

DIGITAL DOSING





Digital Dosing represents innovation in its purest form!

No more complicated calculations

In the past, traditional dosing equipment forced you to resort to complicated calculations to find the right setting. The exact dosage required to ensure that your dosing system was economical and safe had to be found by trial and error. And you would have to do it all over again whenever you needed to make adjustments. That all changed when Grundfos brought you Digital Dosing. Now, you simply specify the dosage you want and let the pump do the rest – with perfect confidence that you will get what you want.

Digital Dosing represents innovation in its purest form. This patented Grundfos solution uses new principles and methods to set an entirely new standard for dosing technology. It makes your job a lot easier and your results a lot better.

Focus on user-friendliness

Digital Dosing is about complete precision combined with complete user-friendliness. It is made possible through the use of an innovative drive principle in a diaphragm dosing pump. More technical information can be found elsewhere in this brochure, but all you really need to concern yourself with is the easy-to-use control panel. Just push the buttons a few times to specify the dose you want, and the pump will take care

of the rest. Quite simply, Digital Dosing means that what you set is what you get.

Proven technology

Ever since Digital Dosing was introduced, enthusiastic customer responses have shown that there was a real demand for better dosing technology. Aside from the obvious advantages of precise, trouble-free dosing, many customers point to the remarkable reliability of Grundfos Digital Dosing as a key benefit. This is technology you can trust.

We have always been confident that Digital Dosing was the way to go, and satisfied users worldwide now support this conviction. In effect, Grundfos has set the agenda for the future of dosing. And you can trust us to remain ahead of the game.

To give even more enterprises the chance to benefit from Digital Dosing, we have expanded the product family to cover the full range from 2,5 ml/hour to 150 l/hour – all handled by just a few highly versatile and efficient models. So if you haven't gone digital yet, we urge you to try it out. You will never want to go back.

Your benefits

Digital Dosing is the result of true Grundfos innovation. We are always working with new methods, materials and technology with a specific goal in mind: to bring you products that make a difference. To use technological advances to bring you real benefits, not just features that may seem impressive but have limited true value.

- **Fast, simple and accurate dosing**
- **Be your own dosing specialist**
- **Reduction in logistics costs**
- **Easy installation, priming and calibration**
- **Optimal dosing of difficult liquids**



*The DME 150-10
with side mounted
control panel.*

Accurate dosing -



> Grundfos

The large Digital Dosing range comprises two pump models housed in the same size cabinet. Both are equipped with brushless DC motors.

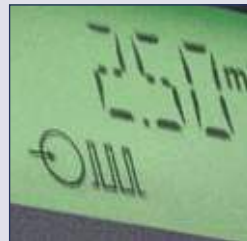


The smaller Digital Dosing range comprises five pump models housed in two cabinet sizes. These use a stepper motor to ensure precise dosing.

Grundfos Digital Dosing

What you set is what you get

The push-button control panel lets you set the pump to deliver exactly the dosage you need. Simply decide how many millilitres or litres of dosing additive you want, punch in the numbers, and let your Digital Dosing pump do the rest. If you need 4.67 l/h, you use the control panel to set 4.67 l/h, and you get 4.67 l/h. With Grundfos, nothing but real precision is good enough.



Smooth and gentle dosing

Grundfos dosing pumps give you full control over the speed, acceleration, and position of the diaphragm. The gentle and steady connecting rod movement minimises pressure peaks in the dosing head and discharge line and eliminates the vibrations associated with traditional dosing pumps. This all means that the additive is discharged more evenly, ensuring precise dosing.



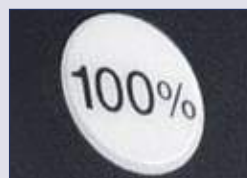
Full stroke length

The full stroke length is an important part of the Digital Dosing approach to optimum performance. It makes the pump less vulnerable to build-up of gases in the dosing head, thereby ensuring maximum precision and optimal stroke length.



Easy priming

You can make your Grundfos dosing pumps run at full capacity by pressing the 100% key. This ensures that the pump is fully primed with additive before a new process begins. Once priming is complete, the pump automatically returns to the previous setting. Easy!



- what you set is w

Fieldbus

Grundfos dosing pumps can be equipped with a fieldbus communication module. This lets you benefit from many types of information sharing. For example, the Digital Dosing pump can supply performance data and status information to be used for quality control, preventive maintenance, and future reference. You can monitor and control pumps from your PC, and you will receive immediate on-screen warnings if something should go wrong in the system.



Fewer models cover all needs

Grundfos covers the vast majority of all dosing needs with just seven Digital Dosing models. Capable of supplying from 2.5 ml/hour to 150 l/hour, the range is sure to include a solution for you. It also allows for significant savings on logistics.



Impressive range of features

The standard features of the Digital Dosing pumps reflect Grundfos standards, which makes them quite impressive in their own right. All pumps feature manual operation, full pulse control, analog 4-20 mA control, timer-based batch control, pulse-based batch control, and switch-mode power supply (100-240 V, 50–60 Hz). Even more features are available as options if you need them.



Many mounting options

Grundfos dosing pumps are easily adapted to your placement requirements. You can choose between pumps with a side-fitted or front-fitted control panel to ensure that you have unobstructed access to the panel and display.



What you get

Trouble-free installation

Reflecting the Grundfos approach to user-friendliness, a Digital Dosing pump takes only a moment to install: just place it where you want it and plug it in. Going digital couldn't be simpler.



Wide range of accessories

Digital Dosing is supported by a large selection of accessories to meet your system requirements. Unlike the "options" offered by many other pump suppliers, these accessories are not necessary for precise pump operation. They simply ensure that the Digital Dosing pump is fully compatible with the rest of your installation.



Simple calibration

The Digital Dosing pump lets you be your own dosing specialist! It features special software to make calibration as easy as possible. Just place a graduated glass under the pump and activate the program. The pump will then perform 100 strokes and indicate how much it thinks it has pumped. Adjust the figure as necessary, and you're done.

The Digital Dosing range gives you complete flexibility and precision with just seven models.





from 2.5 ml/h to 150 l/h



Sophisticated technology for simple operation

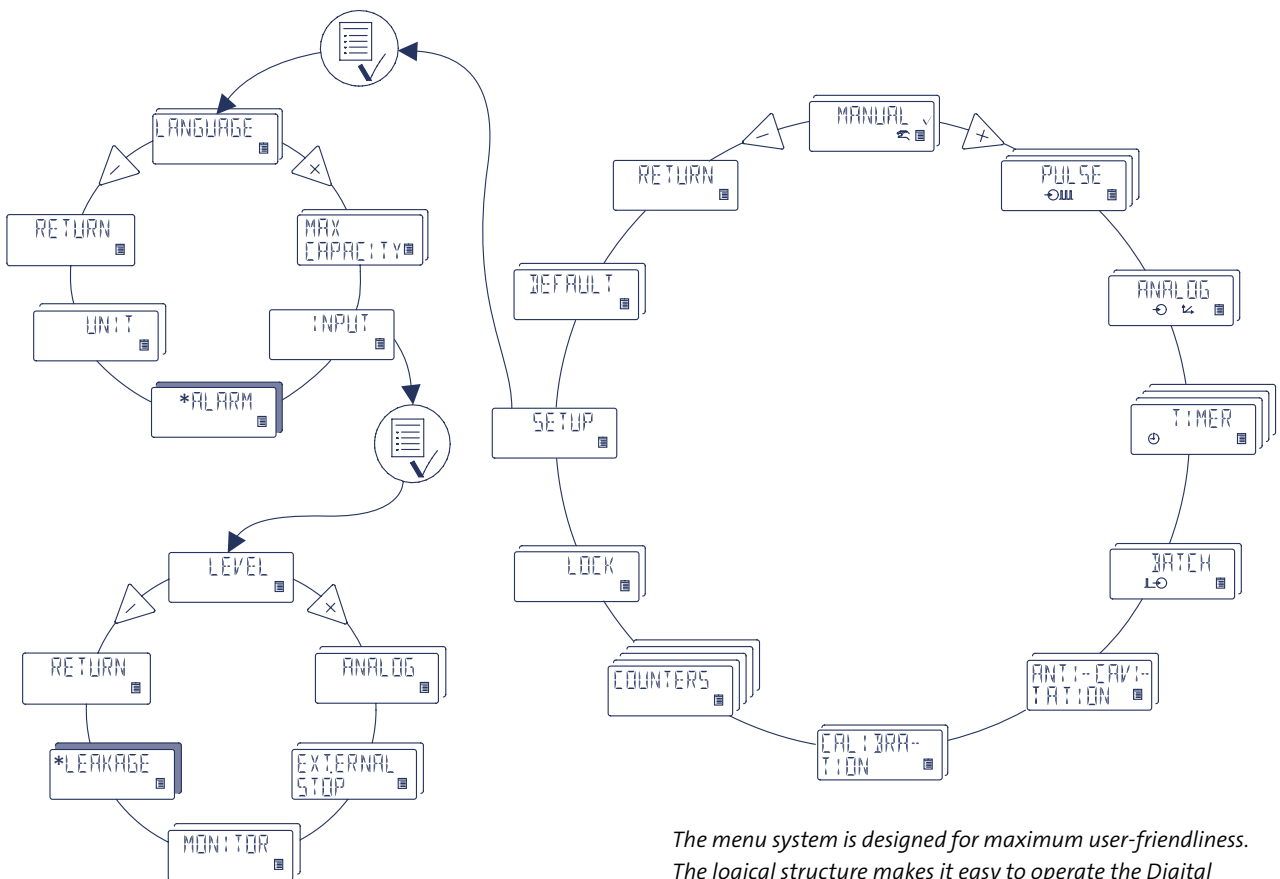
Grundfos dosing pumps are based on innovative technology. New principles and methods have been employed to create patented solutions you won't find anywhere else.

Motor-driven connection rod

The motor-driven connection rod remains in contact with the diaphragm throughout the discharge/suction cycle. This keeps the diaphragm under control at all times.

Full stroke length

The Digital Dosing pumps give you the optimal stroke length every time. The amount of additive discharged through the dosing head is always the maximum possible in each cycle. This makes the pump much less vulnerable to build-up of gases in the dosing head, thereby improving precision and priming capabilities.



The menu system is designed for maximum user-friendliness. The logical structure makes it easy to operate the Digital Dosing pump.

*Only DME model 60-10 and 150-4

Technical specifications

Product range and performance data DME 2.5 ml/h - 48 l/h

Pump type		DME 2-18	DME 8-10	DME 12-6	DME 19-6	DME 48-3
Capacity at max. pressure	[l/h]	2.5	7.5	12	18.5	48
Max. pressure	[bar]	18	10	6	6.2	2.6
Setting range		1:1000	1:1000	1:1000	1:1000	1:1000

Stroke frequency	[min ⁻¹]	180				
Suction lift	[m]	6				
Viscosity*	[mPa]	500				100
Power supply	[V], [Hz]	1×100-240, 50-60 Hz				
Accuracy	[%]	±1% repeatability				

Product range and performance data DME 75 ml/h - 150 l/h

Pump type		DME 60-10	DME 150-4
Capacity at max. pressure	[l/h]	60	150
Max pressure	[bar]	10	4
Setting range		1:800	1:800

Stroke frequency	[min ⁻¹]	160	
Suction lift	[m]	6	
Viscosity*	[mPa]	3000 at 50% capacity	
Power supply	[V], [Hz]	1×100-240V, 50-60 Hz	
Accuracy	[%]	±1% repeatability	





Product range and performance data DMS 25 ml/h - 12 l/h

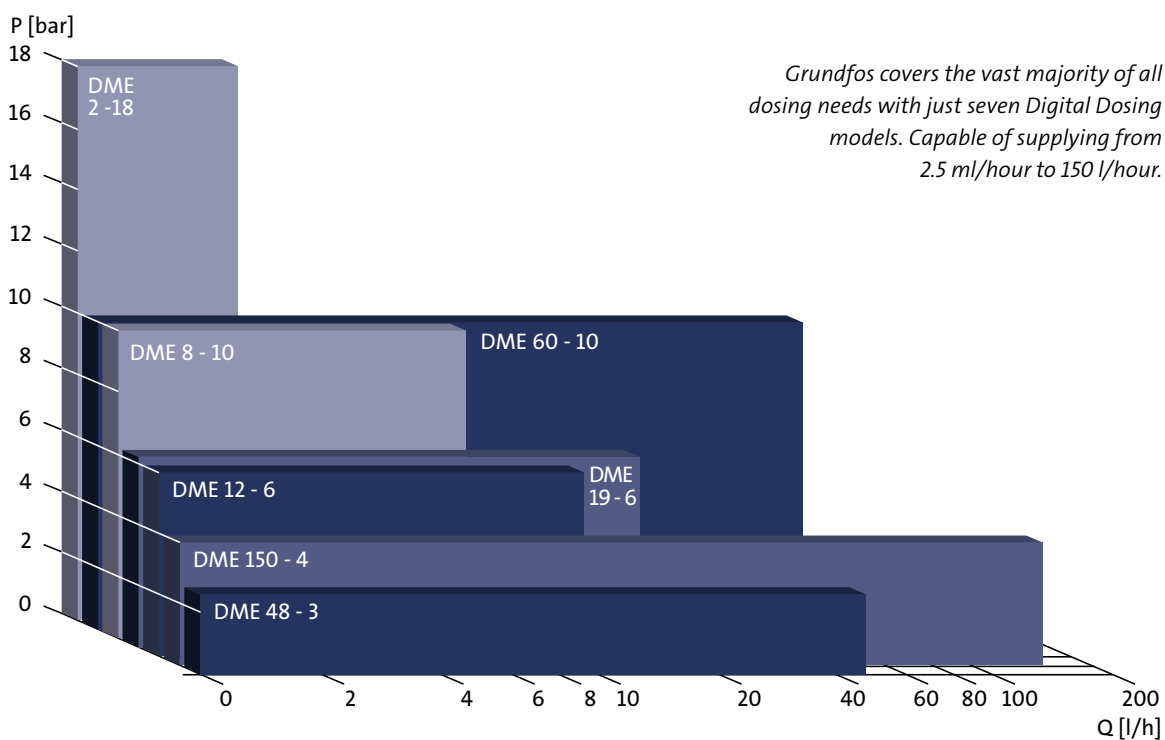
Pump type		DMS 2-11	DMS 4-7	DMS 8-5	DMS 12-3
Capacity at max. pressure	[l/h]	2.5	4	7.5	12
Max pressure	[bar]	11	7	5.4	3.4
Setting range		1:100	1:100	1:100	1:100

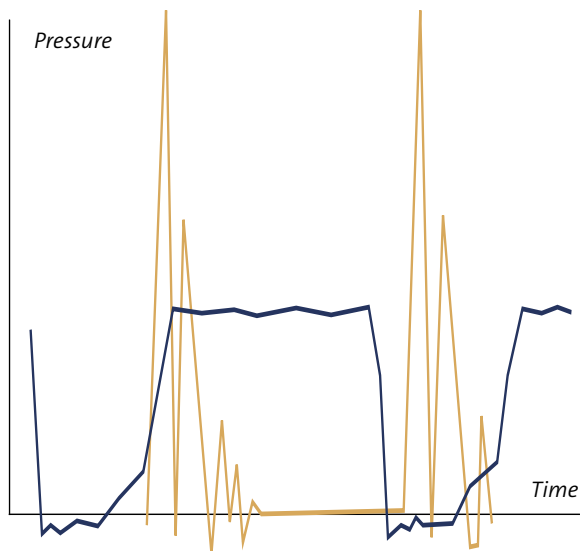
Stroke frequency	[min ⁻¹]	180			
Suction lift	[m]	6			
Viscosity*	[mPa]	500			
Power supply	[V], [Hz]	1×230, 50 Hz - 1×120, 60 Hz - 1×100, 50 Hz			
Accuracy	[%]	±1% repeatability			

*Spring-loaded valves

The Grundfos Digital Dosing range

	<p>DME 2.5 ml/h to 12 l/h</p> <p>Cabinet size 1, consisting of 3 stepper motor driven models. Max. pressure rate: 18, 10 and 6 bar</p>
	<p>DME 19.5 ml/h to 48 l/h</p> <p>Cabinet size 2, consisting of 2 stepper motor driven models. Max. pressure rate: 6.2 and 2.6 bar</p>
	<p>DME 75 ml/h to 150 l/h</p> <p>Cabinet size 3, consisting of 2 brushless DC motor driven models. Max. pressure rate: 10 and 4 bar</p>
	<p>DMS 25 ml/h to 12 l/h</p> <p>An excellent alternative to the Digital Dosing DME range consisting of 4 synchronous motor driven models. Max. pressure rate: 11, 7, 5.4 and 3.4 bar</p>





The advantages of the variable speed motor used in Grundfos dosing pumps are immediately evident when you compare them with standard pumps. The gold curve shows the pressure conditions in a traditional solenoid pump. Here, pressure peaks can be as high as 2.5 times the counter-pressure.

Grundfos dosing pumps give you far better control of the process. As shown by the blue curve, pressure in a Digital Dosing unit builds up to the level of the counter-pressure and is controlled throughout the suction and discharge phases.

Variable speed for smooth dosing

The variable speed motor used in the DME series maintains full control over the diaphragm through-out the suction and discharge phases. The result? A better, more even mix. Also, a unique anti-cavitation function makes it possible to extend the suction phase for extra protection. The slower suction phase ensures correct additive intake every time – even when dosing high-viscosity liquids.

The best dosing solution on the market

With Digital Dosing, Grundfos brings you the best dosing solution on the market. Customers all over the world appreciate the advantages of Digital Dosing: No more complicated calculations, high installation costs, or expensive accessories – just perfect precision with complete ease. Why settle for less?



“The new technology behind the stepper motor that makes precise dosing possible is what really convinced us to choose Grundfos as a dosing pump supplier. Our investment has resulted in highly precise dosing, improved product quality, and higher productivity.” Ralf Kammerer, Technical Manager at Wisthoff Glassworks, Group Gerresheimer



Innovation in its purest form

Grundfos created digital dosing – both as a concept and by developing the world's first ever digital dosing pump range. Our digital dosing pumps represent innovation in its purest form, and this patented new method sets an entirely new standard for dosing technology. It enables our customers to achieve extreme accuracy literally at the touch of a button.

Ongoing research and development

The digital dosing pump range is only one example of how Grundfos remains at the forefront of pumping technology. At Grundfos, research and development is an ongoing process, and a very large proportion of our annual earnings is channelled straight back to developing new innovative pump solutions.

Committed to our customers

Grundfos offers a full range of pumps and pumping solutions with more than 170,000 product variants to choose from. With Grundfos as your partner you can be sure of 100% commitment, before and after the sale, backed by an efficient global service network, 24 hours a day.