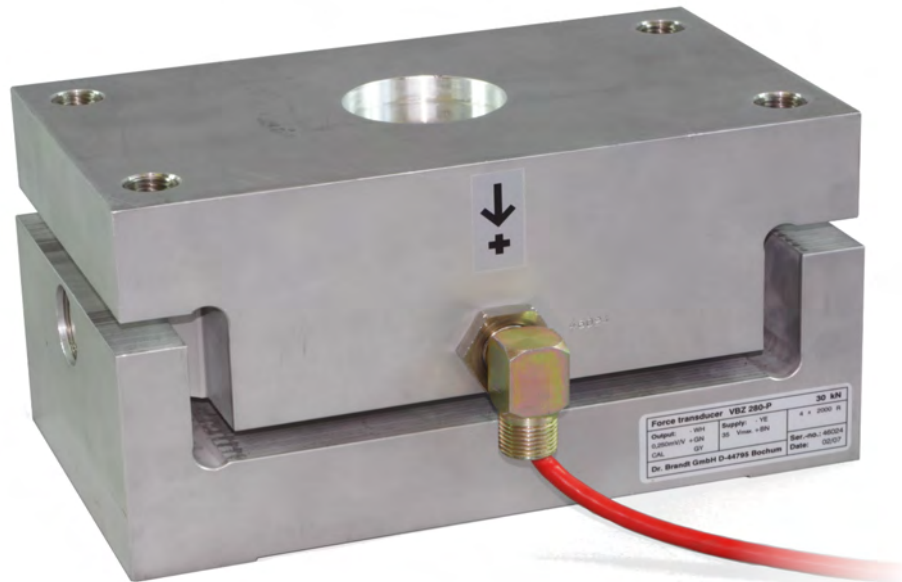


VBZ-P

Measuring direction is rectangular
to mounting surface



Purpose

Measuring of force components is vertical to mounting level.

Functioning

Measuring of bending, shear or upset by means of strain gauges.

Advantages

- Insensitive to affecting forces that are right-angled staggered towards the measuring axis` position.
- Fast response to load changes.
- Direct mounting of the pillow block without insert plates, with or without fitting, customized projected.
- As a standard it can be overloaded up to 6-times of nominal load without metrological damage; 12-times until break-point; optional up to 24-times overloadable.
- High contraction stiffness of the sensor-body in direction of the measuring-axis, typical contraction distance at nominal load $< 0.025\text{ mm}$, practically no contraction in other levels, provides smoothest operation of the turn-rollers as

well as string movement stability.

- Insensitive to lateral forces that occurs due to strip tension and height of the roller-axis above the mounting level.
- Integrated calibration norm for monitoring the entire signal-path and calibration.

Assembly

VBZ-Sensors consist of 2 parallel plates, that are connected either by a center measuring zone and 2 bridges or by 2 end-measuring zones.

The dimensions are designed corresponding to the size of the pillow block housing and the sensors nominal load and can be modified for specific use if the need should arise.

The signal wire is firmly attached, led out at the front side and can be protected by a hydraulic hose if necessary.

Use

In strip tension measuring installations between pillow blocks of return pulley and their mounting base.

Specification

Bridge-resistor nominal	2000 Ω
Bridge-resistor actual value	see test certificate
Charge voltage	35 V DCmax

Nominal characteristic value= Output signal at nominal load	0.5 mV/V Standard
Special characteristic value (optional)	0.2 mV/V, 0.25 mV/V

Calibration resistor	installed
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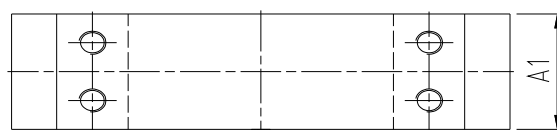
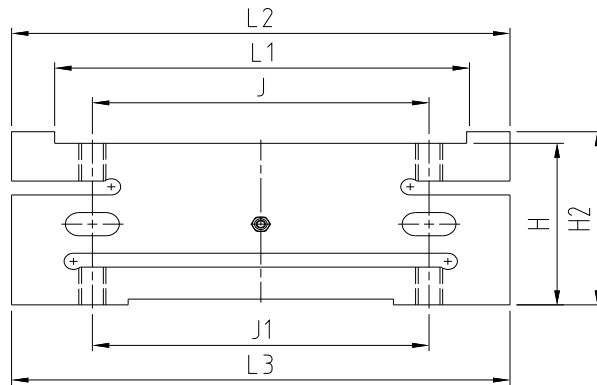
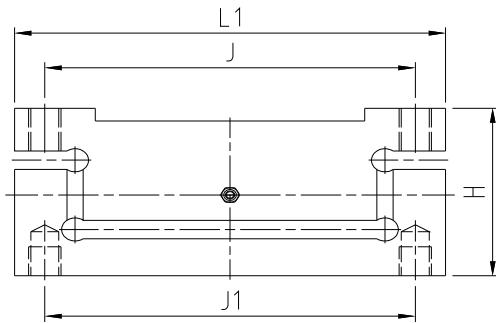
Length of signal cable	11 m
Protective hose	10 m

Combined error	0.3 %
Hysteresis and linearity	0.2 % v. E.
Repeatability	< 0.1 % v. E.
Temperature gradient / 10 K	< 0.1 % v. E.
Compensated temperature range	+ 20°C...+ 80°C
Maximum operating temperature range	0°C...+ 125°C

Nominal load according to series dwg.	kN min.....kN max
Load limit without metrological damage at characteristic value 0.5 mV/V	600/1200 % nominal load
at characteristic value 0.25 m V/V	1600/2400 % nominal load

VBZ - P
(Planheitsmessrolle/shapemeter roll)

Stehlager eingepasst
pedestal bearing fitted



Schlauch-
verschraubung
Hose sealing screw

Schlauch-
verschraubung
Hose sealing screw