



EA30 ELECTRIC ROLLER FORMING UNIT

3 axis, servo-driven, for articulating roller forming

Force: 0.3 up to 30 kN | Stroke: up to 200 mm

3 axis servocontrolled for radial articulating roll forming with HPPi PC-Software

Forming processes: axial roller forming, radial roller forming, crimping, 3D forming

Force range: 0.3 up to 30 kN - axial and radial

▪ **Main Features**

- Basic unit incl. roller forming head: Net weight ~ 140 kg
 - Length: min. 1283 mm
 - Diameter: 180 mm
- Three axis, servocontrolled, stroke Z (axial), stroke R (radial), rotation M
- Direct force measurement in axial and radial direction
- Pricess data achriving of all axis
- Power supply: 3x380 bis 480 VAC (45-65 Hz) 16A overload protection
- Safety standard PLe/SIL 3
- Declaration of incorporation for partly completed machinery according to 2006/42/EG

Standard Version

- Basic unit with all sensors
- Process module: articulated roller forming
- Process module with with three-roller roller forming head
- HPPi PC-Software based on Windows 10
- Control cabinet complete, including cable set to power unit to be mounted by customer:
 - Net weight 56 kg
 - DimensionS 800 x 762 x 311 mm
- Cable set between basic unit and control cabinet
- Automatic spindle lubrication
- Two threaded rings
- UDP communication module for process data upon request. No charge.
- Assembly instruction and manufacturer's verification certificate (force and path) at first delivery enclosed as hard copy – in English
- Operating Manuals and Software enclosed on electronic media (USB) in English

Power Unit

- Force axial axis: 3.0 to 30 kN
- Linear Stroke: max. 200 mm
- Linear feed rate: max. 180 mm/sec, servo controlled
- Rotation Speed: max. 800 min⁻¹, servo controlled
- Integrated mechanical overload protection
- Coaxial load cell (DMS) with amplifier allows true axial force measurement
- Axial path measurement via two independent measuring systems, safety integrated
- Position measurement via two independent systems integrated
- Integrated temperature measurement on motors, servo drives monitors temperature
- Slim, straight design
- Standard lubrication of the spindle, software monitored and controlled
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Optional – not included in this proposal

- Adapter for side mount to column
- C-frame

Process Module & Roller head for articulated roller forming

Roller forming head with 3 rolls. One set of rolls with customer specific geometrie included.

- Force radial axis: up to 30kN, total of all three rollers
- Radial stroke (radius): 10 mm
- Radial feed rate: max. 10mm/sec, servo controlled
- Coaxial load cell (DMS) with amplifier allows true radial force measurement
- Radial path measurement via resolver integrated in roller forming head
- Work piece size & limitations – refer to dimensional sheet

CONTROL CABINET

- Servo drives for three axis, power distribution, 24V power supply, integrated safety PLC, IP/Ethernet & USB port
- Main Switch in side wall
- Integrated fans for cooling
- CE Standard, IP50 – rating

Optional - not included

- Control Cabinet acc. to UL-Standard
- Main Switch through the door

Connectivity

- Ethernet/IP and USB 3.0 Connection
- Cable set between power unit and control cabinet standard 3.0 m
- Existing connections on the control cabinet:
- X111: Socket for Working light, Reserve (standard dummy plug)
- X121: Socket for Lubrication of spindle and riveting head
- X131; Socket for Safety (light curtain, lift door interlock, other safety interlock) (standard dummy plug)
- X141: Socket for external safety, reset, cycle permissive
- Alternative a; - Delivery default / b; - Configurable by customer
- X151: Socket for External emergency Stop, start signal, permissive for work piece handling (standard dummy plug)
- X161: Socket for PLC interface, cycle start, program selection, HPPi OK/Ready, Cycle evaluation OK/NOK
- X171: Socket for Manual Control Box (standard dummy plug)

Optional - not included:

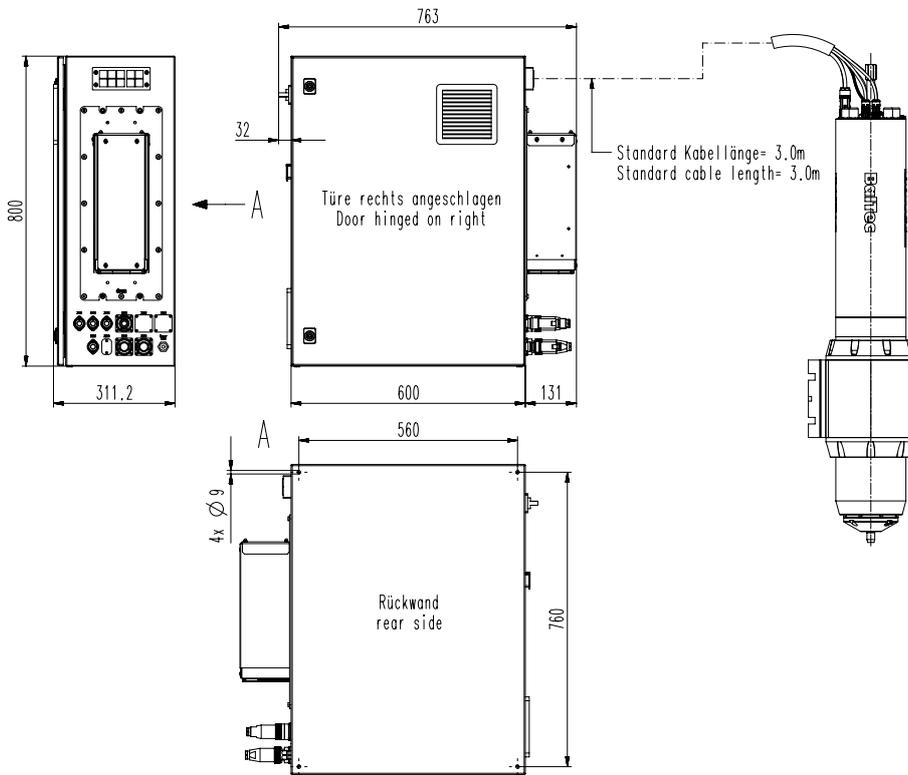
- HMI Monitor 10.4 and Manual Control Box
- X141; External Safety/Reset, plug with cable 5.0 m
- X161; PLC-Interface, plug with cable 50.0m, max. 100.0 m
- X171; Manual Control Box, plug with cable 3.0 m or 4.0 m
- Cable set between power unit and control cabinet: 10.0 m

Software HPPi

- Based on Windows 10 (64 bit) with integrated TeamViewer for remote access
- Program- and process data management with process curve visualisation
- Process data evaluation with feedback of OK/NOK status
- Work piece detection, various types of process start detection (RA)
- Password protection for different access levels
- Process parameter for axial & radial movement: Forming time, Forming path, Forming force, Spindle path, Linear- and Rotational speed
- Display of machine status information for diagnostics and alarm display/ acknowledgement
- HPPi SW can also be used for offline diagnostics
- Predefined master programs available, can be copied and customized
- Manual operation in 'jog-mode' on separate screen
- Logging of all process data on internal PLC, on USB stick or on the customer network
- Graphical display of process curves and data, customizable
- Download of programs, data and curves for storage or diagnosis
- Ethernet IP interface as standard, UDP Protocol for process data available
- Software only works with BalTec ELECTRIC products. No experience of servo drive programming required.
- OPC/UA Communication available (On request and with clear definition of the requirement)

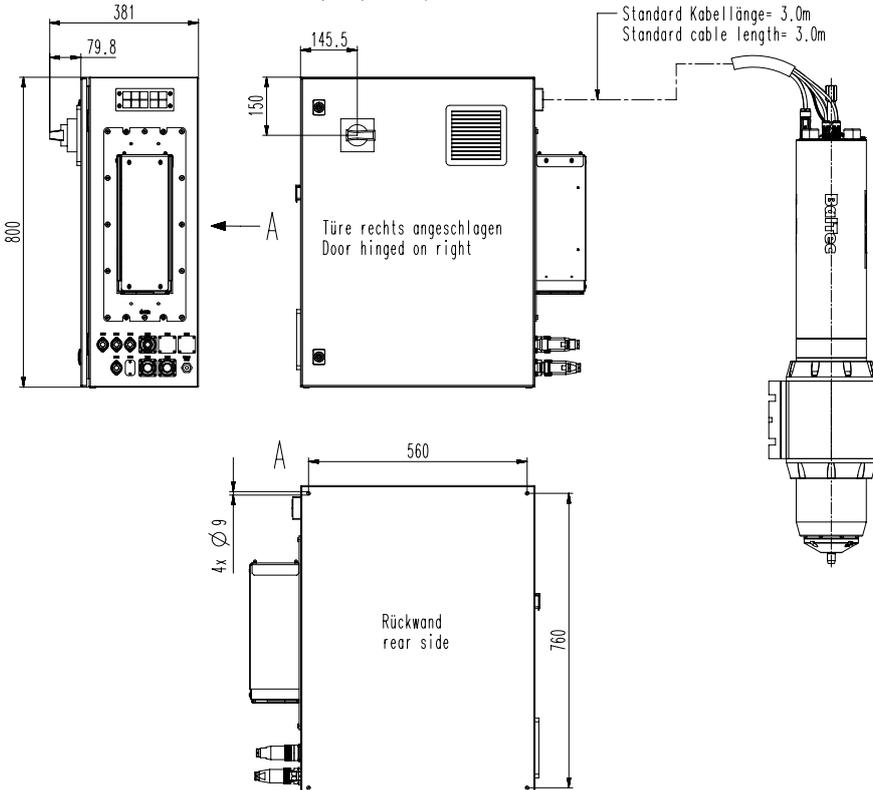
Design for control cabinet - EU-standard, lateral main switch (UL-standard not possible)

Version Europa Norm, Hauptschalter seitlich



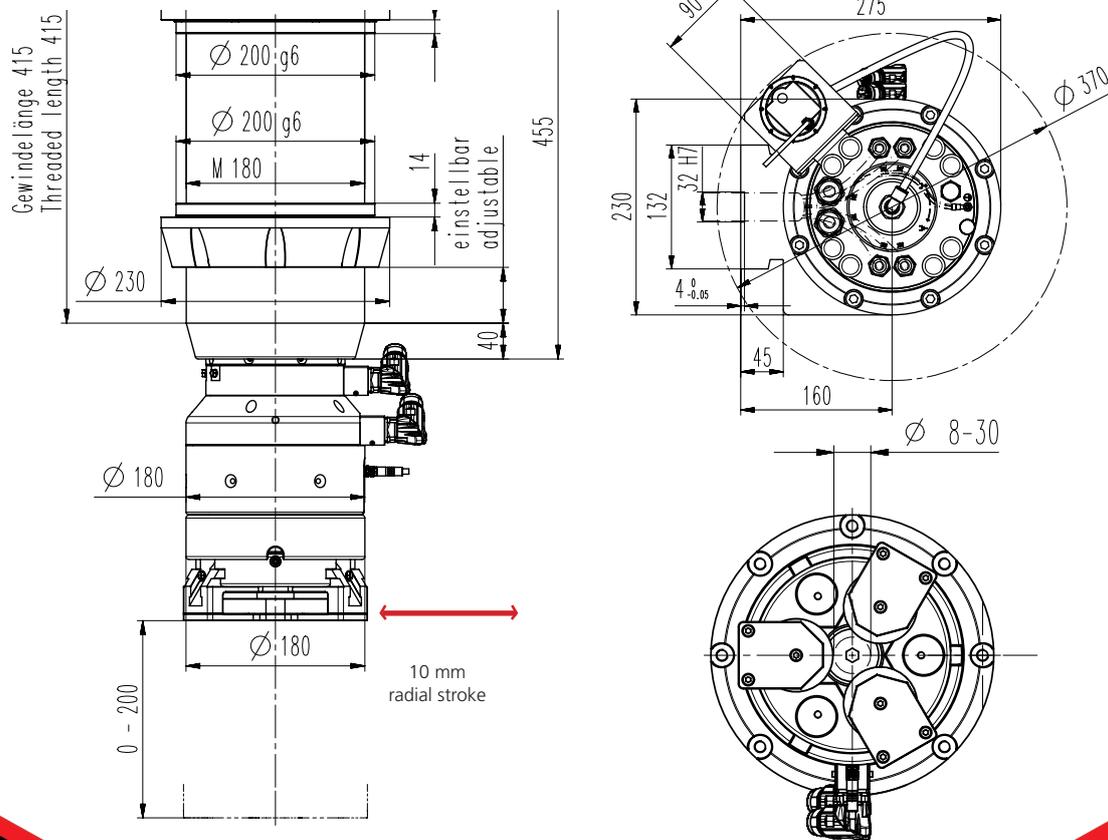
Design for control cabinet - EU-standard (optional UL-standard)

Version UL Norm (USA), Hauptschalter in Türe



- Radial travel 10 mm on the radius
- Max radial in/outward movement speed 10 mm/s
- Forming speed 0-10 mm/s radial
- Max. radial force per slide / all slides 10kN / 30kN
- Max. axial push force 30 kN
- Max. axial pull force 3 kN
- Part Ø to Roll form (with diff. rollers & slides) PØ5 – Ø25 – Ø75* mm
- Part height – internal clearance (Part Ø < 40mm) 80 mm
- Part height – internal clearance (Part Ø > 40mm) 20 mm

* Larger diameter possible on request



SWISS MADE

BalTec AG - Headquarter
Switzerland / Germany

BalTec (UK) Ltd.
United Kingdom

BalTec France
France

BalTec Italia S.r.l.
Italy

BalTec Corporation
USA / KCanada / Mexico

BalTec do Brasil
Brazil

BalTec Machinery (Shanghai) Ltd.
China

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