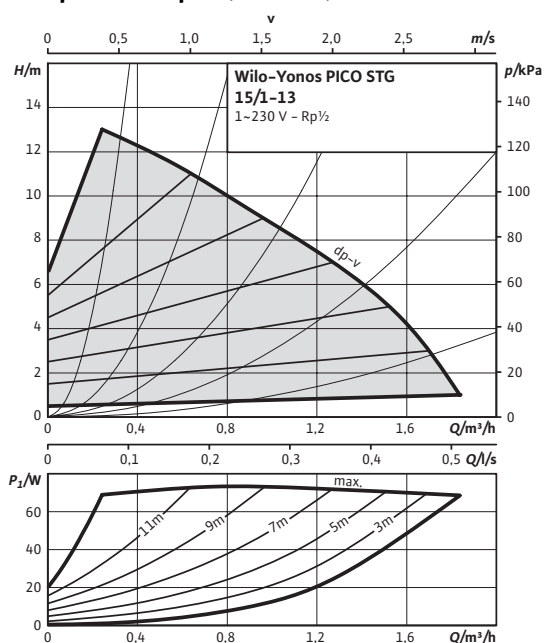


Blocking current-proof motor

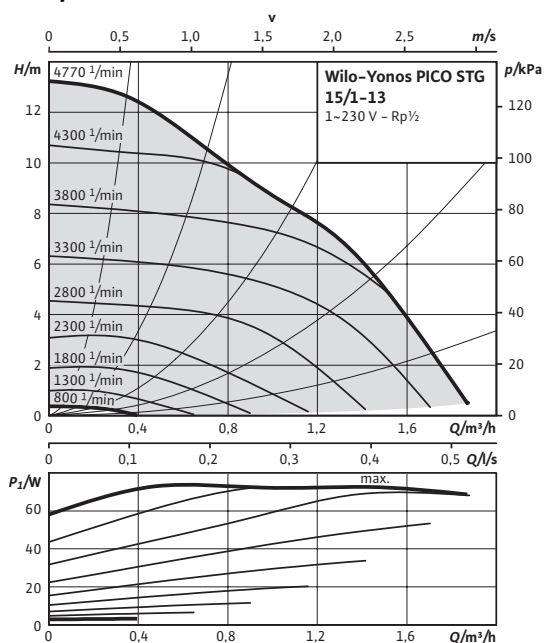
Single-phase motor (EM) 2-pole - 1-230 V, 50 Hz

Data sheet: Wilo-Yonos PICO-STG 15/1-13

Pump curves $\Delta p-v$ (variable)



Pump curves $n = \text{constant}$



Approved fluids (other fluids on request)

- Heating water (in accordance with VDI 2035)
- Water-glycol mixtures (max. 1:1; above 20% admixture, the pumping data must be checked)

Permitted field of application

| | | |
|--|-----------|--------|
| Maximum permissible operating pressure | P_{max} | 10 bar |
|--|-----------|--------|

Pipe connections

| | |
|---------------------|------------------|
| Threaded pipe union | Rp $\frac{1}{2}$ |
| Thread | G 1 |
| Overall length | L_0 130 mm |

Motor/electronics

| | |
|-------------------------------|---------------------------------------|
| Electromagnetic compatibility | EN 61800-3 |
| Emitted interference | EN 61000-6-3 |
| Interference resistance | EN 61000-6-2 |
| Speed control | Frequency converter |
| Protection class | IP X4D |
| Insulation class | F |
| Mains connection | 1~230 V, 50/60 Hz |
| Speed | n 800 - 4800 rpm |
| Power consumption | P_1 4 - 75 W |
| Current consumption | I max. 0.66 A |
| Motor protection | Not required (blocking-current proof) |

Materials

| | |
|--------------|-----------------------------|
| Pump housing | Grey cast iron (EN-GJL-200) |
| Impeller | Plastic (PP - 40% GF) |
| Pump shaft | Stainless steel |
| Bearing | Carbon, metal impregnated |

Minimum suction head at suction port for avoiding cavitation at water pumping temperature

| | |
|--|----------------|
| Minimum suction head at 50 / 95 / 110 °C | 0.5 / 3 / 10 m |
|--|----------------|

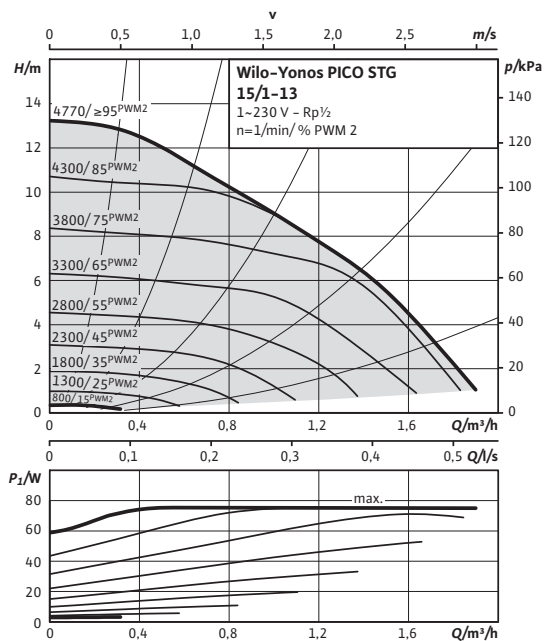
Information for order placements

| | |
|---------|------------------------|
| Make | Wilo |
| Type | Yonos PICO-STG 15/1-13 |
| Art no. | 4527506 |

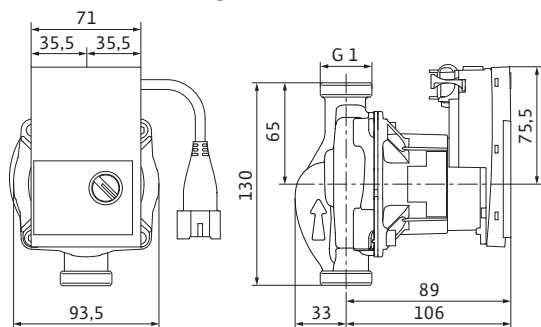
Data sheet: Wilo-Yonos PICO-STG 15/1-13

Pump curves PWM2 (external signal)

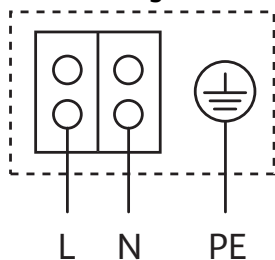
| | | |
|----------------|----------|------|
| Weight approx. | <i>m</i> | 2 kg |
|----------------|----------|------|



Dimension drawing Yonos PICO STG 15/1-13 130



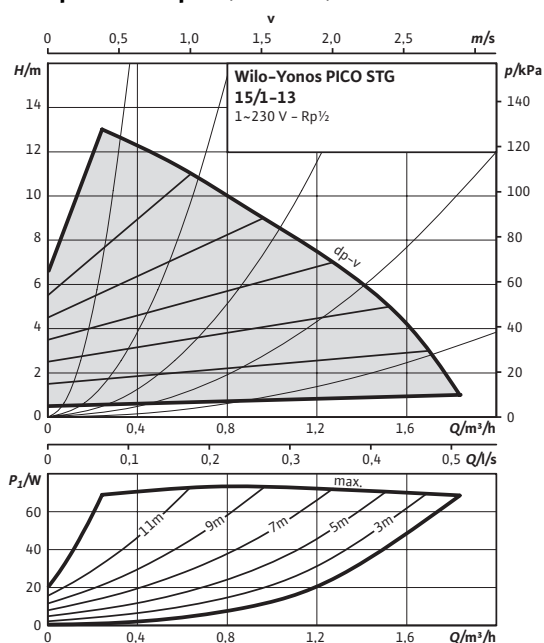
Terminal diagram



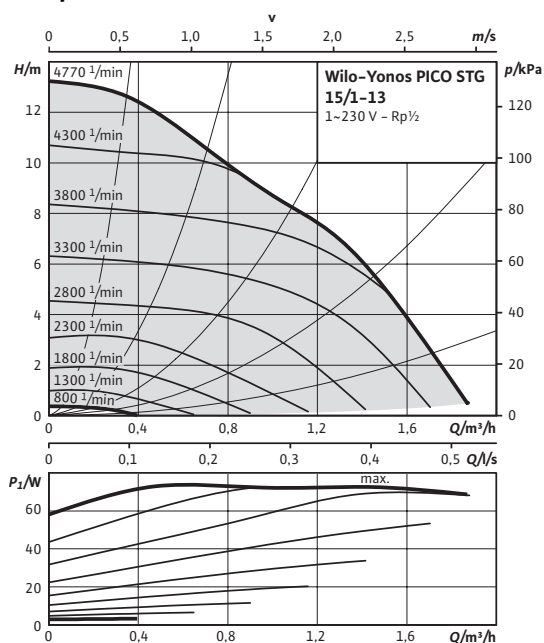
Blocking current-proof motor
 Single-phase motor (EM) 2-pole - 1~230 V, 50 Hz

Data sheet: Wilo-Yonos PICO-STG 15/1-13

Pump curves $\Delta p-v$ (variable)



Pump curves $n = \text{constant}$



Approved fluids (other fluids on request)

- Heating water (in accordance with VDI 2035)
- Water-glycol mixtures (max. 1:1; above 20% admixture, the pumping data must be checked)

Permitted field of application

| | | |
|--|-----------|--------|
| Maximum permissible operating pressure | P_{max} | 10 bar |
|--|-----------|--------|

Pipe connections

| | |
|---------------------|--------------|
| Threaded pipe union | Rp ½ |
| Thread | G 1 |
| Overall length | L_0 180 mm |

Motor/electronics

| | |
|-------------------------------|---------------------------------------|
| Electromagnetic compatibility | EN 61800-3 |
| Emitted interference | EN 61000-6-3 |
| Interference resistance | EN 61000-6-2 |
| Speed control | Frequency converter |
| Protection class | IP X4D |
| Insulation class | F |
| Mains connection | 1~230 V, 50/60 Hz |
| Speed | n 800 - 4800 rpm |
| Power consumption | P_1 4 - 75 W |
| Current consumption | I max. 0.66 A |
| Motor protection | Not required (blocking-current proof) |

Materials

| | |
|--------------|-----------------------------|
| Pump housing | Grey cast iron (EN-GJL-200) |
| Impeller | Plastic (PP - 40% GF) |
| Pump shaft | Stainless steel |
| Bearing | Carbon, metal impregnated |

Minimum suction head at suction port for avoiding cavitation at water pumping temperature

| | |
|--|----------------|
| Minimum suction head at 50 / 95 / 110 °C | 0.5 / 3 / 10 m |
|--|----------------|

Information for order placements

| | |
|---------|------------------------|
| Make | Wilo |
| Type | Yonos PICO-STG 15/1-13 |
| Art no. | 4527507 |

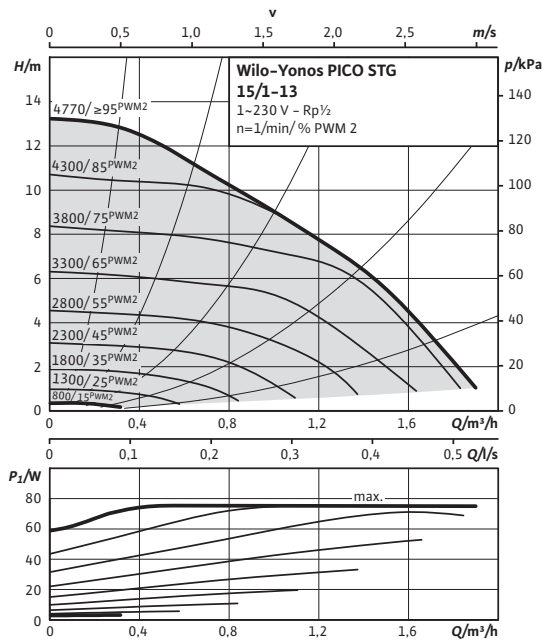
Data sheet: Wilo-Yonos PICO-STG 15/1-13

Pump curves PWM2 (external signal)

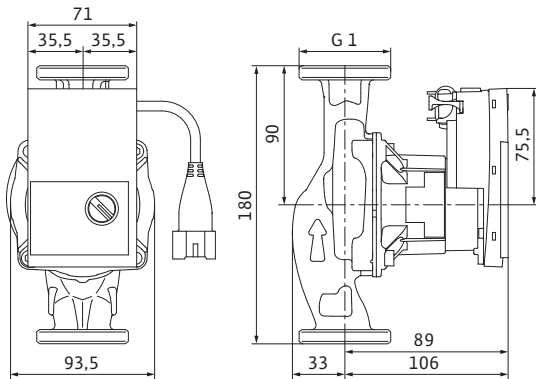
Weight approx.

m

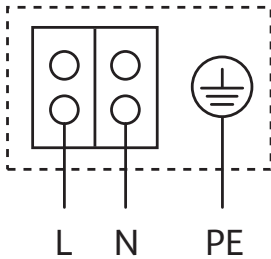
2 kg



Dimension drawing Yonos PICO STG 15/1-13 180



Terminal diagram



Blocking current-proof motor

Single-phase motor (EM) 2-pole - 1~230 V, 50 Hz