

# ARD

## INDUSTRIAL METER

# DIEHL

Metering



### APPLICATION

Diehl Metering offers a modular system based on the volumetric technology. Modules are available in various materials and can be easily assembled. A large choice of materials, adapted to the nature of the measured liquid, can be proposed for each measurement problem.

Modular system gives the possibility to exchange or add one or several pulse emitter modules.

Measuring chamber and rotary piston control and cleaning operations can be carried out on the site, without dismounting the ARD meter from the pipe. It's possible to integrate a heating device in the measuring chamber according to the type of liquid to be measured. These meters have an important measuring dynamic and even very low flowrates are recorded with precision.

### FEATURES

- ▶ Volumetric meter
- ▶ Possibility to measure various liquids
- ▶ High measurement dynamics

## TECHNICAL CHARACTERISTICS

Nominal diameter	DN	mm	15	20	25	40	50
Nominal pressure****		bar	10..40 (4)	10..40 (4)	10..40 (4)	10..40 (4)	10..40 (4)
Operating temperatures range****		°C	40..180 (4)	40..180 (4)	40..180 (4)	40..180 (4)	40..180 (4)
Max. flowrate		l/h	400	1500	3 000	9 000	30 000
Discontinuous flow		l/h	320	1200	2 400	7 200	24 000
Continuous flow		l/h	200	750	1 500	4 500	15 000
Min. flowrate**		l/h	10	30	75	225	750
Min. flowrate*** - aluminium piston		l/h	10	37.5	75	225	750
Min. flowrate*** - ebonite/graphite/stainless piston		l/h	20	75	150	450	1 500
Min. flowrate*** - PPS/PTFE piston		l/h	40	150	300	900	3 000
Starting flow		l/h	4	12	30	90	300
Volume of the measuring chamber (cyclical volume)		cm <sup>3</sup>	12	36	100	330	1 200
Verification step		l	0.01	0.1	0.1	0.1	1
Recording capacity		m <sup>3</sup>	1000	10 000	10 000	10 000	100 000
Max. recording time with continuous flow and no reset		h	5000	13 333	6 666	2 222	6 666
Width of the safety filter mesh		mm	0.4	0.4	0.4	0.8	0.8
Max. width of the impurity collector mesh		mm	0.1	0.1	0.25	0.25	0.25

\* For chemical liquids up to approximately 10 000 mPa.s

\*\* For light fuel oil meter with measuring chamber in brass and a piston in aluminium

\*\*\* For other liquids and piston materials and measuring chamber

\*\*\*\* According to construction materials

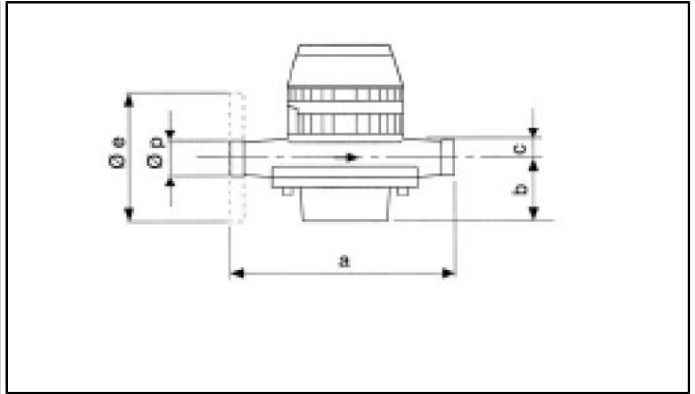
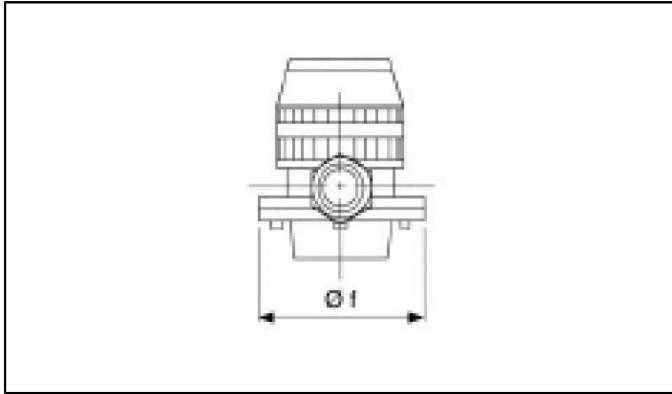
## METROLOGY

ARD		
Error tolerance of the instantaneous value between Q <sub>max</sub> and Q <sub>min</sub>	%	±0.5
Repeatability	%	±0.1
Metering in both flow direction		Yes
Straight length		Not necessary

## ASSEMBLY

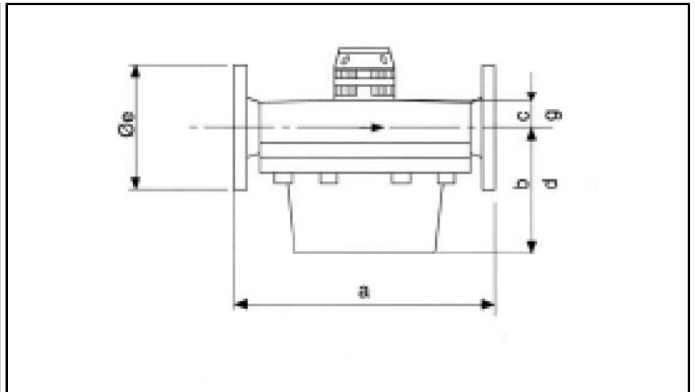
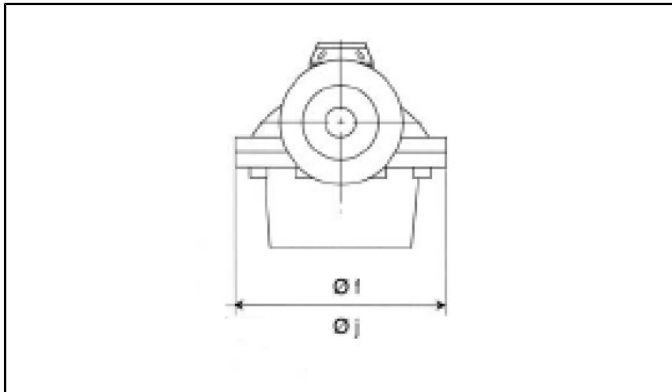
Rotary piston meters may be fitted on all positions but the dial of the register must never face down. No straight length before or after the meter is required. Meters with a register must be installed to be read easily. Rotary piston meters are precision instruments and must always be protected by an impurity collector or a filter. The mesh width must be less than 100 microns (0.1 mm).

## DIMENSIONS : THREAD VERSION



Nominal diameter	DN	mm	15	20	25	40	50
a			165	165	190	300	350
b			45	54	77	116	166
c			20	20	24	35	41
Øf			105	105	130	210	280
Øe			95	105	115	150	-
Øp			3/4"	1"	1-1 / 4"	2"	2-3/8"
Weight		Kg	2.1	2.5	4.2	16	36

## DIMENSIONS : FLANGE VERSION



Nominal diameter	DN	mm	15	20	25	40	50
a			165	165	190*	300	350
b			45	54	77	116	166
c			20	20	24	37	43
d			-	-	107	140.5	-
Øf			105	105	130	210	280
Øe			95	105	115	150	165
g			-	-	26	38	-
Øj			-	-	160	210	-
Weight Inox		Kg	4.5	5.5	8.5	21	40
Weight synthetic		Kg	-	-	10	23	-

\*Only for metal housing, for synthetic housing length is 260 mm.

## PRESSURE LOSS GRAPH

