

**Date:** 11/20/2018

Position | Count | Description

1 DDA 12-10



Product photo could vary from the actual product

Product No.: 97722514

DDA 12-10 FC-PV/E/C-F-31I004BG

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

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 sensor-based FlowControl (FC) 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 (only FCM) measures the actual flow and makes additional monitoring and control equipment redundant (accuracy of  $\pm$  1,5 % 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 (only FCM) 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).

#### 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.
- Pressure sensor.

### 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: 1.585 US gal/hour) and 25 % (maximum flow: 0.7925 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.



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## 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).

#### Installation set includes:

- 2 pump connections (Hose 3/8x1/2" S).
- Foot valve (without level switch).
- Injection unit.
- 6 m PE discharge hose.
- 2 m PVC suction hose.
- 2 m PVC deaeration hose (4/6 mm).

#### Technical:

Type key: DDA 12-10 FC-PV/E/C-F-31I004BG

Max. Flow: 3.17 US gal/hour
Max. flow in slow mode 50%: 1.585 US gal/hour
Max. flow in slow mode 25%: 0.7925 US gal/hour

Min flow: 12.0 ml/h Turn-down ratio: 1:1000

Approvals on nameplate: CE,CSA-US,NSF61,RCM

Valve type: Standard Maximum viscosity at 100 %: 300 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: EPDM

#### Installation:

Range of ambient temperature: 32 .. 113 °F Maximum operating pressure: 145 psi Installation set: YES

Installation type: 3/8"x1/2" up to 60 l/h,10bar

Pump inlet: Hose 3/8x1/2" S
Pump outlet: Hose 3/8x1/2" S
Max. Suction lift during operation: 19.69 ft
Max. Suction lift during priming: 9.843 ft

## Liquid:

Pumped liquid: Water
Liquid temperature range: 14 .. 113 °F
Liquid temperature during operation: 68 °F
Density: 62.29 lb/ft³

## Electrical data:

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



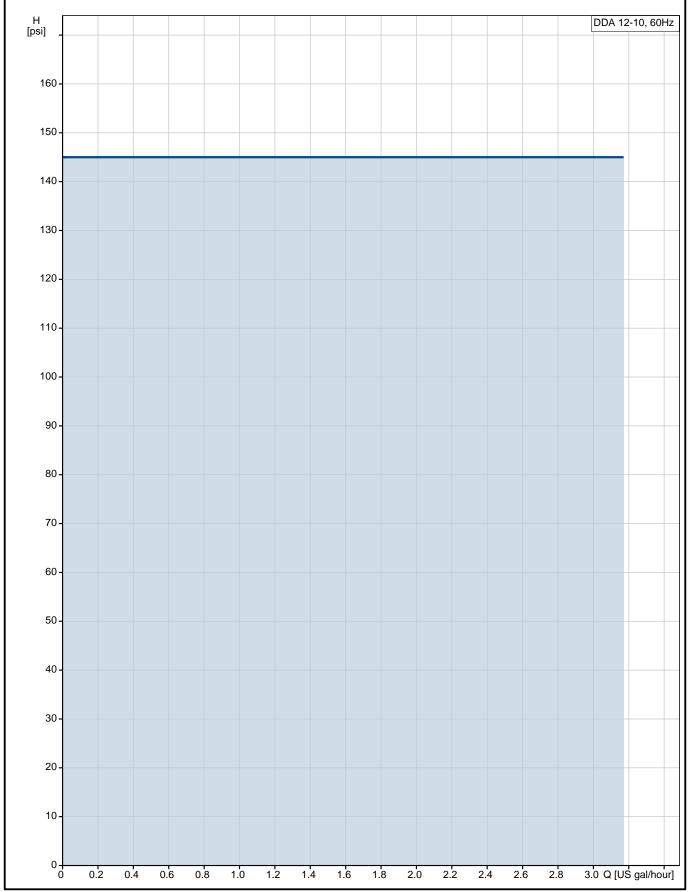
**Date:** 11/20/2018

			Date:	11/20/2018	
Position	Count	Description			
		Controls:			
			FC		
		Control variant:	FC		
		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:			
		Net weight:	6.62 lb		
		Cross weight:	8.82 lb		
		Gross weight:	0.02 ID		
		COLOR:	RED		
		Custom tariff no.:	8413.50.0050		
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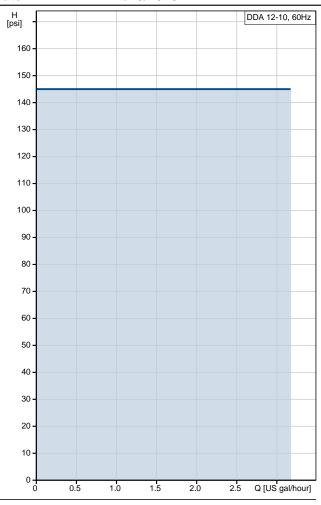
# 97722514 DDA 12-10 60 Hz

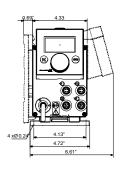


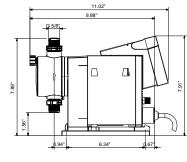


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Description Constal information:	Value				
General information:	DDA 40 40				
Product name:	DDA 12-10				
Product No.:	97722514				
EAN:	5710622726572				
Technical:					
Type key:	DDA 12-10 FC-PV/E/C-F-31I004BG				
Max. Flow:	3.17 US gal/hour				
Max. flow in slow mode 50%:	1.585 US gal/hour				
Max. flow in slow mode 25%:	0.7925 US gal/hour				
Min flow:	12.0 ml/h				
Turn-down ratio:	1:1000				
Approvals on nameplate:	CE,CSA-US,NSF61,RCM				
Valve type:	Standard				
Maximum viscosity at 100 %:	300 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:	EPDM				
Installation:					
Range of ambient temperature:	32 113 °F				
Maximum operating pressure:	145 psi				
Installation set:	YES				
motaliditori oot.	3/8"x1/2" up to 60				
Installation type:	l/h,10bar				
Pump inlet:	Hose 3/8x1/2" S				
Pump outlet:	Hose 3/8x1/2" S				
Max. Suction lift during operation:	19.69 ft				
Max. Suction lift during priming:	9.843 ft				
Liquid:					
Pumped liquid:	Water				
Liquid temperature range:	14 113 °F				
Liquid temperature during operation:	68 °F				
Density:	62.29 lb/ft <sup>3</sup>				
Electrical data:					
Maximum power input - P1:	24 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:	25A at 230V for 2ms				
Controlo					
Controls:					
Controls:	FC				
	FC FRONT-MOUNTED				
Control variant:					
Control variant: Control panel: Level control:	FRONT-MOUNTED				
Control variant: Control panel:	FRONT-MOUNTED YES				
Control variant: Control panel: Level control: Analog input: Pulse control:	FRONT-MOUNTED YES 0/4-20 mA YES				
Control variant: Control panel: Level control: Analog input: Pulse control: Ext. Stop input:	FRONT-MOUNTED YES 0/4-20 mA YES YES				
Control variant: Control panel: Level control: Analog input: Pulse control: Ext. Stop input: Analog output:	FRONT-MOUNTED YES 0/4-20 mA YES YES 0/4-20 mA				
Control variant: Control panel: Level control: Analog input: Pulse control: Ext. Stop input: Analog output: Output relays:	FRONT-MOUNTED YES 0/4-20 mA YES YES 0/4-20 mA 2				
Control variant: Control panel: Level control: Analog input: Pulse control: Ext. Stop input: Analog output: Output relays: Bus communication:	FRONT-MOUNTED YES 0/4-20 mA YES YES 0/4-20 mA				
Control variant: Control panel: Level control: Analog input: Pulse control: Ext. Stop input: Analog output: Output relays: Bus communication: Others:	FRONT-MOUNTED YES 0/4-20 mA YES YES 0/4-20 mA 2 YES				
Control variant: Control panel: Level control: Analog input: Pulse control: Ext. Stop input: Analog output: Output relays: Bus communication:	FRONT-MOUNTED YES 0/4-20 mA YES YES 0/4-20 mA 2				









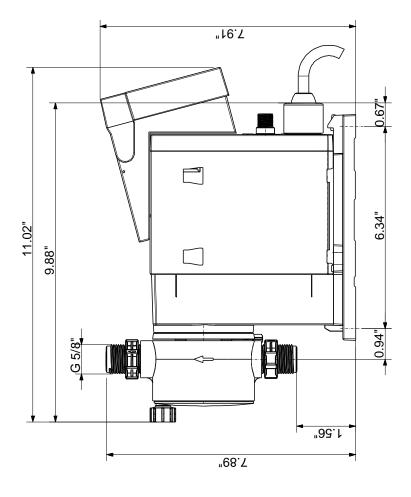
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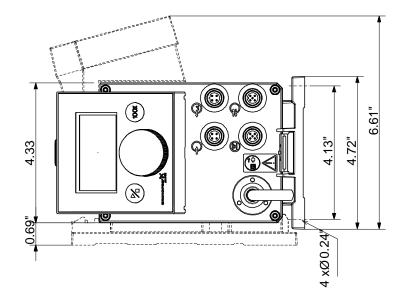
Description	Value
COLOR:	RED
Custom tariff no.:	8413.50.0050



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# 97722514 DDA 12-10 60 Hz





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