Smart Digital

GRUNDFOS DDA/DDC/DDE

The SMART Digital DDA, DDC and DDE models with powerful variable-speed stepper motors bring state-of-the art technology to perfection. Combined expert knowledge and the new patented solutions set future standards. Traditional technologies such as stroke length/stroke frequency adjustment with synchronous motor or solenoid drive become a thing of the past. The click-stop mounting plate provides unique mounting flexibility, and the entire dosing range up to 8 gph is covered with only a few pump variants.

Key Features and Benefits

- Modularity: The included click-stop mounting plate is an example of the unique flexibility offered, with only a few variants
- Simplicity: Easy handling and perfect overview and control ensure simple installation, commissioning and operation
- Flow intelligence: The pump monitors the dosing process of liquids when the FlowControl function is activated, for advanced process reliability with accuracy of 1% of setpoint

DDA Models

- High-end solution for complex and demanding applications
- Flow and pressure up to 8 gph and up to 232 psi
- Auto-deaeration during pump standby
- Flexible Fieldbus control
- Turn-down ratio 3000:1 with constant 100% stroke length

DDC Models

- Optimal price-performance ratio
- Flow and pressure up to 4 gph and up to 145 psi
- Two SlowMode functions (25% and 50%), calibration mode, service display
- External stop, dual-level tank control, 2 relay outputs
- DDE Models
- Digital Dosing™ even for the low budget segment
- Flow and pressure from 0.0015 to 4 gph and up to 145 psi; two models cover entire range
- Control options: manual control 0.1-100 %, pulse in % of stroke volume
- External stop, empty tank control

APPLICATIONS

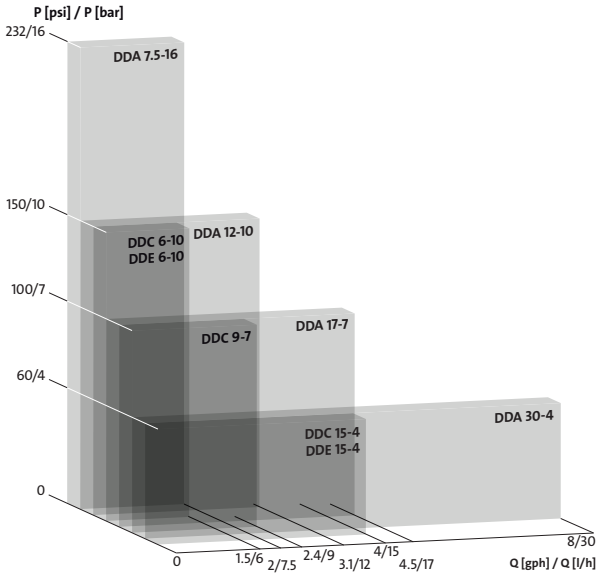
- Disinfection and pH adjustment
- Drinking water, process water and wastewater
- Food and beverage, Clean-in-place
- Ultrafiltration and reverse osmosis
- Pulp and paper, boiler feed water
- Swimming pool water, cooling towers
- Coagulation, flocculation, precipitation
- Chemical industry, car wash, irrigation
- Anywhere chemical treatment and conditioning of water is required

Technical Data & Feature Overview

DDA/DDC/DDE **INFORMATION**

Dosing head:	PP, PVC, PVDF and Stainless Steel 1.4401
Gaskets:	EPDM, FKM or PTFE
Valve balls:	Ceramics or stainless steel 1.4401 (SS heads only)
Connection sets (suction / pressure):	• Tubing: 1/4", 3/8", 1/2" • Threaded: 1/2" MNPT for PP, PVC and PVDF; 1/4"FNTP for SS
Max Flow, Q:	8 gph (30 l/h)
Max Pressure, P:	232 psi (16 bar)
Turndown ratio:	3000:1 or 1000:1
Liquid viscosity:	max 2500mPas, depending on model and setup
Supply voltage:	100-240 V, 50-60Hz
Power consumption:	max 18 W
Weight:	5.3-8.8 lbs (2.4-4 kg), depending on material
Sound pressure level:	60 dB(A)
Enclosure rating:	IP65, NEMA 4X
Approvals:	NSF61, CSA-US

Performance Range



Pump type	DDA			DDC		DDE		
Control variant	**FCM**	**FC**	**AR**	**AR**	**A**	**PR**	**P**	**B**
Operation modes								
Manual speed control	•	•	•	•	•	•	•	•
Pulse control in ml/pulse	•	•	•	•	•			
Pulse control (1:n)						•	•	
Analog control 0/4-20 mA	•	•	•	•				
Batch control (pulse-based)	•	•	•					
Dosing timer cycle	•	•	•					
Dosing timer week	•	•	•					
Fieldbus control	•	•	•					
Functions								
Auto deaeration also during pump standby	•	•	•					
FlowControl system with selective fault diagnosis	•	•						
Pressure monitoring (min / max)	•	•						
Flow measurement	•							
AutoFlowAdapt	•							
SlowMode (anti-cavitation)	•	•	•	•	•			
Calibration mode	•	•	•	•	•			
Scaling of analogue input	•	•	•					
Service information display	•	•	•	•	•			
Relay setting: alarm, warning, stroke signal, pump dosing	•	•	•	•		•		
Relay setting (additionally): timer cycle, timer week	•	•	•					
Inputs/outputs								
Input for external stop	•	•	•	•	•	•	•	
Input for pulse control	•	•	•	•	•	•	•	
Input for analogue 0/4-20 mA control	•	•	•	•				
Input for low-level signal	•	•	•	•	•	•	•	
Input for empty tank signal	•	•	•	•	•	•	•	
Output relay (2 relays)	•	•	•	•		•		
Output, analogue 0/4-20 mA	•	•	•					
Input/output for GeniBus	•	•	•					
Input/output for E-box (Profibus DP or additional alarm relays)	•	•	•					

Control Variants

FCM: Flow Control Measurment
FC: Flow Control
PR: Pulse Relay
P: Pulse input
AR: Analog Relay
A: Analog
B: Basic

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