

FASTENER PRODUCT CATALOGUE - INDIA

CORROSHIELD®


F A S T E N E R S



Asons Enterprise






ENGINEERING EDGE

CORROSHIELD®
FASTENERS

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Asons Enterprise

ASONS ENTERPRISE is the leading and one and only importer / distributor of **CORROSHIELD®** Fasteners in the whole geographical region of India.

From the time of inception in 1999 and till today, it has always been our fervent aspiration and endeavor to help the developing India market with superior products and after sales support.

In the past 20 years, we have earned an overwhelming response from the knowledgeable Indian market, for the quality and service we provide at their doorstep through our distribution network, which we proudly call it the "**CORROSHIELD® Diaspora**"

Such is the recognition of **CORROSHIELD®** Fasteners, it is recommended and used by reputed Pre Engineered Builders / Roll Formers / Fabricators and various other miscellaneous end users.

We at Asons, along with our principles EESG (Singapore) are very committed to reliability and durability of our Fasteners. Hence we deliver the best to our valuable clients, without any doubts of compromise. This assures us to retain a leading position in the Indian market.

Our key to success is Quality, Consistency with Cost Effectiveness and Express Delivery followed by After Sales Commitment. This gives us the edge over others and brings us this feat of ISO 9001-2015 certification.

So insure your efforts and join us to make our metal buildings durable to withstand extremities to the maximum possible.

ASONS ENTERPRISE - Understanding your needs is our prime concern.

DEALERS NETWORK ACROSS INDIA

CORROSHIELD® Fasteners is recommended and used by reputed Pre-Engineering Builders, Roll Formers, Fabricators and various other miscellaneous end users.

ASONS's Dealers network are spread across whole India which covers Andhra Pradesh, Delhi, Gujarat, Goa, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Pondicherry, Punjab, Rajasthan, Telangana, Tamilnadu, Uttar Pradesh, Uttarakhand & West Bengal.

CORROSHIELD®

F A S T E N E R S

PREMIUM FASTENER MANUFACTURER



ST Machine & Tooling
Fabrication Plant JZS



Engineering Edge
VietNam Industrial JSC

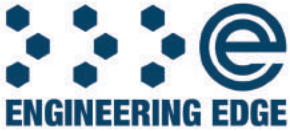


JSE Cold Forging Plant 1
(Kaohsiung, Taiwan)



CC Cold Forging Plant 2
(Kaohsiung, Taiwan)

CORPORATE PROFILE



Engineering Edge (Singapore) Pte Ltd is a leading manufacturer of Oil & Gas, Construction and Industrial fasteners. With production, research and engineering experience since 1989, we have established our **CORROSHIELD®** branding as the premium fastening choice. Our reputation is built on quality and knowledge, and we have collaborated with several clients on extensive research and development to develop unique fastening solutions that far exceed conventional designs.

Our ISO certified manufacturing facilities are located in Taiwan, China and Vietnam, and we are equipped with modern machineries and high-end quality control equipment to churn out one of the finest fasteners in the world.

Our global customers can receive sales and technical support from our team of engineers and authorised distributors located in more than 20 countries around the world. We provide expert consultation to architects, consultants and engineers on fastening solutions on project basis. We also provide fastening solutions versus cost evaluations and corrective proposal to manufacturing industries.

PROJECT REFERENCES ACROSS THE REGION

EAST ASIA REGION

EVA Company Limited

Projects Done:

- Khine Goyangyi Island Resort, Bungalow Hotels
- Basic Education High School, Latpadan Township



PEB Myanmar

Projects Done:

- Heineken Brewery Factory
- ARR Mahn Thit Automobile Factory



PEB Vietnam

Projects Done:

- YKK (Hazama Japan) Vietnam Factory
- Vietcombank Tower (230m top roof steel structure)



SOUTH AFRICA REGION

Youngman Roofing

Projects Done:

- Sitari Residence Project



SOUTH ASIA REGION

Projects Done:

- Amazon
- ABB
- BMW
- Ceat Tyres
- Chennai Metro Rail
- Delhi Metro Rail
- ITC
- JK Tyres
- KIA Motors
- MRF Tyres
- Maruti Suzuki
- NTPC

YOUR GLOBAL FASTENING COMPANY

- MANUFACTURING PLANTS IN TAIWAN & VIETNAM
- OFFICES, DISTRIBUTORS & RETAILERS
- IN MORE THAN 20 COUNTRIES AROUND THE WORLD

Countries of Export

Bangladesh Brunei Ghana Hungary India Indonesia Kenya Kuwait Myanmar
Malaysia Qatar Romania Peru Saudi Arabia South Africa Sri Lanka Tanzania
Thailand Uganda United Arab Emirates United Kingdom Vietnam



Head Office

Engineering Edge (Singapore) Pte Ltd
Website: www.engineering-edge.com



CORROSHIELD® Coating

Corrosion resistance of fasteners varies depending on weather, environment, application and many other factors. No single coating can cater to all applications. That is why at Engineering Edge, we have a huge range of coating options for various product ranges. Regardless the coating type, our expert engineers are ready to advise a set of tried and tested coating options for your various requirements. Several of our coating recommendations are proprietary; these coating has been concocted over several years of trails, testing and experiments, and we believe we have the correct formula to put forth a full proof corrosion prevention solution. Warranties are provided for certain products that take on our proprietary coatings.

CORROSHIELD® coating can meet the corrosion resistance performance of several international standards, for example, American Society for Testing and Materials (ASTM), Australian Standards (AS), Swedish Standard (SS) and many more

CORROSHIELD® SERIES 50 (50)

Suitable for corrosion class C3 environment.

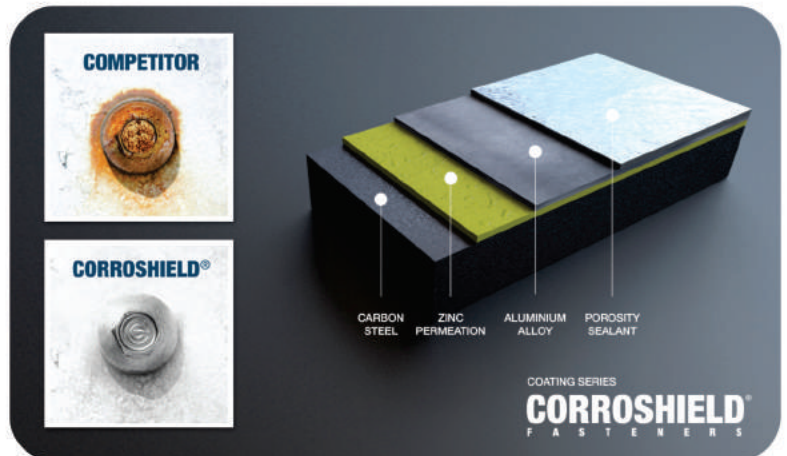
CORROSHIELD® SERIES 30 (30)

Suitable for corrosion class C2 environment.

CORROSHIELD® SERIES 10 (10)

Suitable for general non-critical application.

CORROSHIELD® COATING VS COMPETITOR



Please refer to our brochure for the detailed applications of our coatings.




COATING GUIDE

CORROSION RESISTANCE	(CZ)	(YZ)	(10)	(30)	(50)
COATING TYPE	ZINC CLEAR	ZINC YELLOW	ZINC TOP COAT	ZINC TOP COAT	MECH TIN / ZINC
OUTDOOR CORROSION PROTECTION	/	/	//	///	////
CHEMICAL & SOLVENT RESISTANCE	/	/	/	///	////
SALT RESISTANCE	/	//	///	///	////
INDOOR CORROSION PROTECTION	//	//	///	////	////
/ NOT RECOMMENDED // FAIR /// GOOD //// VERY GOOD ///// EXCELLENT					

CORROSHIELD® COATING & WARRANTY GUIDE

Conducting extensive research and testing is our way of assuring ourselves of our consistency in product quality. These testing are conducted in collaboration with internationally accredited laboratories to acquire unbiased test results. These testing also confirmed the accuracy of our internal inspection standard and procedures. Through these thorough testing, we extend this confidence we have in our products to our customers.

CORROSHIELD® Fasteners that are mentioned in the table below are covered under our international warranty, assuring our customers that the fasteners will perform for a minimum number of years before becoming structurally unreliable due to premature corrosion.

CORROSION CLASS	C2 	C3 	C4 
ENVIRONMENT	Rural	Urban and light industrial	Industrial
OUTDOORS	Atmospheres with low levels of airborne pollution.	Atmospheres with moderate levels of airborne pollution. Coastal areas with low salt levels.	Atmospheres with discernible levels of airborne pollution. Coastal areas with moderate salt levels.
INDOORS	Non-heated areas with fluctuating levels of temperature and humidity. Sports hall, warehouses.	Areas with moderate levels of humidity and some airborne pollution from production process. Laundries, breweries, dairies.	Areas with high levels of humidity and considerable airborne pollution from production process. Chemical plants, swimming pools, dockyards.
STEEL			
MASS LOSS (g/m ²)	≤ 10	> 10 - 200	> 200 - 400
THICKNESS REDUCTION (µm)	≤ 1.3	> 1.3 - 25	> 25 - 50
ZINC			
MASS LOSS (g/m ²)	≤ 0.7	> 0.7 - 5	> 5 - 15
THICKNESS REDUCTION (µm)	≤ 0.1	> 0.1 - 0.7	> 0.7 - 2.1
RECOMMENDED FASTENER MATERIAL AND MINIMUM SURFACE TREATMENT	Carbon Steel + CORROSHIELD® SERIES 10	Carbon Steel + CORROSHIELD® SERIES 30	Carbon Steel + CORROSHIELD® SERIES 50
WARRANTY PERIOD	20 Years	20 Years	20 Years

Environmental Categorisation as per Swedish Standards, SS-EN-ISO 12944-2

IMPROVED LEVIN® Drill Point

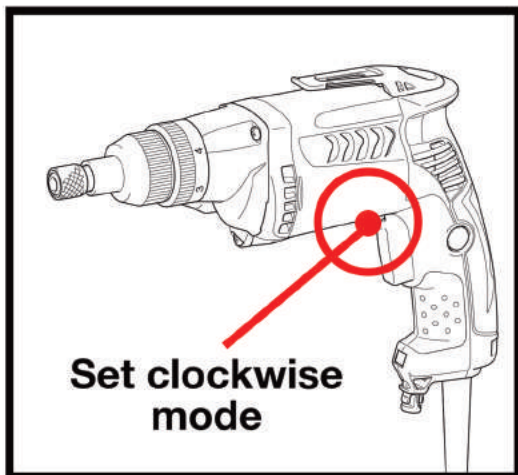
Lesser Manual Load

Slice off Steel

- 30% faster drilling speed
- Reduces worktime efficiency

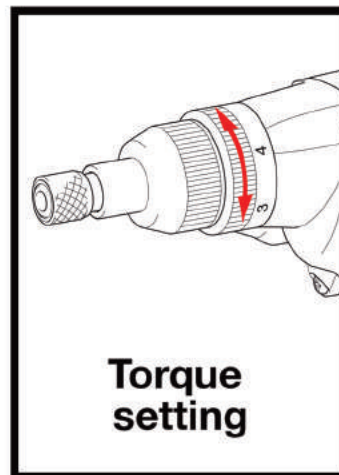


Installation Guide



Step 1

Operate your tool with the correct voltage and ensure drill direction is in clockwise mode.



Step 2

Set to the required torque setting.



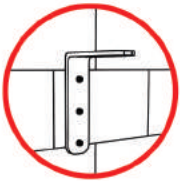
Step 3

Position the fastener and start to drill at a low rpm and gradually increase the speed. **Max 2,500 rpm**



Step 4

Once completed you should hear clicking sounds from your tool indicating that it has reached your torque setting. Re-adjust your torque setting if required.



CONCRETE APPLICATION
CONTAPP®



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TIMBER APPLICATION
TIMTAPP®



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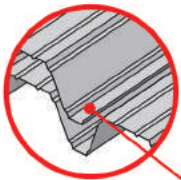
DUO APPLICATION
DUOTAPP®



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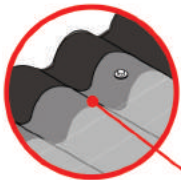
CONSTRUCTION APPLICATIONS



STEEL APPLICATION
METAPP®



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FIBRE SHEET APPLICATION
FIBRETAPP®



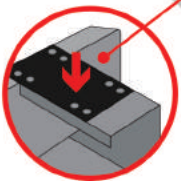
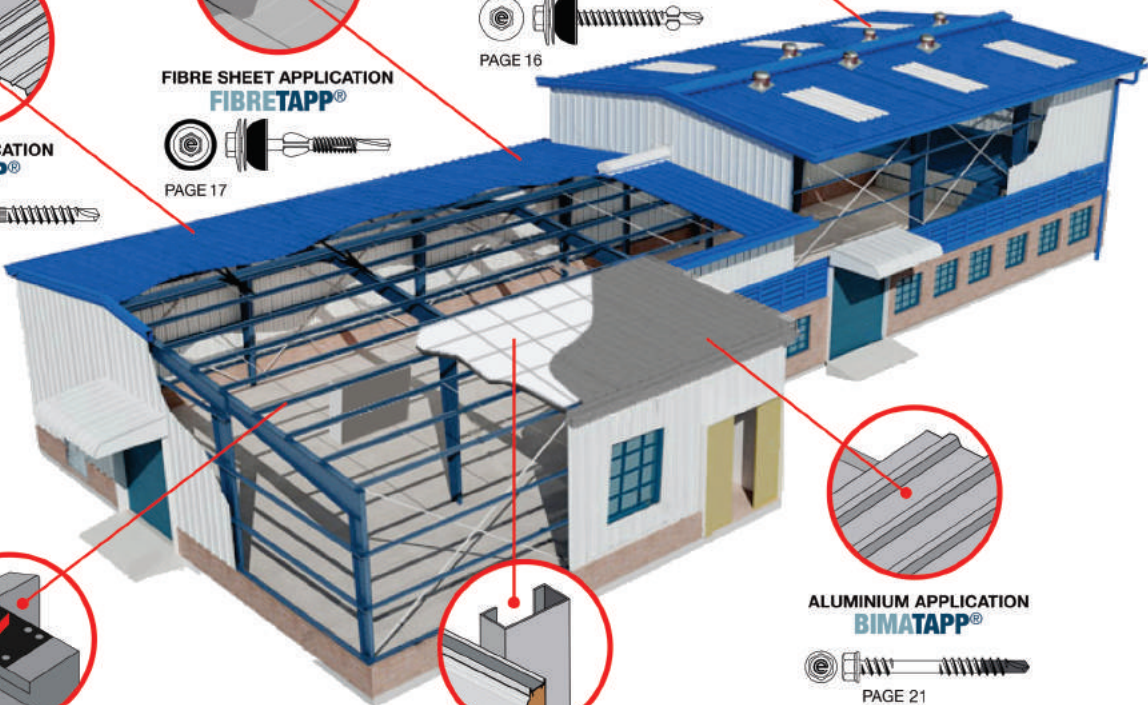
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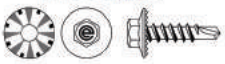
SKYLIGHT APPLICATION
POLYTAPP®



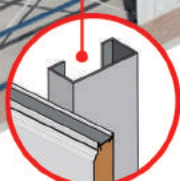
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TRUSS APPLICATION
TRUSSTAPP®



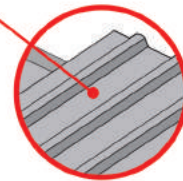
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BOARD APPLICATION
BOTAPP®



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ALUMINIUM APPLICATION
BIMATAPP®









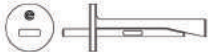






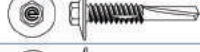






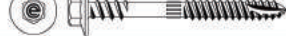


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CORROSHIELD®
FASTENERS

FASTENER SELECTION GUIDE

FASTENER SELECTION GUIDE

		CONCRETE WALL ANCHORING	FRAMES & TRUSSES	FIBRE CEMENT ROOFING	PARTITIONING & BOARDS	ROOF SKYLIGHTS	STEEL DECKING	STEEL / ALUMINIUM ROOFING	WINDOW FABRICATION & INSTALLATION
BIMATAPP®								•	
								•	
						•		•	
						•		•	
BOTAPP®			•		•				
			•		•				
CONTAPP®		•					•		
		•			•				•
		•							
DUOTAPP®						•		•	
FIBRETAPP®				•					
METAPP®			•					•	
							•	•	
								•	
			•					•	
							•	•	
						•		•	
						•		•	
								•	
								•	
POLYTAPP®						•			
TIMTAPP®						•		•	
						•		•	

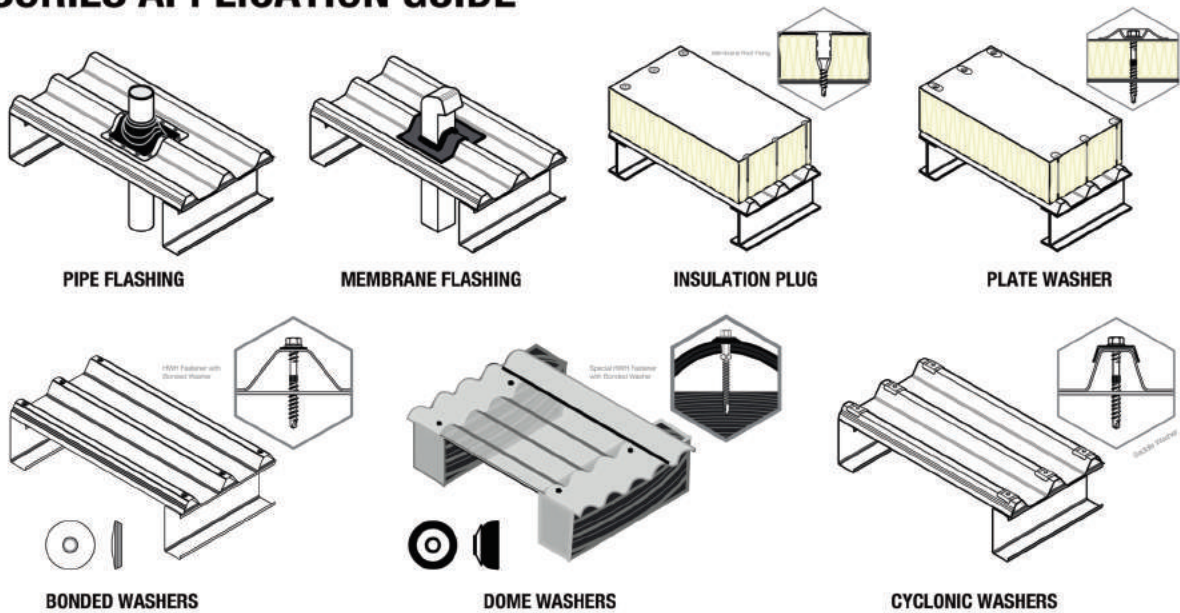
FASTENER SELECTION GUIDE

		CONCRETE WALL ANCHORING	FRAMES & TRUSSES	FIBRE CEMENT ROOFING	PARTITIONING & BOARDS	ROOF SKYLIGHTS	STEEL DECKING	STEEL / ALUMINIUM ROOFING	WINDOW FABRICATION & INSTALLATION
TRUSSTAPP®			•						
PROTAPP®						•		•	

ACCESSORIES

		HEX HEAD SCREW	RECESSED DRIVES	CONCRETE DRILLING	SANDWICH PANEL / FLAT ROOF	PIPES THROUGH ROOF	WATERPROOFING	COLOUR MATCHING
ADAPTORS		•	•					
CAPS			•					•
WASHERS							•	
							•	
							•	

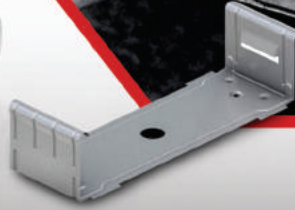
ACCESSORIES APPLICATION GUIDE





METAPP®

FASTENERS FOR STEEL

- Carbon steel fasteners for fixing clips into steel substrates.

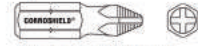


CONCEALED FIXING FASTENERS




Code	Gauge	TPI	Length	Features
MT	10	16	16	<ul style="list-style-type: none"> • Wafer Head Phillips Drive • LEVIN® Drill Point • Full Thread • Max. 4.5mm steel  
MT	10	16	25	
MT	10	16	35	
MT	10	16	40	
MT	10	16	45	



Options:

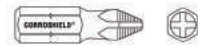


Magnetic Philips Bit

Code	Gauge	TPI	Length	Features
MT	12	24	35	<ul style="list-style-type: none"> • Wafer Head Phillips Drive • LEVIN® 5 Drill Point • Full Thread • Max. 10mm steel   



Options:



Magnetic Philips Bit

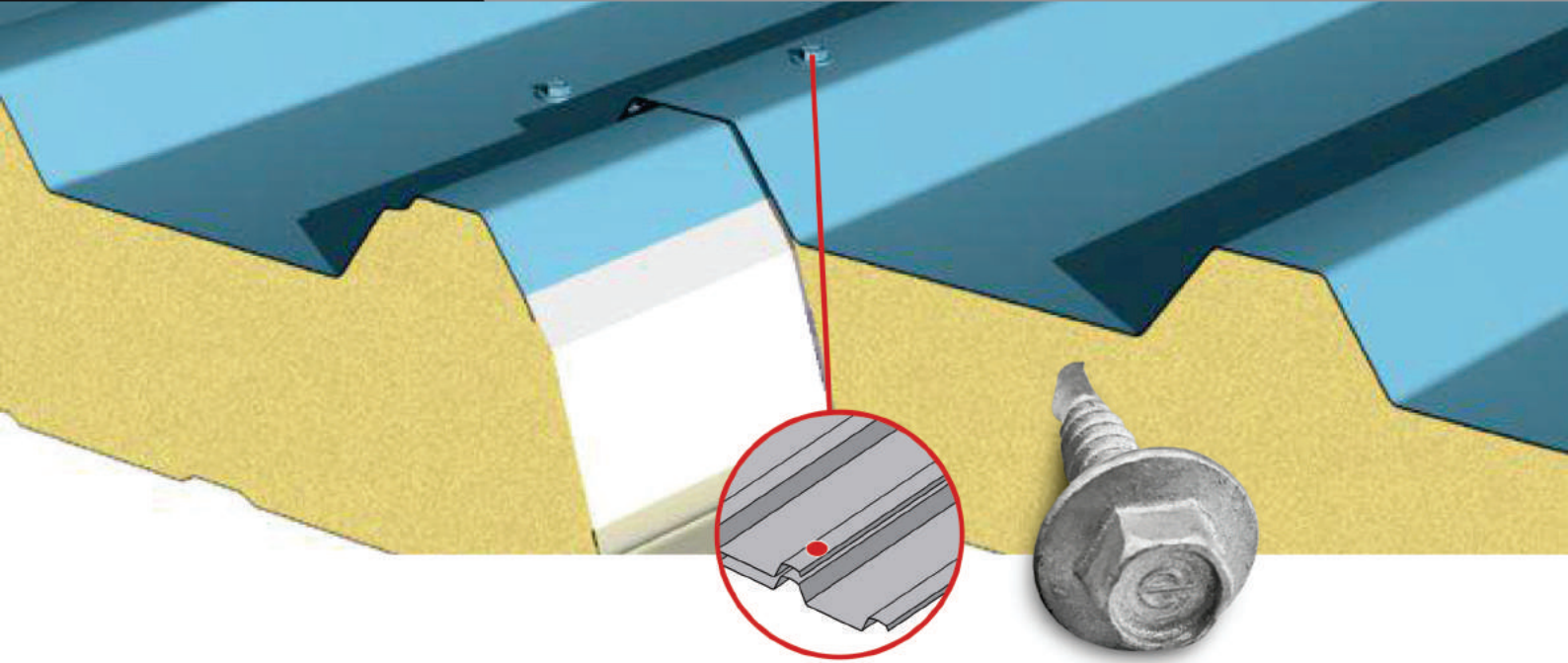
METAPP®

FASTENERS FOR STEEL


- Carbon steel fasteners for sheet - to sheet overlapping.

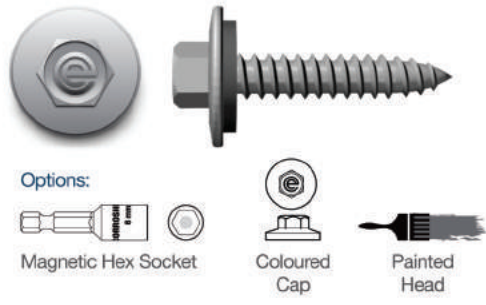


STITCHING FASTENERS



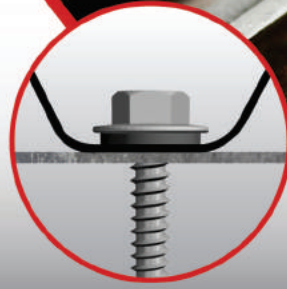
Code	Gauge	TPI	Length	Features
MT	10	12	20	<ul style="list-style-type: none"> • Hex Washer Flange • Needle Point, Type A • Full Thread • Self pierce, Max. 0.7mm steel • Pilot hole 4.0mm, max 1.27mm steel


 Forged Flange





FASTENERS FOR STEEL

• Carbon steel fasteners for Wall Cladding.



VALLEY FIXING FASTENERS

Code	Gauge	TPI	Length	Features
MT	10	16	16	<ul style="list-style-type: none"> • Hex Washer Flange • LEVIN® Drill Point • Full Thread • Max. 5.5mm steel
MT	10	16	25	
MT	12	14	20	
MT	12	14	25	
MT	12	14	35	
MT	12	14	45	
MT	12	14	55	
MT	12	14	65	
MT	12	14	75	
MT	12	14	90	
MT	12	14	90	
MT	12	14	100	
MT	12	14	110	
MT	12	14	120	
MT	12	14	130	
MT	12	14	140	
MT	12	14	150	
MT	12	14	160	
MT	14	14	25	
MT	14	14	35	









Options:



Code	Gauge	TPI	Length	Features
MT	12	24	32	<ul style="list-style-type: none"> • Hex Washer Flange • LEVIN® 5 Drill Point • Full Thread • Max. 12.5mm steel
MT	12	24	55	
MT	12	24	65	
MT	12	24	75	
MT	12	24	90	
MT	12	24	100	
MT	12	24	110	
MT	12	24	120	
MT	12	24	130	
MT	12	24	140	
MT	12	24	150	
MT	12	24	160	



Options:



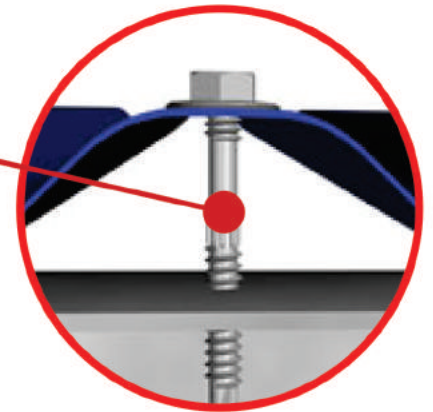
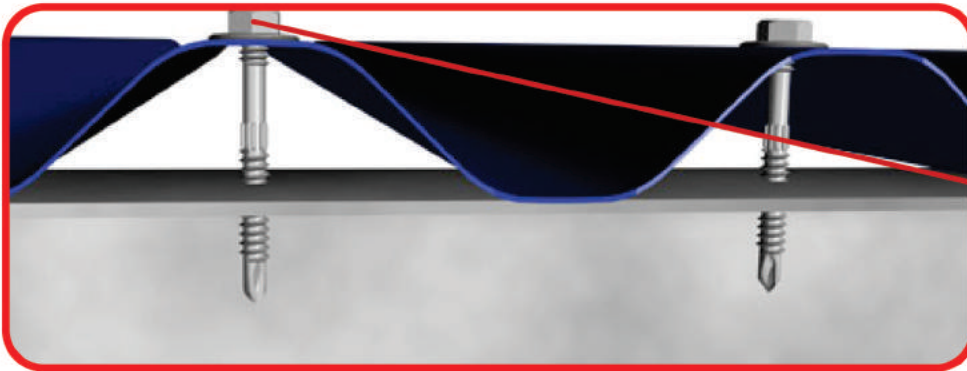
METAPP®

FASTENERS FOR STEEL

- Carbon steel fasteners for Roof.



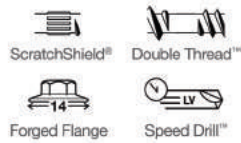
CREST FIXING FASTENERS



Code	Gauge	TPI	Length	Features
MT	12	14	45	<ul style="list-style-type: none"> • Hex Washer Flange • LEVIN® Drill Point • Double Thread™ • ScratchShield® • Max. 5.5mm steel
MT	12	14	55	
MT	12	14	65	
MT	12	14	75	



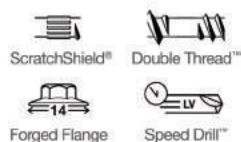
Options:



Code	Gauge	TPI	Length	Features
MT	12	14	90	<ul style="list-style-type: none"> • Hex Washer Flange • LEVIN® Drill Point • Double Thread™ • ScratchShield® • Max. 5.5mm steel
MT	12	14	100	
MT	12	14	110	
MT	12	14	120	
MT	12	14	130	
MT	12	14	140	
MT	12	14	150	
MT	12	14	160	
MT	12	14	180	
MT	12	14	200	
MT	12	14	230	



Options:



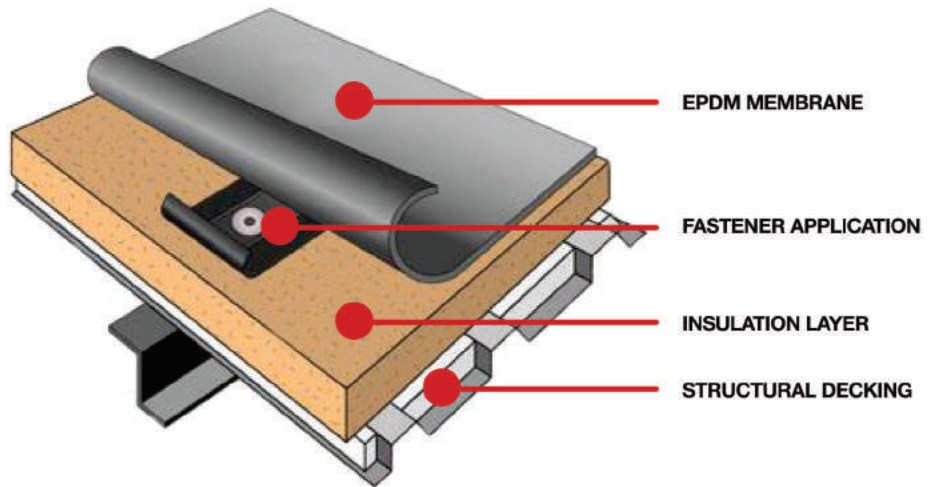
METAPP®

FASTENERS FOR FLAT ROOF


- Carbon steel fasteners for membrane flat roof fixing.



FLAT ROOF FIXING FASTENERS



Code	Diameter Ø	TPI	Length	Features
MT	M4.8	16	50	<ul style="list-style-type: none"> • Bugle-Head Philips Drive • LEVIN® Reduced Point • Max. 1.6mm steel
MT	M4.8	16	70	
MT	M4.8	16	80	
MT	M4.8	16	90	
MT	M4.8	16	100	
MT	M4.8	16	120	
MT	M4.8	16	140	
MT	M4.8	16	160	
MT	M4.8	16	190	



 Deep Drive™



Options:

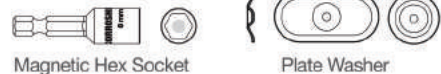


Code	Diameter Ø	TPI	Length	Features
MT	M4.8	16	80	<ul style="list-style-type: none"> • Hex Washer Head • LEVIN® Reduced Point • Double Thread™ • ScratchShield® • Max. 1.6mm steel
MT	M4.8	16	100	
MT	M4.8	16	120	
MT	M4.8	16	140	
MT	M4.8	16	160	

 ScratchShield®  Double Thread™



Options:



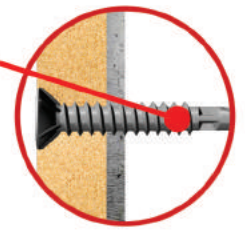
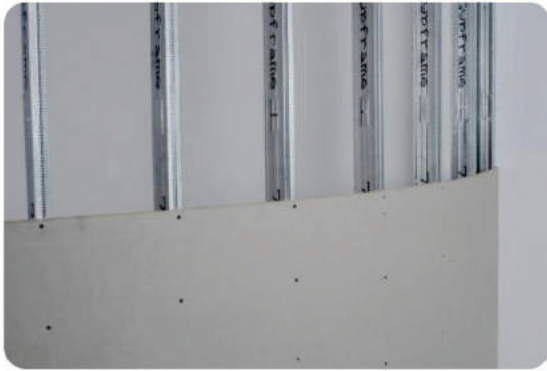
BOTAPP®

FASTENERS FOR BOARD

- Carbon steel fasteners for fixing boards into steel or timber substrates.



BOARD FIXING FASTENERS



LEVIN® Wing-Tip sheared off by steel substrate.

Code	Gauge	TPI	Length	Features
BT	7	18	25	<ul style="list-style-type: none"> • Low Profile Countersunk Philips Drive w/Underhead Ribs • LEVIN® Reduced Drill Point • 8 Under Cut Ribs • Full Thread • Max. 2.0mm, Steel • For 4.5mm board
BT	7	18	38	
BT	7	18	50	
BT	10	12	25	
BT	10	12	38	
BT	10	12	50	



Options:



Hi-Torque Philips Bit

Code	Gauge	TPI	Length	Features
BT	10	12	38	<ul style="list-style-type: none"> • Countersunk Philips Drive w/Ribs • LEVIN® Wing-Tip Drill Point • 8 Underhead Ribs • Full Thread • Max. 2.5mm steel • For 8mm board
BT	10	12	50	



Options:

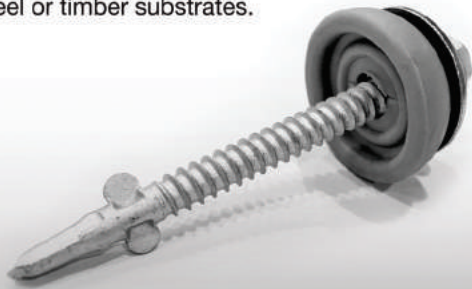


Hi-Torque Philips Bit

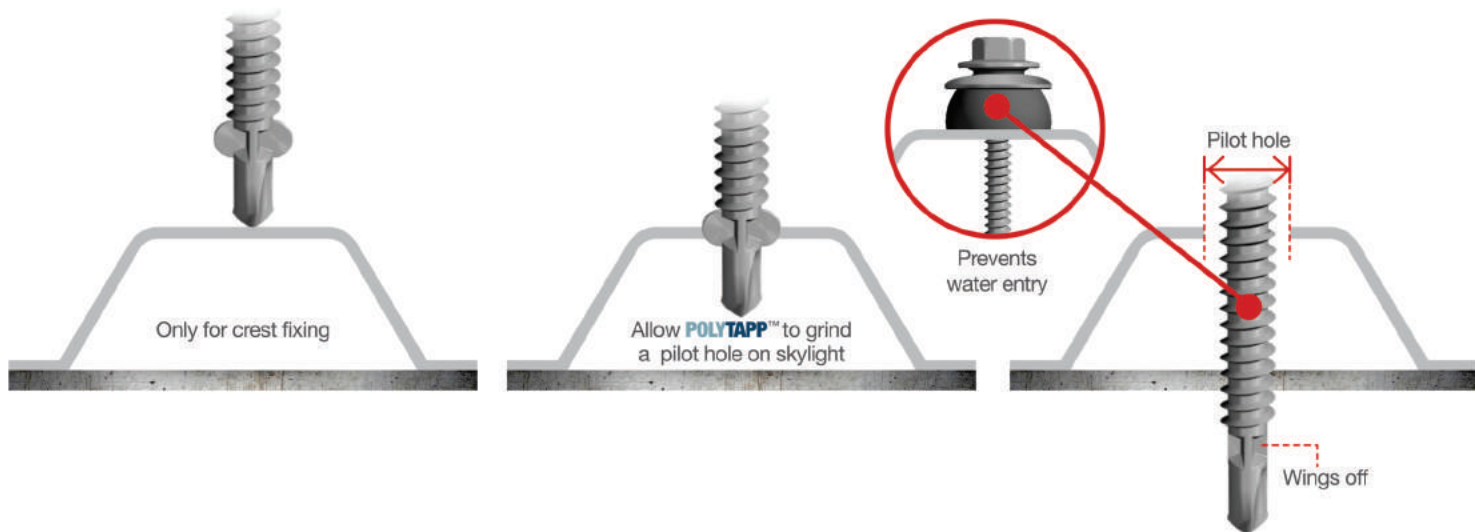
POLYTAPP®

FASTENERS FOR SKYLIGHT

- Carbon steel fasteners for fixing skylights to steel or timber substrates.



SKYLIGHT FIXING FASTENERS



Code	Gauge	TPI	Length	Features
PT	12	14	55	<ul style="list-style-type: none"> • Hex Washer Flange • LEVIN® Drill Point • POLYTAPP® Pilot Hole Wing • Max. 5.5mm steel • Ø25mm Dome EPDM Washer
PT	12	14	80	



Options:



Magnetic Hex Socket



Coloured Cap

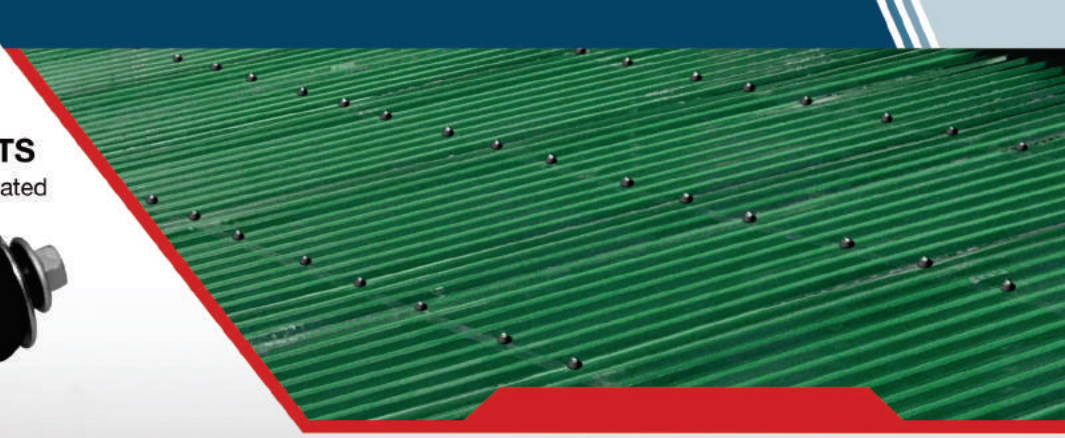
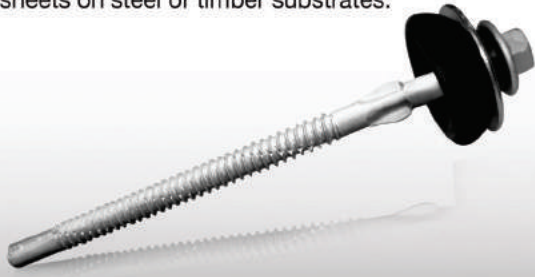


Painted Head

FIBRETAPP®

FASTENERS FOR FIBRE SHEETS

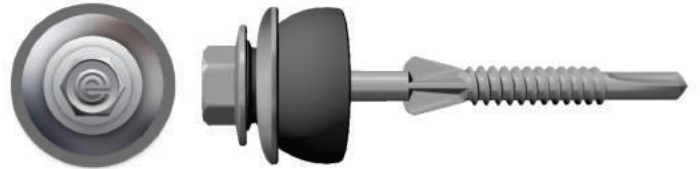
- Carbon steel fasteners for fixing fibre corrugated sheets on steel or timber substrates.



CORRUGATED FIBRE SHEET FASTENERS



Code	Gauge	TPI	Length	Features
FT	14	14	90	<ul style="list-style-type: none"> • Hex Washer Flange • LEVIN®4 Drill Point • FIBRETAPP® Pilot Hole Wing • Max. 8mm steel • Ø25mm Dome EPDM Washer
FT	14	14	100	
FT	14	14	110	
FT	14	14	120	



Options:



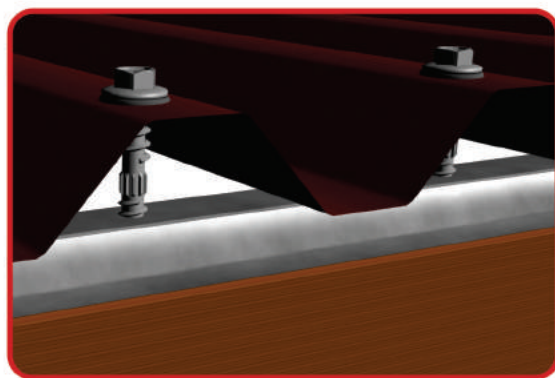
DUOTAPP®

FASTENERS FOR STEEL / TIMBER

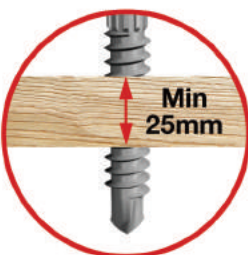
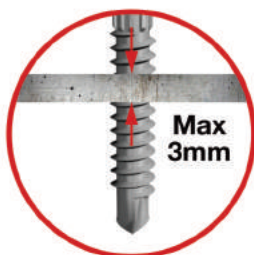
- Carbon steel fasteners for fixing steel sheets into steel as well as timber substrates.



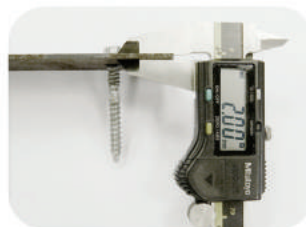
CREST FIXING FASTENERS



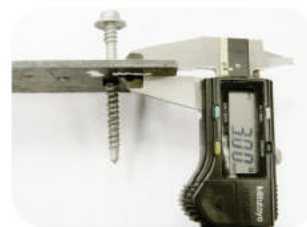
- One Drill Point
- Duo Applications



IMPROVED DRILL CAPACITY!



Before



Now up to 3mm steel

Code	Gauge	TPI	Length	Features
DT	12	14	50	<ul style="list-style-type: none"> • Hex Washer Flange • DUOTAPP® Drill Point • Double Thread • ScratchShield™ • Min. 25mm timber • Max. 3mm steel
DT	12	14	65	



Options:



TIMTAPP®

FASTENERS FOR TIMBER

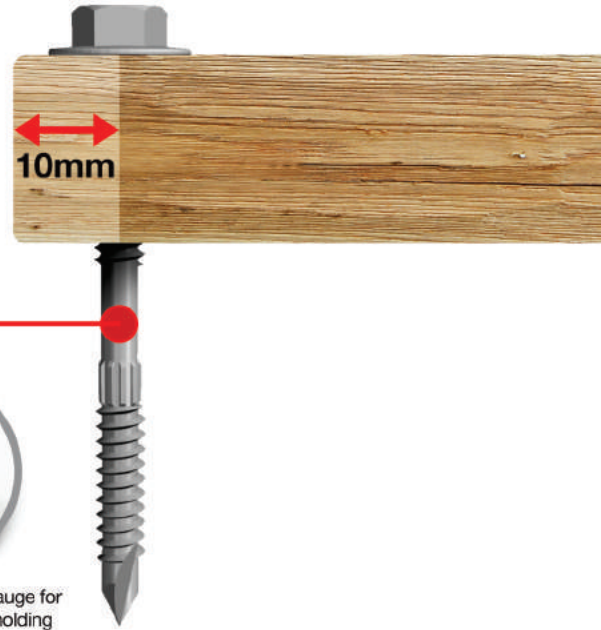
- Carbon steel fasteners for fixing steel sheets into timber substrates.



TIMBER FIXING FASTENERS



PREVENTS Splitting of Timber



No more splitting of timber substrates



Install as close as 10mm to edge




Easy drive with grooved thread




Larger upper thread gauge for improved thin sheet holding


Code	Gauge	TPI	Length	Features
TT	12	9	55	<ul style="list-style-type: none"> • Hex Washer Flange • S17™ Drill Point • Double Thread • ScratchShield™ • Min. 25mm timber
TT	12	9	65	
TT	12	9	75	




Forged Flange



ScratchShield™



Double Thread™




No Split™




Options:




Code	Gauge	TPI	Length	Features
TT	12	11	55	<ul style="list-style-type: none"> • Hex Washer Flange • TY17 Drill Point • Double Thread • ScratchShield™ • Min. 25mm timber
TT	12	11	65	
TT	12	11	75	
TT	12	11	125	






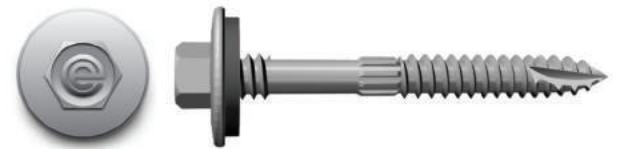
Forged Flange



ScratchShield™



Double Thread™



Options:



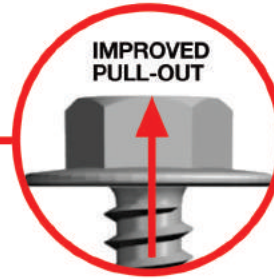
TRUSSTAPP®

FASTENERS FOR TRUSSES


- Carbon steel fasteners for fixing steel frame or trusses.




STEEL FRAME FASTENERS




Code	Gauge	TPI	Length	Features
TR	10	16	20	<ul style="list-style-type: none"> • Hex Washer Flange • 18S Underhead • LEVIN® Drill Point • Harpoon Thread, Closed • Gauge 10, Max 4.0mm • Gauge 12, Max 5.0mm
TR	12	14	20	




Harpoon Thread



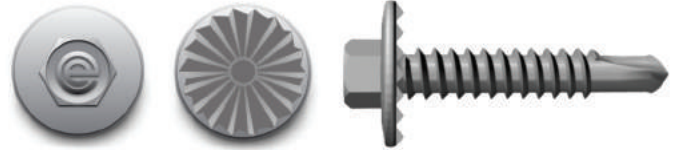
Serration



Forged Flange



Speed Drill™



Options:



Magnetic Hex Socket

BIMATAPP®



FASTENERS FOR ALUMINIUM

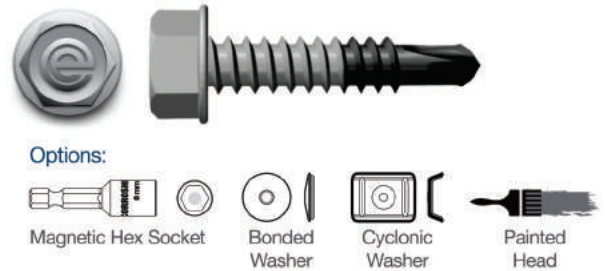
- Stainless steel fasteners with self drilling performance of carbon steel fasteners.
- Single operation stainless steel fastening solution.






VALLEY FIXING FASTENERS

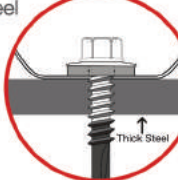
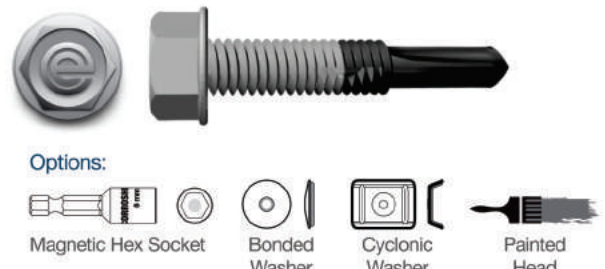
Code	Gauge	TPI	Length	Features
BM	12	14	32	<ul style="list-style-type: none"> • Hex Washer Head • LEVIN® Drill Point • Full Thread • Max. 5.0mm steel • Material options S/S 304 S/S 316
BM	12	14	35	
BM	12	14	40	
BM	12	14	45	
BM	12	14	50	
BM	12	14	60	
BM	12	14	70	
BM	12	14	80	
BM	12	14	120	
BM	12	14	130	

 Speed Drill™
  Stainless




Code	Gauge	TPI	Length	Features
BM	12	24	38	<ul style="list-style-type: none"> • Hex Washer Head • LEVIN® 5 Drill Point • Full Thread • Max. 12.5mm steel • Material options S/S 304 S/S 316
BM	12	24	45	
BM	12	24	50	
BM	12	24	60	
BM	12	24	70	
BM	12	24	50	
BM	12	24	80	
BM	12	24	120	
BM	12	24	130	

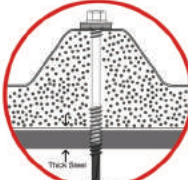
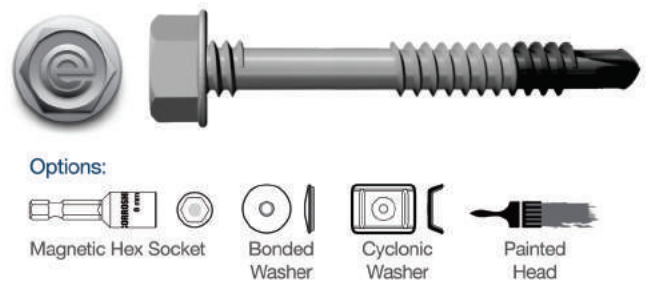
 Thick Steel
  Speed Drill™
  Stainless

CREST FIXING FASTENERS

Code	Gauge	TPI	Length	Features
BM	12	14	55	<ul style="list-style-type: none"> • Hex Washer Head • LEVIN® Drill Point • Double Thread • Max. 5.0mm steel • Material options S/S 304 S/S 316
BM	12	14	65	
BM	12	14	75	
BM	12	14	80	
BM	12	14	90	
BM	12	14	120	
BM	12	14	130	

 Speed Drill™

CONTAPP®

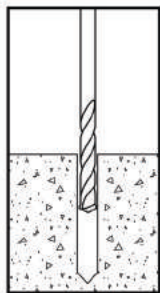
FASTENERS FOR CONCRETE

- Carbon steel fasteners for light to medium density masonry or concrete applications.

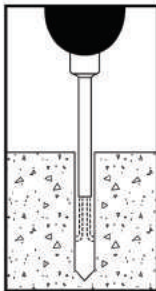


CONCRETE SELF TAPPING FASTENERS

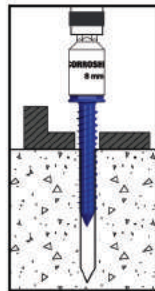
CONTAPP® INSTALLATION GUIDELINE



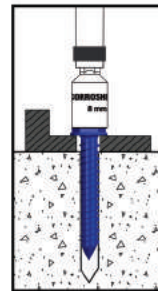
Step 1
Use the appropriate drill bit to drill a hole in the masonry substrate.



Step 2
Remove dust and debris from the hole.



Step 3
Use a suitable powered percussion drill to drive the CONTAPP® into the substrate.

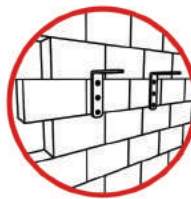


Step 4
Drive the CONTAPP® until the underhead is secured to the surface. Do not overdrive.



Code	Diameter Ø	TPI	Length
CT	M4.8	16	32
CT	M4.8	16	45
CT	M4.8	16	57
CT	M4.8	16	70
CT	M4.8	16	83
CT	M4.8	16	95
CT	M4.8	16	105
CT	M6.3	14	32
CT	M6.3	14	45
CT	M6.3	14	57
CT	M6.3	14	70
CT	M6.3	14	83
CT	M6.3	14	95
CT	M6.3	14	105

- Features**
- Hex Slotted Head
 - **Diamond Point**
 - Hi-Lo Thread
 - Min. 25mm Embedment Depth
 - Substrate hole clearance
For size M4.8, 6.35mm
For size M6.3, 7.95mm



Drill Bit Guide:

Drill Bit	Screw Ø	Screw Length
M4 x 115mm	M4.8	32 ~ 45mm
M4 x 90mm	M4.8	57 ~ 70mm
M4 x 140mm	M4.8	83 ~ 105mm
M4.8 x 90mm	M6.3	32 ~ 45mm
M4.8 x 115mm	M6.3	57 ~ 70mm
M4.8 x 140mm	M6.3	83 ~ 105mm



Options:



Magnetic Hex Socket

- Close Tolerance Concrete Drill Bit

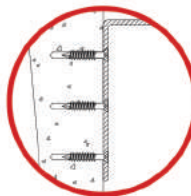


- Quick Change Chuck



Code	Diameter Ø	TPI	Length
CT	M4.8	16	32
CT	M4.8	16	45
CT	M4.8	16	57
CT	M4.8	16	70
CT	M4.8	16	83
CT	M4.8	16	95
CT	M4.8	16	105
CT	M6.3	14	32
CT	M6.3	14	45
CT	M6.3	14	57
CT	M6.3	14	70
CT	M6.3	14	83
CT	M6.3	14	95
CT	M6.3	14	105

- Features**
- Countersunk Flathead Philips Drive
 - **Diamond Point**
 - Hi-Lo Thread
 - Min. 25mm Embedment Depth
 - Substrate hole clearance
For size M4.8, 6.35mm
For size M6.3, 7.95mm
 - Drive size
For M4.8, PH2
For M6.3, PH3



Options:



Hi-Torque Philips Bit

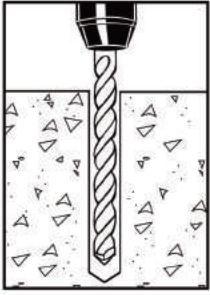
- Close Tolerance Concrete Drill Bit



- Quick Change Chuck



CONCRETE NAIL-IN ANCHOR INSTALLATION GUIDELINE

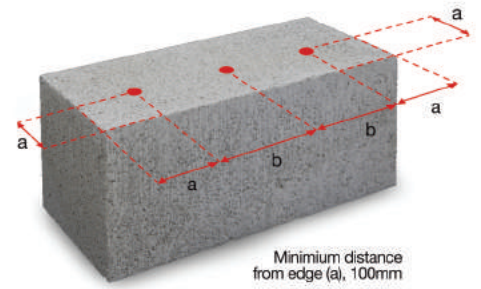


Step 1

Use the recommended drill bit to drill a hole in the masonry substrate. Clear the hole of dust and debris.

Step 2

Fully insert the nail-in anchor ensuring that the underhead touches the surface. Use the hammer to tap in the pin.

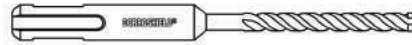


Minimum distance from edge (a), 100mm
Minimum anchor spacing (b), 200mm

Code	Size	Length	Features
PT	M6	35mm	<ul style="list-style-type: none"> Concrete Nail-in Anchor General purpose anchoring Overhead use is not recommended Recommended drill bit, M6 Minimum hole depth, 42mm



Options:



Concrete Drill Bit

CORROSHIELD®

ACCESSORIES

- Construction equipment, Machines, Adapters & Bits.

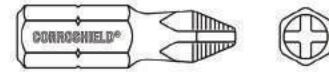


CONSTRUCTION ACCESSORIES

Code	Size	Length	Features
AC	M8	45	<ul style="list-style-type: none"> • Magnetic Hex Socket • Material, S2-Spring steel • Sand blast finish • 6150 magnetic steel, embedded
AC	M8	65	



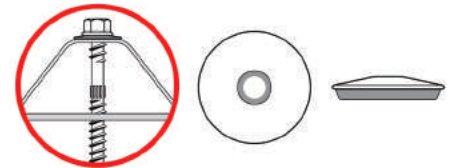
Code	Size	Length	Features
AC	#2	25	<ul style="list-style-type: none"> • Magnetic Philips Bit • Sand Blast finish • Magnetic steel, integrated



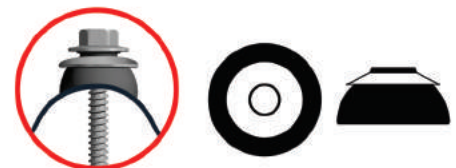
Code	Size	Diameter Ø	Features
AC	8mm	16	<ul style="list-style-type: none"> • Coloured Screw Caps • UV-resistant Polyethylene (PE) • Colour in accordance to RAL • Applicable only to fasteners with HWF



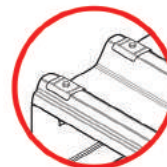
Code	Size	Diameter Ø	Features
AC	M4.8	14	<ul style="list-style-type: none"> • Bonded Washer • Material options Aluminium Galvanised steel Stainless steel • Black or Grey EPDM
AC	M5.5	16	
AC	M5.5 / M6.3	19	
AC	M6.3	22	



Code	Size	Diameter Ø	Features
AC	M5.5	25	<ul style="list-style-type: none"> • Dome Washer w/ plate • Material options Aluminium Galvanised steel Stainless steel • Black or Grey EPDM
AC	M6.3	25	



Code	Width	Angle	Length	Features
AC	25mm	27°	32mm	<ul style="list-style-type: none"> • Cyclonic Washer (Saddle Washer) • Material options Aluminium Galvanised steel • Insulation options Black or Grey EPDM High density foam • Recommended for region with wind speed exceeding 120 km/h.
AC	30mm	29°	32mm	
AC	35mm	38°	32mm	
AC	40mm	34°	32mm	
AC	20mm	30°	40mm	
AC	25mm	29°	40mm	
AC	30mm	35°	40mm	
AC	35mm	35°	40mm	
AC	40mm	40°	40mm	
AC	48mm	39°	40mm	
AC	55mm	32°	40mm	
AC	40mm	36°	45mm	
AC	21mm	30°	50mm	
AC	31mm	25°	50mm	



FASTENER TO USE

METAPP®

Insulated Panel / Crest Fixing

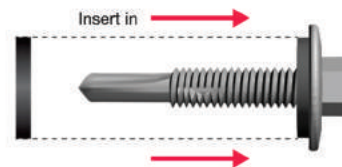


(see pg 12)

TECHNICAL DATA SHEET



EPDM WASHER APPLICATION



EPDM is a cross-linked copolymer consisting of ethylene, propylene and a proportion of diene. This elastomer is particularly characterised by very good ageing and atmosphere resistance. **EPDM** is stable in: Hot water, steam, suds, ketones, hydraulic fluids from the HFC group which have poor flammability and a few HFD types, acids, bases, glycol- based brake fluids, cooling water fluids (water ethyleneglycol), ozone, Skydrol®500 and 700 (phosphate ester fluids)

TEST CRITERIA ON FINISHED PRODUCT

TEST DESCRIPTION	UNIT	STANDARD	RESULTS
Durometer Hardness	Shore A	ASTM D2240	60 +/- 5
Tensile Strength	Mpa	ASTM D412	Min. 6
Ultimate Elongation	%		Min. 125
DC Resistance @ 1000V	Ω	ASTM D257	2000

TEST CRITERIA ON RAW MATERIAL

TEST DESCRIPTION	UNIT	STANDARD	RESULTS
Tear Resistance Die C (kN/m)	kN/m	ASTM D624	Min. 15
Resistance to Heat, 70hrs @ 100°C			
Change in Hardness, from original	Points	ASTM D624	+/- 10
Change in Tensile Strength, from original	%		+/- 20
Change in Ultimate Elongation, from original	%		+/- 50
Compression Set, 22hrs @ 70° @ 25% Strain	%	ASTM D395	Max. 30
Heat: 72hrs @ 40°C and 50 pphm ozone	-	ASTM D1171	No visible cracking
	-	ASTM D1149	
Cold: 3mins @ -50°C	-	ASTM D437	Non brittle
Cyclic UV: 4hrs UV (UV-B lamps with peak emission at 313Nm) @ 60°C followed by 4hrs condensation @ 50°C service temperature	-	ASTM G154	500hrs 50°C to 115°C

*The above typical data are supplied only for technical information, not guaranteed values. This document may be revised without prior notice

CORROSHIELD®

F A S T E N E R S

ENGINEERING EDGE SINGAPORE PTE LTD
 11 Woodlands Drive, #03-11 Woodlands Industrial Estate Singapore 738600 T: +65 6502 4997 F: +65 6502 7844 W: www.corrosshield.com.sg E: info@corrosshield.com.sg

TECHNICAL DATA SHEET

METAPP® #12-14 x L

MATERIAL GRADE
Carbon Steel, Grade C1022

INSTALLATION GUIDE
RECOMMENDED TOOL:
TORQUE 17 - 29Nm SPEED 1,800 - 2,500RPM

DIMENSIONAL STANDARD
AS 3556.1, Modified

COATING OPTIONS
CORROSHIELD® Series 10
CORROSHIELD® Series 30
CORROSHIELD® CC Series
CORROSHIELD® SR Series
CORROSHIELD® CS Series
CORROSHIELD® H3 Series
CORROSHIELD® M3 Series
CORROSHIELD® M4 Series

PRODUCT IDENTIFICATION
Engineering Edge Program

STEEL SUBSTRATE PARAMETERS

LVR	For Steel Substrate Q250, Max. 1.0mm thick
LV	For Steel Substrate G425, Max. 5.0mm thick
LV4	For Steel Substrate G425, Max. 8.0mm thick
LV5	For Steel Substrate G425, Max. 12.5mm thick

SHEAR PROPERTIES
METHOD: Shear tests done using Material Test System (MTS) at a speed rate of 3mm/min until failure.

Ultimate Shear Load	9,800 N
Ultimate Shear Strength	F70 Mpa
Fracture Position	Occured at thread

TENSILE PROPERTIES
METHOD: Shear tests done using Material Test System (MTS) at a speed rate of 3mm/min until failure.

Ultimate Shear Load	15,600 N
Ultimate Shear Strength	1,170 Mpa
Fracture Position	Occured at thread

TORQUE PROPERTIES
METHOD: Torque tests done using Williams Torque Wrench with a range from 1 to 500 Nm.

Ultimate Breaking Torque	14.5 Nm
--------------------------	---------

ULTIMATE SHEAR STRENGTH

ULTIMATE TENSILE STRENGTH

ULTIMATE BREAKING TORQUE

CORROSHIELD®

ENGINEERING EDGE SINGAPORE PTE LTD
 11 Woodlands Drive, #03-11 Woodlands Industrial Estate Singapore 738600 T: +65 6502 4997 F: +65 6502 7844 W: www.corrosshield.com.sg E: info@corrosshield.com.sg

MANUFACTURING TEST CERTIFICATE

Customer: [Blank] Shop Card No.: IC02170005
 P/O No.: [Blank] Shop Card Date: 01.08.2015
 Q/C No.: IC021942 Invoice No.: IC021950
 Date Recd: [Blank] Material Type: AS 3556
 Batch No.: IC021942 MFG Card No.: IC021950

Heat Code No. (HND): [Blank]

	C	B	Mn	P	S	Ni	Cr	Mo	Cu	Al
Standard	0.25	0.04	0.03	0.02	0.005	0.005	0.005	0.005	0.005	0.005

Part Number: CORROSHIELD
 Description: METAPP #12-14 x L
 Size: M12-14 x 35mm
 Surface Treatment: ZN-100
 Mechanical Spec: AS 3556 & AS 3556-1
 Dimensional Spec: AS 3556 & AS 3556-1

TECHNICAL DIAGRAM

CORROSHIELD®

MECHANICAL PROPERTIES

Specifications	UNIT	Standard	Measured	Notes	Remarks
Weight	kg	5.00	4.95	4.98	4.98
Head Weight	kg	5.40	5.00	4.98	5.33
Access Flat	mm	7.62	7.70	7.80	7.80
Access Corner	mm	-	0.34	0.30	0.34
Hex Washer	mm	12.80	13.00	13.50	13.10
Thread Major	mm	4.81	4.76	4.82	4.82
Pitch	mm	3.24	3.28	3.23	3.23
Total Length	mm	30.5	30.24	30.28	30.28

MECHANICAL PROPERTIES

Specifications	UNIT	Standard	Measured	Notes	Remarks
Q18 Penetration	mm	0.30	-	2.50	3.00
Tensile Strength	MPa	483	480	480	480
Yield Strength	MPa	275	280	280	280
Char. Hardness	HV	160	160	160	160
Core Hardness	HV	400	390	400	400

QC APPROVED

Inspection Results:
 Final Report (FRT): 2.012.0001.001
 Re-Work Order (RWO): [Blank]
 Rejected: [Blank]
 Remarks: [Blank]

Inspected by: [Signature]
 Date: 07.08.2015

TECHNICAL DATA SHEET

MTC CERTIFICATE

MANUFACTURING PROCESS

WIRE DRAWING
PROCESS



HEADING
PROCESS



POINTING
PROCESS



THREADING
PROCESS



HEAT
TREATMENT

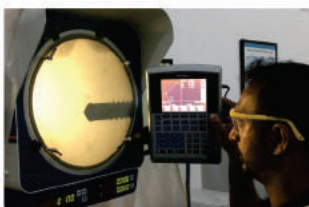
SURFACE
TREATMENT

QC
PROCESS

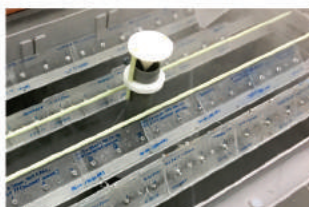
PACKAGING
PROCESS



QC TESTING FACILITIES



DIMENSIONAL TEST MACHINE



SALT SPRAY TEST MACHINE



HARDNESS TEST MACHINE

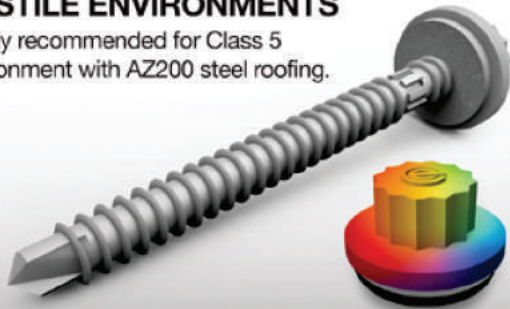


DRILLING TEST MACHINE

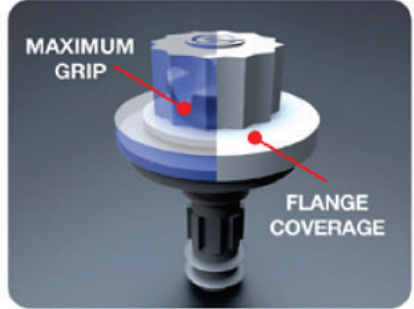
PROTAPP®

MAXIMUM PROTECTION AGAINST HOSTILE ENVIRONMENTS

- Highly recommended for Class 5 environment with AZ200 steel roofing.

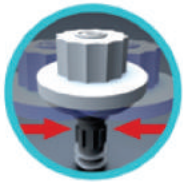


AZ200 ROOFING FASTENER



Now equipped with DUOTAPP® Point!

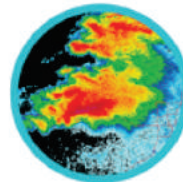
- 1 drill point 2 applications
- Reduce your inventory by 1/2



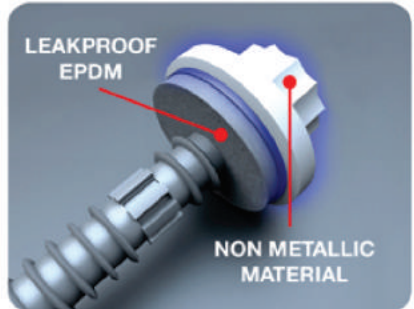
Precision accuracy for fastener centricity



High hardness to handle driving torque



Weatherproof Capabilities



Colour matched to any RAL colour codes



Cavity under flange to prevent washers from shearing

*Contact us for more customization designs.

Code	Gauge	TPI	Length	Features
PR	12	11	75	<ul style="list-style-type: none"> • 12 Point Double Hex Flange Head • DUOTAPP® Drill Point • Double Thread • ScratchShield™ • Min. 25mm timber • Max. 3mm steel

Forged Flange

Speed Drill™

Double Thread™

ScratchShield™



CORROSHIELD®

PROFESSIONAL TOOLS

• Heavy Duty Electric Screwdrivers for your fastener applications.



LI-ION 18V 2.0Ah



TOOLS FOR THE PROFESSIONALS

Code	Model No	Features
AC18003	CLS018HD	<ul style="list-style-type: none"> • Heavy Duty Li-ion Cordless Screwdriver • 18V, 2.0A Lithium-ion battery • 16 Stage adjustable torque • 2 Speeds, 0/400rpm, 0/1550rpm • Up to Ø10 chuck size • Fan cooled motor for extreme durability • Light weight, compact design • LED guide light with soft grip • 1 hour fast charging



Options:



LI-ION Battery



Charger

Code	Model No	Features
AC18004	ESD570HD	<ul style="list-style-type: none"> • Heavy Duty Electric Screwdriver • High power 570W, 2.6A • Speed: 0/3600rpm • Pressure sensitive variable speed • High power-to-weight ratio • Synchronised pin clutch for long life • Silent pin clutch for low noise operation • Adjustable depth locator rod



Code	Model No	Features
AC18005	ESD230	<ul style="list-style-type: none"> • Electric Screwdriver • 2 Speeds: 0/400rpm, 0/1500rpm • 16 Stage adjustable torque • Tool free bit change feature • Light weight, compact design • Pressure sensitive variable speed





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