



## HAM Hard sleeve anchor

Anchor version	Benefits
 HAM with steel strength 8.8 screw   HAM	<ul style="list-style-type: none"> <li>- secure fastenings in various base materials</li> <li>- cone attached to sleeve to ensure pre-setting</li> <li>- wings to prevent spinning in the borehole</li> <li>- plastic cap in cone to prevent dust entrance</li> <li>- blue-chromate zinc coating</li> <li>- 8.8 steel strength of screw</li> </ul>



Concrete



Solid brick

### Basic loading data (for a single anchor)

All data in this section applies to

- Correct setting (See setting instruction)
- No edge distance and spacing influence
- Concrete as specified in the table
- **Steel** failure
- Minimum base material thickness
- Concrete C 20/25,  $f_{ck, cube} = 25 \text{ N/mm}^2$

### Recommended Loads in uncracked concrete C20/25

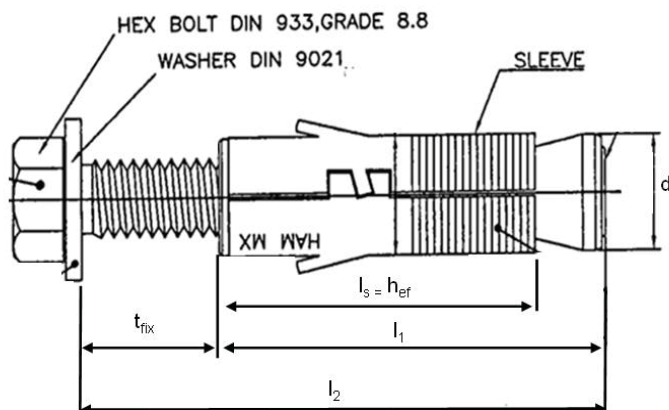
Thread Diameter	d	[mm]	M6x50	M8x60	M10x80	M12x90
Tension	$N_{rec}$	[kN]	4,0	4,8	5,8	8,7
Shear	$V_{rec}$	[kN]	4,6	8,4	13,3	19,3

### Recommended Loads in solid brick

Thread Diameter	d	[mm]	M6x50	M8x60	M10x80	M12x90
Tension	$N_{rec}$	[kN]	For solid brick, load values need to be determined on the building site			
Shear	$V_{rec}$	[kN]				

### Materials

Part	Material
Sleeve	Carbon steel
HAM Anchor	
Hex head Bolt	Carbon steel DIN 933, Strength 8.8
Washer	Carbon steel, DIN 9021



### Anchor dimensions

Anchor version	Anchor	$h_{ef}$ [mm]	$d$ [mm]	$l_s$ [mm]	$l_1$ [mm]	$l_2$ [mm]	$t_{fix}$ [mm]
HAM	M6 x 50	30	12	30	40	50	10
	M8 x 60	35	14	35	50	60	10
	M10 x 80	43	16	43	60	80	20
	M12 x 90	55	19	55	70	90	20

### Setting

#### Installation equipment

Anchor size		M6x50	M8x60	M10x80	M12x90
Rotary hammer		TE 2 – TE 16			
Drill bit	TE-C3X	12	14	16	20
Other tools		hammer, torque wrench, blow out pump			

For detailed information on installation see instruction for use given with the package of the product.

#### Setting details for HAM with 8.8 screw

Thread Diameter	$d$	[mm]	M6x50	M8x60	M10x80	M12x90
Nominal diameter of drill bit	$d_o$	[mm]	12	14	16	20
Cutting diameter of drill bit	$d_{cut} \leq$	[mm]	12,5	14,5	16,5	20,55
Depth of drill hole	$h_1 \geq$	[mm]	65	80	90	110
Width across nut flats	SW	[mm]	10	13	17	19
Diameter of clearance hole in the fixture	$d_f \leq$	[mm]	7	9	12	14
Max. torque moment concrete	$T_{inst}$	[Nm]	10	25	45	75
Max. torque moment masonry	$T_{inst}$	[Nm]	5	10	20	30