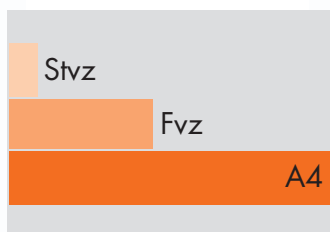


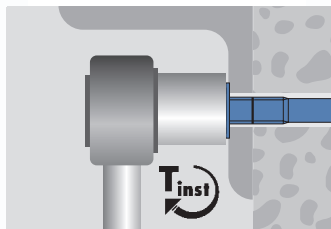
# m2 Throughbolt



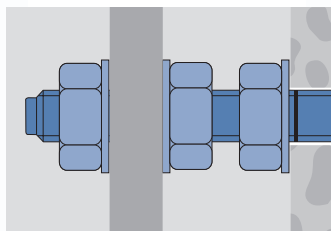
**European Technical Approval**  
European Technical Approval  
Option 7 for non-cracked concrete



**Corrosion resistance**  
A4 = stainless steel A4/316  
Fvz = hot dip galvanised > 40µm  
Stvz = zinc plated > 5µm



**Installation safety**  
by applying the prescribed torque  
when setting.



**Distance fixing**  
Longer threads for stand off  
installations.



# m2 Throughbolt



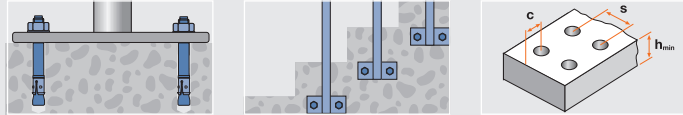
## Features

- European Technical Approval Option 7 for non-cracked concrete
- Torque controlled expansion
- Zinc plated > 5µm
- Pre installation or through fixing
- Indoor applications



## Applications

steel constructions, profiles, machines, high-racks, cable trays

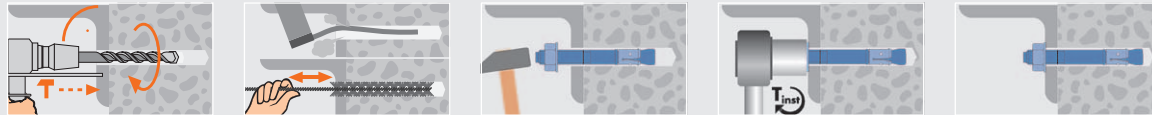


## Technical Data

	Concrete C20/25 tension load (kN)	Concrete C20/25 shear load (kN)	Bending moment (Nm)	Distance betw. anchors mm	Edge distance mm	Min. distance betw. anchors/at edge distance mm	Min. edge distance/at distance betw. anchors mm	Minimum thickness of concrete member mm	Installation torque (Nm)	Wrench size
				s	c	s <sub>min</sub> /c	c <sub>min</sub> /s	h <sub>min</sub>	T <sub>inst</sub>	SW
M6	3.6	2.1	5.8	120	60	40/70	40/80	100	5	10
M8	5.7	3.9	14.3	150	75	50/90	50/100	100	15	13
M10	7.6	6.2	28.5	174	87	60/115	60/120	120	30	17
M12	8.3	8.4	46.8	204	102	75/150	100/150	140	50	19
M16	9.9	15.7	118.6	240	120	100/190	130/190	160	100	24
M20	16.5	24.5	231.5	300	150	200/400	300/350	200	200	30

The partial safety factors of the resistances as well as a partial safety factor of the load of  $\gamma_F = 1.4$  are considered / The technical data is only valid for single fixings without consideration of edge and anchor distances / Only valid for setting depths according to approval / 1 kN = 100 kg

## Installation



Article code	Plug and drill $\varnothing$ mm	Length mm	Drilling depth mm	Usable length mm	Effective anchorage depth mm	Box content	Outer carton	Quantity per pallet
	$d_{nom} = d_0$	L	$h_0$	$t_{fix}$	$h_{ef}$	FS	SK	
<sup>1)</sup> 3200605	6	50	50	5	30	100 21	900 22	54000
3200606	6	65	60	10	40	100 21	900 22	54000
3200608	6	80	60	25	40	100 21	900 22	54000
<sup>1)</sup> 3200805	8	50	45	5	27	100 21	900 22	54000
<sup>1)</sup> 3200806	8	60	50	10	30	100 21	900 22	54000
3200808	8	80	65	10	50	100 41	300 12	18000
3200885	8	85	65	15	50	100 41	300 12	18000
3200809	8	95	65	25	50	100 51	300 22	18000
3200811	8	115	65	45	50	100 51	300 22	18000
3200816	8	165	65	95	50	50 51	150 22	9000
<sup>1)</sup> 3201006	10	60	55	5	33	100 41	300 12	18000
<sup>1)</sup> 3201007	10	70	60	10	35	100 51	300 22	18000
3201009	10	95	80	15	58	100 51	300 22	18000
3201011	10	110	80	30	58	50 51	150 22	9000
3201012	10	125	80	45	58	50 51	150 22	9000
3201014	10	140	80	60	58	50 51	150 22	9000
3201016	10	160	80	80	58	50 51	150 22	9000
3201018	10	180	80	100	58	25 51	75 22	4500
<sup>1)</sup> 3201208	12	80	70	5	49	50 41	150 12	9000
3201211	12	110	90	15	68	50 51	150 22	9000
3201212	12	125	90	30	68	50 51	150 22	9000
3201214	12	145	90	50	68	25 41	75 12	4500
3201216	12	165	90	70	68	50 51	150 22	9000
3201218	12	185	90	90	68	50 51	150 22	9000
<sup>1)</sup> 3201609	16	90	80	5	50	25 51	75 22	3600
<sup>1)</sup> 3201611	16	115	100	10	70	25 51	75 22	3600
3201613	16	130	110	15	80	25 51	75 22	3600
3201614	16	145	110	30	80	25 51	75 22	3600
3201616	16	160	110	45	80	25 51	75 22	3600
3201618	16	180	110	65	80	25 51	75 22	3600
<sup>1)</sup> 1452013	20	130	110	10	76	20 51	60 22	2880
1452016	20	160	130	30	100	20 51	60 22	2880

<sup>1)</sup> Not part of the approval

Article code	Plug and drill $\varnothing$ mm	Length mm	Drilling depth mm	Usable length mm	Effective anchorage depth mm	Unit content	Quantity per pallet
	$d_{nom} = d_0$	L	$h_0$	$t_{fix}$	$h_{ef}$		
3200080	8	80	65	10	50	300	24000
3200095	10	95	80	15	58	150	12000
3200110	12	110	90	15	68	100	8000

## m2 Throughbolt with washer DIN 125A



## m2 Throughbolt with washer DIN 125A in Mini-Box, bulk packed



30 × 20 × 12.5 cm

