# CF.65

## FLANGE LOAD CELLS


- Compact design
- Easy installation
- High reliability
- Strain gauge technology
- Measuring range from 50N to 300N

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

CF 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.

**Operating principle:** CF 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.

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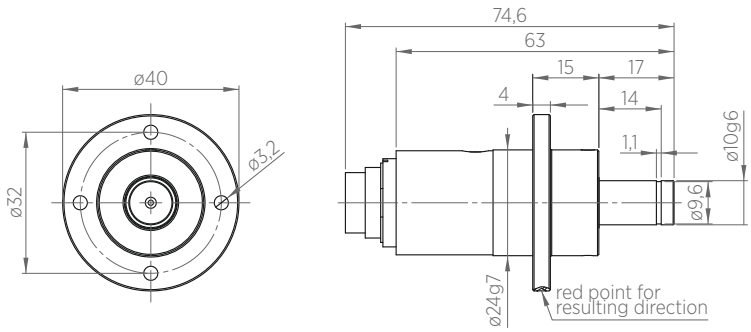
## TECHNICAL DRAWING




### Selection model table

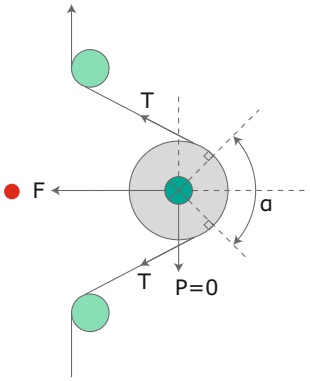
| Code | Load N |
|---|---|
| CF.65.30 | 300 |
| CF.65.20 | 200 |
| CF.65.5 | 50 |

* for other model contact our technical dpt.

CF.65.xx
- Load N
- Load cell model

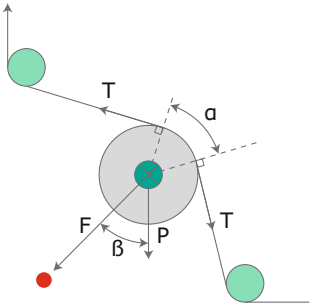
## CALCULATION

HORIZONTAL RESULTANT



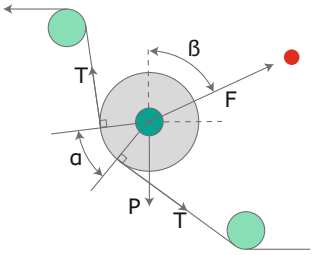

F = T sin **α**/2

DOWNWARD RESULTANT




F = T sin **α**/2 + P/2 cos**ß**

UPWARD RESULTANT




F = T sin **α**/2 - P/2 cos**ß**

## TECHNICAL DATA

| | | |
|---|---|---|
| Precision class | | 0.5 |
| Sensitivity | Normal<br>Supply | from 1,5mV/V to 2,0mV/V<br>10V - max 15V |
| Total error-repeatability-histeresy-linearity | | < ± 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 |

*Data are subject to technical change without notice

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