

VTFT500 Highly Accurate Turbine Flow Meters

- ▶ High pressure rating
- ▶ High and low temperature resistance
- ▶ Low pressure loss
- ▶ Fast response time
- ▶ High repeatability and accuracy
- ▶ Small structure

VTFT500 series serial flowmeters contain magnetic detectors and a magnetic turbine that drives the turbine when the medium in the pipe flows. The speed of a turbine is proportional to the velocity of the medium. The magnetic detector detects the rotor speed and converts it into a standard industrial electrical signal output or display.

VTFT500 series can be used for measuring medium and low viscosity media, such as water, light fuel, solvent, hydraulic oil, Lubricating oil, etc. Optional viscosity compensation allows VTFT500 series to be used in media where viscosity varies with temperature.

The maximum range ratio of the VTFT500 series is up to 100:1, and the accuracy of the ultra-high precision model is up to 0.1%



FLOW

Specifications

Measuring range	External thread type 0.05... 1300L/Min, Flange type 0.05... 1700L/Min
Measuring medium	Medium or lower viscosity liquids
Accuracy	±0.5%
Repeatability	±0.06%
Pressure Rating	MAX 550bar
Response Time	Fastest 2ms
Ambient Temperature	-40...90°C
Medium Temperature	-100...232°C
Materials	
Body	316 stainless steel
Rotor Support	316 stainless steel
Turbine	17-4 PH
Shaft	316 stainless steel
Bearing	Special compound ball bearing
Process Connection	ANSI Flange, AN Thread (600#)

Applications

- ▶ Petrochemical/Energy industry
- ▶ Hydraulic/Lubrication system
- ▶ Water treatment
- ▶ Oil/Gas industry
- ▶ Experimental equipment
- ▶ Test systems
- ▶ Food/Medical equipment

Order Numbers of AN series

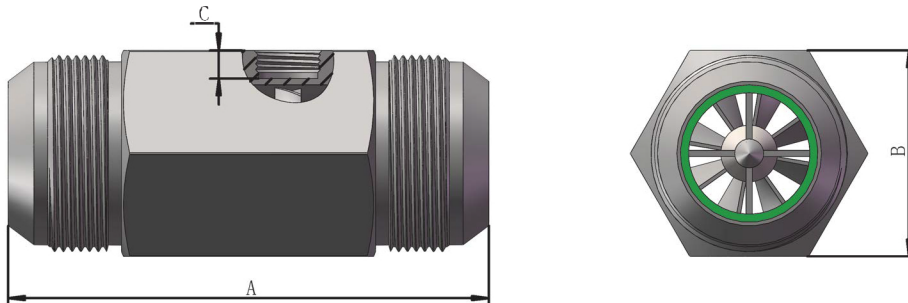
Order No	Type	Standard measuring range L/Min		Extended measuring range L/Min		Max Pressure Bar	Process connection AN Thread	Max. Filter Diameter (micron)
		Magnetic sensor	Non-magnetic sensor	Magnetic sensor	Non-magnetic sensor			
VTFT5002	VTFTB500AN02BBBE	0.5-5.0	0.5-5.0	0.4-5.5	0.05-5.5	540	AN02	10
VTFT5004	VTFTB500AN04BBBE	1.2-12	1.0-12	0.4-13	0.13-13	540	AN04	10
VTFT5006	VTFTB500AN06BBBE	2.0-20	1.9-20	0.5-24	0.24-24	450	AN06	10
VTFT5008	VTFTB500AN08BBBE	3.3-33	2.8-33	0.6-38	0.38-38	410	AN08	10
VTFT5010	VTFTB500AN10BBBE	6.0-60	4.5-60	1.1-70	0.70-70	410	AN10	10
VTFT5012	VTFTB500AN12BBBE	9.0-90	7.6-90	1.9-120	1.2-120	410	AN12	10
VTFT5016	VTFTB500AN16BBBE	22-220	19-220	3.8-240	2.4-240	350	AN16	20
VTFT5020	VTFTB500AN20BBBE	40-400	34-400	6.0-490	4.9-490	350	AN20	20
VTFT5024	VTFTB500AN24BBBE	70-700	57-700	10-820	8.2-820	250	AN24	50
VTFT5032	VTFTB500AN32BBBE	110-1100	83-1100	13-1300	13-1300	250	AN32	50

Order Numbers of ANSI 600# flange series

Order No.	Type	Standard measuring range L/Min		Extended measuring range L/Min		Max Pressure Bar	Process connection ANSI 600#Flange	Max. Filter Diameter (micron)
		Magnetic sensor	Non-magnetic sensor	Magnetic sensor	Non-magnetic sensor			
VTFT5102	VTFTB500F302BBBE	0.5-5.0	0.5-5.0	0.4-5.5	0.05-5.5	100	95mm	10
VTFT5104	VTFTB500F304BBBE	1.2-12	1.0-12	0.4-13	0.13-13	100	95mm	10
VTFT5106	VTFTB500F306BBBE	2.0-20	1.9-20	0.5-24	0.24-24	100	95mm	10
VTFT5108	VTFTB500F308BBBE	3.3-33	2.8-33	0.6-38	0.38-38	100	95mm	10
VTFT5110	VTFTB500F310BBBE	6.0-60	4.5-60	1.1-70	0.70-70	100	118mm	10
VTFT5112	VTFTB500F312BBBE	9.0-90	7.6-90	1.9-120	1.2-120	100	118mm	10
VTFT5116	VTFTB500F316BBBE	22-220	19-220	3.8-240	2.4-240	100	124mm	20
VTFT5120	VTFTB500F320BBBE	40-400	34-400	6.0-490	4.9-490	100	133mm	20
VTFT5124	VTFTB500F324BBBE	57-700	57-700	10-820	8.2-820	100	156mm	50
VTFT5132	VTFTB500F332BBBE	83-1100	83-1100	13-1300	13-1300	100	165mm	50
VTFT5140	FTB500F340BBBE	150-1500	150-1500	19-1700	17-1700	100	191mm	50

ANSI 600# Flange standard for detailed dimensions

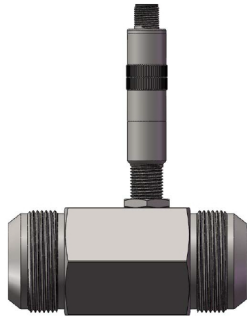
Dimensions of AN type



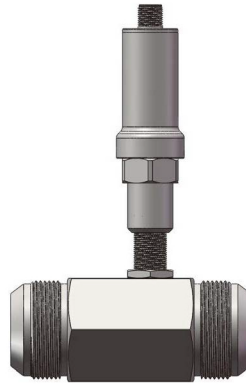
Order No.	A(mm)	B(mm)	C(mm)
VTFT5002	62.2	23	6.72
VTFT5004	62.2	23	6.72
VTFT5006	62.2	23	5.83
VTFT5008	62.2	23	5.45
VTFT5010	69.2	32	8.65
VTFT5012	83.0	32	7.86
VTFT5016	90.5	36	5.8
VTFT5020	103.0	41	6.5
VTFT5024	116.5	50	6.82
VTFT5032	154.0	65	8.76

Optional sensor type

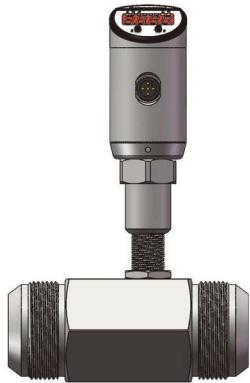
Instrument and sensor selection see related pages!



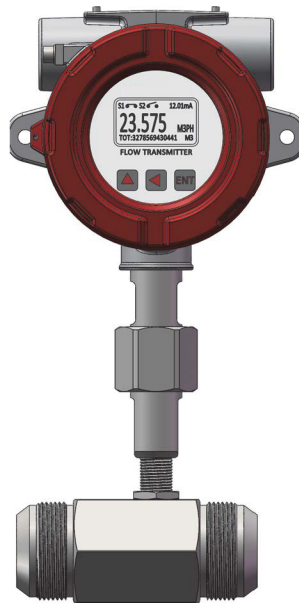
Pulse output type
VS1000
RS1000



Analog output type
RA1000
VA1000
KA1000
Frequency output type
RF1000
VF1000
KF1000



DWE Digital display
DW1001
DW1002
DW1003

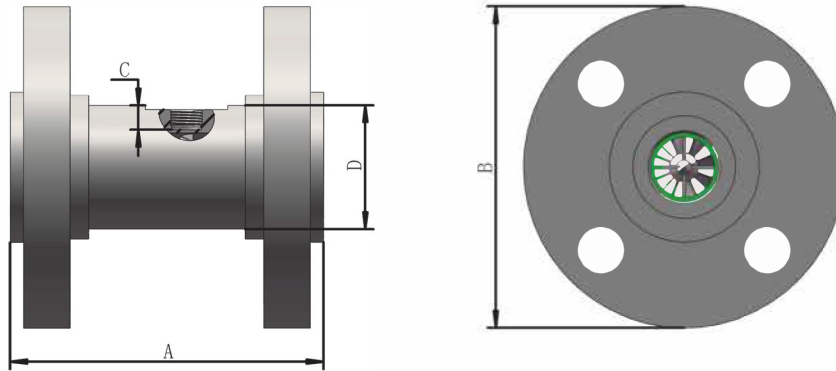


BT Explosion-proof
digital display type
BT1001
BT1002

BT split explosion-proof
digital display type
BT0001



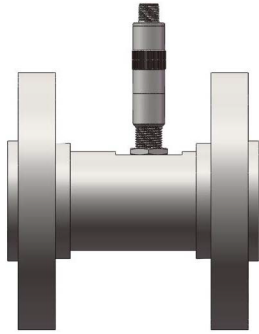
Dimensions of flange type
ANSI 600#



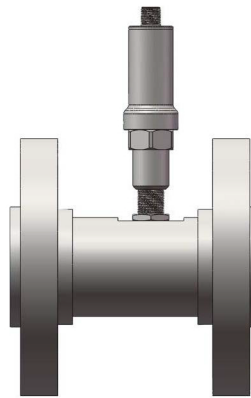
Order NO.	A(mm)	B(mm)	C(mm)	D(mm)
VTFT5102	107	117	11.72	33
VTFT5104	107	117	11.72	33
VTFT5106	107	117	10.83	33
VTFT5108	107	117	10.45	33
VTFT5110	110.8	124	11.65	38
VTFT5112	126.8	124	10.86	38
VTFT5116	135.5	133	11.3	47
VTFT5120	154	133	9.5	47
VTFT5124	152	155	11.82	60
VTFT5132	165	165	11.26	70
VTFT5140	229	191	13.15	89

Optional sensor type

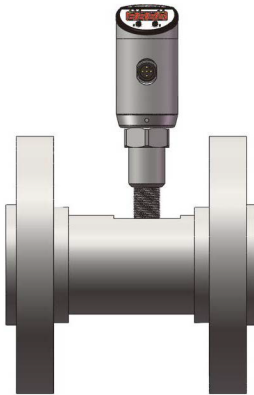
Instrument and sensor selection see related pages



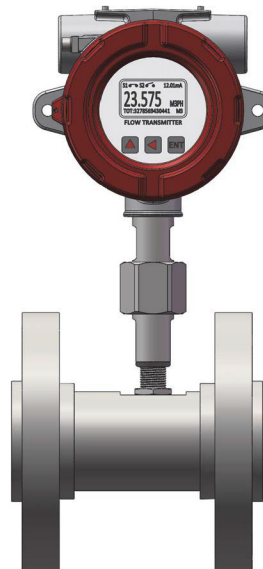
Pulse output type
VS1000
RS1000



Analog output type
RA1000
VA1000
KA1000
Frequency output type
RF1000
VF1000
KF1000

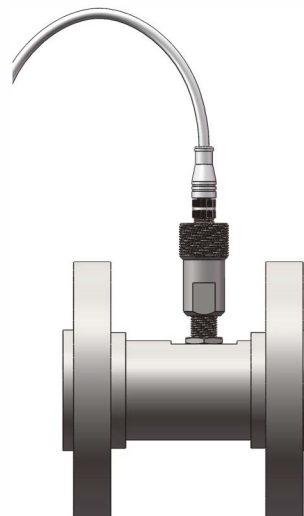


DWE Digital display
DW1001
DW1001
DW1001



BT Explosion-proof digital display type
BT1001
BT1002

BT split explosion-proof digital display type
BT0001



Pressure drop(The following results were obtained by testing medium with a viscosity of 1.2 mm²/s)

Order NO.	Pessure drop(bar)%measuring range						
	10%	25%	40%	55%	70%	85%	100%
VTFT5002, FT5102	0.00	0.01	0.03	0.05	0.08	0.11	0.15
VTFT5004, FT5104	0.01	0.03	0.06	0.16	0.19	0.27	0.35
VTFT5006, FT5106	0.01	0.02	0.06	0.11	0.16	0.23	0.32
VTFT5008, FT5108	0.01	0.05	0.11	0.20	0.30	0.46	0.61
VTFT5010, FT5110	0.06	0.12	0.23	0.41	0.61	0.92	1.22
VTFT5012, FT5112	0.06	0.13	0.24	0.42	0.64	0.93	1.22
VTFT5016, FT5116	0.06	0.09	0.16	0.27	0.39	0.57	0.74
VTFT5020, FT5120	0.06	0.13	0.24	0.43	0.62	0.96	1.31
VTFT5024, FT5124	0.07	0.16	0.32	0.60	0.89	1.32	1.74
VTFT5032, FT5132	0.07	0.08	0.14	0.24	0.34	0.51	0.66
VTFT5140	0.03	0.06	0.13	0.21	0.40	0.45	0.61