Available Machine Types

Machine Name	PAB	HotSpeed	Premium
Description	Flexible design for quick change of tools, high quality results and user-friendly maintenance	Optimized design for converters where high temperature and speed is key while maintaining fast tool exchange	Solid high precision modular calendar construction for high precision and high pressure perforation
Working width	Up to 2'000 mm	Up to 1'600 mm	Up to 5'000 mm
Perforating roller	Core Ø 110 mm Perforating segments according to customer's specification Ø over pin tips: 130 – 160 mm **Option:** U-joint for perforating ring exchange without dismounting the perforating roller	Core Ø 110 mm Perforating segments according to customer's specification Ø over pin tips: 130 – 200 mm	Inside Ø 160 – 350 mm Perforating segments according to customer's specification Ø over pin tips: 180 – 400 mm
Counter Roller	Roller Ø 120 – 160 mm Tampico fibre brush **Options:** (according to application) Other brush fibers and construction design Rubber Felt	Roller Ø 140 – 160 mm Tampico fibre brush **Option:** (according to application) Variation of brush fibers and arrangement Rubber	Roller Ø 200 – 500 mm Tampico fiber brush **Option:** (according to application) Other brush fibers and construction designs Rubber Felt With holes
Heating system	External high-performance infrared heating with fast mid-wave frequency radiators up to 350 °C (measured at perforating ring) Heating power: up to 13.5 kW per meter width **Options:** internal electric resistance heating external ceramic infrared radiators	"Hot Oven" construction Combination of external ceramic heating and internal resistance heating Combined Heating power: up to 13 kW per meter width	Internal thermo fluid-heating with spiral roller construction for temperature up to 250 °C (fluid temperature) Autonomic electrical heating device with rotary union connection to roller, with panel for temperature control/display **Option:** Outside induction heating system for temperature up to 330 °C measured on the perforation ring
Working temperature	Up to 350 °C	up to 400 °C (measured at perforating ring)	250 – 330°C
Drive system	2.2 kW, DC-motor, 50 Hz, 400 V (USA 480 V, 60 Hz) **Option:** for low speed and cold applications roller may be driven by material	2.2 kW, DC-motor, 50 Hz, 400 V	1 or 2 servo motor, approximate 7.5 kW **Option:** synchronization of motors/drives for male/female perforation
Line Speed	Up to 250 m/min	Up to 300 m/min (production speed depending on material and requested hole quality)	Up to 400 m/min (production speed depending on material and requested hole quality)
Emergency break system	emergency stop with electronic motor brake (< 1 second) **Option:** Electro-magnetic brakes on perforating and counter roller	emergency stop with electronic motor brake (< 1 second)	emergency stop with electronic motor brake (< 1 second)
Penetration adjustment	Manual thread with knurled screw, optical indication with measure scale	Manual rotary position control and analog indication in increments of 0.1 mm	Electrical spindle lifting device, visualisation and adjustment on control display
Electronic control	Cabinet with push buttons, temperature display and adjustment, line integration via 0 – 10 V signal **Option:** Cabinet with Siemens touch-panel, control/display of all mechanical functions and parameters (speed and temperature), line integration through 4 – 20 mA signal, manual synchronization adjustment of line speed and perforation speed at control panel, modem connection for remote maintenance	Cabinet with push buttons, temperature display and adjustment, line integration via 0 – 10 V signal **Option:** Cabinet with Siemens touch-panel, control/display of all mechanical functions and parameters as speed and temperature, line integration through 4 – 20 mA signal, manual synchronization adjustment, adaption of line speed and perforation speed at control panel, modem connection for remote maintenance	Cabinet for electronic components Autonomic Touch Panel Siemens on wheels with 4 m wire connection to cabinet, control/display of all mechanical functions and parameters (speed and penetration depth), line integration through 4 – 20 mA signal, manual synchronization adjustment, adaption of line speed and perforation speed at control panel, modem connection for remote maintenance **Option**: Control/display of temperature on main touch panel
Energy connection/ consumption	50 Hz, 400 V energy consumption approx. 15 kWh per meter working width	50 Hz, 400 V, Energy consumption approx. 15 kWh per meter working width	400 V, 50 Hz, (USA 480 V, 60 Hz)
External dimensions	Total length = working width + 922 mm (without drive + 300 mm) Height: approx. 800 mm Depth: approx. 380 mm	Total length = working width + 800 mm Height: 700 mm (approx.) Depth: 700-1000 mm (approx.)	Total length = working width + 750 mm (motor) + 400 in case of internal oil heating Height: approx. 1300 mm Depth: approx. 860 mm
Additional options	Unit can be integrated in horizontal position. Optical electronic matching control for printed film perforation	Segmented pinning for special perforating pattern Dedicated construction for fast roller change Dedicated construction for fast pin ring exchange without roller disassembly	Electronic matching control for printed film perforation Heating of counter roller Recipe storage on display

For all machine types we are able to adapt to customer's requirements to ensure an optimal end-result.

All our leaflets, measure sheets and inquiry forms can be downloaded at
www.burckhardt.com

BURCKHARDT
OF SWITZERLAND

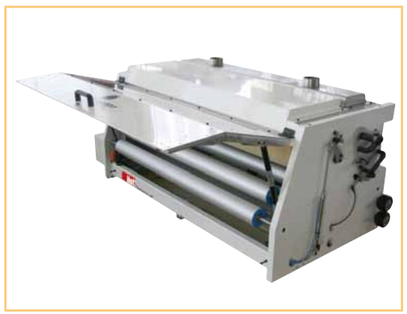
BURCKHARDT OF SWITZERLAND AG
Pfarrgasse 11, CH – 4019 Basel
Switzerland
Tel +41 61 638 18 00
Fax +41 61 638 18 50
info@burckhardt.com
www.burckhardt.com

Tailor-Made Perforating Units

Engineering, Design and Manufacture of Perforating Units

According to your needs, we design and compose the tailor made solution for your application.
We build machines with various options as well as units with new components to solve your specific problems.

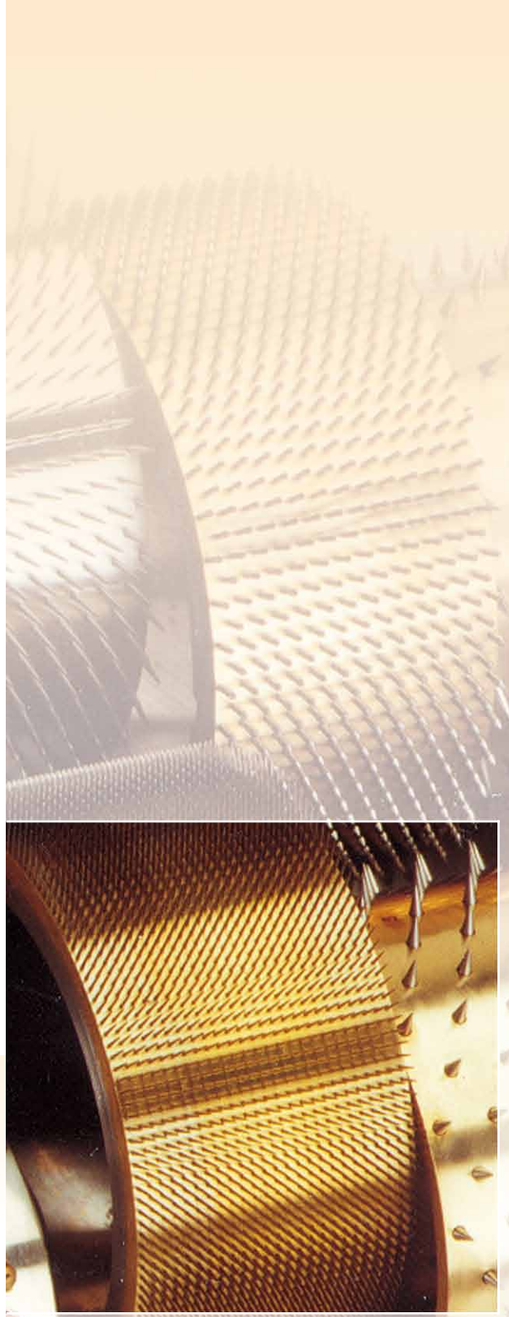
PAB-H type



HotSpeed

Premium type

BURCKHARDT
OF SWITZERLAND



Perforating

with Pin Tools and Units

BURCKHARDT
OF SWITZERLAND

With our in-house Perforating Line, we can make all kinds of trials and run production lots under industrial conditions

We manufacture Perforating Tools with various dimensions, pinnings and patterns

High quality Perforation through high quality Swiss tools

Your Partner for Perforating Solutions

with custom made pin rollers and complete perforating units. Our skilled staff will develop your specific perforating solution with trials in our laboratory and industrial standard production capabilities. For existing standard products, we establish competitive offers. Our innovative, tailor-made solutions will increase your competitive advantage.

Perforating Trials

Our lab units allow hot and cold perforating trials with various pin patterns. We can offer basic trials to evaluate the feasibility as well as enlarged trials to test industrial conditions.

You may send us your product samples for basic trials after previous agreement (ideal dimension max. 200 x 600 mm or approx. 2 x legal format).

Contract Perforation

Our industrial standard perforating, slitting and winding line allows production of 0-series as well as full-scale contract perforation on a working width of 1600 mm with various existing perforating tools.

Use our know how in the application of pin rollers for perforating, embossing, napping, transporting, cutting, tearing, separating, etc.

Perforating
with Pin Tools and Units

Product Properties

Many products can get an **added value** through the treatment with pin rollers. We help you to develop new products and applications which may

- **improve your process efficiency**
- **refine your products**
- **enlarge the application field of your products**

Possible Applications of Pin Rollers

- Steam- and water permeability
- Ventilation and breathing activity
- Tear-off lines for packaging
- Sound and heat insulation materials
- Higher absorption capacity
- Filtration
- Adhesive power
- Controlled material transport
- Improved acoustics

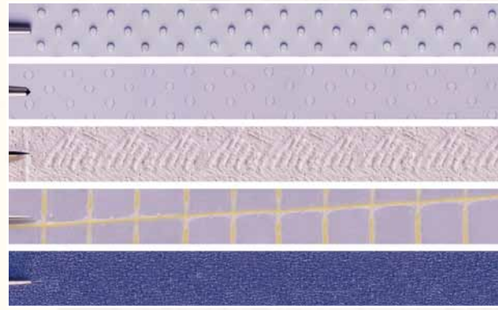
Processed materials

Basically any material that may be deformed with hot or cold steel pins, mostly roll goods like:

- Plastic films
- Non wovens
- Laminated foils
- Rubber
- Paper
- Foamed plastics
- Metal foils and sheets up to 0.5 mm thickness
- Leather / artificial leather
- Textiles
- Compound materials

Technical possibilities

Burckhardt pinning and perforating tools are high precision parts, produced in numerous versions. For information about the technical feasibility of your specific request, please see our measure sheets or consult our contact person which you can find on our website.



Special pins create special holes

Drilled and pinned parts for flame perforation or other special effects

There are endless variations of pinned rollers