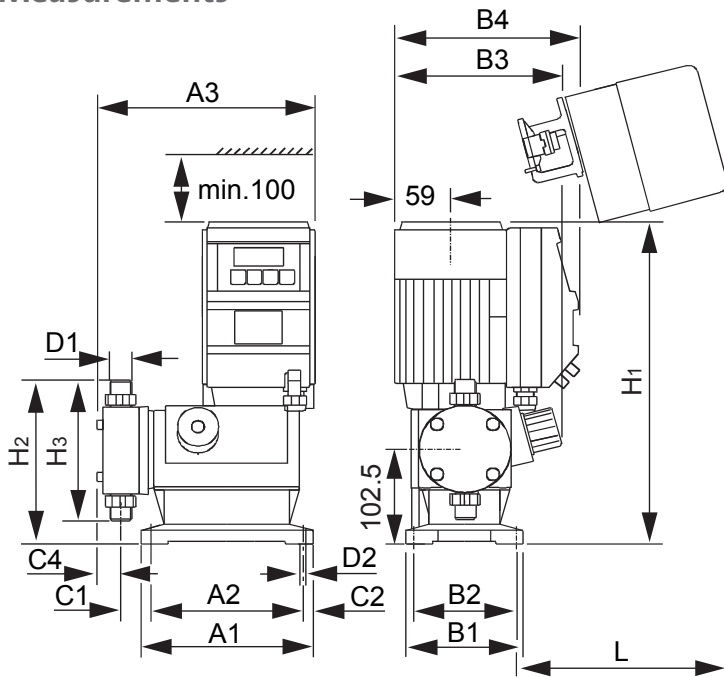


DMX 221

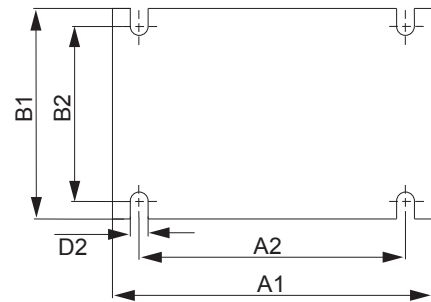
The versatile diaphragm dosing pump



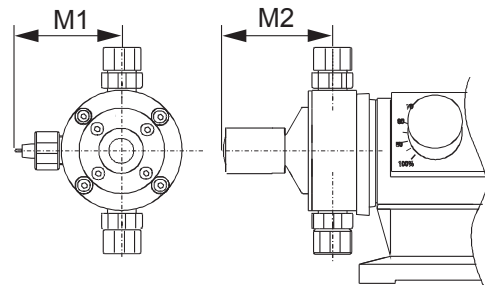
Measurements



Drilling scheme



Dosing head with integrated pressure relief valve

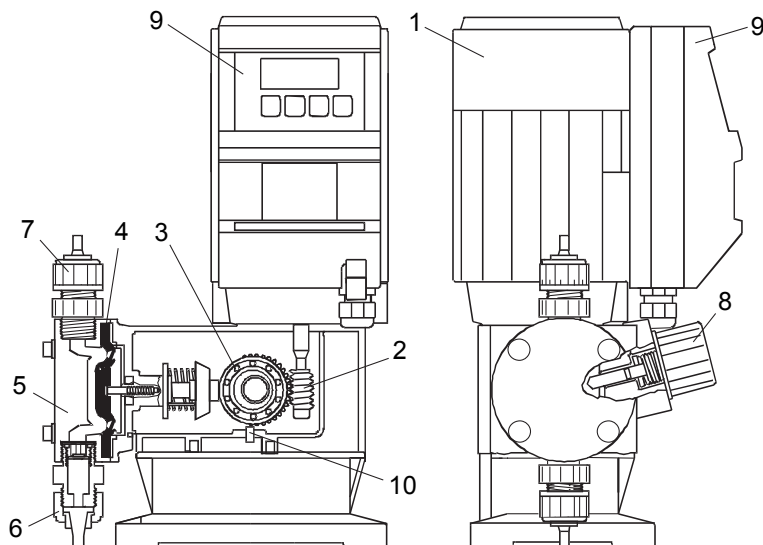


Head size	A1	A2	A3	B1	B2	B3	B4	L
1-4	180	159	275	123	105	175	205	227
5	180	159	323	123	105	175	205	227
6	180	159	330	123	105	175	205	227
Head size	C1	C2	C4	D1	D2	H1	H2	H3
1-4	32	10.5	25	R 5/8"	6.5	319	179	153
5	64	10.5	38	R 1 1/4"	6.5	319	192	177
6	80	10.5	40	R 1 1/4"	6.5	319	197	188

All measurements in mm (except D1)

Head size	Measurements in mm	
	M1	M2
1-4	61	86
5	94	120
6	99	120

Description



- 1 Motor
- 2 Gear
- 3 Eccentric
- 4 Dosing diaphragm
- 5 Dosing head
- 6 Suction valve
- 7 Pressure valve
- 8 Stroke length adjustment knob
- 9 Etron Profi electronics
- 10 Stroke sensor

DMX 221

- Capacity spectrum 4 up to 115 l/h
- Various combinations of dosing heads and materials suitable for applications in chemical engineering
- Optionally with Etron Profi electronics

Pump types

50 Hz			60 Hz			100 Hz *)			V _{stroke} [cm ³]	Head size	Motor capacity [kW]		Connection PVC hose	DMX model
[l/h]	[n/min]	[bar]	[l/h]	[n/min]	[bar]	[l/h]	[n/min]	[bar]			Standard	PTC *)		
4	29	10	5	35	10	8	58	10	2.2	1	0.09	0.09	6/12	221-4
7	29	10	8	35	10	14	58	10	3.8	2	0.09	0.09	6/12	221-7
8	63	10	10	75	10	16	126	10	2.2	1	0.09	0.09	6/12	221-8
9	29	10	11	35	10	18	58	10	4.9	3	0.09	0.09	6/12	221-9
12	29	10	14	35	10	24	58	10	6.9	4	0.09	0.18	6/12	221-12
14	63	10	17	75	10	28	126	10	3.8	2	0.09	0.09	6/12	221-14
16	120	10	19	144	10	–	–	–	2.2	1	0.09	–	6/12	221-16
17	29	4	20	35	4	34	58	4	10.4	5	0.09	0.18	13/20	221-17
18	63	10	22	75	10	36	126	10	4.9	3	0.09	0.09	6/12	221-18
25	29	3	30	35	3	54	58	3	16	6	0.09	0.18	13/20	221-25
26	63	10	31	75	10	52	126	10	6.9	4	0.09	0.18	6/12	221-26
27	120	10	32	144	10	–	–	–	3.8	2	0.09	–	6/12	221-27
35	120	10	42	144	10	–	–	–	4.9	3	0.09	–	6/12	221-35
39	63	4	47	75	4	78	126	4	10.4	5	0.09	0.18	13/20	221-39
50	120	10	60	144	8	–	–	–	6.9	4	0.09	–	6/12	221-50
60	63	3	72	75	3	120	126	3	16	6	0.09	0.18	13/20	221-60
75	120	4	90	144	3.5	–	–	–	10.4	5	0.09	–	13/20	221-75
115	120	3	138	144	2.5	–	–	–	16	6	0.09	–	13/20	221-115

*) Motor for frequency control

Technical data

Accuracy	Dosing flow variation < ± 1.5%, linearity < ± 4%
Flow rate setting	By manual stroke length adjustment in a 1:1 ratio or by electronic stroke adjustment or motor frequency control
Suction height	Up to 4 m water column, according to the head size
Materials	Enclosure: aluminium; dosing diaphragm: NBR, PTFE-coated; dosing head and valves: please see the respective table
Weight	8 kg to 13 kg
Motor	E.g.: 3-phase motor 220-240 V/380-420 V (50/60 Hz), 440-480 V (60 Hz), IP 65/F, 90 W for other motors please see the respective table
Connections	Dosing head sizes 1 to 4: PVC hose 6/12; PVC pipe 12x1.2; PP pipe 16x2 (DN10); PVDF pipe 16x2; stainless steel pipe R 1/4" Dosing head sizes 5 and 6: PVC hose 13/20; PVC pipe 25x1.9; PP pipe 25x1.9; PVDF pipe 25x1.9; stainless steel pipe R 3/4"

Dosing head and valve versions

Dosing of non abrasive and non combustible liquids

Dosing head	Valve	Material		
		Valve seat	Gasket	Valve ball
PVC	PVC	Viton	Viton	Glass
PVC	PVC	EPDM	EPDM	Stainless steel
PVDF	PVDF	PTFE	PTFE	PTFE
PP	PP	Viton	Viton	Glass
Stainless steel	Stainless steel	Viton	Viton	Stainless steel

Options:

- Diaphragm leakage indication
- Integrated pressure relief valve
- Special valves for abrasive liquids
- Stainless steel version optionally with heating flange



DMX 221 with integrated pressure relief valve

Motors

Motor without PTC resistor	3 AC, 220-240/380-420 V, 50/60 Hz, 440-480 V, 60 Hz, IP 65/F
Motor with PTC resistor	3 AC, 220-240/380-420 V, 50/60 Hz, 440-480 V, 60 Hz, IP 65/F, PTC
Flameproof motors	3 AC 230/400 V, 50/60 Hz, IP 65/F, EEx e II T3
Motors for Etron Profi, single-phase (1 AC)	220-240 V (50 Hz), IP 65/F 110-120 V (60 Hz), IP 65/F
Motor kits	for NEMA 42 C for IEC BG 63 B5

Electric servomotor

Description	Order number
<ul style="list-style-type: none"> • Block-proof synchronous motor with feedback potentiometer • Two limit switches 	384-711

Versions

- 230 V, 50/60 Hz, IP 55
- 115 V, 50/60 Hz, IP 55, 1-phase
- 24 V AC, 50/60 Hz, IP 55, 1-phase

Optional simplex potentiometers

100 Ω, 200 Ω, 500 Ω, 1000 Ω, 5000 Ω

Optionally with analog input 4-20 mA, manual adjustment ON/OFF



DMX 221 with servomotor

Etron Profi microprocessor electronics

- Stroke frequency adjustable from 0 to max., 0/4-20 mA signal control
- Contact input with multiplier and divisor
- Two-step tank empty signal, remote off switching
- Input for dosing controller and diaphragm leakage indication
- 1.5 m of mains cable (USA 2 m)
- Mains plug versions for: Europe, Switzerland, USA, Australia
- Optionally with signal pre-alert empty or stroke signal with Hall sensor

Description
Etron Profi for mounting on the terminal box, 115/230 V, 50/60 Hz
Etron Profi for wall mounting, 115/230 V, 50/60 Hz, 5 m of cable to the pump

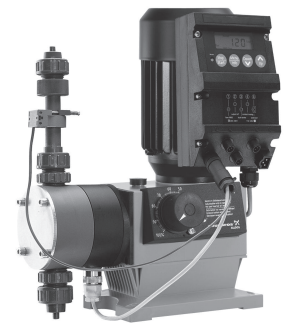


Etron Profi
for wall mounting

Dosing controller

for liquids with viscosity similar to water

Material	DMX model	Order number
PVC	221-4 up to 221-8	334-105
	221-9 up to 221-35	334-101
	221-50	334-1031
	221-75 up to 221-115	334-103
PVDF	221-4 up to 221-8	334-106
	221-9 up to 221-35	334-102
	221-50	334-1041
	221-75 up to 221-115	334-104



Etron Profi for installation
with dosing controller

Signal transmission

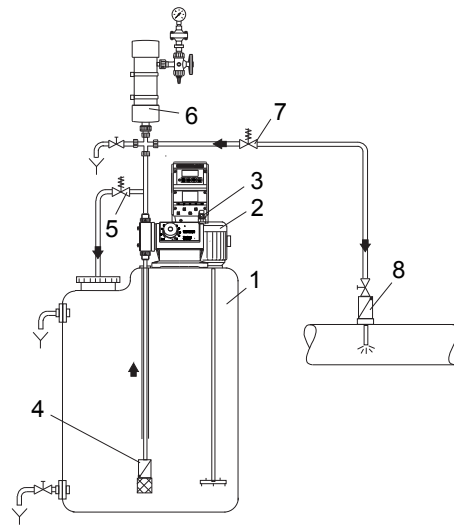
Description	Order number
Cable with plug, length 2 m	
for contact input, analog signal input and remote On/Off	321-205
for output for pre-alert / error message and stroke signal	321-206
Cable with plug, length 5 m	
for contact input, analog signal input and remote On/Off	321-207
for output for pre-alert / error message and stroke signal	321-208
Combined plug / Cable for diaphragm leakage indication and dosing controller	
Combined plug, 5-poles	321-210
Cable, 5-poles, length 5 m	321-223

Fittings and accessories

(see separate Data Booklet Accessories)

Flow scheme of a complete dosing system

- 1 Dosing tank 502
- 2 Electric agitator 509
- 3 Dosing pump DMX
- 4 Suction line 521 with empty indication
- 5 Pressure relief valve 525
- 6 Pulsation damper 517
- 7 Pressure loading valve 525
- 8 Injection unit 522



Consoles

Description	Order number
Wall console for DMX 221, lacquered steel sheet, with fastening material	539-015
Adaptor console for installation of DMX 221 on Grundfos Alldos dosing tanks 502-0075 to -1001	539-038

Spare parts sets

- Gaskets for the dosing head, 1 dosing diaphragm *Your choice depends on the head size and the material !*
- Complete valves for plastic versions with connection sizes 6/12, 10/12, 12/16 and 14/16
- Inner valve parts for plastic versions with connection sizes 13/20 and bigger and for stainless steel versions

Material valve body / valve seat /gasket / valve ball	Order number according to head size					
	1	2	3	4	5	6
PVC / Viton / Viton / glass	553-520	553-521	553-522	553-523	-	-
PVC / PTFE / Viton / glass	-	-	-	-	553-544	553-547
PVC / EPDM / EPDM / stainless steel	553-521-2	553-521-2	553-522-2	553-523-2	-	-
PP / Viton / Viton / glass	553-530	553-531	553-532	553-533	-	-
PP / PTFE / Viton / glass	-	-	-	-	553-545	553-548
PVDF / PTFE / PTFE / PTFE	553-535	553-536	553-537	553-538	553-546	553-549
Stainless steel / Viton / Viton / stainless steel	553-526	553-525	553-527	553-528	-	-
Stainl. steel / stainl. steel / Viton / stainl. steel	-	-	-	-	553-550	553-551

Spare parts sets for integrated pressure relief valves

- 1 dosing diaphragm, 1 gasket, 1 ball

Material gasket / ball	Head size	Order number
PTFE/PTFE	1-4	553-1489
PTFE/PTFE	5+6	553-1490

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Subject to change.