Lightweight-Boxes LBR

LBR Lightweight shoring covers the whole range of applications in urban civil engineering projects, particularly the laying of cables and pipes for electricity, gas and water. Depending on the structural requirements and the conditions on site locally, the Lightweight box is either dropped into the finished trench or lowered using the dig-and-push method.

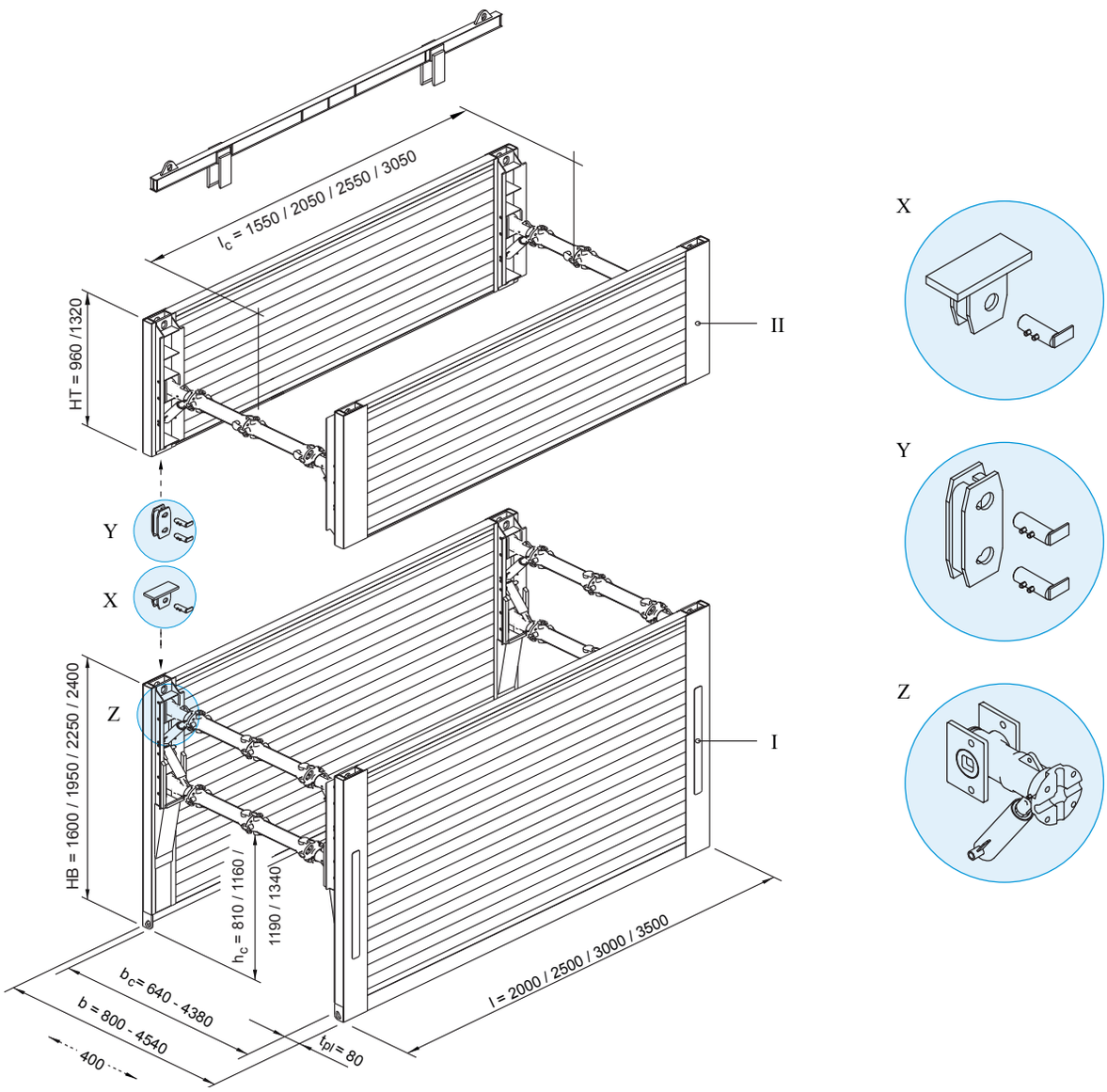
Lightweight shoring is the smallest and lightest trench box in the E+S range. It can be equipped with the high-performance system strut that is also used with Medium and Magnum boxes. The combination of base and top panels permits the shoring of trenches up to 4 m deep. As with all top panels, assembly is simple, quick, but nevertheless safe. Connections with posts and pins eliminate the risk of error.

Basic data

Shoring length	2,00 m - 3,50 m
Height base unit	1,60 m / 1,95 m / 2,25 m / 2,40 m
Height top unit	0,96 m / 1,32 m
Pipe culvert height	0,81 m / 1,16 m / 1,19 m / 1,34 m
Weight	745 kg - 1540 kg
Trench width	variable, see page 57

Advantages
- Highly economical shoring solution for urban civil engineering projects
- Can be either dropped in or lowered
- Utmost safety standard
- Strut system compatible with Medium- and Magnum-class shorings
- Easy handling

Lightweight-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 1,60 m)

Art. No.	l [m]	t_{pl} [m]	h_c [m]	l_c [m]	G / VP [kg]	G / Box [kg]	A [m²]	eh [kN/m²]
801 455	**2,00**	0,08	0,81	1,55	373,0	746,0	3,20	70,5
801 505	**2,50**	0,08	0,81	2,05	420,0	840,0	4,00	50,9
801 568	**3,00**	0,08	0,81	2,55	502,0	1.004,0	4,80	34,0
801 578	**3,50**	0,08	0,81	3,05	538,0	1.076,0	5,60	24,3

Base units (Height 1,95 m)

Art. No.	l [m]	t_{pl} [m]	h_c [m]	l_c [m]	G / VP [kg]	G / Box [kg]	A [m²]	eh [kN/m²]
801 475	**2,00**	0,08	1,16	1,55	423,0	846,0	3,90	58,3
801 525	**2,50**	0,08	1,16	2,05	478,0	956,0	4,88	46,6
801 565	**3,00**	0,08	1,16	2,55	548,0	1.096,0	5,85	34,0
801 575	**3,50**	0,08	1,16	3,05	618,0	1.236,0	6,83	24,3
801 590	**4,00**	0,08	1,19	3,55	798,0	1.596,0	7,80	18,6

Base units (Height 2,25 m)

Art. No.	l [m]	t_{pl} [m]	h_c [m]	l_c [m]	G / VP [kg]	G / Box [kg]	A [m²]	eh [kN/m²]
801 015	**2,00**	0,08	1,19	1,55	515,0	1.030,0	4,50	61,1
801 055	**2,50**	0,08	1,19	2,05	595,0	1.190,0	5,63	48,9
801 105	**3,00**	0,08	1,19	2,55	670,0	1.340,0	6,75	34,0
801 108	**3,50**	0,08	1,19	3,05	740,0	1.480,0	7,88	24,3
801 109	**4,00**	0,08	1,19	3,55	960,0	1920,0	9,00	18,6

Base units (Height 2,40 m)

Art. No.	l [m]	t_{pl} [m]	h_c [m]	l_c [m]	G / VP [kg]	G / Box [kg]	A [m²]	eh [kN/m²]
801 210	**2,00**	0,08	1,34	1,55	550,0	1.100,0	4,80	50,6
801 215	**2,50**	0,08	1,34	2,05	635,0	1.270,0	6,00	40,5
801 220	**3,00**	0,08	1,34	2,55	675,0	1.350,0	7,20	34,0
801 110	**3,50**	0,08	1,34	3,05	770,0	1.540,0	8,40	24,3
801 115	**4,00**	0,08	1,34	3,55	980,0	1960,0	9,60	18,6

Top units (Height 0,96 m)

Art. No.	l [m]	t_{pl} [m]	h_c [m]	l_c [m]	G / VP [kg]	G / Box [kg]	A [m²]	eh [kN/m²]
801 595	**2,00**	0,08	-	1,55	278,0	556,0	1,92	70,5
801 625	**2,50**	0,08	-	2,05	317,0	634,0	2,40	50,9
801 665	**3,00**	0,08	-	2,55	357,0	714,0	2,88	34,0
801 675	**3,50**	0,08	-	3,05	395,0	790,0	3,36	24,3
801 676	**4,00**	0,08	-	3,55	465,0	930,0	3,84	18,6

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 [m²]	eh [kN/m²]
801 628	**2,00**	0,08	-	1,55	341,0	682,0	2,64	70,5
801 630	**2,50**	0,08	-	2,05	391,0	782,0	3,30	50,9
801 635	**3,00**	0,08	-	2,55	408,0	816,0	3,96	34,0
801 680	**3,50**	0,08	-	3,05	430,0	860,0	4,62	24,3
801 678	**4,00**	0,08	-	3,55	573,0	1.146,0	5,28	18,6

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

Number of extension bars	Length extension bars [m]	b_c [m]	b [m]
0	0,00	0,64 - 1,08	0,80 - 1,24
1	0,55	1,19 - 1,63	1,35 - 1,79
2	1,10	1,74 - 2,18	1,90 - 2,34
3	1,65	2,29 - 2,73	2,45 - 2,89
4	2,20	2,84 - 3,28	3,00 - 3,44
5	2,75	3,39 - 3,83	3,55 - 3,99
max. 6	3,30	3,94 - 4,38	4,10 - 4,54

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.

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		

Accessories/Spares see page 75