


Qty.	Description
1	<p data-bbox="204 338 328 367"><b>DDA 60-10</b></p>  <p data-bbox="595 723 1075 748">Note! Product picture may differ from actual product</p> <p data-bbox="204 757 616 813">Product No.: <a href="#">99164185</a> DDA 60-10 FCM-PVC/T/C-F-31U3U3</p> <p data-bbox="204 844 1453 969">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.</p> <p data-bbox="204 985 1437 1061">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.</p> <p data-bbox="204 1102 1449 1274">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 <math>\pm 1\%</math> 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).</p> <p data-bbox="204 1326 568 1350">The dosing head is composed of:</p> <ul data-bbox="240 1355 1123 1469" style="list-style-type: none"> <li>- Long lifetime and universal, chemically resistant full double PTFE diaphragm.</li> <li>- Ball valves for highest dosing accuracy.</li> <li>- Deaeration valve for easy startup.</li> <li>- Pressure sensor.</li> </ul> <p data-bbox="204 1503 400 1527">Operating modes:</p> <ul data-bbox="240 1532 1075 1709" style="list-style-type: none"> <li>- Manual dosing in ml/h, l/h or gph.</li> <li>- Pulse control in ml/pulse (incl. memory function).</li> <li>- Analog control 0/4-20 mA (scalable).</li> <li>- Pulse-based batch function in ml, l or gal.</li> <li>- Timer-based batch function (Dosing timer, cycle or week).</li> <li>- Fieldbus control (GENIbus prepared for Grundfos CIU fieldbus modules).</li> </ul> <p data-bbox="204 1742 368 1767">Other features:</p> <ul data-bbox="240 1771 1437 2007" style="list-style-type: none"> <li>- Auto deaeration during pump standby to avoid breakdowns due to air-locking.</li> <li>- Two SlowMode steps (anti-cavitation), 50 % (maximum flow: 30 l/h) and 25 % (maximum flow: 15 l/h), e.g. for high-viscosity or degassing liquids.</li> <li>- Service information display to show when service and which wear-part order number is required.</li> <li>- Two-step key lock function to protect the pump against unauthorised access.</li> <li>- Additional display function to provide further information, e.g. the actual mA input signal.</li> <li>- Counter for total dosed volume (resettable), operating hours, etc.</li> <li>- Save and load customised settings as well as reload of factory settings.</li> </ul> <p data-bbox="204 2036 440 2060">Signal inputs/outputs:</p> <ul data-bbox="240 2065 842 2092" style="list-style-type: none"> <li>- Input for pulse, analog 0/4-20mA and external stop.</li> </ul>

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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</p> <p>Level control: YES</p> <p>Analog input: 0/4-20 MA</p> <p>Pulse control: YES</p> <p>Ext. Stop input: YES</p> <p>Analog output: 0/4-20 MA</p> <p>Output relays: 2</p> <p>Bus communication: YES</p> <p><b>Liquid:</b></p> <p>Pumped liquid: Water</p> <p>Liquid temperature range: 0 .. 40 °C</p> <p>Selected liquid temperature: 20 °C</p> <p>Density: 998.2 kg/m<sup>3</sup></p> <p><b>Technical:</b></p> <p>Type key: DDA 60-10 FCM-PVC/T/C-F-31U3U3</p> <p>Max. Flow: 60 l/h</p> <p>Max. flow in slow mode 50%: 30 l/h</p> <p>Max. flow in slow mode 25%: 15 l/h</p> <p>Min flow: 75 ml/h</p> <p>Turn-down ratio: 1:800</p> <p>Approvals on nameplate: CE, CSA-US, NSF61, EAC, RCM</p> <p>Valve type: Standard</p> <p>Maximum viscosity at 100 %: 150 mPas</p> <p>Maximum viscosity in slow mode 50 %: 2000 mPas</p> <p>Maximum viscosity in slow mode 25 %: 3000 mPas</p> <p>Accuracy of repeatability: 1.5 %</p> <p><b>Materials:</b></p> <p>Dosing head: PVC (Polyvinyl chloride)</p> <p>Valve ball: Ceramic</p> <p>Gasket: PTFE</p> <p><b>Installation:</b></p> <p>Range of ambient temperature: 0 .. 45 °C</p> <p>Maximum operating pressure: 10 bar</p> <p>Installation set: NO</p> <p>Installation type: No installation set</p> <p>Pump inlet: Conn.pack U3 (hose ID.19mm &amp;..</p> <p>Pump outlet: Conn.pack U3 (hose ID.19mm &amp;..</p> <p>Max. Suction lift during operation: 3 m</p> <p>Max. Suction lift during priming: 1.5 m</p> <p><b>Electrical data:</b></p> <p>Maximum power input - P1: 62 W</p> <p>Mains frequency: 50 / 60 Hz</p> <p>Rated voltage: 1 x 100-240 V</p> <p>Enclosure class (IEC 34-5): IP65 / NEMA 4X</p> <p>Length of cable: 1.5 m</p> <p>Type of cable plug: EU</p>



Company name:

Created by:

Phone:

Date:

06/02/2020

Qty.	Description
	Inrush current: 70A at 240V (35A/100V) for 2ms
	<b>Others:</b>
	Net weight: 6 kg
	Gross weight: 7 kg
	Color: RED



Company name:

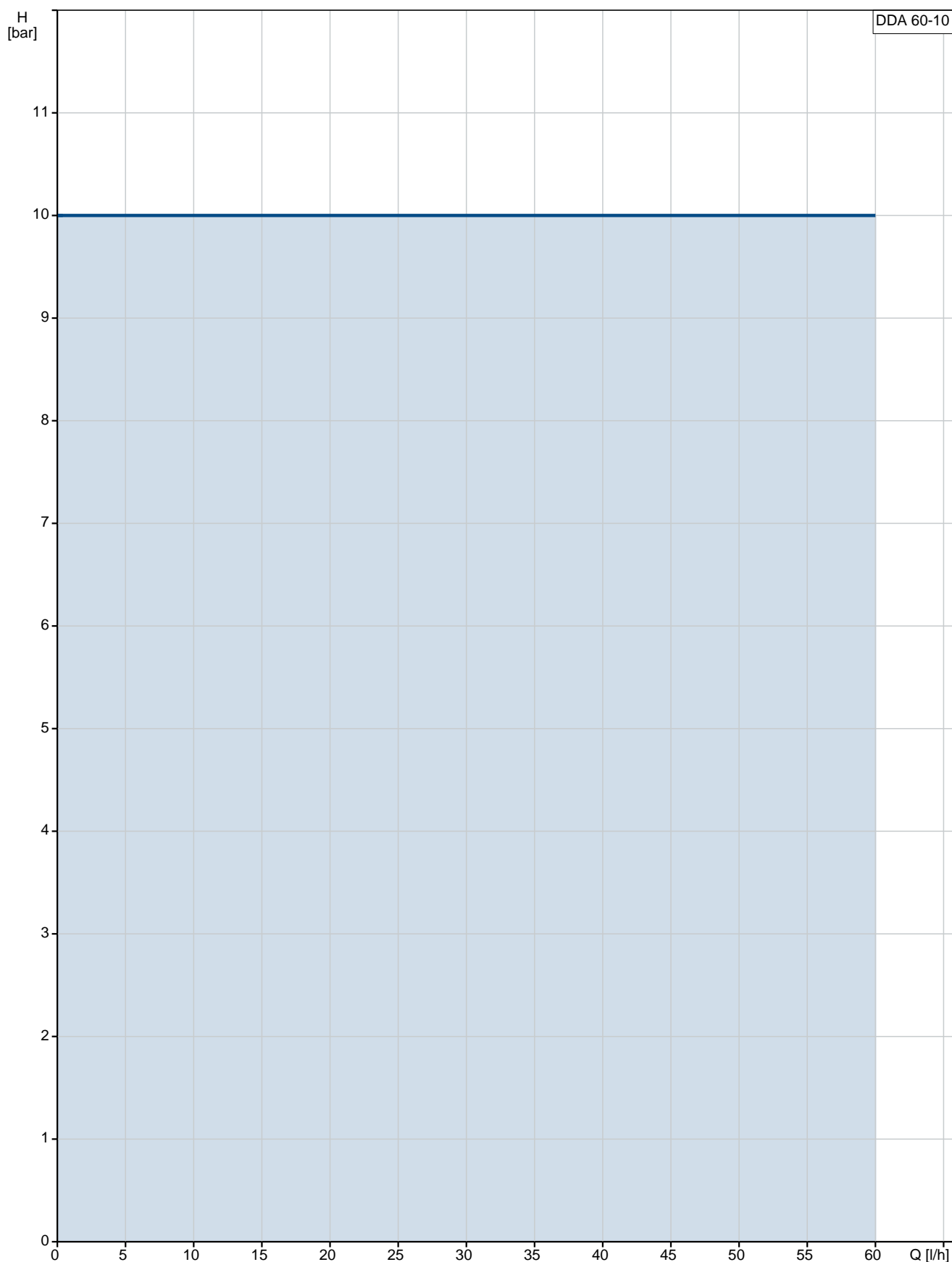
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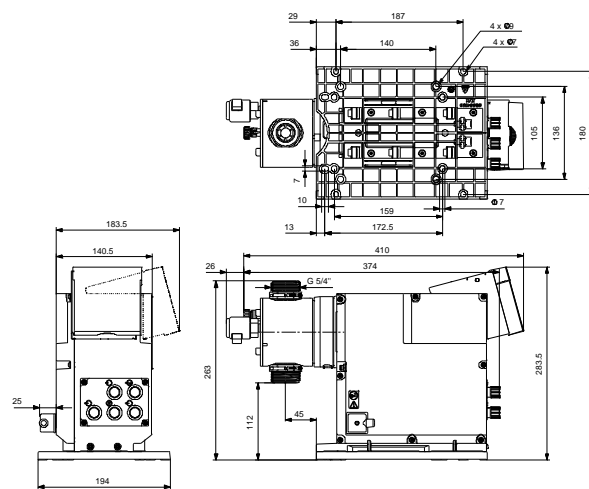
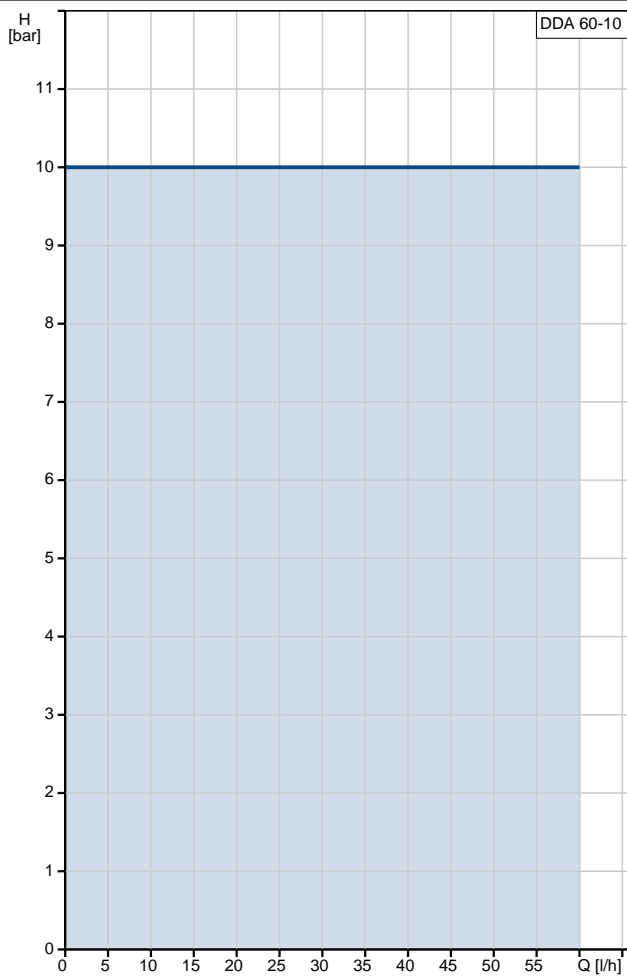
Date:

06/02/2020

## 99164185 DDA 60-10



Description	Value
<b>General information:</b>	
Product name:	DDA 60-10
Product No:	99164185
EAN number:	5712607923112
	5712607923112
<b>Technical:</b>	
Type key:	DDA 60-10 FCM-PVC/T/C-F-31U3U3
Max. Flow:	60 l/h
Max. flow in slow mode 50%:	30 l/h
Max. flow in slow mode 25%:	15 l/h
Min flow:	75 ml/h
Turn-down ratio:	1:800
Approvals on nameplate:	CE, CSA-US, NSF61, EAC, RCM
Valve type:	Standard
Maximum viscosity at 100 %:	150 mPas
Maximum viscosity in slow mode 50 %:	2000 mPas
Maximum viscosity in slow mode 25 %:	3000 mPas
Accuracy of repeatability:	1.5 %
<b>Materials:</b>	
Dosing head:	PVC (Polyvinyl chloride)
Valve ball:	Ceramic
Gasket:	PTFE
<b>Installation:</b>	
Range of ambient temperature:	0 .. 45 °C
Maximum operating pressure:	10 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
Analog output:	0/4-20 MA





Company name:

Created by:

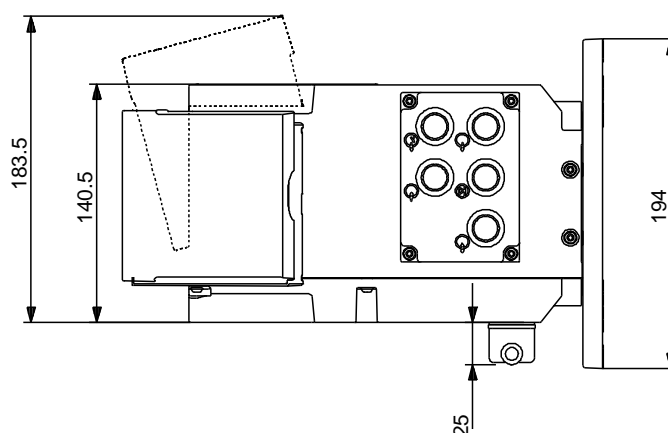
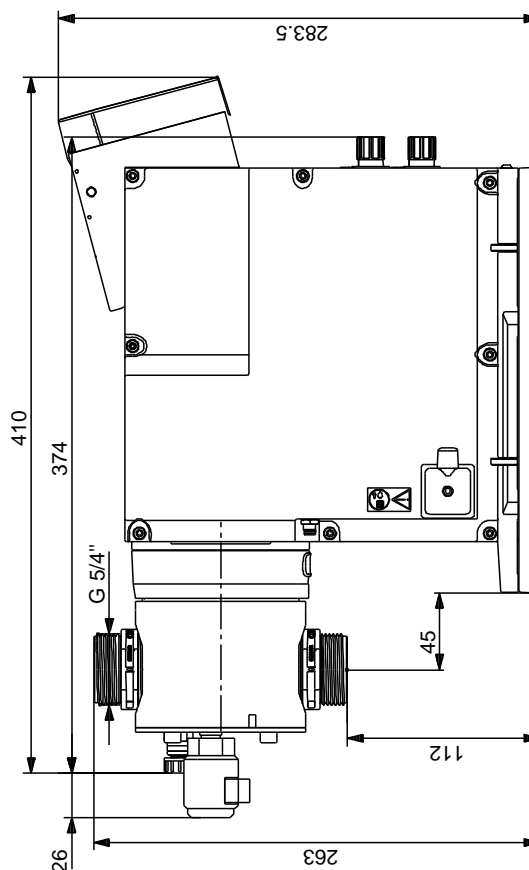
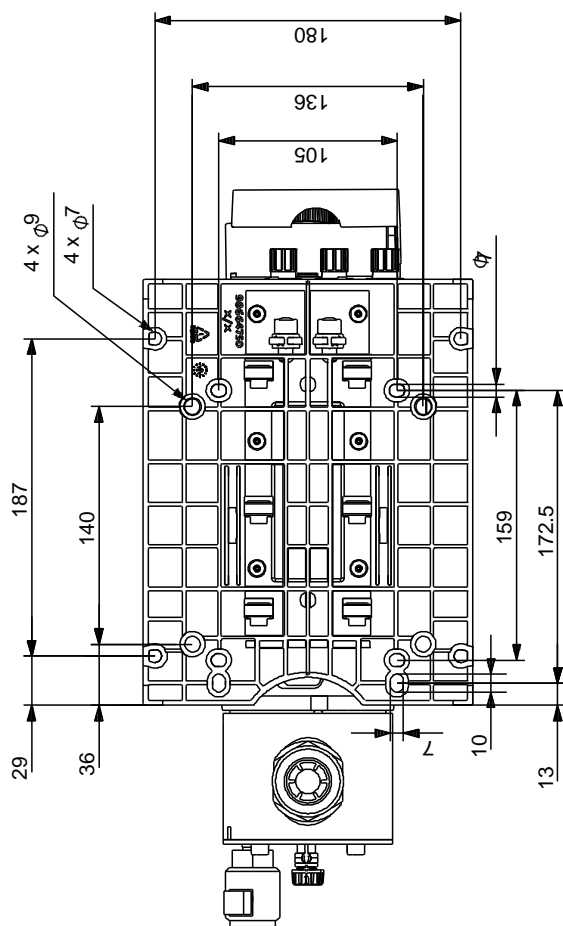
Phone:

Date:

06/02/2020

Description	Value
Output relays:	2
Bus communication:	YES
Others:	
Net weight:	6 kg
Gross weight:	7 kg
Color:	RED

## 99164185 DDA 60-10



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