

## Today's innovations equip us for tomorrow's tasks

PMA® conduits are the ideal complement to BRUDERER's precision stamping machines

### PMA

PMA® build numerous types of conduit for a range of cable protection applications for differing technical requirements.



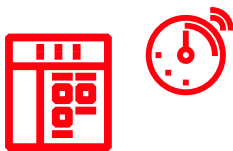
BRUDERER is regarded globally as the pacesetter for

**Swiss precision**  
and for leading the way in stamping machine technology

Every day, we come across products manufactured by BRUDERER stamping machines – although most people are not aware of it. Answering a mobile phone call, driving from A to B, paying with small change at your favourite bakery or using your computer to search for the nearest electric charging station.

Both ABB's PMA team and BRUDERER always demand the highest standards when it comes to products and quality; their enduring collaborative relationship grew from this common objective.





BRUDERER high-performance stamping presses rely on

# PMA cable protection solutions

### A company with a tradition and a future

BRUDERER is an owner-managed family company; it is considered to be a global pacesetter as a top quality stamping technology. Three characteristics, all hallmarks of BRUDERER, have contributed to this success: performance, precision and quality.

BRUDERER employs a workforce of some 500 throughout the world. The company's headquarters and its production sites are based in Frasnacht on Lake Constance in Switzerland. This is where it produces high-precision, high-performance stamping presses, exerting forces of between 200 and 2500 kN, for stamping and forming both simple and complex components. The product range also includes feed models, servo axes and control solutions. Direct contact with customers is ensured by a worldwide sales and service organization.

Within the sheet metal and forming sector, BRUDERER stamping presses are regarded as synonymous with maximum performance, superb precision and unbeatable reliability.

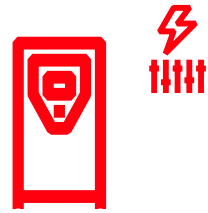


### Mobility concepts

ABB and BRUDERER are actively involved in potential future applications for their products. E-mobility is a key area, benefiting from common synergies. The market for new and more powerful electric engines is growing as is the demand for components for charging stations.

ABB offers a comprehensive portfolio catering to all electromobility requirements. Its solutions extend from alternating current wallbox charging points for private use, to powerful direct current professional charging stations.

Electromobility portfolio components are complex; they are produced on BRUDERER's BSTA stamping



PMA® cable protection conduits provide

## maximum safety

machines. These components include electrical sheets for electric engines, power generators, plugs and many other items.

Various PMA cable protection components, including conduits, support brackets and end caps are installed in BRUDERER's stamping presses. By employing ABB's PMAFLEX CYL conduit and the divisible PACOF conduit, BRUDERER is relying on products which meet the company's stringent requirements for dynamic applications.

The material's properties and benefits include:

- Rapid assembly
- High impact resistance
- Specially modified Polyamide 6
- Can be opened lengthwise and closed again at any time
- Excellent ductility
- High compression strength
- Halogen-free, in conformity with REACH + RoHS
- Temperature range: -40°C to +105°C, briefly up to +160°C

## The attention to individual elements ensures a high-quality overall product.

— BRUDERER's stamping presses are equipped with PMA cable protection.

### The PACOF conduit

This conduit provides protection and safety for cables and leads used in the machinery and plant construction sector.

### The PMAFLEX CYL conduit

This conduit is ideal for use in machinery and equipment construction. It is compatible with PMAFIX, PMAFIX Pro and PMA Smart Line threaded connections, PMAGRIP flanges and other PMA accessories.

The material's properties and benefits include:

- Conforms to UL 1696
- Specially modified Polyamide 6
- Very good ductility and good bending resistance under alternating stress
- Excellent mechanical properties even at low temperatures and when dry
- Self-extinguishing in accordance with UL 94 V2
- Halogen-free, in conformity with REACH + RoHS
- Temperature range: -40°C to +105°C, briefly up to +160°C







With its PMA cable protection range, ABB offers a comprehensive portfolio of conduits, threaded connections and accessories for the most varied markets and applications.

#### **BRUDERER and ABB**

These two Swiss companies, BRUDERER and ABB's PMA Cable Protection team, continue to enjoy a long-term collaborative relationship and have a shared interest in sustainable technologies. A range of different components for the e-mobility sector, for example, are produced on BRUDERER stamping presses.

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