



CK.175...

SHAFT THROUGH LOAD CELLS



- ✓ Compact design
- ✓ Easy installation
- ✓ High reliability
- ✓ Strain gauge technology
- ✓ High versatility
- ✓ Measuring range from 1000N to 3000N

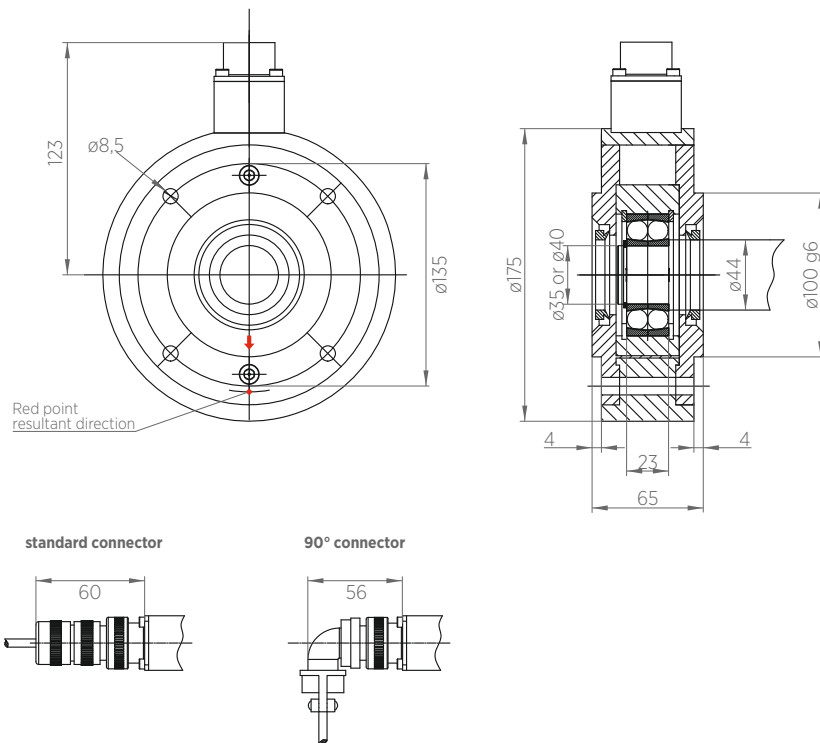
A reliable web tension control may reduce web tears in order to increase productivity. CK load cells, used in a precise tension control system, are designed to carry out these delicate tasks.

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.175.100.35	1000
CK.175.150.35	1500
CK.175.300.35	3000
CK.175.100.40	1000
CK.175.150.40	1500
CK.175.300.40	3000

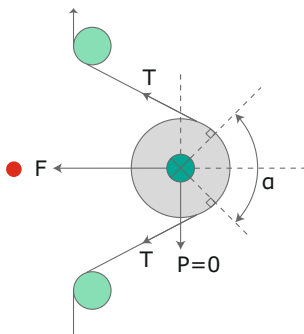
* for other model contact our technical dpt.

CK.175.xx.xx

└─ Hole
└─ Load N
└─ Load cell model

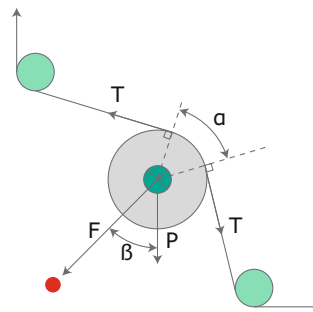
CALCULATION

HORIZONTAL RESULTANT



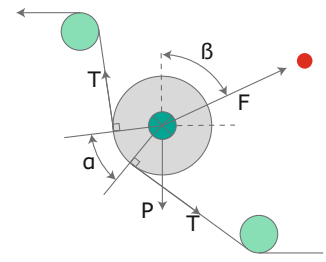
$$F = T \sin \alpha/2$$

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	< $\pm 0,05\%$ end scale value
Measuring principle	strain gauge full bridge
Strain gauge bridge resistance	350 Ω Ohm
Max overload	300%
Temperature range	0°C/+60°C
Option	4-20 mA output
Material	aluminium

*Data are subject to technical change without notice



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