

## Chemical Anchors, styrene free

Approved for the anchoring in non-cracked concrete in connection with Kalm anchor rods, galvanized, stainless steel A4, hot dip galvanized and highly corrosion resistant 1.4529.

### ● **Areas of application:**

For the anchorage of heavy duty fixings in non-cracked concrete. For example: high rise racks, guardrails, noise protection walls, claddings, machines, balustrades ... To be installed in dry, moistening and aggressive damp environments such as chlorine, sea water or tunnels.

### ● **Characteristics:**

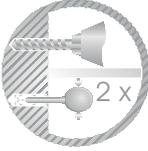
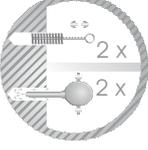
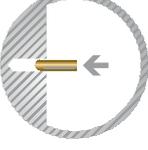
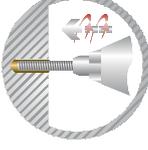
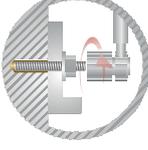
Chemical anchors are especially capable for high loads at low spacing and edge distances, because of the expansion free anchorage. The usage is permitted in dry as well as in humid underground and convenient for alignments.

### ● **Impact:**

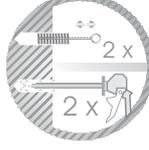
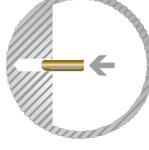
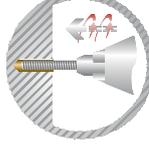
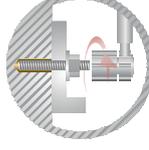
The Chemical Anchor capsule VPK-SF consists of a resin mixture and a small tube filled with hardener. The fixing element (e.g. anchor rods) is inserted into the hole using a percussion drill, thereby breaking the glass and mixing the resin and hardener evenly. The mixture fills the space between the fixing element and the drill hole wall. After the mixture has hardened the fixture can be loaded as per table.

● **Operating instructions:**

**Standard Cleaning**

- 1  Drill the hole (see technical data below). Blow out the dust with the blow pump ABK twice.
- 2  Brush the drill hole twice with the steel brush DBK, again blow out the dust with the blow pump ABK twice.
- 3  Check the capsule before using. The capsule can be used if it is undamaged and the resin is viscous. Insert the capsule into the drill hole.
- 4  Drive the anchor stud into the drill hole with the help of a percussion drill. Notice the curing times. In case of a wet base material the curing time has to be doubled.
- 5  Considering the curing times the nut can be tightened. Respect the torque moment. (see technical data)

**Premium Cleaning**

- 1  Drill the hole (see technical data). Blow out the dust with compressed air (>6 bar) twice.
- 2  Brush the drill hole twice with the steel brush DBK, again blow out the dust with compressed air (>6 bar) twice.
- 3  Check the capsule before using. The capsule can be used if it is undamaged and the resin is viscous. Insert the capsule into the drill hole.
- 4  Drive the anchor stud into the drill hole with the help of a percussion drill. Notice the curing times. In case of a wet base material the curing time has to be doubled.
- 5  Considering the curing times, the nut can be tightened. Respect the torque moment. (see technical data)

● **Reaction Times:**

Anchor base temperature [°C]	-5-0	0-5	5-10	10-20	>20
Curing time [min]	360	180	90	40	20

In case of a wet base material the curing time has to be doubled

● **Technical Data:**

**VPK-SF guidelines for concrete  $f_c=20 \text{ N/mm}^2$ ,  
Anchor rod quality 5.8**

	M8	M10	M12	M16	M20	M24
Hole depth $h_v$ [mm]	80	90	110	125	170	210
Hole diameter [mm]	10	12	14	18	25	28
Recommended load* at tension load (including partial safety factor)						
Standard Cleaning [kN]	5	6,7	8,9	13,9	22,2	33,3
Premium Cleaning [kN]	6,7	8,9	13,9	19,4	33,3	41,7
Installation torque $T_{inst}$ [Nm]	10	20	40	60	120	150

\* Without influence of spacing and edge distance.

Date 02.2016