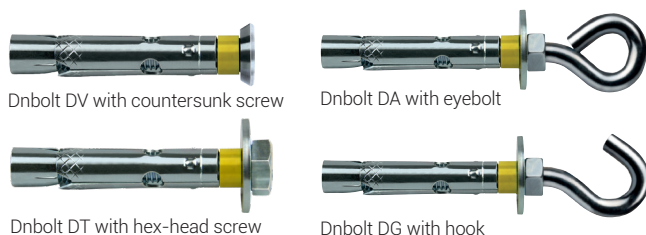


Sleeve anchor Dnbolt

Advantages



- Allrounder for many day-to-day fastenings for medium loads up to 1.000 kg
- Dnbolt DT and DV with ETA assessment for non-cracked concrete
- Anti-rotation cone with ribs for secure expansion
- Due to the special sleeve construction, the fixture can be pressed flush to the concrete surface
- Chamfered sleeve guarantees perfect sliding on the cone and thus a secure fixing
- Load capacity tested by an independent institute (Applus+)

Suitable building materials

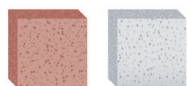
Very suitable



- Concrete



Suitable to a limited extent



- Dense natural stone
- Solid brick



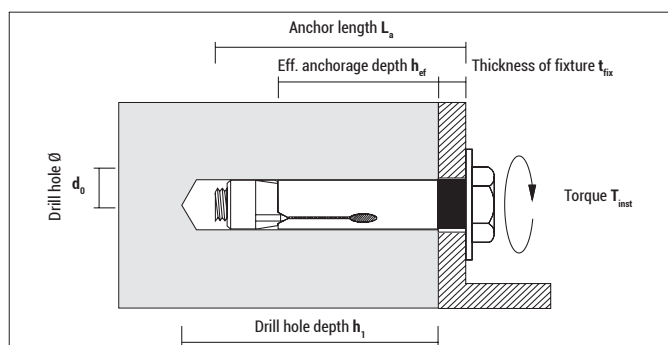
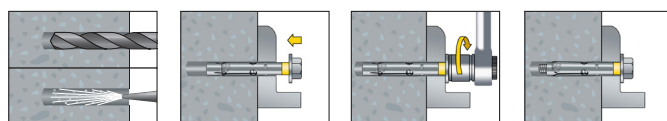
Approvals and certificates



European Technical Assessment Option 8 for non-cracked concrete (Dnbolt DT/DV 8, 10, 12, zinc plated)



Mounting



Dnbolt DV, zinc plated with countersunk screw; Head-Ø 16 mm

Type	Art-No	d ₀ [mm]	h ₁ ≥ [mm]	h _{ef} ≥ [mm]	L _a [mm]	t _{fix} ≤ [mm]	Thread	Recess	ETA	€/ 100 pcs	[pcs]	[pcs]
10x60/10	91060DV	10	55	37	60	10	M8	TX 40	●		100	400
10x80/30	91080DV	10	55	37	80	30	M8	TX 40	●		100	400

**Dnbolt DT, zinc plated** with hex-head screw

Type	Art-No	d ₀ [mm]	h ₁ ≥ [mm]	h _{ef} ≥ [mm]	L _a [mm]	t _{fix} ≤ [mm]	Thread	Recess	ETA	€/ 100 pcs	[pcs]	[pcs]
8 x 45/5	9845DT	8	45	30	45	5	M6	SW 10	●		250	1.000
8 x 60/20	9860DT	8	45	30	60	20	M6	SW 10	●		200	800
10 x 60/10	91060DT	10	55	37	60	10	M8	SW 13	●		100	400
10 x 80/30	91080DT	10	55	37	80	30	M8	SW 13	●		100	400
12 x 70/10	91270DT	12	65	43	70	10	M10	SW 17	●		50	200
12 x 100/40	912100DT	12	65	43	100	40	M10	SW 17	●		50	200
14 x 70/10	91470DT	14	65	43	70	10	M10	SW 17	–		50	200
14 x 100/40	914100DT	14	65	43	100	40	M10	SW 17	–		50	200
16 x 80/10	91680DT	16	75	55	80	10	M12	SW 19	–		40	160
16 x 110/40	916110DT	16	75	55	110	40	M12	SW 19	–		25	100
20 x 110/30	921110DT	20	85	65	110	30	M16	SW 24	–		10	40
25 x 130/30	926130DT	25	105	80	130	30	M20	SW 30	–		8	32

**Dnbolt DA, zinc plated** with eyebolt

Type	Art-No	d ₀ [mm]	h ₁ ≥ [mm]	h _{ef} ≥ [mm]	L _a [mm]	t _{fix} ≤ [mm]	Thread	Recess	€/ 100 pcs	[pcs]	[pcs]
8 x 45/5	9845DA	8	45	30	45	5	M6	SW 10		100	400
10 x 60/10	91060DA	10	55	37	60	10	M8	SW 13		50	200

**Dnbolt DG, zinc plated** with hook

Type	Art-No	d ₀ [mm]	h ₁ ≥ [mm]	h _{ef} ≥ [mm]	L _a [mm]	t _{fix} ≤ [mm]	Thread	Recess	€/ 100 pcs	[pcs]	[pcs]
8 x 45/5	9845DG	8	45	30	45	5	M6	SW 10		100	400
10 x 60/10	91060DG	10	55	37	60	10	M8	SW 13		50	200

Loads, spacing and edge distance for Dnbolt DT/DV 8, 10, 12 according to ETA assessment for non-cracked concrete

Type	Size	Torque T _{inst} [Nm]	Non-cracked concrete ^{1) 2)} ≥ C20/25				Permissible bending moment		Spacing		Edge distance		Min. thickness of structural part h _{min} [mm]
			Tension N _{per} [kN]	Steel 6.8 Shear V _{per} [kN]	Steel 8.8* Shear V _{per} [kN]		Steel 6.8 M _{per} [Nm]	Steel 8.8* M _{per} [Nm]	S _{cr} [mm]	S _{min} [mm]	C _{cr} [mm]	C _{min} [mm]	
Dnbolt 8	M6	10	2,9	3,4	4,0		5,3	7,0	90	40	45	40	100
Dnbolt 10	M8	15	3,6	5,4	5,4		12,9	17,1	111	50	56	50	100
Dnbolt 12	M10	30	4,8	6,8	6,8		25,7	34,2	129	60	65	60	110

¹⁾ Permissible loads for single anchor without influence of spacing and edge distance. (C > 10 x h_{ef})

²⁾ Load values include the resistances' partial safety factors as per ETA assessment and a partial safety factor on the action of γ_F = 1,4.

If underrun the char. spacing or edge distance (C_{cr} or S_{cr}) the loads must be reduced. h_{min}, S_{min} and C_{min} must be observed.

* Dnbolt in steel 8.8 only on request

Recommended loads for Dnbolt DT and DV in non-cracked concrete C20/C25 for not approved sizes

Type	Size	Torque T _{inst} [Nm]	Drill hole Ø [mm]	Zinc plated, Steel quality 6.8		Stainless steel A2	
				Tension load N _{rec} [kN]	Shear load V _{rec} [kN]	Tension load N _{rec} [kN]	Shear load V _{rec} [kN]
Dnbolt 8	M6	10	8	–	–	1,8	2,0
Dnbolt 10	M8	15	10	–	–	2,0	3,2
Dnbolt 12	M10	30	12	–	–	3,4	4,8
Dnbolt 14	M10	30	14	6,2	8,6	3,5	5,6
Dnbolt 16	M12	65	16	7,5	12,0	4,8	8,5
Dnbolt 20	M16	150	20	8,9	26,0	–	–
Dnbolt 25	M20	300	25	10,6	28,8	–	–

F_{rec}: Recommended loads in all directions incl. safety factors

Recommended loads for Dnbolt DA and DG in non-cracked concrete C20/C25 without approval

Type	Size	Drill hole Ø [mm]	DA with eyebolt F _{rec} [kN]	DG with hook F _{rec} [kN]
Dnbolt 8	M6	8	0,6	0,6
Dnbolt 10	M8	10	0,6	0,6

F_{rec}: Recommended loads in all directions incl. safety factors Bending of the eyebolt or hook is decisive.