



RN4 FLOWMETER

This flanged range of axial turbine flowmeters will provide you with a highly accurate way of measuring liquids over the range of 1 to 18,000 litres/min.

FEATURES & BENEFITS

- Highly accurate measurement of flow
 - Well proven
 - Improve product quality
 - Reduce cost and waste
- Robust stainless steel construction
 - Corrosion resistant
 - Low maintenance and downtime
 - Withstands high temperature and pressure
- High quality manufacture
 - ISO 9001 certified company
 - Approvals for use in hazardous areas
 - Individual calibration certificates
- Low pressure drop
- Bi-directional flow capability

PRODUCT CONFIGURATION

1 MATERIAL (Body/Rotors/Bearing)

Body: 316 stainless steel

2 BEARING TYPE

Sleeve bearings: up to 50mm - carbon graphite filled PTFE (max temperature 180°C)
Optional tungsten carbide 80mm and above tungsten carbide (max temperature 300°C)

3 ROTOR/ROTOR SHAFT MATERIAL

431 S/S or ferralium / Tungsten carbide

4 THRUST BALLS/PLATE

Tungsten carbide or ceramic

5 HANGERS / CIRCLIPS

316 stainless steel / 316 stainless steel

6 INSTRUMENTATION

The signal can be used for a local display, remote display or converted for transmission to a separate control system.

PRINCIPLE OF OPERATION

When liquid flows and the rotor turns, the sensor detects the movement of the blade tips and generates pulses. The pulse frequency is proportional to the flowrate.

CALIBRATION

All RN4 turbine flowmeters are individually calibrated with water and are traceable to national standards. We provide you with a test certificate for each meter showing the number of pulses per litre, which is used to set the instrumentation.

INSTALLATION

The flowmeter is installed directly into the pipeline. To reduce turbulence and get the best results from your flowmeter we recommend that you install it in a straight section of pipe with at least 10 pipe diameters upstream and 5 pipe diameters downstream. Control valves should be installed downstream of the flowmeter.

To prevent foreign particles blocking your line we recommend you install a filter before the flowmeter. Preamplifiers are only needed if you have very long transmission distances or an electrically noisy environment close to pumps, motors, generators, switchgear or heavy current carrying cables. Intrinsically safe systems always require an IS pick-off coil. The IS P5 preamplifier is required for transmission to the safe area through barriers.

CONSTRUCTION

The stainless steel construction is durable and gives excellent corrosion resistance. The rotor is machined from solid making it virtually indestructible. The sleeve bearings provide you with highly reliable performance over long periods.

ADDITIONAL OPTIONS

- mV sinewave pickup (standard option)
- Ex - mV sinewave ATEX approved (EXia)
- HT - mV sinewave high temp (232°C)
- PPW - square wave pulse
- FC7 - 4-20 mA analogue outputs
- R5 - FRT141D0FM battery powered display of flow rate & total, pulse & 4-20mA analogue outputs
- R4 - FRT401D0FA battery powered display of flow rate & total, pulse output
- R3 - FRT121D0FMI intrinsically safe battery powered display of flow rate & total, pulse & 4-20mA analogue outputs
- ANSI flanges
- PN flanges
- ND flanges

* Other flanges available on request

APPLICATIONS

- Water
- Light oils
- Solvents
- Low viscosity chemicals
- Batching
- Flow rate monitoring
- Controlling
- Filling
- Pumps, engines, valves & other flow meters
- Blending monitoring
- Intrinsically safe ATEX II 1G Ex ia IIC T5/T4 Ga (-20C<Ta<80°C/+100°C)

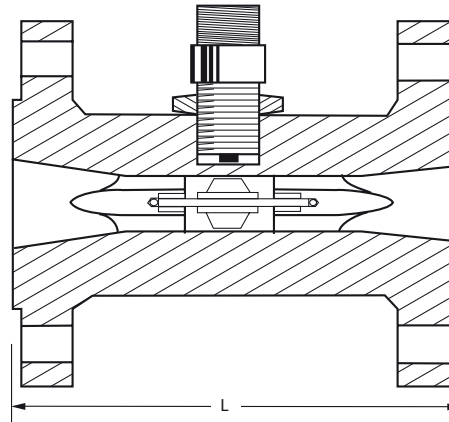
SPECIFICATIONS



	RN3 Flowmeter
Linearity	Better than +/- 0.5% of reading
Repeatability	+/- 0.1% of reading
Pressure drop	0.5 bar at maximum flow
Maximum overrange	Up to 120% of the maximum flow rate for short durations
Maximum working pressure	Subject to flange rating
Temperature range	Standard pick off -30°C to 110°C
	IS pickoff -20°C to 100°C
	High Temp -30°C to 232°C
Flanged connections	ASA 150 to ASA 2500
	PN10 to PN400
	Others available on request

Flowrate Ranges		
Model no	Flow Range (l/min)	K factor pulses/litre
RN4/15/1	1-10	6000
RN4/15/2	2-20	3000
RN4/20/5	5-50	1080
RN4/20/8	8-80	1080
RN4/25/15	15-150	520
RN4/25	25-250	362
RN4/32	45-450	102
RN4/40	67-670	72
RN4/50	110-1100	41
RN4/80	225-2250	16
RN4/100	450-4500	6.6
RN4/150	900-9000	2.8
RN4/200	1800-18000	1.7

DIAGRAM

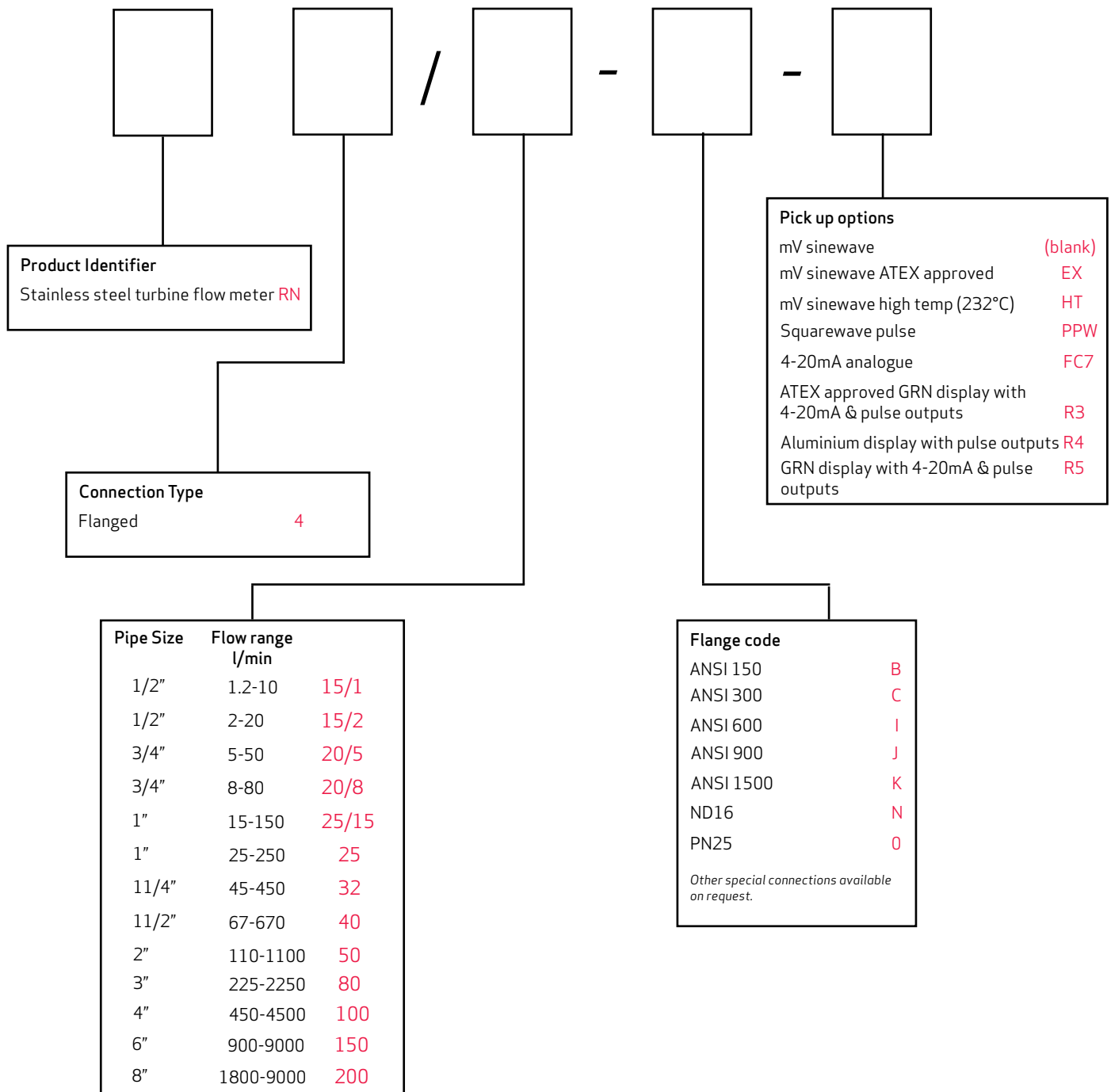


DIMENSIONS

Flowrate Ranges			
Model No.	Flange Size (mm)	L (mm)	Weight Kg
RN4/15/1	15	140	2.0
RN4/15/2	15	140	2.0
RN4/20/5	20	139.7	3.0
RN4/20/8	20	139.7	3.0
RN4/25/15	25	139.7	3.5
RN4/25	25	139.7	3.3
RN4/32	32	145.0	3.9
RN4/40	40	152.4	8.0
RN4/50	50	165.1	11
RN4/80	80	250.0	21
RN4/100	100	300.0	32
RN4/150	150	360.0	51
RN4/200	200	360.0	80

#The nominal K factor is based on water at 20°C
Each flowmeter is individually calibrated on water and will have a unique K factor.

OPTIONS AND ORDERING INFORMATION



Service & Warranty: For technical assistance, warranty replacement or repair contact your distributor:
Hydrotechnik UK Ltd. 1 Central Park, Lenton Lane, Nottingham, NG7 2NR, UK.
 Tel: +44 (0) 115 900 3550. Email: sales@hydrotechnik.co.uk. Web: www.hydrotechnik.co.uk



ISO 9001