STRIP THICKNESS / STRIP WIDTH

Contact Gauges VBK

Application

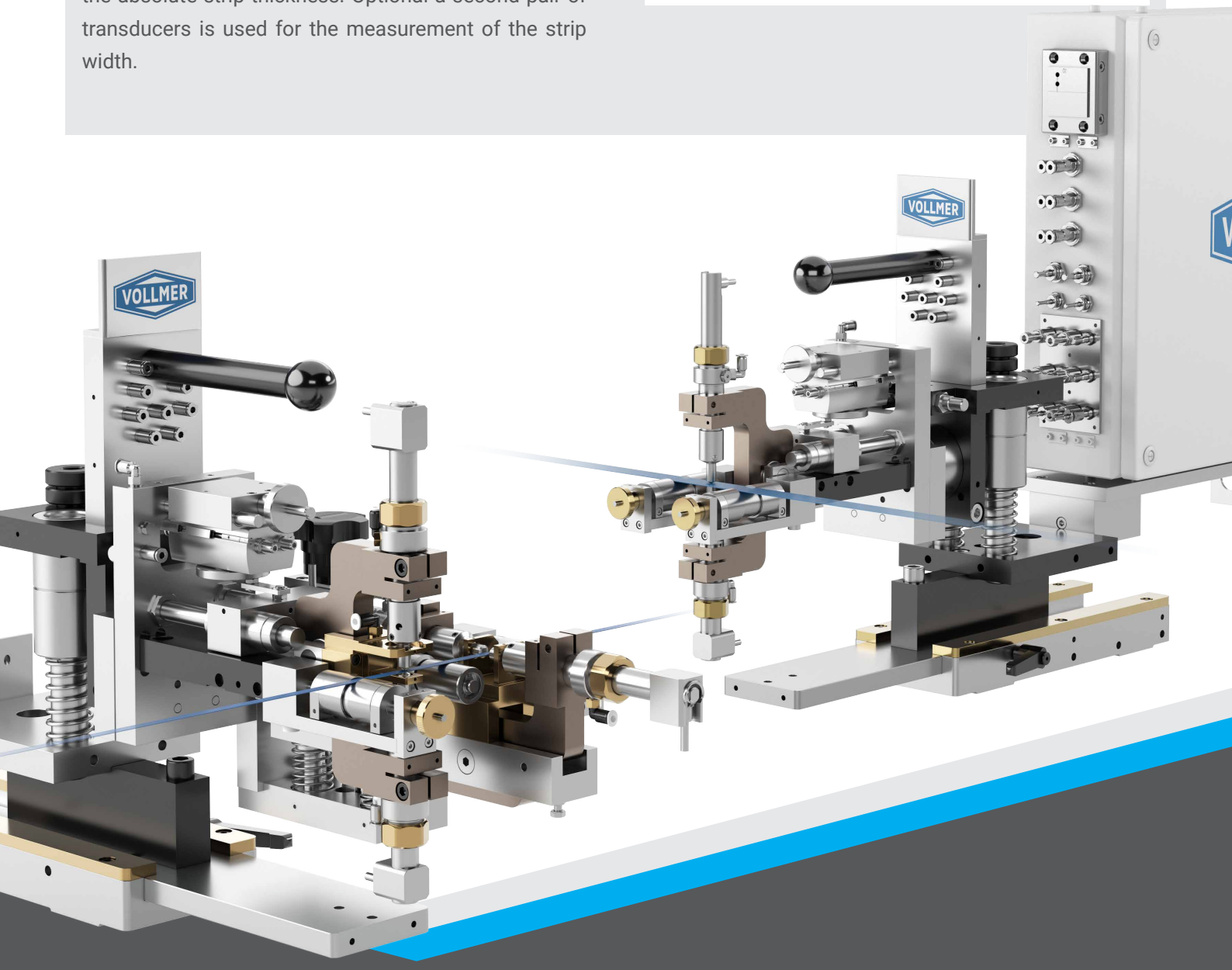
- Metal strip (flat wire)
- Optional: profiled wire

Function

Two transducers contact the upper and lower side of the strip, the sum of the individual measurements is the absolute strip thickness. Optional a second pair of transducers is used for the measurement of the strip width.

Advantages

- Direct, absolute measurement irrespective of the alloy
- Combined measurement of thickness and width possible
- Precision up to 1 micrometer
- Correct results even with oiled strip



Type Series	VBK 512		
Process Parameters	**Thickness Measurement**	**Width Measurement** (at strip thickness > 0.1 mm)	
Material to be measured	metal strip (flat wire)		
Max. strip temperature	120 °C (up to 200 °C with reduced accuracy)		
Max. strip speed	600		m/min
Strip run / Strip shape	no sudden or short-wave changes, twist free		
Max. pass line variation during measurement	± 1		mm
Measurement Parameters			
Measurement range	0.01 – 9	1 – 18	mm
Measurement throat depth (- 5 mm = max. measurement depth)	20	–	mm
Measurement resolution	0.1	0.5	µm
Measurement accuracy (For Ti ≥ 10 ms, measurement insert material: Diamond. For large temperature gradients resp. high-speed or long-running strip, intermediate zero-setting may be necessary.)	± 0.1 % of nominal value, but not better than ± 0.001 mm	± 0.1 % of nominal value, but not better than ± 0.002 mm	
Horizontal positioning	manual		
Sampling rate	1		kHz
Averaging time Ti	1 – 2,000		ms
Dimensions			
Width (installation space) in strip pass direction	thickness measurement only: 100 (120) thickness and width measurement: 165 (185)		mm
Height below pass line	200		mm
Width outside line	200		mm
Connection Data / Consumtions / Environment			
Interfaces	alternative: PROFINET, PROFIBUS DP, TCP/IP, digital and analog in- and outputs		
Supply voltage / connected load	110 – 230 V AC, 50 – 60 Hz / 1 kW		
Protection class	gauge head: IP64; pneumatic cabinet: IP55		
Environment	temperature: 5 – 50 °C, relative humidity: 0 – 95 %		
Compressed air quality acc. DIN ISO 8573-1	solids: quality class 5 = max. 40 µm, particle density < 10 mg/m³ water content: quality class 5 = 9.4 g/m³ at 10 °C oil content: quality class 4 = oil content < 5 mg/m³		
Compressed air supply	pressure: min. 5 bar, consumption: max. 2 m³/h		
Options			
Special strip guiding	for disadvantageous proportion of strip thickness to strip width		
Cylindrical guiding rolls	for strip width > 20 mm		
Profiled guiding rolls	for profiled wire		
Further options	data recording (VRecoS), statistical evaluation (VGraph), pass schedule store, etc.		