



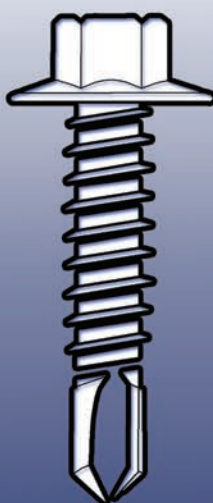
# WORLD CLASS FASTENERS



Reliability

Strength

Precision



# ピアスビス®

MADE IN JAPAN





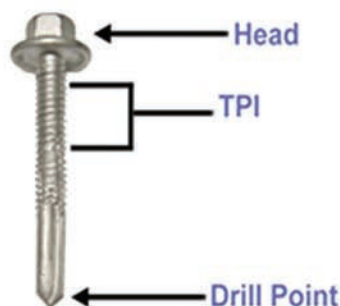
## INTRODUCTION

The Technical Data presented in this PIAS Self Drilling Fasteners Technical Data Manual is based on the numerous in-house test conducted by the Fasten Technical Department and are all conducted in the laboratory environment. As national or international regulations do not cover all possible types of applications, on-site technical support and technical consulting services are required for different types of applications and base material.

### Base Material

There are many types of material available on site that requires different fastening condition. PIAS SDS are designed to be the fastening solution for most of the different types of Base Material. On-Site Testing maybe required verifying the suitability or the loading capacity of the selected screw.

### Screw Selection



1) Head Types: The choice of Head Types is based on the different types of applications for the SDS and the desired finished appearance of the fastened surface.

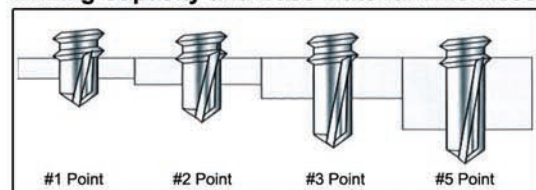
2) TPI: The choice of the number of Threads per Inch is based on the thickness of the base material.

3) Drill Point: The Drill Point is essential to the drilling capacity of the Self Drilling Screw. It is important that specification of the appropriate fastener to be based on the loading and base material.

### Types of Drill Point

PIAS Reduced Point	PIAS Self Drill Metal	PIAS No. 5 Point Up to 13mm Metal	PIAS Reamer Self Drill Timber to Metal	PIAS 'S' Point Timber To Light Metal	PIAS Type 17 Self Drill Timber

### Drilling Capacity and Base Material Thickness



### Screw Size / Drilling Capacity and Base Material Thickness

#1 point / Reduced Point	<2.5mm
#2 Point	1.5mm to 4.5mm
#3 Point	4.5mm to 6.0mm
#5 Point	Up till 13.0mm

### Features of a PIAS Screw



1) PIAS Logo on the head of the screw: The original PIAS logo has a shallow imprint of the "P" lightly marked on the head with a nonstandard font and is stamped like a watermark on the head.



2) The PIAS Patented Drill Point: PIAS Screws feature a second-generation symmetrical precision point. This point is formed perfectly and ensures that the screw drills with speed and precision.



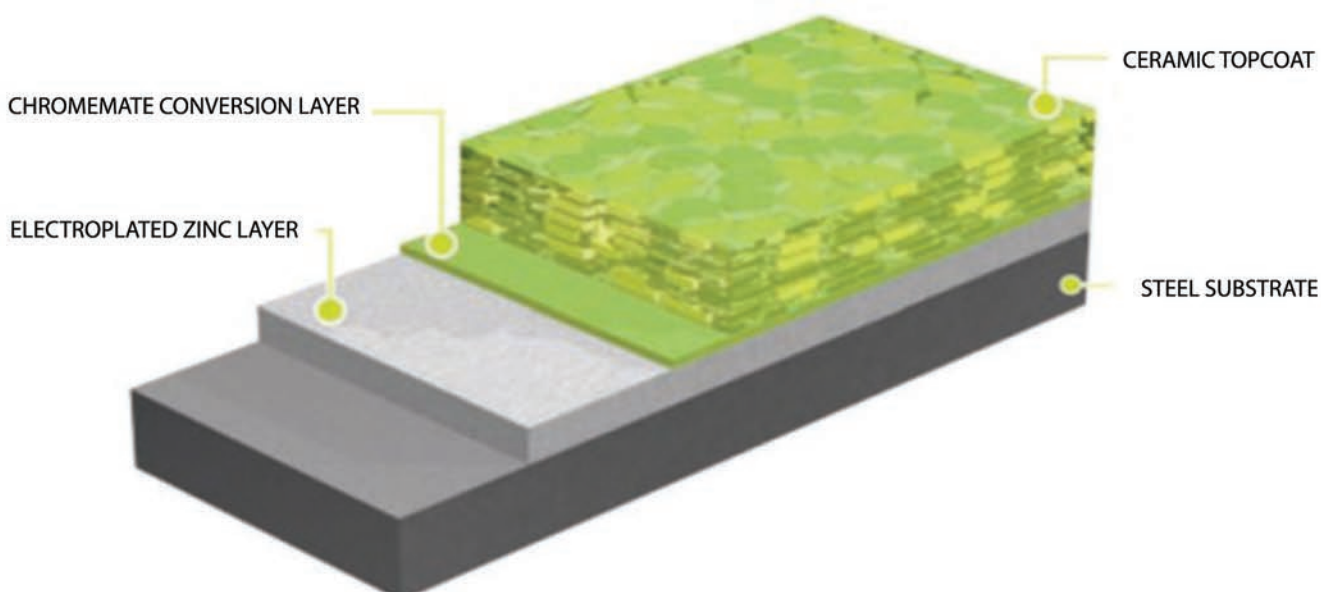
3) The "S" Point: PIAS Screws all feature the "S" point on the tip of the drilling point. This feature eliminates "walking" of the screw during installation and gives the installer more control over the screw. This effect is even more pronounced when the screw is being installed on a roof with a steeper profile or it is awkward angle.



4) High Hex: Another distinguishing feature found on the PIAS screws is the high hex dri makes it harder for the screw to pop out of the socket during installation by giving it a better sitting.



## THE RUSPERT COATING



The Ruspert™ coating is organic in nature and it is ceramic based, utilizes very advance chemicals and resins to achieve its ability to give unsurpassed corrosion resistance. The most remarkable feature of the Ruspert™ coating is that while the coating is extremely resistant to corrosion, it is very thin in nature (about 15-20 microns). This enables it to drill and cut through whatever materials with minimal resistance, preserving drill point integrity and ensuring maximum thread life. The Ruspert™ coating on the PIAS Carbon-Steel series conforms and exceeds the AS3566 - Australian Standard for Self-drilling screws for the building and construction industries (corrosion resistance) and exceeds the requirements for Class 3.

The Ruspert™ coating consists mainly of 3 layers. While the layers are independent and separate in nature, they are fused together by secondary chemical reactions which occur in between the layers, thus resulting in stronger adhesion and also consistency in thickness throughout the whole screw. This special process is patented and is a standard feature on PIAS carbon steel screws.

The first layer is a layer of electroplated Zinc. This layer of Zinc gives the Ruspert™ coating its ability to "self-heal" in the event that the topcoat of ceramic layer is breached. This layer also protects the base steel material by the self- sacrificing nature of Zinc.

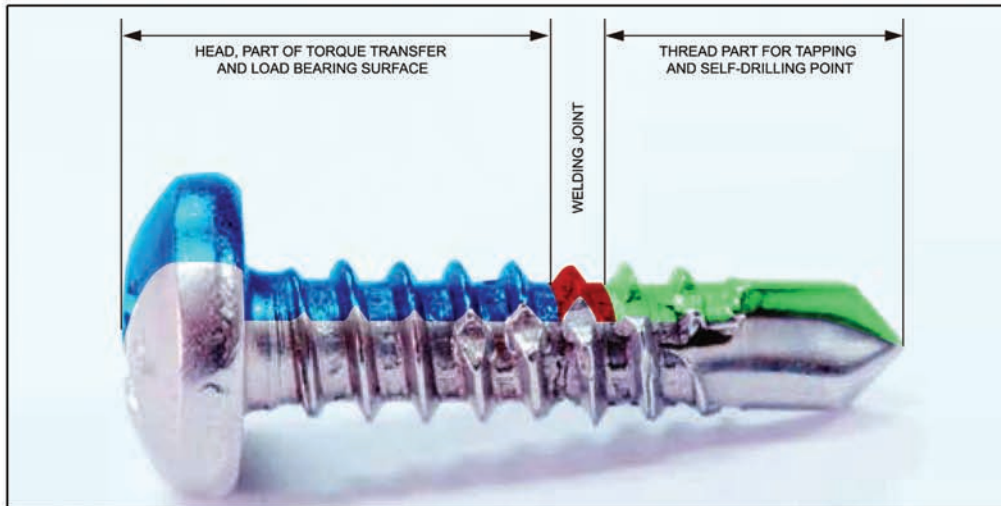
The second layer is the Chromate conversion phase. This effect is commonly observed on Zinc plated products which have a yellowish-greenish appearance. The chromate conversion film inactivates/passivates the surface of the zinc layer by preventing it from forming the fine/near invisible layer of Zinc Oxide (ZnO) when it come in contact with air.

The topmost layer is the ceramic layer. This layer acts as like a tough "jacket" and protects the 2 layers below it. It intercepts any materials or circumstances that threaten to breach any layers and cause corrosion. It is non-metallic in nature which means that the screw is insulated from electrolytic or galvanic corrosion as well.

Test Type	Test Method
Alternating Anti-Corrosion Test	200 Cycles of 2Hrs Salt Mist -> 2Hrs Drying at 60°C -> Humidity at 50°C min. 95% RH for over 4Hrs
Cass Test	10 Cycles of 16Hrs of Salt Mist using concertation of salt and Acetic Acid adjusted to PH3.0-31 and idling of 8Hrs
Acid/Alkali Resistance Test	500Hrs Consecutive lighting from a carbon rod and repetitive water mist spray - no crumbling of coating
Accelerated Environment Condition Test	Product soaked in 5% Acid concentration for 24Hrs and in 3% Alkali concentration for 72Hrs showed neither disintegration nor wrinkling of coating.
Heat Resistance Test	7Hrs of continuous of Hot Air environment at 250°C.
Coating Hardness Test	Coating strongly adhesive to any type of contours, including of envelope or cylinder-like shape.
Odd Contour Adhesion Test	4Hrs Hardness Test with the Pencil Scratch Method



## PIAS FASTENERS PRODUCT RANGE



PIAS Fasteners Range	Head, Part Of Torque Transfer And Bearing Surface	Welding Joint	Thread Part For Taping And Self-Drilling Point
<b>PIAS</b> Case Hardened Carbon Steel Fasteners	Case hardened - SWCH18A-JIS G3539 or AISI 1018 grade of Carbon Steel	✗	Case hardened - SWCH18A-JIS G3539 or AISI 1018 grade of Carbon Steel
<b>PIAS 410</b> Martensitic Stainless Steel Fasteners	Stainless Steel SUS 410	✗	Stainless steel SUS 410
<b>PIASTA</b> Bi-Metal Austenite Stainless Steel + Case Hardened Carbon Steel Fasteners	Austenite Stainless Steel SUS 304 / SUS 305	○	Case hardened - SWCH18A-JIS G3539 or AISI 1018 grade of Carbon Steel
<b>SUPER PIASTA</b> Bi-Metal Austenite + Martensitic Stainless Steel Fasteners	Austenite Stainless Steel SUS 316	○	Hardened Stainless Steel SUS 420J2

### Accelerated Environmental Tests Compliance:

Pias Fasteners Range	AS 2331.3.1-2001 - Methods of test for metallic and related coatings - Corrosion and related property tests - Neutral salt spray (NSS) test - (Less than 5% red Rust)	ASTM 2247-2001 - Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity - (Less than 5% red Rust)	DIN 50018-97 Testing in a saturated atmosphere in the presence of sulfur dioxide - (no Blister S3 or larger size)	ASTM G154-12A Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials - (no cracking, flaking and peeling)
<b>PIAS</b> Case Hardened Carbon Steel Fasteners (Ruspert Grey)	1,000 Hrs	1,000 Hrs	15 Cycles	2,000 Hrs
<b>PIASTA</b> Bi-Metal Austenite Stainless Steel + Case Hardened Carbon Steel Fasteners (Ruspert Silver)	2,200 Hrs	1,000 Hrs	15 Cycles	2,000 Hrs
<b>SUPER PIASTA</b> Bi-Metal Austenite + Martensitic Stainless Steel Fasteners (Passivated)	2,200 Hrs	1,000 Hrs	15 Cycles	2,000 Hrs



## TECHNICAL DATA



### TEST METHOD:

The fasteners were driven into cold rolled steel test plates of the stated thickness, lined with a steel socket pre-drilled with a clearance hole. The fasteners were then pulled by the laboratory tensile machine till failure. The stated values were obtained under laboratory conditions.

### PIAS

(N)

Screw Size / Gauge	Thickness of Steel Material (mm)					
	1.2 mm	1.6 mm	2.3 mm	3.2 mm	4.2 mm	6.0 mm
M 3.5 / #6	1500	2200	3500	-	-	-
M 3.9 / #7	1500	2300	3700	4100	-	-
M 4.2 / #8	1600	2400	3900	4700	8100	-
M 5.0 / #10	-	2400	4000	6800	10500	-
M 5.5 / #12	-	-	4200	7100	11100	18200
M 6.3 / #14	-	-	4400	7300	12800	20700

### PIAS 410

(N)

Screw Size / Gauge	Thickness of Steel Material (mm)					
	1.2 mm	1.6 mm	2.3 mm	3.2 mm	4.2 mm	6.0 mm
M 3.5 / #6	1500	2200	3500	-	-	-
M 4.2 / #8	1600	2400	3900	4700	8100	-
M 5.0 / #10	-	2400	4000	6800	10500	-
M 5.5 / #12	-	-	4200	7100	11100	18200
M 6.3 / #14	-	-	4400	7300	12800	21700

### PIASTA

(N)

Screw Size / Gauge	Thickness of Steel Material (mm)					
	1.2 mm	1.6 mm	2.3 mm	3.2 mm	4.2 mm	6.0 mm
M 4.2 / #8	1600	2300	4100	6100	-	-
M 5.0 / #10	-	2700	4300	6400	8600	-
M 5.5 / #12	-	-	4400	6900	9700	10200
M 6.3 / #14	-	-	4400	7800	9500	13800

### SUPER PIASTA

(N)

Screw Size / Gauge	Thickness of Steel Material (mm)					
	1.2 mm	1.6 mm	2.3 mm	3.2 mm	4.2 mm	6.0 mm
M 4.2 / #8	1600	2300	4100	6100	-	-
M 5.0 / #10	-	2700	4300	6400	8600	-
M 5.5 / #12	-	-	4400	6900	9700	10200
M 6.3 / #14	-	-	4400	7800	9500	13800

\*All values obtained under laboratory conditions.





## TECHNICAL DATA



Tensile Resistance:

(N)

Screw Size / Gauge	PIAS	PIAS 410	PIASTA	SUPER PIASTA
M 3.5 / 6 G	6638	4940	-	-
M 3.9 / 7 G	8660	9430	-	-
M 4.2 / 8 G	11380	9974	7500	7875
M 5.0 / 10 G	13880	14330	9500	9975
M 5.5 / 12 G	18920	19420	13600	14280
M 6.3 / 14 G	205790	22500	16600	17430



Shear Resistance:

(N)

Screw Size / Gauge	PIAS	PIAS 410	PIASTA	SUPER PIASTA
M 3.5 / 6 G	3090	3250	-	-
M 3.9 / 7 G	6050	6393	-	-
M 4.2 / 8 G	7400	9430	4900	5145
M 5.0 / 10 G	9020	14330	6100	6405
M 5.5 / 12 G	12300	19420	8800	9240
M 6.3 / 14 G	13151	22500	10800	11340



Torque Resistance:

(Nm)

Screw Size / Gauge	PIAS	PIAS 410	PIASTA	SUPER PIASTA
M 3.5 / 6 G	4.52	4.67	-	-
M 3.9 / 7 G	5.88	6.80	-	-
M 4.2 / 8 G	6.82	6.93	3.92	4.11
M 5.0 / 10 G	11.31	12.50	6.38	6.69
M 5.5 / 12 G	15.72	18.15	8.50	8.92
M 6.3 / 14 G	21.98	22.60	13.90	14.59

\*All values obtained under laboratory conditions.

## MATERIAL CHEMICAL COMPOSITION

		Carbon Steel: SWCH18A – JIS G3539 / AISI 1018	Stainless Steel 410: JIS G4309 / AISI 410	Stainless Steel 304: JIS SUS 304	Stainless Steel 305: JIS SUS 305	Stainless Steel 316: JIS G4303 SUS 316	Stainless Steel 420: JIS G4303 SUS 420J2
Carbon	C	0.18 ~ 0.23	≤ 0.15	≤ 0.12	≤ 0.12	≤ 0.08	0.26 ~ 0.40
Silicon	Si	≤ 0.10	≤ 1.00	≤ 1.00	≤ 1.00	≤ 1.00	≤ 1.00
Manganese	Mn	0.30 ~ 0.60	≤ 1.00	≤ 2.00	≤ 2.00	≤ 2.00	≤ 1.00
Phosphorus	P	≤ 0.03	≤ 0.04	≤ 0.045	≤ 0.045	≤ 0.045	≤ 0.04
Sulfur	S	≤ 0.035	≤ 0.03	≤ 0.03	≤ 0.03	≤ 0.03	≤ 0.03
Aluminum	Al	≤ 0.02	≤ 0.60	-	-	-	-
Nickel	Ni	-	-	10.50 ~ 13.00	10.50 ~ 13.00	10.00 ~ 14.00	-
Chromium	Cr	-	11.50 ~ 13.50	17.00 ~ 19.00	17.00 ~ 19.00	16.00 ~ 18.00	12.00 ~ 14.00
Molybdenum	Mo	-	-	-	-	2.00 ~ 3.00	-



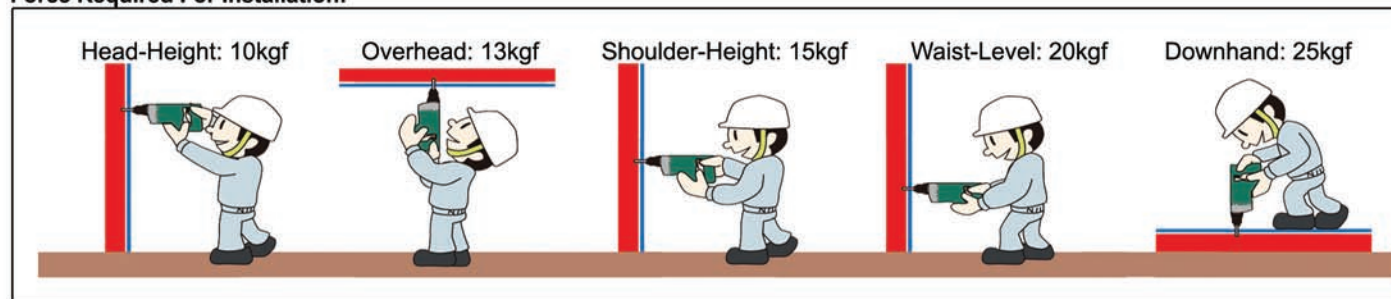
## Installation Guidelines

- A torque-controlled screwgun with a depth sensitive nosepiece should be used to install the self drilling screws. For optimal fastener performance, the screwgun should be a minimum of 5 amps and have a RPM range of 0-2500.
- Overdriving may result in torsional failure of the fastener or stripout of the substrate.
- The fastener must penetrate beyond the metal structure a minimum of 3 pitches of thread.

### Recommended Drill Speed

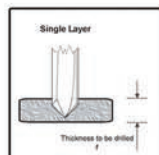
Diameter	Screw Gauge Size	Recommended Drill Speed for Metal Sheet <u>under 6mm</u>	Recommended Drill Speed for Metal Sheet <u>thicker than 6mm</u>	Max Drill Thickness
Ød (mm)		(rpm)	(rpm)	
3.5	#6	2,200 ~ 2,500	-	2.5 mm
3.9	#7	2,200 ~ 2,500	-	2.5 mm
4.2	#8	2,200 ~ 2,500	-	4.5 mm
4.8	#10	2,200 ~ 2,500	-	6.0 mm
5.5	#12	1,800 ~ 2,500	1,600 ~ 1,800	13.0 mm
6.3	#14	1,600 ~ 1,800	1,600 ~ 1,800	13.0 mm

### Force Required For Installation:



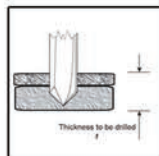
## DRILLING THICKNESS

Before we go into how to determine the thickness of material to be drilled, we have to understand that the drill point has to finish drilling and clear all the different layers before the screw thread can start to engage the material. With this in mind, we can now go into how to determine the screw thickness.



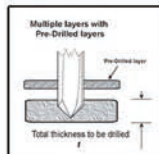
### Single Layer

In a straightforward application where a single material is involved, the thickness to be drilled is simply the thickness of the material, expressed as  $t$ .



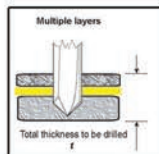
### Single Sheet

In reality however, we always have to consider fastening something to something else. Thus in a practical application, if we need to fasten say a roofing sheet to the purlin, the combined thickness of both the sheet and purlin would have to be considered in determining  $t$ .



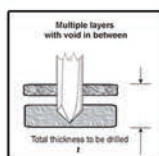
### Pre-drilled top layer

In the event that the overall thickness exceeds the maximum drill capacity of the screw, it is possible to fasten this application by pre drilling the top most layer(s). Thus for this case,  $t$ , to be considered would be limited to only those layers that have not been pre drilled



### Multiple layers

In other applications where insulation or other materials like architectural or composite panels are involved, we have to consider all the layers as one thick layer to be drilled through.



### Layers with Void

In applications with a void in between the fastened sheet members, we have to consider the whole assembly as one thick layer.





## PAN HEAD

- For fixing of Aluminum to Steel Structure in Façade or Curtain Wall Applications.

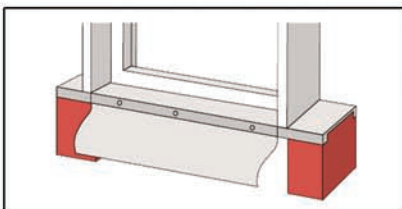
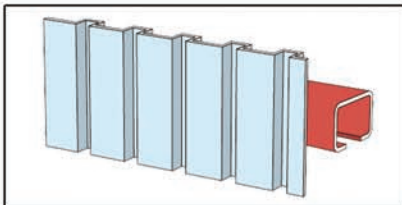
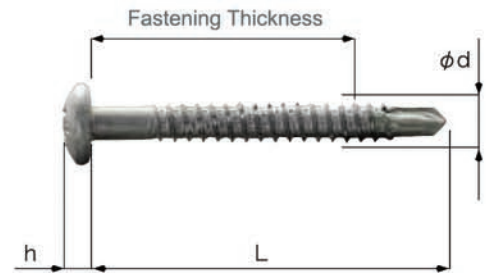
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Piasta



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Pias



Tested at  
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Certified  
Management  
System



Speical  
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Ruspert™  
Coating



Electro-Galvanised



Phillips Drive



Coarse  
Thread



Fine  
Thread



#1 Drill Point



#2 Drill Point

## SCREW SELECTION CHART

Diameter Ød (mm)	Length L (mm)	Head Diameter Ødk (mm)	Head Thickness (h) h (mm)	Fastening Thickness (mm)	Drill Point
3.5	10	7.0	2.8	3.5	1
3.5	13	7.0	2.8	6.0	1
3.5	16	7.0	2.8	9.0	1
3.5	19	7.0	2.8	12.0	1
3.5	25	7.0	2.8	18.0	1
4.0	10	8.2	2.9	4.0	1
4.0	13	8.2	2.9	5.0	2
4.0	16	8.2	2.9	8.0	2
4.0	19	8.2	2.9	10.0	2
4.0	25	8.2	2.9	16.0	2
4.0	30	8.2	2.9	21.0	2
4.0	35	8.2	2.9	26.0	2
4.0	40	8.2	2.9	31.0	2
4.0	45	8.2	2.9	36.0	2
4.0	50	8.2	2.9	41.0	2
5.0	13	9.5	3.3	3.5	2
5.0	16	9.5	3.3	6.0	2
5.0	19	9.5	3.3	8.0	2
5.0	25	9.5	3.3	14.0	2
5.0	30	9.5	3.3	19.0	2
5.0	35	9.5	3.3	24.0	2
5.0	40	9.5	3.3	29.0	2
5.0	45	9.5	3.3	34.0	2
6.0	19	10.2	4.0	7.0	2
6.0	25	10.2	4.0	13.0	2
6.0	35	10.2	4.0	23.0	2





## COUNTERSUNK HEAD

- For fixing of Aluminum to Steel Structure in Façade or Curtain Wall Applications.
- The Countersunk Head flush on fastenings and it finishes with a flat surface which enables other members to clear it or move over it.

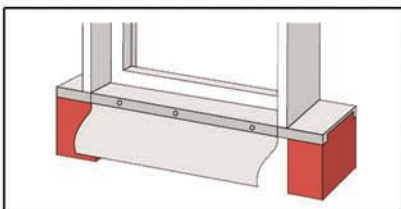
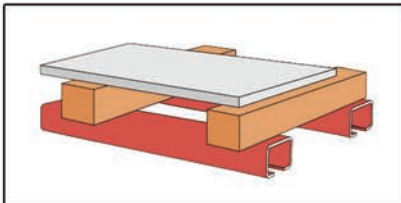
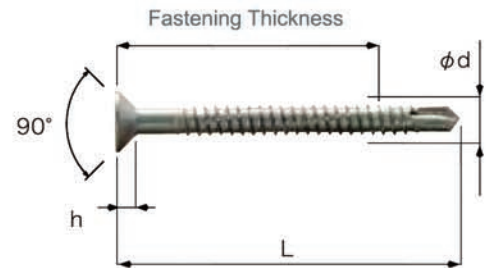
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Electro-Galvanised



Phillips Drive



Coarse  
Thread



Fine  
Thread



#1 Drill Point



#2 Drill Point

## SCREW SELECTION CHART

Diameter $\phi d$ (mm)	Length L (mm)	Head Diameter $\phi dk$ (mm)	Head Thickness (h) h (mm)	Fastening Thickness (mm)	Drill Point
4.0	10	8.0	2.3	4.0	1
4.0	13	8.0	2.3	5.0	2
4.0	16	8.0	2.3	7.0	2
4.0	19	8.0	2.3	10.0	2
4.0	25	8.0	2.3	16.0	2
4.0	30	8.0	2.3	21.0	2
4.0	35	8.0	2.3	26.0	2
4.0	40	8.0	2.3	31.0	2
4.0	45	8.0	2.3	36.0	2
4.0	50	8.0	2.3	41.0	2
4.0	60	8.0	2.3	51.0	2
5.0	19	10.0	2.8	8.0	2
5.0	25	10.0	2.8	14.0	2
5.0	30	10.0	2.8	19.0	2
5.0	35	10.0	2.8	24.0	2
5.0	45	10.0	2.8	34.0	2
5.0	50	10.0	2.8	39.0	2
5.0	60	10.0	2.8	49.0	2



## COUNTERSUNK HEAD - REAMER

- For fixing of wood/ panel to steel structure. The special Reamer drill point has wings to bore a slightly bigger hole through the wood and upon contact with the steel underneath, the wings will snap off to enable a snug tapping.

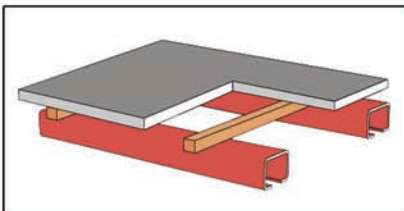
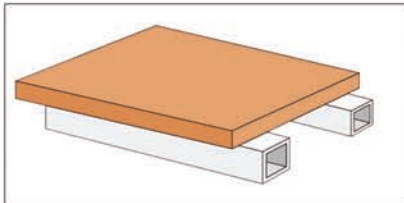
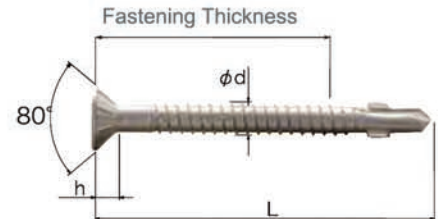
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Piasta



Pias



Tested at  
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Certified  
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Electro-Galvanised



Philips Drive



Coarse  
Thread



Fine  
Thread



Reamer  
Drill Point

## SCREW SELECTION CHART

Diameter Ød (mm)	Length L (mm)	Head Diameter Ødk (mm)	Head Thickness (h) h (mm)	Fastening Thickness (mm)	Drill Point
4.0	28	7.0	2.8	12.0	2
4.0	32	7.0	2.8	16.0	2
4.0	37	7.0	2.8	21.0	2
4.0	40	7.0	2.8	24.0	2
4.0	45	7.0	2.8	29.0	2
5.0	25	9.5	3.9	8.0	2
5.0	32	9.5	3.9	15.0	2
5.0	37	9.5	3.9	20.0	2
5.0	42	9.5	3.9	25.0	2
5.0	45	9.5	3.9	28.0	2
6.0	35	12.0	4.6	17.0	3
6.0	40	12.0	4.6	22.0	3
6.0	45	12.0	4.6	27.0	3
6.0	50	12.0	4.6	32.0	3
6.0	55	12.0	4.6	37.0	3
6.0	60	12.0	4.6	42.0	3





## WAFER HEAD

- For fixing of clip and locking roof systems and secret fix systems to Steel Structure. The Wafer Head combines secure fastening power and a low profile head so that clip locking or secret fix systems can simply lock or clip over it.

Super  
Piasta



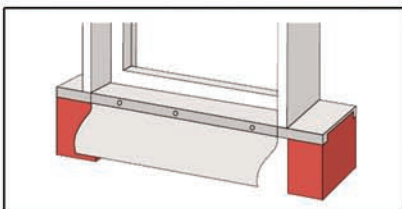
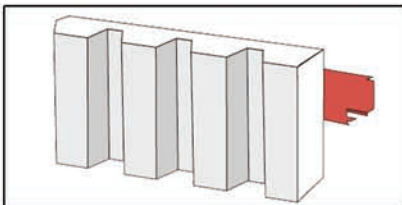
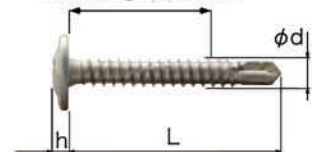
Piasta



Pias



Fastening Thickness



Tested at  
TUV SUD PSB



Certified  
Management  
System



Speical  
S-Coating



Ruspert™  
Coating



Electro-Galvanised



Philips Drive



Coarse  
Thread



Fine  
Thread



Reduced  
Point



#3 Drill Point



#5 Drill Point

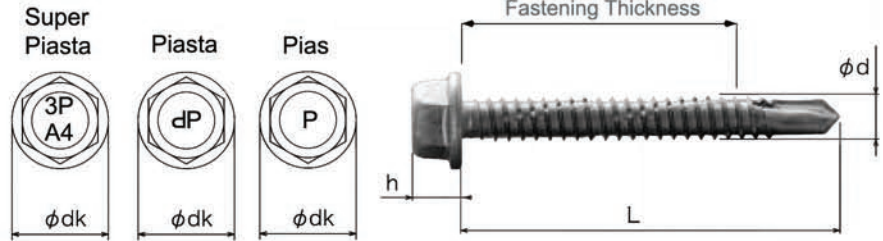
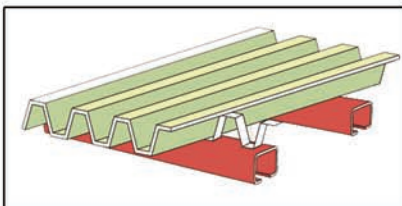
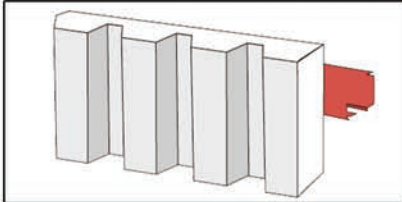
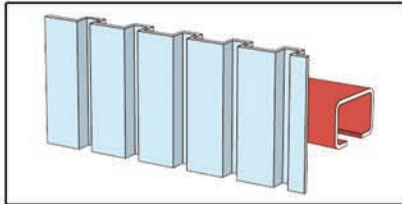
## SCREW SELECTION CHART

Diameter Ød (mm)	Length L (mm)	Head Diameter Ødk (mm)	Head Thickness (h) h (mm)	Fastening Thickness (mm)	Drill Point
5.0	19	11	2.5	8.0	RP
5.0	25	11	2.5	14.0	RP
5.0	40	11	2.5	29.0	RP
5.0	16	11	2.5	6.0	3
5.0	19	11	2.5	8.0	3
5.0	25	11	2.5	14.0	3
5.0	30	11	2.5	19.0	3
5.0	35	11	2.5	24.0	3
5.0	40	11	2.5	29.0	3
5.0	45	11	2.5	34.0	3
5.5	32	11	2.5	10.0	5
5.5	38	11	2.5	16.0	5
5.5	50	11	2.5	28.0	5
5.5	61	11	2.5	39.0	5



## HEXAGONAL HEAD

- For fixing of Roofing and Cladding on to Strutural Steel.



Tested at  
TUV SUD PSB



Certified  
Management  
System



Speical  
S-Coating



Ruspert™  
Coating



Electro-Galvanised



Hexagonal  
Drive



Coarse  
Thread



Fine  
Thread



Reduced  
Point



#3 Drill Point



#5 Drill Point



PIAS  
Type 17

## SCREW SELECTION CHART

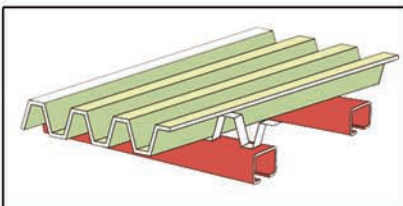
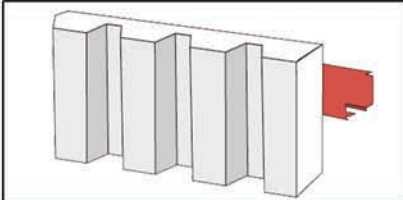
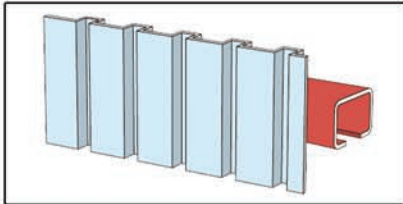
Diameter Ød (mm)	Length L (mm)	Head Diameter Ødk (mm)	Head Thickness (h) h (mm)	Fastening Thickness (mm)	Drill Point
5.0	19	11	3.9	8.0	Type 17
5.0	25	11	3.9	14.0	Type 17
5.5	50	13	4.8	39.0	Type 17
5.5	65	13	4.8	54.0	Type 17
5.5	75	13	4.8	64.0	Type 17
5.0	19	11	3.9	8.0	RP
5.0	25	11	3.9	14.0	RP
5.0	40	11	3.9	29.0	RP
5.0	16	11	3.9	6.0	3
5.0	19	11	3.9	8.0	3
5.0	25	11	3.9	14.0	3
5.0	30	11	3.9	19.0	3
5.0	35	11	3.9	24.0	3
5.0	40	11	3.9	29.0	3
5.0	45	11	3.9	34.0	3
5.5	19	13	4.8	7.0	3
5.5	25	13	4.8	12.0	3
5.5	30	13	4.8	17.0	3
5.5	35	13	4.8	22.0	3
5.5	32	13	4.8	10.0	5
5.5	38	13	4.8	16.0	5
5.5	50	13	4.8	28.0	5
5.5	61	13	4.8	39.0	5





## HEXAGONAL HEAD

- For fixing of Roofing and Cladding on to Strutural Steel.



Super  
Piasta



Piasta



Pias



Tested at  
TUV SUD PSB



Certified  
Management  
System



Speical  
S-Coating



Ruspert™  
Coating



Electro-Galvanised



Hexagonal  
Drive



Double  
Thread



Half  
Thread



#3 Drill Point

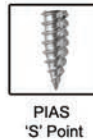
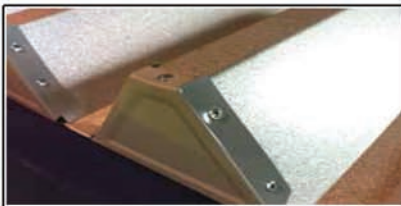
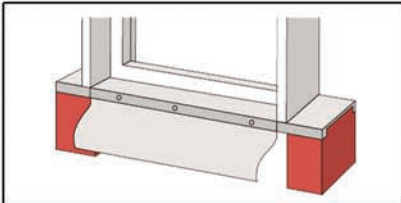
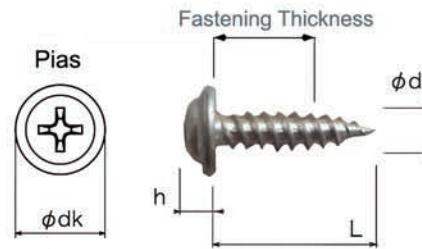
## SCREW SELECTION CHART

Diameter Ød (mm)	Length L (mm)	Head Diameter Ødk (mm)	Head Thickness (h) h (mm)	Fastening Thickness (mm)	Drill Point
5.5	45	13	4.8	23.0	3
5.5	50	13	4.8	28.0	3
5.5	55	13	4.8	33.0	3
5.5	65	13	4.8	16.0	3
5.5	75	13	4.8	43.0	3
5.5	85	13	4.8	63.0	3



## THIN TRUSS HEAD

- For easy fixing of thin Steel Sheet. Fully-threaded shank engages the entire length of the fastener, providing a secure connection between the roof/ facade and wall framing members.
- PIAS Sharp 'S' Drill Point is designed to improve drilling ability through thin sheet metal.
- The Thin Truss Head allows the fastening of low profile sheet metal clips and ensures proper installation of metal roof panels.



## SCREW SELECTION CHART

Diameter $\phi d$ (mm)	Length L (mm)	Head Diameter $\phi dk$ (mm)	Head Thickness (h) h (mm)	Fastening Thickness (mm)	Max Drill Thickness
3.5	13	10.0	1.9	6.0	1.2 mm
3.5	22	10.0	1.9	13.0	1.2 mm
4.2	16	11.0	3.0	8.0	1.6 mm
4.2	19	11.0	3.0	11.0	1.6 mm





## WASHERS

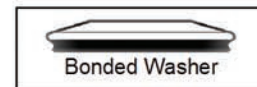
### Molded Washers

These are the simple normal types of washers. Our washers are all injection molded and they provide a secure and snug fit for our range of screws and for most applications.

Item	Material	Dimensions	
MW10	EPDM	Gauge 10 O.D 10mm	
MW12	EPDM	Gauge 12 O.D 10mm	
MW14	EPDM	Gauge 14 O.D 12mm	

### Bonded Washers

These are EPDM rubber bonded to a metal backing which provides more support for a better seal.



Item	Sealing Material	Support Material	Dimensions	
BW8/10-16 *(A,S,I)	EPDM	Aluminum, Galvanised Steel, Stainless Steel 304	Gauge 8/10 O.D 16mm	
BW10/12-12 *(A,S,I)	EPDM	Aluminum, Galvanised Steel, Stainless Steel 304	Gauge 10/12 O.D 12mm	
BW12/14-14 *(A,S,I)	EPDM	Aluminum, Galvanised Steel, Stainless Steel 304	Gauge 12/14 O.D 14mm	
BW12/14-16 *(A,S,I)	EPDM	Aluminum, Galvanised Steel, Stainless Steel 304	Gauge 12/14 O.D 16mm	
BW12/14-19 *(A,S,I)	EPDM	Aluminum, Galvanised Steel, Stainless Steel 304	Gauge 12/14 O.D 19mm	
BW12/14-25 *(A,S,I)	EPDM	Aluminum, Galvanised Steel, Stainless Steel 304	Gauge 12/14 O.D 25mm	

\* A – Aluminum, S – Galvanised Steel, I – INOX(SUS)

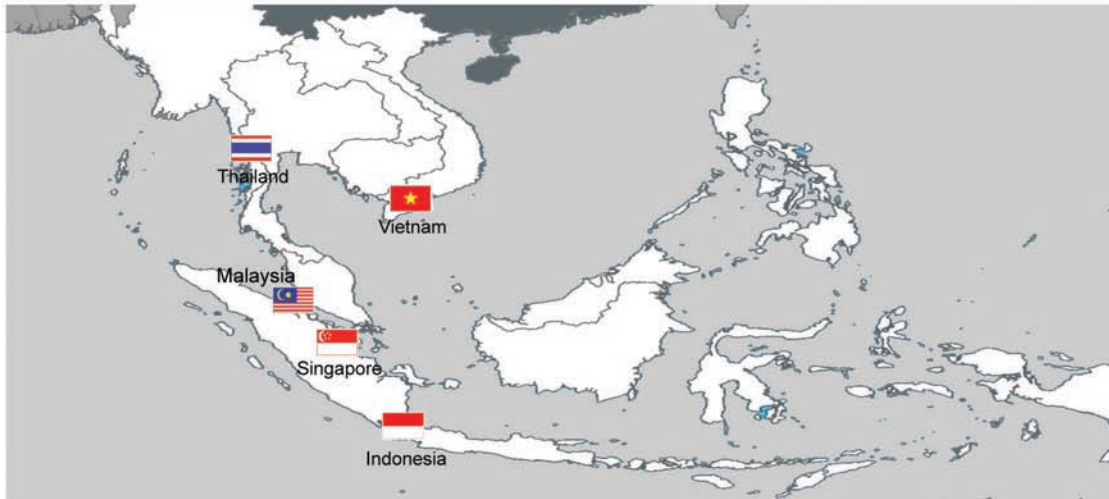
### Specialty Washers

Also known as cyclonic washers. These are used for areas where heavy duty sealing and holding power is required.

Item	Sealing Material	Support Material	Dimensions	
EW12/14-25 *(A,S,I) Embossed Washer	EPDM	Aluminum, Galvanised Steel, Stainless Steel 304*	Gauge 12/14 O.D 25mm	
CW12/14-D *(A,S,I) For Spandek or Trimdek	EPDM	Aluminum, Galvanised Steel, Stainless Steel 304*	Gauge 12/14 O.D 36mm	
CW12/14-K *(A,S,I) For Kliplok	EPDM	Aluminum, Galvanised Steel, Stainless Steel 304*	Gauge 12/14 O.D 30mm	



## Regional Sales Network



### SINGAPORE

**FASTEN ENTERPRISES PTE LTD**  
**COREFIX TECH SYSTEMS (S) PTE LTD**

#### Main Office

No.3 Ang Mo Kio Street 62 #01-50/51  
LINK@AMK Singapore 569139  
Tel: (65) 6741 2998  
Fax: (65) 6741 7606  
Email: office@fasten.com.sg  
Website: www.fasten.com.sg

#### **FASTEN HARDWARE & ENGINEERING PTE LTD**

Tel: (65) 6732 2998  
Fax: (65) 6235 2998  
Email: office@fastenhardware.com.sg



### MALAYSIA (KL)

**CF BUILDING PRODUCTS SDN. BHD.**

No. 17, Jalan Perusahaan 6/2A,  
Kawasan Perusahaan  
Selesa Jaya, Balakong 43300  
Seri Kembangan, Selangor Darul Ehsan, Malaysia  
Tel: (603) 8962 2591/92/93 Fax: (603) 8962 2598  
Email: confast@fasten.com.sg



**EC MASON INDUSTRIES (M) SDN. BHD.**

No. 17, Jalan Perusahaan 6/2A,  
Kawasan Perusahaan  
Selesa Jaya, Balakong 43300  
Seri Kembangan, Selangor Darul Ehsan, Malaysia  
Tel: (603) 8962 2591/92/93 Fax: (603) 8962 2598  
Email: ecmason@fasten.com.sg



### THAILAND

**CONSTRUCTION FASTENERS (THAILAND) LTD**

1184/23-24, Soi Paholyothin 32, Paholyothin Road,  
Chandrakasem, Chatuchak, Bangkok 10900, Thailand.  
Tel: (662) 561 0774/5 Fax: (662) 561 2590  
Email: cfthailand@fasten.com.sg



### VIETNAM

**FASTEN ENTERPRISES (VIETNAM) PTE LTD**

393 Nguyen Thai Binh, P.12, Q. Tan Binh,  
TP. Ho Chi Minh City, Vietnam  
Tel: (84) 8 6281 6188 Fax: (84) 8 6281 6179  
Email: vietnam@fasten.com.sg



### INDONESIA

**PT. CIPTA FASTENER INDONESIA (JKT)**

**RUKO MEGA GROSIR CEMPAKA MAS**  
Block N/15, Jl. Letjend Soeprapto, Samur Batu Kemayoran,  
Jakarta Pusat 10640, Indonesia.  
Tel: (021) 4287 9523 Fax: (021) 4288 0653  
Email: sales@ciptafastener.com  
Website: www.ciptafastener.com

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Surabaya 60293, Indonesia  
Tel: (031) 879 5418/ 9 Fax: (031) 872 2113  
Email: sales@ciptafastener.com

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Makasar 90133, Indonesia  
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Distributor: