

公司简介 Company Profile



上海麦超胶辊厂成立于2008年，先以专业的技术使用HEX-POL(UK)的合成橡胶生产印刷胶辊。长期为海德堡、曼罗兰、高宝、小森、富士、确立等印刷机提供维修胶辊。为保证产品质量，麦超作为一家包胶工厂，使用的橡胶全部由HEXPOL英国的混炼胶加工中心统一配送；并每周抽检有代表性的胶辊送往交大力学实验室全面测试。确保每支胶辊达到要求。

2016年7月20日开始与日本TECHNO ROLL株式会社开展技术合作，引进了除尘（粘性）胶辊材料，并将重点致力于除尘（粘性）胶辊的生产，此项业务将填补国内高端除尘辊的空白，广泛应

用于电路板印刷、LCD、光电、半导体、液晶片、背光板、凹版印刷、胶膜胶带制造工厂等领域。即将于2017下半年引进TRUST系列聚胺脂材料，生产印铁UV胶辊和超级涂布辊。

麦超胶辊厂将依托日本TECHNO ROLL高端弹性体材料和先进的制造技术，为印刷市场提供完美的产品和完善的服务。

Company Profile

Established in 2008, Shanghai Maichao Rubber Products Co., Ltd has been utilizing synthetic rubber to produce printing rubber rollers with professional technology. It offers maintenance of rubber rollers in a long term for printing press of Heidelberg, Man Roland, KBA, Komori and Fuji etc. As a rubberization factory for guaranteeing the quality of products, Maichao has all of the rubbers distributed by the rubber compound processing center of HEXPOL England. Every week, we send representative sampling rubber rollers for comprehensive tests in mechanics laboratory of Jiaotong University, to ensure that every roller meets the design demand.

On July 20th, 2016, we began the technological cooperation with a Japanese company TEC. **from which** we brought in **dedusting materials**. We will focus on the production of dedusting rollers which will fill in the gap of high-end dedusting rollers in China, being extensively used in circuit board printing, LCD, photoelectricity, semiconductor, liquid crystal, backlight, intaglio printing, film and adhesive tape factory, etc. With the introduction of PU materials of TRUST series, **we plan to produce UV rollers and super coating rollers in the second half year of 2017.**

Relying on the high-end elastomeric material and advanced manufacture technology of Japan Techno Roll, Shanghai Maichao will provide perfect products and best service for printing market.



合成橡胶辊—墨辊 /Synthetic rubber roller-Ink roller

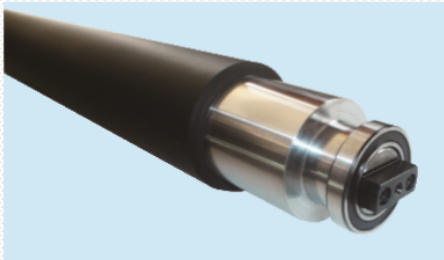
普通油墨印刷 /Ordinary ink printing

UV专用油墨印刷 /UV special ink printing

UV油墨和普通油墨双重用途印刷

Dual use of UV ink and ordinary ink printing

- 对于UV油墨、普通油墨以及各种清洁剂具有非常优异的适应性
- 对混合油墨有优异的兼容性
- 适用于平张机和轮转机
- 对于腐蚀性强烈、转移极差的印铁UV油墨具有极高的包容性

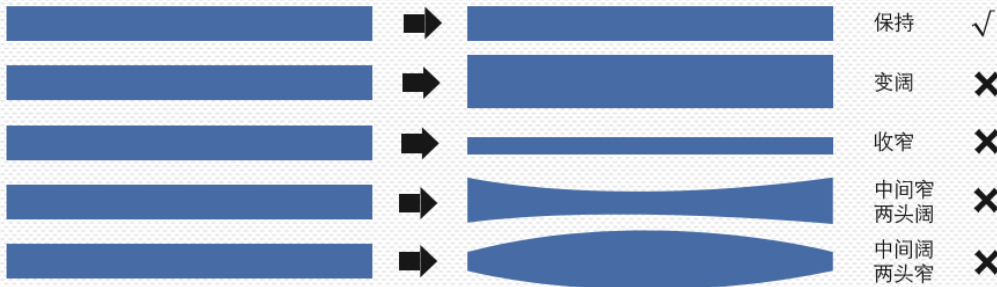
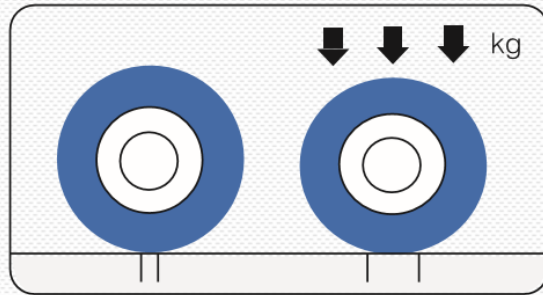


润版辊(到版水辊、计量水辊、水槽辊)

Fountain Roller(Form Dampening Roller, Metering Roller and Dampening Ductor Roller)

- 根据不同的需求可提供用于酒精印刷、减酒精印刷和免酒精印刷用水辊
- 水系统胶辊采用不易结垢的橡胶材料
- 减少油墨反馈

理想的印刷胶辊需要回弹性好，而且能使用最低的压力便可达到指定的平位阔度。经使用后，此平位应该能维持原有的阔度，而不会变阔、收窄或变形。



Synthetic rubber roller-Ink roller

Ordinary ink printing

Dual use of UV ink and ordinary ink printing

UV special ink printing

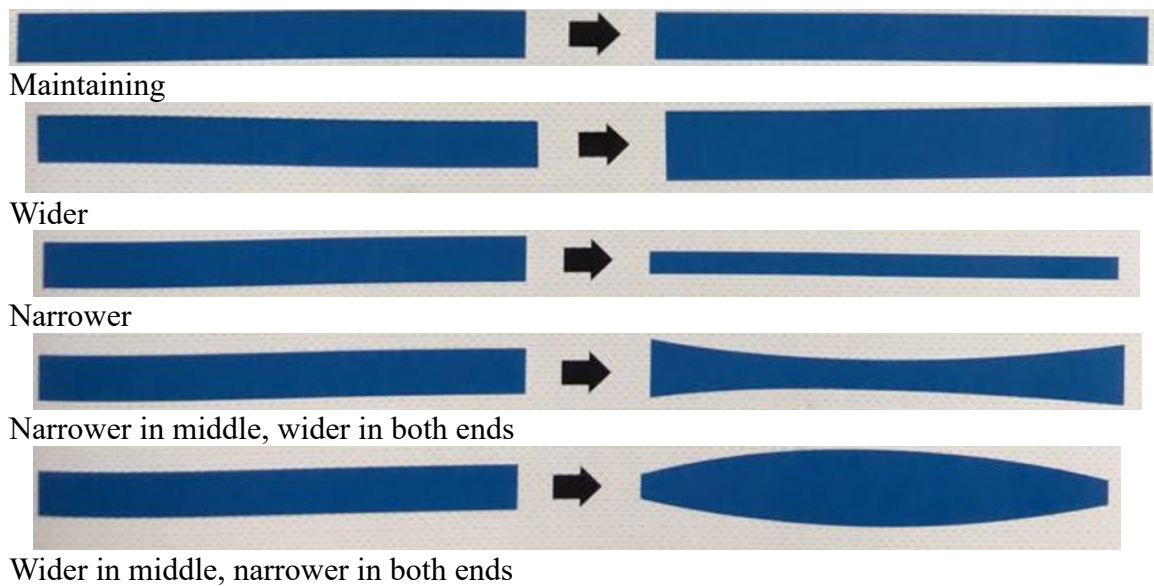
- Excellent adaptability for UV ink, ordinary ink and various detergents
- Excellent compatibility for mixed ink
- Applicable to flat sheet machine and rotary machine
- High tolerance for iron printing UV ink with strong corrosion and poor transference

Fountain Roller (Form Dampening Roller, Metering Roller and Dampening Ductor Roller)

- Available for alcohol printing, alcohol reduction printing and alcohol-free printing according to different demands
- No-glazed rubber material is adopted in Fountain Roller.
- Feedback of less ink consumption.

Ideal printing rubber roller should have the feature of good resilience and could reach a specific horizontal width with the minimum pressure.

Rubber should maintain the original width, rather than become wider, narrower or out of shape after use.





印刷用 / For Printing

墨辊 / ink roller

树脂系列UV墨辊 UV Ink Roller Resin Series



树脂系列UV墨辊 /UV Ink Roller Resin Series

- 最适合解决UV印刷的所有问题
- 此产品代表了印刷领域的最新技术
- 在我们的共同认知中，除了合成橡胶辊，没有更好的产品可以用于UV印刷，但是日本聚脂胺材料改写了这项共同的认知，推出了聚脂胺系列印刷胶辊，填补这项空白
- 聚脂胺系列UV胶辊硬度范围: SHA6°- SHA70°
- 适用于纸包装印刷、马口铁印刷、铝片印刷、标签不干胶印刷（凸版）、金属塑料容器的曲面印刷、制卡印刷

理由	结果
油墨消耗量	节省油墨，减少油墨的雾散及保持良好的流动性，这些结果会减少油墨用量
酒精消耗量	和聚脂胺UV普通两用水辊相配合，能减少酒精的用量
胶辊寿命	超过合成胶辊
清洗剂消耗量	缩短洗车时间，减少清洗剂的用量
印坏纸张量	减少纸张印坏的发生率
缩短印刷时间	印刷流畅，印刷速度加快，可降低印刷成本
对油墨的抗性	对油墨有高度的抗耐性，不会造成胶辊硬度增加及收缩

UV Ink Roller, Resin Series

- Most appropriate to solve all problems of UV printing.

- This product represents the newest technology of printing field.
- In our common sense, there is no better product to be used in UV printing other than synthetic rubber rollers. But the Japanese PU materials has changed the common vision with the launching of the UV resin roller of PU Series to fill in the gap.
- The range of hardness of PU rubber roller, TRUST series: SHA6°~SHA70°.
- Applicable to paper package printing, tinfoil printing, aluminum printing, self-adhesive label printing (relief block), curved surface printing of metal and plastic containers, and card printing.

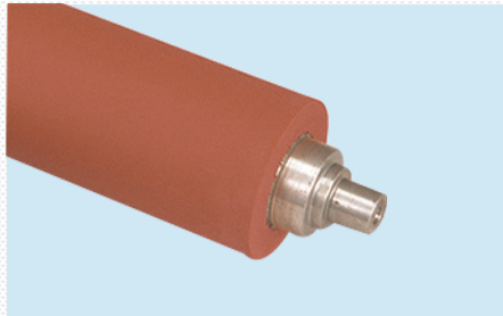
Reason	Result
Ink consumption	Save ink, reduce ink scattering and keep good flow which will reduce the ink consumption.
Alcohol consumption	Cooperate with PU ordinary dual-use damping roller, will reduce alcohol consumption.
Life of rubber roller	Surpass synthetic rubber roller.
Consumption of detergent	Shorten the time of washing car; reduce detergent usage.
Amount of bad-printing paper	Reduced the occurrence of bad-printing paper.
Shorten the time of printing	Print fluently with faster speed to reduce the printing cost.
Resistance to ink	Have high resistance to ink, not causing the increase of the hardness or shrinking of rubber roller.



印刷用 / For Printing

水辊 / Dampening Roller

树脂系列UV普通两用水辊 /UV Ordinary Dual-use Dampening Roller of Resin Series



树脂系列UV普通两用水辊 /UV Ordinary Dual-use Dampening Roller of Resin Series

- 适用于所有连续给水系统
- 硬度范围: SHA25° -SHA35°
- 不会因UV油墨、UV洗车水、异丙醇的刺激而产生膨胀和收缩
- 对温度变化不敏感,是触版水辊和计量水辊的理想材质
- 对普通油墨具有更优秀的适性
- 能够快速控制水膜厚度到理想状态,使纸张的损耗降到最低
- 压力长期稳定能使印刷实地和网点更加清晰,抑制重影的产生,减少水杠现象;并能抑制齿轮杠的发生

食品包装卫生安全 /Food packaging hygiene Safety

胶辊系列均通过:

- 【美泰QSOP0003-3600重金属】和【美泰QSOP0006-3610邻苯二甲酸酯】的检测
- 【欧洲化学品管理公署-授权审议的161种高关注物质(SCHC)】的检测
- 【欧盟ROHS指令2002/95/EC-2011/65/EU的限值要求】的检测
- GB4806.1食品用橡胶制品卫生标准
- GB9865食品容器包装材料用助剂使用卫生标准

TRUST Series -UV Ordinary Dual-use Dampening Roller

- Applicable for all continuous water supplying system
- Hardness range: SHA 25°-SHA 50°
- There is no expansion or shrinkage from stimulations from UV ink, UV wash-offset and isopropyl alcohol.
- Not sensitive to temperature change as ideal material for touchable roller and metering dampening roller.

- Excellent adaptation to ordinary ink.
- Control thickness of water film to an ideal state rapidly to reduce paper waste to the lowest level.
- Long and stable pressures make printing fields and dots clearer, which will prevent ghosting and gear bar, and also reduce water bar phenomenon.

Food packaging hygiene Safety

Rubber roller series have all passed following tests:

- Test of 【Mattel QSOP0003-3600 Heavy Metals】 and 【Mattel QSOP0006-3610 Phthalates】
- Test of 【European Chemicals Administration Office - 161 Substances of High Concern(SCHC)】
- Test of 【EU ROHS 2002/95/EC-2011/65/EU Limitation Requirements】
- GB4806.1 Hygiene Standard of Rubber Products for Food Use
- GB9865 Hygiene Standard of Packaging Additives

除尘 除静电胶辊

Dust & Electrostatic Removal Rubber Roller



除尘 除静电胶辊是由日本【TECHNO ROLL株式会社】研制的软质粘性胶辊。是聚酯型和硅胶型粘性辊的升级替代品。在生产线上使用时，不会有增塑剂析出，更不会有胶渣脱落，并杜绝了脱胶现象的发生。

除尘 除静电胶辊用于去除带有静电材质的灰尘(杂质)，能有效去除胶膜、薄纸、马口铁板、铝片等材料上的灰尘及杂质。

- 除尘 除静电胶辊本身具有粘性，所以不需要配合或添加任何粘性物质，即使用强烈的溶剂清洗后，仍能恢复原有的粘着力。
- 除尘 除静电胶辊质地柔软(SHA10° -SHA40°)，不必担心使用时因灰尘附着而造成损伤。一旦有损伤发生时，损伤扩大的程度将非常缓慢，所以使用时间更长。
- 由于具有较强的粘性，所以可以去除微米(μm)单位的细小灰尘。
- 可长期在摄氏70°的工况环境下使用，可以在摄氏100°的工况环境下短时间使用。
- 不含重金属物质，达到食品卫生、化妆品、药业厂使用规范，橡胶中污染物含量少于自来水中的含量。持有食品卫生试验执照(昭和34年厚生省告示等370号)
- 可依照客户的设备情况进行设计安装。

种类概况 /Overview of Category

名称	黏着力	颜色	橡胶硬度
除尘 除静电胶辊	大 75 ± 30mm*1	白色	10~13 (JIS-A)
除尘 除静电胶辊	中 122 ± 40mm*1	蓝色	15~18(JIS-A)
除尘 除静电胶辊	小 212 ± 50mm*1	橙色	20~13 (JIS-A)
除尘 除静电胶辊	中 190 ± 30mm*1	黑色	30~40(JIS-A)

* (距离较短代表粘度较强)

Dust & Electrostatic Removal Rubber Roller

Dust & Electrostatic Removal Rubber Roller is soft and sticky developed by Japan Techno Roll Co., Ltd, which is the upgrading alternatives of roller in polyether type and silica gel type. When it is utilized on the production line, there will be no precipitation of plasticizer or flaking of glue residue. What's more, this rubber roller prevents the phenomenon of degumming.

Dust & Electrostatic Removal Rubber Roller is used to remove dusts with electrostatic materials(impurity), effectively removing impurities and dusts on adhesive film, thin paper, tinplate and aluminum sheet.

- Dust & Electrostatic Removal Rubber Roller itself is sticky, therefore it is no need to coordinate with or add any sticky materials. It could recover to its original adhesion even after cleaned by strong solvents.

- With soft texture (SHA 10°- SHA 40°), so there is no need to worry about damages caused by dust adhesion to Dust & Electrostatic Removal Rubber Roller. It could be used for longer time because the extent of damage expanding is very slow even the damage happens.
- Dust & Electrostatic Removal Rubber Roller could be applicable for removing tiny dust in micron unit (μm) due to the strong viscosity.
- Dust & Electrostatic Removal Rubber Roller could be used in long term under the working condition of 70 degrees Celsius, and could be used in short time under the working condition of 100 degrees Celsius.
- Without heavy metal materials, Dust & Electrostatic Removal Rubber Roller has achieved standardizations in food hygiene, cosmetics and pharmaceutical factory. Pollutant content in rubber is less than that in tap water. Our company holds a food hygiene test license (No. 370, Labor and Welfare Ministry of Japan, Showa 34)
- Design and installation can be carried according to the equipment of customer.

Overview of Category

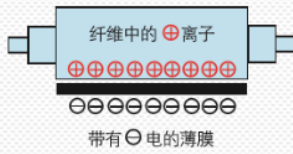
Name	Stickiness	Color	Hardness
Dust & Electrostatic Removal Rubber Roller	High	White	10~13(JIS-A)
Dust & Electrostatic Removal Rubber Roller	Middle	Blue	15~18(JIS-A)
Dust & Electrostatic Removal Rubber Roller	Small	Orange	20~13(JIS-A)
Dust & Electrostatic Removal Rubber Roller	Middle	Black	30~40(JIS-A)

*(shorter space represents higher stickiness)

效能分析 /Performance Analysis

除尘 除静电胶辊是用于去除带有静电材质的灰尘（杂质）；含有由「TECHNO ROLL」公司所研发的静电中和纤维，此种纤维去除静电导电能力高，所以能有效去除胶膜、薄纸……等灰尘（杂质）。

除尘胶辊的静电中和构造



纤维的静电中和去除资料

辊轮种类	电阻值 (Ω)	除电前 (kv)	除电后 (kv)	除电率 (%)
纤维橡胶	3×10^8	-15.6	-0.9	94.2
无导电橡胶	1×10^{14}	-16.0	-15.8	1.3
高导电橡胶	5×10^2	-15.4	-13.3	13.6

设置实践 /Film with negative electricity

- 薄钢板镀锌工厂
- 铁皮印刷，涂装工厂
- 铝片加工工厂
- 不锈钢板张力水平工厂
- 汽车印刷工厂
- 录音带制造工厂
- 铜箔制造工厂
- 塑料膜、凹板印刷工厂
- 印刷合板制造工厂
- 轮转机印刷机工厂
- 胶膜工厂
- 镜像管护膜制造工厂
- 厚纸板印刷工厂
- 瓦楞纸印刷工厂
- 制纸工厂
- 印刷电路板制造工厂
- 加工线切割工厂

除尘胶辊的物性、特性的比较 /Electrostatic Neutralization & Removal Data of Fiber

项目/品名	TEC除尘除静电胶辊	聚醚、聚氨酯除尘辊	硅胶除尘辊
剥离带电发生	无	有	有
静电的去除	○	X	X
粘着力的维持期间	1~5年	3~12个月	3~8个月
粘着物质的转移	无	无	转移至其他物质
粘着力的调整	5种	固定	固定
耐热温度	连续70℃ 短时间110℃	60℃以下	在100℃油会析出
耐溶剂性	○	△	○
耐水性	○	X	○
耐油性	X	○	X
耐久性 耐伤性	○	○	X
耐高速回转	800m/min	100m/min	50m/min
工程过后问题之发生	无	无	有
食品用途的使用	○	△	○

- Adhesive Urethane长时间使用，加水会分解溶化
- Adhesive Urethane的工作场合，油墨不会附着

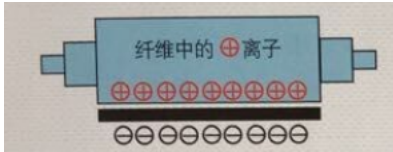
Performance Analysis

With electrostatic neutralizing fiber developed by Japan Techno Roll Company, Dust & Electrostatic Removal Rubber Roller is used to remove dusts with electrostatic materials(impurity), effectively removing impurities and dusts on adhesive film, thin paper, tinplate and aluminum sheet.

Electrostatic
within Dust Removal Rubber Roller

Neutralizing

Structure



Film with negative electricity

纤维的静电中和去除资料

辊轮种类	电阻值 (Ω)	除电前 (kv)	除电后 (kv)	除电率 (%)
纤维橡胶	3×10^8	-15.6	-0.9	94.2
无导电橡胶	1×10^{14}	-16.0	-15.8	1.3
高导电橡胶	5×10^5	-15.4	-13.3	13.6

Electrostatic Neutralization & Removal Data of Fiber

Roller Type	Resistance Value(Ω)	Before Neutralization	After Neutralization	Neutralization Ratio
Fiber Roller	3×10^8	-15.6	-0.9	94.2
Non-conductive Roller	1×10^{14}	-16.0	-15.8	1.3
High Conductive Roller	5×10^5	-15.4	-13.3	13.6

Application Area

- Steel sheet galvanizing factory
- Tin-plate printing factory
- Aluminum factory
- Stainless steel tension level factory
- Auto printing factory
- Tape factory
- Cooper foil factory
- Plastic film & intaglio factory
- Printing plate factory
- Rotary press & printing press factory
- Adhesive film factory
- Mirror pipe protective film factory
- Thick paper printing factory
- Corrugated paper
- Paper making factory
- PCB factory
- Processing line factory

Comparison of substance and characteristics for Dust Removal Rubber Roller

Item	Dust & Electrostatic Removal Rubber Roller of TEC	Polyether, PU Dust Removal Rubber Roller	Silicon Dust Removal Rubber Roller
Occurrence of stripping charge	No	Yes	No
Electrostatic removal	○	×	×
Maintenance period of adhesive force	1~5 years	3~12months	3~8months
Transference of adhesive materials	No	No	Transferred to be on other materials
Adjustment of adhesive force	5 kinds	fixed	fixed
Heat-resistant temperature	Continuously at 70 °C 100°C for short time	Under 60 °C	Precipitation at 100°C
Solvent resistance	○	△	×
Water resistance	○	×	○
Oil resistance	×	○	×
Durability & scratch resistance	○	○	×
High speed resistance	800m/min	100m/min	50m/min
Problems after engineering	No	No	Yes
Whether for food industry	○	△	○

- If materials PU is used for a long time, the rubber roller will be decomposed and melted when water added in.
- In the working condition of adhesive urethane, the ink won't adhere.

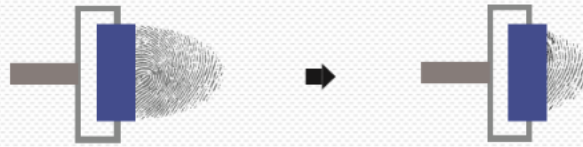
除尘滚轮 /Dedusting Roller

DUST REMOVABLE



本公司使用的除尘滚轮材料是由日本「TECHNO ROLL株式会社」研发的半永久粘着性软质橡胶。滚轮非常柔软，不用担心在使用时，因灰尘附着而造成损伤；一旦发生损伤时，其扩大程度非常缓慢，所以使用时间更长。

- 蓝色胶辊具有强力的粘着力，可去除大至微米单位的细小灰尘。亦能去除指膜痕。
- 橙色胶辊为中粘度粘着力。可去除细小灰尘。
- 黄色胶辊为低粘度粘着力。可去除细小灰尘。
- 黑色胶辊为低粘度粘着力。能中和静电值，使静电值降低。



挑选清洁滚轮时具备一定的条件，才能达到事半功倍的效果。挑选清洁滚轮有三大要素，要素如下：

1. 无胶渣脱落：如果清洁滚轮本身的胶渣残留在工作物上，反而会使工作物受损，并沾染更多灰尘。

本公司保证胶材不残留于工作物表面。随附日本「TECHNO ROLL株式会社」之MSDS。

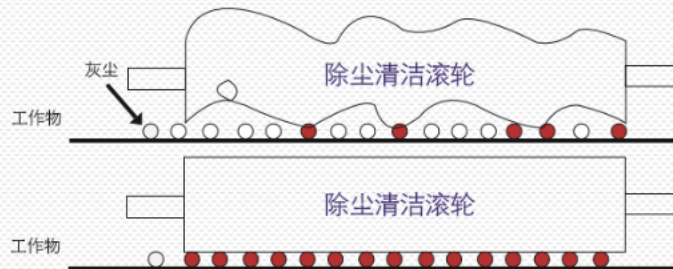
2. 滚轮的圆周度与同心度：如果胶轮的圆周度不够，是椭圆形外貌，在转动清洁时，与工作物的接触面积可能有时会压力太大而有时候会没有接触，如附图：



如同心度不够，也会有相同情况，造成无法将工作物完全清除干净。

本公司检附东京激光检测数值，测量外径与圆周度，公差在 $\pm 0.03\text{mm}$ 。

3. 表面粗糙度：除尘滚轮-除-滚轮本身粘度外，其表面粗糙度也是很重要的一环，滚轮表面光洁度越高，除尘力愈佳（举例如下图），且表面愈光滑，清洗更方便。

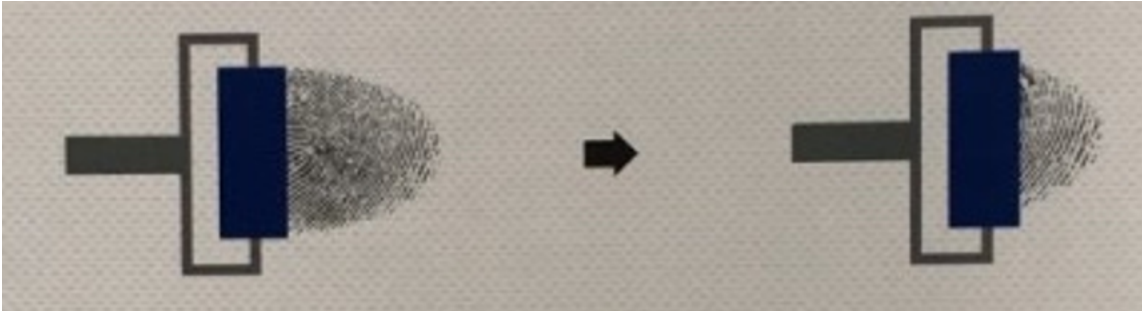


本公司检测表面和糙度数值，Rz值在 $5.5\sim 10.5\mu\text{m}$ （视胶材而定）。

Dedusting Roller

The materials of the dedusting roller of our company is semi-permanent, soft and sticky rubber. There is no need for worrying about the scratch caused by dust in use because the roller is very soft. Once there is scratch, it can be used for longer time because the scratch enlarging speed is extremely slow.

- With strong adhesive force, blue rollers can remove the tiny micron dust and finger print.
- With middle adhesive force, orange rollers can remove tiny dust.
- With low adhesive force, yellow rollers can remove tiny dust.
- With low adhesive force, black rollers can neutralize electrostatic, lowering the electrostatic value.

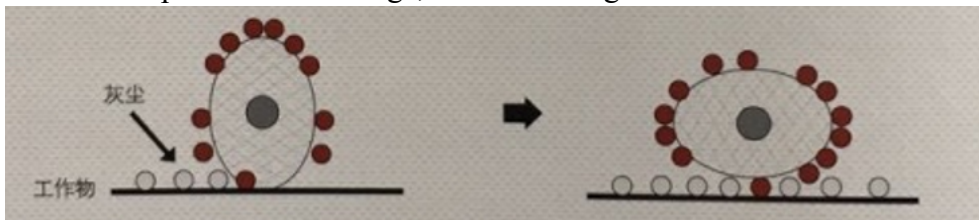


Meeting a certain condition can make the roller work with double results for your choice. There are three elements for you to pay attention to during your choice.

1. No smear flaking: Smear flaking on the working surface makes it damaged, easier to be dusted.

Our company guarantees that the glue materials won't be left on the working surface. Please refer to the attachment: [MSDS of Japan Techno Roll Company](#).

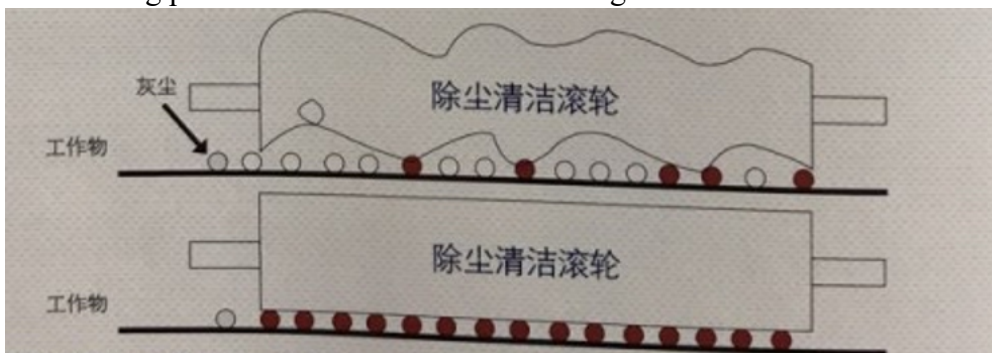
2. Circular degree and concentricity of rollers: If the circular degree of the roller is not qualified, it is an ellipse, which does not contact with the working surface when the pressure is too large, as the drawing:



If the concentricity is not qualified, there will be the same condition leading to incomplete cleaning.

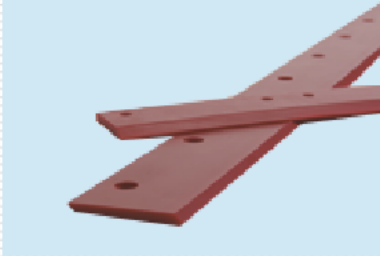
Our test results will be enclosed with Tokyo Laser Test Value with the outward diameter and circular degree. (TOL: $\pm 0.3\text{mm}$)

3. Roughness of the surface: Besides the stickiness of the roller itself, the roughness of the surface is also very important. The smoother the surface is, the better the dedusting power is and the easier the cleaning is.



Our company tests the surface with the roughness value: Rz is 5.5~10.5 μ m (according to rubber materials)

其它产品 /Other



洗机刮刀
Blade of Washing Machine

耐溶剂性好；超长寿命；特别适合UV油墨印刷。

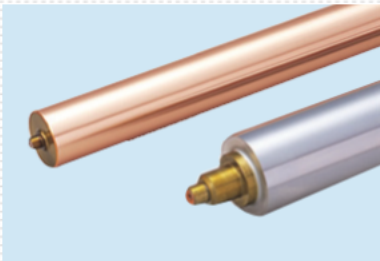


超长寿命吸盘
Long-life Sucker

特殊的耐磨橡胶、无油性析出、无颗粒脱落、上光后无底影显现。适用于高端产品（奶粉罐、饮料罐等）使用。



合成树脂匀墨辊
Sythetic Resin Ink Distributing Roller



铜匀墨辊
Cooper Ink Distributing Roller

超镜面计量水辊
Super Mirror Metering Dampening Roller

Others

Blade of Washing Machine



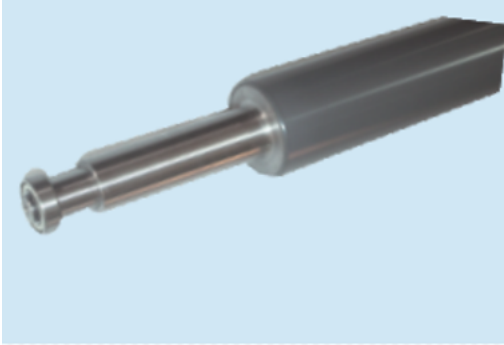
With good solvent resistance and long life span; especially appropriate for UV ink printing.



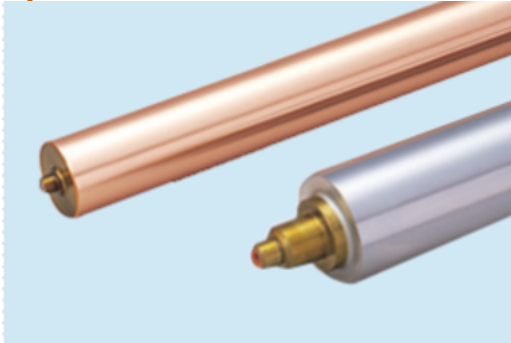
Long-life Sucker

Special abrasion-resistant rubber, oil free precipitation, non-granule flaking, non-shadow at the bottom after polishing.

Applicable for premium products (e.g. powder milk can and beverage bottles etc.).



Synthetic Resin Ink Distributing Roller



Cooper Ink Distributing Roller Super Mirror Metering Dampening Roller

Detergent



化学制剂 / Chemical

环保型UV洗车水，除尘辊专用清洗剂，印刷化学品
Environmental Protection UV wash-offset,
Cleaning agent for dedusting roller,
Chemicals for printing

胶辊清洁、保养化学品

Chemicals for the Cleaning and Maintenance of Rubber Roller

良好的保养有助于避免各类印刷问题（墨辊结晶、油墨转移不良、色差及油墨过度乳化等）的发生，减少停机次数，使印刷机发挥最高的效率。



环保型UV洗车水

Environmental Protection UV wash-offset

我们为用户选择了最佳性能的洗车水，具有良好的清洁力，性能安全可靠，满足环保要求。适用于大多数中国油墨。



润版液

Fountain Solution

如果说胶辊是印刷加工的“心脏”的话，那么润版液连同油墨则是“血液”。我们为用户选择了适用于所有平版印刷的防钙化润版液，来满足广大用户的需求。



我们同时可以为用户提供全球最高端的胶辊保养品和印刷化学品。
We also provide the high-end products in the world about the maintenance for roller and chemicals for printing.

化学制剂 / Chemical

环保型UV洗车水，除尘辊专用清洗剂，印刷化学品
Environmental Protection UV wash-offset,
Cleaning agent for dedusting roller,
Chemicals for printing

[Chemical](#)

[Environmentally-friendly UV wash-offset, Cleaning agent for Dedusting roller, Chemicals for printing](#)

Good maintenance can avoid variable printing problems (crystallization of ink rollers, poor transfer of ink, color difference and excessive ink emulsification, etc.), reduce the times of shutdown, and maximize the efficiency of printing press.



Environmentally-friendly UV Wash-offset

We choose the best wash-offset for users with nice detergent power, safe and reliable performance, and meeting the demand of environmental protection. It is applicable for most ink in China.



Fountain Solution

If rubber roller is the heart of printing press, fountain solution and ink are the blood of it. We choose anti-calcification fountain solution which applies to all offset printing to meet the demand of vast majority of users.

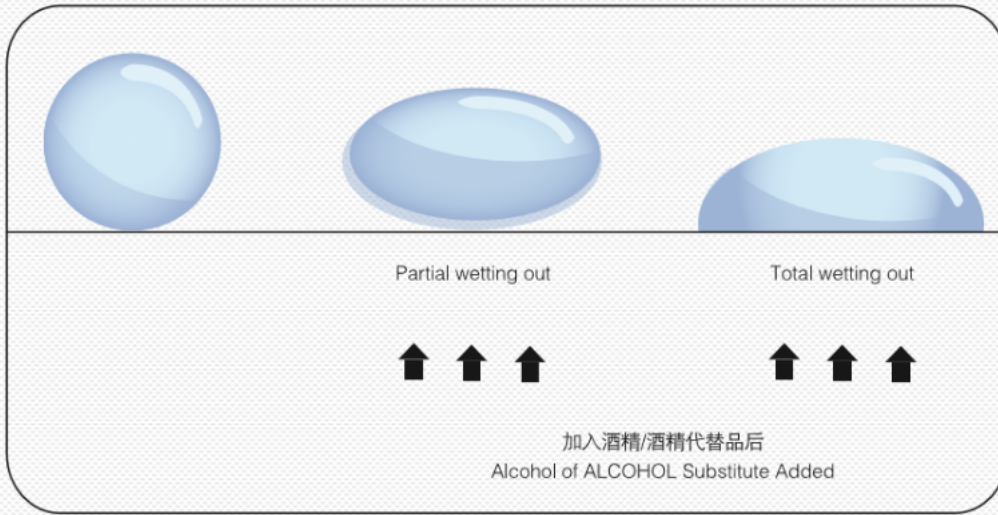


We can also provide roller maintenance products and printing chemicals, with the global highest-end brands.



Our company is the authorized dealer of





酒精/酒精替代品之润版系统 Dampening System of Alcohol/Alcohol Substitute

润湿系统是现代胶印机十分重要的组成部分，润湿液中的异丙醇IPA不仅可以降低水的表面张力，由72dynes/cm降至35-45dynes/cm，以便印版更容易均匀的上水，同时能够提高水的粘度到1.2-1.4克当量/100公斤，可以输送足够多的水分到印版表面。在纸包装高速印刷的条件下，酒精的快速挥发，可以带走大量的热量，降低印版的表面温度，维持稳定的水墨平衡状态。所以异丙醇一向在印纸界中极受欢迎，是被广泛使用的润湿溶液。

由于现代印刷的健康环保要求，要减低使用酒精。润湿化学品（润版液）同样可以降低水的表面张力到同一幅度，但只可以提高水的粘度到1.02-1.08克当量/公斤，所以在同一工作环境下，被输送的水份略少。而化学品与异丙醇的适量添加，刚好匹配胶印油墨的特性。



a

Dampening System of Alcohol/Alcohol Substitute

Dampening system is an important component of modern offset press. Isopropyl IPA in

fountain solution can not only lower the surface tension of water, from 72dynes/cm to 35-45dynes/cm, to make it easier to cover the surface of printing plate with fountain solution evenly; but also increase the viscosity of water to be 1.2-1.4 gram equivalent/100kg, which can transport enough water to the surface of printing plate. In the condition of high-speed printing of paper package, the rapid evaporation of alcohol can take away a lot of heat, lowering the temperature of the surface of printing plate, and maintaining the stable water-ink balance. Therefore, isopropyl is always popular and widely used dampening liquid.

Because of the demand of health and environmental protection in modern printing, the usage of alcohol should be reduced. Dampening chemical (fountain solution) can also lower the tension of water surface to the same degree, but it only can increase the viscosity of water to be 1.02-1.08 gram equivalent/kg. Therefore, the water transportation is less in the same working condition. The proper amount of chemicals and isopropyl added corresponds to the characteristics of offset printing ink.