

RN7 HYGIENIC FLOWMETER

The RN7 hygienic turbine flowmeters are specifically designed for the measurement of liquid flow in the food and pharmaceutical industries.

Hygienic stainless steel construction ✓

- Polished internals
- Easy to clean with steam or CIP
- Hygienic end connections
- Very low maintenance and down time

Highly accurate measurement of flow ✓

- Reduce waste and costs
- Improve product quality

High quality manufacture ✓

- ISO 9001 certified company
- Individual calibration certificates

Bi-directional flow capability ✓



Application

The RN7 hygienic turbine flowmeters have been designed for the dairy, beverage, food processing and pharmaceutical industries. The liquid food applications include milk products, vegetable oils and vinegar for both continuous measurement and batch control.

The brewing and soft drinks industry use the flowmeter for keg filling, ratio blending and tanker loading. Pharmaceutical processes often require the hygienic qualities of the meter for accurate flow measurement of salines, proprietary medicines and fine chemicals.

The bearings are suitable for low pressure steam sterilisation and chemical in place cleaning.

Instrumentation

The signal can be used for a local display, remote display or converted for transmission to a separate control system. Apollo have a range of instruments to suit all your requirements.

Principle of Operation

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

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.

The design minimises bacterial growth crevices.

Calibration

All Apollo RN7 turbine flowmeters are individually calibrated on 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 RN7 flowmeters have hygienic tri-clamp, RJT, ISS or ACME end connections for mounting directly into the flow line.

For best performance and to reduce turbulence we recommend that the flowmeter is installed in a straight section of pipe with at least 10 pipe diameters upstream and 5 pipe diameters downstream. All control valves should be installed downstream of the flowmeter. Preamplifiers are only needed for installations with very long transmission distances or where the installation is in an electrically or magnetically noisy environment close to pumps, motors, generator, switchgear or heavy current carrying cables.

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Hygienic Turbine Flowmeter

Specification

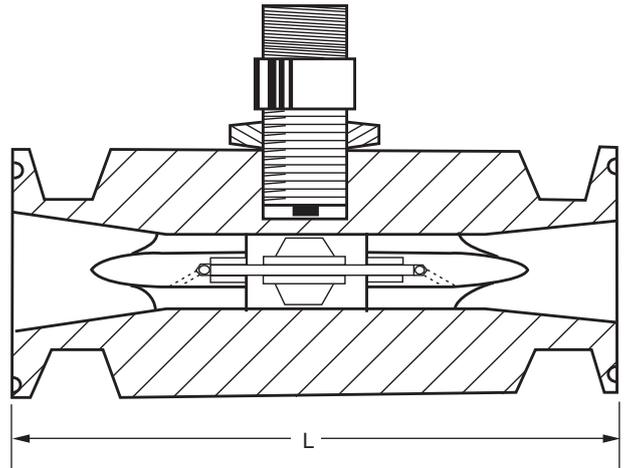
Linearity:	Better than +/- 0.5% of reading
Repeatability:	+/- 0.1% of reading
Pressure drop:	0.5 bar at maximum flow
Max. overrange:	Up to 110% of the maximum flow rate for short durations
Maximum working pressure:	16 bar
Temperature:	Standard pickoff coil -30°C to 110°C High temp. pickoff -30°C to 232°C
Body connections:	Tri-clamp (standard) ISS threaded RJT (ring joint thread) ACME thread

Materials of Construction

Body:	316/316L dual certified stainless steel
Sleeve bearings:	PTFE with carbon graphite filler (180°C) Tungsten carbide option for a maximum temp of 232°C
Rotor:	431 stainless steel or ferralium
Rotor shaft:	Tungsten carbide
Hangers:	316 stainless steel
Circlips:	316 stainless steel

Performance Data

Model Number	Pipe size mm	Linear Flow Range	K factor pulses/litre
RN7/15/1	25	1-10	6000
RN7/15/2	25	2-20	3000
RN7/20/5	25	5-50	1080
RN7/20/8	25	8-80	1080
RN7/25/15	25	15-150	520
RN7/25	25	25-250	362
RN7/40	40	65-650	72
RN7/50	50	110-1100	41
RN7/80/50	80	110-1100	41
RN7/80	80	225-2250	16



Dimensions

Model Number	Standard Triclamp Size *	L mm	Weight kg
RN7/15/1	1"	127	1.4
RN7/15/2	1"	127	1.4
RN7/20/5	1"	127	1.4
RN7/20/8	1"	127	1.4
RN7/25/15	1 1/2"	127	1.8
RN7/25	1 1/2"	127	1.7
RN7/40	2"	155	3.0
RN7/50	2 1/2"	216	5.2
RN7/80/50	3"	216	6.0
RN7/80	3"	250	8.0

* Other sizes can be specified

Contact our flow measurement specialists for advice on your application

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