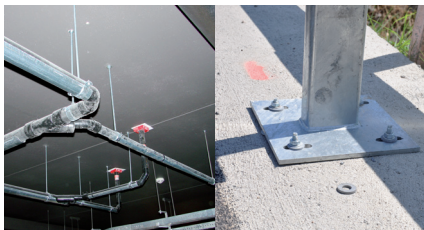


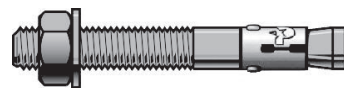
Throughbolt – PTB

PTB Throughbolt hot dip galvanised – PTB-G

PTB Throughbolt with internal thread – PTB-M



PTB-G



PTB-M



Approvals and test reports



Product description

1. General applications

- For installation in uncracked concrete (>C20/25 to C50/60) and compressive resistant stone
- Not suitable for use in soft base materials
- For medium and heavy loading
- For static or almost static loading
- Application examples: steel profiles, cable systems, structural wood, (hand)rails, beams, columns, footplates
- Zinc plated throughbolts for indoor (dry) environments only
- Through fixing and pre-installation

2. Benefits

- Very high approved loads for tension and shear
- Immediate, high strength loading
- Safe, controlled installation by torquing the anchor up to the given approved installation torque
- Long threaded part for variability in fixture thicknesses

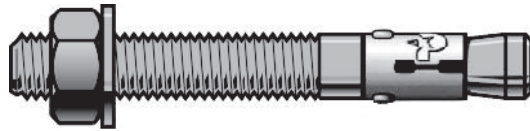
3. Properties

- Also available in: A4 steel (PTB-SS-ETA1-PRO), zinc plated (PTB-ETA7-PRO), zinc plated with large washer (PTB-ETA7-PRO-DIN9021) and extra long zinc plated with large washer (PTB-XL-ETA7-PRO)
- Wide range of lengths and diameters, from M8 to M20
- PTB-M available with internal thread M6, M8 and M10.







Specifications

Anchor components	Carbon steel (PTB-M)	Hot Dipped Galvanised (PTB-G)
Anchor body		
M8 -M16	Grade 5.8	Grade 5.8
M20	Grade 4.6	Grade 4.6
Expansion sleeve	Grade 430 A2 steel	Grade 430 A2 steel
Washer	Carbon steel	Carbon steel
Nut	Carbon steel property class 8	Carbon steel property class 8
Plating	Electroplated zinc Coating thickness 5 microns min	Hot Dipped Galvanised Coating thickness 42 microns min

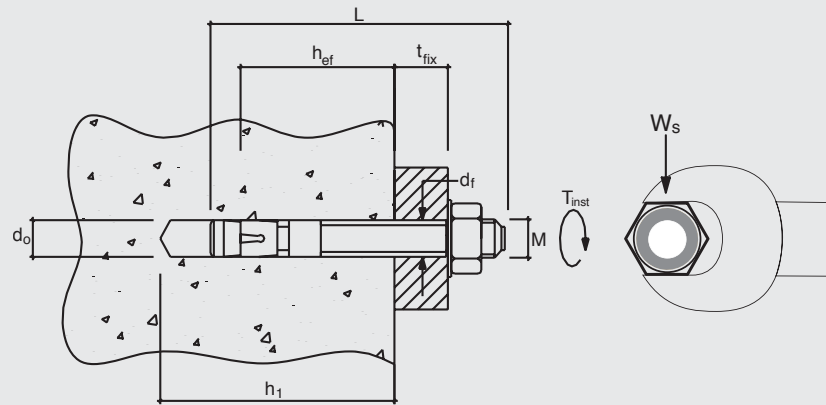
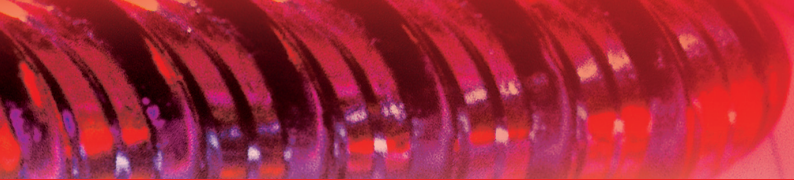




PTB throughbolt – hot dip galvanised

Type	Art. Nr.						
Type	Art. Nr.			L [mm]	M	d ₀ [mm]	Ws [mm]
PTB-G 8/5x50	07418	200	800	50	M8	8	13
PTB-G 8/5x65	07720	100	400	65	M8	8	13
PTB-G 8/5x75	07723	100	400	75	M8	8	13
PTB-G 8/45x115	07724	100	400	115	M8	8	13
PTB-G 10/5x60	07725	100	400	60	M10	10	17
PTB-G 10/1x80	07726	50	200	80	M10	10	17
PTB-G 10/20x100	07730	50	200	100	M10	10	17
PTB-G 10/45x125	07734	50	200	125	M10	10	17
PTB-G 12/5x80	07741	50	200	80	M12	12	19
PTB-G 12/5x100	07742	50	200	100	M12	12	19
PTB-G 12/25x120	07748	25	100	120	M12	12	19
PTB-G 12/45x140	07750	25	100	140	M12	12	19
PTB-G 16/15x100	07752	25	100	100	M16	16	24
PTB-G 16/5x125	07763	20	80	125	M16	16	24
PTB-G 16/20x140	07765	20	80	140	M16	16	24
PTB-G 16/55x175	07767	10	40	175	M16	16	24
PTB-G 16/100x220	07769	10	40	220	M16	16	24
PTB-G 20/5x120	07771	10	40	120	M20	20	30
PTB-G 20/35x170	07773	10	40	170	M20	20	30





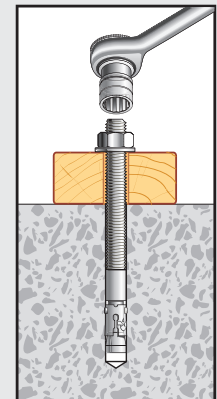
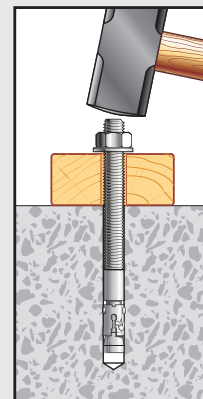
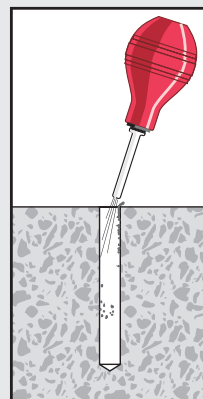
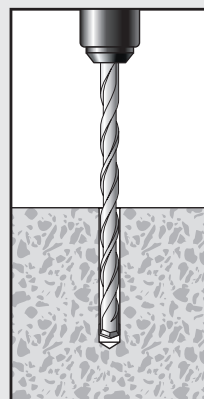
Recommended loads

$$\frac{N_{RK}}{\gamma_M \cdot \gamma_F} = N_{rec}$$

$$\gamma_F = 1,4$$

C20/25

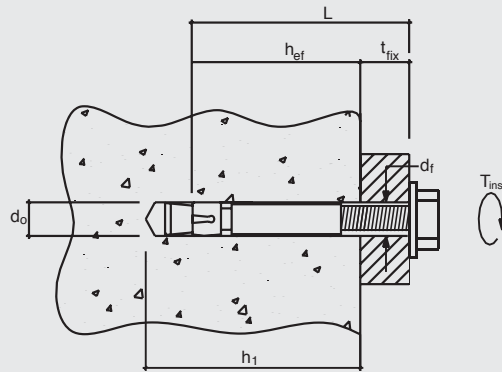
Type	h _{ef} [mm]	h ₁ [mm]	d _f [mm]	t _{fix} [mm]	T _{inst} [Nm]	N _{rec} [kN]	V _{rec} [kN]
PTB-G 8/5x50	25	40	9	5	15	1,1	4,4
PTB-G 8/5x65	40	55	9	5	15	2,2	4,4
PTB-G 8/5x75	50	65	9	5	15	3,1	4,4
PTB-G 8/45x115	50	65	9	45	15	3,1	4,4
PTB-G 10/5x60	30	50	12	5	30	1,1	7,9
PTB-G 10/1x80	60	80	12	1	30	3,1	7,9
PTB-G 10/20x100	60	80	12	20	30	3,1	7,9
PTB-G 10/45x125	60	80	12	45	30	3,1	7,9
PTB-G 12/5x80	50	75	14	5	50	6,1	12,4
PTB-G 12/5x100	70	95	14	5	50	10,1	12,4
PTB-G 12/25x120	70	95	14	25	50	10,1	12,4
PTB-G 12/45x140	70	95	14	45	50	10,1	12,4
PTB-G 16/15x100	50	80	18	15	100	6,1	22,8
PTB-G 16/5x125	85	115	18	5	100	13,4	22,8
PTB-G 16/20x140	85	115	18	20	100	13,4	22,8
PTB-G 16/55x175	85	115	18	55	100	13,4	22,8
PTB-G 16/100x220	85	115	18	100	100	13,4	22,8
PTB-G 20/5x120	75	110	22	5	180	11,1	18,3
PTB-G 20/35x170	100	135	22	35	180	17,1	18,3





PTB throughbolt – internal thread, zinc plated

Type	Art. Nr.					
Type	Art. Nr.	L [mm]	M	d ₀ [mm]		
PTB-M 8x50 M6	07459	200	800	50	6	8
PTB-M 10x55 M8	07460	100	400	55	8	10
PTB-M 12x65 M10	07461	50	200	65	10	12



Recommended loads

$$\frac{N_{Rk}}{\gamma_M \cdot \gamma_F} = N_{rec}$$

$$\gamma_M = 2,1$$

$$\gamma_F = 1,4$$



Type	h _{ef} [mm]	h ₁ [mm]	d _f [mm]	T _{inst} [mm]	N _{rec} [kN]	V _{rec} [kN]
PTB-M 8x50 M6	45	60	7	15	2,4	1,9
PTB-M 10x55 M8	50	65	9	30	3,0	3,5
PTB-M 12x60 M10	55	70	12	50	6,3	4,6

