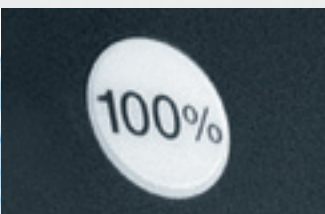


GRUNDFOS DOSING ALL PRODUCT



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GRUNDFOS 

Dosing Products Overview

PRODUCT FAMILY		Mechanically actuated diaphragm	Hydraulically actuated diaphragm	Manual knob for stroke length control	Stroke speed control	Stroke frequency control	Digital control interface (key pad)	Analog 4-20 mA control	Pulse control	Anti-cavitation/high viscosity mode	Plus3 system for auto-degassing option	Flow monitoring option	Available with duplex head	PAGES
	DME 0.00066 to 248 gph Up to 260 psi	●			●		●	●	●	●		●		6-11
	DDI 0.10 up to 39.6 gph Up to 232 psi	●			●		●	●	●	●	●	●		12-15
	Plus³	●			●		●	●	●	●	●	●		16-17
	DMI 0.095 up to 1.9 gph Up to 232 psi	●		●		●			●		●			18-19
	DMS 0.66 up to 3.17 gph Up to 160 psi	●				●	●	●	●			●		20-21
	DMX 1.3 up to 166.3 gph Up to 232 psi	●		●		●	●	●	●				●	22-23
	DMH 0.50 up to 278 gph Up to 2900 psi		●	●		●	●	●	●				●	24-25






NOTE: Options vary depending on model number

MODEL	SIZE	GPH	PSI	Max SPM
DMI 208	0.3 - 10	0.1	145	144
DDI 209	0.4 - 10	0.10	145	180
DMI 208	0.8 - 16	0.25	232	144
DMI 208	1.0 - 10	0.32	145	144
DMI 208	1.1 - 16	0.35	232	144
DMH 280	1.3 - 200	0.50	2900	76
DMI 208	1.6 - 10	0.51	145	144
DDI 209	2.0 - 16	0.58	232	180
DMH 281	2.0 - 100	0.60	1450	35
DMS	2 - 11	0.66	160	180
DME	2 - 18	0.66	260	180
DDI 209	3.0 - 10	0.66	145	180
DMH 251	2.2 - 25	0.69	363	17
DMH 280	2.2 - 200	0.70	2900	115
DMH 251	2.3 - 16	0.74	232	17
DMH 251	2.4 - 10	0.77	145	17
DMH 280	2.8 - 200	0.90	2900	144
DMI 208	3.0 - 10	0.92	102	144
DMS	4 - 7	1.05	102	180
DMI 208	3.6 - 16	1.14	189	144
DMI 208	4.0 - 8	1.27	87	144
DMX 221	4.0 - 10	1.3	145	35
DMH 281	4.2 - 100	1.30	1450	76
DMH 251	4.5 - 25	1.43	363	35
DDI 209	5.5 - 10	1.45	145	180
DMH 251	4.9 - 16	1.55	232	35
DMI 208	5.0 - 6	1.58	72.5	144
DMH 251	5 - 10	1.58	145	35
DMI 208	6.0 - 8	1.9	87	144
DME	8 - 10	1.98	145	180
DMS	8 - 5	1.98	78	180
DMH 281	6.4 - 100	2.00	1450	115
DMX 221	7 - 10	2.1	145	35
DMX 221	7 - 16	2.3	232	75
DMH 288	7.5 - 200	2.40	2900	67
DMH 281	8 - 100	2.50	1450	144
DMX 221	8 - 10	2.6	145	75
DMI 208	9 - 6	2.9	79.8	144
DMX 221	9 - 10	2.9	145	35
DME	12 - 6	3.17	87	180
DMS	12 - 3	3.17	49	180
DMH 252	10 - 16	3.17	232	35
DMH 288	10 - 200	3.30	2900	88
DMH 251	11 - 25	3.43	363	75
DMH 252	11 - 10	3.45	145	35
DDI 209	14 - 4	3.64	58	180
DMX 221	12 - 10	3.7	145	35
DMH 251	12 - 16	3.70	232	75
DMX 221	13.7 - 16	4.0	232	144
DMH 288	13 - 200	4.10	2900	118
DMH 251	13 - 10	4.22	145	75
DMI 208	14 - 4	4.44	43.5	144
DMX 221	14 - 10	4.5	145	75
DME	19 - 6	4.88	90	151
DMH 288	15 - 200	4.90	2900	134
DMX 221	16 - 10	5.0	145	144
DDI 209	20 - 3	5.28	43.5	180
DMH 251	17 - 25	5.28	363	115
DMX 221	17 - 4	5.3	58	35
DMI 208	18 - 4	5.7	43.5	144
DMX 221	18 - 10	5.8	145	75
DMH 287	18 - 200	5.80	2900	67
DMH 251	18 - 16	5.81	232	115
DMH 251	19 - 10	6.07	145	115
DMH 283	19 - 100	6.10	1450	65
DMH 285	20 - 100	6.30	1450	33
DMH 253	21 - 10	6.60	145	35

MODEL	SIZE	GPH	PSI	Max SPM
DMH 252	23 - 16	7.13	232	75
DMH 287	23 - 200	7.40	2900	88
DMH 252	24 - 10	7.66	145	75
DMX 221	25 - 3	7.9	43.5	35
DMX 221	26 - 10	8.2	145	75
DMX 221	27 - 10	8.4	145	144
DMH 283	27 - 100	8.40	1450	90
DMH 287	31 - 200	9.80	2900	118
DMH 283	33 - 100	10.60	1450	110
DMX 221	35 - 10	11	145	144
DMH 252	36 - 16	11.35	232	115
DMH 287	36 - 200	11.40	2900	134
DMH 252	37 - 10	11.62	145	115
DMX 221	39 - 4	12	58	75
DME	48 - 3	12.68	38	151
DMH 283	40 - 100	12.70	1450	134
DMH 285	40 - 100	12.70	1450	67
DMH 253	43 - 10	13.70	145	75
DDI 222	60 - 10	15.8	145	180
DMH 254	50 - 10	15.80	145	32
DME	60 - 10	15.85	145	160
DMX 221	50 - 10	16	116	144
DMX 226	52 - 8	16.4	116	75.6
DMH 285	52 - 100	16.60	1450	88
DMX 221	60 - 3	19	43.5	75
DMH 253	67 - 10	20.60	145	115
DMX 226	67 - 10	21.1	145	68.4
DMH 285	70 - 100	22.20	1450	118
DMX 221	75 - 4	24	50.8	144
DMH 285	80 - 100	25.30	1450	134
DMX 226	82 - 5	25.9	72	75.6
DMH 253	83 - 10	26.10	145	144
DMH 286	85 - 50	26.90	725	67
DMX 226	95 - 8	30	116	68.4
DMH 254	97 - 16	30.60	232	65
DMX 226	100 - 8	31.7	116	144
DMH 254	102 - 10	32.20	145	65
DMH 286	111 - 50	35.10	725	88
DMX 221	115 - 3	36	36.3	144
DDI 222	150 - 4	39.6	58	180
DME	150 - 4	39.6	58	160
DMX 226	130 - 3	41.2	43.5	75.6
DMX 226	132 - 10	41.7	116	144
DMH 254	136 - 16	43.00	232	90
DMH 254	143 - 10	45.40	145	90
DMX 226	152 - 6	48	87	68.4
DMX 226	160 - 5	50.7	72	144
DMH 254	166 - 16	52.80	232	110
DMH 286	170 - 50	53.90	725	134
DMH 254	175 - 10	55.40	145	110
DMH 255	194 - 10	61.50	145	65
DMX 226	199 - 8	63.1	116	144
DMH 254	202 - 16	63.90	232	134
DMH 254	213 - 10	67.30	145	134
DMH 257	220 - 10	69.70	145	33
DMX 226	249 - 3	78.9	43.5	68.4
DMX 226	255 - 3	80.8	43.5	144
DMH 255	270 - 10	85.50	145	90
DME	375 - 10	99	145	160
DMX 226	321 - 6	102	58	144
DMH 255	332 - 10	105.00	145	110
DMH 255	403 - 10	128.00	145	134
DMH 257	440 - 10	139.40	145	65
DMX 226	525 - 3	166.3	43.5	144
DMH 257	575 - 10	182.20	145	90
DMH 257	770 - 10	244.00	145	110
DME	940 - 4	248	58	160
DMH 257	880 - 10	278.00	145	134

DMX 226 and DMH available in Duplex configuration for double capacity.

4 • CONTROL FEATURES BY MODEL

	 DME 2 to 48 A, AR	 DME 60 to 940 AR	 DME 60 to 940 B	 DMS A, AR	 DMS B
CAPACITY CONTROL					
Stroke frequency control	▲	▲	▲	▲	▲
Stroke speed control	▲	▲	▲		
CONTROL PANEL					
Capacity setting in l/hr, ml/hr, or GPH	▲	▲	▲	▲	▲
Display with soft touch buttons and background light	▲	▲	▲	▲	▲
Circular menu	▲	▲	▲	▲	▲
Multi-language options	▲	▲	▲	▲	▲
Start/Stop button	▲	▲	▲	▲	▲
Maximum capacity (priming) button	▲	▲	▲	▲	▲
Green light for operating indication	▲	▲	▲	▲	▲
Red light for fault indication	▲	▲	▲	▲	▲
Control panel lock	▲	▲	▲	▲	▲
Front interface	▲	▲	▲	▲	▲
Side interface	▲	▲	▲	▲	
OPERATING MODES					
Manual control	▲	▲	▲	▲	▲
Pulse control	▲	▲		▲	
Analog 0/4-20 mA control	▲	▲		▲	
Timer-based batch control	▲	▲			
Pulse-based batch control	▲	▲			
FUNCTIONS					
Dosing monitoring	▲	▲		▲	
Dual level control	▲	▲		▲	
Calibration function	▲	▲	▲	▲	▲
Anti-cavitation (reduced suction speed)	▲	▲	▲		
Capacity limitation	▲	▲	▲		
Counter for strokes, operating hours, and power On/Off	▲	▲	▲	▲	▲
Fieldbus communication Profibus (variant AP)	▲	▲			
Overload protection		▲	▲		
Error message in display		▲	▲		
Leak detection		▲			
Dosing signal output		▲			
POWER SUPPLY					
Switch mode (100-240 V, 50/60 Hz)	▲	▲	▲		
INPUTS/OUTPUTS					
Pulse input	▲	▲		▲	
Analog 0/4-20 mA input	▲	▲		▲	
External Start/Stop input	▲	▲		▲	
Alarm relay output (variant AR)	▲	▲		▲	
Dosing output		▲			

								
	DDI 209	DDI 222	DMI B	DMI A (AR)	DMX B	DMX AR	DMH B	DMH AR
CAPACITY CONTROL								
Stroke frequency control				▲		▲		▲
Stroke speed control	▲	▲						
Stroke length adjustments			▲	▲	▲	▲	▲	▲
CONTROL PANEL								
Capacity setting in l/hr, ml/hr, or GPH	▲	▲						
Red light for stopped pump and error signals	▲	▲				▲		▲
Green light when pump is running	▲	▲		▲		▲		▲
Yellow light to indicate pump remotely paused	▲	▲						
Control panel lock	▲	▲				▲		▲
Start/Stop button	▲	▲				▲		▲
Front-mounted interface	▲	▲				▲		▲
Side-mounted interface		▲						
Top-mounted interface	▲			▲				
Wall-mounted interface						▲		▲
OPERATING MODES								
Manual control	▲	▲	▲	▲	▲	▲	▲	▲
Pulse control	▲	▲		▲		▲		▲
Analog 0/4-20 mA control	▲	▲				▲		▲
Pulse-based batch control	▲	▲				▲		▲
Internal timer-based batch control	▲	▲						
FUNCTIONS/OPTIONS								
Alarm outputs (variant AR)	▲	▲		▲		▲		▲
Dosing controller output						▲		▲
Flow monitor (variant AF)	▲	▲						
Leak detection (optional diaphragm breakage indication)	▲	▲				▲	▲	▲
Dual level control (requires level controller, available on select sizes)	▲	▲		▲		▲		▲
Auto degassing pump head (optional Plus3 system)	▲		▲	▲				
Anti-cavitation/slow mode (reduced suction speed)	▲	▲						
Pulse memory (saves up to 65,000 pulses)	▲	▲				▲		▲
Calibration function	▲	▲						
Resettable dosing quantity counter	▲	▲						
Hours of operation counter	▲	▲				▲		▲
Remote On/Off	▲	▲		▲		▲		▲
0/4-20 mA output	▲	▲				▲		▲
Fieldbus communication (variant AP - Profibus)	▲	▲						
Available in Duplex versions (check size chart for availability)					▲	▲	▲	▲

DME – High-Precision Dosing from 0.00066 to 12.7 gph (48 l/h)



The DME series of high-precision diaphragm pumps are the cornerstone of the highly successful Digital Dosing series from Grundfos. They were the first to combine high-precision dosing with unprecedented user-friendliness, and they remain the best in the business today.

The DME 0.00066 gph – 12.68 gph (2.5 ml/h – 48 l/h) pumps use stepper-motor technology in an entirely new way. The variable-speed motor remains in contact with the diaphragm throughout the entire discharge/suction cycle, controlling its speed at all times. This ensures a much greater level of control compared to traditional dosing pumps.

User-Friendly Dosing

The Digital Dosing range eliminates the need for complicated calculations associated with other dosing equipment. In effect, the simple user interface lets you be your own dosing specialist, using a minimal number of buttons to give access to an impressive range of control features.

Variable Speed for Smooth Dosing

The ingenious stepper motor runs continually, ensuring that the discharge phase extends throughout the full period between suction phases. This gives a better, more even mix. The motor automatically adjusts the dosing speed to provide the right amount of additive at all times.

Full Stroke Length at All Times

Grundfos uses a full stroke length every time, thereby improving accuracy and efficiency. The stroke speed is carefully adjusted to ensure even concentrations of additive in your media.

Turndown Ratio 1:1000

The Digital Dosing range is designed to give you superior flexibility and accuracy with a minimal number of pump variants. With a turndown ratio of 1:1000, the DME range will remain accurate even when dosing in very small amounts.

Anti-Cavitation

The variable speed of the DME pumps facilitates a unique anti-cavitation function for high-viscosity liquids. This function gives you slower suction speed (70% of the maximum speed), thereby ensuring optimal priming and pumping of even the most difficult liquids.

Calibration

With Digital Dosing, calibration is easier and faster than ever. Simply place a graduated glass under the pump and activate the calibration program. The pump will perform 100 strokes and indicate how much it thinks it has pumped. Adjust the figure by entering the correct numbers if necessary. After this dosage can be adjusted without recalibrating the pump.

14 Different Languages

As part of the Digital Dosing series, Grundfos DME pumps can be set to one of 14 different languages, making them perfect for integration in products aimed at a worldwide market.

Counter

The built-in counter function provides easy access to information about the accumulated number of strokes, accumulated operating hours and flow, as well as the total number of times the pump is switched on.

Several Material Variants

The DME pump heads are available in several different materials to suit your situation: stainless steel, PVDF, and polypropylene for an environmentally friendly and cost-efficient alternative.

Dimensions [inches (mm)]

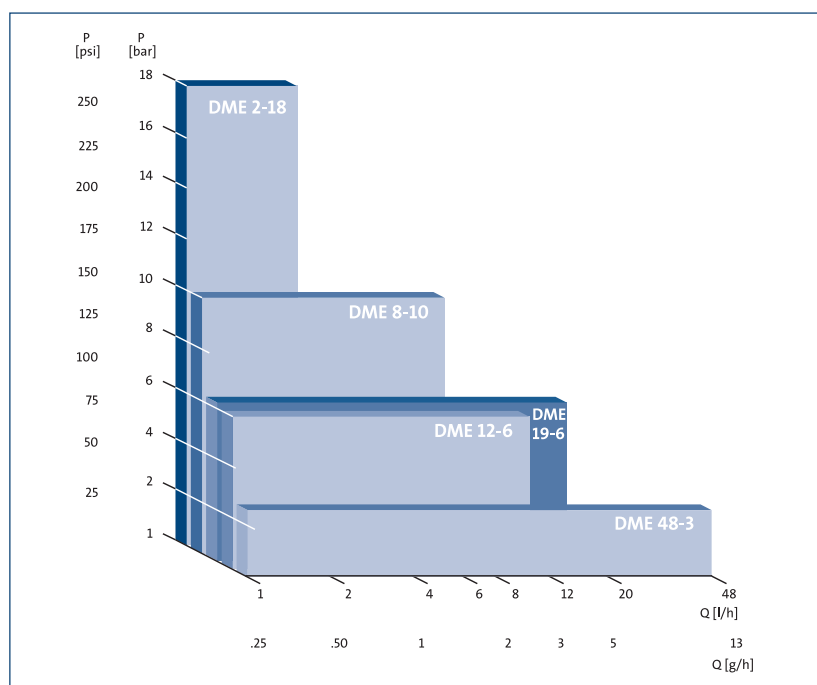
	DME 2	DME 8	DME 12	DME 19	DME 48
A		5 7/16 (137)		7 9/16 (192)	
B		9 7/16 (239)		7 11/16 (194)	
C		1 7/16 (36)		5/8 (15)	
D		6 5/8 (168)		7 7/16 (188)	

Product Range and Performance Data

Pump type		DME 2-18	DME 8-10	DME 12-6	DME 19-6	DME 48-3
Capacity at max. pressure	g/h (l/h)	0.66 (2.5)	1.98 (7.5)	3.17 (12)	4.89 (18.5)	12.68 (48)
Max. pressure	psi (bar)	261 (18)	145 (10)	87 (6)	89.9 (6.2)	37.7 (2.6)
Setting range		1:1000	1:1000	1:1000	1:1000	1:1000

Stroke frequency	spm	180				
Suction lift	ft (m)	19.7 (6)				
Viscosity	cps	500				
Power supply	V, Hz	1×100-240, 50-60 Hz				
Accuracy	%	±1% repeatability - full range				

Performance Range



Additional Features

Pulse

The pump is dosing according to an external pulse signal, e.g., from an external water meter.

Analog

The pump is dosing according to an external analog signal. The dosage is proportional to the input value in mA.

Timer

Integrated timer function, which enables the pump to dose a specific entered batch at maximum capacity according to the timer settings.

Batch

The pump doses a specific entered batch at maximum set capacity when receiving an external pulse signal.

Lock

Protect the pump settings by enabling the electronic lock.

DME – Larger Pumps from 0.02 to 39.7 gph (60 - 150 l/h)



Grundfos has applied innovative technology to expand the Digital Dosing pump range, allowing it to handle liquids in much larger quantities. Perfect for large water and wastewater treatment plants, textile industries, pulp and paper industries, and many other demanding applications, the new, large DME pumps bring the benefits of Digital Dosing to a new circle of users worldwide.

Familiar Digital Dosing Benefits

The large DME pumps have all the benefits of the highly acclaimed smaller Digital Dosing range, making exact dosing easier than ever.

Easy-To-Use Digital User Interface

The simple display allows everyone to be their own dosing specialist. With just a few buttons, you can navigate the straightforward menus to use the impressive range of standard control features – including pulse, analog, timer, batch, and anti-cavitation control – as well as simple calibration and much more.

Turndown Ratio 1:800

Digital Dosing pumps can be adjusted to 1/800 of their maximum capacity. Two new sizes provide even more flexibility, from 0.02 to 39.6 GPH (75 to 150 ml/h).

Full Stroke Length at All Times

Grundfos is the only pump manufacturer to use a full stroke length every time. The speed of each stroke is carefully timed, ensuring even concentration in the system and optimal priming throughout the entire operating range.

Smooth, Continuous Dosing

A brushless DC motor eliminates the need for a servo motor/frequency converter. The result is smooth, continuous dosing, which greatly improves the performance of sensors and measuring devices that read the impact of your chemical feed program.

Anti-Cavitation

For handling viscous polymers or other difficult liquids, slow down the speed of the suction stroke to 75%, 50%, or 25% of the maximum speed.

Fieldbus Communication Available

Available with Profibus interface.

Overload Protection

Built-in overload protection monitors pump counter pressure and protects against exceptionally high pressure loads.

Switch-Mode Power Supply

The switch-mode power supply ensures that Grundfos Digital Dosing pumps can be used worldwide within the 100–240V, 50/60Hz range.

Several Material Variants

The DME pump heads are available in stainless steel, PVDF, and environmentally friendly, cost-efficient polypropylene.



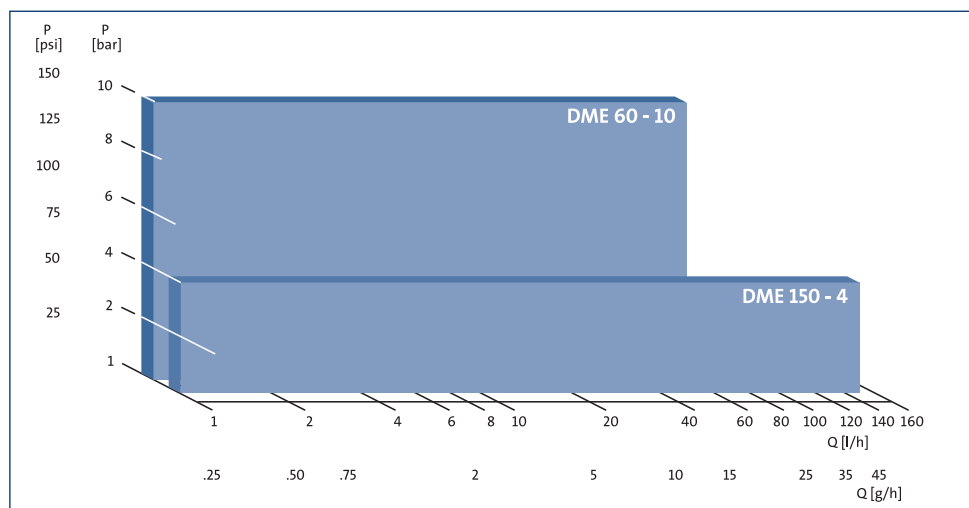
Dimensions [inches (mm)]

	DME 60-10	DME 150-4	
A	6.93 (176)		
B	7.8 (198)		
C	13.03 (331)	13.58 (345)	
D	11.18 (284)		
E	7.09 (180)		
F	17.48 (444)		
G	1.61 (41)	1.10 (28)	
H	2.91 (74)		
I	7.36 (187)		

Product Range and Performance Data

Pump type		DME 60-10	DME 150-4
Max. capacity at max. pressure	GPH (l/h)	15.85 (60)	39.6 (150)
Min. capacity	GPH (l/h)	0.0198 (0.075)	0.0497 (0.188)
Max. pressure	psi (bar)	145 (10)	58 (4)
Setting range		1:800	
Stroke frequency	spm	160	
Power supply	V, Hz	1×100-240V, 50-60 Hz	
Accuracy	%	±1% repeatability	
Pump head material		PP, PVDF, stainless steel	
Suction lift	ft (m)	13.1 (4)	
Viscosity	cps	3000	

Performance Range



DME 375/940 – Exact Dosing from 0.13 to 248 gph (940 l/h)



Grundfos has applied the innovative technology of Digital Dosing to expand the performance range of these precision metering pumps. The large DME is perfect for water and wastewater treatment plants, textile and pulp & paper industries, and many other demanding applications.

Familiar Digital Dosing Benefits

The DME 375 and 940 have all the benefits of the highly acclaimed smaller models but offer precision performance at much higher capacities. Available materials include polypropylene, PVDF, and 316 stainless steel.

Easy to Use Interface

The intuitive menu structure is extremely easy to use. Use the keypad to set the desired flow in gph (or l/h). With just the touch of a button, navigate the menu to use the impressive range of standard automatic control features, including pulse, analog, batch or internal timer control. Confirm that “what you set is what you get” by running a quick and simple calibration.

Smooth, Continuous Feed

The 800:1 turndown ratio means the large DME will continuously deliver chemicals down to 1/800 of full speed. Precise speed control of the brushless DC motor eliminates the need for a servo-motor/frequency converter or additional variable speed drives.

Accurate Through Its Entire Adjustable Range

DME pumps always perform at 100% stroke length. Motor speed is carefully timed to deliver the desired feed rate, even in pulse and analog control modes without pausing to rest in between strokes.

Additional Features

- Anti-cavitation: slows down the suction stroke speed 75%, 50%, or 25% to facilitate handling viscous fluids
- Overload protection: will stop the pump if the maximum pressure load is exceeded
- Fieldbus communication: available with Profi-bus interface
- Switch-mode power supply: 100-240 VAC, 50/60 Hz to facilitate use around the globe.



Dimensions [inches (mm)]

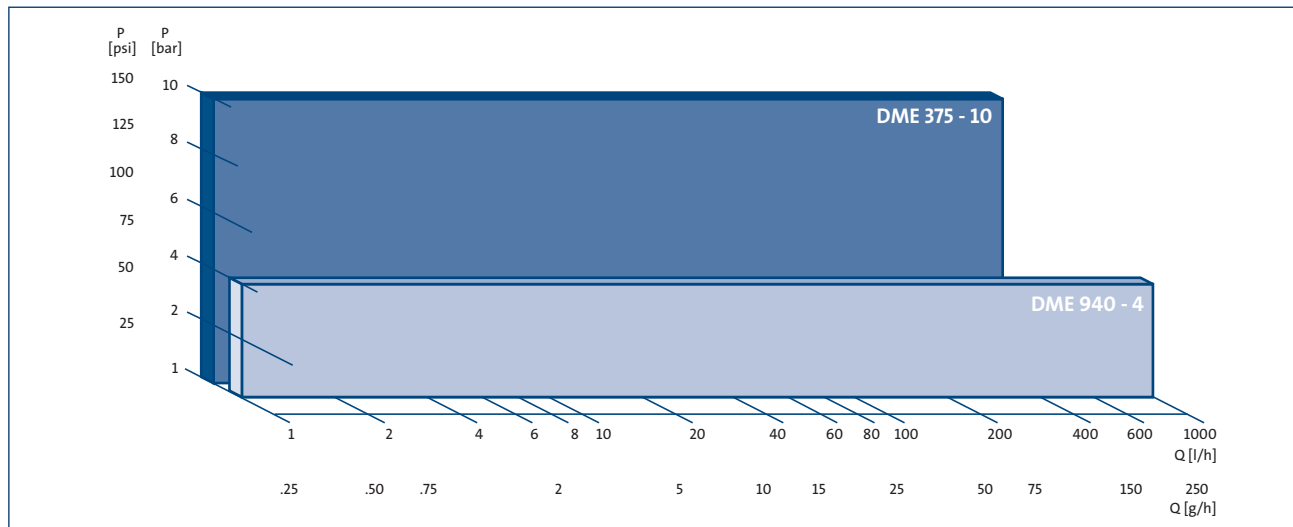
	DME 375-10	DME 940-4	
A	9.37 (238)	9.37 (238)	
B	8.58 (218)	8.58 (218)	
C	18.54 (471)	19.53 (496)	
D	14.33(364)	14.33(364)	
E	9.06 (230)	9.06 (230)	
F	21.26 (540)	21.22 (539)	
G	1.22 (31)	.24 (6)	
H	3.74 (95)	3.74 (95)	
I	9.69 (246)	9.69 (246)	

Product Range and Performance Data

Pump type		DME 375-10	DME 940-4
Max. capacity at max. pressure	gph (l/h)	99.1 (375)	248.3 (940)
Min. capacity	gph (l/h)	0.124 (0.47)	0.31 (1.18)
Max. pressure	psi (bar)	145 (10)	58 (4)
Setting range		800:1	
Stroke frequency	[min ⁻¹]	160	
Power supply	[V], [Hz]	1×100-240V, 50-60 Hz	
Accuracy	%	±1% repeatability	
Pump head material		PP, PVDF, 316 SS	
Suction lift: primed/dry	ft [m]	19/4.9 [6/1.5]	
Viscosity*	[cps]	3000 at 50% capacity	

*Spring-loaded valves

Performance Range



DDI 209 – Perfect Precision from 0.001 to 5.3 gph (20 l/h)



The Difference is Digital

The Grundfos DDI range was created because accurate dosing demands precision. These compact units combine perfect precision with a user interface that lets you set the dosing feed rate you want directly on the pump – without spending time on complicated calculations beforehand. Available materials include PVC, PVDF, polypropylene, and 316 stainless steel.

The DDI AR: Taking Diaphragm Dosing Pumps to the Next Level

The DDI AR series is the backbone of the overall DDI range. Its innovative drive technology combines a powerful stepper motor with integrated contact signal control to bring you smoother, more accurate dosing. The user interface gives you a full range of options for customizing the dosing process.

Smooth Dosing Through Variable Speed

By using a full stroke length (100%) through its entire adjustable range, the DDI does not sacrifice accuracy at low feed rates, and eliminates potential disruptive factors such as gas buildup. Rather than adjusting the stroke length to suit demand, a stepper motor carefully adjusts the speed of each stroke to ensure a smooth, even delivery of the pumped media.

Turndown Ratio of 100:1

The DDI range is designed to give you superior flexibility and accuracy with as few product variants as possible. That is why you can slow down the feed rate to 1/100 the pump's maximum capacity without any loss of accuracy.

The DDI series can dose additive in quantities down to 0.001 GPH (0.025 l/h) with perfect precision. Evidence of this precision can be provided at any time while the pump is running — it runs with nearly continuous flow, with no pauses between strokes.

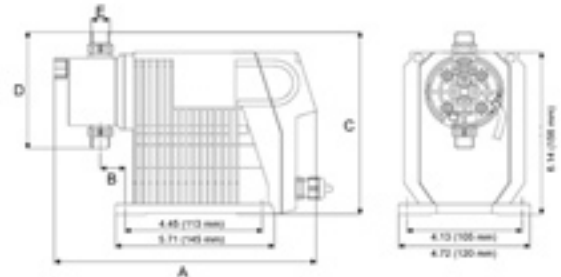
Reliable Dosing of Viscous Liquids

To facilitate handling viscous fluids, the suction stroke speed can be slowed down to reduce friction losses. Simply enable the Slow Mode to decelerate the suction stroke, thereby maintaining superior reliability.



DDI AR Dimensional Data

DDI Pump	A in (mm)	B in (mm)	C in (mm)	D in (mm)	E
0.4-10	9.41 (239)	0.91 (23)	6.91 (175.5)	4.41 (112)	G 3/8
2-16	9.41 (239)	0.91 (23)	6.91 (175.5) [8.17*]	4.41 (112) [6.93*]	G 3/8 [G 5/8*]
3-10	9.41 (239)	0.91 (23)	6.91 (175.5) [8.17*]	4.41 (112) [6.93*]	G 3/8 [G 5/8*]
6-10	9.41 (239)	0.91 (23)	6.91 (175.5) [8.17*]	4.41 (112) [6.93*]	G 3/8 [G 5/8*]
14-4	9.45 (240)	1.14 (29)	7.28 (185)	5.24 (133)	G 5/8
20-3	9.45 (240)	1.14 (29)	7.28 (185)	5.24 (133)	G 5/8



Technical Specifications

DDI Pump	Max capacity		SPM (at 60Hz)	Max suction lift ft AR (AM)	Max viscosity cps AR (AM)
	GPH AR (AM)	psi			
0.4-10	0.1 (0.1)	145	180	- (5)	500 (100)
2-16	0.58 (0.5)	232		13 (5)	1000 (100)
3-10	0.66 (0.58)	145		13 (5)	500 (100)
6-10	1.45 (1.29)	145		13 (5)	500 (50)
14-4	3.64 (n/a)	58		9	500 (n/a)
20-3	5.28 (n/a)	43.5		9	500 (n/a)

Application Areas

- › Treatment of industrial and municipal water
- › Industrial cleaning
- › Polymer feed
- › Paper production/paper finishing
- › Optical technology and chip production
- › Chemical industry
- › CIP cleaning and disinfection (dairies, breweries, etc.)
- › Galvanic industry and surface treatment
- › Air conditioning/cooling towers
- › Reverse osmosis systems
- › Semi-conductor industry

Additional Data

Accuracy	Dosing flow variation/ linearity deviation	< +/- 1.5% throughout adjustable range
Control methods	Manual, Analog, Pulse, Batch timer	
Output signals	0(4)-20 mA, alarm relay, low-level and empty tank	
Power Supply	100 - 240 V, 50/60 Hz	

Additional Options

Plus3 (DDI 208/209 only)	Auto degassing for sodium hypochlorite and other difficult liquids
Leak detection	Diaphragm failure indication
Flow monitor	Monitor flow in the pump head without additional sensors or controls
Profibus	Fieldbus communication

DDI 222 – Perfect Precision from 0.158 to 39.6 gph (0.6 to 150 l/h)



The Difference is Digital

The Grundfos DDI range was created because accurate dosing demands precision. These compact units combine perfect precision with a user interface that lets you set the dosing feed rate you want directly on the pump – without spending time on complicated calculations beforehand. Available materials include PVC, PVDF, polypropylene, and 316 stainless steel.

The DDI AR: Taking Diaphragm Dosing Pumps to the Next Level

The DDI AR series is the backbone of the overall DDI range. Its innovative drive technology combines a powerful EC motor with integrated contact signal control to bring you smoother, nearly continuous, and more accurate dosing for the optimal mixing of liquids. The EC motor technology also lowers energy costs while still providing maximum efficiency.

Two Slow Mode steps and special valve combinations can be used for handling of more viscous liquids. The user interface gives you a full range of options for customizing the dosing process. Contact or analogue signal controls and batch or timer dosing are just some possibilities for specific applications.

The DDI AF: Built-In Flow Monitor

The DDI AF models have all of the overall DDI benefits: it doses, measures, and detects gases from the pump head, cavitation, and pressure changes that result from line breaks or a blocked discharge line. It eliminates the need for additional equipment by combining precision dosing and continuous flow measurement in a single unit.

With a radical reduction in variants and spare parts, you only need one motor, one gearing, and two dosing head sizes to fit the complete pump series.

Easy Input and User-Friendly Display

The DDI features easy input and display of the dosing rate in l/h or gal/h, with perfect calibration for optimum operating convenience and unparalleled levels of precision. There's also a hotkey for easy query of the dosed quantity, allowing optimal control of the consumption of chemicals. Control excess pressure of the pump by digitally inputting the maximum backpressure allowed before the pump stops.

Turndown Ratio of 800:1

The DDI range is designed to give you superior flexibility and accuracy with as few product variants as possible. That is why you can slow down the feed rate to 1/100 the pump's maximum capacity without any loss of accuracy.

The DDI series can dose additive in quantities down to 0.019 GPH (0.0029 l/h) with perfect precision. Evidence of this precision can be provided at any time while the pump is running — it runs with nearly continuous flow, with no pauses between strokes.

Double Diaphragm System with Diaphragm Control for Pump Protection

Double diaphragm technology comes as a standard option on DDI model 222. This option affords high process reliability. If there is a working diaphragm defect, the pump continues to dose with the robust protective diaphragm.

The diaphragm control is optional. For applications where the process must not be interrupted in the event of a diaphragm leakage, a differential pressure sensor is optionally available. In the event of a working diaphragm leakage, the sensor immediately sends out a signal, while the pump continues to dose with the protective diaphragm. (See figure at right.)



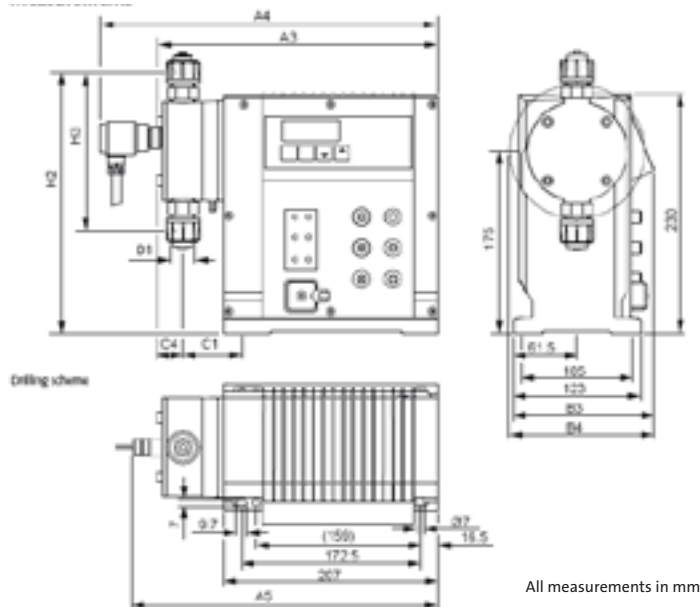
DDI 222 Technical Data

Input of the dosing capacity	Digital – by regulation of the dosing stroke speed Adjustment range: from 0.125% to 100% of the maximum dosing capacity			
Accuracy	Dosing flow < ± 1.5%, linearity < ± 1.5%			
Noise level	65 ± 5 dB (A), tested according to DIN 45635-01-KL3			
Max. suction height	6 m Water Column for liquids with viscosity similar to water			
Max. viscosity (HV version) at operating temperature	DDI model 222-60D 222-150D	Normal operation 200 mPa s 500 mPa s	Slow Mode 1 1000 mPa s 800 mPa s	Slow Mode 2 2600 mPa s 2000 mPa s
Max. admission pressure	2 bar on the suction side			
Min. backpressure	1 bar (pressure difference with the suction side)			
Max. temperature	<ul style="list-style-type: none"> max. ambient and operating temperature +40°C storage temperature -10°C up to +50°C 			
Max. relative air humidity	up to 92%, no condensation			
Motor, motor voltage	AC 110 - 240 V ±10%, 50/60 Hz, power consumption 50 W (including all sensors)			
Material of enclosure	Pump and electronics, PPE/PS 20% glass-fiber reinforced Option: flame-proof enclosure			
Protection	IP 65			
Weight	DDI model 222-60D DDI model 222-150D	PVC,PP,PVDF: 5 kg / stainless steel: 7 kg PVC,PP,PVDF: 7.5 kg / stainless steel: 12 kg		

DDI 222 Flow Capacities

NORMAL OPERATION				SLOW MODE STEP 1				SLOW MODE STEP 2				V _{stroke} [ml] (p=3 bar)	DDI MODEL
Q [l/h]	P _{max} [bar]	Q [USg/h]	P _{max} [psi]	Q [l/h]	P _{max} [bar]	Q [USg/h]	P _{max} [psi]	Q [l/h]	P _{max} [bar]	Q [USg/h]	P _{max} [psi]		
60	10	15.87	145	40	10	10.58	145	24.7	10	6.53	145	6.63	222-60D
150	4	39.68	58	100	4	26.46	58	62	4	16.40	58	13.9	222-150D

DDI 222 Dimensional Data



Double Diaphragm System



Version for high-viscosity liquids (HV)

DDI Models	A3	A4	B3	B4	C1	C4	D1	H2	H3	C1	C4	D1	H2	H3
222-60D	272	326	137	-	58	26	G $\frac{3}{8}$ "	252	153	90	39	G1 $\frac{1}{4}$ "	246	143
222-150D	315	372	137	139	90	39	G1 $\frac{1}{4}$ "	265	179	90	39	G1 $\frac{1}{4}$ "	265	179

Plus³ System for Automatic Deaeration and Calibration



Degassing and Calibration Unit for Your DMI and DDI Pumps

The Plus³ system is a deaeration and calibration unit that enables your dosing pump to handle volatile liquids. Briefly put, it removes gas from the liquid being dosed and makes continuous calibration possible while the pump is in operation.

The Plus³ system allows for reliable dosing of volatile media, accurate dosing of very small quantities, and precise dosing of concentrated, or neat, liquids. Designed as an option for use with the DMI and DDI models, the Plus³ system lets you get the most out of your dosing pump.

Reliable Dosing of Sodium Hypochlorite

The Plus³ system is based on a patented double-diaphragm design which removes air in the dosing media, thereby insuring completely accurate dosing. Fluids like sodium hypochlorite that can cause many pumps to gas lock and lose prime are handled with ease using the Plus³ system.

The usual problems associated with such high-precision dosing are avoided by having the Plus³ unit lift a large quantity of liquid into the priming chamber. Here, it is deaerated so that all gas bubbles are removed before the exact dose required is added to your process. The unwanted air is vented into the atmosphere, while the surplus liquid is returned to the container for later use.

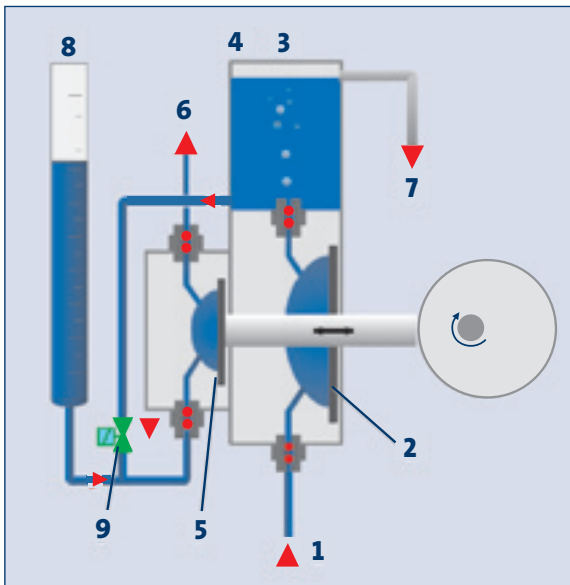
Continuous Calibration

The Plus³ system includes a compact integrated calibration system. This allows for accurate control and adjustment of the dosing rates at any time. You won't need to interrupt the process, no additional calibration devices are necessary, and no chemicals are wasted. The net result is simple: The calibration system saves you time and money.

Change Tanks During Operation

Because of the small reservoir built into the pump head, the Plus³ system allows you to change the feed tank while the pump is running – a definite plus for disinfection processes.





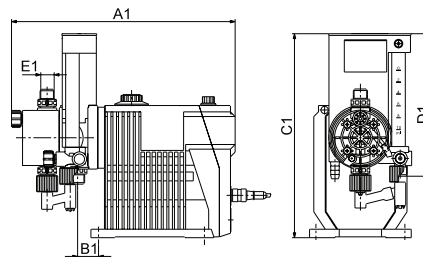
The Plus³ system employs a patented double diaphragm design to optimize dosing accuracy.

How it works:

- The first diaphragm (2) draws in a large amount of dosing media from the dosing tank (1) and transfers it into the priming chamber (3) for deaeration. This eliminates the problems associated with drawing-in of very small quantities.
- (4) Any gas bubbles in the liquid are vented into the atmosphere.
- The second diaphragm (5) doses the exact amount of liquid required into the dosing line (6).
- Excess liquid is returned to the tank through the deaeration bypass (7).
- The integrated calibration tube (8) and valve (9) allow for precise calibration of the dosing flow while the pump is running.

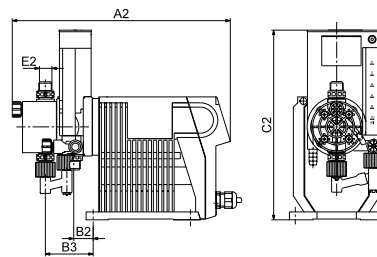
Performance Range

Model	Size	Capacity
DDI	0.4 - 10	0.10 gph/145 psi
	2 - 16	0.50 gph/232 psi
	3 - 10	0.58 gph/145 psi
	6 - 10	1.29 gph/145 psi
DMI	0.3 - 10	0.08 gph/43.5 psi 0.05 gph/145 psi
	0.8 - 16	0.42 gph/145 psi 0.13 gph/232 psi
	1 - 10	0.42 gph/43.5 psi 0.21 gph/145 psi
	1.1 - 16	0.71 gph/145 psi 0.44 gph/232 psi
	1.6 - 10	0.71 gph/43.5 psi 0.55 gph/145 psi
	3 - 10	0.98 gph/43.5 psi 0.87 gph/102 psi
	3.6 - 16	1.43 gph/145 psi 1.11 gph/232 psi
	4 - 8	1.43 gph/43.5 psi 1.27 gph/87 psi
	6 - 6	1.85 gph/43.5 psi 1.65 gph/87 psi



DDI with Plus³ system

Pump	DDI 0.3 - 10
A1	10.28
B1	0.99
C1	9.88
D1	7.78
E1	G 3/8



DDI 209 AR with Plus³ system

Pump	DDI 0.40 - 10
Model	209 AR
A2	10.87 (276)
B2	0.98 (25)
B3	2.4 (61)
C2	9.45 (240)
E2	G 3/8

DMI – Cost-Efficient Dosing from 0.008 to 5.7 gph (21.6 l/h)



Variations on the Synchronous Motor Theme

The Grundfos DMI range comprises several variants for general or specific dosing purposes. Dosing heads and valves are available in different materials to suit a wide range of general water treatment and industrial applications.

Although it appears to be a solenoid pump, the DMI is actually MOTOR DRIVEN. Whichever model you choose, you get a sturdy, cost-efficient pump based on a well-proven synchronous motor design. The DMI range can handle feed rates from 0.08 to 4.8 GPH (0.3 to 18 l/h) and pressures up to 232 psi (16 bar).

Silent Operation

Regardless of model, the DMI pump is among the most quiet pumps of its type available on the market today. It keeps its noise emission down to just 45 dB(A).

Flexible Installation

The Grundfos DMI is suitable for both horizontal and vertical installation. If installed horizontally, the control elements are located on the unit's top for easy access. Pump head materials include: PVC, PP, PVDF, and 316 SS.

Gentle Dosing — Less Maintenance

The synchronous motor technology used in the Grundfos DMI range combines accuracy and reliability. Unlike solenoid pumps, pulsation spikes are limited, reducing vibration, wear, and tear on pump and system components.

Manual or External Control

The DMI is offered in two control versions: variant B for simple manual control, or variant A which will operate manually or from an external contact generated pulse.

Typical Applications

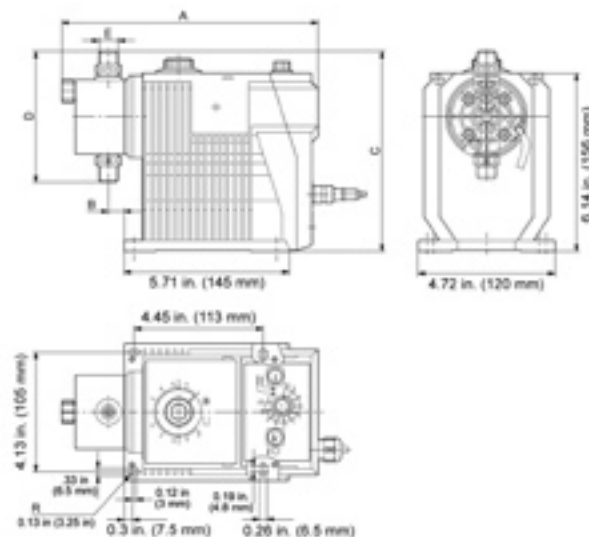
- Municipal and industrial water treatment
- Cleaning and disinfection, CIP
- Car washes
- Paper production and finishing
- Cooling towers
- Plating industry
- Optical technology and chip production
- Chemical industry
- Galvanic industry and surface treatment
- Mechanical and chemical engineering



Dimensional Data

DMI Pump	A (mm)	B (mm)	C (mm)	D (mm)	E
0.3-10	8.86 (225)	0.81 (20.7)	6.91 (175.5)	4.41 (112)	G 3/8
0.8-16					
1-10					
1.1-16					
1.6-10					
3-10	8.86 (225)	0.81 (20.7)	6.91 (175.5)	4.41 (112)	G 3/8
3.6-16					
4-8					
5-6					
6-8					
9-6	9.06 (230)	1.05 (26.7)	7.26 (184.5)	5.24 (133)	G 3/8
14-4					
18-4					

NOTE: Dimensions are only for standard pump heads.



Technical Specifications

DMI Pump	Max capacity		spm (at 60Hz)	Vstroke (cm ³) 100% stroke	Maximum suction lift		Turndown ratio	Max Viscosity (cps)
	GPH (l/hr)	psi (bar)			Wet (ft)	Dry (ft)		
0.3-10	0.095 (0.36)	145 (10)	144	0.04	*	*	1:10	200
1-10	0.32 (1.2)	145 (10)		0.14	19.7	3.3		
1.6-10	0.51 (1.92)	145 (10)		0.22		4.9		
3-10	0.92 (3.5)	101.5 (7)		0.42		6.5		
4-8	1.27 (4.8)	87 (6)		0.55		7.2		
5-6	1.58 (6)	72.5 (5)	144	0.69	19.7	8.2	1:10	100
6-8	1.90 (7.2)	87 (6)		0.84		9.2		100
9-6	2.9 (11)	79.8 (5.5)		1.24		9.2		150
14-4	4.44 (16.8)	43.5 (3)		1.92		9.2		150
18-4	5.7 (21.6)	43.5 (3)		2.5		9.2		150
High Pressure								
0.8-16	0.25 (0.96)	232 (16)	144	0.11	19.7	3.3	1:10	200
1.1-16	0.35 (1.32)	232 (16)		0.15		3.3		
3.6-16	1.14 (4.32)	189 (13)		0.5		6.5		

Additional Data

Accuracy	Repeatability	< +/- 1.5% of within the control range 10-100%
	Linearity	+/- 4% within the control range 20-100%
Protection class	IP 65	
Ambient temperature range	32-104° F	
Storage temperature range	14-104° F	
Power Supply	1ø x 120V, 60Hz	

DMI 208 pumps are available with Plus3 auto-degassing, and high viscosity heads.
Please contact Grundfos for technical data and dimensions.

DMS A & B – Constant Speed from 0.0066 to 3.17 gph (20 l/h)



The Digital Dosing range of high-precision diaphragm pumps from Grundfos comes with different motor types to suit your project specifications. As an excellent alternative to the DME series (stepper-motor variants), the DMS A and B series uses synchronous motors to provide the user-friendliness and exact dosing you expect from any Grundfos Digital Dosing pump. Simply specify the desired dosage via the easy-to-use display, and the pump will handle the rest.

The synchronous motor in the DMS pumps runs at constant speed, stopping only between cycles. This means that the DMS pump automatically regulates dosage by increasing or decreasing the stroke frequency. Full stroke length is maintained at all times, ensuring optimum suction conditions and eliminating the need for re-calibration when adjusting dosage.

User-Friendly Display

The simple user interface lets you be your own dosing specialist. With a minimal number of buttons you can navigate the straightforward menus to use the impressive range of control features.

Turndown Ratio 1: 100

The Digital Dosing range is designed to give you superior flexibility and accuracy with just a few variants. With a turndown ratio of 1:100, the DMS range will remain accurate even when dosing in very small amounts, eliminating the need to have several different pump types for dosing on different scales.

Full Stroke Length at All Times

Grundfos uses a full stroke length every time, thereby improving accuracy and repeatability. The strokes are carefully timed, ensuring even concentration of additive into your media. They also give optimal suction conditions throughout the entire operating range.

Synchronous Motor for Precise Dosing

The ingenious design of the Digital Dosing pumps combines robustness and precision thanks to efficient motor technology. The synchronous motor used in the DMS models gives the pump full control over the process, providing low pulsation and accurate dosing.

Several Material Variants

The DMS pump heads are available in several different materials to suit your situation: stainless steel, PVDF, and polypropylene for an environmentally friendly and cost-efficient alternative.

Calibration

With Digital Dosing, calibration is easier and faster than ever. Simply place a graduated glass under the pump and activate the calibration program. The pump will perform 100 strokes and indicate how much it thinks it has pumped. Adjust the figure by entering the correct numbers if necessary. After this dosage can be adjusted without recalibrating the pump.

14 Different Languages

As part of the Digital Dosing series, Grundfos DMS A & B pumps can be set to one of 14 different languages, making them perfect for integration in products aimed at a worldwide market.

Counter

The built-in counter function provides easy access to information about the accumulated number of strokes, accumulated operating hours and flow, as well as the total number of times the pump is switched on.



Dimensions [inches (mm)]

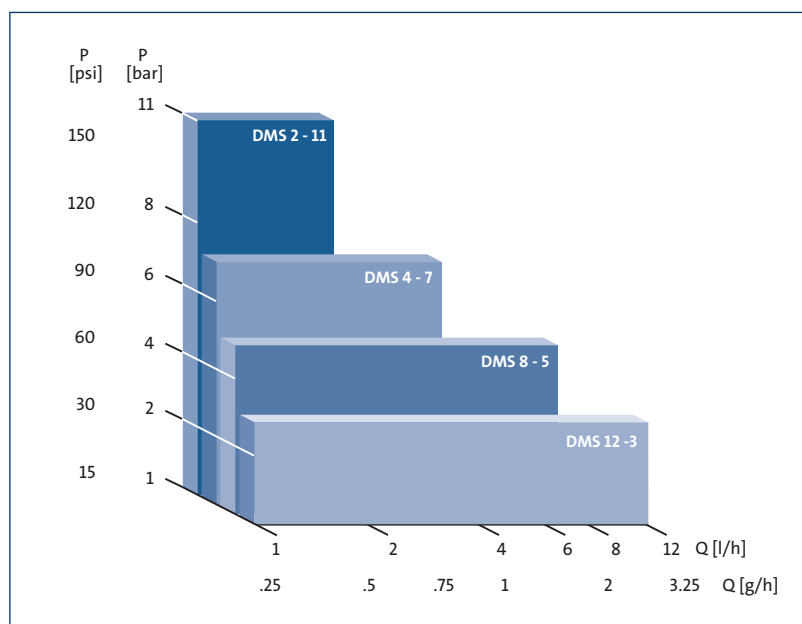
	DMS 2	DMS 4	DMS 8	DMS 12
A	5 7/16 (137)			
B	9 7/16 (239)			
C	1 7/16 (36)			
D	6 5/8 (168)			

Product Range and Performance Data

Pump type		DMS 2-11	DMS 4-7	DMS 8-5	DMS 12-3
Capacity at max. pressure	g/h (l/h)	0.66 (2.5)	1.05 (4)	1.98 (7.5)	3.17 (12)
Max pressure	psi (bar)	159.5 (11)	101.5 (7)	78.3 (5.4)	49.3 (3.4)
Setting range		1:100	1:100	1:100	1:100

Stroke frequency	spm	180			
Suction lift	ft (m)	19.7 (6)			
Viscosity	cps	500			
Power supply	V, Hz	1×120, 60 Hz			
Accuracy	%	±1% repeatability - full range			

Performance Range



Additional Features

Pulse*

The pump is dosing according to an external pulse signal, e.g., from an external water meter.

Analog*

The pump is dosing according to an external analog signal. The dosage is proportional to the input value in mA.

Lock

Protect the pump settings by enabling the electronic lock.

*DMS A only

DMX – Reliable Dosing from 0.13 to 2 x 166 gph (630 l/h)



DMX 221 and 226 – Versatility Through Choice

The Grundfos DMX is a series of high-quality mechanically actuated diaphragm pumps suitable for many uses, such as drinking water treatment, wastewater treatment, and the pulp/paper and textile industries. This series is designed to be highly versatile, which is reflected in the wide flow range covered and the choice of dosing head sizes, materials, and accessories available. If in doubt, ask us – we will help you configure the DMX that is best for you.

Manual or Remote Reliable Control

DMX B models feature a manual stroke length adjustments for a 10:1 turndown ratio. For additional control the DMX AR features a micro-processor controller with:

- Precise and automatic proportional feed
- Manual stroke frequency control
- 0(4)-20 mA or pulse control
- Menu driven display with user-friendly interface
- Low-level and empty output
- Remote on/off control

Choose the Materials – and Size – That Suit You

Both the DMX 221 and 226 liquid ends are available in PVC, PVDF, polypropylene, and stainless steel. For additional output and flexibility, the DMX 226 is available in a duplex version.

Accessories Insure Perfect System Integration

A wide range of accessories specially designed for the Grundfos DMX series help optimize performance. This makes commissioning fast and easy. Other accessories are also available to make sure that your Grundfos DMX fits your system exactly, such as:

- Back pressure valves for dosing systems with no or varying back pressure
- Servomotor for remote stroke length control via 4-20 mA input
- DMX AR dosing controller with output to indicate a loss
- DMX AR with leak detection
- DMX with integrated pressure relief valve in the pump head



Technical Specifications

DMX 221 Pump	Max capacity		SPM (at 60 Hz)	Max Viscosity cps	Max suction lift ft	Motor voltage	Accuracy flow	Linearity
	GPH (l/hr)	psi (bar)						
4-10	1.3 (5)	145 (10.0)	35	400	13.1	1∅ 115V, 50/60 Hz	+/- 1.5%	+/- 4%
7-10	2.1 (8)	145 (10.0)	35	400	13.1			
7-16	2.3 (8.6)	232 (16.0)	75	400	13.1			
8-10	2.6 (10)	145 (10.0)	75	400	13.1			
9-10	2.9 (11)	145 (10.0)	35	200	9.8			
12-10	3.7 (14)	145 (10.0)	35	200	9.8			
14-16	4.0 (16)	232 (16.0)	144	200	11.5			
14-10	4.5 (17)	145 (10.0)	75	400	13.1			
16-10	5.0 (19)	145 (10.0)	144	200	11.5			
17-4	5.3 (20)	58 (4.0)	35	200	3.3			
18-10	5.8 (22)	145 (10.0)	75	200	9.8			
25-3	7.9 (30)	44 (3.0)	35	200	3.3			
26-10	8.2 (31)	145 (10.0)	75	200	9.8			
27-10	8.4 (32)	145 (10.0)	144	200	11.5			
35-10	11.0 (42)	145 (10.0)	144	100	8.2			
39-4	12.0 (47)	58 (4.0)	75	100	3.3			
50-10	16.0 (60)	116 (8.0)	144	100	8.2			
60-3	19.0 (72)	44 (3.0)	75	100	3.3			
75-4	24.0 (90)	51 (3.5)	144	100	1.6			
115-3	36.0 (138)	36 (2.5)	144	100	1.6			

DMX 226 Pump	Max capacity (Duplex x 2)		SPM (at 60 Hz)	Max Viscosity cps	Max suction lift ft	Motor voltage	Accuracy flow	Linearity
	GPH (l/hr)	psi (bar)						
52-8	16.4 (62)	116 (8.0)	76	700	9.8	DMX-B: no motor, Nema 56 C flange DMX-AR: 1∅115V, 60 Hz	+/- 1.5%	+/- 4%
67-10	21.1 (80)	145 (10.0)	68	700	9.8			
82-5	25.9 (98)	72 (5.0)	76	500	9.8			
95-8	30.0 (114)	116 (8.0)	68	500	9.8			
100-8	31.7 (120)	116 (8.0)	144	400	9.8			
130-3	41.2 (156)	44 (3.0)	76	400	6.6			
132-10	41.7 (158)	116 (8.0)	144	400	9.8			
152-6	48.0 (182)	87 (6.0)	68	400	6.6			
160-5	50.7 (192)	72 (5.0)	144	200	9.8			
199-8	63.1 (239)	116 (8.0)	144	200	9.8			
249-3	78.9 (299)	44 (3.0)	68	100	4.9			
255-3	80.8 (306)	44 (3.0)	144	100	6.6			
321-6	102.0 (385)	58 (4.0)	144	100	6.6			
525-3	166.3 (630)	44 (3.0)	144	50	3.3			

Note: Suction lift data is for water-like fluids. Please see the pump manual for more details and dimensional data.

DMH – Performance-Ready from 0.07 to 2 x 278 gph (1052 l/h)



The Preferred Choice for Difficult Tasks

The Grundfos DMH range is a series of hydraulic pumps for situations that demand a higher quality pump. With its high accuracy and modern interface possibilities, the DMH is ideal for many applications in water treatment and industrial processing.

Prepared for Performance and Safety in Extreme Situations

The DMH 250 series of pumps is available in PVC, PVDF, polypropylene, stainless steel and Hastelloy C wetted components. For higher pressure requirements, select from the series of stainless steel or Hastelloy C DMH 280 pumps, rated up to 2900 PSI. All models are fitted with a PTFE diaphragm, with the AMS diaphragm protection system and internal relief valve for pump protection.

Get the Pump Configuration You Need

Manually control capacity by adjusting the stroke length from 0 to 100% with +/- 1% repeatable accuracy. Additional options include:

- › Duplex version for doubled capacity or blending applications
- › Electric 4-20 mA servomotor or pneumatic stroke length control
- › Variable speed drive controller
- › Integrated stroke sensor and electronic counter
- › Leak detection

Typical Applications

- › Municipal and industrial water treatment
- › Waste water treatment
- › Chemical industry
- › Boiler feed
- › Petroleum industry
- › Filtration systems
- › pH control
- › Demineralizers
- › Pulp & paper
- › Textile
- › Food & beverage

API 675 Models

DMH 250 and 280 series pumps are available in API 675 compatible versions. This is commonly used in petroleum, chemical refineries, and transmission pipeline applications.



DMH 250 Technical Specifications

DMH 250 Series Pump		Max capacity		SPM (at 60 HZ)
		GPH	PSI	
251	2.2-25	0.69	363	17
	2.3-16	0.74	232	17
	2.4-10	0.77	145	17
	4.5-25	1.43	363	35
	4.9-16	1.55	232	35
	5-10	1.58	145	35
	11-25	3.43	363	75
	12-16	3.7	232	75
	13-10	4.22	145	75
	17-25	5.28	363	115
	18-16	5.81	232	115
19-10	6.07	145	115	
252	10-16	3.17	232	35
	11-10	3.45	145	35
	23-16	7.13	232	75
	24-10	7.66	145	75
	36-16	11.35	232	115
	37-10	11.62	145	115
253	21-10	6.6	145	35
	43-10	13.7	145	75
	67-10	20.6	145	115
	83-10	26.1	145	144
254	50-10	15.8	145	32
	97-16	30.6	232	65
	102-10	32.2	145	65
	136-16	43	232	90
	143-10	45.4	145	90
	166-16	52.8	232	110
	175-10	55.4	145	110
	202-16	63.9	232	134
	213-10	67.3	145	134
255	194-10	61.5	145	65
	270-10	85.5	145	90
	332-10	105	145	110
	403-10	128	145	134
257	220-10	69.7	145	33
	440-10	139.4	145	65
	575-10	182.2	145	90
	770-10	244	145	110
	880-10	278	145	134

DMH 280 Technical Specifications

DMH 280 Series Pump		Max capacity		SPM (at 60 HZ)
		GPH	PSI	
280	1.5-200	0.5	2900	76
	2.2-200	0.7	2900	115
	2.8-200	0.9	2900	144
281	2-100	0.6	1450	35
	4.2-100	1.3	1450	76
	6.4-100	2	1450	115
	8-100	2.5	1450	144
283	19-100	6.1	1450	65
	27-100	8.4	1450	90
	33-100	10.6	1450	110
	40-100	12.7	1450	134
285	20-100	6.3	1450	33
	40-100	12.7	1450	67
	52-100	16.6	1450	88
	70-100	22.2	1450	118
	80-100	25.3	1450	134
286	85-50	26.9	725	67
	111-50	35.1	725	88
	170-50	53.9	725	134
287	18-200	5.8	2900	67
	23-200	7.4	2900	88
	31-200	9.8	2900	118
	36-200	11.4	2900	134
288	7.5-200	1.1	2900	67
	10-200	2.4	2900	88
	13-200	3.3	2900	118
	16-200	4.1	2900	134

DMH B - No motor, Nema 56 C flange

DMH 285, 286, 287 - NEMA 145 TC flange

Motor DMH AR - 1Ø115V, 60 HZ

DMH AR - Models 251, 252, 253, 280, 281 only

Accuracy Flow +/- 1.5%

Linearity +/- 2%

All the Accessories You Need



Installation Kit

A basic installation kit consists of a non-return foot valve equipped with a strainer and weight, a spring-loaded non-return injection valve and the requisite tubing.



Hot Injection Valve

Complete hot injection valve kit assembly with shut-off valve, pipe and tubing connection fitting for chemical injection into steam and hot water applications.



Injection Valve

The injection valve is a spring-loaded, non-return valve, fitted with either a tubing or pipe connection.



Level Control Unit

For use with the dosing pumps having a level control input. The unit includes a two-position level sensor, ceramic weight, cable and plug for connecting to the pump.



Foot Valve

The foot valve includes a non-return valve, strainer and a tubing or pipe connection.



Tank

Closed cylindrical tank with screw lid, drain hole, and bushing for suction line. DME and DMS can be mounted directly on top of the tank.



Rigid Suction Line

Preassembled, adjustable-length rigid suction line consists of a foot valve with strainer, rigid suction pipe, threaded tank connection and suction tubing. Also available with dual-level control sensors.



Tubing

Tubing in various lengths, diameters and materials is available.



Multifunction Valve

This compact valve unit is mounted directly on the pump discharge connection. Its four functions are:

- Constant back pressure
- Protects pump against excessive pressure
- Anti-siphoning
- Manual pressure relief of pump and discharge line



Back Pressure and Relief Valve

Installed in-line, the valve works as a back pressure valve optimizing dosing accuracy into systems with fluctuating pressure, or as an anti-siphoning valve in non-pressurised systems. Installed in a T-connection, the valve works as a pressure relief valve or a safety valve protecting the pump and discharge line against excessive pressure. The valve is adjustable between 0 and 145 psi (10 bar).



Dosing Monitor

The dosing monitor is designed to monitor the dosing of liquids which may cause gas accumulation in the dosing head, thus stopping the dosing process even if the pump is still operating.



Cable and Plug

The cable and plug are used to connect external control devices such as flow meters, control instruments and level sensors to Grundfos dosing pumps.



Pulsation Dampener

The pulsation dampener can be installed both in the suction and discharge lines to reduce pressure surges, thus ensuring an even flow and optimal dosing precision.



Flow Indicator

A float in the transparent flow indicator shows whether the pump is dosing. The device is mounted directly in the pump discharge line.



Automatic Venting Valve

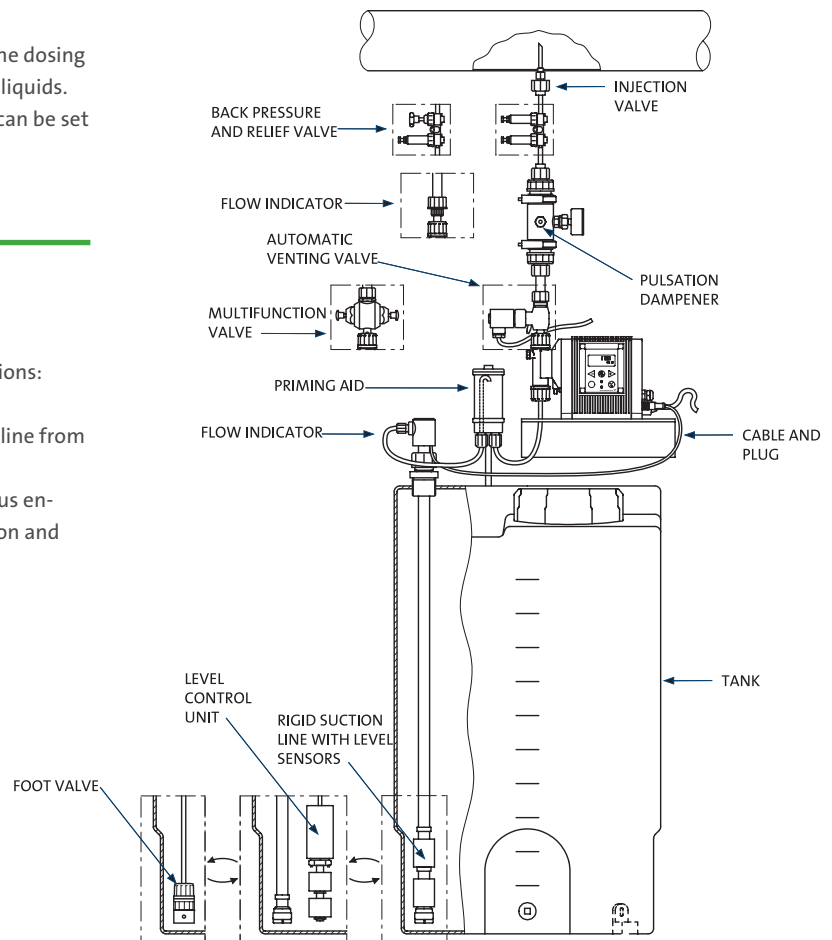
The valve automatically vents the dosing head when pumping degassing liquids. Venting duration and intervals can be set by means of integrated timers.



Priming Aid

The priming aid has three functions:

- To facilitate priming
- To prevent gas in the suction line from entering the dosing head
- To reduce pressure surges, thus ensuring optimal dosing precision and reduced risk of cavitation





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