



BENEFITS

- CE Homologation Option 8 for Ø8-10-12mm.
- Test performed in Applus lab for Ø9-11-14-16-21-26mm.
- Longitudinal ribs. To avoid the rotation between cone and sleeve.
- Progressive coning (conical shape). Better expansion with less effort..
- DIN 9021 washer to get a better resistance.
- Material:
 - Screw: 6.8 and 8.8 steel according to ISO/DIN 981-1.
 - Sleeve: soft steel.
 - Washer: soft steel.
 - Cone: soft steel, quality C6.
 - Case: Plastic.
 - Coating: white zinc plated.
 - Stainless steel version: screw, sleeve, washer and cone made by AISI 304 / A2 Steel

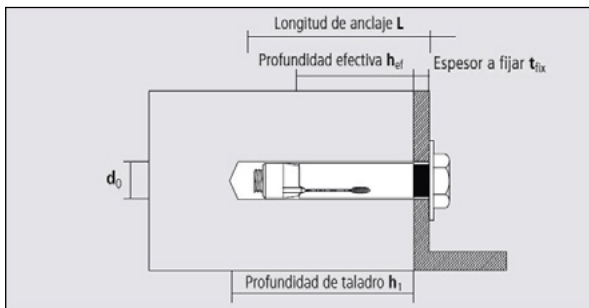
BASE MATERIALS

- Concrete
- Concrete block
- Solid brick
- Stone

APPROVALS



MAIN DIMENSIONS [mm]



Denom.	Thread	Lenght	Hole dimensions		Embedment depth	Maximum thickness of fixture	Required torque
		L [mm]	d ₀ [mm]	h ₀ [mm]	h ₁ [mm]	t _{fix,max} [mm]	t _{inst} [Nm]
8-45/5	M6	45	8	45	40	5	10
8-60/20	M6	60	8	45	40	20	10
9-45/5	M6	45	9	45	40	5	10
9-60/20	M6	60	9	45	40	20	10
10-60/10	M8	60	10	55	50	10	15/ 18*
10-80/30	M8	80	10	55	50	30	15/ 18*
11-60/10	M8	60	11	55	50	10	15/ 18*
11-80/30	M8	80	11	55	50	30	15/ 18*
12-70/10	M10	70	12	65	60	10	30
12-100/40	M10	100	12	65	60	40	30
14-70/10	M10	70	14	65	60	10	30
14-100/40	M10	100	14	65	60	40	30
16-80/10	M12	80	16	75	70	10	65
16-110/40	M12	110	16	75	70	40	65
21-110/40	M12	110	16	75	70	40	65
21-110/30	M16	110	21	85	80	30	150
26-130/30	M20	130	26	105	100	30	300

* Countersunk head.

Countersunk version: 60° countersunk head, Ø16 mm. df (Diameter of clearance hole in the fixture): 12mm. Torx 40 recess.

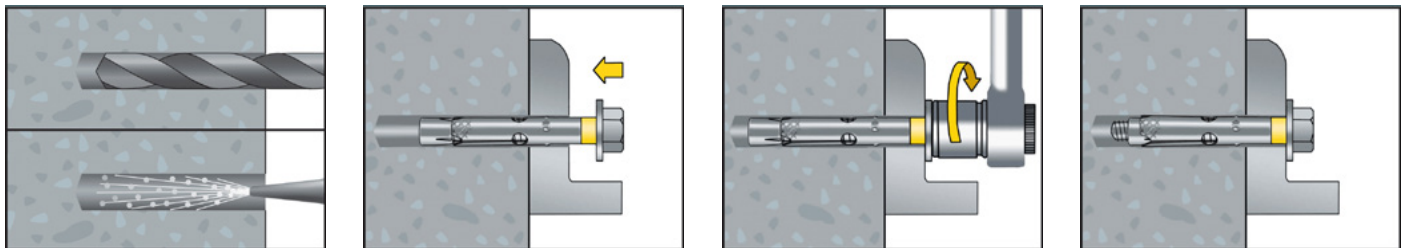
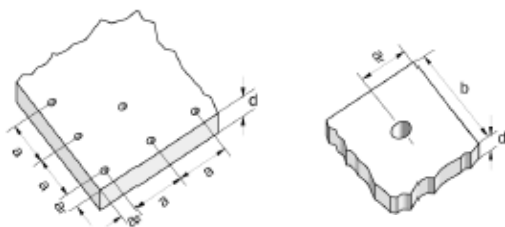
● ● ● Small Things Matter ● ●

DnBolt® eyebolt

Denom.	Thread	Lenght	Hole dimensions		Embedment depth	Maximum thickness of fixture	Required torque
		L [mm]	d ₀ [mm]	h ₀ [mm]	h ₁ [mm]	t _{fix,max} [mm]	t _{inst} [Nm]
A - 8-45/5	M6	45	8	45	30	5	10
A - 9-45/5	M6	45	9	45	30	5	10
A - 10-80/30	M8	80	10	55	37	30	15
A - 11-60/10	M8	60	11	55	37	10	15

DnBolt® hook

Denom.	Thread	Lenght	Hole dimensions		Embedment depth	Maximum thickness of fixture	Required torque
		L [mm]	d ₀ [mm]	h ₀ [mm]	h ₁ [mm]	t _{fix,max} [mm]	t _{inst} [Nm]
G - 8-45/5	M6	45	8	45	30	5	10
G - 9-45/5	M6	45	9	45	30	5	10
G - 10-60/10	M8	60	10	55	37	10	15
G - 11-60/10	M8	60	11	55	37	10	15
G - 12-70/10	M10	70	12	65	45	10	30
G - 16-80/10	M12	80	16	75	55	10	65

PROCEDIMIENTO DE INSTALACIÓN**INSTALLATION PROCEDURE**

Ø Hole		8	9	10	11	12	14	16	21	26
Characteristic spacing distance	S _{cr} [mm]	90	93	111	108	129	134	155	175	228
Minimum spacing distance	S _{min} [mm]	40	-	50	-	60	-	-	-	-
Characteristic edge distance	C _{cr} [mm]	45	47	56	54	65	67	76	88	114
Minimum edge distance	C _{min} [mm]	40	-	50	-	60	-	-	-	-
Minimum thickness of concrete	h _{min} [mm]	100	100	100	100	110	110	120	140	170

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RECOMMENDED LOADS ON C20/25 [KN]

d ₀ / Thread	6.8 Quality		8.8 Quality		Stainless steel A2 [304]		Loose dynabolt	
	Tensile N _{per}	Shear V _{per}	Tensile N _{per}	Shear V _{per}	Tensile N _{per}	Shear V _{per}	Tensile N _{per}	Shear V _{per}
8/ M6	2,9 KN	2,9 KN	2,9 KN	3,8 KN	1,7 KN	2,0 KN	-	-
9/ M6	3,4 KN	3,4 KN	-	-	1,7 KN	2,3 KN	1,8 KN	2,0 KN
10/ M8	3,6 KN	5,2 KN	3,6 KN	7,0 KN	2,0 KN	3,1 KN	-	-
11/ M8	4,2 KN	5,6 KN	-	-	2,5 KN	3,2 KN	3,2 KN	3,4 KN
12/ M10	4,8 KN	6,9 KN	4,8 KN	9,2 KN	3,3 KN	4,7 KN	-	-
14/ M10	6,1 KN	8,4 KN	-	-	3,4 KN	5,5 KN	4,1 KN	5,0 KN
16/ M12	7,4 KN	11,8 KN	-	-	4,7 KN	8,3 KN	5,7 KN	5,9 KN
21/ M16	8,8 KN	25,5 KN	-	-	-	-	8,3 KN	9,8 KN
26/ M20	10,4 KN	28,2 KN	-	-	-	-	-	-

Notes:

- Safety factor included
- Quality 6.8 and 8.8 according ETA 15-0508 in Ø8-10-12mm
- Class 6.8 y 8.8 according test results of A1 ETAG 001-1 in Applus with safety factor=2.1
- Design load = 1,4 * recommended load. The recommended load includes the increment of the load.
- Loose DNBOLT: Loads calculated with 5.6 threaded road.
- DNBOLT T21E. Screw with special design. M12 metric thread reduced from diameter of 16mm under the head.

CARGAS RECOMENDADAS PARA DNBOLT® ARO Y DNBOLT® GANCHO EN HORMIGÓN C20/25 [KN]

Denomination	DA F _{rec}	DG F _{rec}
Dnbolt 8/M6	0,6 KN	0,6 KN
Dnbolt 9/M6	0,6 KN	0,6 KN
Dnbolt 10/M8	0,6 KN	0,6 KN
Dnbolt 11/M8	0,6 KN	0,6 KN

Notes:

- Safety factor included.
- Dnbolt® eyebolt & Dnbolt®hook without CE homologation.

APPLICATIONS

- Fences
- Metal channels and supports
- Urban furniture

