

Digital Dosing

SMART DIGITAL XL RANGE

The Grundfos SMART Digital XL DDA and DDE digital diaphragm dosing pumps enable accurate dosing of virtually all chemicals up to 52.8 gph and 145 psi while offering great flexibility and user friendliness. The two pump models open up new application possibilities within industry, water utility, agriculture and more.



KEY FEATURES AND BENEFITS

Easy selection, few variants, stock reduction

The SMART Digital XL DDE (Economical) and DDA (Advanced), can easily be integrated into typical dosing applications.

Three sizes (60-10, 120-7, 200-4) cover a dosing range from 0.02 gph to 52.8 gph (0.075 to 200 l/h). With its wide range of power supplies (100-240 V, 50/60 Hz) the SMART Digital XL can be used globally. All international approvals are available.

Degassing chemicals (hypochlorite) and high-viscosity liquids up to 3,000 mPas can be dosed. The dosing head is available in various materials fit for all liquid chemicals.

The mounting plate allows quick installation on any horizontal surface, and the control cube can easily be modified to face left, right, or straight ahead.

Excellent dosing accuracy

The dosing accuracy is +/- 1.5 % of the actual setpoint and +/- 0.1% of full scale. This allows precise dosing of chemicals, even with small dosing quantities (ratio 800:1).

SMART Digital XL is able to dose concentrated chemicals, they don't have to be diluted. Chemicals are saved, transportation costs are reduced, smaller dosing tanks can be used. Moreover, the chemical consumption is reduced by dosing precisely the amount of chemicals required.

Dosing is almost pulsation-free, no additional accessories are needed. Overdosing is prevented and environmental and health protection are improved.

Integrated flowmeter reduces installation costs

An external flowmeter is not required. The integrated positive-displacement like flow measurement capability of the (DDA-FCM) measures precisely the dosed volume per stroke, and the integrated controller corrects the dosing flow automatically. Temperature, counterpressure, viscosity or air bubbles have no influence on the dosing accuracy.

This means full control of the dosing process on both the suction and pressure side with automatic failure correction, detection of air bubbles, and start of the automatic priming program.

Safe dosing with automatic failure correction

- Reduced operator time
- Increased system safety
- High process reliability
- Low failure rate

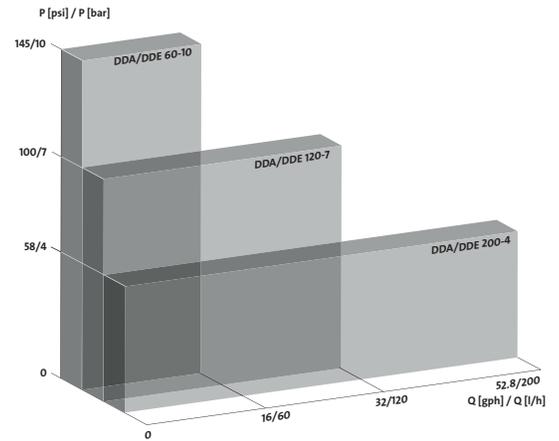
APPLICATIONS

- Disinfection
- pH adjustment
- Chemical dosing (anti foamers, cleaners, biocides, bleaches, surface handling agents, etc.)
- Cleaning in place (CIP)
- Coagulation
- Precipitation/flocculation
- Filtration
- Reverse osmosis

TECHNICAL DATA

DDA/DDC/DDE	
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):	Threaded: 3/4" MNPT for PVC and PVDF; 3/4" FNPT for stainless steel
MAX FLOW, Q:	52.8 gph (200 l/h)
MAX PRESSURE, P:	145 psi (10 bar)
TURNDOWN RATIO:	800:1
LIQUID VISCOSITY:	max 3000 mPas, depending on model and setup
SUPPLY VOLTAGE:	100-240V, 50-60 Hz
POWER CONSUMPTION:	max. 18 W
WEIGHT:	14.8-33.1 lbs (6.7-15 kg), depending on material
SOUND PRESSURE LEVEL:	80 dB(A)
ENCLOSURE RATING:	IP65, NEMA 4X
APPROVALS:	NSF61, CSA-US

PERFORMANCE RANGE



FEATURE OVERVIEW

PUMP TYPE	DDA		DDE	
	FCM	AR	AR	B
CONTROL VARIANT				
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)	•	•		
Double-diaphragm leakage detection (optional)		•		
INPUTS/OUTPUTS				
Input for external stop	•	•	•	
Input for pulse control	•	•	•	
Input for analogue 0/4-20 mA control	•	•	•	
Input for low-level signal	•	•	•	
Output relay (2 relays)	•	•	•	
Analog output (0)4-20 mA	•	•		
Input/output for GeniBus	•	•		
Input/output for Grundfos CIU (Profibus DP or additional alarm relays)	•	•		

CONTROL VARIANTS

- FCM: Flow Control Measurement
- AR: Analog Relay
- B: Basic

Visit grundfos.us/pei to learn more about Department of Energy (DOE) pump energy index (PEI) requirements and PEI ratings on specific Grundfos models.