



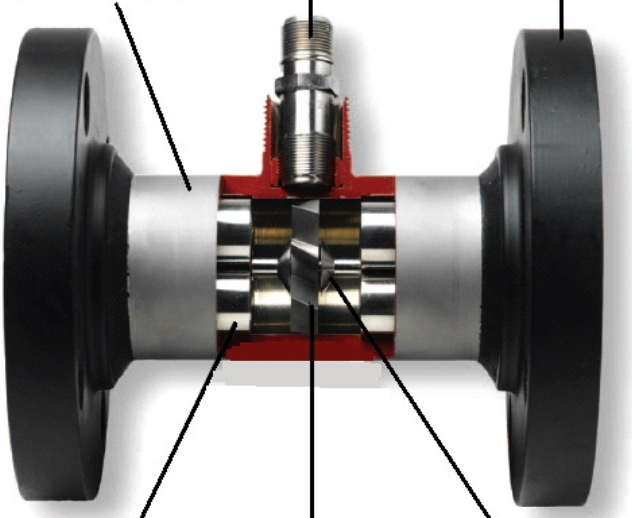
TURBINE FLOWMETER



Materials of Housing
Stainless Steel 304
(Others available on request)

Magnetic Pickup
For hazardous areas, pickup coils supplied with explosion proof boss.

End Fittings:
Carbide Steel
(Others available on request)



Flow Straighteners
Upstream and downstream flow profiling for accurate flow measurement.

Hydraulically Balanced Rotar
2Cr13

Bearings
Carbide Steel



Product Description :

CLA1-TF turbine flow meters inherit the features of high accuracy, good repeatability, easy installation/maintenance, simple structure etc. Liquid flows through the flowmeter pipe causing an internal rotor to spin. As the rotor spins, an electrical signal is generated in the pickup coil. This signal is converted into engineering units (liters, cubic meters, gallons etc.) on the local display.

SPECIFICATIONS :

Repeatability:	±0.2%
Accuracy:	±1% of reading
Temperature:	-20°C to +110°C
Pressure:	Fluid pressure should be limited according to rating.
Housing:	Stainless Steel , Standard - SS304, Optional - SS316
Bearings and Shaft:	Tungsten Carbide
Rotor:	Standard - Stainless Steel, (Optional Alloy CD4Mcu)
Retaining Rings:	SS316 Stainless Steel
Sensor:	Pulse signal (Low Level: =0.8V; High Level: =8V)
Transmitter:	4 to 20 mA DC current signal
Protection Level:	IP65
Power Supply:	
Sensor:	+12V DC (Optional: +24V DC)
Transmitter:	+24V DC
Field Display Type B:	Integral 3.2V Lithium Battery, (Others available on request)
Field Display Type C:	+24V DC
Display	4 digital instantaneous flow display. 8 digital totalized flow display (Resettable)

MODELS :

THREADED



FLANGED





INSTALLATION :

Flow altering device such as elbows, valves and reducers can affect accuracy. See Fig1 for, typical flow meter installation. The recommended guidelines are given to enhance accuracy and maximize performance. Distance given here are minimum requirements; double them for desired straight pipe lengths.

Upstream: allow a minimum straight pipe length at least 10 times the internal diameter of the pipe.

Downstream: allow a minimum straight pipe length at least 5 times the internal diameter of the pipe.

Fig 1. Typical Flow Meter System Installation

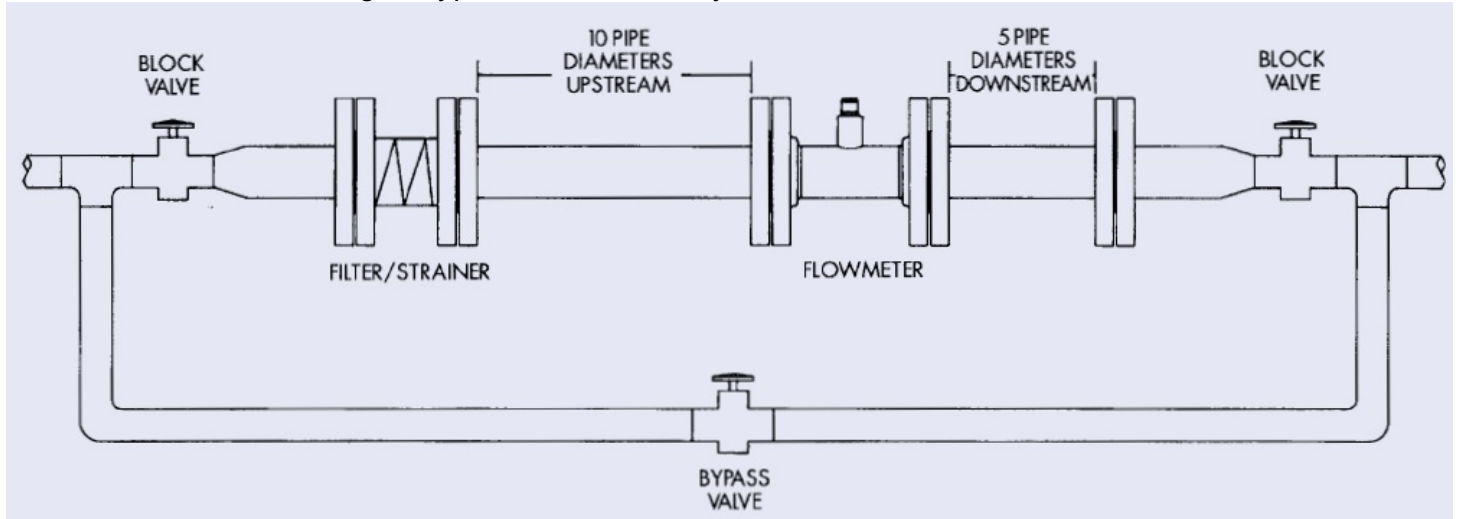
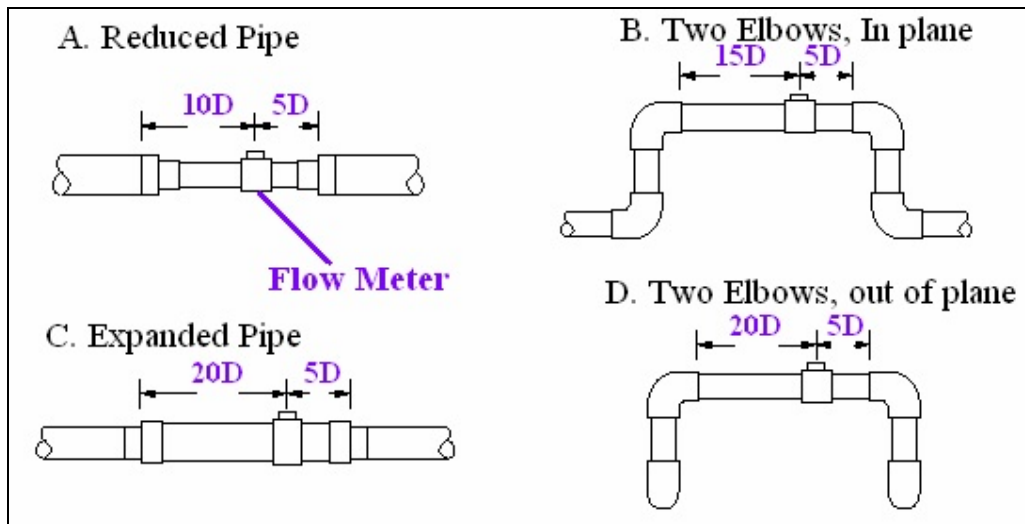


Fig. 2 Straight pipe length requirement in different installation conditions



- ⚠ Special Notice**
- Impurities in the liquid being measured can clog the meter's rotor and adversely affect accuracy. Install Filters to filter impurities from incoming liquids.
 - To ensure accurate measurement, drain all air from the system before use.
 - Create backpressure by installing a control valve on the downstream side of the meter at the proper distance detailed above.



DIMENSIONS :

Fig. 1 : DN4-DN10

Fig.2 : DN15- DN40

Fig. 3 : DN50- DN200

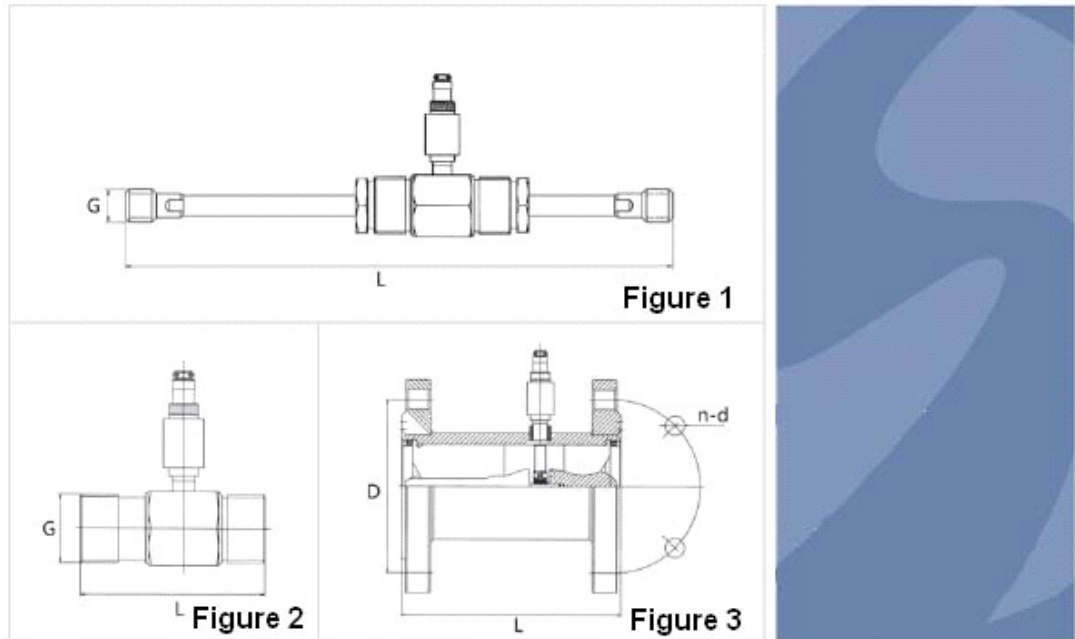
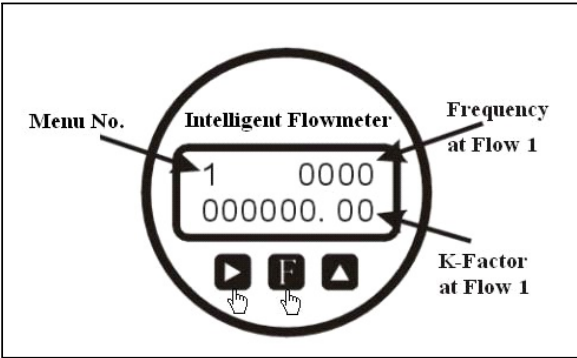
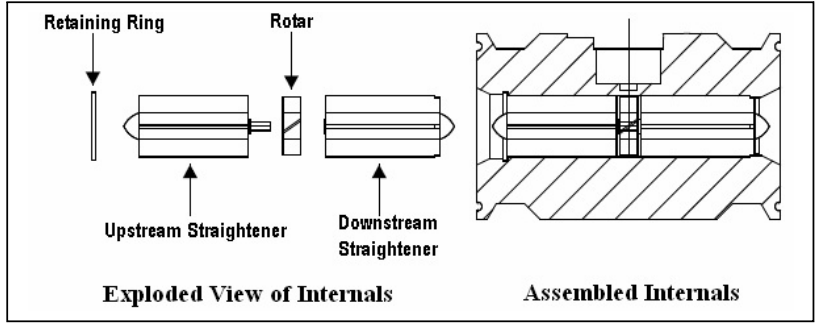


Table 1. Sizes

Diameter (mm)	L (mm)	G	D (mm)	d (mm)	n (Bolts)
3.1 Flange: 1S07005-1 RF					
4	295	G ½	Threaded Connection		
6	330	G ½			
10	450	G ½			
15	75	G 1	Φ65	Φ14	4
20	80	G 1	Φ75	Φ14	4
25	100	G 1 ¼	Φ85	Φ14	4
32	140	G 2	Φ100	Φ14	4
40	140	G 2	Φ110	Φ18	4
50	150	Flange Connection	Φ125	Φ18	4
65	170		Φ145	Φ18	4
80	200		Φ160	Φ18	8
100	220		Φ180	Φ18	8
125	250		Φ210	Φ22	8
150	300		Φ240	Φ22	8
200	360		Φ295	Φ28	12
3.2 Flange: ASN1 Class 600					
15	90		Φ66.5	Φ16	4
25	115		Φ89	Φ20	4



INTERNALS :



MEASURABLE FLOW RATE RANGE:

Nominal Diameter		Standard Flow Range (SFR)	Extended Flow Range (EFR)	Standard Pressure Rating	Customized Pressure Rating
(mm)	(in.)	(m ³ /hr)	(m ³ /hr)	(MPa)	(MPa) - Flange Fitting
4	0.15	0.04 to 0.25	0.04 to 0.4	Thread: 6.3	12, 16, 25
6	0.25	0.1 to 0.6	0.06 to 0.6	Thread: 6.3	12, 16, 25
10	0.4	0.2 to 1.2	0.15 to 1.5	Thread: 6.3	12, 16, 25
15	0.5	0.6 to 6	0.4 to 8	Thread: 6.3; Flange: 2.5	4.0, 6.3, 12, 16, 25
20	0.75	0.8 to 8	0.45 to 9	Thread: 6.3; Flange: 2.5	4.0, 6.3, 12, 16, 25
25	1	1 to 10	0.5 to 10	Thread: 6.3; Flange: 2.5	4.0, 6.3, 12, 16, 25
32	1.25	1.5 to 15	0.8 to 15	Thread: 6.3; Flange: 2.5	4.0, 6.3, 12, 16, 25
40	1.5	2 to 20	1 to 30	Thread: 6.3; Flange: 2.5	4.0, 6.3, 12, 16, 25
50	2	4 to 40	2 to 40	Flange: 2.5	4.0, 6.3, 12, 16, 25
65	2.5	7 to 70	4 to 70	Flange: 2.5	4.0, 6.3, 12, 16, 25
80	3	10 to 100	5 to 100	Flange: 2.5	4.0, 6.3, 12, 16, 25
100	4	20 to 200	10 to 200	Flange: 1.6	4.0, 6.3, 12, 16, 25
125	5	25 to 250	13 to 250	Flange: 1.6	2.5, 4.0, 6.3, 12, 16
150	6	30 to 300	15 to 300	Flange: 1.6	2.5, 4.0, 6.3, 12, 16
200	8	80 to 800	40 to 800	Flange: 1.6	2.5, 4.0, 6.3, 12, 16

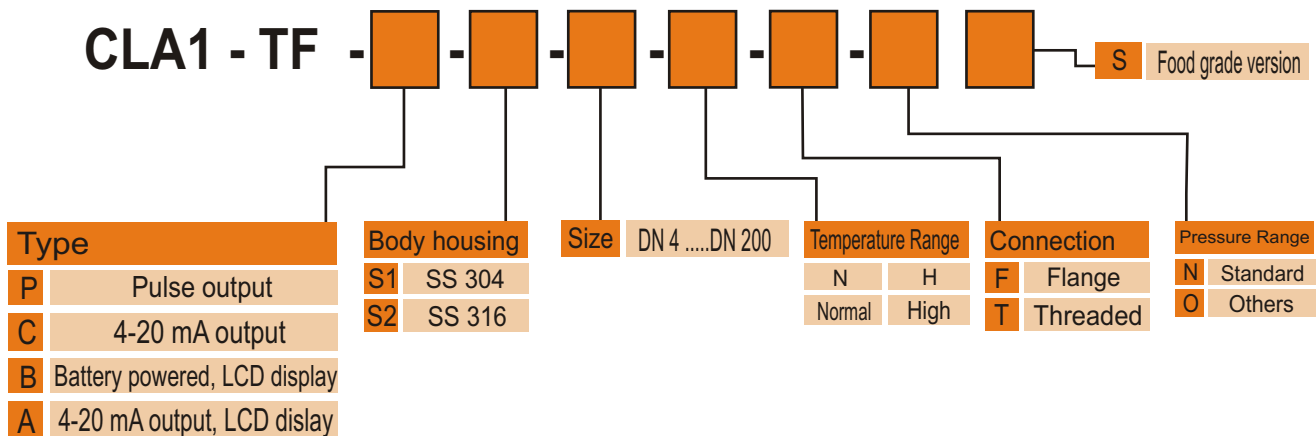


MODEL FLOW RATE :

SIZE	FLOW RATE (m3/hr)	SIZE	FLOW RATE (m3/hr)
DN 4	0.04 ~ 0.25	DN 50	4 ~ 40
DN 6	0.1 ~ 0.6	DN 65	7 ~ 70
DN 10	0.2 ~ 1.2	DN 80	10 ~ 100
DN 15	0.6 ~ 6	DN 100	20 ~ 200
DN 20	0.8 ~ 8	DN 125	25 ~ 250
DN 25	1 ~ 10	DN150	30 ~ 300
DN 32	1.5 ~ 15	DN 200	80 ~ 800
DN 40	2 ~ 20		

MODEL SELECTION

CLA1 - TF



- Sizes DN4 ~ DN25 are available in thread connection
- Power supply for 3 wire pulse output model is 12~24 V DC & for 4-20 mA output models is 24 V DC
- Battery powered models are equipped with Li battery.

Contact us for other models & specifications not listed here. Due to constant product enhancement technical specification may vary.

Cirrus



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