

# Medium-Boxes



On the market for medium-sized products, Medium shoring from Emunds+Staudinger occupies a special place. Its various dimensions and special design features give it universal and varied applications. In addition, the strut system is compatible with Magnum and Lightweight shoring. The top panels can also be used with the Magnum shoring system.

The E+S strut system consists of two efficient individual components: The nut made of nodular cast-iron (GGG 50) effectively withstands the tensile and compressive forces. The spindle is a threaded tube with a friction-welded flange and four holes for the flange bolts. Thanks to its stepless adjustment, it can be adapted perfectly to the demanded trench width required. For this, there are extension bars of different lengths and grades that are also capable of discharging greater loads.

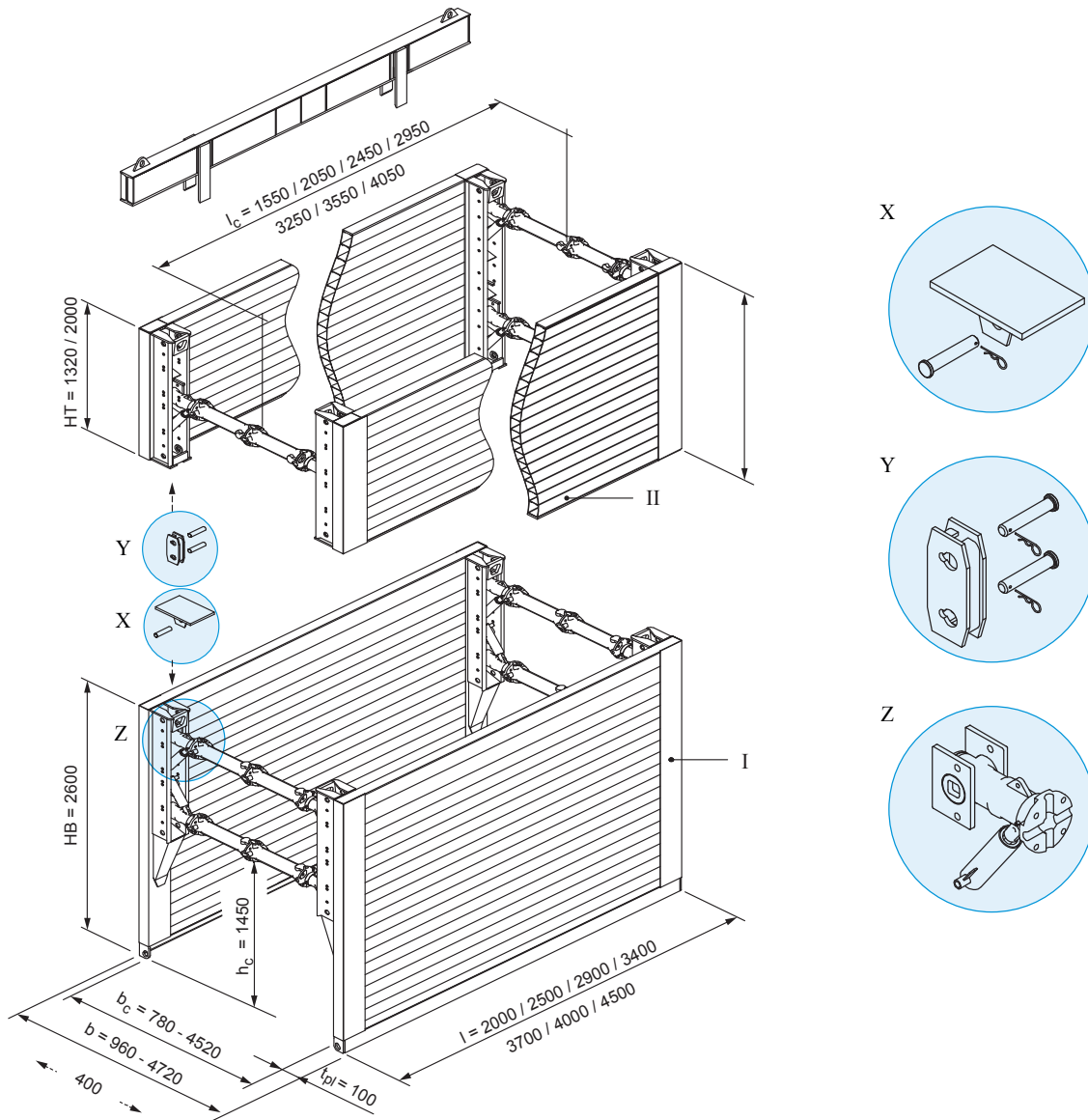
## Basic data

Shoring length	2,00 m - 4,50 m
Height base unit	2,60 m
Height top unit	1,32 m / 2,00 m
Pipe culvert height	1,45 m
Weight	1460 kg - 2780 kg
Trench width	variable, see page 60

## Advantages

- Economical shoring solution for urban civil engineering projects
- Stepless adjustability for optimum adaptation to the trench width
- Strut system compatible with Magnum and Lightweight shoring
- Top panels compatible with Magnum shoring

Medium-Boxes



(All dimensions in mm)

I	Base unit	$l_c$	Pipe culvert length	X	Pressure plate
II	Top unit	$b$	Shoring / trench width	Y	Connector
HB	Height base unit	$b_c$	Inner width	Z	Spreader with bearing plate and shock absorber
HT	Height top unit	$h_c$	Pipe culvert height		
l	Length	$t_{pl}$	Thickness		

**Base units (Height 2,60 m)**

Art. No.	l [m]	t <sub>pl</sub> [m]	h <sub>c</sub> [m]	l <sub>c</sub> [m]	G / VP [kg]	G / Box [kg]	A [m <sup>2</sup> ]	eh [kN/m <sup>2</sup> ]
800 010	2,00	0,10	1,46	1,55	730,0	1.460,0	5,20	70,0
800 100	2,50	0,10	1,46	2,05	825,0	1.650,0	6,50	60,0
800 150	2,90	0,10	1,46	2,45	908,0	1.816,0	7,54	55,0
800 200	3,40	0,10	1,46	2,95	1.028,0	2.056,0	8,84	50,8
800 300	3,70	0,10	1,46	3,25	1.118,0	2.236,0	9,62	42,3
800 400	4,00	0,10	1,46	3,55	1.257,0	2.514,0	10,40	44,0
800 440	4,50	0,10	1,46	4,05	1.390,0	2.780,0	11,70	34,2

**Top units (Height 1,32 m)**

Art. No.	l [m]	t <sub>pl</sub> [m]	h <sub>c</sub> [m]	l <sub>c</sub> [m]	G / VP [kg]	G / Box [kg]	A [m <sup>2</sup> ]	eh [kN/m <sup>2</sup> ]
800 550	2,00	0,10	-	1,55	463,0	926,0	2,64	165,0
800 600	2,50	0,10	-	2,05	531,0	1.062,0	3,30	99,3
800 650	2,90	0,10	-	2,45	578,0	1.156,0	3,83	71,5
800 700	3,40	0,10	-	2,95	658,0	1.316,0	4,49	50,5
800 800	3,70	0,10	-	3,25	692,0	1.384,0	4,88	42,1
800 900	4,00	0,10	-	3,55	775,0	1.550,0	5,28	43,8
800 950	4,50	0,10	-	4,05	820,0	1.640,0	5,94	34,2

**Top units (Height 2,00 m)**

Art. No.	l [m]	t <sub>pl</sub> [m]	h <sub>c</sub> [m]	l <sub>c</sub> [m]	G / VP [kg]	G / Box [kg]	A [m <sup>2</sup> ]	eh [kN/m <sup>2</sup> ]
802 680	2,00	0,10	-	1,55	697,0	1.394,0	4,00	165,0
802 690	2,50	0,10	-	2,05	785,0	1.570,0	5,00	99,3
802 550	2,90	0,10	-	2,45	840,0	1.680,0	5,80	71,5
802 700	3,40	0,10	-	2,95	930,0	1.860,0	6,80	50,5
802 750	3,70	0,10	-	3,25	990,0	1.980,0	7,40	42,1
802 751	4,00	0,10	-	3,55	1.085,0	2.170,0	8,00	43,8
800 951	4,50	0,10	-	4,05	1.192,0	2.384,0	9,00	34,2

**Extension bars**

Art. No.	Short description	l [m]	G [kg]
850 091	Extension bar GGG 50	0,250	11,2
850 100	Extension bar GGG 50	0,550	18,7
850 112	Extension bar HEB 180	0,275	28,0
850 110	Extension bar HEB 180	0,550	43,0
850 124	Extension bar HEB 180	1,100	70,0
850 132	Extension bar HEB 180	1,650	100,0
850 135	Extension bar HEB 180	2,200	130,0

**Trench widths (for cast iron tubular extension bars  $l = 0.55$  m)**

Number of extension bars	$l$ [m]	$b_c$ [m]	$b$ [m]
0	0,00	0,78 - 1,22	0,98 - 1,42
1	0,55	1,32 - 1,77	1,52 - 1,97
2	1,10	1,88 - 2,32	2,08 - 2,52
3	1,65	2,43 - 2,87	2,63 - 3,07
4	2,20	2,98 - 3,42	3,18 - 3,62
5	2,75	3,53 - 3,97	3,73 - 4,17
max. 6	3,30	4,08 - 4,52	4,28 - 4,72

From-to sizes dependent on spindle adjustment range.

Other trench widths possible by combining the two different extension bar lengths  $l = 0.25$  m and  $l = 0.55$  m.

Larger trench widths available on request.

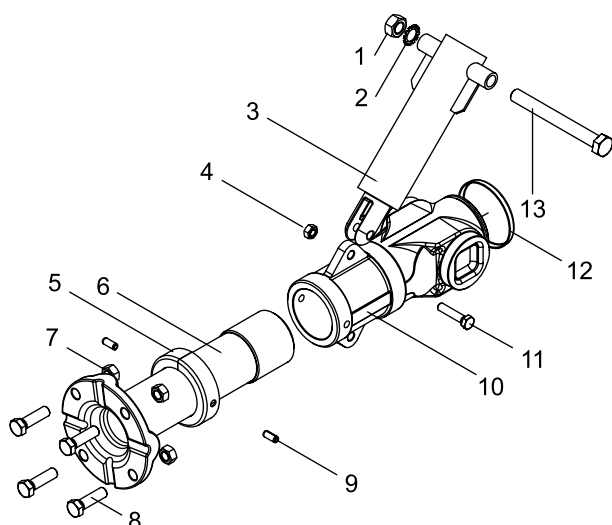
**Trench widths (for extension bars HEB 180)**

$l$ [m]	$b_c$ [m]	$b$ [m]
0,000	0,780 - 1,220	0,980 - 1,420
0,275	1,055 - 1,495	1,255 - 1,695
0,550	1,330 - 1,770	1,530 - 1,970
1,100	1,880 - 2,320	2,080 - 2,520
1,650	2,430 - 2,870	2,630 - 3,070
2,200	2,980 - 3,420	3,180 - 3,620
2,200 + 1,100	4,080 - 4,520	4,280 - 4,720

From-to dimensions depend on the spindle adjustment range.

Other trench widths are possible by combining different HEB lengths.

Larger trench widths are available on request.

**E+S spreader, complete, right/left, with shock absorber**

- |    |                              |
|----|------------------------------|
| 1  | Nut M 20                     |
| 2  | Lock washer A 20             |
| 3  | Shock absorber               |
| 4  | Nut M 12                     |
| 5  | Metal cap for spindle        |
| 6  | Spindle, right / left        |
| 7  | Nut M 16                     |
| 8  | Hexagon screw M 16 x 55      |
| 9  | Damping sleeve 10 x 24 mm    |
| 10 | Cast-iron nut, right / left  |
| 11 | Hexagon screw M 12 x 55      |
| 12 | PVC dust cap for spindle nut |
| 13 | Hexagon screw M 20 x 180     |

**Accessories / Spares**

Art. No.	Short description	$l$ [m]	$d$ [m]	G [kg]
842 752	Adapter for DKU piling frame, corner shoring, $h = 0.50$ m KDVI			55,0
842 753	Adapter for DKU piling frame, corner shoring, $h = 1.00$ m KDVI			94,0
842 750	Adapter for DKU piling frame, E+S spreader			31,0
850 699	Bar for adjusting E+S/Krings spindles (Medium, Magnum, KS 100, slide rail)	0,7	0,024	2,5
302 125	Bearing plate -closed-			4,2
850 500	Cast iron connector (for Medium boxes, Magnum boxes, Manhole)			6,7
862 214	Connector (for Linear box, top unit with struts)			6,1
HB 0190 F	Damping sleeve 10 x 24 mm			0,01
842 099	DKU piling frame guide frame	2,27		105,0
842 100	DKU piling frame guide frame	3,81		175,0
859 981	Drop-in bearing block, E+S			25,6
HD 0110 F	Grease nipple		0,01	0,01
HD 0050 F	Metal cap for spindle			0,1
HD 0013 F	Metal cap for spindle housing			0,2
IA 0095 F	Nut M 12			0,01

**Accessories / Spares (contd.)**

Art. No.	Short description	l [m]	d [m]	G [kg]
IA 0120 F	Nut M 16			0,03
IA 0130 F	Nut M 20			0,03
IA 0185 F	Nut M 30			0,30
HD 0040 F	PE cap for the spindle			0,01
850 600	Pin	0,195	0,035	1,8
850 610	Pin (for Lightweight box)	0,095	0,030	0,5
850 614	Pin 200 x 40 mm (Linear box boogie car)			1,9
851 010	Pressure plate (for Lightweight-Boxes)			7,0
851 005	Pressure plate (for Medium Boxes, Magnum Boxes, Manhole)			19,0
IB 0215 F	Screw M 12 x 55			0,06
IB 0310 F	Screw M 16 x 55			0,11
IB 0420 F	Screw M 20 x 180			0,56
IB 0360 F	Screw M 20 x 45			0,17
300 100	Shock absorber	0,143		4,5
GB 0070 E	Spindle housing, left hand			9,4
GB 0040 E	Spindle housing, right hand			9,4
GB 0090 E	Spindle, lefthand -heavy duty-			17,1
GB 0080 E	Spindle, lefthand -hollow-			9,5
GB 0030 E	Spindle, righthand -heavy duty-			17,1
GB 0020 E	Spindle, righthand -hollow-			9,5
301 010	Spreader complete, left hand -heavy duty-			27,1
301 000	Spreader complete, left hand -hollow-			19,5
300 010	Spreader complete, right hand -heavy duty-			27,1
300 000	Spreader complete, right hand -hollow-			19,5
159 161	Spring cotter (850 614)			0,1
HE 0050 F	Spring cotter 6 mm		0,006	0,03
ID 0160 F	Spring ring A 20			0,01
336 960	Support bracket for DKU piling frame element			40,0
821 100	Suspension chain KL-13-8	5,000		25,7

l	Length	$h_c$	Pipe culvert height	G / VP	Weight per shoring panel
$l_c$	Pipe culvert length	$t_{pl}$	Thickness	G / Box	Weight per shoring box
b	Shoring / trench width	A	Area	eh	Earth pressure max.
$b_c$	Inner width	G	Weight		