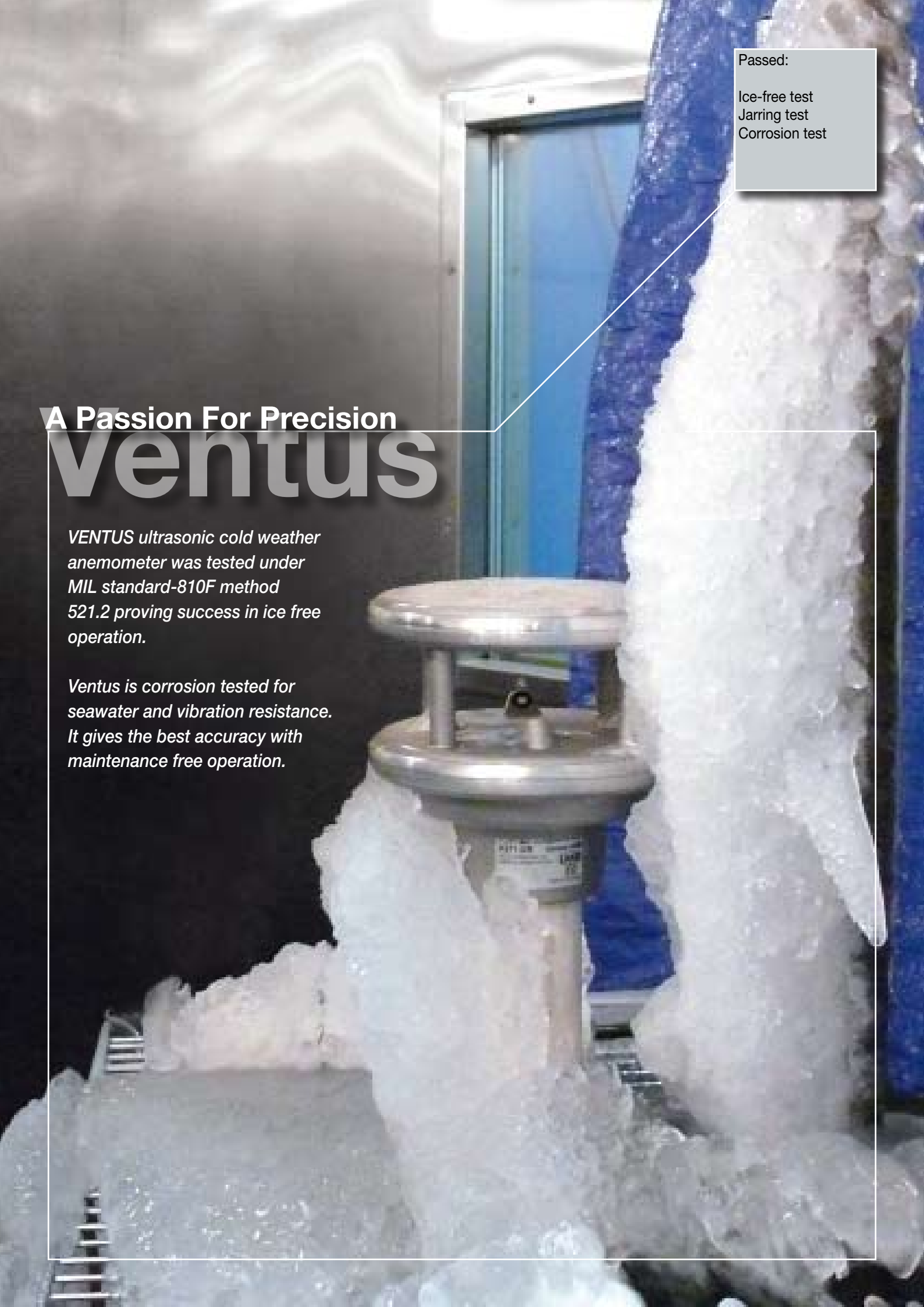


Passed:  
Ice-free test  
Jarring test  
Corrosion test

# A Passion For Precision Ventus

*VENTUS ultrasonic cold weather anemometer was tested under MIL standard-810F method 521.2 proving success in ice free operation.*

*Ventus is corrosion tested for seawater and vibration resistance. It gives the best accuracy with maintenance free operation.*



# VENTUS Ultrasonic Wind Sensor Metal Housing and 240W-Heater



**Extremely precise and maintenance-free measurement of wind velocity and wind direction as well as calculation of acoustic virtual temperature.**

Belongs to Luffts WS family of professional intelligent sensors with digital and analog interfaces.

The ultrasonic wind sensor is designed without mechanical parts as they have been used with traditional "cup and vane".

The digital or analog output delivers instantaneous, average, min or max value with flexible measuring rate. The VENTUS is heated in case reaching critical ambient conditions. Made for cold climate!

#### Recommended for:

- Wind turbines
- Marine/ships
- Meteorology
- Building automation

#### The following outputs/protocols are available:

- NMEA
- ASCII
- UMB
- 4 ... 20mA analog
- MODBUS
- analog outputs

VENTUS-UMB Wind Sensor			Order No.
<b>VENTUS-UMB</b>			<b>8371.UM</b>
<b>Technical Data</b>	Dimensions	Ø approx. 150 mm, height approx. 200 mm	
	Weight	approx. 1.7 kg	
<b>Wind direction</b>	Principle	Ultrasonic	
	Measuring range	0.1 ... 359.9°	
	Resolution	0.1°	
	Accuracy	± 2° RMSE > 1.0 m/s	
	Start-up Threshold	0.1 m/s	
	Measuring rate	60 partial measurements/ 15 measurements per second	
	Measurement output rate	1-10 seconds adjustable – default 10 s	
<b>Wind speed</b>	Principle	Ultrasonic	
	Measuring range	0 ... 65 m/s	
	Resolution	0.1 m/s	
	Accuracy	± 0.2 m/s or ± 2 % of reading, whichever is greater	
	Start-up Threshold	0.1 m/s	
	Measuring rate	60 partial measurements/ 15 measurements per second	
	Measurement output rate	1-10 seconds adjustable – default 10 s	
<b>Virtual temperature</b>	Principle	Ultrasonic	
	Measuring range	-50 ... +70 °C	
	Resolution	0.1 °K	
	Accuracy	± 2.0 K (without heater and without sun exposure)	
	Measuring rate	60 partial measurements/ 15 measurements per second	
<b>Data output digital</b>	Interface	RS485 semi-/full duplex, isolated	
	Baudrate	1200-57600	
	Meas. rate instant. value	1-10 s	
	Measuring rate Avg (arithmetic, vector)	1-10 min	
	Status	Heating, sensor failure	
	<b>Data output analogue</b>	Only semi-duplex mode	
Output signal		4 ... 20 mA (instantaneous, avg, min, max)	
Load		max. 300 Ohm	
Resolution		16 Bit	
<b>General Information</b>	Operating temperature	-40 ... +60 °C (with heating)	
	Bus operation	Up to 32 devices	
	Operating voltage electronics	24 VDC ± 10 % or 24 VDC/1.2 VA	
	with heating	24 VDC, max. 240 VA (140 W + 100 W)	
	Connection	8-pole plug	
	Housing material	Aluminium, seawater-proof	
	Protection	IP65	
	Pole diameter	50 mm/2"	
	Factory certificate	yes	
<b>Accessories</b>	Surge protection		<b>8379.USP-V</b>
	Power supply 24V/10A		<b>8366.USV2</b>
	UMB Interface converter ISOCON		<b>8160.UISO</b>
	Connection cable, 15 m incl. connector		<b>8371.UK015</b>
	Connection cable, 50 m incl. connector		<b>8371.UK050</b>
	Connector		<b>8371.UST1</b>

<b>Jarring test</b>	According to IEC 60945
<b>Corrosion test</b>	According to MIL-STD-810 Method 509.3
<b>Ice-free test</b>	According to MIL-STD-810F Method 521.2