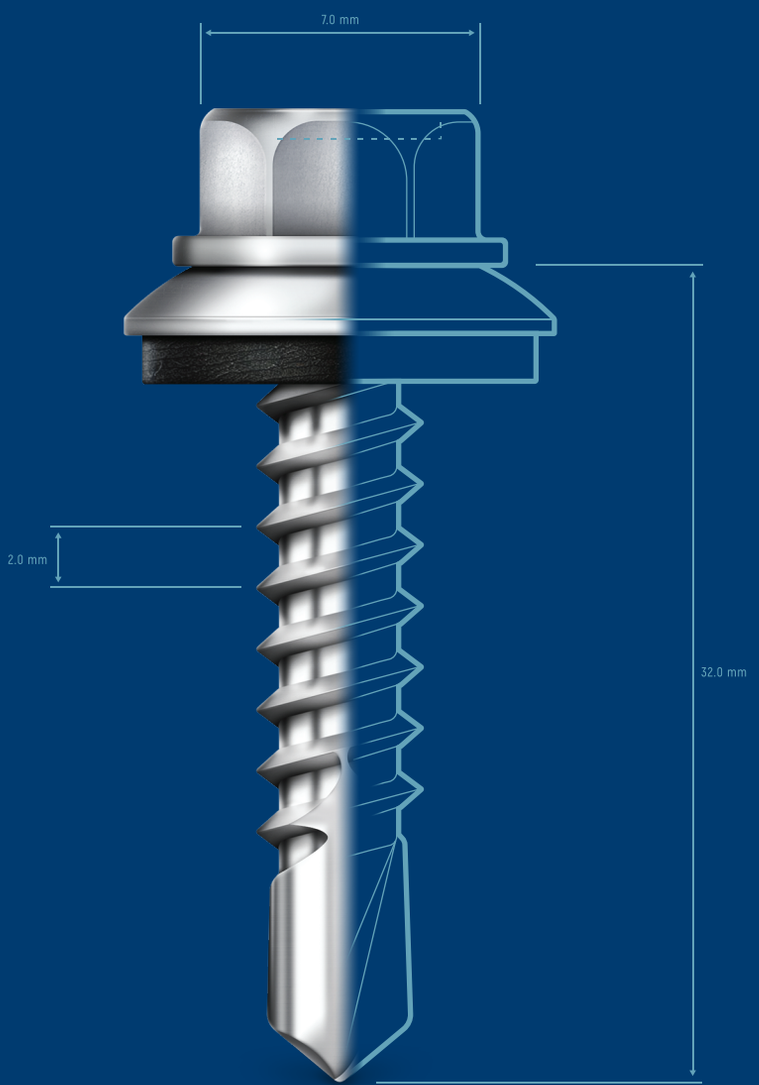
PATTA®



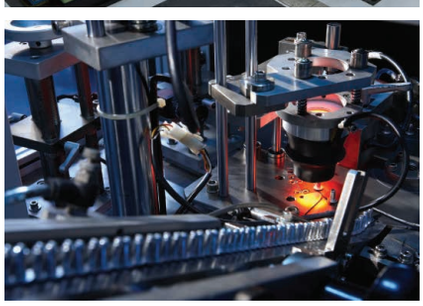
Self Drilling Screws

Our components, your key

Screws

Index


PATTA®



Grip Forever

Our Components, Your Key

Professional
provide expertise and know-how in fastener and construction hardware industry

Active
keep improving quality product and service to customers

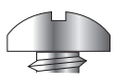
Trustworthy
with 30-year experience under well-known "PATTA" brand name

Typical
provide unique fastener problem solving

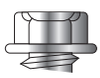
Ambitious
provide a series of activities to meet customers expectation

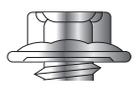
Screw Data

Head Styles


PAN

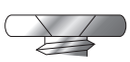

OVAL


H.W.H


H.W.F


C.S.K


LARGE WAFER


PANCAKE


BUGLE


PAN FRAMING


HINGE


WAFER


TRUSS


FLOWER HEAD

Head Recess


POZI


PHILLIPS

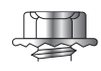

SQUARE

Under Head

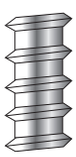

PHILLIPS 4 RIBS

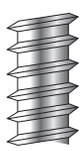

H.W.F. UNDERCUT

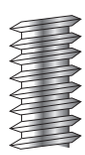

H.W.H. UNDERCUT

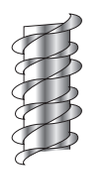

SERRATIONS

Threads


TYPE A
#10-12T
#12-11T
#14-10T

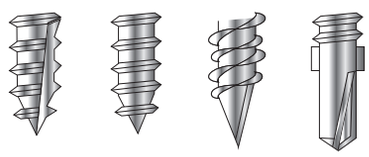

TYPE B
#6-20T
#7-19T
#8-18T
#10-16T
#12-14T
#14-14T

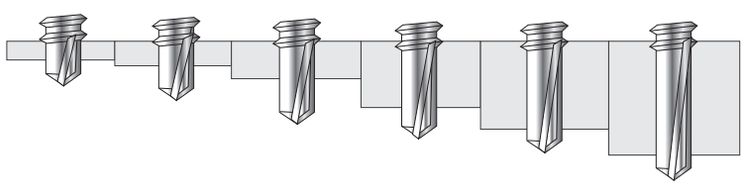

TYPE C
#8-32T
#10-24T
#12-24T
#14-20T


HI-LOW


DOUBLE-THREAD

Points


TYPE 17 TAPPING SPOON WING TEKS


PT. #1 PT. #2 PT. #3 PT. #4 PT. #5 PT. #6

Washer

P.V.C


#10, #12, #14

E.P.D.M


#10, #12, #14

BONDED WASHER


#10 x 14
#12 x 14


#12 x 16
#14 x 16


#12 x 19
#14 x 19


#14 x 25

STEEL + P.V.C


#12, #14 x 16

Plating

PL: Plain
YZ: Yellow Zinc
ZN: Zinc

KP: Black Phosphated
BP: Grey Phosphated
BZ: Black Zinc

BO: Black Oxide
DC: Dacrotized
RS: Ruspert
XY: Xylan

Mechanical Data I

- Material

  C-1022 Steel Case Hardened
  IND Flange Washer

- Special

  High Grip

- Hexagon

  Washer Face with E.P.D.M Seal

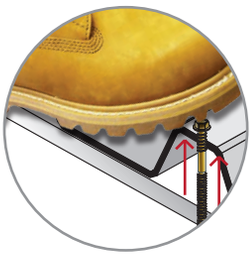
- Coating and Finish

- Standard

  AS 3566
  ASTMD 2247
  DIN 50018

- E.P.D.M Seal

- High grip



Nanoplating

Technical description

It is innovative nano scale surface treatment technology that provides inexpensive, high quality and extreme corrosion resistance properties in current competitive markets. Nanoplating is no toxic and no pollution to the environment as reach to world standard.

Characteristics

- Stronger than Bi-metal screws or alloy steel screw without breaking during usage.
- Extreme corrosion resistance for more than 2000 hours salt spray test
- Environment friendly process reduces waste effluent
- Available for ACQ with treated wood
- Excluded lead, cadmium and other heavy metal
- Meets WEEE and ROHS directive from European Union and ELF (End of Life Vehicle) directive for eliminating hazardous chemicals

Resistance Performance

Salt Spray [ASTM B117]	2000 hours
Kesternich [DIN 50018 2.0L (SO2)]	25 cycles
Acid Resistance [ASTM D-1308]	320 hours
Heat Resistance [250℃]	15 hours
Meet Australia Standard	As 3566 CLASS 4

Nanoplating VS Mechanically Plated Tin-zinc

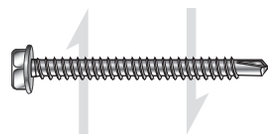
	Thickness	Salt Spray Test	Kesternich
Nanoplating	20 mu	2000 hours passed	25 cycles
C4 + Coating	60 - 70 mu	1500 hours passed	20 cycles

Note: the test results shown above are the result of laboratory tests and are guidance purpose only

Mechanical Data II

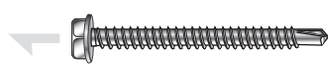
Shear Strength

Gauge	#6	#8	#10	#12	#14
MM	3.5	4.2	4.8	5.5	6.3
Kn	2.93	4.36	6.28	8.36	12.27



Tensile Strength

Gauge	#6	#8	#10	#12	#14
MM	3.5	4.2	4.8	5.5	6.3
Kn	5.0	7.0	10.0	12.5	17.0

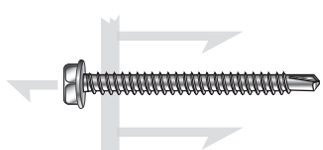


Torsional Strength

Gauge	#6	#8	#10	#12	#14
MM	3.5	4.2	4.8	5.5	6.3
Nm	2.8	4.5	6.5	10.0	14.0

Pull-out Strength

Gauge	Drill Point #2, #3					#5	
MM	1.6	2.0	2.5	3.0	3.2	5.0	6.0
Kn	3.82	4.93	6.32	7.92	9.30	11.21	12.50



Performance And Mechanical Data

	Steel Thickness	4.8 mm (#10)	5.5 mm (#12)	6.3 mm (#14)
Shear Strength (N)		6700	10400	13400
Tensile Strength (N)		9500	13900	15500
Torsional Strength (N - M)		6.5	10.0	14.0
Pull-out Strength (N)	2.3 mm	4690	4700	5000
	3.2 mm	7480	7610	7930
	4.5 mm	9680	12700	13500
	6.0 mm		13900	15000
Drilling Capacity	max. mm	3.5	4.5	6.0

The test results shown above are the result of laboratory tests and are guidance purpose only.

Mechanical Data III

Suggested Material Thickness For Steel Application

Self Drilling Screws	Size	Drill Point	Drill Capacity (m/m) max.
	M3.5 (#6), M3.9 (#7)	#2	0.5 - 1.0 mm
	M4.2 (#8)	#2	1.0 - 2.0 mm
	M4.8 (#10)	#2	1.0 - 2.0 mm
	M4.8 (#10)	#3	1.0 - 3.0 mm
	M5.5 (#12), M6.3 (#14)	#3	2.0 - 4.0 mm
		#4	7.0 - 8.0 mm
		#5	10.0 - 12.0 mm
Drywall Screws		**Point NO.**	**Drill Capacity (m/m) max.**
			0.7 - 1.0 mm

Plating

Types	Salt Spray Test/hrs	Kesternich/cycles
Zinc	24 - 36	—
Yellow Zinc	24 - 36	—
Black Phosphate	24 - 36	—
Grey Phosphate	24 - 36	—
Dacromet	500 - 1000	—
Ruspert	500 - 1000	—
Mechanical Galvanizing	500 - 1000	—
Mechanical Galvanizing + Coating	1000 - 1500	15 - 20
Nanoplating	1500 - 2000	20 - 25

Washer Material's General Properties

Physical Properties	E.P.D.M	P.V.C
Age-Heat Resistance	●	×
Cold Resistance	●	×
Weather Resistance	●	×
Ozone Resistance	●	○
Oil Resistance	●	×
Bending Strength	○	×
Wear Resistance	○	×
Repulsive Elasticity	○	×
Compressive Distortion	○	○

● EXCELLENT ○ GOOD × POOR

The test results shown above are the result of laboratory tests and are guidance purpose only

Phillips
Pan Head

Applications

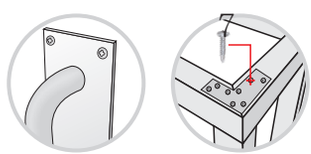
- Skin sheet to steel
- Residential steel frame construction
- For light duty purpose
- Suitable for stitching 1 thick & 1 thin steel plate

Features

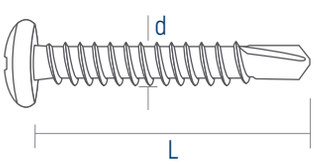
- Pan head design on purost using
- Non-walking point provides fast material engagement

Plated: ZN SS

Point: 2 3



Suggested application thickness
point #2 < 2mm
point #3 < 5mm



Size	Length (inch)	Length (mm)	Drill Point (m/m)	Drill Capacity (m/m)
#6-20 M3.5	3/8"	10	#2	0.5 - 1.0
	1/2"	13	#2	0.5 - 1.0
	5/8"	16	#2	0.5 - 1.0
#8-18 M4.2	1/2"	13	#2	1.0 - 2.0
	5/8"	16	#2	1.0 - 2.0
	3/4"	19	#2	1.0 - 2.0
	1"	25	#2	1.0 - 2.0
	1-1/4"	32	#2	1.0 - 2.0
	1-1/2"	38	#2	1.0 - 2.0
#10-16 M4.8	1/2"	13	#2	1.0 - 2.0
	5/8"	16	#2	1.0 - 2.0
	3/4"	19	#2	1.0 - 2.0
	1"	25	#3	1.0 - 3.0
	1-1/4"	32	#3	1.0 - 3.0
	1-1/2"	38	#3	1.0 - 3.0
	2"	50	#3	1.0 - 3.0

SS Stainless Steel
YZ Yellow Zinc
BP Black phosphate
RS Ruspert
ZN Zinc

Phillips

Countersunk Head

Applications

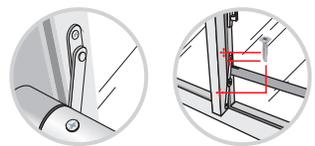
- Best choice for fastening in window or door frames purpose
- Using in flat surface required
- Using in per-drilled hole for fitting

Features

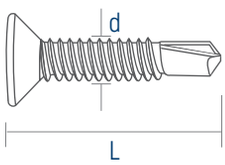
- Precise cutting edges to improve drill performance
- Countersunk head available for working purpose

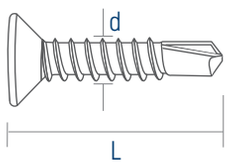
Plated: ZN BP SS

Point: 2 3



Suggested application thickness
point #2 < 2mm
point #3 < 5mm





80° degree

100° degree

Size	Length (inch)	Length (mm)	Drill Point (m/m)	Drill Capacity (m/m)
#6-20 M3.5	3/8"	10	#2	0.5 - 1.0
	1/2"	13	#2	0.5 - 1.0
	5/8"	16	#2	0.5 - 1.0
	3/4"	19	#2	0.5 - 1.0
	1"	25	#2	0.5 - 1.0
#8-18 M4.2	1/2"	13	#2	1.0 - 2.0
	5/8"	16	#2	1.0 - 2.0
	3/4"	19	#2	1.0 - 2.0
	1"	25	#2	1.0 - 2.0
#10-16 M4.8	1/2"	13	#2	1.0 - 2.0
	5/8"	16	#2	1.0 - 2.0
	3/4"	19	#2	1.0 - 2.0
	1"	25	#3	1.0 - 3.0
	1-1/4"	32	#3	1.0 - 3.0
	1-1/2"	38	#3	1.0 - 3.0

Light duty

Hex Washer Head

Applications

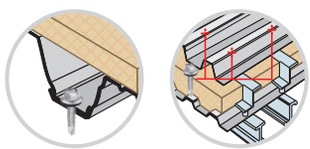
- For light duty purpose
- Stitch roof deck and wall panel sidelaps
- Residential steel frame construction
- Brick ties to steel framing

Features

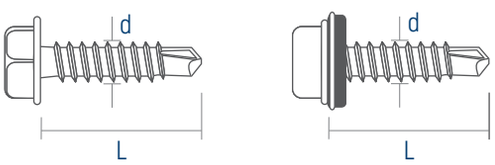
- Unique point to thread design extrudes the metal preventing stripout
- Non-walking point provides fast material engagement
- Point to thread design maximizes pullout performace and minimizes backout

Plated: ZN YZ SS

Point: 2 3



Suggested application thickness point #2 < 2mm



Size	Length (inch)	Length (mm)	Drill Point (m/m)	Drill Capacity (m/m)
#6-20 M3.5	3/8"	10	#2	0.5 - 1.0
	1/2"	13	#2	0.5 - 1.0
	5/8"	16	#2	0.5 - 1.0
#8-18 M4.2	1/2"	13	#2	1.0 - 2.0
	5/8"	16	#2	1.0 - 2.0
	3/4"	19	#2	1.0 - 2.0
	1"	25	#2	1.0 - 2.0
	1-1/4"	32	#2	1.0 - 2.0
	1-1/2"	38	#2	1.0 - 2.0
#10-16 M4.8	1/2"	13	#2	1.0 - 2.0
	5/8"	16	#2	1.0 - 2.0
	3/4"	19	#2	1.0 - 2.0
	1"	25	#3	1.0 - 3.0
	1-1/4"	32	#3	1.0 - 3.0
	1-1/2"	38	#3	1.0 - 3.0
	2"	50	#3	1.0 - 3.0

SS Stainless Steel | YZ Yellow Zinc | BP Black phosphate | RS Ruspert | ZN Zinc

Medium duty

Hex Washer Head

Applications

- For medium duty purpose
- Roof deck to steel framing
- Accessories to steel framing

Plated

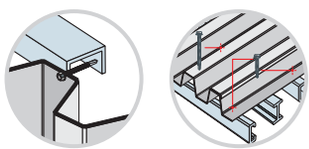
ZN YZ SS

Point

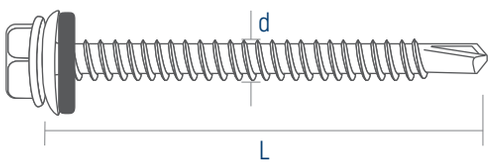
3

Features

- Precise cutting edges to improve drill performance with less effort
- Point to thread design maximize pullout performance and minimizes backout



Suggested application thickness point #3 < 5mm



Size	Length (inch)	Length (mm)	Drill Point (m/m)	Drill Capacity (m/m)
#12-14 M5.5	3/4"	19	#3	2.0 - 4.0
	1"	25	#3	2.0 - 4.0
	1-1/4"	32	#3	2.0 - 4.0
	1-1/2"	38	#3	2.0 - 4.0
	2"	50	#3	2.0 - 4.0
	2-1/2"	63	#3	2.0 - 4.0
	3"	75	#3	2.0 - 4.0
#14-14 M6.3	3/4"	19	#3	2.0 - 4.0
	1"	25	#3	2.0 - 4.0
	1-1/4"	32	#3	2.0 - 4.0
	1-1/2"	38	#3	2.0 - 4.0
	2"	50	#3	2.0 - 4.0
	2-1/2"	63	#3	2.0 - 4.0
	3"	75	#3	2.0 - 4.0
	4"	100	#3	2.0 - 4.0
	5"	125	#3	2.0 - 4.0

Phillips

Truss Head

Applications

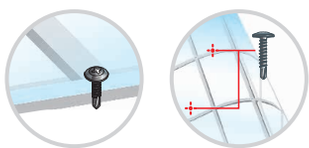
- Residential steel frame construction
- For using in object like polycabonate sheet, shadow cover

Features

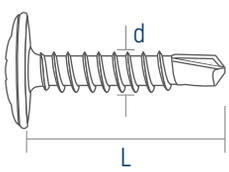
- Truss head design on purpose using
- Non-walking point provides fast material engagement

Plated: ZN BP SS

Point: 2



Suggested application thickness point #2 < 2mm



Size	Length (inch)	Length (mm)	Drill Point (m/m)	Drill Capacity (m/m)
#8-18 M4.2	1/2"	13	#2	1.0 - 2.0
	5/8"	16	#2	1.0 - 2.0
	3/4"	19	#2	1.0 - 2.0
	1"	25	#2	1.0 - 2.0
	1-1/4"	32	#2	1.0 - 2.0
	1-5/8"	41	#2	1.0 - 2.0

SS Stainless Steel | YZ Yellow Zinc | BP Black phosphate | RS Ruspert | ZN Zinc

Phillips

Bugle Head

Applications

- For using in stitch wood to metal
- Using in flat surface required
- Using in pre-drilled hole for fitting

Features

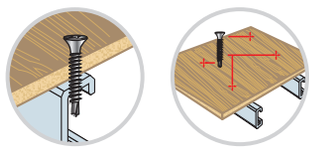
- Precise cutting edges to improve drill performance with less effort
- Bugle head available for working purpose

Plated

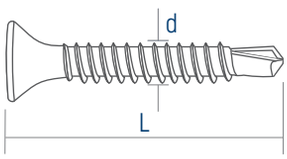
ZN YZ SS

Point

3



Suggested application thickness point #2 < 2 mm



Size	Length (inch)	Length (mm)	Drill Point (m/m)	Drill Capacity (m/m)
#6-20 M3.5	1"	25	#2	0.5 - 1.0
	1-1/8"	28	#2	0.5 - 1.0
	1-1/4"	32	#2	0.5 - 1.0
	1-5/8"	41	#2	0.5 - 1.0
	2"	50	#2	0.5 - 1.0
#8-18 M4.2	1"	25	#2	1.0 - 2.0
	1-1/4"	32	#2	1.0 - 2.0
	2"	50	#2	1.0 - 2.0
	2-3/8"	60	#2	1.0 - 2.0
	2-5/8"	65	#2	1.0 - 2.0
	3"	75	#2	1.0 - 2.0

Phillips
Wafer Head

Applications

- Roof and skin sheet to steel
- Residential steel frame construction
- For light duty purpose

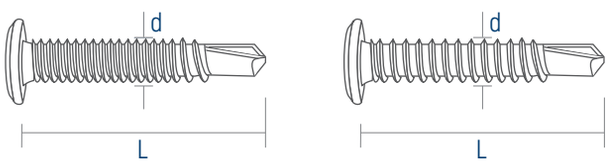
Plated: ZN YZ SS

Point: 2 3

Suggested application thickness
point #3 < 5mm

Features

- Wafer head design on purpose using
- Non-walking point provides fast material engagement



Size	Length (inch)	Length (mm)	Drill Point (m/m)	Drill Capacity (m/m)
#10-16 M4.8	5/8"	16	#2	1.0 - 2.0
	7/8"	22	#2	1.0 - 2.0
	1-1/4"	32	#3	1.0 - 3.0
	1-1/2"	38	#3	1.0 - 3.0
#10-24 M4.8	5/8"	16	#2	1.0 - 2.0
	7/8"	22	#2	1.0 - 2.0
	1-1/4"	32	#3	1.0 - 3.0
	1-1/2"	38	#3	1.0 - 3.0

SS Stainless Steel
YZ Yellow Zinc
BP Black phosphate
RS Ruspert
ZN Zinc

Hex Washer Flange

Applications

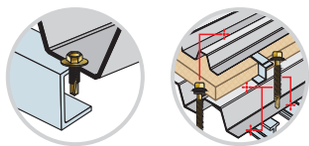
- For medium duty purpose
- Roof deck to steel framing
- Accessories to steel framing

Features

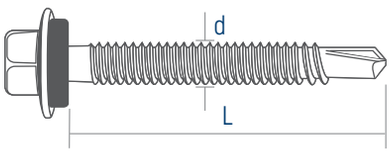
- Precise cutting edges to improve drill performance with less effort
- Provide bigger cover surface in using exterior enviormen

Plated: ZN YZ SS

Point: 3



Suggested application thickness point #3 < 5 mm



Size	Length (inch)	Length (mm)	Drill Point (m/m)	Drill Capacity (m/m)
#12-24 M5.5	3/4"	19	#3	2.0 - 4.0
	1"	25	#3	2.0 - 4.0
	-3/8"	35	#3	2.0 - 4.0
	1-1/2"	38	#3	2.0 - 4.0
	1-3/4"	45	#3	2.0 - 4.0
	2"	50	#3	2.0 - 4.0
	2-3/16"	55	#3	2.0 - 4.0
	2-1/2"	63	#3	2.0 - 4.0
	3"	75	#3	2.0 - 4.0
	3-1/2"	88	#3	2.0 - 4.0
	4"	100	#3	2.0 - 4.0
	5"	125	#3	2.0 - 4.0

Heavy duty steel to steel applications

Hex Washer Head

Applications

- For heavy duty purpose
- Metal deck to structural steel or bar joist
- Clip to structural or bar joist
- Longer length fasteners for sheet applications

Features

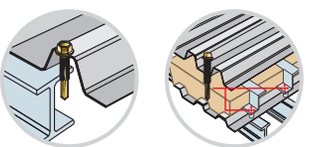
- Engineered for fast drilling and smooth tapping with less effort

Plated

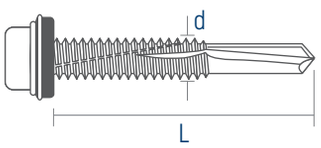
ZN YZ SS

Point

5



Suggested application thickness point #5 < 12mm



Size	Length (inch)	Length (mm)	Drill Point (m/m)	Drill Capacity (m/m)
#12 M5.5	1-1/4"	32	#5	12.0
	1-1/2"	38	#5	12.0
	2"	50	#5	12.0
	2-1/2"	63	#5	12.0
	3"	75	#5	12.0

SS Stainless Steel

YZ Yellow Zinc

BP Black phosphate

RS Ruspert

ZN Zinc

Countersunk Wings

Applications

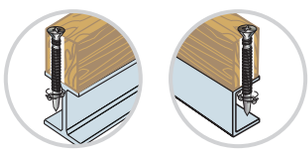
- Wood mansard to steel frames
- Plywood fascial to steel frames
- Plywood roof and floor sheet to steel frames

Features

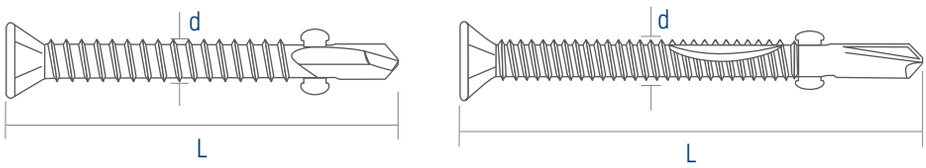
- Large bearing surface ideal for plywood
- Flat head desing countersunks and seats flush in wood
- Aluminium/Steel washer
- Special winged fasteners ream a hole in wood preventing thread engagement during drilling

Plated: ZN YZ SS

Point: 3 4 5



Suggested application thickness
point #3 < 2 - 5 mm
point #4 < 5 - 8 mm
point #5 < 9 - 12 mm

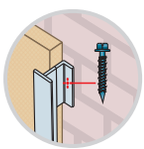


Size	Length (inch)	Length (mm)	Drill Point (m/m)	Drill Capacity (m/m)
#10 M4.8	1"	25	#3	1.0 - 3.0
	1-1/4"	32	#3	1.0 - 3.0
	1-1/2"	38	#3	1.0 - 3.0
	1-3/4"	45	#3	1.0 - 3.0
#12 M5.5	1-1/2"	38	#3	2.0 - 4.0
	2"	50	#3 · #5	2.0 - 4.0 · 12.0
	2-3/16"	55	#3 · #5	2.0 - 4.0 · 12.0
	3"	75	#3 · #5	2.0 - 4.0 · 12.0
	3-5/32"	80	#3 · #5	2.0 - 4.0 · 12.0
	3-1/2"	45	#3 · #5	2.0 - 4.0 · 12.0
	4-3/4"	120	#3 · #5	2.0 - 4.0 · 12.0
#14 M6.3	2"	50	#4 · #5	7.0 - 8.0 · 12.0
	3-5/32"	80	#4 · #5	7.0 - 8.0 · 12.0
	3-1/2"	88	#4 · #5	7.0 - 8.0 · 12.0
	4-3/4"	120	#4 · #5	7.0 - 8.0 · 12.0
	6"	150	#4 · #5	7.0 - 8.0 · 12.0

Concrete & Masonry Application

Plated

RS



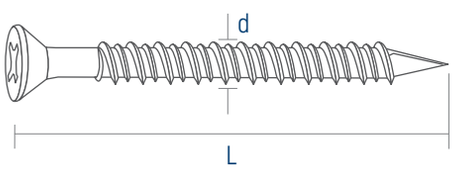
Suggested application thickness
diamond point < 0.6 mm

Applications

- Concrete material fixtures
- Flexible flashing
- Suitable for soft brick & masonry work

Features

- Can be using in exterior environment
- Interal washer design provides more bearing surface
- Hi-lo thread provides smooth power for drilling
- Pre-drilled hole are requested



Size	Length (inch)	Dia. x Length (m/m)	Drill Point (m/m)
#14 M6.3	2-3/8"	60	Diamond
	3"	75	Diamond
	3-5/32"	80	Diamond
	3-1/2"	90	Diamond
	4"	100	Diamond
	5"	125	Diamond
	5-1/2"	140	Diamond
	6-5/16"	160	Diamond
	7-1/8"	180	Diamond
	7-7/8"	200	Diamond

SS Stainless Steel
YZ Yellow Zinc
BP Black phosphate
RS Ruspert
ZN Zinc

Grip Forever

PATTA Self Drilling Screws

Environment Characteristics

To determine the type of environment, an inspection of building in the area is usually necessary

Very Severe Marine (ISO Category 5)

Includes off-shore are and up to 100m from the high waterline of area with breaking surf.

Warranty Periods	not recommended	no warranty	available
Zinc or yellow zinc	☒		
Painted head	☒		
410 Stainless steel		▲	
Anti-corrosion R3			●
Anti-corrosion R4			●
304 Stainless steel			●

Severe Marine (ISO Category 4)

Generally between 100m from the beach front to approximately 300m inland. In high wind area may extend further inland depending on prevailing winds and geography of the area. Characterized by Strong salt structures generally a very noticeable deterioration of most building material is evident.

Warranty Periods	not recommended	no warranty	available
Zinc or yellow zinc	☒		
Painted head	☒		
410 Stainless steel		▲	
Anti-corrosion R3			●
Anti-corrosion R4			●
304 Stainless steel			●

Moderate Marine (ISO Category 3)

Generally between 300m and 1000m from marine surf, although strong prevailing wind may extend this distance. Characterized by occasionally noticeable slight salt. Airborne salt present but not visible as haze.

Warranty Periods	not recommended	no warranty	available
Zinc or yellow zinc	☒		
Painted head		▲	
410 Stainless steel		▲	
Anti-corrosion R3			●
Anti-corrosion R4			●
304 Stainless steel			●

Very Severe Industrial (ISO Category 5)

Characterized by heavy fall-out and emission from sacks and strong sulphur and smells. Generally very high rates of corrosion in most building structures in evident.

Warranty Periods	not recommended	no warranty	available
Zinc or yellow zinc	☒		
Painted head		▲	
410 Stainless steel		▲	
Anti-corrosion R3			●
Anti-corrosion R4			●
304 Stainless steel			●

Note: Warranty period is based on 20-years duration of contructions. × not recommended ▲ no warranty ● available

Severe Industrial (ISO Category 4)

Characterized by fall-out and emission from stack sulphur and acid smell. Include only plant buildings themselves and any building immediately under stacks. Also includes buildings with high internal humidity and/or corrosion from operation within.

Warranty Periods	not recommended	no warranty	available
Zinc or yellow zinc	⊠		
Painted head		▲	
410 Stainless steel		▲	
Anti-corrosion R3			●
Anti-corrosion R4			●
304 Stainless steel			●

Industrial (ISO Category 3)

Characterized by fall-out from adjoining severe industrial environments of were small industries lead to significant industrial fall-out. Generally includes other service buildings located near heavy industrial plants, including out-buildings of the plant itself.

Warranty Periods	not recommended	no warranty	available
Zinc or yellow zinc	⊠		
Painted head		▲	
410 Stainless steel		▲	
Anti-corrosion R3			●
Anti-corrosion R4			●
304 Stainless steel			●

Light Industrial/Urban (ISO Category 2-3)

This environment is widespread in industrial urban area, away from all environments listed above and typically more than 500m from heavy industrial fall-out or where small industrial lead to a moderate level of fall-out from small stacks etc.

Warranty Periods	not recommended	no warranty	available
Zinc or yellow zinc	⊠		
Painted head		▲	
410 Stainless steel		▲	
Anti-corrosion R3			●
Anti-corrosion R4			●
304 Stainless steel			●

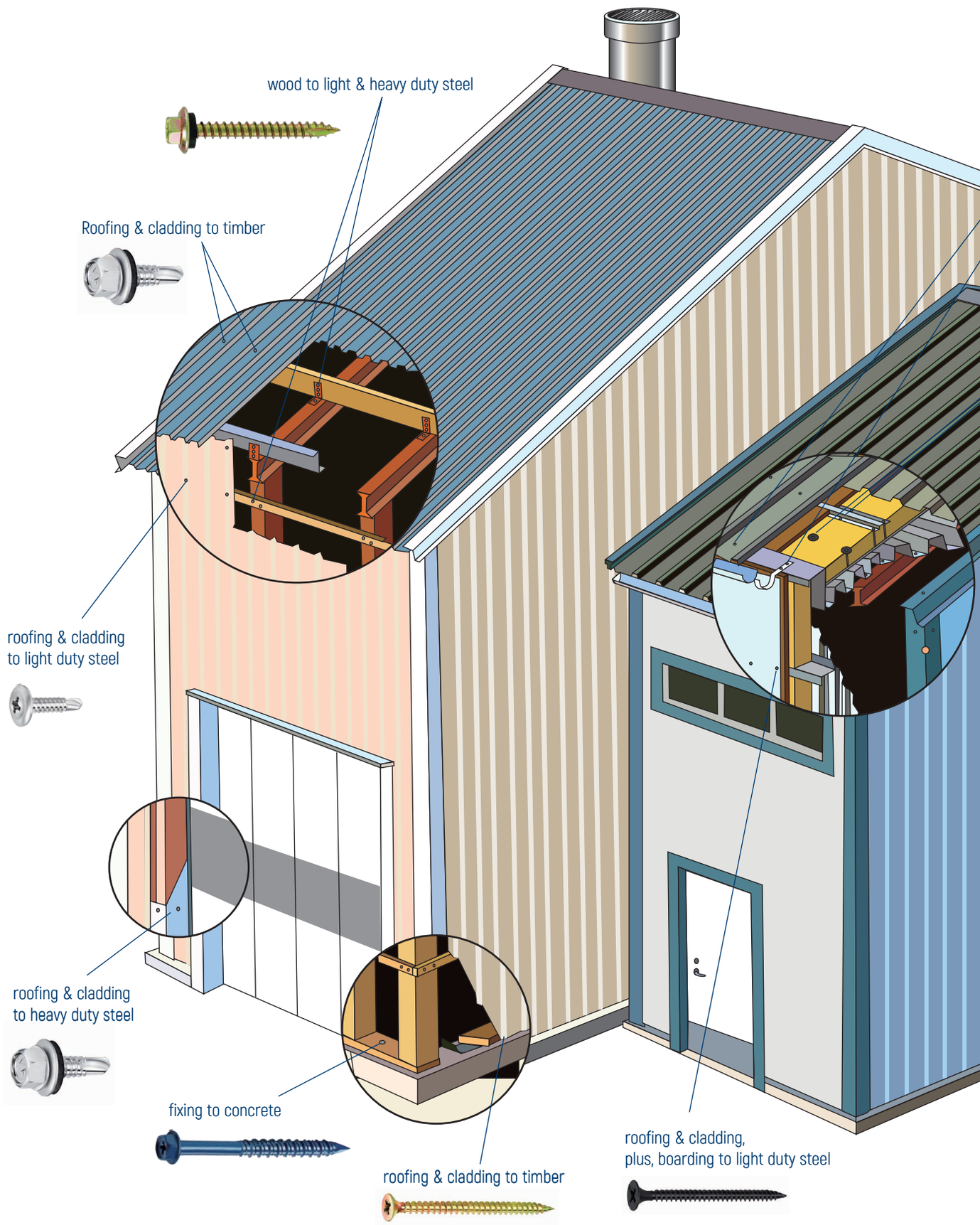
Mild Urban/Rural (ISO Category 1-2)

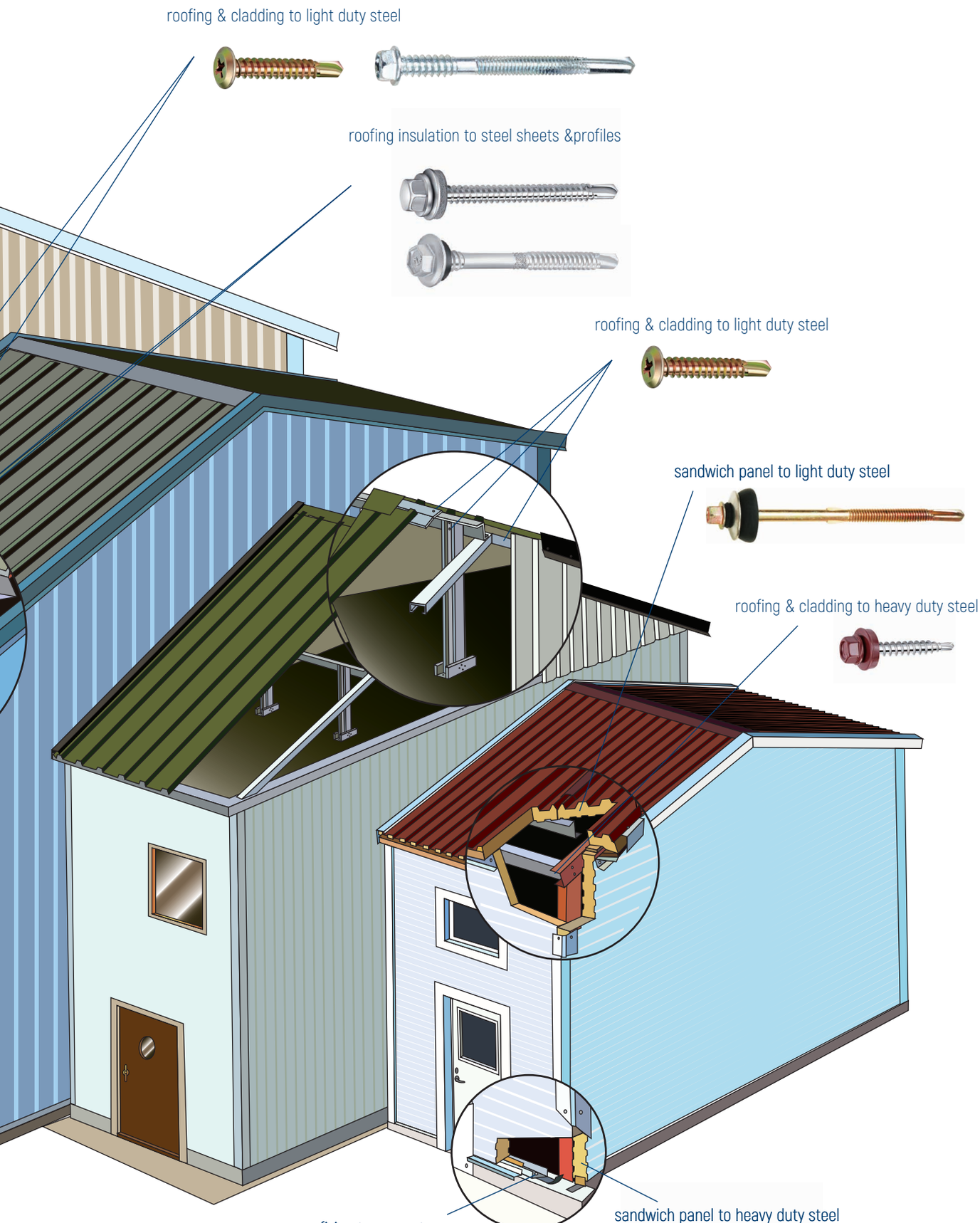
Always from all above environments and corrosive fall out with 2kms.

Warranty Periods	not recommended	no warranty	available
Zinc or yellow zinc		▲	
Painted head		▲	
410 Stainless steel		▲	
Anti-corrosion R3			●
Anti-corrosion R4			●
304 Stainless steel			●

Note: Warranty period is based on 20-years duration of contructions. ×not recommended ▲no warranty ●available

Our Components, Your Key




roofing & cladding to light duty steel
roofing insulation to steel sheets &profiles
roofing & cladding to light duty steel
sandwich panel to light duty steel
roofing & cladding to heavy duty steel
fixing to concrete
sandwich panel to heavy duty steel

304 Bi-metal

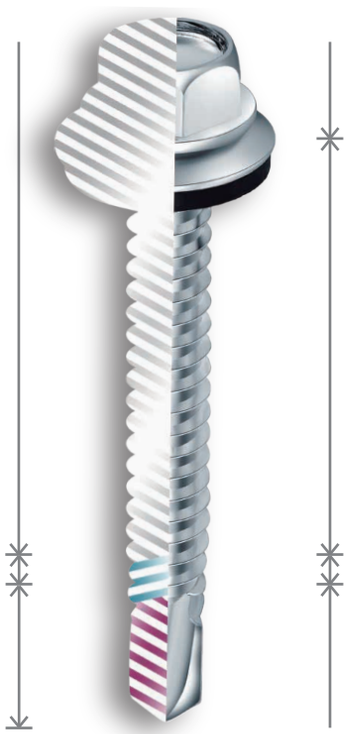
SUS304 Bi-metal screws

combined together two parts by welding, the one consisting of
a stainless head which shall be exposed air and a stainless shank which undergoes
the full-stress after fastened into materials, and the another is a carbon steel hardened
for self-drilling and self-tapping.

Configuration

- stainless head & body
- stainless steel, SUS 304
- with corrosion resistance
  (no case-hardening)

- welded
- self-drilling point
- stainless steel, SUS 410
- case-hardened carbon steel



A Head, part of torque transfer and bearing surface

B Thread part for fastening

C Welding part

D Drilling point

Strength

- A - No case-hardening for keeping anti-corrosion high. Surface hardness 350HV
- B - Tensile stress value over A2 (700N/mm)
- C - Welding strength over the breaking values for torsion and tensile of part B
- D - Case-hardening for over 600HV

#12-24 x 1"(5.5 x 25 mm)

#12-24 x 1-1/2"(5.5 x 38 mm)

#12-24 x 2"(5.5 x 50 mm)

#12-24 x 2-1/2"(5.5 x 65 mm)

#12-24 x 3"(5.5 x 75 mm)

410 Stainless Steel

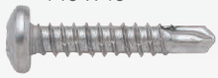
SUS410 Stainless Steel screws

Stainless steel fasteners are a natural choice with stainless steel building components.

Where possible, a fastener of similar or superior corrosion resistance to the component should be used.

Type 410 is a general-purpose martensitic stainless steel that is frequently used for fasteners.

Its resistance to corrosion is not as good as Type 304, but it is satisfactory for many architectural applications.

Pan Phillips	Countersunk Phillips	Hex Washer Head
 M4 x 13	 M4 x 13	 M4 x 13
 M4 x 16	 M4 x 16	 M4 x 16
 M4 x 19	 M4 x 19	 M4 x 19
 M5 x 13	 M5 x 16	 M4 x 25
 M5 x 16	 M5 x 19	 M5 x 16
 M5 x 19	 M5 x 25	 M5 x 19
 M5 x 25	 M5 x 32	 M5 x 25
 M5 x 32	 M5 x 38	 M5 x 32
 M5 x 38		 M5 x 38

Custom Options

All our products come in various sizes, styles and can be customized to fit your needs.

What is Anti-corrosion R3 & R4?

Abstraction

Not solely the omnigenous usage of metal material or as the conductor medium be performed, that particularly issues which come into notice for the metal material are their exposure to every potential destruction and deteriorate environment hence enormous pecuniary loss resulted in.

Lately, satistics shows thereabouts 1million tons above narrated or relative. Therefore, the research of their protection has been the momentous task and the pressing need for engineers and scientists.

Surface Anti-corrosion Treatment

Means apply kinds of protection on the surface of metal to quarantine itself from the corrosives environment and restrain the progress of or reduce the adjoining between corrosive media and metal surface to avoid or mitigate the corrosion situation.

The Reason of Metal Corrosion

Produced by industrial pollution and plenty exhausted fume emission of vehicles, the gaseous, minute particle corrosiveness sulfides as well as chloride teemed within the air and made the major reason of metal eroding.

Anti-corrosion R3, Anti-corrosion R4

This advance technology now are all available to apply to screw & nuts, helps to defense the corrosion once exposure to the sever marine, industrial, critical and air pollution as well. To determine the type of usage and cost, we have contained total solution for your essential.

Typical appearance of heads of fasteners using the salt-spray test

Anti-corrosion R3 & R4 is a superior corrosion resistant fastener finish. When a fastener is treated with Anti-corrosion R3 & R4, its entire surface is covered with polymer coating not susceptible to oxidation. Anti-corrosion R3 & R4 outperfrm all other existing electro-plating andprevent corrosion caused by chemical reaction between dissimilar metals.A nti-corrosion R3 & R4 create an attractive, metallic-grey finish that provide an excellent base surface for color matching paint. It is compatible with all painted and metal-coated surface.

Anti-corrosion Fasteners Deemed ti Comply

Self drilling screws shall exhibit the minimum properties appropriate to the intended usage as given in below.

Anti-corrosion	Maximum Coating Porosity	Coating Type	Minimum Average Coating Thickness	Salt-spray Test
R3	30%	Mechanically plated Tin-Zinc	25µ	1000 hrs
R4	30%	Mechanically plated Tin-Zinc	45µ	1500 hrs

Ruspert Coating - Super Anti-corrosion

What is Ruspert Coating?

Ruspert metal finish is a high-grade, non-organic, tri-layered ceramic surface coating developed to attain optimum performance in the various pollutive and atmospheric conditions that cause corrosion. It consists of three layers:

- The 1st layer: a metallic zinc layer.
- The 2nd layer: a high-grade anti-corrosion chemical conversion film.
- The 3rd top layer : a baked ceramic top coating.

The unique feature of Ruspert Coating is the tight joining of the baked ceramic top coating and the chemical conversion film thanks to the cross-linking effect. These layers are bonded together with the metallic zinc layer through chemical reactions, and this unique method of combining layers results in a rigid and dense combination of the coating films.

Ruspert Coating treatment does not attribute its anti-corrosion properties to merely a single material, but the synergy of these three layers, which combined have superb rustproof qualities. Compatible with metal coated and painted surfaces, fasteners coated with Ruspert are resistant to acid and alkaline attack, galvanic corrosion and hydrogen embrittlement.

Ruspert Coating Processes

Material : metallic zinc & resin

Coating Type : metallic zinc

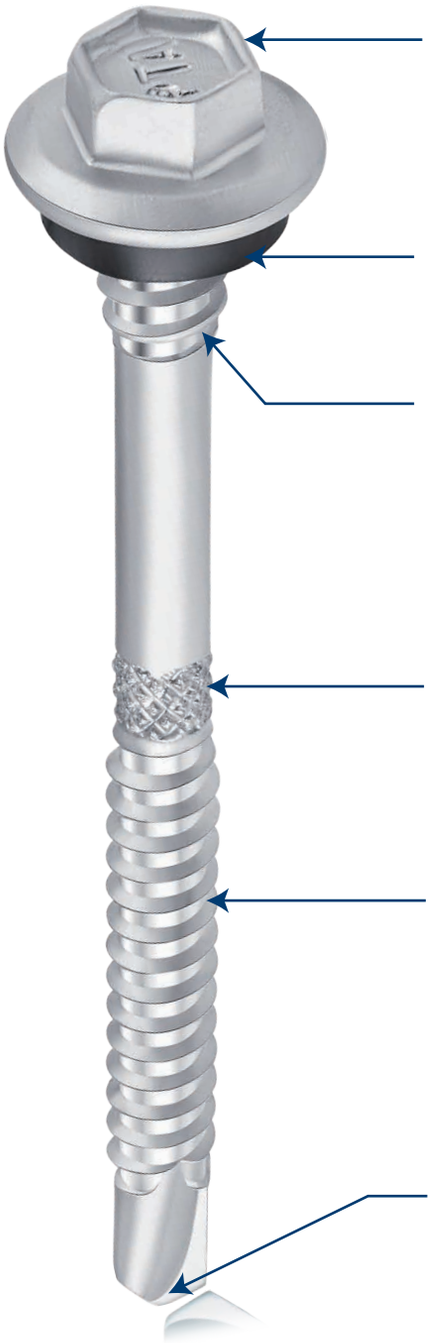
(3 layers) dip-coating

baked ceramic top coating

Minimun Average Coating Thickness :

20μ 、 30μ 、 40μ

Salt-spray Test : 500 、1000 、1500 hrs



Extra-heavy plating provides long corrosion-free service.

EPDM Sealing

Made of macromolecule material, the EPDM seal contains excellent characters of aging, unltraviolet rays resistance and endure to ozone, high temperature and low temperature (-50°C - 150°C)

Hi-grip

Hi-grip is a dual-threaded system that provides positive support to roofing profiles and secures a watertight seal between fastener and roofing sheet during crest fixing.

Drillshield

To enlarge the hole in the profile, and to avoid damage to the protective coating on the shank beneath the roof.

Thread

PATTA fasteners are designed to give the best possible holding power with a low installation torque. As thinner high tensile sections are introduced, our engineers ensure that screws have optimum holding power and pullout strength.

Hi Teks

C-1022 steel case hardened drill point that will drill and thread in structural steel and mild steel. This techology is designed in a manner much the same as a high speed steel drill bits.

Salt-spray Test Result

after 1500 hrs (40μ)

after 1000 hrs (30μ)

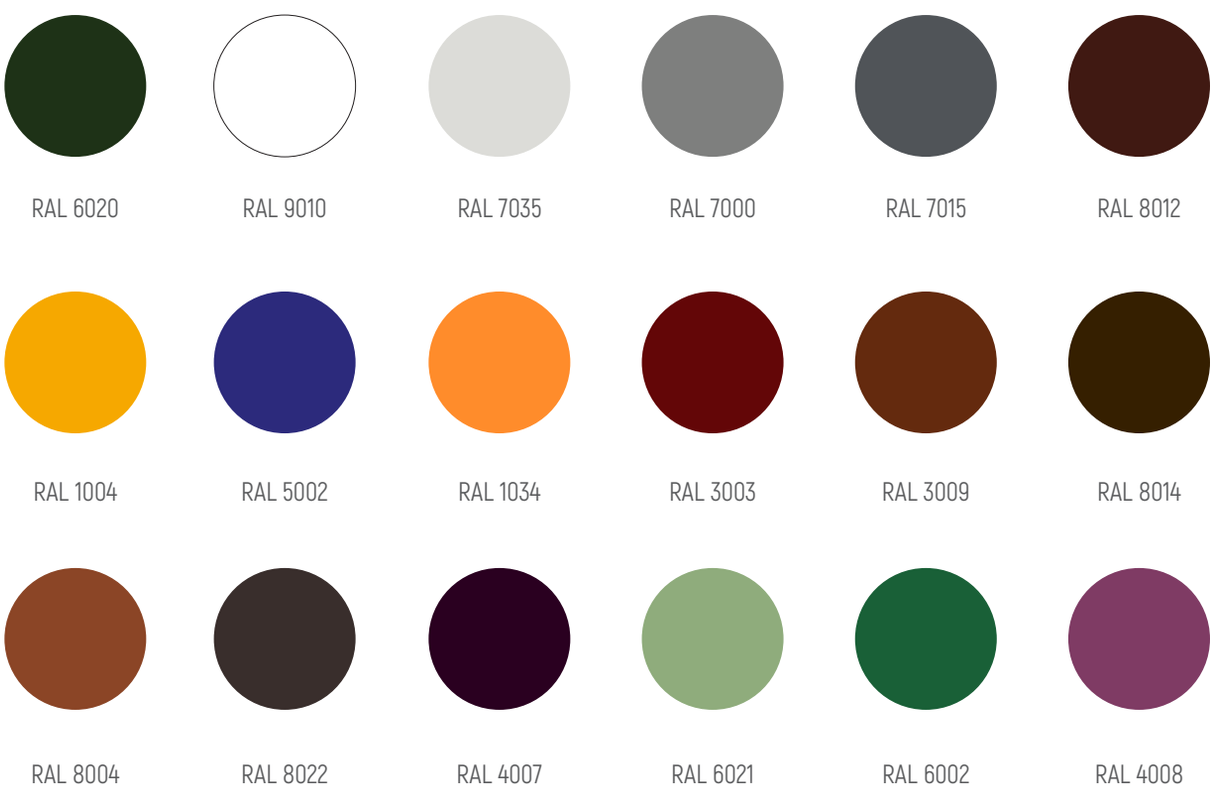
after 500 hrs (20μ)

PATTA Painted System

Advantages

- Customized combination w/screw & washer
- RAL, RR or customized colors option
- Complete automatic production system
- Automatic Spray Painting Machine
- High Production Capacity
- Evenly Painted
- Obvious Head Marking
- Large Automatic Oven with Stabilized Temperature
- Customized Paint Colors (RAL and RR)
- High Quality Paint Powder
- SGS Certified
- Well-managed QC Tests

RAL Colors



- Note: Sample colors are for reference only. Please refer to the original RAL color card for a precise color reproduction.

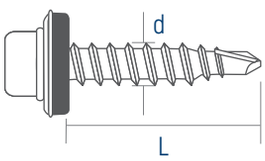
Farmer Screws

Features

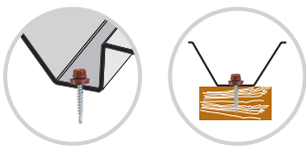
- Used for fasten sheet-metal to walls and roofs, the aluminium washer with EPDM rubber covering ensures an effective seal and resistance to aging. Moreover, farmer screws are electro galvanised with coating thickness as available, and various colors as in RAL and RR for selection.

Conditions

- Durable painting
- Ideal for walls and roofs with overlap joints
- Aluminium/Steel washer
- 2.5/3 mm EPDM thickness



Plated ZN Point 2



Suggested application thickness
Reduced point < 1.6 mm

Size	Length (inch)	Length (m/m)	Drill Point (m/m)	Drill Capacity (m/m)
#10-12 M4.8	3/4"	20	#2	1.0 - 1.6
	1-1/8"	28	#2	1.0 - 1.6
	1-3/8"	35	#2	1.0 - 1.6
	1-1/2"	38	#2	1.0 - 1.6
	2-3/8"	60	#2	1.0 - 1.6
	2-3/4"	70	#2	1.0 - 1.6

SS Stainless Steel
YZ Yellow Zinc
BP Black phosphate
RS Ruspert
ZN Zinc

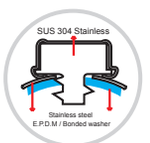
Stainless Steel Cap Self-drilling Screw

Applications

- For steel construction
- Excellent works for steel plate roof
- Suitability of aluminum and plastic window accessory

Plated ZN

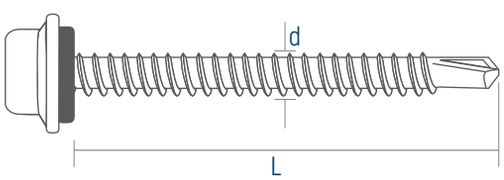
Point 2 3



Suggested application thickness
point #2 < 2 mm
point #3 < 5 mm

Features

- Weather resistance
- Water proof for exterior environment
- Prevent rust



Size (inch)	Length (inch)	Length (m/m)	Drill Point (m/m)	Drill Capacity (m/m)
#10-16 M4.8	5/8"	16	#2	1.0 - 2.0
	3/4"	19	#2	1.0 - 2.0
	1"	25	#3	1.0 - 3.0
	1-1/2"	38	#3	1.0 - 3.0
#12-14 M5.5	3/4"	19	#3	1.0 - 4.0
	1"	25	#3	1.0 - 4.0
	1-1/2"	38	#3	1.0 - 4.0
	2"	50	#3	1.0 - 4.0
	2-5/6"	65	#3	1.0 - 4.0
	3"	75	#3	1.0 - 4.0
	3-1/2"	90	#3	1.0 - 4.0
	4"	100	#3	1.0 - 4.0
	5"	125	#3	1.0 - 4.0

SS Stainless Steel
YZ Yellow Zinc
BP Black phosphate
RS Ruspert
ZN Zinc

Works excellent for roofing, perfect in weather resistance.

Size (inch)	**Length** (inch)	**Length** (m/m)	**Drill Point** (m/m)	**Drill Capacity** (m/m)
#14-14 M6.3	3/4"	19	#3	2.0 - 4.0
	1"	25	#3	2.0 - 4.0
	1-1/4"	32	#3	2.0 - 4.0
	1-1/2"	38	#3	2.0 - 4.0
	2"	50	#3	2.0 - 4.0
	2-5/8"	65	#3	2.0 - 4.0
	3"	75	#3	2.0 - 4.0
	3-1/2"	90	#3	2.0 - 4.0
	14"	100	#3	2.0 - 4.0
	14 x 5"	125	#3	2.0 - 4.0
	6"	150	#3	2.0 - 4.0

Double Thread

Applications

- Roof and wall panel over rigid insulation to steel framing
- Roof panel over spacer block and insulation to eaves purlin

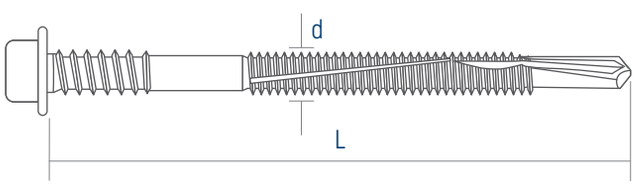
Features

- Double thread for the purpose using exterior roofing environment
- High thread under the head prevents panel stripout
- Point to thread design maximizes pullout performance and minimizes backout

Plated: ZN RS

Point: 5

Suggested application thickness
point #3 < 5 mm
point #4 < 8 mm
point #5 < 12 mm



Size	Length (inch)	Length (m/m)	Drill Point (m/m)	Drill Capacity (m/m)
#14-14 / #12-24 M6.3 / M5.5	2-3/8"	60	#5	12.0
	3-5/32"	80	#5	12.0
	4"	100	#5	12.0
	5"	125	#5	12.0
	6"	150	#5	12.0
	2-3/8"	60	#5	12.0
	3-5/32"	80	#5	12.0
	5"	125	#5	12.0
	4"	100	#5	12.0
	6"	150	#5	12.0
	7"	175	#5	12.0
	8"	200	#5	12.0
	10"	250	#5	12.0
	11"	275	#5	12.0

SS Stainless Steel
YZ Yellow Zinc
BP Black phosphate
RS Ruspert
ZN Zinc

Hex Washer Head

Wing up With Washer

Applications

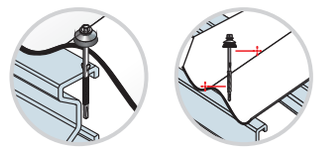
- For fibre cement sheet to steel application

Features

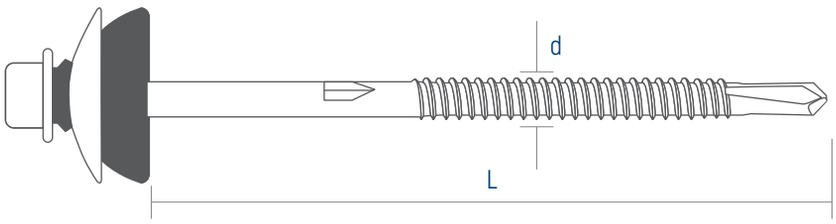
- EPDM with good water proof for exterior environment
- Wing up to enhance the drilling performance for fitting in exterior environment

Plated: ZN YZ SS

Point: 2



Suggested application thickness
point #3 < 5 mm
point #5 < 12 mm



Size	Length (inch)	Length (m/m)	Drill Point (m/m)	Drill Capacity (m/m)
#14-20 M6.3	4-5/32"	105	#5	12.0
	4-9/16"	115	#5	12.0
	5"	125	#5	12.0
	5-3/4"	145	#5	12.0
	6-1/8"	155	#5	12.0

Long Size Screws

Applications

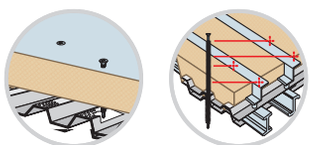
- Reduced point suitable for joint thin board
- Countersunk head for drilling material purpose
- Joint of composite panel or wall panel

Features

- Engineered for fast drilling and smooth tapping with less effort
- Screw length can be made by request
- High thread under head prevents panel stripout
- Fastens the broadest range of insulation thickness

Plated: ZN YZ SS

Point: 2 3 5



Suggested application thickness
point #2 < 2 mm
point #3 < 5 mm
point #4 < 8 mm
point #5 < 12 mm

Size	Length (inch)	Length (m/m)	Drill Point (m/m)	Drill Capacity (m/m)
#10 M4.8	6"	150	#2	1.0 - 2.0
	7"	175	#2	1.0 - 2.0
	8"	200	#2	1.0 - 2.0
#14 M6.3	6"	150	#3	2.0 - 4.0
	7"	175	#3	2.0 - 4.0
	8"	200	#3	2.0 - 4.0
#12 M5.5	6"	150	#5	12.0
	7"	175	#5	12.0
	8"	200	#5	12.0
#14-14 / #12-12 M6.3 / 5.5	6"	150	#5	12.0
	7"	175	#5	12.0
	8"	200	#5	12.0

SS Stainless Steel
YZ Yellow Zinc
BP Black phosphate
RS Ruspert
ZN Zinc

Type 17 hex washer flange yellow zinc

countersunk head, reduced point

Hex flange washer wing up with umbrella washer

Concrete & masonry screw ruspert

Bugle head reduced point, plain

Type 17 double thread ruspert

Double thread nano plating

Hex washer double thread #5 with bonded washer zinc plated

Custom Options

All our products come in various sizes, styles and can be customized to fit your needs.

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Iron Work Applications, Made of Alloy Steel

- Phillips
- Square(Roberson)
- Pozidriv
- Torx
- 1/4" Hex Shank, Double-ended Bit
- Nut Setters
  - Magnetic
  - Non-Magnetic

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PATTA

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Self Tapping Screws

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Blind Rivets

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Rivet Nuts

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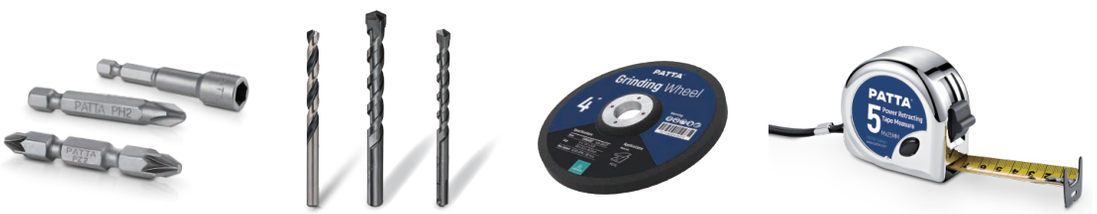

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