Xdrill XIAOJUN

Feel the Power of Screws



Xdrill XiAOJUN

Company Introduction

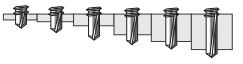
Handan Xiaojun Fastener Manufacturing Co.,Ltd. It's located in China's largest fastener production base in Yongnian, Hebei province. Xiaojun is a large private enterprise with high standards of fastener production and scientific research, whose industrial products are sold all over the world. The company adheres to the business tenet of quality excellence, strict management and put reputation first. We have been selecting superior steel raw materials and employing senior technical staffs. As the industry develops, upgrades and transforms, the high strength threaded bars brought us new opportunities since 2009. Under this background we decide to produce self drilling screws.

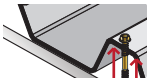
The main products are: Carbon Steel and Stainless Steel Self-Drilling Screws and Self-Tapping Screws, Xiaojun has thousand sets of cold-forming machines, tapping, drilling, punching machines and other CNC equipment.

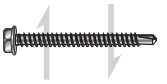
Xiaojun focus on manufacturing high quality products and providing professional sales service, we are also willing to cooperate with clients worldwide sincerely.



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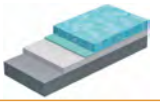
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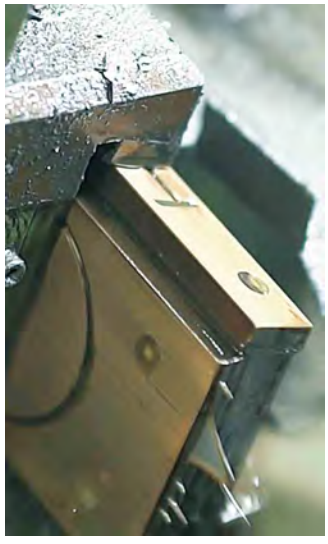
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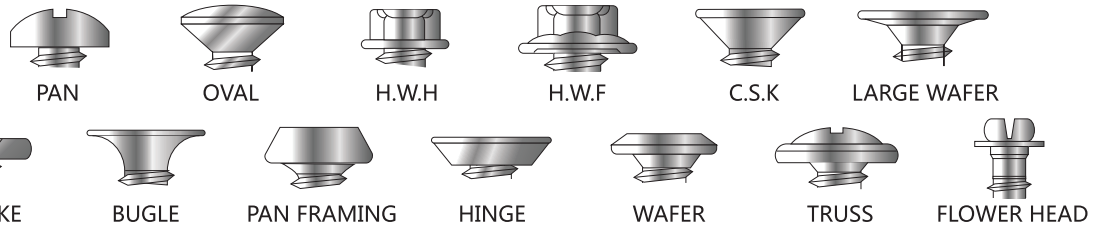
Xdrill XIAOJUN

Feel the Power of Screws

- **Professional**
  Provides expertise and technology in fasteners and construction Hardware industry
- **Positive**
  Continuously provide customers with high-quality products and services
- **Trustworthy**
  With 15 years of experience, with the famous XiAOJUN® brand
- **Typical**
  Provide unique solutions to fastener problems
- **Ambitious**
  Offer a range of activities to meet client expectations

Screw Data

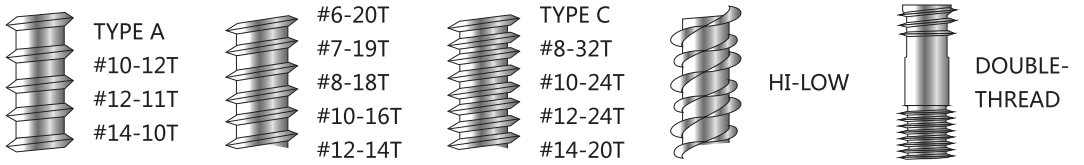
Head Styles



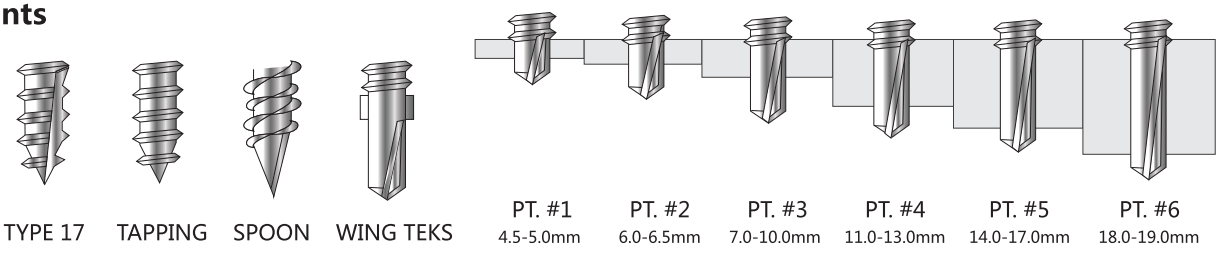
Head Recess



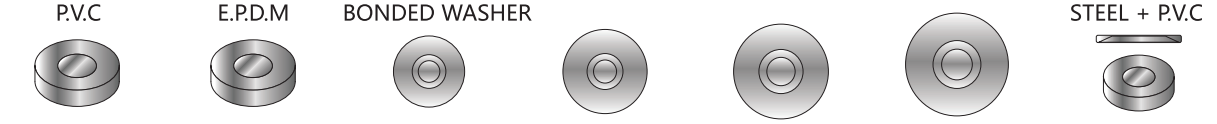
Threads



Points



Washer



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

- **Coating and Finish**

- **E.P.D.M Seal**

- **High grip**

- **Specia**

  High Grip

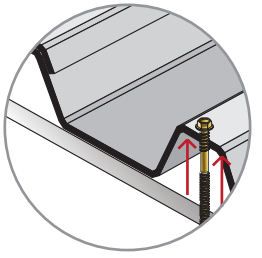
- **Standard**

  AS 3566
  ASTMD 2247
  DIN 50018

- **Hexagon**

  Washer Face with E.P.D.M Seal





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

Resistance Performance

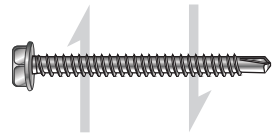
	Thickness	Salt Spray Test	Kesternich
Nanoplating	20 mu	2000 hours passed	25 cycles
C4 + Coating	60 - 70 mu	1500 hours passed	20 cycles

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



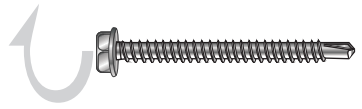
Tensile Strength

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



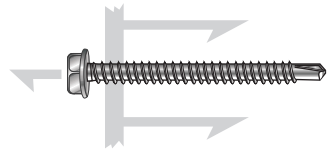
Torsional Strength

Gauge	#6	#8	#10	#12	#14
MM	3.5	4.2	4.8	5.5	6.3
Kn	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	4.8mm (#10)	5.5mm (#12)	6.3mm (#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

Shear Strength

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	○	○

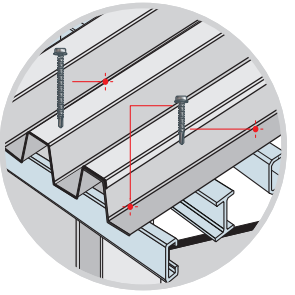
● EXCELLENT ○ POOR × GOOD

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

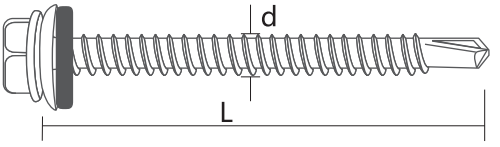
Medium duty

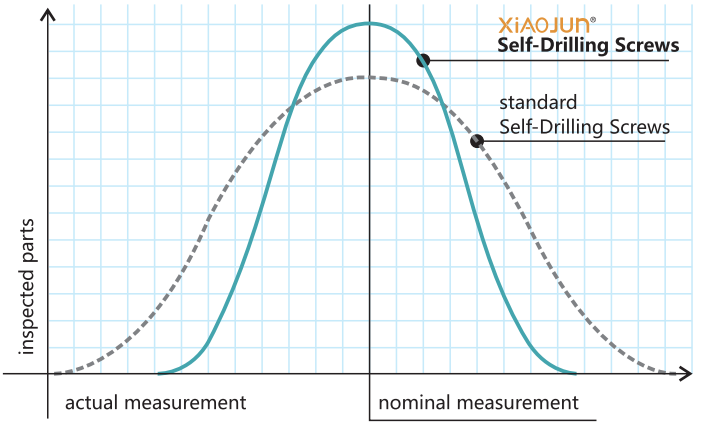
Hex Washer Head

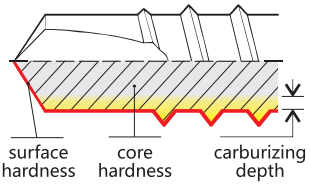




XiAOJUN® Suggested drill point #3
maximum drill capacity of 5mm







Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

- dp3 — Drill Pont #3
- dp5 — Drill Pont #5

Plated

- WZP — White Zinc -plated
- YZP — Yellow Zinc -plated
- CR — Chrome -plated
- NI — Nickel -plated

Coating

- RS — Ruspert
- MG — Magni
- CM — Climaseal
- DC — Dacromet

Applications

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

Features

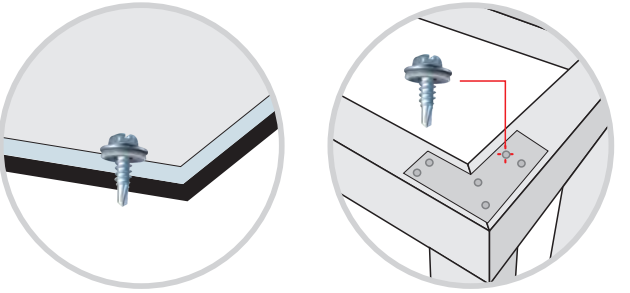
- Precise cutting edges to improve drill performance with less effort
- Point to thread design maximize pullout performance and minimizes backout

Specifications

Head Style	Hex Washer head	**Product Type**	Self-drilling screw
Drive Socket	3/8"	**Material**	C1022A Carbon steel
Drill Point	Xiaojun®-#3 drill point	**Threads Per Inch**	14
Diameter	#14	**Diameter [mm]**	6.3 mm
Width Across Flats [Inches]	0.374"	**Width Across Flats [mm]**	9.5mm
Thread Major Dia [Inches]	0.248"	**Thread Major Dia [mm]**	6.3 mm
Thread Minor Dia [Inches]	0.2"	**Thread Minor Dia [mm]**	5.1mm
Drill Capacity Max [Inches]	0.237"	**Drill Capacity Range [mm]**	6mm
Washer	EPDM Washer		

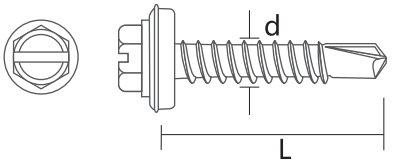
Size	Length (inch)	Length (mm)	Drill Point (m/m)	Drill Capacity (m/m)
#12-14 M5.5	3/4"	19	#3	2.0 - 4.0
	1"	25	#3	2.0 - 4.0
	1-1/4"	32	#3	2.0 - 4.0
	1-1/2"	38	#3	2.0 - 4.0
	2"	50	#3	2.0 - 4.0
	2-1/2"	63	#3	2.0 - 4.0
	3"	75	#3	2.0 - 4.0
#14-14 M6.3	3/4"	19	#3	2.0 - 4.0
	1"	25	#3	2.0 - 4.0
	1-1/4"	32	#3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

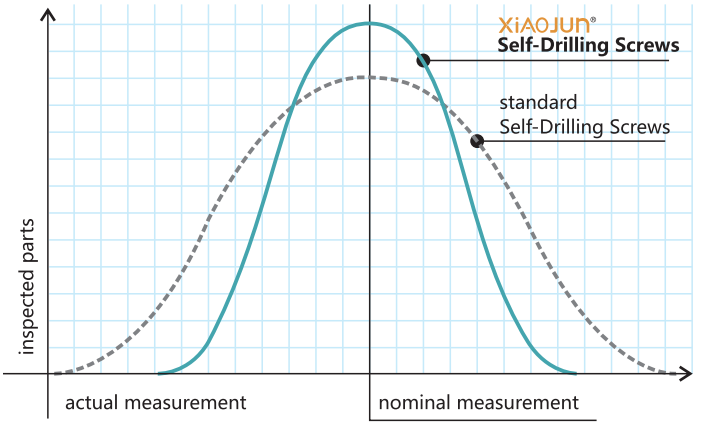
Slotted
Hex Washer Head

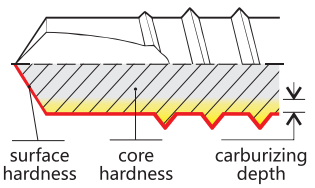


XiAOJUN® Suggested drill point #3
maximum drill capacity of 5mm









Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

- dp3 — Drill Pont #3
- dp5 — Drill Pont #5

Plated

- WZP — White Zinc -plated
- YZP — Yellow Zinc -plated
- CR — Chrome -plated
- NI — Nickel -plated

Coating

- RS — Ruspert
- MG — Magni
- CM — Climaseal
- DC — Dacromet

Applications

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

Features

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

Specifications

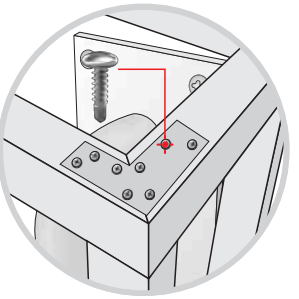
Head Style	Hex Washer head	**Product Type**	Self-drilling screw
Drive Socket	3/8"	**Material**	C1022A Carbon steel
Drill Point	Xiaojun®-#3 drill point	**Threads Per Inch**	14
Diameter	#14	**Diameter [mm]**	6.3 mm
Width Across Flats [Inches]	0.374"	**Width Across Flats [mm]**	9.5mm
Thread Major Dia [Inches]	0.248"	**Thread Major Dia [mm]**	6.3 mm
Thread Minor Dia [Inches]	0.2"	**Thread Minor Dia [mm]**	5.1mm
Drill Capacity Max [Inches]	0.237"	**Drill Capacity Range [mm]**	6mm
Washer	EPDM Washer		

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

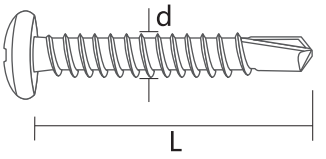
Phillips

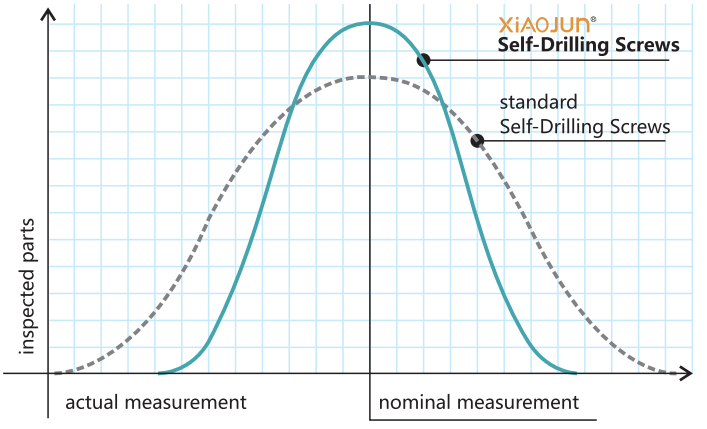
Pan Head

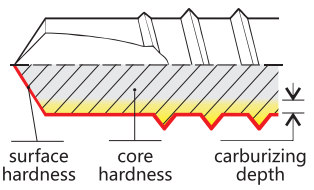




XiAOJUN® Suggested drill point #2 maximum drill capacity of 2mm and drill point #3 maximum drill capacity of 5mm







Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

- dp2 — Drill Pont #2
- dp3 — Drill Pont #3

Plated

- WZP — White Zinc -plated
- YZP — Yellow Zinc -plated
- CR — Chrome -plated
- NI — Nickel -plated

Coating

- RS — Ruspert
- MG — Magni
- CM — Climaseal
- DC — Dacromet

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 purpose using
- Non-walking point provides fast material engagement

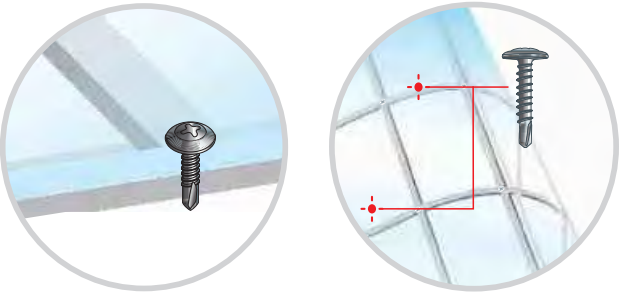
Specifications

Drive Socket	#2 Phillips	**Product Type**	Self-drilling screw
Diameter	#10	**Diameter [mm]**	4.72 mm
Drill Capacity Max [Inches]	0.150"	**Drill Point**	XiaoJun®-#2 drill point
Head Style	Pan	**Material**	Carbon steel
Thread Major Dia	0.186"	**Thread Major Dia [mm]**	4.72 mm
Thread Minor Dia	0.138"	**Thread Minor Dia [mm]**	3.51mm
Threads Per Inch	16	**Washer**	No washer

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

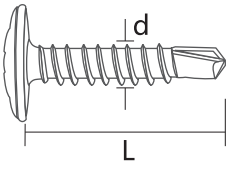
Phillips

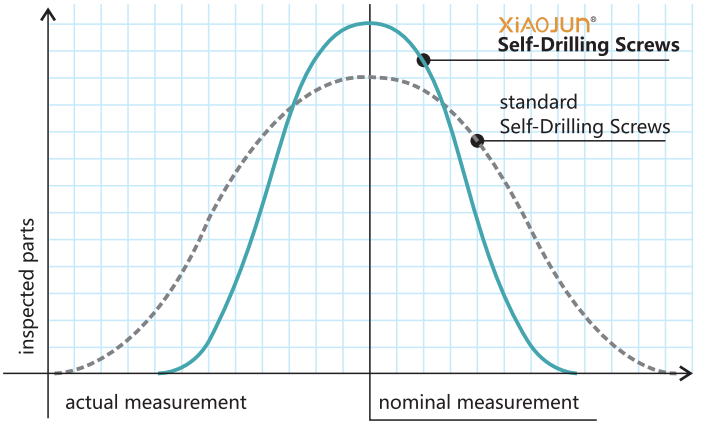
Truss Head

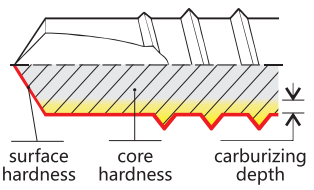


XiAOJUN® Suggested drill point #2
maximum drill capacity of 2mm









Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

- dp2 — Drill Pont #2

Plated

- WZP — White Zinc -plated
- YZP — Yellow Zinc -plated
- CR — Chrome -plated
- NI — Nickel -plated

Coating

- RS — Ruspert
- MG — Magni
- CM — Climaseal
- DC — Dacromet

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

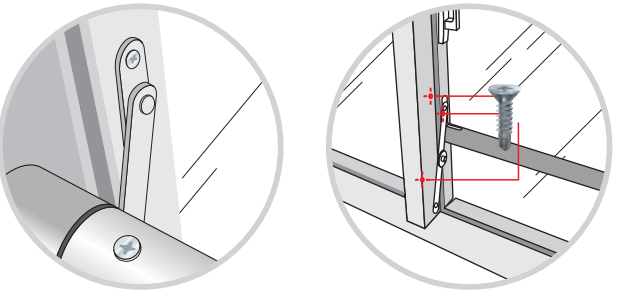
Specifications

Drive Socket	#2 Phillips	**Product Type**	Self-drilling screw
Diameter	#10	**Diameter [mm]**	4.72 mm
Drill Capacity Max [Inches]	0.150"	**Drill Point**	XiaoJun®-#2 drill point
Head Style	Truss	**Material**	Carbon steel
Thread Major Dia	0.186"	**Thread Major Dia [mm]**	4.72 mm
Thread Minor Dia	0.138"	**Thread Minor Dia [mm]**	3.51mm
Threads Per Inch	16	**Washer**	No washer

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

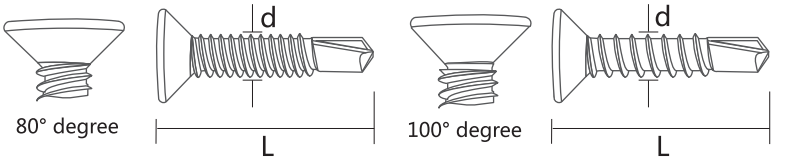
Phillips

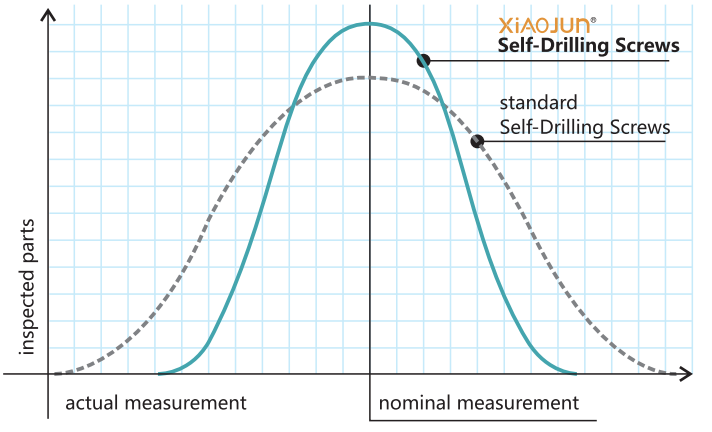
Countersunk Head

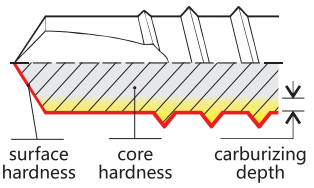




XiAOJUN® Suggested drill point #2 maximum drill capacity of 2mm and drill point #3 maximum drill capacity of 5mm







Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

- dp2 — Drill Pont #2
- dp3 — Drill Pont #3

Plated

- WZP — White Zinc -plated
- YZP — Yellow Zinc -plated
- CR — Chrome -plated
- NI — Nickel -plated

Coating

- RS — Ruspert
- MG — Magni
- CM — Climaseal
- DC — Dacromet

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

Specifications

Drive Socket	#2 Phillips	**Product Type**	Self-drilling screw
Diameter	#10	**Diameter [mm]**	4.72 mm
Drill Capacity Max [Inches]	0.150"	**Drill Point**	XiaoJun®-#2 drill point
Head Style	CSK	**Material**	Carbon steel
Thread Major Dia	0.186"	**Thread Major Dia [mm]**	4.72 mm
Thread Minor Dia	0.138"	**Thread Minor Dia [mm]**	3.51mm
Threads Per Inch	16	**Washer**	No washer

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

Phillips

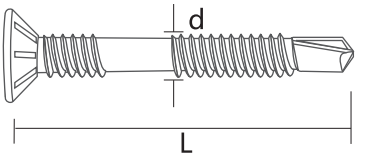
Countersunk Head With Ribs(Nibs)

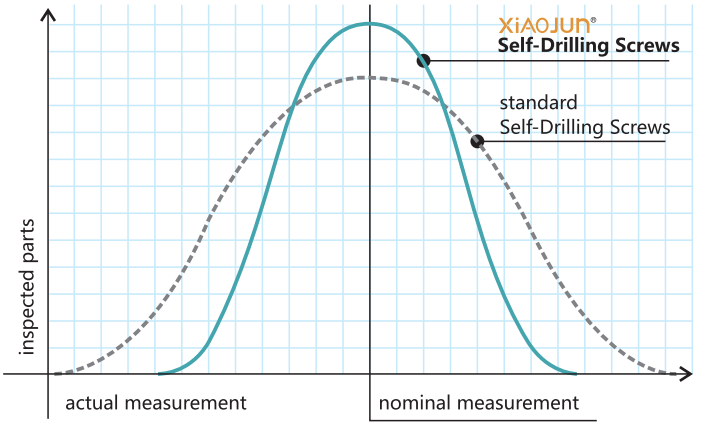


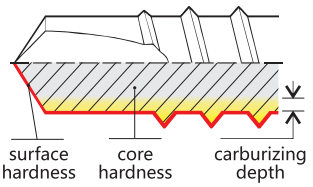




XiAOJUN® Suggested drill point #2
maximum drill capacity of 2mm and drill point #3
maximum drill capacity of 5mm







Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

- dp2 — Drill Pont #2
- dp3 — Drill Pont #3

Plated

- WZP — White Zinc -plated
- YZP — Yellow Zinc -plated
- CR — Chrome -plated
- NI — Nickel -plated

Coating

- RS — Ruspert
- MG — Magni
- CM — Climaseal
- DC — Dacromet

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

Specifications

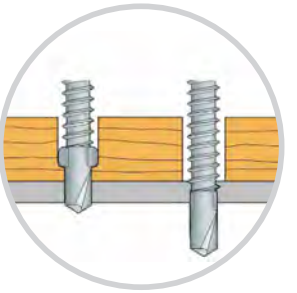
Drive Socket	#2 Phillips	**Product Type**	Self-drilling screw
Diameter	#10	**Diameter [mm]**	4.72 mm
Drill Capacity Max [Inches]	0.150"	**Drill Point**	XiaoJun®-#2 drill point
Head Style	CSK	**Material**	Carbon steel
Thread Major Dia	0.186"	**Thread Major Dia [mm]**	4.72 mm
Thread Minor Dia	0.138"	**Thread Minor Dia [mm]**	3.51mm
Threads Per Inch	16	**Washer**	No washer

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

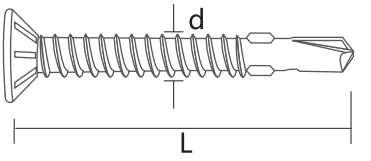
Phillips

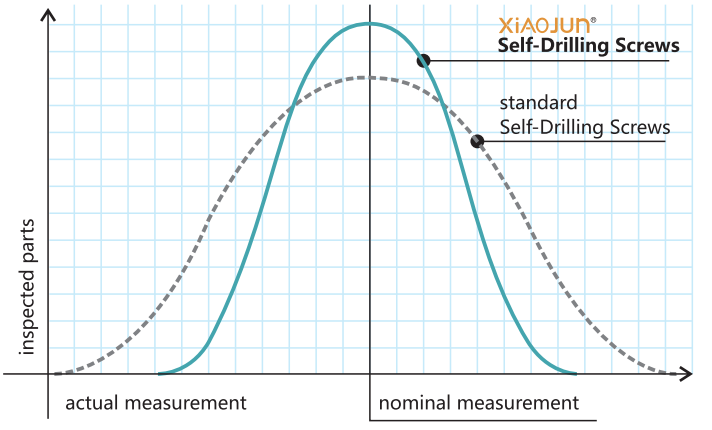
Countersunk Head With Ribs(Nibs) And Wings

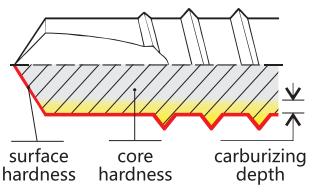




XiAOJUN® Suggested drill point #3
maximum drill capacity of 5mm and drill point #4
maximum drill capacity of 8mm







Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

- dp3 — Drill Pont #3
- dp4 — Drill Pont #4

Plated

- WZP — White Zinc -plated
- YZP — Yellow Zinc -plated
- CR — Chrome -plated
- NI — Nickel -plated

Coating

- RS — Ruspert
- MG — Magni
- CM — Climaseal
- DC — Dacromet

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

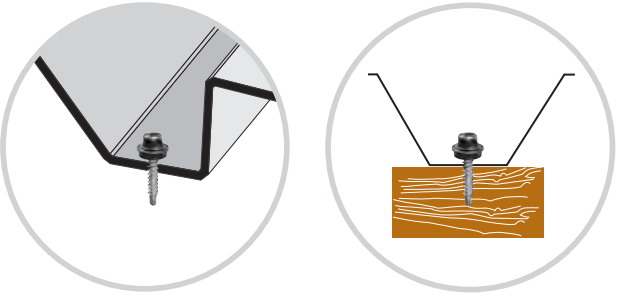
Specifications

Drive Socket	#2 Phillips	**Product Type**	Self-drilling screw
Diameter	#10	**Diameter [mm]**	4.72 mm
Drill Capacity Max [Inches]	0.150"	**Drill Point**	XiaoJun®-#2 drill point
Head Style	CSK	**Material**	Carbon steel
Thread Major Dia	0.186"	**Thread Major Dia [mm]**	4.72 mm
Thread Minor Dia	0.138"	**Thread Minor Dia [mm]**	3.51mm
Threads Per Inch	16	**Washer**	No washer

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

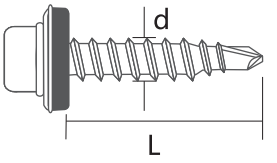
Medium duty

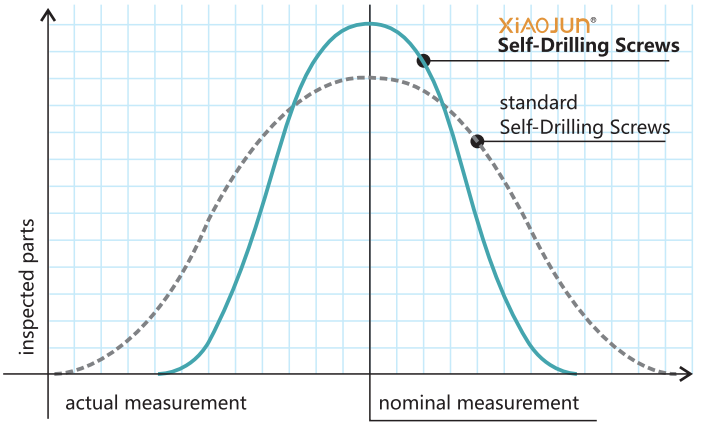
Hex Washer Head

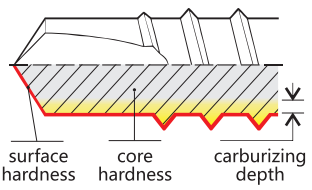


XiAOJUN® Suggested drill point #3
maximum drill capacity of 5mm









Material

- CS — Carbon Steel
- SS — Stainless Steel
- BM — Bi-Metal

Point

- dp3 — Drill Pont #3

Plated

- WZP — White Zinc -plated
- YZP — Yellow Zinc -plated
- CR — Chrome -plated
- NI — Nickel -plated

Coating

- RS — Ruspert
- MG — Magni
- CM — Climaseal
- DC — Dacromet

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

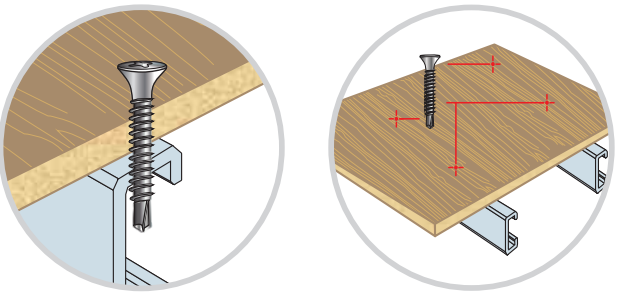
Specifications

Head Style	Hex Washer head	**Product Type**	Self-drilling screw
Drive Socket	3/8"	**Material**	C1022A Carbon steel
Drill Point	Xiaojun®-#3 drill point	**Threads Per Inch**	14
Diameter	#14	**Diameter [mm]**	6.3 mm
Width Across Flats [Inches]	0.374"	**Width Across Flats [mm]**	9.5mm
Thread Major Dia [Inches]	0.248"	**Thread Major Dia [mm]**	6.3 mm
Thread Minor Dia [Inches]	0.2"	**Thread Minor Dia [mm]**	5.1mm
Drill Capacity Max [Inches]	0.237"	**Drill Capacity Range [mm]**	6mm
Washer	EPDM Washer		

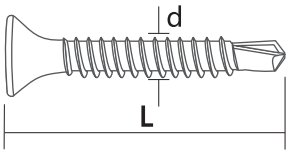
Size	Length (inch)	Length (mm)	Drill Point (m/m)	Drill Capacity (m/m)
#12-14 M5.5	3/4"	19	#3	2.0 - 4.0
	1"	25	#3	2.0 - 4.0
	1-1/4"	32	#3	2.0 - 4.0
	1-1/2"	38	#3	2.0 - 4.0
	2"	50	#3	2.0 - 4.0
	2-1/2"	63	#3	2.0 - 4.0
	3"	75	#3	2.0 - 4.0
#14-14 M6.3	3/4"	19	#3	2.0 - 4.0
	1"	25	#3	2.0 - 4.0
	1-1/4"	32	#3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

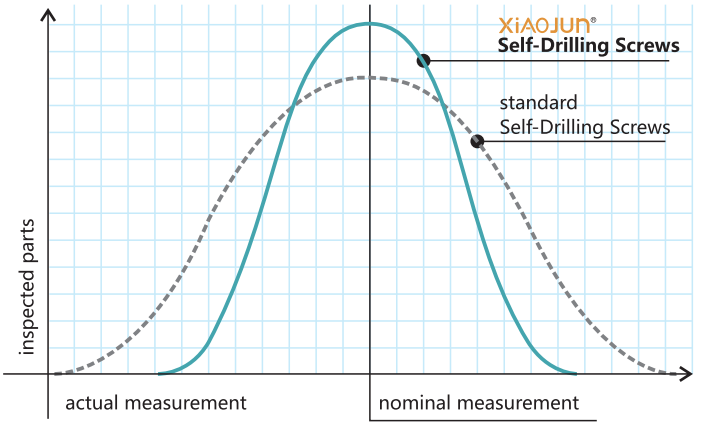
Phillips
Bugle Head

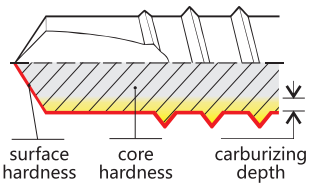




XiAOJUN® Suggested drill point #2 maximum drill capacity of 2mm and drill point #3 maximum drill capacity of 5mm







Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

- dp2 — Drill Pont #2
- dp3 — Drill Pont #3

Plated

- WZP — White Zinc -plated
- YZP — Yellow Zinc -plated
- CR — Chrome -plated
- NI — Nickel -plated

Coating

- RS — Ruspert
- MG — Magni
- CM — Climaseal
- DC — Dacromet

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

Specifications

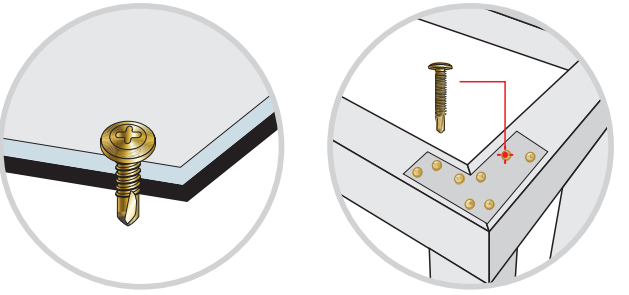
Drive Socket	#2 Phillips	**Product Type**	Self-drilling screw
Diameter	#10	**Diameter [mm]**	4.72 mm
Drill Capacity Max [Inches]	0.150"	**Drill Point**	XiaoJun®-#2 drill point
Head Style	Bugle	**Material**	Carbon steel
Thread Major Dia	0.186"	**Thread Major Dia [mm]**	4.72 mm
Thread Minor Dia	0.138"	**Thread Minor Dia [mm]**	3.51mm
Threads Per Inch	16	**Washer**	No washer

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

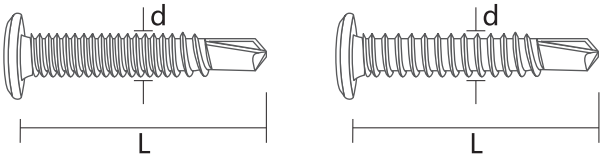
Phillips

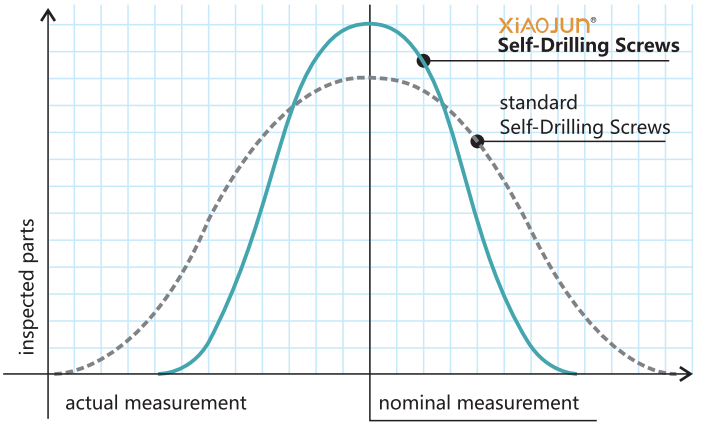
Wafer Head

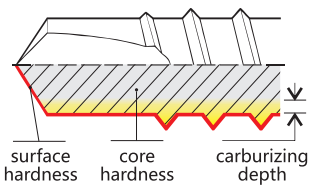




XiAOJUN® Suggested drill point #3
maximum drill capacity of 5mm







Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

- dp3 — Drill Pont #3

Plated

- WZP — White Zinc -plated
- YZP — Yellow Zinc -plated
- CR — Chrome -plated
- NI — Nickel -plated

Coating

- RS — Ruspert
- MG — Magni
- CM — Climaseal
- DC — Dacromet

Applications

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

Features

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

Specifications

Drive Socket	#2 Phillips	**Product Type**	Self-drilling screw
Diameter	#10	**Diameter [mm]**	4.72 mm
Drill Capacity Max [Inches]	0.150"	**Drill Point**	XiaoJun®-#2 drill point
Head Style	Wafer	**Material**	Carbon steel
Thread Major Dia	0.186"	**Thread Major Dia [mm]**	4.72 mm
Thread Minor Dia	0.138"	**Thread Minor Dia [mm]**	3.51mm
Threads Per Inch	16	**Washer**	No washer

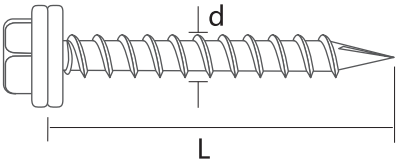
Size	Length (inch)	Length (mm)	Drill Point (m/m)	Drill Capacity (m/m)
#10-16 M4.8	5/8″	16	#2	1.0 - 2.0
	7/8″	22	#2	1.0 - 2.0
	1-1/4″	32	#3	1.0 - 3.0
	1-1/2″	38	#3	1.0 - 3.0
#10-24 M4.8	5/8″	16	#2	1.0 - 2.0
	7/8″	22	#2	1.0 - 2.0
	1-1/4″	32	#3	1.0 - 3.0
	1-1/2″	38	#3	1.0 - 3.0

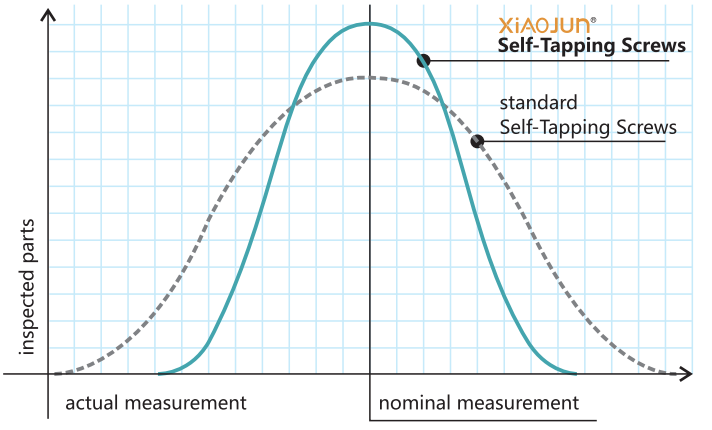
Unslotted
Hex Washer Head

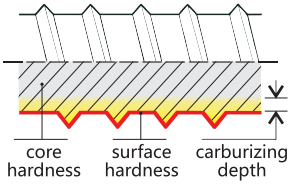




XiAOJUN® Suggested use for self starting in thin (.015-.050 thick) metal or resin-filled plywood.







Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

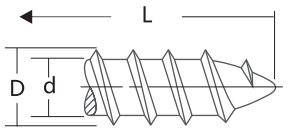
- Type-A — Type-A
- Type-AB — Type-AB

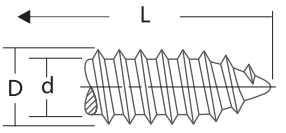
Plated

- WZP — White Zinc -plated
- YZP — Yellow Zinc -plated
- CR — Chrome -plated
- NI — Nickel -plated

Coating

- RS — Ruspert
- MG — Magni
- CM — Climaseal
- DC — Dacromet





THREADS FOR SELF-TAPPING SCREWS TYPE A — ANSI B18.6.4

Nominal Size or Basic Screw Diameter		Threads Per Inch	D Major Diameter Max	D Major Diameter Min	d Minor Diameter Max	d Minor Diameter Min	L These Lengths or Shorter Have AB Threads 90o Heads	L These Lengths or Shorter Have AB Threads Csk Heads	Minimum Torsional Strength, lb.-in. (STEEL SCREWS ONLY)
6	0.1380	18	.141	.136	.102	.096	1/4	5/16	24
7	0.1510	16	.158	.152	.114	.108	5/16	3/8	30
8	0.1640	15	.168	.162	.123	.116	3/8	7/16	39
10	0.1900	12	.194	.188	.133	.126	3/8	1/2	48
12	0.2160	11	.221	.215	.162	.155	7/16	9/16	83
14	0.2420	10	.254	.248	.185	.178	½	5/8	125
20	0.3200	9	.333	.327	.234	.226	11/16	13/16	250
24	0.3720	9	.390	.383	.291	.282	3/4	1	492
Tolerance on Length				Up to 1" Incl.: ±0.03			Over 1": ±0.05		

Description	A thread forming tapping screw with wider spaced threads than a Type-AB and a gimlet point
Applications/ Advantages	For self starting in thin (.015-.050 thick) metal or resin-filled plywood. 18-8 Stainless steel tapping screws may be used inapplications which require general atmospheric corrosion resistance. Fastening stainless steel parts to aluminum or steel can cause a type of corrosion known as a galvanic couple in some environments.
Material	Steel: AISI 1016 - 1024 or equivalent steel. Stainless: Austenitic 18-8 stainless steel
Heat Treatment (Steel only)	Screws shall be quenched in liquid and then tempered by reheating to 650°F minimum.
Surface Hardness	Steel: Rockwell C45 minimum
Case Depth (Steel only)	No. 6 diameter: .002 - .007 No. 8 thru 12 diameter: .004 - .009 1/4" and larger: .005 - .011
Core Hardness (after tempering)	Steel: Rockwell C28 - 38
Plating	See Appendix-A for information on plating of steel screws.

THREADS FOR SELF-TAPPING SCREWS TYPE AB — ASME B18.6.4-1998

Nominal Size or Basic Screw Diameter		Threads Per Inch	D Major Diameter Max	D Major Diameter Min	d Minor Diameter Max	d Minor Diameter Min	L Minimum Practical Screw Length 90o Heads	L Minimum Practical Screw Length Csk Heads	Minimum Torsional Strength, lb.-in. (STEEL SCREWS ONLY)
2	.0860	32	.088	.082	.064	.060	3/16	7/32	4
3	.0990	28	.101	.095	.075	.071	3/16	1/4	9
4	.1120	24	.114	.108	.086	.082	7/32	9/32	13
5	.1250	20	.130	.123	.094	.090	1/4	5/16	18
6	.1380	20	.139	.132	.104	.099	9/32	11/32	24
7	.1510	19	.154	.147	.115	.109	5/16	3/8	30
8	.1640	18	.166	.159	.122	.116	5/16	3/8	39
10	.1900	16	.189	.182	.141	.135	3/8	7/16	56
12	.2160	14	.215	.208	.164	.157	7/16	21/32	88
1/4	.2500	14	.246	.237	.192	.185	1/2	19/32	142
5/16	.3125	12	.315	.306	.244	.236	5/8	3/4	290
3/8	.3750	12	.380	.371	.309	.299	3/4	29/32	590
Tolerance on Length				Up to 1" Incl.: ±0.03			Over 1": ±0.05		

Description	A thread forming tapping screw with spaced threads and a gimlet point
Applications/ Advantages	For self starting in thin metal or resin-filled plywood. Recommended over a Type-A, particularly in brittle materials.
Material	Steel: AISI 1016 - 1024 or equivalent steel. Stainless: 18-8 stainless steel.
Heat Treatment (Steel only)	Screws shall be quenched in liquid and then tempered by reheating to 650°F minimum.
Surface Hardness	**Steel:** Rockwell C45 minimum
Case Depth (Steel only)	No. 4 thru 6 diameter: .002 - .007 No. 8 thru 12 diameter: .004 - .009 1/4" and larger: .005 - .011
Core Hardness (after tempering)	Steel: Rockwell C28 - 38
Plating	See Appendix-A for plating information.

Phillips

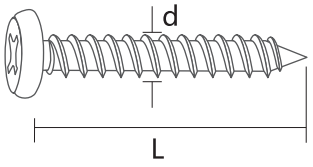
Pan Head

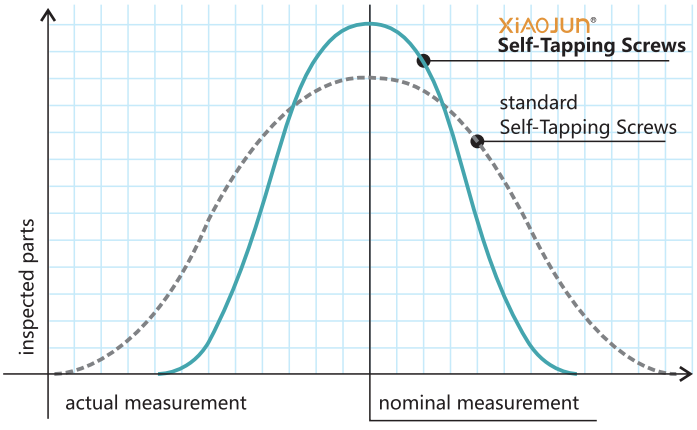


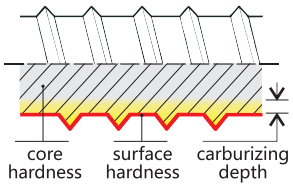




XiAOJUN® Suggested use for self starting in thin (.015-.050 thick) metal or resin-filled plywood.







Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

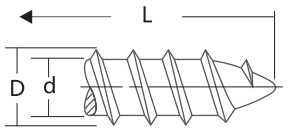
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- Type-AB — Type-AB

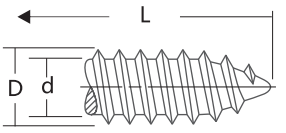
Plated

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- YZP — Yellow Zinc -plated
- CR — Chrome -plated
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Coating

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- MG — Magni
- CM — Climaseal
- DC — Dacromet





THREADS FOR SELF-TAPPING SCREWS TYPE A — ANSI B18.6.4

Nominal Size or Basic Screw Diameter		Threads Per Inch	D Major Diameter Max	D Major Diameter Min	d Minor Diameter Max	d Minor Diameter Min	L These Lengths or Shorter Have AB Threads 90o Heads	L These Lengths or Shorter Have AB Threads Csk Heads	Minimum Torsional Strength, lb.-in. (STEEL SCREWS ONLY)
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8	0.1640	15	.168	.162	.123	.116	3/8	7/16	39
10	0.1900	12	.194	.188	.133	.126	3/8	1/2	48
12	0.2160	11	.221	.215	.162	.155	7/16	9/16	83
14	0.2420	10	.254	.248	.185	.178	½	5/8	125
20	0.3200	9	.333	.327	.234	.226	11/16	13/16	250
24	0.3720	9	.390	.383	.291	.282	3/4	1	492
Tolerance on Length				Up to 1" Incl.: ±0.03			Over 1": ±0.05		

Description	A thread forming tapping screw with wider spaced threads than a Type-AB and a gimlet point
Applications/ Advantages	For self starting in thin (.015-.050 thick) metal or resin-filled plywood. 18-8 Stainless steel tapping screws may be used inapplications which require general atmospheric corrosion resistance. Fastening stainless steel parts to aluminum or steel can cause a type of corrosion known as a galvanic couple in some environments.
Material	Steel: AISI 1016 - 1024 or equivalent steel. Stainless: Austenitic 18-8 stainless steel
Heat Treatment (Steel only)	Screws shall be quenched in liquid and then tempered by reheating to 650°F minimum.
Surface Hardness	Steel: Rockwell C45 minimum
Case Depth (Steel only)	No. 6 diameter: .002 - .007 No. 8 thru 12 diameter: .004 - .009 1/4" and larger: .005 - .011
Core Hardness (after tempering)	Steel: Rockwell C28 - 38
Plating	See Appendix-A for information on plating of steel screws.

THREADS FOR SELF-TAPPING SCREWS TYPE AB — ASME B18.6.4-1998

Nominal Size or Basic Screw Diameter		Threads Per Inch	D Major Diameter Max	D Major Diameter Min	d Minor Diameter Max	d Minor Diameter Min	L Minimum Practical Screw Length 90o Heads	L Minimum Practical Screw Length Csk Heads	Minimum Torsional Strength, lb.-in. (STEEL SCREWS ONLY)
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Plating	See Appendix-A for plating information.

Phillips

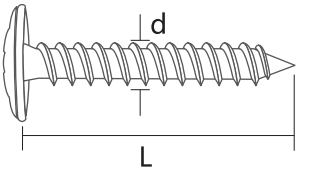
Truss Head

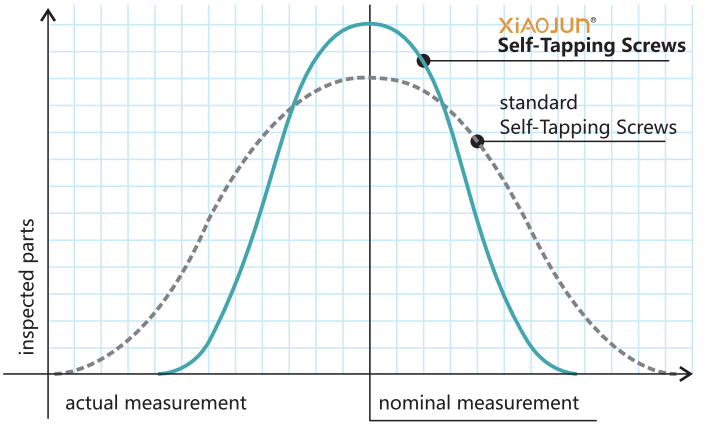


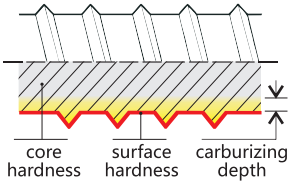


XiAOJUN® Suggested use for self starting in thin (.015-.050 thick) metal or resin-filled plywood.









Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

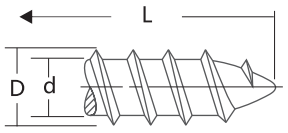
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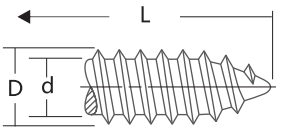
Plated

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Coating

- RS — Ruspert
- MG — Magni
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THREADS FOR SELF-TAPPING SCREWS TYPE A — ANSI B18.6.4

Nominal Size or Basic Screw Diameter		Threads Per Inch	D Major Diameter Max	D Major Diameter Min	d Minor Diameter Max	d Minor Diameter Min	L These Lengths or Shorter Have AB Threads 90o Heads	L These Lengths or Shorter Have AB Threads Csk Heads	Minimum Torsional Strength, lb.-in. (STEEL SCREWS ONLY)
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8	0.1640	15	.168	.162	.123	.116	3/8	7/16	39
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12	0.2160	11	.221	.215	.162	.155	7/16	9/16	83
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20	0.3200	9	.333	.327	.234	.226	11/16	13/16	250
24	0.3720	9	.390	.383	.291	.282	3/4	1	492
Tolerance on Length				Up to 1" Incl.: ±0.03			Over 1": ±0.05		

Description	A thread forming tapping screw with wider spaced threads than a Type-AB and a gimlet point
Applications/ Advantages	For self starting in thin (.015-.050 thick) metal or resin-filled plywood. 18-8 Stainless steel tapping screws may be used inapplications which require general atmospheric corrosion resistance. Fastening stainless steel parts to aluminum or steel can cause a type of corrosion known as a galvanic couple in some environments.
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Surface Hardness	Steel: Rockwell C45 minimum
Case Depth (Steel only)	No. 6 diameter: .002 - .007 No. 8 thru 12 diameter: .004 - .009 1/4" and larger: .005 - .011
Core Hardness (after tempering)	Steel: Rockwell C28 - 38
Plating	See Appendix-A for information on plating of steel screws.

THREADS FOR SELF-TAPPING SCREWS TYPE AB — ASME B18.6.4-1998

Nominal Size or Basic Screw Diameter		Threads Per Inch	D Major Diameter Max	D Major Diameter Min	d Minor Diameter Max	d Minor Diameter Min	L Minimum Practical Screw Length 90o Heads	L Minimum Practical Screw Length Csk Heads	Minimum Torsional Strength, lb.-in. (STEEL SCREWS ONLY)
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Phillips

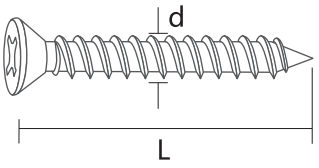
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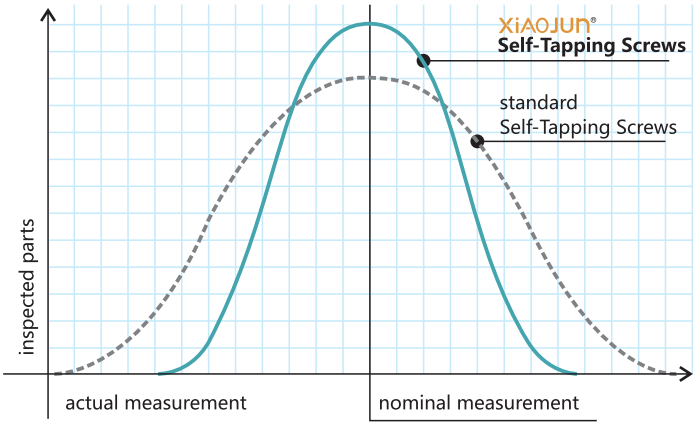


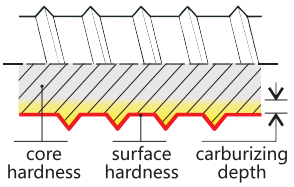




XiAOJUN® Suggested use for self starting in thin (.015-.050 thick) metal or resin-filled plywood.







Material

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- SS — Stainless Steel

Point

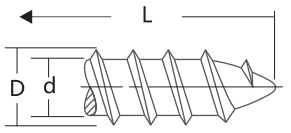
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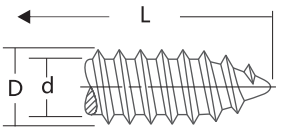
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THREADS FOR SELF-TAPPING SCREWS TYPE A — ANSI B18.6.4

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Description	A thread forming tapping screw with wider spaced threads than a Type-AB and a gimlet point
Applications/ Advantages	For self starting in thin (.015-.050 thick) metal or resin-filled plywood. 18-8 Stainless steel tapping screws may be used inapplications which require general atmospheric corrosion resistance. Fastening stainless steel parts to aluminum or steel can cause a type of corrosion known as a galvanic couple in some environments.
Material	Steel: AISI 1016 - 1024 or equivalent steel. Stainless: Austenitic 18-8 stainless steel
Heat Treatment (Steel only)	Screws shall be quenched in liquid and then tempered by reheating to 650°F minimum.
Surface Hardness	Steel: Rockwell C45 minimum
Case Depth (Steel only)	No. 6 diameter: .002 - .007 No. 8 thru 12 diameter: .004 - .009 1/4" and larger: .005 - .011
Core Hardness (after tempering)	Steel: Rockwell C28 - 38
Plating	See Appendix-A for information on plating of steel screws.

THREADS FOR SELF-TAPPING SCREWS TYPE AB — ASME B18.6.4-1998

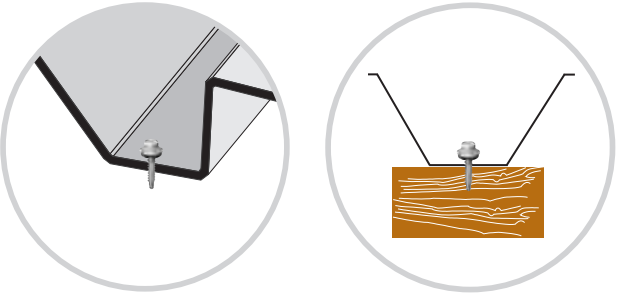
Nominal Size or Basic Screw Diameter		Threads Per Inch	D Major Diameter Max	D Major Diameter Min	d Minor Diameter Max	d Minor Diameter Min	L Minimum Practical Screw Length 90o Heads	L Minimum Practical Screw Length Csk Heads	Minimum Torsional Strength, lb.-in. (STEEL SCREWS ONLY)
2	.0860	32	.088	.082	.064	.060	3/16	7/32	4
3	.0990	28	.101	.095	.075	.071	3/16	1/4	9
4	.1120	24	.114	.108	.086	.082	7/32	9/32	13
5	.1250	20	.130	.123	.094	.090	1/4	5/16	18
6	.1380	20	.139	.132	.104	.099	9/32	11/32	24
7	.1510	19	.154	.147	.115	.109	5/16	3/8	30
8	.1640	18	.166	.159	.122	.116	5/16	3/8	39
10	.1900	16	.189	.182	.141	.135	3/8	7/16	56
12	.2160	14	.215	.208	.164	.157	7/16	21/32	88
1/4	.2500	14	.246	.237	.192	.185	1/2	19/32	142
5/16	.3125	12	.315	.306	.244	.236	5/8	3/4	290
3/8	.3750	12	.380	.371	.309	.299	3/4	29/32	590
Tolerance on Length				Up to 1" Incl.: ±0.03			Over 1": ±0.05		

Description	A thread forming tapping screw with spaced threads and a gimlet point
Applications/ Advantages	For self starting in thin metal or resin-filled plywood. Recommended over a Type-A, particularly in brittle materials.
Material	Steel: AISI 1016 - 1024 or equivalent steel. Stainless: 18-8 stainless steel.
Heat Treatment (Steel only)	Screws shall be quenched in liquid and then tempered by reheating to 650°F minimum.
Surface Hardness	**Steel:** Rockwell C45 minimum
Case Depth (Steel only)	No. 4 thru 6 diameter: .002 - .007 No. 8 thru 12 diameter: .004 - .009 1/4" and larger: .005 - .011
Core Hardness (after tempering)	Steel: Rockwell C28 - 38
Plating	See Appendix-A for plating information.

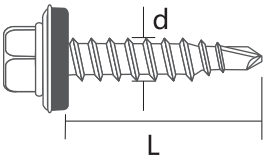
Bi-Metal

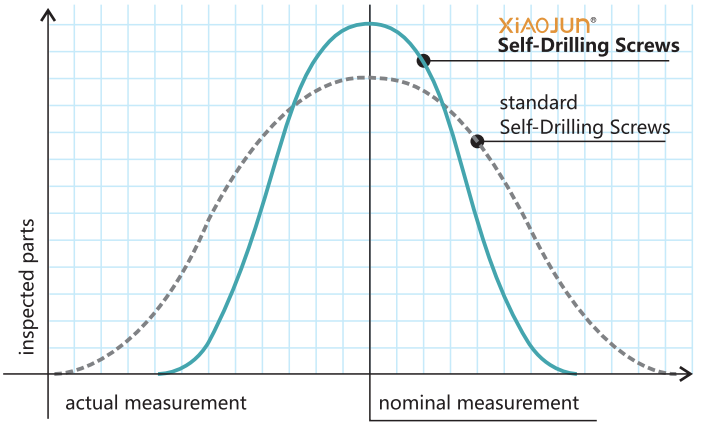
Hex Washer Head

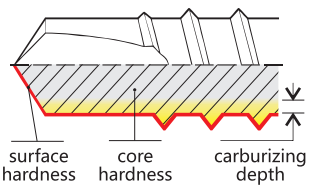




XiAOJUN® Suggested drill point #3 maximum drill capacity of 5mm and drill point #5 maximum drill capacity of 12mm







Material

BM
Bi-Metal

Plated

WZP
White Zinc -plated

YZP
Yellow Zinc -plated

Point

dp3
Drill Pont #3

dp5
Drill Pont #5

Coating

RS
Ruspert

MG
Magni

CM
Climaseal

DC
Dacromet

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
- Point to thread design maximize pullout performance and minimizes backout

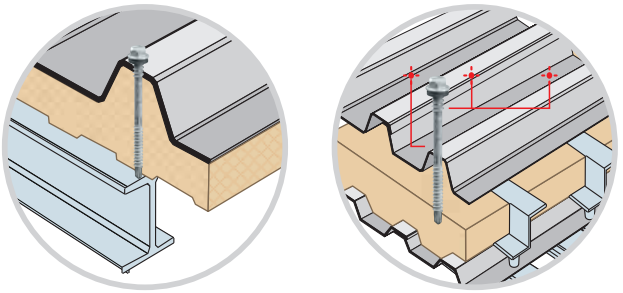
Specifications

Head Style	Hex Washer head	**Product Type**	Self-drilling screw
Drive Socket	3/8"	**Material**	C1022A Carbon steel
Drill Point	Xiaojun®-#3 drill point	**Threads Per Inch**	14
Diameter	#14	**Diameter [mm]**	6.3 mm
Width Across Flats [Inches]	0.374"	**Width Across Flats [mm]**	9.5mm
Thread Major Dia [Inches]	0.248"	**Thread Major Dia [mm]**	6.3 mm
Thread Minor Dia [Inches]	0.2"	**Thread Minor Dia [mm]**	5.1mm
Drill Capacity Max [Inches]	0.237"	**Drill Capacity Range [mm]**	6mm
Washer	EPDM Washer		

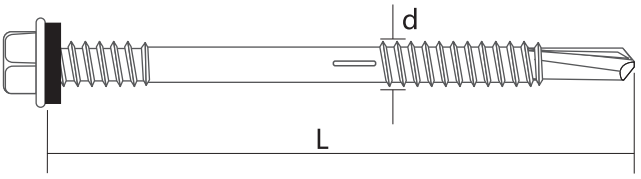
Size	Length (inch)	Length (mm)	Drill Point (m/m)	Drill Capacity (m/m)
#12-14 M5.5	3/4"	19	#3	2.0 - 4.0
	1"	25	#3	2.0 - 4.0
	1-1/4"	32	#3	2.0 - 4.0
	1-1/2"	38	#3	2.0 - 4.0
	2"	50	#3	2.0 - 4.0
	2-1/2"	63	#3	2.0 - 4.0
	3"	75	#3	2.0 - 4.0
#14-14 M6.3	3/4"	19	#3	2.0 - 4.0
	1"	25	#3	2.0 - 4.0
	1-1/4"	32	#3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

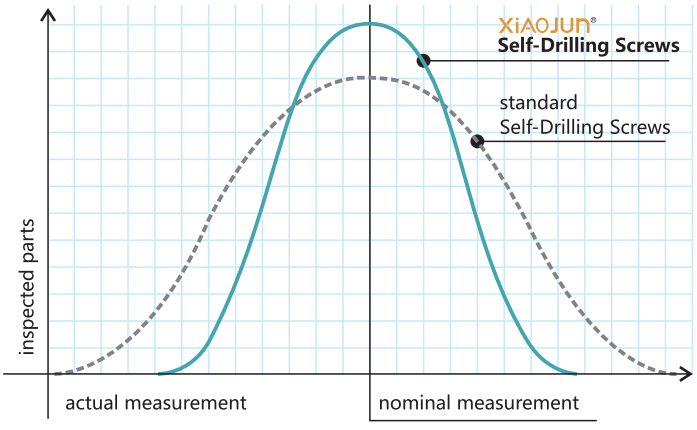
Knurled Double Thread
Hex Washer Head

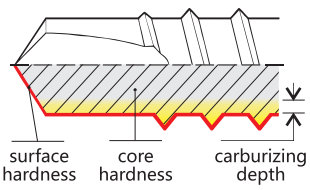




XiAOJUN® Suggested drill point #3 maximum drill capacity of 5mm and drill point #5 maximum drill capacity of 12mm







Material

- **CS** Carbon Steel
- **SS** Stainless Steel
- **BM** Bi-Metal

Point

- **dp3** Drill Pont #3
- **dp5** Drill Pont #5

Plated

- **WZP** White Zinc -plated
- **YZP** Yellow Zinc -plated
- **CR** Chrome -plated
- **NI** Nickel -plated

Coating

- **RS** Ruspert
- **MG** Magni
- **CM** Climaseal
- **DC** Dacromet

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

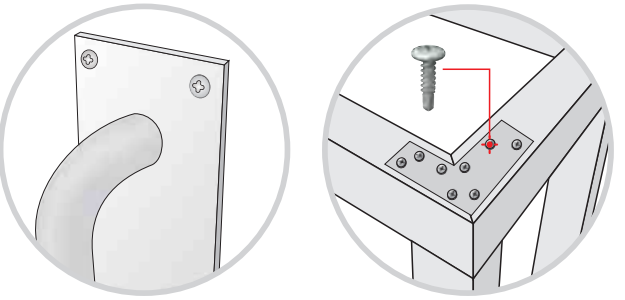
Specifications

Head Style	Hex Washer head	**Product Type**	Self-drilling screw
Drive Socket	3/8"	**Material**	C1022A Carbon steel
Drill Point	Xiaojun®-#3 drill point	**Threads Per Inch**	14
Diameter	#14	**Diameter [mm]**	6.3 mm
Width Across Flats [Inches]	0.374"	**Width Across Flats [mm]**	9.5mm
Thread Major Dia [Inches]	0.248"	**Thread Major Dia [mm]**	6.3 mm
Thread Minor Dia [Inches]	0.2"	**Thread Minor Dia [mm]**	5.1mm
Drill Capacity Max [Inches]	0.237"	**Drill Capacity Range [mm]**	6mm
Washer	EPDM		

Size	Length (inch)	Length (mm)	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
	4"	100	#5	12.0
	5"	125	#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

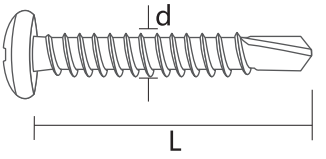
Phillips

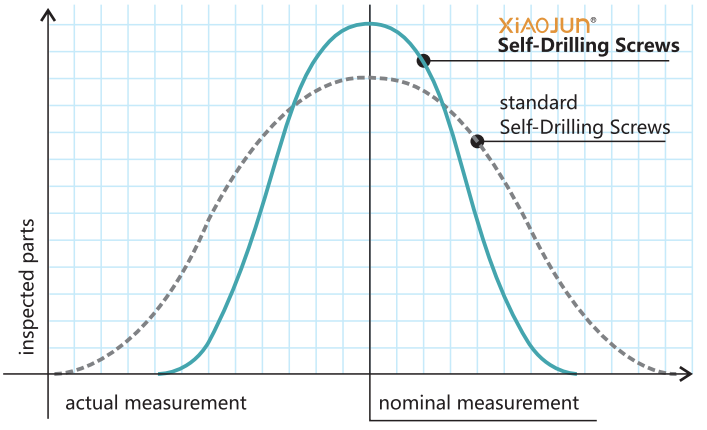
Pan Head

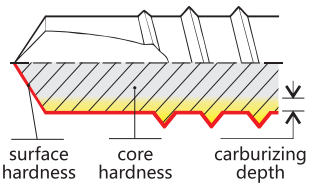




XiAOJUN® Suggested drill point #2 maximum drill capacity of 2mm and drill point #3 maximum drill capacity of 5mm







Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

- dp2 — Drill Pont #2
- dp3 — Drill Pont #3

Plated

- WZP — White Zinc -plated
- YZP — Yellow Zinc -plated
- CR — Chrome -plated
- NI — Nickel -plated

Coating

- RS — Ruspert
- MG — Magni
- CM — Climaseal
- DC — Dacromet

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 purpose using
- Non-walking point provides fast material engagement

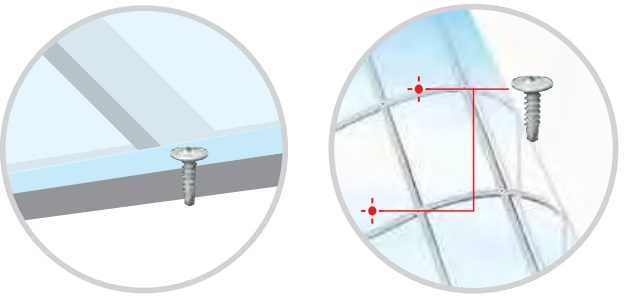
Specifications

Drive Socket	#2 Phillips	**Product Type**	Self-drilling screw
Diameter	#10	**Diameter [mm]**	4.72 mm
Drill Capacity Max [Inches]	0.150"	**Drill Point**	XiaoJun®-#2 drill point
Head Style	Pan	**Material**	Stainless steel
Thread Major Dia	0.186"	**Thread Major Dia [mm]**	4.72 mm
Thread Minor Dia	0.138"	**Thread Minor Dia [mm]**	3.51mm
Threads Per Inch	16	**Washer**	No washer

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

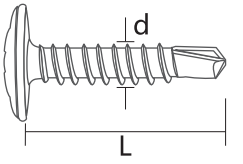
Phillips

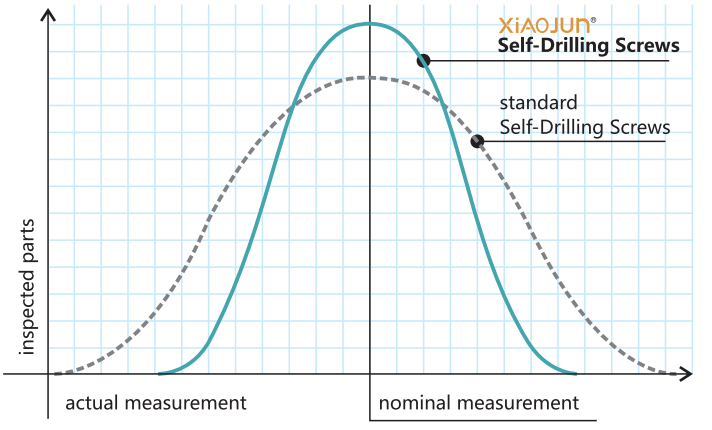
Truss Head

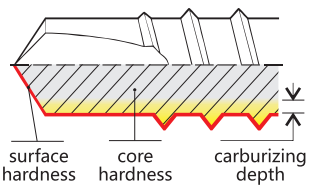


XiAOJUN® Suggested drill point #3 maximum drill capacity of 5mm









Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

- dp3 — Drill Pont #3

Plated

- WZP — White Zinc -plated
- YZP — Yellow Zinc -plated
- CR — Chrome -plated
- NI — Nickel -plated

Coating

- RS — Ruspert
- MG — Magni
- CM — Climaseal
- DC — Dacromet

Applications

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

Features

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

Specifications

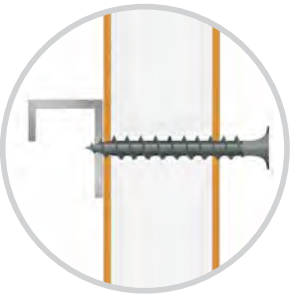
Drive Socket	#2 Phillips	**Product Type**	Self-drilling screw
Diameter	#10	**Diameter [mm]**	4.72 mm
Drill Capacity Max [Inches]	0.150"	**Drill Point**	XiaoJun®-#2 drill point
Head Style	Truss	**Material**	Stainless steel
Thread Major Dia	0.186"	**Thread Major Dia [mm]**	4.72 mm
Thread Minor Dia	0.138"	**Thread Minor Dia [mm]**	3.51mm
Threads Per Inch	16	**Washer**	No washer

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

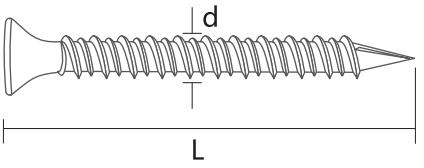
Phillips

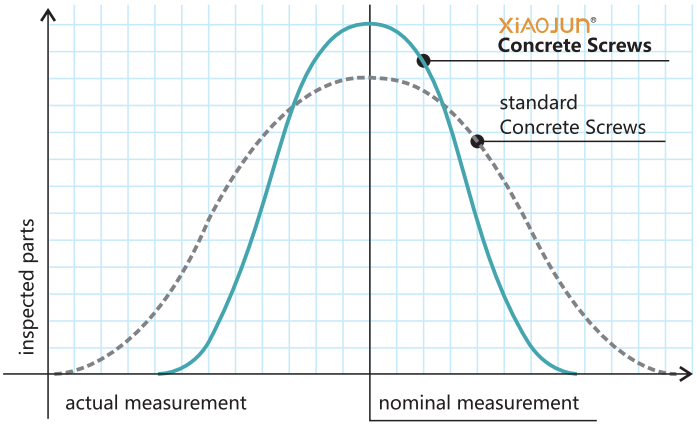
Bugle head Hi-Lo thread

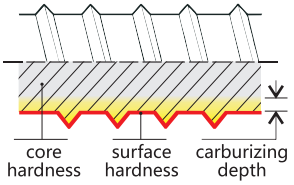




XiAOJUN® provide the minimal performance solution to create a stronger grip on the gypsum board







Material

CS
Carbon Steel

Thread

Hi-Low
Hi-Low Thread

Plated

WZP
White Zinc -plated

YZP
Yellow Zinc -plated

CR
Chrome -plated

NI
Nickel -plated

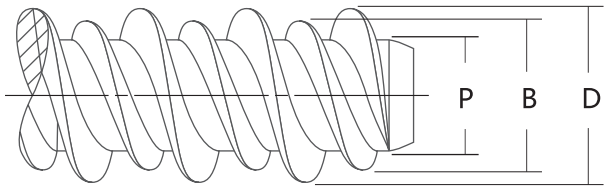
Coating

RS
Ruspert

MG
Magni

CM
Climaseal

DC
Dacromet



THREAD AND HOLE DIMENSIONS FOR HIGH-LOW THREAD FORMING SCREWS					Elco*, ANSI B18.6.4	
Screw Size	D	B	P	Pilot Hole Diameter Flexural Modulus of Plastic		Minimum Torsional Strength, lb. in. (STEEL SCREWS ONLY)
	High Thread Diameter	Low Thread Diameter	Point Diameter	Up to 200,000 P.S.I.	200,000-400,000 P.S.I.	
2-32	.084 - .090	.069	.050 - .058	.0670	.0700	-
4-24	.105 - .115	.086	.061 - .070	.0810	.0860	4
5-20	.119 - .125	.100	.073 - .082	.0935	.0995	9
6-19	.135 - .145	.108	.080 - .090	.1015	.1100	13
7-19	.148 -.158	.130	.089 - .100	.1200	.1250	18
8-18	.160 - .170	.130	.095 - .105	.1200	.1285	18
10-16	.185 - .195	.145	.099 - .110	.1360	.1440	30
12-16	.210 - .220	.167	.125 - .137	.1570	.1660	39
1/4-15	.250 - .260	.200	.161 - .175	.1890	.2010	56
Tolerance on Length			Up to 1 in., Incl.: +0, -3/64		Over 1 in.: +0, -1/16	

Description	A thread forming screw with a double-lead, consisting of a high and low thread. The lower thread varies in height from 1/3 to 1/2 that of the higher thread, which is sharper and flatter than a standard thread.
Applications/ Advantages	For use in plastic, nylon, wood or other low-density materials. Thread design reduces driving torques, enhances resistance to thread stripping, improves pullout strength and lessens risk of cracking the work piece.
Material	**Steel:** 1019-1022 or equivalent steel. **Stainless:** 410 martensitic or 18-8 austenitic stainless steel
Heat Treatment	**Steel:** Screws shall be quenched in liquid and then tempered by reheating to 650°F minimum. **410 Stainless:** Screws shall be annealed by heating to 1850-1950°F, held at least ½ hour and rapid air- or oil-quenched then reheating to 525°F minimum for at least 1 hour and air cooled to provide the required tensile, yield and hardness properties.
Case Hardness	**Steel:** Rockwell C45 minimum
Case Depth (steel)	No. 2 thru 6 diameter: .002 - .007 No. 8 thru 12 diameter: .004 - .009 1/4" diameter: .005 - .011
Core Hardness	**Steel (after tempering):** Rockwell C28 - 36 **410 Stainless (after tempering):** Rockwell C38 - 42 **18-8 Stainless:** Rockwell B100 (approximate)
Plating	See Appendix-A

*Elco is the original writer of high-low screw dimensions.

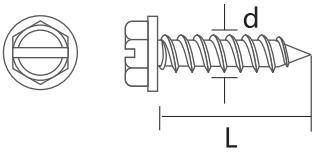
Slotted

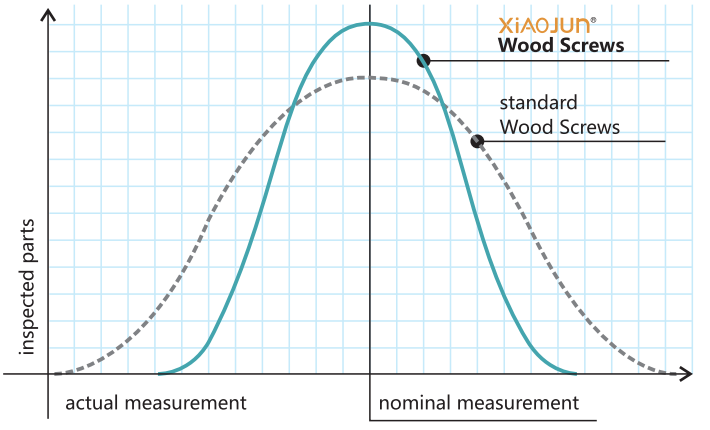
Hex Washer Head

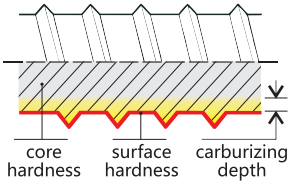




XiAOJUN® Suggested use for self starting in thin (.015-.050 thick) metal or resin-filled plywood.







Material

CS Carbon Steel

SS Stainless Steel

Point

Type-A Type-A

Type-AB Type-AB

Plated

WZP White Zinc -plated

YZP Yellow Zinc -plated

CR Chrome -plated

NI Nickel -plated

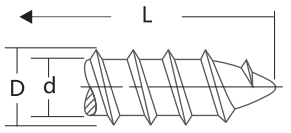
Coating

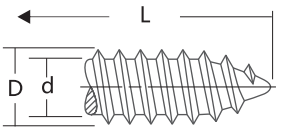
RS Ruspert

MG Magni

CM Climaseal

DC Dacromet





THREADS FOR SELF-TAPPING SCREWS TYPE A — ANSI B18.6.4

Nominal Size or Basic Screw Diameter		Threads Per Inch	D Major Diameter Max	D Major Diameter Min	d Minor Diameter Max	d Minor Diameter Min	L These Lengths or Shorter Have AB Threads 90o Heads	L These Lengths or Shorter Have AB Threads Csk Heads	Minimum Torsional Strength, lb.-in. (STEEL SCREWS ONLY)
6	0.1380	18	.141	.136	.102	.096	1/4	5/16	24
7	0.1510	16	.158	.152	.114	.108	5/16	3/8	30
8	0.1640	15	.168	.162	.123	.116	3/8	7/16	39
10	0.1900	12	.194	.188	.133	.126	3/8	1/2	48
12	0.2160	11	.221	.215	.162	.155	7/16	9/16	83
14	0.2420	10	.254	.248	.185	.178	½	5/8	125
20	0.3200	9	.333	.327	.234	.226	11/16	13/16	250
24	0.3720	9	.390	.383	.291	.282	3/4	1	492
Tolerance on Length				Up to 1" Incl.: ±0.03			Over 1": ±0.05		

Description	A thread forming tapping screw with wider spaced threads than a Type-AB and a gimlet point
Applications/ Advantages	For self starting in thin (.015-.050 thick) metal or resin-filled plywood. 18-8 Stainless steel tapping screws may be used inapplications which require general atmospheric corrosion resistance. Fastening stainless steel parts to aluminum or steel can cause a type of corrosion known as a galvanic couple in some environments.
Material	Steel: AISI 1016 - 1024 or equivalent steel. Stainless: Austenitic 18-8 stainless steel
Heat Treatment (Steel only)	Screws shall be quenched in liquid and then tempered by reheating to 650°F minimum.
Surface Hardness	Steel: Rockwell C45 minimum
Case Depth (Steel only)	No. 6 diameter: .002 - .007 No. 8 thru 12 diameter: .004 - .009 1/4" and larger: .005 - .011
Core Hardness (after tempering)	Steel: Rockwell C28 - 38
Plating	See Appendix-A for information on plating of steel screws.

THREADS FOR SELF-TAPPING SCREWS TYPE AB — ASME B18.6.4-1998

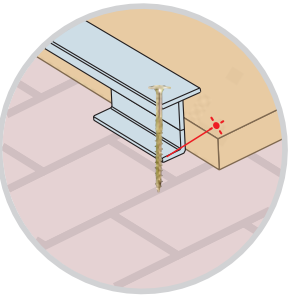
Nominal Size or Basic Screw Diameter		Threads Per Inch	D Major Diameter Max	D Major Diameter Min	d Minor Diameter Max	d Minor Diameter Min	L Minimum Practical Screw Length 90o Heads	L Minimum Practical Screw Length Csk Heads	Minimum Torsional Strength, lb.-in. (STEEL SCREWS ONLY)
2	.0860	32	.088	.082	.064	.060	3/16	7/32	4
3	.0990	28	.101	.095	.075	.071	3/16	1/4	9
4	.1120	24	.114	.108	.086	.082	7/32	9/32	13
5	.1250	20	.130	.123	.094	.090	1/4	5/16	18
6	.1380	20	.139	.132	.104	.099	9/32	11/32	24
7	.1510	19	.154	.147	.115	.109	5/16	3/8	30
8	.1640	18	.166	.159	.122	.116	5/16	3/8	39
10	.1900	16	.189	.182	.141	.135	3/8	7/16	56
12	.2160	14	.215	.208	.164	.157	7/16	21/32	88
1/4	.2500	14	.246	.237	.192	.185	1/2	19/32	142
5/16	.3125	12	.315	.306	.244	.236	5/8	3/4	290
3/8	.3750	12	.380	.371	.309	.299	3/4	29/32	590
Tolerance on Length				Up to 1" Incl.: ±0.03			Over 1": ±0.05		

Description	A thread forming tapping screw with spaced threads and a gimlet point
Applications/ Advantages	For self starting in thin metal or resin-filled plywood. Recommended over a Type-A, particularly in brittle materials.
Material	Steel: AISI 1016 - 1024 or equivalent steel. Stainless: 18-8 stainless steel.
Heat Treatment (Steel only)	Screws shall be quenched in liquid and then tempered by reheating to 650°F minimum.
Surface Hardness	**Steel:** Rockwell C45 minimum
Case Depth (Steel only)	No. 4 thru 6 diameter: .002 - .007 No. 8 thru 12 diameter: .004 - .009 1/4" and larger: .005 - .011
Core Hardness (after tempering)	Steel: Rockwell C28 - 38
Plating	See Appendix-A for plating information.

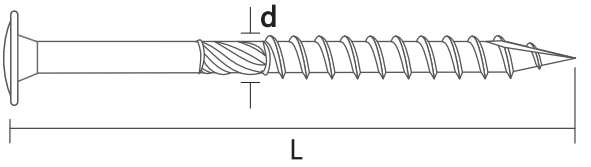
Torx

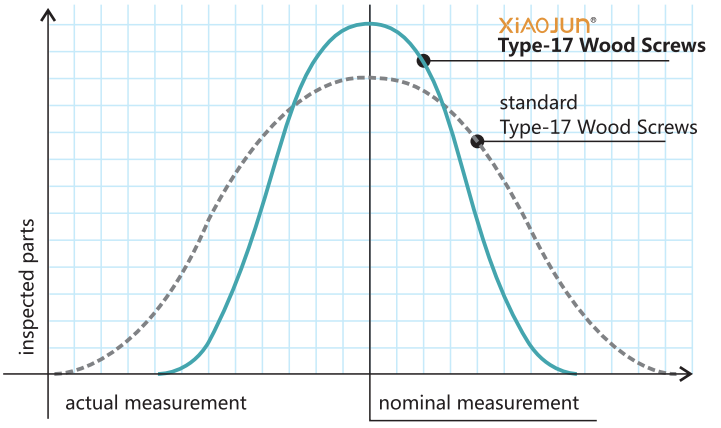
Washer Head Knurled

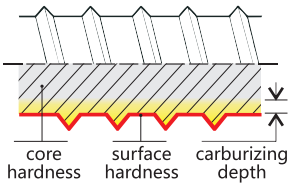




XiAOJUN® Suggested use Type-17 suitable any timber to timber applications







Material

- CS — Carbon Steel
- SS — Stainless Steel

Point

- Type-17 — Type-17

Plated

- WZP — White Zinc -plated
- YZP — Yellow Zinc -plated
- CR — Chrome -plated
- NI — Nickel -plated

Coating

- RS — Ruspert
- MG — Magni
- CM — Climaseal
- DC — Dacromet

Applications

• Type 17 timber screws are suitable for fixing metal roofing into timber battens (both hardwood and softwood)

Features

• Fast and Easy application into both Hardwood and Softwood battens

• Prevents the scratching and scouring of the fastener shank thatcan happen during installation.

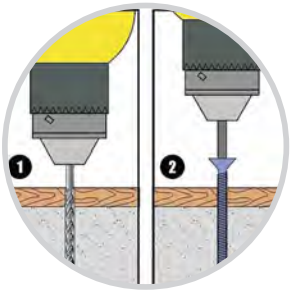
Specifications

Drive Socket	Torx	**Product Type**	Wood screw
Diameter	#10	**Diameter [mm]**	4.72 mm
Drill Capacity Max [Inches]	0.150"	**Drill Point**	Xiaojun®-Type 17
Head Style	Wafer	**Material**	Carbon steel
Thread Major Dia	0.186"	**Thread Major Dia [mm]**	4.72 mm
Thread Minor Dia	0.138"	**Thread Minor Dia [mm]**	3.51mm
Threads Per Inch	16	**Washer**	No washer

PRODUCT	GAUGE	THREAD	LENGTH	HEAD TYPE	SEAL
Type 17	12	11	50mm	Washer Head	With seal
Type 17	12	11	50mm	Washer Head	With Seal
Type 17	12	11	65mm	Washer Head	With seal
Type 17	14	10	50mm	Washer Head	With seal
Type 17	14	10	50mm	Washer Head	With Seal
Type 17	14	10	50mm	Washer Head	With seal
Type 17	14	10	65mm	Washer Head	With seal
Type 17	14	10	65mm	Washer Head	With Seal
Type 17	14	10	75mm	Washer Head	With seal
Type 17	14	10	90mm	Washer Head	With seal

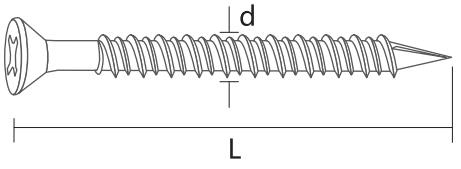
Phillips

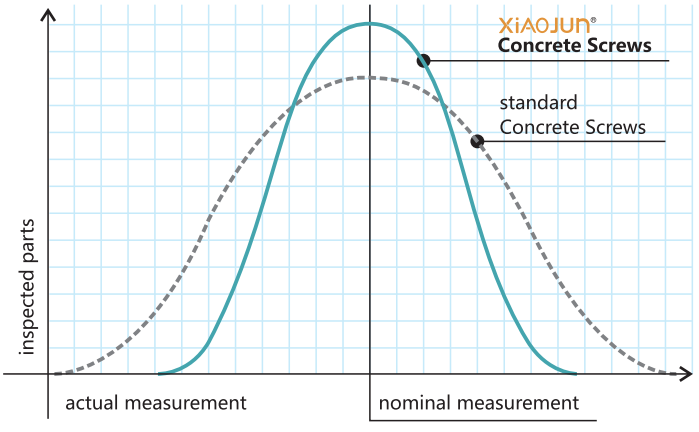
Countersunk Head Hi-Low

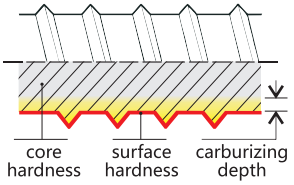




XiAOJUN® Suggested application maximum thickness of material is 0.6 mm







Material

CS
Carbon Steel

Thread

Hi-Low
Hi-Low Thread

Plated

WZP
White Zinc -plated

YZP
Yellow Zinc -plated

CR
Chrome -plated

NI
Nickel -plated

Coating

RS
Ruspert

MG
Magni

CM
Climaseal

DC
Dacromet

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

Specifications

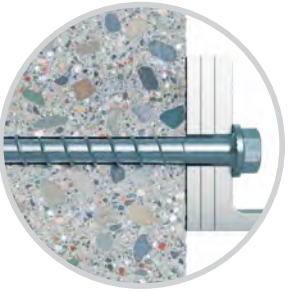
Drive Socket	#2 Phillips	**Product Type**	Concret screw
Diameter	#10	**Diameter [mm]**	4.72 mm
Drill Capacity Max [Inches]	0.150"	**Drill Point**	Xiaojun®-#2 drill point
Head Style	CSK	**Material**	Carbon steel
Thread Major Dia	0.186"	**Thread Major Dia [mm]**	4.72 mm
Thread Minor Dia	0.138"	**Thread Minor Dia [mm]**	3.51mm
Threads Per Inch	16	**Washer**	No washer

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

Unslotted

Hex Flange Head



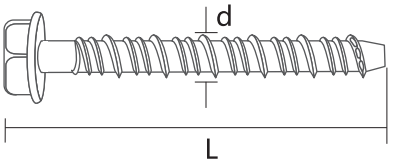


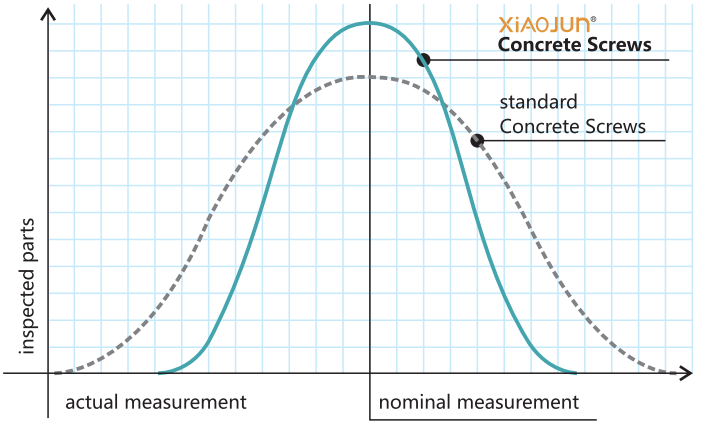
XiAOJUN® Suggested Installing with concrete screws are one of the easiest and quickest ways to install on concrete and can be achieved in 3 easy steps:

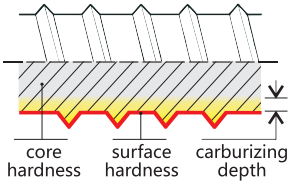
Step 1: Drill hole.

Step 2: Clean out hole.

Step 3: Drive in the screw!







Material

CS Carbon Steel

Plated

WZP White Zinc -plated

YZP Yellow Zinc -plated

CR Chrome -plated

NI Nickel -plated

Coating

RS Ruspert

MG Magni

CM Climaseal

DC Dacromet

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

Specifications

Head Style	Hex Washer head	**Product Type**	Self-drilling screw
Drive Socket	3/8"	**Material**	C1022A Carbon steel
Drill Point	Xiaojun®-#3 drill point	**Threads Per Inch**	14
Diameter	#14	**Diameter [mm]**	6.3 mm
Width Across Flats [Inches]	0.374"	**Width Across Flats [mm]**	9.5mm
Thread Major Dia [Inches]	0.248"	**Thread Major Dia [mm]**	6.3 mm
Thread Minor Dia [Inches]	0.2"	**Thread Minor Dia [mm]**	5.1mm
Drill Capacity Max [Inches]	0.237"	**Drill Capacity Range [mm]**	6mm
Washer	No washer		

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

More Products of Stainless Steel Screws

Xdrill XiAOJUN



Ruspert Coating:

Material : metallic zinc & resin

Coating Type : metallic zinc

(3 layers) dip-coating

baked ceramic top coating

Minimun Average Coating Thickness :

20μm , 30μm , 40μm

Salt-spray Test : 500、1000、1500 hrs

Application:

XiAOJUN® ruspert coating screws can beused in a wide variety of applications.

From various building projects toconstruction, renovation, homeimprovement and DIY applications.

They are particularly useful for building,decking and outdoor projects.



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 areas 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.

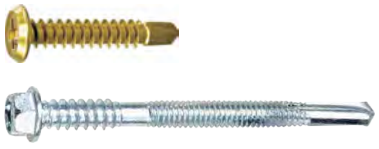
Warranty Periods	not recommended	no warranty	available
Zinc or yellow zinc		▲	
Painted head		▲	
410 Stainless steel		▲	
Anti-corrosion R3			●
Anti-corrosion R4			●
304 Stainless steel			●

Note : Warranty period is based on 20-years duration of contructions.

☒ not recommended ▲ no warranty ● available

Xdrill XIAOJUN

roofing & cladding to
light duty steel



wood to light & heavy duty steel

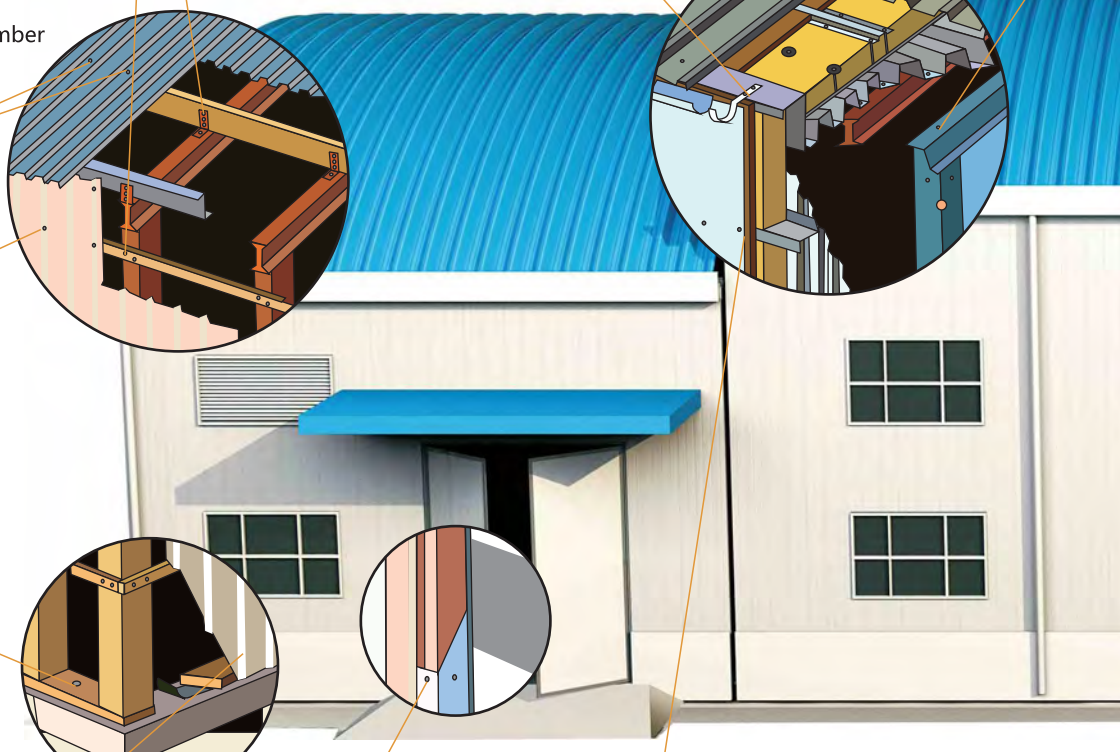


Roofing & cladding to timber



roofing & cladding
to light duty steel





fixing to concrete



roofing & cladding to timber



roofing & cladding
to heavy duty steel



roofing & cladding,
plus, boarding to light duty steel



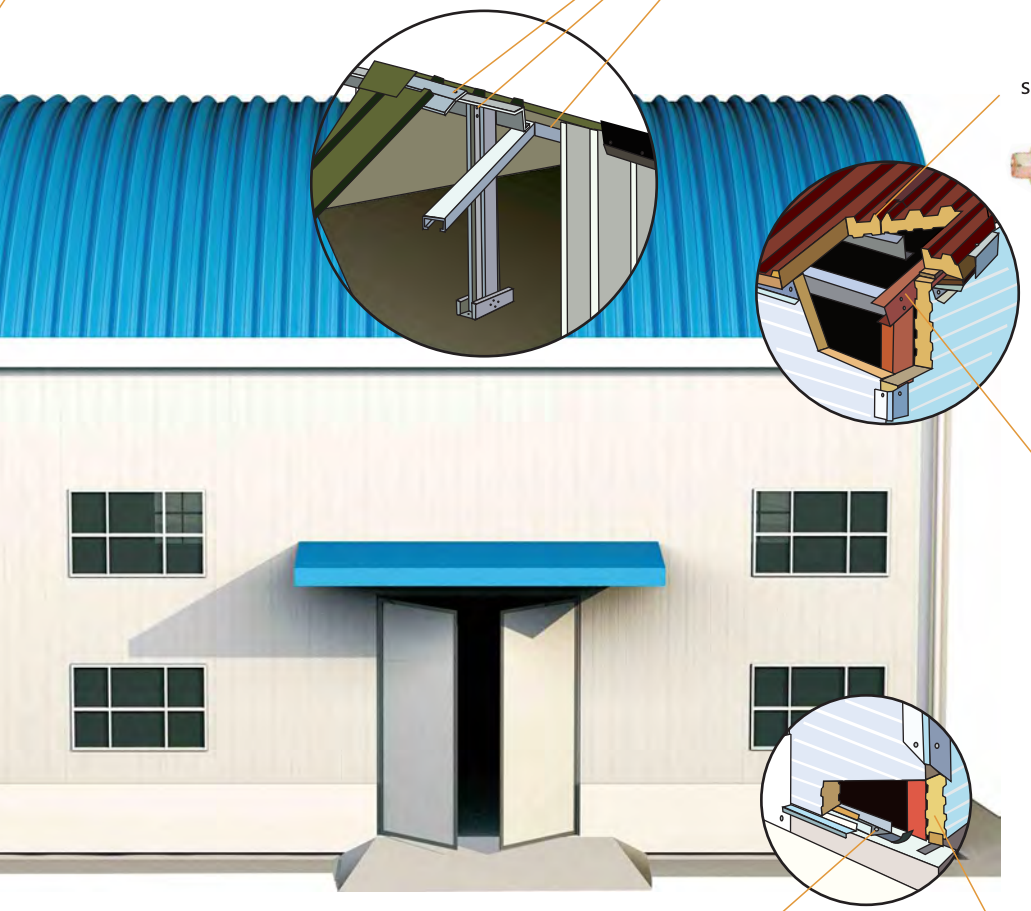
roofing insulation to
steel sheets &profiles





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



410 Stainless Steel

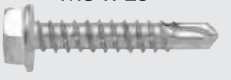
SUS410 Stainless Steel screws

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. Anti-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

SUS304/316 Bi-metal

SUS304/316 Bi-metal screws

combined together two parts by welding, the one consisting of a stainless head which shall be exposed to 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 304/316
- with corrosion resistance (no case-hardening)

- welded
- self-drilling point
- stainless steel, SUS 410/420/435
- 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



#12-24x1" (5.5x25mm)



#12-24x1-1/2" (5.5x38mm)



#12-24x2" (5.5x50mm)



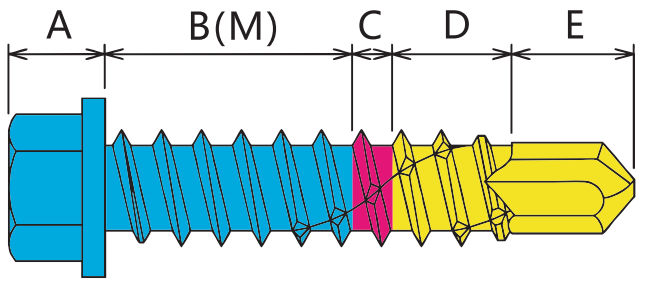
#12-24x2-1/2" (5.5x65mm)



#12-24x3" (5.5x75mm)

Basic Concept

XiAOJUN® screw combined together two parts by welding, the one consisting of a stainlesshead which shall be exposed to air and a stainless shank which undergoes the pull-stressafter fastened into materials, and the another is a carbon steel hardened for self-drilling andself-tapping.



Basic Configuration

A : Head part for torque transfer and bearing surface
B : Thread part for fastening
C : Welding part
D : Thread part for tapping
E : Drilling point

Stainless steel with corrosion resistance (No case-hardening)

Case-hardened carbon steel

Basic 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

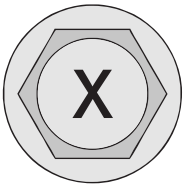
D : Case-hardening for over 600HVE : Case-hardening for over 600HV

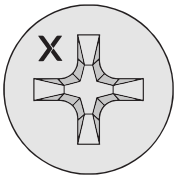
Basic surface treatment

Ruspert silver about 8~12μ， Non-Chrome

Head mark

Basically, the head mark 五 on the Hex Head, On the Pan Head the head mark XJ is placed in synmetry diagonally. These head marks are registered.





Strength of XiAOJUN®

The stainless part of XiAOJUN® screws are manufactured with more than A2-70 strength Description of"A2-70"
It consists of 2 sections divided with a hyphen. First section represents stainless steel classes, of which the alphabet indicates stainless steel materials, table 1, and the number chemical compound types, table 2, Second section represents strength classes and the two-digit number is tenth part of tensile strength of a completed product.

POINT

In other words, A2-70 is austenitic stainless, which is non-magnetic and high corrosion resistance, 18-8 stainless SUS-300 series, whose tensile strength is at over 700N/mmi(700MPa)

Table 1

Steel materia	Magnetism	Hardenability
A : Austenite	×	×
C : Martensite	○	○
F : Ferrite	○	×

Table 2

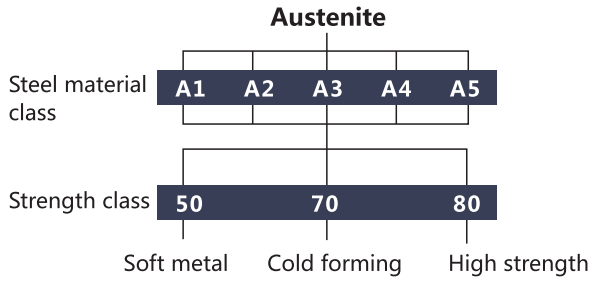
Chemical compounds of A2 (%)

Ni	C	Si	Mn	P	S	Cr	CU
8~19	0.1	1	2	0.05	0.03	15~20	4

Chemical compounds of A4 (%)

Ni	C	Si	Mn	P	S	Cr	CU	Mo
10~15	0.08	1	2	0.045	0.03	16~18.5	1	2~3

※ Values without range indicates the maximal ones.



Reference : JIS Handbook Fasteners&Screw Threads 2003

The material of XiAOJUN® screws is mostly XM7 which is equivalent to A2, 18-8 stainless. but if the cold-forming is not enough, the tensile strength gets no more than around600N/mm(600MPa) and hence twisting and bending occurs during use. However, we produce XiAOJUN® screws at over 700N/mm(700MPa) with our special manufacture know-how.

Therefore A2 stainless steel is of high corrosion resistance and used for kitchenware and equipments in an ordinary factory, but not suitable for use under such environmentsas contacting non-oxidized acid and chloride, such as swimming pool and sea. For such envitonments, A4 stainless steel, which is often used for food industry and shipbuilding industry, is recommended. A4 XiAOJUN® is available on all items on order.

Technical data of XiAOJUN®

Technical data of stainless parts "A" and "B

Chemical Composition

Austenite SUS-305J1 (%)

Ni	C	Si	Mn	P	S	Cr
11.00~13.50	max 0.08	max 1.00	max 2.00	max 0.045	max 0.03	16.5~19.00

Austenite SUS-XM7 (%)

Ni	C	Si	Mn	P	S	Cr	Cu
8.50~13.50	max 0.08	max 1.00	max 2.00	max 0.045	max 0.03	17.0~19.00	3.0~4.0

Pull Out Value (N)

Thread Dia	Thickness 1.2mm	Thickness 1.6mm	Thickness 2.3mm	Thickness 3.2mm	Thickness 4.0mm	Thickness 6.0mm
4	3260	3618	5952	6702		
5		5490	6060	8624	7716	
5.5			6030	8022	10204	11532
6			6112	9662	10704	13732

Tensile and Shear Strength

※Test Sheet :2.3mm (N)

Thread Dia	Tensile Strength	Shear Strength
4	6606	5194
5	8502	6256
5.6	11634	8042
6	15440	10732

Torsion Strength

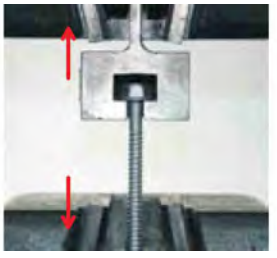
(N.m)

Thread Dia	Torsion Strength
4	4.8
5	6.9
5.6	9.6
6	14.7

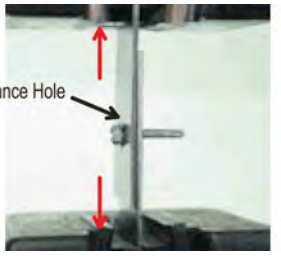
Pull-Out Value



Tensile Strength



Shear Strength



Torsion Strength



Clearance Hole For Pull-Out Test (mm)

Thread Dia	Clearace Hole Dia
4	4.4
5	5.4
5.6	5.9
6	6.4

Clearance Hole For Shearing Test (mm)

Thread Dia	Clearace Hole Dia
4	4.7
5	5.7
5.6	6.2
6	6.7

These are measured values, not guaranteed one.

Thread and drill point in carbon steel aren't concerned with the values.

Stainless strength for all screws over A2-70.

For anti-corrosion, hexavalent chromate treatment over zinc plating had been generally applied.

Hexavalent chromium has high corrosion resistance, however, on the other hand, there are hazardous natures that it causes dermatitis and tumor if contacting with your skin for a longtime, and causes cancer if it is stored in a certain amount in your body.

In fact, health hazard was reported because hexavalent chromium was absorbed into land through acid rain and contaminated groundwater, This became a social problem to be solved urgently.

In 2003, European Union nations issued RoHS directive and WEEE directive, which both restrict specified toxic substances, As a result, hexavalent chromium was gradually replaced with trivalent chromium in car and light electric appliance industries in Europe andmovement towards the elimination of hexavalent chromium has been accelerating globally.

XiAOJUN® screw has as explained in this catalogue by now, the austenitic stainless shank and it contributes to economical use with resources and cost saving due to the fastening longevity, which should be a drill screw, what we call, quite gentle against environment.

Concept of XiAOJUN® Super Ruspert Plus

Sacrificial protection by zinc in zinc electroplating layer, non-chromium, and a barrier effectby upper baking layer forms the coating with high corrosion resistance.

Coating layers



Ruspert

Ruspert is a combination of the Zinc Nickel alloy plating and non-chrome coating system which realize its superior anti-corrosion performance. With the Ruspert specialty of tough and elaborated film structure, the coating has been reborn as an environmental friendly waterborne system.

Features

01 Waterborne system

Using water as a solvent.
Substantially reduce VOC emissions.

02 Chromium-free

Free from the hazardous chromium compound completely.

03 Electrolytic corrosion resistance

Reducing dissimilar metal contact corrosion apparently between the products and aluminum board or plated steel board.

04 Color variation

The basic color is silver and please contact us for color variety request.

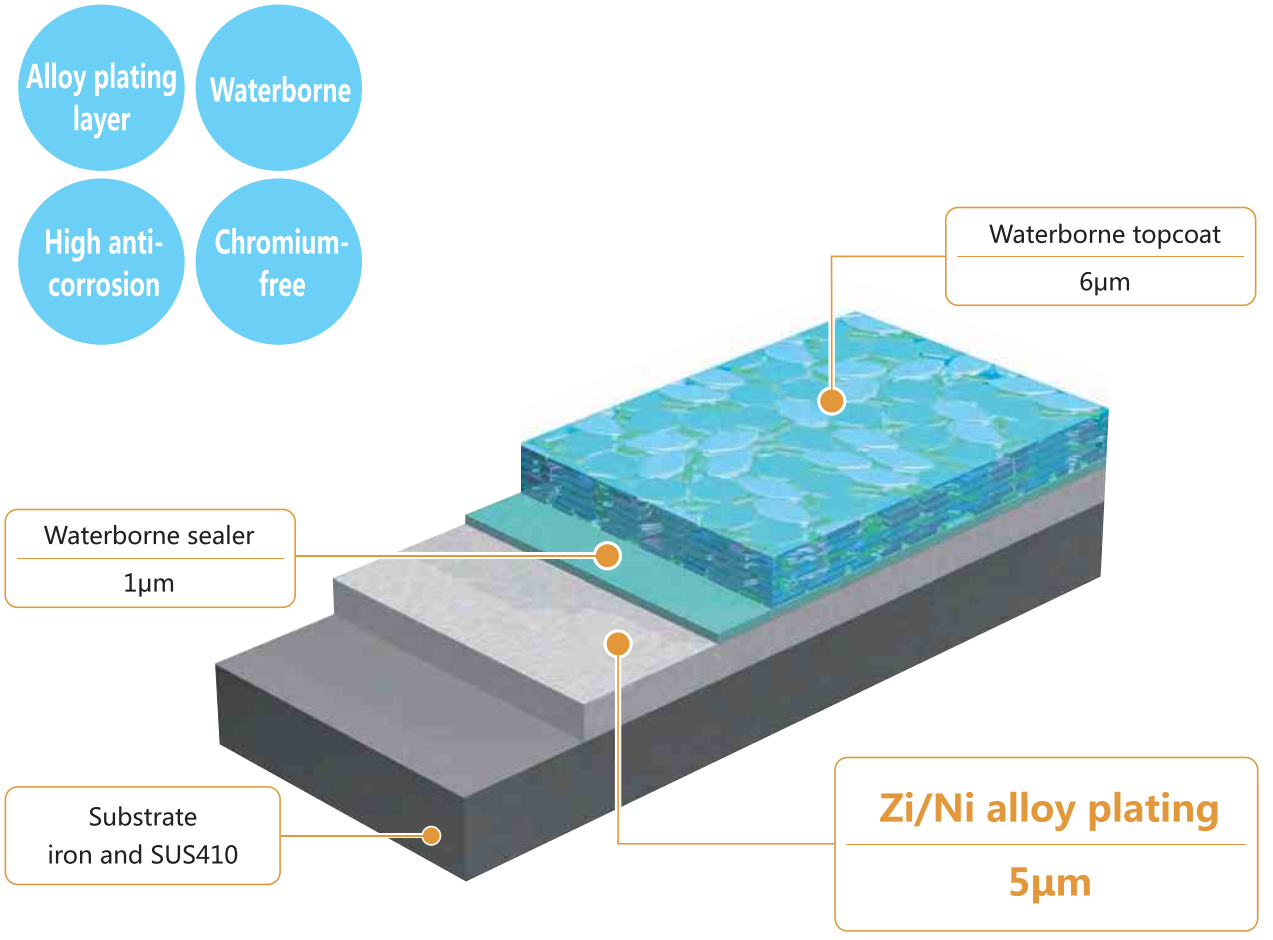
05 Stability of anti-corrosion performance

Zn/Ni alloy plating and waterborne top coat combined by the waterborne sealer which can improve and ensure the stability of the whole anti-corrosion performance.

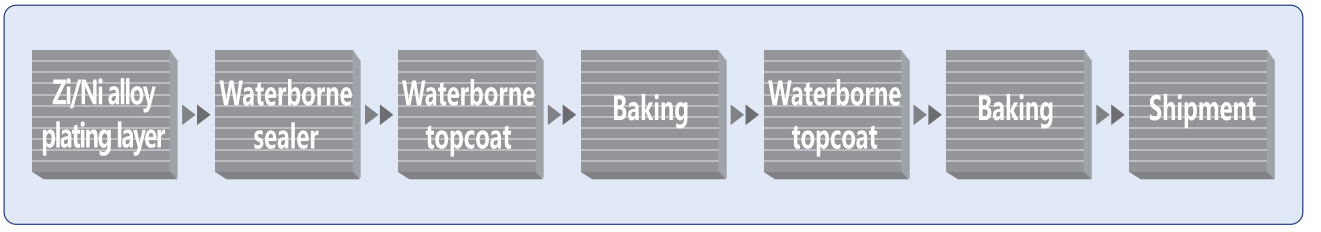
06 Superior corrosion resistance performance

Salt spray test（JIS Z 2371)
2000 Hours No red rust occurred
Combined cycle test（JASO M 609-91)
200cycles No red rust occurred

Coating strucure and the corrosion prevention mechanism



Standard treatment process (Dip-spin method)



* Spray coating (1coating) is available depending on the profile of products.

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

XIAOJUN 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)



DIN50018 Testing In Alternating Condensation Atomosphere Containing Sulphur Dioxide

1、Purpose and range of application

This standard describes the general condition which must be observed for testing samples in condensation atmosphere containing sulphur dioxide, so that comparable results are obtained when the test is carried out in different laboratories.

The test allows defects in corrosion protection systems to be detected quickly. Exposure to these test atmospheres does not allow any direct conclusions to be drawn regarding the life of the tested components under practical duty conditions. This, however, does not exclude the possibility, once ample experience has been gained regarding the long-term behaviours of specific systems in an industrial atmosphere, of being able to establish a relationship between the behaviour in practical service and the behaviour under test conditions, particularly in atmosphere DIN 50 018 – SFW0.25.

It is advisable to test only identical corrosion protection system simultaneously in one and same test facility, since the possibility of interaction between samples representing different system cannot be excluded.

When different corrosion protection systems are tested simultaneously and different materials are present, it should be borne in mind that different effects are often brought about by sulphur dioxide. Direct comparison of the results of tests on different combinations of corrosion protection systems and materials is therefore not readily permissible.

Sample form, sample preparation, test duration, evaluation of the test and assessment of the results are not the subject of this Standard. Details on these points will be found in the relevant Standards or special specifications, or are to be agreed case by case. In particular, the remarks in DIN 50 905 part 1 to part 3 are to be observed when carrying out this test.

2、Other relevant Standards

- DIN 50 900 Part 1 Corrosion of metals; definitions, general definition.
- DIN 50 900 Part 2 Corrosion of metals; definitions, electrochemical definition.
- DIN 50 900 Part 1 Corrosion of metals; chemical corrosion tests, general.
- DIN 50 900 Part 2 Corrosion of metals; chemical corrosion tests, corrosion values with uniform surface corrosion.
- DIN 50 900 Part 3 Corrosion of metals; chemical corrosion tests, corrosion values with non-uniform corrosion absence of additional mechanical stress.

3、Definitiontress.

According to DIN 50 900 Patr1 and Part2.

4、Test condition

At the star of the first test phase in each cycle the test chamber temperature is raised to ±31℃ over a period of about 1 ½ hours. At the same time condensation forms on the samples. This wetting must persist throughout the further progress of the first test phase. It is during this stage that the test reaches maximum everity through the the simultaneous action of sulphur dioxide.

Note: the sulphur dioxide admitted at the start of the first test phase quickly dissolves to a great extent in the water in the bottom of the test chamber. At the start of the test, therefore, the effective sulphur dioxide concentration in the gas space is only about 1/7 of theoretical concentration. This initial concentration does not remain constant during the first phase, but instead drops sharply at first and thereafter more slowly.

The second test phase starts with the disconnection of the heat supply and the opening or ventilating of the test chamber, which must lead to the establishing after about 1 ½ hours of the test conditions according to the Table.

Type of test condition			Theoretical SO2 concentration start of a cycle % by vol.		
			0.067*	0.33*	0.67*
Condensation atmosphere			DIN50 018-SFW0.2S	DIN50 018-SFW1.0S	DIN50 018-SFW2.0S
Cycle	Test phase 1 h		8 including heating		
	Test phase 2 h		16 including cooling (test chamber opened ventilate)		
	Total h		24		
Conditions in test space	Test phase 1	Temperature ℃	40±3		
		Relative humidity%	Approx. 100(wetting of test specimens)		
	Test phase 2	Temperature ℃	18 to 28		
		Relative humidity%	Max.75		
Water quantity in the test space % by vol.			0.67		

1) For a test facility with a test chamber volume of 300l,the theoretical so2 concentrationcorresponds to an so2 admission per cycle of 0.2l, 1.0l, 2.0l.

2) For a test facility with a volume of 300l, this concentration corresponds to a quality of2l

＊ Usually known abroad under the old designation RRSt 1405.

5、Test facility

5.1 Test chamber

Testing in a warm humid atmosphere containing sulphur dioxide requires a test chamber with a volume of at least 300L closed all round and sealed and having walls consisting of a corrosion-resistant material which, moreover, must not influence the corrosion. The test chamber must have a bottom trough capable of being heated and of holding the quantity of water prescribed in the Table. The heating of the test chamber takes place only via this water bath.

A suitable temperature measuring and control device must be available in the test chamber. The temperature is measured in the immediate vicinity of the samples. The valves necessary for pressure equalization and the gas inlet must be located above the

water surface. The roof of the test chamber must be so constituted as to prevent condensate from dripping down on to the samples. The shape and size of the test chamber are optional, provided that the requirements of Section 5 and 7 are fulfilled. The illustration shows a tes tfacility with a chamber volume of 300L.

The test chamber is to be set up in a room without corrosive atmosphere, at room temperature and a relative humidity not exceeding 75%, and so installed that it is protected from draughts and sola irradiation.

5.2 Sample holder

the sample holder must consist of a corrosion-resistant material which also must not influence the corrosion of the sample. it must be so constituted that the samples can be arranged to suit the requirements of Section 6.2.

6 Procedures

6.1 Samples

Only samples which do not affect each other should be tested jointly.

6.2 Arrangement of samples

The samples are to be so arranged in the test chamber that the following spacing is maintained:

- Distance from walls at least 100mm
- Distance of underside of samples from surface of water at least 200mm
- Distance between samples at least 20mm

In the absence of any agreements to the contrary, the total surface area of the suspended samples should amount to 0.5m² ±0.1m² per 300L of test chamber volume. Special agreements are to be made in respect of samples the surface area of which cannot be determined.

It is importance to ensure that during exposure no condensate can drip on to the samples. Since the same amount of sulphur dioxide is affective in each cycle, the result depends on the size and nature of the total sample surface area loaded. For comparative tests it is therefore indispensable to work each time with the same total sample surface area and samples of like a kind.

It is also important that the material used to mask surface which are not to be exposed should be of a kind which does not reach with sulphur dioxide and also does not influence the test result in any other way.

6.3 Filling the bottom trough

The bottom trough should be filled with the quality of distilled or deionized water stated in the Table. Prior to each cycle the water must be renewed and the test chamber cleaned if necessary.

6.4 Gas supply

Before the sulphur dioxide is admitted the test chamber must be closed.

6.4.1 Supplying sulphur dioxide from steel cylinders. For the exact measurement of the amount sulphur dioxide admitted, commercial-type gas meters or containers with fluid displacement(paraffin oil) may be used.

6.4.2 Generation of sulphur dioxide inside the test facility.

It is also permissible to generate sulpur dioxide inside the test facility by suitable means(e.g. NaHSO3+dilute sulphuric acid)

6.5 Heating

the heating should be switched on immediately after the admission of sulphur dioxide and the test chamber raised to temperature of 40℃ over a period of about 1 ½ hours. This temperature must be held to within ±3℃ at the measuring point.

6.6 Test duration

If the specific test Standards do not lay down any test duration,1,2,5,10 or 20 cycles should be run for preference. The test may be broken off any unacceptable impairment of the appearance or function of the samples occurs or if a given degree of corrosion is reached.

6.7 Test sequence

Each cycle comprises two-test phase corresponding to the Table, i.e. totaling 24 hours. At the end of the first test phase(8 hours)the heating is switched off and the test chamber opened or ventilated.

At the end of the second test phase (18 hours) the bottom trough is emptied, cleaned if necessary, and filled with fresh distilled or deionized water. The test chamber is then closed and solphur dioxide admitted. With the switching on of the heating a new cycle starts.

6.8 Interrupting the test

Test interruptions are to be made up by prolonging the second test phase and are to be indicated in the report. When specimens are to be exposed to only 1 or 2 cycles, the test facility should have been in operation beforehand for at least 1 cycle.

7. Functional check of the test facility

For monitoring the reproducibility the test results given by a test facility, or those of identical test facilities at different locations, it is necessary to carry out a functional check at appropriate intervals. Test facilities with a test chamber volume of 300L are covered by the provision in Sections 7.1 to 7.8.

7.1Test material

7.1.1 Five samples each measuring 50mm wide, 100mm long and 0.6 to



1.5mm thick, of the steel grades St 37(bright as rolled) to DIN 17 100 or St 1405° (bright as rolled) to DIN 1623 part 1 ground with a ceramic wheel of hardness J and 46 grit.

7.1.2 Two blank samples each measuring 250mm wide,400mm long and 1mm thick, of the steel grades St 37(bright as rolled) to DIN 17 100 or St 1405° (bright as rolled) to DIN1623 Part1.

7.2 Sample preparation

Before the functional check is started, the test material according to Section 7.1 should be degreased by using white spirit or another suitable solvent applied with a soft lint-free cloth or a brush, and the sample according to Section 7.1.1 then weighed to the nearest 1 mg. If the weighing cannot be performed immediately after degreasing, the sample should be kept in a desiccator until weighed.

7.3 Performance of the functional check

The five samples according to Section 7.1.1 are arranged vertically in the chamber. The blank samples according to Section 7.1.2 are also arranged vertically on either side of five samples according to Section 7.1.1. The exposure of the samples extends over five cycles corresponding to the test conditions SFW 0.25 according to Section 6.

7.4 Removing the corrosion products

On completion of the functional check the corrosion products are removed from the samples by using an approximately 10% solution of hydrochloric acid(230ml of chemically pure HCLρ=1.18g/ml and 730ml of distilled or deionized water), to which 0.1% properly alcohol has been added, at room temperature. After the corrosion products have been removed, the samples are thoroughly rinsed in distilled or deionized water, dried and then kept in the desiccator at room temperature from 18 to 28℃ until weighed.

7.5 Weighing the samples

The samples are weighed to the nearest 1mg.

7.6 Evaluation of results

The losses of mass determined are converted to g/m^2 If the mean value found is between 100 and $150m/g^2$ and if the deviation of the individual values from the mean value does not exceed ±20%, the test is in conformity with the Standard.

Further Standards

DIN 1623 Part Flat products of steel; cold rolled strip and sheet of mild unalloyed steels;

Quality specifications.

DIN 17 100 Steels for general structural purposes; quality specification(subsequent edition

at present in after form.

Explanations

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

RAL 1000
RGB 205 186 136
CMYK 26 26 52 0

RAL 1001
RGB 208 176 132
CMYK 24 33 51 0

RAL 1002
RGB 210 170 109
CMYK 24 36 62 0

RAL 1003
RGB 249 168 0
CMYK 4 42 93 0

RAL 1004
RGB 228 158 0
CMYK 15 43 96 1

RAL 1005
RGB 203 142 0
CMYK 24 47 100 4

RAL 1006
RGB 226 144 0
CMYK 14 51 97 1

RAL 1007
RGB 232 140 0
CMYK 11 54 97 1

RAL 1011
RGB 175 128 79
CMYK 33 50 71 10

RAL 1012
RGB 221 175 39
CMYK 20 33 89 0

RAL 1013
RGB 227 217 198
CMYK 14 15 24 0

RAL 1014
RGB 221 196 154
CMYK 18 24 43 0

RAL 1015
RGB 230 210 181
CMYK 13 19 31 0

RAL 1016
RGB 241 221 56
CMYK 15 9 82 0

RAL 1017
RGB 246 169 80
CMYK 5 42 73 0

RAL 1018
RGB 250 202 48
CMYK 8 24 84 0

RAL 1019
RGB 164 143 122
CMYK 41 43 50 4

RAL 1020
RGB 160 143 101
CMYK 42 40 62 7

RAL 1021
RGB 246 182 0
CMYK 8 34 93 0

RAL 1023
RGB 247 181 0
CMYK 7 34 93 0

RAL 1024
RGB 186 143 76
CMYK 31 44 75 6

RAL 1026
RGB 255 255 0
CMYK 13 0 84 0

RAL 1027
RGB 167 127 14
CMYK 36 47 100 13

RAL 1028
RGB 255 155 0
CMYK 0 49 93 0

RAL 1032
RGB 226 163 0
CMYK 17 40 96 0

RAL 1033
RGB 249 154 28
CMYK 3 49 90 0

RAL 1034
RGB 235 156 82
CMYK 10 47 71 0

RAL 1035
RGB 144 131 112
CMYK 48 44 53 9

RAL 1036
RGB 128 100 63
CMYK 46 53 75 26

RAL 1037
RGB 240 146 0
CMYK 7 52 96 0

※ For more information please visit www.ral-colours.com

RAL 2000
RGB 218 110 0
CMYK 15 66 100 3

RAL 2001
RGB 186 72 27
CMYK 22 80 98 13

RAL 2002
RGB 191 57 34
CMYK 21 87 94 11

RAL 2003
RGB 246 120 40
CMYK 2 65 87 0

RAL 2004
RGB 226 83 3
CMYK 10 78 100 2

RAL 2005
RGB 255 77 0
CMYK 0 80 96 0

RAL 2007
RGB 255 178 0
CMYK 2 38 92 0

RAL 2008
RGB 237 107 33
CMYK 6 69 91 1

RAL 2009
RGB 222 83 7
CMYK 12 78 100 2

RAL 2010
RGB 208 93 40
CMYK 18 73 89 5

RAL 2011
RGB 226 110 14
CMYK 12 67 98 1

RAL 2012
RGB 213 101 77
CMYK 17 71 68 3

RAL 2013
RGB 146 62 37
CMYK 30 79 89 30

RAL 3000
RGB 167 41 32
CMYK 25 92 95 22

RAL 3001
RGB 155 36 35
CMYK 27 93 90 28

RAL 3002
RGB 155 35 33
CMYK 27 94 92 28

RAL 3003
RGB 134 26 34
CMYK 30 97 87 38

RAL 3004
RGB 107 28 35
CMYK 36 94 77 52

RAL 3005
RGB 89 25 31
CMYK 39 93 75 61

RAL 3007
RGB 62 32 34
CMYK 55 79 65 70

RAL 3009
RGB 109 52 45
CMYK 40 78 73 47

RAL 3011
RGB 121 36 35
CMYK 33 91 83 44

RAL 3012
RGB 198 132 109
CMYK 26 55 54 3

RAL 3013
RGB 151 46 37
CMYK 28 89 88 29

RAL 3014
RGB 203 115 117
CMYK 24 65 45 2

RAL 3015
RGB 216 160 166
CMYK 19 45 26 0

RAL 3016
RGB 166 61 47
CMYK 27 83 82 21

RAL 3017
RGB 203 85 93
CMYK 22 77 53 4

RAL 3018
RGB 199 63 74
CMYK 21 85 63 7

RAL 3020
RGB 187 30 16
CMYK 21 96 100 13

RAL 3022
RGB 207 105 85
CMYK 20 68 63 4

RAL 3024
RGB 255 45 33
CMYK 0 89 87 0

RAL 3026
RGB 255 42 27
CMYK 0 90 90 0

RAL 3027
RGB 171 39 60
CMYK 27 93 68 18

RAL 3028
RGB 204 44 36
CMYK 17 91 92 7

RAL 3031
RGB 166 52 55
CMYK 27 88 73 21

RAL 3032
RGB 112 29 35
CMYK 34 94 79 49

RAL 3033
RGB 165 58 45
CMYK 27 84 83 22

RAL 4001
RGB 129 97 131
CMYK 57 66 28 6

RAL 4002
RGB 141 60 75
CMYK 38 82 53 26

RAL 4003
RGB 196 97 140
CMYK 29 73 22 0

RAL 4004
RGB 101 30 56
CMYK 46 93 51 48

RAL 4005
RGB 118 104 154
CMYK 64 64 16 1

RAL 4006
RGB 144 51 115
CMYK 52 91 23 7

RAL 4007
RGB 71 36 60
CMYK 65 87 44 52

RAL 4008
RGB 132 76 130
CMYK 58 79 21 4

RAL 4009
RGB 157 134 146
CMYK 45 49 32 2

RAL 4010
RGB 188 64 119
CMYK 32 86 28 2

RAL 4011
RGB 110 99 135
CMYK 65 63 26 6

RAL 4012
RGB 107 107 127
CMYK 64 56 35 10

RAL 5000
RGB 49 79 111
CMYK 84 66 34 20

RAL 5001
RGB 15 76 100
CMYK 90 63 40 27

RAL 5002
RGB 0 56 123
CMYK 99 89 19 8

RAL 5003
RGB 31 56 85
CMYK 90 76 39 36

RAL 5004
RGB 25 30 40
CMYK 84 76 54 71

RAL 5005
RGB 0 83 135
CMYK 93 69 22 8

RAL 5007
RGB 55 107 140
CMYK 81 53 29 8

RAL 5008
RGB 43 58 68
CMYK 81 65 51 48

RAL 5009
RGB 34 95 120
CMYK 86 55 36 16

RAL 5010
RGB 0 79 124
CMYK 93 69 27 12

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RAL 5011
RGB 26 43 60
CMYK 89 75 48 55

RAL 5012
RGB 0 137 182
CMYK 82 38 18 0

RAL 5013
RGB 25 49 83
CMYK 93 82 37 37

RAL 5014
RGB 99 125 150
CMYK 68 47 29 4

RAL 5015
RGB 0 124 176
CMYK 85 47 15 0

RAL 5017
RGB 0 91 140
CMYK 91 63 23 6

RAL 5018
RGB 5 139 140
CMYK 82 30 45 4

RAL 5019
RGB 0 94 131
CMYK 90 59 30 11

RAL 5020
RGB 0 65 75
CMYK 91 60 51 43

RAL 5021
RGB 0 117 119
CMYK 85 39 49 13

RAL 5022
RGB 34 45 90
CMYK 94 90 31 29

RAL 5023
RGB 66 105 140
CMYK 79 56 28 7

RAL 5024
RGB 96 147 172
CMYK 67 36 25 1

RAL 5025
RGB 33 105 124
CMYK 84 49 39 14

RAL 5026
RGB 15 48 82
CMYK 96 82 37 37

RAL 6000
RGB 60 116 96
CMYK 77 38 62 17

RAL 6001
RGB 54 103 53
CMYK 78 38 89 27

RAL 6002
RGB 50 89 40
CMYK 78 42 95 37

RAL 6003
RGB 80 83 60
CMYK 64 51 72 39

RAL 6004
RGB 2 68 66
CMYK 89 53 60 47

RAL 6005
RGB 17 66 50
CMYK 86 49 75 53

RAL 6006
RGB 60 57 46
CMYK 66 60 70 57

RAL 6007
RGB 44 50 34
CMYK 72 58 79 65

RAL 6008
RGB 55 52 42
CMYK 67 62 71 61

RAL 6009
RGB 39 53 42
CMYK 77 57 72 62

RAL 6010
RGB 77 111 57
CMYK 72 37 86 23

RAL 6011
RGB 108 124 89
CMYK 61 39 67 15

RAL 6012
RGB 48 61 58
CMYK 76 59 61 52

RAL 6013
RGB 125 118 90
CMYK 53 45 62 17

RAL 6014
RGB 71 65 53
CMYK 64 59 68 51

RAL 6015
RGB 61 61 54
CMYK 68 60 64 53

RAL 6016
RGB 0 105 76
CMYK 87 36 73 24

RAL 6017
RGB 88 127 64
CMYK 70 33 85 14

RAL 6018
RGB 97 153 59
CMYK 69 21 91 3

RAL 6019
RGB 185 206 172
CMYK 35 11 38 0

RAL 6020
RGB 55 66 47
CMYK 71 53 76 53

RAL 6021
RGB 138 153 119
CMYK 53 31 56 4

RAL 6022
RGB 58 51 39
CMYK 64 62 73 62

RAL 6024
RGB 0 131 81
CMYK 84 27 79 9

RAL 6025
RGB 94 110 59
CMYK 64 41 83 24

RAL 6026
RGB 0 95 78
CMYK 87 41 67 30

RAL 6027
RGB 126 186 181
CMYK 56 13 32 0

RAL 6028
RGB 49 84 66
CMYK 78 47 69 39

RAL 6029
RGB 0 111 61
CMYK 87 33 87 20

RAL 6032
RGB 35 127 82
CMYK 82 29 76 12

RAL 6033
RGB 70 135 127
CMYK 74 33 49 7

RAL 6034
RGB 122 172 172
CMYK 59 22 33 0

RAL 6035
RGB 25 77 37
CMYK 85 44 95 46

RAL 6036
RGB 4 87 75
CMYK 87 44 65 35

RAL 6037
RGB 0 139 41
CMYK 85 21 100 5

RAL 6038
RGB 0 181 26
CMYK 78 0 100 0

RAL 7000
RGB 122 136 142
CMYK 58 42 37 4

RAL 7001
RGB 140 150 157
CMYK 52 38 32 1

RAL 7002
RGB 129 120 99
CMYK 52 46 57 14

RAL 7003
RGB 122 118 105
CMYK 55 47 53 14

RAL 7004
RGB 155 155 155
CMYK 46 37 34 0

RAL 7005
RGB 108 110 107
CMYK 60 49 49 16

RAL 7006
RGB 118 106 94
CMYK 54 51 55 20

RAL 7008
RGB 116 94 61
CMYK 50 53 75 31

RAL 7009
RGB 93 96 88
CMYK 63 51 56 26

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RAL 7010
RGB 88 92 86
CMYK 65 53 56 28

RAL 7011
RGB 82 89 93
CMYK 69 55 49 27

RAL 7012
RGB 87 93 94
CMYK 67 54 50 25

RAL 7013
RGB 87 80 68
CMYK 61 56 63 38

RAL 7015
RGB 79 83 88
CMYK 69 58 50 31

RAL 7016
RGB 56 62 66
CMYK 74 62 55 47

RAL 7021
RGB 47 50 52
CMYK 74 65 59 59

RAL 7022
RGB 76 74 68
CMYK 65 58 60 41

RAL 7023
RGB 128 128 118
CMYK 54 44 48 9

RAL 7024
RGB 69 73 78
CMYK 71 60 52 38

RAL 7026
RGB 55 67 69
CMYK 76 59 56 45

RAL 7030
RGB 146 142 133
CMYK 49 41 44 4

RAL 7031
RGB 91 104 109
CMYK 67 51 45 18

RAL 7032
RGB 181 176 161
CMYK 35 29 36 0

RAL 7033
RGB 127 130 116
CMYK 55 42 51 9

RAL 7034
RGB 146 136 111
CMYK 47 42 55 8

RAL 7035
RGB 197 199 196
CMYK 27 19 21 0

RAL 7036
RGB 151 147 146
CMYK 47 40 37 2

RAL 7037
RGB 122 123 122
CMYK 56 46 44 9

RAL 7038
RGB 176 176 169
CMYK 37 28 31 0

RAL 7039
RGB 107 102 94
CMYK 58 51 54 22

RAL 7040
RGB 152 158 161
CMYK 47 35 31 0

RAL 7042
RGB 142 146 145
CMYK 51 39 38 2

RAL 7043
RGB 79 82 80
CMYK 67 56 55 34

RAL 7044
RGB 183 179 168
CMYK 34 27 33 0

RAL 7045
RGB 141 146 149
CMYK 51 39 35 2

RAL 7046
RGB 127 134 138
CMYK 56 43 38 5

RAL 7047
RGB 200 200 199
CMYK 26 19 19 0

RAL 7048
RGB 129 123 115
CMYK 53 47 48 11

RAL 8000
RGB 137 105 62
CMYK 43 53 77 23

RAL 8001
RGB 157 98 43
CMYK 33 61 89 21

RAL 8002
RGB 121 77 62
CMYK 44 66 67 35

RAL 8003
RGB 126 75 38
CMYK 39 66 88 37

RAL 8004
RGB 141 73 49
CMYK 34 72 79 30

RAL 8007
RGB 112 69 42
CMYK 43 67 82 43

RAL 8008
RGB 114 74 37
CMYK 43 64 89 41

RAL 8011
RGB 90 56 38
CMYK 48 69 80 54

RAL 8012
RGB 102 51 43
CMYK 42 77 73 50

RAL 8014
RGB 74 53 38
CMYK 55 66 76 59

RAL 8015
RGB 94 47 38
CMYK 43 77 76 55

RAL 8016
RGB 76 43 32
CMYK 49 74 78 63

RAL 8017
RGB 68 47 41
CMYK 58 69 68 62

RAL 8019
RGB 61 54 53
CMYK 67 65 60 56

RAL 8022
RGB 26 23 24
CMYK 75 73 66 83

RAL 8023
RGB 164 87 41
CMYK 30 69 89 20

RAL 8024
RGB 121 80 56
CMYK 43 63 73 35

RAL 8025
RGB 117 88 71
CMYK 49 59 64 31

RAL 8028
RGB 81 58 42
CMYK 54 65 75 55

RAL 8029
RGB 127 64 49
CMYK 37 74 75 37

RAL 9001
RGB 233 224 210
CMYK 11 12 19 0

RAL 9002
RGB 215 213 203
CMYK 20 15 20 0

RAL 9003
RGB 236 236 231
CMYK 9 6 10 0

RAL 9004
RGB 43 43 44
CMYK 74 67 61 65

RAL 9005
RGB 14 14 16
CMYK 80 76 68 90

RAL 9006
RGB 161 161 160
CMYK 43 34 33 0

RAL 9007
RGB 135 133 129
CMYK 52 44 43 6

RAL 9010
RGB 241 236 225
CMYK 7 7 13 0

RAL 9011
RGB 39 41 43
CMYK 76 67 60 67

RAL 9016
RGB 241 240 234
CMYK 7 5 9 0

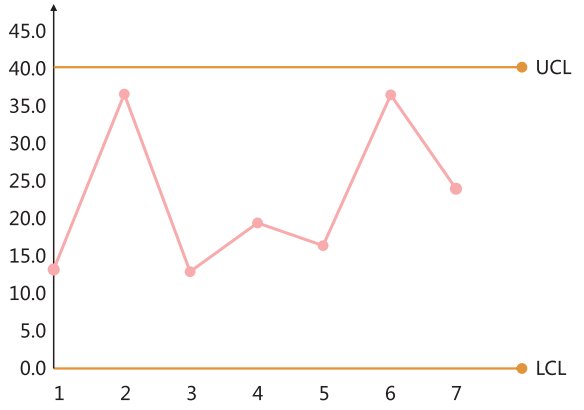
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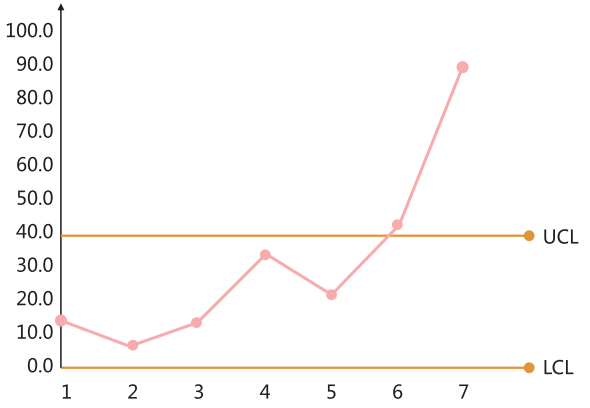
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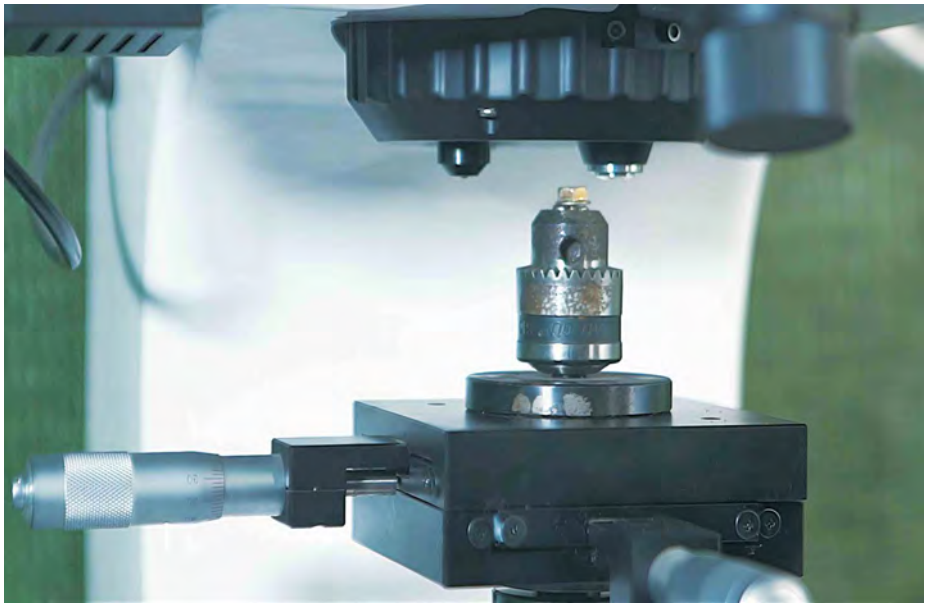
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Salt Spray Test









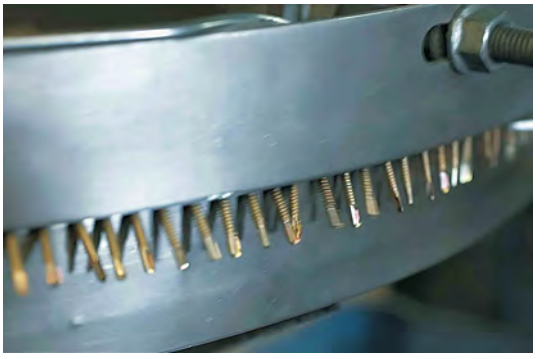


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