



PRODUCT DATA SHEET 06.23



1
4
1
6

DROP-IN ANCHORS

DEFINING FEATURES

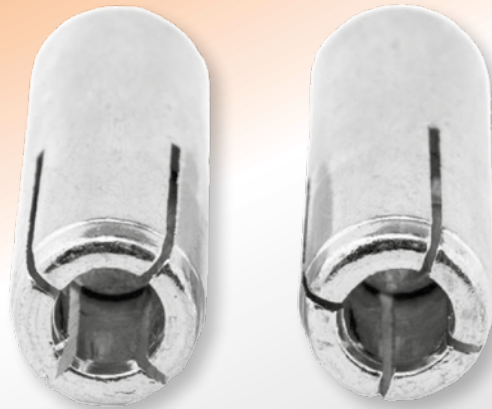
- High performance in cracked and non-cracked concrete confirmed by ETA
- Shallow embedment for flush fitting
- Designed to facilitate easy setting and expansion

CONFORMITY:

Covered with European Technical Assessment for multi-point non-structural fixings - ETA-13/0584 UKTA-22/6371.

ADDITIONAL FEATURES/ INFORMATION:

This drop-in anchor is the recommended fixing for applications requiring fire resistance.



FIRST FOR SAFETY

ADDITIONAL FEATURES

- 1 **Manufactured from high-strength steel** to ensure maximum performance in all suitable applications.
- 2 **Slotted sleeve and internal wedge component** combine to facilitate easy setting and expansion.
- 3 **This anchor is recommended for applications requiring fire resistance.**
- 4 **Approved for** cracked concrete C20/25-C50/60, non-cracked concrete C20/25-C50/60, unreinforced concrete and reinforced concrete.
- 5 **Applications include:** Pipelines systems, Ventilation systems, Sprinkler systems, Cable conduits/wires and Gratings.



DESIGNED FOR USE WITH:



AF-6140



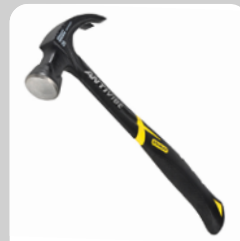
AF-6116



AF-6100



AF-6142



GT-1713

INSTALLATION:

OFTEN PURCHASED WITH:



AF-6143



AF-6136



AF-6176



AF-6178

FIRST FOR QUALITY

ORDERING INFORMATION

PART NO	MATERIAL	MIN DRILL HOLE DEPTH	THREAD DIAMETER	LENGTH	HOLE DIAMETER	BOX QUANTITY
AF-6141	Steel	65mm	16mm	65mm	20mm	25

SUITABLE INDUSTRIES



SCAFFOLDING



OIL & GAS



CONSTRUCTION



ROOFING



BRICKWORK

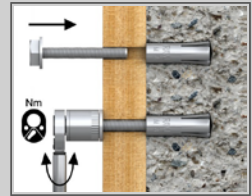
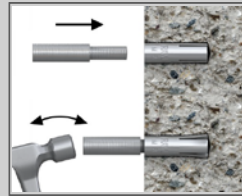
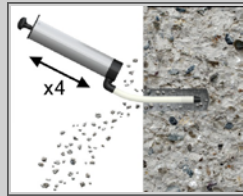
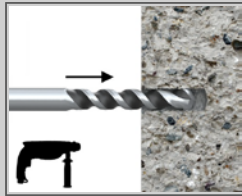


DEMOLITION



MAINTENANCE

INSTALLATION GUIDE

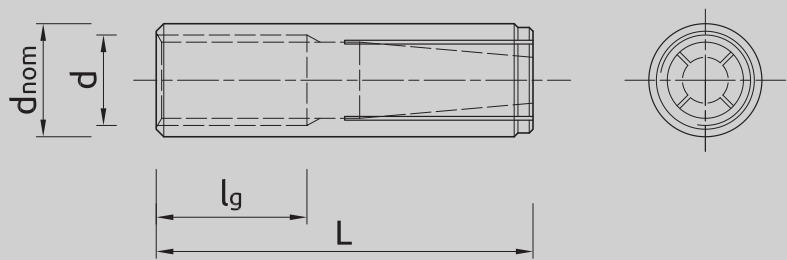


1. Drill a hole of required diameter and depth
2. Clear the hole of drilling dust and debris (using blowpump or equivalent method)
3. Insert wedge anchor, slotted end first
4. Use the setting tool to drive the internal wedge into the anchor
5. Insert bolt or stud through fixture and tighten to the recommended torque

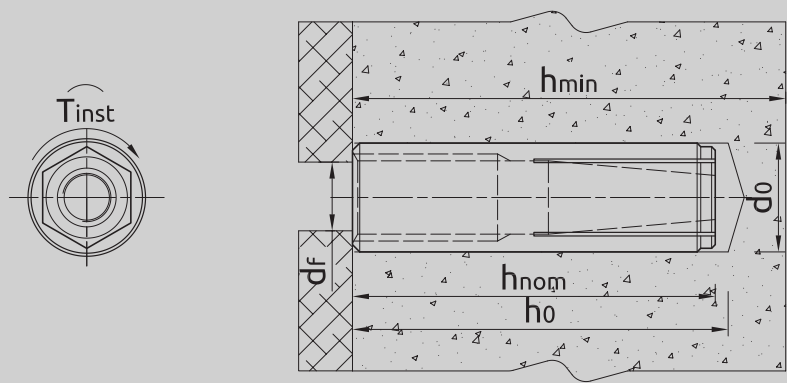
FIRST FOR INNOVATION

MECHANICAL ANCHORS:

Product information



Installation data



Normal concrete

Size			M6	M8	M10	M12	M16	M20
Thread diameter	d	[mm]	6	8	10	12	16	20
Hole diameter in substrate	d ₀	[mm]	8	10	12	15	20	25
Max. installation torque	T _{inst}	[Nm]	4.5	11	22	38	98	130
Min. hole depth in substrate	h ₀	[mm]	27	32	42	52	67	82
Min. installation depth	h _{nom}	[mm]	25	30	40	50	65	80
Min. substrate thickness	h _{min}	[mm]	80	80	80	100	130	160
Min. spacing	s _{min}	[mm]	200	200	200	200	260	320
Min. edge distance	c _{min}	[mm]	150	150	150	150	195	240

Mechanical properties

Size			M6	M8	M10	M12	M16	M20
Nominal ultimate tensile strength - tension	f _{uk}	[N/mm ²]	450	450	450	450	450	450
Nominal yield strength - tension	f _{yk}	[N/mm ²]	360	360	360	360	360	360
Cross sectional area - tension	A _s	[mm ²]	20.1	36.6	58	84.3	157	245
Elastic section modulus	W _{el}	[mm ³]	21.21	50.3	98.2	169.7	402.1	785.4

FIRST FOR SOLUTIONS

Basic performance data

Performance data for single anchor without influence of edge distance and spacing

Size		M6	M8	M10	M12	M16	M20
Effective embedment depth h_{ef}	[mm]	25.00	30.00	40.00	50.00	65.00	80.00
MEAN ULTIMATE LOAD							
TENSION AND SHEAR LOAD $F_{Rd,m}$	[kN]	-	-	-	-	-	-
CHARACTERISTIC LOAD							
TENSION AND SHEAR LOAD F_{Rk}	[kN]	1.50	3.00	4.50	6.00	13.00	17.00
DESIGN LOAD							
TENSION AND SHEAR LOAD F_{Rd}	[kN]	0.83	1.67	2.50	3.33	7.22	9.44
RECOMMENDED LOAD							
TENSION AND SHEAR LOAD F_{Rc}	[kN]	0.60	1.19	1.79	2.38	5.16	6.75

Design performance data

Normal concrete

Size			M6	M8	M10	M12	M16	M20
Effective embedment depth	h_{ef}	[mm]	25.00	30.00	40.00	50.00	65.00	80.00
TENSION AND SHEAR LOAD								
Characteristic resistance	F_{Rk}	[kN]	1.50	3.00	4.50	6.00	13.00	17.00
Installation safety factor	γ_{inst}	-	1.20	1.20	1.20	1.20	1.20	1.20
Spacing	s_{cr}	[mm]	200.0	200.0	200.0	200.0	260.0	320.0
Edge distance	c_{cr}	[mm]	150.0	150.0	150.0	150.0	195.0	240.0
SHEAR LOAD								
STEEL FAILURE; STEEL CLASS 4.8								
Characteristic resistance with lever arm	$M_{Rk,s}$	[Nm]	6.00	15.00	30.00	52.00	133.0	260.0
Partial safety factor	γ_{Ms}	-	1.25	1.25	1.25	1.25	1.25	1.25
STEEL FAILURE; STEEL CLASS 5.8								
Characteristic resistance with lever arm	$M_{Rk,s}$	[Nm]	8.00	19.00	37.00	66.00	167.0	325.0
Partial safety factor	γ_{Ms}	-	1.25	1.25	1.25	1.25	1.25	1.25
STEEL FAILURE; STEEL CLASS 6.8								
Characteristic resistance with lever arm	$M_{Rk,s}$	[Nm]	9.00	23.00	45.00	79.00	200.0	390.0
Partial safety factor	γ_{Ms}	-	1.25	1.25	1.25	1.25	1.25	1.25
STEEL FAILURE; STEEL CLASS 8.8								
Characteristic resistance with lever arm	$M_{Rk,s}$	[Nm]	12.00	30.00	60.00	105.0	267.0	520.0
Partial safety factor	γ_{Ms}	-	1.25	1.25	1.25	1.25	1.25	1.25

FIRST FOR SAFETY