

Data sheet

Hydraulic data

| | |
|------------------------------------|--------|
| Maximum inlet pressure p_{inl} | 6 bar |
| Maximum operating pressure PN | 10 bar |
| Discharge port | Rp 1 |
| Min. fluid temperature T_{min} | -20 °C |
| Max. fluid temperature T_{max} | 120 °C |
| Min. ambient temperature T_{min} | -15 °C |
| Max. ambient temperature T_{max} | 50 °C |

Motor data

| | |
|--------------------------------------|-------------------|
| Mains connection | 3~380 V, 50/60 Hz |
| Rated power P_2 | 1.1 kW |
| Motor efficiency class | IE5 |
| Rated current I_N | 2 A |
| Activation type | Softstart |
| Motor efficiency 100% $\eta_M 100\%$ | 93.9 % |
| Insulation class | F |
| Protection class motor | IP55 |

Materials

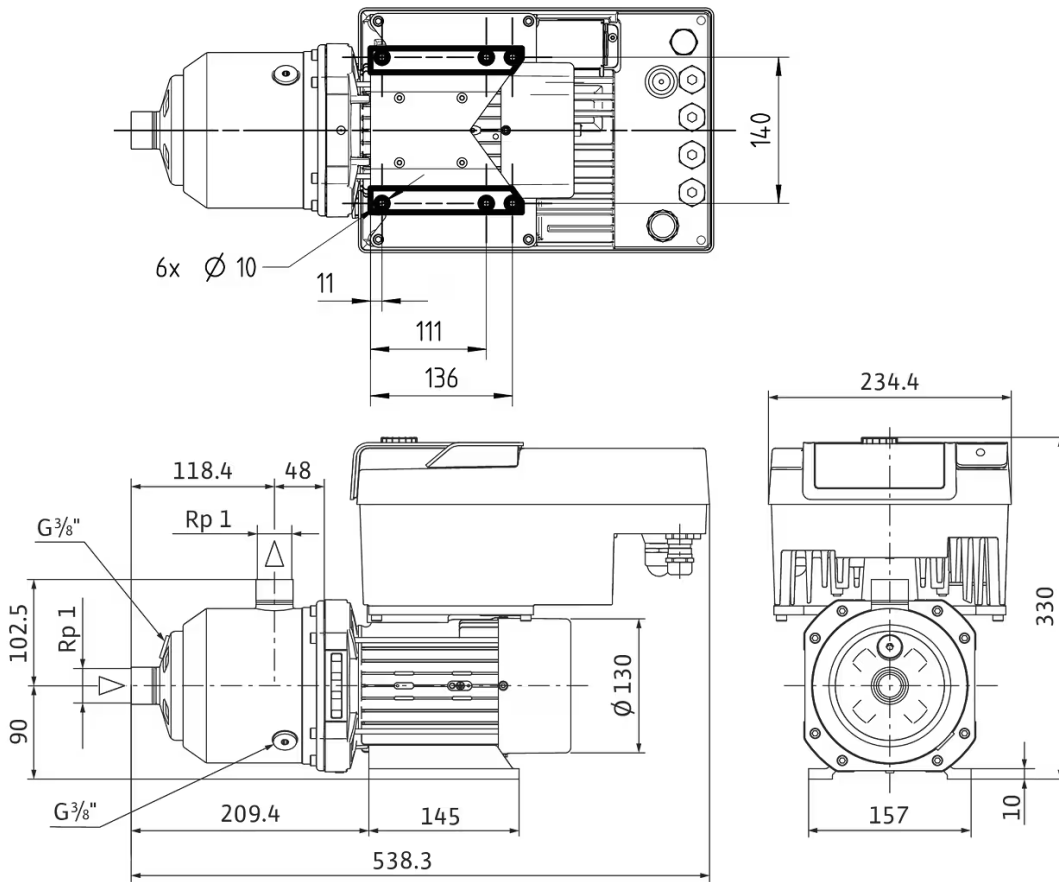
| | |
|-----------------|-----------------|
| Pump housing | Stainless steel |
| Impeller | Stainless steel |
| Shaft | Stainless steel |
| Mechanical seal | BQ1E3GG |
| Gasket material | EPDM |

Installation dimensions

| | |
|--|------|
| Pipe connection on the suction side DN_s | Rp 1 |
| Pipe connection on the discharge side DN_d | Rp 1 |

Dimensions and dimensions drawings

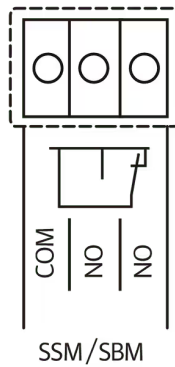
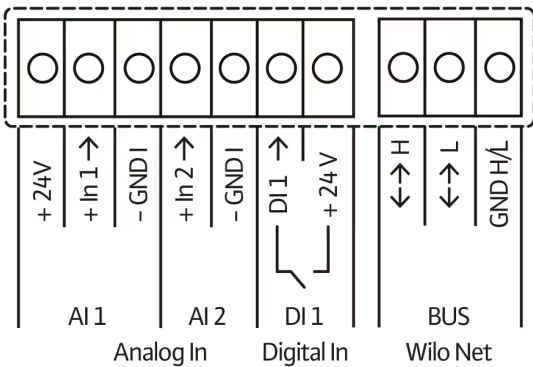
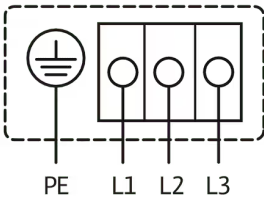
MEDANA CH3-LE.404-1/E/3/10T



Wiring diagram


3~ 380 V...440 V, 50/60 Hz

3~380V...440V, 50/60 Hz



Ordering information

Product data

| | |
|----------------------------|--|
| Brand | Wilo |
| Product description | MEDANA CH3-LE.404-1/E/3/10T |
| Article number | 4250156  |
| EAN number | 4062679209975 |
| Colour | Green/black/silver |
| Minimum order quantity | 1 |
| Date of sales availability | 2022-05-01 |

Packaging

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|--------------------|-----------------|
| Packaging type | Box |
| Packaging property | Sales packaging |
| Pieces per pallet | 18 |
| Number per layer | 6 |

Dimension, weight

| | |
|--------------------------------|---------|
| Length with packaging | 538 mm |
| Length <i>L</i> | 538 mm |
| Height with packaging | 350 mm |
| Height <i>H</i> | 330 mm |
| Width with packaging | 385 mm |
| Width <i>W</i> | 234 mm |
| Gross weight, approx. <i>m</i> | 25.1 kg |
| Net weight, approx. <i>m</i> | 21.1 kg |

Tender text

Highly efficient, non-self-priming high-pressure multistage centrifugal pump in horizontal design, equipped with electronically controlled EC motor of energy efficiency class IE5 in accordance with IEC 60034-30-2.

The pump is suitable for water supply, water distribution and pressure boosting, industrial recirculation systems, process water, closed cooling circuits and heating. It can also be used in washing systems as well as for irrigation.

Control modes:

- > Constant speed n-c: manually with green button or via external signals
- > Constant pressure p-c, constant differential pressure Δp -c, variable pressure p-v, variable differential pressure Δp -v: pressure control with sensor, setpoint adjustment with green button or by means of external signals
- > PID control: other constant control variables (temperature, volume flow, pressure....) with sensor, setpoint adjustment with green button, by means of external signals

The electronic module provides various functions:

- > Max. pressure limit detection
- > Min. pressure limit detection
- > Lack of water detection by suction sensor
- > Zero-flow test (open loop)
- > No-Flow Stop (closed loop)
- > Dry-running detection
- > Volume flow calculation by using differential pressure sensor
- > Pump kick
- > Error and warning codes
- > Overload protection
- > Plug-in position for Wilo CIF modules PLR, LON, BACnet MS/TP, Modbus RTU, CANopen, Ethernet Multi-protocol (Modbus TCP, BACnet/IP) for connection to the building automation
- > Green LED indicates the pump status
- > Blue LED indicates that the pump is influenced externally via an interface

Analogue input:

- > IN (AI 1): Input sensor signal 4-20 mA, 0-10 V, 0-20 mA or 2-10 V
- > IN (AI 2): Input setpoint 0-20 mA, 0-10 V, 4-20 mA or 2-10 V

Digital input IN (DI 1):

- > Extern OFF
- > Lack of water detection by binary input

Dual pump management (2 x single pumps)

- > Main/standby operation

- > Pump cycling main/standby operation after 24 hours or automatic fault-actuated switchover
- > Wired connection via Wilo Net

Special features/product advantages

- > IE5 EC motor and integrated frequency converter in combination with Medana CH high efficiency hydraulics
- > 2" coloured LCD display, Wilo Green Button Technology and soft button with return function. The pump menu is clearly structured and enables a comfortable setting of the pump.
- > Analogue and digital interface as well as CIF module
- > Intelligent with various control modes, integrated dual pump management
- > Efficiency-optimised, laser-welded 2D/3D high-efficiency hydraulics (flow and degassing optimised)
- > Corrosion-resistant impellers, guide vanes and stage housings
- > Flow and degassing-optimised hydraulics
- > Flow and NPSH-optimised pump housing
- > Easy-maintenance design
- > Drinking water approval for pumps with parts that come in contact with the fluid made of stainless steel (EPDM version)

Scope of delivery

- > Medana CH3-LE multistage centrifugal pump
- > Installation and operating instructions

Design notes

- > Optional plug-in CIF-Modules PLR, LON, BACnet MS/TP, Modbus RTU, CANopen, Ethernet Multi-protocol (Modbus TCP, BACnet/IP) for connection to the building automation
- > Optional connection M12 RJ45 CIF Ethernet
- > Sensors are available as accessories: differential pressure kit 4 - 20mA and relative pressure kit 4 - 20mA

Operating Data

Product data

| | |
|------------------------------------|--------|
| Maximum operating pressure P_N | 10 bar |
| Min. fluid temperature T_{min} | -20 °C |
| Max. fluid temperature T_{max} | 120 °C |
| Max. ambient temperature T_{max} | 50 °C |

Motor data

| | |
|------------------------|-------------------|
| Mains connection | 3~380 V, 50/60 Hz |
| | 3~400 V, 50/60 Hz |
| | 3~440 V, 50/60 Hz |
| Rated power P_2 | 1.1 kW |
| Rated current I_N | 2 A |
| Insulation class | F |
| Protection class | IP55 |
| Motor efficiency class | IE5 |


Materials

| | |
|-----------------|-----------------|
| Pump housing | Stainless steel |
| Impeller | Stainless steel |
| Shaft | Stainless steel |
| Shaft seal | BQ1E3GG |
| Gasket material | EPDM |

Installation dimensions

| | |
|---|------|
| Pipe connection on the suction side DNs | Rp 1 |
| Pipe connection on the discharge side DNd | Rp 1 |

Ordering information

| | |
|-------------------------|--|
| Brand | Wilo |
| Product description | MEDANA CH3-LE.404-1/E/3/10T |
| Net weight, approx. m | 21.1 kg |
| Article number | 4250156  |

Mechanical accessories

Fittings

Shut-off valve

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|-----------------|---------|
| Ball valve Rp 1 | 2663980 |
|-----------------|---------|

Valves/accessories

Screwed connection for non-return valve

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|---|---------|
| Screwed connection for non-return valve DN 25 | 2660509 |
|---|---------|

Electrical accessories

Pump control/accessories

Low-water cut-out switchgear kit for domestic water systems

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|---|---------|
| low-water cut-out switchgear kit WMS G 1¼ | 4204510 |
| low-water cut-out switchgear kit WMS G2 | 4204512 |

Pump control/interface module

CIF-Modules

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|-------------------------|---------|
| CIF-Module BACnet MS/TP | 2190367 |
| CIF-Module Modbus RTU | 2190368 |
| CIF-Module CANopen | 2190369 |
| CIF-Module LON | 2190370 |
| CIF-Module PLR | 2190371 |
| CIF-Module Ethernet | 2211408 |

Pressure control

Kit for differential pressure sensor

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|--|---------|
| Kit differential pressure sensor 0-16 bar (for horizontal pumps) | 4194672 |
|--|---------|

Pressure sensor for systems

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|-----------------------------|---------|
| Pressure sensor, 0 - 6 bar | 2550660 |
| Pressure sensor, 0 - 10 bar | 2550661 |
| Pressure sensor, 0 - 16 bar | 2550662 |
| Pressure sensor, 0 - 25 bar | 2550663 |
| Pressure sensor, 0 - 40 bar | 2550664 |

Level control

Float switch WA

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|---------------------------------------|-----------|
| Float switch WA65 with 5 m cable | 503211390 |
| Float switch WA65 with 10 m cable | 503211893 |
| Float switch WA65 with 20 m cable | 2004431 |
| Float switch WA65 with 30 m cable | 2004432 |
| Float switch WA KR1 S with 5 m cable | 6082806 |
| Float switch WA KR1 S with 10 m cable | 6082807 |

Float switch WA-EK

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| | |
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|----------------------------------|-----------|
| Float switch WAEK 65, 5 m cable | 503211698 |
| Float switch WAEK 65, 10 m cable | 2005516 |
| Float switch WAEK 65, 20 m cable | 2005517 |

Float switch WAO

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|---------------------------------|-----------|
| Float switch WAO 65, 5 m cable | 503211595 |
| Float switch WAO 65, 10 m cable | 2006027 |
| Float switch WAO 65, 20 m cable | 2004429 |
| Float switch WAO 65, 30 m cable | 2004430 |

Float switch WAO-EK

| | |
|-----------------------------------|---------|
| Float switch WAOEK 65, 20 m cable | 2005626 |
|-----------------------------------|---------|

Immersion probe

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|-------------------------------------|-----------|
| Submersible electrode, 3 m | 500183799 |
| Submersible electrode, 4 m | 2516278 |
| Submersible electrode, 5 m | 500937990 |
| Submersible electrode, 10 m | 2501937 |
| Submersible electrode, 20 m | 2516283 |
| Submersible electrode, 25 m | 2000601 |
| Submersible electrode, 30 m | 2514045 |
| Submersible electrode, 35 m | 2516284 |
| Submersible electrode, 40 m | 2516285 |
| Submersible electrode, 50 m | 2500315 |
| Submersible electrode without cable | 64873 |

Motor protection

PTC thermistor tripping unit

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|------------------------------|-----------|
| PTC thermistor tripping unit | 509275993 |
|------------------------------|-----------|

Services

With Wilo as your partner, you can not only be sure of choosing high-quality product solutions, but also of benefiting from a comprehensive, worry-free package of well thought-out services. We collaborate to develop a service concept tailored to your individual needs; with our expertise and personal consultancy, we make sure that the operation of your systems is as energy-efficient, reliable and economical as possible. All the while our competent Wilo service technicians are ready to assist you with fast, reliable and on-time support.

Recommended services

| | |
|---|---------|
| Commissioning FWJ/HiMulti 3-5 | 2219394 |
| Commissioning Booster Set 1-2 pumps | 2216414 |
| Maintenance BASIC FWJ/HiMulti 3-5 | 2219534 |
| Maintenance BASIC Booster Set 1-2 pumps | 2160453 |
| Maintenance COMFORT FWJ/HiMulti 3-5 | 2219496 |
| Maintenance COMFORT Booster Set 1-2 pumps | 2160468 |
| Maintenance PREMIUM FWJ/HiMulti 3-5 | 2219549 |
| Maintenance PREMIUM Booster Set 1-2 pumps | 2160483 |
| Wilo-Live Assistant Service | 2216415 |

More suitable services

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|--|---------|
| Extended Warranty Booster Set 1-2 pumps | 2216416 |
| Supervision FWJ/HiMulti 3-5 | 2219328 |
| Supervision Booster Set 1-2 pumps | 2216412 |
| Installation FWJ/HiMulti 3-5 | 2219363 |
| Installation Booster Set 1-2 pumps | 2216413 |
| System Optimisation FWJ/HiMulti 3-5 | 2219258 |
| System Optimisation Booster Set 1-2 pump | 2216410 |
| Energy Solutions FWJ/HiMulti 3-5 | 2219293 |
| Energy Solutions Booster Set 1-2 pumps | 2216411 |
| Repair FWJ/HiMulti 3-5 | 2219617 |
| Repair Booster Set 1-2 pumps | 2216417 |