KLINGER LDG-P

Magnetic Inductive Flow meter

KLINGER LDG is a magnetic inductive flow meter for measuring flow on liquids with electrical conductivity. The measurement principle is based on Faradays law on magnetic induction, it says, that an electrical voltage will be induced, when a conductor passes a magnetic field. In the magnetic inductive flow meter is the liquid the electrical conductor, and the induced voltage directly proportional to the velocity of the liquid.

FEATURES

- High measurement accuracy in a large measuring range: ±0,5 % (V > 0,6 m/s) or ±3mm/s of; option: ±0,2 %
- A maintenance-free measurement without moving parts
- A measurement is independent of temperature, density, viscosity, concentration and conductivity.
- Bidirectional measurement
- Measurement range: 0.3–12 m/s

TECHNICAL SPECIFICATIONS

SIZES	DN15–DN3000
PROCESS CONNECTION	Flange EN 1092-1, JIS B2220 or ANSI 16.5
PRESSURE RATING	DN10-25 ≤40 bar, DN32-150 ≤16 bar, DN200-600 ≤10 bar, DN700-2200 ≤6 bar
MEASURED MEDIUM	Conductivity > 5 µS/cm, gas content < 5%, solids content < 30%
RENTALS	Hard Rubber, PP, PTFE, PFA
LINER TEMPERATURES	Hard Rubber -20...+60 °C, PP -5…+90 °C, PTFE -20…+120 °C, PFA -20…+180 °C
ELECTRODES	SS316, Titanium, Tantalum, Hastelloy C22
TRANSMITTER	Compact or remote (10 m cable), IP67
ACCURACY	±0.5% of actual value (V > 0,3m/s) Option: ±0.2% of actual value (V > 0,3m/s)
FLOW DIRECTIONS	Two-way (positive/negative)
AMBIENT CONDITIONS	-20 …+60 oC / 5%-95% RH
OUTPUT	4-20 mA, scaled pulse, Option: HART, Modbus RS485 or Profibus DP
POWER SUPPLY	110-240 VAC or 24 VDC, < 20 W

KLINGER Finland Oy » Tinankuja 3, FI-02430 MASALA » +358 (0)10 400 1011 » info@klinger.fi » www.klinger.fi

ORDER CODE

IDENTIFICATION	MODEL CODE										FEATURES
LDG-P											Electromagnetic Flowmeter
Diameter	DN3-DN2000										
Connection	DXX										D10: DIN PN10 flange; D25: DIN PN25 flange
	AXX										A15: ANSI 150# flange; A30: ANSI 300# flange
	JXX										J10: JIS 10K flange; J20: JIS 20K flange
Linings		1									Hard Rubber (DN50–DN1200)
		2									PTFE (≤DN1200)
		3									Polyurethane (≤DN1200)
		4									PFA (≤DN250)
		5									F46 (≤DN250)
Electrode Material			1								Stainless Steel 316L
			2								Hastelloy C
			3								Hastelloy B
			4								Titanium
			5								Tantalum
			6								Platinum
Ground Connection				0							Flange Grounding
				1							Grounding Ring
				2							Grounding Electrode
Protection Rating					1						IP65
					2						IP67 (For Compact Model Only)
					3						IP68 (For Remote Model Only)
Model Type						C					Compact Display Model
						R					Remote Display Model
Power Supply							A				85–265 V AC (45–63Hz)
							D				16–36V DC
							B				3.6V Battery Powered
Output								O			Standard (4–20mA, Pulse and Alarm)
								M			Standard + Modbus
								H			Standard + HART
Material									S4		Stainless Steel 304
									CS		Carbon Steel
Additional Configuration										O	None
										J	Relay Output
										T	Power-Off Timer
										F	Enhancements
										Q	Remote Control
										S	High-Frequency Slurry
										R	Infrared Remote Controller
										G	GPRS Communication

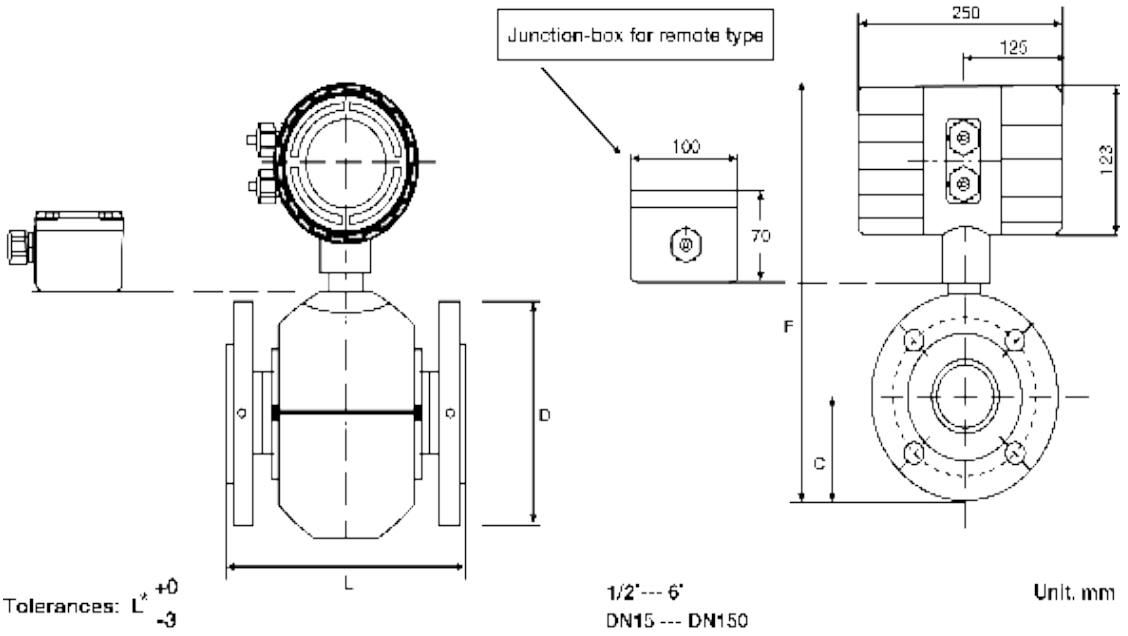
KLINGER Finland Oy » Tinankuja 3, FI-02430 MASALA » +358 (0)10 400 1011 » info@klinger.fi » www.klinger.fi

INSTALLATION

Installation dimensions comply with ISO 13359 -standard. Recommended maximum flow velocity: 4–6 m/s.

NOMINAL SIZE		FLOW RATE (M3/H)		
MM	INCHES	V=0.3 M/S MIN	V=1.0 M/S	V=15 M/S MAX
15	1/2	0.1909	0.6362	9.543
20	3/4	0.3393	1.131	16.96
25	1	0.5301	1.767	26.51
32	1 1/2	0.8686	2.895	43.43
40	1 1/2	1.357	4.524	67.86
50	2	2.121	7.069	106.0
65	2 1/2	3.584	11.95	179.2
80	3	5.429	18.10	271.4
100	4	8.482	28.27	424.1
125	5	13.25	44.18	662.7
150	6	19.9	63.62	954.3
200	8	33.93	113.1	1696
250	10	53.01	176.7	2651
300	12	76.34	254.5	3817
350	14	103.9	346.4	5195
400	16	135.7	452.4	6786
450	18	171.8	572.6	8588
500	20	212.1	706.9	10603
600	24	305.4	1018	15268
700	28	415.6	1385	20782
800	32	542.9	1810	27144
900	36	687.1	2290	34353
1000	40	848.2	2827	42412
1200	48	1221	4072	61073
1400	56	1663	5542	83127
1600	-	2171	7238	108574
1800	-	2748	9161	137414
2000	-	3393	11310	169647
2200	-	4105	13685	205273
2400	-	4886	16286	244292
2600	-	5734	19114	286703
2800	-	6650	22167	332508
3000	-	7634	25447	381705

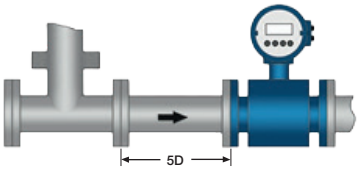
KLINGER Finland Oy » Tinankuja 3, FI-02430 MASALA » +358 (0)10 400 1011 » info@klinger.fi » www.klinger.fi



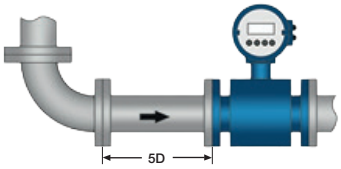
NOMINAL SIZE	NOMINAL PRESSURE	SIZE			BOLT SPECIFICATIONS						FLANGE OUTSIDE DIAMETER (D)		WEIGHT APPROX	
					BOLT CIRCLE DIAMETER		BOLT DIAMETER (A)		NUMBER OF BOLTS (N)					
GB, DIN		L	C	F	1.6	4.0	1.6	4.0	1.6	4.0	1.6	4.0	1.6	4.0
MM	MPa	MM	MM	MM	MM	MM	MM	MM	N	N	MM	MM	KG	KG
15	1.6.	200	48	315	65	65	14	14	4	4	95	95	7	7
20	or	200	53	325	75	75	14	14	4	4	105	105	9	9
25	4.0	200	58	330	85	85	14	14	4	4	115	115	11	11
32		200	70	380	100	100	18	18	4	4	140	140	12	12
40		200	75	380	110	110	18	18	4	4	150	150	13	13
50		200	83	385	125	125	18	18	4	4	165	165	14	14
65		200	93	405	145	145	18	18	4	8	185	185	22	23
80		200	100	420	160	160	18	18	8	8	200	200	26	28
100		250	118	455	180	190	18	22	8	8	235	235	28	32
125		250	135	500	210	220	18	26	8	8	270	270	35	41
150		300	150	500	240	250	22	26	8	8	300	300	38	44
200	1.0.	350	170	540	295	295	22	22	8	12	340	340	45	46
250	or	450	203	600	350	355	22	26	12	12	395	405	67	71
300	1.6	500	230	660	400	410	22	26	12	12	445	460	94	103
350		550	260	720	460	470	22	26	16	16	505	520	145	158
400		600	290	780	515	525	26	30	16	16	565	580	180	197
450		600	320	840	565	585	26	30	20	20	615	640	215	242
500		600	358	915	620	650	26	33	20	20	670	715	245	293
600		600	420	725	725	770	30	36	20	20	780	840	335	418

KLINGER Finland Oy » Tinankuja 3, FI-02430 MASALA » +358 (0)10 400 1011 » info@klinger.fi » www.klinger.fi

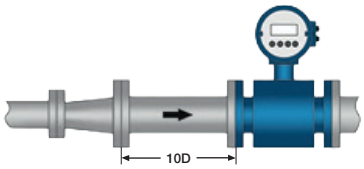
T shape pipe



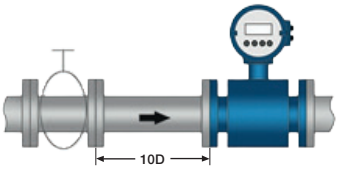
90°C elbow



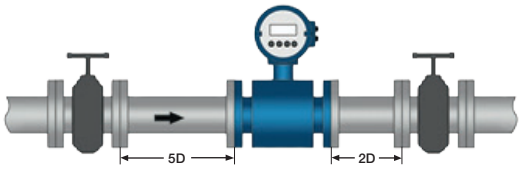
Expansion pipe



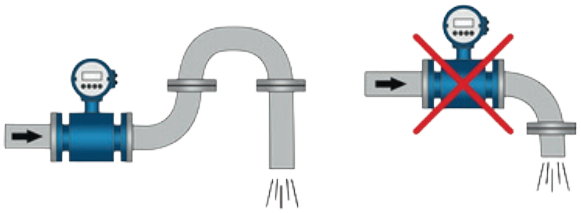
Various valves



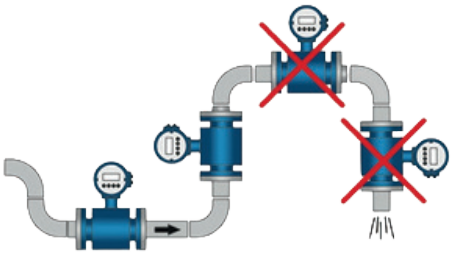
Valve in fully open position



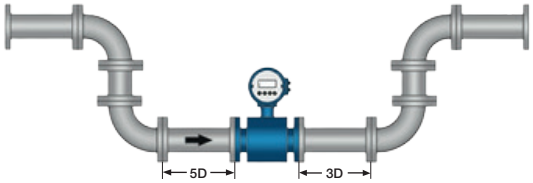
Installation in open-ended lines



Installation in corrugated pipes



Not fully filled Installations



KLINGER Finland Oy » Tinankuja 3, FI-02430 MASALA » +358 (0)10 400 1011 » info@klinger.fi » www.klinger.fi