



CF2.85

FLANGE LOAD CELL



- ✓ Overload protection up to 10 times the nominal load
- ✓ Sensor rotation $\pm 30^\circ$ without change the load cell fixing
- ✓ Compact design
- ✓ Easy and quick installation
- ✓ High reliability
- ✓ Strain gauge technology
- ✓ IP54 protection class
- ✓ Measuring range from 250N to 2000N

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.

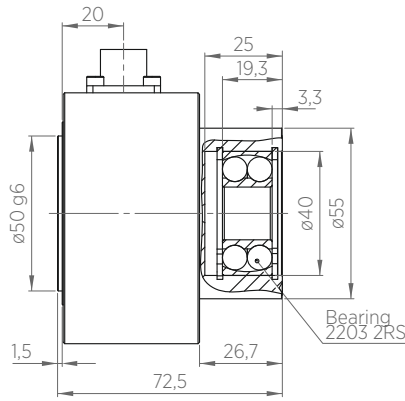
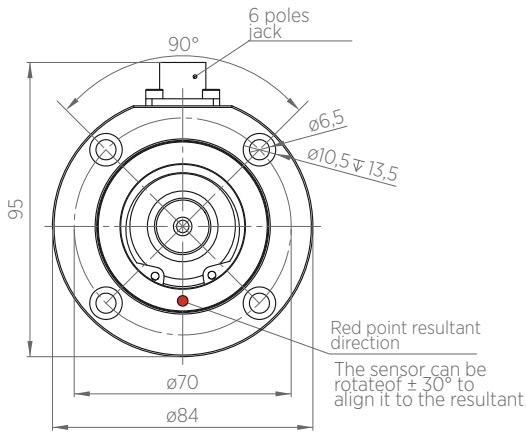
They are installed at the end of a measuring roller to precisely detect the resultant of the forces generated by pulling of the material depending on the wrapping angle.

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.

CF2.85 is a special flange load cells specifically designed for applications that require high overloads as it guarantees an overload protection up to 10 times the nominal load. Moreover the sensor can be oriented of $\pm 30^\circ$ without changing the fixing holes in order to precisely align it to the resultant force.

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.

TECHNICAL DRAWING



Selection model table

Code	Load N	bearing size
CF2.85.25.40	250	40x17
CF2.85.50.40	500	40x17
CF2.85.100.40	1000	40x17
CF2.85.200.40	2000	40x17

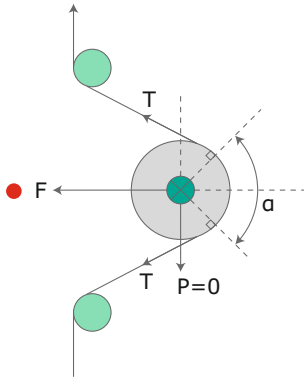
* for other model contact our technical dpt.

CF2.85.xx.xx

└─ Load N
└─ Ball bearing size
└─ Load cell model

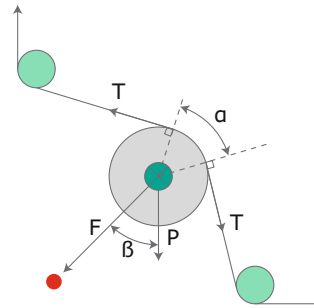
CALCULATION

HORIZONTAL RESULTANT



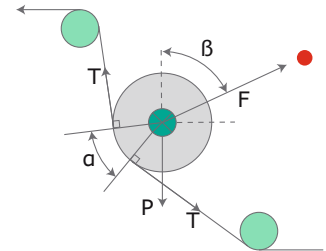
$$F = T \sin \alpha/2$$

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 max 15V (max at full-scale value: 20mV)
Total error-repeatability-hysteresis-linearity		<0,05% full-scale value
Measuring principle		strain gauge full bridge
Strain gauge bridge resistance		350Ω Ohm
Max overload		10 times the nominal load
Temperature compensation		+10°C ÷ +50°C
Working temperature		+10°C ÷ +50°C
IP protection class		IP54

*Data are subject to technical change without notice



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