

# **OPERATING INSTRUCTIONS**

**SHORING SYSTEM**

**Extra Box Series 500**



**manufacturer:**

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**OPERATING INSTRUCTIONS**

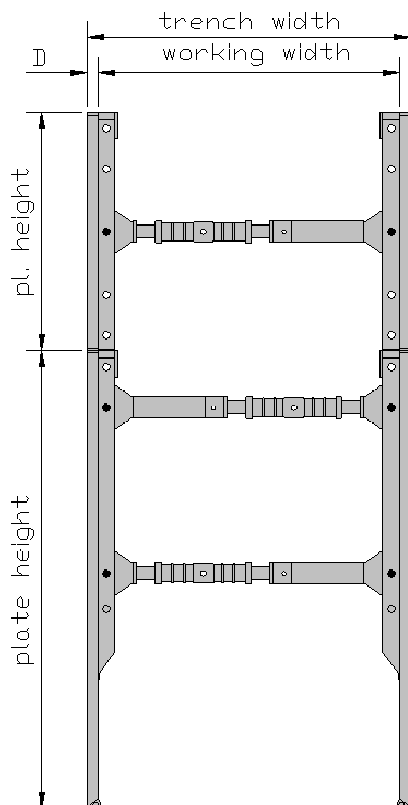
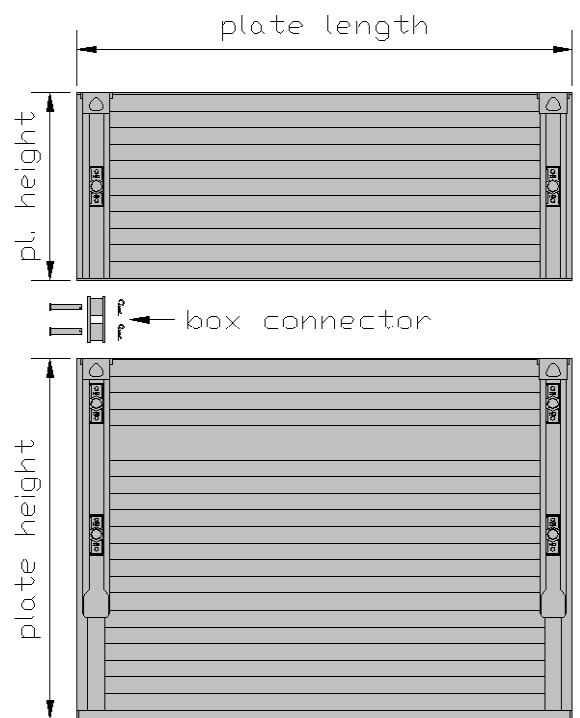
The SBH Extra Box, Series 500, is an end-supported shoring system securing trench walls. The systems are manufactured in series or as special models. With this shoring a max. spindle clearance of 1,39 m is achieved and it is so suited for the medium up to heavy trench shoring in over field as well as in the city.

The base plates are offered in various heights and lengths to cover a most wide spectrum in operation possibilities. Greater trench depths can be achieved by extending the base plates with top plates. Base and top plates are connected with box connectors, bolts and clips.

Due to the use of the shoring strut type 031/085 (or better) and due the combination of various extension pipes, trench widths of 0,98 - 4,26 m are achieved. The spring spindle holders of the struts are fixed with the bolt, thickness = 40 mm, at the profile. The profiles are - as the name "end-supported" says - at the ends of the lining plate.

**technical information**

plate length [ m ]	plate height [ m ]	weight [ kg / unit ]	plate type
2,50	2,00	1.392	510
2,50	2,40	1.582	507
2,50	2,60	1.710	508
2,50	1,40	998	509
3,00	2,00	1.594	511
3,00	2,40	1.810	503
3,00	2,60	1.956	504
3,00	1,40	1.126	505
3,50	2,00	1.770	512
3,50	2,40	2.014	501
3,50	2,60	2.178	502
3,50	1,40	1.254	506



**spindle type 031 / 085 blue**

number of extension pipes	inner working width [ m ]	external trench width [ m ]
0	0,98 - 1,26	1,14 - 1,42
1	1,48 - 1,76	1,64 - 1,92
2	1,98 - 2,26	2,14 - 2,42
3	2,48 - 2,76	2,64 - 2,92
4	2,98 - 3,26	3,14 - 3,42
5	3,48 - 3,76	3,64 - 3,92
6	3,98 - 4,26	4,14 - 4,42

## installation instructions

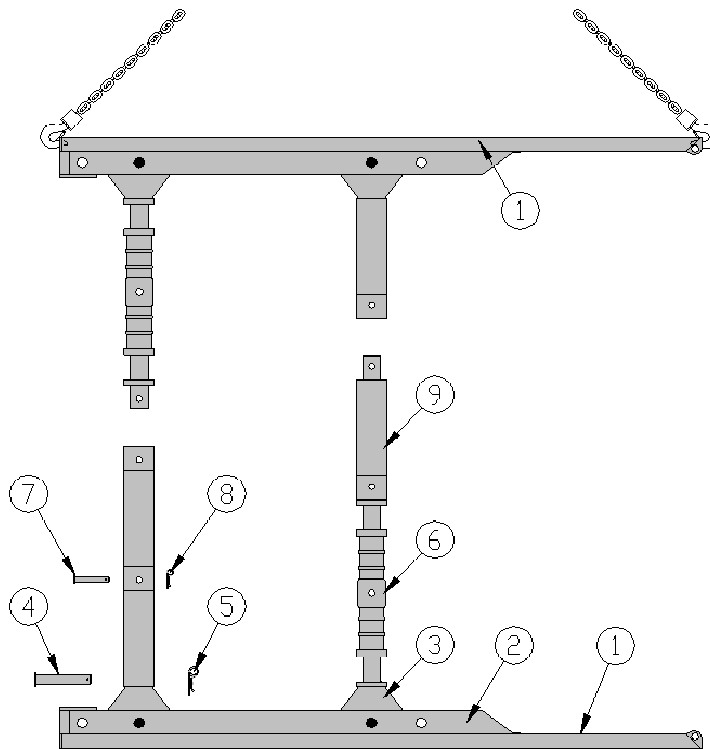
Put the shoring plate (1) onto a flat ground with the profiles (2) on the top.

Afterwards put the spring spindle holder (3) into the profile, fix it with the bolt 40 x 230 mm (4) and then secure it with the clip 4,0 mm (5).

Put the spindles (6) and the extension pipes (9) - each staggered as shown in the drawing below - into the spring spindle holders (3) (trench widths up to 2,0 m at one plate - greater widths at the two plates), fix it with the bolt 20 x 147 mm (7) and then secure it with the clip 6,3 mm (8)

Extending up to the required trench width is effected with extension pipes (9) as above.

After installation of all struts, a plate is put into the corresponding lifting/transportation eyes (top and cutting edge) and afterwards it is put from the top onto the struts, bolted and secured.



drawing 1

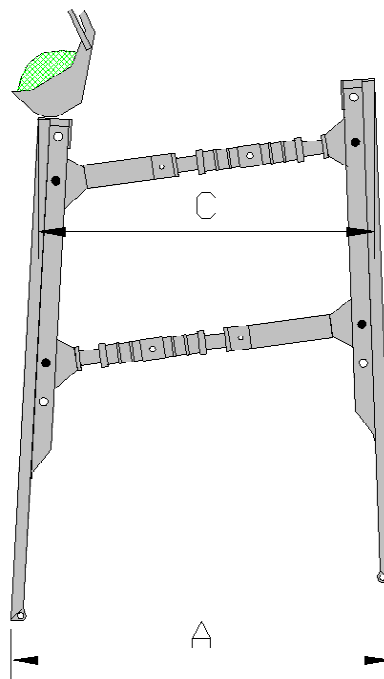
Now the struts are extended/spindled up to the required trench width (fine adjusting).

Attention has to be paid to the fact that the bottom struts have to be extended plus 3 - 5 compared with the upper struts, to achieve the A-arrangement of the shoring plates.

(See picture 2)

The shoring width C has to be shorter than shoring width A.

The installation of the top units has to be effected analogously.



drawing 2

## INSTALLATION

The shoring has to be complete, that means without any spaces. The limits for the max. safe working load absolutely have to be kept.

The shoring has to be situated directly/closely to the soil. Single shoring systems have to be used only if the front and back side of trench is secured properly. The safety rules for trench shoring equipment as well as the accident-prevention-directions have to be kept during all works.

### PLACE- AND ADJUST METHOD

for solid soil conditions

With lifting appliance the shoring unit is placed into the completely excavated trench. Through extending/spindling of the struts the shoring plates are pushed against the trench walls -if it is necessary.

### CUT- AND LOWER METHOD

for not-solid ground conditions

Pre- excavation of about 1,25 m and not more than one shoring field length. In principle the pre-excitation is according to the kind of soil and to the safety rules.

Placing of the shoring unit which is spindled according to the trench width.

Further excavation of about 50 cm and pushing down alternately the plates.

For greater trench depths use top plates.

These have to be connected with the base plates through box connectors and bolts, so that the top plate is lifted together with the base plate when re-installing the shoring.

The pushing/lowering is effected with an excavator only on the plates or profile heads. Due to safety reasons the pushing on extension pipes is prohibited.

## RE-INSTALLATION

If the site it allows the plates are removed from the trench walls through spindling in the struts.

According to compacting possibilities put in max. 50 cm fill material.

Lifting of the shoring unit according to the filled height.

Then compact of the fill material.

Repeat this process till it is possible to lift out the shoring - taking into consideration the safety rules.

The struts do not have to be used as lifting appliance. Only the lifting eyes at the profile heads have to be used for lifting.

We emphasize particularly that it is prohibited to stay in the danger zone during the installation and re-installation.

To avoid an overloading of the shoring plates, it is to omit to carry out lifting actions from one side only.

Ropes or chains always must be fixed at two points.

## MAINTENANCE/SERVICE

Slight damages can be repaired by yourself after consulting SBH. Otherwise our service will be at your disposal if requested. To increase the life of your shoring, a regular check of the struts, which should be oiled if necessary, is recommendable. Stock-keeping of the spindles over a long time in screwed-in position only.

According to intensity of use the spindles should be painted with rust-resistant colour.

Furthermore, we should like to draw your attention to the fact that all rules and regulations of the TBG concerning trench shoring and the DIN EN 13331 & DIN 4124 have to be kept upon using the SBH Shoring, Series 500.