



SANSHING

THE ART OF FASTENER EQUIPMENTS

TOTAL SOLUTION



Machine Brochure



SAN SHING NUT FORMER

Precision Series

SNF

The Most Precise Machine With Cutting Edge Technology

Highest Precision, Efficiency and Flexibility Your Optimum Solution For High-Value Product



Model		14P	17P	19P	24P
Hex Nut (DIN934)	mm	M6-M8	M6-M10	M8-M12	M10-M16
	inch	1/4-5/16	1/4-7/16	5/8-1/2	3/8-5/8
Flange Nut (DIN6923)	mm	M5-M8	M6-M8	M6-M10	M8-M14
	inch	#12-5/16	1/4-5/16	1/4-7/16	5/16-9/16
Station		6	6	6	6
Forging Power	Tons	90	130	160	250
Main Motor	HP	25	30	40	50
Max. Cut-Off Dia	mm	14	17	19	24
Max. Cut-Off Length	mm	19	23	26	32
Max. Kick-Out Stroke	mm	19	23	26	32
Max. Output	pcs/min	260	230	200	150
Max. PKO Stroke	mm	10	12	13	16
Ram Stroke	mm	80	85	110	130
Die Pitch	mm	60	75	80	100
Forging Die	mm	60x45	75x55	80x60	100x75
Punch Die	mm	40x120	50x148	60x160	70x205
Cut-off Quill	mm	60x45	75x55	80x60	100x75
Net Weight	Tons	11	15	18	26
Machine Size (LxWxH)	mm	3350x 2200 x1750	4300x 2200 x1750	4100x 2400 x1800	4600x 2800 x2000

ACCESSORIES				
Human Machine Interface with OPC UA	●	●	●	●
Overarm	●	●	●	●
Inverter	●	●	●	●
Crankshaft with Bush and Clutch	●	●	●	●
Linear Feeding System	●	●	●	●
Oil Tank With Centrifugal Filter	●	●	●	●
PKO System	▲	▲	▲	▲
Close Type Cutter	▲	▲	▲	▲
Sound Enclosure	▲	▲	▲	▲
Forge Load Monitor	▲	▲	▲	▲
	14P	17P	19P	24P

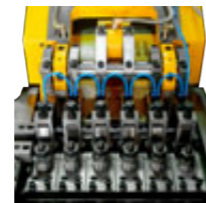
● = Standard ▲ = Optional

- San Shing precision series is a systematic onward development of highly successful Basic series.
- For achieving a higher precision, this series equips many features such as Linear Feeding System, Main Ram with Overarm design, the Crankshaft with Bush and cooperated with Clutch System to ensure product precision while forging.



Overarm & Crankshaft with Bush

Crankshaft with Bush collocated with high pressure lube system extends crankshaft endurance. Overarm improves product precision.



PKO Punch-Block (Option)

Simultaneous kick out and changeable stroke to adapt for extensive product requirement.



Air brake with Clutch

Flywheel driven by motor and stopped by air brake with clutch. Whenever the machine stops, the main ram stays at the BDC position.



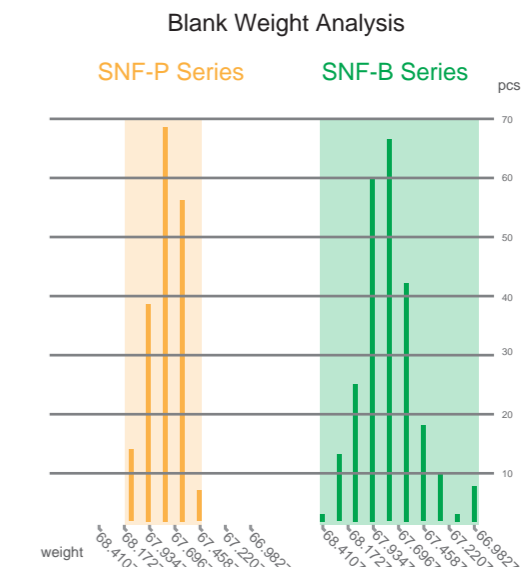
Human Machine Interface

Displaying the production info in all aspect. Improving the management of counter and tooling life. Easier to handle machine condition and to produce part.



Linear Feeding System

Linear Feeding System enables the cutting tolerance to be fine-tune continually to within 1%(L=0.6D), saving material and tooling costs.



SNF

SAN SHING NUT FORMER
Basic Series



- The basic series is built of San Shing's 50-year experiences in massive nut production.
- Hallmarks on the series are a high level of standardization and resulting from this, a highly affordable price making for an excellent price and performance ratio.

Speed And Flexibility

Thanks to the lightened transfer finger design, San Shing nut former is able to perform in a faster speed compare to other competitor while producing most type of the standardized nut. Also, the cut-off length and K.O. stroke are longer, which provides better flexibility to produce a wider range of product.

Cut-Off Position Detector

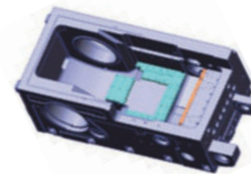
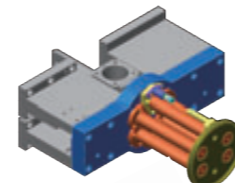
When there is a deviation of cut-off position, alarm signal will appear so that the operator will be aware of the possible problem in the cut-off system.

Lining Plate Design

When the gap between the main ram and clamping plate is over the standard value, maintenance is only need to be done on the main ram and lining plate instead of machine frame.

HMI & Touch Screen-Alarm Status

Clear alarm message indicates position of the error to help operator eliminates the error in a shorter time.



The Most Economic Machine to Satisfy Your Standard Part Demand

Outstanding Performance with Competitive Price Your Best Choice for Standard Part Production

Model		11B		14B		17B		19B		24B		32B	
Hex Nut (DIN934)	mm	M3~M6		M6~M8		M6~M10		M8~M12		M10~M16		M12~M22	
	inch	#4~1/4		1/4~3/8		1/4~7/16		5/16~1/2		3/8~5/8		1/2~7/8	
Station		5	6	5	6	5	6	5	6	5	6	5	6
Forging Power	Tons	50	55	85	90	120	130	145	160	230	250	375	400
Main Motor	HP	15		20		30		30		50		100	125
Max. Cut-Off Dia	mm	11		14		17		19		24		32	
Max. Cut-Off Length	mm	9		12		15.5		17		22.5		30	
Max. Kick-Out Stroke	mm	12.5		16.5		20		22		26		36	
Max. Output	pcs/min	400		320		275		220		180		110	
Ram Stroke	mm	50		70		85		90		110		145	
Die Pitch	mm	50		60		75		80		100		140	
Forging Die	mm	50x40		60x45		75x55		80x60		100x75		140x100	
Punch Die	mm	28x113		38x135		43x170		50x184		60x211		85x278	
Cut-off Quill	mm	50x40		60x45		75x55		80x60		100x75		140x100	
Net Weight	Tons	4.9	5.2	7.5	8	9.6	10.2	13.5	14.4	21	22.3	40	43
Machine Size (LxWxH)	mm	2120	2120	2685	2685	3030	3030	3230	3230	3900	3900	4950	4950
		x	x	x	x	x	x	x	x	x	x	x	x
		1500	1550	1730	1790	1960	2035	2070	2150	2580	2680	2780	2920
		x	x	x	x	x	x	x	x	x	x	x	x
		1200	1200	1250	1250	1400	1400	1500	1500	1800	1800	2100	2100

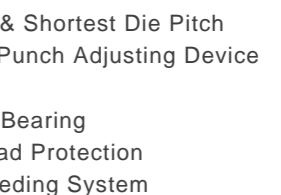
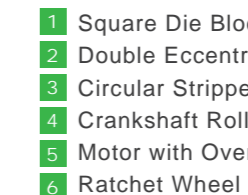
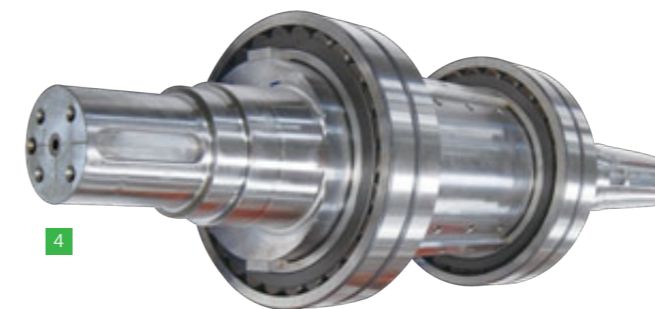
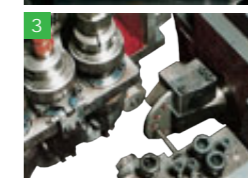
ACCESSORIES

Human Machine Interface	●	●	●	●	●	●
Built-in Oil Tank	●	●	●	●	●	●
Inverter	●	●	●	●	●	●
Linear Feeding System	▲	▲	▲	▲	▲	×
Centrifuge Oil Filter	▲	▲	▲	▲	▲	▲
	11B	14B	17B	19B	24B	32B

● = Standard ▲ = Optional × = Not Available

Inverter

Variable speed adjustment for the optimal output.



- 1 Square Die Block & Shortest Die Pitch
- 2 Double Eccentric Punch Adjusting Device
- 3 Circular Stripper
- 4 Crankshaft Roller Bearing
- 5 Motor with Overload Protection
- 6 Ratchet Wheel Feeding System



SAN SHING BOLT FORMER

4 Forging Station

SBF

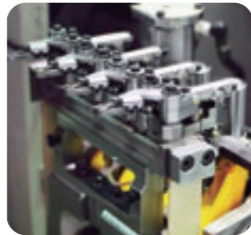
The Exquisite Design To Provide Possible Conditions For Cost Saving

Optimal output and Superior mold life Your Minimum Compromise to Chase Productivity-Based Growth



Peak Productivity

Lightened transfer finger system is designed to serve faster production speed and meanwhile maintain the precise movement of oscillating mechanism while forging a variety of bolts.

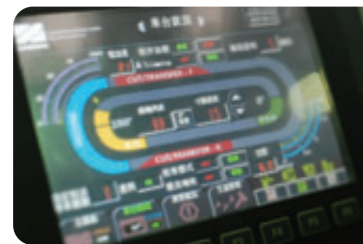


Ease of Adjustment

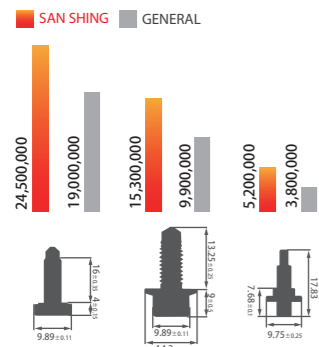


With worm gear design, the opening/closing timing of transfer fingers can be handily adjusted in shortest time.

The modular transfer finger system gives the perks of easy removal and deviation-free alignment, as well as delivers a quick and precise operation. Moreover, the opening width and clamping position of transfer fingers can be determined while they are unattached to the machine.



HMI displays all necessary production info. Operator gets a real-time machine status feedback and manages the tooling life effortlessly.



Annual Production

30% UP



Hand wheel facilitates the adjustment for kick-out position. Gear design is applied on both punch adjusting wedge and kick-out setting. By observing the meter indicator, operator spends less time to achieve satisfactory set-up with higher precision.

Utmost Precision



The rigorous process control and meticulous scraping imposed on the primary machine parts excel San Shing bolt former in terms of overall performance. Prominent example is main ram working precision, indicating up to 20% increase on punch life. The accuracy and reliability permit the operator to produce various types of bolts effectively.



Inverter enables the main ram to inch move consecutively during adjusting, the operator can easily find the best timing for clamping setting, avoiding unpredictable and dangerous collisions. Encoder allows the main ram to return to BDC position when the machine is stopped, eliminating the possibility to damage mechanical and tooling parts.

Tooling Life

20% UP



Quadruple-feed rollers system provides smooth and steady operation to eliminate insufficient material feeding.

SPECIFICATION

		SBF-10B	SBF-13B	SBF-17B
	Metric	M6	M8	M10
	Imperial	1/4"	5/16"	3/8"
	Max LENGTH	50	75	100
	MIN LENGTH (H/S)	12/16	16/20	16/20
	FORGING STATION	-	4	4
	FORGING POWER	Tons	40	65
	MAIN MOTOR	HP	20	25
	MAX. CUT-OFF DIA	mm	8	10
	MAX. CUT-OFF LENGTH	mm	70	105
	MAX. OUTPUT	pcs/min	260	240
	MAX. KICK-OUT STROKE	mm	55	80
	MAX. P.K.O STROKE	mm	13	23
	MAX. RAM STROKE	mm	120	150
	DIE PITCH	mm	60	76
	MAIN DIE HOLE	D*L	Φ50*65	Φ60*105
	PUNCH HOLE	D*L	Φ40*80	Φ45*110
	CUT-OFF QUILL	D*L	Φ28*46	Φ35*56

	SBF-10B	SBF-13B	SBF-17B
HMI (HUMAN MACHINE INTERFACE)	●	●	●
INVERTER	●	●	●
SOUND ENCLOSURE	▲	▲	▲
MOTORIZED K.O. ADJUSTMENT	▲	▲	▲
PRODUCT / SCRAP CONVEYOR	▲	▲	▲
FORGE LOAD MONITOR	▲	▲	▲
HYDRAULIC CLAMP FOR K.O.	▲	▲	▲

● = Standard ▲ = Option

SAN SHING
NUT TAPPING MACHINE
 Two Spindles / Four Spindles Type

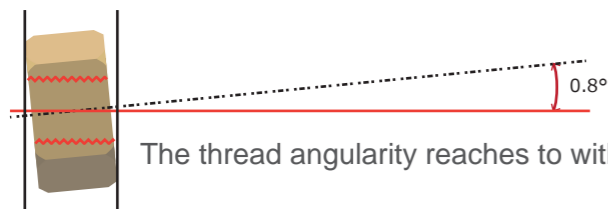
SNT

Comprehensive Tapping Machines To Satisfy All Demands of Nut Product.

The thread quality can reach the standard of DIN13 to within 6 and the thread angularity within 0.8 degree



Four Spindles Type



The thread angularity reaches to within 0.8 degree

- Air cylinder pusher, simple pushing mechanism and easy stroke adjustment.
- Tapping movement controlled by PLC
- Automatic sensor of operation errors such as bad threads, no feeding, part jammed, overloaded and abnormal air pressure...etc
- Option with Automatic rejection system to discharge the defective parts automatically.
- Human Machine Interface which can set up the tapping parameters and manage tap life.
- Easy tool change-over of pusher heads, chutes and sleeves
- Control plate to shift the operation of left / right threads

Model		11T or 11A	16T or 16A	19T or 19A	24T or 24A	30T or 30A
* Hex Nut (DIN934)	Metric	M5-M8	M8-M10	M10-M12	M12-M16	M16-M24
	Imperial	1/4"-5/16"	5/16"-3/8"	3/8"-9/16"	1/2"-5/8"	5/8"-7/8"
	Max. Output	pcs/min	330-300	270-240	210-180	150-120
* Flange Nut (DIN6923)	Metric	M5-M6	M6-M10	M10-M12	M12-M14	M14-M20
	Imperial	1/8"-1/4"	1/4"-3/8"	3/8"-1/2"	1/2"-5/8"	5/8"-7/8"
	Max. Output	pcs/min	210-180	170-145	130-110	90-70
Main Motor Qty		2 / 4	2 / 4	2 / 4	2 / 4	2 / 4
Max Diameter for Nut	mm	18	23	29	35	49
Motor Power	HP,Pole	1,2	2,4	2,4	3,4	5,4
Spindle Speed	RPM	2090	1629	1425	1166	855
Net Weight	kg	930/1050	1480/1610	1480/1730	1820/2250	2950/3400
Oil Tank Volume	L	190/250	360/510	360/510	490/620	550/730
Machine Size (LxWxH)	mm	1400x1310x1575	1630x1410x1785	1715x1410x1870	1875x1570x2065	2075x1630x2280
		1200x1370x1575	1595x1585x1785	1635x1585x1875	1730x1870x1880	2000x2370x2190

* Valid For Tapping Before Heat Treatment Process

T = Two Spindles Type A = Four Spindles Type

Series	Two Spindles (T) Type	Four Spindles (A) Type
HMI (Human Machine Interface)	●	●
Magnetic Chip Separator	●	●
Wear-resistance Tapping Spindles	●	●
Wear-Resistance Hopper	●	●
Inverter For Main Motor	●	●
Inverter For Hopper Motor	●	●
Air Tank	●	●
Automatic Defect Rejection	●	●
Oil-proof Cover	●	●

● = Standard ▲ = Optional ✕ = Not available



- 1
- 2
- 3
- 4
- 5

- 1 Tapping Push Rod
- 2 PLC&Human Machine Interface
- 3 Magnetic Chip Separator
- 4 Main Motor Inverter
- 5 Torque Limiter

SAN SHING
NUT TAPPING MACHINE
Round Nut Type

SNT

Purpose-Built Tapping Machine To Serve Expert Technology For Round Nut

Diverse integrations for ideal thread angularity controlling and systematic production monitoring.



7 Full Machine Covers
Provide a clean and safer working environment.

1 Tapping Push Rod
Simple design and easy adjustment

2 Air Turning Clamps
Fixing nuts by air turning clamps

6 Improving The Nut Angularity
Easy tool change over of push heads, chutes and sleeves

7 FEATURES

5 Inverter
Tapping speed can be controlled by the inverter.

3 Human Machine Interface
Which can set up the tapping parameters and manage tap life.

PLC Module
Control tapping movement and detect bad thread , part jammed , overloaded and abnormal air pressure.

4 Automatic Rejection System
Discharge the defective parts automatically

▲ **Optional Items**

- Hopper
- Magnetic Scrap Conveyor



Specification		SNT-30D	SNT-55D	
Production range	Metric	M5-M8	M8-M22	
	Inch	1/4"-3/8"	7/16"-3/4"	
Output rate	pcs/min	140-120	80-45	
Ref.output rate	Size*Thick*Taps	pcs/min	140 (M6*T7*Thread NO.28T)	76 (M10*T10*Thread NO.28T)
			120 (M8*T9*Thread NO.28T)	48 (M22*T11*Thread NO.23T)
Spindle Speed Range		1200-2500	700-1500	
Max Diameter for Nut	mm	28	50	
Main Motor Power	HP,Pole	3HP/4P*4	5HP/4P*4	
Pump Motor Power	HP,Pole	1HP/4P*2	1HP/4P*2	
Magnetic Scrap Conveyor ▲	w	40	90	
Oil Tank Volume	L	245	450	
Size	With Hopper ▲	L*W*H/mm	2170*1620*2800	2570*2530*2950
	Without Hopper		2170*1620*2450	2570*2530*2570
Net Weight	kg	3500	4800	
▲ = Optional				



SNS

SAN SHING NUT SORTING MACHINE
Glass Plate Type



SBS

SAN SHING BOLT SORTING MACHINE
Index Plate Type

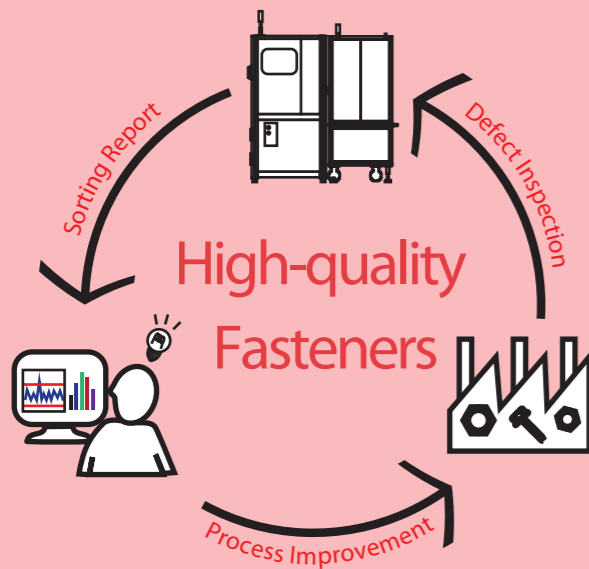


Compulsory Equipment for High Quality Fasteners

With the most powerful sorting software, you may lay back in your office while learning all sorting info from computer.

Accurate information for process improvement

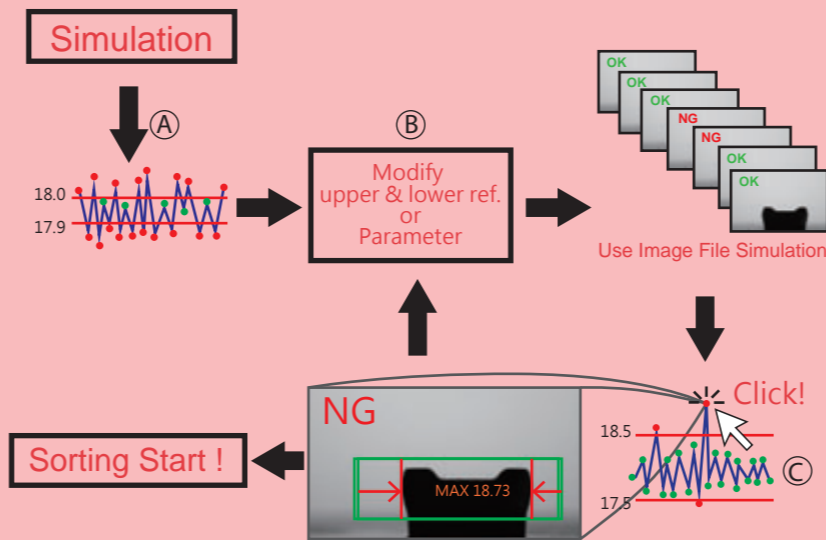
Information gathered from sorting process such as CPK value, SPC graph, and reference images can be implemented back into process improvement to reduce or even eliminate the defect.



Simulation Function

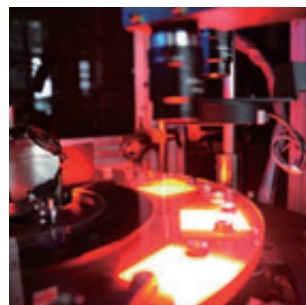
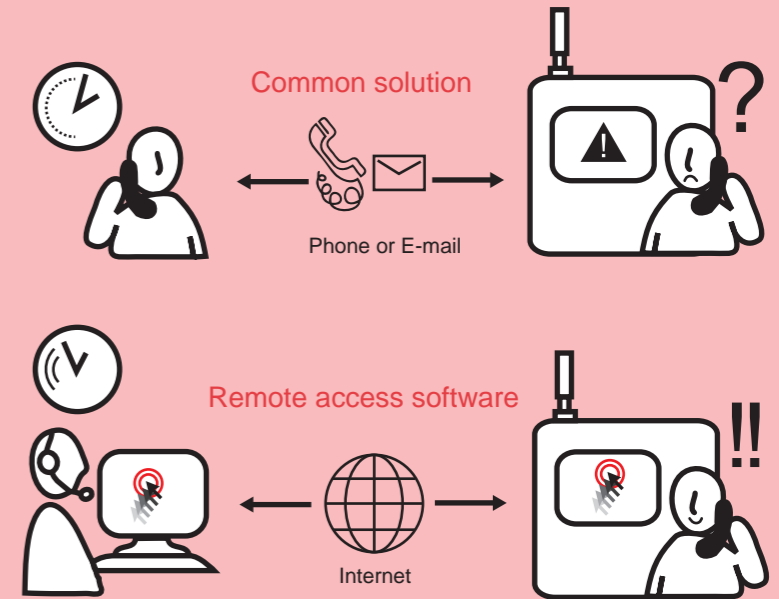
3 simple steps of simulation for finding optimized tolerance prior to actual sorting process :

- Ⓐ. Finding distribution of upper & lower limits.
- Ⓑ. Modify upper & lower limits or parameters.
- Ⓒ. With existed image file simulation, the optimized tolerance can be located to rule out defective parts efficiently, simplifying the process before actual sorting starts.



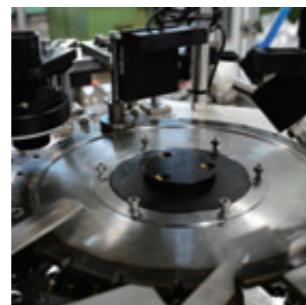
Online service

Instead of using email and telephone which are time-consuming and tedious, San Shing service engineer can assist operator diagnose and eliminate problem on sorting machine through remote Internet access.



SNS Glass Plate Type Nut Sorting Machine

High transparency, tempered, and polished to reach $\pm 10\mu m$ flatness. CCD camera can inspect both sides to expand sorting area.



SBS Index Plate Type Bolt Sorting Machine

Smooth turning index plate comprised with special actuator to ensure stable image capturing



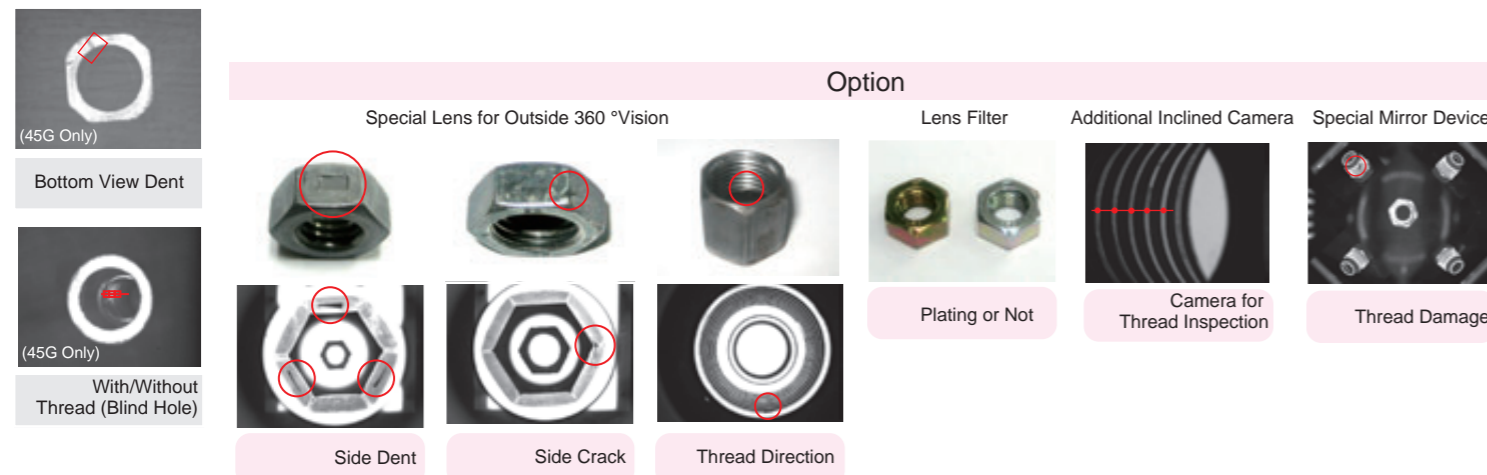
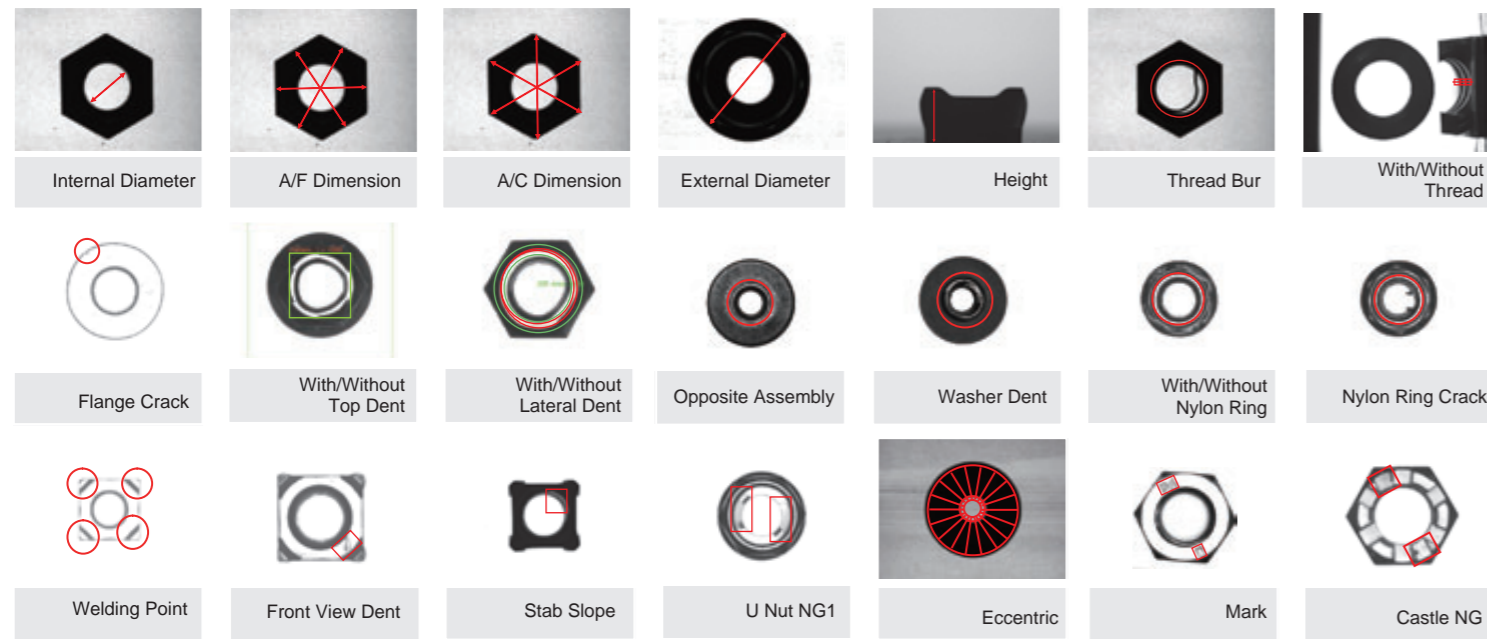
Humanized & Friendly Hardware

Easy learning of software and adjustable positions of monitor and keyboard. Clear alarm message with picture and troubleshooting guides.

SNS SAN SHING NUT SORTING MACHINE

Glass Plate Type

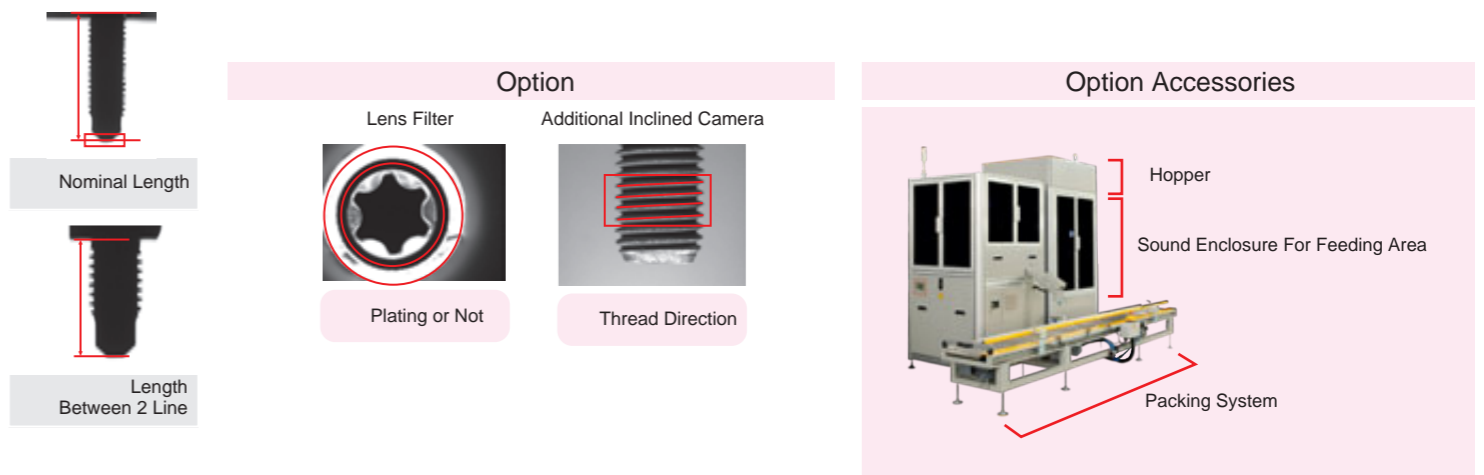
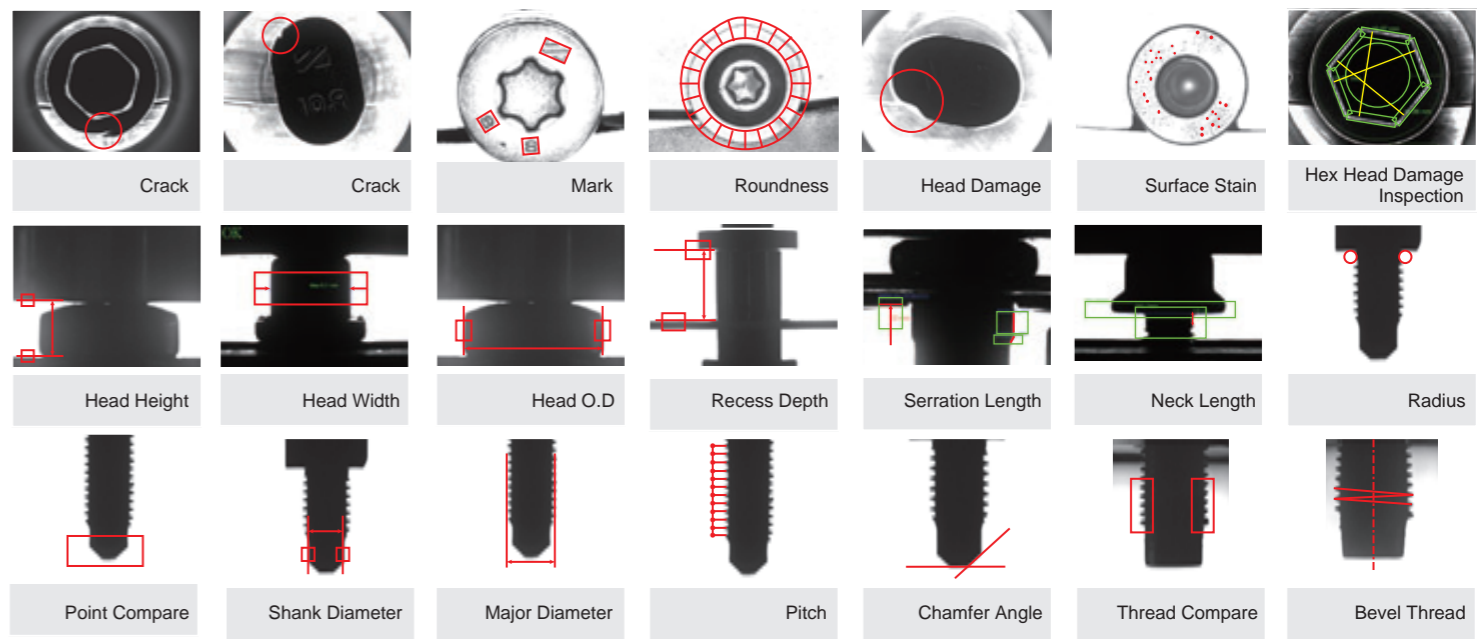
Model	SNS-45G	SNS-45B
Feeding Type	Glass Plate (Flatness Reaches to $\pm 10 \mu m$)	Glass Plate + Conveyor Belt
Camera	4 Cameras : 1 Horizontal, 3 Vertical Cameras	4 Cameras : 1 Horizontal, 3 Vertical Cameras
Resolution	640x480 pixels	640x480 pixels
Illumination	1 LED Ring Light · 4 LED Flat Light · 1 Coaxial Light	1 LED Ring Light · 4 LED Flat Light · 1 Coaxial Light
Max Diameter/Height/ Weight	45mm(M20)/38mm/150g	45mm(M20)/30mm/80g
Sorting Accuracy(Back Light)	± 1 pixel	± 1 pixel
Max Sorting Speed	400pcs/min	400pcs/min
Option		
Packing System		
Sound Enclosure For Feeding Area		
Special Lens for Outside 360°Vision		
Additional Inclined Camera for Thread Inspection		

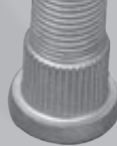


SBS SAN SHING BOLT SORTING MACHINE

Index Plate Type

Model	SBS-35D	SBS-35L
Feeding Type	Index Plate	Index Plate
Camera	4 Cameras : 3 Horizontal, 1 Vertical Cameras	4 Cameras : 3 Horizontal, 1 Vertical Cameras
Resolution	640x480 pixels	640x480 pixels
Illumination	2 LED Ring Light · 4 LED Flat Light	1 LED Ring Light · 3 LED Flat Light
Sorting Diameter	M3 ~ M16	M3 ~ M16
Sorting Accuracy(Back Light)	± 1 pixel	± 1 pixel
Max Head Diameter/Length	35mm/6 ~ 125mm	35mm/50 ~ 150mm
Max Sorting Speed	400pcs/min	400pcs/min
Option		
Packing System		
Sound Enclosure For Feeding Area		
Straightness Inspection (For SBS-35L only)		





WORKING HARD TO BE THE BEST
STRATEGIC PARTNER FOR OUR
CUSTOMERS

At SAN SHING, we believe our vertically integrated production, focus on innovation and quality, and professional work force create the highest quality products and top service in the business. That's why we're the best partner for our customers.

WE WOULD LIKE TO TAKE THIS OPPORTUNITY TO THANK YOU FOR YOUR SUPPORT.



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