

Count	Description
1	<p data-bbox="225 338 352 367">DDA 200-4</p>  <p data-bbox="616 723 1072 748" style="text-align: center;">Product photo could vary from the actual product</p> <p data-bbox="225 757 635 813">Product No.: 99159493 DDA 200-4 FCM-PV/V/C-F-31A7A7B</p> <p data-bbox="225 844 1461 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="225 985 1461 1064">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="225 1102 1461 1276">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).</p> <p data-bbox="225 1328 592 1352">The dosing head is composed of:</p> <ul data-bbox="264 1357 1150 1471" style="list-style-type: none"> - Long lifetime and universal, chemically resistant full double PTFE diaphragm. - Ball valves for highest dosing accuracy. - Deaeration valve for easy startup. - Pressure sensor. <p data-bbox="225 1505 424 1529">Operating modes:</p> <ul data-bbox="264 1534 1102 1711" style="list-style-type: none"> - 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). <p data-bbox="225 1744 392 1769">Other features:</p> <ul data-bbox="264 1774 1417 2007" style="list-style-type: none"> - Auto deaeration during pump standby to avoid breakdowns due to air-locking. - Two SlowMode steps (anti-cavitation), 50 % (maximum flow: 26.42 US gal/hour) and 25 % (maximum flow: 13.21 US gal/hour), 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. <p data-bbox="225 2040 464 2065">Signal inputs/outputs:</p> <ul data-bbox="264 2069 866 2094" style="list-style-type: none"> - Input for pulse, analog 0/4-20mA and external stop.

Count	Description
	<ul style="list-style-type: none"> - Input for low-level and empty-tank signal. - Two potential-free output relays for maximum 30 V AC/DC (configurable, e.g. alarm, stroke signal, pump dosing, timer etc.) - Output analog 0/4-20mA. - Fieldbus communication interface (GENIbus, for connection of the Grundfos CIU fieldbus converter). <p>Controls:</p> <p>Control variant: FCM Level control: YES Analog input: 0/4-20 mA Pulse control: YES Ext. Stop input: YES Analog output: 0/4-20 mA Output relays: 2 Bus communication: YES</p> <p>Liquid:</p> <p>Pumped liquid: Water Liquid temperature range: 32 .. 122 °F Liquid temperature during operation: 68 °F Density: 62.29 lb/ft³</p> <p>Technical:</p> <p>Type key: DDA 200-4 FCM-PV//C-F-31A7A7B Max. Flow: 52.83 US gal/hour Max. flow in slow mode 50%: 26.42 US gal/hour Max. flow in slow mode 25%: 13.21 US gal/hour Min flow: 250 ml/h Turn-down ratio: 1:800 Approvals on nameplate: CE,CSA-US,NSF61,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 %</p> <p>Materials:</p> <p>Dosing head: PVDF (Polyvinylidene fluoride) Valve ball: Ceramic Gasket: FKM</p> <p>Installation:</p> <p>Range of ambient temperature: 32 .. 113 °F Maximum operating pressure: 58 psi Installation set: NO Installation type: No installation set Pump inlet: Conn. Threaded 3/4#NPTM CodeA7 Pump outlet: Conn. Threaded 3/4#NPTM CodeA7 Max. Suction lift during operation: 9.843 ft Max. Suction lift during priming: 4.922 ft</p> <p>Electrical data:</p> <p>Maximum power input - P1: 62 W Main frequency: 60 Hz Rated voltage: 1 x 100-240 V Enclosure class (IEC 34-5): IP65 / NEMA 4X Length of cable: 4.922 ft Type of cable plug: USA, Canada</p>



Company name:

Created by:

Phone:

Date:

12/13/2018

Count	Description
	<p>Inrush current: 70A at 240V (35A/100V) for 2ms</p> <p>Others:</p> <p>Net weight: 15.4 lb</p> <p>Gross weight: 17.6 lb</p> <p>COLOR: RED</p>



Company name:

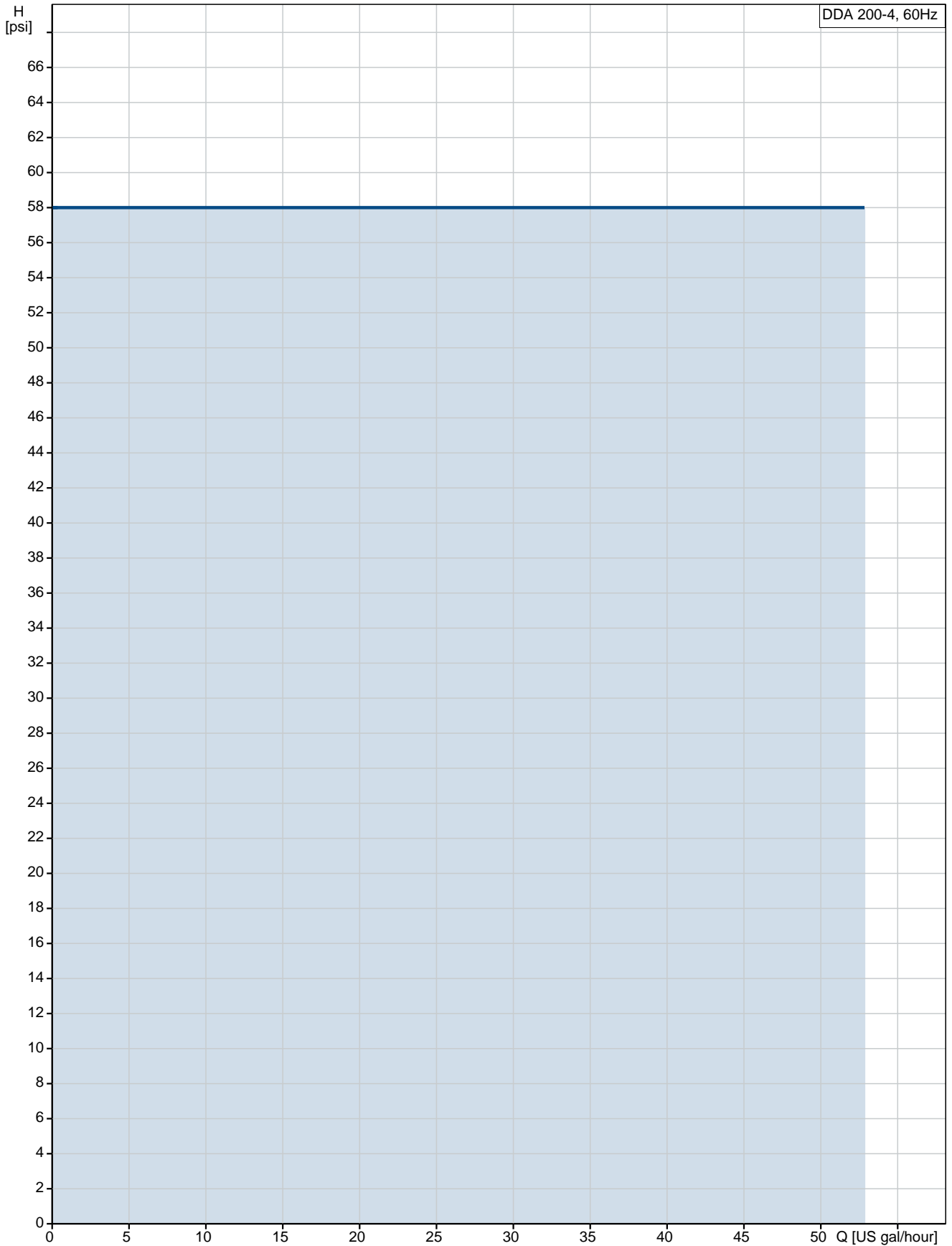
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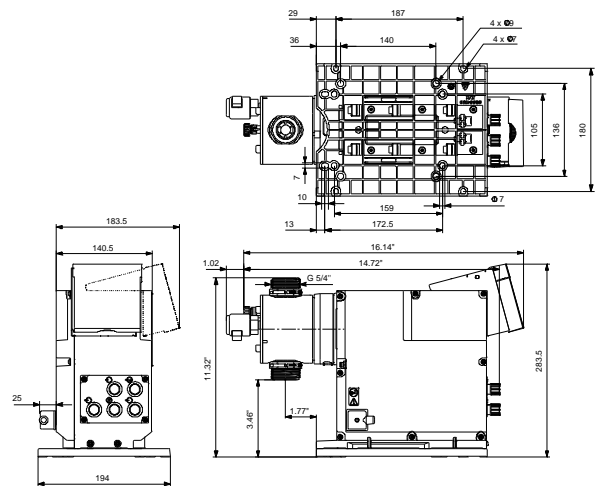
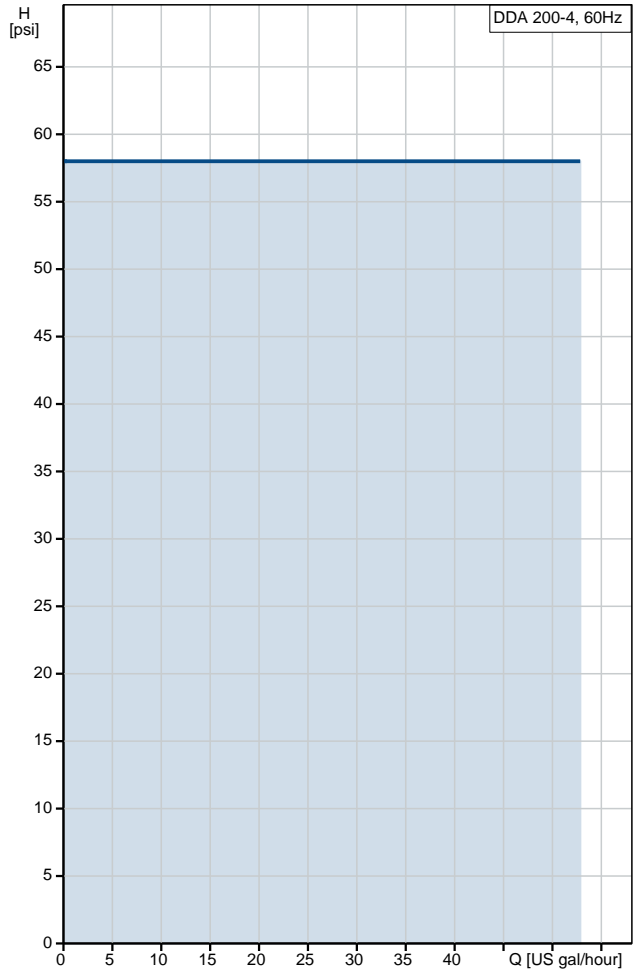
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12/13/2018

99159493 DDA 200-4 60 Hz



Description	Value
General information:	
Product name:	DDA 200-4
Product No.:	99159493
EAN:	5712607842819
Technical:	
Type key:	DDA 200-4 FCM-PV/V/C-F-31A7A7B
Max. Flow:	52.83 US gal/hour
Max. flow in slow mode 50%:	26.42 US gal/hour
Max. flow in slow mode 25%:	13.21 US gal/hour
Min flow:	250 ml/h
Turn-down ratio:	1:800
Approvals on nameplate:	CE,CSA-US,NSF61,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 %
Materials:	
Dosing head:	PVDF (Polyvinylidene fluoride)
Valve ball:	Ceramic
Gasket:	FKM
Installation:	
Range of ambient temperature:	32 .. 113 °F
Maximum operating pressure:	58 psi
Installation set:	NO
Installation type:	No installation set
Pump inlet:	Conn. Threaded 3/4#NPTM CodeA7
Pump outlet:	Conn. Threaded 3/4#NPTM CodeA7
Max. Suction lift during operation:	9.843 ft
Max. Suction lift during priming:	4.922 ft
Liquid:	
Pumped liquid:	Water
Liquid temperature range:	32 .. 122 °F
Liquid temperature during operation:	68 °F
Density:	62.29 lb/ft ³
Electrical data:	
Maximum power input - P1:	62 W
Main frequency:	60 Hz
Rated voltage:	1 x 100-240 V
Enclosure class (IEC 34-5):	IP65 / NEMA 4X
Length of cable:	4.922 ft
Type of cable plug:	USA, Canada
Inrush current:	70A at 240V (35A/100V) for 2ms
Controls:	
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
Output relays:	2
Bus communication:	YES
Others:	





Company name:

Created by:

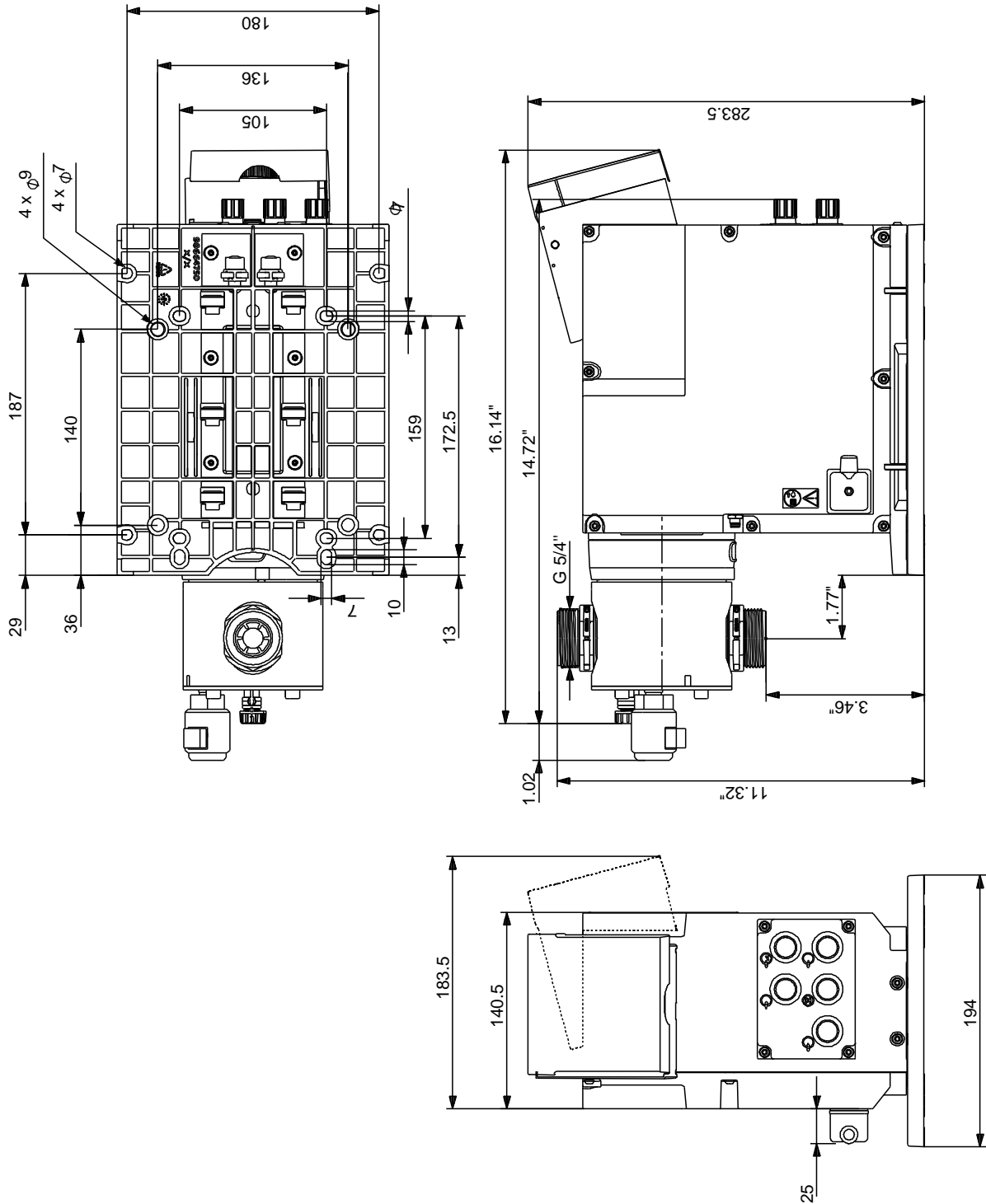
Phone:

Date:

12/13/2018

Description	Value
Net weight:	15.4 lb
Gross weight:	17.6 lb
COLOR:	RED

99159493 DDA 200-4 60 Hz



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