

TZ

LONG FOLDER

INNOVATIVE, VERSATILE AND EFFICIENT



TZ LONG FOLDER The innovative TZ model emerged as a synergy and further development of two preceding models, the THAKO and ZR series. The TZ unites the best elements of centuries of Swiss engineering skill and is now impressive in its own right through its numerous innovations. In particular, the **INNOVATIVE VFD (Vertical Force Drive) DESIGN PRINCIPLE** is second to none. The machine stands are formed in the shape of "rigid C-frames". With its vertical tool alignment, the VFD produces a great amount of vertical clamping force for hemming. The integration of the globally unique kinetic **CONTROL SHAFT TECHNOLOGY** is not only clever from a technical viewpoint, but also offers real added value by distributing the output from all of the machine stands evenly over the clamping and folding beams. Additional free space and flexibility are provided by the newly designed **CLAMPING BEAMS** and the **OFFSET FOLDING BEAM**. With the most modern drive technology, the TZ provides measurably improved energy efficiency with considerably higher folding dynamics. Torsion-free profiles are created by a smooth-running, servo-drive-controlled **DYNAMIC CROWNING** system which impressively compensates for any edge-pressure effects which may occur. The **NEW LONGITUDINAL SLITTER** concept is detached from the folding beam and thus prevents disruptive influences during the folding process.



VFD
VERTICAL FORCE DRIVE



MODULAR TOOL GEOMETRY

Two different tool shapes are available for the clamping respectively upper beam. A straight upper-beam tool with a very flat angle of inclination of just 35° is supplied as standard, which permits the manufacturing of metal profiles with a side ratio of 3:4 (ratio of height to depth). A curved upper-beam tool, resembling a goat's foot, can be optionally supplied. This tool can be used to shape metal parts with a side ratio of just 1:2 (e.g. a ratio of 35 mm (1.37") height to 70 mm (2.75") depth). The modular tool geometry is completed with the newly designed folding beam. This beam is offset, moved back to the folding line and set at a 15° angle. As a result, the space available directly at the bent part is increased to a total of 275°, which provides significantly more flexibility during the folding process.



UNIQUE CONTROL SHAFT TECHNOLOGY

The unique control shaft technology distributes the power from all of the C-frames evenly over the clamp and folding beam. Both control shafts on the clamping and folding beam have direct encoder measuring. This kinetic drive concept achieves an unrivalled angle precision and parallelism of the bent components along the entire length of the machine.



ELECTRICAL LONGITUDINAL SLITTER

The positioning of the electrically-driven longitudinal slitter on the machine base frame relieves the folding beam mechanical components. Since protruding guidance parts on the folding beam are omitted, valuable forming space is made available.



COMPREHENSIVE SAFETY CONCEPT

The comprehensive safety concept, which includes highly advanced laser technology for the clamping area and slitting device, provides maximum protection and safety for the workplace.



RADIUS ADJUSTMENT AND CROWNING

Automatic radius adjustment is performed using muted and efficient servomotors. The same drive also controls the dynamic crowning function which prevents the profile ends from being folded too far.



FULLY-AUTOMATIC BACK GAUGE

The fully-automatic back gauge provides a working range of 5 mm - 1250 mm (0.19" - 49.21"). A tapered back-gauge function is optionally available.



CHARACTERISTICS

- » Tool geometry with 275° free space
- » Straight clamping beam with a 35° angle of inclination
- » Straight folding beam geometry with a 15° inclination
- » VFD (Vertical Force Drive) design
- » Kinetic control shaft technology
- » Energy-efficient fre. con. high-performance hydraulics
- » Adjustable sheet supporting table
- » Manually adjustable folding beam crowning
- » Safety laser for clamping and cutting
- » Graphic CNC touch-screen controller
- » Remote maintenance using TeamViewer software

OPTIONS

- » Detached automatic slitter
- » Roll-forming unit for special profiles
- » Side-adjustable spring-loaded finger back gauge
- » Curved clamping beam geometry
- » Offset folding beam geometry (as of version TZ 200)
- » Tapered back gauge
- » Automatic radius adjustment (standard from TZ 150)
- » Dynamic crowning adjustment
- » Folding beams with interchangeable tools
- » HARDOX beam tools
- » LED clamping line lighting

MODELS

TZ125 | TZ150 | TZ200 | TZ300

Max. folding capacity*	1,25 1,50 2,00 3,00 mm**
Working length	From 3,2 to 12,0 m***
Throat depths	1250 mm****
Folding beam width	15/10 + add. rail 10 mm*****
Max. folding angle	143°
Folding accuracy	± 0,5°

*At 400 N/mm² / 58 ksi **18 | 16 | 14 | 11 ga
 10.5 to 39.4 ft *49.21 in *****0.59/0.39 + 0.39 in

VFD (VERTICAL FORCE DRIVE)

The VFD design principle developed by Thalmann engineers and used in the TZ and TC models is second to none. Whereas the machine stands in conventional long folders work like oversized pliers as they clamp the metal sheet, the stands in these models are formed in the shape of "rigid C-frames". Combined with the vertically arranged clamping beam mounted on the top part of the C-frame, this unique concept creates a huge pressing and clamping force - and the mechanical zero-point locking system eliminates the risk of an overload which may result in subsequent fissures. The VFD guarantees



reliable clamping of the sheet-metal parts and is thus crucial for the evenly applied pressure on open or closed hems.

