bürkert
FLUID CONTROL SYSTEMS

Digital dosing pump for continuous dosing

- Continuous dosing through digitally controlled stepper motor drive
- Controlled by: 0/4…20 mA, pulses, time and manually
- Limitation of the max. dosage through software
- Setting range for the dosage 1:1000
- High accuracy over the complete setting range
- Simple, menu-guided calibration
- Multi-language menu

Type 7800 can be combined with…

Typ 8030
Flow sensor

Typ 8020
Flow sensor

Typ 8025/35
konti-Dos-control

Typ 8205
PH-Controller

Typ 8040(41/45)
Finger-MID
Flow sensor

PLC

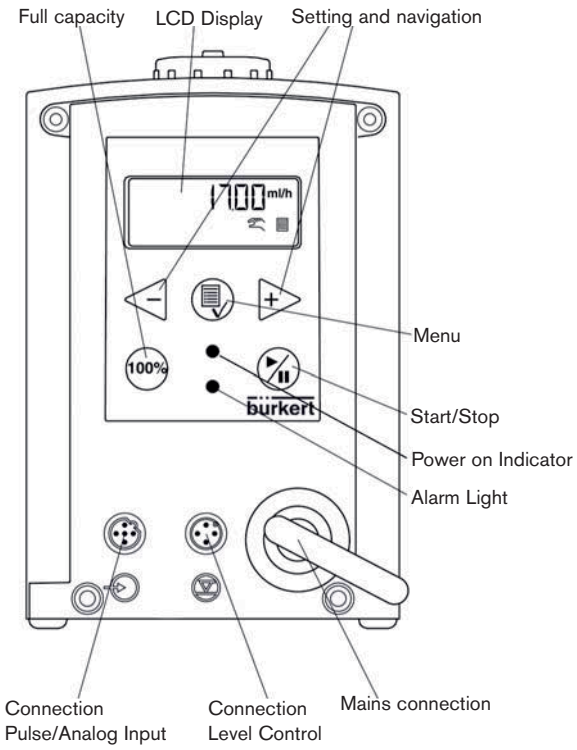
The Type 7800 digital dosing pump is characterised by a drive principle that is completely new for dosing pumps. The drive is carried out by a microprocessor-controlled stepper motor, which is connected directly to the diaphragm by a crankshaft-and-connecting-rod drive. This means that, in contrast to conventional dosing pumps, the position and the speed of the diaphragm is controlled by the microprocessor electronics during the complete discharge/suction cycle.
The microprocessor-controlled compression stroke results in a dosage that is considerably more even, particularly with small dosages.

The 7800 dosing pump always works with the maximum stroke length, whereby a high accuracy for the dosing over the full setting range and a lower sensitivity with respect to gaseous media is achieved. Through an optimised clearance volume ratio with the full stroke length, the accuracy and function is ensured, even for difficult degassing liquids. Through the anti-cavitation function, the drive is optimally adapted to the dosing of high viscosity liquids.

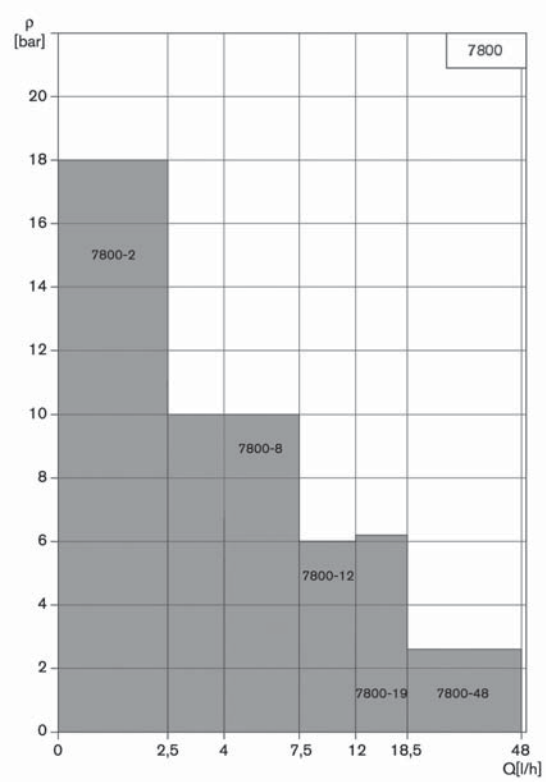
The 7800 dosing pump can be controlled manually, by standard signals (4…20 mA) and by external pulses (e.g., open-collector). Thanks to the wide setting range of 1:1000, it is possible to realise dosing tasks from 0.002 l/h to 48.0 l/h with only 5 pump sizes.

Technical data						
Pump type		**7800-2**	**7800-8**	**7800-12**	**7800-19**	**7800-48**
Capacity at max. pressure	**[l/h]**	2.5	7.5	12	18.5	48
Repeatability	**[%]**	± 1				
Max. pressure	**[bar]**	18	10	6	6.2	2.6
Setting range		1:1000				
Max. stroke frequency	**[Hub/min]**	180	180	180	151	151
Max. suction lift (intake)	**[m]**	1.8	3	3	3	3
Max. viscosity	**[mPas]**	200	200	200	200	100
Medium temperature	**[°C]**	0…50				
Ambient temperature	**[°C]**	0…45				
Operating voltage	**[VAC]**	100…240				
Max. power consumption	**[W]**	18	18	18	22	22
Frequency	**[Hz]**	50…60				
Protection class		IP 65				
Power supply cable		1.5 H05RN-F with plug				
Impedence at analog input	**[Ω]**	250				
Voltage in impulse input	**[VDC]**	5 (active)				
Min. pulse-repetition period	**[ms]**	3.3				

Operating controls



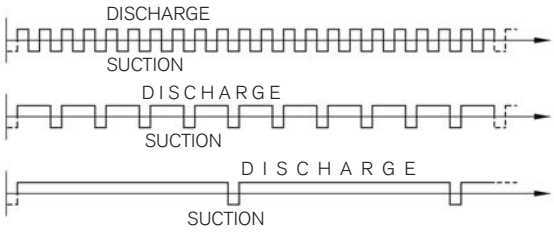
Pressure performance diagram



Software options

- Reduction of maximun performance
- Calibration menu
- 14 languages available
- Input signal scaling
- Timer function
- Charge function
- Anti-cavitation function for viscous media
- Internal counters for strokes, hours, power-on
- Key lock function

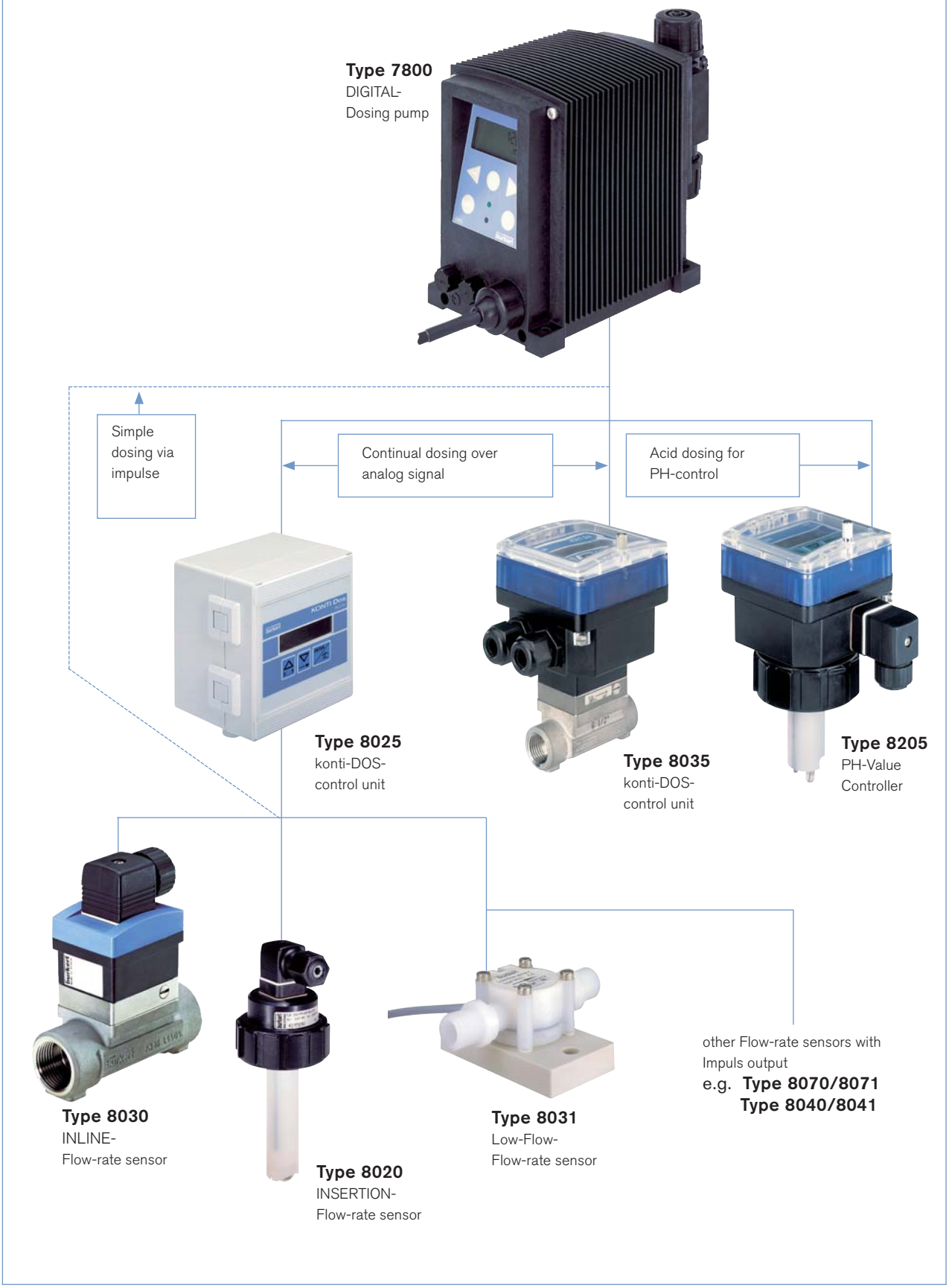
Dosing pump operation



The stepper motor of the 7800 dosing pump operates in the continuous principle under microprocessor control, so that the compression stroke phase extends over the complete timeframe between the suction strokes.

The control software automatically matches the dosing speed of the compression stroke to the desired throughput.

Combination with other Bürkert products



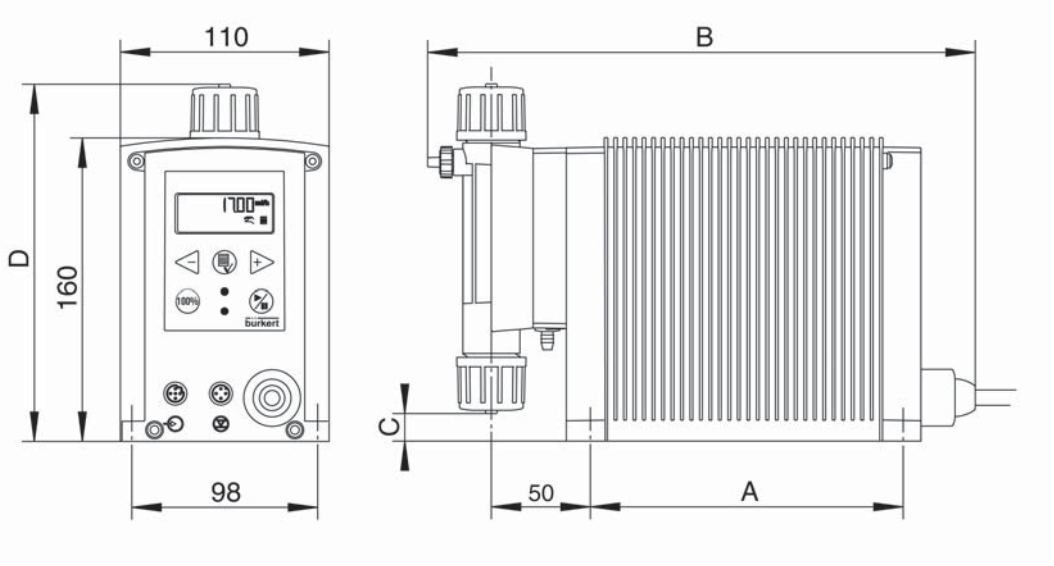
Ordering chart

Type	Pump performance [l/h]	Max. pressure [bar]	Material Pump head	Seal material	Item n0.
7800-2	2.5	18.0	PP	FKM	788 372
7800-2	2.5	18.0	PP	EPDM	788 468
7800-2	2.5	18.0	PVDF	FKM	788 373
7800-8	7.5	10.0	PP	FKM	788 501
7800-8	7.5	10.0	PP	EPDM	788 469
7800-8	7.5	10.0	PVDF	FKM	788 306
7800-12	12.0	6.0	PP	FKM	787 991
7800-12	12.0	6.0	PP	EPDM	788 470
7800-12	12.0	6.0	PVDF	FKM	788 339
7800-19	18.5	6.2	PP	FKM	788 114
7800-19	18.5	6.2	PP	EPDM	788 471
7800-19	18.5	6.2	PVDF	FKM	788 371
7800-48	48.0	2.6	PP	FKM	788 109
7800-48	48.0	2.6	PP	EPDM	788 472
7800-48	48.0	2.6	PVDF	FKM	788 337

Ordering chart for accessories (Type 7810)

	Item no.		
	PP/FKM	PP/EPDM	PVDF/FKM
Installation DN 2 4/6 (foot valve, tubing, injection valve)	788 507	788 506	788 508
Installation DN 4 6/9 (foot valve, tubing, injection valve)	787 992	788 502	788 503
Installation DN 8 9/12 (foot valve, tubing, injection valve)	788 111	788 110	788 505
Control cable impulse/analog length 2m	787 993		
Control cable impulse/analog length 5m	788 579		
Plug for Impulse/Analog 5-polar without cable	788 580		
Plug for Level Input 4-polar without cable	788 581		

Dimensions [mm]



Pump Type	7800-2 7800-8 7800-12	7800 -19 7800-48
A[mm]	137	192
B[mm]	239	294
C[mm]	36	15
D[mm]	168	188
Tube hose connector	4/6 and 6/9	6/9 and 9/12