

**Date:** 12/11/2018

Count | Description

DDA 120-7



Product photo could vary from the actual product

Product No.: 99159468

DDA 120-7 AR-PVC/E/C-F-31A7A7B

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 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.

#### 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, I 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: 15.85 US gal/hour) and 25 % (maximum flow: 7.925 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.

#### Signal inputs/outputs:

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

### Controls:

Control variant: AR



**Date:** 12/11/2018

Count | Description

Level control:

Analog input:

Pulse control:

Ext. Stop input:

Analog output:

O/4-20 mA

Output relays:

YES

0/4-20 mA

Output relays: 2
Bus communication: YES

Liquid:

Pumped liquid: Water
Liquid temperature range: 32 .. 104 °F
Liquid temperature during operation: 68 °F
Density: 62.29 lb/ft³

Technical:

Type key: DDA 120-7 AR-PVC/E/C-F-31A7A7B

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 %

Materials:

Dosing head: PVC (Polyvinyl chloride)

Valve ball: Ceramic Gasket: EPDM

Installation:

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#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

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

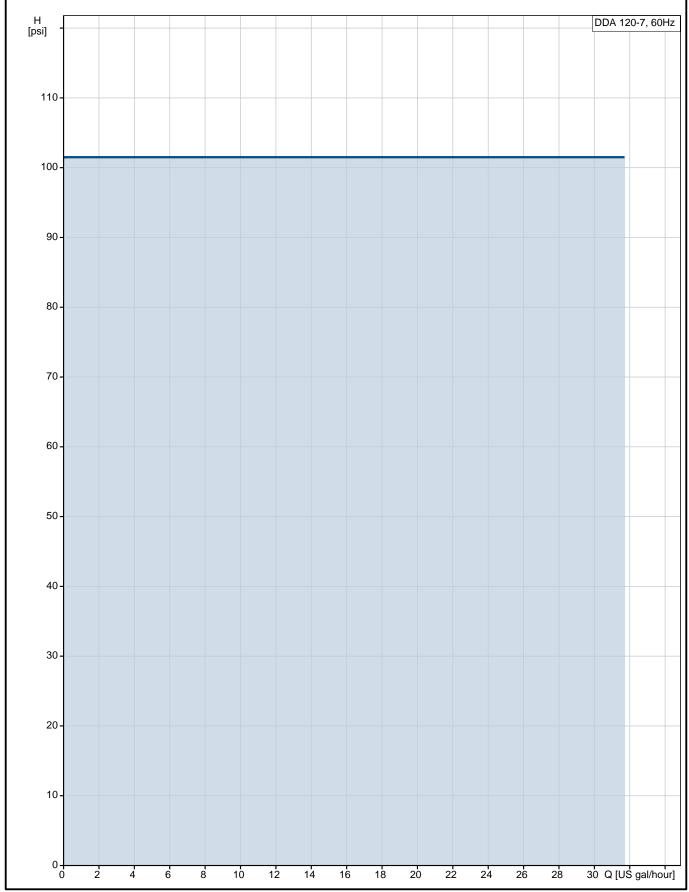
Others:

Net weight: 13.2 lb Gross weight: 15.4 lb COLOR: RED



**Date:** 12/11/2018

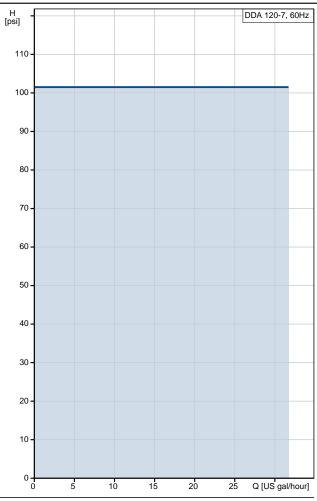
# 99159468 DDA 120-7 60 Hz

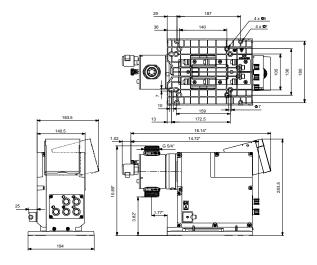




**Date:** 12/11/2018

Description	Value
General information:	
Product name:	DDA 120-7
Product No.:	99159468
EAN:	5712607842567
Technical:	
Type key:	DDA 120-7 AR-PVC/E/C-F-31A7A7B
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 %
Materials:	. ,•
Dosing head:	PVC (Polyvinyl chloride)
Valve ball:	Ceramic
Gasket:	EPDM
	EPDINI
Installation:	00 440.05
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#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:	32 104 °F
Liquid temperature during operation:	68 °F
Density:	62.29 lb/ft <sup>3</sup>
Electrical data:	
Maximum power input - P1:	62 W
Main fraguanay:	60 H-
Main frequency:	60 Hz
Rated voltage:	1 x 100-240 V
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	1 x 100-240 V
Rated voltage: Enclosure class (IEC 34-5):	1 x 100-240 V IP65 / NEMA 4X
Rated voltage: Enclosure class (IEC 34-5): Length of cable:	1 x 100-240 V IP65 / NEMA 4X 4.922 ft
Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug:	1 x 100-240 V IP65 / NEMA 4X 4.922 ft USA, Canada 70A at 240V (35A/100V)
Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current:	1 x 100-240 V IP65 / NEMA 4X 4.922 ft USA, Canada 70A at 240V (35A/100V)
Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current: Controls: Control variant:	1 x 100-240 V IP65 / NEMA 4X 4.922 ft USA, Canada 70A at 240V (35A/100V) for 2ms
Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current: Controls: Control variant: Control panel:	1 x 100-240 V IP65 / NEMA 4X 4.922 ft USA, Canada 70A at 240V (35A/100V) for 2ms
Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current:  Controls: Control variant: Control panel: Level control:	1 x 100-240 V IP65 / NEMA 4X 4.922 ft USA, Canada 70A at 240V (35A/100V) for 2ms  AR FRONT-MOUNTED YES
Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current:  Controls: Control variant: Control panel: Level control: Analog input:	1 x 100-240 V IP65 / NEMA 4X 4.922 ft USA, Canada 70A at 240V (35A/100V) for 2ms  AR FRONT-MOUNTED YES 0/4-20 mA
Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current:  Controls: Control variant: Control panel: Level control: Analog input: Pulse control:	1 x 100-240 V IP65 / NEMA 4X 4.922 ft USA, Canada 70A at 240V (35A/100V) for 2ms  AR FRONT-MOUNTED YES 0/4-20 mA YES
Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current:  Controls: Control variant: Control panel: Level control: Analog input: Pulse control: Ext. Stop input:	1 x 100-240 V IP65 / NEMA 4X 4.922 ft USA, Canada 70A at 240V (35A/100V) for 2ms  AR FRONT-MOUNTED YES 0/4-20 mA YES YES
Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current:  Controls: Control variant: Control panel: Level control: Analog input: Pulse control: Ext. Stop input: Analog output:	1 x 100-240 V IP65 / NEMA 4X 4.922 ft USA, Canada 70A at 240V (35A/100V) for 2ms  AR FRONT-MOUNTED YES 0/4-20 mA YES YES 0/4-20 mA
Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current:  Controls: Control variant: Control panel: Level control: Analog input: Pulse control: Ext. Stop input: Analog output: Output relays:	1 x 100-240 V IP65 / NEMA 4X 4.922 ft USA, Canada 70A at 240V (35A/100V) for 2ms  AR FRONT-MOUNTED YES 0/4-20 mA YES YES 0/4-20 mA 2
Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current:  Controls: Control variant: Control panel: Level control: Analog input: Pulse control: Ext. Stop input: Analog output: Output relays: Bus communication:	1 x 100-240 V IP65 / NEMA 4X 4.922 ft USA, Canada 70A at 240V (35A/100V) for 2ms  AR FRONT-MOUNTED YES 0/4-20 mA YES YES 0/4-20 mA
Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current:  Controls: Control variant: Control panel: Level control: Analog input: Pulse control: Ext. Stop input: Analog output: Output relays:	1 x 100-240 V IP65 / NEMA 4X 4.922 ft USA, Canada 70A at 240V (35A/100V) for 2ms  AR FRONT-MOUNTED YES 0/4-20 mA YES YES 0/4-20 mA 2







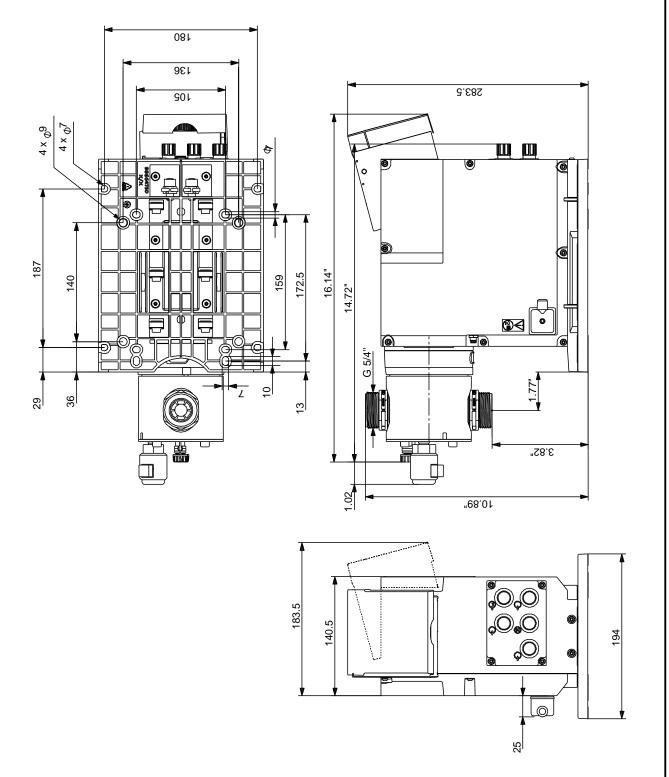
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Description	Value
Gross weight:	15.4 lb
COLOR:	RED



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# 99159468 DDA 120-7 60 Hz



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