THALMANN

The ZR Series

ZR SERIES LONG FOLDER

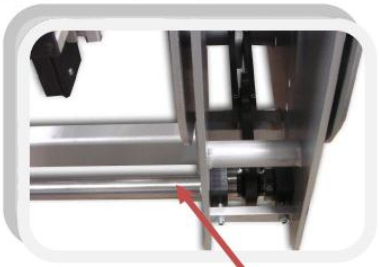
Thalmann Maschinenbau is the premier long folder manufacturer world wide. Thalmann patented the first long folder for the sheet metal forming industry in 1961 and still today, introduces innovative technology to the world market. When you look at a long folder, there are more unique features on a Thalmann, than any folder on the market!

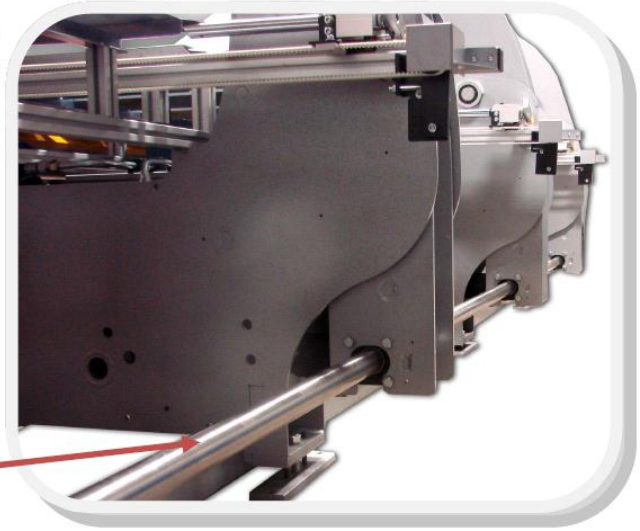
ZR150 6.4 Shown - 16ga x 21'

TORSION SHAFT - CLAMPING BEAM

ZR series folder is uniquely built with a torsion shaft on the upper clamping beam. Each hydraulic cylinder that is connected to the upper beam is works differently over time on all long folders To combat this, Thalmann utilizes a 2" solid torsion shaft to insure perfect parallelism of the upper beam, even if the hydraulic cylinders are working differently. The ZR folder has each hydraulic cylinder connected to the torsion shaft, so that there is never any problems with the upper beam clamping unevenly over time. ZR Series only uses a rotary encoder directly on the torsion shaft, so that there is a always an accurate position of the upper beam for open hems.

The ZR series has a kinematic postitive stop on the base of the machine that prevents over clamping of the C-frames. This truly demonstrates Thalmann's engineering superiority compared to the competition!





Torsion Shaft

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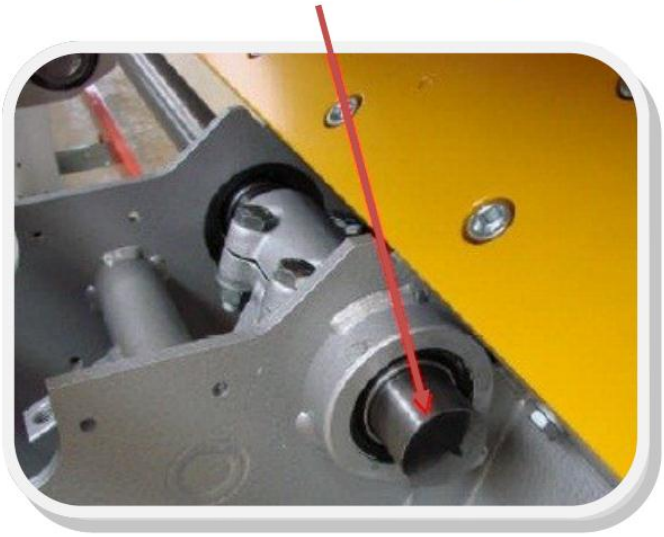
TORSION SHAFT - FOLDING BEAM

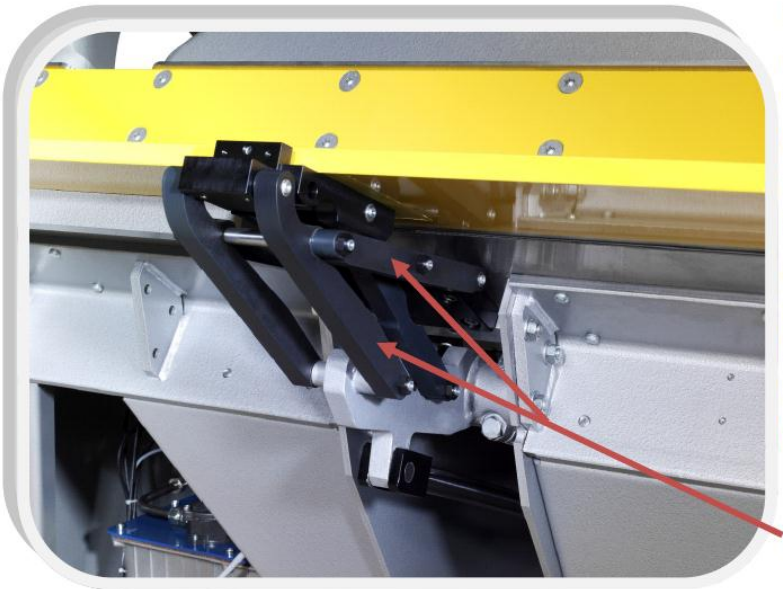
Just like on the upper beam, the folding beam incorporates a 2" torsion shaft full length of the machine. The high tensile torsion shaft locks the hydraulic cylinders to the linkages that are connected to the folding beam. This engineering approach turns the hydraulic action into a mechanical action. A rotary encoder is attached directly to the torsion shaft, which allows for true folding accuracy any position on the folding beam for the life of the machine.

Rotary Encoder on end of Torsion Shaft

Torsion Shaft for Folding Beam



HARDENED LINKAGES AND PINS on FOLDING BEAM



Since the folding beam utilizes a torsion shaft, the ZR series does not get the "twist" from the folding beam hydraulic cylinders working differently over time. Therefore we are able to use forged and hardened linkages and pins that are attached to the folding beam and torsion shaft. There is no brass bushings on the linkages, like what the competitors use. Bushings are used for one reason only; to be replaced!

Hardened Linkage

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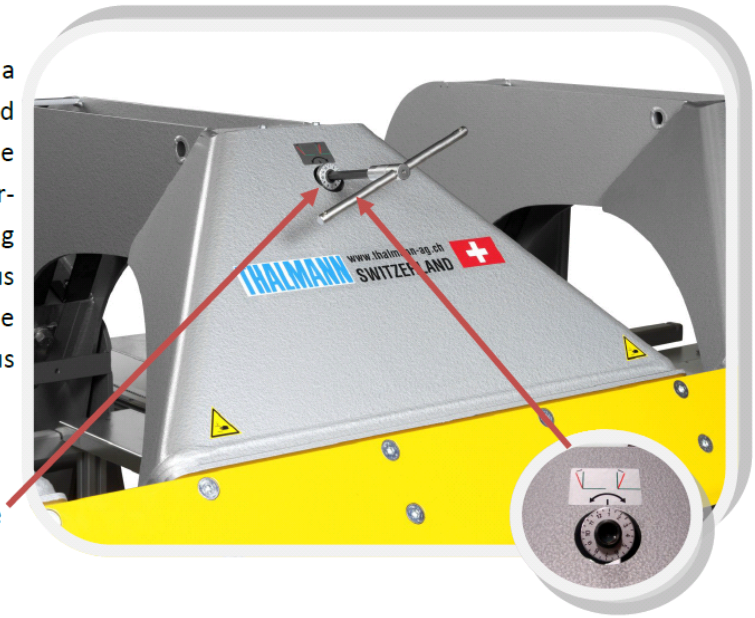
CROWNING

The upper clamping C-frames each have a adjustment for material thicknesses and crowning bow. An explosive area in the sheet metal industry is forming radius cornice type work. The ZR series is the only long folder with adjustment for forming radius bump bending. There is no need for the shimming for forming complicated radius parts, like on competitors machines!



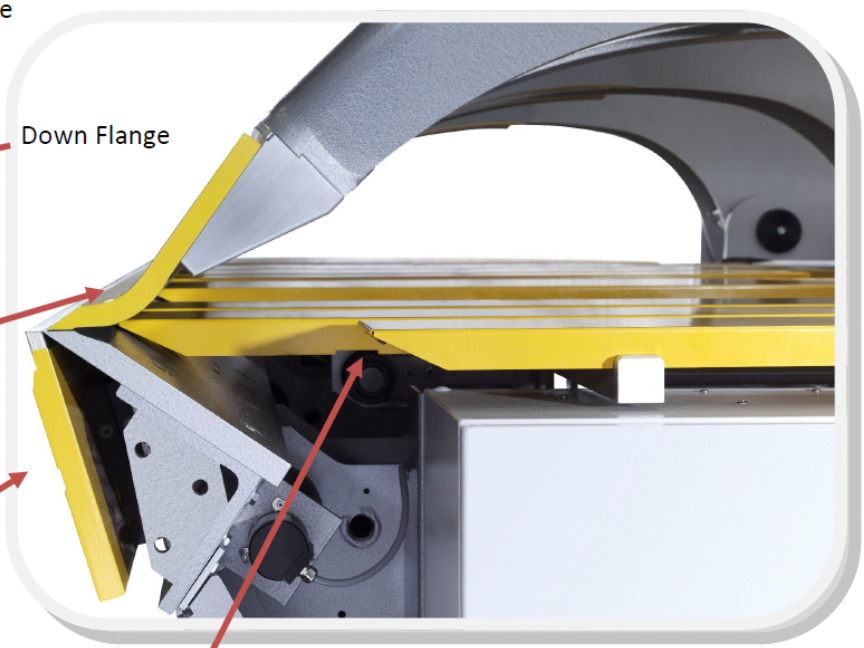
Crowning Adjustment with Handle

FREE SPACE for FORMING

ZR series has more free space then any long folder on the market. The upper jaw slopes back, so you can form a J-Channel with a 1" (25mm) x 2" (50mm) return flange! All other folders have their upper jaw at a 45 degree angle causing collisions. The folding beam is relieved back by 15 degrees allowing for tight corners to be formed. The sheet supports can be moved back if there is a down flange that needs to gauged from. 13.8" (350mm) of free space

Inside the upper beam!

Down Flange



Upper Jaw Relief

Folding Beam Relieved
15 Degrees

Sheet Support moved back for down flange

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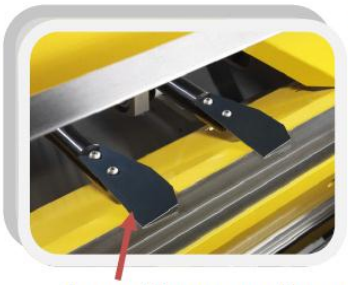
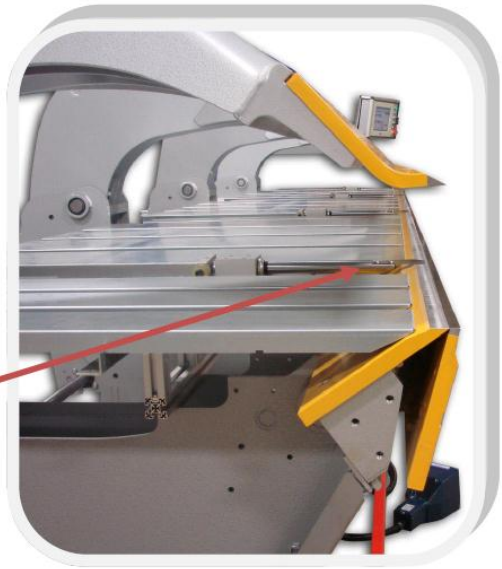
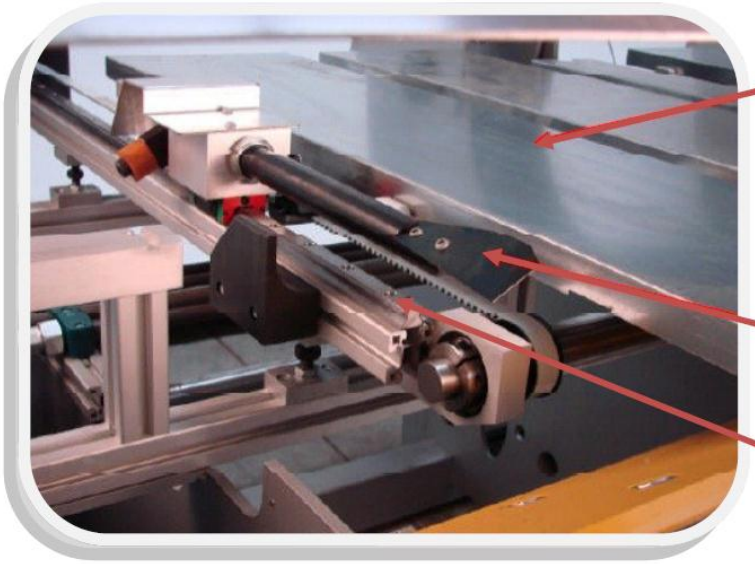
BACKGAUGE

ZR series has a fast and accurate backgauge system with a linear guide system. Positioning can go from .19" (4.8mm) to 49.2" (1250mm). The sheet support panels help gauge wavy blanks that operators sometimes have to work with.



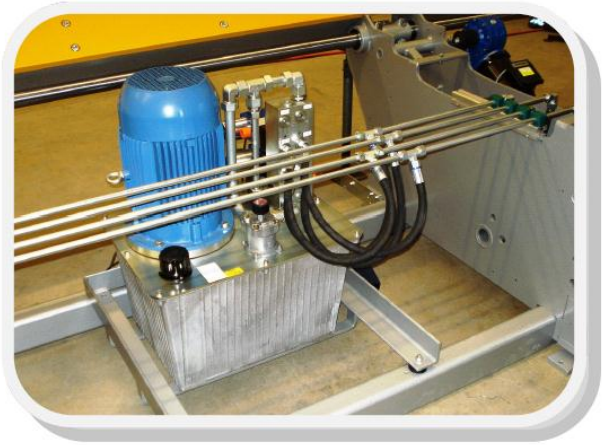
Gauge Fingers up close to .19" (4.8mm)





SMOOTH HYDRAULICS

ZR series uses a high speed hydraulic system with low noise, 62 decibels. Thalmann assembles their hydraulics in a "clean room environment" and recommends the oil and filter be replaced every 15 years!



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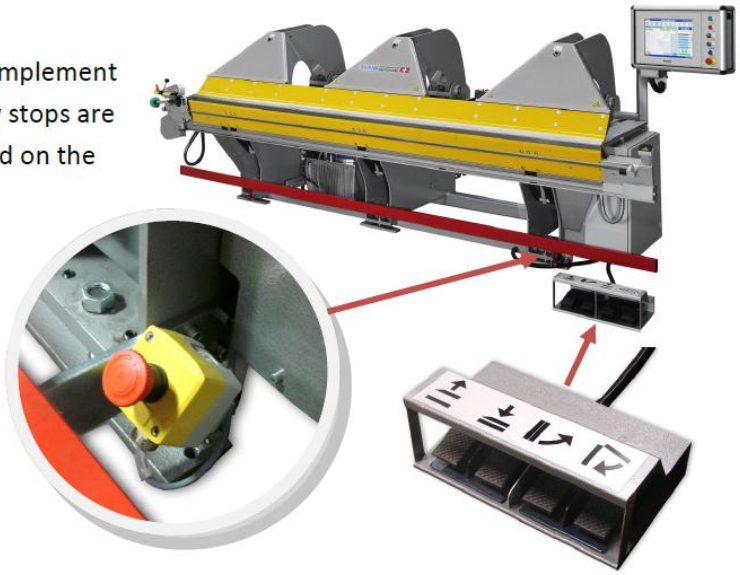
DS3001 GRAPHIC CONTROL

The DS3001 controls 3-axis and manages: type and thickness of materials via library, blank size, backgauge position, bend angle, upper beam open height, angle correction data table and clamping pressures. Other features are:

- Unlimited profile storage
- Manual and Automatic operating mode
- Categories can be setup
- Graphic sequence for profile verification
- Angle correction is automatic and based on different angles
- Blank size will change when profile flange length is modified
- 15" TFT Touch Screen with graphic navigation and 3D visualization
- Easy and user friendly programming and administration
- Over 150 Metal Building, Post Frame and Architectural Metal Roofing profiles programmed with the optimum sequence of bending
- Offline line programming with USB port for data exchange or thru local network
- Graphics show cash detection of profile to the folder

SAFETY



Thalmann believes in safety and strives to implement the most up to date features. 2 emergency stops are located at the control panel and one located on the full length red kick plate. A limit switch is located in the down position of the foot pedal. This allows the operator to step thru the foot pedal during clamping and the upper beam will automatically come up. A standard pinch control for clamping stops the upper beam about a 1/4" from clamping and the operator has to restep on the foot pedal to clamp. For 2 person

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SPECIFICATIONS:

Model	ZR125 4	ZR125 6.4	ZR125 8	ZR150 3.2	ZR150 6.4	ZR150 8	ZR150 10	ZR150 12
Gauge Capacity	18ga (1.25mm)	18ga (1.25mm)	18ga (1.25mm)	16ga (1.5mm)	16ga (1.5mm)	16ga (1.5mm)	16ga (1.5mm)	16ga (1.5mm)
Bending Length	13.1' (4m)	21' (6.4m)	26.8' (8m)	10.5' (3.2m)	21' (6.4m)	26.8' (8m)	32.75' (10m)	40' (12.2m)
Backgauge Depth	49.2" (1250mm)	49.2" (1250mm)	49.2" (1250mm)	49.2" (1250mm)	49.2" (1250mm)	49.2" (1250mm)	49.2" (1250mm)	49.2" (1250mm)
Backgauge Accuracy	+/-.004 (.1mm)	+/-.004 (.1mm)	+/-.004 (.1mm)	+/-.004 (.1mm)	+/-.004 (.1mm)	+/-.004 (.1mm)	+/-.004 (.1mm)	+/-.004 (.1mm)
Clamping Stroke	7.5" (190mm)	7.5" (190mm)	7.5" (190mm)	7.5" (190mm)	7.5" (190mm)	7.5" (190mm)	7.5" (190mm)	7.5" (190mm)
Folding Accuracy	± 0.5°	± 0.5°	± 0.5°	± 0.5°	± 0.5°	± 0.5°	± 0.5°	± 0.5°
Folding Range	145°	145°	145°	145°	145°	145°	145°	145°
Folding Beam Speed	93°/sec	93°/sec	93°/sec	93°/sec	93°/sec	93°/sec	93°/sec	93°/sec
Folding Beam Width	.593" (15mm)	.593" (15mm)	.593" (15mm)	.593" (15mm)	.593" (15mm)	.593" (15mm)	.593" (15mm)	.593" (15mm)
Number C-Frames	3	4	6	3	5	7	9	11
Weight	6,860 lbs. (3120kg)	9,900 lbs. (4500kg)	12,166 lbs. (5530kg)	6,050 lbs. (2750kg)	10,600 lbs. (4800kg)	14,124 lbs. (6420kg)	16,500 lbs. (7500kg)	19,800 lbs. (9000kg)
Width	73" (1860mm)	73" (1860mm)	73" (1860mm)	73" (1860mm)	73" (1860mm)	73" (1860mm)	73" (1860mm)	73" (1860mm)
Length	205" (5.2m)	292" (7.4m)	363" (9.2m)	163" (4.2m)	292" (7.4m)	363" (9.2m)	418" (10.6m)	504" (12.8m)
Height	73" (1860 mm)	73" (1860 mm)	73" (1860 mm)	73" (1860 mm)	73" (1860 mm)	73" (1860 mm)	73" (1860m m)	73" (1860 mm)
Voltage	460V 3phase	460V 3phase	460V 3phase	460V 3phase	460V 3phase	460V 3phase	460V 3phase	460V 3phase
Amp Breaker	20amp	35amp	35amp	20amp	35amp	40amp	45amp	50amp
Power	5.3HP (4kw)	10HP (7.5kw)	10HP (7.5kw)	5.3HP (4kw)	10HP (7.5kw)	14.6HP (11kw)	16HP (12kw)	18.7HP (14kw)