# MIRAD TEHNIC

FIXĂRI ȘI ETANȘĂRI ÎN CONSTRUCȚII

ANTI-CORROSION RO FASTENERS

# PRODUCT CATALOGUE

www..mirad-tehnic.ro

CE ISO ASTM INTERNATIONAL Standards Worldwide STANDARDS Australia DIN bsi. ifi SABS

CORROSHIELD® FASTENERS

TAPPERMAN® FASTENERS




Cu o experienta de peste 10 ani in oferirea de solutii de fixare si etansare pentru inchideri perimetrale la constructii, sisteme de siguranta personala si colectivea pe acoperisuri, echipa noastra va ajuta in alegerea corecta a sistemelor care va sunt necesare, dupa care livram prompt si la preturi corecte oriunde aveti nevoie de produsele noastre, la sediul dumneavoastra sau direct in santier, oriunde in tara.

Fixarile mecanice utilizate pentru inchiderile la constructiile industriale este necesar sa fie superioare din punct de vedere calitativ, fiind supuse unor eforturi mai intense si pe o perioada mai lunga de timp, actiunea agentilor corozivi naturali fiind amplificata de catre substantele degajate in cursul proceselor industriale si a activitatilor mult mai intense decat intr-un mediu non-industrial. Drept urmare, acoperirile protective si anticorozive ale sistemelor de fixare, mai ales a celor utilizate la constructii industriale, trebuie sa fie cel putin la nivelul materialelor de prins, intre pretul acestora trebuind sa existe un raport logic.

Utilizarea unor materiale de calitate, scumpe, dar fixate cu niste suruburi de calitate indoielnica sau fara certificari tehnice, conduce, in cele din urma, la pierderea de resurse, timp si bani cu inlocuiri, reparatii repetate, deteriorari ale materialelor de baza, etc. Acoperirile protective si anticorozive ale sistemelor de fixare trebuie sa fie cel putin la nivelul materialelor de prins, intre pretul acestora trebuind sa existe un raport logic.

Controlul calitatii si trasabilitatea produselor, dar mai ales certificarea tehnica a acestora de catre institutii specializate si abilitate in acest sens (INCERC, TUV, ITB, etc.), este o conditiie obligatorie in acest domeniu. Toate produsele livrate de catre noi au variante cu agremente tehnice specifice lucrarilor de constructii, multe dintre ele fiind inovatii tehnice de exceptie sustinute de caracteristicile mult superioare celor oferite de catre alti producatori.

Alegerea unor furnizori de incredere, de mare prestigiu, dar mai ales verificati de catre noi in decursul multor ani de colaborare si a multor lucrari de inchideri la constructii realizate impreuna cu partenerii nostri din constructii-montaj, ne dau increderea ca va oferim cele mai bune solutii pentru constructiile dumneavoastra.

# PREMIUM FASTENER MANUFACTURER











## ENGINEERING EDGE

## CREATING AN EDGE

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®**, **DYNO®** and **TAPPERMAN®** 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 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.

# CORROSHIELD®
FASTENERS





**CORROSHIELD®** our primary brand for our middle to premium range of fastening systems. Our business focus started with the manufacturing of high corrosion resistant fasteners for long life outdoor application. The brand was derived from words: 'CORROSION' and 'SHIELD'. As simple as it is, putting the two words together, it was the bes way to represent the main characteristic of the fastening system that we produce.

**TAPP®** Series Fasteners

To 'tap' a screw into a substrate is the common jargon used in the fastening industry. We have incorporated the use of the similar jargon with double P to represent "Premium and Power", as you will have the premium **CORROSHIELD®** coating and the power of our innovations.

**ALUTAPP®** Stainless Steel Fastener
- For Aluminium Roof and Wall

| | |
|---|---|
| **304TAPP®** | S/S Grade 304 Fasteners |
| **316TAPP®** | S/S Grade 316 Fasteners |
| **410TAPP®** | S/S Grade 410 Fasteners |
| **BIMATAPP®** | S/S Shank with Carbon Steel Drill Point |

**STEELTAPP®** Carbon Steel Fastener
- For Steel Roof and Wall

| | |
|---|---|
| **METAPP®** | Steel sheets to steel substrates |
| **TIMTAPP®** | Steel sheets to timber substrates |
| **POLYTAPP®** | Skylights to Steel or Timber Substrate |
| **FIBRETAPP®** | Fibre Cement Sheets to Steel or Timber substrates |
| **BOTAPP®** | Fastener for Drywall Applications |
| **CONTAPP®** | Fasteners for Light Concrete & Masonry |
| **WINTAPP®** | Fasteners for Window Frame Assembly |
| **TRUSSTAPP®** | Fasteners for Light gauge Steel Trusses |

# COUNTRY OF EXPORTS



# COUNTRIES OF EXPORT

Bangladesh Bulgaria Brunei Europe Ghana Greece Hungary India Indonesia Kenya Korea Kuwait Myanmar Malaysia Peru Poland Qatar Romania Saudi Arabia South Africa Tanzania Thailand Uganda United Arab Emirates United States United Kingdom Vietnam




















# TAPPERMAN®
## FASTENERS

# TP RETAIL RACK SOLUTION

TAPPERMAN®
FASTENERS

# RETAIL STAND DISPLAY
## DIMENSION SPECIFICATIONS

1. **BRANDING HEADERBOARD**
2. **MARKETING BANNER**
3. **SHELF TALKER**
4. **PRODUCT PACKAGING**
5. **BASE COVER BRANDING**

3D rendering images are for illustration purpose only.




## CUSTOMIZABLE MINI BOX PACKAGING & LABELS TO SUIT YOUR NEEDS!

### CLASS 3




**BCN: 781718483223**
50TT 12-11 X 65MM, HWF, DS, T17,12DT/14 GRY EPDM 2.5MM

### CLASS 3




**BCN: 781718483216**
50TT 12-11 X 75MM, HWF, DS, T17,12DT/14 GRY EPDM 2.5MM

### CLASS 4




**BCN: 781718483247**
M4TT 12-9 X 65MM, HWF, DS, S17,12DT/14 GRY EPDM 2.5MM

### CLASS 4




**BCN: 781718483230**
M4TT 12-9 X 75MM, HWF, DS, S17,12DT/14 GRY EPDM 2.5MM

## METAPP® FIXING INTO STEEL

### CLASS 3




**BCN: 781718483254**
50MT 12-14 X 65MM, HWF, DS, LV, 12DT/14 GRY EPDM 2.5MM

### CLASS 4




**BCN: 781718483278**
M4MT 12-14 X 65MM, HWF, DS, LV, 12DT/14 GRY EPDM 2.5MM

### Legend

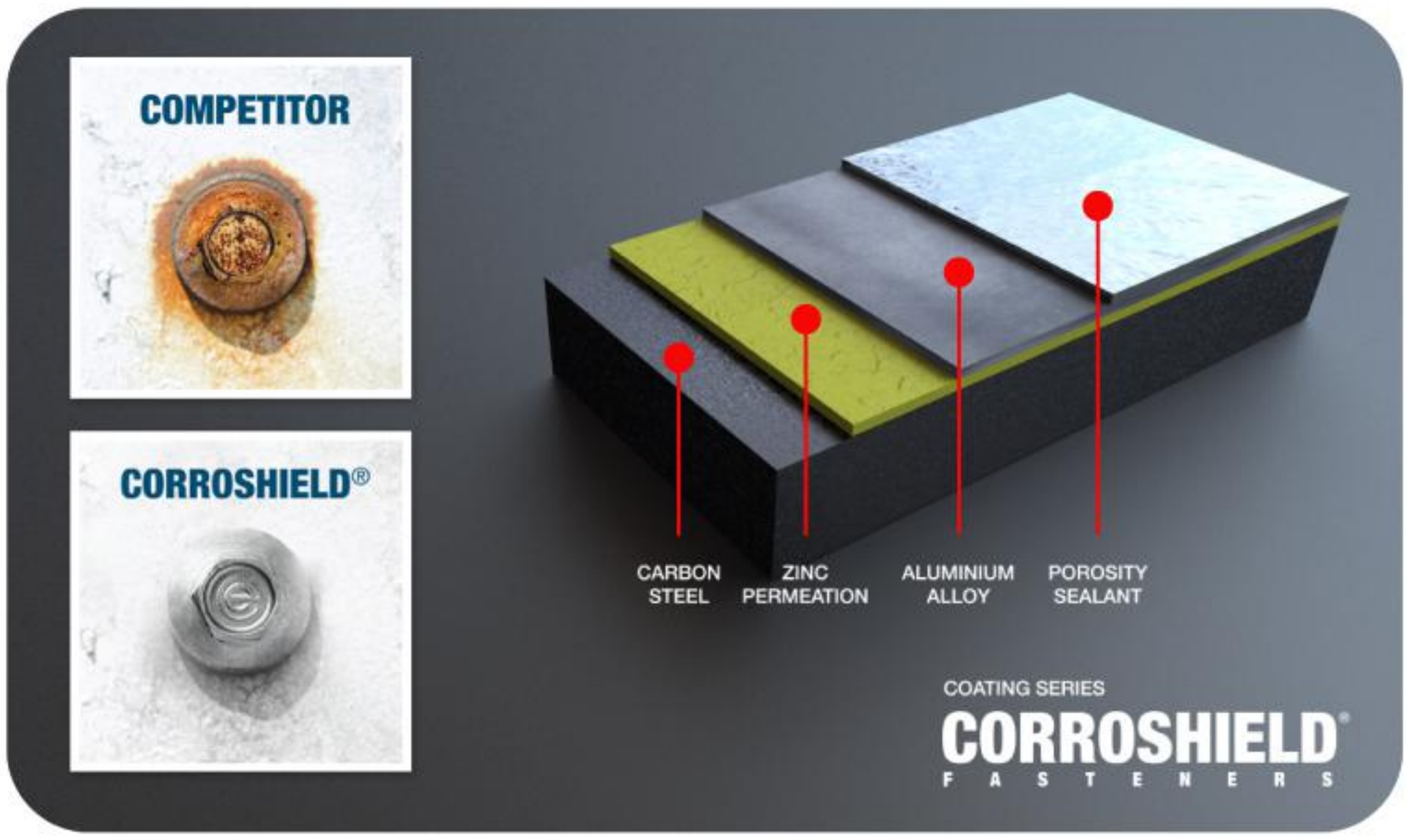
**50** – Suitable for Class 3 Environmental Coating
**M4** – Suitable for Class 4 Environmental Coating
**TT** – TIMTAPP Series for Timber Application
**MT** – METAPP Series for Metal Application
**HWF** – Hex Washer Flange Head Profile
**FT** – Full thread profile
**DS** – Double Thread profile with Scratchshield design
**LV** – Levin® Drill point for max 5.5mm thick metal application
**S17** – Special Drill point for Timber Application
**T17** – Type 17 Drill point for Timber Application
**GRY** – Low Carbon Content EPDM washers

# OUR COATING TECHNOLOGY

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), British Standard (BS) and many more

## CORROSHIELD® COATING VS COMPETITOR




*Coating specification is compliant with AS3566.2 (2002)

### CORROSHIELD® OC

Suitable for general non-critical application.

- **C1 Requirement** - 500hrs SST

### CORROSHIELD® CS

Suitable for Corrosion Class 3 Environment

- **C3 Requirement** - 1,000hrs SST, 15C KES, 1,000hrs HUM & 2,000hrs UV

### CORROSHIELD® SR

Suitable for Corrosion Class 2 Environment

- **C2 Requirement** - 1,000hrs SST, 5C KES

### CORROSHIELD® HD

Suitable for Corrosion Class 4 Environment

- **C4 Requirement** - 2,000hrs SST, 20C KES, 1,000hrs HUM & 2,000hrs UV

ENGINEERING EDGE

# 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.

| **CORROSITIVITY CATEGORY** | C1 | C2 | C3 | C4 | C5 | CX |
|---|---|---|---|---|---|---|
| **ENVIRONMENT CORROSION** | Very Low | Low | Medium | High | Very High | Extreme |
| **EXTERIOR** | — | Atmospheres with low level of pollution: mostly rural areas | Urban and industrial atmospheres, moderate sulfur dioxide pollution; coastal areas with low salinity | Industrial areas and coastal areas with moderate salinity | Industrial areas with high humidity and aggressive atmosphere and coastal areas with high salinity | Offshore areas with high salinity and industrial areas with extreme humidity and aggressive atmosphere and subtropical and tropical atmospheres |
| **INTERIOR** | Heated buildings with clean atmospheres, e.g. offices, shops, schools, hotels | Unheated buildings where condensation can occur, e.g. depots, sports halls | Production rooms with high humidity and some air pollution, e.g. food processing plants, laundries, breweries, dairies | Chemical plants, swimming pools, coastal ship and boatyards | Buildings or areas with almost permanent condensation and with high pollution | Industrial areas with extreme humidity and aggressive atmosphere |
| **LOW-CARBON STEEL** | | | | | | |
| MASS LOSS (g/m2) | ≤ 10 | > 10 - 200 | > 200 - 400 | > 400 - 650 | > 650 - 1500 | > 1500 - 5500 |
| THICKNESS LOSS (µm) | ≤ 1.3 | > 1.3 - 25 | > 25 - 50 | > 50 - 80 | > 80 - 200 | > 200 - 700 |
| **ZINC** | | | | | | |
| MASS LOSS (g/m2) | ≤ 0.7 | > 0.7 - 5 | > 5 - 15 | > 15 - 30 | > 30 - 60 | > 60 - 180 |
| THICKNESS LOSS (µm) | ≤ 0.1 | > 0.1 - 0.7 | > 0.7 - 2.1 | > 2.1 - 4.2 | > 4.2 - 8.4 | > 8.4 - 25 |
| **RECOMMENDED FASTENER MATERIAL AND MINIMUM SURFACE TREATMENT** | Carbon Steel + **CORROSHIELD®** OC | Carbon Steel + **CORROSHIELD®** SR | Carbon Steel + **CORROSHIELD®** CS & M3 | Carbon Steel + **CORROSHIELD®** HD & M4 | Stainless Steel 304 + **CORROSHIELD®** SR | Stainless Steel 316 + **CORROSHIELD®** SR |
| **WARRANTY PERIOD** | — | 5 Years | 20 Years | 30 Years | 40 Years | 60 Years |

EESG-CWG-001 V0

**NOTE:** The mass loss & thickness loss stated above are values after first year of exposure.
Environmental Categorisation as per Standard, ISO 12944-2:2017

CORROSHIELD®
FASTENERS

# FASTENER SELECTION GUIDE

## METAPP® Fixing Metal Roofing Sheets into Steel Substrate (Valley Fixing)


| | | |
|---|---|---|
| Hex Washer Head, LV |  | Page 15 |
| Hex Washer Head, LV5 |  | Page 16 |


## METAPP® SUPER STITCH™ Fixing Overlapping joints or Metal Sheets (Stitching)


| | | |
|---|---|---|
| Hex Washer Head, LVR |  | Page 17 |


## METAPP® Secure Concealed Fix Clips into Steel Substrate (Concealed Fixing)


| | | |
|---|---|---|
| Wafer Head, LV3 |  | Page 18 |
| Wafer Head, LV5 |  | Page 19 |

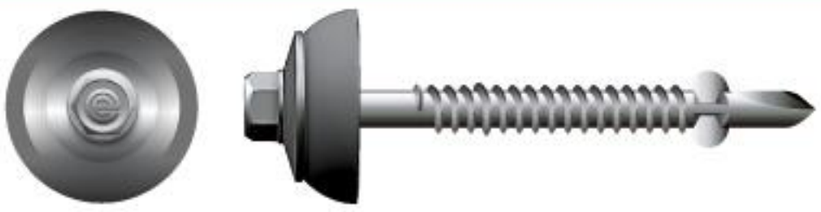
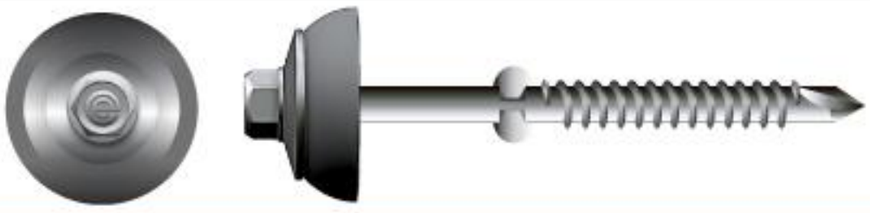

## METAPP® Fixing Carbon Steel Fasteners for Membrane Flat Roof (Flaf Roof)


| | | |
|---|---|---|
| Rasied Bugle Head, LVR |  | Page 21 |


## METAPP® Fixing Sandwich Panel into Steel Substrate (Sandwich Panel)


| | | |
|---|---|---|
| Hex Washer Head, SCRATCHSHIELD™, LV3 |  | Page 22 |
| Hex Washer Head, SCRATCHSHIELD™, LV5 |  | Page 23 |


## POLYTAPP® Fixing Skylight Polycarbonate Sheets into Steel or Timber Substrate


| | | |
|---|---|---|
| Hex Washer Flange, POLYTAPP® Wing, LV3 |  | Page 24 |
| Hex Washer Flange, POLYTAPP® Wing, S17™ Point |  | Page 25 |


## TIMTAPP® Fixing Metal Roofing Sheets to Timber Substrate (Valley Fixing)


| | | |
|---|---|---|
| Hex Washer Head, Type 17 Point |  | Page 26 |


## TIMTAPP® Fixing Sandwich Panel into Wood Substrate (Sandwich Panel)


| | | |
|---|---|---|
| Hex Washer Head, SCRATCHSHIELD™, LVR |  | Page 27 |
| Hex Washer Head, SCRATCHSHIELD™, S17™ Point |  | Page 28 |

CORROSHIELD®
FASTENERS

# FASTENER SELECTION GUIDE

## TIMTAPP® *Plus* Timber-to-timber Connection & General Timber Applications


| | | |
|---|---|---|
| Countersunk Head with 6 ribs, Tooth Thread, Type 17 Point |  | Page 30 |
| Countersunk Head with 6 ribs, Tooth Thread, CLEANCHAF™, Type 17 Point |  | Page 31 |


## TIMTAPP® GRIP Strutural Timber Screws


| | | |
|---|---|---|
| Button Washer Head, CLEANCHAF™, Type 17 Point |  | Page 33 |


## TAPPERMAN® ECONOMICAL SCREWS FOR RETAIL


| | | |
|---|---|---|
| Hex Washer Head, LVR, Galvanised Bonded Black EPDM Washer |  | Page 36 |
| Round Countersunk Head, LVR, Aluminium Cup, Bonded Black EPDM |  | Page 36 |


## WINTAPP® Window Production


| | | |
|---|---|---|
| Pan Head, LV |  | Page 37 |
| Countersunk Head with 6 Ribs, LV |  | Page 38 |
| Countersunk Head with 6 Ribs, Needle Point |  | Page 38 |


## WINTAPP® Window or Door Frame Installation Screw into Concrete


| | | |
|---|---|---|
| Undercut Flat Head with 6 Ribs, Grooved thread, Gimlet Point |  | Page 40 |
| Cylindrical Head, Grooved thread, Gimlet Point |  | Page 41 |


## ACCESSORIES


| | | |
|---|---|---|
| Magnetic Hex Socket Drive |  | Page 42 |
| Magnetic Phillips Bit Drive |  | Page 42 |
| Magnetic Torx Bit Drive |  | Page 42 |
| Magnetic Square Bit Drive |  | Page 42 |
| Magnetic Pozi Bit Drive |  | Page 42 |

CORROSHIELD®
FASTENERS

# FASTENER SELECTION GUIDE

## ACCESSORIES


| | | |
|---|---|---|
| Bonded Washers |  | Page 43 |
| Colour Screw Caps |  | Page 43 |
| Dome Washer w/ Plate |  | Page 43 |
| Cyclonic Washer / Storm Washer / Saddle Washer |  | Page 43 |

# FASTENER ACRONYMS & ABBRIEVIATION

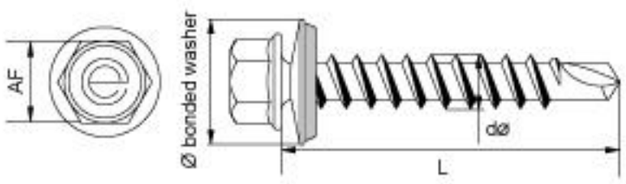
| Acronyms | Description |
|---|---|
| HWF | Hex Washer Flange |
| HWH | Hex Washer Head |
| TRS | Truss Head |
| PANCAKE HD | Pan Cake Head |
| LV | LEVIN® Drill Point |
| LV5 | LEVIN® 5 Drill Point |
| LVR | LEVIN® Reduced Drill Point |
| T17 | Type 17 Drill Point |
| S17 | S17™ Drill Point |
| ZnA | Zinc Alloy Steel |
| GAL D-WSH | Galvanized Double Layer Washer |
| GAL BND WSH | Galvanized Bonded Washer |
| FT | Full Thread |
| HL/FT | Hi-Lo Full Thread |
| TX | Torx Drive |
| HPT | Harpoon Thread |
| THT | Tooth Thread |
| PT | Partial Thread |
| PTW | Pilot Hole Wing |

| Acronyms | Description |
|---|---|
| G | Hex Washer Flange |
| GLP | Gimlet Point |
| NDP | Needle Point |
| PANCAKE HD | Pan Cake Head |
| PH | Phillips Drive |
| DS | ScratchShield™ |
| UFH | Undercut Flat Head |
| W/6RIBS | Under cut Ribs |
| SSC | Stainless Steel Cap |
| DOME WSH | Dome Washer |
| ALU | Aluminium |

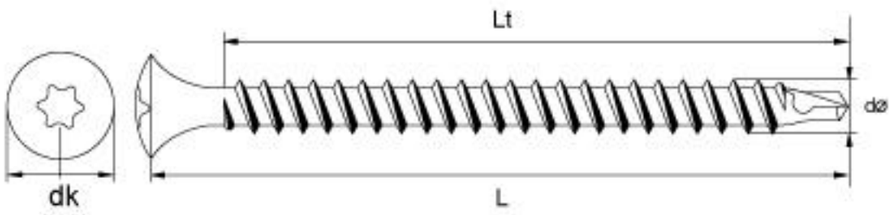
| Abbreviation | Description |
|---|---|
| L | Thread length |
| A/F | Across Flats |
| dØ | Thread Diameter |
| W | Width |
| $l_g$ | Screw length |
| dk | Head diameter |

# FASTENER WIRE DIAGRAM

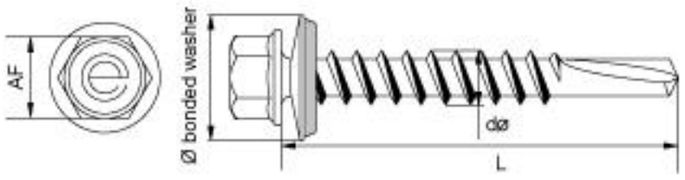
## FOR STEEL



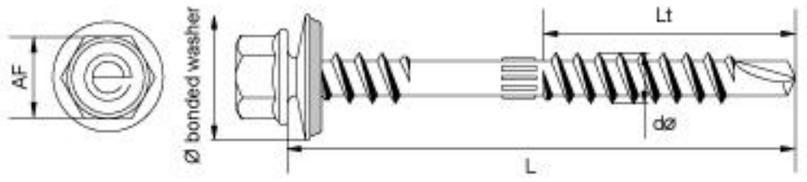

**HWH, FT, LV, GAL BND WSH GRY EPDM**



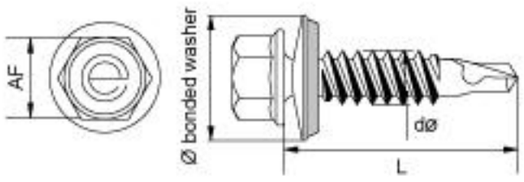

**RBGH+TX, HPT/FT, LVR**



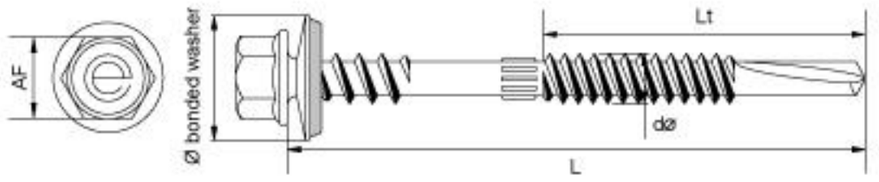

**HWH, FT, LV5, GAL BND WSH GRY EPDM**



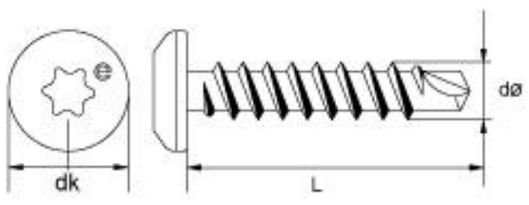

**HWH, DS, LV, GAL BND GRY EPDM 2.5MM**



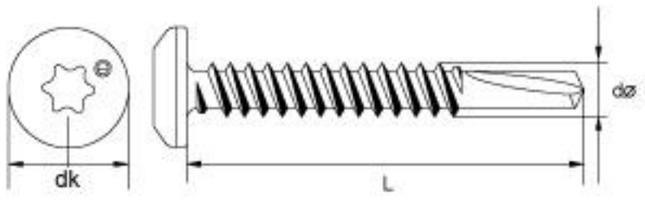

**HWH, FT, LVR, GAL BND WSH GRY EPDM**




**HWH, DS, LV5, GAL BND GRY EPDM 2.5MM**




**WFR + TX, FT, LV**



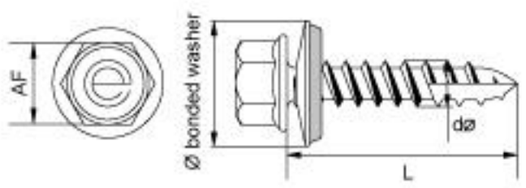

**WFR + TX, FT, LV5**

CORROSHIELD®
FASTENERS

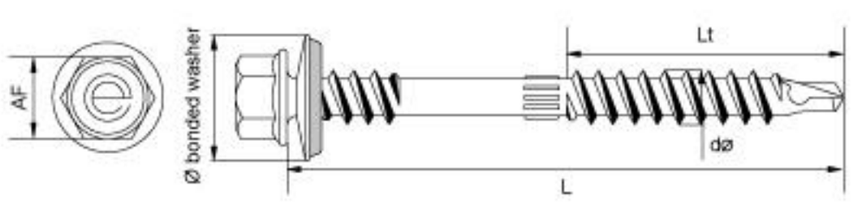
# GLOSSARY

## FASTENER WIRE DIAGRAM

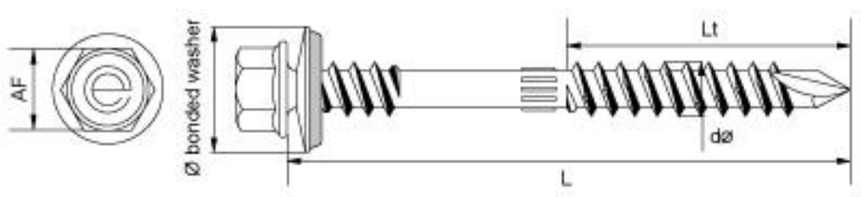
### FOR TIMBER




**HWH, FT, T17, GAL BND GRY EPDM 2.5MM**



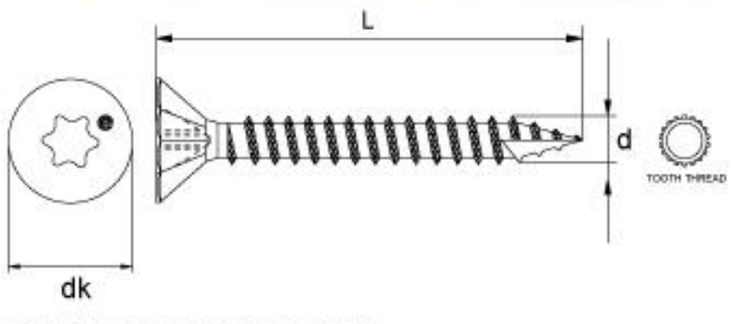

**HWH, DS, LVR, GAL BND GRY EPDM 2.5MM**



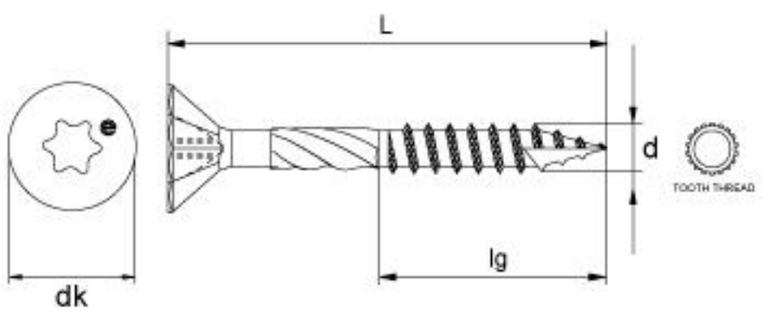

**HWH, DS, S17, GAL BND GRY EPDM 2.5MM**

### FOR TIMBER

## HIGH PERFORMANCE WOOD SCREWS




**CSK+TX, THT/FT, T17**



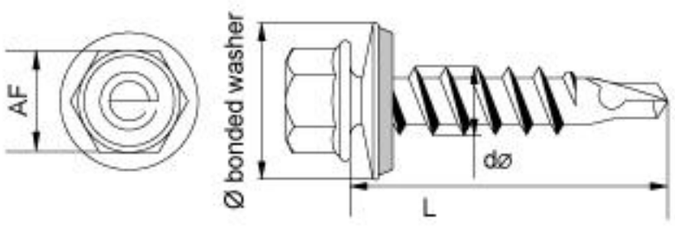

**CSK+TX, THT/PT+C, T17**

## STRUCTURAL TIMBER SCREWS



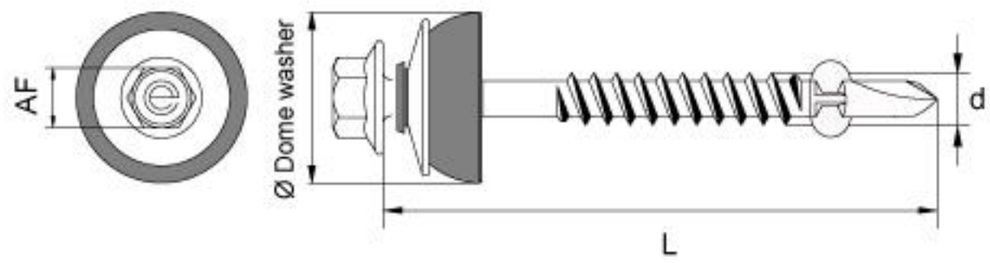

**BWH+TX, PT+C, T17**

## TAPPERMAN

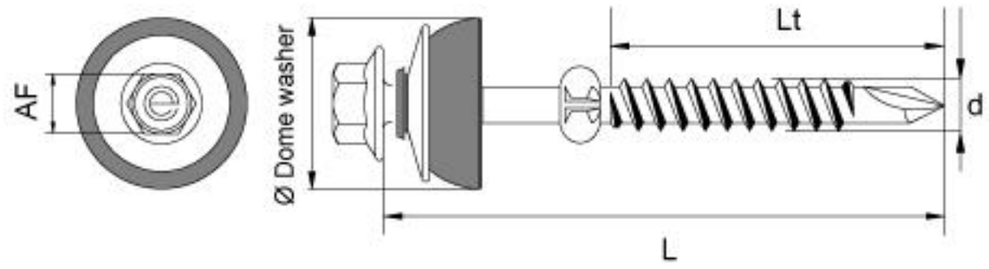



**HWH, FT, LVR, GAL BND WSH GRY EPDM**

### SKYLIGHT FIXING

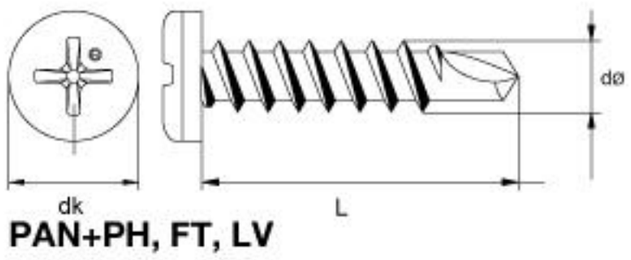



**HWF,FT+PTW,LV,ø25MM GRY EPDM DOME WSH W/ 1MM ALU PLATE**

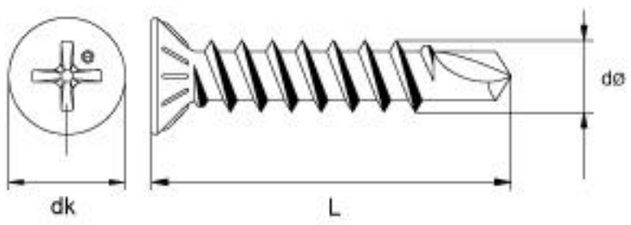



**HWF,FT+PTW,S17,ø25MM GRY EPDM DOME WSH W/ 1MM ALU PLATE**

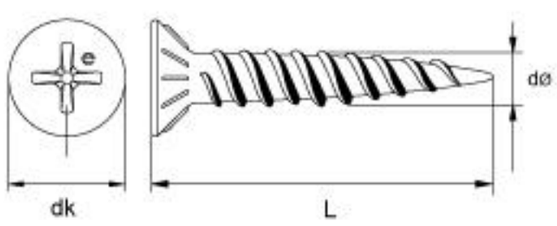
### WINDOW PRODUCTION




**PAN+PH, FT, LV**

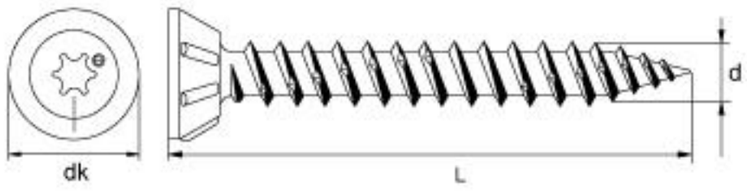



**CSK+PH W/6 RIBS, FT, LV**

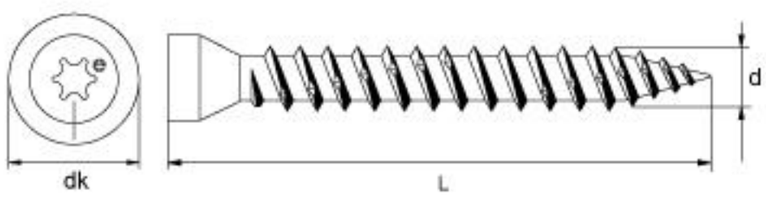



**CSK+PH W/6 RIBS, FT, NDP**

### WINDOW INSTALLATION

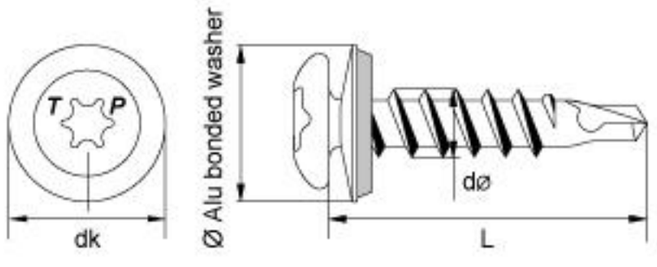



**UFH + TX W/6 RIBS, FT+G, GLP**




**UFH + TX W/6 RIBS, FT+G, GLP**

## TAPPERMAN




**RCSK+TX, FT, LVR, GAL BND WSH GRY EPDM**



# FASTENER FOR STEEL

## FIXING METAL ROOFINGS SHEETS INTO SHEET SUBSTRATE

## METAPP®

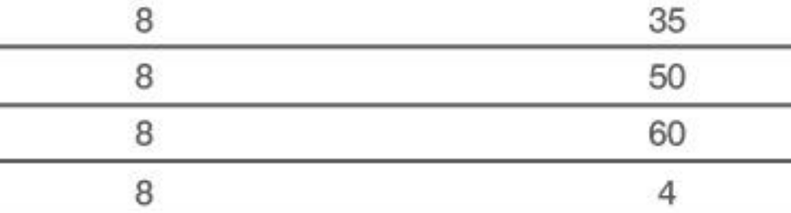


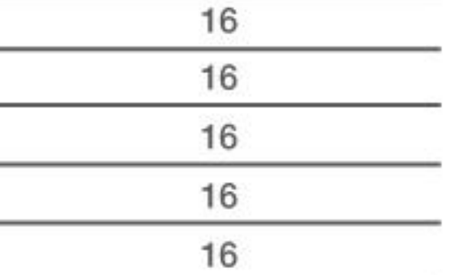


| Ø Diameter (d) | L (mm) | AF (mm) | Max Clamp Thickness (mm) | Ø Bonded Washer (mm) |
|---|---|---|---|---|
| 4.8 | 16 | 8 | 1 | 14 |
| 4.8 | 25 | 8 | 9 | 14 |
| 5.5 | 19 | 8 | 4 | 16 |
| 5.5 | 25 | 8 | 10 | 16 |
| 5.5 | 32 | 8 | 15 | 16 |
| 5.5 | 38 | 8 | 23 | 16 |
| 5.5 | 50 | 8 | 35 | 16 |
| 5.5 | 65 | 8 | 50 | 16 |
| 5.5 | 75 | 8 | 60 | 16 |
| 6.3 | 19 | 8 | 4 | 16 |
| 6.3 | 25 | 8 | 10 | 16 |
| 6.3 | 38 | 8 | 23 | 16 |
| 6.3 | 50 | 8 | 35 | 16 |

## FEATURES

- Material: Carbon Steel
- Hex Washer Head
- Full thread
- **LEVIN®** Drill Point
- Max. Drilling Capacity: (5.5mm) Steel
- Bonded Washer: Galvanized Steel Plate with EPDM Washer
- Painted head option available

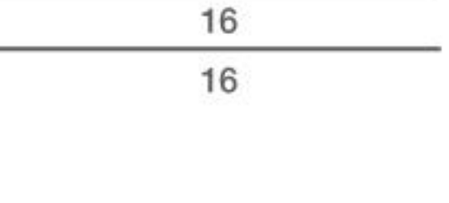


FOR STEEL



VALLEY FIXING ON WALL/ROOF



C-PURLIN



Z-PURLIN

Coating options:

CORROSHIELD

OC SR CS HD

*Please refer to page 4 for more coating information.




Speed Drill




Anti-Corrosion



RAL Colour Matched

Note: Max Clamp Thickness is calculated by allowance of 3 full threads extension beyond the substrates.

CORROSHIELD® FASTENERS

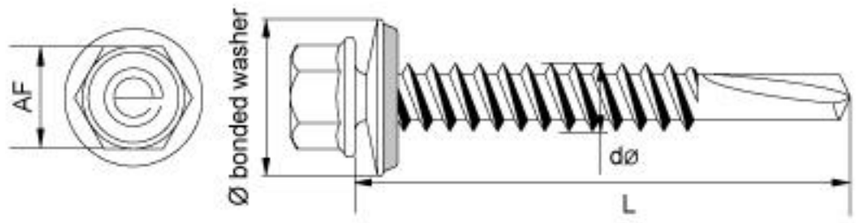
# METAPP®



| Ø Diameter (d) | L (mm) | AF (mm) | Max Clamp Thickness (mm) | Ø Bonded Washer (mm) |
|---|---|---|---|---|
| 5.5 | 24 | 8 | 1 | 16 |
| 5.5 | 32 | 8 | 7 | 16 |
| 5.5 | 38 | 8 | 13 | 16 |
| 5.5 | 50 | 8 | 25 | 16 |
| 5.5 | 55 | 8 | 30 | 16 |
| 5.5 | 60 | 8 | 35 | 16 |
| 5.5 | 65 | 8 | 40 | 16 |
| 5.5 | 70 | 8 | 45 | 16 |
| 5.5 | 75 | 8 | 50 | 16 |
| 6.3 | 38 | 8 | 13 | 16 |
| 6.3 | 50 | 8 | 25 | 16 |
| 6.3 | 75 | 8 | 50 | 16 |

## FEATURES

- Material : Carbon Steel
- Hex Washer Head
- Full thread
- **LEVIN®** #5 Drill Point
- Max. Drilling Capacity: (12.5mm) Thick Steel
- Bonded Washer: Galvanized Steel Plate with EPDM Washer
- Painted head option available




Coating options:

CORROSHIELD FASTENERS

OC SR CS HD

*Please refer to page 4 for more coating information.




**Speed Drill**




**Anti-Corrosion**



**RAL Colour Matched**



PIERCED FIX | I-BEAM | THICK STEEL

Note: Max Clamp Thickness is calculated by allowance of 3 full threads extension beyond the substrates.

CORROSHIELD® FASTENERS



# SUPERSTITCH FASTENERS

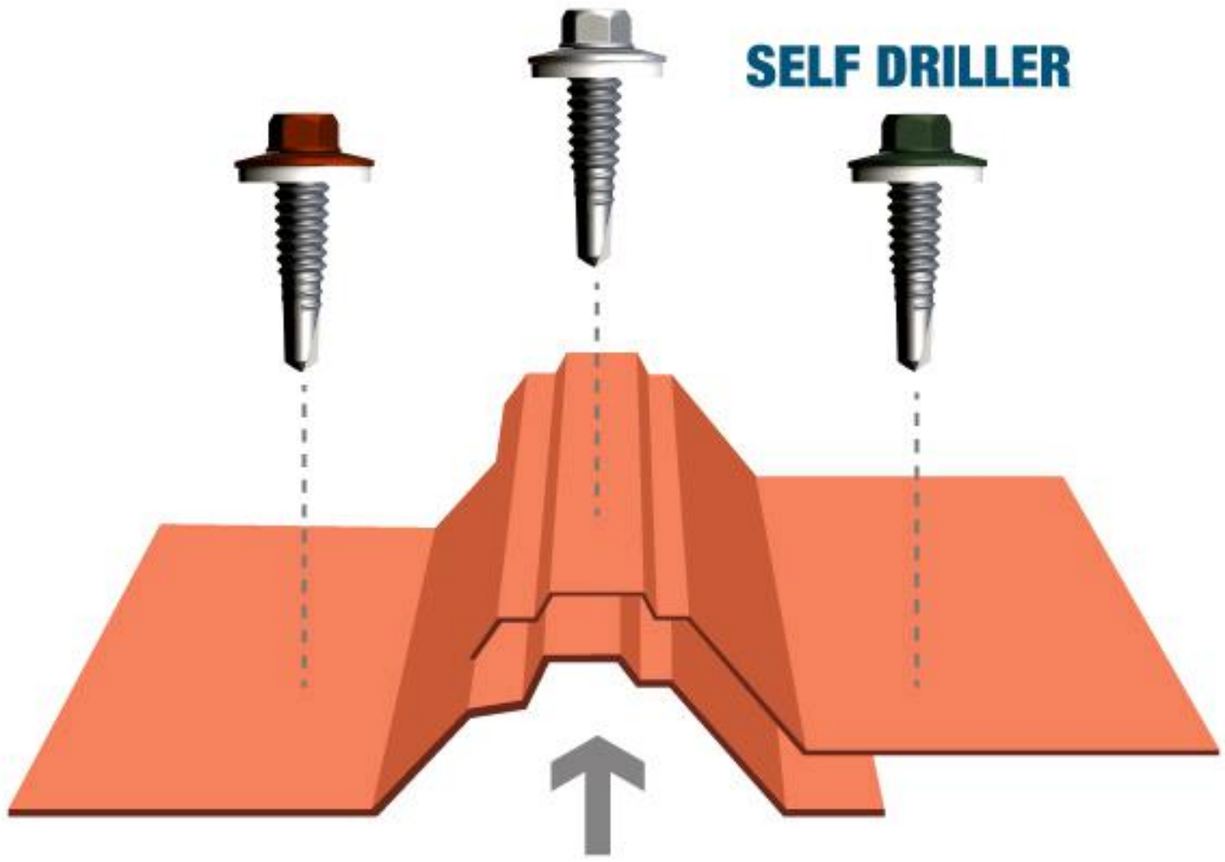
## FIXING OVERLAPPING JOINTS OR METAL SHEETS (STITCHING)



STITCHING



STEP COUNTER FLASHING STITCH




OVERLAPPING METAL
ROOFING SHEET

## SUPERSTITCH



| Ø Diameter (d) | L (mm) | AF (mm) | Max Clamp Thickness (mm) | Ø Bonded Washer (mm) |
|---|---|---|---|---|
| 6.3 | 22 | 8 | 8 | 16 |

### FEATURES

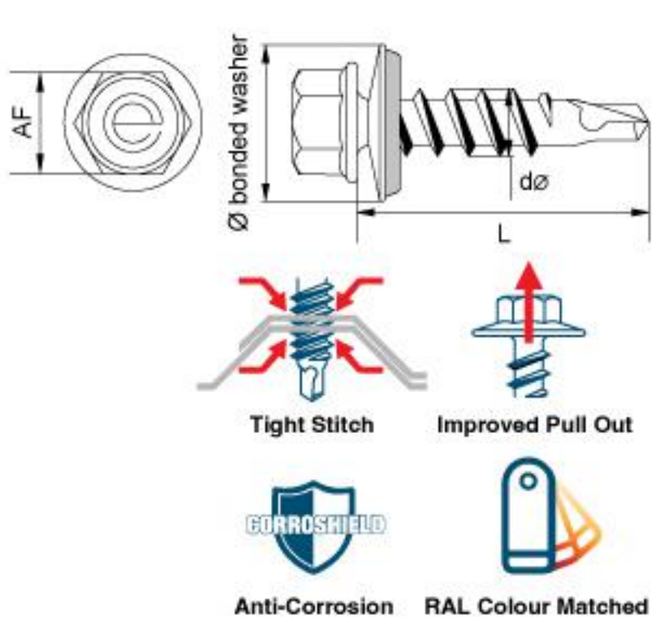
- Material : Carbon Steel
- Hex Washer Head
- Full thread
- **LEVIN®** Reduced Drill Point
- Max. Drilling Capacity: (2mm) Steel
- Bonded Washer: Galvanized Steel Plate with EPDM Washer
- Painted head option available

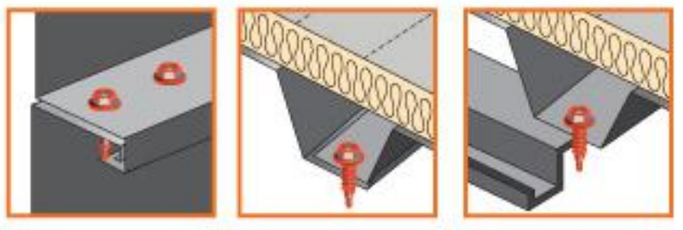
Coating options:

CORROSHIELD FASTENERS

OC SR CS HD

*Please refer to page 4 for more coating information.



SHEET-TO-SHEET STITCHING | SHEET METAL APPLICATIONS | Z-CHANNEL PURLIN

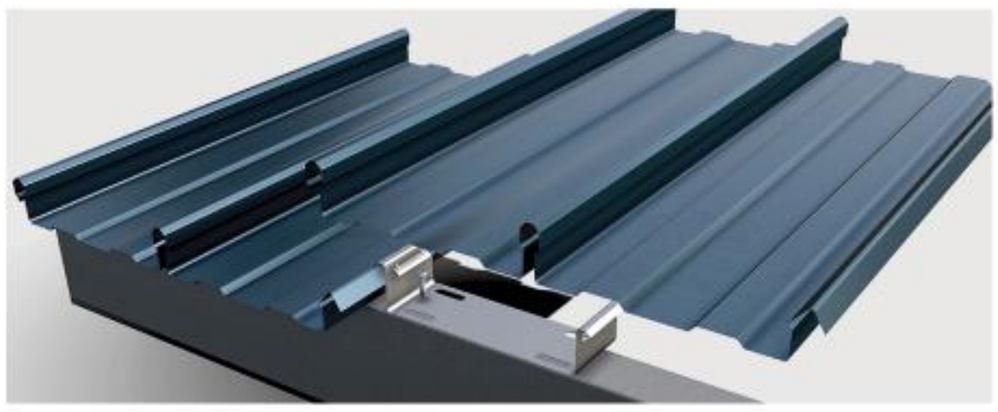
Note: Max Clamp Thickness is calculated by allowance of 3 full threads extension beyond the substrates.

CORROSHIELD® FASTENERS

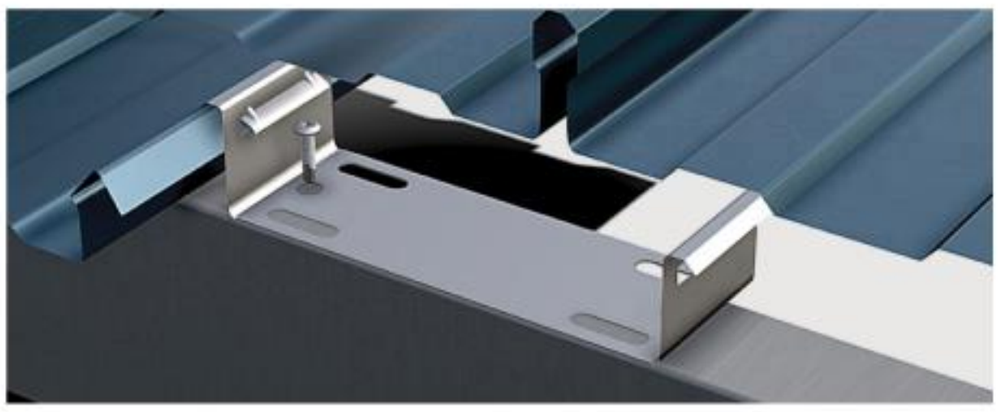


# CONCEALED FIXING SCREWS

## CONCEALED FIXING



CONCEALED / SECRET FIX APPLICATIONS



CONCEALED / SECRET FIX APPLICATIONS

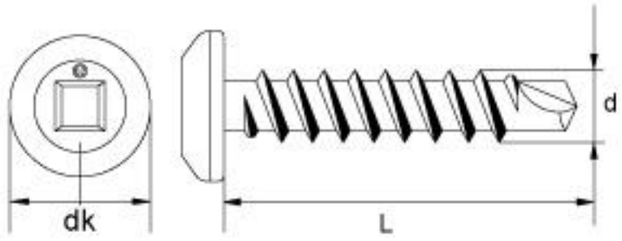
## METAPP®



| Ø Diameter (d) | L (mm) | dk (mm) | Max Clamp Thickness (mm) |
|---|---|---|---|
| 4.8 | 16 | 8 | 1 |
| 4.8 | 22 | 8 | 7 |
| 4.8 | 25 | 8 | 13 |
| 4.8 | 38 | 8 | 25 |
| 4.8 | 40 | 8 | 30 |
| 4.8 | 45 | 8 | 35 |

## FEATURES

- Material : Carbon Steel
- Wafer Head
- Full thread
- Square Drive
- **LEVIN®** Drill Point
- Max. Drilling Capacity: (5.5mm) Steel
- Painted head option available




Coating options:

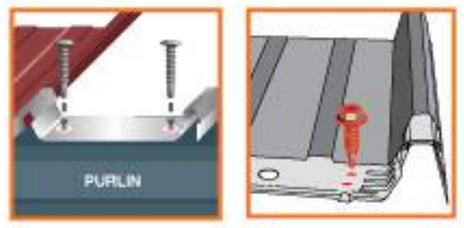
CORROSHIELD

OC SR CS HD

*Please refer to page 4 for more coating information.

Anti-Corrosion

RAL Colour Matched




CONCEALED CLIP

CONCEALED FIXING

Note: Max Clamp Thickness is calculated by allowance of 3 full threads extension beyond the substrates.

CORROSHIELD® FASTENERS

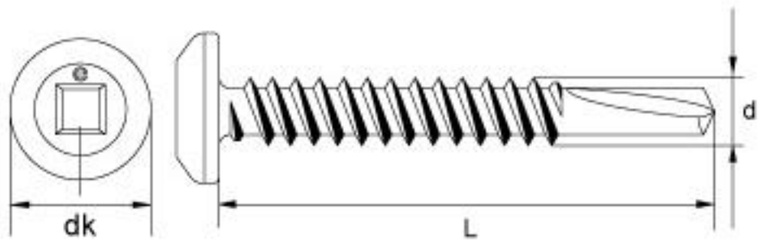
# METAPP®



| Ø Diameter (d) | L (mm) | dk (mm) | Max Clamp Thickness (mm) |
|---|---|---|---|
| 4.8 | 16 | 8 | 1 |
| 4.8 | 22 | 8 | 7 |
| 4.8 | 25 | 8 | 13 |
| 4.8 | 38 | 8 | 25 |

## FEATURES

- Material : Carbon Steel
- Wafer Head
- Square Drive
- Full thread
- **LEVIN®** #5 Drill Point
- Max. Drilling Capacity: (12.5mm) Thick Steel
- Painted head option available




Coating options:

CORROSHIELD FASTENERS

OC SR CS HD

*Please refer to page 4 for more coating information.




Anti-Corrosion



RAL Colour Matched



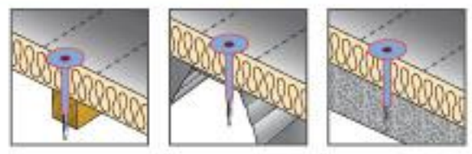

CONCEALED CLIP



CONCEALED FIXING

Note: Max Clamp Thickness is calculated by allowance of 3 full threads extension beyond the substrates.

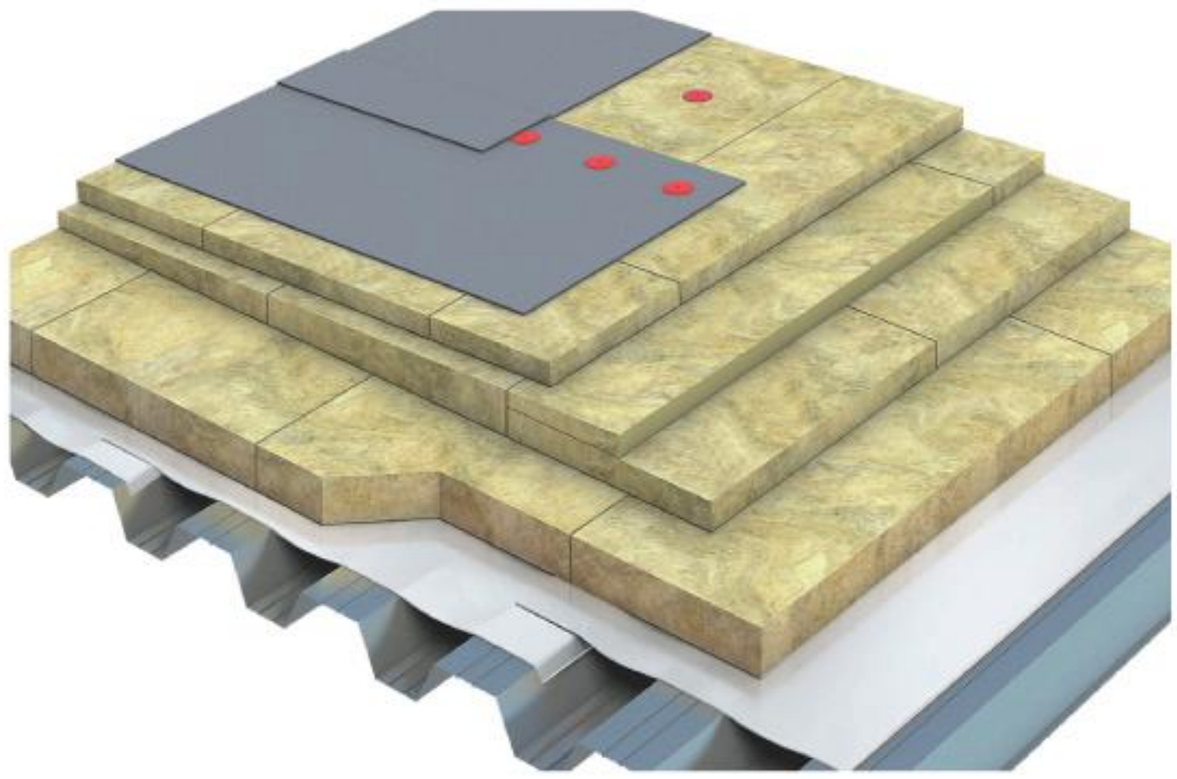
CORROSHIELD® FASTENERS



## METAPP® FLAT ROOF APPLICATIONS

# Raised Bugle Head Flat Roof Screw

- Professional fasteners & installation tools for fastening insulation & roof waterproofing membranes.
- To fix roofing membranes and insulating material to substrates made of sheet steel ≥ 0.70 mm ≤ 1.5 mm, timber or wood-based material.
- For combination with stress plates, High thread for resistance to imposed loads.



For new buildings and renovations

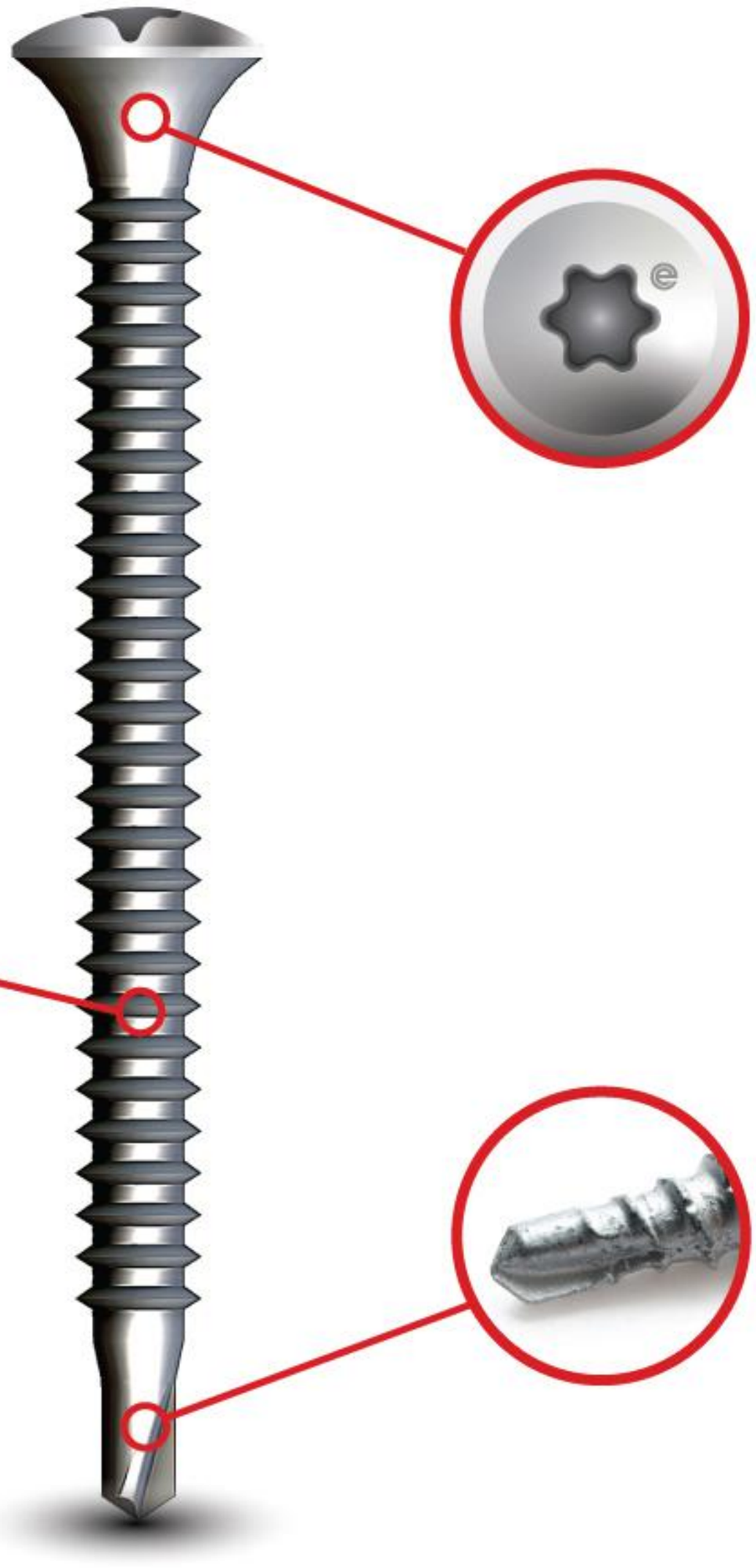
### MATERIAL GRADE

Carbon Steel, Grade C1022

## FEATURES



Head Marking



**RAISED BUGLE HEAD**

**TORX 25 DRIVE**

No Slippages, improved torque



**HARPOON THREAD**

**PREVENTS SLIPPING**

Improved Pull-Out resistance



**LEVIN® REDUCED POINT**

**TIGHT ENGAGEMENT**

Reduces the risk of stripping during installation



# FLAT ROOF APPLICATION

## FIXING CARBON STEEL FASTENERS FOR MEMBRANE FLAT ROOF

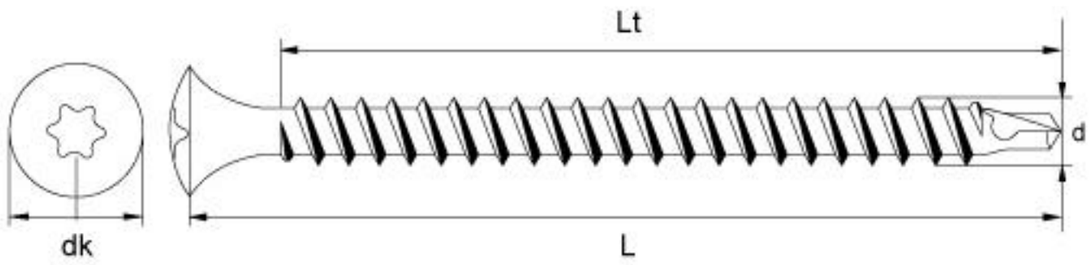
## METAPP®



| Ø Diameter (d) | L (mm) | Lt (mm) | dk (mm) | Min Clamp Thickness (mm) | Max Clamp Thickness (mm) |
|---|---|---|---|---|---|
| 4.8 | 50 | 45 | 9.5 | 10 | 35 |
| 4.8 | 70 | 50 | 9.5 | 26 | 55 |
| 4.8 | 80 | 75 | 9.5 | 10 | 65 |
| 4.8 | 90 | 75 | 9.5 | 20 | 75 |
| 4.8 | 100 | 75 | 9.5 | 30 | 85 |
| 4.8 | 120 | 75 | 9.5 | 50 | 105 |
| 4.8 | 140 | 75 | 9.5 | 70 | 125 |
| 4.8 | 160 | 75 | 9.5 | 90 | 145 |
| 4.8 | 190 | 75 | 9.5 | 120 | 175 |
| 4.8 | 210 | 75 | 9.5 | 140 | 195 |
| 4.8 | 300 | 75 | 9.5 | 230 | 285 |

### FEATURES

- Material : Carbon Steel
- Raised Bugle Head (RBGH)
- Torx Drive
- Harpoon thread / Full thread
- **LEVIN®** Reduced Drill Point
- Max. Drilling Capacity: (2mm) Steel



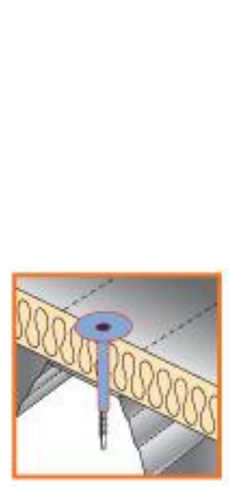

Coating options:

CORROSHIELD FASTENERS

OC SR CS HD

*Please refer to page 4 for more coating information.



WARM ROOF INSULATION

Note: Max Clamp Thickness is calculated by allowance of 3 full threads extension beyond the substrates.

CORROSHIELD® FASTENERS

# SANDWICH PANEL SCREWS

## FIXING SANDWICH PANEL INTO STEEL SUBSTRATE



Fixation of Roof Panels



Steel



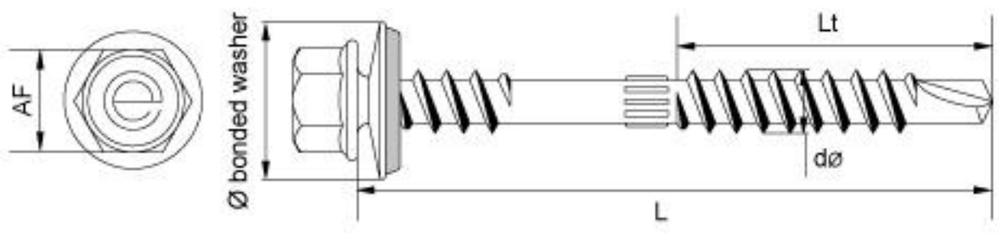
# METAPP®



| Ø Diameter (d) | L (mm) | Lt (mm) | AF (mm) | Clamp Thickness (mm) Min. | Clamp Thickness (mm) Max. | Ø Bonded Washer (mm) |
|---|---|---|---|---|---|---|
| 5.5/6.3 | 85 | 52 | 8 | 35 | 65 | 16 |
| 5.5/6.3 | 110 | 56 | 8 | 55 | 95 | 16 |
| 5.5/6.3 | 130 | 56 | 8 | 75 | 115 | 16 |
| 5.5/6.3 | 150 | 56 | 8 | 95 | 135 | 16 |
| 5.5/6.3 | 170 | 60 | 8 | 115 | 155 | 16 |
| 5.5/6.3 | 190 | 60 | 8 | 135 | 175 | 16 |
| 5.5/6.3 | 210 | 60 | 8 | 155 | 195 | 16 |
| 5.5/6.3 | 240 | 62 | 8 | 180 | 225 | 16 |
| 5.5/6.3 | 260 | 62 | 8 | 200 | 245 | 16 |

## FEATURES

- Material : Carbon Steel
- Hex Washer Head
- ScratchShield™
- Double thread
- **LEVIN®** Drill Point
- Max. Drilling Capacity: (5.5mm) Steel
- Bonded Washer: Galvanized Steel Plate with EPDM Washer



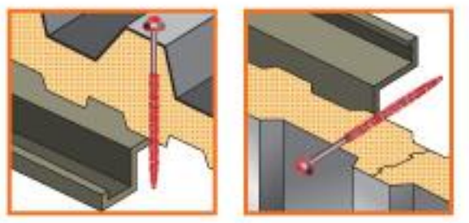

Coating options:

CORROSHIELD FASTENERS

OC SR CS HD

*Please refer to page 4 for more coating information.



CREST FIX TO Z-CHANNEL PURLIN

WALL CLADDING TO Z-CHANNEL PURLIN

Note: Max Clamp Thickness is calculated by allowance of 3 full threads extension beyond the substrates.

CORROSHIELD® FASTENERS

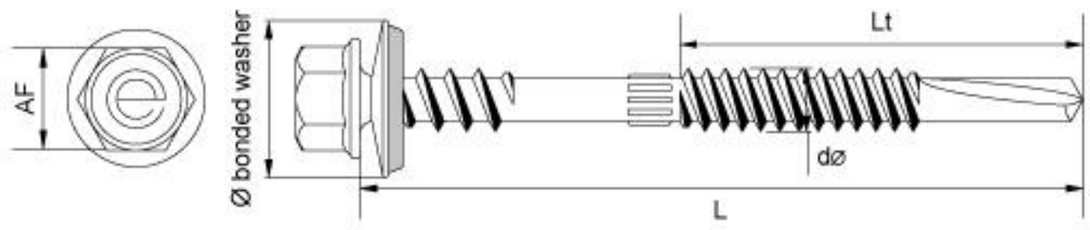
# METAPP®



| Ø Diameter (d) | L (mm) | Lt (mm) | AF (mm) | Clamp Thickness (mm) Min. | Clamp Thickness (mm) Max. | Ø Bonded Washer (mm) |
|---|---|---|---|---|---|---|
| 5.5/6.3 | 70 | 52 | 8 | 20 | 50 | 16 |
| 5.5/6.3 | 90 | 52 | 8 | 40 | 60 | 16 |
| 5.5/6.3 | 110 | 56 | 8 | 55 | 90 | 16 |
| 5.5/6.3 | 130 | 56 | 8 | 75 | 110 | 16 |
| 5.5/6.3 | 150 | 56 | 8 | 95 | 130 | 16 |
| 5.5/6.3 | 160 | 56 | 8 | 105 | 140 | 16 |
| 5.5/6.3 | 180 | 60 | 8 | 120 | 160 | 16 |
| 5.5/6.3 | 190 | 60 | 8 | 130 | 170 | 16 |
| 5.5/6.3 | 200 | 60 | 8 | 140 | 180 | 16 |
| 5.5/6.3 | 250 | 62 | 8 | 190 | 230 | 16 |
| 5.5/6.3 | 280 | 62 | 8 | 220 | 260 | 16 |
| 5.5/6.3 | 330 | 62 | 8 | 265 | 310 | 16 |

## FEATURES

- Material : Carbon Steel
- Hex Washer Head
- ScratchShield™
- Double thread
- **LEVIN®** Reduced Drill Point
- Max. Drilling Capacity: (12.5mm) Steel
- Bonded Washer: Galvanized Steel Plate with EPDM Washer

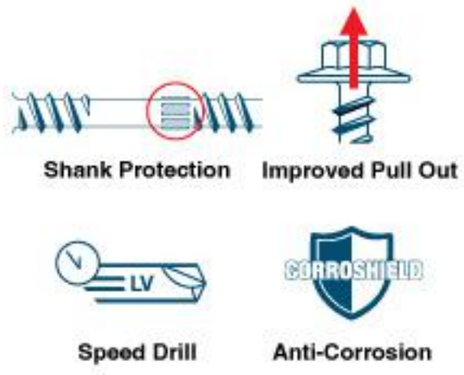


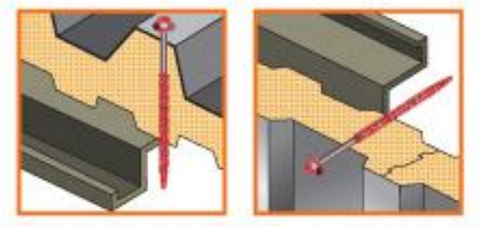

Coating options:

CORROSHIELD

OC SR CS HD

*Please refer to page 4 for more coating information.



CREST FIX TO Z-CHANNEL PURLIN

WALL CLADDING TO Z-CHANNEL PURLIN

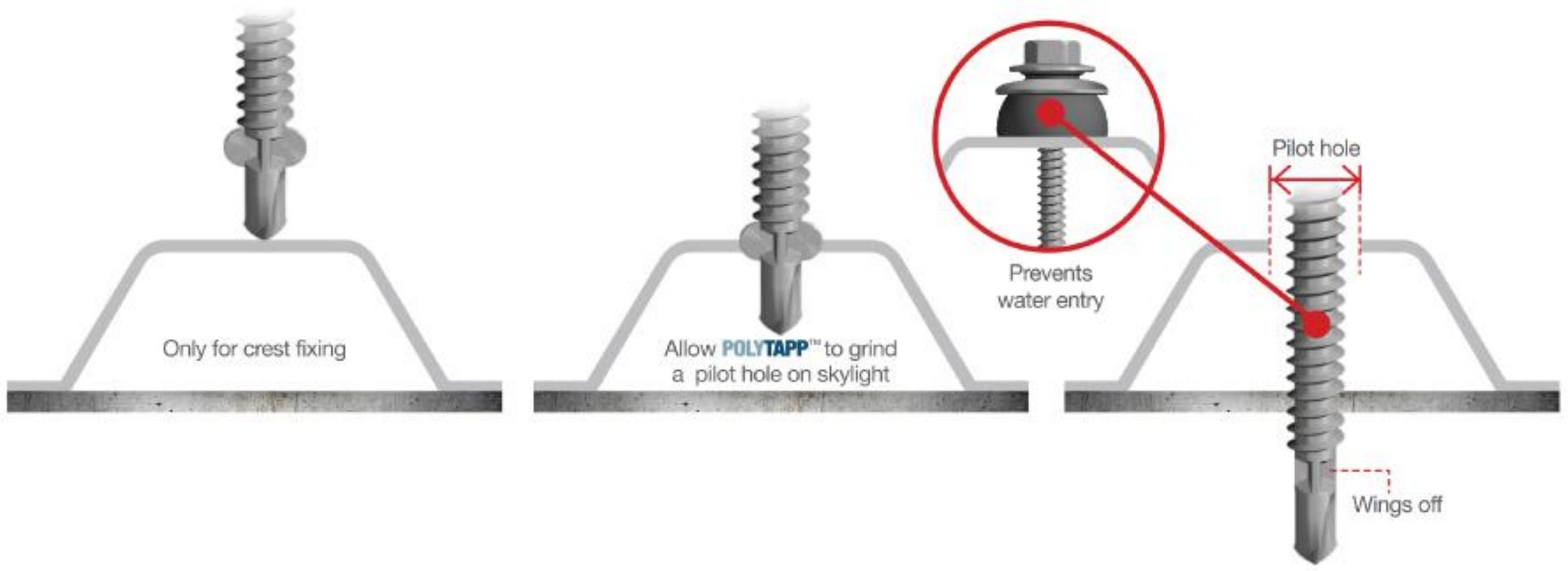
Note: Max Clamp Thickness is calculated by allowance of 3 full threads extension beyond the substrates.

CORROSHIELD® FASTENERS

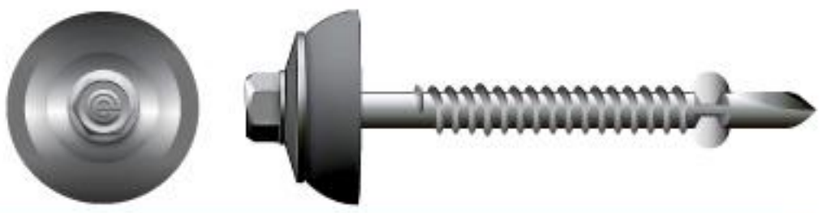


# POLYTAPP® SKYLIGHT FIXING SCREWS

## FIXING SKYLIGHT POLYCARBONATE SHEETS INTO STEEL OR TIMBER




## POLYTAPP®

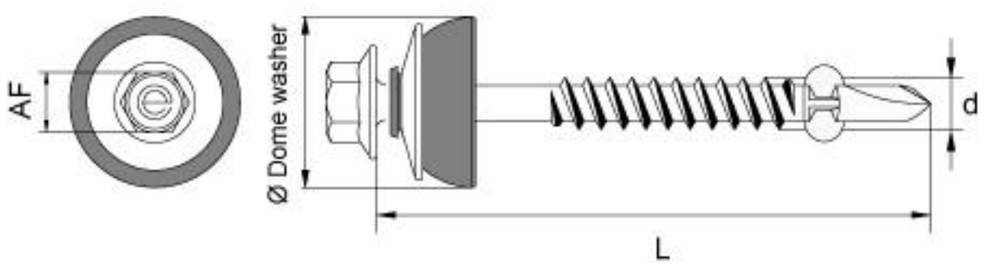


| Ø Diameter (d) | L (mm) | AF (mm) | Ø Dome Washer |
|---|---|---|---|
| 5.5 | 55 | 8 | 25 |
| 5.5 | 65 | 8 | 25 |
| 5.5 | 72 | 8 | 25 |
| 5.5 | 75 | 8 | 25 |
| 5.5 | 80 | 8 | 25 |

### FEATURES

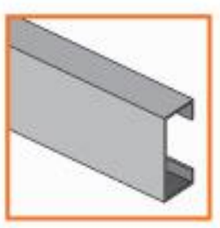
- Material : Carbon Steel
- Hex Washer Flange
- **POLYTAPP®** Pilot Hole Wing
- **LEVIN®** Drill Point
- Drilling Capacity: Max (5.5mm) Steel Min (2.5mm) Steel

**Suitable for Skylight Fixing

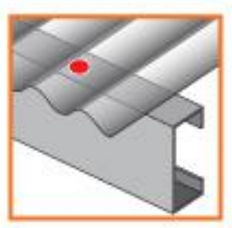





WATER SEALING



FOR STEEL



POLYCARBONATE OR FIBREGLASS SKYLIGHTS




Speed Drill




Anti-Corrosion




Improved Pull Over




Dome Washer




Pilot Hole

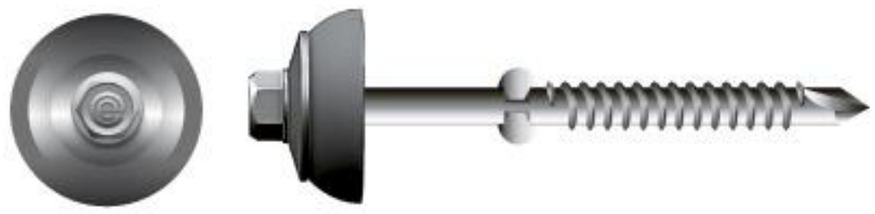
Coating options:




*Please refer to page 4 for more coating information.

CORROSHIELD® FASTENERS

# POLYTAPP®

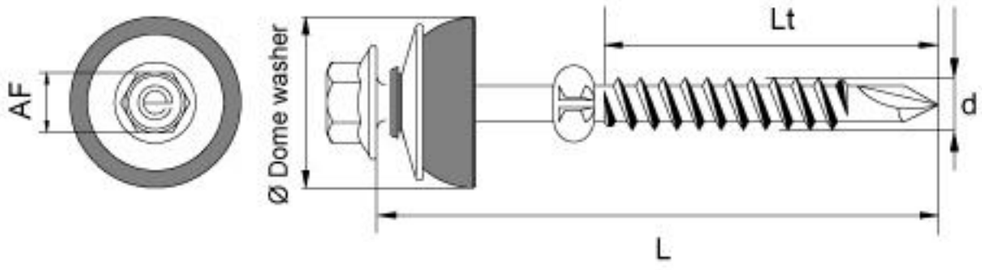


| Ø Diameter (d) | L (mm) | Lt (mm) | AF (mm) | Ø Dome Washer |
|---|---|---|---|---|
| 5.5 | 55 | 40 | 8 | 25 |
| 5.5 | 65 | 45 | 8 | 25 |
| 5.5 | 72 | 50 | 8 | 25 |
| 5.5 | 75 | 50 | 8 | 25 |
| 5.5 | 80 | 50 | 8 | 25 |
| 5.5 | 92 | 50 | 8 | 25 |

## FEATURES

- Material : Carbon Steel
- Hex Washer Flange
- **POLYTAPP®** Pilot Hole Wing
- **S17®** Drill Point
- Drilling Capacity: Min (25mm) Timber

**Suitable for Skylight Fixing

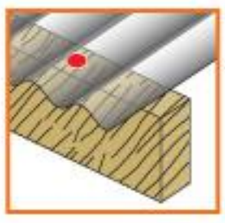





WATER SEALING



FOR TIMBER



POLYCARBONATE OR FIBREGLASS SKYLIGHTS




Speed Drill




Anti-Corrosion




Improved Pull Over




Dome Washer




Pilot Hole

Coating options:



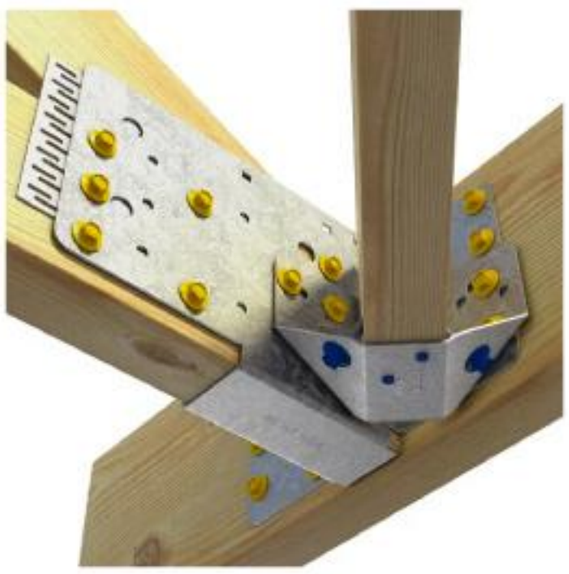

*Please refer to page 4 for more coating information.

CORROSHIELD® FASTENERS



# VALLEY FIXING SCREWS

## FIXING METAL ROOFING SHEETS TO TIMBER SUBSTRATE





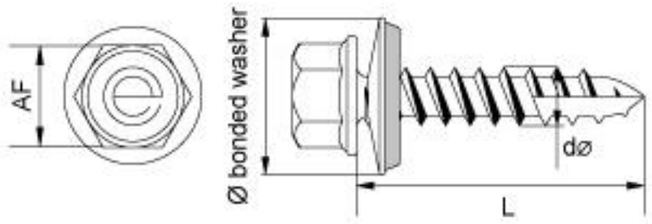
## TIMTAPP®



| Ø Diameter (d) | L (mm) | AF (mm) | Max Clamp Thickness (mm) | Ø Bonded Washer (mm) |
|---|---|---|---|---|
| 6.3 | 25 | 8 | 1 | 16 |
| 6.3 | 35 | 8 | 10 | 16 |
| 6.3 | 45 | 8 | 20 | 16 |
| 6.3 | 65 | 8 | 40 | 16 |
| 6.3 | 75 | 8 | 50 | 16 |

## FEATURES

- Material : Carbon Steel
- Hex Washer Head
- T17™ Drill Point
- Min embedment (25mm) Timber
- Bonded Washer: Galvanized Steel Plate with EPDM Washer
- Painted head option available




Coating options:

CORROSHIELD FASTENERS

OC SR CS HD

*Please refer to page 4 for more coating information.

Anti-Corrosion

RAL Colour Matched



FOR TIMBER

Note: Max Clamp Thickness is calculated by allowance of 3 full threads extension beyond the substrates.

CORROSHIELD® FASTENERS

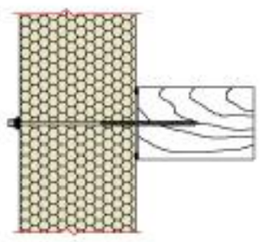


# SANDWICH PANEL SCREWS

## FIXING SANDWICH PANEL INTO TIMBER SUBSTRATE



## TIMTAPP®



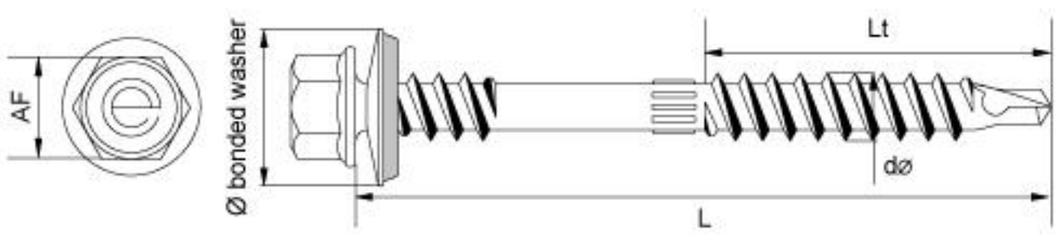
Timber



| Ø Diameter (d) | L (mm) | Lt (mm) | AF (mm) | Clamp Thickness (mm) Min. | Clamp Thickness (mm) Max. | Ø Bonded Washer (mm) |
|---|---|---|---|---|---|---|
| 6.3/7.0 | 100 | 52 | 8 | 55 | 85 | 16 |
| 6.3/7.0 | 120 | 56 | 8 | 70 | 105 | 16 |
| 6.3/7.0 | 140 | 56 | 8 | 90 | 125 | 16 |
| 6.3/7.0 | 160 | 56 | 8 | 110 | 145 | 16 |
| 6.3/7.0 | 190 | 60 | 8 | 135 | 175 | 16 |
| 6.3/7.0 | 210 | 60 | 8 | 155 | 195 | 16 |
| 6.3/7.0 | 240 | 62 | 8 | 185 | 225 | 16 |
| 6.3/7.0 | 260 | 62 | 8 | 205 | 245 | 16 |
| 6.3/7.0 | 320 | 65 | 8 | 260 | 305 | 16 |

## FEATURES

- Material : Carbon Steel
- Hex Washer Head
- Double Thread
- **LEVIN®** Reduced Drill Point
- Min embedment (25mm) Timber
- Bonded Washer: Galvanized Steel Plate with EPDM Washer
- Painted head option available




Coating options:

CORROSHIELD FASTENERS

OC SR CS HD

*Please refer to page 4 for more coating information.



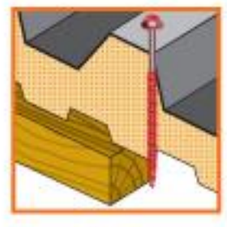
Anti-Corrosion



RAL Colour Matched



Shank Protection



CREST FIX TO TIMBER



SANDWICH PANEL

Note: Max Clamp Thickness is calculated by allowance of 3 full threads extension beyond the substrates.

CORROSHIELD® FASTENERS

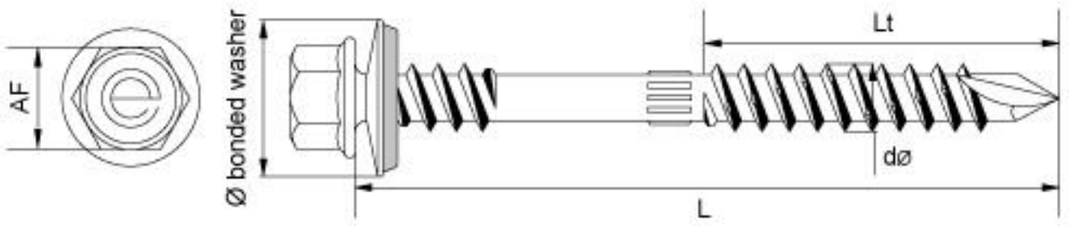
# TIMTAPP®



| Ø Diameter (d) | L (mm) | Lt (mm) | AF (mm) | Clamp Thickness (mm) Min. | Clamp Thickness (mm) Max. | Ø Bonded Washer (mm) |
|---|---|---|---|---|---|---|
| 6.3/7.0 | 100 | 52 | 8 | 55 | 85 | 16 |
| 6.3/7.0 | 120 | 56 | 8 | 70 | 105 | 16 |
| 6.3/7.0 | 140 | 56 | 8 | 90 | 125 | 16 |
| 6.3/7.0 | 160 | 56 | 8 | 110 | 145 | 16 |
| 6.3/7.0 | 190 | 60 | 8 | 135 | 175 | 16 |
| 6.3/7.0 | 210 | 60 | 8 | 155 | 195 | 16 |
| 6.3/7.0 | 240 | 62 | 8 | 185 | 225 | 16 |
| 6.3/7.0 | 260 | 62 | 8 | 205 | 245 | 16 |
| 6.3/7.0 | 320 | 65 | 8 | 260 | 305 | 16 |

## FEATURES

- Material : Carbon Steel
- Hex Washer Head
- Double thread
- ScratchShield™
- **S17™** Drill Point
- Min embedment (25mm) Timber
- Bonded Washer: Galvanized Steel Plate with EPDM Washer
- Painted head option available




Coating options:

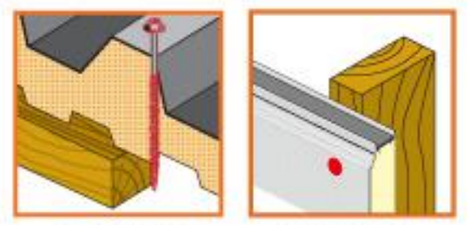
CORROSHIELD FASTENERS

OC SR CS HD

*Please refer to page 4 for more coating information.




**Anti-Corrosion** **RAL Colour Matched** **No Split**



CREST FIX TO TIMBER

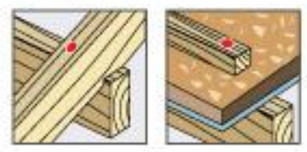
SANDWICH PANEL

Note: Max Clamp Thickness is calculated by allowance of 3 full threads extension beyond the substrates.

CORROSHIELD® FASTENERS

CORROSHIELD®
FASTENERS

CORROSHIELD® High Performance Wood Screws



## TIMTAPP® +Plus GENERAL TIMBER AND DECKING APPLICATIONS

# High Performance Wood Screw

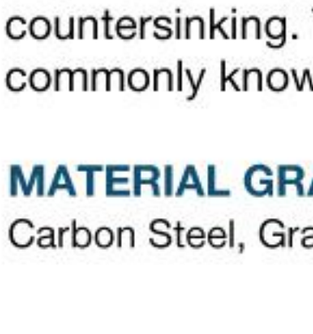
- Most versatile screw available on the market suitable for both manmade and natural woods. Capable of driving into hard woods without pre-drilling.
- For universal use when fastening to wood, chipboard, MDF, plastic, OSB and composites.
- Our high performance wood screws have a double countersunk head to increase strength and assist with countersinking. They have a cross recess head commonly known as a pozi drive.

**MATERIAL GRADE**
Carbon Steel, Grade C1022



Excellent applications for installing chipboard framing.

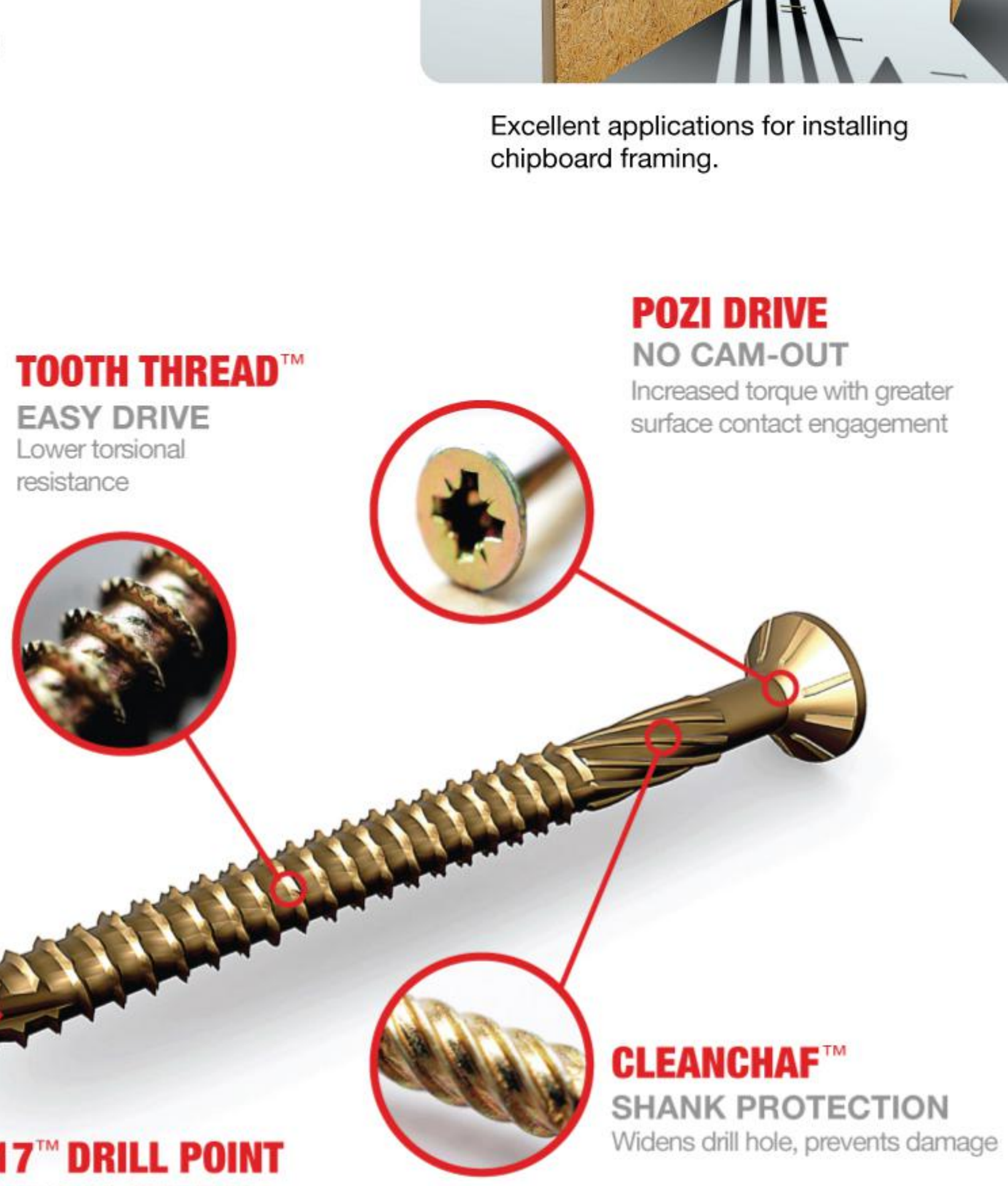
## FEATURES



Head Marking

**TOOTH THREAD™**
**EASY DRIVE**
Lower torsional resistance

**POZI DRIVE**
**NO CAM-OUT**
Increased torque with greater surface contact engagement



**T17™ DRILL POINT**
**SMOOTH CUTTER**
Reduces the risk of wood spiltting during the installation

**CLEANCHAF™**
**SHANK PROTECTION**
Widens drill hole, prevents damage



# TIMTAPP® +Plus

## HIGH PERFORMANCE WOOD SCREWS

## MOST VERSATILE SCREW FOR MANMADE & NATURAL WOODS

### SUITABLE MATERIALS



Hard Wood | Chip Board | Oak Wood | Ply Wood | Soft Wood | OSB | MDF Board

Most versatile screw available on the market suitable for both manmade and natural woods. Capable of driving into hard woods without pre-drilling.

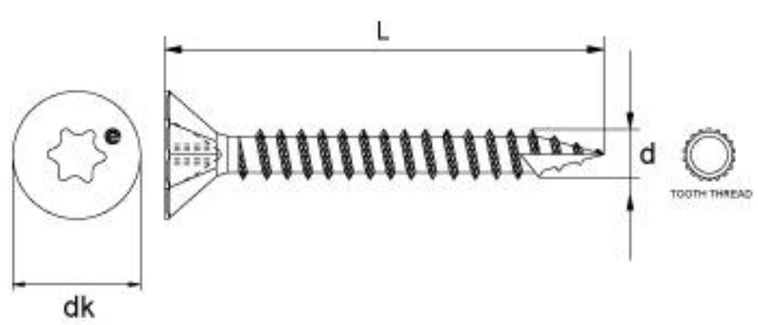
# TIMTAPP® +Plus



| Ø Diameter (d) | L (mm) | dk (mm) |
|---|---|---|
| 3.5 | 16 | 6.8 |
| 3.5 | 20 | 6.8 |
| 3.5 | 25 | 6.8 |
| 3.5 | 30 | 6.8 |
| 4 | 16 | 7.75 |
| 4 | 20 | 7.75 |
| 4 | 25 | 7.75 |
| 4 | 30 | 7.75 |
| 5 | 30 | 9.75 |

## FEATURES

- Material : Carbon Steel
- Countersunk w/6 Ribs (CSK)
- Torx Drive
- Partial Thread with Cleanchaf™
- Tooth Thread™
- TY™ 17 Drill Point
- Min embedment (25mm) Timber

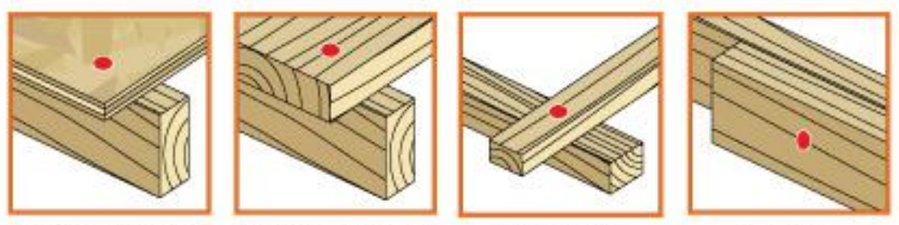



Drive options:






Embedment Ribs | Anti-Corrosion | CleanChaf™ | Tooth Thread™



CHIPBOARD ON WOODEN BEAM | TIMBER RAFTER TO TIMBER PURLIN | SUPPORT LATH ABOVE RAFTER | JOINING WOODEN BEAM

Coating options:

CORROSHIELD FASTENERS

OC | SR | CS | HD

TAPPERMAN FASTENERS

YZ

*Please refer to page 4 for more coating information.

CORROSHIELD® FASTENERS

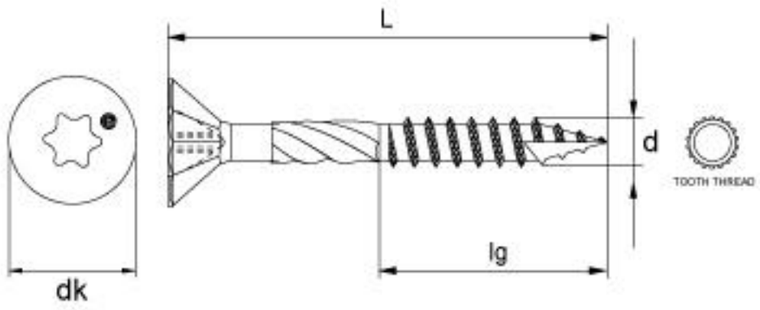
# TIMTAPP® +Plus



| Ø Diameter (d) | L (mm) | lg (mm) | dk (mm) |
|---|---|---|---|
| 4 | 35 | 23 | 7.75 |
| 4 | 40 | 27 | 7.75 |
| 4 | 45 | 30 | 7.75 |
| 4 | 50 | 30 | 7.75 |
| 4 | 60 | 36 | 7.75 |
| 4 | 70 | 42 | 7.75 |
| 4 | 80 | 48 | 7.75 |
| 5 | 40 | 27 | 9.75 |
| 5 | 50 | 30 | 9.75 |
| 5 | 60 | 36 | 9.75 |
| 5 | 70 | 42 | 9.75 |
| 5 | 80 | 48 | 9.75 |
| 5 | 90 | 54 | 9.75 |
| 5 | 100 | 60 | 9.75 |
| 6 | 60 | 36 | 11.75 |
| 6 | 70 | 42 | 11.75 |
| 6 | 80 | 48 | 11.75 |
| 6 | 90 | 54 | 11.75 |
| 6 | 100 | 60 | 11.75 |
| 6 | 120 | 72 | 11.75 |
| 6 | 130 | 75 | 11.75 |
| 6 | 150 | 75 | 11.75 |
| 6 | 180 | 80 | 11.75 |

## FEATURES

- Material : Carbon Steel
- Countersunk w/6 Ribs (CSK)
- Torx Drive
- Partial Thread with Cleanchaf™
- Tooth Thread™
- TY™ 17 Drill Point
- Min embedment (25mm) Timber




Drive options:





CHIPBOARD ON WOODEN BEAM | TIMBER RAFTER TO TIMBER PURLIN | SUPPORT LATH ABOVE RAFTER

Coating options:

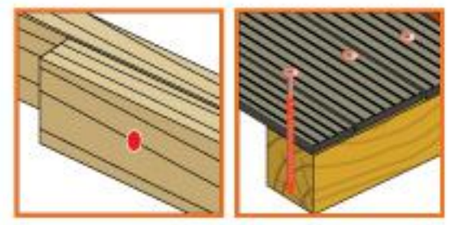
CORROSHIELD FASTENERS — OC, SR, CS, HD

TAPPERMAN FASTENERS — YZ

*Please refer to page 4 for more coating information.




Embedment Ribs | Anti-Corrosion | CleanChaf™ | Tooth Thread™



JOINING WOODEN BEAM | TERRACE BOARD TO TIMBER PURLIN

Note: Max Clamp Thickness is calculated by allowance of 3 full threads extension beyond the substrates.

CORROSHIELD® FASTENERS

CORROSHIELD®
FASTENERS



## TIMTAPP® GRIP STRUCTURAL FRAME APPLICATIONS

# Button Washer Head Wood Screw

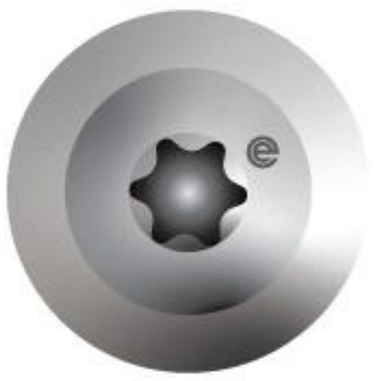
- Fastening of non-pre-drilled or pre-drilled components made of wood, wood-based material and pre-drilled and pre-set steel components to non-pre-drilled or pre-drilled components made of solid wood, solid structural timber (KVH), glued-laminated timber (BSH), laminated veneer lumber (LVL) in non-weathered areas
- Suitable for fastening over-rafter insulation systems
- Ideal solution for fixing rafters onto purlins

**MATERIAL GRADE**
Carbon Steel, Grade C1022



**TIMTAPP®** BWH screws 90° T-Connection between two CLT walls.

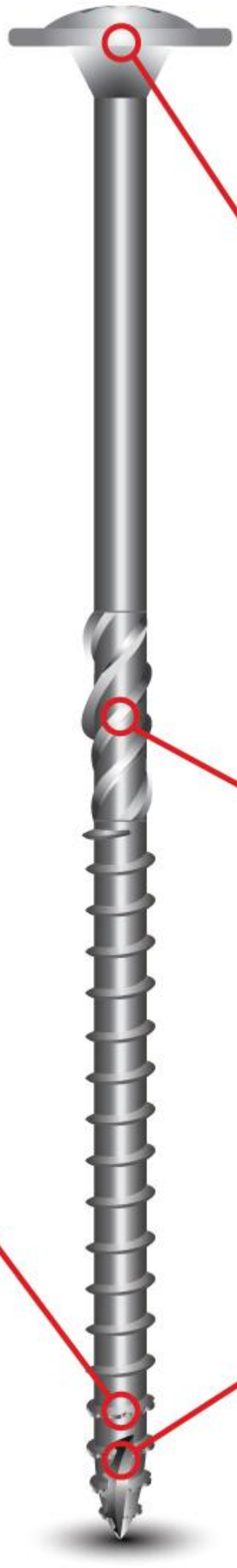
## FEATURES

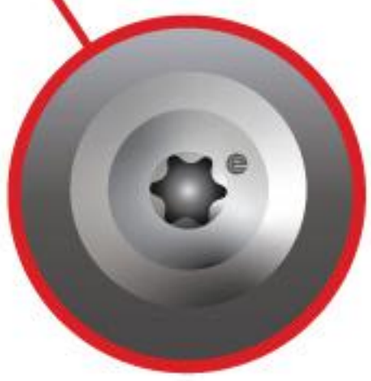


Head Marking



**TOOTH THREAD™**
**EASY DRIVE**
Lower torsional resistance





**TORX DRIVE**
**NO CAM-OUT**
No slippages, improved torque



**CLEANCHAF™**
**SHANK PROTECTION**
Clears away debris, protects screw shank coating from scratches



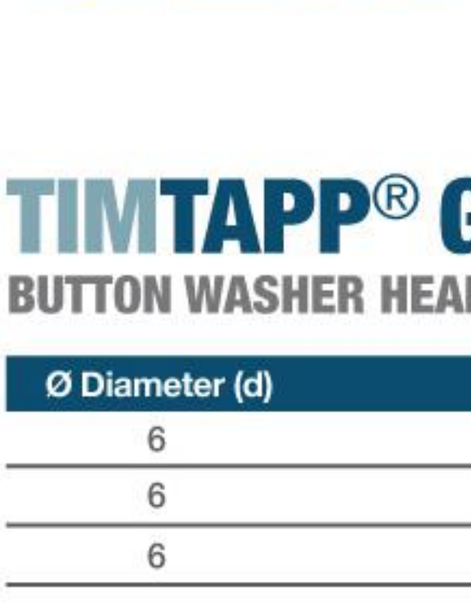
**T17™ DRILL POINT**
**SMOOTH CUTTER**
Reduces the risk of wood spiltting during the installation

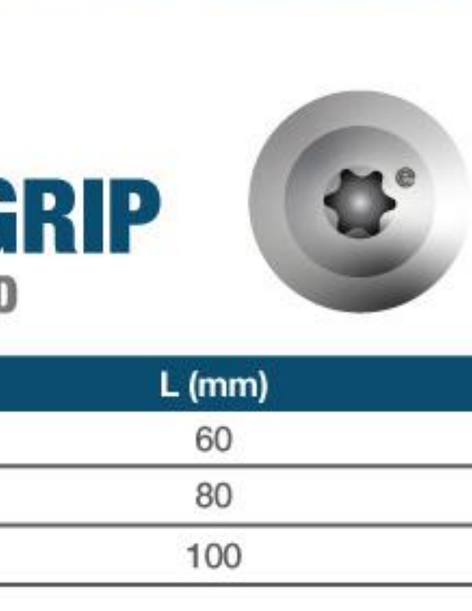


# TIMTAPP® GRIP / STRUCTURAL SCREWS

## FIXING LIGHT & HEAVY TIMBER CONSTRUCTIONS TO TIMBER SUBSTRATE







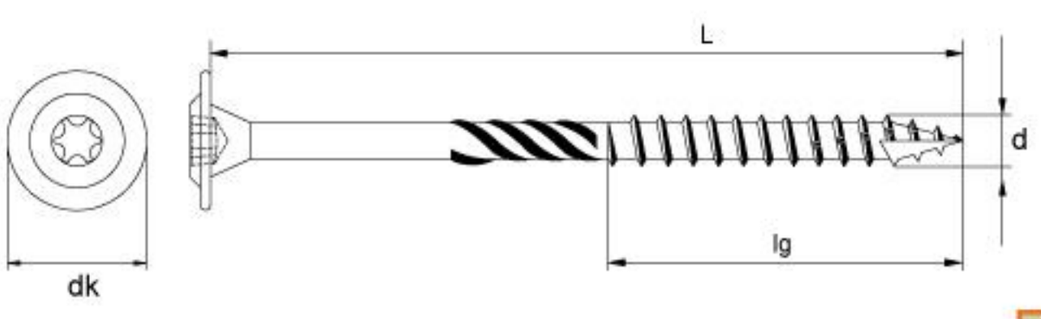
## TIMTAPP® GRIP
### BUTTON WASHER HEAD



| Ø Diameter (d) | L (mm) | lg (mm) | dk (mm) |
|---|---|---|---|
| 6 | 60 | 42 | 14 |
| 6 | 80 | 50 | 14 |
| 6 | 100 | 50 | 14 |

## FEATURES

- Material : Carbon Steel
- Button Washer Head (BWH)
- Torx Drive
- Partial Thread with Cleanchaf™
- Groove Thread
- T17™ Drill Point
- Min embedment (25mm) Timber



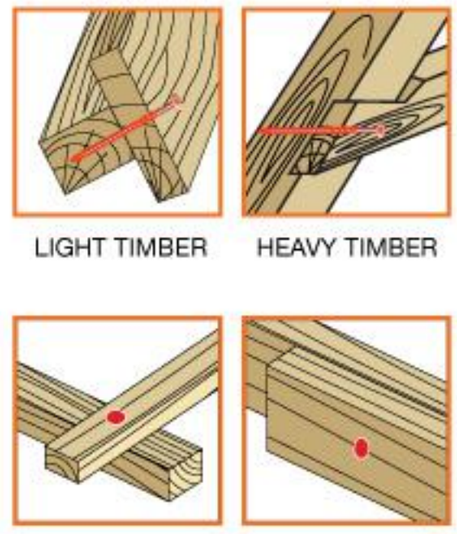

Coating options:

CORROSHIELD FASTENERS

OC SR CS HD

*Please refer to page 4 for more coating information.




CORROSHIELD® FASTENERS

# TIMTAPP® GRIP

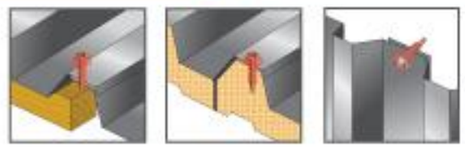
## BUTTON WASHER HEAD

| Ø Diameter (d) | L (mm) | lg (mm) | dk (mm) |
|---|---|---|---|
| 6 | 120 | 50 | 14 |
| 6 | 140 | 70 | 14 |
| 6 | 160 | 70 | 14 |
| 6 | 180 | 70 | 14 |
| 6 | 200 | 70 | 14 |
| 6 | 220 | 70 | 14 |
| 6 | 240 | 70 | 14 |
| 6 | 260 | 70 | 14 |
| 6 | 280 | 70 | 14 |
| 6 | 300 | 70 | 14 |
| 8 | 80 | 50 | 22 |
| 8 | 100 | 50 | 22 |
| 8 | 120 | 80 | 22 |
| 8 | 140 | 80 | 22 |
| 8 | 150 | 80 | 22 |
| 8 | 160 | 80 | 22 |
| 8 | 170 | 80 | 22 |
| 8 | 180 | 80 | 22 |
| 8 | 200 | 80 | 22 |
| 8 | 220 | 80 | 22 |
| 8 | 240 | 80 | 22 |
| 8 | 260 | 80 | 22 |
| 8 | 280 | 80 | 22 |
| 8 | 300 | 80 | 22 |
| 8 | 320 | 80 | 22 |
| 8 | 340 | 80 | 22 |
| 8 | 360 | 80 | 22 |
| 8 | 380 | 80 | 22 |
| 8 | 400 | 80 | 22 |
| 10 | 160 | 80 | 25 |
| 10 | 170 | 80 | 25 |
| 10 | 180 | 80 | 25 |
| 10 | 200 | 80 | 25 |
| 10 | 220 | 80 | 25 |
| 10 | 240 | 80 | 25 |
| 10 | 260 | 80 | 25 |
| 10 | 280 | 80 | 25 |
| 10 | 300 | 80 | 25 |
| 10 | 320 | 80 | 25 |
| 10 | 340 | 80 | 25 |
| 10 | 360 | 80 | 25 |
| 10 | 380 | 80 | 25 |
| 10 | 380 | 80 | 25 |

CORROSHIELD®
FASTENERS

# TAPPERMAN®





## METAPP® OVERLAPPING STITCHING SCREWS

# FLAT & CORRUGATED METAL SHEET TO TIMBER SUBSTRATE

- Allows you to drill through sheet metal up to 2mm thick in a very short time
- ALU Cup bonded washer provides sealing and protects connections against corrosion and weather conditions.
- RAL color paint coating ensures a durable and intense color matched to the coating roof, at the same time demonstrating extraordinary resistance to UV radiation and weather conditions.





### MATERIAL GRADE

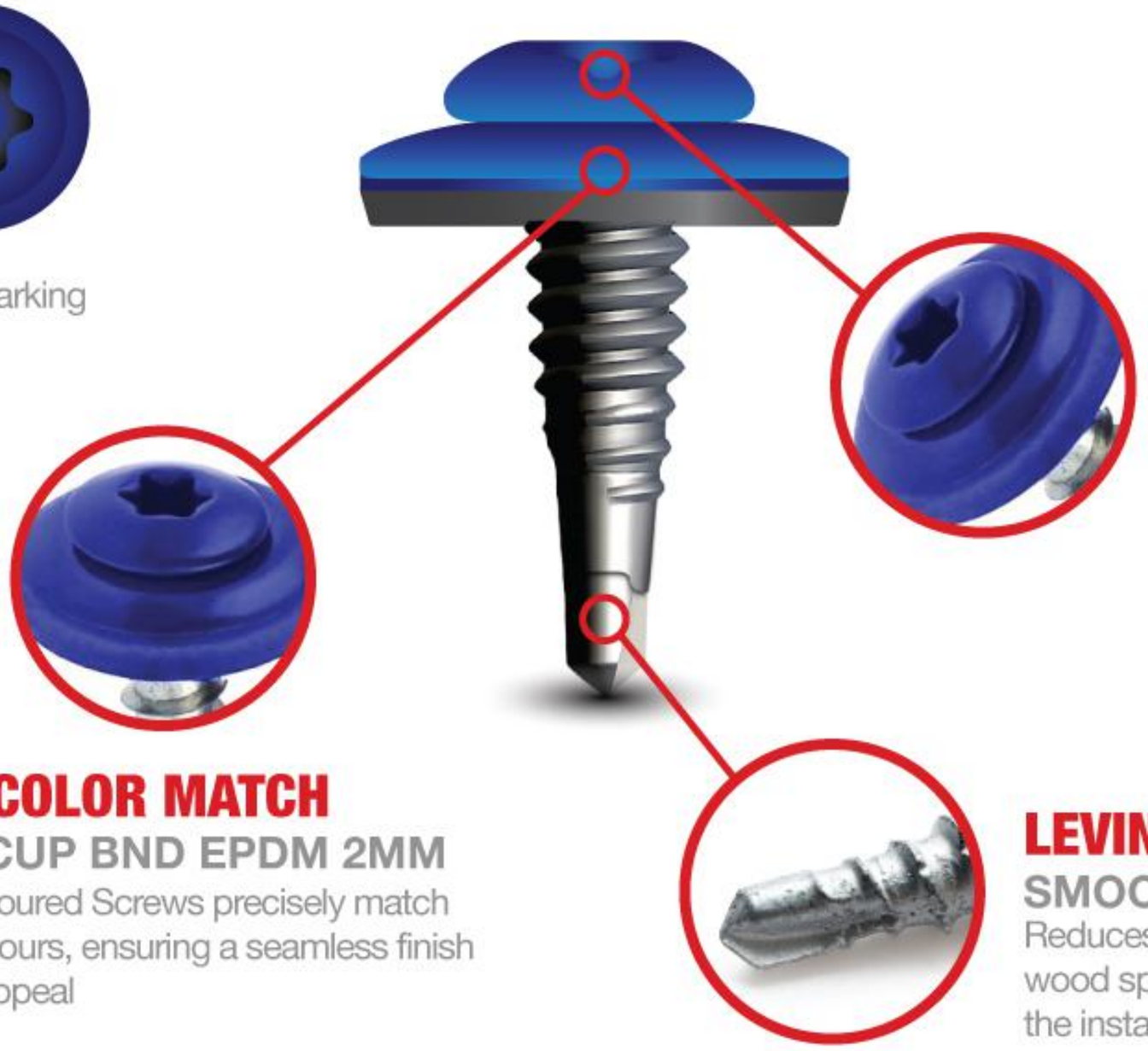
Carbon Steel, Grade C1022




# FEATURES



Head Marking



## RAISED COUNTERSUNK HEAD

### AESTHETIC APPEAL

Modern shape appearance adapts to the surface of the fastened sheet metal

## RAL COLOR MATCH

### ALU CUP BND EPDM 2MM

Our Coloured Screws precisely match RAL colours, ensuring a seamless finish visual appeal

## LEVIN® REDUCED POINT

### SMOOTH CUTTER

Reduces the risk of wood spiltting during the installation



TAPPERMAN®

## ECONOMICAL SCREWS FOR RETAIL

# TAPPERMAN®

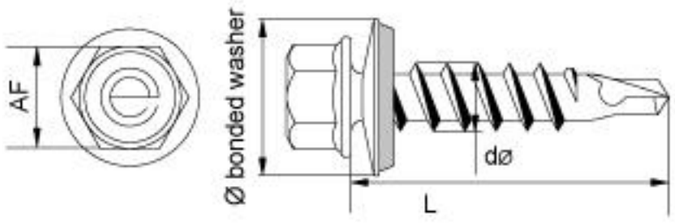
### FIXING PROFILED METAL SHEETS TO TIMBER SUBSTRATE



| Ø Diameter (d) | L (mm) | AF (mm) | Clamp Thickness (mm) | Ø Bonded Washer |
|---|---|---|---|---|
| 4.8 | 20 | 8 | - | 14 |
| 4.8 | 35 | 8 | 10 | 14 |
| 4.8 | 50 | 8 | 25 | 14 |
| 4.8 | 80 | 8 | 55 | 14 |

## FEATURES

- Material : Carbon Steel
- Hex Washer Head
- Full Thread
- **LEVIN®** Reduced Drill Point
- Max. Drilling Capacity: Max (2mm) Steel




Coating options:

CZ YZ



Tight Stitch




Anti-Corrosion



RAL Colour Matched



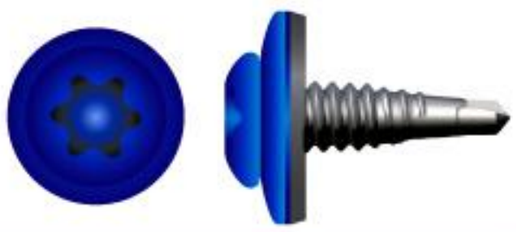
FOR TIMBER



CORRUGATED

# TAPPERMAN®

### FLAT & CORRUGATED METAL SHEETS TO TIMBER SUBSTRATE (OVERLAPPING STITCH)



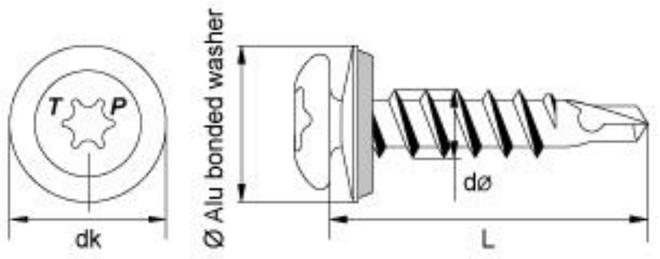
| Ø Diameter (d) | L (mm) | dk (mm) | Clamp Thickness (mm) | Ø ALU Bonded Washer |
|---|---|---|---|---|
| 4.8 | 20 | Torx 20 | - | 14 |
| 4.8 | 28 | Torx 20 | 3 | 14 |
| 4.8 | 35 | Torx 20 | 10 | 14 |
| 4.8 | 60 | Torx 20 | 35 | 14 |
| 4.8 | 80 | Torx 20 | 55 | 14 |

## FEATURES

- Material : Carbon Steel
- Raised Countersunk Head
- Torx Drive
- Full Thread
- **LEVIN®** Reduced Drill Point
- Max. Drilling Capacity: Max (2mm) Steel

Coating options:

CZ YZ






Tight Stitch




Anti-Corrosion



RAL Colour Matched



FOR TIMBER



SANDWICH PANEL



STITCHING

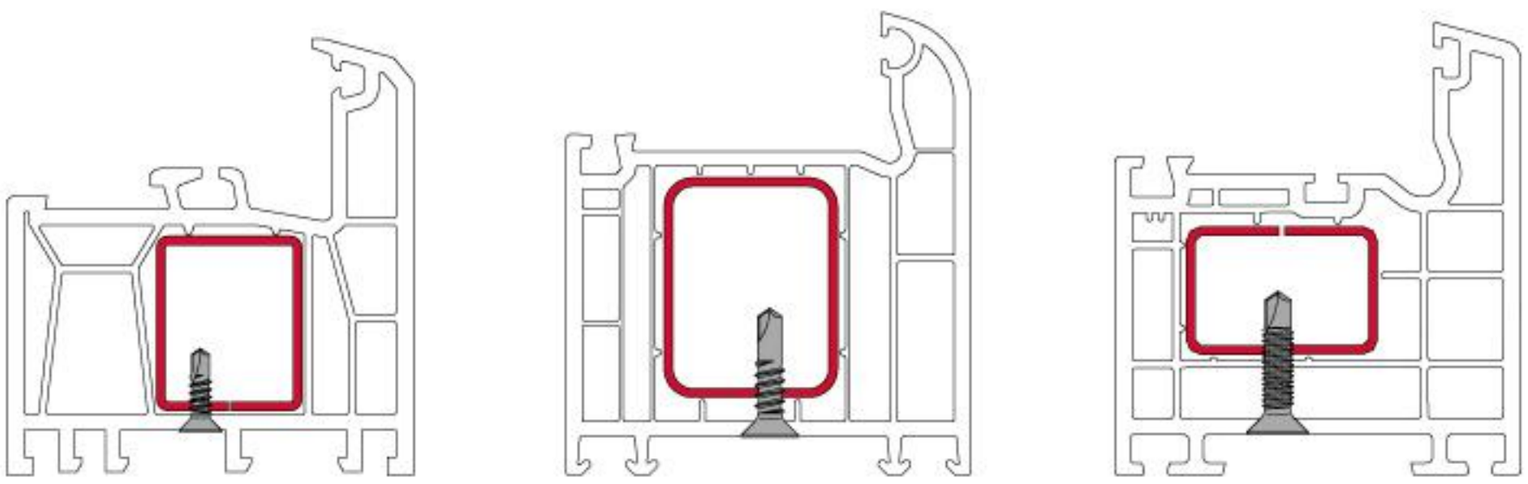
CORROSHIELD® FASTENERS



# WINDOW PRODUCTION SCREWS



## APPLICATION GUIDE



For fixing reinforced steel up to 3.0 mm in PVC windows with tight fitting reinforcement



## WINTAPP®



| Ø Diameter (d) | L (mm) | dk (mm) |
|---|---|---|
| 3.9 | 10 | 7.5 |
| 3.9 | 13 | 7.5 |
| 3.9 | 16 | 7.5 |
| 3.9 | 19 | 7.5 |

## FEATURES

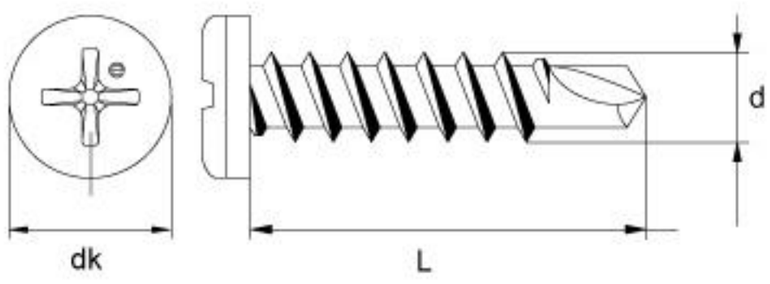
- Material : Carbon Steel
- Pan Head
- Phillips Drive
- Full Thread
- **LEVIN®** Drill Point
- Options : Automated Assembly
  Manual Assembly

Coating options:

CORROSHIELD FASTENERS — OC

TAPPERMAN FASTENERS — CZ

*Please refer to page 4 for more coating information.




Deep Drive

Anti-Corrosion

RAL Colour Matched



FRAME ASSEMBLY

CORROSHIELD® FASTENERS

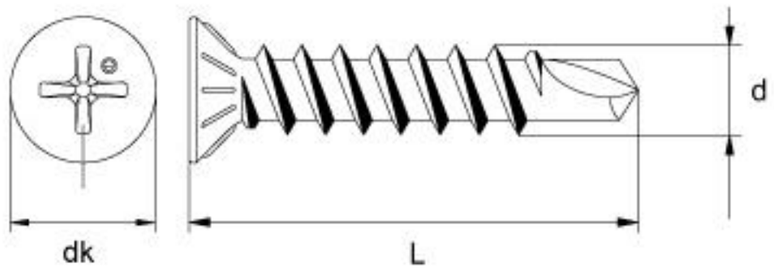
# WINTAPP®



| Ø Diameter (d) | L (mm) | dk (mm) |
|---|---|---|
| 3.9 | 10 | 7.5 |
| 3.9 | 13 | 7.5 |
| 3.9 | 16 | 7.5 |
| 3.9 | 19 | 7.5 |

## FEATURES

- Material : Carbon Steel
- Countersunk Head
- Phillips Drive
- 6 Underhead Ribs
- Full Thread
- **LEVIN®** Drill Point
- Options : Automated Assembly
  Manual Assembly




Coating options:

CORROSHIELD FASTENERS — OC

TAPPERMAN FASTENERS — CZ

*Please refer to page 4 for more coating information.


Deep Drive


6 Ribs Underhead



Anti-Corrosion


RAL Colour Matched


FRAME ASSEMBLY

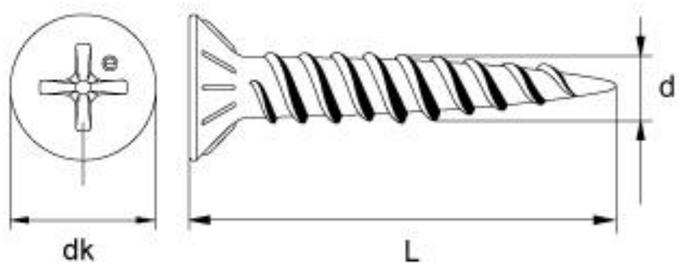
# WINTAPP®



| Ø Diameter (d) | L (mm) | dk (mm) |
|---|---|---|
| 4.2 | 19 | 6.75 |
| 4.2 | 22 | 6.75 |
| 4.2 | 25 | 6.75 |
| 4.2 | 32 | 6.75 |
| 4.2 | 38 | 6.75 |
| 4.2 | 45 | 6.75 |
| 4.2 | 50 | 6.75 |
| 4.2 | 55 | 6.75 |

## FEATURES

- Material : Carbon Steel
- Countersunk Head
- Phillips Drive
- 6 Underhead Ribs
- Full Thread
- **Needle** Drill Point
- Options : Automated Assembly
  Manual Assembly




Coating options:

CORROSHIELD FASTENERS — OC

TAPPERMAN FASTENERS — CZ

*Please refer to page 4 for more coating information.


Deep Drive


6 Ribs Underhead



Anti-Corrosion


RAL Colour Matched


FRAME ASSEMBLY

CORROSHIELD® FASTENERS

CORROSHIELD®
FASTENERS



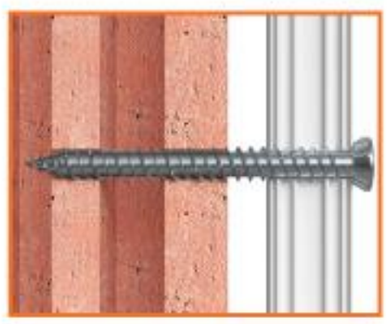
## WINTAPP® WINDOW INSTALLATION SCREWS

# Window or Door Frame Installation into Concrete

- Stress free, durable fixing of the frame.
  Grooved thread prevents frames from being pulled
- Cost-effective screw installation without plugs
- Fast series installation due to small drill hole diameter of 6 mm.
- Recommended for installation of window or door frames made from PVC and aluminium



### MATERIAL GRADE
Carbon Steel, Grade C1022



PERFORATED BRICK



FOR CONCRETE

## FEATURES



Head Marking



### UNDERCUT FLAT HEAD
**UNDER HEAD 6 RIBS**
Flush Finish, stronger holding power





### GROOVED THREAD
**EASY DRIVE**
Enhanced joint integrity, vibration resistance & cost-effectiveness



### GIMLET POINT
**REDUCED SWARF FASTENING**
Penetrates sheet metal effectively, no thread cutting provision is needed



# WINDOW INSTALLATION SCREWS

## WINDOW OR DOOR FRAME INSTALLATION SCREW INTO CONCRETE

### INSTALLATION GUIDE: PRE-DRILL REQUIRED FOR CONCRETE SUBSTRATE




**WINTAPP®**
**UNDERCUT FLAT HEAD**



| Ø Diameter (d) | L (mm) | dk (mm) |
|---|---|---|
| 7.5 | 42 | 11.5 |
| 7.5 | 52 | 11.5 |
| 7.5 | 62 | 11.5 |
| 7.5 | 72 | 11.5 |
| 7.5 | 82 | 11.5 |
| 7.5 | 92 | 11.5 |
| 7.5 | 102 | 11.5 |
| 7.5 | 112 | 11.5 |
| 7.5 | 122 | 11.5 |
| 7.5 | 132 | 11.5 |
| 7.5 | 152 | 11.5 |
| 7.5 | 182 | 11.5 |
| 7.5 | 202 | 11.5 |
| 7.5 | 212 | 11.5 |
| 7.5 | 252 | 11.5 |
| 7.5 | 302 | 11.5 |

## FEATURES

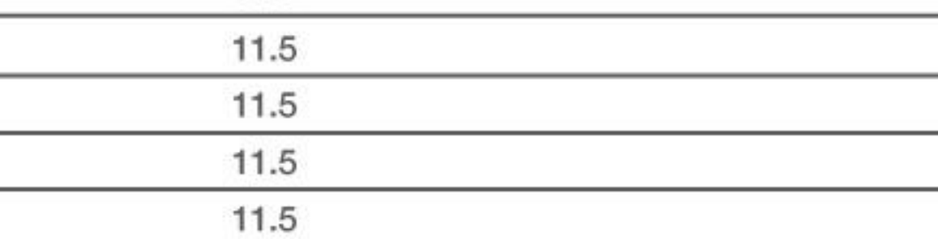
- Material : Carbon Steel
- Undercut Flat Head (UFH)
- Torx Drive
- 6 Underhead Ribs
- Full Thread + Grooved
- **Gimlet** Drill Point

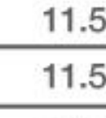
Coating options:

CORROSHIELD FASTENERS — e OC

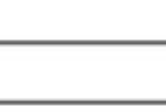
TAPPERMAN FASTENERS — e CZ

*Please refer to page 4 for more coating information.



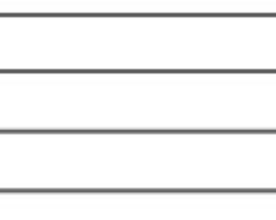


Deep Drive

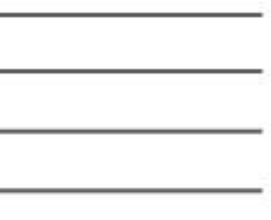

6 Ribs Underhead



Anti-Corrosion


RAL Colour Matched


PERFORATED BRICK


FOR CONCRETE

CORROSHIELD® FASTENERS

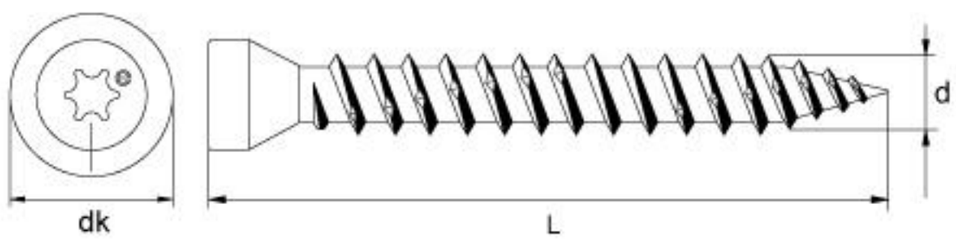
# WINTAPP®
## CYLINDRICAL HEAD



| Ø Diameter (d) | L (mm) | dk (mm) |
|---|---|---|
| 7.5 | 42 | 8 |
| 7.5 | 52 | 8 |
| 7.5 | 62 | 8 |
| 7.5 | 72 | 8 |
| 7.5 | 82 | 8 |
| 7.5 | 92 | 8 |
| 7.5 | 102 | 8 |
| 7.5 | 112 | 8 |
| 7.5 | 122 | 8 |
| 7.5 | 132 | 8 |
| 7.5 | 152 | 8 |
| 7.5 | 182 | 8 |
| 7.5 | 202 | 8 |
| 7.5 | 212 | 8 |
| 7.5 | 252 | 8 |
| 7.5 | 302 | 8 |

## FEATURES

- Material : Carbon Steel
- Cylindrical Head
- Torx Drive
- Full Thread + Grooved
- **Glimlet** Drill Point




Coating options:

CORROSHIELD FASTENERS — OC

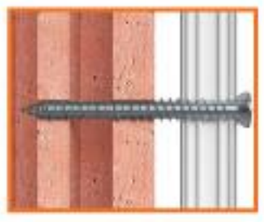
TAPPERMAN FASTENERS — CZ

*Please refer to page 4 for more coating information.

Deep Drive

Anti-Corrosion

RAL Colour Matched



PERFORATED BRICK



FOR CONCRETE

CORROSHIELD® FASTENERS



ACCESSORIES

# MAGNETIC SOCKETS DRIVE BITS

| Size | L (mm) |
|---|---|
| AF:8 | 45 |
| AF:8 | 65 |

**Features**

- Magnetic Hex Socket
- Material : 6150 Magnetic steel
- Sand blast finish




| Size | L (mm) |
|---|---|
| #2 | 25 |
| #3 | 25 |

**Features**

- Magnetic Phillips Bit
- Material : S2
- Magnetic Steel Integrated




| Size | L (mm) |
|---|---|
| T25 | 25 |
| T30 | 25 |

**Features**

- Magnetic Torx Bit
- Material : S2
- Magnetic Steel Integrated




| Size | L (mm) |
|---|---|
| SD2 | 25 |
| SD3 | 25 |

**Features**

- Magnetic Square Drive Bit
- Material : S2
- Magnetic Steel Integrated




| Size | L (mm) |
|---|---|
| PZ2 | 25 |
| PZ3 | 25 |

**Features**

- Magnetic Pozi Drive Bit
- Material : S2
- Magnetic Steel Integrated




CORROSHIELD®
FASTENERS

| Size | Diameter Ø |
|---|---|
| M4.8 | Ø14mm |
| M4.8 | Ø16mm |
| M5.5 | Ø16mm |
| M5.5 | Ø19mm |
| M5.5 | Ø16mm |
| M6.3 | Ø19mm |
| M6.3 | Ø22mm |
| M6.3 | Ø29mm |

**Features**

- Bonded Washers
- Material options :
  Aluminium
  Galvanized steel
  Stainless Steel
  Black or Grey EPDM



| Size | L (mm) |
|---|---|
| AF:8 | 16 |
| AF:8 | 19 |

**Features**

- Colour Screw Caps
- UV-resistant Polyethylene (PE)
- Applicable only to fasteners with HWF
- *Follow Colour Chart



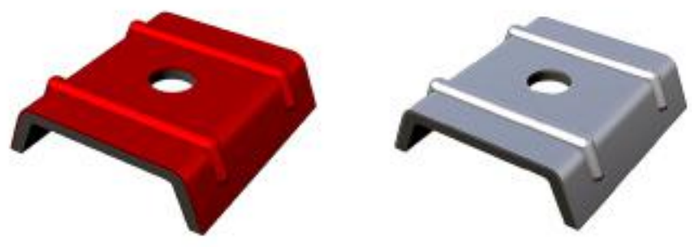
| Size | Diameter Ø |
|---|---|
| M5.5 | Ø25mm |
| M6.3 | Ø25mm |

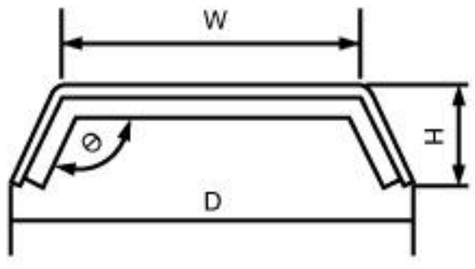
**Features**

- Dome Washer w/ Plate
- Material options:
  - Galvanized Steel, Aluminium or Stainless Steel
- Black or Grey Dome EPDM Washer



| Diameter Ø | L (mm) | W (mm) | H (mm) | D (mm) | Θ (º) |
|---|---|---|---|---|---|
| 6.7 | 37mm | 22mm | 8.6mm | 36.1mm | 48.7° |
| 7.0 | 48mm | 41 | 11mm | 55mm | 32° |
| 7.0 | 48mm | 26mm | 11mm | 48mm | 27° |
| 7.0 | 48mm | 41mm | 10.5mm | 53mm | 27° |
| 7.0 | 48mm | 34mm | 9mm | 47mm | 46° |
| 7.8 | 51mm | 39.5mm | 16mm | 52.5mm | 24.5° |
| 8.0 | 40mm | 29mm | 8mm | 49.3mm | 25° |






**Features**

- Cyclonic Washer / Storm Washer / Saddle Washer
- Material options:
  - Galvanized Steel, Aluminium or Stainless Steel
- Provides weatherproof seal whilst reducing risk of crown splaying or crushing

CORROSHIELD®
FASTENERS

# Technical Data Sheet

CORROSHIELD® FASTENERS

## TECHNICAL DATA SHEET — METAPP® #14 (M6.3) - 20 X L

### APPLICATION
For stitching - steel sheet to sheet overlapping

### SIZE: #14 (M6.3)
TPI: 20

### HEAD TYPE:
8mm Hex Washer Head

### REFERENCE STANDARD
AS 3566.1, Modified
ISO 10666, Modified
BS 5247

### MATERIAL GRADE
Carbon Steel, Grade C1022



### STEEL SUBSTRATE PARAMETERS

**LEVIN®** Point Reduced, LVR: For Steel, Max. 1.0mm thick

**NOTE:** Drill-through on Steel substrate with Hardness, ranging from 110HV - 175HV.

### SHEAR PROPERTIES

| Fastener Diameter (mm) | Ø6.3 X L |
|---|---|
| Ultimate Shear Load (kN) | 13.4 |

**NOTE:** Shear test done using Universal Testing Machine at a speed rate of 3mm/min until failure.

### TENSILE PROPERTIES

| Fastener Diameter (mm) | Ø6.3 X L |
|---|---|
| Ultimate Tensile Load (kN) | 24.8 |

**NOTE:** Tensile test done using Universal Testing Machine at a speed rate of 3mm/min until failure.

### TORSIONAL PROPERTIES

| Fastener Diameter (mm) | Ø6.3 X L |
|---|---|
| Ultimate Breaking Torque Load (Nm) | 22.5 |

**NOTE:** Torsional test done using Torque Wrench with a range up to 600 lb.in (~67.8Nm).

### PULL OVER PROPERTIES

| Ultimate Pull Over Load (kN) | Nominal Steel Thickness (mm) | Ultimate Pull Over Load (kN) |
|---|---|---|
| Ø16 Washer | 0.5 | 4.8 |
| | 0.7 | 5.2 |
| | 1.0 | 6.0 |

**NOTE:** Pull Over Test done in accordance with the principle of BS 5247.

Values above resulted from tests conducted on screws installed at the valley of a profile steel sheet.

**ULTIMATE SHEAR STRENGTH**



**ULTIMATE TENSILE STRENGTH**



**ULTIMATE BREAKING TORQUE**



**ULTIMATE PULL OVER STRENGTH**



TDS MT 14-20 HWH v0

ENGINEERING EDGE (S) PTE LTD
31, Woodlands Close, Unit 08-01, Woodlands Horizon, Singapore 737855
T: +65 6552 4680 F: +65 6552 7554 E: info@engineering-edge.com

# Fastener Test Report

CORROSHIELD® FASTENERS

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31, Woodlands Close, Unit 08-01, Woodlands Horizon, Singapore 737855 T +65 6552 4680 F +65 6552 7554 W www.engineering-edge.com M info@engineering-edge.com

## FASTENER TEST REPORT

**F3.1 - ISO 16228**

| | | | | | |
|---|---|---|---|---|---|
| Part Number | : | CO10MT19004 | | | |
| Description/s | : | 10MT 12-14 X 55MM, HWF, DS, LV, 12DT/14 GRY EPDM 2.5MM | | | |
| Surface Treatment | : | Series 10 | | | |
| Customer | : | XYZ Pte Ltd | Report No. | : | IC202203087 |
| P/O No. | : | PO 101129 | Date of Report | : | 11.03.2022 |
| S/C No. | : | SC201297 | Batch No. (Or Trace Lot No.) | : | PO 101129 |
| Invoice No. | : | IN102567 | Quantity Shipped | : | 500,000 pcs |

**MATERIAL PROPERTIES**

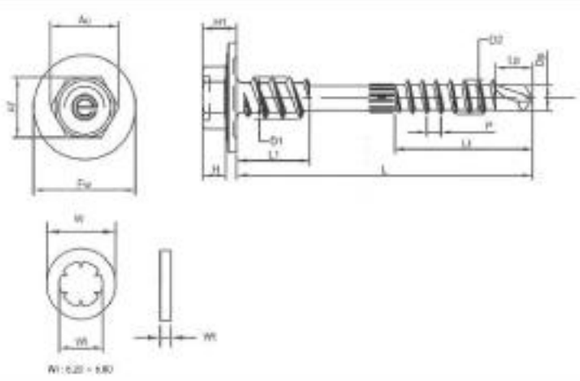
Reference Standard: AISI 1022 — Test Facility: Supplier (S)

Material Grade: AISI 1022 — Mill Cert No.: 1006098B0331

Heat Code No. (HCN): VB251

| Chemical Composition (%) | C | Mn | P | S | Si | Cr | Ni | Cu | Al | N | Ti |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specification | 0.17 -0.23 | 0.70 - 1.00 | Max 0.04 | Max 0.05 | - | - | - | - | - | - | - |
| Result | 0.21 | 0.81 | 0.011 | 0.009 | 0.04 | 0.04 | 0.03 | 0.07 | 0.034 | 0.0061 | 0.001 |

Technical Diagram



**DIMENSIONAL PROPERTIES**

Reference Standard: AS 3566.1: 2002 Modified — Test Facility: Manufacturer (M)

| Specification | | Qty of Tested Parts | Equipment Used * | Unit | Specification Min. | Specification Max. | Result Min. | Result Max. | Result Mean | Note |
|---|---|---|---|---|---|---|---|---|---|---|
| FASTENER | | | | | | | | | | |
| Hex Height | H | 5 | VC | mm | 4.05 | 3.70 | 3.98 | 3.70 | 3.84 | |
| Head Height | H1 | 5 | VC | mm | 6.02 | 5.18 | 5.88 | 5.85 | 5.87 | |
| Across Flats | Af | 5 | VC | mm | 7.92 | 7.78 | 7.84 | 7.80 | 7.82 | |
| Across Corners | Ac | 5 | VC | mm | - | 8.64 | 8.73 | 8.70 | 8.72 | |
| Hex Washer Ø | Fw | 5 | VC | mm | 14.80 | 13.97 | 14.29 | 14.08 | 14.19 | |
| Upper Threads Major Ø | D1 | 5 | VC | mm | 6.25 | 6.10 | 6.25 | 6.16 | 6.21 | |
| Lower Threads Major Ø | D2 | 5 | VC | mm | 5.46 | 5.33 | 5.45 | 5.37 | 5.41 | |
| Pitch | P | 5 | PJ | mm | 1.92 | 1.70 | 1.82 | 1.80 | 1.81 | |
| Upper Thread Length | L1 | 5 | VC | mm | 9.00 | 7.60 | 7.96 | 7.73 | 7.85 | |
| Lower Thread Length | Lt | 5 | VC | mm | 31.00 | 29.00 | 29.66 | 29.48 | 29.57 | |
| Drill Point Diameter | Dp | 5 | VC | mm | 4.75 | 4.65 | 4.73 | 4.67 | 4.70 | |
| Flute Length | Lp | 5 | VC | mm | 8.30 | 7.50 | 7.68 | 7.58 | 7.63 | |
| Total Length | L | 5 | VC | mm | 56.27 | 53.73 | 54.71 | 54.54 | 54.63 | |
| WASHER | | | | | | | | | | |
| EPDM Washer Outer Dia | W | 5 | VC | mm | 11.50 | 10.90 | 11.07 | 10.92 | 11.00 | |
| EPDM Washer Thickness | Wt | 5 | VC | mm | 2.80 | 2.20 | 2.43 | 2.39 | 2.41 | |

**MECHANICAL & FUNCTIONAL PROPERTIES**

Reference Standard: AS 3566.1: 2002 & ISO 10666: 1999 Modified — Test Facility: Manufacturer (M)

| Specification | Qty of Tested Parts | Equipment Used * | Unit | Specification Min. | Specification Max. | Result Min. | Result Max. | Result Mean | Note |
|---|---|---|---|---|---|---|---|---|---|
| Torsional Strength | 10 | TW | kg.cm | - | 106.0 | 156.0 | 150.0 | 153.00 | |
| Case Hardness | 5 | MCH | HV | 700 | 580 | 636 | 608 | 622.0 | |
| Core Hardness | 5 | MCH | HV | 425 | 320 | 404 | 371 | 387.5 | |
| Drill Penetration 1,800rpm@35.5kgs, T:1+5.0mm | 10 | DTM | sec | 11.00 | - | 8.48 | 4.37 | 6.43 | |

**SURFACE TREATMENT PROPERTIES**

Reference Standard: AS 3566.1: 2002 Modified — Test Facility: Manufacturer (M)

| Specification | Qty of Tested Parts | Equipment Used * | Unit | Specification Min. | Specification Max. | Result Min. | Result Max. | Result Mean | Note |
|---|---|---|---|---|---|---|---|---|---|
| Coating Thickness | 5 | CDS | µm | - | - | 20.32 | 15.57 | 17.95 | |

* ABBREVIATION: For Measuring & Testing Equipment: VC = Vernier Caliper, PJ = Projector, TW - Torque Wrench, DTM = Drill Test Machine, CDS = Coating Dualscope, MCH = Microhardness Tester

**VALIDATION**

The inspection/ tests were performed on samples representative of this manufacturing lot number. The fasteners delivered are in compliance with the order and have been manufactured in accordance with the relevant standards and/or specifications.

**AUTHORIZED REPRESENTATIVE**

Inspected By

Name KEE MENG KEONG
Function QA ENGINEER
Date 26-04-22

Approved By

ENGINEERING EDGE (SINGAPORE) PTE LTD QC APPROVED

Name JAKE TANG
Function MANAGER, QUALITY ASSURANCE
Date 26-04-22

# Compliance Standards

CORROSHIELD® FASTENERS





## DECLARATION OF CONFORMITY

CE

**No.151202**

| | |
|---|---|
| **1. Unique identification code of the product-type** | Self Drilling Screw (Tapping Thread, Cutting point) |
| **2. Type, batch or serial number or any other element allowing identification of the construction product as required under Article 11(4)** | 1) CZAT M4.8-12 X 35MM,HWH,FT,LVR,ø14 X 0.8MM GAL BND BLK EPDM 2MM |
| **3. Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer** | The Intended use of Self Drilling Screw Family shall be in the application of common use defined in EN 14566:2008 +A1:2009 such as:<br>- Sheet Metal/Metal<br>- Sheet Metal/Wood<br>- Wood/Sheet Metal |
| **4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant Article 11(5)** | **ENGINEERING EDGE (SINGAPORE) PTE LTD**<br>31, Woodlands Close,Unit 08-01,<br>Woodlands Horizon,<br>Singapore 737855 |

# Compliance Standards

CORROSHIELD® FASTENERS

ENGINEERING EDGE (SINGAPORE) PTE LTD
31, Woodlands Close, Unit 08-01, Woodlands Horizon, Singapore 737855 T +65 6552 4680 F +65 6552 7554 W www.engineering-edge.com M info@engineering-edge.com

## DECLARATION OF PERFORMANCE

ACCORDING TO CONSTRUCTION PRODUCTS REGULATION NO. 305/2011

Certificate No.: EESG-DOP-CEUKCA-001

| **Manufacturer** |
|---|
| Engineering Edge (Singapore) Pte ltd<br>31 Woodlands Close, Unit 08-01, Woodland Horizon Singapore 737855<br>Tel: +65 6552 4680 Fax: +65 6552 7554 |

Hereby declare under sole responsibility that the following products:

| | | |
|---|---|---|
| Product Type | : | Carbon Steel Screws |
| Intended Use | : | Application on Plasterboards/ Drywall/ Metal/ Wood |
| Manufacturing Model | : | **M# x L – Head – Thread** |
| M# (Diameter) | : | M4.8 – M6.3 |
| L (Length) | : | 19mm – 225mm |
| Head Type | : | BGH, RBGH, PAN, HWH |
| Thread Type | : | HPT, HPT/PT, FT, PT |
| Point | : | LVR, LV, LV5, SP, T17, S17 |

| **Characteristic** | **Characteristic Type** | **Harmonised Technical Specification** | | **Declared Performance** |
|---|---|---|---|---|
| | | **Parent Standard** | **Sub-Standard** | |
| Reaction to Fire | Essential | EN 14566: 2008 & A1: 2009 | EN 13501-1: 2007 & A1: 2009 | Class A1 |
| Flexural Strength (Bending Behaviour) | Essential | | EN ISO 12777-3: 2002 | Pass |
| Protective Treatment | Additional | | EN ISO 9227: 2017 | Class 24, 48 & 96<br>Class 500, 1,000, 2,000 |
| Thickness or Mass of Coating | Additional | | N/A | Pass (> 5 µm) |
| Withdrawal Force | Initial Type Test | | N/A | Pass (> 450N) |
| Point (Drilling Time) | Initial Type Test | | N/A | Pass (< 1 s for Type N and < 4 s for Type D) |
| Nominal Length & Tolerance | Initial Type Test | | N/A | Pass |
| Case Hardness | Initial Type Test | | EN ISO 6508-1: 2016 | Pass (> 55 HRC, min case hardened depth, 0.05mm) |

Reference Technical construction file and test report no.: EE-2021001-A1

# ISO Certification

CORROSHIELD®
FASTENERS

Certificate of Registration

## G-CERTI *certificate*

*hereby certifies that*

**Engineering Edge (S) Pte Ltd**

**31 Woodlands Close #08-01 Woodlands Horizon Singapore 737855**

*meets the Standard Requirements & Scope as following*

ISO 9001:2015 *Quality Management Systems*

**Trading of Oil & Gas, Construction & Industrial Fasteners**

Certificate No : GKSG-0172-QC
Initial Date : 05. Sep. 2018 Issue Date : 24. Aug. 2022
Expiry Date : 04. Sep. 2024 Valid period : 24. Aug. 2022 ~ 04. Sep. 2023

*Signed for and on behalf of GCERTI*
*President I.K.Cho*

G-CERTi SYSTEM SERVICE
MSCB-113

To verify the validity of this certificate please visit : www.gcerti.com
Korea, Seoul, Sungpyeong-gu, Eunpyeong-ro, 88, 15F. Surveillance audits shall be conducted at least once a calendar year, except in recertification years. This is to certify that the Management Systems of this company has been found to confirm to the above. If the certified client does not allow surveillance, recertification audits, certificate should be returned to GCERTI. This certificate remains the property of GCERTI and this certificate is recognized by GCERTI.

IAS ACCREDITED Management Systems Certification Body MSCB-113

IAF MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT

# 3rd Party Test Report

CORROSHIELD® FASTENERS

SGS

Material & Engineering Laboratory-Douliou

## Test Report

Report No : DK-17-00375
Page No : 1 OF 5
Date of Report : May 04,2017

**Applicant: Engineering Edge (Singapore) Pte Ltd**

The following sample(s) was/were submitted and identified by the client as:

| | | |
|---|---|---|
| Sample description | : | Hex Flange Head Self-drilling Screw |
| Sample Type | : | TPM3TT16003 12-9×75mm (as show in Fig.1) |
| | | TPM4MT16001 12-14×25mm (as show in Fig.2) |
| Quantity | : | 3 Units of each type |
| Date of Sample Received | : | Mar. 27, 2017 |
| Date of Testing | : | Mar. 27, 2017~ May 02, 2017 |
| Test Name | : | Porosity rating |
| Test Method | : | AS 3566.2-2002 |
| Remark | : | The information mentioned in the above section is provided by Client (Exclude Date of Sample Received and Date of Testing) |
| Test Results | : | |



Fig.1



Fig.2

----- 1 -----

The required specification(s) offered in this test report is/are for reference only. The conformity judgment is at the Applicant's final verdict.

Signed for and on behalf of
SGS Taiwan Ltd.

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TWB9574452 7001

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