

# MANUAL



## PARALLEL SLIDE RAIL SYSTEM EG-PV

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**TRENCH SHORING SYSTEMS FROM SHORING PROFESSIONALS**

*Trench shoring equipment*

**Production - Sales - Rental - Service**

These instructions for use must be presented to the building site personnel.

## 1. General purpose of use

Extremely solid slide-rail system with a pipe culvert height of up to 1.80 m. When the system is used as directed, the shoring can be performed with the occurrence of virtually no settling.

## 2. Specifications EG PV 400

Max. pipe culvert height:	1,800 mm
Rail length:	4,000 mm
Rail weight:	454 kg
Slide weight:	157 kg
Extension weight:	L= 500 29.2 kg
	L=1000 50.5 kg
	L=1500 71.8 kg
	L=2000 93.1 kg
Max. bending moment:	210.3 kNm

## 3. Safety regulations

**WARNING**

We refer to the fact that the above shoring system is only for the intended use and may only be assembled, installed, dismantled and unmounted in the sequence listed under points 4 - 7, exclusively with the use of all relevant "original construction elements".

The shoring panels used are slide-rail panels of the KRA/KRI VS 100 type (plate thickness 105 mm) and A/KRI VS 120 (plate thickness 125 mm). If this is not observed, the manufacturer's liability and warranty are invalid. Observe the load-bearing capacity of the shoring elements.

### Note:

All of the requirements of BG-Bau (the professional association) as well as DIN 4124 "Excavations and trenches, embankments, workroom widths, shoring" are applicable. In the event of conditions deviating from the standard conditions, construction site statics must be prepared.

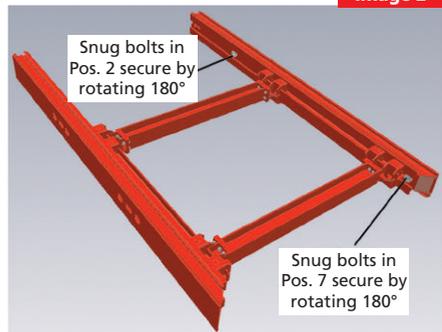
## 4. Assembly:

Sufficiently tighten the sliding frame consisting of two slides, and the extension beams required for the trench width, according to Fig. 2, with screws DIN 6914 M24x85-10.9 HV, nuts DIN 6951 M24-10 and discs DIN 6916. All screw connections must be checked after each dismantling of the shoring elements and retightened if necessary. The screw tightening torque is 750 Nm and the width across flats of the HV screws is 41 mm. Thread the sliding frame according to Fig. 2 into the guide with the rail lying flat. Only an appropriate lifting device may be used. Existing lifting eyes must be used.

After threading, insert the securing bolts into the corresponding apertures pos. 2 and pos. 7 in the rail and secure them by rotating 180°. Then thread a second rail into the sliding frame using the lifting eyes on the back of the rail and secure with bolts in pos. 2 and pos. 7 as described above. After erecting the rails, check the securing effectiveness of the bolts.

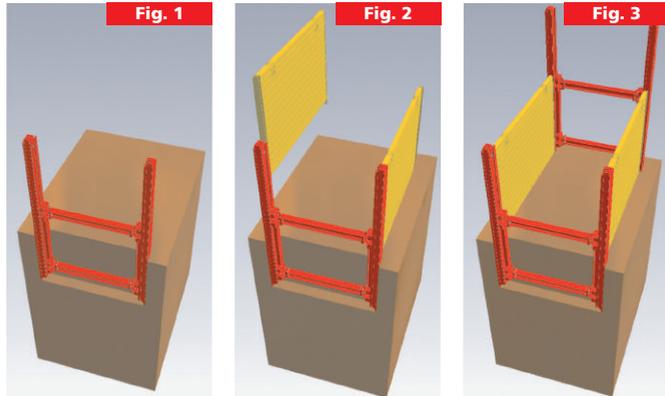


Image 2

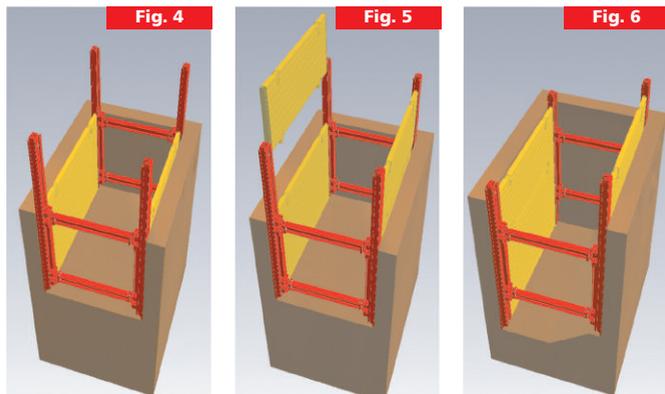


## 5. Installation

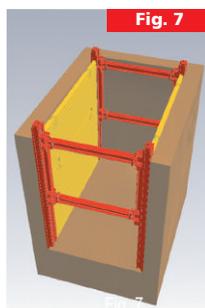
- a) At right angles to the shoring trench direction, excavate a trench with a length equal to the shoring width and a depth of approx. 2.00 m. Press the mounted slide-rail pair into this ditch (Fig. 1) sufficiently far that it is prevented from falling over. In the case of unstable ground, e.g. sand, the rail pair should be secured against falling over using the excavator and an appropriate lifting accessory. The rail bolts in pos. 2 and pos. 7 limit the travel of the slide to 800 mm. During this entire installation phase, nobody may be present in the danger area.
- b) Pick up each shoring plate with an appropriate lifting tool, thread it into the guides of the slide rails (Fig. 2) and align it. To align the plates, cables must be attached to the pulling eyes of the plates (Fig. 2).



- c) Position a second preassembled slide-rail unit over the free ends of the plate pair; thread it into the guide and lower it (Fig. 3). To align the slide-rail pair here, cables should again be attached to the lower pulling eyes of the slide.
- d) As the excavation proceeds, both the plates and the slide rails are pressed down alternately. The possible upward travel of the rails is limited by the snug bolts in pos. 2 and pos. 7 of the rails, and amounts to 800 mm (Fig. 4). No later than when this upward travel is reached, the cross-beam must be pressed down until the limit due to the snug bolts in pos. 7 of the rails is reached. Avoid hitting it with the scoop of the excavator. Otherwise, damage to the bolts or other parts is unavoidable.

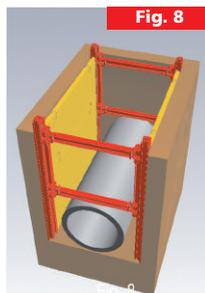


- e) When the plate head is approx. 0.10 m before reaching the upper edge of the trench (Fig. 4), a support plate can be inserted into each of the guides of the slide rails (Fig. 5). The connection to the baseplate is made with the corresponding bolts secured by linchpins. The remainder of the excavation is as described under d. (Fig. 6).
- f) Once the final trench depth has been reached, the snug bolts of the slide rails are switched from pos. 2 to pos. 1. Raise the sliding frame with an appropriate lifting tool and switch the lower snug bolts from pos. 7 to pos. 5 or pos. 6 (pipe culvert 2600 mm or 1950 mm). The lower bolts must always be switched with a crossbeam secured against slippage. The working position for laying the pipe has now been reached (Fig. 8).



## 6. Dismantling

- Insert the filler material in layers
- Switch the lower snug bolts (pos. 5) from pos. 5 to pos. 6 with the sliding frame secured against slippage (hang a chain in the sliding frame and affix it to the excavator) secure it with a 180° rotation.
- Pull the plate. Max. possible upward travel 650 mm (depending on the compaction level of the material). Compact the backfill material against the undisturbed soil.
- Pull the slide rails alternately. Compact the backfill material against the undisturbed soil. No later than reaching the upward travel limit due to the lower snug bolts in pos. 6, you must raise the cross-beam (max. upward travel = 650 mm).



## 7. Disassembly

Before transporting away the shoring unit, it is disassembled analogously to the assembly but in the reverse sequence. If the width is appropriate, there is no need to dismantle the sliding-frames. Before resumption of use, however, it must be checked that the screw connections are firmly seated.

## 8. Maintenance / Service

On each disassembly, the shoring units should be cleaned. The roller guides must be kept in a freely moving state with the use of appropriate lubricants. The integrity of the existing lifting eyes must be checked. The entire shoring unit must be protected against corrosion caused by handling damage by the use of appropriate protective measures.

## 9. Transport

When unloading, you should store the supplied wooden blocks and the rubber plates appropriately. These parts must always be re-used for the return transport. As the shipper, you are co-responsible for the appropriate shipping of the return transport.

