Components of an accident recovery unit

The accident recovery unit is installed as a precautionary measure in road tunnels. In the event of an accident crashed vehicles can be effectively and quickly recovered.

Increasingly, emergency and accident recovery services demand that suitable accident recovery units are installed every 100 metres in suitable recesses in tunnel walls.

The HALFEN Recovery anchor system is a cast-in stainless steel spherical head anchor, load class 20,0, with a freely pivoting standard lifting link attached.

The lifting link is similar to the type used for moving precast concrete elements.

A securing-bolt is provided to prevent unintentional removal of the lifting link.

<table>
<thead>
<tr>
<th>Description</th>
<th>HALFEN article number</th>
<th>HALFEN order number</th>
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<tbody>
<tr>
<td>Spherical head transport anchor, stainless steel, load class 20,0</td>
<td>6000-20,0-0180 A4</td>
<td>0735.009-00003</td>
</tr>
<tr>
<td>Recess former round, with threaded rods and wing-nut</td>
<td>6232 – 20,0 ©</td>
<td>0736.020-00008</td>
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<tr>
<td>Load device with provision for locking pin to prevent unintentional removal</td>
<td>6104-12/20</td>
<td>0738.009-00001</td>
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<tr>
<td>Chain (to prevent unauthorized removal)</td>
<td>Provided by customer</td>
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<tr>
<td>Anchor plate with bolt anchor/U-shaped bar, weldable</td>
<td>Provided by customer</td>
<td></td>
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Installation and Application

**Entfernen der Aussparungskörper**

- Constructing the formwork for a tunnel-recess (recommended dimension: see page 4).
- The spherical-head anchor is inserted into the recess former and both are then fitted to the formwork.
- Drill a hole in the formwork and attach the recess former to the formwork using the threaded bolt and the wing nut.
- Ensure the recess former is properly closed and is completely flush with the formwork.
- After the concrete has set, remove the wing nut. The formwork can now be removed.
- Use two metal rods as shown in the illustration to remove the recess former. A hemispherical recess with the anchor head in the middle has been formed.

**On-site reinforcement / Fixing the anchor-plate:**
- the tunnel wall must be sufficiently dimensioned for accident recovery; required reinforcement must be installed
- additional reinforcement is not required for the transport anchor
- an anchor-plate with a head anchor is placed above the transport anchor
- the anchor-plate is fixed flush to the top of the reinforcement
Installing and Application

HALFEN RECOVERY ANCHOR SYSTEM

Attaching the clutch

The finished recess after removing the formwork and the recess former

▸ The lifting link can be attached after removing the recess former.

▸ When connecting the lifting link ensure the tongue points in the direction of the link.

▸ Insert the retaining pin; the pin prevents unintentional release of the lifting link while allowing it to be turned.

A chain can be installed to prevent theft of the recovery anchor. The chain is passed through the handle and a u-shaped bar inserted in the two chain ends. The u-shaped bar with the chain-ends is welded to the cast-in metal plate.

Attached recovery anchor; not secured with a chain
Recommended dimension for an accident recovery anchor wall-recess

Deliver and install a load class 20,0, spherical head transport anchor, length 170 mm.
In stainless steel A4 1.4571/1.4404 with reinforcement. Additional on-site reinforcement is not included.
Construct a recess with a back surface area of 60 cm × 120 cm, 20 cm deep with side surfaces at a slant of 30°.
Insert the spherical head anchor in a round recess former and secure both to the formwork.
Secure the recess former to the formwork with the threaded rod (included with delivery).
Place reinforcement around the recess former in the area around the anchor head.

Deliver and install a load class 20,0, zinc galvanized, universal head clutch.
The clutch is attached to the spherical head anchor after striking the formwork.
The universal head clutch load class 20,0 is identified with a permanent unique identification number to facilitate annual safety checks.
The clutch is fitted with a device – by the manufacturer – to prevent unintentional release of the clutch from the anchor.
A chain fixed with a dowel (with an external thread) and a ring bolt to prevent theft of the recovery anchor is installed.