

General

Even when there are large flow fluctuations ideal proportional metering is achieved by contact head water meters emitting pulses in proportion to the flow rate. The Magdos series magnetic metering pumps are designed for use with such water meters because one metering stroke is achieved for each pulse received, thus avoiding the run-up and run-down delays typical of motor driven pumps when started and stopped directly by an pulse water meter.



Types

The water meters are multijet wet-operating types with summarizing metering works: contact sequences can be changed within a wide range in accordance with table 2.

Wet dial water meters are units in which the water fills the entire metering chamber up to the cover glass. Multijet water meters have measuring works in which the water is distributed to several jet nozzles around the fan wheel so that fan blade is acted upon smoothly and is symmetrical to the axis.

The reed-contacts may only be loaded with the volumes given in the technical data.

These are suitable for use with MAGDOS pumps and MEMDOS DX.

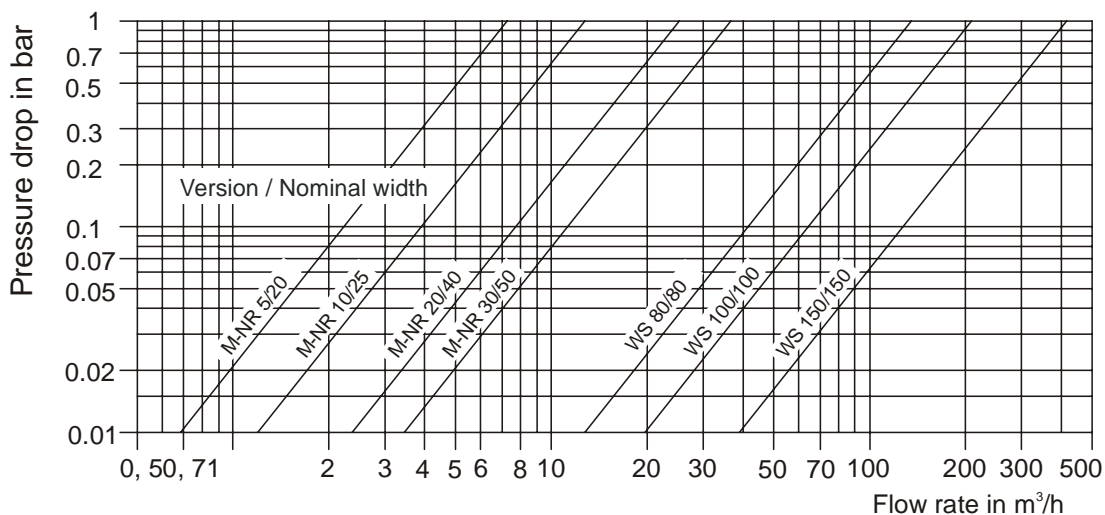
All water meters listed above are suitable for horizontal mounting. (Other versions available upon request.)

Max. operational pressure: 10 bar
 Max. water temperature: 40° C
 Electrical connection: max. 24 V, 0.2 A

For power over 4.8 W the contact protective relay must be modified.

MAGDOS and MEMDOS DX can be connected directly, since the voltage and currents of these units are clearly within the permissible limits.

Table pressure drop



Technical data

Table 1 types and part no.

Types		M-NR	M-NR	M-NR	M-NR	WS	WS	WS
		5	10	20	30	80	100	150
DN	Nominal diameter	20	25	40	50	80	100	150
*	Pulse sequence	1	2.5	5	5	25	25	50
	Litre/pulse	13700007	13700025	13700042	13700058	13700068	13700075	13700088
	Maximum loading	5	12	20	30	110	180	350
	Continuous	2.5	6	10	15	55	90	200
	Cutoff point +/-2%	0.25	0.5	1.0	1.5	3	4	10
	with measurement +/-5%	0.03	0.07	0.1	0.2	0.3	0.4	1
T	Depth	85	97	140	—	—	—	—
F	Depth	134	145	210	—	—	—	—
C	Length	145	185	208	—	—	—	—
E	∅	10	10	10	—	—	—	—
G	Height	MAGDOS 01-12	220	240	250	280	—	—
		MAGDOS 20-100	280	300	314	342	—	—
H	Height	110	118	133	142	215	220	394
h	Height	41	44	46	85	102	116	155
L	Length	190	260	300	270	300	360	500
S	Length with screw conn.	305	410	495	—	—	—	—
M	Length with screw conn.	360	460	530	—	—	—	—
AG	Connection thread of the meter	G1	G 1 1/4	G2	—	—	—	—
VG	Conn. thread of the screw conn.	G 3/4	G1	G1 1/2	—	—	—	—
D	Flange diameter	—	—	—	165	200	220	285
K	Diameter of PCD	—	—	—	125	160	180	240
	Number of screws	—	—	—	4	8	8	8
	Weight	kg	1.7	2.8	5.4	12.4	25.5	31.5
Connection dimensions of the flange are in accordance with DIN 2501, PN 10 / PN 16, all dimensions in mm								

* other pulse sequences according to table 2 are also available

Pulse available for the M-NR and WS meters

Table 2

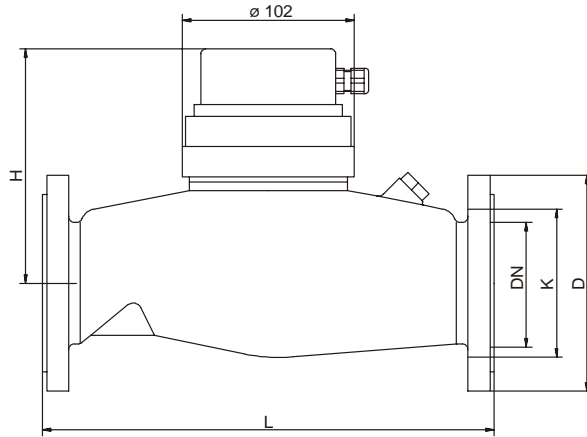
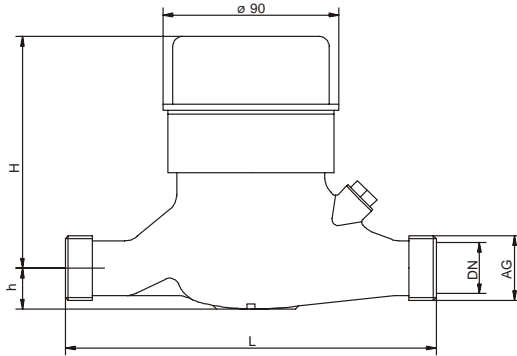
Model	Type	DN	Litre / pulse														
			0.25	0.5	1	2	2.5	5	10	20	25	50	100	200	250	500	1000
M-NR	5	20	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	10	25	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	20	40	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	30	50	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
WS	80	80					x	x	x	x	x	x	x	x	x	x	x
	100	100					x	x	x	x	x	x	x	x	x	x	x
	150	150									x	x	x	x	x	x	x

Dimensions

Dimensions see Table 1

MAGDOS mounted on water meter

Type:
M-NR 5 ... 20



Type:
WS and M-NR 30

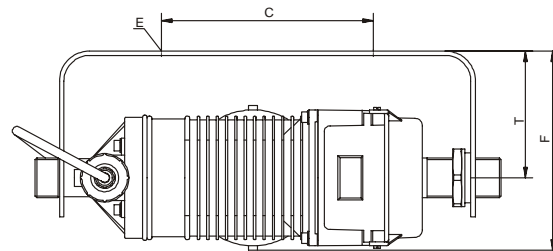
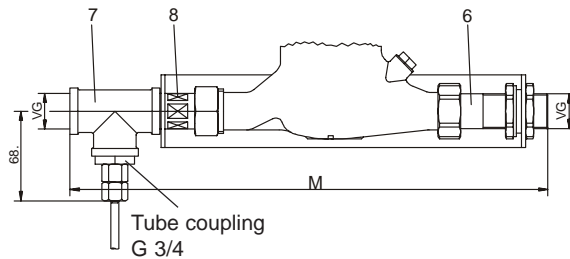
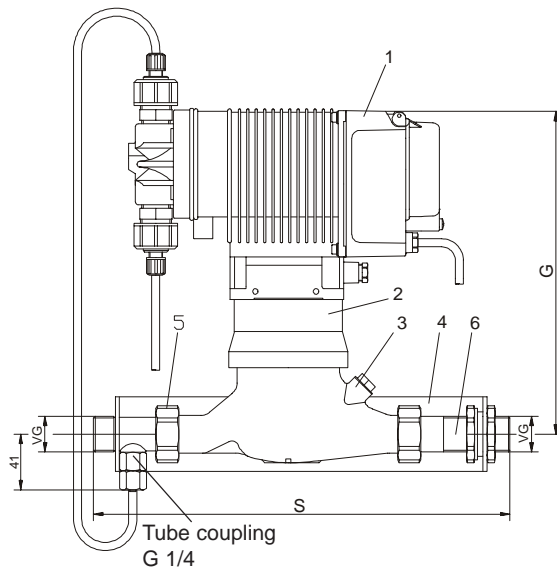
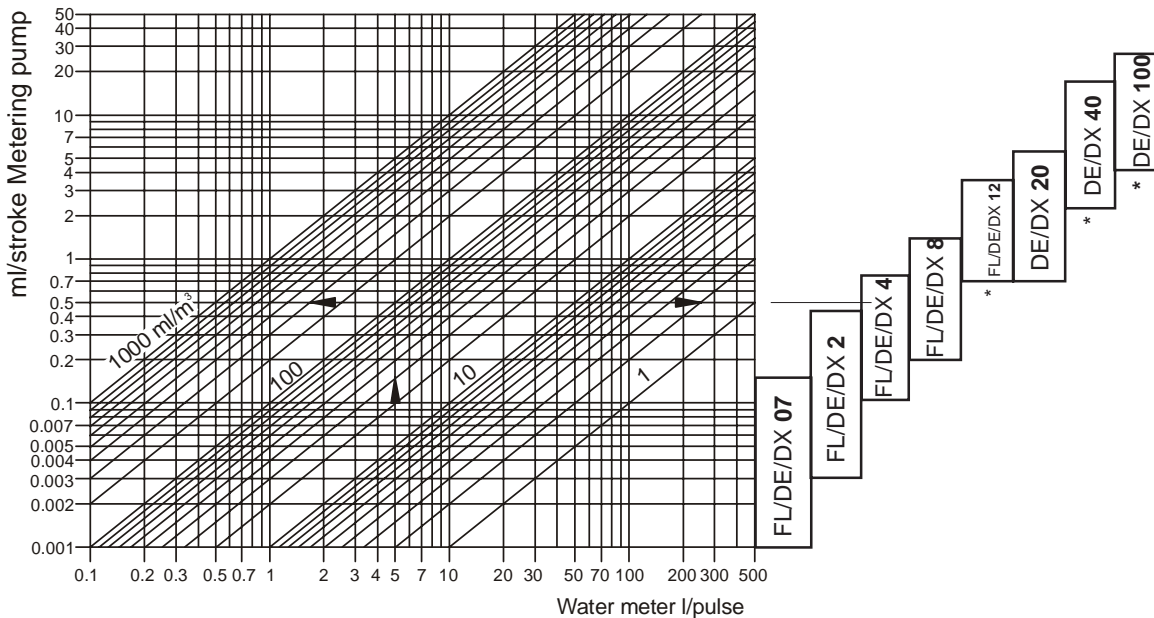


Table 3 Mounting accessories

Item	Description	Part no. for model		
		M-NR 5	M-NR 10	M-NR 20
1	MAGDOS-metering pump	MB 1 02 05, MB 1 02 15		
2	Connection piece	21801		
3	Contact head water meter	see Table 1		
4	Water meter mounting bracket	77670	77671	77672
5	Screw connection G 1/4	77866	77867	77884
6	Screw connection for length compensation	77896	77897	77898
7	T-piece for Injection piece Ms	77940	77941	77942
	T-piece for Injection piece malleable cast iron	82638	82639	82954
8	Short screw connection	77864	77865	77899

Diagram for coordination of metering quantity/m³ water meter pulse sequence and pump size.

Table 4



Recommended magnet metering for 4 bar back pressure or 2 * bar.

Example

100 ml/m³ of chemical has to be metered per 1 m³ of drinking water. Water consumption at peak use 25m³/hr but normally at 8 m³/hr.

Selection of the water meter and pump

For this application a water meter will allow a peak flow rate of 30 m³/hr. The pulse rating (gearing) is dependent on the type of metering pump to be chosen. The MAGDOS magnetic metering pump is recommended, since it permits excellent proportional metering without additional control system. The DN 50 water meter for MAGDOS control has an impulse rating of 5l/pulse, No. 13700058. In Table 4, the 100ml/m³ line intersects the 5l/pulse line at a point which shows that 0.5 ml must be metered per MAGDOS pump stroke. According to the diagram the MAGDOS FL 4, DE 4 or DX 4 is suited for this purpose.

See Table 3 for additional accessories.