

Turbine flow sensors | Turbotron | VTH40, VTM40

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Highlights – VTH40

- Cost optimized version

Highlights – VTM40

- Pressure rating up to 50 bar

Technical data

Type	VTH40	VTM40
Material pipe section	Brass	
Flow range	0.4...25 m ³ /h (6.7...417 l/min)*	
Accuracy	±7 % of the measured value between 0.4...3 m ³ /h ±5 % of the measured value between 3...25 m ³ /h	
Repeatability	±0.5 %	
Signal output	From 0.28 m ³ /h	
Medium temperature	0...85 °C (non-freezing)	
Pressure rating	PN 10	PN 50
Nominal diameter	DN 40	
Process connection	G 2 male thread, supplementary screwed connection recommended	
Sensor	Hall effect sensor	
Output signal	→ Pulse rate / K-factor → Resolution → Signal shape → Signal current	
Electrical connection	2 m PVC cable, shielded (T _{max} = 75 °C)	4 pin plug connector M12 x 1
Power supply	10...30 VDC optional 4.5...26.5 VDC	6.5...24 VDC short circuit proof and reverse polarity protected
Degree of protection	IP54	
Max. particle size in the medium	< 0.63 mm	
Integrated screen filter	Flat filter, mesh size 0.63 mm	

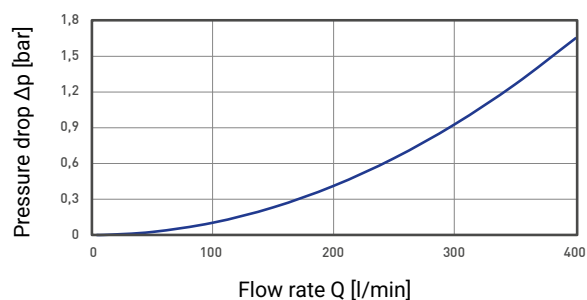
* not suitable for continuous operation

Options

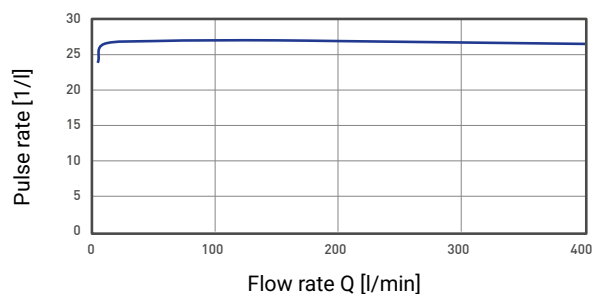
Options	
See order code	
Turbine flow transmitter, analogue output 4...20 mA ($T_{\max} = 80\text{ °C}$)	see options Turbotron
Turbine flow switch, switching output (contact) ($T_{\max} = 80\text{ °C}$)	see options Turbotron

Typical pressure drop | Characteristic curve

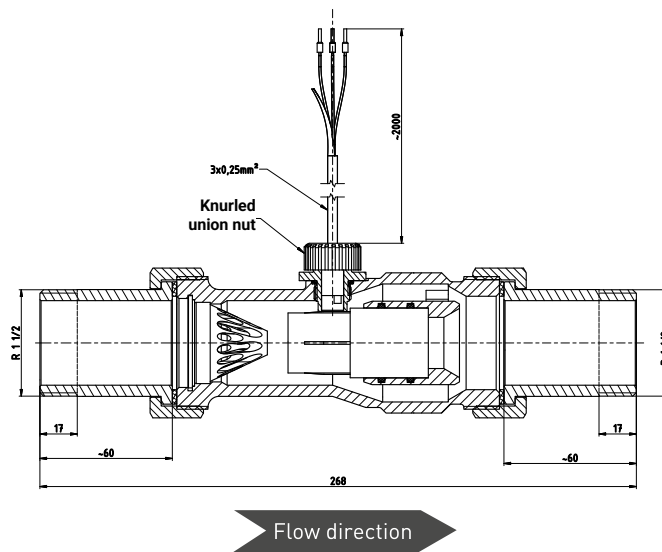
Typical pressure drop



Characteristic curve



Technical drawing



Materials

Materials in contact with fluid		
	VTH40	VTM40
Pipe section	Brass CW724R	
Turbine cage	PS-ST Xarec® 20 % glass fibre reinforced	
Rotor	PS-ST Xarec® 20 % glass fibre reinforced	
Shaft	Stainless steel 1.4539	
Bearing	Sapphire / PA	
Housing for hall sensor	PS-ST Xarec® 20 % glass fibre reinforced	Brass CW602N / CW614N
O-ring	EPDM	
Flow guiding cone	POM	
Screen filter	Stainless steel 1.4301	
Retaining ring	Stainless steel 1.4122	

Article numbers





Order code				
Type				
VTH40 / VTM40			VT4025MS	
Version				
VTH40	Standard	10...30 VDC		HNP000F
	Option	4.5...26.5 VDC		HKP000F
VTM40				MNS000F
Options*				
Electronics for VTM40				
Including transducer 4...20 mA				
→ Corresponds with 0...150 l/min				E
→ Corresponds with 0...250 l/min				F
→ Corresponds with 0...400 l/min				G
Switching output VE				6
Switching output VE with pulse output				7
Example order number			VT4025MS	HNP000F
				E

* If you do not require any of the options, digits of the order code do not apply.

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Type	Order number
VTH40 Power supply: 10...30 VDC, without electronics	VT4025MS HNP000F

Article numbers | Connection adapters

Order code				
Series	Connection adapters*			Order number
VT40		Screw coupling G 1 1/2-ISO 228 with integrated temperature sensor Pt100 / 3-wirer	Brass, Flat seal KLINGERSIL®, T _{max} = 85 °C	VT1311
		Screw coupling R 1 1/2-DIN EN 10226-1 2004-10		VT40Z00000002
		Screw coupling G 2-ISO 228		VT40Z00000001
		Screw connection 2" x 42 PN 16	brass with copper internal soldering end, Flat seal KLINGERSIL®, T _{max} = 85 °C	VT1313

* Supplied piecewise

Article numbers | Connection cables

Order code				
Series	Connection cables		Length	Order number
VT40		Connection cable for turbine flow sensor with cable socket M12 x 1 moulded lead, 4 pin, shielded, sheathing material PUR (T _{max} = 70 °C) UL-approval	3 m	XVT2053
			5 m	XVT2009
10 m	XVT2070			
		4 pin cable socket M12 x 1 angle type unassembled		VT1331