

Count	Description
1	<p><b>DDA 120-7</b></p>  <p>Product photo could vary from the actual product</p> <p>Product No.: <a href="#">99159481</a> DDA 120-7 FCM-SS/T/SS-F-31A3A3</p> <p>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>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>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>The dosing head is composed of:</p> <ul 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>Operating modes:</p> <ul 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>Other features:</p> <ul 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: 15.85 US gal/hour) and 25 % (maximum flow: 7.925 US gal/hour), 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>Signal inputs/outputs:</p> <ul 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            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><b>Liquid:</b></p> <p>Pumped liquid: Water            Liquid temperature range: 32 .. 122 °F            Liquid temperature during operation: 68 °F            Density: 62.29 lb/ft<sup>3</sup></p> <p><b>Technical:</b></p> <p>Type key: DDA 120-7 FCM-SS/T/SS-F-31A3A3            Max. Flow: 31.7 US gal/hour            Max. flow in slow mode 50%: 15.85 US gal/hour            Max. flow in slow mode 25%: 7.925 US gal/hour            Min flow: 150 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 %: 1500 mPas            Maximum viscosity in slow mode 25 %: 3000 mPas            Accuracy of repeatability: 1 %</p> <p><b>Materials:</b></p> <p>Dosing head: Stainless Steel 1.4435            Valve ball: Stainless steel            Gasket: PTFE</p> <p><b>Installation:</b></p> <p>Range of ambient temperature: 32 .. 113 °F            Maximum operating pressure: 102 psi            Installation set: NO            Installation type: No installation set            Pump inlet: Conn. threaded 3/4#NPTF CodeA3            Pump outlet: Conn. threaded 3/4#NPTF CodeA3            Max. Suction lift during operation: 9.843 ft            Max. Suction lift during priming: 4.922 ft</p> <p><b>Electrical data:</b></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:

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Phone:

Date:

12/13/2018

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



Company name:

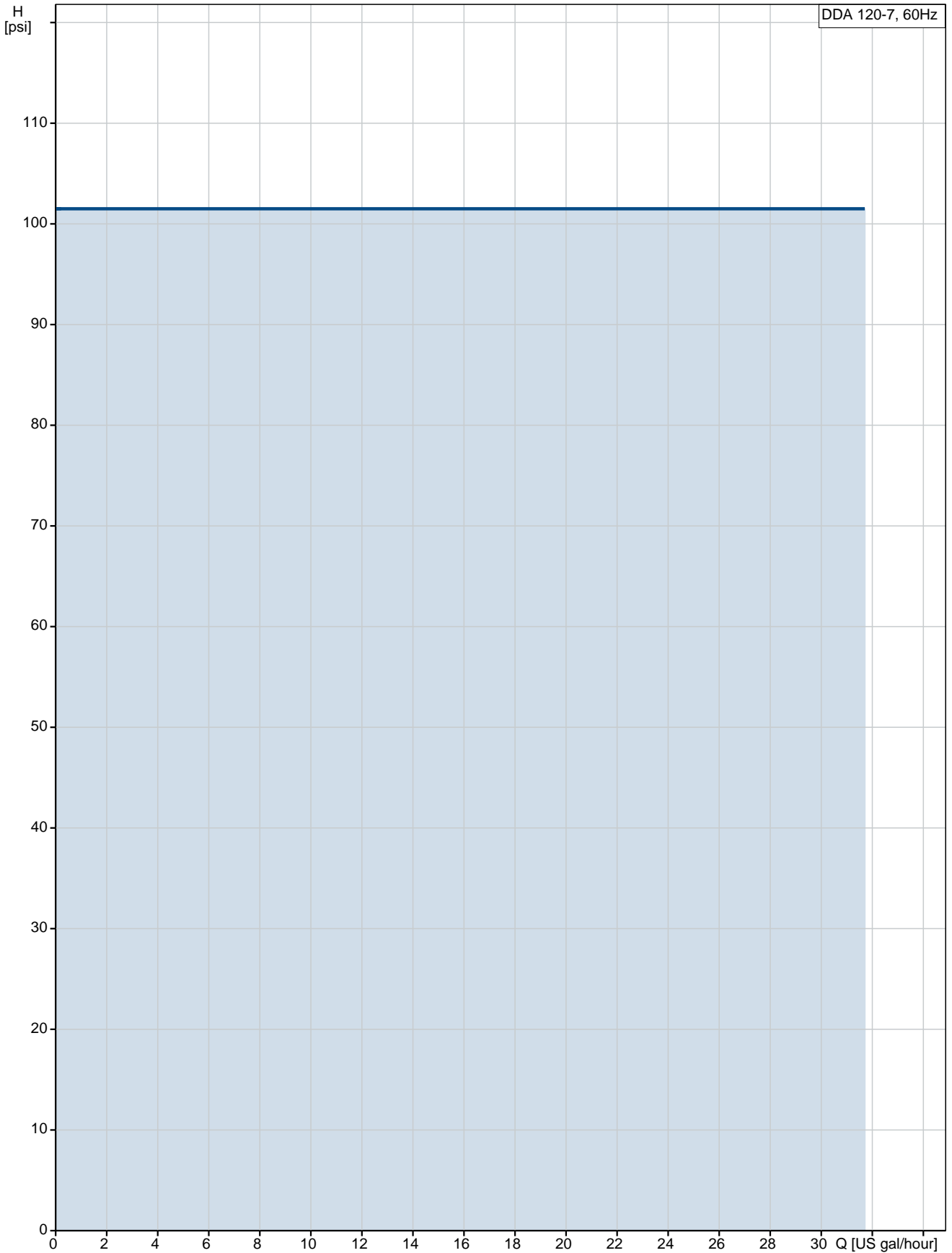
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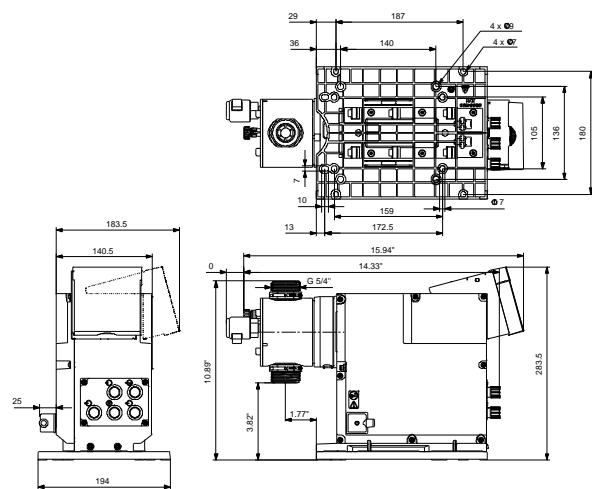
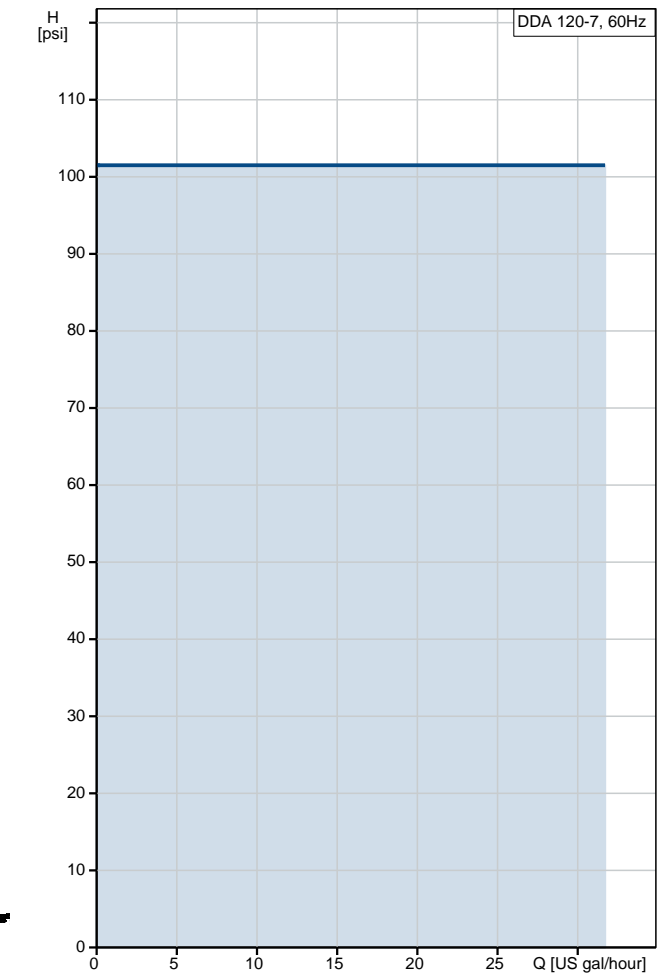
Date:

12/13/2018

## 99159481 DDA 120-7 60 Hz



Description	Value
<b>General information:</b>	
Product name:	DDA 120-7
Product No.:	99159481
EAN:	5712607842697
<b>Technical:</b>	
Type key:	DDA 120-7 FCM-SS/T/SS-F-31A3A3
Max. Flow:	31.7 US gal/hour
Max. flow in slow mode 50%:	15.85 US gal/hour
Max. flow in slow mode 25%:	7.925 US gal/hour
Min flow:	150 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 %:	1500 mPas
Maximum viscosity in slow mode 25 %:	3000 mPas
Accuracy of repeatability:	1 %
<b>Materials:</b>	
Dosing head:	Stainless Steel 1.4435
Valve ball:	Stainless steel
Gasket:	PTFE
<b>Installation:</b>	
Range of ambient temperature:	32 .. 113 °F
Maximum operating pressure:	102 psi
Installation set:	NO
Installation type:	No installation set
Pump inlet:	Conn. threaded 3/4#NPTF CodeA3
Pump outlet:	Conn. threaded 3/4#NPTF CodeA3
Max. Suction lift during operation:	9.843 ft
Max. Suction lift during priming:	4.922 ft
<b>Liquid:</b>	
Pumped liquid:	Water
Liquid temperature range:	32 .. 122 °F
Liquid temperature during operation:	68 °F
Density:	62.29 lb/ft <sup>3</sup>
<b>Electrical data:</b>	
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
<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
Output relays:	2
Bus communication:	YES
<b>Others:</b>	
Net weight:	15.4 lb





Company name:

Created by:

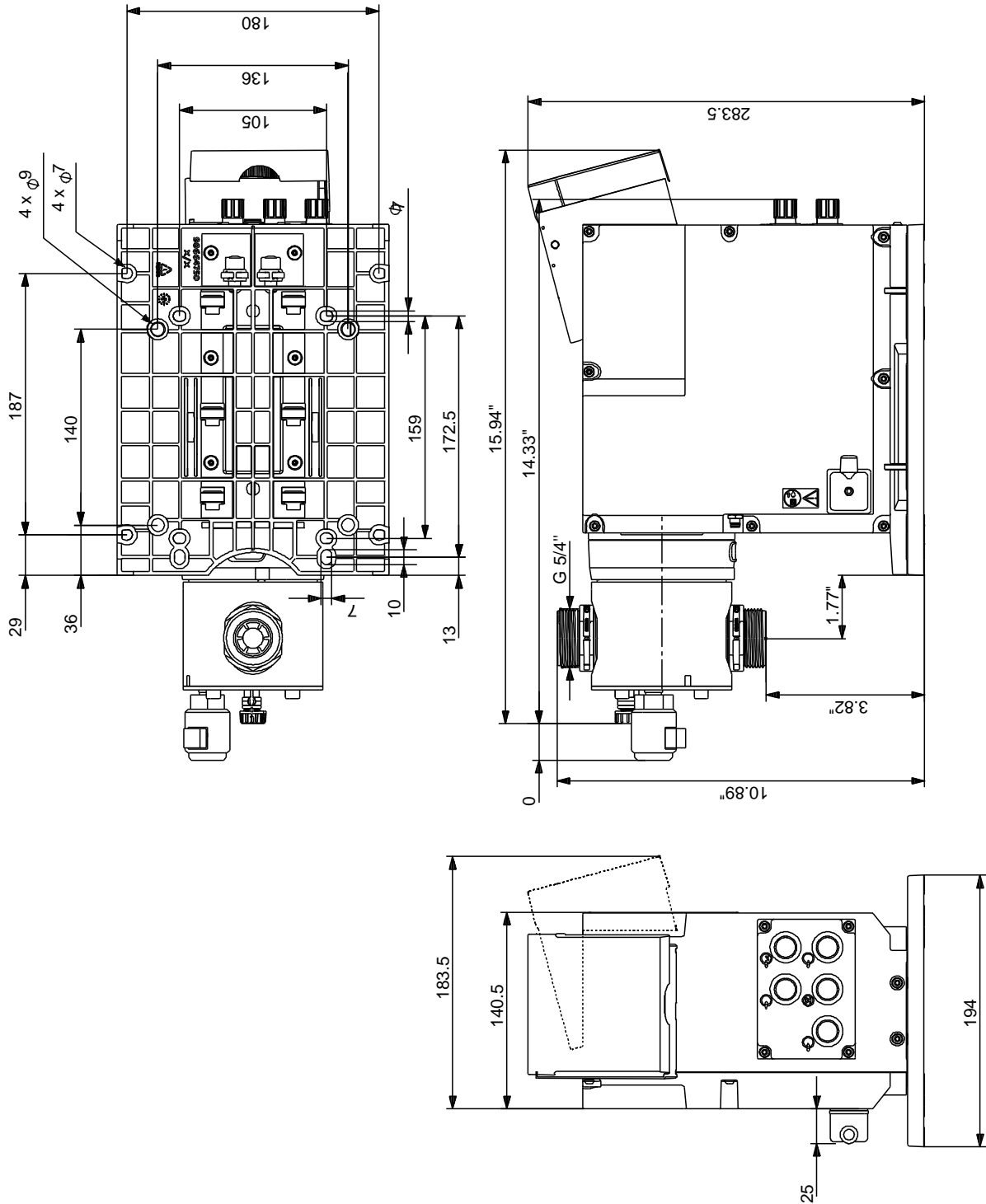
Phone:

Date:

12/13/2018

Description	Value
Gross weight:	17.6 lb
COLOR:	RED

## 99159481 DDA 120-7 60 Hz



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