

# Vorpa **VE.CE7 INOX A4**

Heavy duty anchor with European Technical Assessment for non cracked concrete



products group



**Approved for**

- non-cracked concrete C20/25-C50/60
- anchorage under static, quasi/ static actions M6-M20
- anchorage under fire exposure in standard TR 020 R30-R120

**To fix**

- parapets
- gates, stairs, profiles
- steel beams
- machine tools
- industrial systems
- heavy duty metal constructions
- static, quasi/static anchorages



EAD 330232-00-0601  
for non cracked concrete



product information

**Characteristics**

- special wedge anchor assembled with hex nut and washer with European Technical Assessment for non cracked concrete
- fire tested in compliance with TR020. Fire resistance ratings R30–R120
- reduced hole diameter
- suitable for through-setting applications in concrete
- thread diameter and hole diameter are the same
- reinforced anchor's head to avoid damaging the thread during the installation

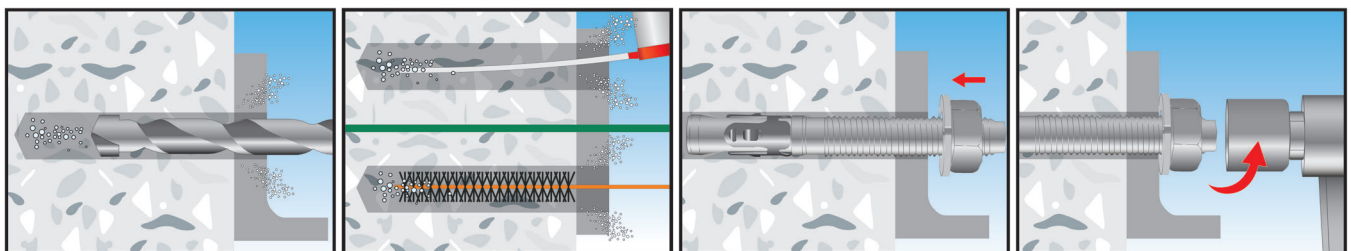
**Installation**

- through-setting anchor

**Suggestion for use**

- choose the right size of the anchor according to the load
- always check load bearing capacity values in the table
- respect the installation data
- **clean the hole before the installation**

installation sequence



**Examples of applications**



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non cracked concrete

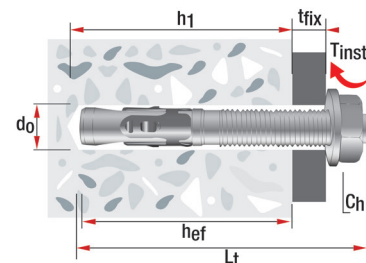
product code and technical data



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Code	Description		L <sub>t</sub> mm	d <sub>o</sub> mm	h <sub>1</sub> / h <sub>1</sub> rid mm	t <sub>fix</sub> / t <sub>fix2</sub> mm	T <sub>inst</sub> Nm	Ch
4621	VE.CE7 A4	8/10-19-75	75	8	65/55	10/19	15	13
4622	VE.CE7 A4	8/30-39-95	95	8	65/55	30/39	15	13
4623	VE.CE7 A4	8/55-64-120	120	8	65/55	55/64	15	13
4625	VE.CE7 A4	10/15-21-90	90	10	70/65	15/21	25	17
4626	VE.CE7 A4	10/45-51-120	120	10	70/65	45/51	25	17
4627	VE.CE7 A4	10/70-76-145	145	10	70/65	70/76	25	17
4698	VE.CE7 A4	10/100-106-175	175	10	70/65	100/106	25	17
* 4628	VE.CE7 A4	12/5-75	75	12	90/75	-/5	50	19
4629	VE.CE7 A4	12/15-30-110	110	12	90/75	15/30	50	19
4630	VE.CE7 A4	12/30-45-125	125	12	90/75	30/45	50	19
4631	VE.CE7 A4	12/50-65-145	145	12	90/75	50/65	50	19
4697	VE.CE7 A4	12/85-100-180	180	12	90/75	85/100	50	19
4663	VE.CE7 A4	12/105-120-200	200	12	90/75	105/120	50	19
4632	VE.CE7 A4	16/13-115	115	16	110/95	-/13	100	24
4633	VE.CE7 A4	16/30-48-150	150	16	110/95	30/48	100	24
4634	VE.CE7 A4	16/60-78-180	180	16	110/95	60/78	100	24
4635	VE.CE7 A4	20/5-27-150	150	20	130/110	5/27	160	30
4636	VE.CE7 A4	20/35-57-180	180	20	130/110	35/57	160	30



- L<sub>t</sub> = Anchor length
- h<sub>ef</sub> = Effective anchorage depth
- h<sub>1</sub> = Min. hole depth
- d<sub>o</sub> = Hole diameter
- t<sub>fix</sub> = Fixture thickness
- T<sub>inst</sub> = Torque
- Ch = Spanner

\* Not covered by ETA

Attention: The use of the Tfix2 causes reduced effective anchorage depth and reduced loads

## VE.CE7 INOX A4

Installation data			M8	M10	M12	M16	M20
<b>Performance data</b>							
Effective anchorage depth	h <sub>ef</sub>	mm	44 -	48 -	65 -	80 -	100 -
Reduced anchorage depth	h <sub>ef,red</sub>	mm	- 35 <sup>1)</sup>	- 42	- 50	- 64	- 78
Drill hole diameter	d <sub>o</sub>	mm	8 8	10 10	12 12	16 16	20 20
Drill hole diameter in the fixture	d <sub>o</sub>	mm	9 9	12 12	14 14	18 18	22 22
Drill hole depth	h <sub>1</sub>	mm	65 55	70 65	90 75	110 95	130 110
Torque moment	T <sub>inst</sub>	Nm	15 15	25 25	50 50	100 100	160 160
Width across nut	SW	mm	13 13	17 17	19 19	24 24	30 30
<b>Spacing and edge distance</b>							
Effective anchorage depth	h <sub>ef</sub>	mm	44 35 <sup>1)</sup>	48 42	65 50	80 64	100 78
Characteristic spacing	S <sub>cr,N</sub>	mm	132 105	144 126	195 150	240 192	300 234
Characteristic edge distance	C <sub>cr,N</sub>	mm	66 52,5	72 63	97,5 75	120 96	150 117
Minimum spacing	S <sub>min</sub>	mm	35 60	45 55	60 100	80 110	100 140
Minimum edge distance	C <sub>min</sub>	mm	45 60	55 65	70 100	80 110	100 140
Minimum thickness of concrete slab	h <sub>min</sub>	mm	100 80	100 100	130 100	160 130	200 160
<b>Characteristic values - Effective anchorage depth (hef)</b>			<b>M8</b>	<b>M10</b>	<b>M12</b>	<b>M16</b>	<b>M20</b>
Pull out failure			9	12	20	30	40
ψ <sub>c</sub> C30/37	C25/30		1,22	1,22	1,22	1,22	1,22
ψ <sub>c</sub> C40/50			1,41	1,41	1,41	1,41	1,41
ψ <sub>c</sub> C50/60			1,55	1,55	1,55	1,55	1,55
Shear failure	V	kN	12	19	27	50	86
Bending moment	M	Nm	24	49	85	199	454
<b>Design loads - Effective anchorage depth (hef)</b>			<b>M8</b>	<b>M10</b>	<b>M12</b>	<b>M16</b>	<b>M20</b>
Pull out failure	N	kN	6	8	13,3	20	26,6
Shear failure	V	kN	9,6	15,2	21,6	40	61,4
Bending moment	M	Nm	19,2	39,2	68	159,2	324,2
<b>Recommended loads</b>			<b>M8</b>	<b>M10</b>	<b>M12</b>	<b>M16</b>	<b>M20</b>
Pull out failure	N	kN	4,2	5,7	9,5	14,2	19
Shear failure	V	kN	6,8	10,8	15,4	28,5	43,8
Bending moment	M	Nm	13,7	28	48	113,5	231

1) Application limited to statically indetermined systems.