



CK.100...

SHAFT THROUGH LOAD CELLS



- ✓ Compact design
- ✓ Easy installation
- ✓ High reliability
- ✓ Strain gauge technology
- ✓ High versatility
- ✓ Measuring range 250N

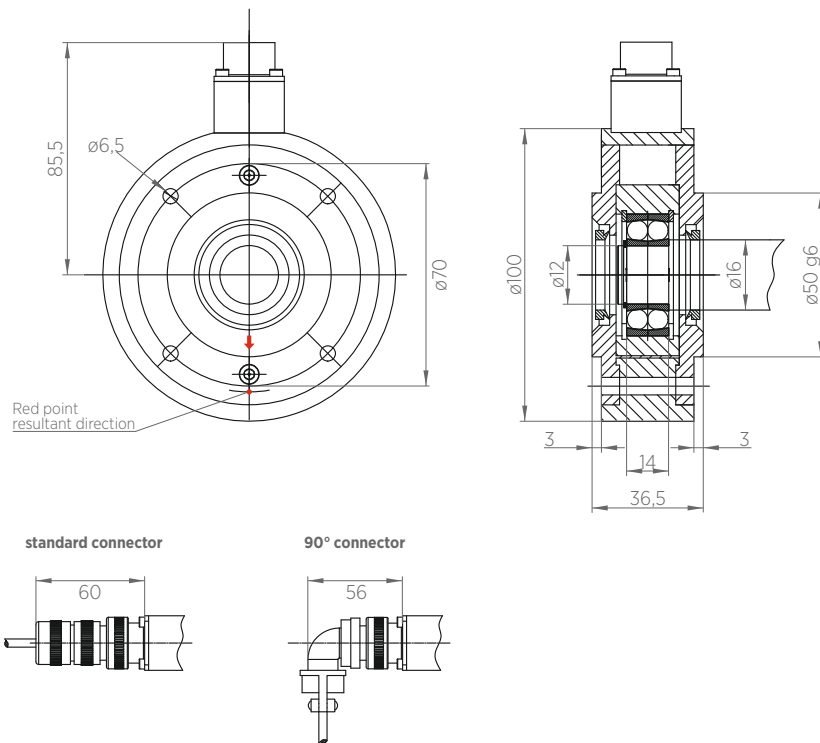
A reliable web tension control may reduce web tears in order to increase productivity. CK load cells, used in a precise tension control system, are designed to carry out these delicate tasks.

They are installed in shaft through applications at the end of a measuring roller to precisely detect the resultant of the forces generated by pulling of the material depending on the wrapping angle.

CK shaft through load cells have been designed with a compact design, to easily fit them in narrow spaces, to be installed very easily and to reach a very high reliability. Depending on models CK load cells are made with single or double foil.

Operating principle: CK load cells use the strain gauge operating principle to guarantee a perfect detection of the web tension. Strain gauges resistors are mounted on a inner metal foil of a load cell and connected to each other in a "wheatstone bridge" able to convert a mechanical movement into an electrical signal, that must be amplified by suitable amplifiers.

TECHNICAL DRAWING



Selection model table

| Code | Load N |
|--------------|--------|
| CK.100.25.12 | 250 |
| CK.100.50.12 | 500 |

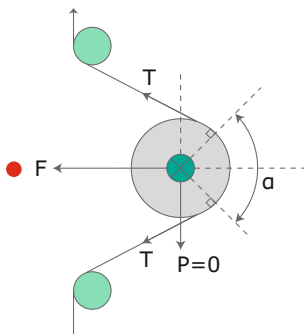
* for other model contact our technical dpt.

CK.100.xx.xx

└─ Hole
└─ Load N
└─ Load cell model

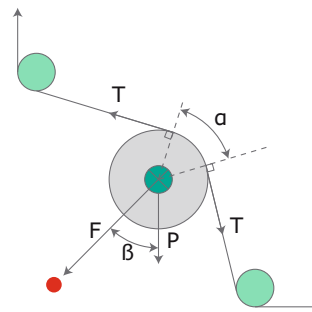
CALCULATION

HORIZONTAL RESULTANT



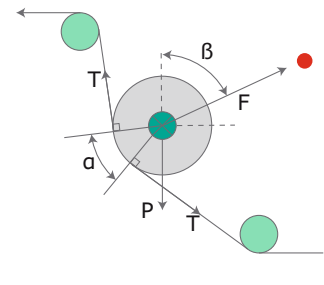
$$F = T \sin \alpha/2$$

DOWNWARD RESULTANT



$$F = T \sin \alpha/2 + P/2 \cos \beta$$

UPWARD RESULTANT



$$F = T \sin \alpha/2 - P/2 \cos \beta$$

TECHNICAL DATA

| | | |
|--|---------------------------|--|
| Precision class | 0.5 | |
| Sensitivity | Normal Supply | from 1,5mV/V to 2,0mV/V 10V - max 15V |
| Total error-repeatability-hysteresis-linearity | < ± 0,05% end scale value | |
| Measuring principle | strain gauge full bridge | |
| Strain gauge bridge resistance | 350Ω Ohm | |
| Max overload | 300% | |
| Temperature range | 0°C/+60°C | |
| Option | 4-20 mA output | |
| Weight | | |

*Data are subject to technical change without notice



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