Ramset™

WERCS AnkaScrew™

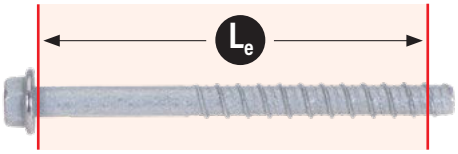
Screw in Anchors - Non-Cracked Concrete

Date	13/8/25
Reference	TDS03185

PERFORMANCE	MATERIAL	INSTALLATION RELATED

Description

The WERCS AnkaScrew™ Anchor is a medium duty, rotation setting thread forming anchor.



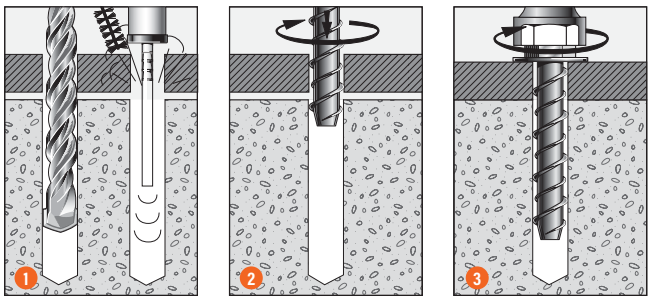
Features & Benefits

- Fast and easy to install:
- Simply screws into hole.
- Fast and easy to remove:
- Screws out leaving an empty hole with no protruding metal parts to grind off.
- Close to edge and for close anchor spacing:
- Does not expand and burst concrete.
- Uses technical data validated from testing in ANZ concrete substrates• AISI 316(A4) Stainless Steel.
- Ramset Design Method: * Uses technical data validated from testing in ANZ concrete substrates

Applications

- Pallet racking
- Temporary safety barriers
- Conveyors
- Pipe brackets
- Gate hinges into brickwork
- Temporary hand rails
- Bottom plates

Installation



1. Drill hole to correct diameter and depth. Clean thoroughly with brush. Remove debris by way of vacuum or hand pump, compressed air etc.
2. Using a socket wrench, screw the WERCS AnkaScrew™ into the hole using slight pressure until the self tapping action starts.
3. Tighten the WERCS AnkaScrew™ until flush with fixture. If resistance is experienced when tightening, unscrew anchor one turn and re-tighten. Ensure not to over tighten.

Material Specifications

Anchor part	Zn Zinc Plated	MGAL Mechanically Galvanised
Anchor body	Heat treated carbon steel	Heat treated carbon steel
Plating	Electroplated Zinc coating minimum thickness 5 microns	Mechanical Galvanised Coating minimum thickness 42 microns

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Installation and performance

Anchor size, d_b (mm)	Installation details				Optimum dimensions*		Working Load Limit (kN)			
	Drilled hole diameter, d_h (mm)	Fixture hole diameter, d_f (mm)	Anchor effective depth, h (mm)	Tightening torque, T_r (Nm)	Edge distance, e_c (mm)	Anchor spacing, a_c (mm)	Shear, V_a *** f'c ≥ 20 Mpa	Tension, N_a ** Concrete compressive strength, f'c		
								20 MPa	25 MPa	32 MPa
5	5	7	25	5	15	15	0.5	1.1	1.2	1.4
6	6	8	30	15	60	35	3.4	2.0	2.2	2.3
			37				#3.8	2.5	2.7	3.0
			45				4.1	3.2	3.4	3.8
8	8	10	40	40	80	45	6.3	3.0	3.2	3.5
			50				#7.1	4.0	4.3	4.7
			60				7.3	5.1	5.5	6.0
10	10	12	50	55	100	60	10.3	4.3	4.7	5.1
			70				11.5	6.9	7.5	8.2
			90				11.5	9.9	10.7	11.7
12	12	15	60	80	120	70	12.5	6.2	6.7	7.3
			75				14.2	8.6	9.3	10.1
			90				16.5	11.2	12.1	13.2
16	16	19	90	110	120	70	#27.7	11.5	13.3	15.7
			105				29.4	14.1	16.3	19.3
			120				29.4	16.8	19.5	23.0

* Note: For shear loads acting towards an edge or where these optimum dimensions are not achievable, please use the simplified strength limit state design process to verify capacity.
**Note: Working Load Limit concrete tensile capacity $N_a = N_{uc}$ /FoS where FoS = 3 and Nuc = Characteristic ultimate concrete tensile capacity.
*** Note: Values are for single anchor shear load direction away from concrete edge - Working Load Limit concrete edge shear capacity $V_a = V_{uc}$/FoS where FoS = 3 and V_{uc} = Charecteristic ultimate concrete edge shear capacity.
# Note: Values for shear limited by steel - Working Load Limit steel shear capacity $V_{as} = V_{us}$/FoS where FoS = 2.5 and $_{Vu}$s = Characteristic ultimate steel shear capacity.

Description And Part Numbers

Anchor Size (mm), d_b	Actual length (mm)	Effective length, L_e (mm)	Part No.	
			ZINC Hex Head	GAL Hex Head
5	30	28	AS05030	-
6	50	44	AS06050W	AS06050WGM
	75	69	AS06075W	AS06075WGM
	100	94	AS06100W	AS06100WGM
8	60	54	AS08060W	AS08060WGM
	75	69	AS08075W	AS08075WGM
	100	94	AS08100W	AS08100WGM
10	60	54	AS10060W	AS10060WGM
	75	69	AS10075W	AS10075WGM
	100	94	AS10100W	AS10100WGM
	120	114	AS10120W	AS10120WGM
	140	134	-	AS10140WGM
12	75	69	AS12075W	AS12075WGM
	100	94	AS12100W	AS12100WGM
	150	144	AS12150W	AS12150WGM
16	-	115	AS16115	-
	-	140	AS16140	-
	-	160	AS16160	-

Effective depth, h (mm)

$h = L_e - t,$

t = total thickness of material(s) being fixed

Engineering Properties

Anchor size, d_b (mm)	Stress area, A_s (mm^2)	Yield strength, f_y (MPa)	UTS, f_u (MPa)
5	15.9	600	800
6	22.9	640	800
8	42.4	640	800
10	69.4	640	800
12	84.1	640	800
16	186.3	640	800

For further information, please contact Ramset™

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