

Name

- 1 Hardening bar
- 2 Reaction resin
- 3 Silica

Building materials

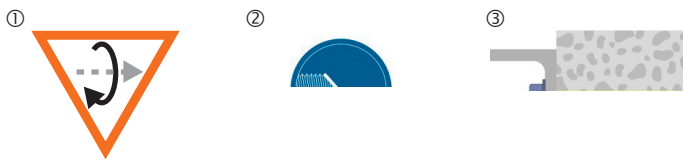
Approvals



Characteristics

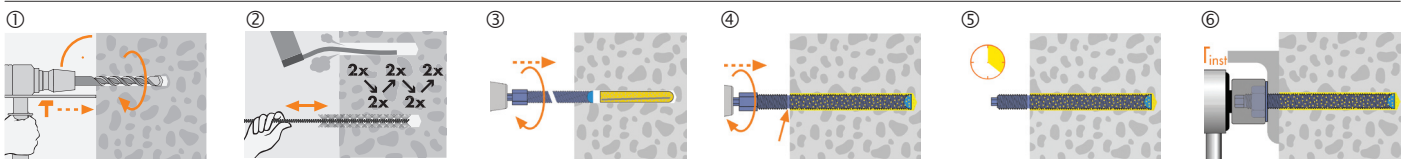
- European Technical Approval with MVA-S/MVA-Sr on page 3.20
- Application in concrete C12/15 - C50/60
- High loads with low edge and axial spacing
- Temperatur range: 50°C long term, 80°C acute
- Possible to set under water
- Application on compact natural stone (without approval)
- Approved bending moment can be adapted by using different steel qualities (5.8; 8.8; A4-70)
- Do not use for overhead fixings

Applications



- ① Anchor setting subject to spinning of rod under percussion
- ② Rod and sleeves have to be sharpened
- ③ Fixings in uncracked concrete


Installation



- ① Take drill hole-Ø and drill hole depth from the table
- ② Clean the drill hole with a brush, then blow it out with a purging pump
- ③ Insert the Resin Capsule...
- ④ And turn in the sharpened anchor rod until the mark is reached
- ⑤ Await the hardening time of the table
- ⑥ Tighten the nut with a torque spanner to the predetermined value T_{inst}



MVA Resin Capsule

Capsule size			8/80	10/80	12/95	14/95	16/95	20/135	20/175	24/210	30/265
$N_{App}^{1)}$	- Concrete C20/25 - C50/60 steel 5.8, A4	kN	8.0	12.0	16.0	18.0	20.0	30.0		38.0	60.0
V_{App}	- Concrete C20/25 - C50/60 steel 5.8, A4	kN	5.0	8.0	12.0	16.0	22.0	35.0		50.0	60.0
$M_{App, s}$	- Concrete C20/25 - C50/60 steel 5.8	Nm	10.8	21.1	37.1	51.8	94.9	185.7		320.6	642
	- Concrete C20/25 - C50/60 steel A4		11.9	23.8	42.1	58.1	106.7	207.9		359.4	402
d_s	Anchor rod-Ø	M	8	10	12	14	16	20		24	30
d_0	Drill hole-Ø in the building material	mm	10	12	14	16	18	24	25	28	35
h_0	Drill hole depth	mm	80	90	110	120	125	140	170	210	280
T_{inst}	Torque at anchoring	Nm	6	12	20	30	45	120		150	300
SW	Spanner size		10	17	19	22	24	30		36	46
h_{min}	Min. thickness base material	mm	110	120	140	150	160	180	220	260	330
s	Axial spacing	mm	240	180	220	240	250	280	340	420	700
c	Edge distance	mm	120	90	110	120	125	140	170	210	350
s_{min}	Min. spacing	mm	40	45	55	60	65	85	70	105	280
h_{min}	Min. edge distance	mm	40	45	55	60	65	85	70	105	140
	Hardening times to full load in the dry drill hole	> 30° C	t		10 Minutes						
		20° to 30° C	t		20 Minutes						
		5° to 20° C	t		1 Hour						
		- 5° C to 5° C	t		5 Hours						
	Hardening times to full load in the moist drill hole	> 30° C	t		20 Minutes						
		20° to 30° C	t		40 Minutes						
		5° to 20° C	t		2 Hours						
	Hardening times to full load under water	> 30° C	t		1 Hour						
		20° to 30° C	t		2 Hours						
		5° to 20° C	t		5 Hours						
l	Capsule length	mm	80	80	95	95	95	135	175	210	265
d_{nom}	Capsule-Ø	mm	8	10	12	14	16	20		24	30
			1610008	1610010	1610012	1610014	1610016	1602211	1610015	1610024	1602825
	Part of approval		2	2	2	-	2	-	2	2	-

MVA Resin Capsule

- 1) For approved fixing use Anchor Rod MVA-S or MVA-Sr (page 3.18)
 2) European Technical Approval with MVA-S, MVA-Sr/Possible to set under water

Steel Brush / Purging Pump

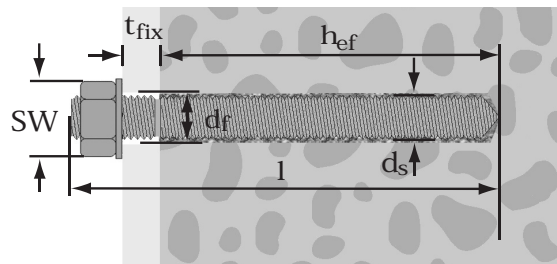
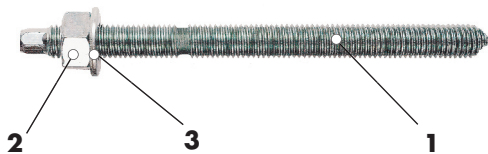
For assemblies with Resin Capsules the drill holes have to be cleaned with a brush and then blown out with a purging pump.
 See the related implements in accessories on page 3.12.

Anchor Rod / Anchor Sleeve with internal thread

In connection with Resin Capsules MVA Anchor Rod and Anchor Sleeves with internal threads can be used in different building sizes. See the related products on page 3.18 and 3.19.



MVA-S Anchor Rod



Name	Material
1 Threaded rod	Zinc plated steel 5.8 / A4 - F70
2 Nut	Zinc plated steel / A4 - F70
3 Washer DIN 125	Zinc plated steel / A4

Characteristics

- M8 to M16 with external hexagon socket
- Anchor Rod with 45° end
- Including nut and washer
- Each box of Anchor Rod incl. a setting tool (M8 - M16)

Anchor Rod MVA-S and MVA-Sr

d _s	Thread	M8	M10	M12	M14	M16	M20	M24	M30										
M _{Emp}	Recommended bending moment Steel 5.8	10.8	21.1	37.1	51.8	94.9	186	321	642										
	Recommended bending moment Steel A4	11.9	23.8	42.1	58.1	107	208	360	402										
h _{ef}	Effective anchorage depth	mm	80	90	110	110	125	140	170	210	280								
SW	Spanner size	mm	13	17	19	22	24	30	36	46									
d _f	Clearance hole in fixture	mm	9	11	13.5	15.5	17.5	22	26	33									
l	Length anchor rod	mm	110	150	130	170	160	220	260	300	170	190	230	260	300	230	260	300	380
t _{fix}	Assembling usable length	mm	15	55	20	65	30	90	130	170	40	40	80	110	150	70	70	65	70
- MVA-S zinc plated			1650008	1651508	1650010	1651710	1650012	1652212	1652612	1653012	1650014	1650016	1652316	1652616	1653016	1652020	1652026	1652430	1653038
- MVA-Sr stainless A4			1660008	1661508	1660010	1661710	1660012	1662212	1662612	1663012		1660016	1662316	1662616	1663016	1662020	1662026	1662430	1663038



These tools have to be used for the assembly of Anchor Rod:

Setting Tool for external hexagon socket

Hot-dip galvanised Anchor Rod on request
Steel quality 8.8 on request

Setting Tool MVA-WZ

For threads	M8	M10	M12	M14	M16	M20	M24	M30
Setting Tool for rod without drive	1665008	1665010	1665012	1665014	1665016	1665020	1665024	1665030



MVA-I 5.8, MVA-Ir stainless steel A4 Anchor Sleeve with internal thread

Internal-thread		M8	M10	M12	M16	M20
Outside-Ø capsule	mm	12	16	16	20	24
Drill hole-Ø	mm	15	18	22	28	35
Drill hole depth	mm	90	90	90	125	180
Minimal installation depth	mm	12	15	18	24	40
Maximal installation depth	mm	30	35	40	40	60
Tighten torque	Nm	6	12	20	45	100
- Steel, galvanized 5.8		1670008	1670010	1670012	1670016	1670020
- Steel, stainless A4		1670108	1670110	1670112	1670116	1670120



MVA-I, MVA-Ir Anchor Sleeve