

ABB load cells (Mini-PBT & PRT) successfully installed in tissue converting machinery from Paper Converting Machine Company (PCMC) in Lucca, Italy

The tissue converting machinery delivered from Paper Converting Machine Company (PCMC) in Lucca, Italy is running with Mini-PillowBlock load cells (Mini-PBT load cells) and Pressductor Radial Tensiometer Load Cells (PRT load cells) providing accurate web tension measurement

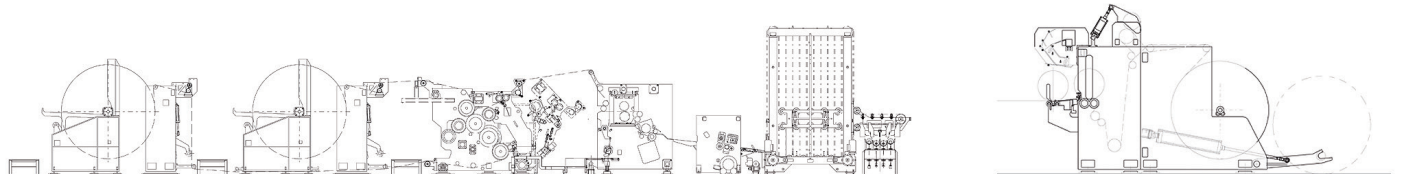
Background

Thanks to a close "customer-oriented" analysis, first of all PCMC is able to define a wide range of standardized products, liable to market influence improvements which completely meet the real customer requirements in technological and economic terms. PCMC has succeeded to define new technological solutions studying the market requirements.



PCMC decided to change to ABB load cells due to lots of maintenance problems with dancer rolls. ABB's Mini-PBT and PRT load cells are mainly used for unwinders and embossers. PCMC also gets faster step response with load cells, which is of great importance while increasing speeds of the machines. PCMC has also reported faster tuning and easier installation compared to the case with the dancer rolls. To summarize: "Instead of dancer rolls we use load cells with much better results"

"This solution is definitely good for us – it's another world with ABB load cells"



PCMC's tissue converting machinery is delivered with ABB load cells (Mini-PBT & PRT) – for reliable and accurate web tension measurement

The new systems introduced on the machines reduce the subjective intervention of the operator on the line, minimizing, simplifying and speeding up the adjustment and maintenance activities, increasing at the same time, often amazingly, the safety, the efficiency and the effective productivity of the converting lines.

Up until today, in this sector, interest was always focused on fast machines with more and more extreme performances. The innovations at the root of the technological concept of PCMC European and Asian Operations allow PCMC to produce more intelligent machines, more self-managed and with increased attention to the details, without sacrificing the line efficiency.



"PFEA111-electronics is easy to operate, easy to zero-set, easy to program"



Mini-PillowBlock load cells (Mini-PBT) installed in tissue converting machinery from PCMC Italy. In instances where the force component in the measuring direction is insufficient or non-existent, the Mini Series PillowBlocks can be mounted at an angle.



Pressductor Radial Tensiometers Load Cells (PRT load cells) installed in tissue converting machinery from PCMC Italy. No matter what the wrap angle is or where the measurement roll is located on the machine, the PRT load cell is simply rotated to pick up the ideal measurement force component.



ABB has delivered Mini-PBT & PRT load cells to PCMC Italy since year 2000. "Very good tension control with ABB load cells", comments Mr Angelo Giusti, Electrical Engineer.

What are your comments on the ABB load cells?

We ask Mr Angelo Giusti, Electrical Engineer, Charge of electrical part at PCMC, Load cell & Control expert, Mr Nicola Stefani, Senior Mechanical Designer and Mr Alessandro Scipioni, Mechanical Engineer & Safety Consultant:

"PCMC Italy is replacing dancer rolls with ABB load cells (Mini-PBT & PRT) in the unwinding and embossing sections in the standard converting lines for tissue and towel. This has turned out very well and as a consequence we have achieved the following:

We have definitely seen an increase in production and a reduction of up to 50% in installation and tuning time.

Best features with ABB load cells:

- Sturdy and robust load cells
- Stable signals - ABB load cells deliver very stable tension measurements over time
- Good step response time
- Easy to set-up the ABB load cells

ABB load cells and PFEA tension electronics are easy to operate for end-customers. Also, the PFEA111-electronics is easy to zero-set and easy to program, which is highly appreciated. To summarize: Very good tension control with ABB load cells. It is definitely good for us with ABB load cells.

And our final conclusion: It is another world with ABB load cells."

"We have definitely seen an increase in production and a reduction of up to 50% in installation and tuning time."

Company profile

Supplied equipment

ABB Force Measurement supplies Mini-PBT and PRT load cells to around 20 complete tissue converting machines per year, mainly unwinders and embossers (see below). Average number of load cells used per machine: 6-8 load cells.

Unwinder

Reel unwinding is the first phase of the converting process. The reel is raised by lifting arms and placed inside the unwinder, on the unwinder belts. The web is kept in tension, thus allowing its correct passage to the downstream converting stations.

Embosser

The embosser compresses the web between two rolls, one of which is steel and bears a pattern that is transferred through pressure onto the web. The aim of this process is both functional and decorative: the plies can be embossed with a dedicated pattern to yield bulk and softness.

Tension load cells installed on the idler rolls at the exit of the unwinding and embossing section

Min. reel diameter (unwinders)	1,600 mm
Max. reel diameter (unwinders)	2,500 mm
Max. speed (unwinders)	650 m/min
Max. speed (embossers)	750 m/min
ABB load cells installed in PCMC's tissue converting machinery	Pressductor Radial Load Cells (PRT) model PFRL 101A and Mini-PillowBlock Load Cells (Mini-PBT) model PFTL 301E



Company profile

PCMC is one of the biggest manufacturers of paper converting machinery: toilet paper, kitchen towels, industrial products and wet wipes.

The extremely dynamic team of PCMC people is dedicated to process excellence to grow continuously in quality together with customers and suppliers; its 200 employees are mostly very young, considering the average age of 34 years.

Today, the production processes have changed with respect to a few years ago; at present, only the activities with high added value are carried out internally: from mechanical and electrical assembly to specific testing. The base production has been completely transferred to a network of external suppliers, selected and reliable in terms of quality and respect of delivery times.

This policy contributed, and still contributes, to a considerable cost reduction, allowing PCMC to properly answer the competitive market dynamics without jeopardizing the financial company balance.

PCMC Italia is proud of its results; a few years ago the company had a turnover of 4 million Euros per year, and now the average turnover is about 18 to 20 million Euros, with peaks of 23 million Euros.

(For more information, visit www.redcarpetpcmcurope.com)

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