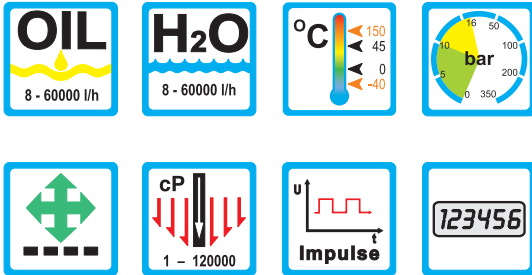


COVOL



Areas of Application

Method of Operation

- Oscillating Piston

Fields of operation

- Consumption measuring
- Dosing and mixing
- Batching

Features

- High accuracy
- Good repeatability
- Easy cleaning
- Used for viscosity's up to 120000 mPas (cP)
- Options: Totalizer (CIP), Digital indicator and measuring converter (MC-01, MT-02, CI-420, DFD-2)

Installation information

- The operating instructions for COVOL must be observed!
- Download: www.meister-flow.com

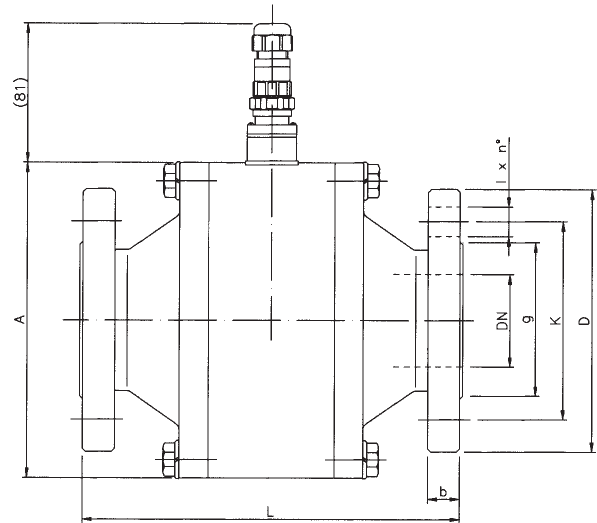
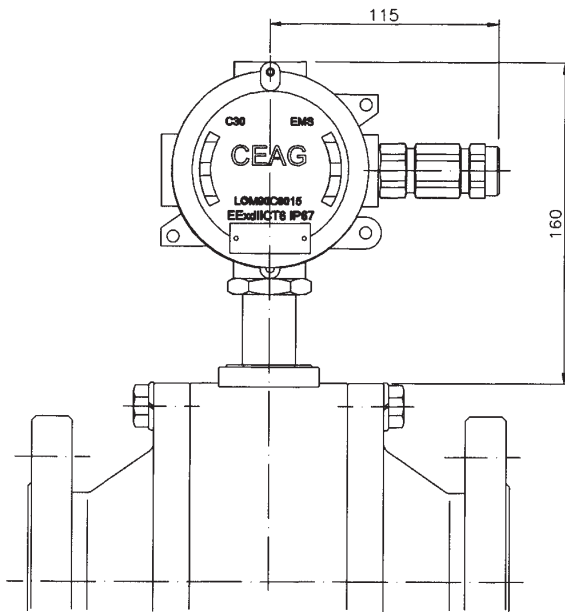
Operating Data

Operating pressure, max.	PN 10 (Plastic) PN 16 (Stainless Steel)
Pressure drop	see diagram on page 4
Temperature, max.	150 °C (Stainless Steel) 130 °C (PTFE) 80 °C (PP) 45 °C (PVC)
Accuracy	0,3 %

Measuring Ranges

Type	Flow ranges [l/h]
COVOL DN 10 ⁽¹⁾	25 - 250
COVOL DN 10	40 - 350
COVOL DN 15	150 - 1500
COVOL DN 25	500 - 4500
COVOL DN 40	800 - 8500
COVOL DN 50	1500 - 16000
COVOL DN 80	3000 - 28000
COVOL DN 100	5000 - 60000

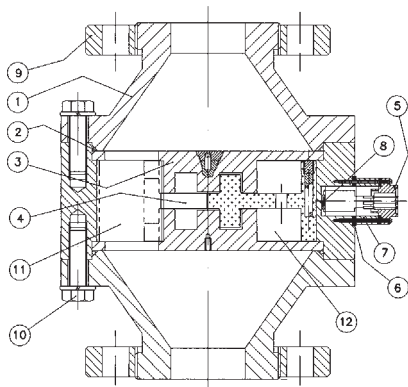
⁽¹⁾ 1/4" (H)



Connections, Dimensions and Weights

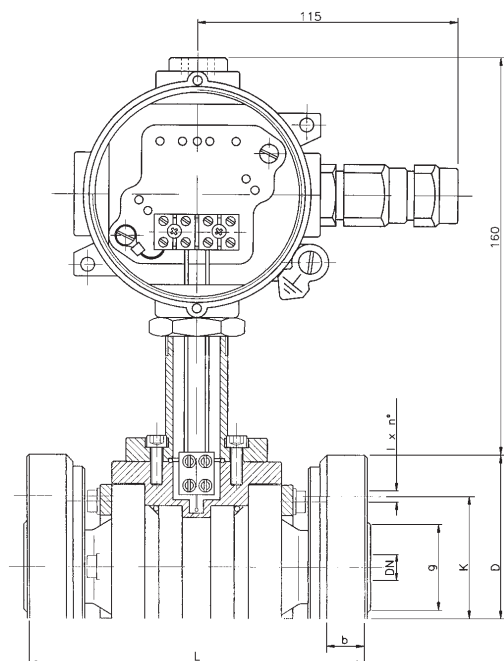
DN	D	k	g	I x n°	b	L		A		Weight [kg]	
						Stain- less steel	PVC PTFE	Stain- less steel	PVC PTFE	Stain- less steel	PVC PTFE
10	90	60	40	14 x 4	14	180	210	85	125	6	5
15	95	65	45	14 x 4	14	180	210	105	140	9	8
25	115	85	68	14 x 4	16	200	230	140	170	10	9
40	150	110	88	18 x 4	16	220	250	180	200	18	15
50	165	125	102	18 x 4	18	240	270	200	230	26	21
80	200	160	138	18 x 8	20	260	330	250	290	37	30
100	220	180	158	18 x 8	20	340	450	360	420	92	80

Materials

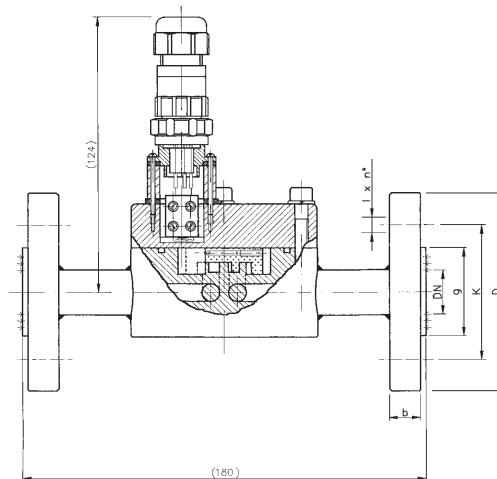


Nr.	Components	Stainless steel	PTFE	PVC / PP
1	Fittings	SS 1.4404	PTFE	PVC / PP
2	O-ring	NBR / Viton	Viton / PTFE	NBR / Viton
3	Disc	SS 1.4404	PTFE	PVC / PP
4	Piston	PTFE graphitized	PTFE graphitized	PTFE graphitized, PVC, PP
5	Connector	brass / plastic	brass / plastic	brass / plastic
6	Gaskets	NBR	NBR	NBR
7	Mounting	SS 1.4404	SS 1.4404 / PTFE	SS 1.4404 / PVC / PP
8	Reed-Contact	glass, 0,3 A / 220 V	glass, 0,3 A / 220 V	glass, 0,3 A / 220 V
9	Flanges	Steel / SS 1.4401	Steel / PTFE	Steel / PVC / PP
10	Screws	SS 1.4401	SS 1.4401	SS 1.4401
11	Separator	SS 1.4404	PTFE	PVC / PP
12	Measuring chamber	SS 1.4404	PTFE	PVC / PP

Plastic-versions with ADF-housing



DN 10 HZ only for horizontal mounting



Dimensions DN 10 ... DN 100

DN	D	k	g	l x n°	b	L
10	95	60	40	10 x 4	25	210
15	100	65	44	12 x 4	45	210
25	120	85	64	12 x 4	45	230
40	150	110	84	16 x 4	45	250
50	175	125	98	16 x 4	45	270
80	230	160	138	16 x 4	55	330
100	250	180	158	18 x 8	65	450

Dimensions DN 10 HZ

DN	D	k	g	l x n°	b
10	90	60	40	14 x 4	14

Technical data

COVOL

Operating pressure stainless steel-version

PN 16

Operating pressure plastic-version

PN 10

Temperature range stainless steel-version

- 40 °C bis +150 °C

Temperature range PTFE-version

- 20 °C bis +130 °C

Temperature range PP-version

- 10 °C bis +80 °C

Temperature range PVC-version

0 °C bis +45 °C

Pressure drop

see diagram on page 4

Viscosity

120000 mPas (cP)

Accuracy

0,8 %

Repeatability

0,3 %

Connections

Standard

EN 1092-1 flanges, PN 16

On request

Sanitary connections, NPT-thread

Options

Totalizer CIP (see page 5)

MC-01, MT-02, CI-420, DFD-2 (see separate data sheets)

Measuring ranges				
DN	min. [l/h]	range max [l/h]	intermittent [l/h]	pulses per litre (± 12 %)
10 1/4" (H)	25	250	500	100
10	40	350	800	100
15	150	1500	2700	20
25	500	4500	9000	10
40	800	8500	15500	4
50	1500	16000	28000	2
80	3000	28000	50000	1
100	5000	60000	104000	0,2

diagram 1: pressure drop versus flow rate

diagram 2: accuracy

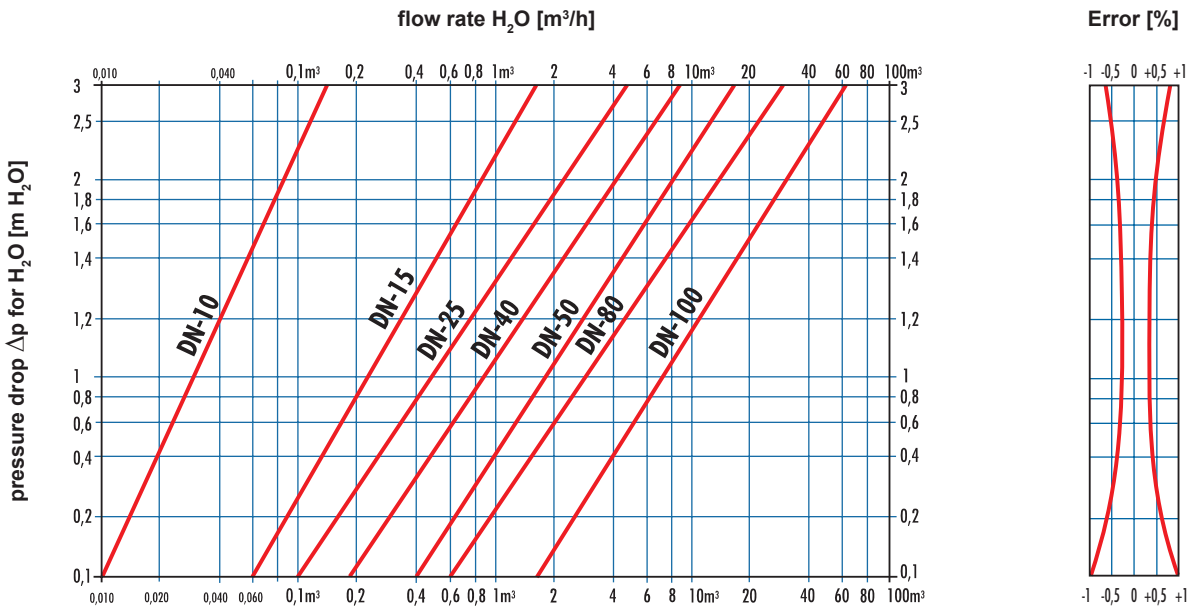
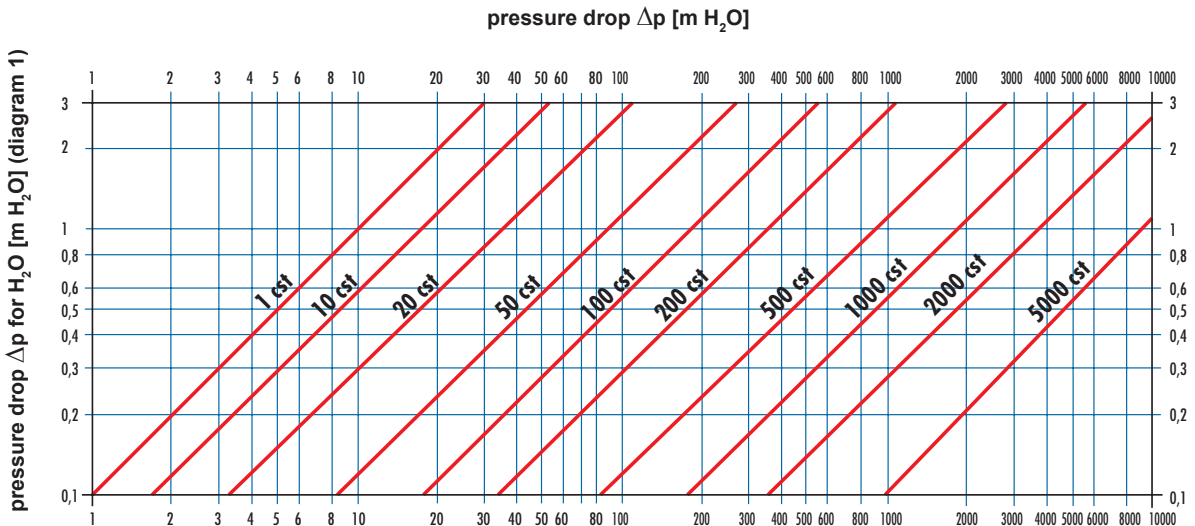


diagram 3: pressure drop versus viscosity of media



Electronic counter CIP for Covol

The electronic totalizer CIP is specially designed for the meter type COVOL. The totalizer is battery powered and directly mounted on the meter, so it is possible to show total quantities direct on site..

- Compact construction
- Battery-powered (3 - 4 years lifetime)
- 7-digits display, 9 mm high
- Resetting with a integrated push button or external with magnet
- PTFE coated aluminium housing (IP 65), cover in polycarbonat (UV-protected)

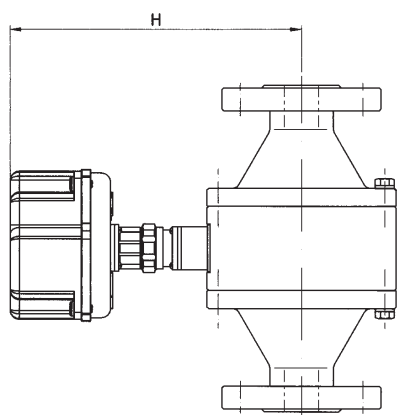


Dimensions DN 10...DN 100

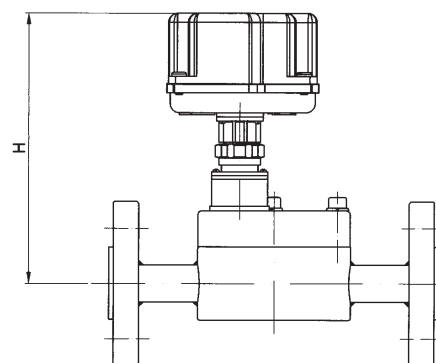
DN	H
10	148
15	161
25	170
40	192
50	202
80	227
100	267

Dimensions DN 10 HZ

DN	H
10	142



DN 10 ... DN 100

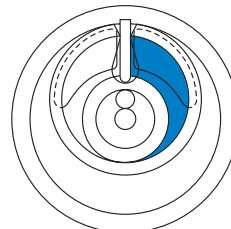


DN 10 HZ

Function principle of the oscillating piston meter

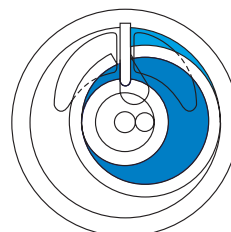
position 1

The liquid flows into the inside of the ring piston and starts the rotation.



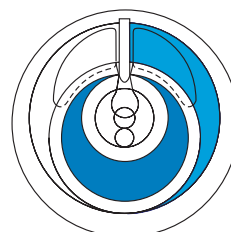
position 2

The liquid starts to fill the cavity between metering chamber and the outside of the piston and continues to fill the inside of the piston.



position 3

The pistons inside is completely filled. The liquid continues to fill the outside cavity and keep the piston in motion.



position 4

During further filling of the cavity, the inside of the piston will be discharged through the outlet. Then begins a new cycle by filling the pistons inside again.

