

RLW - GEARS FLOW METER

RLW gears flow meters are suited for applications with lubrication liquids and not, as well as for viscous, abrasive and corrosive fluids.

Gears flowmeters are volumetric counters that have internal design similar to gear pumps. There are two gears wheels inside the flowmeter body; they have mutual engagement with a minimum backlash. Between the teeth and walls of the flowmeter body closed chambers arise into which medium forced-flows and it puts thereby the gear wheels in motion. The gear wheels move freely and do not brake the medium flow. Their number of revolutions is proportional to the flow rate detected using contactless sensors through the body wall.

Applications

- Waterborne paints, clear coatings, 2-component paints, highly-filled metal paints and softfeel paints
- Coating wax, glues, PVC, epoxy resin, viscous and abrasive fluids
- Polyol- and isocyanate
- Oil, fat (also food and cosmetics)
- Filling processes
- Dosing systems
- Lubrication-monitoring
- Light acids and alkalis



TECHNICAL SPECIFICATIONS

Linearity:	+/- 0.5% of actual flow (>30 mm2/s; up to 0.1% with linearization electronics)
Repeatability:	+/- 0.1%
Fluid temperature:	-20 to +180°C (higher temperatures on request)
Materials:	Housing SS303 (as per DIN 1.4305); gears as per DIN 1.4122; carbide bearing; FKM, PTFE, NBR, Kalrez sealing.
Output:	see Pick-Up

Models	Flow range l/min	K-factor pulse/l	Max Pressure bar	Frequency in Hz	Weight kg
RLW-01A-B	0.002 to 0.5	40.000	315	1.3 to 330	2.2
RLW-01C	0.02 to 3	14.000	630	4.6 to 700	1.3
RLW-02B	0.1 to 7	4.200	630	7 to 490	2.2
RLW-03	0.5 to 25	1.740	630	14 to 730	2.9
RLW-04	0.5 to 70	475	630	4 to 560	8.5
RLW-05	5 to 150	134	400	11 to 340	23
RLW-06A	5 to 250	106	400	8.8 to 450	27
RLW-06B	10 to 500	53	400	18 to 450	35
RLW-07	50 to 1000	24	400	20 to 400	66.5

Calibration certificate included = 3 points (ref. Nist) to supply std.

Request = calibration to 5 or 10 points with extra charge.



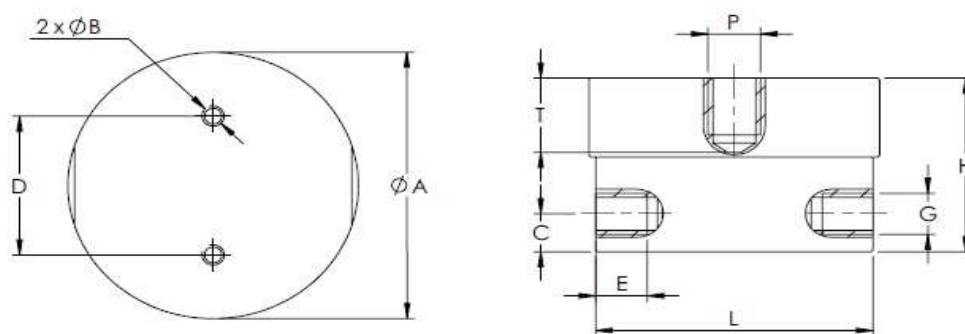
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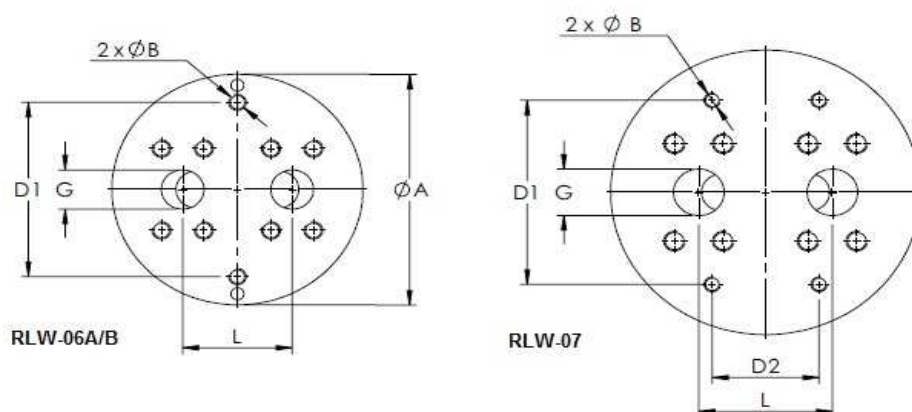
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DIMENSIONS

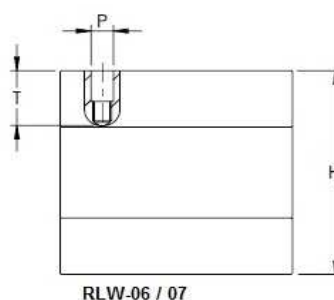


Models	RLW-01AB	RLW-01C	RLW-02B	RLW-03	RLW-04	RLW-05
A	76	76	84.4	84.4	125	175.5
B	M6 H10	M6 H10	M6 H10	M6 H10	M6 H10	M8 H15
C	10.5	12	12	12	17	22.5
D	44	44	44	44	60	100
E	14	14	14	14	18	18
G	M12 x 1.5	M12 x 1.5	M12 x 1.5	M12 x 1.5	M20 x 1.5	M33 x 2
H	41	50	51	67	96	133
L	72	72	80.5	80.5	121	170
P	M14x1.5	M14x1.5	M14x1.5	M14x1.5	M14x1.5	M14x1.5
T 1)	19	18	23.5	23.5	30.5	43.5

1) Total height is calculated by adding up the height (H) and the height of the pickup and subtract the bore hole depth (T)



	RLW-06A	RLW-06B	RLW-07
A	188.5	188.5	233
B	M12 H25	M12 H25	M12 H25
D1	142	142	150
D2	-	-	80
G	SAE 1"1/4"	SAE 1"1/4"	SAE 1"1/2"
H	138	180	220
L	82	82	100
P	M14x1.5	M14x1.5	M14x1.5
T 1)	48.5	48	63



RLW-06 / 07

1) Total height is calculated by adding up the height (H) and the height of the pickup and subtract the bore hole depth (T)



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PICKUP AND AMPLIFIER

WT*.02 WI*.02	Local converters for direct on board mounting type WT.02 / WI.02 are passive 4-20 mA sensors with carrier-frequency-input stage (WT.02) or inductive input stage(WI.02). The carrier frequency converters WT.02 are recommended for low flows due to the lower cut off frequency (typically < 0,5 Hz). The inductive converters WI.02 are recommended for higher medium temperature (up to 150°C).	
IF* VIE*	The IF* inductive pickup detects the r.p.m. of RLW flow meter. Each passage of a gear changes the magnetic field of the pickup inducing an alternating voltage in the output by changing in the magnetic flux. The VIE* will amplify the sinusoidal output voltage of the pickup converting squarewave voltage signal with a number of pulses per time unit proportional to flow rate, and to be transmitter to an electronic remote display.	
Pickup	WT* /WI* K = for RLW 02 to 04 L = for RLW 05 to 07 R = for RLW 01A-B-C	IF* PG = cable sleeves version with 3 meter cable K= short version for RLW 02 to 04 L = long version RLW 02 to 07 R = short version for RLW 01A-B-C
Amplifier	-	VIE* G = separated version: amplifier without pickup K = short version with pickup for RLW 02-04 L = long version with pickup for RLW 02-07 R = short version with pickup for RLW 01 S = long version with pickup for RLW 01 up to +150°C
Drilling type	E	E
FluidTemp	-40 to 120°C WT.02 -40 to 150°C WI.02	<+180°C
Ex-Approv	Ex II 2G Ex ia IIC T4	Ex II 2G Eex ia IIC T6, BVS 03 ATEX E 207
Analog Output	4-20 mA, 2-wire passive, linearization	-
Supply	12-30V, regulated	7-29VDC
Operating mode	ON frequency proportional current OFF supply current 4 mA independent of frequency	Input 0.5 up to 500 mV <100Ohm
Output	Open collector, potential free OFF (frequency output disabled) 1:1 (output frequency = input frequency) CORR (scaleable output frequency) SW (switch output)	Standard versions adjustable via jumpers two-wire (current level); three-wire active NPN; three-wire active PNP (PLC); three-wire passive NPN Ex versions by factory not adjustable 2N = two-wire DIN 19234 NAMUR 3A = three-wire active NPN 3P = three-wire passive NPN/open collector
Frequency	WT 1-3,000 Hz; WI 7-3,000 Hz	7...3,000 Hz
Connection	M12; 5 pin 1 = +I, 2= -I, 3 = emitter, 4 = collector, 5 = remote input	1 or 2 3pin terminals for inductive pickup, amplifier, supply and output signal
Ambient Temp	-40...+50°C	-20...+50°C
Material	S.S.	Pickup IF* = Stainless steel as per DIN 1.4104 VIE* = Aluminium, LxWxH mm 64x58x37 one or two cable sleeves
Protection	IP65	IP65



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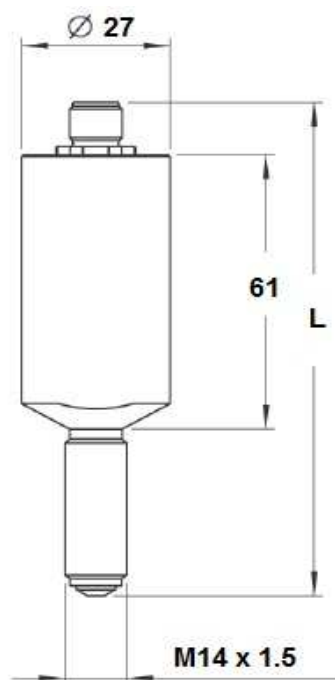
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PICKUP AND AMPLIFIER DIMENSIONS

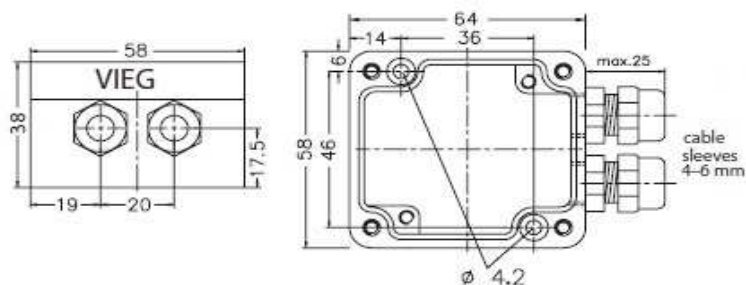
WT* / WI*



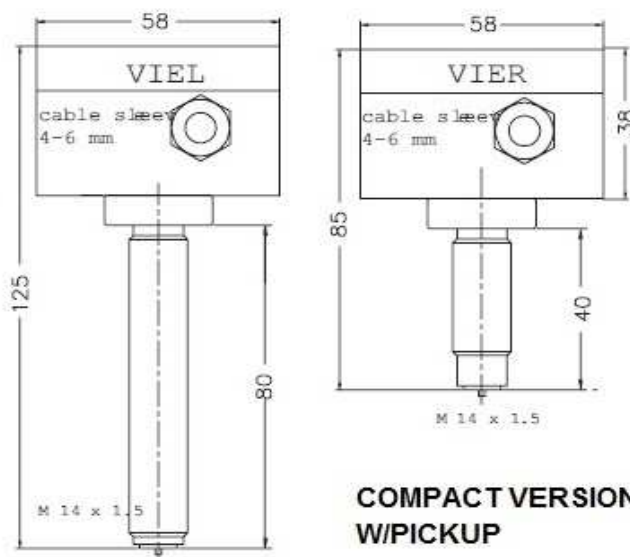
Form K, R = L 117 mm
Form L = L 156 mm

PICKUP WT*02 / WI*02

VIE*



SEPARATED VERSION



COMPACT VERSION
W/PICKUP



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