

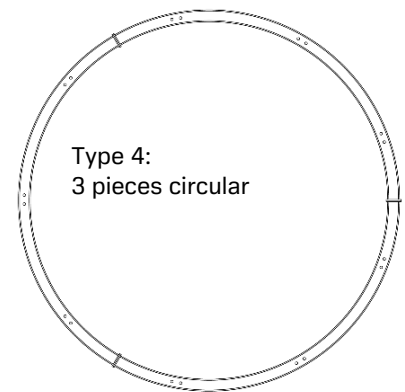
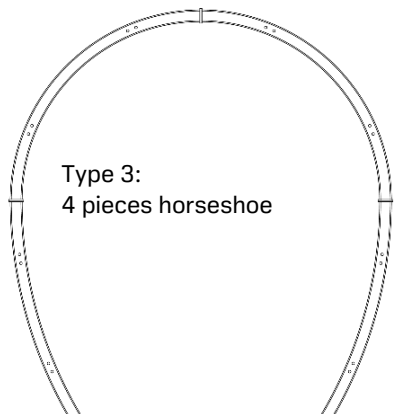
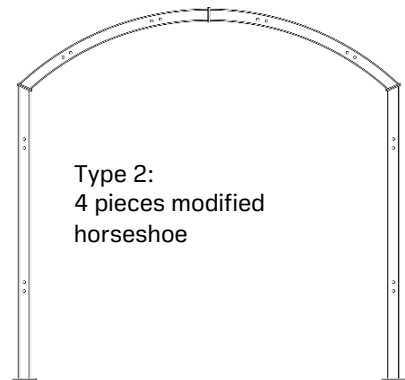
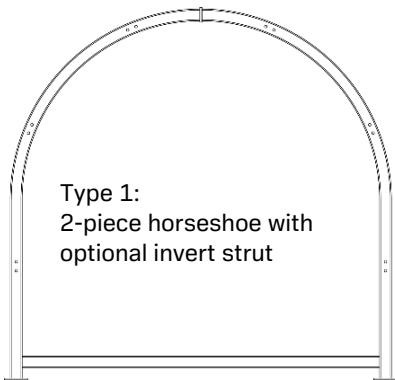
Steel rib supports & accessories

Category: Lattice girders and steel ribs

Main advantages

- Customized cold-formed beam constructions
- Various rib support types available upon request
- Flexible adaptation of the beam geometry to the respective excavated cross-section
- TH sections and other special support profiles available upon request
- Custom formed lagging resistant to machine jack thrusts and impact loads

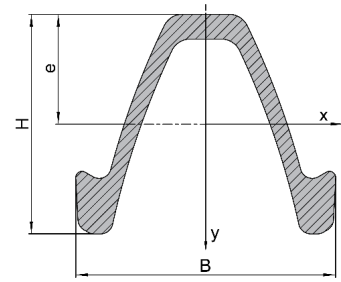
Steel rib support types



Steel ribs (EMEA)

TH profile

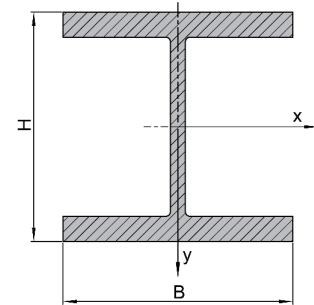
- Mine support steel 31Mn4 according to DIN 21544
- Bent to the corresponding profile
- Single overlapping segments are usually connected by two locks
- Different types of TH locks are available upon request



Characteristic value / type	Symbol	Unit	TH 21	TH 25	TH 29	TH 36
Nominal weight	m	[kg/m]	21	25	29	36
Profile height	H	[mm]	108	118	124	138
Profile width	B	[mm]	124	135	151	171
Neutral axis	e	[mm]	52	58	58	69
Section modulus	Wx	[cm ³]	61	80	94	136

HEB profile

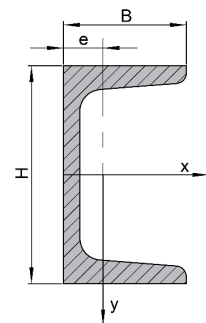
- I profile – broad flange girder
- Primary material S235JRG2 or S355J2G3 according to EN 10025-2
- Bent to the corresponding profile
- Connection of the segments via head plates that are available in different designs
- Alternative connection of the abutting segments via laces
- Different lace types and lace screws are available upon request



Characteristic value / type	Symbol	Unit	TH 21	TH 25	TH 29
Nominal weight	m	[kg/m]	20,9	27,4	34,5
Profile height	H	[mm]	100	120	140
Profile width	B	[mm]	100	120	140
Section modulus	Wx	[cm ³]	89,9	144,0	216,0
Section modulus	Wy	[cm ³]	33,5	52,9	78,5

UNP profile

- U profile – flanges with inclined inner surfaces
- Primary material S235JRG2 or S355J2G3 according to EN 10025-2
- Bent to the corresponding profile
- Connection of the segments via welded-on and screwed head plates or flange connections
- Different lace types and lace screws are available upon request



Characteristic Value / Type	Symbol	Unit	UNP 80	UNP 100	UNP 120	UNP 140	UNP 160	UNP 180
Nominal weight	m	[kg/m]	8,6	10,6	13,4	16,4	18,8	22,0
Profile height	H	[mm]	80	100	120	140	160	180
Profile width	B	[mm]	45	50	55	60	65	70
Neutral axis	e	[cm]	1,45	1,55	1,60	1,75	1,84	1,92
Section modulus	Wy	[cm ³]	6,4	8,5	11,1	14,8	18,3	22,4

Steel Ribs (North America)

Specifications US customary units

- Curvature range: minimum radius of 10 times the beam depth for 4" and 6" sections up and to 14 times for larger beams.
- WF, and H sections from 4" to 27" (102 to 686 [mm] in depth, bent to project requirements.
- Butt joints
- Height: rib depth plus 1"
- Width: flange width plus 1"

Tie rods

- ASTM A529 \varnothing 3/4" rod stock with 4" NC threaded both ends
- Length: rib spacing plus 6"
- Beam width 12" and above: structural spreaders are recommended

Pipe spacers

- Schedule 40 pipe stock \varnothing 2" (for \varnothing 3/4" tie rods)
- Length: rib spacing minus web thickness

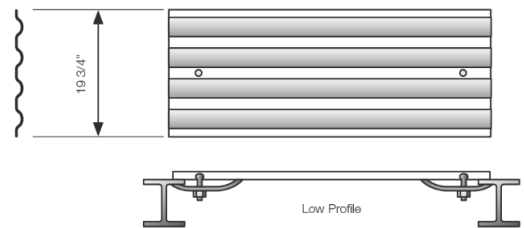
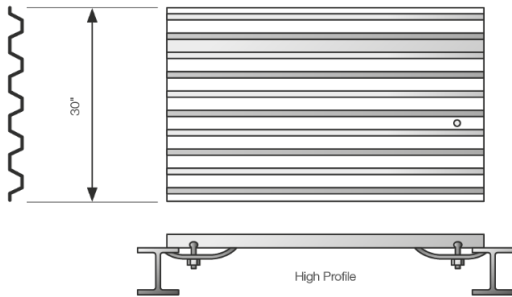
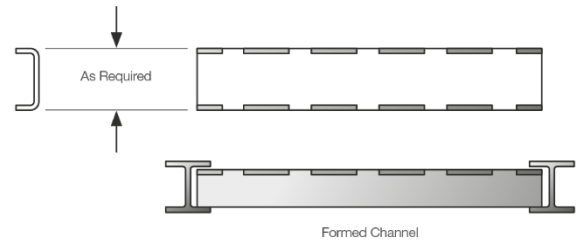
Joints and foot plates

Characteristic Value Unit	4"	5"	6"	8"	10"	12"
Butt joint thickness [in]	3/8	3/8	1/2	5/8	3/4	1
Bolt quantity 1)	[1]	2	2	4	4	6
Bolt diameter 1)	[in]	3/4	1	1	1	1
Foot plate dimensions [in]	1/2" x 7" x 7"	5/8" x 9" x 9"	5/8" x 9" x 9"	3/4" x 12" x 12"	1" x 14" x 14"	1 1/4" x 16" x 16"

1) ASTM A325. For standard loading conditions; higher loads may require a full-moment strength joint.

Steel lagging (North America)

- Custom-formed as a replacement for wood lagging
- Placement on the inside or outside flange
- Low profile and high profile types
- Lagging clamp: 3" x 5" x 5" gage with square or round hole
- 5/8" diameter carriage bolt with nut



Legal disclaimer

All dimensions, weights, quantities, and specifications are those applicable at the time of this publication and may be amended from time to time. Please contact your local representative for final confirmation of any key specifications.

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