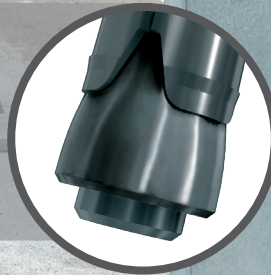




First in Safety, First in Seismic C2 Certification

SAFE INSTALLATION

Optimal expansion guaranteed by the coupling of the cone and body



UNIFORM EXPANSION

Single piece
three expanding segments

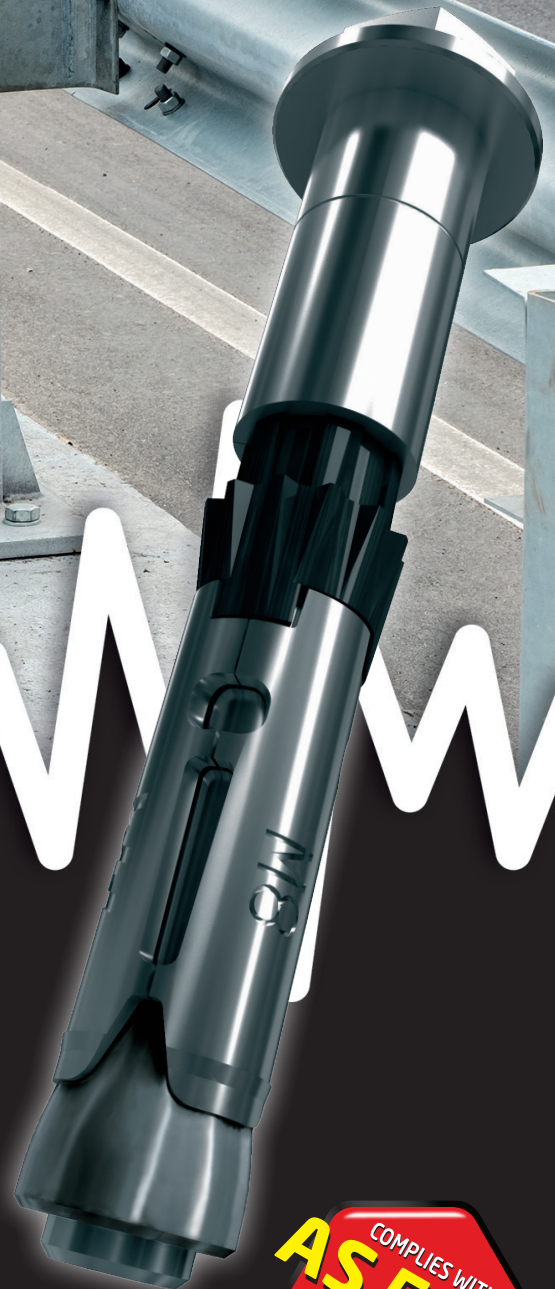
ANTI-ROTATION

The special bush shape prevents rotation



APPLICATIONS:

- Steel/Aluminium constructions which require a high certified level of safety
- Suspended applications
- Data centres & high risk applications
- Heavy duty machinery
- Airports & transport infrastructure
- Structural applications in seismic areas
- Bridging & tunnelling
- Public infrastructure



ATS-evo



FRUULSIDER **ATS-evo** YOUR FIXING FACTORY

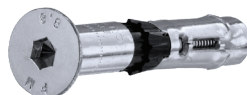
☐ **ATS-evo - Hex head bolt Carbon Steel Class 8.8 Zinc Clear**



ZINC CLEAR Part No.	Description	Drill Diameter (mm)	Clearance Hole in Fixture (mm)	Max. Fixture Thickness (mm)	Anchor Length Under Head (mm)	Hex Head / Socket Size (mm)	ETA Option	qty
ATSeS10070	10 x 70mm (M6 Bolt) (79302b10070)	10	12	10	70	10	Option 1 / Seismic C1	50
ATSeS10080	10 x 80mm (M6 Bolt) (79302b10080)			20	80			50
ATSeS10110	10 x 110mm (M6 Bolt) (79302b10110)			50	110			50
ATSeS12080	12 x 80mm (M8 Bolt) (79302b12080)	12	14	10	80	13	Option 1 / Seismic C2	25
ATSeS12090	12 x 90mm (M8 Bolt) (79302b12090)			20	90			25
ATSeS12120	12 x 120mm (M8 Bolt) (79302b12120)			50	120			25
ATSeS15090	15 x 90mm (M10 Bolt) (79302b15090)	15	17	10	90	17	Option 1 / Seismic C2	20
ATSeS15100	15 x 100mm (M10 Bolt) (79302b15100)			20	100			20
ATSeS15130	15 x 130mm (M10 Bolt) (79302b15130)			50	130			20
ATSeS15180	15 x 180mm (M10 Bolt) (79302b15180)			100	180			20
ATSeS18110	18 x 110mm (M12 Bolt) (79302b18110)	18	20	10	110	19	Option 1 / Seismic C2	20
ATSeS18125	18 x 125mm (M12 Bolt) (79302b18125)			25	125			20
ATSeS18150	18 x 150mm (M12 Bolt) (79302b18150)			50	150			20
ATSeS18200	18 x 200mm (M12 Bolt) (79302b18200)			100	200			20
ATSeS24125	24 x 125mm (M16 Bolt) (79302b24125)	24	26	10	125	24	Option 1 / Seismic C2	10
ATSeS24140	24 x 140mm (M16 Bolt) (79302b24140)			25	140			10
ATSeS24165	24 x 165mm (M16 Bolt) (79302b24165)			50	165			10
ATSeS24215	24 x 215mm (M16 Bolt) (79302b24215)			100	215			10
ATSeS28160	28 x 155mm (M20 Bolt) (79302b28160)	28	31	10	155	30	Option 1 / Seismic C2	4
ATSeS28180	28 x 175mm (M20 Bolt) (79302b28180)			30	175			4
ATSeS28210	28 x 205mm (M20 Bolt) (79302b28210)			60	205			4
ATSeS28250	28 x 245mm (M20 Bolt) (79302b28250)			100	245			4
ATSeS32180	32 x 175mm (M24 Bolt) (79302b28210)	32	35	10	175	36	Option 1 / Seismic C2	4
ATSeS32200	32 x 195mm (M24 Bolt) (79302b32200)			30	195			4
ATSeS32230	32 x 225mm (M24 Bolt) (79302b28230)			60	225			4

FRUULSIDER **ATS-evo** YOUR FIXING FACTORY

☐ **ATS-evo SK - Countersunk bolt hex socket Carbon Steel Class 8.8 Zinc Clear**



ZINC CLEAR Part No.	Description	Drill Diameter (mm)	Fixture Clearance Hole (mm)	Max. Fixture Thickness (mm)	Overall Length (mm)	Drive Type (Internal Hex)	CSK Head Width (mm)	CSK Head Height (mm)	ETA Option	qty
ATSeSK10070	10 x 75mm (M6 Bolt) (79303b10070)	10	12	15	75	5	17	5	Option 1 / Seismic C1	50
ATSeSK10080	10 x 85mm (M6 Bolt) (79303b10080)			25	85					50
ATSeSK12080	12 x 86mm (M8 Bolt) (79303b12080)	12	14	16	86	6	21	6	Option 1 / Seismic C2	25
ATSeSK12090	12 x 96mm (M8 Bolt) (79303b12090)			26	96					25
ATSeSK15090	15 x 97mm (M10 Bolt) (79303b15090)	15	17	17	97	8	26	7	Option 1 / Seismic C2	20
ATSeSK15100	15 x 107mm (M10 Bolt) (79303b15100)			27	107					20
ATSeSK18125	18 x 133mm (M12 Bolt) (79303b18125)	18	20	33	133	10	31	8	Option 1 / Seismic C2	20



Heavy Duty Safety Bolt with Seismic Certification

TDS |1043.2

VERSIONS:

- Hex head bolt
- Hex socket countersunk head screw

PRODUCT FEATURES:

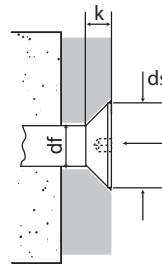
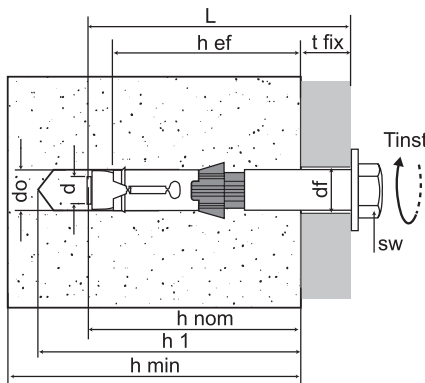
- Class 8.8 steel
- Thick shear sleeve for high shear strength
- Special nylon bush
- White zinc plated

SUITABLE BASE MATERIALS:

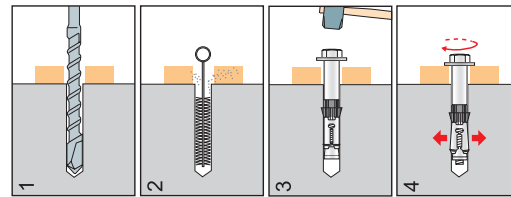


CERTIFICATIONS:

- Seismic certification C1 - C2
- OPTION 1: For cracked concrete
- F120 fire resistance certification



- d = anchor diameter
- do = hole diameter
- df = clearance hole in fixture
- dsk = countersunk head diameter
- tfix = fixture thickness
- sw = socket size
- k = countersunk head depth
- L = anchor length
- h₁ = minimum hole depth
- h_{ef} = minimum depth of anchorage
- h_{min} = min support (concrete) thickness
- h_{nom} = nominal embedment depth
- T_{inst} = torque



DESIGN⁽¹⁾ AND RECOMMENDED⁽²⁾ LOADS

Single anchor with large anchor spacing and edge distances in cracked and uncracked concrete C20/25

Anchor		M6	M8	M10	M12	M16	M20	M24			
Minimum support thickness	h _{min}	mm	100	120	140	180	200	250	300		
Minimum hole depth	h ₁	mm	75	85	95	115	130	160	180		
Nominal embedment depth	h _{nom}	mm	60	70	80	100	115	145	165		
Minimum depth of anchorage	h _{ef}	mm	49	59	67	88	99	125	150		
Hole diameter	d ₀	mm	10	12	15	18	24	28	32		
Spacing	S _{cr,N}	mm	147	177	201	264	297	375	450		
Edge distance	C _{cr,N}	mm	74	89	101	132	149	188	225		
Tensile uncracked concrete	Design Loads	N _{rd,ucr⁽¹⁾}	kN	10.7	14.9	18.0	27.1	32.3	45.8	60.3	
	Recommended Loads	N _{ucr⁽²⁾}	kN	7.6	10.6	12.9	19.3	23.1	32.7	43.0	
Tensile cracked concrete	Design Loads	N _{rd,cr⁽¹⁾}	kN	6.0	8.0	10.7	16.7	22.6	32.1	42.2	
	Recommended Loads	N _{cr⁽²⁾}	kN	4.3	5.7	7.6	11.9	16.2	22.9	30.1	
Shear ⁽³⁾ uncracked concrete	Design Loads	V _{rd,ucr⁽¹⁾}	kN	11.2	14.9	33.6	40.0	64.6	91.7	120.5	
	Recommended Loads	V _{ucr⁽²⁾}	kN	8.0	10.6	24.0	28.6	46.2	65.5	86.1	
Shear ⁽³⁾ cracked concrete	Design Loads	V _{rd,cr⁽¹⁾}	kN	7.9	10.4	25.2	37.9	45.2	64.2	84.4	
	Recommended Loads	V _{cr⁽²⁾}	kN	5.6	7.4	18.0	27.1	32.3	45.8	60.3	
Seismic Resistance Category C1	Tensile	Design Loads	N _{rd,eq C1⁽¹⁾}	kN	4.5	8.0	10.7	16.1	19.2	27.3	35.9
		Recommended Loads	N _{eq C1⁽²⁾}	kN	3.2	5.7	7.6	11.5	13.7	19.5	25.6
	Shear ⁽³⁾	Design Loads	V _{rd,eq C1⁽¹⁾}	kN	6.7	8.8	16.0	16.0	38.4	54.5	71.7
		Recommended Loads	V _{eq C1⁽²⁾}	kN	4.8	6.3	11.4	11.4	27.5	39.0	51.2
Seismic Resistance Category C2	Tensile	Design Loads	N _{rd,eq C2⁽¹⁾}	kN	-	2.6	5.2	10.2	19.2	21.9	27.5
		Recommended Loads	N _{eq C2⁽²⁾}	kN	-	1.9	3.7	7.3	13.7	15.6	19.7
	Shear ⁽³⁾	Design Loads	V _{rd,eq C2⁽¹⁾}	kN	-	8.2	13.6	13.6	35.1	54.5	59.7
		Recommended Loads	V _{eq C2⁽²⁾}	kN	-	5.8	9.7	9.7	25.1	39.0	42.6
Minimum spacing	S _{min}	mm	50	60	70	80	100	125	150		
	for C	mm	75	90	100	150	200	250	300		
Minimum edge distance	C _{min}	mm	50	60	70	80	100	125	150		
	for S	mm	75	90	100	150	200	250	300		
Shear C = Cmin	V _{rd,min}	kN	3,3	4,5	5,8	7,5	11,0	14,3	23,7		
	V _{min}	kN	2,4	3,2	4,2	5,4	7,8	10,2	16,9		
Torque	T _{inst}	Nm	10	20	45	80	150	170	200		

⁽¹⁾ The design loads N_{rd} and V_{rd} are derived from the characteristic loads in the ETA 10/0423 certification and are inclusive of the partial safety factors γ_m proportional to each diameter (see ETA).
⁽²⁾ The recommended loads N_d and V are derived from the characteristic loads in the ETA 10/0423 certification and are inclusive of the partial safety factors γ_r=1.4 and γ_m proportional to each diameter (see ETA).
⁽³⁾ Shear values valid with distance from the edge C > 10 x h_{ef}.
 The load values are only valid if the installation has been carried out correctly. The design engineer is responsible for the designing and calculation of the fixing. The design and calculation of an anchorage should be carried out in accordance with AS 5216.



Download DesignPRO

AS5216:2021 COMPLIANT NCC ANCHOR DESIGN

IT'S EASY AND FREE



- ✓ Fast software download and its easy and FREE!
- ✓ **ICCONS®** DesignPRO Anchoring Software complying with AS 5216:2021
 - Includes Design of fastenings under seismic actions
 - Includes Design of redundant non-structural system
 - Combined loading and displacement calculations
- ✓ Unique all-in-one screen interface with easy data input and results display
- ✓ Interactive 3D model display for clear anchor and baseplate layout including rotation functionality
- ✓ Integrated FEA (Finite Element Analysis) for quick base plate thickness calculations
- ✓ Offers design solutions for rigid and elastic baseplates
- ✓ Flexible custom anchor and base plate geometry design for complex shapes and applications
- ✓ Utilizes Australian steel profiles and material grades
- ✓ All product and all failure modes individually checked for precise anchor analysis and selection
- ✓ Summary or detailed design report options available to save or print.

FREE DOWNLOAD for DesignPRO using the following link
www.iccons.com.au/software/design-pro

ICCONS® PTY LTD

VICTORIA - HEAD OFFICE
 383 Frankston Dandenong Road,
 Dandenong South,
 Vic, 3175
 P: **03 9706 4344**

NSW Branch
 Unit A, 17 Seddon Street,
 Bankstown,
 New South Wales, 2200
 P: **02 9791 6869**

QLD Branch
 42-44 Nealdon Dr,
 Meadowbrook,
 Queensland, 4131
 P: **07 3200 6455**

FNQ Branch
 41 Corporate Crescent,
 Garbutt,
 Queensland, 4814
 P: **07 2111 3453**

S.A Branch
 29-31 Weaver Street
 Edwardstown,
 South Australia, 5039
 P: **08 8234 5535**

W.A. Branch
 90 Christable Way,
 Landsdale,
 Western Australia, 6065
 P: **08 6305 0008**

N.T Branch
 Unit 1, 14 Menmuir Street,
 Winnellie,
 Northern Territory, 0820
 P: **08 8947 2758**

New Zealand

Sesto Fasteners
 5E Piermark Drive,
 Rosedale, Auckland,
 New Zealand, 0632
 P: **+64 9415 8564**
 E: sestofasteners@gmail.com

THAILAND

ICCONS® (Thailand) Co. Ltd.
 55 Phetkasem 62/3, Bangkhae,
 Bangkok, 0160
 P: **+66 2 801 0764**
 F: **+66 2 801 0764**
 M: **+66 8 1 710 8745**
 E: icconsthailand@iccons.com.au