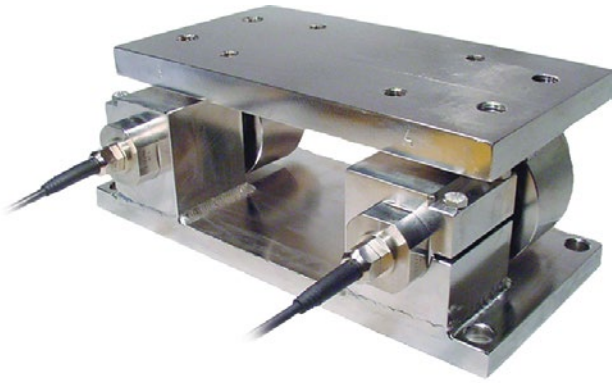
# Web Tension Measurement Unit

## 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.

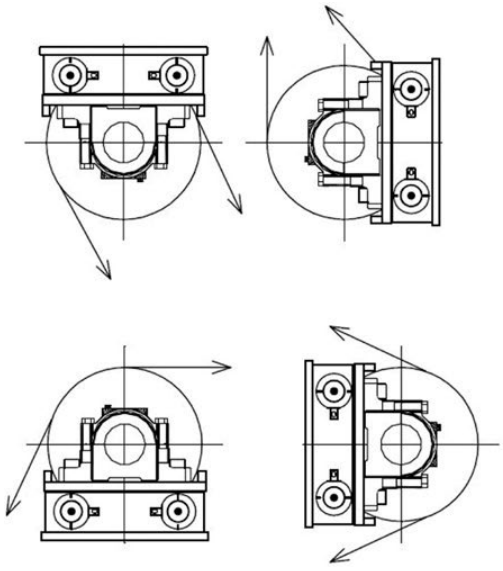
Each FMU consists of two precision load cells, a load plate that carries the pillow block, and a base plate that mounts to the machine support. The unique design of the FMU allows measurement of the resultant web tension force without the need to mount the entire assembly on a sloped support. Because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

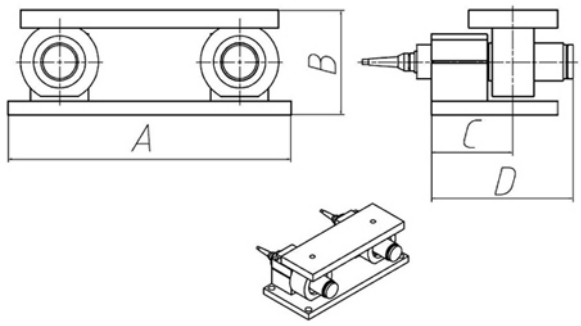


BLH NOBEL
A VPG Brand

Web Tension Measurement Unit

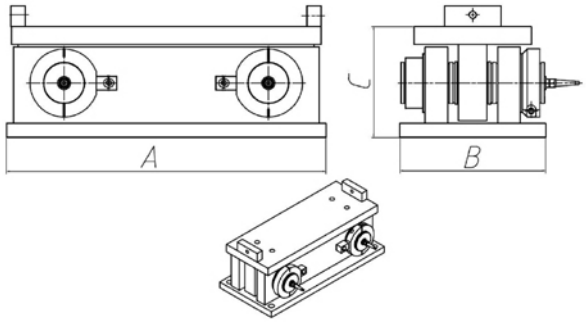
## OUTLINE DIMENSIONS

**Typical dimensions FMU-1:**




| 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 |

**Typical dimensions FMU-5:**




| CAPACITY | A (mm) | B (mm) | C (mm) |
|---|---|---|---|
| 100, 200 kN | 480 | 260 | 205 |
| 400 kN | 680 | 310 | 236 |

## SPECIFICATIONS

| PARAMETER | VALUE | |
|---|---|---|
| **PERFORMANCE** | | |
| **Typical tecnical 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.


Technical contact: blhnobel.usa@vpgsensors.com,
Europe: blhnobel.eur@vpgsensors.com, Asia: blhnobel.asia@vpgsensors.com
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