

#### **Submittal Data**

| PROJECT:        | UNIT TAG:        | QUANTITY: |
|-----------------|------------------|-----------|
|                 | TYPE OF SERVICE: |           |
| REPRESENTATIVE: | SUBMITTED BY:    | DATE:     |
| ENGINEER:       | APPROVED BY:     | DATE:     |
| CONTRACTOR:     | ORDER NO.:       | DATE:     |

#### MAGNA1 D 50-120 F



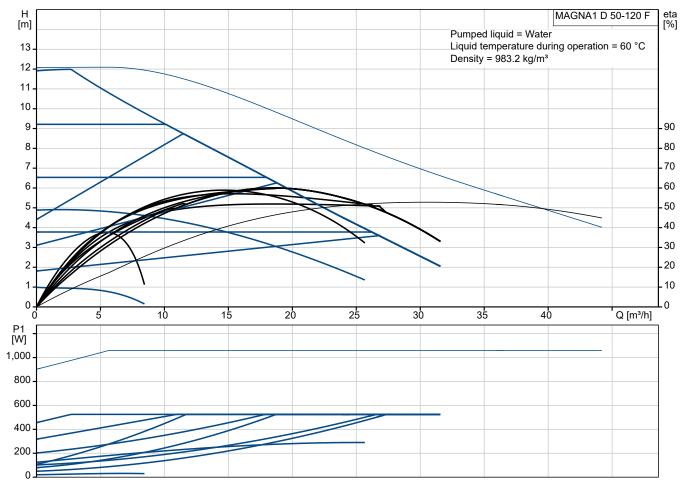
The MAGNA1 D circulator pump is ideal for basic performance needs in heating and cooling application. The pump offers peace of mind due to the security of supply obtained by having a redundant pump, resulting in improved uptime. The two pumps communicate wirelessly.

Note! Product picture may differ from actual product

| Conditions        | of Service |  |
|-------------------|------------|--|
| Liquid:           | Water      |  |
| Temperature:      | 60 °C      |  |
| Specific Gravity: | 0.985      |  |
|                   |            |  |

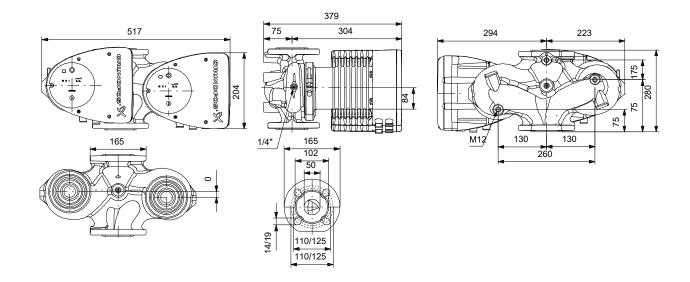
| Pump Data                    |            |
|------------------------------|------------|
| Maximum operating pressure:  | 10 bar     |
| Liquid temperature range:    | -10 110 °C |
| Maximum ambient temperature: | 40 °C      |
| Flange standard:             | DIN        |
| Pipe connection:             | DN 50      |
| Product number:              | On request |
|                              |            |

| Motor Data        |             |  |  |  |  |
|-------------------|-------------|--|--|--|--|
| P1 max:           | 20.71 534 W |  |  |  |  |
| Mains frequency:  | 50 / 60 Hz  |  |  |  |  |
| Enclosure class:  | X4D         |  |  |  |  |
| Insulation class: | F           |  |  |  |  |
|                   |             |  |  |  |  |
|                   |             |  |  |  |  |





### **Submittal Data**



#### Materials:

Pump housing: Cast iron
Pump housing: EN-GJL-250
Pump housing: ASTM A48-250B
Impeller: PES 30%GF



**Date:** 26/09/2022

Qty. | Description

1 MAGNA1 D 50-120 F



Note! Product picture may differ from actual product

Product No.: On request

The Grundfos MAGNA1 D circulator pump is the simple option for a job well done.

With its high energy efficiency the product lives up to the EuP 2015 regulations ensuring substantial savings on electricity, and with its intuitive, user-friendly interface and maintenance-free design, MAGNA1 D is the ideal circulator pump for basic performance needs in applications where basic system control and monitoring are desired.

With this range of circulator pumps, everything from setup to basic control and monitoring are made easy. The pump is maintenance-free due to the canned-rotor type design.

MAGNA1 D offers peace of mind due to the security of supply obtained by having a redundant pump, resulting in improved uptime. The flow, and thereby constant comfort, is secured because of its ability to automatically switch between pump heads if one breaks down. The two pumps communicate wirelessly.

MAGNA1 D offers the possibility of monitoring the pump via the fault relay output. The digital start/stop input remotely controls the pump. The pump communicates wirelessly with the Grundfos GO Remote app and can also communicate via radio.

MAGNA1 D can work as main pump in both heating and cooling applications, including:

- Mixing loops
- · Heating surfaces
- Air-conditioning surfaces
- · Ground-source heat pump systems
- · Smaller chiller applications.

MAGNA1 D is a single-phase pump and characterised by having the controller and operating panel integrated in the control box.

The pump housing is available in both cast-iron and stainless-steel versions.

The composite rotor can is carbon-fibre reinforced, the bearing plate and rotor cladding are made of stainless steel and the stator housing is made of aluminium.

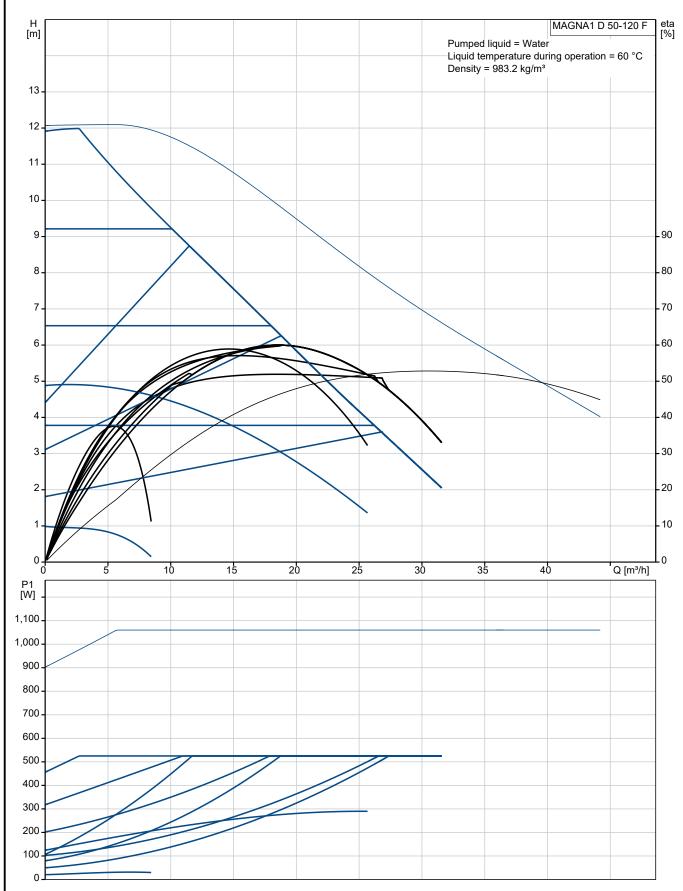
The power electronics are air-cooled.

The pump incorporates a 4-pole synchronous, permanent-magnet motor (PM motor). This motor type is characterised by higher efficiency than a conventional asynchronous squirrel-cage motor. The pump speed is controlled by an integrated frequency converter.



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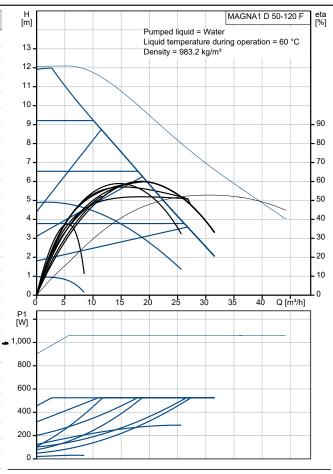
## On request MAGNA1 D 50-120 F

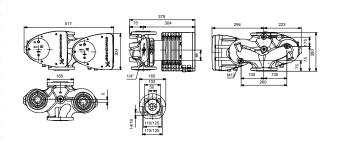


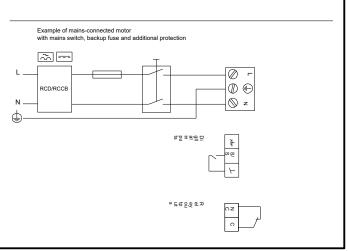


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| Description                   | Value                                       |
|-------------------------------|---|
| General information:          |   |
| Product name:                 | MAGNA1 D 50-120 F                           |
| Product No:                   | On request                                  |
| EAN number:                   | On request                                  |
| Technical:                    |   |
| Head max:                     | 120 dm                                      |
| TF class:                     | 110   |
| Approvals:                    | CE,VDE,EAC,MOROCCO,UKCA,<br>TSERCM,UkrSEPRO |
| Model:                        | С   |
| Materials:                    |   |
| Pump housing:                 | Cast iron                                   |
| Pump housing:                 | EN-GJL-250                                  |
| Pump housing:                 | ASTM A48-250B                               |
| Impeller:                     | PES 30%GF                                   |
| Installation:                 |   |
| Range of ambient temperature: | 0 40 °C                                     |
| Maximum operating pressure:   | 10 bar                                      |
| Flange standard:              | DIN   |
| Pipe connection:              | DN 50                                       |
| Pressure rating:              | PN 6/10                                     |
| Port-to-port length:          | 280 mm                                      |
| Liquid:                       |   |
| Pumped liquid:                | Water                                       |
| Liquid temperature range:     | -10 110 °C                                  |
| Selected liquid temperature:  | 60 °C                                       |
| Density:                      | 983.2 kg/m³                                 |
| Electrical data:              |   |
| Power input - P1:             | 20.71 534 W                                 |
| Mains frequency:              | 50 / 60 Hz                                  |
| Rated voltage [V]:            | 1 x 230 V                                   |
| Maximum current consumption:  | 0.22 2.37 A                                 |
| Enclosure class (IEC 34-5):   | X4D   |
| Insulation class (IEC 85):    | F   |
| Others:                       |   |
| Energy (EEI):                 | 0.22  |
| Environmental approvals:      | CN ROHS,WEEE                                |
| Net weight:                   | 34.6 kg                                     |
| Gross weight:                 | 42.2 kg                                     |
| Shipping volume:              | 0.132 m³                                    |
| Country of origin:            | DE  |
| Custom tariff no.:            | 84137030                                    |



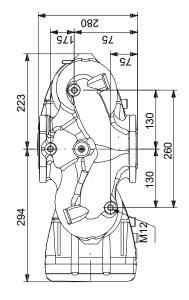


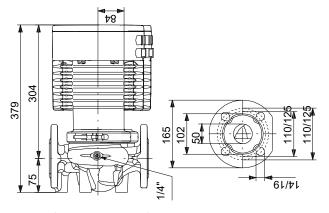


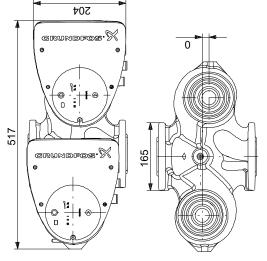


26/09/2022 Date:

## On request MAGNA1 D 50-120 F







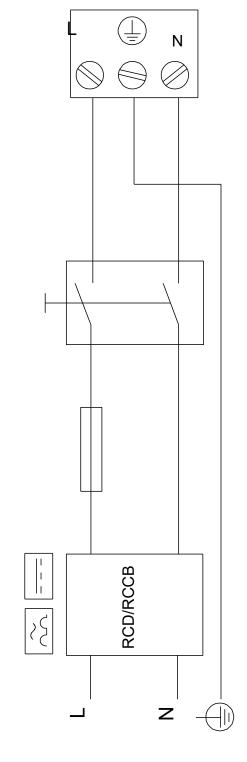
Note! All units are in [mm] unless others are stated. Disclaimer: This simplified dimensional drawing does not show all details.

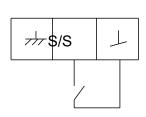


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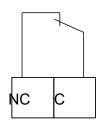
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### On request MAGNA1 D 50-120 F





Digital inputs



Relay outputs

Note! All units are in [mm] unless others are stated.

Example of mains-connected motor with mains switch, backup fuse and additional protection



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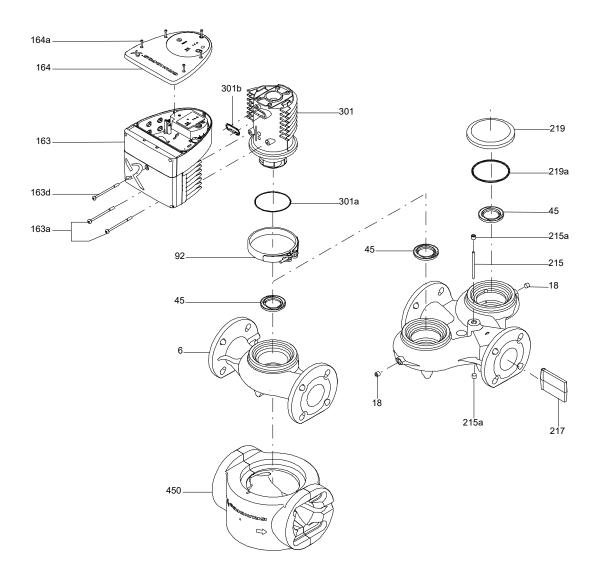
#### Order Data:

| Position | Your pos. | Product name      | Amount | Product No  | Total            |
|----------|-----------|-------------------|--------|-------------|------------------|
|          |           | MAGNA1 D 50-120 F | 1      | <del></del> | Price on request |
|          |           |                   |        |             | request          |
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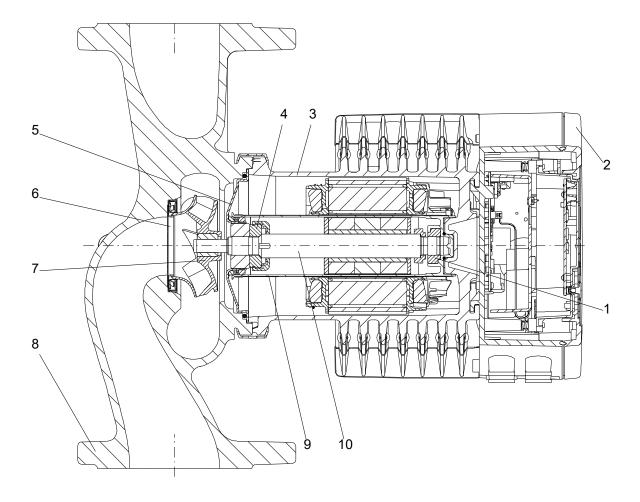
( TM054005 for Magna1 750-1600W)





**Date:** 26/09/2022

(TM069997 Magna1 ME/LA model C)





**Date:** 26/09/2022

# Spare parts MAGNA1 D 50-120 F, Product No. On request Produced After 1731 (production year and week number)

| Pos   | Description                    | Annotation | Classification Data |            | ty. | Unit |
|-------|--------------------------------|------------|---------------------|------------|-----|------|
| -     | Kit, Control box conf. Head I  |            |                     | 99426900 1 |     | pcs  |
| -     | Kit,control box non-configured |            |                     | 99280445   | 5 1 |      |
| -     | Control box cpl.               |            |                     |            |     |      |
| -     | Control box                    |            |                     |            |     |      |
| 159c  | Pan washer head screw          |            |                     |            |     |      |
| 164a  | Screw DELTA PT                 |            |                     |            |     |      |
| 164   | Cover                          |            |                     |            |     |      |
| 163   | Control box                    |            |                     |            |     |      |
| 163d  | Pan head screw                 |            |                     |            |     |      |
| 163a  | Pan head screw                 |            |                     |            |     |      |
| 301b  | Protector                      |            |                     |            |     |      |
|       | GSC                            |            |                     |            | 1   |      |
| -     | Kit, Control box conf. Head II |            |                     | 99427019 1 |     | pcs  |
| -     | Kit,control box non-configured |            |                     | 99280445   | 5 1 |      |
| -     | Control box cpl.               |            |                     |            |     |      |
| -     | Control box                    |            |                     |            |     |      |
| 159c  | Pan washer head screw          |            |                     |            |     |      |
| 164a  | Screw DELTA PT                 |            |                     |            |     |      |
| 164   | Cover                          |            |                     |            |     |      |
| 163   | Control box                    |            |                     |            |     |      |
| 163d  | Pan head screw                 |            |                     |            |     |      |
| 163a  | Pan head screw                 |            |                     |            |     |      |
| 301b  | Protector                      |            |                     |            |     |      |
|       | GSC                            |            |                     |            | 1   |      |
| -     | Kit, Cover                     |            |                     | 99280465 1 |     | pcs  |
| 164a  | Screw DELTA PT                 |            |                     |            | 5   |      |
| 164   | Cover                          |            |                     |            | 1   |      |
| -     | Kit, Pump head                 |            |                     | 98148745 1 |     | pcs  |
| 92    | Clamp cpl.                     |            |                     |            | 1   |      |
| - 301 | Pump head                      |            |                     |            | 1   |      |
| -     | Stator w/housing cpl.          |            |                     |            |     |      |
| 301   | Stator housing                 |            |                     |            |     |      |
| 303   | Rotor can cpl.                 |            |                     |            |     |      |
| - 304 | Shaft w/impeller cpl.          |            |                     |            |     |      |
| -     | Bearing plate cpl.             |            |                     |            |     |      |
| 301a  | O-ring                         |            |                     |            |     |      |
| -     | Kit, Valve flap                |            |                     | 96407255 1 |     | pcs  |
| 215   | Guide pin                      |            |                     |            | 1   |      |
| 217   | Valve flap                     |            |                     |            | 1   |      |
| -     | Spare, Clamp                   |            |                     | 98148759 1 |     | pcs  |
| 92    | Clamp cpl.                     |            |                     |            | 1   |      |
| -     | Spare, O-ring                  |            |                     | 98148761 1 |     | pcs  |
| 301a  | O-ring                         |            |                     |            | 1   |      |
| -     | Pump housing cpl.              |            |                     | 98660072 1 |     | pcs  |
| 18    | Pipe plug                      |            |                     | 96547615   | 5 2 |      |