

NITTOSEIKO

Fastening Products
Digest Catalog

Screw Manufacturer

gives you seeds
for evolution



Screwdriver Manufacturer

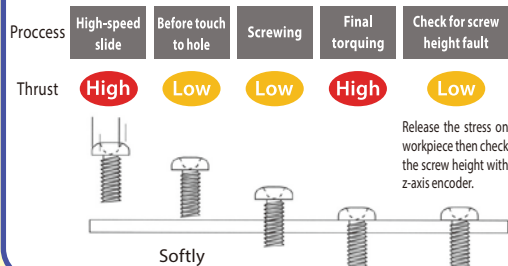
gives you hints
for innovation



Function of NejiRobo

Thrust force control

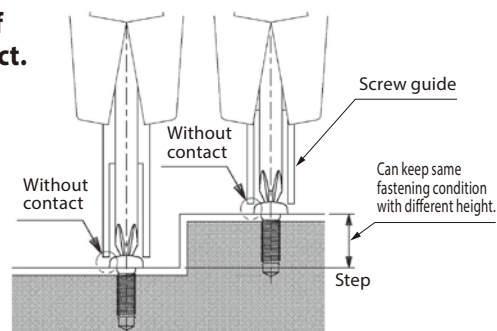
Optimum thrust control effectively prevents to damage to internal threads and cam-out.



Screw guide position variable control

Suitable for fastening of product that hate contact.

Can set height of the screw guide arbitrarily. It means that can fastening different height of positions, also fastening without contact of screw guide if needed.



Function of SR580Y0-ZZ

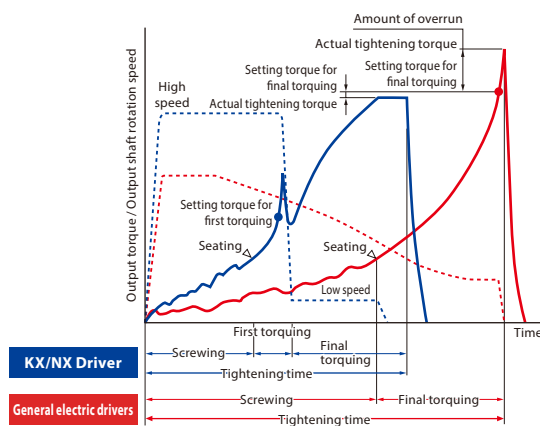
Function of motors & drivers

Two-step Torque Tightening

Enables high-speed and high-accuracy fastening.

First torquing and final-torquing is performed in succession. It's speed and accuracy are superior to ordinary screwdrivers which only tighten screws to each set torque at a dash.

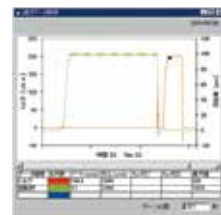
- Enabling high accuracy fastening with less torque variation.
- Enabling high speed fastening with high-speed rotation even when the torque increases.



Waveform display

Displaying tightening results in the waveform display.

The waveforms of torque(current values), rotations number of output shaft and angle, can be displayed on your PC monitor. This data is useful for performing fastening tests during the causes of fastening errors, and formulating production plans based on tact time.

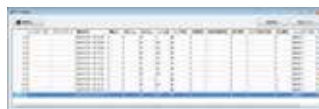


Software for collecting and saving data of waveform.

Can upload many kinds of data to PC.

Upload time, torque, angle and judgement data of each fastening.

Upload torque and angle data for each 1ms, and save it to CSV file.



Display and saving for result of fastening.

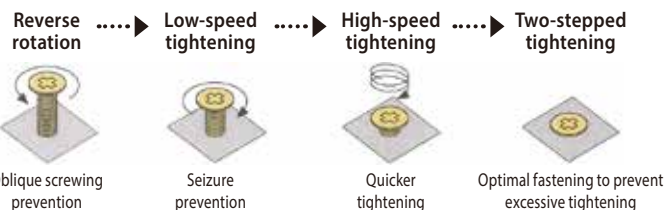


Display and saving for waveform of fastening.

Flexible fastening control

Eliminating problems such as thread stripping, cross threads etc.

Enabling flexible control of torque, speed, angle, direction of rotation, etc. Reducing fastening errors such as idle turn due to oblique screwing, seizure, and excessive tightening.

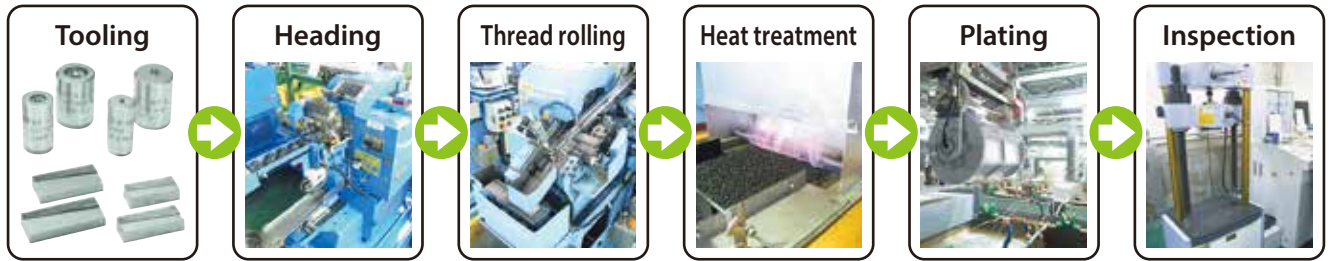


Adopted applications

| | |
|----------------------------|---|
| ■ Automotive equipment | ·Lithium ion battery ·Power module ·Battery case ·Converter ·Inverter ·ETC ·Automotive navigation system ·ECU board ·PCU ·ABS ·Transmission ·Cylinder block ·AT valve ·Valve body ·Locker arm ·Turbo charger ·Oil pump ·Disk brake ·Drum brake ·Brake booster ·Airbag ·Steering ·Piston ring ·Hub ·Key cylinder ·Exhaust manifold ·Fuel tank ·Chain cover ·Instrument panel ·Sunroof ·Starter motor ·Window regulator ·Door mirror ·Head lamp ·Rear lamp ·Wiper motor ·Seatbelt ·Door |
| ■ Home electronics | ·LED lamp ·Television ·Washing machine ·Rice cooker ·Microwave ·TV tuner ·Refrigerator ·Air conditioner ·Fan heater |
| ■ Meter equipment | ·Smart meter ·Electric power meter ·Gas meter ·Water heater ·Stove burner ·Pneumatic equipment |
| ■ House equipment | ·Solar panel ·Fire-alarm box ·Panel ·Sash ·Washstand ·Sink cabinet ·Chair ·Steel house ·Breaker |
| ■ IT device | ·Hard disk drive ·Mobile base station ·Printer cartridge ·Cell phone ·Magnetic storage media ·Digital player ·Digital camera |
| ■ Medical and nursing care | ·Thermometer ·Hemodialysis apparatus ·Endoscope ·Hematology analyzer ·Wheelchair |
| ■ Amusement | ·Japanese pinball ·Slot machine ·Game machine |
| ■ Other | ·Servo amp ·Power box |

Expert of Screw manufacturer

Start-to-finish production from tooling, manufacturing equipment to inspection

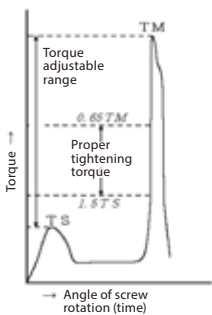


NITTOSEIKO expands their brand globally with providing tooling, manufacturing and inspection systems to offshore subsidiaries.

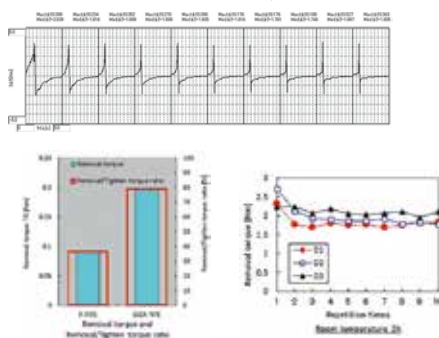


NITTOSEIKO provides the best condition for fastening

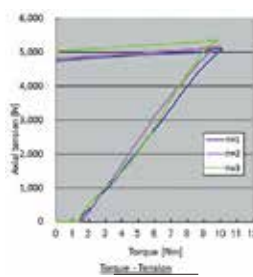
Torque performance



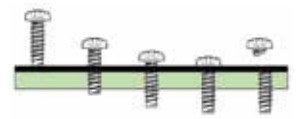
Repeated loosening torque analysis



Torque-Tension test

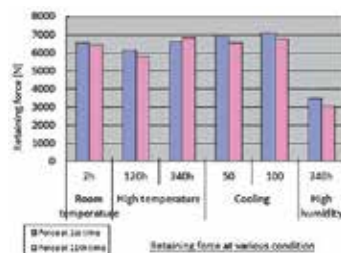
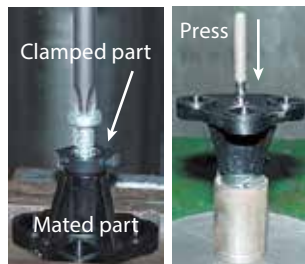


Drive to failure test



The best way to the goal is to know the facts.

Retaining (holding) force test



Vibration test



Totally Support Fastening

NITTOSEIKO is a unique company who supplies,

- Industrial Fasteners (Screws)
- Automatic assembly systems, Automatic screw driving machines
- Measurement and Inspection equipment

NITTOSEIKO provides not only the best condition for fastening, but also optimized operation process which is beyond customer's expectation with integrating technologies and experiences stored at all through the group.

- Production work saving technology
- Fastening system technology

Customers

Total Support

- Measurement and control technology
- Ground survey technology

- Cold heading, Thread rolling technology
- Fastening technology

AC Servo Screwdrivers

"KX" series

SD550 series
Offer unparalleled optimal fastening with detailed control
Torque is controlled with current as well as angle. To achieve the most durable driver available we choose an ac servo motor as the drive motor. Multiple programmable drive sequences are available for virtually any sequence desired. It achieves excellent precision driving characteristics.



- Features**
- Torque, speed, time, angle, etc. can be set individually in numerical values.
 - The screw fastening conditions can be selected from point to point.
 - Maintains a high-speed rotation even with an increase of torque.

Maximum rotation speed
3,000min⁻¹

Torque range
0.08~45N·m

Torque transducer "NX" series

SD550T series
Offer more performance and reliability with torque transducer
The NX driver is mounted torque sensor based on KX driver. It achieves higher performance and reliability. Of course basic function is same as KX driver.



- Features**
- Torque and judgment of tightening can be displayed on the panel.
 - Optional function of waveform analysis can be judged fault of tightening immediately.

Maximum rotation speed
1,100min⁻¹

Torque range
0.2~80N·m

Torque accuracy
3~5%

SD600T series

Introducing new series with High Accuracy and High Performance
Standardly installed Data collection and Waveform Analysis will provide safety and comfort to any user.



- Features**
- Number of channels is increased to 32 and ideal for high-mix low-volume production system.
 - Waveform Analysis comes in standard, and it will detect screw driving failure which could not be detected only by final torque check.
 - Data collection functions, using Ethernet, also comes in standard. It's useful for establishing traceability and finding root cause of screw driving failure.
 - Renewed Communication Software is user-friendly.

Maximum rotation speed
1,100min⁻¹

Torque range
0.5~45N·m

Torque accuracy
2~3%

SD550T series (Option) / SD600T series (Standard)

Screw drive judgment can be determined by using Waveform Analysis function.

SD600T series (Standard)

All fastening waveform can be corrected by Data collection function.

Note1 : This page describes the general features and specifications of the driver series, which may be different from those of individual models.
Note2 : We offer a variety of options and special specifications. Consult us for more details.
Note4 : Feed rate of screw feeder may vary depending on screw size, head shape, etc.

Hand-held Screwdrivers

Feedmat FM Hand-held series

Easy fastening with a single-hand operation
They let you perform manual work comfortably and raise efficiency. Screws are instantly fed from the feeder to the driver chuck under air pressure, thus guaranteeing continuous cycling.

- Features**
- Enables fastening of maximum 30 screws in one minute with a single hand operation. (Number of fastening screws may vary depending on screw size, head shape, etc.)
 - Widely used in the automobile industry and many other industries.

Supported screw diameters
2~8mm

Torque range
0.2~44N·m

Attention!

Screw are automatically loaded to the driver chuck.

Armdriver series

The KX or NX driver can be mounted on the balance arm and supports cell production. Optional encoder can detect position.

- Features**
- Generates no reaction force or impact during fastening and thus prevents inflammation of a tendon sheath.
 - Reduces the strain on your hands and allows easy fastening.
 - Enables fastening with a maximum torque 45Nm. (High rigidity V type)

Arm allowable torque
Max45N·m

AD100TE

Screw feeders

Disk type screw feeder DF200

Feed precision screws reliably
New concept of screw feeder for precision screws which conveys screws with a disk. Screws do not get stuck or jammed in the machine, and productivity is improved.

Features

- Can be used with micro screws a diameter 0.6mm and many other types of screws.
- Suitable for use in an automated lines.
- Different sizes of screws can be easily used just by replacing the disk.

Supported screw diameters
0.6~2mm

Feed rate
Max. 25 screws per min. Note4

Attention!

Screws that could not be fed with conventional feeders can be fed.

Ultra-thin head

Short and small

Very small

Screw with washers

Single- / Multi-spindle Screwdrivers

Feedmat FM Unit series

Easy mounting on the robot or lines
Screwdrivers are proven as attachments for robot arms and along automated assembly lines. Small and light weight, they are easy to attach and handle. Makes screwdriving completely automatic and labor saving.

- Features**
- It is a ready-to-use system consists of a driver, a feeder, a controller and all other mechanisms.
 - A variety of models are available according to applications.

Supported screw diameters
1.7~8mm

Torque range
0.1~22N·m

Feedmat FM Multi-spindle series

Multiple screws can be fastened quickly at the same time
Screwdrivers can tighten more than 1 screw at the same time. This greatly reduces work time and ensures against uneven tightening. These machines are dependable in line operations as a spindle unit and can fasten screws in the horizontal direction as well as vertical up or down.

- Features**
- Enables fastening of two to six screws at the same time. Case of seven or more screws can be designed optionally.
 - Each screwdriver is independently controlled, providing flexible work conditions.

Supported screw diameters
2~8mm

Torque range
0.3~20N·m

FM5000

NejiRobo (Screwdriving Robot)

Nitoman SR series

Screw manufacture's know-how is built-in
"A variety models, such as Cartesian type, Yθ (straight and slewing motion) type, horizontal type, twin spindle type and desktop type are available. SR580Yθ-Z, the newest model, has Z-axis which can control the thrust of fastening. Optimum fastening for each materials and each application is ensured.

- Features**
- It is ready-to-use system consists of a controller and a feeder.
 - Equipped with KX driver.
 - A variety of models can meet various applications.

Supported screw diameters
0.6~8mm

Torque range
0.08~22N·m

SR580Yθ-Z

Riveting / Eyeleting Machines

Rivet setter RS series

Easily, Reliable, Low-cost Riveting
Rivets are fed automatically to enable efficient continuous riveting.

- Features**
- A column type and a desktop type are available.
 - An electrically-operated type for high-speed riveting and a hydraulic type for quiet riveting are available.
 - Also can be used with automatic machines.

Supported rivet diameters
2~8mm

Supported rivet diameters
1.2~6mm

RS404B

Has ES series which are eyeleting machines. Can be used to soft materials such as plastic and ceramic.

Centerboard hopper type screw feeder FF series

Widely used as feeder for automatic machines
Our unique centerboard hopper style feeders are extremely versatile, and prevents screws from getting jammed, ensuring productivity.

Features

- The reliable feeding and durability make the feeders suitable for use with an automatic machines.
- Compatible with commercial power supply voltage levels of the world. (FF503H)

Supported screw diameters
2~8mm

Feed rate
Max. 30 screws per min. Note4

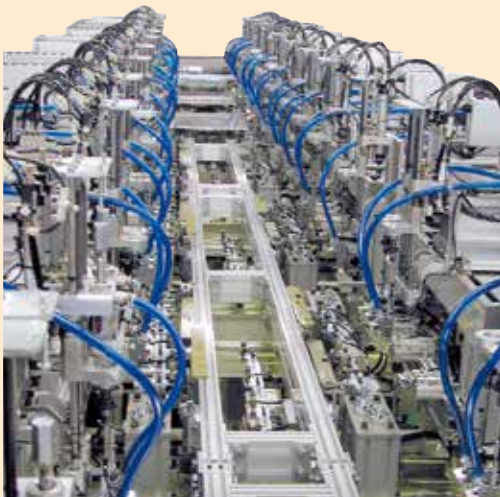
FF503H

Feed rate was counted with single escapement.

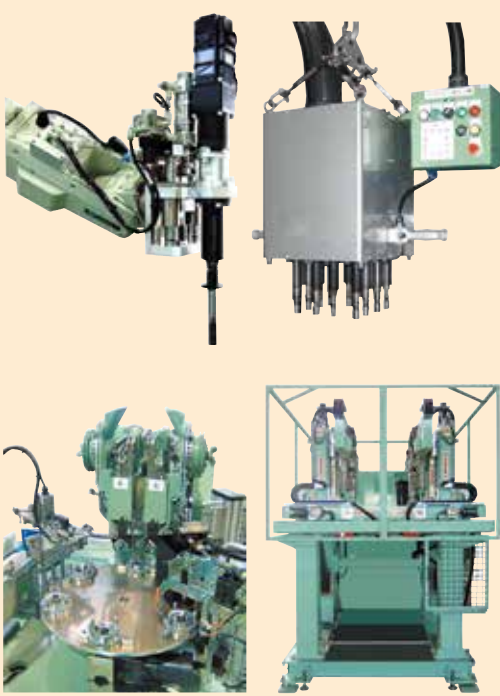
Attention!

Can be built customized machine which includes specification and request from customer. Also can be provided best proposal with our technology and experience of more than 5,000 applications.







Customized machines



Special applications of standard machines



Screws for Metal Fastening

| Character | | | High axial tension | High torque tightening | For sheet metal | For Aluminum alloy | For Magnesium alloy | Self-Locking screws |
|------------------------|----------------------------------|-------------------|---|---|---|---|--|---|
| Name | | | TAPTITE 2000® | RSTITE | LAMITITE | ALUMITITE | MAGTITE® | APSLOK |
| Appearance of products | | |  |  |  |  |  |  |
| Major applications | | | Automobile parts, Home appliances | Copying machines, Printers, Air conditioners | Washing machines, Refrigerators, Microwaves, etc. | Automobile parts, Laptops, Electric mobile devices | Laptops, Cameras, Cellular phones | OA equipment, Cameras, Home appliances |
| Recommended function | Self-tapping | | Applicable | Applicable | Dedicated | Applicable | Dedicated | — |
| | Thread stripping prevention | | ◎ | ◎ | ◎ | ○ | ○ | — |
| | Loosening prevention | Normal conditions | ◎ | ○ | ○ | ◎ | ○ | ◎ |
| | | Under vibration | ◎ | ○ | △ | ◎ | ○ | ◎ |
| Features | | | ·Rounded frank surface (Radius Profile™) reduces thread forming torque | ·Provides low thread forming torque and high maximum tightening torque | ·Available in sheet metal fastening with >0.35mm of thickness and prevents thread stripping | ·Prevents un-seating of screw head due to sticking at fastening on aluminum and other soft metal. | ·Prevents un-seating of screw head due to sticking at fastening on Magnesium alloy ·Reduces metal dusts falling | ·Anti-Loosening Power by sticking of thread to flank face of internal thread. |
| Specifications, etc. | Shank cross-sectional shapes | | Trilobular | Tip : Trilobular Body : Circular | Tip : Trilobular Body : Circular | Trilobular | Trilobular | Trilobular |
| | Suitable mating materials | | Metal, Soft metal | Metal plates | Sheet metal t=0.35~0.8mm | Aluminum alloy (soft metal) | Magnesium Alloy | Metal, Soft metal |
| | Suggested hole for screw driving | | Pressed, Burring, Drilled, Casted | Pressed, Burring, Drilled | Pressed, Pierced, Burring, Drilled | Drilled, Casted | Drilled, Casted | Tapped threads |
| | Supported size in dia.※(mm) | | 5~8 | 3 , 4 | 3 , 4 , 5 | 1.4~6 | 1.4~6 | 1.4~6 |

Special Cold-Forget Parts

Switching from machined parts to cold-forged parts achieves significant cost reduction!



clinching stud bolt

Suppresses burrs and warping during press-fitting
New standard for sheet metal clinching fasteners (Standard, torque-resistant, space-saving, waterproof, low-profile)



JOISTUD®

Bimetallic joint products

Achieves strong dissimilar metal bonding with materials such as iron, stainless steel, aluminum, and copper!



AKROSE®

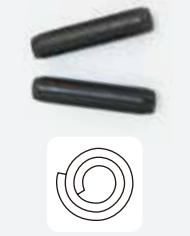
Grooved Pins

Fastener with 3 V-grooves! No reaming required. The 3 V-grooves provide strong retention during pin insertion!



Coiled Pins

Spiral-shaped spring pin with high elasticity!



Rivets (metal/resin)

Achieves high-speed, high-quality riveting!



Lightweight and freely colorable
Suitable for decorative purposes as well

Waterproof Screw: ASFA WP

·High axial force fastening possible
·Waterproof performance is not affected by misalignment of intervening objects









Assembly products








Supports combined processing such as forging, pressing, machining, and injection molding









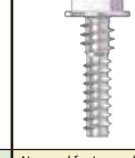
Screws for Plastic Fastening

| Character | | High loose-proof effect | For Carbon fiber reinforced plastics | For Super engineering plastic | Higher retaining force | For thin plastic plates | For Flexible plastic |
|------------------------|------------------------------|--|---|---|--|---|---|
| Name | | GIZA TITE | CFTITE | EPTITE | M-TITE | PSTITE-II | PCSCREW |
| Appearance of products | |  |  |  |  |  |  |
| Major applications | | Automobile Sliding roofs, Inlet systems, Interior parts, Cellular phones, Heat sources | Flame of New Generation of Vehicles, Antenna | Electromagnetic valves, Automobile inlet & fuel systems, Circuit breakers | Power tools, Vibrating bodies, Automobile inlet systems | Laptops, Electric mobile device | Washing machines, Automobile interior parts |
| Recommended function | Self-tapping | | Dedicated | Dedicated | Dedicated | Dedicated | Dedicated |
| | Thread stripping prevention | | ○ | ◎ | ◎ | ◎ | ◎ |
| | Loosening prevention | Normal conditions | ◎ | ○ | ○ | ◎ | ○ |
| | | Under vibration | ◎ | ○ | ○ | ○ | Single thread : ○ Double thread : △ |
| Specifications, etc. | Shank cross-sectional shapes | | Circular + concave groove | Trilobular™ | Trilobular™ | Trilobular™ | Circular |
| | Suitable mating materials | | Thermo-plastics | CFRP, CFRTF | Thermo high rigidity plastics | Thermo-plastics | Thermo-plastics (Flexible plastics) |
| | Supported size in dia.※(mm) | | 1.4~6 | 3~6 | 1.4~5 | 2~5 | 1.4~2.6 |
| | Features | | ·Hard to loose thanks to interlocking of grooves on thread with plastic. ·Demonstrates anti-loosening effects under vibration and temperature changes. | ·Reduce damage of carbon fiber when fastening ·Realize fastening with thin workpiece under vibration and temperature changes | ·Applicable to super engineering plastic (PPS etc.) ·Prevents cracks ·Also available for thermoset plastics. | ·Easy tightening ·Prevents loosening caused by vibration and temperature changes ·Prevents cracks | ·Prevents thread stripping at a shallow screwing depth ·Better workability thanks to wider torque allowance ·Prevents cracks ·Twin-lead thread |

Special Drive Recesses

| Character | Camout / Ream-out prevention | Improved workability | Protect good looks | Removal prevention | | | |
|-----------------------------|---|---|---|--|--|---|---|
| Name | TORX PLUS® | TOUGH CROSS | SHARE CROSS | PAINT CROSS | ONEWAY | TPR | AUDITORX® |
| Appearance of products |  |  |  |  |  |  |  |
| Features | ·Improved from Torx® for higher torque transmission ·Prevents camout" | ·Prevents ream-out (a crushed cross recess) ·Compatible with normal driver bits for cross recess | ·Compatible with cross-head bits of different sizes. ·Preventing issues like cross-head stripping. | ·Prevents peeling of paint on screw head ·Compatible with normal driver bits for cross recess | ·Can be tightened with ordinary driver bits for straight slot ·Makes bits slip when rotated reversely | ·Can be used in fastening important parts of which you do not want to be removed by a store-bought bit. | ·Head breaks at a certain torque not to remove the screw |
| Supported size in dia.※(mm) | 1.4~6 | 1.4~5 | 5~6 | 1.7, 2 | 2.6~5 | 1~5 | 3~6 |

Special head / Washers

| Character | Thinning | Loosening proof | | Self-Locking screws | Axial tension stabilizer | Trap metal dust | Supporting lightweight construction |
|-----------------------------|--|---|--|---|---|---|--|
| Name | LAMIX, LAMIMATE | CUPSCREW | ASFA | NC GRIP | FRIX | CP-GRIP | COLLARLESS TITE |
| Appearance of products |  |  |  |  |  |  |  |
| Features | ·Able to go thin head size down to 0.2mm (LAMIX) ·Helps reduce the product thickness and weight | ·Function of spring washer and plain washer are shaped in one piece ·Prevents screw loosening with the cup flange spring | ·Assembly of screw and washers ·Can be integrated with plain, spring, wave, toothed and other various washers | ·Strong adhesion achieved by applying epoxy adhesive to the screw threads | ·Stabilize axial tension ·Applicable for self-tapping screws | ·Special coating to prevent falling of metal chips | ·No need for iron collars or insert nuts. ·Prevents axial force reduction and post-creep loosening. Achieves cost reduction and lightweight design. |
| Supported size in dia.※(mm) | LAMIX : 1.4~2 LAMIMATE : 2.5~5 | 2~6 | 1.4~6 | 1.4~5 (Up to 10 for customer-supplied screws) | 3~8 | 1.4~5 | 4~6 |

※If you have interested in other size of supported size, please feel free to contact us.

For more details, visit our website.

<https://global.nittoseiko.com>

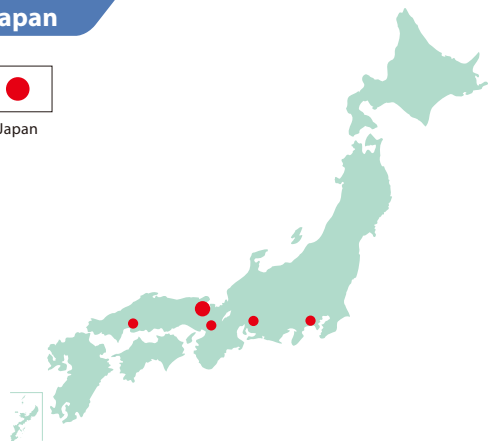
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TORX®, TORX PLUS®, AUDITORX® : Acument Global Technologies B.V.(NL)

Network

Japan



Japan



If you have question about screws, cold-forged parts and pins, please feel free contact us.



Fastener Division

10, Bodai, Shimoyata, Ayabe City,
Kyoto, 623-0116, Japan

Tel. +81-6-6745-8392 (Global Sales Section, Osaka)
E-mail : sales2@nittoseiko.com

Contact for Screw Driving Machine, Riveting Machine and Automation



Machinery Division

2, Shiroyama-cho, Ayabe City,
Kyoto, 623-0003, Japan

Tel. +81-773-42-1290
E-mail : sales2@nittoseiko.com

Global



U.S.A.
NSA



**NITTO SEIKO
AMERICA CORPORATION**
1301 Rankin Dr. Troy, MI 48063 U.S.A.
Tel. +1-248-588-0133

Screw(Industrial Fasteners)
Assembly Machines
Measurement and Inspection Equipment



Korea
KOR



NITTOSEIKO CO., LTD. KOREA OFFICE
71, Gyesansae-ro, Gyeong-gu, Highverras Bldg D-1209-2,
Incheon, Republic of Korea
Tel. +82-70-7612-5007

Screw(Industrial Fasteners) etc
Measurement and Inspection Equipment



China
NTZ



NITTOSEIKO TECHNOLOGY(ZHEJIANG) CO., LTD.
NO.48, Huang Shan Road, Huimin Block, Jiashan, Zhejiang, China
Tel. +86-573-8475-3988
Website : <http://www.nitto-nps.com/>

Screw(Industrial Fasteners)
Assembly Machines
Measurement and Inspection Equipment



Taiwan, R.O.C.
SHI-HO



SHI-HO SCREW INDUSTRIAL CO., LTD.
NO.12, Yeong Chuen Street, Sheau Gaang District, Kaohsiung Taiwan, Republic of China
Tel. +886-7-871-3198
Website : <http://www.shiho.com.tw/>

Screw(Industrial Fasteners)
Assembly Machines



Thailand
NST



NITTO SEIKO (THAILAND) CO., LTD.
84/2 Moo 9 Theparak Road, Bangpla, Bangplee, Samutprakarn, 10540, Thailand
Tel. +66-2-315-4142
Website : <http://www.nittoseikothailand.com/>

Screw(Industrial Fasteners)



Thailand
TNM



THAI NITTO SEIKO MACHINERY CO., LTD.
9/158 Moo 5, Phaholyotin Road, Klong 1, Klong Luang, Patumthani, 12120, Thailand
Tel. +66-2-902-0916
Website : <http://www.fact-link.com/home/thainsm/>

Assembly Machines
Measurement and Inspection Equipment



Malaysia
MPM



MALAYSIAN PRECISION MANUFACTURING SDN.BHD.
NO.3, Lorong Perak 3 Kawasan Perusahaan, 42500,
Telok Panglima Garang, Kuala Langat, Selangor, Malaysia
Tel. +60-3-3122-7405

Screw(Industrial Fasteners)
Assembly Machines



Indonesia
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PT. NITTO ALAM INDONESIA / PT. INDONESIA NITTO SEIKO TRADING
Jl Manis II, Kawasan Industri Manis, Tangerang, Banten, 15810, Indonesia
Tel. +62-21-591-8691
Website : <http://www.nittoindonesia.co.id/>

Screw(Industrial Fasteners)
Assembly Machines
Measurement and Inspection Equipment



Indonesia
NAI



PT.NITTO ALAM INDONESIA BEKASI FACTORY
Delta Silicon Industrial Park Lot 7-8/9, Lippo Cikarang,
Bekasi-Jawa Barat, Indonesia
Tel. +62-21-8991-5651

Screw(Industrial Fasteners)



India
VFG
VCF



VULCAN FORGE PRIVATE LIMITED / VULCAN COLD FORGE PRIVATE LIMITED
Plot No.432, Sector-8, IMT Manesar, Gurugram, Haryana- 122051, India

Cold-forged parts

NITTOSEIKO CO.,LTD.

<https://global.nittoseiko.com>

NITTOSEIKO



●For improvement in performance, specifications are subject to change without notice.

TM000625