

Web Tension Measurement Unit

FEATURES

- Measure full resultant web tension force
- Superior accuracy for heavy rolls with small wrap angles
- Low profile—minimal change in line profile when retrofitting existing equipment
- Units customized to fit existing applications—no reconstruction and adaptors required

OPTIONAL FEATURES

- High temperature units—functional to 100°C
- Special units designed to meet any application need

APPLICATIONS

- Paper machines
- Steel strip tension equipment
- Mining conveyors
- Felts, dryers, calenders, coaters, and laminators
- Winders and rewinders

DESCRIPTION

FMU applications include all zones on paper processing machines and steel mill strip tension equipment.

Each FMU consists of two precision load cells, a load plate that carries the pillow block, and a base plate that mounts to the machine support. The unique design of the FMU allows measurement of the resultant web tension force without the need to mount the entire assembly on a sloped support. Because the load cells are cylindrical, they can be rotated to measure in the direction of the exact resultant force.

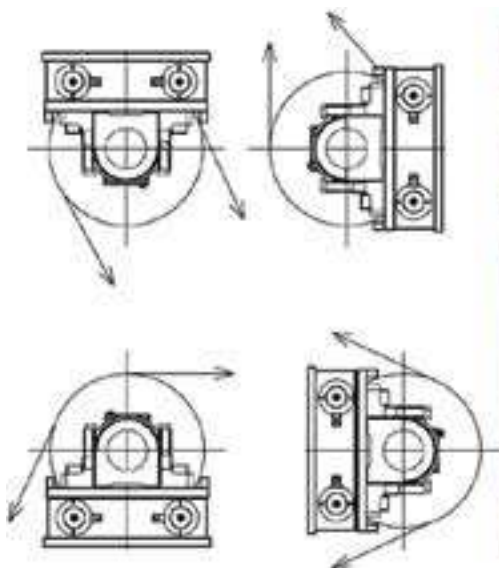


Measuring the resultant force rather than a vertical or horizontal component assures the highest possible accuracy and eliminates wrap angle restrictions.

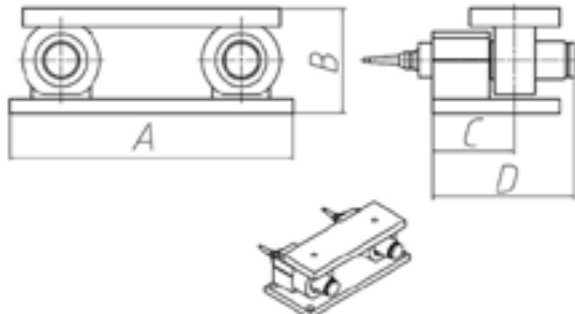
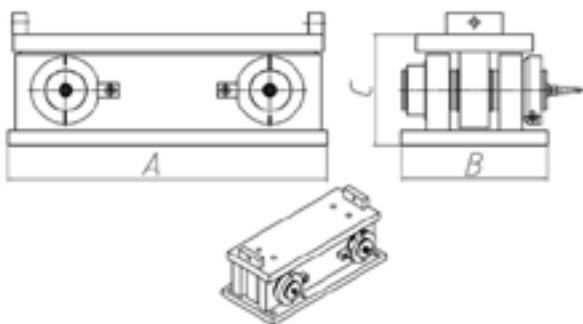
Tension signals from the FMU feed directly into a web tension transmitter which provides load cell excitation and a communication interface for the host PLC/DCS system.

Whether you are using standard products or customized solutions, our highly skilled system engineers, service technicians, and flexible production sites can meet your demands with a high level of professionalism.

CONFIGURATION



Web Tension Measurement Unit

OUTLINE DIMENSIONS				
Typical dimensions FMU-1: 			Typical dimensions FMU-5: 	
CAPACITY	A (mm)	B (mm)	C (mm)	D (mm)
2, 4, 10 kN	320	110	94.5	150
20, 40, 60 kN	380	140	110	190.5
100 kN	570	175	157	268
200 kN	640	219	167	292.5
CAPACITY	A (mm)	B (mm)	C (mm)	
100, 200 kN	480	260	205	
400 kN	680	310	236	

SPECIFICATIONS		
PARAMETER	VALUE	
PERFORMANCE		
Typical technical data	FMU-1	FMU-5
Capacity	2 kN to 200 kN	100 kN to 400 kN (800 kN ^{**})
Accuracy error/repeatability	Better than 0.1% RO	Better than 0.1% RO
Accuracy error/repeatability (with one dummy load cell)	Better than 0.5% RO	Better than 0.5% RO
Input voltage recommended	5–10 VDC or VAC	5–10 VDC or VAC
Input voltage maximum	18 VDC or VAC	18 VDC or VAC
Rated output (RO)	2 mV/V	2 mV/V
Temperature range^{**}	–40°C to +80°C (100°C*)	–40°C to +80°C (100°C*)
Electrical connection	Shielded four conductor cable or connector	
Materials	Yellow chromate zinc plated steel or stainless steel	

* Option available

** Higher values available upon request

BLH Nobel engineers are capable of customizing FMU transducers to meet all application needs.



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