

E+S Trench shoring systems / Endsupported compact shoring systems

Magnum-Boxes



↑ *Magnum-Boxes*

Shoring length	2,00 m - 6,84 m
Height base unit	3,15 m / 4,00 m
Height top unit	1,32 m / 1,44 m / 2,00 m
Pipe culvert height	1,75 m / 2,00 m / 2,46 m
Weight	1860 kg - 7130 kg

Compact yet big enough for large pipe dimensions.

The boxes of the Medium and Magnum class have captured a leading position in the market for efficiently laying unusually wide or long pipes. What distinguishes these boxes is their outstanding performance features such as shoring depth up to 6.00 m and trench width of over 4.70 m, with a vertical pipe clearance of up to 2.46 m.

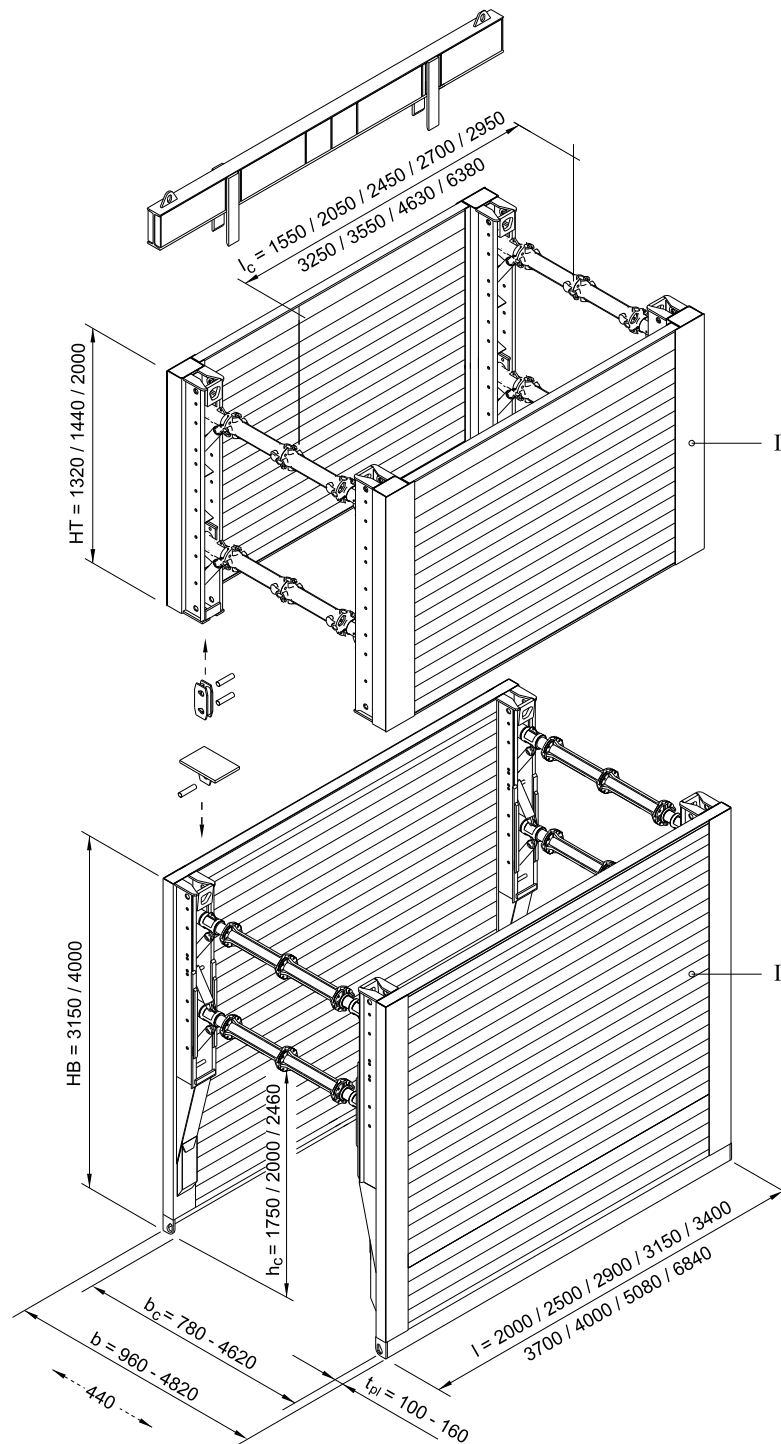
As you like it. Extreme culvert heights, extreme culvert lengths.

Thanks of the huge range of models in the Medium and Magnum class, E+S is in a position to offer trench boxes for completely different purposes, and with specific design

features and performance parameters. If the size of pipe diameter is the crucial factor, trench boxes are called for with a large clearance between the bottom strut and the bottom edge of the box panels. For pipes up to 2.50 m diameter. In cases where it is not so much the height as the extreme pipe culvert length which is important, the externally supported Magnum-Boxes with large clearance between the struts are the ideal choice, for pipes up to 6 m long.

However different the shoring system may be in size, all the boxes of the compact class - from the Lightweight through to the Magnum-Box - use one and the same strut system.

Magnum-Boxes



I	Base unit	l_c	Pipe culvert length
II	Top unit	b	Shoring / trench width
HB	Height base unit	b_c	Inner width
HT	Height top unit	h_c	Pipe culvert height
l	Length	t_{pl}	Thickness

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(All dimensions in mm)

Magnum-Boxes

Base units (Height 3,15 m)

Art. No.	l [m]	t _{pl} [m]	h _c [m]	l _c [m]	G / VP [kg]	G / Box [kg]	A [m ²]	eh [kN/m ²]
802 036	2,00	0,10	2,01	1,55	930,0	1.860,0	6,30	69,5
802 040	2,50	0,10	2,01	2,05	1.042,0	2.084,0	7,50	55,7
802 050	2,90	0,10	2,01	2,45	1.138,0	2.276,0	8,70	48,0
802 175	3,40	0,10	2,01	2,95	1.260,0	2.520,0	10,20	41,0
802 210	3,70	0,10	2,01	3,25	1.428,0	2.856,0	11,10	37,7
802 300	4,00	0,10	2,01	3,55	1.579,0	3.158,0	12,00	35,8
802 425	5,08	0,12	2,01	4,63	1.918,0	3.836,0	15,24	28,6
802 460	6,84	0,16	1,75	6,38	3.565,0	7.130,0	21,55	25,08

Base units (Height 4,00 m)

Art. No.	l [m]	t _{pl} [m]	h _c [m]	l _c [m]	G / VP [kg]	G / Box [kg]	A [m ²]	eh [kN/m ²]
802 100	3,15	0,10	2,46	2,70	1.385,0	2.770,0	12,60	46,0
802 197 A	3,40	0,10	2,46	2,95	1.568,0	3.136,0	13,60	41,0

Top units (Height 1,32 m)

Art. No.	l [m]	t _{pl} [m]	h _c [m]	l _c [m]	G / VP [kg]	G / Box [kg]	A [m ²]	eh [kN/m ²]
800 550	2,00	0,10	-	1,55	463,0	926,0	2,64	70,0
800 600	2,50	0,10	-	2,05	531,0	1.062,0	3,30	60,0
800 650	2,90	0,10	-	2,45	578,0	1.156,0	3,83	55,0
800 700	3,40	0,10	-	2,95	658,0	1.316,0	4,49	50,8
800 800	3,70	0,10	-	3,25	692,0	1.384,0	4,88	42,3
800 900	4,00	0,10	-	3,55	775,0	1.550,0	5,28	44,0
802 814	5,08	0,12	-	4,63	1.110,0	2.220,0	6,71	34,2

Top units (Height 1,44 m)

Art. No.	l [m]	t _{pl} [m]	h _c [m]	l _c [m]	G / VP [kg]	G / Box [kg]	A [m ²]	eh [kN/m ²]
802 815	6,84	0,16	-	6,38	1.505,0	3.010,0	9,85	25,8

Top units (Height 2,00 m)

Art. No.	l [m]	t _{pl} [m]	h _c [m]	l _c [m]	G / VP [kg]	G / Box [kg]	A [m ²]	eh [kN/m ²]
802 550	2,90	0,10	-	2,45	840,0	1.680,0	5,80	55,0
802 600	3,15	0,10	-	2,70	860,0	1.720,0	6,30	60,7
802 700	3,40	0,10	-	2,95	920,0	1.840,0	6,80	50,8
802 750	3,70	0,10	-	3,25	1.005,0	2.010,0	7,40	42,3

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
850 105	Extension bar HEB 220	0,275	40,0
850 115	Extension bar HEB 220	0,550	58,0
850 121	Extension bar HEB 220	1,100	98,0
850 130	Extension bar HEB 220	1,650	140,0
850 141	Extension bar HEB 220	2,200	180,0

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

Anz.-ZwSt. n	$l_{ZwSt.}$ [m]	for base element $h = 3,15$ m			for base element $h = 4,00$ m			
		b_c [m]	element $l = 4,00$ m	element $l = 5,08$ m	element $l = 6,84$ m	b_c [m]	element $l = 3,15$ m	Element $l = 3,40$ m
			b [m]	b [m]	b [m]		b [m]	b [m]
0	0,000	0,78 - 1,22	0,98 - 1,42	1,02 - 1,46	1,10 - 1,54	0,88 - 1,32	1,04 - 1,48	1,08 - 1,52
1	0,550	1,33 - 1,77	1,53 - 1,97	1,57 - 2,01	1,65 - 2,09	1,43 - 1,87	1,59 - 2,03	1,63 - 2,07
2	1,100	1,88 - 2,32	2,08 - 2,52	2,12 - 2,56	2,20 - 2,64	1,98 - 2,42	2,14 - 2,58	2,18 - 2,62
3	1,650	2,43 - 2,87	2,63 - 3,07	2,67 - 3,11	2,75 - 3,19	2,53 - 2,97	2,69 - 3,13	2,73 - 3,17
4	2,200	2,98 - 3,42	3,18 - 3,62	3,22 - 3,66	3,30 - 3,74	3,08 - 3,52	3,24 - 3,68	3,28 - 3,72
5	2,750	3,53 - 3,97	3,73 - 4,17	3,77 - 4,21	3,85 - 4,29	3,63 - 4,07	3,79 - 4,23	3,83 - 4,27
max. 6	3,300	4,08 - 4,52	4,28 - 4,72	4,32 - 4,76	4,40 - 4,84	4,18 - 4,62	4,34 - 4,78	4,38 - 4,82

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)

Anz.-ZwSt. n	$l_{ZwSt.}$ [m]	for base element $h = 3.15$ m			for base element $h = 4.00$ m			
		b_c [m]	element $l = 4.00$ m	element $l = 5.08$ m	element $l = 6.84$ m	b_c [m]	element $l = 3.15$ m	Element $l = 3.40$ m
			b [m]	b [m]	b [m]		b [m]	b [m]
0	0,000	0,78 - 1,22	0,98 - 1,42	1,02 - 1,46	1,10 - 1,54	0,88 - 1,32	1,04 - 1,48	1,08 - 1,52
1	0,275	1,055 - 1,495	1,255 - 1,695	1,295 - 1,735	1,375 - 1,815	1,155 - 1,595	1,315 - 1,755	1,355 - 1,795
1	0,550	1,33 - 1,77	1,53 - 1,97	1,57 - 2,01	1,65 - 2,09	1,43 - 1,87	1,59 - 2,03	1,63 - 2,07
1	1,100	1,88 - 2,32	2,08 - 2,52	2,12 - 2,56	2,20 - 2,64	1,98 - 2,42	2,14 - 2,58	2,18 - 2,62
1	1,650	2,43 - 2,87	2,63 - 3,07	2,67 - 3,11	2,75 - 3,19	2,53 - 2,97	2,69 - 3,13	2,73 - 3,17
1	2,200	2,98 - 3,42	3,18 - 3,62	3,22 - 3,66	3,30 - 3,74	3,08 - 3,52	3,24 - 3,68	3,28 - 3,72
1	3,300	4,08 - 4,52	4,28 - 4,72	4,32 - 4,76	4,40 - 4,84	4,18 - 4,62	4,34 - 4,78	4,38 - 4,82

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.

Accessories / Spares

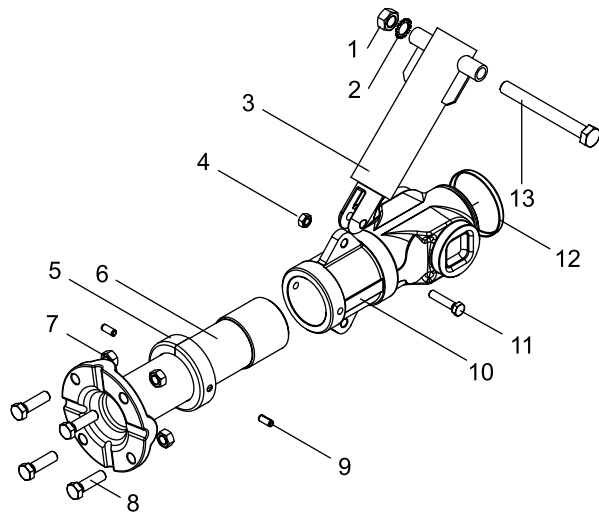
Art. No.	Short description	l [m]	G [kg]	d [m]	Standard
842 752	Adapter for DKU piling frame, corner shoring, $h = 0.50$ m KDVI		55,0		
842 753	Adapter for DKU piling frame, corner shoring, $h = 1.00$ m KDVI		94,0		
842 750	Adapter for DKU piling frame, E+S spreader		31,0		
850 699	Bar for adjusting E+S/Krings spindles (Medium, Magnum, KS 100, slide rail)	0,7	2,5	0,024	
336 960	Bearing claw for DKU piling frame element		40,0		
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		DIN 1481
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	DIN 71412
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		DIN 985

Magnum-Boxes

Accessories / Spares (contd.)

Art. No.	Short description	l [m]	G [kg]	d [m]	Standard
IA 0120 F	Nut M 16		0,03		DIN 934
IA 0130 F	Nut M 20		0,03		DIN 934
IA 0185 F	Nut M 30		0,30		DIN 934
HD 0040 F	PE cap for the spindle		0,01		
850 600	Pin	0,195	1,8	0,035	
850 610	Pin (for Lightweight box)	0,095	0,5	0,030	
850 614	Pin 200 x 40 mm (Linear box roller unit)		1,9		
861 077	Pressure beam (Lightweight shoring, KS 60, KVL)	1,80	117,0		
861 078	Pressure beam (Lightweight shoring, KS 60, KVL)	2,30	138,0		
861 079	Pressure beam (Lightweight shoring, KS 60, KVL)	2,80	161,0		
861 080	Pressure beam (Lightweight shoring, KS 60, KVL)	3,30	183,0		
861 076	Pressure beam (Medium, Magnum shoring, KS 100, GLS)	1,60	175,5		
861 074	Pressure beam (Medium, Magnum shoring, KS 100, GLS)	2,35	236,0		
861 070	Pressure beam (Medium, Magnum shoring, KS 100, GLS)	2,80	271,0		
861 071	Pressure beam (Medium, Magnum shoring, KS 100, GLS)	3,40	318,0		
851 010	Pressure plate (for Lightweight-Boxes)		5,0		
851 005	Pressure plate (for Medium Boxes, Magnum Boxes, Manhole)		17,0		
IB 0215 F	Screw M 12 x 55		0,06		DIN 933
IB 0310 F	Screw M 16 x 55		0,11		DIN 933
IB 0420 F	Screw M 20 x 180		0,56		DIN 601
IB 0360 F	Screw M 20 x 45		0,17		DIN 933
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		
HE 0100 F	Spring cotter (Linear-Box)		0,01	0,006	
HE 0050 F	Spring cotter 6 mm		0,03	0,006	DIN 11024
ID 0160 F	Spring ring A 20		0,01		DIN 127
821 100	Suspension chain KL-13-8	5,000	25,7		
862 216	Top cover for Linear-Box		3,00		

Magnum-Boxes



↑ 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 |

Anz _{ZwSt.}	Number of extension bars
l _{ZwSt.}	Total extension bar length
l	Length
l _c	Max. pipe length
b	Shoring / trench width
b _c	Inner width
h _c	Vertical clearance

t _{pl}	Panel thickness
A	Area
G	Weight
G / VP	Weight per shoring panel
G / Box	Weight per shoring box
eh	Max. soil pressure