

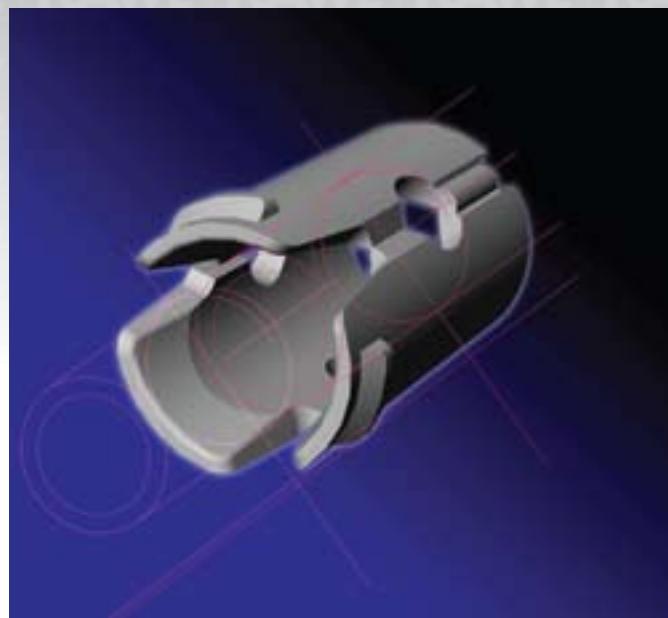
Heritage

For over 90 years, the Rawlplug brand has been synonymous with innovation, reliability and safety in the development and manufacture of construction anchors and ancillary products.

In 1919, John J. Rawlings, a London builder, developed and patented the first ever specialist wall fixing. His revolutionary Fibre Plug was the product from which the modern range of Rawlplug fixings was to develop.

The company expanded dramatically and today it is one of the world's leading fixing manufacturers with distribution on every continent.

Innovation remains at the heart of Rawlplug's success, including significant developments of torque controlled anchors and bonded anchor systems for safety critical applications.



Product Approval

The proven quality and performance of Rawlplug and Rawl Fixings anchors is demonstrated by the numerous independent approvals that Rawlplug and Rawl Fixings products carry. In fact, in 1999, Rawlplug became the first UK manufacturer to obtain European technical approvals (ETA) for cracked and non-cracked concrete.

Other international approvals include:



FRANCE - SOCOTEC



High Quality Manufacturing

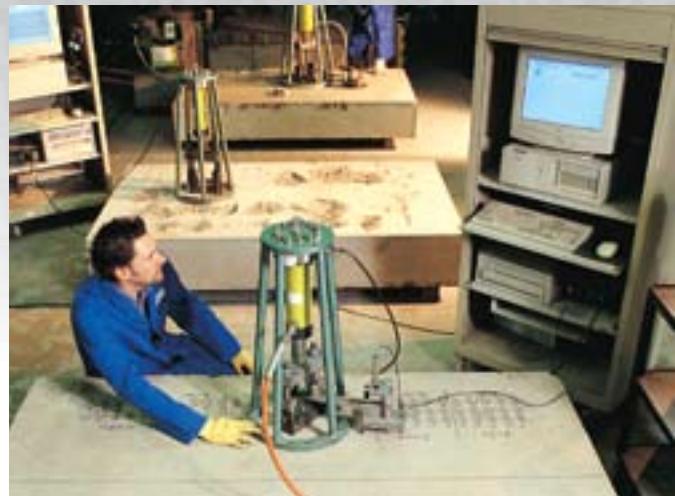
Rawlplug and Rawl Fixings products are manufactured using some of the most advanced production facilities in the industry. Rawlplug and Rawl Fixings anchors are renowned for their consistent high quality and performance.

The company's quality system is approved to BS EN ISO 9001: 2000 for design and manufacture.

The company also places great emphasis on providing a safe working environment for its employees.

Product Development & Testing Facilities

Achievement and maintenance of the numerous approvals is largely due to the extensive technical facility at Rawlplug's modern testing centre in Glasgow. Equipped with 3D solid modelling technology, finite element analysis systems and the latest testing equipment, Rawlplug's testing capability is amongst the best in the world.



Technical Support Service

Rawlplug's Technical Advisory Service offers free advice on the correct selection and installation of anchors to distributors, specifiers and users around the world. Staffed by qualified engineers with many years of experience, the technical support service provides:

- Assistance via telephone, e-mail or fax
- Advice on anchor design and selection
- Advice on usage & application, including contractor training
- Recommendations on fixing solutions
- On site testing (mainly UK)
- Technical seminars
- Distributor training

This service is supported by field engineers available to visit design offices and contractors at short notice.

Technical literature, and a CD-Rom design disc is available to users, specifiers and distributors. Full up-to-date information on all Rawlplug activities is available on the Rawlplug website www.rawlplug.co.uk.

In addition, Rawlplug distributors are serviced by dedicated and experienced customer support teams. Each team can provide distributors and users with advice on:

- Product availability
- Pricing and order placement
- Order and despatch status
- Literature
- Quotations
- Product samples



Worldwide Distribution Network

Fast, reliable availability of Rawlplug and Rawl Fixings products is guaranteed thanks to our extensive international network.

Rawlplug has subsidiaries in Scandinavia, Ireland, France & UAE.

Area sales managers cover all areas of the UK, Europe and the Middle East providing distributor support, site training and advice.

Background

October 1997 marked the first significant step in the development, selection and use of structural and safety critical anchor bolts. The European Commission adopted the first ever European Technical Approval Guideline (ETAG) for any construction product.

ETAG 001, Parts 1-3 "Metal Anchors for use in Concrete"

These parts of the ETAG cover torque controlled anchors such as Rawl R-HPT and Rawl R-XPT Throughbolts. Adoption of the ETAG 001 marked the first stage of harmonisation of product approval systems throughout Europe.

This harmonisation has been sought after by manufacturers, specifiers and end users for many years, allowing products to be compared on a like for like basis and the free passage of products within Europe.

ETAG 001, Part 4 "Metal Anchors for use in Concrete"

Adopted in December 1998, it covers deformation controlled anchors such as the Rawl Wedge Anchor (more commonly known as "drop-in" anchor).

ETAG 001 Part 5 „Metal Anchors for use in Concrete”

That part covers bonded anchors such as Rawl R-CAS-V spin-in capsules, R-HAC-V hammer-in capsules and R-KER/RV200 injection resin systems.

Scope

ETAG 001 covers all structural and safety relevant applications where there is risk to human life or considerable economic consequence. It is extremely difficult to clearly identify the applications where approved products should be selected or which are covered by the scope of the ETAG.

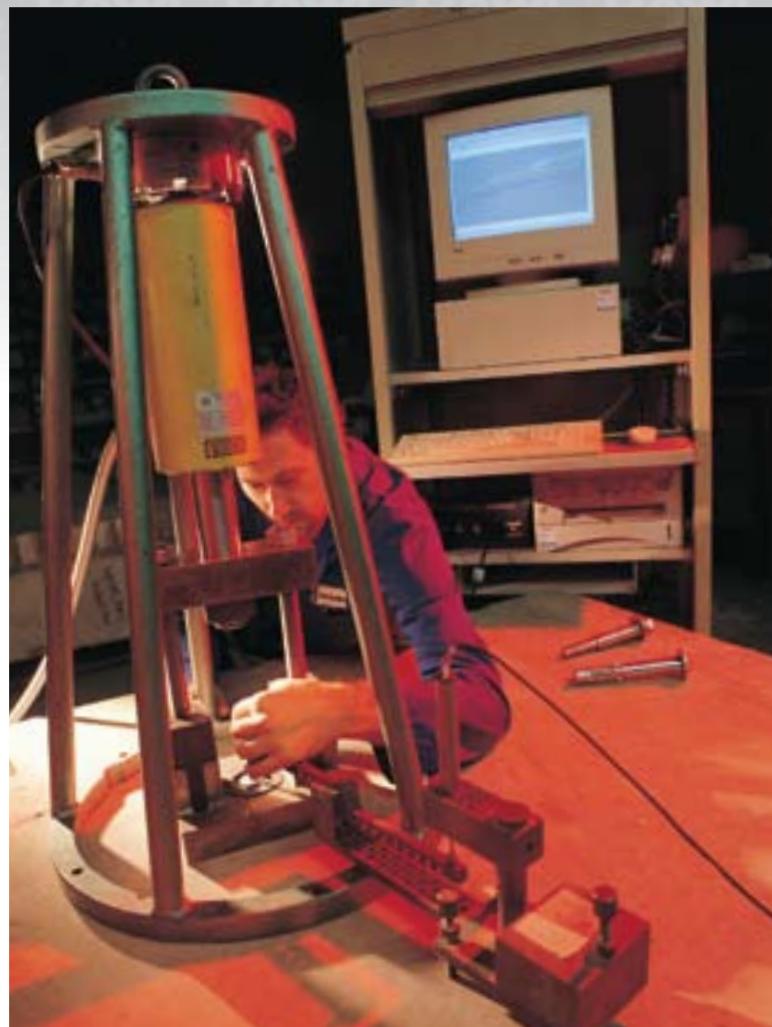
Testing and Assessment

European Technical Approvals (ETA's) can only be awarded after satisfying the demanding requirements of the comprehensive test programme described within ETAG 001, "Metal Anchors for use in Concrete".

Suitability tests determine the functionality of the anchor under the most likely and extreme deviations from installation and service conditions. This would include: variations in concrete strengths, tolerances of hole diameter, deviations in installation torques, repeated and sustained loads, cracked concrete and the subsequent movement of such cracks.

Admissible Service Condition tests are used to establish characteristic loads (i.e. tensile, shear and combined), and all edge spacing distances when installed in accordance with the manufacturers instructions.

Stringent assessment criteria are also applied to all tests. Load/displacement graphs must show positive gradients with no sign of slipping of the anchor. The mean ultimate load in all suitability tests must attain a given percentage of the reference values obtained in the Admissible Service Condition tests and all test results must have limited scatter.



The net effect of the new comprehensive range of tests and stringent assessment criteria will reduce current load performances and increase the edge distances and spacings for all products, in comparison with current published and accepted performance.

Manufacturing

The manufacturer must also satisfy and demonstrate to an independent control body that they have effective control of the manufacturing specifications and processes for the approved product. This control is product specific and is far more complex and detailed than the general BS EN ISO 9001:2000 specification. This ensures the highest quality is maintained for these safety critical products, a policy which Rawlplug has always upheld.

CE Marking

To affix CE marking to an anchor, it must have two important documents:

- 1) A European Technical Approval (ETA) in accordance with the ETAG 001 "Metal Anchors for use in Concrete".
- 2) A certificate of attestation from an independent control body.

Only then can an anchor possess CE marking.



Benefits

ETAG approved and CE marked products will enable specifiers, distributors, contractors and end users to have the utmost confidence in specifying, selling and installing these products, where safety and reliability are paramount and where performance and quality can be assured.

Rawl Fixings

Rawlplug and Rawl Fixings have continued to develop their range of products to meet these requirements to ensure their customers can satisfy current and future market needs with new, improved anchors with increased safety.

Rawl Fixings has been awarded ETA approvals and CE marking for the Rawl R-HPT range and Rawl R-XPT Throughbolts i.e. ETA's 98/0003 and 08/0339 and corresponding certificates of attestation.

Rawlplug and Rawl Fixings were the first UK manufacturer of any construction products to be awarded an ETA and CE marking.

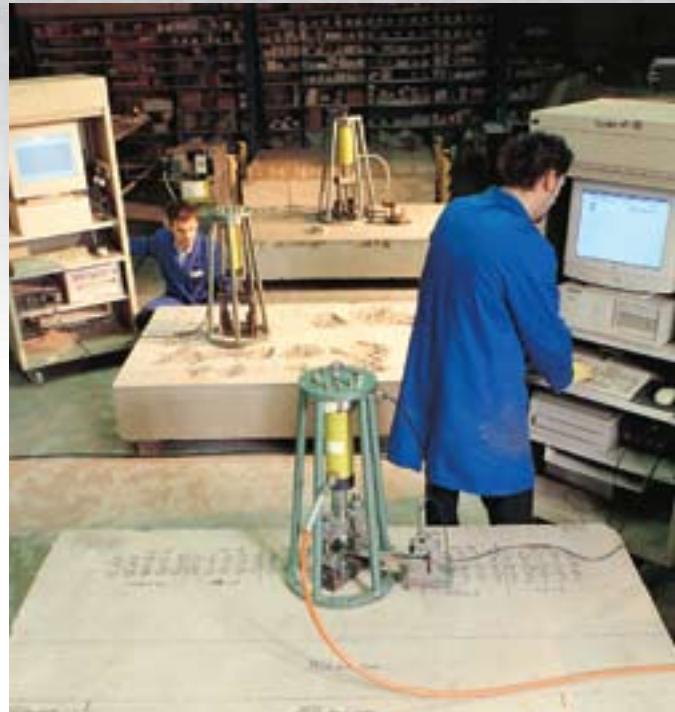
This ensures that customers are supplied with world class products of the highest quality and technical performance which can be independently certified.

Future

This new approach to approvals has led to unknown territory where there is generally low awareness of the detail and on the impact it will have on the use of these products. This particularly applies to the definition and the scope of cracked concrete, structural and safety critical applications. To complicate matters further each member state within the EC has still to prescribe a transition period for their market place, whereby existing national approval systems will run their course and eventually be superceded by the new approach to ETA's. This is likely to be a protracted and diverse procedure.

During this transition period national approvals will still be accepted, although the performance data has been based on different testing and assessment criteria. Direct comparison of performance data between approval systems cannot be made. Therefore products which are currently used in the market place can still be used during this transition period. This situation is complex and confusing, but during this stage customers can rely on Rawlplug and Rawl Fixings to provide guidance on selection and supply of approved products to meet their requirements.

Rawlplug and Rawl Fixings continue to be represented on the working groups which compile future guidelines and building regulations, thus ensuring that their customers are kept up-to-date with current developments and that their requirements are continuously considered.



Rawlplug Ltd. is proud to be a member of the Construction Fixings Association (CFA) which represents major fixings suppliers within the UK and whose aims are summarised in the phrase:

Ensuring Best Fixings Practice

The Association achieves this by:

- Publishing a series of free Guidance Notes*
- Contributing to the development of European Guidelines for Technical Approval of anchors
- Being directly involved in the development of European and British Standards
- Working with other influential bodies such as CIRIA and BBA to improve the understanding and use of the fixings.
- Supporting specific industries in the development of guidelines for their use of fixings.

All **CFA Members** are committed to providing technically proven products manufactured to recognised Quality Assurance procedures and backed up with comprehensive technical support services including performance data, applications advice, site testing and training in the correct use of our products.

* Downloadable free from the website which also carries articles, news and technical advice www.fixingscfa.co.uk

For more information contact:

The Secretary,

Construction Fixings Association
65 Dean Street, Oakham, LE15 6AF

Tel & Fax 01664-474755
email: info@fixingscfa.co.uk

HIGH PERFORMANCE MECHANICAL ANCHORS

HIGH PERFORMANCE BONDED ANCHORS

LIGHTWEIGHT FIXINGS

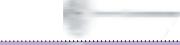
DESCRIPTION		PAGE	BASE MATERIAL							
			CONCRETE	STONE	BRICKWORK	BLOCKWORK	PLASTER	WOOD	SOLID	PERFORATED
STRUCTURAL LIGHTWEIGHT	STANDARD									
SAFETYPLUS®		8	∅	✓	∅					
SOCKET ANCHOR		12	∅	✓	∅					
RAWL® R-HPT Throughbolt		13	∅	✓	∅					
RAWL® R-XPT Throughbolt		14	∅	✓	∅					
BRASS EXPANSION ANCHORS		16	∅	✓	✓	✓	✓			
WEDGE ANCHOR		17	∅	✓						
LIPPED WEDGE ANCHOR		18	∅	✓						
RAWLBOLT® Shield Anchor		19	∅	✓	✓	✓	✓	∅		
RAWLOK®		23		✓	✓	✓	✓	∅	∅	
SR Expansion anchor		25								
KT Sleeve anchor		26								
R-CAS-V		27	✓	✓	∅					
R-HAC-V		28	✓	✓						
CFS+ RV200		29	✓	✓						
CFS+ RM50		31	✓	✓	✓	✓	✓	✓	✓	✓
CFS+ RP30		33	✓	✓	✓	✓	✓	✓	✓	✓
R-KF2		35	✓	✓	✓	✓	✓	∅	✓	✓
R-KEM +		36	✓	✓	✓	✓	✓	✓	✓	✓
R-KER		37	✓	✓	✓	✓				
R-KEX		38	✓	✓	✓					
BONDED ANCHORS ACCESSORIES		39	AS APPLICABLE							
STUDS AND SOCKETS		40	AS APPLICABLE							
THREADED RODS AND MESH SLEEVES		41	AS APPLICABLE							
UNO UNIVERSAL PLUG		42	✓	✓	✓	✓	✓	✓	✓	✓
FIX EXPANSION PLUG		44	✓	✓	✓	✓	✓	✓	✓	
KS UNIVERSAL EXPANSION PLUG		47	✓	✓	✓	✓	✓		✓	
STAIR-TREAD FIXINGS		48	✓	✓	✓	✓	✓		✓	
DOOR STOPS BALL SHAPED		49	✓	✓	✓	✓	✓		✓	
LIGHTWEIGHT BLOCK ANCHOR		49						✓		
SANITARY FIXINGS		50	✓	✓	✓	✓	✓	∅	✓	∅
FF1 FRAME FIXINGS		52	✓	✓	✓	✓	✓	✓	✓	✓
FRAME FIXINGS WITH SHORT EXPANSION ZONE		53	✓	✓	✓	✓	✓		✓	
FRAME FIXINGS WITH LONG EXPANSION ZONE		54	✓	✓	✓	✓	✓	✓	✓	✓
HAMMER FIXINGS		55	✓	✓	✓	✓	✓	✓	✓	✓

LIGHTWEIGHT FIXINGS

SELF DRILLING SCREWS

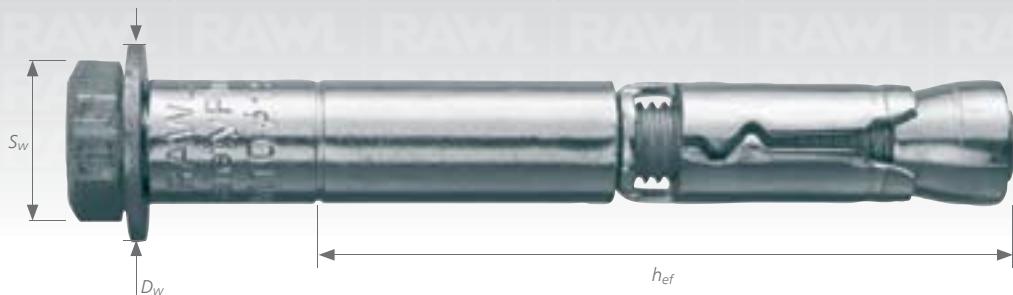
DESCRIPTION	PAGE	BASE MATERIAL							
		CONCRETE		STONE	BRICKWORK		BLOCKWORK		PLASTER BOARD
		STRUCTURAL LIGHTWEIGHT	STANDARD	SOLID	PERFORATED	LOW DENSITY	HOLLOW		WOOD
HAMMER FIXINGS WITH LONG EXPANSION ZONE WITH STEEL NAIL	56	✓	✓	✓	✓	✓	✓	✓	
METAL FRAME ANCHORS	57	✓	✓	✓	✓	✓	✓	✓	
CONQUEROR CONCRETE SCREWBOLT	58	✓	✓						
CONCRETE SCREWS	59	✓	✓	✓	✓				
DRYWALL SCREWS	60	AS APPLICABLE							
PAN HEAD SCREWS	61	AS APPLICABLE							
DECKING SCREWS	61	AS APPLICABLE							
SELF-DRIVE PLASTERBOARD FIXINGS	62								✓
INTERSET HEAVY DUTY CAVITY FIXINGS	64							✓	✓
SPRING TOGGLS	66							✓	✓
PLASTIC TOGGLS	67							✓	✓
RAWLNUT – FLEXI PLUG	68	✓	✓	✓	✓	✓	✓	✓	✓
CEILING SPRING PIN	69	✓	✓	✓					
WIRE HANGER	69	✓	✓						
METAL HAMMER FIXINGS	70	✓	✓	✓	✓	✓			
CEILING ANCHOR	70	✓	✓	✓	✓	✓			
SCAFFOLDING EYEBOLTS & PLUGS	71	✓	✓	✓	✓	✓	✓		
WINDOW FITTING SCREWS	72								✓
WAFER HEAD SCREWS	72	AS APPLICABLE							
CHIPBOARD SCREWS	73	AS APPLICABLE							
PLASTIC WOOD	74								✓
FLOOR FILLER	74								✓
OCW self drilling screws	75								
OC self drilling screws	76								
ON, ONP self drilling screws	77								
OD self drilling screws to wooden constructions	78								
OCWS stainless steel self drilling screws	79								
OCS stainless steel self drilling screws	80								
ONS stainless steel self drilling screws	81								
ODWS stainless steel self drilling screws to wooden constructions	82								
OC-55/63, OCS-55/63 self drilling screws for steel composite panels	83								
ON-55/63, ONS-55/63 self drilling screws for steel composite panels	84								
WF, WFS wafer head screws	85								
CAPS	86								
WASHERS	86								

DIRECT FASTENING
FIXINGS, TOOLS
AND ACCESSORIESFAÇADE AND ROOFING
INSULATION FIXINGSFAÇADE AND ROOFING
INSULATION FIXINGS

	DESCRIPTION	PAGE	BASE MATERIAL							
			CONCRETE		STONE	BRICKWORK		BLOCKWORK		PLASTER BOARD
	STRUCTURAL LIGHTWEIGHT	STANDARD	SOLID	PERFORATED	LOW DENSITY	HOLLOW				
PATRON MX AND CONSUMABLES		87	✓	✓						
WW90CH FRAMING NAILER AND CONSUMABLES		90							✓	
SC40 NAILER AND CONSUMABLES		91	✓	✓	✓	✓	✓	✓		
2ND FIX NAILERS AND BRADS		92							✓	✓
STAPLE TOOLS AND STAPLES		93							✓	✓
KI-10			95	AS APPLICABLE						
KI-10N			96	AS APPLICABLE						
KI-10M			97	AS APPLICABLE						
KI-10NS			98	AS APPLICABLE						
TFIX-8M			99	AS APPLICABLE						
INSULATION FLANGE			100	AS APPLICABLE						
INSULATION HOLDING FLANGE			100	AS APPLICABLE						
GOK			101	AS APPLICABLE						
GOK-PLUS			102	AS APPLICABLE						
GOK-75			103	AS APPLICABLE						
GOK-WX/WO PRE-ASSEMBLED TELESCOPIC SYSTEM			104	AS APPLICABLE						
STEEL WASHERS			105	AS APPLICABLE						
WO			106	AS APPLICABLE						
WX			107	AS APPLICABLE						
WB			108	AS APPLICABLE						
WW			109	AS APPLICABLE						
WBT			110	AS APPLICABLE						
WCS			111	AS APPLICABLE						
K08L EXPANSION PLUG			112	AS APPLICABLE						
ELECTRIC SCREWDRIVER BIT			112	AS APPLICABLE						

SAFETYPLUS™ LOOSE BOLT

Product Information

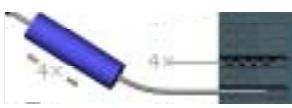


Description		Features		Suitable for use in		Typical applications						
SafetyPlus™ is an all steel high performance expansion anchor, suitable for the most demanding safety critical applications. This range offers exceptional tension, shear and combined load performance in concrete.		1. 8.8 grade bolt. 2. High strength steel washer. 3. Integral controlled collapse and anti-rotation feature ensures fixture is firmly secured. 4. Unique zig-zag feature provides balanced expansion ensuring secure setting and maximum load carrying capacity. 5. Case-hardened nut with optimum angle taper for maximum expansion.		Concrete		<ul style="list-style-type: none"> Structural steel Masonry support Cladding restraints Road signs Heavy machinery Racking systems Industrial doors Safety barriers. 						
						  PENDING						
BOLT SIZE (d)	BOLT LENGTH (mm) (l)	BOLT HEAD DIAMETER (mm) (S_w)	WASHER DIAMETER (mm) (D_w)	MAXIMUM FIXTURE THICKNESS (mm) (t_{fix})	HOLE DIAMETER	MINIMUM HOLE DEPTH IN CONCRETE (mm) (d_0)	EFFECTIVE EMBEDMENT DEPTH (mm) (h_{ef})	RECOMMENDED TORQUE (Nm) (T_{inst})	ZINC PLATED			
					IN FIXTURE (mm) (d_f)	IN CONCRETE (mm) (d_0)			NUMERIC CODE	PRODUCT CODE		
M8	90	12	21	15	14	12	80	60	120	25	50-010	R-SPL-08090/15
	110			40							50-015	R-SPL-08110/40
M10	105	15	24	20	17	15	90	70	140	50	50-020	R-SPL-10105/20
	120			40							50-025	R-SPL-10120/40
	140			60							50-030	R-SPL-10140/60
M12	120	18	30	25	20	18	105	80	160	80	50-035	R-SPL-12120/25
	150			50							50-040	R-SPL-12150/50
M16	145	24	40	25	26	24	125	100	200	180	50-050	R-SPL-16145/25
	170			50							50-055	R-SPL-16170/50
M20	175	28	50	30	30	28	155	125	240	275	50-065	R-SPL-20175/30

Installation



1. Drill a hole of required diameter and depth through clearance hole in the fixture into concrete.



2. Remove debris and thoroughly clean hole.



3. Insert SafetyPlus™ anchor through fixture into hole and tap home.



4. Tighten to the recommended torque.

SAFETYPLUS™ BOLT PROJECTING

Product Information



Description	Features	Suitable for use in	Typical applications
A high performance steel expansion anchor, suitable for the most demanding safety critical applications. This range offers exceptional tension, shear and combined load performance in concrete.	<ul style="list-style-type: none"> 1. 8.8 grade stud with slot for final adjustment. 2. High strength steel washer. 3. Sleeve provides maximum shear load performance. 4. Integral controlled collapse and anti-rotation feature ensures fixture is firmly secured. 5. Unique zig-zag feature provides balanced expansion ensuring secure setting and maximum load carrying capacity. 6. Case-hardened nut with optimum angle taper for maximum expansion. 7. Nut and washer allow for fixture to be removed and relocated easily. 	Concrete	<ul style="list-style-type: none"> • Structural steel • Masonry support • Cladding restraints • Road signs • Heavy machinery • Racking systems • Industrial doors • Safety barriers.



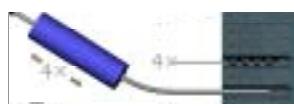
PENDING

BOLT SIZE (d)	BOLT LENGTH (mm) (l)	NUT DIAMETER (mm) (S_w)	WASHER DIAMETER (mm) (D_w)	MAXIMUM FIXTURE THICKNESS (mm) (T_fx)	HOLE DIAMETER		MINIMUM HOLE DEPTH IN CONCRETE (mm) (d_0)	EFFECTIVE EMBEDMENT DEPTH (mm) (h_ef)	MINIMUM SUBSTRATE THICKNESS (mm) (h_min)	RECOMMENDED TORQUE (Nm) (T_inst)	ZINC PLATED	
					IN FIXTURE (mm) (d_f)	IN CONCRETE (mm) (d_0)					NUMERIC CODE	PRODUCT CODE
M8	95	12	21	15	14	12	80	60	120	25	50-110	R-SPL-BP-08095/15
M10	110	15	24	20	17	15	90	70	140	50	50-120	R-SPL-BP-10110/20
M12	135	18	30	25	20	18	105	80	160	80	50-135	R-SPL-BP-12135/25
				50							50-140	R-SPL-BP-12160/50
M16	160	24	40	25	26	24	125	100	200	180	50-150	R-SPL-BP-16160/25
	185			50							50-155	R-SPL-BP-16185/50
M20	190	30	50	30	30	28	155	125	250	275	50-165	R-SPL-BP-20190/30

Installation



1. Drill a hole of required diameter and depth through clearance hole in the fixture into concrete.



2. Remove debris and thoroughly clean hole.



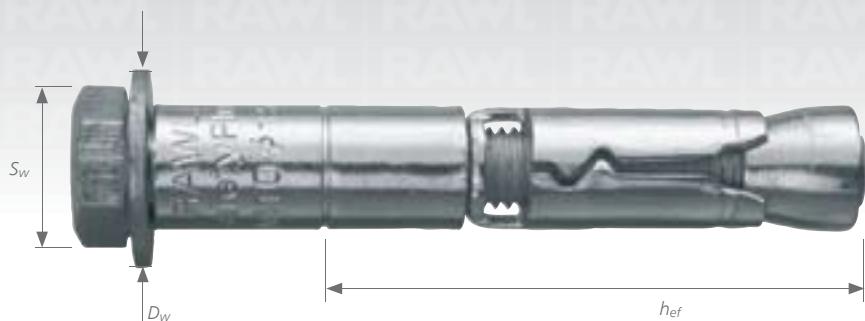
3. Insert SafetyPlus™ anchor through fixture into hole and tap home.



4. Tighten to the recommended torque.

SAFETYPLUS™ LIMITED EMBEDMENT

Product Information



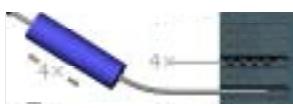
Description	Features	Suitable for use in	Typical applications
A high performance steel expansion anchor, suitable for the most demanding safety critical applications. This range offers exceptional tension, shear and combined load performance in concrete.	<ul style="list-style-type: none"> 1. 8.8 grade bolt. 2. High strength steel washer. 3. Sleeve provides maximum shear load performance. 4. Integral controlled collapse and anti-rotation feature ensures fixture is firmly secured. 5. Unique zig-zag feature provides balanced expansion ensuring secure setting and maximum load carrying capacity. 6. Case-hardened nut with optimum angle taper for maximum expansion. 	Concrete	<ul style="list-style-type: none"> • Structural steel • Road signs • Industrial doors • Masonry support • Heavy machinery • Safety barriers • Cladding restraints • Racking systems.

BOLT SIZE (d)	BOLT LENGTH (mm) (l)	BOLT HEAD DIAMETER (mm) (S_w)	WASHER DIAMETER (mm) (D_w)	MAXIMUM FIXTURE THICKNESS (mm) (T_{fix})	HOLE DIAMETER		MINIMUM HOLE DEPTH IN CONCRETE (mm) (d_0)	EFFECTIVE EMBEDMENT DEPTH (mm) (h_{ef})	MINIMUM SUBSTRATE THICKNESS (mm) (h_{min})	RECOMMENDED TORQUE (Nm) (T_{inst})	ZINC PLATED	
					IN FIXTURE (mm) (d_f)	IN CONCRETE (mm) (d_0)					NUMERIC CODE	PRODUCT CODE
M8	80	13	21	25	14	12	55	40	100	25	50-005	R-SPL-LE-08080/25
M10	90	17	24	25	17	15	70	50	110	50	50-018	R-SPL-LE-10090/25
M12	100	19	30	25	20	18	85	60	130	80	50-033	R-SPL-LE-12100/25
M16	130	24	40	30	26	24	100	75	165	180	50-048	R-SPL-LE-16130/30

Installation



1. Drill a hole of required diameter and depth through clearance hole in the fixture into concrete.



2. Remove debris and thoroughly clean hole.



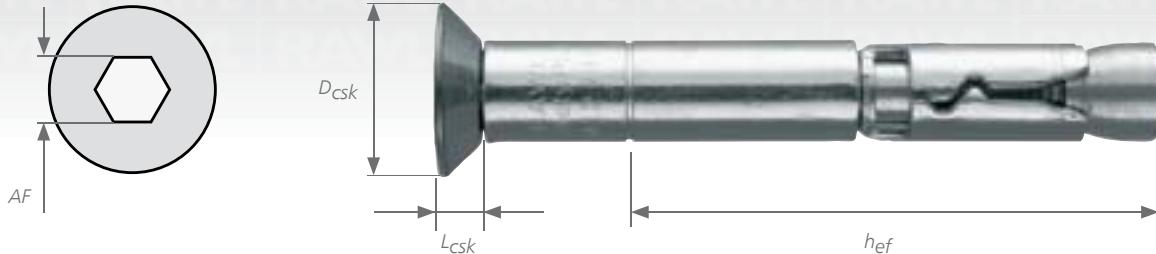
3. Insert SafetyPlus™ anchor through fixture into hole and tap home.



4. Tighten to the recommended torque.

SAFETYPLUS™ COUNTER SUNK

Product Information



Description	Features	Suitable for use in	Typical applications
High performance countersunk all steel high performance expansion anchor for safety critical applications where a flush fixing is required in concrete.	<ul style="list-style-type: none"> 1. 8.8 grade countersunk bolt for flush fitting installation. 2. High strength steel washer. 3. Sleeve provides maximum shear load performance. 4. Integral controlled collapse and anti-rotation feature ensures fixture is firmly secured. 5. Unique zig-zag feature provides balanced expansion ensuring secure setting and maximum load carrying capacity. 6. Case-hardened nut with optimum angle taper for maximum expansion. 	Concrete	<ul style="list-style-type: none"> • Walkways • Platforms • Public seating • Storage systems • Balustrading • Lighting columns • Structural steel.



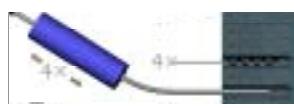
PENDING

BOLT SIZE (d)	BOLT LENGTH (mm) (l)	HEX DRIVER SIZE (mm) (AF)	MAXIMUM HEAD DIAMETER (mm) (D _{csk})	COUNTERSUNK DEPTH (mm) (L _{csk})	MAXIMUM FIXTURE THICKNESS (mm) (T _{fix})	HOLE DIAMETER		MINIMUM HOLE DEPTH IN CONCRETE (mm) (d ₀)	EFFECTIVE EMBEDMENT DEPTH (mm) (h _{ef})	MINIMUM SUBSTRATE THICKNESS (mm) (h _{min})	RECOMMENDED TORQUE (Nm) (T _{inst})	ZINC PLATED	
						IN FIXTURE (mm) (d _f)	IN CONCRETE (mm) (d ₀)					NUMERIC CODE	PRODUCT CODE
M8	90	6	22	5.5	20	14	12	80	60	120	25	50-210	R-SPL-C-08090/20
M10	105	8	28	7.0	25	17	15	90	70	140	50	50-220	R-SPL-C-10105/25
M12	125	10	33	7.6	30	20	18	105	80	160	80	50-235	R-SPL-C-12125/30
M16	145	12	40	8.5	30	26	24	125	100	200	180	50-250	R-SPL-C-16145/30

Installation



1. Drill a hole of required diameter and depth through clearance hole in the fixture into concrete.



2. Remove debris and thoroughly clean hole.



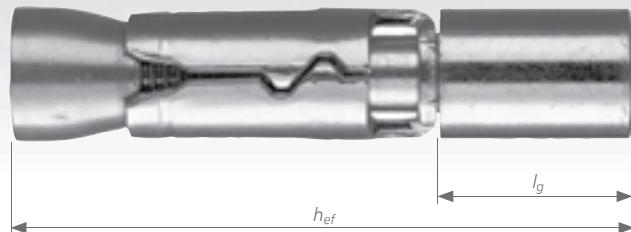
3. Insert SafetyPlus™ anchor through fixture into hole and tap home.



4. Tighten using hexagon driver to the recommended torque.

SOCKET ANCHOR

Product Information



Description	Features	Suitable for use in	Typical applications
A versatile problem solving fixing, providing a permanent high performance threaded socket for a wide variety of studding applications, including deep embedment applications.	<ul style="list-style-type: none"> 1. Internally threaded socket for stud or rebar. 2. Integral controlled collapse and anti-rotation feature ensures fixture is firmly secured. 3. Unique zig-zag feature provides balanced expansion ensuring secure setting and maximum load carrying capacity. 4. Case-hardened nut with optimum angle taper for maximum expansion. 	Concrete	<ul style="list-style-type: none"> • Starter bar • Formwork supports • Temporary works • Heavy machinery • Lighting columns • Structural steel

THREAD SIZE (d)	ANCHOR LENGTH (mm) (l)	INTERNAL THREAD LENGTH (mm) (l_g)	HOLE DIAMETER		SET FLUSH TO SURFACE			SET AT DEPTH			MAX. RECOMMENDED TORQUE (Nm)		ZINC PLATED	
			IN FIXTURE (mm) (d_f)	IN CONCRETE (mm) (d_o)	MINIMUM HOLE DEPTH (mm) (d_f)	EFFECTIVE EMBEDMENT DEPTH (mm) (h_eff)	MINIMUM SUBSTRATE THICKNESS (mm) (h_min)	MINIMUM HOLE DEPTH (mm) (d_f)	EFFECTIVE EMBEDMENT DEPTH (mm) (h_eff)	MINIMUM SUBSTRATE THICKNESS (mm) (h_min)	4.6 STUD (T _{inst})	8.8 STUD (T _{inst})	PRODUCT CODE	PRODUCT CODE
M8	55	8	10	12	65	45	90	80	60	120	11	19	86-510	R-SOC-08
M10	67	13	12	15	75	55	110	90	70	140	22	37	86-515	R-SOC-10
M12	80	17	14	18	90	65	130	105	80	160	39	65	86-520	R-SOC-12
M16	95	18	18	24	105	80	160	125	100	200	96	163	86-525	R-SOC-16
M20	115	24	24	28	125	95	190	155	125	250	187	280	86-530	R-SOC-20

Installation



1. Drill a hole of required diameter and depth through clearance hole in the fixture into concrete.



2. Remove debris and thoroughly clean hole.



3. Screw studding into socket. Assemble two nuts at the other end of the studding.



4. Ensuring nuts are securely locked together, apply the recommended torque through the top nut. Carefully slacken and remove nuts.



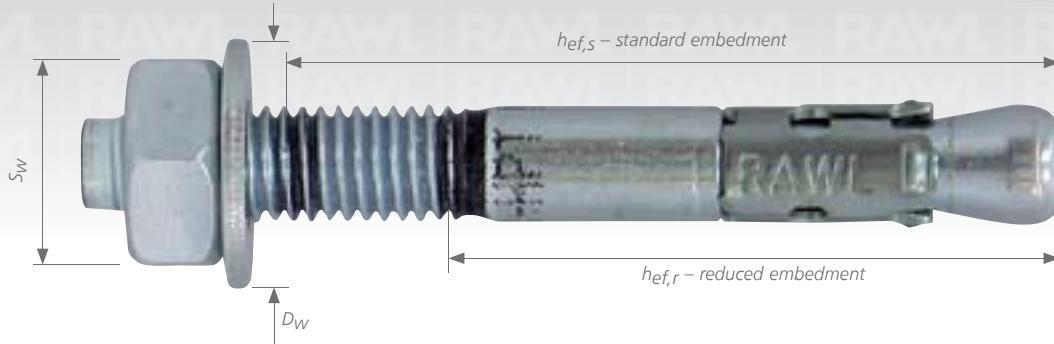
5. Apply fixture, washer and hexagon nut.



6. Apply torque to ensure clamping of fixture against concrete surface.

R-HPT THROUGHBOLT

Product Information



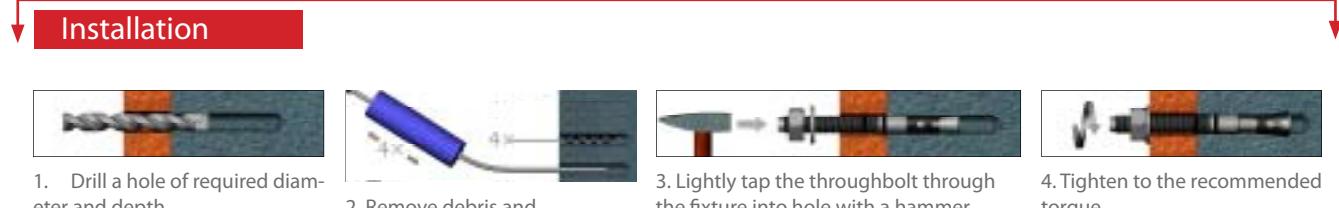
Description	Features	Suitable for use in	Typical applications
<p>The RAWL® Throughbolt range has been developed to meet the changing demands of the market in terms of product approval levels, ease of fixing and product quality.</p> <p>The versatile through fixing for use in a wide range of applications in concrete of 20 N/mm² and over.</p> <p>Available in: Zinc plated steel.</p> <p>For European Approvals see p 6/7.</p>	<ol style="list-style-type: none"> Standard and limited embedment depth markings to ensure correct installation. Cold formed body ensures constant dimensional accuracy. Stainless steel expander provides an enhanced performance in cracked concrete. Optimum cone angle for controlled expansion. Tested and approved by the independent UK and international approval bodies. 	Cracked and Uncracked Concrete	<ul style="list-style-type: none"> Cladding restraints Barriers Structural steel Curtain walling Hand rails Heavy plant Balustrading Passenger lifts



ETA-98/0003

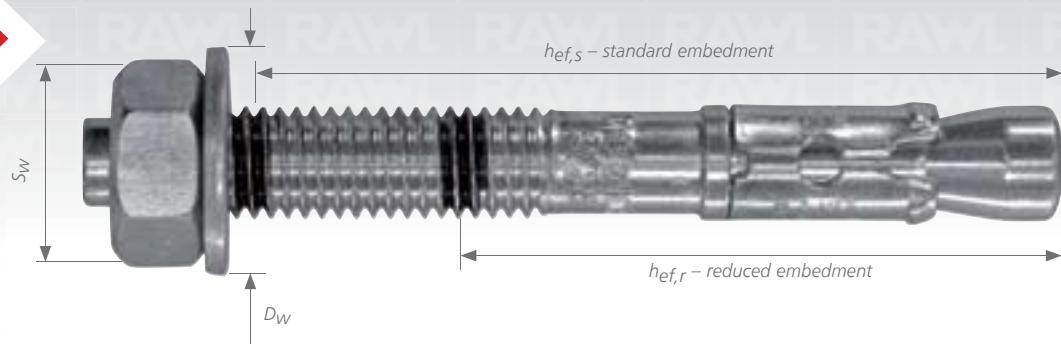
Option 1

BOLT SIZE/HOLE IN CONCRETE (mm) (d)/(d_o)	BOLT LENGTH (mm) (l)	NUT DIAMETER (mm) (AF) (S_w)	WASHER DIAMETER (mm) (D_w)	THREAD LENGTH (mm) (l_c)	HOLE DIAMETER IN FIXTURE (mm) (l_g)	STANDARD EMBEDMENT			REDUCED EMBEDMENT			MINIMUM SUBSTRATE THICKNESS (mm) (h_{min})	RECOMMENDED TORQUE (Nm) (T_{inst})	ZINC PLATED	
						MIN. HOLE DEPTH (mm) ($h_{0,s}$)	EFFECTIVE EMBEDMENT (mm) ($h_{ef,s}$)	MAX. FIXTURE THICKNESS (mm) ($T_{fix,s}$)	MIN. HOLE DEPTH (mm) ($h_{0,r}$)	EFFECTIVE EMBEDMENT (mm) ($h_{ef,r}$)	MAX. FIXTURE THICKNESS (mm) ($T_{fix,r}$)			NUMERIC CODE	PRODUCT CODE
M8 8 mm	50	13	17	14	—	—	—	—	40	26	5	100	15	56-314	R-HPT-08050/5
	65			25	—	—	—	—	33	15	—			56-316	R-HPT-08065/15
	80			40	55	48	15	—	33	30	—			56-320	R-HPT-08080/15
	95			55	55	48	30	—	33	45	—			56-325	R-HPT-08095/30
	115			65	55	48	50	—	33	65	—			56-325	R-HPT-08115/50
M10 10 mm	65	17	21	22	—	—	—	—	50	37	5	100	25	56-328	R-HPT-10065/5
	80			30	60	53	7	—	40	40	16			56-330	R-HPT-10080/7
	95			46	60	53	22	—	40	40	32			56-332	R-HPT-10095/22
	115			65	60	53	42	—	40	40	52			56-334	R-HPT-10115/42
	130			80	60	53	57	—	40	40	67			56-336	R-HPT-10130/57
M12 12 mm	80	19	24	30	—	—	—	—	60	48	5	110	60	56-338	R-HPT-12080/5
	100			40	80	74	4	—	48	48	24			56-340	R-HPT-12100/4
	120			60	80	74	24	—	48	48	44			56-342	R-HPT-12120/24
	135			75	80	74	39	—	48	48	58			56-344	R-HPT-12135/39
	150			90	80	74	54	—	48	48	73			56-346	R-HPT-12150/54
M16 16 mm	105	24	30	55	—	—	—	—	80	65	5	130	110	56-350	R-HPT-16105/5
	140			60	100	89	20	—	67	67	40			56-352	R-HPT-16140/20
	180			100	100	89	60	—	67	67	80			56-354	R-HPT-16180/60
	220			140	100	89	100	—	67	67	120			56-356	R-HPT-16220/100
	125	30	37	65	—	—	—	—	100	80	5			56-360	R-HPT-20125/5
	160			65	120	105	20	—	85	85	40			56-362	R-HPT-20160/20
	200			100	120	105	60	—	85	85	80			56-364	R-HPT-20200/60
	300			100	120	105	160	—	85	85	180			56-366	R-HPT-20300/160



R-XPT THROUGHBOLT

Product Information



Description	Features	Suitable for use in	Typical applications
<p>The RAWL® Throughbolt range has been developed to meet the changing demands of the market in terms of product approval levels, ease of fixing and product quality.</p> <p>The versatile through fixing for use in a wide range of applications in concrete of 20N/mm² and over.</p> <p>Available in: Zinc plated steel, Hot dip galvanized, Stainless steel grade A4.</p> <p>For European Approvals see p. 6/7</p>	<ol style="list-style-type: none"> Embedment depth markings to ensure correct installation. Cold formed body ensures constant dimensional accuracy. Optimum cone angle for controlled expansion. Tested and approved by the independent UK and international approval bodies. Reduced embedment depth to overcome the problem of hitting re-bar when installing the product on sites. 	Concrete	<ul style="list-style-type: none"> Cladding restraint Curtain wall Balustrading Barriers Handrails Racking Structural Steel Bollards.



ETA-08/0339

RAWL® R-XPT Throughbolt Zinc Plated

BOLT SIZE/HOLE IN CONCRETE (mm) (d)/(d_0)	BOLT LENGTH (mm) (l)	NUT DIAMETER (mm) (AF) (S_w)	WASHER DIAMETER (mm) (D_w)	THREAD LENGTH (mm) (t_d)	HOLE DIAMETER IN FIXTURE (mm) (l_c)	STANDARD EMBEDMENT	REDUCED EMBEDMENT	MINIMUM SUBSTRATE THICKNESS (mm) (h_{min})	RECOMMENDED TORQUE (Nm) (T_{inst})	ZINC PLATED PRODUCT CODE				
M6 6 mm	50 65 85	10	12.5	25 35 55	6.5	- 50 50	- 42 42	- 5 25	30 30 30	22 22 22	10 25 45	90	5	R-XPT-06050/10* R-XPT-06065/5* R-XPT-06085/25*
M8 8 mm	60 65 75 80 85 95 115 140 150	13	17	25 30 35 40 45 55 55 55 100 110	9	- - - - 47 47 47 47 47	- - - 10 15 20 30 35	- 5 10 15 20 30 35	40 40 40 40 40 40 40 40 40	32 32 32 32 32 32 32 32 32	10 15 25 30 35 45 65 90 100	100	15	R-XPT-08060/10 R-XPT-08065/15 R-XPT-08075/10 R-XPT-08080/15 R-XPT-08085/20 R-XPT-08095/30 R-XPT-08115/50 R-XPT-08140/75 R-XPT-08150/85
M10 10 mm	65 80 95 115 130 140 150 180	17	21	21 31 46 59 59 59 59 131	11	- - - 49 49 49 49 49	- 10 15 20 30 45 50 80	- 5 25 49 49 49 70 110	49 49 49 49 49 49 49 49	39 39 39 39 39 39 39 39	5 20 35 55 70 80 90 120	115	30	R-XPT-10065/5 R-XPT-10080/10 R-XPT-10095/25 R-XPT-10115/45 R-XPT-10130/60 R-XPT-10140/70 R-XPT-10150/80 R-XPT-10180/110
M12 12 mm	80 100 120 125 135 140 150 180 220 300	19	24	21 30 60 65 80 80 90 100 120 140	13	- - - - 49 49 68 68 68 68 68 68 68 68	- - - - 45 45 60 60 60 80 80 125	- 5 25 30 40 40 55 60 60 205	60 60 60 60 60 60 60 60 60 60	48 48 48 48 48 48 48 48 48 48	5 25 45 50 60 65 75 105 145 225	140	50	R-XPT-12080/5 R-XPT-12100/5 R-XPT-12120/25 R-XPT-12125/30 R-XPT-12135/40 R-XPT-12140/45 R-XPT-12150/55 R-XPT-12180/85 R-XPT-12220/125* R-XPT-12300/205*
M16 16 mm	90 100 105 125 140 150 160 180 220 300	24	30	30 30 35 45 100 100 100 100 100 100	18	- - - - 85 85 85 85 85 85	- - - - 5 20 30 40 40 100	- 80 80 80 80 80 80 80 80 80	65 80 80 80 80 80 80 80 80 80	50 65 65 65 65 65 65 65 65 65	10 5 10 25 40 50 60 80 120 180	170	100	R-XPT-16090/10* R-XPT-16100/5 R-XPT-16105/10 R-XPT-16125/5 R-XPT-16140/20 R-XPT-16150/30 R-XPT-16160/40 R-XPT-16180/60 R-XPT-16220/100* R-XPT-16280/160*
M20 20 mm	125 160 200 300	30	37	50 61 100 100	22	- - - - 99 99 60 160	- - - - 20 20 79 79	- 99 99 99 99 97	99 99 99 99 79 79 80 80	79 40 80 180	5 40 80 180	200	200	R-XPT-20125/5 R-XPT-20160/20 R-XPT-20200/60* R-XPT-20300/160*
M24 24 mm	180 260 300	36	44	65 65 65	26	135 135 135	112 112 112	20 100 140	120 120 120	97 97 97	35 115 155	220	300	R-XPT-24180/20* R-XPT-24260/100* R-XPT-24300/140*

* not covered by ETA

RAWL® R-XPT Throughbolt Hot Dip Galvanized – made to order

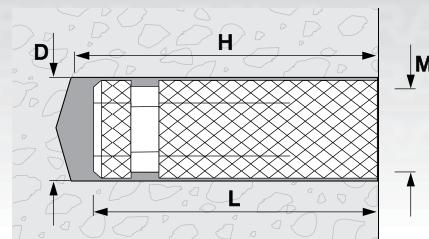
BOLT SIZE/HOLE IN CONCRETE (mm) (d/d_o)	BOLT LENGTH (mm) (l)	NUT DIAMETER (mm) (AF) (S_w)	WASHER DIAMETER (mm) (D_w)	THREAD LENGTH (mm) (l_g)	HOLE DIAMETER IN FIXTURE (mm) (l_g)	STANDARD EMBEDMENT			REDUCED EMBEDMENT			MINIMUM SUBSTRATE THICKNESS (mm) (h_{min})	RECOMMENDED TORQUE (Nm) (T_{inst})	HOT DIP GALVANIZED	PRODUCT CODE
						MIN. HOLE DEPTH (mm) ($h_{o,s}$)	EFFECTIVE EMBEDMENT (mm) ($h_{ef,s}$)	MAX. FIXTURE THICKNESS (mm) ($T_{fix,s}$)	MIN. HOLE DEPTH (mm) ($h_{o,r}$)	EFFECTIVE EMBEDMENT (mm) ($h_{ef,r}$)	MAX. FIXTURE THICKNESS (mm) ($T_{fix,r}$)				
M6 6 mm	50	10	12.5	25	6.5	-	-	-	30	22	10	90	5	R-XPT-HD-06050/10 R-XPT-HD-06085/25 R-XPT-HD-06100/40	
	85			55		50	42	25	30	22	45				
	100			70		50	42	40	30	22	60				
	60			25		-	-	-	40	32	10				
	65			30		-	-	-	40	32	15				
	75			35		55	47	10	40	32	25				
	80			40		55	47	15	40	32	30				
	95			55		55	47	30	40	32	45				
	115			75		55	47	50	40	32	65				
	140			100		55	47	75	40	32	90				
M8 8 mm	65	13	17	21	9	-	-	-	49	39	5	100	15	R-XPT-HD-08065/15 R-XPT-HD-08075/10 R-XPT-HD-08085/15 R-XPT-HD-08095/30 R-XPT-HD-08115/50 R-XPT-HD-08140/70	
	80			31		59	49	10	49	39	20				
	95			46		59	49	25	49	39	35				
	115			66		59	49	45	49	39	55				
	130			81		59	49	60	49	39	70				
	140			91		59	49	70	49	39	80				
	80			30		-	-	-	60	48	5				
	100			40		80	68	5	60	48	25				
	120			60		80	68	25	60	48	45				
	125			65		80	68	30	60	48	50				
M10 10 mm	135	17	21	75	13	80	68	40	60	48	60	100	25	R-XPT-HD-10095/25 R-XPT-HD-10115/45 R-XPT-HD-10130/60 R-XPT-HD-10140/70	
	150			90		80	68	55	60	48	75				
	180			100		80	68	85	60	48	105				
	220			120		80	68	125	60	48	145				
	100			30		-	-	-	80	65	5				
	105			35		-	-	-	80	65	10				
	125			45		100	85	5	80	65	25				
	140			60		100	85	20	80	65	40				
	150			70		100	85	30	80	65	50				
	180			100		100	85	60	80	65	80				
M12 12 mm	220	19	24	140	18	100	85	100	80	65	120	110	45	R-XPT-HD-16100/5 R-XPT-HD-16105/10 R-XPT-HD-16125/25 R-XPT-HD-16135/40 R-XPT-HD-16150/55 R-XPT-HD-16180/85 R-XPT-HD-16220/125	
	100			30		-	-	-	60	48	5				
	105			35		-	-	-	80	65	10				
	125			45		100	85	5	80	65	25				
	140			60		100	85	20	80	65	40				
	150			70		100	85	30	80	65	50				
	180			100		100	85	60	80	65	80				
	220			140		100	85	100	80	65	120				
	100			30		-	-	-	60	48	5				
	125			40		80	68	5	60	48	25				
M16 16 mm	150	24	30	70	18	80	68	30	60	48	50	140	50	R-XPT-HD-16125/5 R-XPT-HD-16140/20 R-XPT-HD-16150/30 R-XPT-HD-16180/60 R-XPT-HD-16220/100	
	180			90		100	85	60	80	65	80				
	220			140		100	85	100	80	65	120				
	125			50		-	-	-	99	79	5				
	140			61		119	99	20	99	79	40				
	150			61		119	99	60	99	79	80				
	180			100		119	99	160	99	79	180				
	200			100		119	99	60	99	79	80				
	300			100		119	99	160	99	79	180				
	260			36		44	65	26	135	112	100	120	97	115	220


RAWL® R-XPT Throughbolt Stainless Steel Grade 316 (A4)

BOLT SIZE/HOLE IN CONCRETE (mm) (d/d_o)	BOLT LENGTH (mm) (l)	NUT DIAMETER (mm) (AF) (S_w)	WASHER DIAMETER (mm) (D_w)	THREAD LENGTH (mm) (l_g)	HOLE DIAMETER IN FIXTURE (mm) (l_g)	STANDARD EMBEDMENT			REDUCED EMBEDMENT			MINIMUM SUBSTRATE THICKNESS (mm) (h_{min})	RECOMMENDED TORQUE (Nm) (T_{inst})	STAINLESS STEEL GRADE 316 (A4)	PRODUCT CODE
						MIN. HOLE DEPTH (mm) ($h_{o,s}$)	EFFECTIVE EMBEDMENT (mm) ($h_{ef,s}$)	MAX. FIXTURE THICKNESS (mm) ($T_{fix,s}$)	MIN. HOLE DEPTH (mm) ($h_{o,r}$)	EFFECTIVE EMBEDMENT (mm) ($h_{ef,r}$)	MAX. FIXTURE THICKNESS (mm) ($T_{fix,r}$)				
M6 6 mm	50	10	12.5	25	6.5	-	-	-	30	22	10	90	5	R-XPT-A4-06050/10 R-XPT-A4-06085/25 R-XPT-A4-06100/40	
	85			55		50	42	25	30	22	45				
	100			70		50	42	40	40	32	10				
	60			25		-	-	-	40	32	15				
	65			30		-	-	-	40	32	25				
	75			35		55	47	10	40	32	30				
	80			40		55	47	15	40	32	35				
	95			45		55	47	20	40						

BRASS ANCHOR

Product Information



Description

Brass Anchor for medium loads.
Anchor is set by torquing the screw or stud inducing expansion.
Possibility of anchoring in substrates where a deep hole cannot be drilled.
Surface-flush anchorage allows the attached item to be removed and refitted several times.
Suitable for all screws and studs with a metric thread.

Suitable for use in

Concrete
Solid Brickwork
Stone

Typical applications

- Pipes
- Suspended ceilings
- Scaffolding
- Ventilation systems
- Gates
- Gratings
- Cable trays

THREAD SIZE (mm) (M)	HOLE DIAMETER (mm) (D)	HOLE DEPTH (mm) (H)	ANCHOR LENGTH (mm) (L)	QUANTITY		PRODUCT CODE
				PACK	OUTER	
M5	7	22	20	100	2400	ST-05
M6	8	24	22	100	2400	ST-06
M8	10	32	30	100	2400	ST-08
M10	12	34	32	100	2400	ST-10
M12	15	40	38	50	1200	ST-12
M16	20	48	45	50	1200	ST-16

Installation



1. Drill a hole of required diameter and depth.

2. Remove debris and thoroughly clean hole with brush and pump.

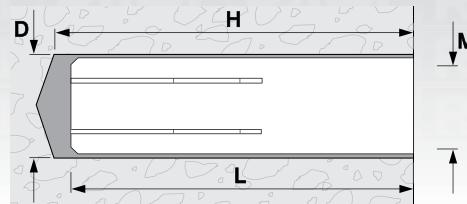
3. Insert brass anchor, slotted end first.

4. Use the manual or mechanical setting tool when required to drive the internal wedge into the anchor.

5. Tighten to the recommended torque.

R-DCA WEDGE ANCHOR

Product Information



Description		Features		Suitable for use in		Typical applications	
<p>Provides permanently fixed threaded sockets in concrete.</p> <p>Allows bolts or studs to be installed and removed without damaging the anchor.</p> <p>Available in: zinc plated steel and stainless steel grade A4 (1.4401).</p> <p>Install with manual setting tool or mechanical setting tool for use with hammer action drilling machines.</p>		<ol style="list-style-type: none"> Internally threaded to take stud or bolt. Easy to install by hammer action. Slotted sleeve and captive internal tapered wedge to facilitate easy setting and expansion. 		Concrete		<ul style="list-style-type: none"> For permanently fixing threaded sockets in concrete and good quality stone. Ideal for secure fixing for mechanical services, cable trays, electrical platforms, drain covers, suspended ceilings etc. Securing equipment that may need to be removed or replaced. 	



ETA-08/0198

THREAD SIZE (d)	ANCHOR LENGTH (mm) (l)	THREAD LENGTH (mm) (l _G)	HOLE DIAMETER (mm) (d ₀)	HOLE DEPTH (mm) (h ₀)	MAXIMUM RECOMMENDED TORQUE (Nm) (T _{inst})	ZINC PLATED		STAINLESS STEEL GRADE 316 (A4)	
						Numeric Code	Product Code	Numeric Code	Product Code
M6	25	11	8	27	4.5	77-108	R-DCA-06-25	77-608	R-DCA-06-25-A4
M8	30	13	10	32	11	77-120	R-DCA-08-30*	77-620	R-DCA-08-30-A4
M10	40	15	12	42	22	77-132	R-DCA-10-40*	77-632	R-DCA-10-40-A4
M12	50	20	15	52	38	77-141	R-DCA-12-50*	77-641	R-DCA-12-50-A4
M16	65	25	20	67	95	77-150	R-DCA-16-65	77-650	R-DCA-16-65-A4
M20	80	35	25	82	185	77-162	R-DCA-20-80	-	-

* ETA approval

Manual Setting Tool



THREAD SIZE (d)	Numeric Code	Product Code
M6	77-208	R-DCA-ST-06
M8	77-220	R-DCA-ST-08
M10	77-232	R-DCA-ST-10
M12	77-241	R-DCA-ST-12
M16	77-250	R-DCA-ST-16
M20	77-262	R-DCA-ST-20

Mechanical Setting Tool

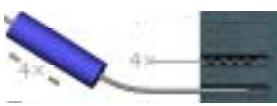


THREAD SIZE (d)	Grip Type	Numeric Code	Product Code
M6	SDS-plus	77-209	R-DCA-SDS-06
M8	SDS-plus	77-221	R-DCA-SDS-08
M10	SDS-plus	77-233	R-DCA-SDS-10
M12	SDS-plus	77-242	R-DCA-SDS-12
M16	SDS-max	77-251	R-DCA-SDS-16
M20	SDS-max	77-263	R-DCA-SDS-20

Installation



1. Drill a hole of required diameter and depth.



2. Remove debris and thoroughly clean hole with brush and pump.



3. Insert wedge anchor, slotted end first.



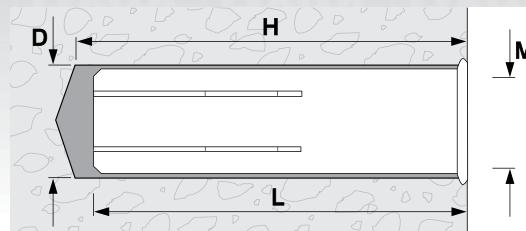
4. Use the manual or mechanical setting tool when required to drive the internal wedge into the anchor.



5. Tighten to the recommended torque.

R-DCL LIPPED WEDGE ANCHOR

Product Information



Description	Features	Suitable for use in	Typical applications
<p>The Lipped Wedge Anchor provides an easy to install fixing. Allows for bolts and studs to be installed and removed without effecting the anchor. Available in zinc plated steel. Install with manual setting tool or mechanical setting tool for use with hammer action drilling machines.</p>	<ul style="list-style-type: none"> 1. Internally threaded to take stud or bolt. 2. Easy to install flush to the surface. 3. Ideal for setting in cavity ceilings. 	Concrete Stone.	<ul style="list-style-type: none"> • Fixing mechanical services • Cable trays • Platforms • Drain covers • Suspended ceilings.



ETA-08/0198

THREAD SIZE (d)	ANCHOR LENGTH (mm) (l)	THREAD LENGTH (mm) (l _G)	HOLE DIAMETER (mm) (d ₀)	HOLE DEPTH (mm) (h ₀)	MAXIMUM RECOMMENDED TORQUE (Nm) (T _{inst})	NUMERIC CODE	PRODUCT CODE
M6	25	11	8	27	4.5	77-908	R-DCL-06L
M8	30	13	10	32	11	77-920	R-DCL-08L*
M10	40	15	12	42	22	77-932	R-DCL-10L*
M12	50	20	15	52	38	77-941	R-DCL-12L*
M16	65	25	20	67	95	77-950	R-DCL-16L

* ETA approval

Manual Setting Tool



THREAD SIZE (d)	NUMERIC CODE	PRODUCT CODE
M6	77-208	R-DCA-ST-06
M8	77-220	R-DCA-ST-08
M10	77-232	R-DCA-ST-10
M12	77-241	R-DCA-ST-12
M16	77-250	R-DCA-ST-16
M20	77-262	R-DCA-ST-20

Mechanical Setting Tool

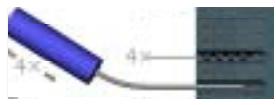


THREAD SIZE (d)	GRIP TYPE	NUMERIC CODE	PRODUCT CODE
M6	SDS-plus	77-209	R-DCA-SDS-06
M8	SDS-plus	77-221	R-DCA-SDS-08
M10	SDS-plus	77-233	R-DCA-SDS-10
M12	SDS-plus	77-242	R-DCA-SDS-12
M16	SDS-max	77-251	R-DCA-SDS-16
M20	SDS-max	77-263	R-DCA-SDS-20

Installation



1. Drill a hole of required diameter and depth.



2. Remove debris and thoroughly clean hole with brush and pump.



3. Insert wedge anchor, slotted end first.



4. Use the manual or mechanical setting tool when required to drive the internal wedge into the anchor.



5. Tighten to the recommended torque.

RAWLBOLT® SHIELD ANCHOR LOOSE BOLT

Product Information



Description	Features	Suitable for use in	Typical applications
<p>World's most popular expanding shield anchor. Easy to use with good load carrying capacity. Ideal general purpose anchor bolt with excellent tolerance to variation in hole size.</p> <p>The collapsible ferrule ensures positive clamping force is transmitted to the fixture.</p>	<ol style="list-style-type: none"> Bolt lengths suitable for fixture thickness up to 150mm. Ferrule marked with hole diameter for correct installation. Pressed steel segments ensure consistent dimensional accuracy. Optimum taper nut angle for maximum expansion in all substrates. Shield available separately. 	<p>Concrete Brickwork Stone.</p>	<ul style="list-style-type: none"> Roller shutter doors Fire doors Steelwork Security grills Machinery Pipework/duct work supports.



REFERENCE	BOLT SIZE (d)	BOLT LENGTH (mm) (l)	BOLT HEAD DIAMETER (mm) (Af)	WASHER DIAMETER (mm) (Dw)	SHIELD LENGTH (mm) (s)	FIXTURE THICKNESS (mm)		HOLE DIAMETER (mm)		MINIMUM HOLE DEPTH (mm) (h0)	EFFECTIVE EMBEDMENT DEPTH (mm) (h_ef)	MINIMUM SUBSTRATE THICKNESS (mm) (h_min)	RECOMMENDED TORQUE (Nm)		NUMERIC CODE	PRODUCT CODE	
						MAX. (mm) (Tfix)	MIN. (mm) (Tfix)	IN FIXTURE (mm) (df)	IN STRUCT. (mm) (do)				30 N/mm² CONCRETE (Tinst)	20.5 N/mm² BRICKWORK (Tinst)			
M6 10L		55				10										44-015	R-RBL-M06/10W
M6 25L	M6	70	10	12.5	45	25	0	6.5	12	50	35	70	6.5	5.0	44-020	R-RBL-M06/25W	
M6 40L		85				40										44-025	R-RBL-M06/40W
M8 10L		65				10										44-055	R-RBL-M08/10W
M8 25L	M8	80	13	17	50	25	0	9.0	14	55	40	80	15	7.5	44-060	R-RBL-M08/25W	
M8 40L		95				40										44-065	R-RBL-M08/40W
M10 10L		75				10										44-105	R-RBL-M10/10W
M10 25L	M10	90		17	21	25	0	11	16	65	50	100	27	13	44-110	R-RBL-M10/25W	
M10 50L		115				50										44-115	R-RBL-M10/50W
M10 75L		140				75										44-120	R-RBL-M10/75W
M12 10L		90				10										44-155	R-RBL-M12/10W
M12 25L	M12	105		19	24	25	0	13	20	85	60	120	50	23	44-160	R-RBL-M12/25W	
M12 40L		120				40										44-165	R-RBL-M12/40W
M12 60L		140				60										44-170	R-RBL-M12/60W
M16 15L		135				15	0									44-205	R-RBL-M16/15W
M16 30L	M16	150		24	30	30	10	17	25	125	95	190	120	-	44-210	R-RBL-M16/30W	
M16 60L		180				60	30									44-215	R-RBL-M16/60W
M20 60L	M20	195		30	37	60	25	22	32	140	115	220	230	-	44-255	R-RBL-M20/60W	
M20 100L		235				100	60									44-260	R-RBL-M20/100W
M24 100L	M24	255		36	50	100	25	26	38	160	125	240	400	-	44-305	R-RBL-M24/100W	
M24 150L		300				150	100									44-310	R-RBL-M24/150W

Rawlbolt® Shield



REFERENCE	SHIELD LENGTH (mm) (s)	HOLE DIAMETER IN STRUCT. (mm) (do)	MINIMUM HOLE DEPTH (mm) (h0)	EFFECTIVE EMBEDMENT DEPTH (mm) (h_ef)	MINIMUM SUBSTRATE THICKNESS (mm) (h_min)	RECOMMENDED TORQUE (Nm)	30 N/mm² CONCRETE (Tinst)	20.5 N/mm² BRICKWORK (Tinst)	NUMERIC CODE	PRODUCT CODE
M6S	45	12	50	35	70	6.5	5.0	44-010		R-RB-M06
M8S	50	14	55	40	80	15	7.5	44-050		R-RB-M08
M10S	60	16	65	50	100	27	13	44-100		R-RB-M10
M12S	75	20	85	60	120	50	23	44-150		R-RB-M12
M16S	115	25	125	95	190	120	-	44-200		R-RB-M16
M20S	130	32	140	115	220	230	-	44-250		R-RB-M20
M24S	150	38	160	125	240	400	-	44-300		R-RB-M24

Installation



1. Drill a hole of required diameter and depth.
Note: When fixing into brickwork, mortar joints should be avoided.



2. Remove debris and thoroughly clean hole with brush and pump.



3. Remove bolt and washer. Insert shield into hole by tapping with hammer.



4. Place fixture over the hole and insert bolt with washer through the fixture.



5. Tighten to the recommended torque.

RAWLBOLT® SHIELD ANCHOR BOLT PROJECTING

Product Information



Description	Features	Suitable for use in	Typical applications
<p>World's most popular expanding shield anchor. Easy to use with good load carrying capacity.</p> <p>Ideal general purpose anchor bolt with excellent tolerance to variation in hole size.</p> <p>The collapsible ferrule ensures positive clamping force is transmitted to the fixture.</p>	<ol style="list-style-type: none"> Provides a projecting stud to support fixture during installation and removal. Ferrule marked with hole diameter for correct installation. Pressed steel segments ensure consistent dimensional accuracy. Optimum taper nut angle for maximum expansion in all substrates. 	Concrete Brickwork Stone.	<ul style="list-style-type: none"> Roller shutter doors Fire doors Wall plates Security grills Machinery Signs Fencing.

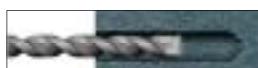


FRANCE - SOCOTEC
No.DX1435

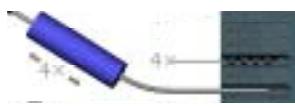


REFERENCE	BOLT SIZE (d)	BOLT LENGTH (mm) (l)	NUT DIAMETER (mm) (Af)	WASHER DIAMETER (mm) (Dw)	SHIELD LENGTH (mm) (s)	FIXTURE THICKNESS (mm)		HOLE DIAMETER (mm)		MINIMUM HOLE DEPTH (mm) (ho)	EFFECTIVE EMBEDMENT DEPTH (mm) (hef)	MINIMUM SUBSTRATE THICKNESS (mm) (hmin)	RECOMMENDED TORQUE (Nm)		NUMERIC CODE	PRODUCT CODE	
						MAX. (mm) (Tfix)	MIN. (mm) (Tfix)	IN FIXTURE (mm) (df)	IN STRUCT. (mm) (do)				30N/mm ² CONCRETE (Tinst)	20.5N/mm ² BRICKWORK (Tinst)			
M6 10P		65				10										44-505	R-RBP-M06/10W
M6 25P	M6	80	10	12.5	45	25	0	6.5	12	50	35	70	6.5	5.0	44-510	R-RBP-M06/25W	
M6 60P		15				60										44-515	R-RBP-M06/60W
M8 10P		75				10										44-555	R-RBP-M08/10W
M8 25P	M8	90	13	17	50	25	0	9.0	14	55	40	80	15	7.5	44-560	R-RBP-M08/25W	
M8 60P		125				60										44-565	R-RBP-M08/60W
M10 15P		90				15										44-605	R-RBP-M10/15W
M10 30P	M10	105	17	21	60	30	0	11	16	65	50	100	27	13	44-610	R-RBP-M10/30W	
M10 60P		135				60										44-615	R-RBP-M10/60W
M12 15P		110				15										44-655	R-RBP-M12/15W
M12 30P	M12	125	19	24	75	30	0	13	20	85	60	120	50	23	44-660	R-RBP-M12/30W	
M12 75P		170				75										44-665	R-RBP-M12/75W
M16 15P		150				15	0									44-705	R-RBP-M16/15W
M16 35P	M16	170	24	30	115	35	10	17	25	125	95	190	120	-	44-710	R-RBP-M16/35W	
M16 75P		210				75	35									44-715	R-RBP-M16/75W
M20 15P		170				15	0									44-755	R-RBP-M20/15W
M20 30P	M20	185	30	37	130	30	10	22	32	140	115	220	230	-	44-760	R-RBP-M20/30W	
M20 100P		255				100	30									44-765	R-RBP-M20/100W
M24 75P	M24	255	36	50	150	75	0	26	38	160	125	240	400	-	44-805	R-RBP-M24/75W	
M24 120P		300				120	75									44-810	R-RBP-M24/150W

Installation



1. Drill a hole of required diameter and depth.
Note: When fixing into brickwork, mortar joints should be avoided.



2. Remove debris and thoroughly clean hole with brush and pump.



3. Remove nut and washer and insert anchor into hole.



4. Position fixture over the thread.



5. Add washer and nut and tighten to recommended torque.

RAWLBOLT® SHIELD ANCHOR EYE BOLT

Product Information



Description	Features	Suitable for use in	Typical applications
<p>Suitable for temporary or permanent anchorage.</p> <p>Supplied complete with shield, washer and hex nut.</p> <p>Must not be used for safety harness applications or for lifting where shock load could be applied.</p>	<ol style="list-style-type: none"> Forged eye designed & manufactured for maximum performance. Ferrule marked with hole diameter to ensure correct installation. Pressed steel segments ensure consistent dimensional accuracy. Optimum geometry taper angle for maximum expansion in all substrates. 	<p>Concrete Brickwork Stone.</p>	<ul style="list-style-type: none"> Supporting guy ropes, stays & cables. Supporting ladder restraints.

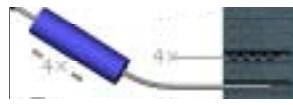


REFERENCE	BOLT SIZE (d)	SHIELD LENGTH (mm) (l)	OVERALL LENGTH (mm) (l)	HOLE DIAMETER IN STRUCTURE (mm) (do)	MINIMUM HOLE DEPTH (mm) (h0)	EFFECTIVE EMBEDMENT DEPTH (mm) (h_ef)	APPROXIMATE DIAMETER IN EYE (mm) (E)	RECOMMENDED TORQUE (Nm)		NUMERIC CODE	PRODUCT CODE
								30 N/mm² CONCRETE (Tinst)	20.5 N/mm² BRICKWORK (Tinst)		
M6E	M6	45	73	12	50	35	10	6.5	5	44-432	R-RBL-06EW
M8E	M8	50	87	14	55	40	12	15	7.5	44-437	R-RBL-08EW
M10E	M10	60	108	16	65	50	14	27	13	44-442	R-RBL-10EW
M12E	M12	75	130	20	85	60	17	50	23	44-447	R-RBL-12EW

Installation



1. Drill a hole of required diameter and depth. Note: When fixing into brickwork, mortar joints should be avoided.



2. Remove debris and thoroughly clean hole with brush and pump.



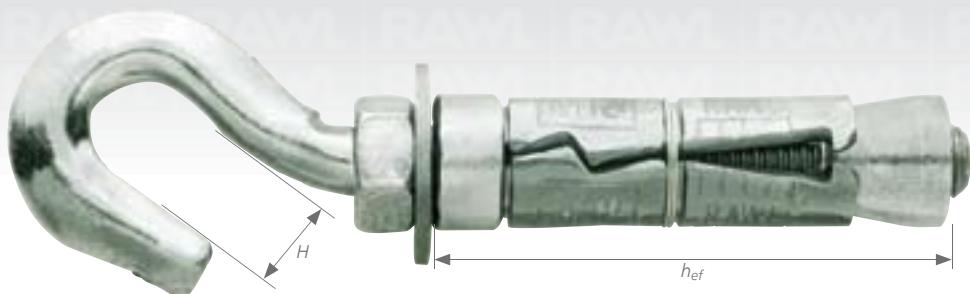
3. Insert the Eye Bolt and position accordingly.



4. Tighten to recommended torque, using the nut (not the eye).

RAWLBOLT® SHIELD ANCHOR HOOK BOLT

Product Information



Description	Features	Suitable for use in	Typical applications
<p>Suitable for temporary or permanent anchorage. Supplied complete with shield, washer and hex nut. Must not be used for safety harness applications or for lifting where shock load could be applied.</p>	<ol style="list-style-type: none"> Hook designed & manufactured for maximum performance. Ferrule marked with hole diameter to ensure correct installation. Pressed steel segments ensure consistent dimensional accuracy. Optimum geometry taper angle for maximum expansion in all substrates. 	<p>Concrete Brickwork Stone.</p>	<ul style="list-style-type: none"> Supporting guy ropes, stays & cables. Supporting ladder restraints.

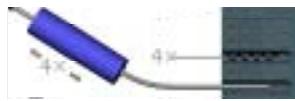


REFERENCE	BOLT SIZE (d)	SHIELD LENGTH (mm) (l)	OVERALL LENGTH (mm) (l)	HOLE DIAMETER IN STRUCTURE (mm) (do)	MINIMUM HOLE DEPTH (mm) (h0)	EFFECTIVE EMBEDMENT DEPTH (mm) (h_ef)	APPROXIMATE DIAMETER IN HOOK (mm) (E)	RECOMMENDED TORQUE (Nm)		NUMERIC CODE	PRODUCT CODE
								30 N/mm ² CONCRETE (T _{inst})	20.5 N/mm ² BRICKWORK (T _{inst})		
M6H	M6	45	83	12	50	35	8	6.5	5	44-401	R-RBL-06HW
M8H	M8	50	98	14	55	40	10	15	7.5	44-406	R-RBL-08HW
M10H	M10	60	120	16	65	50	12	27	13	44-411	R-RBL-10HW
M12H	M12	75	145	20	85	60	16	50	23	44-416	R-RBL-12HW

Installation



1. Drill a hole of required diameter and depth. Note: When fixing into brickwork, mortar joints should be avoided.



2. Remove debris and thoroughly clean hole with brush and pump.



3. Insert the Hook Bolt and position accordingly.



4. Tighten to recommended torque, using the nut (not the hook).

RAWLOK® LOOSE BOLT

Product Information



Description				Features				Suitable for use in				Typical applications			
All purpose expansion anchor for use in medium weight applications in brickwork, blockwork and hard masonry. Through fixing, allows drilling through pre-positioned fixture. No marking out required. Available in yellow passivated zinc plated steel and stainless steel.				1. 5.8 grade bolt for high performance. 2. Bolt and drill size marked on sleeve for accurate installation. 3. Integral collapse feature to ensure maximum clamping force is applied to the fixture. 4. Anchor designed for optimum performance in most base materials.				Concrete Brickwork Blockwork Stone.				• Stadium seating • Radiators • Signs • Satellite dishes • Wall plates • Shutters • Garage doors.			

BOLT SIZE (d)	BOLT LENGTH (mm) (l)	HEAD DIAMETER (mm) (Af) (Sw)	WASHER DIAMETER (mm) (Dw)	MAXIMUM FIXTURE THICKNESS (mm) (Tfix)	MINIMUM HOLE DEPTH INSTRUCTURE (mm) (ho)	MINIMUM SUBSTRATES THICKNESS (mm) (hmin)	MINIMUM EFFECTIVE EMBEDMENT DEPTH (mm) (h_ef)	HOLE DIAMETER	IN FIXTURE (mm) (df)	IN STRUCTURE (mm) (d0)	RECOMMENDED TIGHTENING TORQUE (Nm)	CONCRETE 30N/mm² (Tinst)	BRICKWORK 20.5N/mm² (Tinst)	BLOCKWORK 14N/mm² (Tinst)	BLOCKWORK 7N/mm² (Tinst)	LOOSE BOLT ZINC PLATED
M8	60	13	24	15	45	70	32	12	10	11.0	11.0	6.0	4.0	69-715	R-RLK-L-08060	
	80			35										69-716	R-RLK-L-08080	
M10	70	17	30	14	55	85	40	14	12	22.0	22.0	11.0	8.0	69-722	R-RLK-L-10070	
	100			44										69-721	R-RLK-L-10100	

BOLT SIZE (d)	BOLT LENGTH (mm) (l)	HEAD DIAMETER (mm) (Af) (Sw)	WASHER DIAMETER (mm) (Dw)	MAXIMUM FIXTURE THICKNESS (mm) (Tfix)	MINIMUM HOLE DEPTH INSTRUCTURE (mm) (ho)	MINIMUM SUBSTRATES THICKNESS (mm) (hmin)	MINIMUM EFFECTIVE EMBEDMENT DEPTH (mm) (h_ef)	HOLE DIAMETER	IN FIXTURE (mm) (df)	IN STRUCTURE (mm) (d0)	RECOMMENDED TIGHTENING TORQUE (Nm)	CONCRETE 30N/mm² (Tinst)	BRICKWORK 20.5N/mm² (Tinst)	BLOCKWORK 14N/mm² (Tinst)	BLOCKWORK 7N/mm² (Tinst)	LOOSE BOLT STAINLESS STEEL
M6	40	10	14	10	35	55	26	10	8	6.0	6.0	3.0	2.0	69-308	R-RLK-A4-06040	
M8	50	13	17	10	40	65	36	12	10	11.0	11.0	6.0	4.0	69-314	R-RLK-A4-08050	
M10	75	15	21	27	55	85	43	14	12	22.0	22.0	11.0	8.0	69-322	R-RLK-A4-10075	

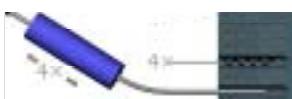
Rawlok® Countersunk

BOLT SIZE (d)	BOLT LENGTH (mm) (l)	HEAD DIAMETER (mm) (Af) (Sw)	MAXIMUM FIXTURE THICKNESS (mm) (Tfix)	MINIMUM HOLE DEPTH INSTRUCTURE (mm) (ho)	MINIMUM SUBSTRATES THICKNESS (mm) (hmin)	MINIMUM EFFECTIVE EMBEDMENT DEPTH (mm) (h_ef)	HOLE DIAMETER	IN FIXTURE (mm) (df)	IN STRUCTURE (mm) (d0)	RECOMMENDED TIGHTENING TORQUE (Nm)	COUNTERSUNK ZINC PLATED		
M5	53	12	25	30	50	27	8	6.5	2.5	2.5	1.5	69-572	R-RLK-C-05053
	80		46									69-574	R-RLK-C-05080

Installation



1. Drill a hole of required diameter and depth.
 Note: When fixing into brickwork, mortar joints should be avoided.



2. Remove debris and thoroughly clean hole with brush and pump.



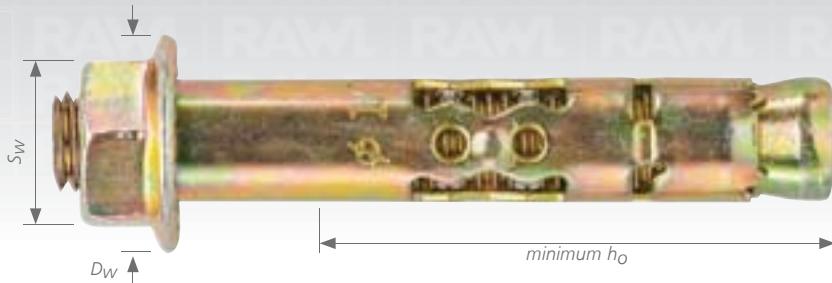
3. Insert Rawlok® Sleeve Anchor through the fixture into the hole.



4. Tighten to recommended torque with torque wrench.

RAWLOK® BOLT PROJECTING

Product Information



Description	Features	Suitable for use in	Typical applications
<p>The Rawlok® is a torque controlled expansion anchor comprising a split sleeve and a bolt incorporating an expander wedge. It is a through fixing, thus allowing the hole in the substrate to be drilled through the pre-positioned fixture, eliminating the need for marking out, ensuring fast and simple installation.</p>	<ol style="list-style-type: none"> 1. Bolt and drill size marked on sleeve to ensure correct installation. 2. Integral collapse feature to ensure maximum clamping force is applied to the fixture. 3. Anchor designed for optimum performance in most base material types. 3. One piece flange nut. 	<p>Concrete Brickwork Blockwork Stone.</p>	<ul style="list-style-type: none"> • Stadium seating • Radiators • Satellite dishes • Signs • Shutters • Garage doors

BOLT SIZE (d)	BOLT LENGTH (mm) (l)	NUT DIAMETER (mm) (Af) (S_w)	FLANGE DIAMETER (mm) (D_w)	MAXIMUM FIXTURE THICKNESS (mm) (T_fx)	MINIMUM HOLE DEPTH IN STRUCTURE (mm) (h_0)	MINIMUM SUBSTRATE THICKNESS (mm) (h_min)	MINIMUM EFFECTIVE EMBEDMENT DEPTH (mm) (h_ef)	HOLE DIAMETER		RECOMMENDED TIGHTENING TORQUE (Nm)				BOLT PROJECTING ZINC PLATED	
								IN FIXTURE (mm) (d_f)	IN STRUCTURE (mm) (d_g)	CONCRETE 30 N/mm ² (T _{inst})	BRICKWORK 20.5 N/mm ² (T _{inst})	BLOCKWORK 14 N/mm ² (T _{inst})	BLOCKWORK 7 N/mm ² (T _{inst})	NUEMRIC CODE	PRODUCT CODE
M6	40	10	14	10	35	55	26	10	8	6.0	6.0	3.0	2.0	69-508	R-RLK-P-06040
	65			35										69-510	R-RLK-P-06065
M8	50	13	17	10	40	65	36	12	10	11.0	11.0	6.0	4.0	69-514	R-RLK-P-08050
	75			36										69-516	R-RLK-P-08075
	95			55										69-518	R-RLK-P-08095
M10	60	15	21	10	55	85	43	14	12	22.0	22.0	11.0	8.0	69-520	R-RLK-P-10060
	75			27										69-522	R-RLK-P-10070
	100			50										69-524	R-RLK-P-10100
	130			80										69-525	R-RLK-P-10130
M12	110	18	26	55	60	90	50	18	16	38.0	38.0	25.0	12.0	69-528	R-RLK-P-12110
	145			85										69-530	R-RLK-P-12145

Installation



1. Drill a hole of required diameter and depth. Note: When fixing into brickwork, mortar joints should be avoided.



2. Remove debris and thoroughly clean hole with brush and pump.



3. Insert Rawlok® Sleeve Anchor through the fixture into the hole.



4. Tighten to recommended torque with torque wrench.

SR EXPANSION ANCHOR

Product Information



Description	Features	Suitable for use in	Typical applications
	<ul style="list-style-type: none"> 1. Carbon steel, zinc-plated 2. Wide range of anchor diameters 3. Through fixture installation 4. Wide range of anchor lengths 	concrete, stone non-cracked concrete C12/15	<ul style="list-style-type: none"> • Stadium seating • Radiators • Satellite dishes • Signs • Shutters • Garage doors



SIZE	ANCHOR LENGTH (mm)) <i>L</i>	MAX. FIXTURE THICKNESS (mm) <i>t_{fix}</i>	MINIMUM HOLE DEPTH (mm) <i>(h₀)</i>	MINIMUM SUBSTRATES THICKNESS (mm) <i>(h_{min})</i>	HOLE DIAMETER		RECOMMENDED TIGHTENING TORQUE (Nm) <i>(T_{inst})</i>	PRODUCT CODE
M6	40	2	40	150	7	6	6	SR-06040
	55	15						SR-06055
	85	45						SR-06085
M8	50	3	45	180	9	8	20	SR-08060
	75	20						SR-08075
	95	40						SR-08085
	115	60						SR-08095
	60	3						SR-10065
M10	80	20	50	200	11	10	30	SR-10080
	100	40						SR-10095
	120	60						SR-10115
	70	5						SR-12080
M12	100	20	60	220	14	12	50	SR-12100
	130	50						SR-12125
	180	100						SR-12150
	100	20						SR-16125
M16	120	40	65	260	18	16	120	SR-16140
	180	100						SR-16150
	200	120						SR-16180
	160	45						SR-20125
M20	200	85	80	300	22	20	180	SR-20160
	250	135						SR-20200

Installation



1. Drill a hole of required diameter and depth.

2. Remove debris and thoroughly clean hole with brush and pump.

3. Lightly tap anchor through the fixture into hole with a hammer.

4. Tighten to recommended torque with torque wrench.

KT SLEEVE ANCHOR

Product Information



Description	Features	Suitable for use in	Typical applications
	<ul style="list-style-type: none"> 1. Carbon steel, zinc-plated 2. Through fixture installation 3. Wide range of anchor lengths 	concrete, stone, brickwork, blockwork non-cracked concrete C12/15	<ul style="list-style-type: none"> • Stadium seating • Radiators • Satellite dishes • Signs • Shutters • Garage doors



SIZE	ANCHOR LENGTH (mm)) <i>L</i>	MAX. FIXTURE THICKNESS (mm) <i>t_{fix}</i>	MINIMUM HOLE DEPTH (mm) <i>h₀</i>	MINIMUM SUBSTRATES THICKNESS (mm) <i>h_{min}</i>	HOLE DIAMETER		RECOMMENDED TIGHTENING TORQUE (Nm) (<i>T_{inst}</i>)	PRODUCT CODE
					IN FIXTURE (mm) (<i>d_f</i>)	IN STRUCTURE (mm) (<i>d₀</i>)		
M6	40	2	40	70	9	8	12	KT-08040
	55	15						KT-08055
	85	45						KT-08085
M8	40	3	50	80	11	10	35	KT-10040
	50	3						KT-10050
	60	10						KT-10060
	80	30						KT-10080
	100	50						KT-10100
M10	60	3	60	100	14	12	70	KT-12060
	75	15						KT-12075
	100	40						KT-12100
	130	70						KT-12130
M12	110	50	60	110	18	16	120	KT-16110
	150	90						KT-16150
M16	105	35	70	120	22	20	200	KT-20105
	110	40						KT-20110
	130	60						KT-20130
	150	80						KT-20150

Installation



1. Drill a hole of required diameter and depth.

2. Remove debris and thoroughly clean hole with brush and pump.

3. Lightly tap anchor through the fixture into hole with a hammer.

4. Tighten to recommended torque with torque wrench.

R-CAS-V® CAPSULE

Product Information



Description	Features	Suitable for use in	Typical applications
R-CAS-V is a high performance resin anchor system for use in safety critical applications. The system relies on the adhesion between the concrete and resin, which is free from expansion forces. This makes it an ideal choice where there are close edge and spacing distances.	<ul style="list-style-type: none"> 1. High performance. 2. Quick and easy to install. 3. Capsule contains exact amounts of ingredients making it a very consistent product (no waste). 4. Adhesive strength is not affected by unpolluted water (curing time will be affected). 5. Suitable for overhead applications. 6. Suitable for use in wet conditions. 	Concrete	<ul style="list-style-type: none"> • Heavy machinery • Structural steel



ETA-10/0108

STUD THREAD SIZE (mm) (d)	STUD OVERALL LENGTH (mm) (l)	WASHER DIAMETER (mm) (Dw)	MAXIMUM FIXTURE THICKNESS (mm) (Tfix)	HOLE DIAMETER IN CONCRETE (mm) (d₀)	HOLE DIAMETER IN FIXTURE (mm) (df)	STANDARD EMBEDMENT IN CONCRETE (mm) (h₀)	MINIMUM CONCRETE THICKNESS	RECOMMENDED TORQUE	CAPSULES PER BOX	PRODUCT CODE
M8	110	17	17	10	9	80	110	10	10	R-CAS-VSE-08
M10	130	21	28	12	11	90	130	20	10	R-CAS-VSE-10
M12	160	24	36	14	13	110	160	40	10	R-CAS-VSE-12
M16	190	30	42	18	17	125	160	80	10	R-CAS-VSE-16
M20	260	37	65	24	22	170	250	150	6	R-CAS-VSE-20
M24	295	44	55	28	26	210	300	200	6	R-CAS-VSE-24
M30	380	56	65	35	33	280	400	320	6	R-CAS-VSE-30

Boxes of M8 to M16 contain a socket driver suitable for a standard drill chuck.
Please see accessories on page 64 for additional socket drivers.

Resin temperature [°C]	Concrete temperature [°C]	Working time [minutes]	Minimum curing time*
			[minutes]
5	-5	--	480
	0	--	240
	5	--	150
10	10	--	120
15	15	--	90
20	20	--	45
25	30	--	20
	40	--	10

* For wet concrete the curing time must be doubled

Installation



1. Drill correct diameter and depth of hole for the stud or socket.

2. Remove debris and thoroughly clean hole with brush and pump.



3. Insert R-CAS-V capsule into the hole. Connect stud or socket to drilling machine using the appropriate driver system.



4. Offer stud or socket up to capsule and switch on machine. Drive stud or socket into capsule. To prevent over mixing, stop as soon as bottom of hole is reached. Leave undisturbed until resin has set.



5. Position fixture and tighten to recommended torque.

R-HAC-V® CAPSULE

Product Information



Description	Features	Suitable for use in	Typical applications
<p>R-HAC-V capsule range is a high performance fixing system that offers a quick and simple method of fixing either threaded studs or rebar into solid concrete.</p> <p>Simply installed by hammering the stud or rebar through the capsule using a hammer or mechanical drill.</p> <p>Not suitable for overhead applications.</p>	<ol style="list-style-type: none"> High performance. Quick and easy to install. No expensive tooling required for installation. Long shelf life. Double capsules can be used for deep embedment. Ideal for starter bar applications. 	Concrete	<ul style="list-style-type: none"> Studding Reinforcement bars



PENDING

STUD THREAD SIZE (mm) (d)	CAPSULE LENGTH (mm)	STUD OVERALL LENGTH (mm) (l)	WASHER DIAMETER (mm) (Dw)	MAXIMUM FIXTURE THICKNESS (mm) (Tfx)	HOLE DIAMETER IN CONCRETE (mm) (d ₀)	HOLE DIAMETER IN FIXTURE (mm) (d _f)	STANDARD EMBEDMENT IN CONCRETE (mm) (h ₀)	MINIMUM CONCRETE THICKNESS	RECOMMENDED TORQUE	CAPSULES PER BOX	NEW CODE
M8	80	110	17	17	10	9	80	110	10	10	R-HAC-VSE-08
M10	85	130	21	28	12	11	90	130	20	10	R-HAC-VSE-10
M12	95	160	24	36	14	13	110	160	40	10	R-HAC-VSE-12
M16	95	190	30	42	18	17	125	160	80	10	R-HAC-VSE-16
M20	180	260	37	65	24	22	170	250	120	6	R-HAC-VSE-20
M24	210	295	44	55	28	26	210	300	200	6	R-HAC-VSE-24
M30	270	380	56	65	35	33	280	400	320	6	R-HAC-VSE-30

Boxes of M8 to M16 contain a socket driver suitable for a standard drill chuck.
Please see accessories on page 64 for additional socket drivers.
For range of reinforced bars see accessories page 65.

Resin temperature [°C]	Concrete temperature [°C]	Working time [minutes]	Minimum curing time* [hours]
5	-5	--	24
	0	--	14
	5	--	4
10	10	--	3

* For wet concrete the curing time must be doubled

Resin temperature [°C]	Concrete temperature [°C]	Working time [minutes]	Minimum curing time* [hours]
15	15	--	90 min
	20	--	45 min
	25	--	20 min
40	40	--	10 min

Studding



1. Drill appropriate hole for anchor taking care to achieve the exact hole depth.



3. Insert capsule(s).



4. The stud is simply hammered through the capsule using a manual hammer (M8 - M12) or mechanical hammer (M16 - M30). Leave undisturbed until resin has set.



5. Position fixture and tighten to recommended torque.

Rebar installation



1. Drill appropriate hole for anchor taking care to achieve the exact hole depth.



3. Insert capsule(s).



4. The rebar is simply hammered through the capsule using a manual hammer (M8 - M12) or mechanical hammer (M16 - M30). Leave undisturbed until resin has set.



5. Pour new concrete.

CFS+ RV200 VINYLESTER STYRENE FREE RESIN 300 ML

Product Information



Patented self opening cartridge free system

Description	Typical applications	Suitable for use in
RV200 is a high performance, styrene free vinylester resin that is suitable for use in concrete, and other solid masonry structures. This makes it ideal for applications where conventional expansion anchors present problems.	<ul style="list-style-type: none"> • Curtain walling • Balustrading • Handrails • Canopies • Rebar 	Concrete Stone

DESCRIPTION	QUANTITY	PRODUCT CODE
4 FOILS & 4 NOZZLES	4 Pack	R-CFS+RV200-4
APPLICATION TOOL 300 ML	1	R-CFS+GUN
NOZZLES	4	R-CFS-NOZ-4
NOZZLES	24	R-CFS-NOZ-24


 ETA-10/0055



CFS+ RV200 VINYLESTER STYRENE FREE RESIN 300 ML

Installation Details

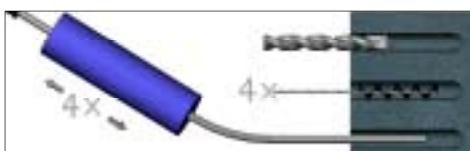
STUD THREAD SIZE (mm) (d)	STUD OVERALL LENGTH (mm) (l)	WASHER DIAMETER (mm) (D _w)	MAXIMUM FIXTURE THICKNESS (mm) (T _{fix})	HOLE DIAMETER IN CONCRETE (mm) (d ₀)	HOLE DIAMETER IN FIXTURE (mm) (d _f)	STANDARD EMBEDMENT IN CONCRETE (mm) (h ₀)	MINIMUM CONCRETE THICKNESS (mm) (H _{min})	RECOMMENDED TORQUE (Nm) (T _{inst})		APPROX. NO. OF HOLES PER 300ML FOIL
								CONCRETE	BRICKWORK	
M8	110	17	17	10	9	80	110	10	2	66
M10	130	21	28	12	11	90	130	20	6	46
M12	160	24	36	14	13	110	160	40	11	31
M16	190	30	42	18	17	125	160	80	24	20
M20	260	37	90	24	22	145	210	150	-	8
M20 Deep	260	37	65	24	22	170	250	150	-	6
M24	295	44	85	28	26	180	270	200	-	5
M24 Deep	295	44	55	28	26	210	300	200	-	4
M30	380	56	65	35	33	280	400	320	-	2

Boxes of M8 to M16 contain a socket driver suitable for a standard drill chuck.
Please see accessories on page 64 for additional socket drivers.
For range of reinforced bars see accessories page 65.

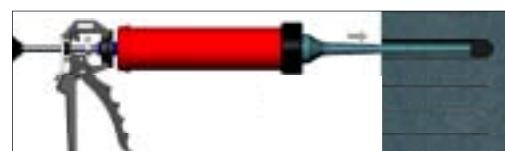
Resin temperature [°C]	Concrete temperature [°C]	Working time		Minimum curing time*	
		R-KER, RV200	R-KER-W, RV200-W	R-KER, RV200	R-KER-W, RV200-W
		[minutes]	[hours]	[hours]	[hours]
5	-20	—	100	—	24
	-15	—	60	—	16
	-10	—	30	—	8
	-5	60	16	6	4
	0	40	12	3	2
	5	20	8	2	1
	10	12	5	80 min	45 min
	15	8	3	60 min	30 min
	20	5	2	45 min	10 min
25	30	2	—	20 min	—
	40	0.5	—	10 min	—

* For wet concrete the curing time must be doubled

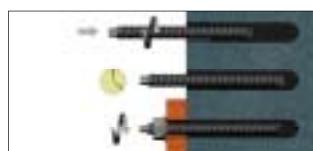
Studding



1. Drill hole to correct diameter and depth for stud size being used.



2. Clean the hole using brush and air three times.



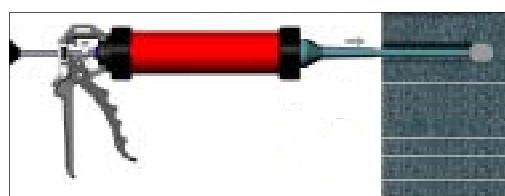
3. Insert foil into CFS gun and attach nozzle. Dispense to waste until an even colour. Then insert nozzle and then pump into hole.

4. Insert stud or socket with a twisting action. Leave the anchor undisturbed until the resin has cured and then attach fixture.

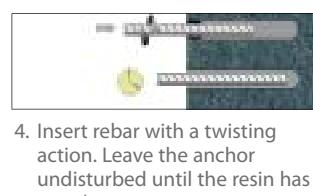
Rebar installation



1. Drill hole to correct diameter and depth for stud size being used.



2. Clean the hole using brush and air three times.



3. Insert foil into CFS gun and attach nozzle. Dispense to waste until an even colour. Then insert nozzle and then pump into hole.

4. Insert rebar with a twisting action. Leave the anchor undisturbed until the resin has cured.

CFS+ RM50 POLYESTER STYRENE FREE RESIN 300 ML

Product Information



Patented self opening cartridge free system



Description	Typical applications	Suitable for use in
RM50 is a high performance, styrene free resin that is suitable for use in concrete, and other solid or hollow masonry structures. This makes it ideal for applications where conventional expansion anchors are not appropriate.	<ul style="list-style-type: none"> • Curtain walling • Balustrading • Handrails • Canopies 	Concrete Brickwork Blockwork Stone

DESCRIPTION	QUANTITY	PRODUCT CODE
4 FOILS & 4 NOZZLES	4 Pack	R-CFS+RM50-4
APPLICATION TOOL 300 ML	1	R-CFS-GUN
NOZZLES	4	R-CFS-NOZ-4
NOZZLES	24	R-CFS-NOZ-24



CFS+ RM50 POLYESTER STYRENE FREE RESIN 300 ML

Instalation details

STUD THREAD SIZE (mm) (d)	STUD OVERALL LENGTH (mm) (l)	WASHER DIAMETER (mm) (D_w)	MAXIMUM FIXTURE THICKNESS (mm) (T_fix)	HOLE DIAMETER IN CONCRETE (mm) (d_o)	HOLE DIAMETER IN FIXTURE (mm) (d_f)	STANDARD EMBEDMENT IN CONCRETE (mm) (h_o)	MINIMUM CONCRETE THICKNESS (mm) (Hmin)	RECOMMENDED TORQUE (Nm) (Tinst)		APPROX. No. OF HOLES PER 300ML FOIL
								CONCRETE	BRICKWORK	
M8	110	17	17	10	9	80	110	10	2	66
M10	130	21	28	12	11	90	130	20	6	46
M12	160	24	36	14	13	110	160	40	11	31
M16	190	30	42	18	17	125	160	80	24	20
M20	260	37	90	24	22	145	210	150	-	8
M20 Deep	260	37	65	24	22	170	250	150	-	6
M24	295	44	85	28	26	180	270	200	-	5
M24 Deep	295	44	55	28	26	210	300	200	-	4
M30	380	56	65	35	33	280	400	320	-	2

Note: For perforated brickwork and hollow block work a mesh sleeve must be inserted into the hole prior to the resin being pumped.

Boxes of M8 to M16 contain a socket driver suitable for a standard drill chuck.
Please see accessories on page 64 for additional socket drivers.
For range of reinforced bars see accessories page 65.

Resin temperature [°C]	Concrete temperature [°C]	Working time [minutes]	Minimum curing time*
			[minutes]
5	5	30	200
10	10	22	150
15	15	12	100
20	20	7	50
25	30	3	25

* For wet concrete the curing time must be doubled

Installation solid substrates



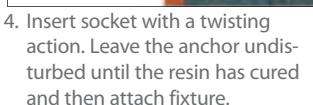
1. Drill hole to correct diameter and depth for stud size being used.



2. Clean the hole using brush and air three times.

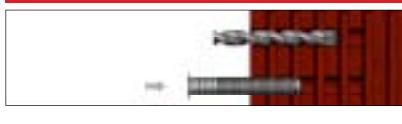


3. Insert foil into CFS gun and attach nozzle. Dispense to waste until an even colour. Then insert nozzle and then pump into hole.



4. Insert socket with a twisting action. Leave the anchor undisturbed until the resin has cured and then attach fixture.

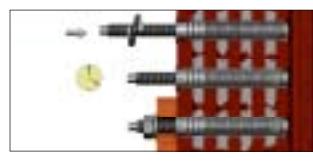
Installation hollow substrates & substrates with voids



1. Drill hole to correct diameter and depth for mesh sleeve being used.



2. Insert sleeve into hole.



4. Insert stud with a twisting action. Leave the anchor undisturbed until the resin has cured and then attach fixture.

CFS+ RP30 POLYESTER RESIN 300 ML

Product Information



Patented self opening cartridge free system

Description	Typical applications	Suitable for use in
RP30 is general purpose resin, for solid and hollow structures having a relatively short cure time.	<ul style="list-style-type: none"> Masonry support Fixing into tarmac Rebar 	Concrete Stone

DESCRIPTION	QUANTITY	PRODUCT CODE
4 FOILS & 4 NOZZLES	4 Pack	R-CFS+RP30-4
APPLICATION TOOL 300 ML	1	R-CFS+GUN
NOZZLES	4	R-CFS-NOZ-4
NOZZLES	24	R-CFS-NOZ-24



CFS+ RP30 POLYESTER RESIN 300 ML

Instalation details

STUD THREAD SIZE (mm) (d)	STUD OVERALL LENGTH (mm) (l)	WASHER DIAMETER (mm) (D_w)	MAXIMUM FIXTURE THICKNESS (mm) (T_fix)	HOLE DIAMETER IN CONCRETE (mm) (d_o)	HOLE DIAMETER IN FIXTURE (mm) (d_f)	STANDARD EMBEDMENT IN CONCRETE (mm) (h_o)	MINIMUM CONCRETE THICKNESS (mm) (Hmin)	RECOMMENDED TORQUE (Nm) (Tinst)		APPROX. NO. OF HOLES PER 300ML FOIL
								CONCRETE	BRICKWORK	
M8	110	17	17	10	9	80	110	10	2	66
M10	130	21	28	12	11	90	130	20	6	46
M12	160	24	36	14	13	110	160	40	11	31
M16	190	30	42	18	17	125	160	80	24	20
M20	260	37	90	24	22	145	210	150	-	8
M20 Deep	260	37	65	24	22	170	250	150	-	6
M24	295	44	85	28	26	180	270	200	-	5
M24 Deep	295	44	55	28	26	210	300	200	-	4
M30	380	56	65	35	33	280	400	320	-	2

Note: For perforated brickwork and hollow block work a mesh sleeve must be inserted into the hole prior to the resin being pumped.

Boxes of M8 to M16 contain a socket driver suitable for a standard drill chuck.
Please see accessories on page 64 for additional socket drivers.
For range of reinforced bars see accessories page 65.

Resin temperature [°C]	Concrete temperature [°C]	Working time [minutes]	Minimum curing time* [hours]				
			5	10	15	20	25
5	-5	60	6				
	0	40	3				
	5	20	2				
10	10	12	80 min				
15	15	8	60 min				
20	20	5	45 min				
25	30	2	20 min				

* For wet concrete the curing time must be doubled

Installation solid substrates



1. Drill hole to correct diameter and depth for stud size being used.



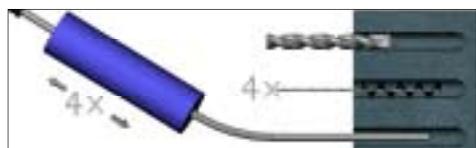
2. Clean the hole using brush and air three times.



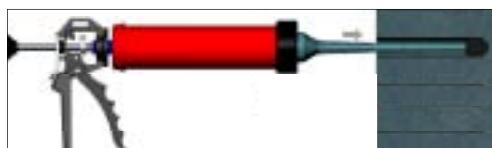
3. Insert foil into CFS gun and attach nozzle. Dispense to waste until an even colour. Then insert nozzle and then pump into hole.

4. Insert socket with a twisting action. Leave the anchor undisturbed until the resin has cured and then attach fixture.

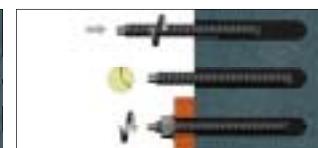
Studding



1. Drill hole to correct diameter and depth for stud size being used.



2. Clean the hole using brush and air three times.



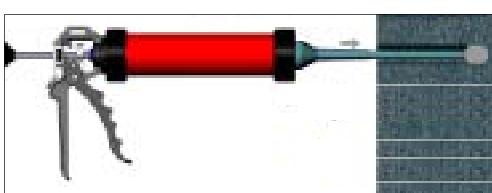
3. Insert foil into CFS gun and attach nozzle. Dispense to waste until an even colour. Then insert nozzle and then pump into hole.

4. Insert stud or socket with a twisting action. Leave the anchor undisturbed until the resin has cured and then attach fixture.

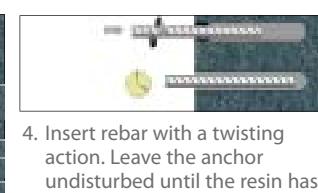
Rebar installation



1. Drill hole to correct diameter and depth for stud size being used.



2. Clean the hole using brush and air three times.



3. Insert foil into CFS gun and attach nozzle. Dispense to waste until an even colour. Then insert nozzle and then pump into hole.

4. Insert rebar with a twisting action. Leave the anchor undisturbed until the resin has cured.

R-KF2® CARTRIDGE

Product Information



Resin temperature [°C]	Concrete temperature	Working time [minutes]	Minimum curing time* [hours]
5	-5	60	6
	0	40	3
	5	20	2
	10	10	80 min
	15	8	60 min
	20	5	45 min
25	30	2	20 min

* For wet concrete the curing time must be doubled

DESCRIPTION	QUANTITY	NUMERICAL CODE	PRODUCT CODE
R-KF2 Polyester resin 380 ml cartridge + nozzles	10	60-200	R-KF2-380

Description Features Suitable for use in Typical applications

R-KF2 is general purpose resin, for solid and hollow structures with both products having a relatively short cure time.

1. Suitable for solid and hollow substrates.
2. 380ml R-KF2 is ideal for small applications.
3. R-KF2 fits a standard mastic gun.

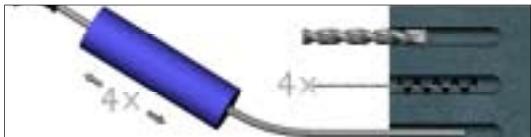
Concrete
Brickwork
Blockwork
Stone
Overhead Applications

- Masonry support
- Fixing into tarmac



STUD THREAD SIZE (mm) (d)	STUD OVERALL LENGTH (mm) (l)	WASHER DIAMETER (mm) (D_w)	MAXIMUM FIXTURETHICKNESS (mm) (T_fix)	HOLE DIAMETER IN CONCRETE (mm) (d_o)	HOLE DIAMETER IN FIXTURE (mm) (d_f)	STANDARD EMBEDMENT IN CONCRETE (mm) (h_0)	MINIMUM CONCRETE THICKNESS (mm) (Hmin)	RECOMMENDED TORQUE (Nm) (Tinst)		APPROX. NO. OF HOLES PER CARTRIDGE	
								CONCRETE	BRICKWORK	R-KF2 380 ml	R-KSF 150 ml
M8	110	17	17	10	9	80	110	5	3	84	33
M10	130	21	28	12	11	90	130	10	6	60	24
M12	160	24	36	14	13	110	160	20	15	40	16
M16	190	30	42	18	17	125	160	40	25	26	11
M20	260	37	90	24	22	145	210	60	-	10	3
M20 Deep	260	37	65	24	22	170	250	60	-	8	3
M24	295	44	85	28	26	180	270	100	-	6	2
M24 Deep	295	44	55	28	26	210	300	100	-	6	-
M30	380	56	65	35	33	280	400	200	-	3	-

Studding



1. Drill hole to correct diameter and depth for stud size being used.



2. Clean the hole using brush and air three times.

3. Insert cartridge into cartridge gun and attach nozzle. Dispense to waste until an even colour and then pump into hole.



4. Insert stud or socket with a twisting action. Leave the anchor undisturbed until the resin has cured and then attach fixture.

Rebar installation

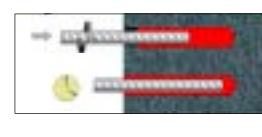


1. Drill hole to correct diameter and depth for stud size being used.



2. Clean the hole using brush and air three times.

3. Insert cartridge into cartridge gun and attach nozzle. Dispense to waste until an even colour and then pump into hole.



4. Insert rebar with a twisting action. Leave the anchor undisturbed until the resin has cured.



R-KEM+® CARTRIDGE

Product Information

Resin temperature [°C]	Concrete temperature [°C]	Working time	Minimum curing time*
		[minutes]	[minutes]
5	5	30	200
10	10	22	150
15	15	12	100
20	20	7	50
25	30	3	25

* For wet concrete the curing time must be doubled

DESCRIPTION	QUANTITY	NUMERICAL CODE	PRODUCT CODE
R-KEM+ Styrene free polyester resin 175 ml tube + nozzle	10	60-725	R-KEM-175
R-KEM+ Styrene free polyester resin 300 ml tube + nozzle	10	60-270	R-KEM-300
R-KEM+ 300 ml tube + nozzle in display box of 10	10	60-271	R-KEM-300-C/N-R

Description Features Suitable for use in Typical applications

R-KEM+ is a high performance, styrene free system that is suitable for use in concrete, and other solid or hollow masonry structures. This makes it ideal for applications where conventional expansion anchors present problems.

1. Suitable for solid and hollow substrates.
2. Suitable for overhead applications (with care).
3. R-KEM+ fits a standard mastic gun.
4. Styrene free.
5. Suitable for use in confined spaces.
6. Patented selfopening foil system

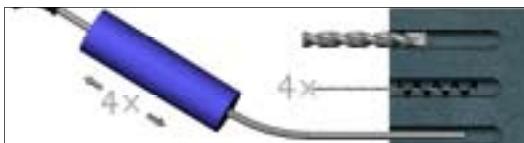
Concrete
Brickwork
Blockwork
Stone

- Curtain walling
- Balustrading
- Handrails
- Canopies
- Rebar



STUD THREAD SIZE (mm) (d)	STUD OVERALL LENGTH (mm) (l)	WASHER DIAMETER (mm) (Dw)	MAXIMUM FIXTURE THICKNESS (mm) (Tfix)	HOLE DIAMETER IN CONCRETE (mm) (d0)	HOLE DIAMETER IN FIXTURE (mm) (df)	STANDARD EMBEDMENT IN CONCRETE (mm) (h0)	MINIMUM CONCRETE THICKNESS (mm) (Hmin)	RECOMMENDED TORQUE (Nm) (Tinst)		APPROX. No. OF HOLES PER 300ML CARTRIDGE
								CONCRETE	BRICKWORK	
M8	110	17	17	10	9	80	110	10	2	66
M10	130	21	28	12	11	90	130	20	6	46
M12	160	24	36	14	13	110	160	40	11	31
M16	190	30	42	18	17	125	160	80	24	20
M20	260	37	90	24	22	145	210	150	-	8
M20 Deep	260	37	65	24	22	170	250	150	-	6
M24	295	44	85	28	26	180	270	200	-	5
M24 Deep	295	44	55	28	26	210	300	200	-	4
M30	380	56	65	35	33	280	400	320	-	2

Installation solid substrates

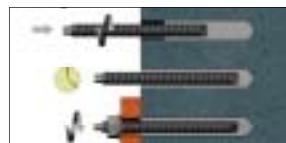


1. Drill hole to correct diameter and depth for stud size being used.



2. Clean the hole using brush and air three times.

3. Insert cartridge into cartridge gun and attach nozzle. Dispense to waste until an even colour and then pump into hole.



4. Insert stud or socket with a twisting action. Leave the anchor undisturbed until the resin has set and then attach fixture.

Installation hollow substrates & substrates with voids



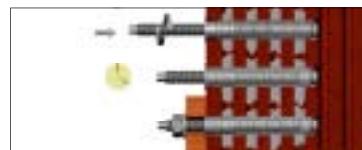
1. Drill hole to correct diameter and depth for mesh sleeve size being used.



2. Insert sleeve into hole.



3. Insert cartridge into cartridge gun and attach nozzle. Dispense to waste until even colour. Then insert nozzle and pump to fill sleeve.



4. Insert stud or socket with a twisting action. Leave the anchor undisturbed until the resin has set and then attach fixture.

R-KER® CARTRIDGE

Product Information

Resin temperature [°C]	Concrete temperature [°C]	Working time [minutes]	Minimum curing time* [hours]	Resin temperature [°C]	Concrete temperature [°C]	Working time [minutes]	Minimum curing time* [hours]
5	-20	—	—	10	10	12	80 min
	-15	—	—	15	15	8	60 min
	-10	—	—	20	20	5	45 min
	-5	60	6	25	30	2	20 min
	0	40	3	5	20	2	10 min

* For wet concrete the curing time must be doubled

DESCRIPTION	QUANTITY	NUMERICAL CODE	PRODUCT CODE
R-KER Epoxy-acrylate resin 380 ml tube + nozzle	10		R-KER-380



Description

R-KER is a high performance, styrene free vinyl ester resin that is suitable for use in concrete, and other solid masonry structures. This makes it ideal for applications where conventional expansion anchors present problems.

Features

R-KER-W will cure at down to -20°C and in other ambient temperatures has the advantage of being a rapid cure resin

Suitable for use in

Concrete
Stone

Typical applications

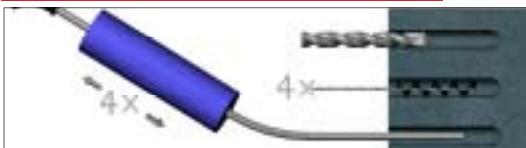
- Curtain walling
- Balustrading
- Handrails
- Canopies
- Rebar



ETA-10/0055

STUD THREAD SIZE (mm) (d)	STUD OVERALL LENGTH (mm) (l)	WASHER DIAMETER (mm) (D_w)	MAXIMUM FIXTURE THICKNESS (mm) (T_fix)	HOLE DIAMETER IN CONCRETE (mm) (d_o)	HOLE DIAMETER IN FIXTURE (mm) (d_f)	STANDARD EMBEDMENT IN CONCRETE (mm) (h_o)	MINIMUM CONCRETE THICKNESS (mm) (Hmin)	RECOMMENDED TORQUE (Nm) (Tinst)	APPROX. No. OF HOLES PER 380ML CARTRIDGE
								CONCRETE	BRICKWORK
M8	110	17	17	10	9	80	110	10	2
M10	130	21	28	12	11	90	130	20	6
M12	160	24	36	14	13	110	160	40	11
M16	190	30	42	18	17	125	160	80	24
M20	260	37	90	24	22	145	210	150	-
M20 Deep	260	37	65	24	22	170	250	150	-
M24	295	44	85	28	26	180	270	200	-
M24 Deep	295	44	55	28	26	210	300	200	-
M30	380	56	65	35	33	280	400	320	-
									3

Installation solid substrates



1. Drill hole to correct diameter and depth for stud size being used.

2. Clean the hole using brush and air three times.

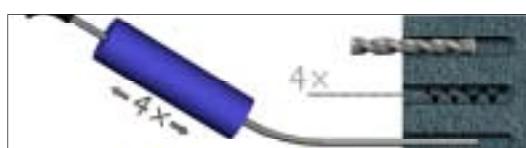


3. Insert cartridge into cartridge gun and attach nozzle. Dispense to waste until an even colour and then pump into hole.



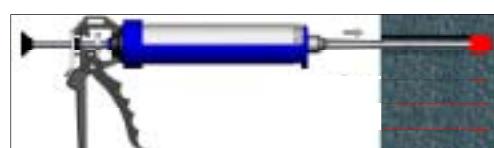
4. Insert stud or socket with a twisting action. Leave the anchor undisturbed until the resin has cured and then attach fixture.

Rebar installation

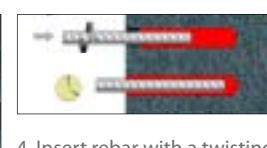


1. Drill hole to correct diameter and depth for stud size being used.

2. Clean the hole using brush and air three times.



3. Insert cartridge into cartridge gun and attach nozzle. Dispense to waste until an even colour and then pump into hole.



4. Insert rebar with a twisting action. Leave the anchor undisturbed until the resin has cured.



R-KEX® CARTRIDGE

Product Information

Resin temperature [°C]	Concrete temperature [°C]	Working time [minutes]	Minimum curing time* [hours]
5	5	180	16
10	10	120	10
15	15	60	5
20	20	50	4.5
25	25	40	4
	30	20	3

* For wet concrete the curing time must be doubled

DESCRIPTION	QUANTITY	NUMERICAL CODE	PRODUCT CODE
R-KEX Epoxy resin 400 ml cartridge + nozzle	1	60-170	R-KEX-400

Description

R-KEX is a high performance two component epoxy resin system. The epoxy resin is odourless and solvent free, and is ideal for anchoring threaded rod and internally threaded sockets.

Features

1. Solvent free.
2. Suitable for variable embedment.
3. Can be used in damp condition and underwater application.
4. High performance especially rebar/starter bar applications.
5. Product has low shrinkage.
6. Longer curing time suitable for high temperature.

Suitable for use in

Concrete.
NB. not suitable for overhead applications

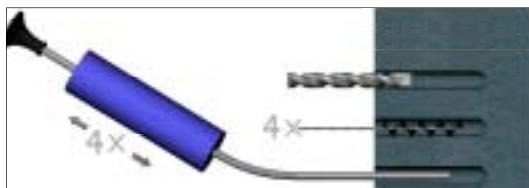
Typical applications

- Safety barriers
- Temporary works/formwork support systems.
- Rebar

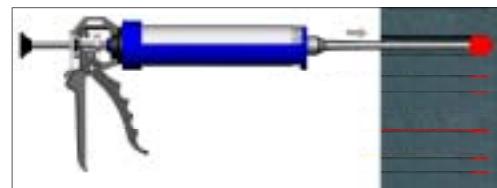


STUD THREAD SIZE (mm) (d)	STUD OVERALL LENGTH (mm) (l)	WASHER DIAMETER (mm) (D_w)	MAXIMUM FIXTURE THICKNESS (mm) (T_fix)	HOLE DIAMETER IN CONCRETE (mm) (d_o)	HOLE DIAMETER IN FIXTURE (mm) (d_f)	STANDARD EMBEDMENT IN CONCRETE (mm) (h_o)	MINIMUM CONCRETE THICKNESS (mm) (Hmin)	RECOMMENDED TORQUE (Nm) (Tinst)	APPROX. NO. OF HOLES PER 400ML CARTRIDGE
M8	110	17	17	10	9	80	110	10	88
M10	130	21	28	12	11	90	130	20	64
M12	160	24	36	14	13	110	160	40	44
M16	190	30	42	18	17	125	160	100	29
M20	260	37	65	24	22	170	250	150	8
M24	295	44	55	28	26	210	300	200	5
M30	380	56	65	35	33	280	400	320	2

Studding



1. Drill hole to correct diameter and depth for stud size being used.



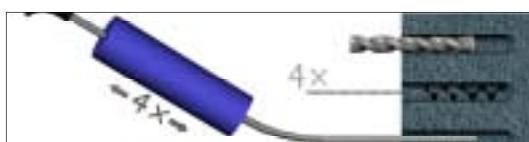
2. Clean the hole using brush and air three times.



3. Insert cartridge into cartridge gun and attach nozzle. Dispense to waste until an even colour and then pump into hole.

4. Insert stud or socket with a twisting action. Leave the anchor undisturbed until the resin has cured and then attach fixture.

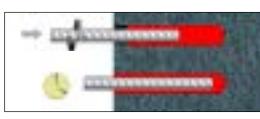
Rebar installation



1. Drill hole to correct diameter and depth for stud size being used.



2. Clean the hole using brush and air three times.



3. Insert cartridge into cartridge gun and attach nozzle. Dispense to waste until an even colour and then pump into hole.

4. Insert rebar with a twisting action. Leave the anchor undisturbed until the resin has cured.

ACCESSORIES

Product Information

Brushes and blow pump



HOLE SIZE BRUSHES	PACK	QUANTITY	PRODUCT CODE	NEW CODE
M8 - 10 mm	POLYBAG	1	60-980	BRUSH-M08/10
M10 - 14 mm	POLYBAG	1	60-981	BRUSH-M10/14
M16 - 28 mm	POLYBAG	1	60-982	BRUSH-M16/10
BLOW PUMP	POLYBAG	1	60-687	BLOWPUMP

Dispenser guns



DESCRIPTION	SUITABLE FOR	PACK TYPE	QUANTITY	PRODUCT CODE	NEW CODE
400ml CARTRIDGE GUN	R-KEX	POLYBAG	1	60-645	R-GUN-400ML
380ml CARTRIDGE GUN	R-KF2	POLYBAG	1	-	R-GUN-380-N
300ml CARTRIDGE GUN	R-KEM+	POLYBAG	1	-	R-GUN-300-N
300ml CFS+ GUN	CFS+	BOXED	1	-	R-CFS+-GUN

STUDS & SOCKETS

Product Information



Studs

Thread size	Stud overall length L [mm]	Product code				
		Steel grade 5.8	Steel grade 8.8	A4-70 steel grade	Steel grade 5.8 (flat head)	A4-70 steel grade (flat head)
M8	110	R-STUDS-08110	R-STUDS-08110-88	R-STUDS-08110-A4	R-STUDS-08110-FL	R-STUDS-08110-A4FL
	160	R-STUDS-08160	-	R-STUDS-08160-A4	R-STUDS-08160-FL	-
M10	130	R-STUDS-10130	R-STUDS-10130-88	R-STUDS-10130-A4	R-STUDS-10130-FL	R-STUDS-10130-A4FL
	170	R-STUDS-10170	-	R-STUDS-10170-A4	R-STUDS-10170-FL	R-STUDS-10170-A4FL
M12	190	R-STUDS-10190	-	R-STUDS-10190-A4	-	-
	220	-	-	-	R-STUDS-10220-FL	-
M16	160	R-STUDS-12160	R-STUDS-12160-88	R-STUDS-12160-A4	R-STUDS-12160-FL	R-STUDS-12160-A4FL
	190	R-STUDS-12190	-	R-STUDS-12190-A4	R-STUDS-12190-FL	R-STUDS-12190-A4FL
M18	220	R-STUDS-12220	-	R-STUDS-12220-A4	R-STUDS-12220-FL	-
	260	R-STUDS-12260	-	R-STUDS-12260-A4	R-STUDS-12260-FL	-
M20	300	R-STUDS-12300	-	R-STUDS-12300-A4	-	-
	190	R-STUDS-16190	R-STUDS-16190-88	R-STUDS-16190-A4	R-STUDS-16190-FL	R-STUDS-16190-A4FL
M22	220	R-STUDS-16220	-	R-STUDS-16220-A4	R-STUDS-16220-FL	R-STUDS-16220-A4FL
	260	R-STUDS-16260	-	R-STUDS-16260-A4	R-STUDS-16260-FL	-
M24	300	R-STUDS-16300	-	R-STUDS-16300-A4	-	-
	310	-	-	-	R-STUDS-16310-FL	-
M26	380	R-STUDS-16380	-	R-STUDS-16380-A4	R-STUDS-16380-FL	-
	260	R-STUDS-20260	R-STUDS-20260-88	R-STUDS-20260-A4	R-STUDS-20260-FL	R-STUDS-20260-A4FL
M28	300	R-STUDS-20300	-	R-STUDS-20300-A4	R-STUDS-20300-FL	-
	350	R-STUDS-20350	-	R-STUDS-20350-A4	R-STUDS-20350-FL	-
M30	300	R-STUDS-24300	R-STUDS-24300-88	R-STUDS-24300-A4	R-STUDS-24300-FL	R-STUDS-24300-A4FL
	400	-	-	-	R-STUDS-24400-FL	-

* for custom length sizes please contact with sales agent

Internally Threaded Sockets



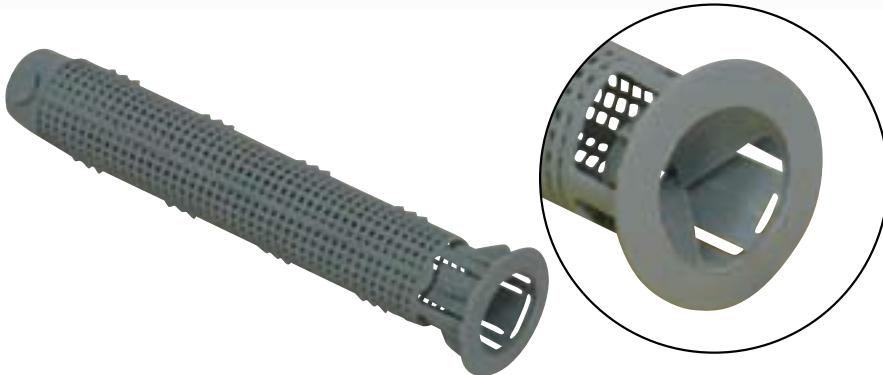
SOCKET TYPE AND INTERNAL THREAD LENGTH (lg)	SOCKET OVERALL LENGTH (l)	HOLE DIAMETER IN CONCRETE (mm) (d ₀)	HOLE DEPTH IN CONCRETE (mm) (h ₀)	HOLE DIAMETER IN FIXTURE (mm) (d _f)	TIGHTENING TORQUE (Nm)			SOCKETS PER BOX/ PACK	SOCKET PRODUCT CODES						
					30 N/mm ² CONCRETE	20.5 N/mm ² BRICKWORK	7.0 N/mm ² BLOCKWORK		ZINC PLATED NUMERIC CODE	ZINC PLATED PRODUCT CODE	STAINLESS STEEL GRADE 303 A2 PRODUCT CODE	A4 STAINLESS STEEL PRODUCT CODE	DRIVE SYSTEM NUMERIC CODE	DRIVE SYSTEM PRODUCT CODE	
M6x24	75	12	75	7	5	3	1.5	10	60-620	ITS-Z-06075	—	—	—	60-690 ITS-DRIVE-06	
M6x24	75	14	75	7	5	3	1.5	10	—	—	R-ITS-A2-06075	60-985	R-ITS-A4-06075	60-690 ITS-DRIVE-06	
M8x25	75	14	75	9	11	6	3	10	60-622	ITS-Z-08075	R-ITS-A2-08075	60-987	R-ITS-A4-08075	—	—
M8x25	90	14	90	9	11	6	3	10	60-623	ITS-Z-08090	R-ITS-A2-08090	60-988	R-ITS-A4-08090	60-692	ITS-DRIVE-08
M10x30	75	20	75	11	22	13	6	10	60-624	ITS-Z-10075	R-ITS-A2-10075	60-989	R-ITS-A4-10075	—	—
M10x30	100	20	100	11	22	13	3	10	60-626	ITS-Z-10100	R-ITS-A2-10100	60-992	R-ITS-A4-10100	60-694	ITS-DRIVE-10
M12x35	100	20	100	13	38	21	6	6	60-628	ITS-Z-12100	—	—	—	60-696 ITS-DRIVE-12	
M12x35	100	22	100	13	38	21	6	6	—	—	R-ITS-A2-12100	60-993	R-ITS-A4-12100	60-696 ITS-DRIVE-12	
M16x50	125	28	125	17	95	30	—	6	60-630	ITS-Z-16125	R-ITS-A2-16125	60-995	R-ITS-A4-16125	60-698	ITS-DRIVE-16

Note: All sockets can be used with cartridge systems and in these circumstances a drive system is not required.

THREADED RODS AND MESH SLEEVES

Product Information

Plastic Sleeves



STUD SIZE (mm)	HOLE DIAMETER IN STRUCTURE (mm)	SLEEVE LENGTH (mm)	BOX QUANTITY	PRODUCT CODE	NEW CODE
M6/M8	16	13 x 80	10	60-607	R-PLS-13080-10
					R-PLS-15085-10
M10	16	13 x 130	10	60-609	R-PLS-13130-10
					R-PLS-15125-10
M12/M16	20	18 x 85	10	60-615	R-PLS-18085-10
M12/M16	20	18 x 85	5	60-616	R-PLS-20085-10

Mesh Sleeves x 1m



Threaded Rods



MATERIAL

steel DIN 975 zinc plated.

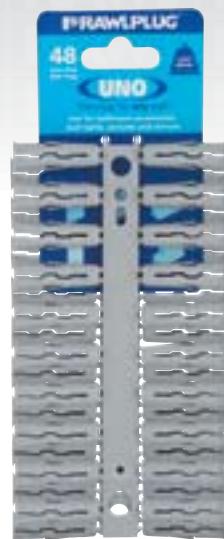
STUD SIZE (mm)	HOLE DIAMETER IN STRUCTURE (mm)	SLEEVE LENGTH (mm)	BOX QUANTITY	PRODUCT CODE
M8 - M10	14	12,5 x 1000	10	SP-CE-R10
M12	16	15,0 x 1000	10	SP-CE-R12
M16	22	20,5 x 1000	10	SP-CE-R16
M20	28	26,0 x 1000	5	SP-CE-R20

GRADE 4.8, LENGTH 1M			GRADE 8.8, LENGTH 1M		
THREAD	QUANTITY	PRODUCT CODE	THREAD	QUANTITY	PRODUCT CODE
M6	50	975-06-1000-ZN	M6	10	975-06-1000-88-ZN
M8	50	975-08-1000-ZN	M8	5	975-08-1000-88-ZN
M10	25	975-10-1000-ZN	M10	5	975-10-1000-88-ZN
M12	20	975-12-1000-ZN	M12	5	975-12-1000-88-ZN
M16	10	975-16-1000-ZN	M16	5	975-16-1000-88-ZN
M20	10	975-20-1000-ZN	M20	5	975-20-1000-88-ZN

UNO™ UNIVERSAL PLUG



Product Information



Description	Features	Suitable for use in	Typical applications
-------------	----------	---------------------	----------------------

Truely universal plug which fixes into any wall, ceiling or floor.

1. Unique design with expansion throughout the length of the plug.
2. Expands at the top giving instant grip.
3. Anti rotation features prevent spinning in the hole.

Concrete
Brickwork
Stone
Blockwork
Plasterboard
Etc

- Shelving and cabinets
- Suspended ceilings
- Switch boxes
- Trunking and cable trays
- Boilers
- Water heaters & radiators

DESCRIPTION	SCREW RANGE (mm)	PLUG LENGTH (mm)	HOLE DIAMETER (mm) (d ₀)	BOX/PACK QUANTITY	OUTER QUANTITY	OPTIONS	PRODUCT CODE			
							CLIP	TUB	BAG	BOX
Yellow	3.0 - 4.5	24	5	96	10	—	68-500			
				24	10	With screws		68-505		
				24	10	With screws and drill		68-510		
				1000	1	—			68-507	
				48	10	—	68-515			
Red	3.5 - 5.0	28	6	96	10	—	68-520			
				288	20	—	68-525			
				288	20	With drill	68-527			
				48	10	With drill		68-530		
				24	10	With screws and drill		68-535		
				24	10	With screws		68-540		
				1000	1	—			68-517	
Brown	4.0 - 6.0	30	7	48	10	—	68-555			
				96	10	—	68-560			
				288	20	—	68-565			
				288	20	With drill	68-567			
				48	10	—		68-570		
				24	10	With screws and drill		68-575		
				24	10	With screws		68-580		
				1000	1	—			68-557	
Blue	4.5 - 6.0	32	8	80	10	—	68-595			
				10	10	With coach screws		68-600		
				10	10	With coach screws and drill		68-605		
				1000	1	—			68-597	
Grey	5.0 - 8.0	36	10	80	10	—	68-615			
				1000	1	—			68-617	
Mixed Red/Brown	3.5-6.0	28/30	6/7	300	1	—			68-636	
Mixed Red/Brown/Blue	3.5 - 6.0	28/30/32	6/7/8	60	10	—		68-630		
				272	20	—	68-635			
				272	20	With 3 drills				

TILED WALLS Not suitable for use with 10 mm grey plugs. Always use smallest gauge screw to prevent possibility of cracking the tile.

UNO™ UNIVERSAL PLUG

UNO™
The plug for **any** wall

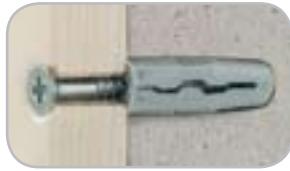
Product Information

Anti Rotation Fins



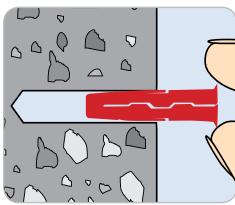
Unique design guarantees maximum expansion and grip

Lip prevents plug falling into oversized holes

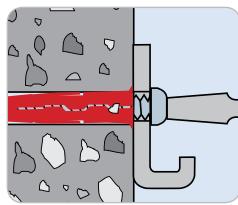


DESCRIPTION	SCREW RANGE (mm)	PLUG LENGTH (mm)	HOLE DIAMETER (mm) (d ₀)	BOX/PACK QUANTITY	OUTER QUANTITY	OPTIONS	PRODUCT CODE			
							CLIP	TUB	BAG	BOX
5 mm Nylon	3.0 - 4.5	24	5	50	10	—			68-640	
				100	10	—				68-645
				50	10	With screws				68-650
6 mm Nylon	3.5 - 5.0	28	6	50	10	—		68-655		
				50	10	With screws				68-665
8 mm Nylon	4.5 - 6.0	32	8	50	10	—		68-670		
				100	10	—		68-675		
				50	10	With screws				68-680
10 mm Nylon	5.0 - 8.0	36	10	50	10	—			68-685	
				100	20	—				68-690
				25	10	With screws				68-695

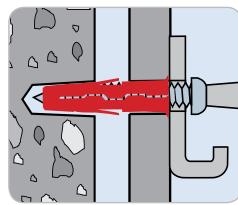
Installation



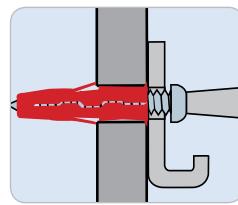
- 1. Solid Walls.**
Drill hole to suit screw length. Clean out hole.



- 2. Insert plug and tap flush to surface. Place item to be fixed. Insert screw and tighten.**



- 3. Combination Walls**
(install as diagram 2).



- 4. Hollow Walls.**
Drill hole, insert plug and tap flush to surface. Place item to be fixed, insert screw and tighten.

FIX™ EXPANSION PLUGS

Product Information



Material	Suitable for use in	Typical applications
Plug sleeve: polyamide PA 6.0 (Nylon) or impact resistant co-polymer of polypropylene PP Screw: electro-zinc coated steel ~10 µm	Concrete Brick Concrete Blockwork Stone Etc.	<ul style="list-style-type: none"> Shelving and cabinets Suspended ceilings Switch boxes Trunking and cable trays Boilers Water heaters & radiators

FIX – Expansion plugs with countersunk head screw with pozidrive



HOLE DIAMETER (mm)	PLUG LENGTH (mm)	BOX/PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE POLYAMIDE PA 6.0 (NYLON)	PRODUCT CODE POLYPROPYLENE PP
5	25	100	9600	FIX-N-05	FIX-K-05
6	30	100	4800	FIX-N-06	FIX-K-06
8	40	100	2400	FIX-N-08	FIX-K-08
10	50	100	2400	FIX-N-10	FIX-K-10
12	60	50	1200	FIX-N-12	FIX-K-12
14	70	25	600	FIX-N-14	FIX-K-14

HOLE DIAMETER (mm)	PLUG LENGTH (mm)	SCREW DIMENSIONS (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
5	25	3.5×30	200	4800	FIX-05+*
6	30	3.5×30	200	4800	FIX-06+
6	30	3.5×40	200	4800	FIX-06+340
6	30	4.0×35	200	4800	FIX-06+350
6	30	4.0×40	200	4800	FIX-06+440
6	30	4.0×50	200	4800	FIX-06+450
8	40	5.0×45	200	2400	FIX-08+
8	40	4.5×50	200	2400	FIX-08+450*
8	40	4.5×60	200	2400	FIX-08+460
8	40	5.0×50	200	2400	FIX-08+550
8	40	5.0×60	100	1200	FIX-08+560
8	40	5.0×80	100	1200	FIX-08+580
8	40	5.0×100	100	1200	FIX-08+100
10	50	5.0×50	100	1200	FIX-10+550
10	50	5.0×60	100	1200	FIX-10+560
10	50	6.0×60	100	1200	FIX-10+660
10	50	6.0×80	50	600	FIX-10+680
10	50	6.0×100	50	600	FIX-10+100
10	50	6.0×120	50	600	FIX-10+120
10	50	6.0×160	25	300	FIX-10+160
12	60	6.0×80	50	1200	FIX-12+680
12	60	6.0×100	50	600	FIX-12+100
12	60	6.0×120	50	600	FIX-12+120

with angle hook



HOLE DIAMETER (mm)	PLUG LENGTH (mm)	HOOK DIMENSIONS (mm)	BOX/PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
6	30	4.5x35	200	4800	FIX-06K
8	40	5.0x50	100	2400	FIX-08K
10	50	6.0x55	100	1200	FIX-10K
12	60	8.0x65	50	600	FIX-12K

FIX™ EXPANSION PLUGS

Product Information

with coach screw



with round hook



HOLE DIAMETER (mm)	PLUG LENGTH (mm)	SCREW DIMENSIONS (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
10	50	6.0x60	100	1200	FIX-10/660
10	50	6.0x80	50	600	FIX-10/680
10	50	6.0x100	50	600	FIX-10/100
10	50	6.0x120	50	600	FIX-10/120
12	60	8.0x60	50	600	FIX-12/60
12	60	8.0x70	50	600	FIX-12/70
12	60	8.0x80	50	600	FIX-12/80
12	60	8.0x100	50	600	FIX-12/100
12	60	8.0x120	50	600	FIX-12/120
12	60	8.0x140	25	300	FIX-12/140
12	60	8.0x160	25	300	FIX-12/160
12	60	8.0x180	25	300	FIX-12/180
12	60	8.0x200	25	300	FIX-12/200
14	70	10x80	25	300	FIX-14/80
14	70	10x100	25	300	FIX-14/100
14	70	10x120	25	300	FIX-14/120
14	70	10x160	25	300	FIX-14/160
14	70	10x180	25	300	FIX-14/180
14	70	10x200	25	300	FIX-14/200
14	70	10x220	25	125	FIX-14/220
14	70	10x260	25	125	FIX-14/260

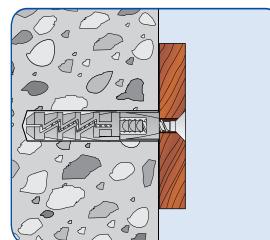
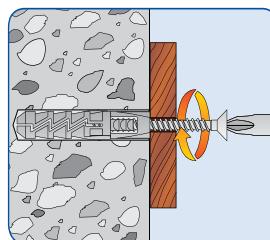
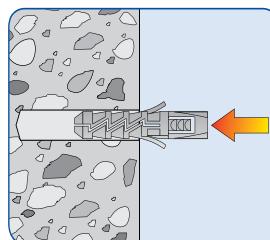
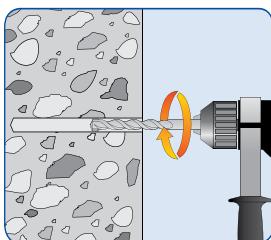
HOLE DIAMETER (mm) (d ₀)	PLUG LENGTH (mm)	HOOK DIMENSIONS (mm)	BOX/PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
6	30	4.5 x 50	200	4800	FIX-06S
8	40	5.0 x 65	100	1200	FIX-08S
10	50	6.0 x 85	50	600	FIX-10S

with pig tail hook



HOLE DIAMETER (mm)	PLUG LENGTH (mm)	HOOK DIMENSIONS (mm)	BOX/PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
12	60	8.0 x 130	25	300	FIX-12H

Installation



FIX™ EXPANSION PLUGS

Product Information



Material

Plug sleeve:

polyamide PA 6.0 (Nylon) or impact resistant co-polymer of polypropylene PP

Screw:

electro-zinc coated steel ~10 µm

Suitable for use in

Concrete
Brick
Concrete Blockwork
Stone
Etc.

Typical applications

- Shelving and cabinets
- Suspended ceilings
- Switch boxes
- Trunking and cable trays
- Boilers
- Water heaters & radiators

FIX – Expansion plugs with collar



with angle hook



HOLE DIAMETER (mm)	PLUG LENGTH (mm)	BOX/PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE POLYAMIDE PA 6.0 (NYLON)	PRODUCT CODE POLYPROPYLENE PP
6	30	250	6000	FIX-NK-06	FIX-KK-06
8	40	200	4800	FIX-NK-08	FIX-KK-08
10	50	100	2400	FIX-NK-10	FIX-KK-10
12	60	50	1200	FIX-NK-12	FIX-KK-12
14	70	25	600	FIX-NK-14	FIX-KK-14

HOLE DIAMETER (mm)	PLUG LENGTH (mm)	SCREW DIMENSIONS (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
6	30	3.5×35	200	4800	FIX-K-06K
8	40	4.5×50	100	2400	FIX-K-08K
10	50	6.0×55	100	1200	FIX-K-10K
12	60	8.0×65	50	600	FIX-K-12K

with countersunk head screw with pozidrive



with round hook



HOLE DIAMETER (mm)	PLUG LENGTH (mm)	SCREW DIMENSIONS (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
6	30	3.5×30	200	4800	FIX-K-06+
6	30	3.5×40	200	4800	FIX-K-06+340
6	30	3.5×50	200	2400	FIX-K-06+350
6	30	4.0×35	200	4800	FIX-K-06+435
6	30	4.0×40	200	4800	FIX-K-06+440
6	30	4.0×50	200	2400	FIX-K-06+450
8	40	5.0×45	200	2400	FIX-K-08+
8	40	4.5×50	200	2400	FIX-K-08+450
8	40	4.5×60	100	1200	FIX-K-08+460
8	40	5.0×50	100	1200	FIX-K-08+550
10	50	5.0×60	100	1200	FIX-K-10+560
10	50	5.0×60	100	1200	FIX-K-10+660

HOLE DIAMETER (mm)	PLUG LENGTH (mm)	SCREW DIMENSIONS (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
6	30	3.5×50	200	4800	FIX-K-06S
8	40	4.5×65	100	1200	FIX-K-08S
10	50	6.0×85	50	600	FIX-K-10S

with pig tail hook



HOLE DIAMETER (mm)	PLUG LENGTH (mm)	SCREW DIMENSIONS (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
12	30	8.0×130	25	300	FIX-K-12H

KS UNIVERSAL EXPANSION PLUGS



Product Information



Material

Plug sleeve:
polyamide PA 6.0 (Nylon) or
impact resistant co-polymer
of polypropylene PP
Screw:
electro-zinc coated steel ~10 µm

Suitable for use in

Concrete
Brick
Concrete Blockwork
Stone
Etc.

Typical applications

- Shelving and cabinets
- Suspended ceilings
- Switch boxes
- Trunking and cable trays
- Boilers
- Water heaters & radiators

KS – Universal expansion plugs

HOLE DIAMETER (mm)	PLUG LENGTH (mm)	BOX/PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
6	40	200	3600	KS-06
8	50	200	2400	KS-08
10	60	100	1200	KS-10

with angle hook



HOLE DIAMETER (mm)	PLUG LENGTH (mm)	SCREW DIMENSIONS (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
6	40	3,5×50	200	2400	KS-06K
8	50	4,5×64	100	1200	KS-08K

with countersunk head screw with pozidrive



with round hook



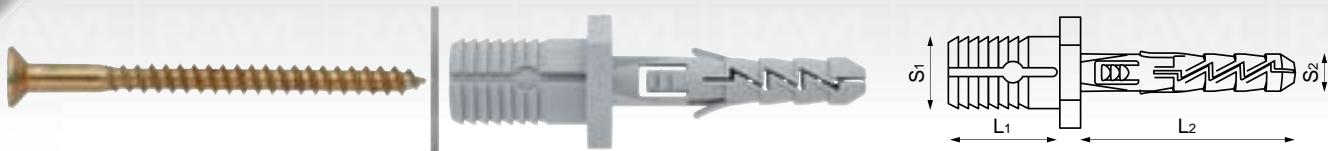
HOLE DIAMETER (mm)	PLUG LENGTH (mm)	SCREW DIMENSIONS (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
6	40	4,0×40	200	2400	KS-06040
6	40	4,0×50	200	2400	KS-06050
6	40	4,0×60	200	2400	KS-06060
8	50	4,5×50	100	1200	KS-08050
8	50	4,5×60	100	1200	KS-08060
8	50	4,5×70	100	1200	KS-08070
10	60	5,0×60	50	600	KS-10060
10	60	5,0×70	50	600	KS-10070
10	60	5,0×80	50	600	KS-10080
10	60	5,0×100	25	300	KS-10100

HOLE DIAMETER (mm)	PLUG LENGTH (mm)	SCREW DIMENSIONS (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
6	40	3,5×65	200	2400	KS-06S
8	50	4,5×85	100	1200	KS-08S

STAIR-TREAD FIXINGS

Product Information

↓ Stair-tread fixings for installation on concrete staircase stringers


MATERIAL

Plug sleeve:
polyamide PA 6.0 (Nylon)

Screw:
electro-zinc coated steel ~10 µm

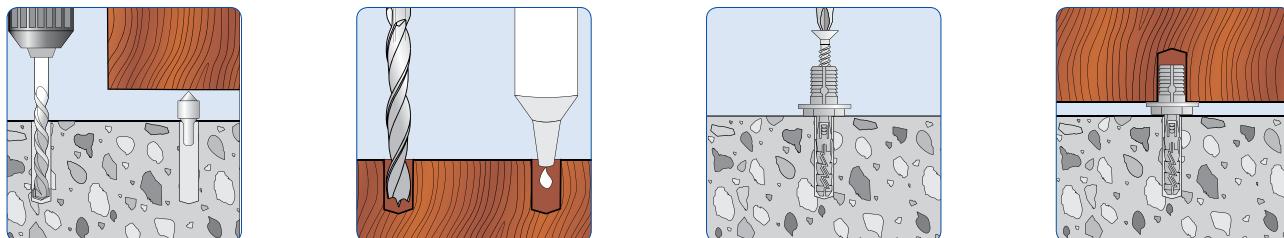
Washer:
polypropylene

CONTENTS OF SET:

- expansion plug
- countersunk head screw
- 4 levelling washers

S1 (mm)	L1 (mm)	S2 (mm)	L2 (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
14	22	8	40	25	600	LSB

↓ Installation in concrete



↓ Stair-tread fixings for installation on steel staircase stringers


MATERIAL

Plug sleeve:
polyamide PA 6.0 (Nylon)

Screw:
electro-zinc coated steel ~10 µm

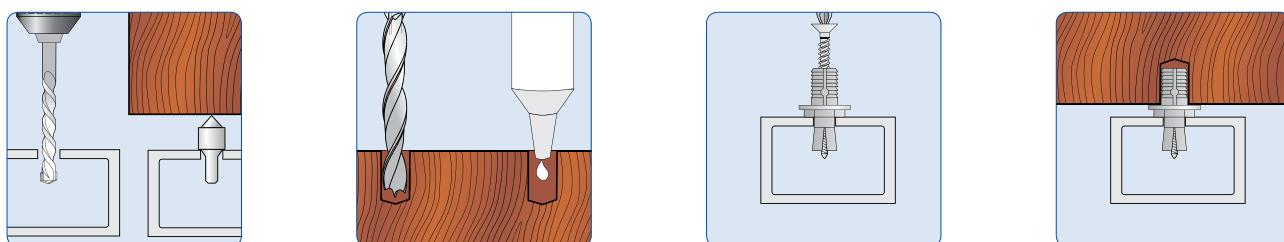
Washer:
polypropylene

CONTENTS OF SET:

- expansion plug
- countersunk head screw,
- 4 levelling washers

S1 (mm)	L1 (mm)	S2 (mm)	L2 (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
14	20	9	10	25	600	LSM

↓ Installation in hollow steel construction



Centre Punches for Stair Treads


MATERIAL

electro-zinc coated steel ~10 µm

S2 (mm)	PACK QUANTITY	PRODUCT CODE
8,0	2	LSB-P

DOOR STOPS BALL SHAPED

Product Information


MATERIAL

Plug sleeve:
polyamide PA 6.0 (Nylon)

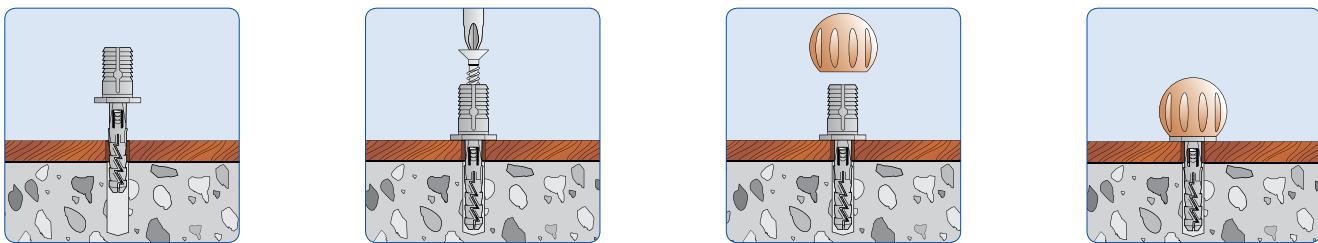
Screw:
electro-zinc coated steel ~10 µm

Door stop:
polyethylene with vinyl acetate

CONTENTS OF SET:

- expansion plug
- countersunk head screw
- ball-shaped door stop

S2 (mm)	L2 (mm)	COLOR OF THE BALL	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
8	40	white	15	180	FIX-ODBK-01
8	40	beige	15	180	FIX-ODBK-02
8	40	brown	15	180	FIX-ODBK-03
8	40	black	15	180	FIX-ODBK-04
8	40	grey	15	180	FIX-ODBK-05

Installation


LIGHTWEIGHT BLOCK ANCHOR

Product Information



Steel fixing giving good performance in light weight blocks such as aerated and light aggregate blocks.

DIMENSIONS (mm)	BOX QUANTITY	PRODUCT CODE
6x32	200	KGS-0632
8x38	200	KGS-0838
8x60	100	KGS-0860
10x60	100	KGS-1060

SANITARY FIXINGS

Product Information

Description

A dedicated range of fixings, designed for secure mounting of all types of Sanitary Ware into solid substrates.

Suitable for use in:

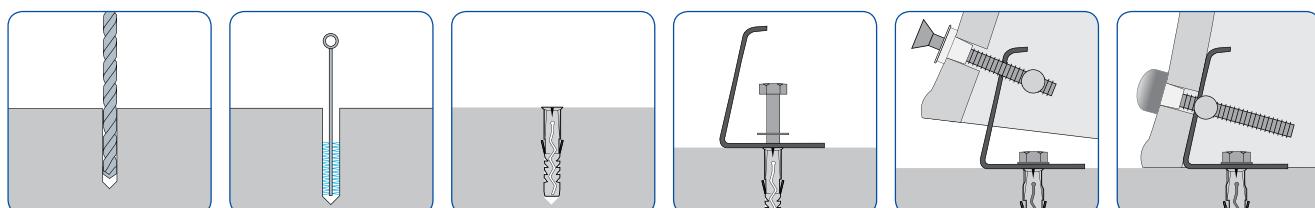
Concrete
Brick
Block
Stone

WC OR BIDET LATERAL FIXING SET

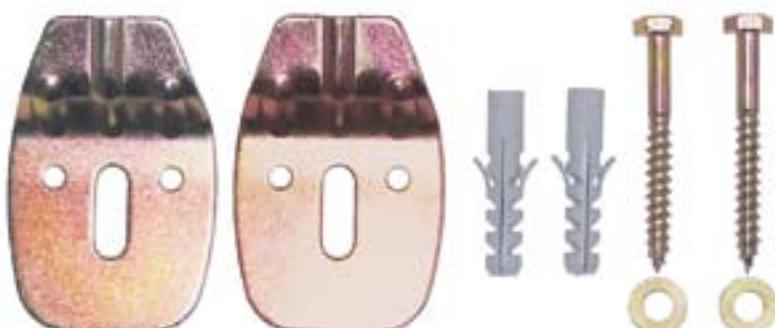


HOLE DIAMETER IN SUBSTRATES (mm)	PRODUCT CODE
10	67-448

Installation

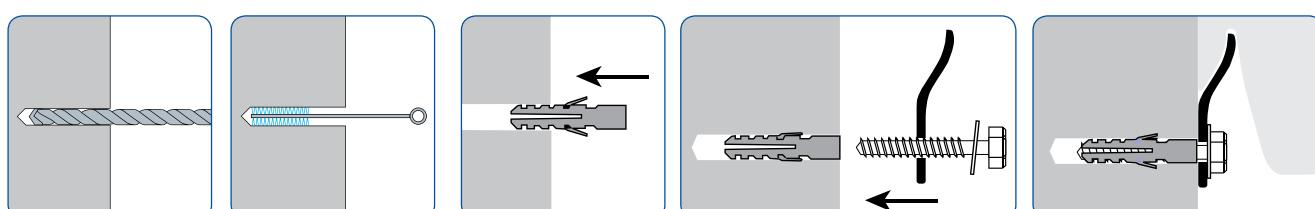


CORNER BASIN FIXING SET



HOLE DIAMETER IN SUBSTRATES (mm)	PRODUCT CODE
8	67-482

Installation



SANITARY FIXINGS

Product Information

Material

Plug sleeve: impact resistant copolymer of polypropylene PP or polyamide PA 6.0 (Nylon)

Screw: electro-zinc coated steel ~10 µm

Off-centre washer and masking cap: polypropylene

Suitable for use in:

Concrete
Brick
Block
Stone

WASHBASIN FIXINGS

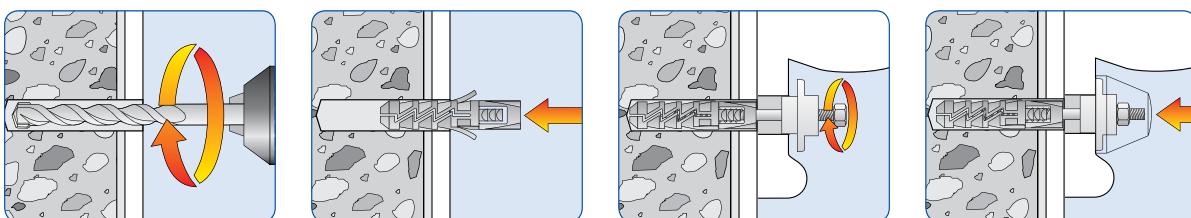


HOLE DIAMETER (mm) (d ₀)	PLUG DESCRIPTION	SCREW DESCRIPTION	COLOUR OF COVER CAPS	QUANTITY		PRODUCT CODE
				PACK	OUTER	
10	10 x 50	M8 x 80	white	1	125	KPU100
12	12 x 60	M8 x 100		1	100	KPU120
12	12 x 60	M8 x 120		1	75	KPU140
14	14 x 70	M10 x 140		1	65	KPU141

CONTENTS OF SET:

- 2 expansion plugs
- 2 stud screws
- 2 nuts
- 2 off-centre washers
- 2 cover caps

Installation



WC FIXINGS

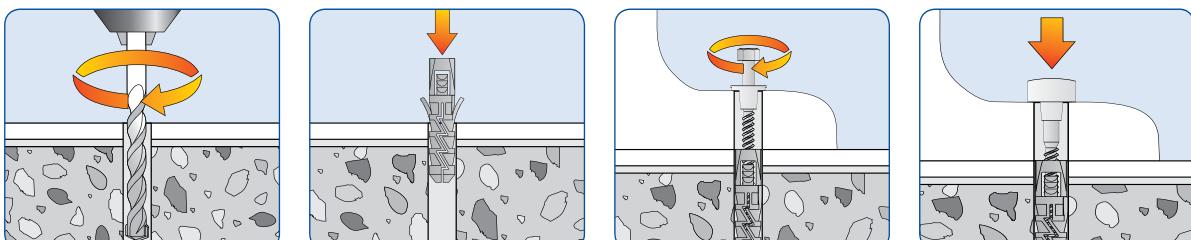


HOLE DIAMETER (mm) (d ₀)	PLUG DESCRIPTION	SCREW DESCRIPTION	COLOUR OF COVER CAPS	QUANTITY		PRODUCT CODE
				PACK	OUTER	
10	10 x 50	6.0 x 80	white	1	500	KPM100
10	10 x 50	6.0 x 80	silver	1	500	KPM100S

CONTENTS OF SET:

- 2 expansion plugs
- 2 snap-fit sleeves
- 2 hexagonal head screws
- 2 cover caps

Installation



FF1 FRAME FIXINGS

Product Information



Description	Features	Suitable for use in	Typical applications
Universal frame fixing for installation timber, metal or PVC window and door frames.	<ol style="list-style-type: none"> SCREW – material: carbon steel, hardened, zinc electroplated, Cr 3+ Two types of screw head: countersunk, TORX 40, provides flush finish in fixture, hex flange head, TORX 40, install using hex socket or TORX drive PLUG – Two types: countersunk for flush fixing of soft material like wood and wide flange for solid fixing of hard material like steel. Profiled internal geometry, designed to fit both types of screw heads. For 4 base material types according to ETAG 020 (A, B, C, D) specially formulated Ultramid Equal embedment depth for all base materials, 70 mm Embedment depth mark Multi axis expansion 	Concrete Brick Hollow brick Aerated concrete	<ul style="list-style-type: none"> Fixing of metal or wooden sub-construction in solid brick masonry, concrete, hollow brick and aerated concrete Easy fixing of timber or metal door and window frames



PLUG DIMENSIONS (mm)	SCREW DIMENSIONS (mm)	HEAD	QUANTITY	PRODUCT CODE
10×80	7×89	TORX40/M13	50	R-FF1-N-10K080
10×100	7×109	TORX40/M13	25	R-FF1-N-10K100
10×120	7×129	TORX40/M13	25	R-FF1-N-10K120
10×140	7×149	TORX40/M13	25	R-FF1-N-10K140
10×160	7×169	TORX40/M13	25	R-FF1-N-10K160
10×200*	7×209	TORX40/M13	25	R-FF1-N-10K200
10×240*	7×249	TORX40/M13	25	R-FF1-N-10K240
10×300*	7×309	TORX40/M13	25	R-FF1-N-10K300

* available soon

PLUG DIMENSIONS (mm)	SCREW DIMENSIONS (mm)	HEAD	QUANTITY	PRODUCT CODE
10×80	7×89	TORX40	50	R-FF1-N-10L080
10×100	7×109	TORX40	25	R-FF1-N-10L100
10×120	7×129	TORX40	25	R-FF1-N-10L120
10×140	7×149	TORX40	25	R-FF1-N-10L140
10×160	7×169	TORX40	25	R-FF1-N-10L160
10×200*	7×209	TORX40	25	R-FF1-N-10L200
10×240*	7×249	TORX40	25	R-FF1-N-10L240
10×300*	7×309	TORX40	25	R-FF1-N-10L300

* available soon

Load values table



BASE MATERIAL	DIAMETER OF DRILL BIT (MM)	EFFECTIVE ANCHORAGE DEPTH (MM)	AVERAGE LOAD (KG)
a CONCRETE	10	70	1450
b BRICK	10	70	1260
c HOLLOW BRICK	10	70	320
d AUTOCLAVED AERATED CONCRETE	10	70	350

FRAME FIXINGS WITH SHORT EXPANSION ZONE

Product Information



Description Features Suitable for use in Typical applications

Fixing timber or metal window and door frames.

1. Countersunk Pozi-head screw provided, suitable for use with screw caps.
2. Durable PA6 grade nylon for extended fixing life.
3. Tough nylon sleeve prevents frame distortion during tightening.
4. Anti-rotation lugs.
5. Extended zig-zag design for enhanced expansion.

Concrete,
Stone
Brickwork & Blockwork

- Quick, easy fixing of timber or metal door and window frames.
- No marking out - drill straight through frame.

PLUG DIMENSIONS (mm)	SCREW DIMENSIONS (mm)	HEAD	MIN. EMBEDMENT DEPTH K (mm)	MAX. FIXTURE THICKNESS U (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE	PRODUCT CODE
8x60	5.5x65	PZ2	50*	5	100	1200	-	KKS-08060-R
8x80	5.5x85	PZ2	50*	25	50	600	-	KKS-08080-R
8x100	5.5x105	PZ2	50*	45	50	600	KKS-08100	KKS-08100-R
8x120	5.5x125	PZ2	50*	65	50	600	KKS-08120	KKS-08120-R
10x80	7.0x85	PZ4	50*	25	50	600	KKS-10080	KKS-10080-R
10x100	7.0x105	PZ4	50*	45	25	450	KKS-10100	KKS-10100-R
10x120	7.0x125	PZ4	50*	65	25	300	KKS-10120	KKS-10120-R
10x140	7.0x140	PZ4	50*	80	25	300	KKS-10140	KKS-10140-R
10x160	7.0x165	PZ4	50*	115	25	300	KKS-10160	KKS-10160-R

* concrete grade C20/25



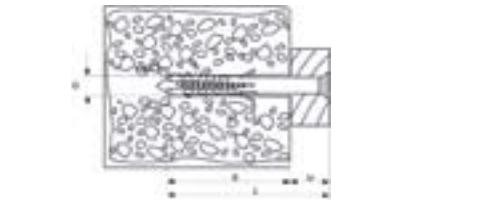
KKS-...-R



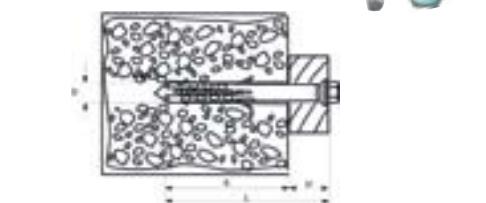
KKS



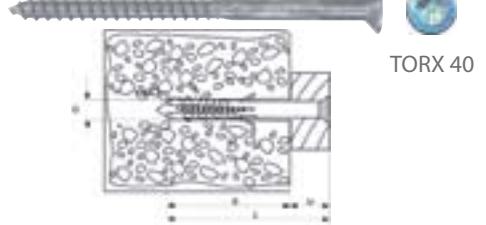
KKS



KKD



KKT



TORX 40

PLUG DIMENSIONS (mm)	SCREW DIMENSIONS (mm)	MIN. EMBEDMENT DEPTH K (mm)	MAX. FIXTURE THICKNESS U (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
10x100	6.8x105	60/40*	50	25	450	KKD-10100
10x120	6.8x125	60/40*	70	25	300	KKD-10120
10x140	6.8x145	60/40*	90	25	300	KKD-10140
10x160	6.8x165	60/40*	110	25	300	KKD-10160

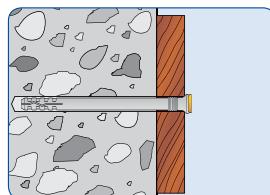
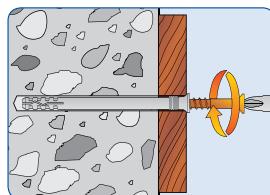
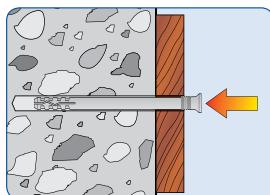
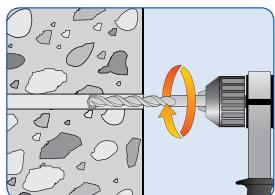
* concrete grade C20/25

PLUG DIMENSIONS (mm)	SCREW DIMENSIONS (mm)	MIN. EMBEDMENT DEPTH K (mm)	MAX. FIXTURE THICKNESS U (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
10x100	6.8x105	60/40*	50	25	300	KKT-10100
10x120	6.8x125	60/40*	70	25	300	KKT-10120
10x140	6.8x145	60/40*	90	25	300	KKT-10140
10x160	6.8x165	60/40*	110	25	300	KKT-10160

* concrete grade C20/25

K – min. embedment depth; D – plug diameter;
L – plug length; U – max. fixture thickness

Installation



1. Place frame in position and drill appropriate diameter hole through frame and into base material. The hole depth (including frame) should equal plug length plus 10mm. Clean out hole. Countersink for neat finish.

2. Insert plug through fixture into hole and lightly tap until flush with the surface.

3. Insert the screw and tighten until secure.

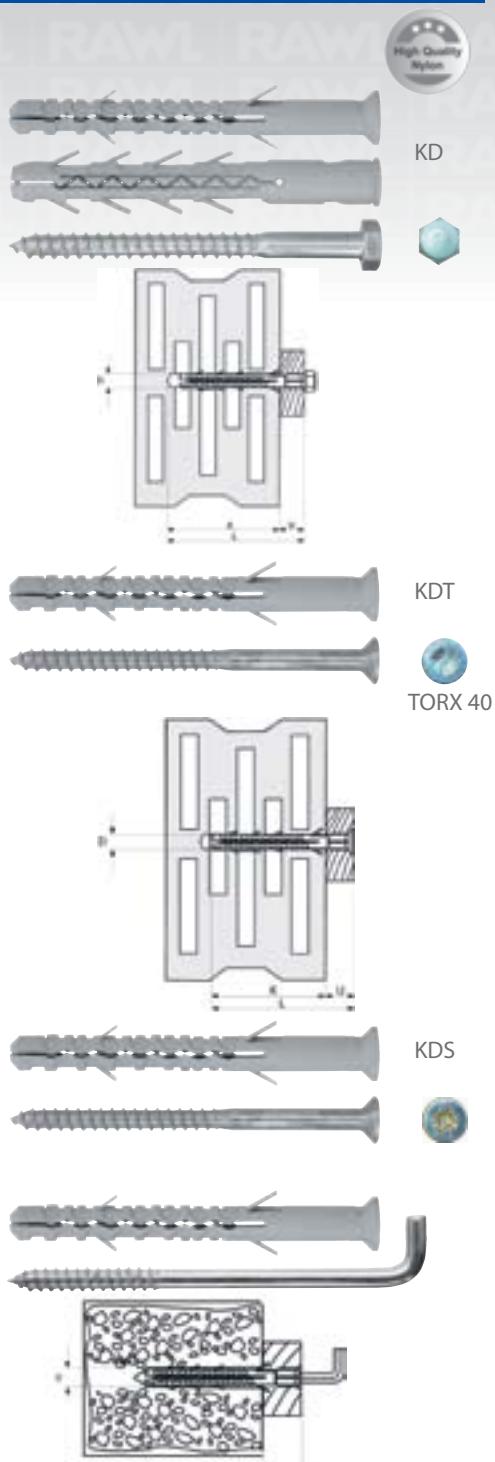
4. Fit a screw cap when fixing is complete (optional).

FRAME FIXINGS WITH LONG EXPANSION ZONE

Product Information

PLUG DIMENSIONS (mm)	SCREW DIMENSIONS (mm)	MIN. EMBEDMENT DEPTH K (mm)	MAX. FIXTURE THICKNESS U (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
10×80	6,8×85	60*	5	50	600	KD-10080
10×100	6,8×105	60*	25	25	450	KD-10100
10×120	6,8×125	60*	45	25	300	KD-10120
10×140	6,8×145	60*	65	25	300	KD-10140
10×160	6,8×165	60*	85	25	300	KD-10160
10×200	6,8×205	60*	125	25	300	KD-10200
10×240	6,8×245	60*	165	25	300	KD-10240
16×140	12×150	100*	35	20	200	KD-16140
16×160	12×170	100*	55	20	200	KD-16160
16×200	12×210	100*	95	20	200	KD-16200
16×240	12×250	100*	135	20	200	KD-16240

* concrete grade C20/25



K – min. embedment depth; D – plug diameter;
L – plug length; U – max. fixture thickness

PLUG DIMENSIONS (mm)	SCREW DIMENSIONS (mm)	MIN. EMBEDMENT DEPTH K (mm)	MAX. FIXTURE THICKNESS U (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
10×80	6,8×85	60	5	50	600	KDT-10080
10×100	6,8×105	60	25	25	450	KDT-10100
10×120	6,8×125	60	45	25	300	KDT-10120
10×140	6,8×145	60	65	25	300	KDT-10140
10×160	6,8×165	60	85	25	300	KDT-10160
10×200	6,8×205	60	125	25	300	KDT-10200

* concrete grade C20/25

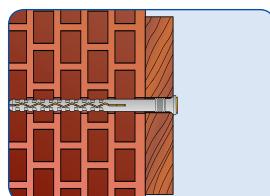
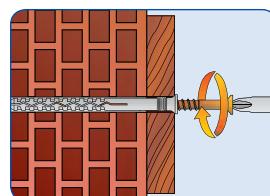
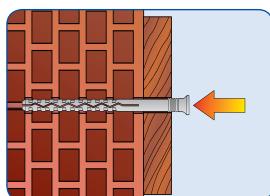
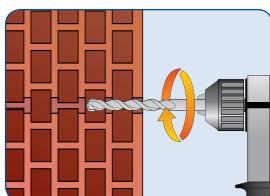
PLUG DIMENSIONS (mm)	SCREW DIMENSIONS (mm)	MIN. EMBEDMENT DEPTH K (mm)	MAX. FIXTURE THICKNESS U (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
8×60	5,5×65	50*	5	100	1200	KDS-08060
8×80	5,5×85	50*	25	50	600	KDS-08080
8×100	4,8×105	60*	25	50	600	KDS-08100
8×120	4,8×125	60*	45	50	600	KDS-08120
8×140	4,8×145	60*	65	50	600	KDS-08140
10×80	6,8×85	60*	5	50	600	KDS-10080
10×100	6,8×105	60*	25	25	450	KDS-10100
10×120	6,8×125	60*	45	25	300	KDS-10120
10×140	6,8×145	60*	65	25	300	KDS-10140
10×160	6,8×165	60*	85	25	300	KDS-10160
10×200	6,8×205	60*	125	25	300	KDS-10200
10×240	6,8×245	60*	165	25	300	KDS-10240

* concrete grade C20/25

PLUG DIMENSIONS (mm)	SCREW DIMENSIONS (mm)	MIN. EMBEDMENT DEPTH K (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
8×100	5,0×120	60	50	600	1200
8×120	5,0×140	60	50	600	600
8×140	5,0×160	60	50	600	600
10×80	7,0×100	60	50	600	600
10×100	7,0×120	60	25	300	600
10×120	7,0×140	60	25	300	600
10×140	7,0×160	60	25	300	450
10×160	7,0×180	60	25	300	300
10×200	7,0×200	60	25	300	300

* concrete grade C20/25

Installation



HAMMER FIXINGS

Product Information

Description/Material	Features	Suitable for use in	Typical applications
<p>For fast, repetitive fixing with minimal screwdriver work.</p> <p>Plug sleeve: impact resistant co-polymer of polypropylene PP or polyamide PA 6.0 (Nylon).</p> <p>Nail: steel electro-zinc coated ~10 µm.</p>	<ol style="list-style-type: none"> Reinforced screwhead - facilitates high knock-in loads with the added benefit of plug neck grip. Hammer in drive screw for fast installation. Deforming crumple zone allows quick adjustment in uneven surfaces. Extended expansion zone gives extra grip. 	Concrete Blockwork Stone Sandstone Etc.	<ul style="list-style-type: none"> Fixing stud battens to walls before cladding. Fixing long runs of shelf supports. Fixing skirting boards to walls.

Hammer fixings, countersunk head with steel nail



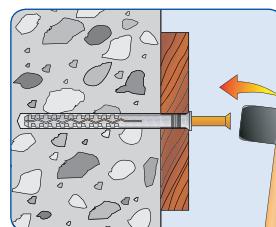
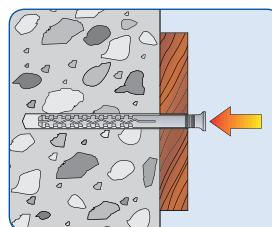
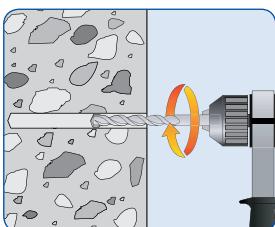
Hammer fixings cylinder head with steel nail



PLUG DESCRIPTION	SCREWHEAD TYPE	QUANTITY		PRODUCT CODE
		PACK	OUTER	
5x25	PZ2	200	3600	FX-05L025
5x30	PZ2	200	3600	FX-05L030
5x35	PZ2	200	3600	FX-05L035
5x40	PZ2	200	3600	FX-05L040
5x50	PZ2	200	2400	FX-05L050
6x35	PZ2	200	2400	FX-06L035
6x40	PZ2	200	2400	FX-06L040
6x50	PZ2	100	1800	FX-06L050
6x60	PZ2	100	1200	FX-06L060
6x80	PZ2	100	1200	FX-06L080
8x45	PZ2	100	1200	FX-08L045
8x60	PZ2	100	1200	FX-08L060
8x80	PZ2	50	600	FX-08L080
8x100	PZ2	50	600	FX-08L100
8x120	PZ2	50	600	FX-08L120
8x140	PZ2	50	600	FX-08L140
8x160	PZ2	50	300	FX-08L160
10x100	PZ3	25	300	10L100
10x120	PZ3	25	300	10L120
10x140	PZ3	25	300	10L140
10x160	PZ3	25	300	10L160

PLUG DESCRIPTION	SCREWHEAD TYPE	QUANTITY		PRODUCT CODE
		PACK	OUTER	
5x25	PZ2	200	3600	FX-05C025
5x30	PZ2	200	3600	FX-05C030
5x35	PZ2	200	3600	FX-05C035
5x40	PZ2	200	3600	FX-05C040
6x40	PZ2	200	4000	FX-06C040
6x45	PZ2	100	1800	FX-06C045
6x60	PZ2	100	2000	FX-06C060
6x80	PZ2	100	2000	FX-06C080
8x45	PZ2	100	1200	FX-08C045
8x60	PZ2	100	1200	FX-08C060
8x80	PZ2	50	600	FX-08C080
8x100	PZ2	50	600	FX-08C100
8x120	PZ2	50	600	FX-08C120
8x140	PZ2	50	600	FX-08C140
8x160	PZ2	50	300	FX-08C160

Installation



HAMMER FIXINGS

Product Information

Hammer fixings, flat mushroom head with steel nail



Hammer fixings with nylon nail



PLUG DESCRIPTION	SCREWHEAD TYPE	QUANTITY		PRODUCT CODE
		PACK	OUTER	
6x40	PZ2	200	2400	FX-06K040
6x45	PZ2	100	1800	FX-06K045
6x60	PZ2	100	1200	FX-06K060
6x80	PZ2	100	1200	FX-06K080

PLUG DESCRIPTION	HOLE DIAMETER (mm)	HEAD PLUG TYPE	QUANTITY		PRODUCT CODE
			PACK	OUTER	
6x40	6	Mushroom	250	3000	FX-N-06K040P
6x40	6	Countersunk	250	3000	FX-N-06L040P
6x40	6	Cylinder	250	3000	FX-N-06C040P

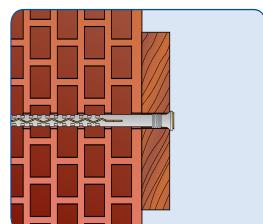
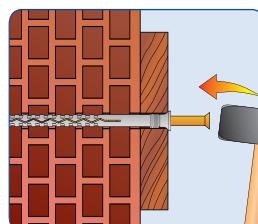
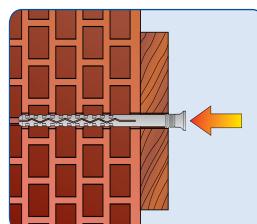
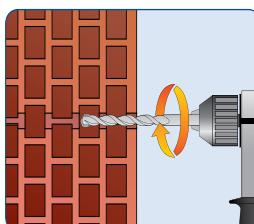
HAMMER FIXINGS WITH COUNTERSUNK HEAD WITH LONG EXPANSION ZONE WITH STEEL NAIL

Description/Material	Features	Suitable for use in	Typical applications
<p>For fast, repetitive fixing with minimal screwdriver work.</p> <p>Plug sleeve: impact resistant co-polymer of polypropylene PP or polyamide PA 6.0 (Nylon).</p> <p>Nail: electro-zinc coated steel ~10 µm.</p>	<ol style="list-style-type: none"> Reinforced screwhead - facilitates high knock-in loads with the added benefit of plug neck grip. Hammer in drive screw for fast installation. Deforming crumple zone allows quick adjustment in uneven surfaces. Extended expansion zone gives extra grip. 	Lightweight concrete Cellular brick Hollow brick Etc.	<ul style="list-style-type: none"> Fixing stud battens to walls before cladding. Fixing long runs of shelf supports. Fixing skirting boards to walls.



PLUG DESCRIPTION	HOLE DIAMETER (mm) (d_o)	SCREWHEAD TYPE	QUANTITY		PRODUCT CODE
			PACK	OUTER	
8 x 100	8	POZI2	50	600	N-KWD-08L100
8 x 120	8	POZI2	50	600	N-KWD-08L120
8 x 140	8	POZI2	50	600	N-KWD-08L140

Installation



METAL FRAME FIXINGS

Product Information



Description	Features	Suitable for use in	Typical applications
For distortion-free installation of metal frames. No marking out - fixes straight through the fixture into the substrate.	<ul style="list-style-type: none"> 1. Anti-rotation lugs prevent rotation during tightening. 2. All-steel construction for strength and durability. 3. Metal sleeve design avoids frame distortion during tightening up. 	Concrete Stone Brickwork & Blockwork	<ul style="list-style-type: none"> • Fixes door and window frames to most types of building material. • Easy fixing for metal-framed doors and windows. • Perfect for installing patio doors. <p>NB. Not suitable for hollow brickwork.</p>

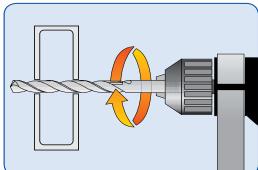
DESCRIPTION	SCREWHEAD TYPE	HOLE DIAMETER IN STRUCTURE (mm) (d_o)	HOLE DIAMETER IN FIXTURE (mm)	QUANTITY	PRODUCT CODE	NEW CODE
10 x 72	POZI 3	10	11	100	21-100	0-10072
10 x 92	POZI 3	10	11	100	21-101	0-10092
10 x 112	POZI 3	10	11	100	21-102	0-10112
10 x 132	POZI 3	10	11	100	21-104	0-10132
10 x 152	POZI 3	10	11	100	21-106	0-10152
10 x 182	POZI 3	10	11	100	21-108	0-10182
10 x 202	POZI 3	10	11	100		0-10202

Masking caps for metal frame fixings

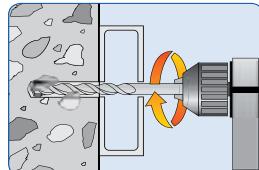


CAP DIAMETER (mm)	PRODUCT COLOUR	QUANTITY		PRODUCT CODE
		PACK	OUTER	
15	WHITE	100	1000	KO-BIALY/WHT
15	BROWN	100	1000	KO-BRAZ/BRN

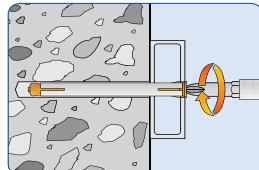
Installation



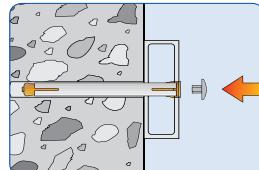
1. Pre-drill the frame with an 11mm HSS twist drill.



2. Place frame in position and drill through frame holes into base material to required depth, using recommended masonry drill. Total hole depth (incl. frame) should equal length of fixing plus 10 mm.



3. Clean hole and install fixing through frame into masonry. Tighten screw until secure. Fixing may be released and resecured, if necessary, to align frame accurately.



4. Fit masking cup.

CONQUEROR CONCRETE SCREWBOLT

Product Information

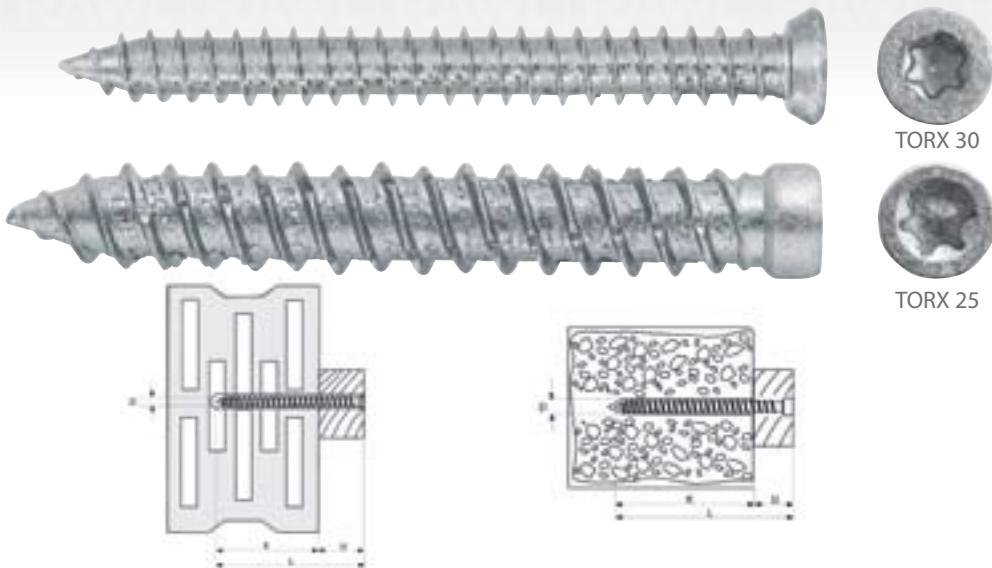


Description	Features	Suitable for use in	Typical applications
<ul style="list-style-type: none"> Non expansion bolt with undercut technology for fixing into wood, brick & (cracked & non cracked) concrete. High performance concrete bolt that cuts its own thread. Non expansion bolt that can be used close to the edge where conventional expanding bolts will damage the material. 	<ol style="list-style-type: none"> Quick & easy installation. Simple & secure to use. Removable & reusable. Hexagon Head with forged on washer Low expansion (undercut) force in base material. Single piece design, no nut and washer to assemble. Close edge/spacing distance. No grinding required to remove anchors. A through fixing 	concrete (non cracked), brick, pre-cast hollow concrete beams, wood.	<ul style="list-style-type: none"> Curtain walling Ballustrading Barriers Handrails Racking Sole plates

DIMENSIONS	BOX QUANTITY	DRILL DIAMETER IN CONCRETE (mm)	WRENCH SIZE (mm)	PRODUCT CODE
6.3X50	200	5	8	CB06350
6.3X60	200	5	8	CB06360
7.5X45	100	6	10	CB075045
7.5X60	100	6	10	CB075060
7.5X80	100	6	10	CB075080
7.5X100	50	6	10	CB075100
10.5X65	50	8	13	CB105065
10.5X75	50	8	13	CB105075
10.5X90	50	8	13	CB105090
10.5X110	30	8	13	CB105110
10.5X130	30	8	13	CB105130
12.5X65	30	10	15	CB125065
12.5X75	30	10	15	CB125075
12.5X85	30	10	15	CB125085
12.5X100	20	10	15	CB125100
12.5X120	20	10	15	CB125120
12.5X140	20	10	15	CB125140
16.5X80	12	14	18	CB165080
16.5X115	12	14	18	CB165115
16.5X135	10	14	18	CB165135
16.5X160	10	14	18	CB165160

CONCRETE FRAME SCREW WITH COUNTERSUNK HEAD

Product Information



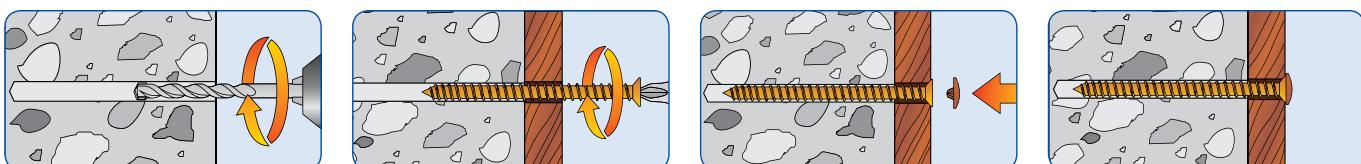
Description	Features	Suitable for use in	Typical applications
Minimum screw anchorage depth: for dense building materials – 30 mm, for aerated concrete and timber – 60 mm. Screw: Hardened steel, electro-zinc coated ~10 µm	1. No expansion force therefore imposes less stress on substrate during installation. 2. Small hole diameter giving high loads. 3. Easily removed for temporary works.	Pre-drilled Ø 6mm: concrete, solid or hollow brick, clinker brick, stone, structural clay tile. Without pre-drilling: aerated concrete, timber.	<ul style="list-style-type: none"> Door and window frames Securing formwork M & E installation Suspended ceilings Lightweight steel angles

DIMENSIONS	MIN. EMBEDMENT DEPTH K* (mm)	MIN. EMBEDMENT DEPTH K** (mm)	MAX. FIXTURE THICKNESS U* (mm)	MAX. FIXTURE THICKNESS U** (mm)	QUANTITY	PRODUCT CODE	PRODUCT CODE
7.5 x 52	30	60	20	-	100	WHO-75052	WHS-75052
7.5 x 72	30	60	40	10	100	WHO-75072	WHS-75072
7.5 x 92	30	60	60	30	100	WHO-75092	WHS-75092
7.5 x 100	30	60			100	WHO-75100	WHS-75100
7.5 x 112	30	60	80	50	100	WHO-75112	WHS-75112
7.5 x 120	30	60			100	WHO-75120	WHS-75120
7.5 x 132	30	60	100	70	100	WHO-75132	WHS-75132
7.5 x 152	30	60	120	90	100	WHO-75152	WHS-75152
7.5 x 182	30	60	150	120	100	WHO-75182	WHS-75182
7.5 x 202	30	60	170	140	100	WHO-75202	WHS-75202
7.5 x 212	30	60	180	150	100	WHO-75212	WHS-75212

* dense building materials

** aerated concrete, timber

Installation



DRYWALL SCREWS BLACK PHOSPHATE

Product Information

Coarse thread for timber



APPLICATION

Mainly in drywall systems for fixing plasterboards to wooden framing.

MATERIAL

Low-carbon steel-black phosphate coating.

PROPERTIES

- Bugle Head PHILIPS2.

Fine thread for sheet metal



APPLICATION

Mainly in drywall systems for fixing plasterboards to metal framing.

MATERIAL

Low-carbon steel-black phosphate coating.

PROPERTIES

- Bugle Head PHILIPS2.

SCREW SIZE (mm)	SCREWHEAD TYPE	BOX/PACK QUANTITY (pcs)	OUTER QUANTITY (pcs)	PRODUCT CODE
3.5 x 25	PHILIPS2	1000	18000	FT-3525
3.5 x 32	PHILIPS2	1000	12000	FT-3532
3.5 x 35	PHILIPS2	1000	12000	FT-3535
3.5 x 38	PHILIPS2	1000	12000	FT-3538
3.5 x 42	PHILIPS2	500	6000	FT-3542
3.5 x 45	PHILIPS2	500	6000	FT-3545
3.5 x 50	PHILIPS2	500	6000	FT-3550
3.5 x 55	PHILIPS2	500	6000	FT-3555
4.2 x 60	PHILIPS2	250	3000	FT-4260
4.2 x 70	PHILIPS2	250	3000	FT-4270
4.2 x 75	PHILIPS2	250	3000	FT-4275
4.8 x 90	PHILIPS2	250	3000	FT-4890
4.8 x 100	PHILIPS2	200	2400	FT-48100
4.8 x 110	PHILIPS2	200	2400	FT-48110
4.8 x 120	PHILIPS2	200	2400	FT-48120

SCREW SIZE (mm)	SCREWHEAD TYPE	BOX/PACK QUANTITY (pcs)	OUTER QUANTITY (pcs)	PRODUCT CODE
3.5 x 25	PHILIPS2	1000	24000	FS-3525
3.5 x 32	PHILIPS2	1000	12000	FS-3532
3.5 x 35	PHILIPS2	1000	12000	FS-3535
3.5 x 38	PHILIPS2	1000	12000	FS-3538
3.5 x 42	PHILIPS2	500	6000	FS-3542
3.5 x 45	PHILIPS2	500	6000	FS-3545
3.5 x 50	PHILIPS2	500	6000	FS-3550
3.5 x 55	PHILIPS2	500	6000	FS-3555
4.2 x 60	PHILIPS2	250	3000	FS-4260
4.2 x 70	PHILIPS2	250	3000	FS-4270
4.2 x 75	PHILIPS2	250	3000	FS-4275
4.8 x 90	PHILIPS2	250	3000	FS-4890
4.8 x 100	PHILIPS2	200	2400	FS-48100
4.8 x 110	PHILIPS2	200	2400	FS-48110
4.8 x 120	PHILIPS2	200	2400	FS-48120

Drywall Collated Screws Black Phosphate



Black fine thread for timber

SCREW SIZE (mm)	SCREWHEAD TYPE	PIECES PER STRIPE	BOX/PAX QUANTITY (pcs)	OUTER QUANTITY (pcs)	PRODUCT CODE
3.5 x 25	PHILIPS2	50	1000	10000	FTC-3525
3.5 x 35	PHILIPS2	50	1000	10000	FTC-3535
3.5 x 38	PHILIPS2	50	1000	10000	FTC-3538
3.5 x 45	PHILIPS2	50	500	10000	FTC-3545
3.5 x 50	PHILIPS2	50	500	10000	FTC-3550
3.5 x 55	PHILIPS2	50	250	10000	FTC-3555

Black coarse thread for sheet metal

SCREW SIZE (mm)	SCREWHEAD TYPE	PIECES PER STRIPE	BOX/PAX QUANTITY (pcs)	OUTER QUANTITY (pcs)	PRODUCT CODE
3.5 x 25	PHILIPS2	50	1000	10000	FSC-3525
3.5 x 35	PHILIPS2	50	1000	10000	FSC-3535

SELF-DRILLING JACKPOINT SCREWS

Product Information

Countersunk head black phosphate



APPLICATION

Mainly for fixing plasterboard to light gauge steel constructions over 0.7 mm.

MATERIAL

Low-carbon steel-black phosphate coating.

PROPERTIES

- Drilling capacity (drill tip length) up to 1.2 mm.

SCREW SIZE (mm)	SCREWHEAD TYPE	BOX/PACK QUANTITY (pcs)	OUTER QUANTITY (pcs)	PRODUCT CODE
3,5 x 25	PHILIPS2	1000	18000	WS-3525
3,5 x 32	PHILIPS2	1000	12000	WS-3532
3,5 x 35	PHILIPS2	1000	12000	WS-3535
3,5 x 38	PHILIPS2	1000	12000	WS-3538
3,5 x 42	PHILIPS2	500	6000	WS-3542
3,5 x 45	PHILIPS2	500	6000	WS-3545
3,5 x 50	PHILIPS2	500	6000	WS-3550
3,5 x 60	PHILIPS2	250	3000	WS-3560

Pan head phosphate coating



APPLICATION

Mainly for joining metal supporting profiles in drywall systems.

MATERIAL

Low carbon steel.

PROPERTIES

- Drilling capacity (drill tip length) up to 2.0 mm.

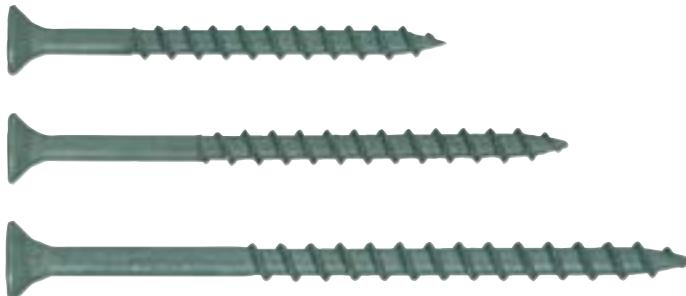
SCREW SIZE (mm)	SCREWHEAD TYPE	BOX/PAX QUANTITY (pcs)	OUTER QUANTITY (pcs)	PRODUCT CODE
3,5 x 9,5	Philips2	1000	24000	WS-3595
3,9 x 11	Philips2	1000	24000	WS-3911

Pan head zinc plated min. 6 µm.



SCREW SIZE (mm)	SCREWHEAD TYPE	BOX/PACK QUANTITY (pcs)	OUTER QUANTITY (pcs)	PRODUCT CODE
3,5 x 9,5	Philips2	1000	24000	WS-3595-0C
3,9 x 11	Philips2	1000	24000	WS-3911-0C

Countersunk head black phosphate



SCREW SIZE (mm)	SCREWHEAD TYPE	BOX/PACK QUANTITY (pcs)	PRODUCT CODE
4,0 x 50	Pozi2	500	DS-4050
4,0 x 60	Pozi2	350	DS-4060
5,0 x 50	Pozi2	400	DS-5050
5,0 x 60	Pozi2	300	DS-5060
5,0 x 80	Pozi2	200	DS-5080

APPLICATION

Recommended for all outdoor uses with all timber.

MATERIAL

High grade steel high-tech organic coating.

PROPERTIES

- High-tech organic coating offering exceptional resistance to corrosion, should last in excess of 25 years.
- Tested under 1500 hours of salt spray, which under normal atmospheric conditions, should last in excess of 25 years.
- Coarse threaded for effective cutting into tanalized timber board.
- Double-angled countersunk head Pozi2 to ensure high strength fixing by increased torsional strength.

METAL SELF-DRIVE

Product Information



DRA-02



DRA-02PLUS



DRA-03

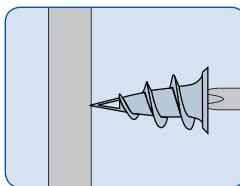


DRA-03PLUS

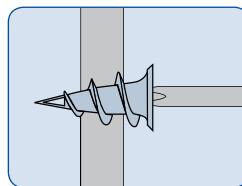
Description	Features	Suitable for use in	Typical applications
<p>No drill required—simply pierce paper skin and screw home.</p> <p>Can be used in single and double thickness plasterboard.</p> <p>Ideal for use with either a power or standard Pozi Driv screwdriver.</p> <p>Must only be used with screws provided.</p>	<ol style="list-style-type: none"> Flange prevents accidental push through in plasterboard. Short length ideally suited for dry-lined walls. 	Plasterboard	<ul style="list-style-type: none"> Securing wall and ceiling fittings, installing hooks and brackets etc. Fixing electrical boxes, sanitary ware, cable trunking etc. Installing shelving units and wooden battens.

DIAMETER (mm)	LENGTH (mm)	SCREW TYPE	SCREW SIZE (mm)	MAX FIXTURE THICKNESS (mm) (T_{fix})	QUANTITY	PRODUCT CODE
14	28	-	-	-	100	DRIVA-02
14	28	panhead	4.2x32	22	100	DRIVA-02PLUS
14	32	-	-	-	100	DRIVA-03
14	32	panhead	4.2x32	22	100	DRIVA-03PLUS

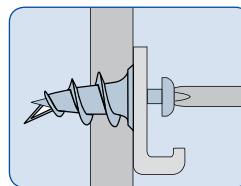
Installation



1. Position the fixture and mark out holes. Using a No. 2 Pozi Driv screwdriver or screwdriver bit, push firmly into the board until thread engages.



2. Maintaining a firm pressure, screw in fixing until flush with the base material.



3. Place fixture in position, insert screw and tighten until secure.

NYLON SELF-DRILL

Product Information



Installation tips

Recommended screw diameter:
3,5-4,2 mm.

Material

Plug sleeve:
PA 6.0+30 GF (polyamide
reinforced with fibre glass - 30%).

Suitable for use in

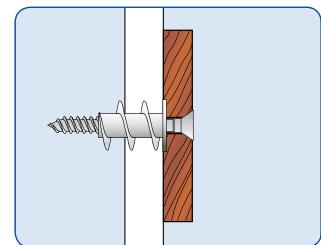
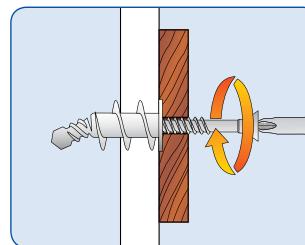
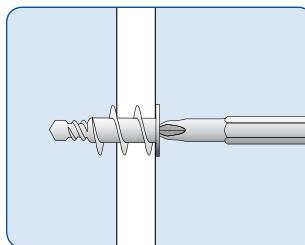
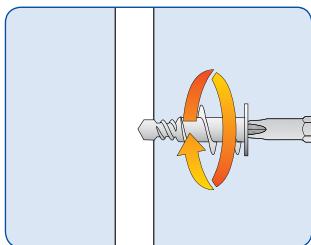
Plasterboard
Gypsum fibreboard

Typical applications

- Ideal for installation of sockets, light switches and other electrical fittings.

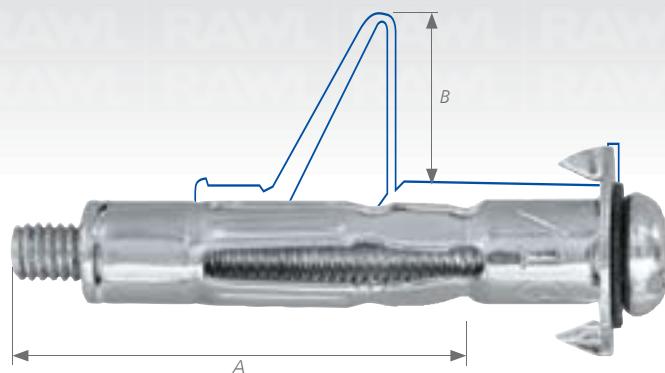
DIAMETER (mm)	LENGTH (mm)	SCREW TYPE	SCREW SIZE (mm)	MAX FIXTURE THICKNESS (mm) (T_{fix})	QUANTITY	PRODUCT CODE
14	22	-	-	-	100	DRIVA-01
14	22	wafer head	4.2x32	22	100	DRIVA-01PLUS

Installation



INTERSET®

Product Information



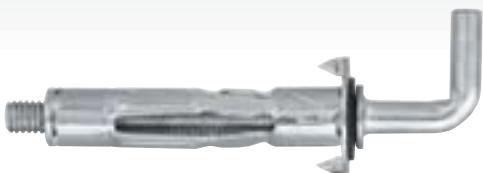
Description	Features	Suitable for use in	Typical applications
Fixing heavy objects securely in a variety of board materials. Fixtures can be removed and re-fitted, eg when moving radiators for redecoration. Can be secured using slotted or Pozi Driv screwdriver.	<ul style="list-style-type: none"> 1. Combination head screw supplied. 2. Integral anti-rotation lugs. 3. Hinged legs positioned to maximise load capacity. 4. One piece stamping, with integral thread and flange for increased reliability. 	Plasterboard Hardboard & Plywood.	<ul style="list-style-type: none"> • Coat hooks to hollow doors. • Shelves and bathroom accessories to standard plasterboard. • Radiators and kitchen cabinets to double thickness and tiled plasterboard.

SCREW SIZE (mm)	HOLE DIAMETER (mm) (d_o)	BOARD THICKNESS RANGE (mm)	MAX FIXTURE THICKNESS (mm) (T_{fix})	MINIMUM CLEARANCE A (mm)	MINIMUM CLEARANCE B (mm)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
M4×25	8	3-5	15	16	5	100	1800	SM-04020
M4×40	8	4-10	15	25	7	100	1800	SM-04032
M4×54	8	15-21	17	26	7	100	1800	SM-04046
M4×66	8	34-38	17	16	8	100	1800	SM-04059
M5×46	11	6-12	15	27	9	100	1800	SM-05037
M5×61	11	6-16	24	40	13	100	1800	SM-05052
M5×73	11	16-30	20	38	15	100	1200	SM-05065
M6×46	13	8-12	18	27	8	100	1200	SM-06037
M6×61	13	8-18	20	38	13	100	1200	SM-06052
M6×73	13	16-30	25	38	13	50	600	SM-06065
M6×90	13	32-45	23	40	12	50	600	SM-06080
M8×90	13	32-45	23	42	13	50	600	SM-08080

INTERSET®

Product Information

INTERSET® with angle hook



INTERSET® with round hook



DESCRIPTION	HOLE DIAMETER (mm) (d_o)	BOARD THICKNESS RANGE (mm)	QUANTITY		PRODUCT CODE
			PACK	OUTER	
M4 x 55	8	4-10	100	1800	SM-04032K

DESCRIPTION	HOLE DIAMETER (mm) (d_o)	BOARD THICKNESS RANGE (mm)	QUANTITY		PRODUCT CODE
			PACK	OUTER	
M4 x 70	8	4-10	100	1800	SM-04032S

Interset® Performance Data

MATERIAL	MAXIMUM RECOMMENDED LOAD TENSION AND SHEAR					
	4 x 20	4 x 32	4 x 40	5 x 40	5 x 65	6 x 52
Plasterboard 9.5mm	—	9 kg	10 kg	12 kg	—	—
Plasterboard 12.5mm	—	—	12 kg	14 kg	16 kg	18 kg
Hollow door	10 kg	12 kg	—	—	—	—

Setting tools



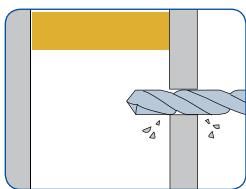
Professional



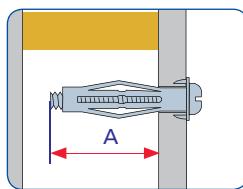
DIY

DESCRIPTION	QUANTITY	PRODUCT CODE
Professional	1	AT-88RAWL
DIY	1	AT-88M

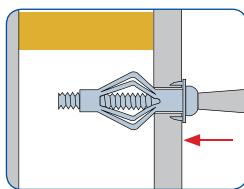
Installation



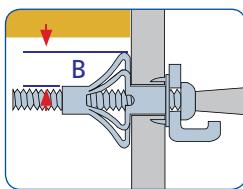
- Drill a hole to appropriate size.



- Insert the fixing into the hole. Tap in lightly, ensuring that the anti-rotation lugs penetrate the face of the base material.



- Keeping a firm forward pressure tighten the screw to set the fixing in position and then remove the screw.



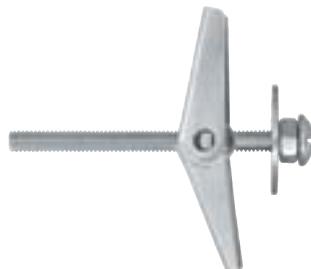
- Position the fixture, insert the screw and tighten until secure.

SPRING TOGGLIES

Product Information

Description	Features	Suitable for use in	Typical applications
Cavity fixing with long threaded screw, ideal for double thickness plasterboard and large fixtures.	<ul style="list-style-type: none"> 1. Machine screw for ease of tightening. 2. Heavy gauge material for superior loads. 3. Spreads load over wide area for extra load capacity. 4. Heavy gauge nut to prevent stripping under load. 	Plasterboard Lathe and plaster Plywood Hardwood	<ul style="list-style-type: none"> • Installing overhead lights, ceiling fans and other fixtures.

Spring toggle with pan head metric screw



Spring toggle with eye



DESCRIPTION	HOLE DIAMETER (mm) (d_o)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
M4 x 50	14	50	900	SP0450

DESCRIPTION	HOLE DIAMETER (mm) (d_o)	PACK QUANTITY	OUTER QUANTITY	PRODUCT CODE
M4 x 75	14	50	900	SP0475Z

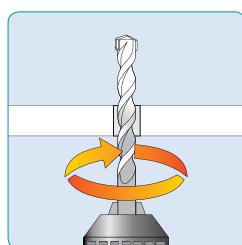
Spring toggle with round hook



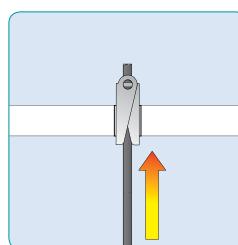
Spring Toggle Performance Data

MATERIAL	MAXIMUM LOAD		
	M3	M5	M6
Plasterboard 9.5mm	15 kg	16 kg	18 kg
Plasterboard 12.5mm	17 kg	18 kg	20 kg

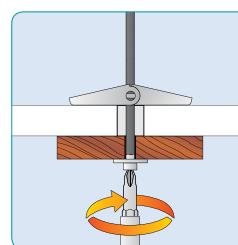
Installation



1. Drill a hole of the appropriate diameter.



2. Compress the 'wings' and push the fixing into the hole.

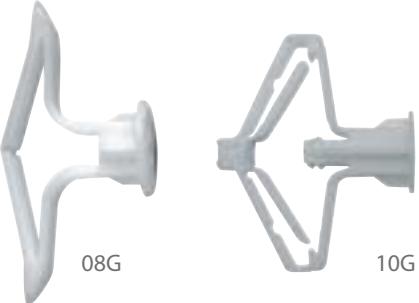


3. While tightening the screw, pull the fixture out from the wall or ceiling to prevent the 'wings' spinning freely.

PLASTIC TOGGLE

Product Information

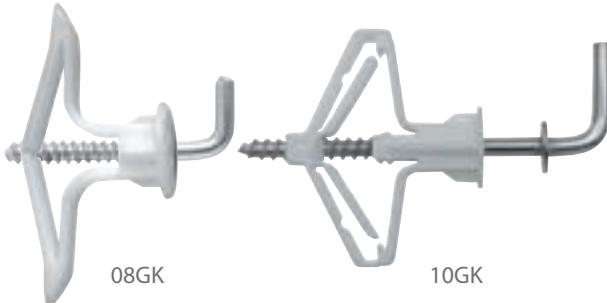
Description	Material	Suitable for use in	Typical applications
Medium duty plasterboard fixing. Fixtures can be removed and replaced for redecoration.	Plug sleeve: impact resistant co-polymer of polypropylene Screw: electro-zinc coated steel ~10 µm	Plasterboard Hardboard Plywood	<ul style="list-style-type: none"> Securing bathroom and kitchen fittings. Installation of ceiling fixtures, such as light fittings. Fixing light shelving, brackets and hooks.



08G 10G

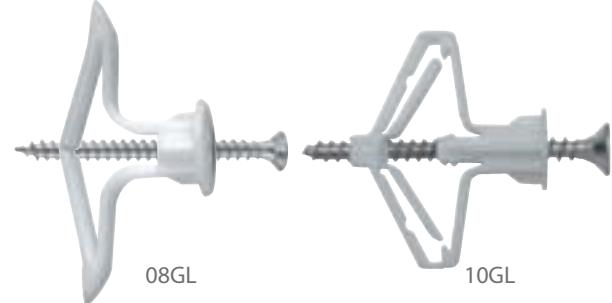
SCREW SIZE (mm)	HOLE DIAMETER (mm) (d_o)	BOARD THICKNESS RANGE (mm)	QUANTITY		PRODUCT CODE
			PACK	OUTER	
3.5×35	8	12.5	100	1800	08G
4.0×50	10	9.5	100	1800	10G

Plastic toggle with angle hook



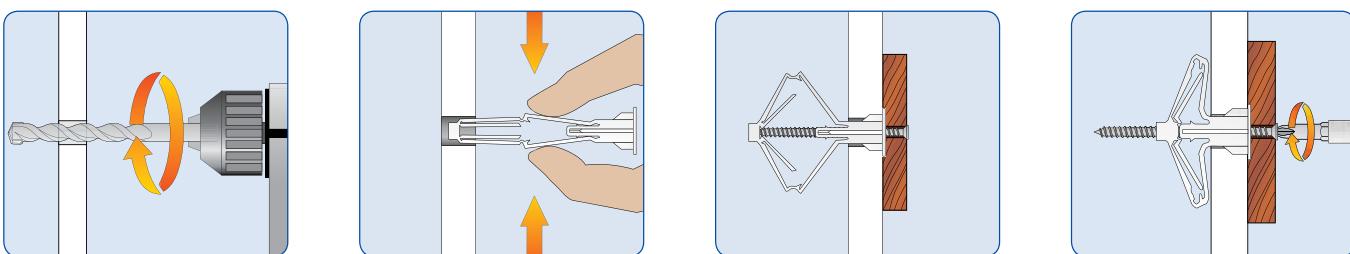
SCREW SIZE (mm)	HOLE DIAMETER (mm) (d_o)	BOARD THICKNESS RANGE (mm)	QUANTITY		PRODUCT CODE
			PACK	OUTER	
3.5×35	8	12.5	100	1800	08GK
4.0×50	10	9.5	100	1800	10GK

Plastic toggle with countersunk head screw POZI 2



SCREW SIZE (mm)	HOLE DIAMETER (mm) (d_o)	BOARD THICKNESS RANGE (mm)	QUANTITY		PRODUCT CODE
			PACK	OUTER	
3.5×45	8	12.5	100	1800	08GL
4.0×60	10	9.5	100	1800	10GL

Installation



RAWLNUT™ FLEXI-PLUG

Product Information

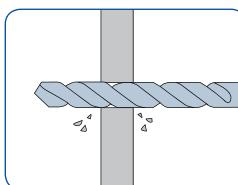


Description		Features		Suitable for use in		Typical applications	
A problem solving fixing.		1. Resistant to vibration and corrosion. 2. Flange holds fixing flush to wall surface. 3. Sleeve compresses to provide secure fixing, even in irregular shaped holes. 4. Made from synthetic rubber for more severe conditions. 5. Bonded brass insert.		For use in virtually any hollow or solid construction material.		<ul style="list-style-type: none"> Fixing to virtually any material, either solid or hollow, eg metal sheet, plasterboard, plywood, glass, plastic, etc. Secure fixing in brittle or unknown substrates. Ideal for fixing in irregular or oversized holes. 	
DESCRIPTION	SCREW LENGTH (mm)	HOLE DIAMETER (mm) (d_h)	FLANGE THICKNESS (mm)	LENGTH (mm)	GRIP RANGE (mm)	QUANTITY	PRODUCT CODE
M3 (3240)	30	8	1,2	24	6 - 14	4	09-045
M3 (3240)	30	8	1,2	24	6 - 14	50	09-040
M4 (4100)	20	8	1,4	12,6	0 - 4	4	09-105
M4 (4100)	20	8	1,4	12,6	0 - 4	50	09-100
M4 (4100)	No screws	8	1,4	12,6	0 - 4	50	09-093
M4 (4240)	30	8	1,2	24	6 - 14	50	09-130
M4 (4240)	No screws	8	1,2	24	6 - 14	50	09-123
M5 (5150)	20	10	1,3	14,1	0 - 5	50	09-195
M5 (5150)	No screws	10	1,3	14,1	0 - 5	50	09-184
M5 (5250)	30	10	1,3	26,1	8 - 16	4	09-240
M5 (5250)	30	10	1,3	26,1	8 - 16	50	09-235
M5 (5250)	No screws	10	1,3	26,1	8 - 16	50	09-224
M5 (5400)	50	10	1,3	39,8	20 - 30	50	09-317
M5 (5400)	No screws	10	1,3	39,8	20 - 30	50	09-310
M6 (6150)	No screws	13	1,3	16	0 - 3	50	09-355
M6 (6250)	No screws	13	2	26,7	6 - 13	50	09-385
M6 (6350)	No screws	13	1,3	35	11 - 23	50	09-415
M6 (6500)	No screws	13	1,2	50	26 - 38	50	09-437
M8 (8250)	No screws	16	5	27,9	4 - 10	50	09-473
M8 (8300)	No screws	18	1,2	30	6 - 15	50	09-475
M8 (8500)	No screws	18	2	50	15 - 39	50	09-533
M10 (1055)	No screws	20	1,3	55	20 - 36	25	09-594
M12 (1275)	No screws	24	1,3	80	30 - 50	20	09-654

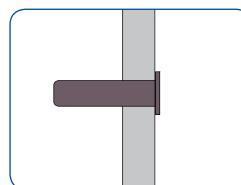
RAWLNUT™ Flexi-Plug Performance Data

MATERIAL	MAXIMUM RECOMMENDED LOAD							
	3240	4240	5250	5400	6250	8300	8500	1055
Plasterboard 9,5 mm	8 kg	8 kg	9 kg		12 kg	13 kg		
Plasterboard 12,5 mm	10 kg	10 kg	11 kg		14 kg	18 kg		
Blockwork Solid 7 N/mm ²				60 kg			100 kg	130 kg
Blockwork Hollow 7 N/mm ²				40 kg			65 kg	70 kg
Blockwork Solid 3,5 N/mm ²				30 kg			50 kg	60 kg
Blockwork Hollow 3,5 N/mm ²				20 kg			30 kg	40 kg

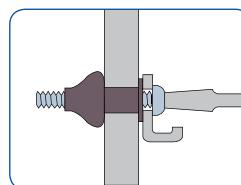
Installation



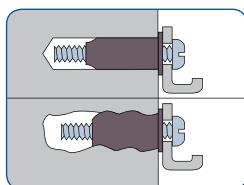
1. Drill appropriate diameter hole. For solid materials, drill hole to length of screw. Clean out hole and remove sharp edges to avoid damaging fixing.



2. Insert the fixing up to its flange.



3. Place fixture in position. Insert screw and tighten to compress sleeve and form a secure fixing. Do not overtighten.



4. Works equally well in uniform or irregular shaped holes.

CEILING SPRING PIN

Product Information



Description	Material	Suitable for use in	Typical applications
-------------	----------	---------------------	----------------------

Mainly for fixing lightweight ceilings and suspended ceilings to solid building materials. Fire resistant

Material

steel 4.6 - electro-zinc coated ~10 µm

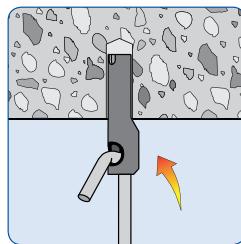
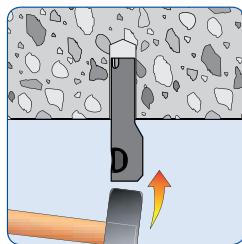
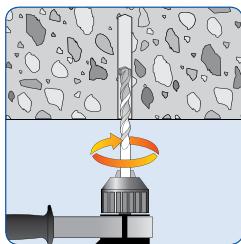
Suitable for use in

Concrete
Masonry
Etc.

- Lightweight suspended ceilings.

DIMENSIONS	HOLE DIAMETER (mm) (d_o)	QUANTITY	PRODUCT CODE
8 x 42	8	100	Z-KSP

Installation



CEILING WIRE HANGER

Product Information



Description	Material	Suitable for use in	Typical applications
-------------	----------	---------------------	----------------------

Mainly for fixing lightweight ceilings and suspended ceilings to solid building materials. Fire resistant

Material

electro-zinc coated steel.

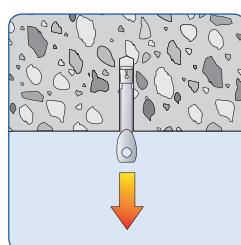
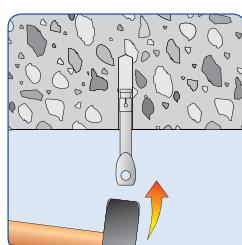
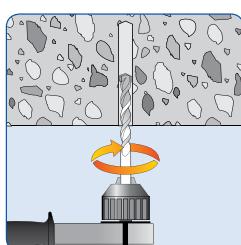
Suitable for use in

Concrete
Masonry
Etc.

- Lightweight suspended ceilings.

DIMENSIONS	HOLE DIAMETER (mm) (d_o)	QUANTITY	PRODUCT CODE
6 x 63	6	100	SRS-06063
PACK	OUTER		
		2400	

Installation



METAL HAMMER FIXINGS WITH STEEL NAIL

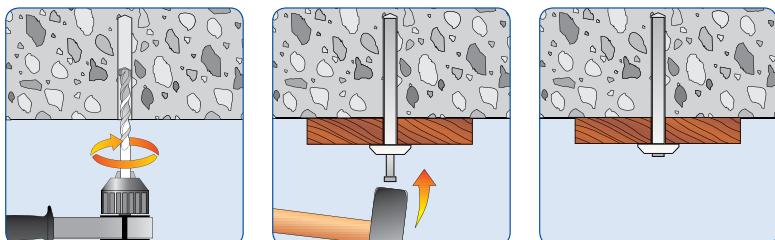
Product Information



Description	Material	Suitable for use in	Typical applications
For light duty fixings of metal constructions and sheet metal to solid building materials	Plug sleeve: zamak (Zn-Al). Nail: electro-zinc coated steel ~10 µm.	Concrete Masonry Etc.	<ul style="list-style-type: none"> Profiled metal roof and wall cladding.

Installation

PLUG DESCRIPTION	HOLE DIAMETER (mm) (d_o)	FLANGE DIAMETER (mm)	QUANTITY		PRODUCT CODE
			PACK	OUTER	
5 x 20	5	12	100	3600	KMW-05020
6 x 30	6	12	100	1800	KMW-06030
6 x 40	6	12	100	1200	KMW-06040
6 x 50	6	12	100	1200	KMW-06050
6 x 65	6	12	100	1200	KMW-06065



CEILING WEDGE ANCHOR

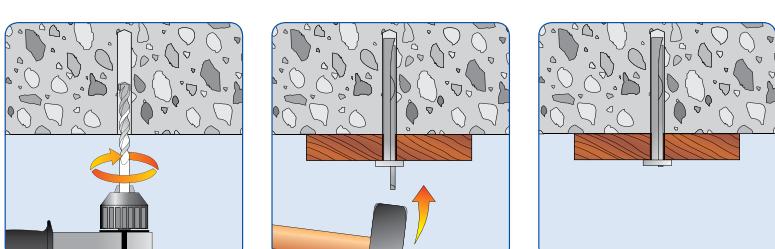
Product Information



Description	Material	Suitable for use in	Typical applications
Mainly for fixing lightweight ceilings and suspended ceilings to solid building materials. Fire resistant	steel 4.6 - electro-zinc coated ~10 µm	Concrete Masonry Etc.	<ul style="list-style-type: none"> Lightweight suspended ceilings.

Installation

PLUG DESCRIPTION	HOLE DIAMETER (mm) (d_o)	QUANTITY		PRODUCT CODE
		PACK	OUTER	
6 x 40	6	100	1800	GS-06040
6 x 65	6	100	1200	GS-06065



SCAFFOLDING EYEBOLT

Product Information



Material

Electro-zinc coated steel.

Typical applications

- Suitable for fastening scaffolding to the wall of the building.

LENGTH (L) mm	QUANTITY PACK	PRODUCT CODE
120	25	HR-12120
160	25	HR-12160
190	25	HR-12190
230	25	HR-12230
300	25	HR-12300
350	25	HR-12350

SCAFFOLDING EYEBOLT PLUG

Product Information



Material

Plug sleeve:
polyamide PA 6.0 (Nylon) or impact resistant co-polymer of polypropylene PP

Suitable for use in:

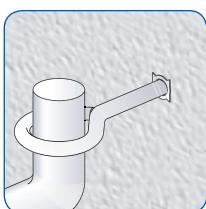
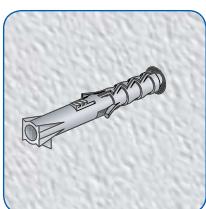
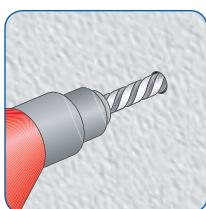
Concrete
Brick
Concrete Blockwork
Stone, etc.

Typical applications

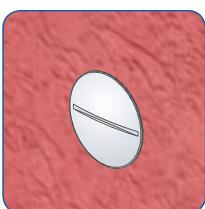
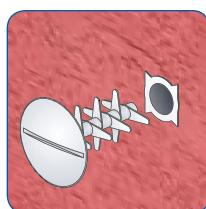
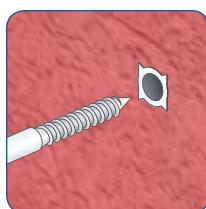
- Suitable for fastening scaffolding to the wall of the building.

LENGTH (L) mm	HOLE DIAMETER (mm)	QUANTITY PACK	PRODUCT CODE
70	14	25	HRK-14070
100	14	25	HRK-14100
135	14	25	HRK-14135

Installation – eyebolt



Installation – eyebolt plug



SELF-DRILLING WINDOW SCREWS

Product Information

**APPLICATION**

For plastics and sheet metal.

MATERIAL

Low carbon steel, electro zinc plated min. 6 µm.

PROPERTIES

- Milling ribs under head for stressfree embedment,
- Drilling capacity (drill tip) 2,5mm,
- Countersunk Head Philips2.

SCREW SIZE (mm)	QUANTITY		PRODUCT CODE
	BOX	OUTER	
3.9 x 13	1000	24000	KS-3913
3.9 x 16	1000	24000	KS-3916
3.9 x 19	1000	24000	KS-3919
3.9 x 25	1000	24000	KS-3925
3.9 x 32	500	12000	KS-3932
3.9 x 38	500	6000	KS-3938

WINDOW FITTING SCREWS

Product Information

**APPLICATION**

for plastics.

MATERIAL

Low carbon steel, electro zinc plated min. 6 µm.

PROPERTIES

- Countersunk head Philips2.

SCREW SIZE (mm)	QUANTITY		PRODUCT CODE
	BOX	OUTER	
4.0 x 16	1000	24000	KR-4016
4.0 x 19	1000	24000	KR-4019
4.0 x 22	1000	24000	KR-4022
4.0 x 25	1000	24000	KR-4025
4.0 x 30	500	12000	KR-4030
4.0 x 35	500	12000	KR-4035
4.0 x 40	500	6000	KR-4040
4.0 x 45	500	6000	KR-4045
4.0 x 55	500	6000	KR-4055

WAFER HEAD SCREWS ZINC PLATED

Product Information

**APPLICATION**

for thin sheet metal, plastics and timber..

MATERIAL

Low carbon steel, electro zinc plated min. 6 µm.

PROPERTIES

- Washer head 11 mm diameter with PH2 recess.

SCREW SIZE (mm)	QUANTITY		PRODUCT CODE
	BOX	OUTER	
4.2 x 13	1000	24000	WF-4213
4.2 x 16	1000	24000	WF-4216
4.2 x 19	500	12000	WF-4219
4.2 x 22	500	12000	WF-4222
4.2 x 25	500	12000	WF-4225
4.2 x 32	500	12000	WF-4232
4.2 x 40	500	6000	WF-4240
4.2 x 50	500	6000	WF-4250
4.2 x 65	250	3000	WF-4265
4.2 x 75	250	3000	WF-4275

WAFER HEAD SELF DRILLING SCREWS

Product Information

**APPLICATION**

for thin sheet metal, plastics and timber.

MATERIAL

Low carbon steel, electro zinc plated min. 6 µm.

PROPERTIES

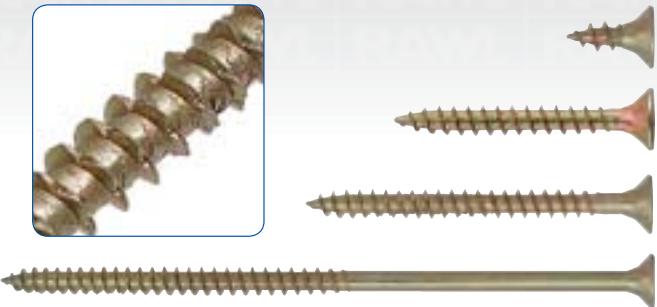
- Washer head 11 mm diameter with PH2 recess.
- Drilling capacity (drill tip length) 2,0 mm.

SCREW SIZE (mm)	QUANTITY		PRODUCT CODE
	BOX	OUTER	
4.2 x 13	1000	24000	WFS-4213
4.2 x 16	1000	24000	WFS-4216
4.2 x 19	500	12000	WFS-4219
4.2 x 22	500	12000	WFS-4222
4.2 x 25	500	12000	WFS-4225
4.2 x 32	500	12000	WFS-4232

CHIPBOARD SCREWS

WITH CROSS-SLOT ON THE THREAD

Product Information



Application

For screwing into chipboard, timber, plastics with no pre-drilling.

Material

Low carbon steel, electro zinc plated min. 6 µm.

Properties

- Milling cross notches on the thread ease installation (easy screwing through cutting into even very hard materials),

SCREW SIZE	SCREW HEAD	DESCRIPTION	QUANTITY BOX	QUANTITY OUTER	PRODUCT CODE
2.5 x 16	Pozidrive1	Full Thread	200	9600	UC-2516
3.0 x 12	Pozidrive1	Full Thread	200	9600	UC-3012
3.0 x 16	Pozidrive1	Full Thread	200	9600	UC-3016
3.0 x 18	Pozidrive1	Full Thread	200	9600	UC-3018
3.0 x 20	Pozidrive1	Full Thread	200	9600	UC-3020
3.0 x 25	Pozidrive1	Full Thread	200	9600	UC-3025
3.0 x 30	Pozidrive1	Full Thread	200	9600	UC-3030
3.0 x 35	Pozidrive1	Full Thread	200	9600	UC-3035
3.0 x 40	Pozidrive1	Full Thread	200	4800	UC-3040
3.5 x 12	Pozidrive2	Full Thread	200	9600	UC-3512
3.5 x 16	Pozidrive2	Full Thread	200	9600	UC-3516
3.5 x 18	Pozidrive2	Full Thread	200	9600	UC-3518
3.5 x 20	Pozidrive2	Full Thread	200	9600	UC-3520
3.5 x 25	Pozidrive2	Full Thread	200	9600	UC-3525
3.5 x 30	Pozidrive2	Full Thread	200	9600	UC-3530
3.5 x 35	Pozidrive2	Full Thread	200	4800	UC-3535
3.5 x 40	Pozidrive2	Full Thread	200	4800	UC-3540
3.5 x 45	Pozidrive2	Full Thread	200	4800	UC-3545
3.5 x 50	Pozidrive2	Full Thread	200	4800	UC-3550
4.0 x 16	Pozidrive2	Full Thread	200	9600	UC-4016
4.0 x 18	Pozidrive2	Full Thread	200	9600	UC-4018
4.0 x 20	Pozidrive2	Full Thread	200	9600	UC-4020
4.0 x 25	Pozidrive2	Full Thread	200	9600	UC-4025
4.0 x 30	Pozidrive2	Full Thread	200	4800	UC-4030
4.0 x 35	Pozidrive2	Full Thread	200	4800	UC-4035
4.0 x 40	Pozidrive2	Full Thread	200	4800	UC-4040
4.0 x 45	Pozidrive2	Full Thread	200	4800	UC-4045
4.0 x 50	Pozidrive2	Full Thread	200	4800	UC-4050
4.0 x 55	Pozidrive2	Full Thread	200	4800	UC-4055
4.0 x 60	Pozidrive2	Partial Thread	200	4800	UC-4060
4.0 x 70	Pozidrive2	Partial Thread	200	3600	UC-4070
4.0 x 80	Pozidrive2	Partial Thread	200	2400	UC-4080
4.5 x 16	Pozidrive2	Full Thread	200	9600	UC-4516
4.5 x 20	Pozidrive2	Full Thread	200	9600	UC-4520
4.5 x 25	Pozidrive2	Full Thread	200	9600	UC-4525
4.5 x 30	Pozidrive2	Full Thread	200	4800	UC-4530
4.5 x 35	Pozidrive2	Full Thread	200	4800	UC-4535

SCREW SIZE	SCREW HEAD	DESCRIPTION	QUANTITY BOX	QUANTITY OUTER	PRODUCT CODE
4.5 x 40	Pozidrive2	Full Thread	200	4800	UC-4540
4.5 x 45	Pozidrive2	Full Thread	200	4800	UC-4545
4.5 x 50	Pozidrive2	Full Thread	200	4800	UC-4550
4.5 x 60	Pozidrive2	Partial Thread	200	3600	UC-4560
4.5 x 70	Pozidrive2	Partial Thread	200	3600	UC-4570
4.5 x 80	Pozidrive2	Partial Thread	200	2400	UC-4580
5.0 x 20	Pozidrive2	Full Thread	200	9600	UC-5020
5.0 x 25	Pozidrive2	Full Thread	200	4800	UC-5025
5.0 x 30	Pozidrive2	Full Thread	200	4800	UC-5030
5.0 x 35	Pozidrive2	Full Thread	200	4800	UC-5035
5.0 x 40	Pozidrive2	Full Thread	200	4800	UC-5040
5.0 x 45	Pozidrive2	Full Thread	200	4800	UC-5045
5.0 x 50	Pozidrive2	Full Thread	200	4800	UC-5050
5.0 x 60	Pozidrive2	Partial Thread	100	2400	UC-5060
5.0 x 70	Pozidrive2	Partial Thread	100	2400	UC-5070
5.0 x 80	Pozidrive2	Partial Thread	100	2400	UC-5080
5.0 x 90	Pozidrive2	Partial Thread	100	1200	UC-5090
5.0 x 100	Pozidrive2	Partial Thread	100	1200	UC-5100
5.0 x 120	Pozidrive2	Partial Thread	100	1200	UC-5120
6.0 x 30	Pozidrive3	Full Thread	200	4800	UC-6030
6.0 x 35	Pozidrive3	Full Thread	200	4800	UC-6035
6.0 x 40	Pozidrive3	Full Thread	200	4800	UC-6040
6.0 x 45	Pozidrive3	Full Thread	200	4800	UC-6045
6.0 x 50	Pozidrive3	Full Thread	200	2400	UC-6050
6.0 x 60	Pozidrive3	Partial Thread	100	2400	UC-6060
6.0 x 70	Pozidrive3	Partial Thread	100	1200	UC-6070
6.0 x 80	Pozidrive3	Partial Thread	100	1200	UC-6080
6.0 x 90	Pozidrive3	Partial Thread	100	1200	UC-6090
6.0 x 100	Pozidrive3	Partial Thread	100	1200	UC-6100
6.0 x 110	Pozidrive3	Partial Thread	100	1200	UC-6110
6.0 x 120	Pozidrive3	Partial Thread	100	1200	UC-6120
6.0 x 130	Pozidrive3	Partial Thread	100	1200	UC-6130
6.0 x 140	Pozidrive3	Partial Thread	100	1200	UC-6140
6.0 x 150	Pozidrive3	Partial Thread	100	1200	UC-6150
6.0 x 160	Pozidrive3	Partial Thread	100	1200	UC-6160
6.0 x 180	Pozidrive3	Partial Thread	100	1200	UC-6180
6.0 x 200	Pozidrive3	Partial Thread	100	1200	UC-6200

PLASTIC WOOD

Product Information



Description

For minor repairs to wood, inside and outside.

Features

- Colours can be mixed.
- Durable & water resistant.
- Accepts screws and nails.
- Available in a comprehensive range of popular wood shades to match natural timber.
- Solvent free, low odour.



Pine



Teak



Mahogany

Typical applications

- Furniture and frames
- Filling cracks or chips in timber
- Repairing skirting boards and decorative woodwork
- Can be drilled, sanded and stained if required



Oak

The above colour chart is for reference only, a perfect colour match cannot be guaranteed.

DESCRIPTION	50 ml TUBE	100ml TUBE	250 ml TUBE	310ml CARTRIDGE
	PRODUCT CODE	PRODUCT CODE	PRODUCT CODE	PRODUCT CODE
Mahogany	PLW-MH050	PLW-MH100	PLW-MH250	PLW-MH310
OAK	PLW-OA050	PLW-OA100	PLW-OA250	PLW-OA310
PINE	PLW-PN050	PLW-PN100	PLW-PN250	PLW-PN310
TEAK	PLW-TK050	PLW-TK100	PLW-TK250	PLW-TK310

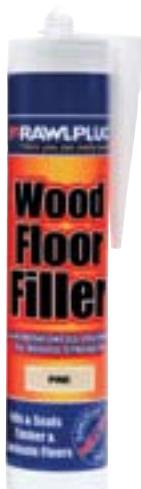
Installation

- Ensure area to be filled is clean and dry.
- Apply Plastic Wood using a wet filling knife to avoid drag.
- Slightly overfill the hole so that the repair stands proud of the surrounding surface.
- When the repair is fully set, rub down with abrasive paper for a perfect finish.

NB: Deep holes should be filled in successive layers allowing each layer time to dry before the next is added.

FLOOR FILLER

Product Information



Description

For timber and laminate floors.

Features

- With reinforced polymer for added strength.
- Available colors: Pine, Oak, Beech.

Typical applications

- Sealing around awkward protrusions eg. radiators pipes.
- Sealing around fitted furniture.

DESCRIPTION	310ml CARTRIDGE
	PRODUCT CODE
Beech	FLF-BE310
OAK	FLF-OA310
PINE	FLF-PN310

OCW SELF DRILLING SCREWS

(DRILLING CAPACITY 2.5 mm)

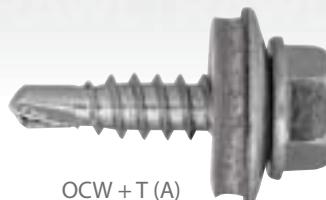
Product Information



APPROVAL
AT-15-4396/2006



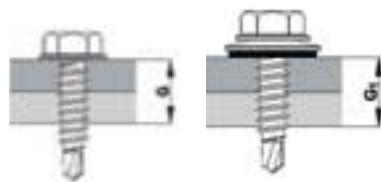
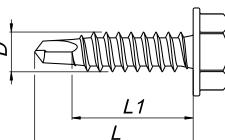
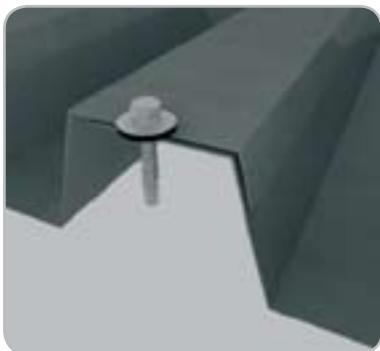
OCW



OCW + T (A)

Description	Features	Material
Overlapping sheet connection	<ul style="list-style-type: none"> 1. Made according to DIN 7504 K 2. Reduced drilling point guarantees optimum tightness of the fastening 3. Full thread eliminates overtightening of the screw, allows the screw to be used without a washer if waterproof connection is not needed 4. Special head design together with washer guarantee even installation and tightness of the connection 5. Available with or without EPDM washer 	<p>SCREW: surface hardened carbon steel – zinc electroplated 16µm</p> <p>WASHER FOR SCREWS 4.8: T14 – zinc-plated steel EPDM washer</p> <p>A14 – aluminium EPDM washer</p> <p>T16, A16 available to order</p> <p>HEAD: hexagonal flange head 8mm</p>

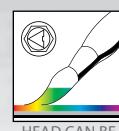
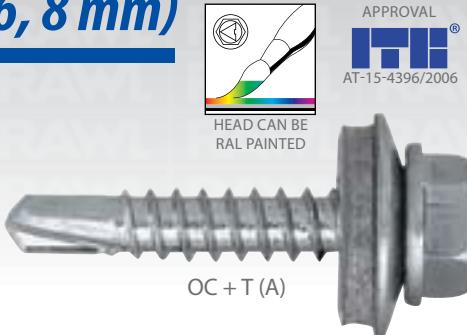
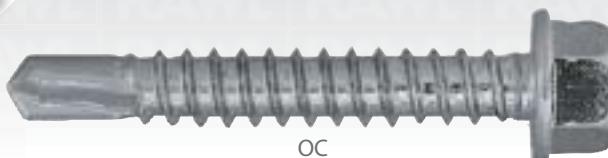
SCREW SIZE	MAX DRILLING THICKNESS	HEAD SIZE	MAX FIXTURE THICKNESS		WASHER	Pcs.	Pcs.	PRODUCT CODE
			SCREW WITH WASHER	SCREW WITHOUT WASHER				
D×L [mm]	[mm]	[mm]		t _{fix} [mm]				
4.8×16	2.0	8	4.0	7.0	T14, A14	250	4500	OCW-48016 (+T/A)
4.8×19	2.0		7.0	10.0	T14, A14	250	4500	OCW-48019 (+T/A)



OC SELF DRILLING SCREWS

(DRILLING CAPACITY 3, 5, 6, 8 mm)

Product Information

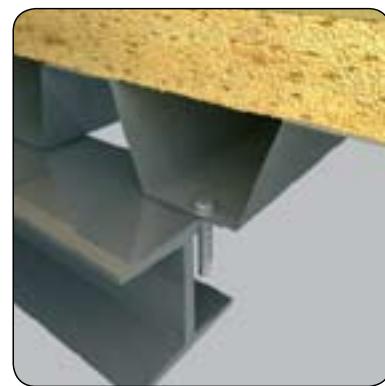
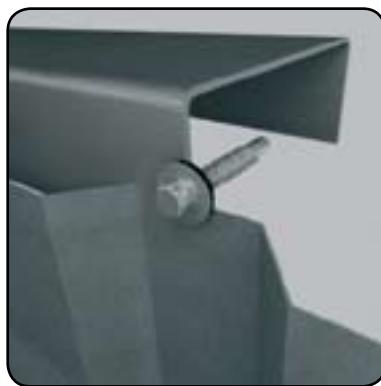
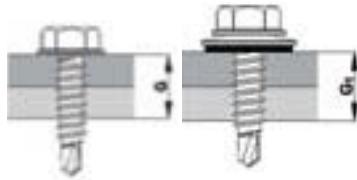
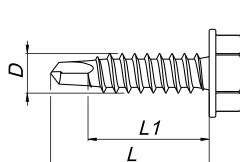


APPROVAL
AT-15-4396/2006

Description			Features						Material		
Fixing of sheet metal to steel structures on facades or flat roof construction			1. Under head non threaded zone eliminates thread breakage in sheet metal hexagonal flange head 2. Special head design together with washer guarantee even installation and tightness of the connection 3. Available with or without EPDM washer						SCREW: surface hardened carbon steel – zinc electroplated 16µm WASHER FOR SCREWS 4.8 AND 5.5: T14 – zinc electroplated steel EPDM washer A14 – aluminium EPDM washer T16, A16 available to order WASHER FOR SCREWS 6.3: T19 – zinc electroplated steel EPDM washer A19 – aluminium EPDM washer T16, A16 available to order HEAD: 8mm hexagonal flange head (screw 4.9 and 5.5) 10mm hexagonal flange head (screw 6.3)		

SCREW SIZE	MAX DRILLING THICKNESS	HEAD SIZE	MAX FIXTURE THICKNESS		WASHER	PRODUCT CODE		
			SCREW WITH WASHER	SCREW WITHOUT WASHER		pcs.	pcs.	
D×L [mm]	[mm]	[mm]	t _{fix} [mm]					
4.8×16			4.0	7.0	T14, A14	250	4500	OC-48016 (+T/A)
4.8×19			7.0	10.0	T14, A14	250	4500	OC-48019 (+T/A)
4.8×22			10.0	13.0	T14, A14	250	4500	OC-48022 (+T/A)
4.8×25			13.0	16.0	T14, A14	250	4500	OC-48025 (+T/A)
4.8×32	3.0	8	20.0	23.0	T14, A14	250	3000	OC-48032 (+T/A)
4.8×35			23.0	26.0	T14, A14	250	3000	OC-48035 (+T/A)
4.8×38			26.0	29.0	T14, A14	250	3000	OC-48038 (+T/A)
4.8×45			33.0	39.0	T14, A14	100	1800	OC-48045 (+T/A)
4.8×55			42.0	45.0	T14, A14	100	1800	OC-48055 (+T/A)

SCREW SIZE	MAX DRILLING THICKNESS	HEAD SIZE	MAX FIXTURE THICKNESS		WASHER	PRODUCT CODE		
			SCREW WITH WASHER	SCREW WITHOUT WASHER		pcs.	pcs.	
5.5×22			9.0	12.0	T14, A14	200	3600	OC-55022 (+T/A)
5.5×25			12.0	15.0	T14, A14	200	3600	OC-55025 (+T/A)
5.5×32	5.0	8	19.0	22.0	T14, A14	100	1800	OC-55032 (+T/A)
5.5×38			25.0	28.0	T14, A14	100	1800	OC-55038 (+T/A)
5.5×45			31.0	34.0	T14, A14	100	1800	OC-55045 (+T/A)
5.5×55			35.0	38.0	T14, A14	100	1800	OC-55055 (+T/A)
5.5×75			55.0	58.0	T14, A14	100	1200	OC-55075 (+T/A)
5.5×90	8.0		70.0	73.0	T14, A14	100	1200	OC-55090 (+T/A)
5.5×12			100.0	103.0	T14, A14	100	1200	OC-55120 (+T/A)
6.3×19			6.0	9.0	T19, A19	200	3600	OC-63019 (+T/A)
6.3×22			9.0	12.0	T19, A19	200	3600	OC-63022 (+T/A)
6.3×25			12.0	15.0	T19, A19	200	2400	OC-63025 (+T/A)
6.3×32			19.0	22.0	T19, A19	200	2400	OC-63032 (+T/A)
6.3×38	6.0	10	25.0	28.0	T19, A19	100	1800	OC-63038 (+T/A)
6.3×45			31.0	34.0	T19, A19	100	1800	OC-63045 (+T/A)
6.3×55			35.0	38.0	T19, A19	100	1800	OC-63055 (+T/A)
6.3×75			55.0	58.0	T19, A19	100	1800	OC-63075 (+T/A)
6.3×90			70.0	73.0	T19, A19	100	1800	OC-63090 (+T/A)
6.3×12			100.0	103.0	T19, A19	100	1800	OC-63120 (+T/A)

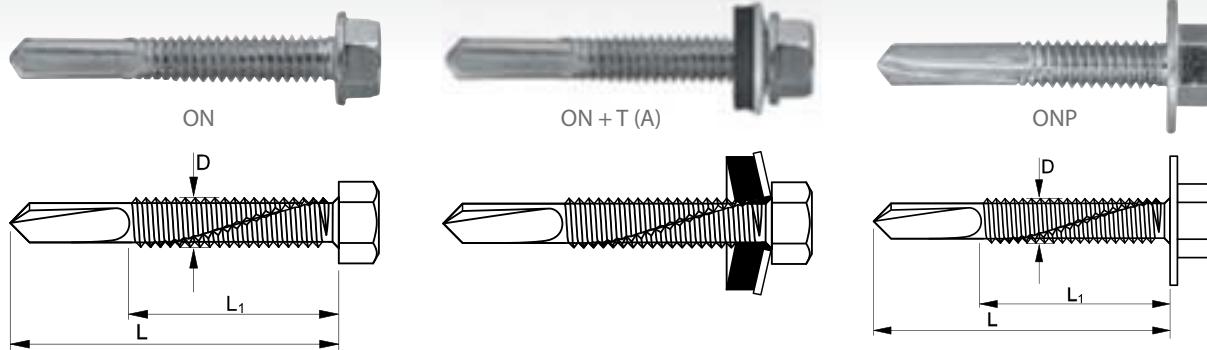


ON, ONP SELF DRILLING SCREWS (DRILLING CAPACITY 12 mm)

Product Information

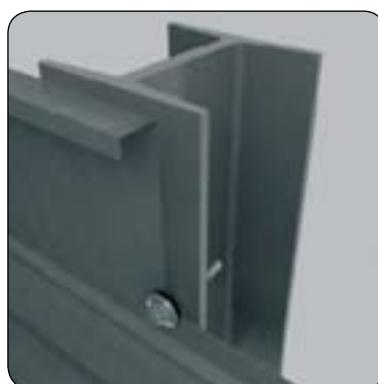


APPROVAL
AT-15-4396/2006



Description	Features	Material
<ul style="list-style-type: none"> Fixing of sheet metal to steel structures on facades or flat roof construction Fixings elements of steel construction 	<ol style="list-style-type: none"> Hexagonal flange head Special head design with collar of ONP screw guarantee even installation and tightness of the connection Available with or without EPDM washer 	SCREW: surface hardened carbon steel – zinc electroplated 16µm WASHER FOR SCREWS 5.5: T14 – zinc-plated steel EPDM washer A14 – aluminium EPDM washer T16, A16 available to order HEAD: hexagonal flange head 8mm

SCREW SIZE	MAX DRILLING THICKNESS	HEAD SIZE	MAX FIXTURE THICKNESS		WASHER			PRODUCT CODE	
			SCREW WITH WASHER	SCREW WITHOUT WASHER					
DxL [mm]	[mm]	8.0	t_{fix} [mm]		T14, A14	100	1800	ON-55032 (+T/A)	
5.5x32	12.0		12.0	15.0					
5.5x38			17.0	20.0	T14, A14	100	1800	ON-55038 (+T/A)	
5.5x32	12.0		12.0	15.0	T14, A14	100	1800	ONP-55032 (+T/A)	
5.5x38			17.0	20.0	T14, A14	100	1800	ONP-55038 (+T/A)	

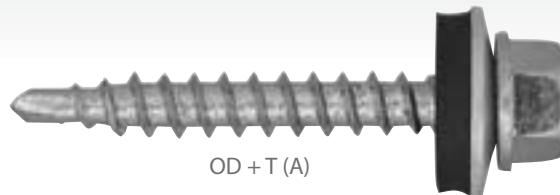


OD SELF DRILLING SCREWS TO WOODEN CONSTRUCTIONS (DRILLING CAPACITY 2.5 mm)

Product Information

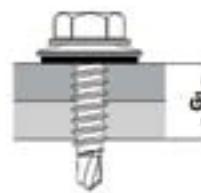
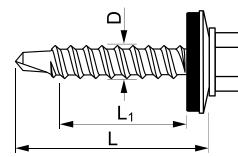
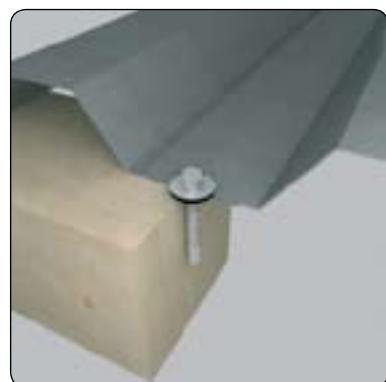


APPROVAL
AT-15-4396/2006



Description	Features	Material
For fixing profiled sheet to wood	<ul style="list-style-type: none"> 1. Made according to DIN 7504 K, 2. Reduced drilling point guaranteeing quick and firm installation in wooden substrate, 3. Special under head strengthening protection, 4. Thread for wood with large thread pitch. 5. Available with EPDM washer 	<p>SCREW: surface hardened carbon steel – zinc electroplated 16µm</p> <p>WASHER FOR SCREWS 4.8: T14 – zinc-plated steel EPDM washer A14 – aluminium EPDM washer T16, A16 available to order</p> <p>HEAD: hexagonal flange head 8mm</p>

SCREW SIZE	MAX DRILLING THICKNESS	HEAD SIZE	MAX FIXTURE THICKNESS		WASHER			PRODUCT CODE
			SCREW WITH WASHER	SCREW WITHOUT WASHER				
DxL [mm]	[mm]	[mm]		t _{fix} [mm]				
4.8x28			5.0	8.0	T14, A14	250	4500	OD-48028T (A)
4.8x35	2.5	8	12.0	15.0	T14, A14	250	3000	OD-48035T (A)
4.8x55			32.0	35.0	T14, A14	100	1800	OD-48055T (A)



OCWS STAINLESS STEEL SELF DRILLING SCREWS

Product Information



APPROVAL
AT-15-4396/2006



OCWS



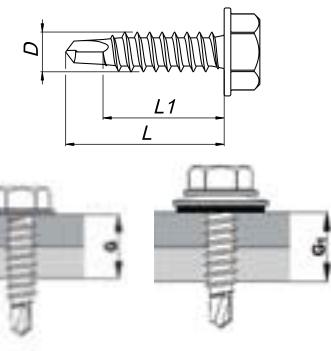
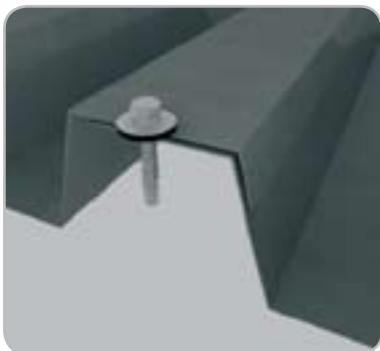
OCWS + S



FOR CAPS COLOUR
RANGE SEE PAGE 86

Description	Features	Material
Overlapping sheet connection	<ul style="list-style-type: none"> 1. Made according to DIN 7504 K 2. Reduced drilling point guarantees optimum tightness of the fastening 3. Full thread eliminates overtightening of the screw, allows the screw to be used without a washer if waterproof connection is not needed 4. Special head design together with washer guarantee even installation and tightness of the connection 5. Available with or without EPDM washer 	<p>SCREW: A2 stainless steel</p> <p>WASHER FOR SCREWS 5.5: S14, S19 – A2 stainless steel EPDM washer S16 available to order</p> <p>HEAD: hexagonal flange head 8mm</p>

SCREW SIZE	MAX DRILLING THICKNESS	HEAD SIZE	MAX FIXTURE THICKNESS		WASHER			PRODUCT CODE
			SCREW WITH WASHER	SCREW WITHOUT WASHER				
D×L [mm]	[mm]	[mm]		t_{fix} [mm]				
4.8x19	2.5	8	2.5	5.5	S14	250	4500	OCWS-48019 (+S)
5.5x25	3.0		3.0	6.0	S14, S19	200	3600	OCWS-55025 (+S)

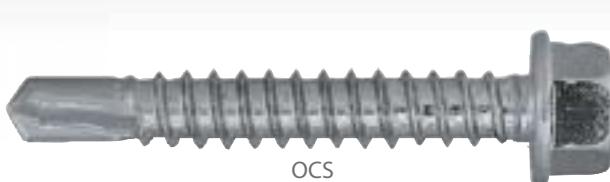


OCS STAINLESS STEEL SELF DRILLING SCREWS (DRILLING CAPACITY 6 mm)

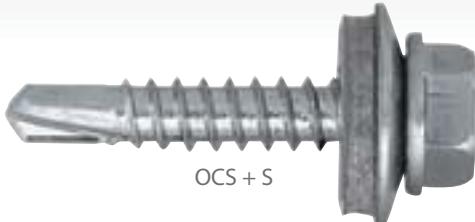
Product Information



APPROVAL
ITI®
AT-15-4396/2006



OCS



OCS + S

FOR CAPS COLOUR
RANGE SEE PAGE 86

Description	Features	Material
-------------	----------	----------

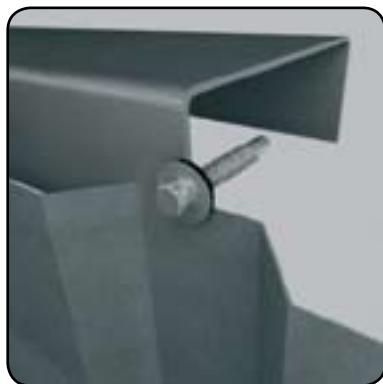
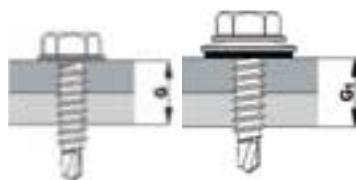
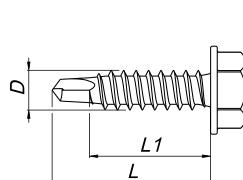
Fixing of sheet metal to steel structures on facades or flat roof construction

- Under head non threaded zone eliminates thread breakage in sheet metal hexagonal flange head
- Special head design together with washer guarantee even installation and tightness of the connection
- Available with or without EPDM washer

Material

SCREW:
A2 stainless steel
WASHER FOR SCREWS 5.5:
S14, S19 – A2 stainless steel EPDM washer
S16 available to order
HEAD:
hexagonal flange head 8mm (screw Ø5,5)

SCREW SIZE	MAX DRILLING THICKNESS	HEAD SIZE	MAX FIXTURE THICKNESS		WASHER			PRODUCT CODE
			SCREW WITH WASHER	SCREW WITHOUT WASHER				
DxL [mm]	[mm]	[mm]		t _{fix} [mm]				
5.5x25			12.0	15.0	S14, S19	200	3600	OCS-55025 (+S)
5.5x30			12.0	15.0	S14, S19	100	1800	OCS-55030 (+S)
5.5x35			17.0	20.0	S14, S19	100	1800	OCS-55035 (+S)
5.5x50			37.0	40.0	S14, S19	100	1800	OCS-55050 (+S)



ONS STAINLESS STEEL SELF DRILLING SCREWS (DRILLING CAPACITY 12 mm)

Product Information



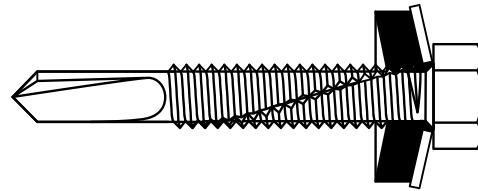
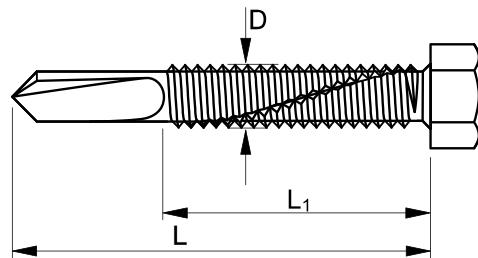
APPROVAL
AT-15-4396/2006



ONS

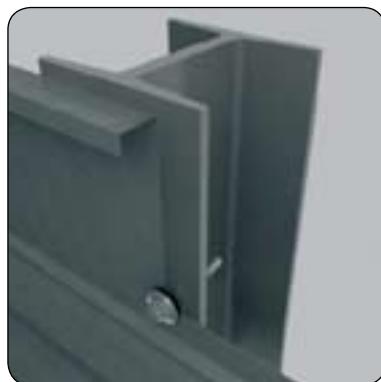


ONS + S

FOR CAPS COLOUR
RANGE SEE PAGE 86

Description	Features	Material
<ul style="list-style-type: none"> Fixing of sheet metal to steel structures on facades or flat roof construction Fixings elements of steel construction 	<ol style="list-style-type: none"> Hexagonal flange head Special head design with collar of ONP screw guarantee even installation and tightness of the connection Available with or without EPDM washer 	SCREW: A2 stainless steel WASHER: S14, S19 – A2 stainless steel EPDM washer S16 available to order HEAD: hexagonal flange head 8mm

SCREW SIZE	MAX DRILLING THICKNESS	HEAD SIZE	MAX FIXTURE THICKNESS		WASHER	WASHER pCS.	SCREW pCS.	PRODUCT CODE
			SCREW WITH WASHER	SCREW WITHOUT WASHER				
DxL [mm]	[mm]	[mm]		t_{fix} [mm]				
5.5x40	12.0	8	19.0	22.0	S14, S19	100	1800	ONS-55040 (+S)



ODWS STAINLESS STEEL SELF DRILLING SCREWS TO WOODEN CONSTRUCTIONS (DRILLING CAPACITY 12 mm)

Product Information



APPROVAL
ITI®
AT-15-4396/2006



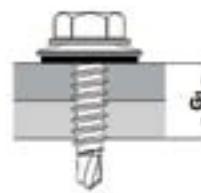
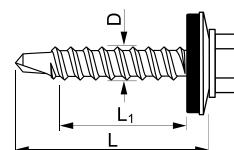
ODWS

Description	Features	Material
for fixing profiled sheet to wood	<ul style="list-style-type: none"> 1. Made according to DIN 7504 K, 2. Reduced drilling point guaranteeing quick and firm installation in wooden substrate, 3. Thread for wood with large thread pitch. 4. Available with or without EPDM washer 	<p>SCREW: A2 stainless steel</p> <p>WASHER FOR SCREWS 6.5: S19 – A2 stainless steel EPDM washer</p> <p>S16 available to order</p> <p>HEAD: hexagonal flange head 8mm</p>

SCREW SIZE	MAX DRILLING THICKNESS	HEAD SIZE	MAX FIXTURE THICKNESS		WASHER			PRODUCT CODE
			SCREW WITH WASHER	SCREW WITHOUT WASHER				
DxL [mm]	[mm]	6.0	8	t_{fix} [mm]				
6.5x50				20*	23*	S19	100	500
6.5x65				35* / 10**	28* / 13**	S19	100	500
6.5x100				70* / 45**	73* / 48**	S19	100	500
6.5x120				90* / 65**	93* / 68**	S19	100	500
6.5x140				110* / 85**	113* / 88**	S19	100	500
6.5x160				130* / 105**	133* / 108**	S19	100	500

* Embedment depth 4d

** Embedment depth 8d



OC-55/63, OCS-55/63 SELF DRILLING SCREWS FOR STEEL COMPOSITE PANELS (DRILLING CAPACITY 5, 6 mm)

Product Information

APPROVAL
ITC
AT-15-4396/2006



PENDING



OC-55/63



OCS-55/63 + S

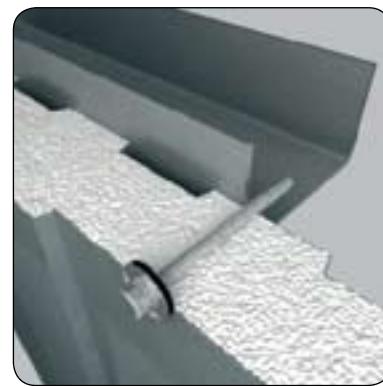
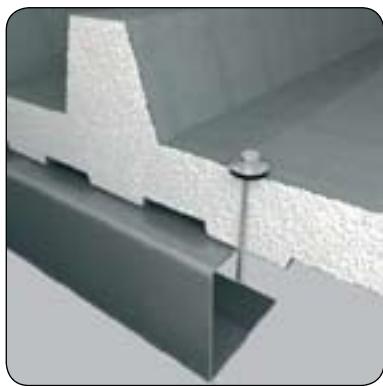
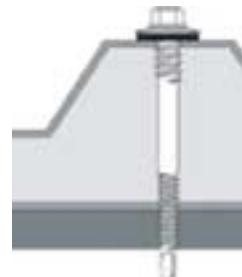
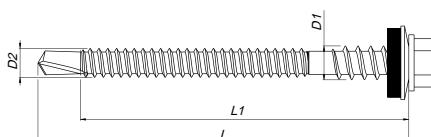


FOR CAPS COLOUR
RANGE SEE PAGE 86

Description	Features	Material
Fixing the composite panels to cold formed sections structures	<ul style="list-style-type: none"> 1. Second threaded zone under hex head protect from push steel sheet up 2. Hexagonal flange head 3. Tight waterproof connection 4. Available with or without EPDM washer 	<p>SCREW: OC-55/63 – surface hardened carbon steel – zinc electroplated 16µm OCS-55/63 – A2 stainless steel HEAD: hexagonal flange head 8mm</p>

SCREW SIZE	MAX DRILLING THICKNESS	HEAD SIZE	MAX FIXTURE THICKNESS	WASHER	ZINC PLATED	PRODUCT CODE
DxL [mm]	[mm]	[mm]	t _{fix} [mm]	pcs.	pcs.	
5.5/6.3x080	5.0	8	30-60	T19, A19	100	500
5.5/6.3x100			50-80	T19, A19	100	500
5.5/6.3x120			70-100	T19, A19	100	500
5.5/6.3x130			80-110	T19, A19	100	500
5.5/6.3x150			100-130	T19, A19	100	500
5.5/6.3x160			110-140	T19, A19	100	500
5.5/6.3x180			130-160	T19, A19	100	500
5.5/6.3x210			160-190	T19, A19	100	500
5.5/6.3x230			180-210	T19, A19	100	500
5.5/6.3x280			230-260	T19, A19	100	500

SCREW SIZE	MAX DRILLING THICKNESS	HEAD SIZE	MAX FIXTURE THICKNESS	WASHER	STAINLESS STEEL	PRODUCT CODE
DxL [mm]	[mm]	[mm]	t _{fix} [mm]	pcs.	pcs.	
5.5/6.3x070	6.0	8	20-50	S19	100	500
5.5/6.3x090			40-70	S19	100	500
5.5/6.3x110			60-90	S19	100	500
5.5/6.3x130			80-110	S19	100	500
5.5/6.3x150			100-130	S19	100	500
5.5/6.3x170			120-150	S19	100	500
5.5/6.3x200			150-180	S19	100	500
5.5/6.3x230			180-210	S19	50	500



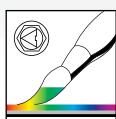
ON-55/63, ONS-55/63 SELF DRILLING SCREWS FOR STEEL COMPOSITE PANELS (DRILLING CAPACITY 12 mm)

APPROVAL
AT-15-4396/2006



PENDING

Product Information



HEAD CAN BE
RAL PAINTED



ON-55/63



ONS-55/63 + S

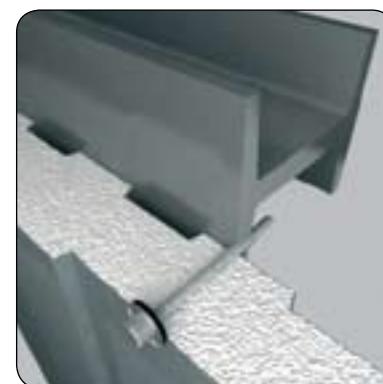
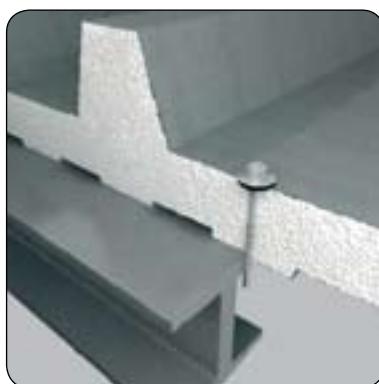
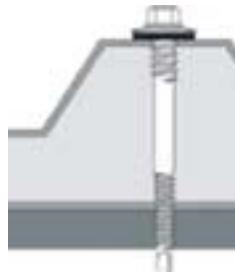
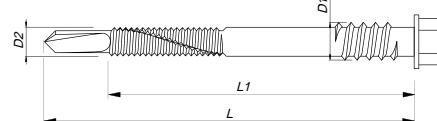


FOR CAPS COLOUR
RANGE SEE PAGE 86

Description	Features	Material
Fixing of composite panels to thick wall hot rolled steel sections	<ul style="list-style-type: none"> 1. Second threaded zone under hex head protect from push steel sheet up 2. Hexagonal flange head 3. Tight waterproof connection 4. Available with or without EPDM washer 	<p>SCREW: ON-55/63 – surface hardened carbon steel – zinc electroplated 16µm ONS-55/63 – A2 stainless steel HEAD: hexagonal flange head 8mm</p>

SCREW SIZE	MAX DRILLING THICKNESS	HEAD SIZE	MAX FIXTURE THICKNESS	WASHER	ZINC PLATED	PRODUCT CODE
D×L [mm]	[mm]	[mm]	t _{fix} [mm]	pcs.	pcs.	
5.5 / 6.3×080			5-50	T19, A19	100	500
5.5 / 6.3×100			25-70	T19, A19	100	500
5.5 / 6.3×130			55-100	T19, A19	100	500
5.5 / 6.3×150			75-120	T19, A19	100	500
5.5 / 6.3×160	12.0	8	85-130	T19, A19	100	500
5.5 / 6.3×180			105-150	T19, A19	100	500
5.5 / 6.3×210			135-180	T19, A19	100	500
5.5 / 6.3×235			160-205	T19, A19	100	500
5.5 / 6.3×280			205-250	T19, A19	100	500
						ON-55/63080
						ON-55/63100
						ON-55/63130

SCREW SIZE	MAX DRILLING THICKNESS	HEAD SIZE	MAX FIXTURE THICKNESS	WASHER	STAINLESS STEEL	PRODUCT CODE
D×L [mm]	[mm]	[mm]	t _{fix} [mm]	pcs.	pcs.	
5.5 / 6.3×075			0-45	S19	100	500
5.5 / 6.3×095			20-65	S19	100	500
5.5 / 6.3×115			40-85	S19	100	500
5.5 / 6.3×135	12.0	8	60-105	S19	100	500
5.5 / 6.3×155			80-125	S19	100	500
5.5 / 6.3×175			100-145	S19	100	500
5.5 / 6.3×195			120-165	S19	100	500
5.5 / 6.3×235			160-205	S19	50	500
						ONS-55/63075
						ONS-55/63095
						ONS-55/63115

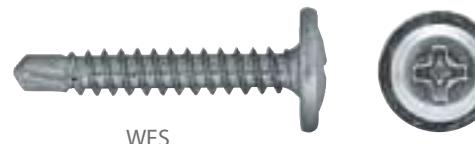
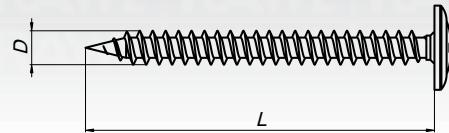


WF, WFS WAFER HEAD SCREWS

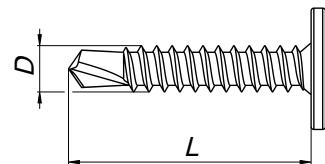
Product Information



WF



WFS



APPROVAL

 AT-15-6843/2005

Description

for fixing of thin sheet metal to thin wall steel structures,
plastic and wood

Material

SCREW:
surface hardened carbon steel – electro zinc plated min. 20 µm
HEAD:
11mm diameter with PH2 recess

SCREW SIZE			PRODUCT CODE	
	DxL [mm]	pcs.	pcs.	
4.2x13		1000	24000	WF-4213
4.2x16		1000	24000	WFS-4216
4.2x19		500	12000	WF-4219
4.2x22		500	12000	WFS-4222
4.2x25		500	12000	WFS-4225
4.2x32		500	12000	WFS-4232*
4.2x40		500	6000	WF-4240
4.2x50		500	6000	WF-4250*
4.2x65		250	3000	WF-4265*



EPDM STEEL AND ALUMINIUM WASHERS

Product Information



Product Code			
	mm	mm	pcs.
Steel			
PET-14	14	3.5	100
PET-19	19	4.0	100
Aluminium			
PEA-14	14	3.5	100
PEA-19	19	4.0	100
Stainless steel			
PES-14	14	3.5	100
PES-19	19	4.0	100



COVER CAPS

Product Information



Product Code	RAL		Product Code	RAL	
KAP-1002	1002	200	KAP-7000	7000	200
KAP-1003	1003	200	KAP-7024	7024	200
KAP-1005	1005	200	KAP-7032	7032	200
KAP-1007	1007	200	KAP-7035	7035	200
KAP-1013	1013	200	KAP-7040	7040	200
KAP-1015	1015	200	KAP-8004	8004	200
KAP-1023	1023	200	KAP-8015	8015	200
KAP-3000	3000	200	KAP-8017	8017	200
KAP-3009	3009	200	KAP-9002	9002	200
KAP-3011	3011	200	KAP-9003	9003	200
KAP-5010	5010	200	KAP-9005	9005	200
KAP-5012	5012	200	KAP-9006	9006	200
KAP-5024	5024	200	KAP-9010	9010	200
KAP-6002	6002	200	KAP-9011	9011	200
KAP-6005	6005	200	KAP-1024	1024	200
KAP-6011	6011	200	KAP-5002	5002	200
KAP-6020	6020	200	KAP-9007	9007	200
KAP-6021	6021	200			

PATRON MX POWDER ACTUATED TOOL

Product Information



CE



pcs.	DESCRIPTION	PRODUCT CODE
1	with short magazine, 16-32 mm nails	R-P-PATRON-MX-S
1	with long magazine, 32-72 mm nails	R-P-PATRON-MX

pcs.	DESCRIPTION	PRODUCT CODE
1	single-shot version, 16-32 mm nails	R-P-PATRON-S
1	single-shot version, 32-72 mm nails	R-P-PATRON

Powder actuated technology – universal, collated fasteners to concrete and steel eg. in formwork protection or metal profiles installation.

- KSC – single nails for concrete
- KSS – single nails for steel
- KSA – threaded nails for steel
- KRC – single nails with washer for concrete and steel
- KCC – ceiling clips with metal flange for concrete and steel
- KDM – single nails with washer for membranes and drainage panels
- KTT – eye hangers
- KRR – conduit clips

FIXING TYPE	KSC	KSS	KSA
MANDREL DIAMETER [mm]	3.7		4.5
MANDREL LENGTH [mm]	16-27		12-32
MIN. BASE MATERIAL THICKNESS [mm]	STEEL	4	
	CONCRETE	120	
SHEAR RESISTANCE [kN] (THICK METAL SHEET, 4 MM THICK BASE MATERIAL)	STEEL	3.0	3.3
PULL-OUT RESISTANCE [kN] (1 MM THICK METAL SHEET, 4 MM THICK BASE MATERIAL)	CONCRETE	1.7	
	STEEL	2.0	3.5
PACKAGE [pcs.]	100-500	500	100-300



SP-SV-11223



SP-SV-11228/SP-SV-11229



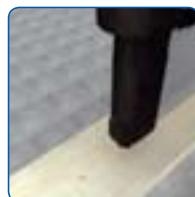
SP-SV-11222



SP-SV-SMAR

Product Code	pcs.	Description
SP-SV-SMAR	1	Cleaning Solution
SP-SV-11222	1	Piston Return Spring
SP-SV-11225	1	Spare Piston
SP-SV-11223	1	Piston Bumper
SP-SV-11228	1	Single Shot Adaptor (16-32 mm)
SP-SV-11229	1	Single Shot Adaptor (32-72 mm)
SP-SV-11230	1	Aluminium magazine

Installation



POWDER ACTUATED

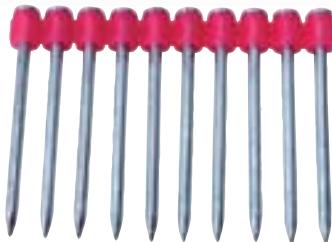
FIXINGS, TOOLS, ACCESSORIES

Product Information

Strip cartridges



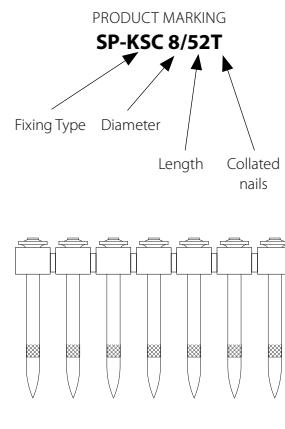
Collated nails for concrete and steel


MATERIAL

Low carbon steel, electro zinc plated.

i	pcs.	pcs.	PRODUCT CODE
YELLOW	100	1000	SP-AM-11/68Y
RED	100	1000	SP-AM-11/68R

mm	pcs.	pcs.	PRODUCT CODE
16	500	6000	SP-KSC-8/16T
19	500	6000	SP-KSC-8/19T
22	500	6000	SP-KSC-8/22T
27	500	6000	SP-KSC-8/27T
32	500	6000	SP-KSC-8/32T
37	500	6000	SP-KSC-8/37T
42	500	6000	SP-KSC-8/42T
47	500	6000	SP-KSC-8/47T
52	400	4800	SP-KSC-8/52T
57	300	3600	SP-KSC-8/57T
62	300	3600	SP-KSC-8/62T
67	300	3600	SP-KSC-8/67T
72	300	3600	SP-KSC-8/72T



Single nails for concrete



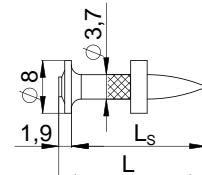
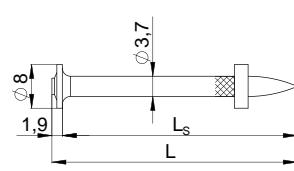
Single nails for steel



mm	pcs.	pcs.	PRODUCT CODE
27	500	9000	SP-KSC-8/27
32	300	5400	SP-KSC-8/32
37	300	5400	SP-KSC-8/37
42	300	5400	SP-KSC-8/42
47	300	5400	SP-KSC-8/47
52	300	5400	SP-KSC-8/52
57	300	5400	SP-KSC-8/57
62	300	5400	SP-KSC-8/62
72	300	5400	SP-KSC-8/72

PRODUCT MARKING
SP-KSC-8/16
Fixing Type Nail Diameter Nail length

mm	pcs.	pcs.	PRODUCT CODE
16	500	9000	SP-KSS-8/16
19	500	9000	SP-KSS-8/19
22	500	9000	SP-KSS-8/22



POWDER ACTUATED FIXINGS, TOOLS, ACCESSORIES

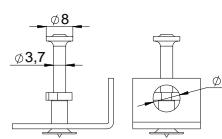
Product Information

Single nails with 15 mm washer for concrete and steel



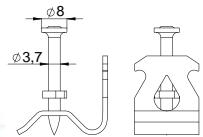
	mm	pcs.	pcs.	PRODUCT CODE
19	300	5400		SP-KRC-8/19
27	200	3600		SP-KRC-8/27
32	200	3600		SP-KRC-8/32
37	100	1800		SP-KRC-8/37
52	100	5400		SP-KRC-8/52
62	100	5400		SP-KRC-8/62

Ceiling strap with nail with metal flange for concrete and steel



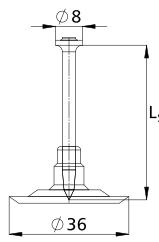
	mm	pcs.	PRODUCT CODE
27	100		SP-KCC-8/27
32	100		SP-KCC-8/32

Ceiling strap "T" type with nail and flange for concrete and steel



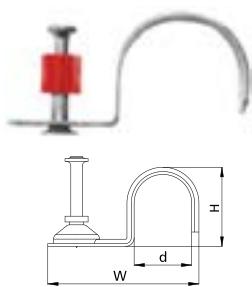
	mm	pcs.	PRODUCT CODE
27	100		SP-KXX-8/27
32	100		SP-KXX-8/32

Single nails with washer 36mm for fixing membranes to concrete and steel substrates.



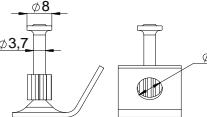
	mm	pcs.	PRODUCT CODE
32	100		SP-KDM-8/32
38	100		SP-KDM-8/38
51	100		SP-KDM-8/51
63	100		SP-KDM-8/63

Metal clamping ring with nail for pipes



YODE DIAMETER mm		mm	pcs.	PRODUCT CODE
8	27	100		SP-KRR-8/27
8	32	100		SP-KRR-8/32
16	27	100		SP-KRR-16/27
16	32	100		SP-KRR-16/32
20	27	100		SP-KRR-20/27
20	32	100		SP-KRR-20/32
26	27	100		SP-KRR-26/27
26	32	100		SP-KRR-26/32

Metal Strap with nail for concrete and steel

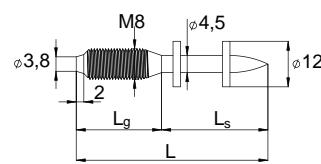


	mm	pcs.	PRODUCT CODE
27	100		SP-KTT-8/27
32	100		SP-KTT-8/32

Threaded studs with metal washers 10 mm*



	mm	pcs.	pcs.	PRODUCT CODE
23	200	3600		SP-KSA-6/11/12
32	200	3600		SP-KSA-6/20/12
47	200	3600		SP-KSA-6/20/27
52	100	1800		SP-KSA-6/20/32
64	300	5400		SP-KSA-6/32/32

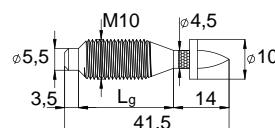


* compatible with the gun of competitors

Threaded studs*



	mm	pcs.	pcs.	PRODUCT CODE
23	200	3600		SP-KSA-8/11/12
42	100	1800		SP-KSA-8/20/12
47	100	1800		SP-KSA-10/20/27
35	100	1800		SP-KSA-10/20/15



* compatible with the gun of competitors

GAS ACTUATED FRAMING NAILER WW90CH

Product Information



Product Code	pcs	Description
R-RAWL-WW90CH	1	Gas Actuated Framing Nailer with 2 batteries, charger and safety glasses

Features

- Cordless** – portable and convenient
- Light weight** – reducing operator fatigue
- Depth adjuster** – ensures quality of fixing.
- Versatile** – drives 51-90 mm nails
- Narrow nose** – allows precise application on work area
- Batteries** – light indicator alerts for battery exchange
- Fuel cell** – quick and simple to load
- Compact** – angled magazine enables nailing in tight spaces – increasing quality of fixings.

Benefits

- saving set up time.
- increasing productivity.
- one tool performs many applications.
- can be fitted with no mark nose piece.
- tool supplied with two batteries
- 1 cell = up to 1200 nails.

Suitable for use in

Wood

Typical applications

- Timber Frame Erection
- Noggins / Dwangs
- Truss plates
- Floor Boarding
- Roof Battening
- Panelling
- Joists
- Soffits
- Loft Conversion
- Fencing
- Decking
- Crate & box assembly

Nails for Frame nailer WW90CH
– in cartons + fuel cells



Fuel cell for frame nailer WW90CH



PRODUCT CODE	COATING	SHANK	mm	mm	FUEL	BOX QTY
R-DPK-2851	Bright	Smooth	2.8	51	3	3300
R-DPK-2863	Bright	Smooth	2.8	63	3	3300
R-DPK-2875	Bright	Smooth	2.8	75	3	3300
R-DPK-3175	Bright	Smooth	3.1	75	2	2200
R-DPK-3190	Bright	Smooth	3.1	90	2	2200
R-DRK-2851	Bright	Ring	2.8	51	3	3300
R-DRK-2863	Bright	Ring	2.8	63	3	3300
R-DRK-2875	Bright	Ring	2.8	75	3	3300
R-DRK-3175	Bright	Ring	3.1	75	2	2200
R-DRK-3190	Bright	Ring	3.1	90	2	2200
R-DPG-3190	Silver Galv	Smooth	3.1	90	2	2200
R-DRG-2851	Silver Galv	Ring	2.8	51	3	3300
R-DRG-2863	Silver Galv	Ring	2.8	63	3	3300
R-DRG-3175	Silver Galv	Ring	3.1	75	2	2200
R-DRG-3190	Silver Galv	Ring	3.1	90	2	2200

Nail information

Bright, silver galvanised min. thickness of 10 µm, stainless steel.

Conforms to Euro code 5 requirements for indoor and covered outdoor applications

PL tape collation – paper laminated, provides high holding power and ease of drive, will not deteriorate in wet weather.

No collation material is left on job site.

D type nail head – clipped, increases number of nails per strip – less downtime.

Diamond point ring & smooth shank

- ring – fixing across the grain.
- smooth – fixing into end grain.

High shear value – 700 N/mm²

Product code	i	pcs.
R-RAWL-GP1	~1100 shots/pcs.	1

Fuel cell information

The fuel cell is a liquified gas under pressure. Rawl cells are a cleaned high grade Propane / Butane fuel mixture – which leaves no carbon residue in the tool.

The fuel also has a fully synthetic oil as a lubricant – increasing the time between servicing. Rawl service intervals will be approximately every 50,000 fixings.

Fuel cell functions down to -5°C and up to a maximum of 35°C

– slight petroleum odour – colourless.

GAS ACTUATED NAILER SC40

Product Information



Product Code	pcs.	Description
R-RAWL-SC40	1	Gas Actuated Framing Nailer with 2 batteries, charger and safety glasses

Features

- Lightweight** – reduces operator fatigue.
- Safe** – allows for one handed operation.
- Extra fan** – allows the tool to cool down quicker.
- Compact nose** – enables working in confined spaces.
- Magnetic tip** – suitable for overhead fixing.
- Batteries** – high performance – 2 included
- Easy access nose** – allows quick jam clearance.
- Ergonomic handle** – reduces vibration and increases comfort.
- Lightweight magazine** – 40 nail load up to 60mm.

Suitable for use in

Masonry
Steel
Concrete

Typical applications

- Installing conduit
- Electrical back boxes
- Fixing brick ties
- Cable management systems
- Pipe clips
- Fire protection brackets
- Metal track systems
- Steel channel

Strip pins for steel with fuel cell

Strip pins for concrete with fuel cell

Fuel cell for nailer SC40



* compatible with PULSA 1000

Product code	pcs.	pcs.
R-KSC-6/15	1000	12000

Product code	pcs.	pcs.
R-KNC-6/20	1000	12000
R-KNC-6/25	1000	12000
R-KNC-6/30	1000	12000
R-KNC-6/40	1000	12000



Product code	~1100 shots/pcs.	pcs.
R-RAWL-GP2	~1100 shots/pcs.	100

Fuel cell information

The fuel cell is a liquified gas under pressure. Rawl cells are a cleaned high grade Propane / Butane fuel mixture – which leaves no carbon residue in the tool.

The fuel also has a fully synthetic oil as a lubricant – increasing the time between servicing. Rawl service intervals will be approximately every 50,000 fixings.

Fuel cell functions down to -5°C and up to a maximum of 35°C – slight petroleum odour – colourless.

CORDLESS GAS 2ND FIX NAILERS

Product Information **CE**



Features

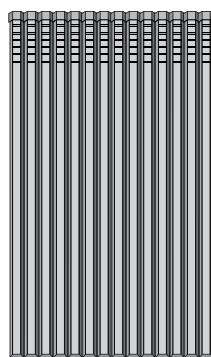
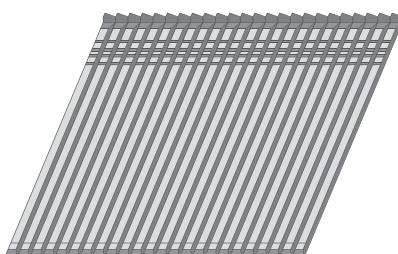
1. **Depth adjuster** – ensures quality of fixing
2. **Quick release nose** – for clearing any jams
3. **High voltage ignition** – increased performance
4. **No mark nose** – protects work surface
5. **Lightweight** – yet will still fire a 65 mm brad
6. **Magazine** – quick and simple to load.

Each tool comes complete with:

- safety and operating instructions
- 2 NiMh batteries
- 2-hour battery charger
- goggles
- rugged carrying case
- 2 wrenches

Product Code		Description	Galv brad sizes [mm]
R-RAWL-B1664	1	Angled 15 gauge	32, 38, 45, 50, 63
R-RAWL-A2064	1	Straight 16 gauge	19, 25, 32, 38, 45, 50, 64

Brads for finish nailers



Code	Coating	Dimensions [mm]	Box Qty [pcs]
20 DEGREE ANGLED BRADS 16 GAUGE			
BRADS1532	GALVANIZED	15x32	2000 BRADS + 2 FUEL CELLS
BRADS1538	GALVANIZED	15x38	2000 BRADS + 2 FUEL CELLS
BRADS1545	GALVANIZED	15x45	2000 BRADS + 2 FUEL CELLS
BRADS1550	GALVANIZED	15x50	2000 BRADS + 2 FUEL CELLS
BRADS1564	GALVANIZED	15x64	2000 BRADS + 2 FUEL CELLS
BRADS1550SS	STAINLESS STEEL	15x50	2000 BRADS + 2 FUEL CELLS
STRAIGHT BRADS 16 GAUGE			
BRADS1619	GALVANIZED	16x19	2000 BRADS + 2 FUEL CELLS
BRADS1625	GALVANIZED	16x25	2000 BRADS + 2 FUEL CELLS
BRADS1632	GALVANIZED	16x32	2000 BRADS + 2 FUEL CELLS
BRADS1638	GALVANIZED	16x38	2000 BRADS + 2 FUEL CELLS
BRADS1645	GALVANIZED	16x45	2000 BRADS + 2 FUEL CELLS
BRADS1650	GALVANIZED	16x50	2000 BRADS + 2 FUEL CELLS
BRADS1664	GALVANIZED	16x64	2000 BRADS + 2 FUEL CELLS
BRADS1625SS	STAINLESS STEEL	16x25	2000 BRADS + 2 FUEL CELLS
BRADS1638SS	STAINLESS STEEL	16x38	2000 BRADS + 2 FUEL CELLS
BRADS1650SS	STAINLESS STEEL	16x50	2000 BRADS + 2 FUEL CELLS

STAPLE TOOLS

Product Information

Product Code	Description	Quantity
KGR0011	Rawl Hammer Tacker	Single Unit



Features

1. For Fastening heavy duty material
2. Compact design with no loose parts
3. Ergonomic soft rubber grip for extra working comfort
4. Reaches awkward corners
5. Easy drop in loading with reload indicator
6. No paper tearing
7. 2 year guarantee

Typical applications

- securing insulation material
- fitting carpet & carpet underlay
- fastening plastic film/moisture wrap
- securing roof felt

Product Code	Description	Quantity
KGR0053	Rawl Easi Squeeze Stapler	Single Unit



Product Code	Description	Quantity
KGR0031	Rawlplug 3 in 1 Stapler	Single Unit



Features

1. For decorative jobs around the home
2. Light weight ABS plastic body with metal handle
3. Compact design
4. Easy drop-in loading with reload indicator
5. Lockable handle for easy storage
6. 2 year guarantee

Typical applications

- upholstery & re-upholstery
- hobby crafts
- fastening posters
- canvas
- netting wire

Features

1. Fastens brads, pins & staples for the required application
2. Compact design
3. Easy drop-in loading with reload indicator
4. Lockable handle for easy storage
5. Uses staples, brads & pins
6. 2 year guarantee

Typical applications

- upholstery & re-upholstery
- moulding & beading
- picture frames
- hobby crafts
- display & shop fitting
- netting wire

Product Code	Description	Quantity
KGR0028	Rawlplug Cable Stapler	Single Unit



Product Code	Description	Quantity
KGR0034	Rawl Universal Steel Stapler	Single Unit



Features

1. For securing electrical cables
2. Fastens 1/4" round cables & 5/32" flat wire cable
3. Built in wire/cable wire/cable guide
4. Compact design
5. Easy drop-in loading with reload indicator
6. Lockable handle for easy storage
7. Rubber grip for extra working comfort
8. Great for Christmas/temporary lighting
9. No loose parts
10. 2 year Guarantee

Typical applications

- securing TV, computer, telephone, speaker, security doorbell, intercom alarm & low voltage cable

Features

1. For those though fastening jobs
2. Adjustable drive force
3. Easy drop-in loading with reload indicator
4. Rubber grip for extra working comfort
5. One machine for different applications
6. Uses staples, brads & pins
7. 2 year guarantee

Typical applications

- securing insulation material
- upholstery & re-upholstery
- moulding & beading
- picture frames
- fitting carpet & carpet underlay
- fastening plastic film/moisture wrap
- netting wire

STAPLES

Product Information



Product code					
KSS00814	RL8	14 mm	brads	PK	1000
KSS00914	RL9	14 mm	pins	PK	1000
KSS015INS	RL15C	-	insulation staples	box	63
KSS05306	RL53	6 mm	staples	PK	1000
KSS05308	RL53	8 mm	staples	PK	1000
KSS05310	RL53	10 mm	staples	PK	1000
KSS05312	RL53	12 mm	staples	PK	1000
KSS05314	RL53	14 mm	staples	PK	1000
KSS14006	RL140	6 mm	staples	PK	1250
KSS14008	RL140	8 mm	staples	PK	1250
KSS140085040	RL140	8 mm	staples	box	5040
KSS14010	RL140	10 mm	staples	PK	1250
KSS140105040	RL140	10 mm	staples	box	5040
KSS14012	RL140	12 mm	staples	PK	1250
KSS140125040	RL140	12 mm	staples	box	5040
KSS14014	RL140	14 mm	staples	PK	1250
KSS14RD5040	RL14	-	round cable staples	box	5040
KSS15FT5040	RL15	-	flat cable staples	box	5040

Product code	Easi Squeez Stapler	3 in 1 Stapler	Universal Steel Stapler	Cable Stapler	Hammer Tacker
KSS00814		×	×		
KSS00914		×	×		
KSS015INS				×	
KSS05306	×	×			
KSS05308	×	×			
KSS05310	×	×			
KSS05312		×			
KSS05314		×			
KSS14006			×		×
KSS14008			×		×
KSS140085040			×		×
KSS14010			×		×
KSS140105040			×		×
KSS14012			×		
KSS140125040			×		
KSS14014			×		
KSS14RD5040				×	
KSS15FT5040				×	

KI-10 INSULATION FIXINGS

WITH HAMMER IN NYLON PIN

Product Information

APPROVAL



Installation tips

1. Pre-drilling diameter: 10 mm
2. Minimum embedment depth: ETA 25mm

Material

Plug sleeve: impact resistant copolymer of polypropylene PP or polyamide PA 6.0 (Nylon) made to order

Nail pin: polyamide PA 6.0 (Nylon) reinforced with fibre glass.

Typical applications

- Approved fastening polystyrene foam to walls made of solid materials: concrete, solid brick, clinker brick, stone, silicate blocks. Recommended to: vertically perforated brick, aerated concrete.

L mm	HEAD DIAMETER (mm)	max mm	pcs.	PRODUCT CODE
70	60	40	250	KI-070
90	60	60	250	KI-090
120	60	90	250	KI-120
140	60	110	250	KI-140
160	60	130	250	KI-160
180	60	150	250	KI-180
200	60	170	250	KI-200
220	60	190	250	KI-220

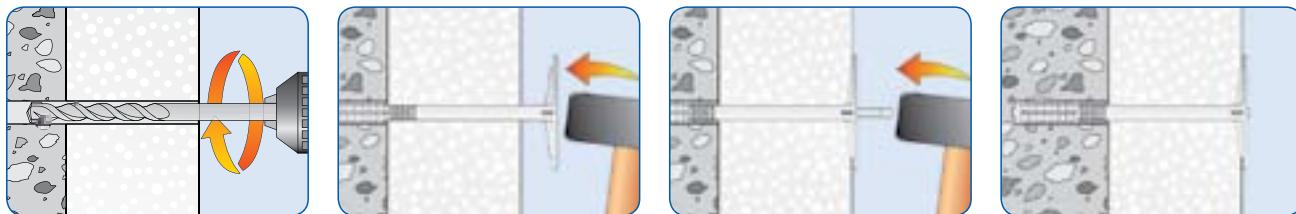
Product Code		KI-...			
Base material		Concrete C12/15	Concrete C20/25	Concrete C50/60	Clay bricks
Characteristic loads	N _{Rk} [kN]	0.5	0.6	0.6	0.5

1) Regarding design loads the national safety factors are to be incorporated.

2) Please observe the approval

Drill diameter	10 mm
Head diameter	60 mm
Drilled hole depth	35 mm
Embedment depth	25 mm
Use categories acc. to ETA	A, B

Installation



KI-10M INSULATION FIXINGS WITH HAMMER IN STEEL PIN

Product Information

APPROVAL



ETA-07/0291



Installation tips

1. Pre-drilling diameter: 10 mm
2. Minimum embedment depth: ETA 25 mm

Material

Plug sleeve: impact resistant copolymer of polypropylene PP or polyamide PA 6.0 (Nylon) made to order

Nail pin: electro zinc plated pin.

Typical applications

- Fastening polystyrene foam and mineral wool to walls made of solid materials: concrete, solid brick, clinker brick, stone, silicate blocks

L mm	HEAD DIAMETER (mm)	max mm	pcs.	PRODUCT CODE
90	60	60	250	KI-090M
120	60	90	250	KI-120M
140	60	110	250	KI-140M
160	60	130	250	KI-160M
180	60	150	250	KI-180M
200	60	170	250	KI-200M
220	60	190	250	KI-220M
260	60	230	200	KI-260M

Product Code	KI-...M			
	Concrete C12/15	Concrete C20/25	Concrete C50/60	Clay bricks
Base material				
Characteristic loads	N _{Rk} [kN]	0.5	0.75	0.75

1) Regarding design loads the national safety factors are to be incorporated.

2) Please observe the approval

Drill diameter	10 mm
Head diameter	60 mm
Drilled hole depth	35 mm
Embedment depth	25 mm
Use categories acc. to ETA	A, B

Polyesterene cap

Product code	DIAMETER (mm)	pcs.
KES	64	250

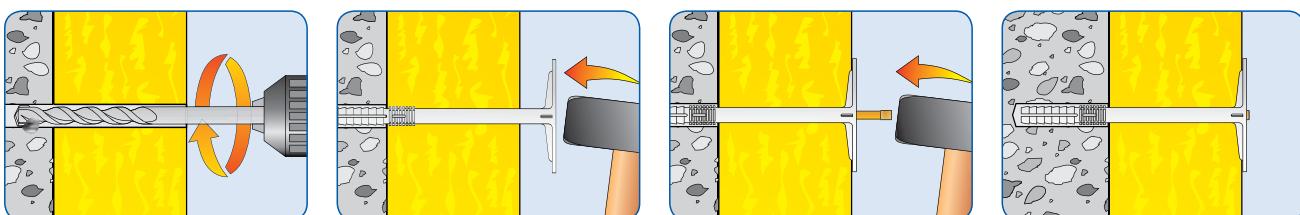


Plastic cutter

Product code	DIAMETER (mm)	pcs.
KFS	64	1



Installation



KI-10N LONG EXPANSION ZONE INSULATION FIXING WITH HAMMER IN STEEL PIN WITH PLASTIC COATED HEAD

Product Information

APPROVAL



ETA-07/0221



Installation tips

- Pre-drilling diameter: 10 mm
- Anchorage depth: ETA 60 mm

Material

Plug sleeve: impact resistant copolymer of polypropylene PP or polyamide PA 6.0 (Nylon) – made to order

Nail pin: electro zinc plated pin.

Head Coating: polyamide PA+GF

Typical applications

- fastening of polystyrene foam and mineral wool to the walls made of porous material: aerated concrete, cavity brick, hollow clay pot, vertically perforated brick, etc.

L mm	HEAD DIAMETER (mm)	max mm	pcs.	PRODUCT CODE
140	60	80	250	KI-140N
160	60	100	250	KI-160N
180	60	120	250	KI-180N
200	60	140	250	KI-200N
220	60	160	250	KI-220N
240	60	180	250	KI-240N
260	60	200	250	KI-260N
300	60	240	200	KI-300N

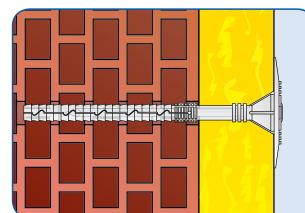
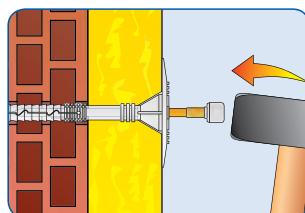
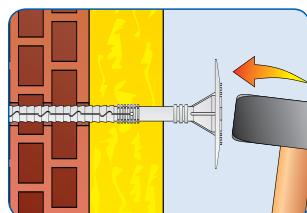
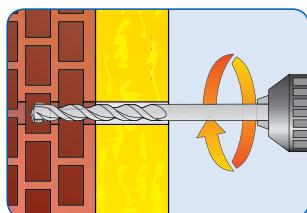
Product Code	KI-...N			
	Clay bricks	Perforated clay bricks, HLZ	Lightweight concrete hollow block, Hbl	Autoclaved aerated concrete blocks
Base material	1.2	0.4	0.3	0.75
Characteristic loads N _{Rk} [kN]				

1) Regarding design loads the national safety factors are to be incorporated.

2) Please observe the approval

Drill diameter	10 mm
Head diameter	60 mm
Drilled hole depth	70 mm
Embedment depth	60 mm
Use categories acc. to ETA	B, C, D, E

Installation



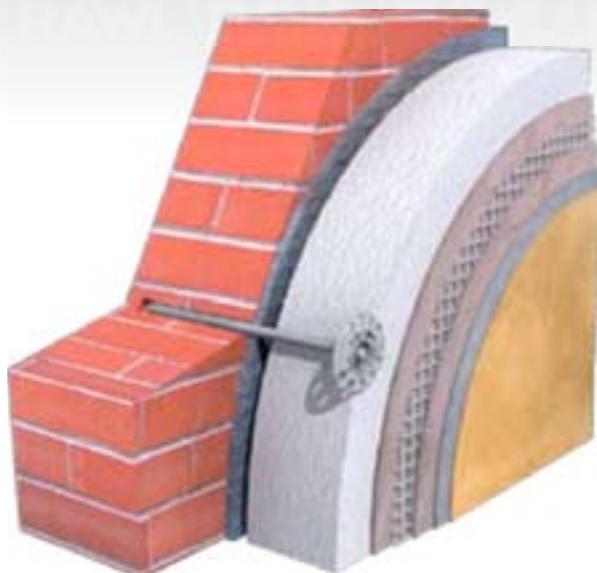
KI-10NS LONG EXPANSION ZONE INSULATION FIXING WITH SCREW IN STEEL PIN WITH PLASTIC COATED HEAD

Product Information

APPROVAL



ETA-07/0221



Installation tips

1. Pre-drilling diameter: 10 mm
2. Minimum embedment depth: ETA 60 mm

Material

Plug sleeve: impact resistant copolymer of polypropylene PP or polyamide PA 6.0 (Nylon) made to order

Screw pin: electro zinc plated pin.

Head Coating: polyamide PA+GF

Typical applications

- fastening of polystyrene foam and mineral wool to the walls made of porous material: aerated concrete, cellular brick, cavity brick, hollow clay pot, vertically perforated brick, etc.

L mm	HEAD DIAMETER (mm)	max mm	pcs.	PRODUCT CODE
160	60	90	250	KI-160NS
180	60	110	250	KI-180NS
200	60	130	250	KI-200NS
220	60	150	250	KI-220NS
260	60	190	200	KI-260NS
300	60	230	200	KI-300NS

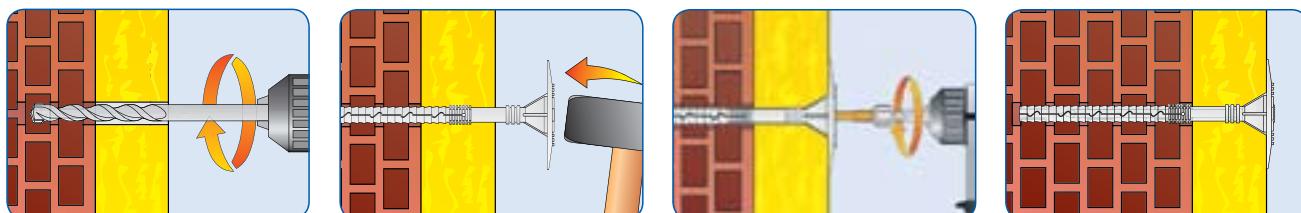
Product Code	KI-...NS			
	Clay bricks	Perforated clay bricks, HLZ	Lightweight concrete hollow block, Hbl	Autoclaved aerated concrete blocks
Characteristic loads: N _{Rk} [kN]	1.2	0.4	0.3	0.75

1) Regarding design loads the national safety factors are to be incorporated.

2) Please observe the approval

Drill diameter	10 mm
Head diameter	60 mm
Drilled hole depth	70 mm
Embedment depth	60 mm
Use categories acc. to ETA	B, C, D, E

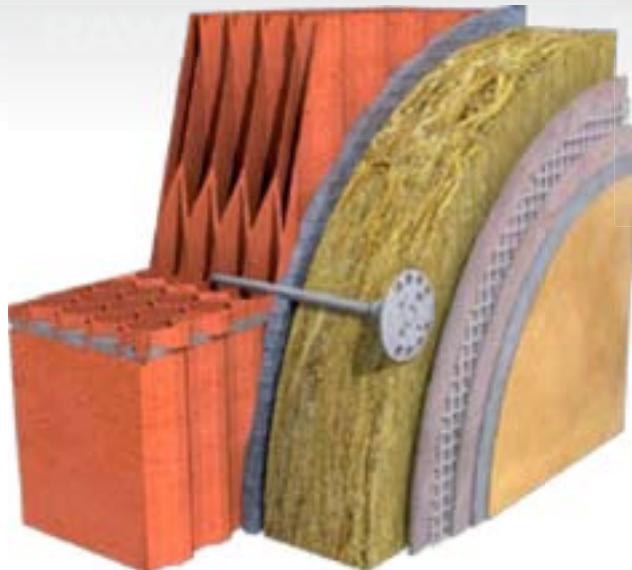
Installation



TFIX-8M INSULATION FIXINGS WITH HAMMER IN STEEL PIN WITH PLASTIC COATED HEAD*

Product Information

APPROVAL



Product recommended for ETICS system

Installation tips

- Pre-drilling diameter: 8 mm
- Minimum embedment depth: ETA 25mm

Material

Plug sleeve: impact resistant copolymer of polypropylene PP or polyamide PA 6.0 (Nylon) made to order.

Nail pin: electro zinc plated pin

Head Coating: polyamide PA+GF

Typical applications

- Fastening polystyrene foam and mineral wool to walls made of solid materials: concrete, solid brick, clinker brick, stone, silicate blocks, vertically perforated brick.

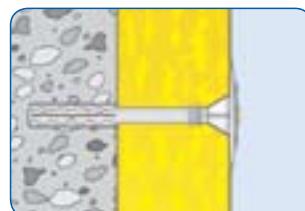
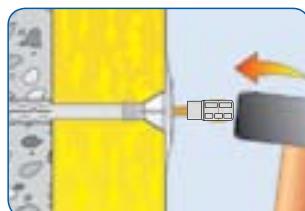
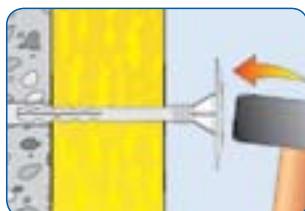
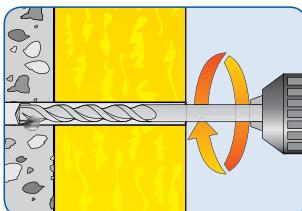
L mm	HEAD DIAMETER (mm)	max mm	pcs.	PRODUCT CODE
75	60	40	200	TFIX-8M/75
95	60	60	200	TFIX-8M/95
115	60	80	200	TFIX-8M/115
135	60	100	200	TFIX-8M/135
155	60	120	200	TFIX-8M/155
175	60	140	200	TFIX-8M/175
195	60	160	200	TFIX-8M/195
215	60	180	100	TFIX-8M/215
235	60	200	100	TFIX-8M/235
255	60	220	100	TFIX-8M/255
275	60	240	100	TFIX-8M/275
295	60	260	100	TFIX-8M/295

Product Code		TFIX-8M/...							
		Concrete C12/15	Concrete C20/25	Concrete C50/60	Clay bricks e.g. according to DIN 105, Mz	Sand-lime solid bricks (calcium silicate) e.g. according to DIN 106, KS	Sand-lime perforated bricks (calcium silicate) e.g. according to DIN 106, KSL	Perforated clay bricks e.g. according to DIN 105, HLZ	Lightweight concrete solid block DIN 18152, Vbl
Base material									
Characteristic loads	N _{Rk} [kN]	1.5	1.5	1.5	1.5	1.5	0.9	0.6	0.5
Drill diameter		8 mm							
Head diameter		60 mm							
Drilled hole depth		35 mm							
Embedment depth		25 mm							
Use categories acc. to ETA		A, B, C							

1) Regarding design loads the national safety factors are to be incorporated.

2) Please observe the approval

Installation



INSULATION FLANGE WITH COVER CAP

Product Information



Installation	Installation tips	Material	Typical applications
	1. Anchorage depth: min. 30 mm	Impact resistant co-polymer of polypropylene PP or polyamide PA 6.0 (Nylon) – made to order.	<ul style="list-style-type: none"> For fixing both light polystyrene and heavy mineral wool boards in combination with appropriate screws to facade walls made from: timber, sheet metal, plasterboard, etc.

KWL INSULATION HOLDING FLANGE

Product Information



MATERIAL

Polyamide PA 6.0 (nylon) reinforced with fibre glass, impact resistant copolymer of polypropylene PP.



mm	pcs.	PRODUCT CODE
90	250	KWL-90
110	200	KWL-110
140	200	KWL-140

GOK STANDARD TELESCOPE

Product Information



APPROVAL



ETA-09/0346



T mm	W mm	pcs.	POLYPROPYLENE PRODUCT CODE	NYLON PRODUCT CODE
15	30	1100	GOK-015	GOK-015-N
35	50	600	GOK-035	GOK-035-N
65	80	400	GOK-065	GOK-065-N
75	90	300	GOK-075	GOK-075-N
85	100	300	GOK-085	GOK-085-N
95	110	250	GOK-095	GOK-095-N
105	120	250	GOK-105	GOK-105-N
125	140	200	GOK-125	GOK-125-N
135	150	200	GOK-135	GOK-135-N
165	180	150	GOK-165	GOK-165-N
185	200	100	GOK-185	GOK-185-N
225	240	100	GOK-225	GOK-225-N
255	270	100	GOK-255	GOK-255-N
285	300	75	GOK-285	GOK-285-N
325	340	50	GOK-325	GOK-325-N
385	400	50	GOK-385	GOK-385-N
425	440	50	GOK-425	GOK-425-N

Description	Material	Typical applications
Telescopic connector for fixing insulation layers to flat roofs. Circular plate eliminates the need for positioning the fixing during the installation, this is indispensable when using fixings with oval plate. Could be used with different type of screws that allow the fixing of the thermal insulation to any kind of substrate: trapezoid sheet, wood, concrete, stone.	1. Polypropylene 2. Nylon	<ul style="list-style-type: none"> Concrete Stone Wood Trapezoid sheet

Assembly parameters	GOK + WO			GOK + WX			GOK + WBT			GOK+WO +K08L			GOK, GOK-N +WW		
	GOK-N +WO	GOK-N +WX	GOK-N +WBT	GOK-N +WBT	GOK-N +WO+	K08L	Structural timber	Plywood	OSB/3						
Screw diameter (mm)	4,8	4,8	6,1	4,8	4,8	8	5	5	5						
Hole diameter (mm)		without pre-drilling			5					without pre-drilling					
Hole depth in substrate (mm)		doesn't concern			35	45				doesn't concern					
Effective anchorage depth (mm)		doesn't concern			30	40	24	20	18						
Minimum substrate thickness (mm)	0,75	0,75	35	60	24	20	20	18							
Minimum space between fasteners (mm)	120	120	120	120	120	120	120	120	120						
Min. space from the edge (mm)	30	30	30	30	30	30	30	30	30						

	Characteristic load [kN]
steel deck:	
GOK, GOK-N + WO	0,97
GOK, GOK-N + WX	0,89
Concrete C12/15, C25/30	
GOK, GOK-N + WBT	1,66
GOK, GOK-N + WO + K08L	1,66
Structural timber	
GOK, GOK-N + WW	1,66
Plywood	
GOK, GOK-N + WW	1,66
OSB/3	
GOK, GOK-N + WW	1,52



GOK-PLUS STANDARD TELESCOPE WITH ADDITIONAL FIXING FEATURES

Product Information



			PRODUCT CODE
15	30	1100	GOK-PLUS-015-N
35	50	600	GOK-PLUS-035-N
65	80	400	GOK-PLUS-065-N
75	90	300	GOK-PLUS-075-N
85	100	300	GOK-PLUS-085-N
95	110	250	GOK-PLUS-095-N
105	120	250	GOK-PLUS-105-N
125	140	200	GOK-PLUS-125-N
135	150	200	GOK-PLUS-135-N
165	180	150	GOK-PLUS-165-N
185	200	100	GOK-PLUS-185-N
225	240	100	GOK-PLUS-225-N
255	270	100	GOK-PLUS-255-N
285	300	75	GOK-PLUS-285-N
325	340	50	GOK-PLUS-325-N
385	400	50	GOK-PLUS-385-N
425	440	50	GOK-PLUS-425-N

Description

Telescopic fastener for fixing insulation layers to the flat roofs. Additional fixing feature in the shape of 3 securing points (thorns) increases the load capacity. This is especially important while using wide, single layer water proof membranes. Circular plate eliminates the need of positioning the fixing during the installation. Could be used with different types of screws which allows the fixing of the thermal insulation to any kind of substrate: trapezoid sheet, wood, concrete.

Material

Nylon

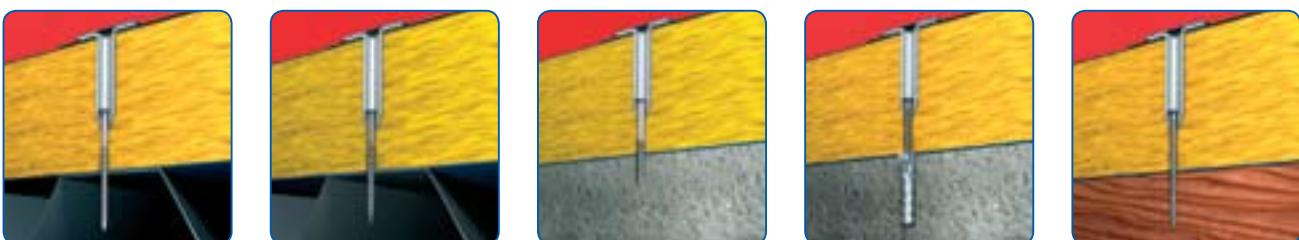
Typical applications

- Concrete
- Stone
- Wood
- Trapezoid sheet

Assembly parameters	GOK-PLUS-N +WW						
	GOK-PLUS-N +WO	GOK-PLUS-N +WX	GOK-PLUS-N +WBT	GOK-PLUS-N +WO+K08L	Structural timber	Plywood	OSB/3
Screw diameter (mm)	4,8	4,8	6,1	4,8	5	5	5
Hole diameter (mm)	without pre-drilling		5	8	without pre-drilling		
Hole depth in substrate (mm)	doesn't concern		35	45	doesn't concern		
Effective anchorage depth (mm)	doesn't concern		30	40	24	20	18
Minimum substrate thickness (mm)	0,75	0,75	35	60	24	20	18
Minimum space between fasteners (mm)	120	120	120	120	120	120	120
Min. space from the edge (mm)	30	30	30	30	30	30	30

	Characteristic load [kN]
steel deck:	
GOK-PLUS-N + WO	0,97
GOK-PLUS-N + WX	0,89
Concrete C12/15, C25/30	
GOK-PLUS-N +WBT	1,66
GOK-PLUS-N +WO + K08L	1,66
Structural timber	
GOK-PLUS-N + WW	1,66
Plywood	
GOK-PLUS-N + WW	1,66
OSB/3	
GOK-PLUS-N + WW	1,52

Installation



GOK075 STANDARD TELESCOPE WITH WIDE PLATE

Product Information


APPROVAL


ETA-09/0346



B mm	mm	pcs.	POLYPROPYLENE PRODUCT CODE	NYLON PRODUCT CODE
15	30	1100	GOK075-015	GOK075-015-N
35	50	600	GOK075-035	GOK075-035-N
65	80	400	GOK075-065	GOK075-065-N
85	100	300	GOK075-085	GOK075-085-N
105	120	250	GOK075-105	GOK075-105-N
125	140	200	GOK075-125	GOK075-125-N
135	150	200	GOK075-135	GOK075-135-N
165	180	150	GOK075-165	GOK075-165-N
185	200	100	GOK075-185	GOK075-185-N
225	240	100	GOK075-225	GOK075-225-N
255	270	100	GOK075-255	GOK075-255-N
285	300	75	GOK075-285	GOK075-285-N
325	340	50	GOK075-325	GOK075-325-N
385	400	50	GOK075-385	GOK075-385-N
425	440	50	GOK075-425	GOK075-425-N

Made to order

Description

Telescopic connector for fixing insulation layers to different types of substrates. Especially recommended for the pre-installation of thermal insulation on the flat roofs. Could be used with different type of screws that allow the fixing of the thermal insulation to any kind of substrate: trapezoid sheet, wood, concrete, stone.

Material

- 1. Polypropylene
- 2. Nylon

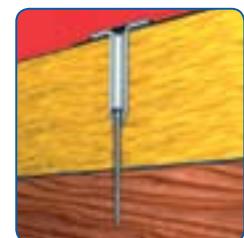
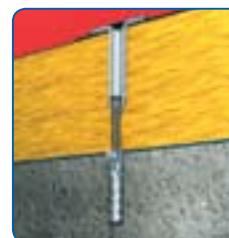
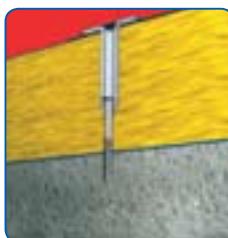
Typical applications

- Concrete
- Stone
- Wood
- Trapezoid sheet

Assembly parameters	GOK075 +WO		GOK075 +WX		GOK075 +WBT		GOK075 +WO+K08L		GOK075, GOK075-N +WW		
	Structural timber	Plywood	OSB/3								
Screw diameter (mm)	4,8	4,8	6,1	4,8	5	5	5				
Hole diameter (mm)		without pre-drilling		5	8			without pre-drilling			
Hole depth in substrate (mm)		doesn't concern		35	45			doesn't concern			
Effective anchorage depth (mm)		doesn't concern		30	40	24	20	18			
Minimum substrate thickness (mm)	0,75	0,75	35	60	24	20	18				
Minimum space between fasteners (mm)	120	120	120	120	120	120	120				
Min. space from the edge (mm)	30	30	30	30	30	30	30				

	Characteristic load [kN]
steel deck:	
GOK075, GOK075-N + WO	0,97
GOK075, GOK075-N + WX	0,89
Concrete C12/15, C25/30	
GOK075, GOK075-N +WBT	1,73
GOK075, GOK075-N + WO + K08L	1,73
Structural timber	
GOK075, GOK075-N + WW	1,73
Plywood	
GOK075, GOK075-N + WW	1,73
OSB/3	
GOK075, GOK075-N + WW	1,52

Installation



GOK-WX/WO PRE-ASSEMBLED TELESCOPIC SYSTEM

Product Information



Description

To save time spent on projects, we recommend our "ready to use" system. This consists of pre-assembled connectors i.e. GOK telescope and WO or WX type of screw appropriate for specific substrate and insulation layers thickness. This significantly minimizes time spent on installation onsite.

Typical applications

- Concrete
- Stone
- Wood
- Trapezoid sheet

				PRODUCT CODE
	mm	mm	pcs.	
GOK-065 + WX-48050	0.9-1.25	80	300	GOK-WX/80
GOK-085 + WX-48050	0.9-1.25	100	200	GOK-WX/100
GOK-105 + WX-48050	0.9-1.25	120	150	GOK-WX/120
GOK-125 + WX-48050	0.9-1.25	140	100	GOK-WX/140
GOK-135 + WX-48050	0.9-1.25	150	100	GOK-WX/150
GOK-135 + WX-48060	0.9-1.25	160	100	GOK-WX/160
GOK-165 + WX-48050	0.9-1.25	180	100	GOK-WX/180
GOK-185 + WX-48050	0.9-1.25	200	100	GOK-WX/200
GOK-065 + WO-48060	0.7-0.9	80	300	GOK-WO/80
GOK-085 + WO-48060	0.7-0.9	100	200	GOK-WO/100
GOK-105 + WO-48060	0.7-0.9	120	150	GOK-WO/120
GOK-125 + WO-48060	0.7-0.9	140	100	GOK-WO/140
GOK-135 + WO-48060	0.7-0.9	150	100	GOK-WO/150
GOK-135 + WO-48060	0.7-0.9	160	100	GOK-WO/160
GOK-165 + WO-48060	0.7-0.9	180	100	GOK-WO/180
GOK-185 + WO-48060	0.7-0.9	200	100	GOK-WO/200

* made to order

Assembly parameters	GOW-PLUS-N +WO	GOW-PLUS-N +WX
Screw diameter (mm)	4,8	4,8
Hole diameter (mm)	without pre-drilling	
Hole depth in substrate (mm)	doesn't concern	
Effective anchorage depth (mm)	doesn't concern	
Minimum substrate thickness (mm)	0,75	0,75
Minimum space between fasteners (mm)	120	120
Min. space from the edge (mm)	30	30

Characteristic load	[kN]
steel deck:	
GOK, GOK-N + WO	0,97
GOK, GOK-N + WX	0,89

STEEL WASHER DEEP TYPE

Product Information

APPROVAL



ETA-09/0346



MATERIAL	mm	mm	mm	PRODUCT CODE
ALZN	80 x 40	5.0	100	POW-05 ALZN

STEEL WASHERS FLAT TYPE

Product Information

APPROVAL



ETA-09/0346



POW-07



PKW-07



POK

DESCRIPTION

Circular, oval or square washers made of steel zinc plated or aluminum – zinc.

MATERIAL	mm	mm	mm	PRODUCT CODE	ETA APPROVAL
ZN	80 x 40	9.0	100	POW-09	-
ZN	76	6.0	100	POK-06	-
ZN	64	7.0	100	PKW-07	-
ALZN	80 x 40	7.0	100	POW-07-ALZN	✓
ALZN	40	6.5	150	POK-041-ALZN	✓

	Characteristic load* [kN]
steel deck:	
POK-041, POW +WO	0.97
POK-041, POW +WX	0.89
POK-041, POW + WB	0.88
Concrete C12/15, C25/30	
POK-041 +WBT	3.84
POW-07 +WBT	4.09
POW-09 +WBT	4.03
POK-041 +WCS	3.84
POW-07 +WCS	4.71
POW-09 +WCS	4.03
POK-041, POW +W0 +FIX-K	1.97

	Characteristic load [kN]
Structural timber	
POK-041, POW-ALZN +WW	2.3
Plywood	
POK-041, POW-ALZN +WW	2.12
OSB/3	
POK-041, POW-ALZN +WW	1.97

* according to ETA

Assembly parameters	POK-041, POW + WO, WX, WB	POK-041, POW + WBT	POK-041, POW + WCS	POK-041, POW + WO + FIX-K	POK-041, POW + WW		
					Structural timber	Plywood	OSB/3
Screw diameter (mm)	4,8	6,1	6,3	4,8	5	5	5
Hole diameter (mm)	without pre-drilling	5	5	8	without pre-drilling		
Hole depth in substrate (mm)	doesn't concern	35	35	45	doesn't concern		
Effective anchorage depth (mm)	doesn't concern	30	30	40	24	20	18
Minimum substrate thickness (mm)	0,75	35	35	60	24	20	18
Minimum space between fasteners (mm)	120	120	120	120	120	120	120
Min. space from the edge (mm)	30	30	30	30	30	30	30

WO SCREWS FOR 2 × 0.9 MM THICKNESS TRAPEZOIDAL SHEET

Product Information



APPROVAL



ETA-09/0346



Description

Screws made of hardened carbon steel protected by a special high quality anti-corrosive coating that guarantees resistance up to 15 Kesternich cycles. Suitable for installing insulation layers on flat roofs together with a appropriate telescope or steel washer.

Specification data

Drilling capacity: 2 x 0.9 mm
Thread Diameter: 4.8 mm
Length: 60-300 mm
Bit type: philips-02/torx-025

Suitable for use in:

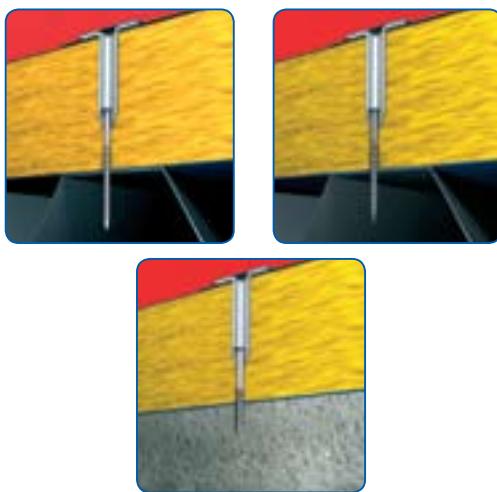
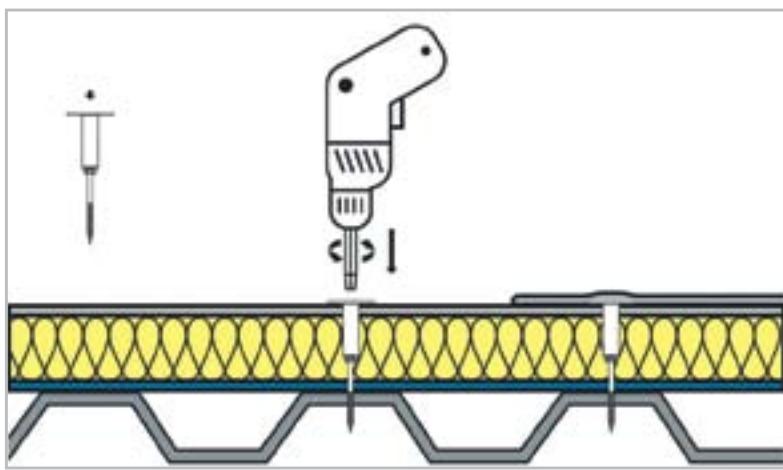
Trapezoid sheet

d x l mm	pcs.	pcs.	PRODUCT CODE PH2	PRODUCT CODE TORX-025
4.8 x 60	250	3000	WO-48060	WO-48T060
4.8 x 80	250	3000	WO-48080	WO-48T080
4.8 x 100	200	2400	WO-48100	WO-48T100
4.8 x 120	200	2400	WO-48120	WO-48T120
4.8 x 140	200	2400	WO-48140	WO-48T140
4.8 x 160	100	1200	WO-48160	WO-48T160
4.8 x 180	100	1200	WO-48180	WO-48T180
4.8 x 200	100	1200	WO-48200	WO-48T200
4.8 x 240	100	1200	WO-48240	WO-48T240
4.8 x 300	100	1200	WO-48300	WO-48T300

Assembly parameters	GOK, GOK-N, GOK-PLUS-N, GOK075, GOK075-N, GOW, GOW-N, GOW-PLUS-N, POK-041, POW+	
	WO	WO + K08L
Screw diameter (mm)	4,8	4,8
Hole diameter (mm)	without pre-drilling	8
Hole depth in substrate (mm)	doesn't concern	45
Effective anchorage depth (mm)	doesn't concern	40
Minimum substrate thickness (mm)	0,75	60
Minimum space between fasteners (mm)	120	120
Min. space from the edge (mm)	30	30

Characteristic load [kN]	
steel deck:	0,97

Installation



WX SELF-DRILLING SCREWS

FOR MAX 2.5 MM THICKNESS TRAPEZOIDAL SHEET

Product Information



APPROVAL



ETA-09/0346

Description

Self drilling screws made of hardened carbon steel protected by a special high quality anti-corrosive coating that guarantees resistance up to 15 Kesternich cycles. Suitable for installing insulation layers on flat roofs together with a appropriate telescope or steel washer.

Specification data

Drilling capacity: 2 x 1.25 mm
Thread Diameter: 4.8 mm
Length: 50-300 mm
Bit type: philips-02/torx-025

Suitable for use in:

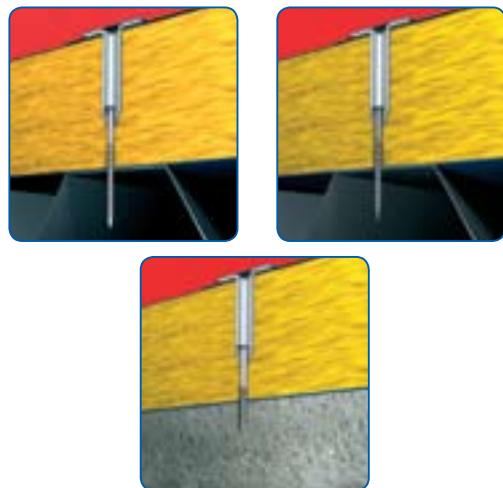
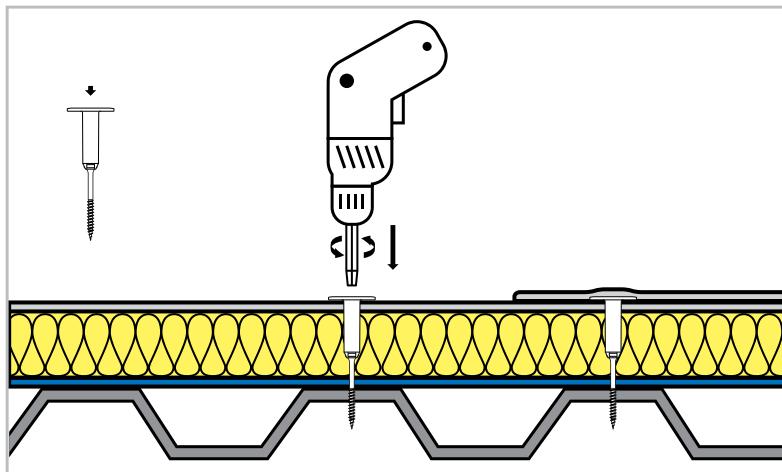
Trapezoid sheet

d x l mm	pcs.	pcs.	PRODUCT CODE PH2	PRODUCT CODE TORX-025
4.8 x 50	250	6000	WX-48050	WX-48T050
4.8 x 60	250	3000	WX-48060	WX-48T060
4.8 x 70	250	3000	WX-48070	WX-48T070
4.8 x 80	200	3000	WX-48080	WX-48T080
4.8 x 100	200	2400	WX-48100	WX-48T100
4.8 x 120	200	2400	WX-48120	WX-48T120
4.8 x 140	100	1200	WX-48140	WX-48T140
4.8 x 160	100	1200	WX-48160	WX-48T160
4.8 x 180	100	1200	WX-48180	WX-48T180
4.8 x 200	100	1200	WX-48200	WX-48T200
4.8 x 240	100	1200	WX-48240	WX-48T240
4.8 x 300	100	1200	WX-48300	WX-48T300

Assembly parameters	GOK, GOK-N, GOK-PLUS-N, GOK075, GOK-75-N, GOW, GOW-N, GOW-PLUS-N, POK-041, POW+WX
Screw diameter (mm)	4,8
Hole diameter (mm)	without pre-drilling
Hole depth in substrate (mm)	doesn't concern
Effective anchorage depth (mm)	doesn't concern
Minimum substrate thickness (mm)	0,75
Minimum space between fasteners (mm)	120
Min. space from the edge (mm)	30

Characteristic load [kN]	
steel deck:	0,89

Installation



WB SELF-DRILLING SCREWS

DOUBLE THREADED FOR MAX 1.25 MM THICKNESS

TRAPEZOIDAL SHEET

Product Information



POW-05-ALZN

APPROVAL



ETA-09/0346



Description

Self drilling screws made of hardened carbon steel protected by a special high quality anti-corrosive coating that guarantees resistance up to 15 Kesternich cycles. Suitable for installing insulation layers on flat roofs in conjunction with steel washer, which remains stable thanks to the double thread.

Specification data

Drilling capacity: 2 x 1.25 mm
Thread Diameter: 4.8 mm
Total Length: 100-220 mm
Bottom thread length: 50 mm
Bit type: hexagonal 0.8

Suitable for use in:

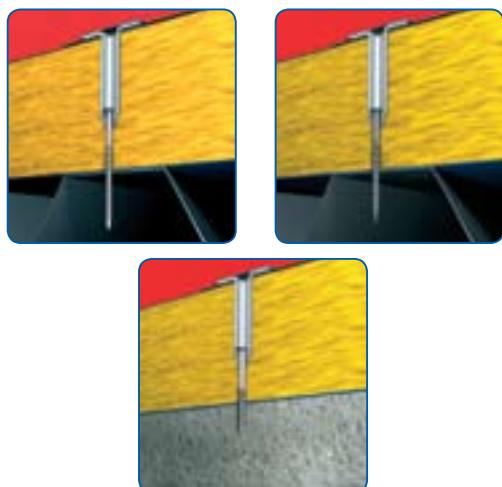
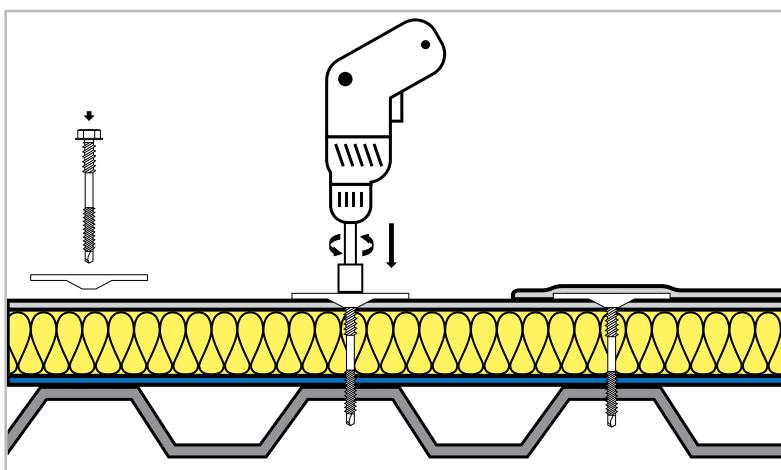
Trapezoid sheet

						PRODUCT CODE
	mm	mm	mm	pcs.	pcs.	
	min.	max.				
4.8 x 100	60	80	100	100	1200	WB-48100
4.8 x 120	80	100	100	100	1200	WB-48120
4.8 x 140	100	120	100	100	1200	WB-48140
4.8 x 160	120	140	100	100	1200	WB-48160
4.8 x 180	140	160	100	100	1200	WB-48180
4.8 x 200	160	180	100	100	1200	WB-48200
4.8 x 220	180	200	100	100	1200	WB-48220

Assembly parameters	POK-041, POW + WB
Screw diameter (mm)	4,8
Hole diameter (mm)	without pre-drilling
Hole depth in substrate (mm)	doesn't concern
Effective anchorage depth (mm)	doesn't concern
Minimum substrate thickness (mm)	0,75
Minimum space between fasteners (mm)	120
Min. space from the edge (mm)	30

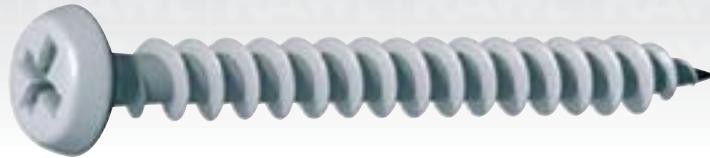
Characteristic load [kN]
steel deck: 0,88

Installation



WW SCREWS FOR WOOD

Product Information



APPROVAL



ETA-09/0346



Description

Screws made of hardened carbon steel with a special thread that provides perfect anchoring in wood. Suitable for fixing of insulation materials in flat roof applications in conjunction with telescopic connector and steel washer. Protected by a special high quality anti-corrosive coating that guarantees resistance up to 15 Kesternich cycles.

Specification data

Thread Diameter: 5.0 mm
Screw Length: 20-120 mm
Bit type: Philips-2
Minimum anchoring depth: 40 mm

Suitable for use in:

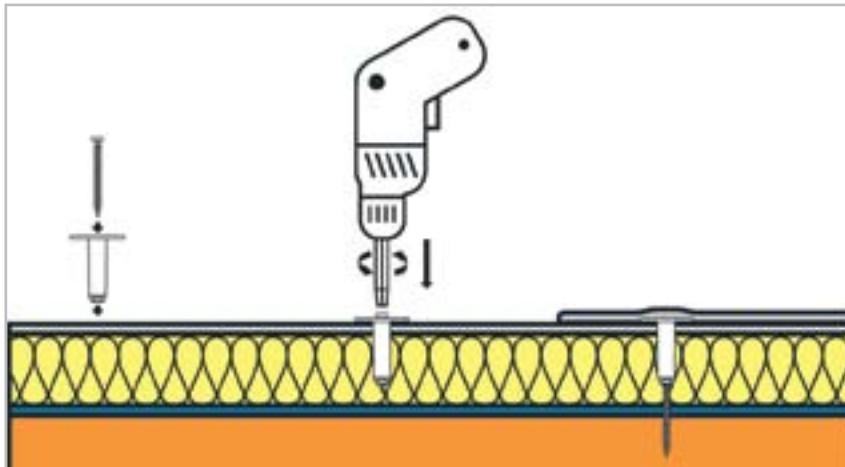
Timber, plywood, OSB plate

	pcs.	pcs.	PRODUCT CODE PH2	PRODUCT CODE TORX-025
5.0 x 20	500	9000	WW-5020	WW-50T20
5.0 x 25	500	9000	-	WW-50T25
5.0 x 35	500	9000	WW-5035	WW-50T35
5.0 x 45	250	4500	-	WW-50T45
5.0 x 55	200	2400	WW-5055	WW-50T55
5.0 x 75	100	1800	WW-5075	WW-50T75
5.0 x 90	100	1200	WW-5090	WW-50T90
5.0 x 120	100	1200	WW-50120	WW-50T120

Assembly parameters	GOK, GOK-N, GOK-PLUS-N, GOW, GOW-N, GOW-PLUS-N, GOK075, GOK075-N, POK-041, POW + WW			Characteristic load [kN]
	Structural timber	Plywood	OSB/3	
Screw diameter (mm)	5	5	5	
Hole diameter (mm)		without pre-drilling		
Hole depth in substrate (mm)		doesn't concern		
Effective anchorage depth (mm)	24	20	18	
Minimum substrate thickness (mm)	24	20	18	
Minimum space between fasteners (mm)	120	120	120	
Min. space from the edge (mm)	30	30	30	

	Characteristic load [kN]
Structural timber	
GOK, GOK-N + WW	1,66
GOK075, GOK075-N +WW	1,73
GOW, GOW-N, GOW-PLUS-N +WW	1,71
POK-041, POW + WW	2,3
Plywood	
GOK, GOK-N + WW	1,66
GOK075, GOK075-N +WW	1,73
GOW, GOW-N, GOW-PLUS-N +WW	1,71
POK-041, POW + WW	2,12
OSB/3	
GOK, GOK-N + WW	
GOK075, GOK075-N +WW	
GOW, GOW-N, GOW-PLUS-N +WW	
POK-041, POW + WW	1,52

Installation



WBT SCREWS FOR CONCRETE

Product Information



APPROVAL



ETA-09/0346



Description

Screws made of hardened carbon steel with a double thread that allows the installation of the fixing directly into the concrete. Suitable for fixing insulation materials in flat roof applications in conjunction with telescopic connector and steel washer. Protected by a special high quality anti-corrosive coating that guarantees resistance up to 15 Kesternich cycles or zinc coating of thickness min. 12 microns.

Specification data

Thread Diameter: 6.1 mm
 Total screw length: 50-300 mm
 Bit type: TORX-025
 Minimum anchoring depth: 20 mm
 Minimum hole depth: 25-30 mm
 Recommended drill diameter: SDS – 5 mm

Suitable for use in:

Concrete

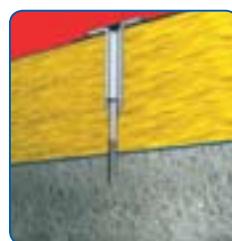
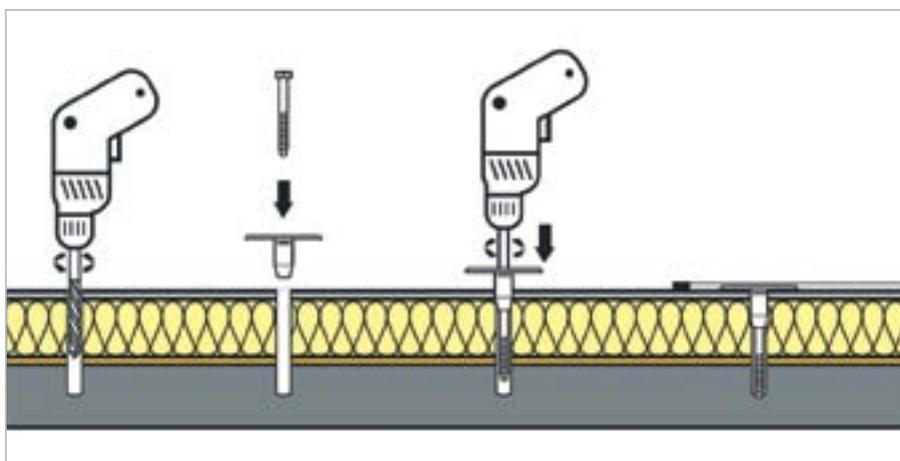
	15 KESTERNICH CYCLES PRODUCT CODE	ZINC PRODUCT CODE
6.1 x 50	WBT-61050*	WBT-61050-ZN
6.1 x 75	WBT-61075*	WBT-61075-ZN
6.1 x 90	WBT-61090*	WBT-61090-ZN
6.1 x 100	WBT-61100*	WBT-61100-ZN
6.1 x 120	WBT-61120*	WBT-61120-ZN
6.1 x 140	WBT-61140*	WBT-61140-ZN
6.1 x 160	WBT-61160*	WBT-61160-ZN
6.1 x 180	WBT-61180*	WBT-61180-ZN
6.1 x 200	WBT-61200*	WBT-61200-ZN
6.1 x 220	WBT-61220*	WBT-61220-ZN
6.1 x 240	WBT-61240*	WBT-61240-ZN
6.1 x 260	WBT-61260*	WBT-61260-ZN
6.1 x 300	WBT-61300*	WBT-61300-ZN

* ETA Approval

Assembly parameters	POK-041, POW + WBT
Screw diameter (mm)	6,1
Hole diameter (mm)	5
Hole depth in substrate (mm)	35
Effective anchorage depth (mm)	30
Minimum substrate thickness (mm)	35
Minimum space between fasteners (mm)	120
Min. space from the edge (mm)	30

Characteristic load [kN]
Concrete C12/15, C25/30
GOK, GOK-N, GOK-PLUS-N +WBT
GOK075, GOK075-N +WBT
GOW, GOW-N, GOW-PLUS-N +WBT
POK-041 +WBT
POW-07 +WBT
POW-09 +WBT

Installation



WCS SCREWS FOR CONCRETE WITH HEXAGONAL HEAD 8 MM

Product Information



APPROVAL



ETA-09/0346



Description

Screws made of hardened carbon steel, zinc plated, with a special thread that allows anchoring directly into the concrete. Suitable for speedy anchoring of different kind of material in concrete on roofs and facades. Depending on the element to be fixed, can be used in conjunction with sealed EPDM washers or oval steel washer POW-07.

Suitable for use in:

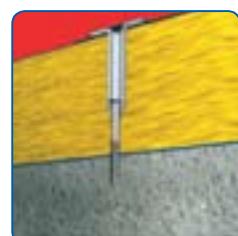
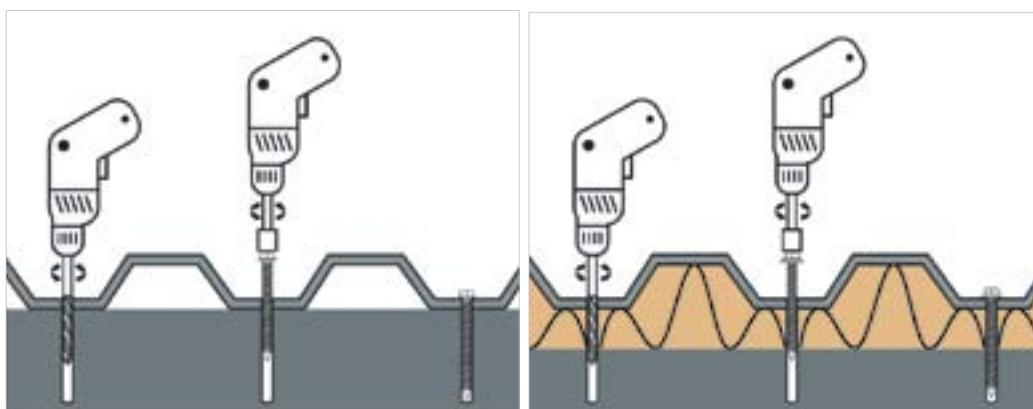
Trapezoid sheet to concrete; metal panels to concrete.

		PRODUCT CODE	
6,3 x 28	100	WCS-63028	WCS-63028T
6,3 x 35	100	WCS-63035	WCS-63035T
6,3 x 45	100	WCS-63045	WCS-63045T
6,3 x 80	100	WCS-63080	WCS-63080T
6,3 x 100	100	WCS-63100	WCS-63100T
6,3 x 130	100	WCS-63130	WCS-63130T
6,3 x 150	100	WCS-63150	WCS-63150T
6,3 x 180	100	WCS-63180	WCS-63180T
6,3 x 230	100	WCS-63230	WCS-63230T

Assembly parameters		POK-041, POW + WCS
Screw diameter (mm)		6,3
Hole diameter (mm)		5
Hole depth in substrate (mm)		35
Effective anchorage depth (mm)		30
Minimum substrate thickness (mm)		35
Minimum space between fasteners (mm)		120
Min. space from the edge (mm)		30

Characteristic load [kN]	
Concrete C12/15, C25/30	
POK-041 +WCS	3,84
POW-07 +WCS	4,71
POW-09 +WCS	4,03

Installation



K08L EXPANSION FIXING FOR ANCHORING IN CONCRETE

Product Information



APPROVAL



ETA-09/0346



Description

Suitable for fixing insulation materials to concrete in flat roof applications in conjunction with WO screws.

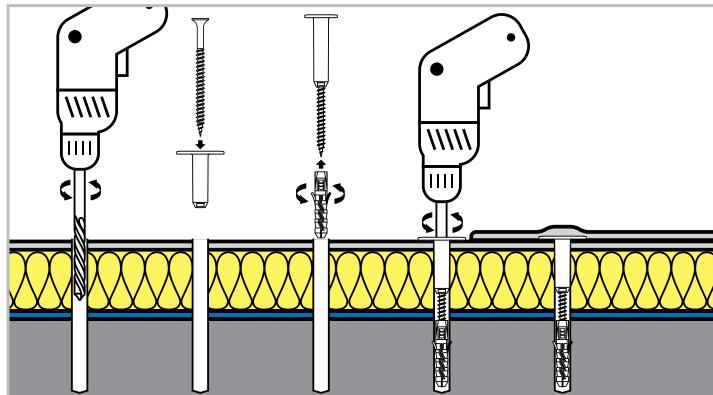
Specification data

1. Compatible screw length: 4.8-5 mm
2. Minimum Hole Depth: 50-70 mm
3. Predrilling: 8 mm

Suitable for use in:

Concrete

mm	pcs.	pcs.	PRODUCT CODE
8.0 x 40	200	4800	K08L040
8.0 x 60	200	2400	K08L060



Electric screwdriver bits

Description

Allows proper fixing of the connection by inserting the screw through the whole length of the telescopic fixing sleeve and anchoring it in the substrate through all the roofing layers.

Properties

Material: S2 steel of hardness 56-62HRC
High grindability resistance
Knurled bit endings in "ACR" system.



PH2 / TORX-025	mm	mm	PRODUCT CODE
PHILIPS- 2	100	50	PH2-100mm
PHILIPS- 2	150	100	PH2-150mm
PHILIPS- 2	200	150	PH2-200mm
PHILIPS- 2	250	200	PH2-250mm
PHILIPS- 2	350	300	PH2-350mm
PHILIPS- 3	460	400	PH2-460mm
TORX-025	100	50	TORX-025/100
TORX-025	150	100	TORX-025/150
TORX-025	200	150	TORX-025/200
TORX-025	350	300	TORX-025/350
TORX-025	460	400	TORX-025/460