

TOCHIGIYA

General Catalog

综合目录

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TOCHIGIYA



MECHANICAL PARTS

TOCHIGIYA

COMPLIMENT

We, Tochigiya Co., Ltd., have always been supplying high quality products to telecommunication industry since 1949, contributing to the development of an information-oriented society as a provider of Mechanical Parts for telecommunication equipments.

We have been making a progress by consolidating accumulated technologies and innovative power in response to the needs of the times from the field of "Mechanical Parts".

Nowadays, we are fulfilling the advanced demands of not only the telecommunication industry but other industrial circle through our research and development function.

We are striving to develop Tochigiya products focusing on excellence in "Function", together with "Beauty", "Toughness", "Compatibility", "Uniformity", and "Safety" taking the ever-increasing environmental concern into account. Through our extensive quality control process, we are also controlling the cost and the delivery term for our customer's better satisfaction.

We appreciate your continued support for Tochigiya's Mechanical Parts and look forward to serving you further.

Best Regards,

President

Kazuo Tochigi,
Tochigiya Co., Ltd.

致 词

株式会社栃木屋，自1949年成立以来一直致力于向通信设备行业提供各类高品质的零件，作为机构零件专门制造商，为信息产业部门的发展做出了贡献。现在，我们不仅能满足通讯设备行业的需求，还能向其他业界提供各种高品质的工业装备配件及五金零件。

我们不断积累技术经验，把握“机构零件”领域的时机，利用各种相关技术来开发前沿产品，在日本一直处于市场的领导地位。

栃木屋的产品特征，“功能卓越”“外观精美”“安全牢固”“兼容一致”。我们致力于“成本控制”“质量管理”，通过独自管理体系和直接销售产品的营销体制，来满足客户的价格需求和交货期需求。

我们还能依据客户的意见和要求，来生产各类订制品和开发新产品。

我们期待您的继续支持和鼓励。

株式会社栃木屋

社长 栃木一夫



All products by TOCHIGIYA are compliant to RoHS Directives

所有栃木屋
产品均符合RoHS指令

Explanation of RoHS RoHS说明

RoHS (Restriction of the use of certain Hazardous Substance) is a restriction of the use of certain hazardous substances in electrical and electronic equipment such as lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (Cr), polybrominated biphenyls (PBB), and polybrominated diphenyl ether (PBDE).

RoHS（特定有害物质禁止使用指令）是指EU（欧盟）实施的有害物质管制。除一部分例外，电子、电气设备产品禁止使用特定有害物质的指令。如铅（Pb）、水银（Hg）、镉（Cd）、六价铬（Cr）、多溴联苯（PBB）和多溴二苯醚（PBDE）。

TOCHIGIYA GREEN MARK 栃木屋环保标志



Tochigiya is taking the ever-increasing environmental concern into account.

We sell our products by putting our original mark "TOCHIGIYA GREEN MARK" on packages.

This symbolizes as an ecological products contributing to the environmental prevention.

* Except for the cables for electrical and electronic equipments.

栃木屋充分考虑了日益严峻的环境问题。

我们销售的产品包装上贴有“TOCHIGIYA GREEN MARK”（栃木屋环保标志）。

在贴有标志的产品，都达到绿色产品的品质标准。

* 除电子电气设备的电缆外。

Environment Conscious Design 环境意识设计

We have been promoting an "Environment Conscious Design" to enhance the ambiance of the products.

We are also focusing on offering our products contributing to "Reduction of Enviromental Impact", "Securing of Safety", and "Promoting a Sound Material-Cycle Society".

为提升产品的环保性，我们加强了“环境意识设计”

我们也致力于使我们的产品“降低环境的负荷”、“确保品质的安全”和为资源可再生利用型社会的促进而不断努力。

Registration of Certificate : ISO9001·ISO14001

ISO9001 : ISO14001 认证登记

ISO 9001: Quality Management System 质量管理体系

Name of Company: TOCHIGIYA CO., LTD.
Address: 2-11-1, Uchikanda, Chiyoda-ku, Tokyo, Japan
Applicable Specification: ISO 9001:2008 / JIS Q 9001:2008
Authorized Office: Japan Quality Assurance Organization (JQA)
Registration Number: JQ-QM4623
Date of Registration: April 7, 2000.
Scope of Registration: Development, Production and sales of Latches, Fasteners, Locks, Hinges, Stays, Handles, Pulls, Casters, Carrying cases and Enclosure accessories.

公司名称: 株式会社栃木屋
地址: 日本東京千代田区内神田2-11-1
适用规范: ISO 9001:2008 / JIS Q 9001:2008
授权机构: 一般財団法人 日本品質保証機構 (JQA)
登记编号: JQ-QM4623
登记日期: 2000年4月7日
登记范围: 研究开发, 生产和销售门锁、紧固件、锁具、铰链、支柱、手柄、拉手、脚轮、携带式仪器箱和箱体配件。

Marks of ISO9001 ISO9001标志



ISO 14001: Environmental Management System 环境管理体系

Name of Company: TOCHIGIYA CO., LTD.
Address: 2-11-1, Uchikanda, Chiyoda-ku, Tokyo, Japan
Applicable Specification: ISO 14001:2004 / JIS Q 14001:2004
Authorized Office: Japan Quality Assurance Organization (JQA)
Registration Number: JQA-EM3462
Date of Registration: October 31, 2003.
Scope of Registration: Development, Production and sales of Latches, Fasteners, Locks, Hinges, Stays, Handles, Pulls, Casters, Carrying cases and Enclosure accessories.

公司名称: 株式会社栃木屋
地址: 日本東京千代田区内神田2-11-1
适用规范: ISO 14001:2004 / JIS Q 14001:2004
授权机构: 一般財団法人 日本品質保証機構 (JQA)
登记编号: JQA-EM3462
登记日期: 2003年10月31日
登记范围: 研究开发, 生产和销售门锁、紧固件、锁具、铰链、支柱、手柄、拉手、脚轮、携带式仪器箱和箱体配件。

Marks of ISO14001 ISO14001标志



Company Profile 公司简介

Company Name TOCHIGIYA CO., LTD.
Establishment 20th of April, 1949.
Capital JPY 50,000,000.-
Employee 240
Head Office 2-11-1 Uchikanda,
Chiyoda-ku, Tokyo
101-0047, JAPAN

公司名称 株式会社栃木屋
成立时间 1949年4月20日
资产 50,000,000日元
员工人数 240
总部 日本東京千代田区
内神田2-11-1
邮编101-0047



History 公司沿革

1913 Tochigiya was founded in Tokyo by Mr. K.
1949 Tochigiya Co., Ltd. was established
1989 Opened Mechanical Parts Center
2000 ISO9001 Accredited
2003 ISO14001 Accredited
2007 Opened R&D Center in Saitama

1913 成立了栃木屋
1949 株式会社栃木屋成立
1989 设立Mechanical Parts Center (MPC)
2000 通过ISO9001认证
2003 通过ISO14001认证
2007 设立R&D Center



Domestic Offices 日本国内营业所

Osaka Office	Kita-Kanto Office
Nagoya Office	Omori Office
Tokai Office	Kawaguchi Office
Tama Office	Fukuoka Office
Yokohama Office	Nagano Office

TOCHIGIYA R&D Center

栃木屋 R&D Center



Overseas Business Division (2nd Floor)
1-26-16 Suehiro, Kawaguchi-shi,
Saitama 332-0006, JAPAN
Tel: +81-48-228-3072
FAX: +81-48-223-9555
E-Mail: support@tochigiya.co.jp
URL: <http://www.tochigiya.co.jp/>

海外营业部 (2楼)
日本埼玉県川口市末広1-26-16
邮编: 332-0006
电话: +81-48-228-3072
传真: +81-48-223-9555
E-Mail: support@tochigiya.co.jp
URL: <http://www.tochigiya.co.jp/>

Other Divisions
Technical Division
Quality Assurance Division

其它部门
技术部
品质保证部



WORLDWIDE DISTRIBUTORS

国际经销商信息



U.S.A. 美国经销商

Designatronics, Inc.

New York 纽约

ADDRESS
T E L
F A X
E - m a i l
U R L

2101 Jericho Turnpike, New Hyde Park, NY 11040, U.S.A.
+1-516-302-0164
+1-516-302-0153
bdengel@designatronics.com
<http://www.designatronics.com/>

U.S.A. 美国经销商

Sierra Pacific Engineering and Products
Long Beach, Dallas, Chicago

Los Angeles 洛杉矶

ADDRESS
T E L
F A X
E - m a i l
U R L

4041 Via Oro Ave, Long Beach, CA 90810, U.S.A.
+1-310-608-0693
+1-310-608-0195
SALES@spep.com
<http://www.spep.com/>

Korea 韩国经销商

Kongjin Co., Ltd.

Korea 韩国

ADDRESS
T E L
F A X
E - m a i l
U R L

10, Dangeong-ro, Gunpo-si, Gyeonggi-do 435-833, Korea
+82-31-453-8321
+82-31-453-8320
kj939@chol.com / dhyu@kongjin.co.kr
<http://www.kongjin.co.kr/>

Dalian, Beijing and Tianjin Area

中国经销商

大连、北京和天津地区

Tokyo Byokane (Dalian) Co., Ltd.
东京兵兼（大连）有限公司

Dalian 大连

ADDRESS
T E L
F A X
E - m a i l

Area IE-53, Dalian Free Trade Zone, Dalian 116600, China
+86-411-8732-1098
+86-411-8732-1018
dl-yaginuma@byokanehk.com / dl-oper@byokanehk.com

Shanghai, Zhejiang and Jiangsu Area

中国经销商

上海、浙江和江苏地区

Shanghai Sibo Machinery Co., Ltd.
上海四博机械有限公司

Shanghai 上海

ADDRESS
T E L
F A X
E - m a i l

Room 616 & 601, Wanda Plaza, No. 4965, Gonghexin Rd, Baoshan Zone, Shanghai 200435, China
+86-21-6073-3698
+86-21-6073-3693
sun.yi@sibo-sh.com

Hong Kong and Guangdong Area

中国经销商

香港和广东地区

TBS Hong Kong Ltd.
三能有限公司

Hong Kong 香港

ADDRESS
T E L
F A X
E - m a i l
U R L

Rm:15E International Trade Residential & Commercial Building,
NO:3009, Nanhu Road, ShenZhen 518001, China
+86-755-8230-0230
+86-755-8221-9078
support@tbshk.com.cn
<http://www.tbshk.com.cn/>

Thailand, covering Laos, Cambodia, Vietnam and Myanmar

泰国经销商

涵盖老挝、柬埔寨、越南和缅甸

Korat Matsushita Co., Ltd.

Thailand 泰国

ADDRESS
T E L
F A X
E - m a i l
U R L

88/1 Moo 8 Tambol Naglang, Sungnoen District, Nakhonratchasima 30380, Thailand
+66-44-335-539
+66-44-335-536
sales@kmcthai.com
<http://www.koratsushita.com/>

(Bangkok office) ADDRESS

16th Floor Unit A, Bangna Towers A, 2/3 Moo 14 Bangna-Trad Road, Km. 6.5
Bangkaew, Bangplee, Samutprakarn 10540

Singapore

新加坡经销商

Honami Electronics (S) Pte. Ltd.

Singapore 新加坡

ADDRESS
T E L
F A X
E - m a i l
U R L

33 Ubi Avenue 3, #03-35/36 Vertex, Singapore 408868
+65-6841-9411
+65-6841-9400
mimura@honami-ele.com
<http://www.honami.com.sg/>

WARRANTIES

Covered Products

The products listed on Tochigiya Co., Ltd. ("Tochigiya")'s TOCHIGIYA GENERAL CATALOG ("Catalog") and sold by Tochigiya ("Product").

Warranty Period

This warranty is limited to 1 (one) year from the date of shipment of Product by Tochigiya to a buyer ("Warranty Period").

This warranty only extends to original overseas buyers who purchase Product directly from Tochigiya ("Buyer") and cannot be transferred or assigned.

Warranties

Tochigiya warrants that unused Product purchased by a buyer will comply with specifications described in Catalog. In case any Product is found not to conform to this warranty for reasons attributable to Tochigiya ("Unconformity"), Tochigiya will, in Tochigiya's sole discretion, repair or replace the Product for free or refund the price paid for the Product, after inspection of such Unconformity by Tochigiya. Buyer must pay for repair and replace after the Warranty Period.

Tochigiya will repair, replace or refund for only Product itself and does not provide any warranty for any finished or unfinished items to which Products are installed.

Repair, replacement or refund shall be at the election of Tochigiya and is the exclusive remedy for Buyer.

Procedures

To obtain warranty service, Buyer shall:

- (1) complete inspection of Product within 1 (one) week from the receipt of Product.
- (2) send a written notice to Tochigiya Overseas Business Division in case Buyer finds any Unconformity in Product through the inspection under the previous clause.
If Tochigiya receives no such written notice within a reasonable time after Tochigiya ships Product to Buyer, it is deemed that there is no Unconformity at the time of Buyer's receipt of the Product.
Once Tochigiya receives a notice from Buyer, Tochigiya will contact the Buyer.
- (3) return the Product to Tochigiya according to Tochigiya's instruction. Tochigiya will conduct inspection after it receives the Product, and if Tochigiya finds Unconformity covered under this warranty, Tochigiya will send the repaired Product or replacement to Buyer or repay an amount equal to the purchase price of such Products.

COVERAGE

Tochigiya does not provide any warranty for

- (1) damage or failures resulting from any use not following specification, purpose, usage condition, instructions and directions for use, warning or any other statement set forth in Catalog, labels or any other documents attached to the Product,
- (2) damage or failures resulting from use other than as parts of general machine, equipment or facility,
- (3) damage or failures resulting from purpose or usage other than purpose or usage for which Product is originally designed,
- (4) any natural alteration (such as dissipation or abrasion) or natural deterioration (such as alteration or discoloration of material),
- (5) On the occurrence of any event of inevitable force (including but not limited to act of God or crime), and
- (6) Flaw, dent, blot, discoloration or any other defect which does not affect use for which Product originally designed.

Limited Warranties

TOCHIGIYA DISCLAIMS ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. EXCEPT FOR THOSE OBLIGATIONS ASSUMED HEREIN, TO THE EXTENT PERMITTED BY LAW, IN NO EVENT SHALL TOCHIGIYA BE LIABLE FOR ANY DAMAGE ARISING FROM OR RELATING TO PRODUCT (INCLUDING BUT NOT LIMITED TO SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGE AND ANY COMMERCIAL DAMAGE SUCH AS LOSS OF PROFIT, FAILURE OF SALES ESTIMATE, LOST OPPORTUNITY CAUSED BY SUSPENSION OF MANUFACTURE OR DELAYED DELIVERY).

Governing Law and Jurisdiction

The terms and conditions herein or elsewhere in connection with Product shall be governed by and construed in accordance with Japanese law. Any disputes arising out of or in connection with these terms and conditions shall be subject to the exclusive jurisdiction of Japanese courts.

Please refer to our website for warranties for users in China.

Catalog Guidance 目录索引

Products Classification 产品规格

Symbol 符号	Category 分类	Part Name 零件名称
TL	Latch & Fastener 门锁和紧固件	Latch, Fastener, Catch, Lock 门锁、紧固件、锁扣、锁具
TH/TH-TM	Hinge 铰链	Indent-Hinge, Lift-Off Hinge, Friction Hinge 铜制平面合页、脱卸合页、阻尼铰链
TM	Stay 支柱	Stay, Support Brace Dampened Hinge 支柱、气体减振器
THA	Handle 手柄	Handle, Flush Handle, Plastic Handle, Swing Handle 手柄、平面手柄、塑料手柄、平面转动手柄
TO	Option Parts 另售零件	Nut, Cam 螺母、挡块
TM	Miscellaneous Parts 各类周边零件	Adjuster Foot, Rubber Foot, Grommet, Chain 调节器地脚、橡胶脚、索环、链条
TCA	Caster 脚轮	Swivel Caster, Fixed Caster, Screw Wrench 旋转脚轮、固定式脚轮、活扳手
Machine Elements	Machine Elements 机械零件	Knob, Ball Plunger 球形把手、球形撞针杆

About the Mark 标志信息



New Product
新产品



Stainless Steel
不锈钢



Commercial Item
商用品目



Patented (Japan)
已获专利 (日本)



Patent Pending (Japan)
专利申请中 (日本)

Indicating Method 标示方法

Drawing	Third Angle Projection
Dimensions	Millimeter Unit
Scale	Not to Scale
Material	Please refer "Technical Data for references"
Finish	Please refer "Technical Data for references"
Test Data	Test data is for reference purpose only, not for guaranteed performance
绘图	三角投影法
尺寸	毫米为单位
比例	刊载的照片、图片比例均不统一。
材质	请参照“技术参数参考”
处理	请参照“技术参数参考”
试验数据	试验数据仅供参考, 并不作为性能保证。

Note 说明

- Please note that the products are subject to change at any time in Part No., specifications, prices and/or suspension of production without notice.
- Please contact us for the lead time.
- 请注意产品的零件编号、规格、价格如有变更, 恕不另行通知。
- 欲了解交付周期信息, 请与我们联系。

How to Order 如何订购

Please specify Part No. and Quantity
Ex) TL-3-1 (100 pcs)
请具体注明零件编号及数量
如) TL-3-1 (100件)

NOTES for USING LOCKS 锁具使用说明

1. Selecting Locks 选择时注意事项

[1] Select by environment and application

Consider followings when using outdoors or using unspecified numbers.

1. Difficult to lock-picking
2. Difficult to duplicate the key
3. Has many different keys

[2] Please consider when using at following environment.

1. At the coast → Sandblast and salt damage (corrosion)
2. At the cold district → Congelation-frost and snow melting agent
3. In the tunnel → Pollution (dust) and corrosion by auto emission
4. At Chemical complex → Corrosion by chemicals

[1] 根据使用环境和用途来选择锁的类型

用于户外或使用对象不确定时，须考虑下述条件：

1. 安全性高的钥匙
2. 选用构造复杂的锁心和钥匙。
3. 拥有多种专用锁芯

[2] 当处在下述环境条件下，请留意

1. 海边 → 喷沙和盐害（腐蚀）
2. 寒冷地区 → 凝固・霜冻和融雪剂
3. 隧道内 → 污染(灰尘)和汽车排气腐蚀
4. 化学联合企业 → 化学制剂腐蚀

2. Using Locks 使用时注意事项

[1] Please do not use the key as a handle.

[2] Please do not apply excessive load to the lever and to the opposite direction of key's rotative direction.

[3] Please do not operate before the key is completely inserted to the lock.

Push the key and turn to operate pipe-key.

[4] Please do not operate while inserting or removing the key.

[5] Please operate the key at the prescribed position.

[6] Changing the rotation specific by removing rotation control cam might be the cause of problem to the operation.

[1] 不要将钥匙当作手柄使用。

[2] 挡块和钥匙转动的相反方向负荷不要过大。

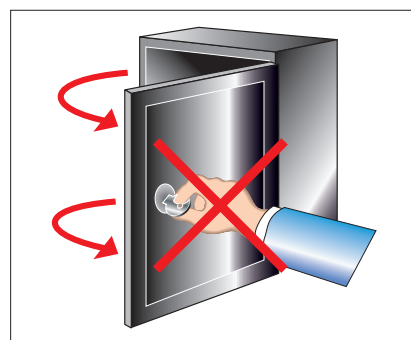
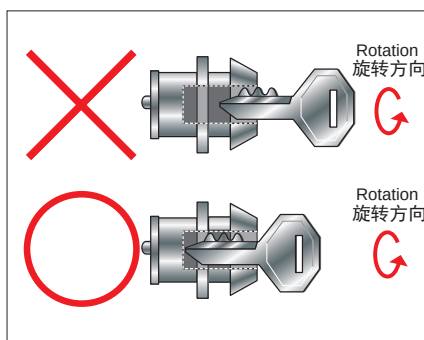
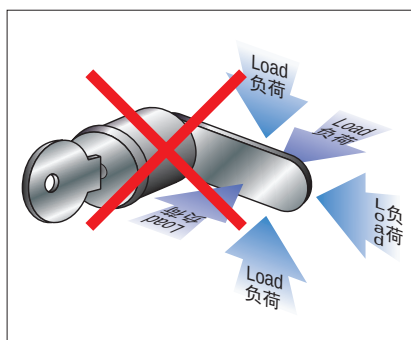
[3] 在钥匙完全插入锁内之前，不得进行操作。

推入钥匙并转动方向操作管式钥匙。

[4] 在插入或拔除钥匙时，不要进行操作。

[5] 请在规定的位置操作钥匙。

[6] 通过拆除旋转控制凸轮改变规定的旋转方向可能会导致产生操作故障。



3. Installing Locks 安装时注意事项

[1] Please do not apply excessive torque to fixing nut when tightening.

[2] Insert the key completely to the lock and tighten the lever when fixing.

Please do not apply excessive torque when tightening. It will be the cause of harm.

※ Please notice that using a fluid adhesive might infiltrate into the lock and cause a problem to the operation when attaching the fixing nut and lever.

Please consider the amount and type of fluid adhesive when using it.

[1] 拧紧时，固定螺母扭矩不要过大。

[2] 固定时，将钥匙完全插入锁孔内并拧紧杆。

拧紧时扭矩不要过大。否则，将会导致损坏。

※ 请注意，连接固定螺母和杆时，使用液体粘合剂可能会渗入锁内，并导致产生操作故障。

使用时，请考虑液体粘合剂的数量和类型。

The comparative table of English and Chinese 英语和中文的比較的表

A	
Abradant	研磨材
Actual Size	实际尺寸
Adhesive Shear Strength	胶合剪切强度
Adjusting Angle	调整角度
Allowable Maximum Load	容许最大载荷
Allowable Shearing Load	容许剪切载荷
Allowable Vertical Compressive Load	容许垂直压缩载荷
Applicable Panel Thickness	适用板厚
B	
Barium Ferrite Plastic	钡铁氧体塑料
Barrel Polishing	滚筒抛光
Bead Blast	喷砂处理
Black Oxide	四三酸化铁皮膜
Bushing	衬套
C	
Chamfer	削棱角
Characteristic List	特点表
Chemical Conversion	化学转化处理
Chloroprene Sponge	氯丁海绵
Clockwise	顺时针
Contact Form of Microswitch	微动开关接点方式
Counter Boring ΦA	镗孔 ΦA
Counterclockwise	逆时针
Countersink ΦA , Hole ΦB	沉头孔 ΦA , 孔 ΦB
Countersunk Screw	沉头螺钉
Custom-made	定制
D	
Damping Direction	阻尼方向
Different Key	单配钥匙
Dimensional Tolerance	尺寸公差
Drag Torque	阻尼扭矩
Draw-In Force	拉力
Durability	耐用性
Dynamic Torque	转动扭矩
E	
Effective Torque Range	有效扭矩范围
Electro Deposition Painting	电着涂装
F	
Ferrite	铁素体
Fiber	纤维
Flange Bushing	法兰衬套
Flatting Paint (Black)	喷涂(黑色亚光)
Folding Force	夹持力
Full Depth Tooth	全高齿
G	
Galvanized Sheet Iron	镀锌钢板
General Characteristics	规格
General Description of the Solenoid	电磁锁规格
General Properties of Microswitch	微动开关规格
Grained	粒面
H	
Hairline	拉丝处理
Hardness	硬度
Heat Treating	热处理
Hole $\Phi A \times B$	延长孔 $\Phi A \times B$
I	
Initial Torque	初始扭矩
K	
Key Insert	钥匙插拔的位置
Key Turn Angle	钥匙旋转角度
L	
Layout of Holes for Installation	安装孔加工图
Leaf Spring	板簧
List for Key No. and Code No.	钥匙编号和代码表
M	
Magnetic Body	磁体
Master Key	总统钥匙
Material	材质

Material Content	材质含量
Max. Load Torque	最大载荷矩
Maximum Operation Torque	最大工作扭矩
Model No.	型号
N	
Neodymium	钕
Net Weight	净重
Nickel Fluoride Plating	镀氟化镍
Nitriding	氮化处理
No. of Teeth	齿数
Nominal Size	标称值
Number of Key Different	单配钥匙数量
O	
Operating Temperature Range	适用温度范围
Ordinary Temp.	常温
P	
Panel Thickness	安装板厚度
Part Name	零件名称
Parts List	零件表
Permissible Temp. Range	容许温度范围
Phosphoric Membrane	磷酸盐被膜
Pitch Diameter	节圆直径
Pitch Line Height	齿距线高度
Polyurethane	聚氨酯
Pressure Angle	压力角
Primary Color	原色
Product Name	产品名称
Product No.	产品号
Pullout Strength	拉力强度
Push-in Strength	推入强度
Q	
Quantity	数量
R	
Rated Torque	额定扭矩
Reactive Property	反作用力性能
Recommended Screw	推荐的螺钉
Recommended Screw Torque	推荐的螺钉扭矩
Recommended Tightening Torque	建议紧固扭矩
Residual Angle	残余角
Rotational Angle	旋转角度
Rotational Range	旋转范围
Round Shape	圆形
S	
Same Key	通配钥匙
Satin Finish	梨皮面
Set Component	构成元件
Silicon Oil	硅油
Solenoid	螺线管
Spur Gear	正齿轮
Square Shape	方形
Standard Length	标准长度
Starting Torque	启动扭矩
Stated in Separately	参照列表
Swivel Direction	旋转方向
T	
Teflon	特氟隆
Temper Color	回火色
Tensile Strength	拉伸强度
Test Method	测试方法
Test Result	测试结果
Tightening Force	拉紧力
Tightening Torque	紧固扭矩
Tilt Direction	倾斜方向
Titanium	钛
Tooth Profile	齿形
Torque Direction	扭矩方向
Transparent	透明
U	
Unlock Force	开锁力

Standard Size Screw (JIS Standard) 标准尺寸的螺丝 (JIS 标准)

Coarse Basic Dimension M (Class 2) 基准尺寸 M (2类)						
Nominal Size 公称尺寸	Pitch 节距	Male Screw External 阳螺丝外部		Female Screw Internal 阴螺丝内部		Screw Mounting Hole 螺丝安装孔
		Max. 最大	Min. 最小	Max. 最大	Min. 最小	
M2	0.4	1.980	1.890	1.679	1.567	2.2
M2.3	0.4	2.280	2.190	1.979	1.867	2.5
M2.5	0.45	2.480	2.380	2.138	2.013	2.7
M2.6	0.45	2.580	2.480	2.238	2.113	2.8
M3	0.5	2.980	2.874	2.599	2.459	3.2
M3.5	0.6	3.470	3.360	3.010	2.850	3.7
M4	0.7	3.978	3.838	3.422	3.242	4.3
M4.5	0.75	4.470	4.340	3.878	3.688	4.8
M5	0.8	4.976	4.826	4.334	4.134	5.3
M6	1.0	5.970	5.820	5.153	4.917	6.4
M8	1.25	7.960	7.790	6.912	6.647	8.4
M10	1.5	9.960	9.770	8.676	8.376	10.5
M12	1.75	11.950	11.760	10.441	10.106	13.0
M14	2.0	13.950	13.740	12.210	11.835	15.0
M16	2.0	15.950	15.740	14.210	13.835	17.0

Countersink Basic Dimension M (Countersink Angle 90°) 沉孔基准尺寸 M (沉孔角度90°)				
Countersink Diameter 沉孔直径	Screw Symbol 螺丝符号	Countersink Hole Tolerance 沉孔公差		Countersink Hole Depth 沉孔深度
		Max. 最大	Min. 最小	
ø4.4	M2	+0.4	-0.1	1.2
ø5.0	M2.3	+0.4	-0.1	1.3
ø5.4	M2.5	+0.4	-0.1	1.4
ø5.6	M2.6	+0.4	-0.1	1.5
ø6.5	M3	+0.4	-0.2	1.8
ø7.5	M3.5	+0.4	-0.2	2
ø8.6	M4	+0.4	-0.2	2.2
ø9.6	M4.5	+0.4	-0.2	2.5
ø10.6	M5	+0.5	-0.2	2.7
ø12.8	M6	+0.5	-0.2	3.3
ø16.8	M8	+0.5	-0.2	4.3

Countersink Standard Size for Wood Screw (Countersink Angle 90°) 木螺丝的沉孔标准尺寸 (沉孔角度90°)				
Countersink Hole 沉孔	Wood Screw Symbol 木螺丝符号	Countersink Hole Tolerance 沉孔公差		Countersink Hole Depth 沉孔深度
		Max. 最大	Min. 最小	
ø4.6	2.1	+0.4	-0.1	1.2
ø5.2	2.4	+0.4	-0.1	1.3
ø5.8	2.7	+0.4	-0.1	1.5
ø6.7	3.1	+0.4	-0.2	1.6
ø7.5	3.5	+0.4	-0.2	1.8
ø8.1	3.8	+0.4	-0.2	2

Countersink Hole Standard Size for Rivet (Countersink Angle 90°) 铆钉的沉孔标准尺寸 (沉孔角度90°)				
Countersink Hole 沉孔	Rivet Symbol 铆钉符号	Countersink Hole Tolerance 沉孔公差		Countersink Hole Depth 沉孔深度
		Max. 最大	Min. 最小	
ø4.0	2	+0.1	-0.4	0.9
ø4.6	2.3	+0.1	-0.4	1.0
ø5.2	2.6	+0.1	-0.4	1.1
ø6.0	3	+0.1	-0.4	1.3
ø7.0	3.5	+0.2	-0.4	1.6
ø8.0	4	+0.2	-0.4	1.9

Surface Symbol List 表面处理符号表

Plating(Main Plating) 镀层 (主要镀层)	
Symbol 符号	Name 名称
Cr Cr	Chrome Plating 镀铬
Cr(Satin) Cr (梨皮面)	Satin-Like Chrome Plating 梨皮面镀铬
Cr(Dull Finish) Cr (垂光)	Satellite Chrome Plating 镀垂光铬
Cu Cu	Copper Plating 镀铜
Ni Ni	Nickel Plating 镀镍
Ni(Satin) Ni (梨皮面)	Nickel Plating with Satin Finishing 梨皮面镀镍
Ni(Dull Finish) Ni (垂光)	Satin-Like Nickel Plating 镀垂光镍
Ni(Satin) Ni (光泽)	Satin Nickel Plating 镀光泽镍
Ni(Black) Ni (黑色)	Black Nickel Plating 镀黑色镍
Ni(Non-electrolyte) Ni (无电解)	Non-electrolyte Nickel Plating 镀无电解镍
Uc Uc	Zinc Plating Gloss Chromate 镀白锌
Zn Zn	Zinc Plating Chromate Treatment 镀锌铬酸盐处理
Zn(Black) Zn (黑色)	Zinc Plating Chromate Black 镀黑色锌

Others(Main Plating) 其他 (主要镀层)	
Symbol 符号	Characteristic 特征
Alumite (Color) 阳极处理 (颜色)	Method to make a film to the surface of the products with oxygen gas generated from an anode by putting them into electrolytic bath. 通过将其放入电解槽, 用从正极产生的氧气将产品的表面镀膜的方法。
Electrostatic Coating 静电喷涂	Coating method by charging electrostatic to the coating machine and the product to have better coating effect. 通过向镀膜机充静电, 使产品有更好的涂层效果的涂层法。
Coating (Color) 喷涂 (颜色)	Method to coat by painting the products and dry them by specified temperature and making a fibrous film. 通过将产品涂漆, 然后在规定温度下进行干燥, 并制加工一层纤维膜的方法。
Electrolytic Polishing 电解抛光	Method to brighten the surface by dissolving the surface into electrolytic bath. 通过将表面在电解池中溶解, 将其变亮的方法。
Buffing 抛光研磨	Method to polish the product by rotational body which is made of layered rounded shape clothes. (Mirror Polishing) 通过产品的转动体 (由多层圆形覆盖物制成) 来进行抛光的方法。(镜面抛光)
Barrel Polishing 滚筒抛光	Method to polish the product by putting it into a bucket (barrel) and rotating to polish. 通过将产品放入筒中, 旋转抛光的方法。
Hairline 拉丝处理	Method of delustering the surface of the product by putting numbers of directional lines on it. 通过在产品上加工数条方向线, 来消除其表面光泽的方法。

Material Symbol List 材料符号表

Steel (Main Material) 钢（主要材质）			
Symbol 符号	Name 名称	Symbol 符号	Name 名称
FC	Gray Iron Castings 铸铁	SUP	Spring Steel 弹簧钢
S	Screws washers and general commercial parts made of steel 螺丝垫圈与钢质一般商用零件	SUS	Screws, Washers and General Commercial Parts made of Stainless Steel 螺丝，垫圈与由不锈钢制成的一般商用零件
S□□C	Carbon Steels for Machine Structure 用于机械结构的碳钢	SUS301	Austenitic Stainless Steel Material 奥氏体不锈钢材质
SCS	Corrosion-resistant Cast Steels for General Applications 一般应用的耐蚀铸钢	SUS303	Austenitic Stainless Steel Material 奥氏体不锈钢材质
SECC	Steel Electrolytic Cold Electrolytic Zinc-coated Steel Sheet 钢电解冷电解镀锌薄钢板	SUS304	Austenitic Stainless Steel Material 奥氏体不锈钢材质
SF	Carbon Steel Forgings for General Use 一般使用的碳钢锻件	SUS305	Austenitic Stainless Steel Material 奥氏体不锈钢材质
SGCC	Hot-dip Zinc-coated Steel Sheet 热浸镀锌薄钢板	SUS316	Austenitic Stainless Steel Material 奥氏体不锈钢材质
SK	Carbon Tool Steels 碳工具钢	SUS420	Austenitic Stainless Steel Material 奥氏体不锈钢材质
SPCC	Cold-reduced Carbon Steel Sheet 冷轧碳薄钢板	SUS430	Ferritic Stainless Steel Material 铁素体不锈钢材质
SPHC	Hot-rolled Mild Steel Plates and Sheets 热轧软钢板和钢片	SUS631	Precipitation-hardened Stainless Steel Material 沉淀硬化不锈钢材质
SS	Rolled Steels for General Structure 用于普通结构的轧钢	SWP	Steel Wire Piano 钢琴钢丝
STKM	Carbon Steels for Machine Structural Use 机械结构用途的碳钢	SWRH	Steel Wire Rod Hard 钢质硬盘条
SUM	Free Cutting Carbon Steel 自由切割碳钢	SWRM	Mild Steel Wire 软钢丝

Non Ferrous (Main Material) 有色金属（主要材质）	
Symbol 符号	Name 名称
ADC	Aluminum Alloy Die Castings 铝合金压铸件
AL	Aluminum and Aluminum Alloy 铝
ALP	Aluminum and Aluminum Alloy Sheets and Plate 铝与铝合金片（板）
C2680 (BSP)	Copper and Copper Alloy Sheets and Plates 铜与铜合金片（板）
C2700 (BSW)	Copper and Copper Alloy Wire 铜与铜合金丝
C2801 (BSP)	Copper and Copper Alloy Sheets and Plates 铜与铜合金片（板）
C360□ (BSBM)	Copper and Copper Alloy Rods and Bars 铜与铜合金杆（板）
C3713 (BSP)	Copper and Copper Alloy Sheets and Plates 铜与铜合金片（板）
C5191 (PBW)	Phosphor Bronze for Spring 用于弹簧的磷青铜
C5210 (PBSP)	Phosphor Bronze for Spring 用于弹簧的磷青铜
C7541 (NSP)	Nickel Plate 镍镀层
ZDC	Zinc Alloy Die Castings 锌合金压铸件
Berric	Hard Zinc Alloy Die Castings 硬锌合金压铸件

Resin 树脂	
Symbol 符号	Name 名称
ABS	Acrylonitrile-Butadiene-Styrene 丙烯腈-丁二烯-苯乙烯共聚物
AES	Acrylonitrile-Ethylene-Styrene 丙烯腈-乙烯-苯乙烯共聚物
EVA	Ethylene Vinyl Acetate 乙烯醋酸共聚物
PA	Polyamide (Nylon) 聚酰胺（尼龙）
PBT	Polybutylene Terephthalate 聚对苯二甲酸二丁酯
PC	Polycarbonate 聚碳酸酯
PE	Polyethylene 聚乙烯
PF	Phenol Formaldehyde 酚醛树脂
POM	Plyoxymethylene (Polyacetal) 聚甲醛（聚缩醛）
PP	Polypropylene 聚丙烯
PPS	Polyphenylene Sulfide 聚苯硫
PS	Polystyrene 聚苯乙烯
PTFE	Polytetrafluoroethylene 聚四氟乙烯
PUR	Polyurethane 聚氨酯
PVC	Poly (Vinyl Chloride) 聚乙烯（氯乙烯）
TPE	Elastomeric Resin 弹性树脂
UF	Urea-Formaldehyde 尿素甲醛脲醛

Rubber 橡胶种类性能表			
Symbol 符号	Name 名称	High-Temperature Limit 高温极限	Low-Temperature Limit 低温极限
CR	Chloroprene Rubber 氯丁橡胶	130°	-30° ~ -40°
EPDM	Ethylene-Propylene-Diane Monomer 三元乙丙橡胶	150°	-40° ~ -60°
NBR	Nitrile-Butadiene Rubber 丁腈橡胶	130°	-40° ~ -50°
NR	Natural Rubber 天然橡胶	120°	-50° ~ -70°
Q	Silicon Rubber 硅橡胶	280°	-70° ~ -120°
SBR	Styrene-Butadiene Rubber 丁苯橡胶	120°	-40° ~ -65°
U	Urethane Rubber 聚氨酯橡胶	80°	-30° ~ -60°

Examples of Using TOCHIGIYA's Mechanical Parts

桁木屋产品使用实例

Mechanical Parts for Construction Equipment

建筑机械设备相关产品



Mechanical Parts for Semiconductor Manufacturing Device

半导体制造装置相关产品



Pulls
不锈钢拉手
THA-31SUS



Tubular Grab Handle
管型拉手
THA-247



Hinge - Clean - Stainless Steel
无尘室用不锈钢合页
TH-142



Lift-Off Hinge - Clean
无尘室用不锈钢合页
(可脱卸式)
TH-147



Magnetic Catch - Dust Proof
防尘磁吸
TL-344



Flush Pulls
嵌入式拉手
THA-317



Level Adjuster
水平调节器
TM-258S



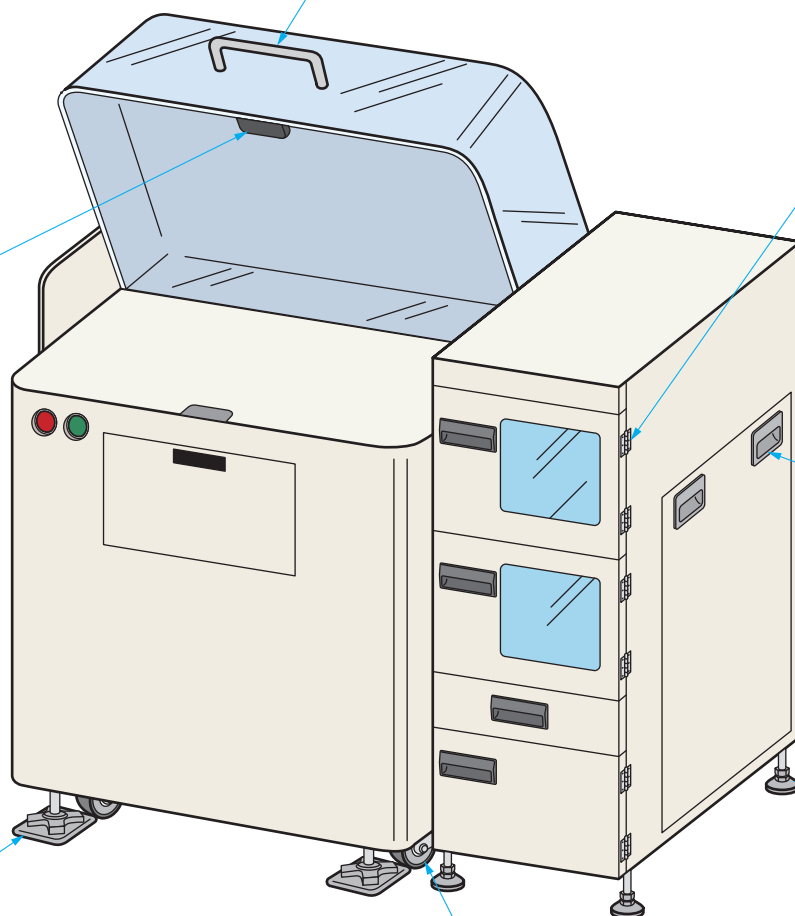
Level Adjuster
水平调节器
LP Series



Caster - Low Positioning
低座式脚轮
TCA-50SUS



Twin Wheel Caster
双轮脚轮
TCA-540SW



NEW PRODUCTS

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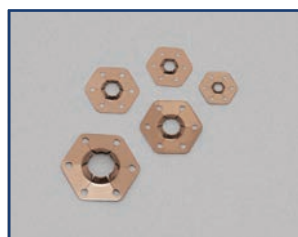
NEW



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Pull-Down Latch - Linkable

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TM-320

Screw Retainer

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TL-384

Slam Latch

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TH-157

Hinge - Free Stopping
- Concealed

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TL-386

Pull-Down Latch with Indicator

1-14



TL-378

Magnetic Catch

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TL-383

Snap Latch

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TH-155

Friction Hinge - One Way

2-10



TL-382

Tension Latch - Lockable

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TL-379

Magnetic Catch

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TH-165

Hinge - Free Stopping
(Outdoor Type)

2-4



TH-161

Friction Hinge

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TL-381

Tension Latch

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TL-389

Magnetic Catch

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TH-166

Hinge - Free Stopping

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TH-162

Friction Hinge - Swivel

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LATCH & FASTENER

门锁和紧固件

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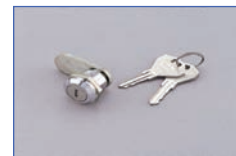
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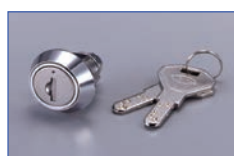
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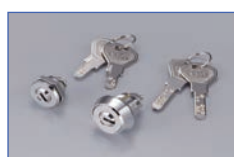
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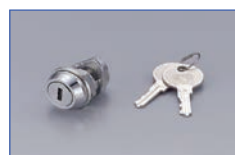
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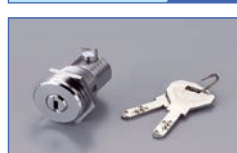
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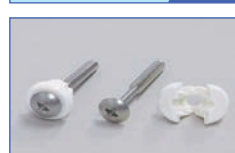
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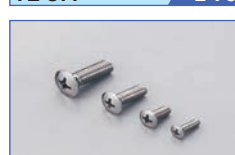
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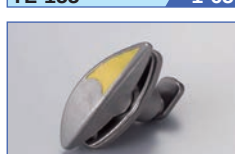
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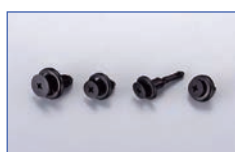
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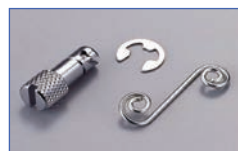
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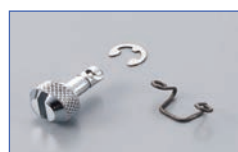
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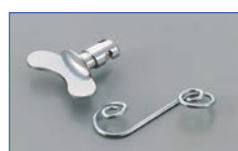
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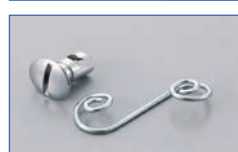
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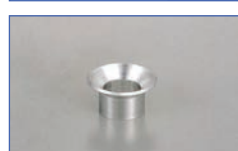
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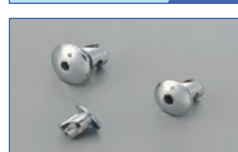
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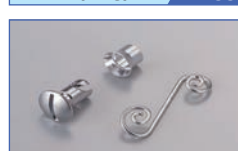
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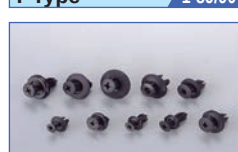
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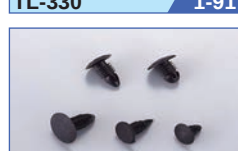
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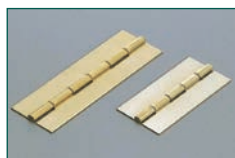
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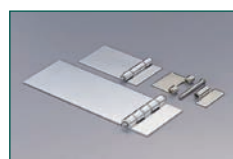
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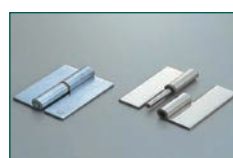
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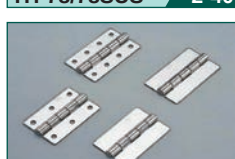
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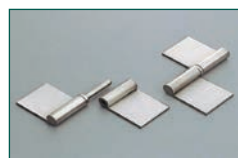
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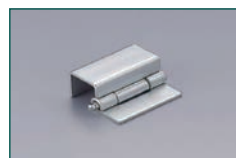
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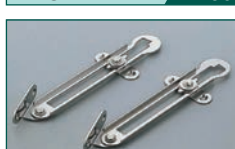
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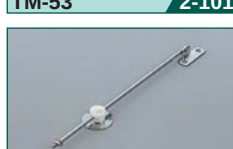
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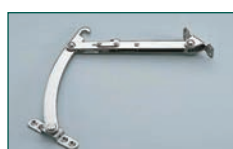
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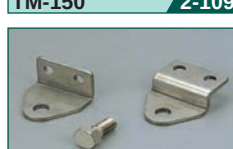
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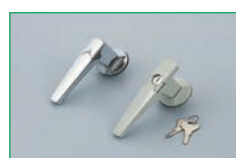
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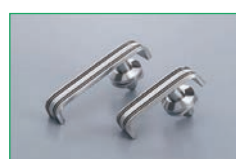
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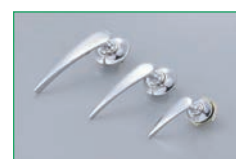
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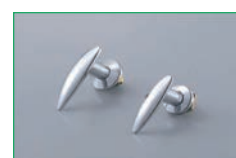
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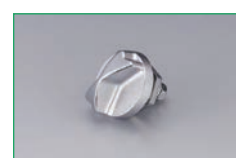
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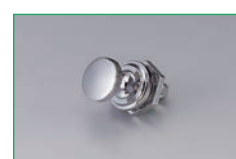
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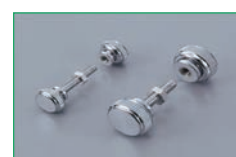
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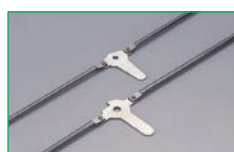
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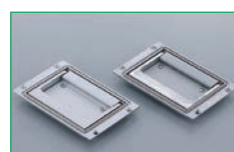
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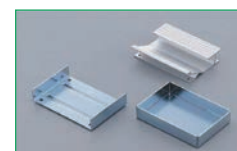
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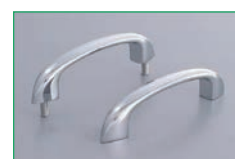
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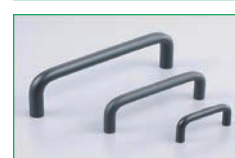
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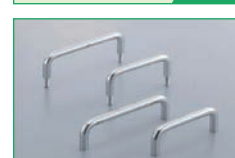
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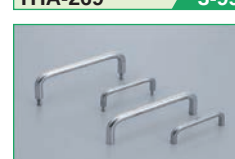
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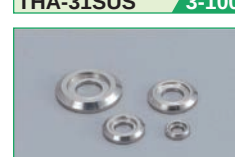
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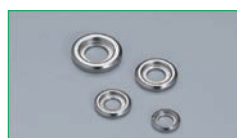
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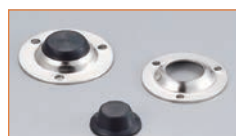
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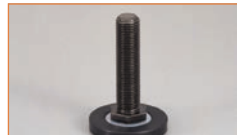
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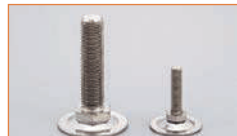
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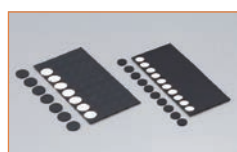


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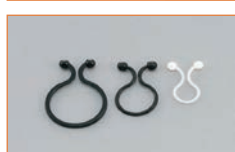
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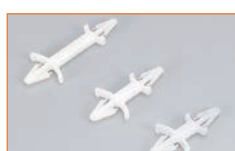
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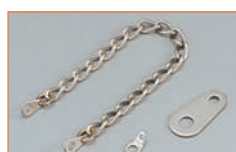
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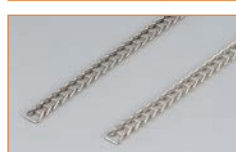
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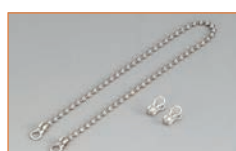
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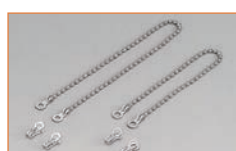
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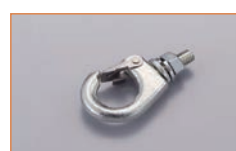
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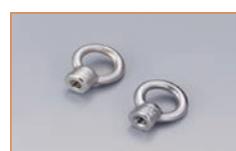
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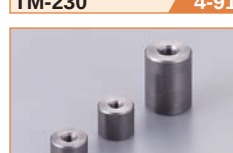
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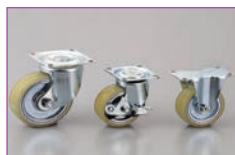
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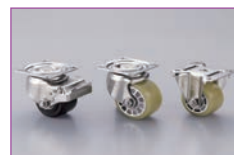
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