

Triga Z - Heavy Duty Structural Anchors



The Heavy Duty Anchor Range

Triga Z are heavy duty, torque controlled structural anchors with patented "pull-down" action.

Product Advantages

- Heavy duty torque controlled anchors for use in concrete over 20MPa
- Through fixing – no marking out and repositioning
- Fully assembled
- Variety of head styles
- Metal "collapse system" sleeve. Patented Z shaped anti-rotation and Z shape shearing
- Thick wall steel spacer – increased resistance of shear forces.
- Achieves high pull-out and pull-down force values
- High performance for fixture clamping
- High shear and tensile capacity, Grade 8.8 steel bolt and threaded rod
- Suitable for cracked or non-cracked concrete (ETA)

Substrates

- Concrete (cracked and non-cracked)

Approvals



ETA Option
no 99/0002



Specification

Triga Z anchors is ideally suited where security and reliability are paramount.

Triga Z Collapse System



During collapse, the Z shapes shears, which enables the upper part of the anchor to move down (bolt, washer and tube)



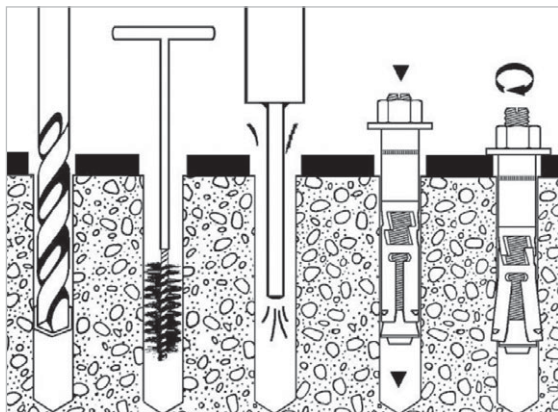
Typical Applications



- Structural steel columns
- Steel beams
- Holding down machinery
- Steel bollards
- Industrial doors
- Fixing of pre-cast units

HEAVY DUTY ANCHORS

Installation



1. Drill the correct diameter hole to the same diameter as the Triga Z stud anchor selected.
2. Remove debris from hole by blowing out with compressed air or hand held blow out pump.
3. Install the anchor in the hole with a hammer until washer seats on fixture.
4. Tighten bolt with a torque wrench to recommended assembly torque

Triga Z Bolt Head (Type V) - Zinc Plated



Part No.	Description	Thread Ø	Max Fixture Thickness (mm)*	Overall Anchor Length (mm)	Hole Ø (mm)	Min Hole Depth (mm)*	Order Qty
7C-TRIG-AV06-05	V6-10/5	M6	5	65	10	70	100
7C-TRIG-AV06-20	V6-10/20	M6	20	80	10	70	100
7C-TRIG-AV08-01	V8-12/1	M8	1	65	12	80	100
7C-TRIG-AV08-10	V8-12/10	M8	10	80	12	80	50
7C-TRIG-AV08-20	V8-12/20	M8	20	90	12	80	50
7C-TRIG-AV08-50	V8-12/50	M8	50	120	12	80	50
7C-TRIG-AV10-01	V10-15/1	M10	1	75	15	90	25
7C-TRIG-AV10-10	V10-15/10	M10	10	95	15	90	25
7C-TRIG-AM10	V10-15/20	M10	20	105	15	90	25
7C-TRIG-AV10-55	V10-15/55	M10	55	140	15	90	25
7C-TRIG-AV12-10	V12-18/10	M12	10	105	18	105	25
7C-TRIG-AM12	V12-18/25	M12	25	120	18	105	25
7C-TRIG-AV12-55	V12-18/55	M12	55	150	18	105	25
7C-TRIG-AV16-10	V16-24/10	M16	10	130	24	131	10
7C-TRIG-AV16-25	V16-24/25	M16	25	145	24	131	10
7C-TRIG-AV16-50	V16-24/50	M16	50	170	24	131	10
7C-RABB	V20-28/25	M20	25	170	28	157	5

* Data based on minimum anchor depth

Triga Z Nut Head (Type E) - Zinc Plated



Part No.	Description	Thread Ø	Max Fixture Thickness (mm)*	Overall Anchor Length (mm)	Anchor / Hole Ø (mm)	Min Hole Depth (mm)*	Order Qty
7C-TRIG-AE06-50	E6-10/50	M6	50	117	10	70	100
7C-TRIG-AE08-20	E8-12/20	M8	20	99	12	80	50
7C-TRIG-AE08-35	E8-12/35	M8	35	114	12	80	50
7C-TRIG-AE08-55	E8-12/55	M8	55	134	12	80	50
7C-TRIG-AE08-95	E8-12/95	M8	95	174	12	80	25
7C-TRIG-AE10-20	E10-15/20	M10	20	114	15	90	25
7C-TRIG-AE10-35	E10-15/35	M10	35	129	15	90	25
7C-TRIG-AE10-55	E10-15/55	M10	55	149	15	90	25
7C-TRIG-AE10-1H	E10-15/100	M10	100	194	15	90	25
7C-TRIG-AE12-25	E12-18/25	M12	25	132	18	105	25
7C-TRIG-AE12-45	E12-18/45	M12	45	152	18	105	20
7C-TRIG-AE12-65	E12-18/65	M12	65	172	18	105	10
7C-TRIG-AE12-1H	E12-18/100	M12	100	207	18	105	20
7C-TRIG-AE16-25	E16-24/25	M16	25	159	24	131	10
7C-TRIG-AE16-55	E16-24/55	M16	55	189	24	131	5
7C-TRIG-AE16-1H	E16-24/100	M16	100	234	24	131	5
7C-TRIG-AE20-25	E20-28/25	M20	25	192	28	157	5
7C-TRIG-AE20-60	E20-28/60	M20	60	227	28	157	5
7C-TRIG-AE20-1H	E20-28/100	M20	100	267	28	157	5

* Data based on minimum anchor depth

Triga Z - (Type V) Zinc Plated - Indicative Design Loads in Concrete

Thread Ø	Anchor Depth (mm)	Torque (Nm)	Anchor Spacing (mm)	Edge Distance (mm)	Shear Load (kN)*	Tension Load (kN)*
M6	50	15	150	80	22.8	11.7
M8	60	25	180	90	34.0	14.6
M10	70	50	210	120	51.7	26.4
M12	80	80	240	120	73.3	25.1
M16	100	120	300	150	124.6	45.4
M20	125	200	375	190	181.3	63.0

Indicative design load (kN) in 30N/mm² non-cracked concrete for Triga Z Bolt Head (Type V)

* Refer to Ramset Design Guide for more information or explanation of technical data

HEAVY DUTY ANCHORS

Triga Z Bolt Head (Type V) - Stainless Steel A4



Part No.	Description	Thread Ø	Max Fixture Thickness (mm)*	Overall Anchor Length (mm)	Anchor / Hole Ø (mm)	Min Hole Depth (mm)*	Order Qty
7D-TRIV-0610-SS	V6-10/10 A4	M6	10	70	10	70	100
7D-TRIV-0810-SS	V8-12/10 A4	M8	10	80	12	80	25
7D-TRIV-0830-SS	V8-12/30 A4	M8	30	100	12	80	25
7D-TRIV-1025-SS	V10-15/25 A4	M10	25	115	15	90	25
7D-TRIV-1225-SS	V12-18/25 A4	M12	25	120	18	105	25

* Data based on minimum anchor depth

Triga Z Nut Head (Type E) - Stainless Steel A4



Part No.	Description	Thread Ø	Max Fixture Thickness (mm)*	Overall Anchor Length (mm)	Anchor / Hole Ø (mm)	Min Hole Depth (mm)*	Order Qty
7D-TRIE-0845-SS	E8-12/45 A4	M8	45	124	12	80	50
7D-TRIE-1045-SS	E10-15/45 A4	M10	45	139	15	90	25
7D-TRIE-1215-SS	E12-18/15 A4	M12	15	122	18	105	25
7D-TRIE-1245-SS	E12-18/45 A4	M12	45	152	18	105	20
7D-TRIE-1625-SS	E16-24/25 A4	M16	25	157	24	130	10

* Data based on minimum anchor depth

Triga Z - (Type E) Stainless Steel A4 - Indicative Design Loads in Concrete

Thread Ø	Anchor Depth (mm)	Torque (Nm)	Anchor Spacing (mm)	Edge Distance (mm)	Shear Load (kN)*	Tension Load (kN)*
M6	50	10	150	80	8.0	11.7
M8	60	25	180	90	10.5	12.5
M10	70	50	210	120	17.3	19.1
M12	80	80	240	120	22.8	20.5
M16	95	120	300	145	46.5	34.2

Indicative design load (kN) in 30N/mm² non-cracked concrete for Triga Z Nut Head (Type E)

* Refer to Ramset Design Guide for more information or explanation of technical data