

**Qty. Description**

1 DDA 200-4



Note! Product picture may differ from actual product

Product No.: [99159406](#)

DDA 200-4 FCM-PVC/V/C-F-31U3U3

The SMART Digital DDA is a compact positive displacement, diaphragm dosing pump with variable-speed drive (PMS motor) and intelligent control electronics with minimum energy consumption. The SMART Digital Dosing series operates at full stroke length to ensure optimum accuracy, priming and suction, even for high-viscosity or degassing liquids. The duration of each discharge stroke varies according to the capacity set, resulting in optimum smooth and continuous discharge flow.

The mounting plate allows quick installation and service. The control cube can be turned easily into front, left or right position. The click wheel and the multi-coloured backlit graphical, plain-text LC display make commissioning and operation intuitive. The control elements are protected by a transparent cover.

The sensor-based FlowControl (FCM) system detects malfunctions directly in the dosing head and displays them in plain text in the alarm menu, e.g. air bubbles, line burst, overpressure. The integrated flow measurement function measures the actual flow and makes additional monitoring and control equipment redundant (accuracy of  $\pm 1\%$  of set value in case of trouble-free process). The measured flow is displayed and can be integrated in the process control, e.g. SCADA. Furthermore, the AutoFlowAdapt function automatically adjusts the pump speed according to the process conditions to maintain target flow even at e.g. varying backpressure or air bubbles foaming (degassing drive strategy).

The dosing head is composed of:

- Long lifetime and universal, chemically resistant full double PTFE diaphragm.
- Ball valves for highest dosing accuracy.
- Deaeration valve for easy startup.
- Pressure sensor.

Operating modes:

- Manual dosing in ml/h, l/h or gph.
- Pulse control in ml/pulse (incl. memory function).
- Analog control 0/4-20 mA (scalable).
- Pulse-based batch function in ml, l or gal.
- Timer-based batch function (Dosing timer, cycle or week).
- Fieldbus control (GENIbus prepared for Grundfos CIU fieldbus modules).

Other features:

- Auto deaeration during pump standby to avoid breakdowns due to air-locking.
- Two SlowMode steps (anti-cavitation), 50 % (maximum flow: 100 l/h) and 25 % (maximum flow: 50 l/h), e.g. for high-viscosity or degassing liquids.
- Service information display to show when service and which wear-part order number is required.
- Two-step key lock function to protect the pump against unauthorised access.
- Additional display function to provide further information, e.g. the actual mA input signal.
- Counter for total dosed volume (resettable), operating hours, etc.
- Save and load customised settings as well as reload of factory settings.

Signal inputs/outputs:

- Input for pulse, analog 0/4-20mA and external stop.

| Qty. | Description  |
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|      | <ul style="list-style-type: none"> <li>- Input for low-level and empty-tank signal.</li> <li>- Two potential-free output relays for maximum 30 V AC/DC (configurable, e.g. alarm, stroke signal, pump dosing, timer etc.)</li> <li>- Output analog 0/4-20mA.</li> <li>- Fieldbus communication interface (GENIbus, for connection of the Grundfos CIU fieldbus converter).</li> </ul> <p><b>Controls:</b></p> <p>Control variant: FCM<br/>                     Level control: YES<br/>                     Analog input: 0/4-20 MA<br/>                     Pulse control: YES<br/>                     Ext. Stop input: YES<br/>                     Analog output: 0/4-20 MA<br/>                     Output relays: 2<br/>                     Bus communication: YES</p> <p><b>Liquid:</b></p> <p>Pumped liquid: Water<br/>                     Liquid temperature range: 0 .. 40 °C<br/>                     Selected liquid temperature: 20 °C<br/>                     Density: 998.2 kg/m<sup>3</sup></p> <p><b>Technical:</b></p> <p>Type key: DDA 200-4 FCM-PVC/V/C-F-31U3U3<br/>                     Max. Flow: 200 l/h<br/>                     Max. flow in slow mode 50%: 100 l/h<br/>                     Max. flow in slow mode 25%: 50 l/h<br/>                     Min flow: 250 ml/h<br/>                     Turn-down ratio: 1:800<br/>                     Approvals on nameplate: CE,CSA-US,NSF61,EAC,RCM<br/>                     Valve type: Standard<br/>                     Maximum viscosity at 100 %: 100 mPas<br/>                     Maximum viscosity in slow mode 50 %: 1000 mPas<br/>                     Maximum viscosity in slow mode 25 %: 2000 mPas<br/>                     Accuracy of repeatability: 1.5 %</p> <p><b>Materials:</b></p> <p>Dosing head: PVC (Polyvinyl chloride)<br/>                     Valve ball: Ceramic<br/>                     Gasket: FKM</p> <p><b>Installation:</b></p> <p>Range of ambient temperature: 0 .. 45 °C<br/>                     Maximum operating pressure: 4 bar<br/>                     Installation set: NO<br/>                     Installation type: No installation set<br/>                     Pump inlet: Conn.pack U3 (hose ID.19mm &amp;..<br/>                     Pump outlet: Conn.pack U3 (hose ID.19mm &amp;..<br/>                     Max. Suction lift during operation: 3 m<br/>                     Max. Suction lift during priming: 1.5 m</p> <p><b>Electrical data:</b></p> <p>Maximum power input - P1: 62 W<br/>                     Mains frequency: 50 / 60 Hz<br/>                     Rated voltage: 1 x 100-240 V<br/>                     Enclosure class (IEC 34-5): IP65 / NEMA 4X<br/>                     Length of cable: 1.5 m<br/>                     Type of cable plug: EU</p> |



Company name:

Created by:

Phone:

Date:

06/02/2020

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|      | <p>Inrush current: 70A at 240V (35A/100V) for 2ms</p> <p><b>Others:</b></p> <p>Net weight: 7 kg</p> <p>Gross weight: 8 kg</p> <p>Color: RED</p> <p>Country of origin: FR</p> <p>Custom tariff no.: 84135040</p> |



Company name:

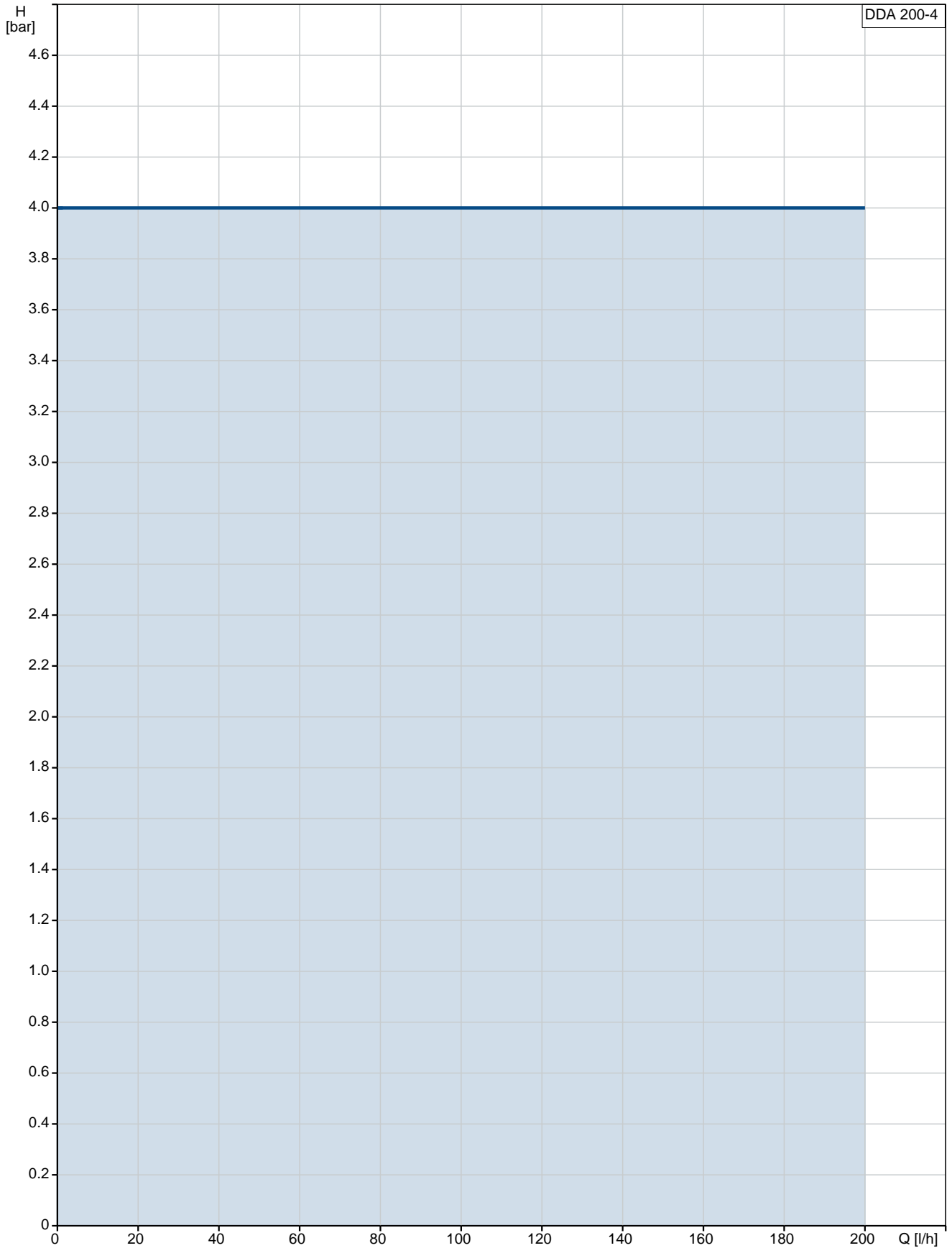
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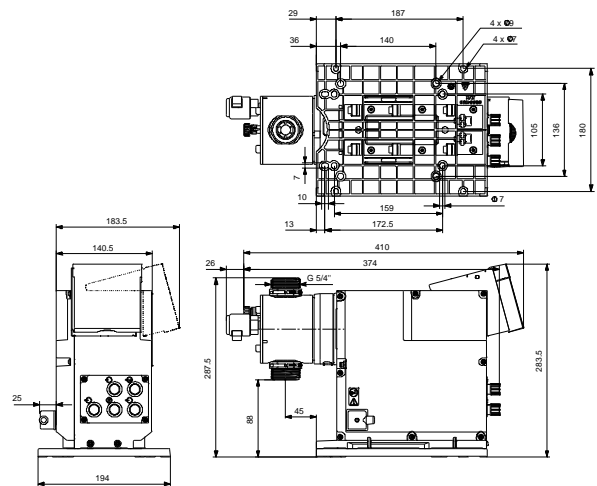
Date:

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## 99159406 DDA 200-4



| Description                          | Value                             |
|--------------------------------------|-----------------------------------|
| <b>General information:</b>          |                                   |
| Product name:                        | DDA 200-4                         |
| Product No:                          | 99159406                          |
| EAN number:                          | 5712607841942                     |
|                                      | 5712607841942                     |
| Price:                               | 3.981,00 GBP                      |
| <b>Technical:</b>                    |                                   |
| Type key:                            | DDA 200-4<br>FCM-PVC/V/C-F-31U3U3 |
| Max. Flow:                           | 200 l/h                           |
| Max. flow in slow mode 50%:          | 100 l/h                           |
| Max. flow in slow mode 25%:          | 50 l/h                            |
| Min flow:                            | 250 ml/h                          |
| Turn-down ratio:                     | 1:800                             |
| Approvals on nameplate:              | CE,CSA-US,NSF61,EAC,RCM           |
| Valve type:                          | Standard                          |
| Maximum viscosity at 100 %:          | 100 mPas                          |
| Maximum viscosity in slow mode 50 %: | 1000 mPas                         |
| Maximum viscosity in slow mode 25 %: | 2000 mPas                         |
| Accuracy of repeatability:           | 1.5 %                             |
| <b>Materials:</b>                    |                                   |
| Dosing head:                         | PVC (Polyvinyl chloride)          |
| Valve ball:                          | Ceramic                           |
| Gasket:                              | FKM                               |
| <b>Installation:</b>                 |                                   |
| Range of ambient temperature:        | 0 .. 45 °C                        |
| Maximum operating pressure:          | 4 bar                             |
| Installation set:                    | NO                                |
| Installation type:                   | No installation set               |
| Pump inlet:                          | Conn.pack U3 (hose ID.19mm &...)  |
| Pump outlet:                         | Conn.pack U3 (hose ID.19mm &...)  |
| Max. Suction lift during operation:  | 3 m                               |
| Max. Suction lift during priming:    | 1.5 m                             |
| <b>Liquid:</b>                       |                                   |
| Pumped liquid:                       | Water                             |
| Liquid temperature range:            | 0 .. 40 °C                        |
| Selected liquid temperature:         | 20 °C                             |
| Density:                             | 998.2 kg/m <sup>3</sup>           |
| <b>Electrical data:</b>              |                                   |
| Maximum power input - P1:            | 62 W                              |
| Mains frequency:                     | 50 / 60 Hz                        |
| Rated voltage:                       | 1 x 100-240 V                     |
| Enclosure class (IEC 34-5):          | IP65 / NEMA 4X                    |
| Length of cable:                     | 1.5 m                             |
| Type of cable plug:                  | EU                                |
| Inrush current:                      | 70A at 240V (35A/100V) for 2ms    |
| <b>Controls:</b>                     |                                   |
| Control variant:                     | FCM                               |
| Control panel:                       | FRONT-MOUNTED                     |
| Level control:                       | YES                               |
| Analog input:                        | 0/4-20 MA                         |
| Pulse control:                       | YES                               |
| Ext. Stop input:                     | YES                               |





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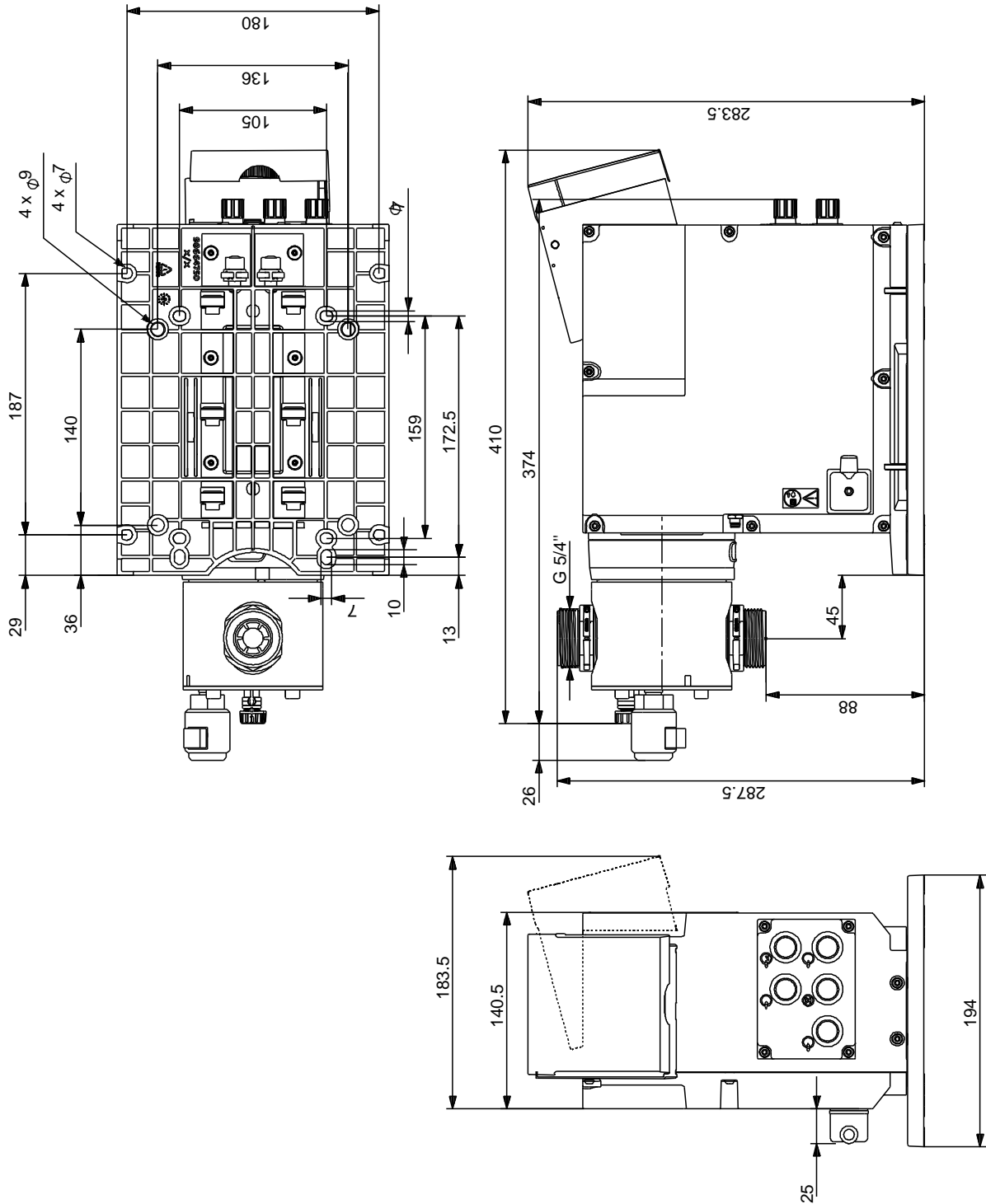
Phone:

Date:

06/02/2020

| Description        | Value     |
|--------------------|-----------|
| Analog output:     | 0/4-20 MA |
| Output relays:     | 2         |
| Bus communication: | YES       |
| <b>Others:</b>     |           |
| Net weight:        | 7 kg      |
| Gross weight:      | 8 kg      |
| Color:             | RED       |
| Country of origin: | FR        |
| Custom tariff no.: | 84135040  |

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