

Stainless steel turbine with flanged or threaded connection

Series VTR

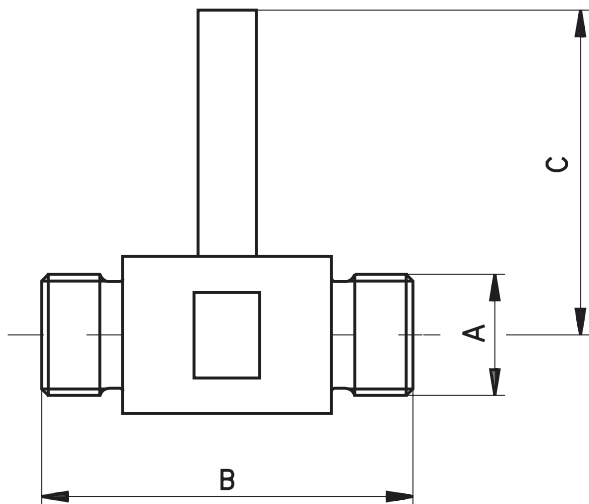


Type VTR 1050

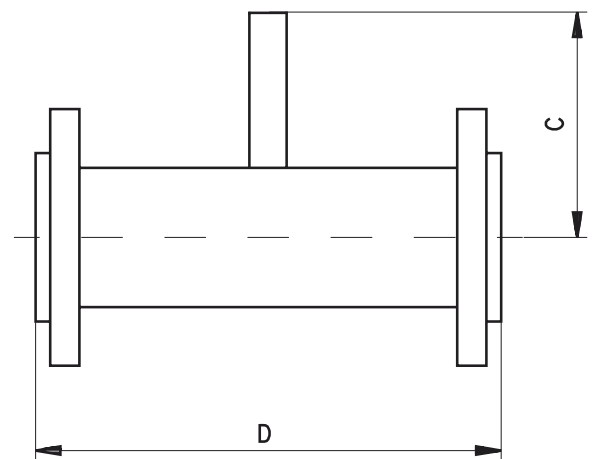
Technical data	
Accuracy	±0.5 % of measured value
Reproducibility	±0.05 % of measured value
Response time	< 50 ms up to DN 40 > 50 ms up to DN 300
Process connections	Flange: DIN, ANSI, others on request thread (up to DN 50): BSP ISO 228 or NPT thread
Pressure drop	280 mbar at 100 % measurement range (density 1, viscosity 1 mm ² /s)
Minimum pressure	2 x pressure drop of sensor
Pressure rating	Threaded connection: 250 bar Flanged connection: corresponding to flange specification
Mediums temperature	Max. 150 °C
All figures specified apply to viscosities up to 5 cSt. Higher viscosities on request.	
Materials	
→ Turbine body	Stainless steel ANSI 316
→ Flange	Stainless steel ANSI 316
→ Rotor	Up to VTR 1020: stainless steel (18 % Cr, 2 % Mo) VTR 1025 - 1300: stainless steel (20 % Cr, 2 % Mo)
→ Bearing support	Stainless steel ANSI 316
→ Rotor bearing	Tungsten carbide sleeve bearing; others (e.g. ball bearings) on request
Options	
Local display TD32500	Description, see page 114

Dimensions and flow range

Thread connection DN 10...DN 50



Flange connection DN 10...DN 300



Type	Nominal diameter	Flow range		Dimensions			
		DN	[m ³ /h]	[l/min]	A	B [mm]	C _{max} [mm]
VTR 1010	10	0.11...1.1	1.8...18.3	G 1/2	64	150	127
VTR 1015-S	15	0.22...2.2	3.7...36.7	G 3/4	64	150	127
VTR 1015	15	0.4...4	6.7...66.7	G 3/4	64	150	127
VTR 1020	20	0.8...8	13.3...133	G 3/4	83	150	140
VTR 1025	25	1.6...16	26.7...267	G 1	88	200	152
VTR 1040	40	3.4...34	56.7...567	G 1 1/2	114	200	178
VTR 1050	50	6.8...68	113...1133	G 2	132	200	197
VTR 1075	80	13.5...135	225...2250			200	254
VTR 1100	100	27...270	450...4500			300	356
VTR 1150	150	55...550	917...9167			300	360
VTR 1200	200	110...1100	1833...18333			350	457
VTR 1250	250	190...1900	3173...31730			350	457
VTR 1300	300	270...2700	4509...45090			400	457

Order codes

Thread connection male

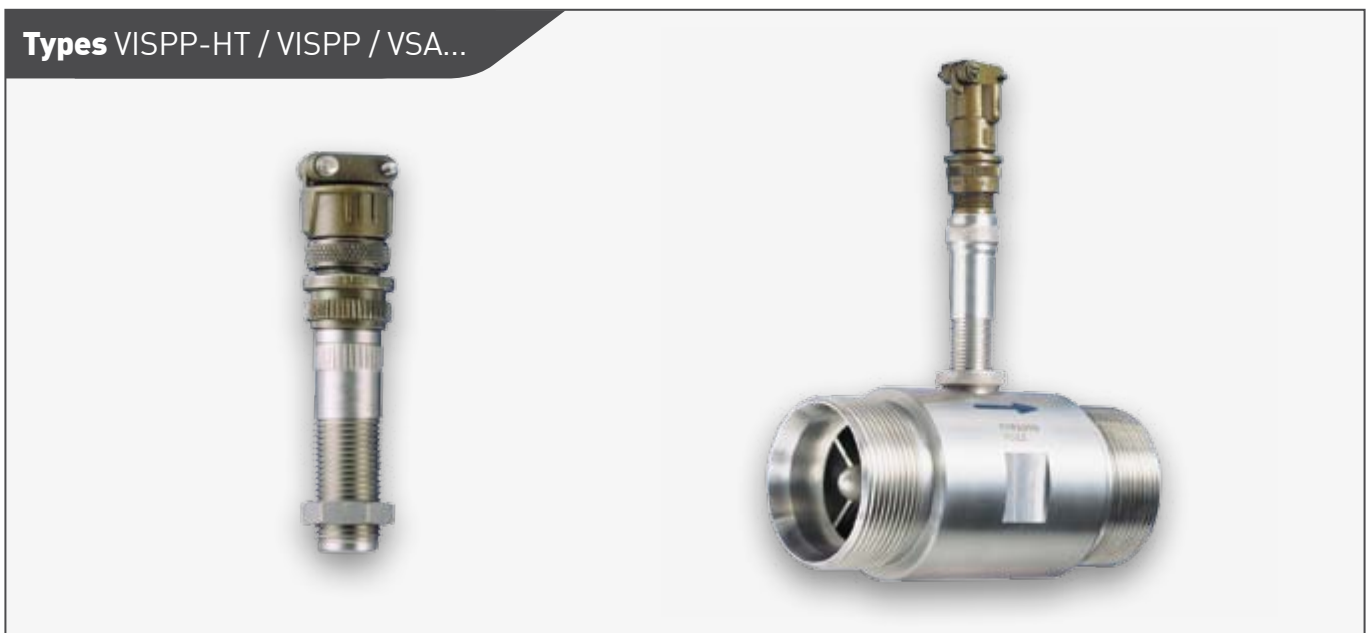
Order example	VS	1071VA	ISP0	A3
Type				
VTR	VS			
Nominal size / flow range		Process connection male threaded G		
DN 10 / 0.11...1.1 m³/h	male thread G½	1071VA		A3
DN 15 / 0.22...2.2 m³/h	male thread G¾	1572VA		A4
DN 15 / 0.4...4 m³/h	male thread G¾	1573VA		A4
DN 20 / 0.8...8 m³/h	male thread G¾	2074VA		A4
DN 25 / 1.6...16 m³/h	male thread G 1	2575VA		A5
DN 40 / 3.4...34 m³/h	male thread G 1½	4076VA		A7
DN 50 / 6.8...68 m³/h	male thread G 2	5077VA		A8
Sensor				
Inductive pick-up VISPP (included in the scope of delivery)			ISP0	
Optional pick-up (seperate order)			0000	

Flange connection

Order example	VS	1071VA	ISP0	G	1
Type					
VTR	VS				
Nominal size / flow range					
DN 10 / 0.11...1.1 m³/h		1071VA			
DN 15 / 0.22...2.2 m³/h		1572VA			
DN 15 / 0.4...4 m³/h		1573VA			
DN 20 / 0.8...8 m³/h		2074VA			
DN 25 / 1.6...16 m³/h		2575VA			
DN 40 / 3.4...34 m³/h		4076VA			
DN 50 / 6.8...68 m³/h		5077VA			
DN 80 / 13.5...135 m³/h		7578VA			
DN 100 / 27...270 m³/h		1H79VA			
DN 150 / 55...550 m³/h		HF81VA			
DN 200 / 110...1100 m³/h		2H82VA			
DN 250 / 190...1900 m³/h		ZF83VA			
DN 300 / 270...2700 m³/h		3H84VA			
Sensor					
Inductive pick-up VISPP (included in the scope of delivery)			ISP0		
Optional pick-up (seperate order)			0000		
Process connection					
DIN flange stainless steel				G	
ANSI flange stainless steel				I	
PN 6 / #150					1
PN 16 / #300					2
PN 25 / #400					3
PN 40 / # 600					4

Accessories

Pick-ups



Type	VISPP Inexpensive, fitted as standard	VISPP-HT For high medium temperature	VSAPPS* Square wave signal	VSAPPSHT* Square wave signal, for high medium temperature	VSANTD For TD32500 (local display)
Output signal	Sinus wave		Square wave NPN or PNP to choose		Square wave NPN
Measuring principle	Inductive		Magnetically biased Hall effect sensor		
Temperature range	-20...120 °C	-20...230 °C**	-20...85 °C	-20...100 °C	-20...85 °C
Power supply			10...30 VDC		Via TD32500
Degree of protection	IP54		IP67		IP65
Electrical connection	Amphenol plug connection MS 10 SL 3102		4 pin plug connection M12 x 1		
Cable socket	Inclusive		Accessory		
Material housing	Stainless steel ANSI 314	Stainless steel ANSI 316	Brass nickel-plated		

* Adapter VT1140 sold separately ** Notice the max. medium temperature of measuring turbine (150 °C).

Connection cables

Connection cables	Length	Order code	
Connection cable for turbine flow sensor with cable socked M12 x 1, 4 pin, shielded, sheathing material PUR (T_{max} = 70 °C), UL approval	3 m 5 m 10 m	XVT 2053 XVT 2009 XVT 2070	
Cable socket M12 x 1 angle type, 4 pin		VT 1331	