

Flomec Turbopulse turbine flowmeters measure flows of low viscosity liquids from 3 to 7000 litres/hr in a range of sizes from ½" to 20" (12-500mm). TP series flowmeters have an axial rotor and flow guides & need to be installed in straight sections of pipe either horizontal or vertical so that the flow is conditioned. TP series flowmeters can be purchased with Exd & Intrinsically Safe (I.S) approvals for use in hazardous areas.

Applications include the distribution of fuels, alcohols, solvents, metering of chemicals, insecticides, water & light hydraulic oils.

Features / Benefits

- High accuracy & repeatability, direct reading flowmeter
- Low cost of ownership, wide flow range
- Rugged & compact design
- Certified Exd & I.S hazardous area versions
- Integral 4-20mA output option
- ± 0.15% linearity option (TP100 and above)

Integral instruments

Flomec TP series meter options include integral LCD totalisers, flow rate totalisers & batch controllers. These instruments provide monitoring & control outputs including 4~20mA, scaled pulse, alarms & batch control:

- BT LCD 5 digit reset, 8 digit cumulative totaliser.
- RT12 LCD 6 digit reset, cumulative totaliser & flow rate. Analogue and pulse outputs
- RT40 LCD 6 digit reset, cumulative totaliser & flow rate. Backlit Display.
- EB LCD 6 digit 2 stage batcher & cumulative totaliser.

(Instruments also available for remote mounting and with I.S. approvals)



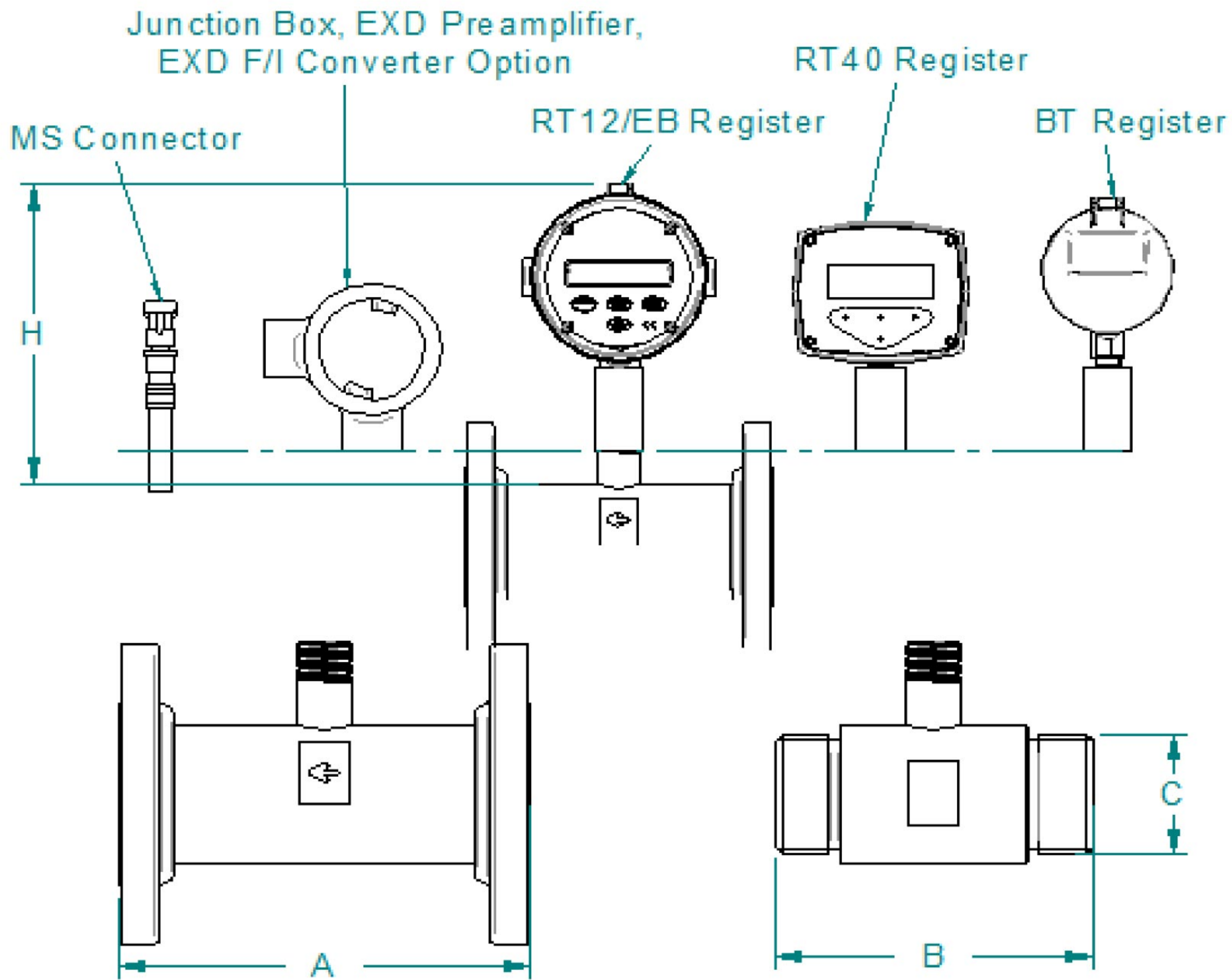
Specifications

Model prefix :	TP-Turbopulse
Nominal size (inches)	12 ~ 500mm (1/2" ~ 20")
**Accuracy @ 3cp	± 0.5% of reading (accuracy is ± 0.2% of reading with optional RT12 with non-linearity correction)
Temperature range	-40°C ~ +200°C (-40°F ~ +400°F), refer factory for lower temperature
Maximum Viscosity	10 Cst
Maximum pressure	(Threaded meters)bar (PSI)
316 Stainless steel	250 (3625)
Electrical - (see also optional output - Turbopulse pick-off types)	
Standard output	Pick-off Coil
Optional outputs	4~20mA, scaled pulse, quadrature pulse, flow alarms or two stage batch control
Physical	
Protection class	IP66/67 (NEMA4X), optional Exd IIB T4/T6, integral ancillaries can be supplied I.S. (intrinsically safe)
Overall dimensions	Refer over page

FLOW RANGES - TP Turbopulse

size	model	litres/hr (GPH)
½"	TP010	100~1100 (0.44~4.4)
¾"	TP012	220~2200 (0.97~9.7)
¾"	TP015	400~4000 (1.77~17.7)
¾"	TP020	800~8000 (3.5~35.2)
m3/hr (GPM)		
1"	TP025	1.6~16 (7~70)
1½"	TP040	3.4~34 (15~150)
2"	TP050	6.8~68 (30~300)
3"	TP080	13~135 (60~600)
4"	TP100	27~270 (120~1200)
6"	TP150	55~550 (240~2400)
8"	TP200	110~1100 (480~4800)
10"	TP250	190~1900 (840~8400)
12"	TP300	270~2700 (1200~12000)
16"	TP400	400~4000 (1800~18000)
20"	TP500	700~7000 (3000~30000)

Over all Dimensions:



FLANGED METERS AVAILABLE WITH A.N.S.I OR DIN FLANGES. SEE APPLICABLE STANDARD FOR FLANGE DIMENSIONS

FLANGED METERS

Model No.	A (mm)
TP-010	127
TP-012	127
TP-015	127
TP-020	140
TP-025	152
TP-040	178
TP-050	197
TP-080	254
TP-100	356
TP-150	368
TP-200	457
TP-250	457
TP-300	457
TP-400	610
TP-500	610

Option Fitted	H (mm)
RT12/EB Register	210
RT40 Register	185
BT Register	190
EX Junction Box	150
MS Connector	118
MS Connector with Pre-Amp	138

THREADED METERS

Model No.	B (mm)	C
TP-010	64	1/2" BSP or NPT
TP-012	64	3/4" BSP or NPT
TP-015	64	3/4" BSP or NPT
TP-020	83	3/4" BSP or NPT
TP-025	89	1" BSP or NPT
TP-040	115	1 1/2" BSP or NPT
TP-050	133	2" BSP or NPT

Model Coding - Flomec TP series Meters



			m3/hr	Usgal/min	Pulse output relative to flow (nominal values)			
					millivolts	P/litre	P/USG	frequency (Hz)
TP010	1/2"	(DN15)	0.11 - 1.1	0.5 ~5	100~1000	4000	15140	120~1200
TP012	3/4"	(DN20)	0.22 - 2.2	0.9 ~9	110~1100	1700	6435	104~1040
TP015	3/4"	(DN20)	0.4 - 4	1.8 ~18	130~1300	1100	4160	120~1200
TP020	3/4"	(DN20)	0.8 - 8	3.6 ~36	100~1000	400	1500	90~900
TP025	1"	(DN25)	1.6 - 16	7 ~70	90~900	180	680	80~800
TP040	1 1/2"	(DN40)	3.4 - 34	15 ~150	65~650	60	230	57~570
TP050	2"	(DN50)	6.8 - 68	30 ~300	50~500	24	90	45~450
TP080	3"	(DN80)	13.5 - 135	60 ~600	65~650	15	57	56~560
TP100	4"	(DN100)	27 - 270	120 ~1200	60~600	6.6	25	50~500
TP150	6"	(DN150)	55 - 550	240 ~2400	40~400	2.3	8.7	35~350
TP200+	8~20"	(DN200 to DN500)	- consult factory for pricing					

Body Material

S	316 stainless steel - 250 bar (3500 psi) max.
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Process Connections

1	BSPP male threaded (TP050 & Smaller)
2	NPT male threaded (TP050 & Smaller)
3	* Tri-clamp ferrules (316SS) (Not available for TP010)
4	ANSI-150 RF flanges
5	ANSI-300 RF flanges
6	PN10 DIN flanges
7	PN16 DIN flanges
8	PN25 DIN flanges
9	Customer nominated connections (covered under SB option below)

* tri-clamp ferrules are 1/2" larger than the meter size

Process Connection Material

T	threaded stainless steel as per body material
C	carbon steel flanges (available with TP080 and above only)
S	316 stainless steel Flanges

No. of Pick-offs

1	one
2	two x 90 degree electrically offset (with TP100 & above only)

Pick-off Style

-	1	MS (military style) connector
-	2	FL (flying leads) (required for Integral options)

Pick-off Type

1	standard (120°C [250°F] max.)
2	hermetically sealed or high temp (200°C [400°F] max.)
3	ATEX approved intrinsically safe (120°C [250°F] max.) (Ex-ia)
4	preamplified (65°C [150°F] max.) (MS Connection only)

Linearity

1	+/-0.5% (standard)
2	+/-0.15% (custody transfer available for TP100 & over)

Integral Options

	JB	junction box
	Ex	Exd aluminum junction box ANZEX
	FI	F/I loop powered 4-20mA analog output
with scaleable pulse output	B2	BT11 dual totaliser with output - 120°C (250°F) max.
IECEX & ATEX approved	B3	I.S. intrinsically safe BT11 including output [2]
scaled pulse, alarms & 4-20mA	R0	RT12 rate totaliser with all outputs [2] (Alloy housing)
scaled pulse, alarms & 4-20mA	R2	RT12 rate totaliser with all outputs [2]
IECEX & ATEX approved	R3	I.S. intrinsically safe RT12 with all outputs [2]
scaled pulse +backlighting	R4	RT40 large LCD flow rate totaliser - 120°C (250°F) max.
	E0	EB10 Ecobatch dc batch controller - 120°C (250°F) max.
	SB	Specific build requirement (see price list cover sheet)

Model No. Example

TP025	S	1	T	1	-	2	1	1	R2
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