

**Date:** 27/02/2020

Qty. | Description

1 DDA 12-10



Note! Product picture may differ from actual product

Product No.: 97722070

DDA 12-10 AR-PV/T/C-F-32U2U2FG

The SMART Digital DDA is a compact positive displacement, diaphragm dosing pump with variable-speed drive (stepper 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 click-stop mounting plate allows installation in three different positions without using any additional accessories. 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-PTFE diaphragm.
- Double ball valves for highest dosing accuracy.
- Deaeration valve for easy start-up.

### Operation 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 ProfibusDP E-box).

### Other features:

- Auto deaeration during pump standby to avoid breakdowns due to air-locking.
- Two SlowMode steps (anti-cavitation), 50 % (maximum flow: 6 l/h) and 25 % (maximum flow: 3 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, external stop.
- Input for low-level and empty-tank signal.
- Two potential-free output relays for max. 30 V AC/DC (configurable, e.g. alarm, stroke signal, pump dosing, timer etc.)
- Output analog 0/4-20mA.
- Fieldbus communication interface (GeniBus, also for additional Profibus DP E-box to retrofit).

#### Technical:

Type key: DDA 12-10 AR-PV/T/C-F-32U2U2FG



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Max. Flow: 12 l/h
Max. flow in slow mode 50%: 6 l/h
Max. flow in slow mode 25%: 3 l/h
Min flow: 12.0 ml/h
Turn-down ratio: 1:1000

Approvals on nameplate: CE,CSA-US,NSF61,EAC,RCM Valve type: Spring-Loaded (HV-version)

Maximum viscosity at 100 %: 500 mPas

Maximum viscosity in slow mode 50 %: 1300 mPas Maximum viscosity in slow mode 25 %: 2500 mPas

Accuracy of repeatability: 1 %

Materials:

Dosing head: PVDF (Polyvinylidene fluoride)

Valve ball: Ceramic Gasket: PTFE

Installation:

Range of ambient temperature: 0 .. 45 °C Maximum operating pressure: 10 bar NO NO

Installation type:

Pump inlet:

Pump outlet:

No installation set

4/6, 6/9, 6/12, 9/12 mm

4/6, 6/9, 6/12, 9/12 mm

Max. Suction lift during operation: 6 m Max. Suction lift during priming: 3 m

Liquid:

Pumped liquid: Water
Liquid temperature range: -10 .. 45 °C
Selected liquid temperature: 20 °C
Density: 998.2 kg/m³

Electrical data:

Maximum power input - P1: 24 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: 25A at 230V for 2ms

Controls:

Control variant:

Level control:

Analog input:

Pulse control:

Ext. Stop input:

Analog output:

O/4-20 MA

YES

Analog output:

O/4-20 MA

Output relays: 2
Bus communication: YES

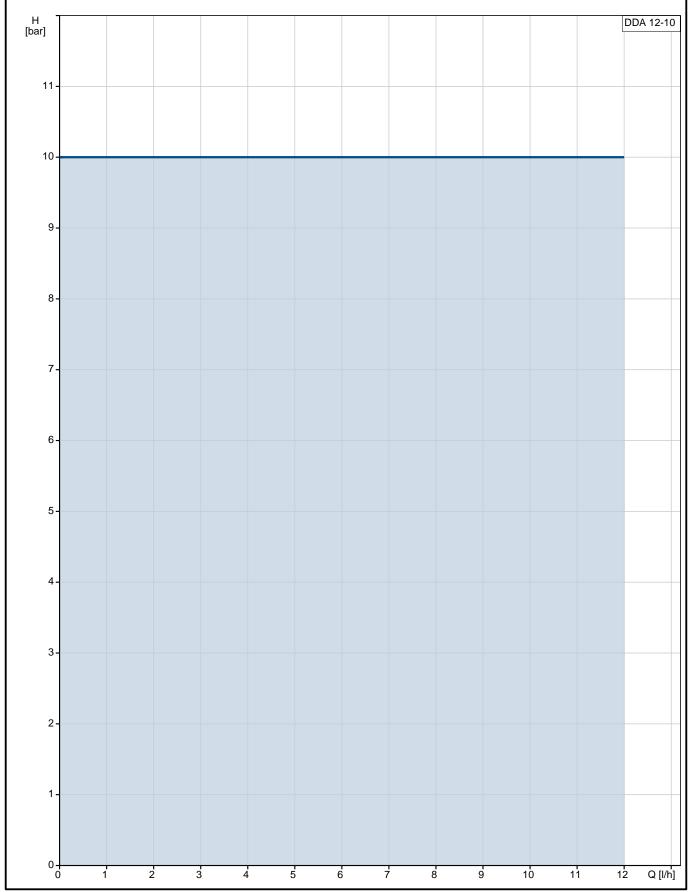
Others:

Net weight: 3 kg
Gross weight: 4 kg
Color: RED
Country of origin: FR
Custom tariff no.: 84135040



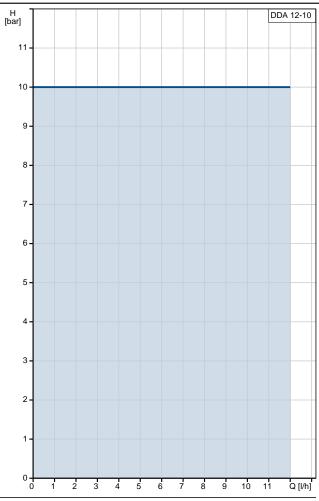
**Date:** 27/02/2020

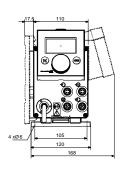
# 97722070 DDA 12-10

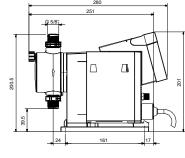




| Description                                                                                                                                                                                                                                                                                                                                                                                                                                      | Value                                                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General information:                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                          |
| Product name:                                                                                                                                                                                                                                                                                                                                                                                                                                    | DDA 12-10                                                                                                                                                                |
| Product No:                                                                                                                                                                                                                                                                                                                                                                                                                                      | 97722070                                                                                                                                                                 |
| EAN number:                                                                                                                                                                                                                                                                                                                                                                                                                                      | 5710622722123                                                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 5710622722123                                                                                                                                                            |
| Price:                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2.029,00 GBP                                                                                                                                                             |
| Technical:                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                          |
| Type key:                                                                                                                                                                                                                                                                                                                                                                                                                                        | DDA 12-10<br>AR-PV/T/C-F-32U2U2FG                                                                                                                                        |
| Max. Flow:                                                                                                                                                                                                                                                                                                                                                                                                                                       | 12 l/h                                                                                                                                                                   |
| Max. flow in slow mode 50%:                                                                                                                                                                                                                                                                                                                                                                                                                      | 6 l/h                                                                                                                                                                    |
| Max. flow in slow mode 25%:                                                                                                                                                                                                                                                                                                                                                                                                                      | 3 l/h                                                                                                                                                                    |
| Min flow:                                                                                                                                                                                                                                                                                                                                                                                                                                        | 12.0 ml/h                                                                                                                                                                |
| Turn-down ratio:                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1:1000                                                                                                                                                                   |
| Approvals on nameplate:                                                                                                                                                                                                                                                                                                                                                                                                                          | CE,CSA-US,NSF61,EAC,RCM                                                                                                                                                  |
| Valve type:                                                                                                                                                                                                                                                                                                                                                                                                                                      | Spring-Loaded (HV-version)                                                                                                                                               |
| Maximum viscosity at 100 %:                                                                                                                                                                                                                                                                                                                                                                                                                      | 500 mPas                                                                                                                                                                 |
| Maximum viscosity in slow mode 50 %:                                                                                                                                                                                                                                                                                                                                                                                                             | 1300 mPas                                                                                                                                                                |
| Maximum viscosity in slow mode 25 %:                                                                                                                                                                                                                                                                                                                                                                                                             | 2500 mPas                                                                                                                                                                |
| Accuracy of repeatability:                                                                                                                                                                                                                                                                                                                                                                                                                       | 1 %                                                                                                                                                                      |
| Materials:                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                          |
| Dosing head:                                                                                                                                                                                                                                                                                                                                                                                                                                     | PVDF (Polyvinylidene fluoride)                                                                                                                                           |
| Valve ball:                                                                                                                                                                                                                                                                                                                                                                                                                                      | Ceramic                                                                                                                                                                  |
| Gasket:                                                                                                                                                                                                                                                                                                                                                                                                                                          | PTFE                                                                                                                                                                     |
| Installation:                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                          |
| Range of ambient temperature:                                                                                                                                                                                                                                                                                                                                                                                                                    | 0 45 °C                                                                                                                                                                  |
| Maximum operating pressure:                                                                                                                                                                                                                                                                                                                                                                                                                      | 10 bar                                                                                                                                                                   |
| Installation set:                                                                                                                                                                                                                                                                                                                                                                                                                                | NO                                                                                                                                                                       |
| Installation type:                                                                                                                                                                                                                                                                                                                                                                                                                               | No installation set                                                                                                                                                      |
| Pump inlet:                                                                                                                                                                                                                                                                                                                                                                                                                                      | 4/6, 6/9, 6/12, 9/12 mm                                                                                                                                                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                          |
| Pump outlet:                                                                                                                                                                                                                                                                                                                                                                                                                                     | 4/6, 6/9, 6/12, 9/12 mm                                                                                                                                                  |
| Pump outlet:  Max. Suction lift during operation:                                                                                                                                                                                                                                                                                                                                                                                                | 4/6, 6/9, 6/12, 9/12 mm<br>6 m                                                                                                                                           |
| •                                                                                                                                                                                                                                                                                                                                                                                                                                                | · · · · · · · · · · · · · · · · · · ·                                                                                                                                    |
| Max. Suction lift during operation:                                                                                                                                                                                                                                                                                                                                                                                                              | 6 m                                                                                                                                                                      |
| Max. Suction lift during operation:  Max. Suction lift during priming:                                                                                                                                                                                                                                                                                                                                                                           | 6 m                                                                                                                                                                      |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid:                                                                                                                                                                                                                                                                                                                                                                  | 6 m                                                                                                                                                                      |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid:  Pumped liquid:                                                                                                                                                                                                                                                                                                                                                  | 6 m<br>3 m<br>Water                                                                                                                                                      |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid:  Pumped liquid:  Liquid temperature range:                                                                                                                                                                                                                                                                                                                       | 6 m<br>3 m<br>Water<br>-10 45 °C                                                                                                                                         |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid:  Pumped liquid:  Liquid temperature range:  Selected liquid temperature:                                                                                                                                                                                                                                                                                         | 6 m<br>3 m<br>Water<br>-10 45 °C<br>20 °C                                                                                                                                |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid:  Pumped liquid:  Liquid temperature range:  Selected liquid temperature:  Density:  Electrical data:                                                                                                                                                                                                                                                             | 6 m<br>3 m<br>Water<br>-10 45 °C<br>20 °C                                                                                                                                |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid:  Pumped liquid:  Liquid temperature range:  Selected liquid temperature:  Density:  Electrical data:  Maximum power input - P1:                                                                                                                                                                                                                                  | 6 m<br>3 m<br>Water<br>-10 45 °C<br>20 °C<br>998.2 kg/m³                                                                                                                 |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid:  Pumped liquid:  Liquid temperature range:  Selected liquid temperature:  Density:  Electrical data:                                                                                                                                                                                                                                                             | 6 m 3 m  Water -10 45 °C 20 °C 998.2 kg/m³                                                                                                                               |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid:  Pumped liquid:  Liquid temperature range:  Selected liquid temperature:  Density:  Electrical data:  Maximum power input - P1:  Mains frequency:  Rated voltage:                                                                                                                                                                                                | 6 m 3 m  Water -10 45 °C 20 °C 998.2 kg/m³                                                                                                                               |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid:  Pumped liquid:  Liquid temperature range:  Selected liquid temperature:  Density:  Electrical data:  Maximum power input - P1:  Mains frequency:                                                                                                                                                                                                                | 6 m 3 m  Water -10 45 °C 20 °C 998.2 kg/m <sup>3</sup> 24 W 50 / 60 Hz 1 x 100-240 V                                                                                     |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid:  Pumped liquid:  Liquid temperature range:  Selected liquid temperature:  Density:  Electrical data:  Maximum power input - P1:  Mains frequency:  Rated voltage:  Enclosure class (IEC 34-5):                                                                                                                                                                   | 6 m 3 m  Water -10 45 °C 20 °C 998.2 kg/m³  24 W 50 / 60 Hz 1 x 100-240 V IP65 / NEMA 4X                                                                                 |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid:  Pumped liquid:  Liquid temperature range:  Selected liquid temperature:  Density:  Electrical data:  Maximum power input - P1:  Mains frequency:  Rated voltage:  Enclosure class (IEC 34-5):  Length of cable:                                                                                                                                                 | 6 m 3 m  Water -10 45 °C 20 °C 998.2 kg/m³  24 W 50 / 60 Hz 1 x 100-240 V IP65 / NEMA 4X 1.5 m                                                                           |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid:  Pumped liquid:  Liquid temperature range:  Selected liquid temperature:  Density:  Electrical data:  Maximum power input - P1:  Mains frequency:  Rated voltage:  Enclosure class (IEC 34-5):  Length of cable:  Type of cable plug:                                                                                                                            | 6 m 3 m  Water -10 45 °C 20 °C 998.2 kg/m³  24 W 50 / 60 Hz 1 x 100-240 V IP65 / NEMA 4X 1.5 m EU                                                                        |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid: Pumped liquid: Liquid temperature range: Selected liquid temperature: Density: Electrical data: Maximum power input - P1: Mains frequency: Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current:                                                                                                                       | 6 m 3 m  Water -10 45 °C 20 °C 998.2 kg/m³  24 W 50 / 60 Hz 1 x 100-240 V IP65 / NEMA 4X 1.5 m EU                                                                        |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid: Pumped liquid: Liquid temperature range: Selected liquid temperature: Density: Electrical data: Maximum power input - P1: Mains frequency: Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current: Controls:                                                                                                             | 6 m 3 m  Water -10 45 °C 20 °C 998.2 kg/m³  24 W 50 / 60 Hz 1 x 100-240 V IP65 / NEMA 4X 1.5 m EU 25A at 230V for 2ms                                                    |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid: Pumped liquid: Liquid temperature range: Selected liquid temperature: Density: Electrical data: Maximum power input - P1: Mains frequency: Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current: Controls: Control variant:                                                                                            | 6 m 3 m  Water -10 45 °C 20 °C 998.2 kg/m³  24 W 50 / 60 Hz 1 x 100-240 V IP65 / NEMA 4X 1.5 m EU 25A at 230V for 2ms  AR                                                |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid: Pumped liquid: Liquid temperature range: Selected liquid temperature: Density: Electrical data: Maximum power input - P1: Mains frequency: Rated voltage: Enclosure class (IEC 34-5): Length of cable: Type of cable plug: Inrush current: Controls: Control variant: Control panel: Level control:                                                              | 6 m 3 m  Water -10 45 °C 20 °C 998.2 kg/m³  24 W 50 / 60 Hz 1 x 100-240 V IP65 / NEMA 4X 1.5 m EU 25A at 230V for 2ms  AR FRONT-MOUNTED YES                              |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid: Pumped liquid: Liquid temperature range: Selected liquid temperature: Density: Electrical data: Maximum power input - P1: Mains frequency: 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:                                                | 6 m 3 m  Water -10 45 °C 20 °C 998.2 kg/m³  24 W 50 / 60 Hz 1 x 100-240 V IP65 / NEMA 4X 1.5 m EU 25A at 230V for 2ms  AR FRONT-MOUNTED YES 0/4-20 MA                    |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid:  Pumped liquid:  Liquid temperature range:  Selected liquid temperature:  Density:  Electrical data:  Maximum power input - P1:  Mains frequency:  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:               | 6 m 3 m  Water -10 45 °C 20 °C 998.2 kg/m³  24 W 50 / 60 Hz 1 x 100-240 V IP65 / NEMA 4X 1.5 m EU 25A at 230V for 2ms  AR FRONT-MOUNTED YES 0/4-20 MA YES                |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid: Pumped liquid: Liquid temperature range: Selected liquid temperature: Density: Electrical data: Maximum power input - P1: Mains frequency: 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:                | 6 m 3 m  Water -10 45 °C 20 °C 998.2 kg/m³  24 W 50 / 60 Hz 1 x 100-240 V IP65 / NEMA 4X 1.5 m EU 25A at 230V for 2ms  AR FRONT-MOUNTED YES 0/4-20 MA YES YES            |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid: Pumped liquid: Liquid temperature range: Selected liquid temperature: Density: Electrical data: Maximum power input - P1: Mains frequency: 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: | 6 m  3 m  Water -10 45 °C 20 °C 998.2 kg/m³  24 W 50 / 60 Hz 1 x 100-240 V IP65 / NEMA 4X 1.5 m EU 25A at 230V for 2ms  AR FRONT-MOUNTED YES 0/4-20 MA YES YES 0/4-20 MA |
| Max. Suction lift during operation:  Max. Suction lift during priming:  Liquid: Pumped liquid: Liquid temperature range: Selected liquid temperature: Density: Electrical data: Maximum power input - P1: Mains frequency: 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:                | 6 m 3 m  Water -10 45 °C 20 °C 998.2 kg/m³  24 W 50 / 60 Hz 1 x 100-240 V IP65 / NEMA 4X 1.5 m EU 25A at 230V for 2ms  AR FRONT-MOUNTED YES 0/4-20 MA YES YES            |









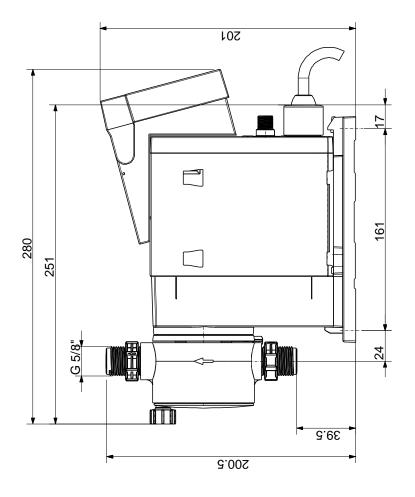
**Date:** 27/02/2020

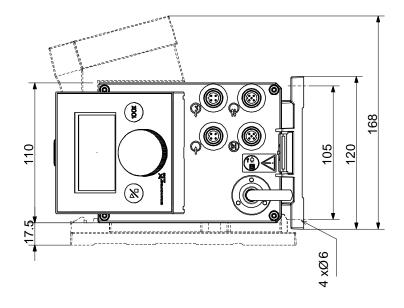
| Description        | Value    |
|--------------------|----------|
| Others:            |          |
| Net weight:        | 3 kg     |
| Gross weight:      | 4 kg     |
| Color:             | RED      |
| Country of origin: | FR       |
| Custom tariff no.: | 84135040 |



**Date:** 27/02/2020

# 97722070 DDA 12-10





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