

WE BUILD  
FITTINGS

***cmatic***<sup>®</sup>  
PNEUMATIC FITTINGS



1970



1980



1990

CN

Cmatic公司成立于上世纪70年代初，最初从事精密金属零件的合同制造。在短时间内，公司迅速从小型企业成长为全面发展的工业实体。尽管规模不断扩大，Cmatic始终密切关注市场需求的动态变化，致力于新材料研究和新产品开发。公司的核心业务最终定位在工业自动化接头的设计、开发与制造领域，形成了涵盖多种材料特性和气动应用功能的完整产品体系，同时始终保持着根据客户需求定制个性化解决方案的服务理念。

自1994年起，Cmatic已获得ISO 9001质量管理体系认证。2018年，随着管理体系的持续完善，公司又成功取得了ISO 14001环境管理体系认证和ISO45001职业健康安全管理体系认证。位于意大利工业核心区布里安扎的朱萨诺生产基地，占地面积超过8500平方米，年产接头产品达2000万件，涵盖40余个产品系列和超过5000种规格\*。

\*2024年数据





2000

2020

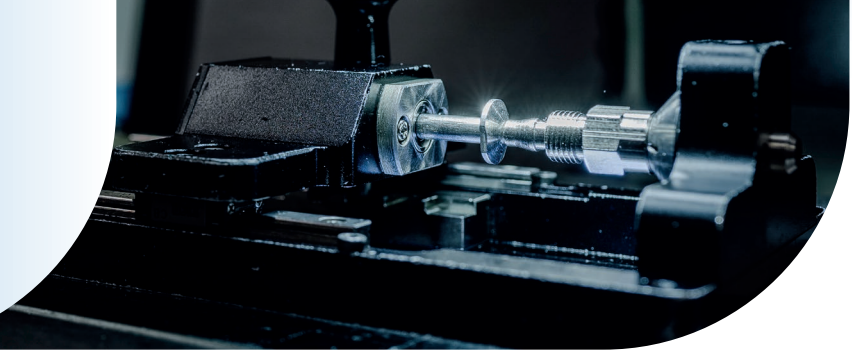
EN

Cmatic was founded in the early 1970s as a contract supplier of precision metal parts. In a short time, the company expanded and evolved from a small business into a full-fledged industrial concern. Despite its increased size, Cmatic never loses sight of the changing demands of the market and focuses its attention on researching new materials and developing new products. The company's core business therefore finds its definitive dimension in the Design, Development and Production of Fittings for Industrial Automation. This has led Cmatic to offer an extensive, complete range of products, both in terms of the variety of materials used and of functionality in every pneumatic application, all without neglecting our willingness to develop custom solutions in collaboration with our clients. Cmatic has been an ISO 9001 certified company since 1994. In 2018, thanks to the continuous development of its Management System, it also achieved ISO 14001 Environmental Management System certification and ISO45001 Occupational Health and Safety certification. The production plant in Giussano, located in the Brianza region of Italy's industrial heartland, covers more than 8500 square metres and produces 20 million fittings divided into more than 40 product lines and over 5000 configurations\*.

\* 2024 Data



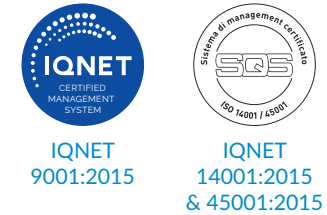
# 认证信息 Certifications



## 产品认证与合规性\* Product Certifications and Compliance\*



## 公司认证 Company Certifications



点击此处下载始终保持最新的认证文件  
Download the always up-to-date certificates here

\*与特定产品系列或单个部件相关的认证  
\* Certifications related to specific product lines or individual units.



CN

“我们的质量源于设计、创新与开发，更重要的是源于持续改进。在我们的实验室中，我们执行严格的产品质量测试，并持续开展研发活动，旨在为客户提供市场上最高标准的产品。”

01  
质量测试

02  
探索新应用

03  
新功能开发

04  
聚焦行业创新

EN

Quality made of design, innovation and development. And, above all, of continuous improvement. In our lab, we carry out stringent product quality tests and constant R&D activities to offer the highest standard on the market to our customers.

01  
QUALITY TESTS

02  
SEARCH FOR  
NEW APPLICATIONS

03  
NEW FUNCTIONS  
DEVELOPMENT

04  
FOCUS ON INDUSTRY  
INNOVATION



# EV10

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可选尺寸: Ø 6mm - Ø 8mm - Ø 10mm  
Available sizes: Ø 6mm - Ø 8mm - Ø 10mm

## CN

电子比例流量控制  
模拟/数字接口

重复精度:  $\pm 0.5\%$  满量程 | 灵敏度: 最大  $0.25\%$  满量程

电子流量控制器由一个电路板 (PCBa) 组成, 该电路板读取输入的电信号, 进行处理, 并驱动伺服执行器, 推动针阀在孔口内移动, 从而实现与输入信号成比例的线性流量变化。控制接口可为模拟信号 (0-10 VDC) 或符合 MODBUS RS485 协议的数字信号。

## EN

Electronic Proportional  
Flow Control with dual Analog/Digital Interface

Repeatability:  $\pm 0,5\%$  f.s. | Sensibility: max  $0,25\%$  f.s.

The electronic flow control consists of a PCBa that reads an electrical input signal, processes it and operates the servo actuator that moves a needle valve inside an orifice to make a linear flow rate change proportional to the electrical input signal.

The command interface can be Analog 0-10 Vdc or Digital according to MODBUS RS485 protocol.



0°±50°C



Max 10 bar



# MV12 & MV21P

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CN

## 新一代节流阀

Push-to-Lock 节流阀在操作便捷性和可靠性方面代表了当前的先进水平。Push-to-Lock 技术使手动调节流量更加快速，无需使用工具。紧凑型设计显著减少了产品整体尺寸，尤其在垂直方向上，调节流量时高度保持不变。高性能工程塑料本体替代传统金属结构，在重量方面实现了显著优化。

EN

## The new generation of flow controls

Push to Lock flow controllers represent the state of the art in terms of user friendliness and reliability. Push-to-Lock technology makes flow adjustment by hand much faster with no need for tools. The compact design reduces the overall product footprint especially vertically, no height changes during flow setting. The technopolymer body replaces the classic metal structure with consequent improvements in terms of weight.



## 特点



设定系统的人体工学设计  
Ergonomics of the setting system



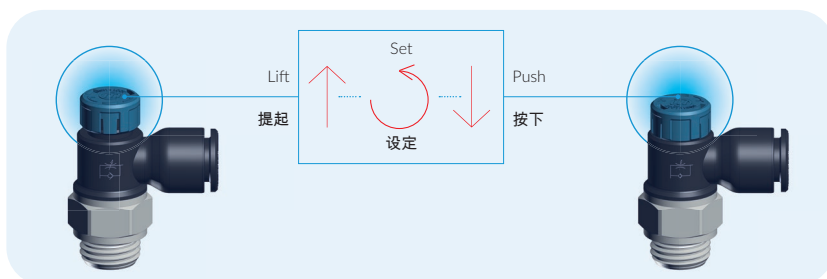
最小垂直占用空间  
Minimum vertical footprint



无需工具  
No tools needed



重量减轻超过 50%  
>50% weight reduction



# XT Clamp solution

MX/PX11 XT | MX/PX15 XT | CX11 XT | OX11 XT | GX30-10 XT | GX30-20 XT

CN

## 针对卫生级应用的卡箍解决方案

卡箍式接头是为所有需要原位清洗（C.I.P）卫生流程的应用场景打造的完美解决方案。该型接头的组装与拆卸十分便捷，无需使用任何工具。接头整体采用不锈钢材质制造，能够确保两个连接表面之间形成安全、光滑和一致的连接。

Cmatic在不锈钢接头与管件的制造领域拥有深厚经验，其产品尤其适用于严苛工况和腐蚀性环境。如今，我们自豪地推出全新产品系列——XT卡箍接头系列，面向制药、生物科技、化妆品、食品饮料、化工等所有对卫生等级有高标准要求的行业领域。XT卡箍接头的尺寸规格全面符合ASME BPE标准规范。

EN

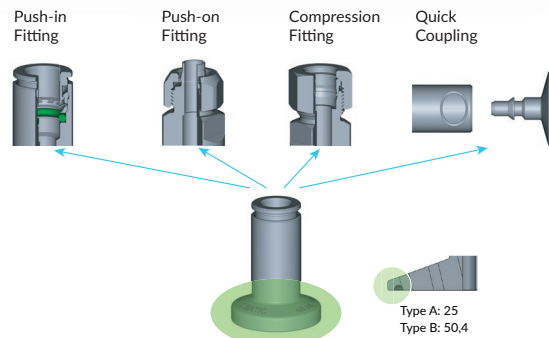
## Clamp Solutions for Sanitary Applications

The Clamp connection style fitting is a perfect solution for all applications requiring the Cleaning in Place (C.I.P) sanitation procedure. The assembly and disassembly of a Clamp fitting is very easy and does not require the use of any tool.

The fitting is made of Stainless steel only and guarantees a secure, smooth, uniform connection between two surfaces.

Cmatic boasts a long experience in the production of Stainless Steel fittings and couplings suitable for harsh aggressive environments and today is proud to expand the product offer to a new range, the XT Clamp line for Pharma, Biotech, Cosmetics, Food & Beverage, Chemical applications and in general all those market segments, where a high degree of hygiene is requested.

The dimension of the XT Clamp is compliant with the ASME BPE norm.



**i** 卡箍式接头的表面处理符合 SF1 级别标准  
The Clamp surface finishing matches SF1 Class



# MY LINE

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CN

## PPSU 快插接头

MY 系列接头已通过 NSF/ANSI 169 认证，可安全用于与水、茶和咖啡的接触。

同时符合 欧盟法规 EU 1935/2004 (MOCA) 的相关要求。MY 系列接头采用 PPSU (聚苯砜) 材料制造，这是一种高性能热塑性聚合物，具有优异的热稳定性、化学稳定性和机械性能，非常适用于食品饮料、工业及医疗等领域。尤其值得一提的是，PPSU 材料出色的耐化学性和耐腐蚀性，使得 MY 系列产品在使用过程中可确保极高的耐久性、性能一致性，并完全避免污染和意外的化学反应风险。

EN

## PPSU Push-in fittings

MY range of fittings is 169 NSF/ANSI certified for contact with water, tea and coffee.

It is also compliant with EU 1935/2004 Regulation (MOCA). MY line of fittings is made of PPSU (Polyphenylsulfone), a high-performance thermoplastic polymer, well-known for its excellent thermal, chemical and mechanical properties that make it an excellent choice for Food and Beverage, industrial and medical applications. Especially the exceptional chemical and corrosion resistance of PPSU enables the MY line to ensure maximum durability, optimal performance consistency, complete absence of contamination and unwanted chemical reactions risks.



### 产品特点

### FEATURES



MY12



MY16



MY21



MY26



MY28



MY29

- ① 非常适用于半自动和全自动咖啡机  
**Perfect** for semi-automatic and automatic coffee machines.
- ② 耐用可靠  
**Long-lasting** and reliable.
- ③ 采用 PPSU 材质：具备卓越的热性能、化学性能和机械性能  
**Made of PPSU:** maximum thermal, chemical, and mechanical performance.

## 1 一般警告事项

- 1.1 选择合适产品并确认其与预期应用的兼容性,完全由系统设计人员/用户或定义该系统技术规范/特性的相关责任人负责。  
系统的运行与安全责任由确认产品兼容性的设计人员承担。  
设计人员有义务检查产品技术参数的任何变更,以防止系统出现故障或失效。  
为确保参考最新的技术数据,建议查阅 **Cmatic** 官方网站([www.cmatic.com](http://www.cmatic.com))上发布的在线目录。
- 1.2 请避免在存在腐蚀性气体、化学品、盐水、水或蒸汽的环境中使用本产品。  
如需在“关键”环境中安装,或与潜在腐蚀性液体接触的情况下使用,请参考本册第 16 页的化学兼容性表。该表列出了我们接头产品中使用的  
所有材料。  
如需识别各产品系列的具体部件,请查阅每个系列的介绍页面。  
表中信息仅供参考,材料的实际表现必须在实际使用条件下进行测试,因为温度、压力和物质浓度等因素可能会显著影响兼容性评估。  
化学兼容性表中的信息不构成任何合同义务,**C.matic** 明确声明不承担任何责任。客户仍有义务自行确认产品的适用性及其是否适用于预期应用。  
**C.matic** 保留随时更新和修改化学兼容性表中信息的权利,恕不另行通知。
- 1.3 产品运行期间,请勿长时间暴露于阳光直射下。;
- 1.4 请勿在存在强烈振动或冲击的环境中使用本产品。
- 1.5 请勿在靠近热源的区域安装本产品。
- 1.6 请勿使用目录中各系列产品技术规格所列以外的流体。
- 1.7 必须严格遵守目录中各系列产品所规定的压力和温度值。若在超出规定范围的压力和/或温度条件下使用产品,可能导致损坏或故障。
- 1.8 严禁拆卸产品或对其进行任何改装和/或加工。此类行为不仅会使产品保修失效,还可能影响产品性能,并对系统及操作人员造成潜在风险。
- 1.9 若产品使用不当,目录中的产品可能具有危险性。安装、调试及维护含有 **Cmatic** 接头的机械或设备,必须由具备经验和专业培训的操作人员进行。在系统未处于安全状态前,请勿进行维护或尝试拆卸产品。
- 1.10 若需拆卸产品,必须事先切断系统的所有电源(包括气源、电源等),并确保已采取上述安全措施。

## 2 产品正确安装的警告与说明:

### 2.1 外螺纹连接件

在安装带外螺纹的接头时,请遵循以下说明:

- 应至少手动旋入螺纹的前几圈,以确保其正确嵌入母螺纹座中。;
- 拧紧时,应使用与接头六角部位尺寸相匹配的扳手/工具。若为内六角结构,使用内六角扳手时需注意避免接触可能损坏的内部部件。
- 过度的拧紧力矩或在非指定部位施力可能导致产品损坏;因此,必须根据螺纹类型严格遵守以下规定的拧紧力矩值

#### A) 拧紧力矩 (Nm)

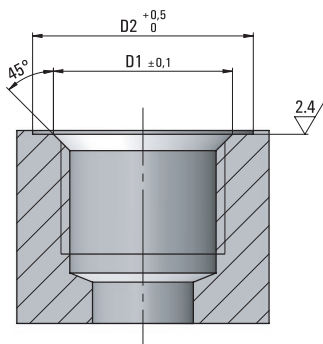
螺纹类型	标准规范	M3x0,5	M5x0,8	M6x1	M7x1	M8x1	M10x1	M12x1,25	M12x1,5	10-32	1/8	1/4	3/8	1/2	3/4
锥形气体螺纹 (带 PTFE)	UNI EN 10226-1										2,5	3,5	6	18	
NPTF 螺纹 (带 PTFE)	ANSI/ASME B1.20.3										11	12	13	18	24
平行气体螺纹 (带 O 型圈)	UNI EN ISO 228-1										1,2	1,5	2,5	3,5	
Easy thread	CMATIC										1,2	1,5	2,5	3,5	
聚甲醛树脂材质的平行气体螺纹 (带 O 型圈)	UNI EN ISO 228-1										1,2	1,5	2,5		
平行气体螺纹 (带塑料垫圈)	UNI EN ISO 228-1										2	3	4	8	
UNF 螺纹 (带 O 型圈)	ANSI/ASME B1.1									0,8					
公制螺纹 (带 O 型圈)	UNI EN ISO 965-1	0,5	0,5	0,8	0,8			1,5	1,5						
锥形公制螺纹 (带 PTFE)	UNI 7707			2,5		2,5	2,5								

MT、RT 和 VT 系列的拧紧力矩:  
请参阅技术目录中相关章节。

### 警告:带 O 型圈的直螺纹

在安装前,必须确保内螺纹已正确加工,以便与外螺纹上的 O 型圈实现良好密封。

下图显示了内螺纹所需的尺寸和表面粗糙度规范:



\*EASY Thread是由Cmatic根据其自身结构标准设计的通用螺纹。

螺纹类型	Ø D1	Ø D2	螺纹类型	Ø D1	Ø D2
G 1/8 - EASY 1/8*	10,3	13,5	M6x1	6,5	9,5
G 1/4 - EASY 1/4*	13,7	16,5	M7x1	7,5	9,5
G 3/8 - EASY 3/8*	17,2	20,5	M10x1	11,5	14,5
G 1/2 - EASY 1/2*	21,6	25,5	M12x1,25	12,9	15,5
G 3/4	27,4	32,5	M12x1,5	12,9	15,5
10-32 UNF	3,2	6	M14x1,5	14,9	17,5
M3x0,5	3,2	6	M16x1,5	16,9	20,5
M5x0,8	5,2	8,5	M22x1,5	22,9	27,5

### 2.2 预涂 PTFE 的锥形螺纹

对于预涂聚四氟乙烯 (PTFE) 的锥形螺纹,需要注意的是,螺纹的前几圈可能未涂覆 PTFE,但这不会影响螺纹的密封性能。

预涂 PTFE 的螺纹密封性始终取决于内螺纹的加工质量;因此,在安装外螺纹前,必须确保内螺纹符合规范。

预涂 PTFE 的螺纹最多可重复使用 5 次。每次装拆后,在再次使用产品前,应检查涂层状况,确保其完整性。

请注意,预涂 PTFE 螺纹最多可重复使用 5 次的前提是内螺纹的实际质量良好,并严格遵守推荐的拧紧力矩。

未遵守上述要求可能会显著降低产品的使用寿命及可重复使用次数。

系统的设计人员/使用者有责任确认 PTFE 涂层与系统及其运行条件的兼容性。

### 2.3 管路连接

当接头与管路连接后,安装完成后可能需要一定程度的方向调整,因此建议根据目录中提供的不同类型接头,选择最适合的型号:

- 可定向接头 (ORIENTABLE fitting): 仅在接头尚未完全拧紧前,允许将管路调整至所需方向。接头拧紧后,若需改变管路方向,必须先松开接头,再重新定位管路。
- 可调向接头: 管件始终可沿其轴线进行小幅度角度调节。不建议进行大角度旋转,特别是在高循环频率的工况下,此类操作会显著缩短接头的使用寿命。
- 旋转式接头 (ROTATING fitting): 管路可在高转速条件下自由旋转。

此分类在目录中每款产品的描述中均有标注,选择适合的接头类型以满足具体应用需求至关重要。若接头在不符合上述规定的使用条件下造成损坏或提前失效,制造商不承担任何责任。

### 2.4 载荷、振动或冲击

为避免因接头断裂和/或软管脱落而导致系统损坏,必须确保接头未承受任何载荷,且不受振动或冲击影响。

同时应确保接头和/或管路未承受拉伸力或扭转力。

### 2.5 清除异物

若产品未存放于原始密封包装中,使用前必须检查接头内部是否清洁,并在必要时通过吹气方式清除可能落入接头内部的污物。

请注意,大多数情况下,接头内部的 O 型圈已涂有润滑剂。任何附着在 O 型圈表面的异物都难以去除,可能会影响接头的气密性。

### 2.6 特殊警告

每个接头系列的章节中可能包含带有符号标识的专用警告和使用说明。 ⚠

### 3 产品存储:

产品必须存放在原始包装中,以保留所有与产品可追溯性相关的信息。

无论何种情况,产品都必须远离灰尘和湿气存放,并且严禁在阳光直射的环境中储存,因为这会导致产品快速老化,尤其是塑料和橡胶部件,从而严重影响其功能和耐用性。

请注意,未经过任何电镀表面处理的黄铜接头在时间推移中可能会发生颜色变化。但这不应被视为产品缺陷,也不构成更换产品的理由。

### 4 产品包装与标签:

详见第14页的详细信息。

# General Instructions and Recommendations

EN

## 1 GENERAL WARNINGS:

1.1 Choosing a suitable product and checking its compatibility with the intended application is the sole responsibility of the system designer/user or whoever defines the specifications/technical features of the said system. Responsibility for the operation and safety of the system lies with the designer who has established compatibility with the product. It is the designer who is obliged to check for any changes in product specifications in order to prevent any possible malfunctions or failures in the system. To be sure to consult the latest state-of-the-art data, it is advisable to refer to the data in the catalogue published online at [www.cmatic.com](http://www.cmatic.com).

1.2 Avoid use in environments with corrosive gases, chemicals, salt water, water or steam. In the case of installation in "critical" environments or in contact with potentially aggressive liquids, please refer to the Chemical Compatibility Table on page 16 of this volume. This table contains a list of all the materials used in our fittings. To identify the specific items for each product line, the introductory page of each series should be consulted.

The information in the table is purely indicative and the actual behaviour of the materials must in any case be tested under the actual conditions of use, as factors such as temperature, pressure and concentrations of substances can lead to significant variations in compatibility assessments. The information contained in the Chemical Compatibility Table should not be regarded as a contractual obligation and any liability is expressly disclaimed. The Customer is not released from the obligation to check the suitability of the products and their suitability for the intended application.

C.matic reserves the right to update and modify the information in the Chemical Compatibility Table at any time and without prior notice.

1.3 Do not expose the product to direct sunlight for prolonged periods during its operation;

1.4 Do not use in places subject to strong vibrations or shocks;

1.5 Do not assemble the product in areas exposed to heat sources;

1.6 Do not use fluids other than those listed in the Catalogue specifications of each product series;

1.7 The pressure and temperature values given in the Catalogue for each product series must be strictly adhered to. If the products are used under pressure and/or temperature conditions outside the indicated range, this may lead to damage or malfunctions.

1.8 It is absolutely forbidden to disassemble the product or to perform modifications and/or reworkings on it. Any such actions, in addition to invalidating any product guarantee, may adversely affect operation and expose the system and users to possible risks.

1.9 The products in the Catalogue are potentially dangerous if used improperly. Assembly, commissioning, and maintenance of machines or equipment in which Cmatic fittings are installed must only be carried out by an experienced and trained operator. Do not service or attempt to remove the product until the system has been made safe.

1.10 If it is necessary to remove the product, ensure that the power supply to the system from any source (pneumatic, electric, etc.) has been cut off beforehand, and that the above safety measures have been implemented.

## 2 WARNINGS AND INSTRUCTIONS FOR THE CORRECT INSTALLATION OF THE PRODUCT:

### 2.1 Male threads

In case of a male threaded fitting assembly, please follow the instructions below:

- screw at least the first few pitches of the thread by hand to secure it in the female housing.
- to tighten, use a wrench/tool consistent in size with the hexagonal part on the fitting. In the case of an internal hex, when using an allenkey pay attention to avoid contact with internal components that could be damaged;
- excessive tightening torque or gripping in an area other than the one indicated may result in damage to the product; therefore, the following tightening torques must be strictly adhered to, depending on the type of thread:

#### A) Tightening forces (Nm)

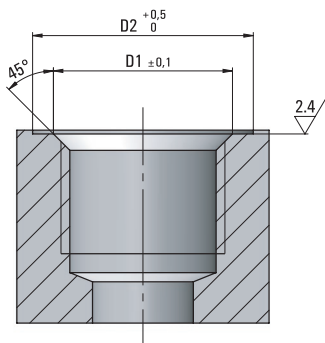
Thread	Standard	M3x0,5	M5x0,8	M6x1	M7x1	M8x1	M10x1	M12x1,25	M12x1,5	10-32	1/8	1/4	3/8	1/2	3/4
Taper gas with PTFE	UNI EN 10226-1										2,5	3,5	6	18	
NPTF with PTFE	ANSI/ASME B1.20.3										11	12	13	18	24
Parallel gas with O-ring	UNI EN ISO 228-1										1,2	1,5	2,5	3,5	
Easy thread	CMATIC										1,2	1,5	2,5	3,5	
Parallel gas in acetal resin with O-ring	UNI EN ISO 228-1										1,2	1,5	2,5		
Parallel gas with plastic washer	UNI EN ISO 228-1										2	3	4	8	
UNF with O-ring	ANSI/ASME B1.1									0,8					
Metric with O-ring	UNI EN ISO 965-1	0,5	0,5	0,8	0,8			1,5	1,5						
Taper metric with PTFE	UNI 7707			2,5		2,5	2,5								

#### B) MT, RT and VT SERIES tightening torques:

Please refer to the relevant sections of the Technical Catalogue.

### WARNING: Parallel threads with oring

Before assembly, make sure that the female part is properly machined to allow perfect sealing with the oring of the male thread. Below a diagram with the dimensional and roughness specifications required for the female part:



Thread	Ø D1	Ø D2	Thread	Ø D1	Ø D2
G 1/8 - EASY 1/8*	10,3	13,5	M6x1	6,5	9,5
G 1/4 - EASY 1/4*	13,7	16,5	M7x1	7,5	9,5
G 3/8 - EASY 3/8*	17,2	20,5	M10x1	11,5	14,5
G 1/2 - EASY 1/2*	21,6	25,5	M12x1,25	12,9	15,5
G 3/4	27,4	32,5	M12x1,5	12,9	15,5
10-32 UNF	3,2	6	M14x1,5	14,9	17,5
M3x0,5	3,2	6	M16x1,5	16,9	20,5
M5x0,8	5,2	8,5	M22x1,5	22,9	27,5

\*The EASY thread is the universal thread designed by Cmatic according to its own construction standards.

### 2.2 Pre teflon-coated taper thread

In the case of pre-Teflon-coated taper thread, it should be noted that the thread may have the first few pitches uncoated without this affecting the sealing capability of the thread. The tightness of the pre-Teflon-coated thread is always determined by the manufacturing quality of the female thread; therefore, it is essential to ensure the conformity of the latter before assembling the male thread. The pre-Teflon-coated thread can be reused up to 5 times. After each assembly-disassembly, before re-using the product, check the condition of the coating to ensure its integrity. Please note that the maximum number of 5 possible reuses of the pre-Teflon-coated thread is closely linked to the actual quality of the female thread and to the strict adherence to the recommended tightening torques. Failure to observe these factors can significantly reduce the service life and number of reuses.

**The system's designer/user is responsible to verify the compatibility of the PTFE coating with the system and its operating conditions.**

### 2.3 Tubing assembly

Once the fitting is connected to a tubing, a certain degree of orientation may be needed after installation for this reason we recommend making the most suitable choice from the various types of fittings in the catalogue:

- **ORIENTABLE fitting:** allows the tubing to be oriented in the desired direction only until the fitting is tightened in place. Thereafter, it will no longer be possible to change the position of the tubing except by loosening the fitting and repositioning the tubing in the desired direction.
- **SWIVEL fitting:** The tubing always has the possibility to move a few degrees along its axis. Wide rotations are not recommended, especially if they are associated with high cyclical, which could significantly reduce the service life of the fitting.
- **ROTATING fitting:** The tubing can rotate even at high rpm.

This classification is given in the description of each product in the catalogue, and it is essential to adhere to it in order to make a suitable choice for the intended use. No liability is accepted for damage or premature degradation due to fittings subjected to conditions of use that do not comply with the above provisions.

### 2.4 Loads, vibrations or shocks

To avoid possible damage to the system due to a broken fitting and/or disconnection of the hose, ensure that no loads are applied to the fittings and that they are not subject to vibration or shock. Also ensure that no tensile or torsional forces are exerted on the fitting and/or tubing.

### 2.5 Removal of foreign bodies

If the product has not been stored in its original sealed packaging, check before use that the fitting inside is clean and, if necessary, remove any traces of dirt that may have fallen inside of the fitting, by blowing air into it. Please note that in most cases, the inner O-rings are lubricated. Any element deposited on the surface of the O-ring is difficult to remove and could compromise the pneumatic seal of the fitting.

### 2.6 Specific warnings

Each section on the individual fitting series may contain specific warnings and instructions for use marked with a symbol

### 3 PRODUCT STORAGE:

Products must be stored in their original packaging in order to keep all the information necessary for traceability over time.

In any case, the product must always be stored away from dust and moisture, and storage with direct exposure to sunlight must be avoided at all costs, as this would lead to rapid ageing, especially of plastic and rubber parts, affecting thereby their function and durability.

Please note that fittings made of brass and not subject to any galvanic surface protection treatment may change in colour over time. However, this should not be regarded as a product defect or lead to product replacement requests.

### 4 PRODUCT PACKAGING AND LABELLING:

See detailed information on page 14.

# 产品包装与标签

## Product packaging and labelling

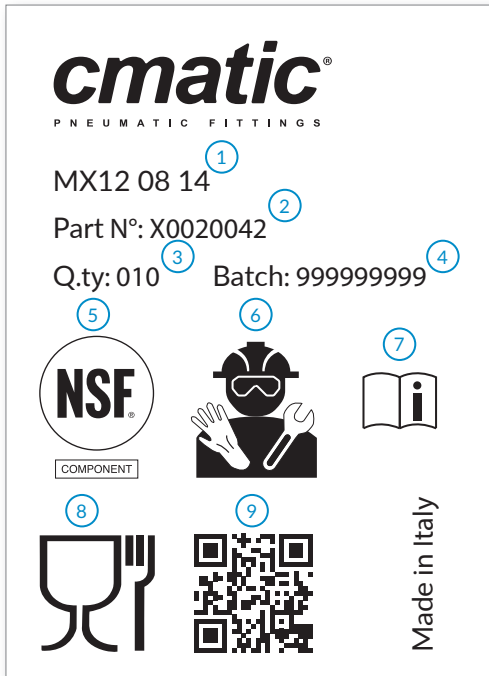


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在使用产品之前，必须确保包装完好，袋内的接头在运输过程中未受损。  
 每个包装上都贴有标签，包含不同的图形和字母数字信息。安装人员/使用者必须理解这些信息的含义。  
 为此，以下提供一个标签示例，展示上述数据及其对应含义。用户理解这些内容对于产品的安全和正确使用至关重要。

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Before using the product, make sure that the packaging is intact and that the fittings contained in the bag have not been damaged during transport. Each package has a label with different graphic and alphanumeric contents. The installer/user must have understood their meaning. For this purpose, a specimen packaging label is provided below in which the above-mentioned data and related meanings are shown. It is essential for the user to understand these contents for conscious and safe use of the product.



- 1 包装内产品的描述；  
Description of the item contained in the package.
- 2 包装内产品的唯一字母数字部件编号；  
Unique alphanumeric part number of the item contained in the package.
- 3 包装内接头的数量；  
Number of fittings in the package.
- 4 生产批次：这是产品在整个生产链中可追溯的关键要素。如产品出现问题，客户必须提供此信息；  
Production batch: a key element for the product traceability throughout the production chain. In the event of problems with the product, it is essential that the customer provides this information.

- 5 NSF 认证：仅当包装内产品通过 NSF 认证时，标签上才会显示此标志；  
NSF certification: this logo is only present if the item in the package is NSF certified.

- 6 专业用户：此标志提醒该产品仅供经过培训且具备经验的专业人员使用。强调在安装过程中必须佩戴所有必要的个人防护装备，以避免事故或健康风险。  
Experienced user: the presence of this logo is a reminder that the product is only for professional use by trained and experienced persons. It is emphasised that all necessary personal protective equipment must be worn during the installation to avoid in the event of accidents, health hazards.

- 7 此标志提醒在安装和使用产品之前，必须查阅相关技术文档、说明书和警告信息；  
The presence of this logo recalls the need to consult the technical documentation, instructions and warnings relating to the product before proceeding with its installation and use.

- 8 (EC)1935/2004：若标签上显示此标志，表示该产品符合相关欧洲法规，可用于食品接触。  
(EC)1935/2004: this logo, if present, identifies the article as compliant for food contact according to the relevant European regulation.

- 9 二维码：包含用于产品追溯及仓库流转的一系列有用信息。扫码后返回的信息字符串为：部件编号 | 袋数+批次号。  
QR code containing a series of useful information for traceability of the product and its movement in the warehouse. If scanned, it returns the following information string: part number|bags qty+batch number.

# 换算表与图标说明

## Conversion Tables and icons legend

### 换算表 Conversion tables

#### 压力 - Pressure

	Pa	kPa	Mpa	bar	mbar	atm	p.s.i.	mmHg
1 Pa =	1	0,001	0,000001	0,00001	0,01	0,0000099	0.000145	0,00750
1 kPa =	1000	1	0,001	0,01	10	0,00987	0.14504	7,50062
1 Mpa =	1000000	1000	1	10	10000	9,86923	145.03774	7500,61505
1 bar =	100000	100	0,10000	1	1000	0,98692	14.50377	750,06151
1 mbar =	100	0,1	0,0001	0,001	1	0,0009869	0.01450	0,75006
1 atm =	101325	101,32500	0,10133	1,01325	1013,25000	1	14.69595	759,99982
1 p.s.i. =	6894,75729	6,89476	0,00689	0,06895	68,94760	0,06805	1	51,71492
1 mmHg =	133,32240	0,13332	0,00013	0,00133	1,33320	0,00132	0.01934	1

#### 长度 Length

	m	mm	in	ft
1 m =	1	1000	39.37008	3.28084
1 mm =	0,001	1	0.03937	0.00328
1 in =	0,02540	25,4	1	0,08333
1 ft =	0,30480	304,8	12	1

#### 重量 Weight

	N	Kg	g	lb	oz
1 N =	1	0,10197	101,97160	0.22481	3.59694
1 Kg =	9,80665	1	1000	2.20462	35.27396
1 g =	0,00981	0,001	1	0.00220	0.03527
1 lb =	4,44822	0,45359	453,59234	1	16
1 oz =	0,27801	0,02835	28,34952	0.06250	1

#### 温度 Temperature

°K =	°C + 273,15
°C =	(°F - 32) * 5/9
°F =	(9/5 * °C) + 32

### 图标说明 Legend Icons

	工作温度 Working Temperature		流量 Flow Rate		不含硅产品 Silicone Free Product		符合 ISO4414 标准 In compliance with ISO4414 norm
	工作压力 Working Pressure		公称直径 Nominal Diameter		专利/注册设计 Patent/Registered Design		食品接触产品 (EC 1935/2004) Food Contact Product (EC 1935/2004)
	真空 Vacuum		螺纹 Thread		符合欧盟 REACH 法规 In compliance with the EU REACH Regulation		NSF 认证产品 NSF Certified Product
	开启压力 Opening Pressure		涂有 PTFE 的螺纹 PTFE-coated thread		符合 RoHS 指令 In compliance with the RoHS Directive		TUV 认证产品 TUV Certified Product

# 化学相容性表

## Chemical compatibility chart



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本表中提供的信息仅供参考。材料的实际反应必须在真实的工作条件下进行测试，因为温度、压力以及不同物质的浓度可能会影响所述的化学相容性。所提供的信息不构成任何合同义务，且明确声明不承担任何责任。客户仍有责任验证产品的适用性及其是否适合预期用途。我们保留在任何时间且无需事先通知的情况下更改信息的权利。

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The information given on this chart have to be used as a guide only and the actual materials' reaction has to be tested in the real working conditions considering that temperature, pressure and different substances concentration can affect the mentioned chemical compatibility. The information is not to be considered a contractual obligation and any liability whatsoever is expressly declined. The customer is not released from his obligation to investigate the products fitness and the suitability for the intended application. We reserve the right to change the information at any time and without prior notice.



### LEGENDA | LEGEND | LÉGENDE | LEGENDE



Ottimo  
Very Good



Buono  
Good



Resistenza Limitata  
Limited  
resistence



Sconsigliato  
Not recommended



Dati non disponibili  
Information not available

化学相容性表 / Chemical compatibility chart

MEDIUM 介质		接头 FITTINGS										垫片 SEALS			管道 HOSES				
		铝	碳钢	黄铜	不锈钢 AISI316L	POM	PEI	PARA	PBT	PPSU	NBR	FPM/FKM	EPDM	PA 11-12	PA6	PA6.6	LDPE	聚氨酯酯基	PTFE
Acetaldehyde	乙醛	●	●	●	●	●	-	-	-	-	●	●	●	●	●	●	●	●	●
Acetic Acid (20%)	醋酸 (20%)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Acetic Acid (5%)	醋酸 (5%)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Acetic Acid (50%)	醋酸 (50%)	●	-	●	-	●	●	-	●	●	●	●	●	●	●	●	●	●	●
Acetone	丙酮	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Acetylene	乙炔	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	-	-	●
Ammonia (10%)	氨水 (10%)	●	●	●	●	●	●	-	-	-	●	●	●	●	●	●	●	-	-
Ammonia Anhydrous	无水氨	●	●	●	●	●	-	-	-	-	●	●	●	●	●	●	●	-	-
Ammonia Aqueous	氨水	-	-	-	-	●	-	-	●	-	●	●	●	●	●	●	●	-	-
Ammonia Gas - Cold	冷氨气	-	-	-	-	-	-	-	-	-	●	●	●	-	-	-	-	-	-
Ammonia Gas - Hot	热氨气	-	-	-	-	-	-	-	-	-	●	●	●	-	-	-	-	-	-
Ammonium Acetate	醋酸铵	●	-	●	●	●	-	-	-	-	●	●	●	●	-	-	●	-	●
Ammonium Bicarbonate	碳酸氢铵	●	-	-	-	-	-	-	-	-	●	●	●	-	-	-	-	-	-
Ammonium Carbonate	碳酸铵	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	●	-	●
Ammonium Chloride	氯化铵	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	●	-	●
Ammonium Fluoride	氟化铵	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	●	-	●
Ammonium Hydroxide	氢氧化铵	●	●	●	●	●	●	-	-	-	●	●	●	●	-	-	●	-	●
Ammonium Nitrate	硝酸铵	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	●	-	●
Ammonium Phosphate	磷酸铵	●	-	●	●	●	-	-	-	-	●	●	●	●	-	-	●	-	●
Ammonium Sulfamate	磺酰胺铵	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ammonium Sulfate	硫酸铵	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	●	-	●
Ammonium Sulfide	硫化铵	●	-	-	-	-	-	-	-	-	●	●	●	●	-	-	●	-	●
Aniline	苯胺	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	-	●
Animal Fats	动物脂肪	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	-	-
Anti-Freeze (Alcohol Base)	防冻液 (酒精基)	●	●	●	●	●	-	-	-	-	-	-	●	-	-	-	-	-	-
Anti-Freeze (Glycol Base)	防冻液 (乙二醇基)	●	●	●	●	●	-	-	-	-	-	-	●	-	-	-	-	-	-
Aqua Regia	王水	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	-	●
Argon	氩气	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-	-
Aromatic Hydrocarbons	芳香烃	●	●	●	●	●	-	-	●	●	●	●	●	●	●	●	●	-	-
Aromatic Solvents (Benzene etc.)	芳香族溶剂 (如苯)	●	-	-	-	-	-	-	-	-	●	●	●	●	-	-	-	-	-
Arsenic Acid	砷酸	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	●	-	●
Arsenic Salts	砷盐	-	-	-	-	-	-	-	-	-	-	●	-	-	-	-	-	-	-
Ascorbic Acid	抗坏血酸	●	-	-	●	-	-	-	-	-	●	-	-	-	-	-	-	-	-
Benzene	苯	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	-	●
Boric Acid	硼酸	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	-	●
Brake Fluid	制动液	●	●	●	●	●	-	-	●	●	●	●	●	●	●	●	●	-	●
Butadiene	丁二烯	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	-	●
Butane	丁烷	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	-	●
Butanol (Butyl Alcohol)	丁醇	●	-	●	●	●	-	-	●	●	●	●	●	●	●	●	●	-	●
Butylene	丁烯	●	-	●	●	●	-	-	-	-	●	●	●	●	-	-	-	-	●
Calcium Bisulfate	亚硫酸氢钙	-	●	●	●	-	-	-	-	-	-	-	●	-	-	-	-	-	●
Calcium Bisulfide	硫化钙	●	-	-	●	●	-	-	-	-	●	●	●	●	-	-	-	-	-
Calcium Bisulfite	亚硫酸钙	●	-	●	●	●	-	-	-	-	●	●	●	●	-	-	-	-	-
Calcium Chlorate	氯酸钙	●	-	-	-	-	-	-	-	-	●	●	●	●	-	-	●	-	-
Calcium Chloride (10%)	氯化钙 (10%)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	-	●
Calcium Hydroxide	氢氧化钙	●	●	●	●	●	●	-	●	-	●	●	●	●	●	●	●	-	●
Calcium Hypochlorite (10%)	次氯酸钙 (10%)	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	-	●
Calcium Nitrate	硝酸钙	●	●	●	●	●	-	-	-	-	●	●	●	●	●	●	●	-	●
Calcium Nitrite	亚硝酸钙	-	-	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium Oxide	氧化钙	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	●	-	-
Calcium Silicate	硅酸钙	●	-	-	-	-	-	-	-	-	●	●	●	●	-	-	-	-	-
Calcium Sulfate	硫酸钙	●	●	-	●	●	-	-	-	-	●	●	●	●	●	●	●	-	●
Calcium Sulfide	硫化钙	●	-	-	●	●	-	-	-	-	●	●	●	●	-	-	-	-	-
Carbon Bisulfide	二硫化碳	●	-	●	●	●	-	-	-	-	●	●	●	●	-	-	-	-	-
Carbon Dioxide	二氧化碳	●	●	●	●	●	-	-	-	-	●	●	●	●	●	●	●	-	●
Carbon Dioxide (dry)	干二氧化碳	●	●	●	●	●	-	-	-	-	-	●	●	●	-	-	-	-	-
Carbon Dioxide (wet)	湿二氧化碳	●	●	●	●	●	-	-	●	-	-	●	●	●	-	-	-	-	-
Carbon Monoxide	一氧化碳	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	●	-	-
Carbon Tetrachloride	四氯化碳	●	●	●	●	●	●	-	-	●	●	●	●	●	●	●	●	-	●
Carbonated Beverages	碳酸饮料	●	-	-	●	-	-	-	-	-	-	●	-	-	-	-	-	-	-
Carbonated Water	碳酸水	●	●	●	●	●	-	-	-	-	●	●	●	●	●	●	●	-	-
Carbonic Acid	碳酸	●	●	●	●	●	-	-	-	-	●	●	●	●	●	●	●	-	●
Chloric Acid	氯酸	●	●	●	●	●	-	-	-	-	●	●	●	●	●	●	●	-	●
Chlorinated Water	氯化水	●	-	●	-	●	-	-	●	-	●	●	●	●	●	●	●	-	-
Chlorine (dry)	干氯气	●	●	●	●	●	-	-	-	-	●	●	●	●	●	●	●	-	●
Chlorine (wet)	湿氯气	●	-	-	●	●	-	-	-	-	-	●	-	-	-	-	-	-	●

化学相容性表 / Chemical compatibility chart

		接头 FITTINGS									垫片 SEALS			管道 HOSES					
MEDIUM	介质	铝	碳钢	黄铜	不锈钢 AISI316L	POM	PEI	PARA	PBT	PPSU	NBR	FPM/FKM	EPDM	PA 11-12	PA6	PA6.6	LDPE	聚氨酯基	PTFE
Chlorine Dioxide	二氧化氯	●	-	-	●	-	-	-	-	-	●	●	●	-	-	-	-	-	-
Chlorine Gas	氯气	-	-	●	●	●	-	-	-	-	●	●	●	●	●	●	●	●	●
Chlorine Water	氯水	●	-	●	●	●	-	-	-	-	●	●	●	●	●	●	●	-	●
Chlorine, Anhydrous liquid	氯	●	●	●	●	●	-	-	-	-	●	●	●	●	●	●	●	-	●
Chloroacetic Acid	氯乙酸	●	●	●	●	●	-	-	-	-	●	●	●	●	●	●	●	-	●
Chlorobenzene	氯苯	●	●	●	●	●	●	-	●	●	●	●	●	●	●	●	●	-	●
Chloroethanol	氯乙醇	●	-	-	●	●	●	●	●	●	-	-	-	-	-	-	●	-	-
Chloroform	氯仿	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	-	●
Chromic Acid (10%)	铬酸 (10%)	●	-	●	●	●	●	-	●	-	●	●	●	●	●	●	●	●	-
Citric Acid	柠檬酸	●	●	●	●	●	●	-	●	●	●	●	●	●	●	●	●	●	●
Coffee	咖啡	●	-	●	●	●	-	-	-	-	●	●	●	-	●	●	-	-	-
Copper Nitrate	硝酸铜	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	●	-	-
Copper Nitrite	亚硝酸铜	●	-	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper Sulfate (10%)	硫酸铜 (10%)	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	●	-	●
Copper Sulfide	硫化铜	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyanic Acid	氰酸	-	●	-	●	●	-	-	-	-	●	●	-	-	-	-	-	-	-
Cyclohexane	环己烷	●	●	-	●	●	●	●	●	●	●	●	●	●	●	●	●	-	●
Cyclohexanol	环己醇	●	●	-	●	●	-	-	-	-	●	●	●	●	-	-	●	-	●
D.D.T. (Dichlorodiphenyltrichloroethane)	滴滴涕	-	-	-	-	●	-	-	-	-	●	-	●	●	-	-	●	-	-
Deionized Water	去离子水	●	●	●	●	-	-	-	-	-	●	●	●	-	-	-	-	-	-
Denatured Alcohol	变性酒精	●	-	-	●	●	-	-	-	-	●	●	●	-	-	-	-	-	-
Detergent Solutions	清洁剂溶液	●	-	●	●	●	-	-	-	-	●	●	●	-	-	-	●	-	-
Dibutyl Phthalate	邻苯二甲酸二丁酯	●	●	●	●	●	-	-	●	-	●	●	●	●	-	-	●	-	●
Dichloroethane	二氯乙烷	-	-	●	●	●	-	-	●	-	●	●	●	-	-	-	-	-	-
Diesel Fuel	柴油	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	-	●
Dimethyl Phthalate	邻苯二甲酸二甲酯	●	-	-	●	●	-	-	-	-	●	●	●	-	●	●	-	-	●
Dioxane	二噁烷	●	-	●	●	●	●	-	●	●	●	●	●	●	●	●	-	-	●
Dioxolane	二氧戊环	-	-	-	-	-	-	-	-	-	●	●	●	-	-	-	-	-	-
Diphenil	二苯	●	●	●	●	●	-	-	-	-	●	●	●	-	-	-	-	-	-
Diphenil Ether	二苯醚	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diphenil Oxide	二苯氧化物	●	●	-	●	●	-	-	-	-	●	●	●	-	-	-	-	-	-
Distilled Water	蒸馏水	●	●	●	●	-	-	-	-	-	●	●	●	-	-	-	-	-	-
Ethane	乙烷	●	●	●	●	●	-	-	●	-	●	●	●	-	-	-	-	-	-
Ethanol (Ethyl Alcohol)	乙醇	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	-
Ether	醚	●	●	●	●	●	-	-	-	●	●	●	●	-	-	-	-	-	-
Ether Sulfate	醚硫酸盐	-	●	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	●
Ethyl Acetate	乙酸乙酯	●	●	-	●	●	●	-	●	-	-	●	●	●	●	●	●	●	●
Ethyl Benzene	乙苯	●	●	-	●	●	-	-	-	-	●	-	-	-	●	●	●	-	●
Ethyl Chloride	氯乙烷	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	●	-	●
Ethyl Chloride Wet	湿氯乙烷	●	-	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethyl Ether	乙醚	●	●	●	●	●	●	-	-	●	●	●	●	●	-	-	●	-	●
Ethyl Sulfate	硫酸乙酯	-	-	-	●	-	-	-	-	-	●	●	●	-	-	-	-	-	-
Ethylene Chloride	氯乙烯	●	-	-	●	●	-	-	-	-	●	●	●	-	●	●	-	-	-
Ethylene Glycol	乙二醇	●	●	●	●	●	●	-	●	-	●	●	●	●	●	●	●	●	●
Ethylene Oxide	环氧乙烷	●	●	●	●	●	●	-	●	-	●	●	●	●	-	-	-	-	●
Fatty Acids	脂肪酸	●	●	●	●	●	-	-	●	-	●	●	●	●	-	-	●	-	-
Ferric Chloride	氯化铁	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	●	-	●
Ferric Hydroxide	氢氧化铁	-	-	-	-	-	-	-	-	-	●	●	●	-	-	-	-	-	-
Ferric Nitrate	硝酸铁	●	●	●	●	●	-	-	-	-	●	●	●	-	-	-	●	-	-
Ferric Sulfate	硫酸铁	●	●	●	●	●	-	-	-	-	●	●	●	-	-	-	●	-	●
Fluorine	氟	●	●	-	●	●	-	-	●	-	-	●	●	●	●	●	●	-	●
Fluorine (Anhydrous)	无水氟	●	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorine (Liquid)	液氟	●	-	-	●	-	-	-	-	-	●	●	●	-	-	-	-	-	-
Fluorine Gas Dry	干氟气	●	-	-	-	●	-	-	-	-	-	-	-	-	-	-	●	-	●
Fluorine Gas Wet	湿氟气	●	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorobenzene	氟苯	●	-	-	-	●	-	-	-	-	●	●	●	-	-	-	-	-	-
Fluorocarbon Oils	氟碳油	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Food Oils (vegetable)	食用植物油	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	●	●	●
Formaldehyde (37%)	甲醛 (37%)	●	●	●	●	●	●	●	●	●	●	●	●	●	-	-	●	-	●
Formic Acid	甲酸	●	●	●	●	●	●	-	●	●	●	●	●	●	-	-	●	-	●
Freon 11	氟利昂11	●	●	●	●	●	-	-	-	-	●	●	●	-	-	-	-	-	-
Freon 112	氟利昂112	●	●	-	●	●	-	-	-	-	●	●	●	-	-	-	-	-	-
Freon 113	氟利昂113	●	●	-	●	●	-	-	-	-	●	●	●	-	-	-	-	-	-
Freon 114	氟利昂114	●	●	-	●	●	-	-	-	-	●	●	●	-	-	-	-	-	-
Freon 114B2	氟利昂114B2	●	●	-	●	-	-	-	-	-	●	●	●	-	-	-	-	-	-
Freon 115	氟利昂115	●	●	-	●	-	-	-	-	-	●	●	●	-	-	-	-	-	-

化学相容性表 / Chemical compatibility chart

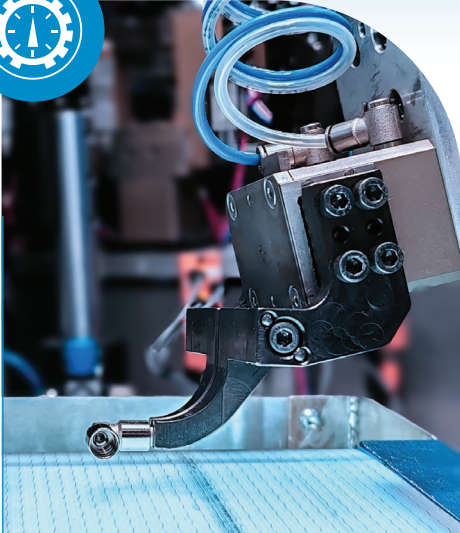
MEDIUM	介质	接头 FITTINGS										垫片 SEALS			管道 HOSES					
		铝	碳钢	黄铜	不锈钢 AISI316L	POM	PEI	PARA	PBT	PPSU	NBR	FPM/FKM	EPDM	PA 11-12	PA6	PA6.6	LDPE	聚氨酯 酯基	PTFE	
Freon 12	氟利昂12	●	●	●	●	●	-	-	-	-	●	●	●	●	●	●	●	●	●	
Freon 13	氟利昂13	●	●	-	●	●	-	-	-	-	●	●	●	●	-	-	-	-	-	
Freon 13B1	氟利昂13B1	●	●	-	●	●	-	-	-	-	●	●	●	●	-	-	-	-	-	
Freon 14	氟利昂14	●	●	-	●	-	-	-	-	-	●	●	●	-	-	-	-	-	-	
Freon 142B	氟利昂142B	●	-	-	-	●	-	-	-	-	●	●	●	-	-	-	-	-	-	
Freon 15	氟利昂15	●	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Freon 152A	氟利昂152A	●	-	-	-	●	-	-	-	-	●	●	●	-	-	-	-	-	-	
Freon 21	氟利昂21	●	●	-	●	●	-	-	-	-	●	●	●	-	-	-	-	-	-	
Freon 218	氟利昂218	●	-	-	-	●	-	-	-	-	●	●	●	-	-	-	-	-	-	
Freon 21B	氟利昂21B	●	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Freon 22	氟利昂22	●	●	●	●	●	-	-	-	-	●	●	●	●	●	●	●	●	●	
Freon 31	氟利昂31	●	●	-	●	●	-	-	-	-	●	●	●	-	-	-	-	-	-	
Freon 32	氟利昂32	●	●	-	●	●	-	-	-	-	●	●	●	-	-	-	-	-	-	
Freon 502	氟利昂502	●	-	-	●	●	-	-	-	-	●	●	●	-	-	-	-	-	-	
Fresh Water	淡水	●	●	●	●	●	-	-	-	-	●	●	●	●	●	●	●	●	●	
Fruit Juice	果汁	●	●	●	●	●	●	●	●	●	●	●	●	●	-	-	-	-	-	
Fuel Oils	燃料油	●	●	●	●	●	-	-	●	●	●	●	●	●	-	-	-	●	●	
Gasoline	汽油	●	●	●	●	●	●	●	-	●	●	●	●	●	-	-	-	-	●	
Glucose	葡萄糖	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	-	●	●	
Glycerine	甘油	●	●	●	●	●	●	-	●	-	●	●	●	●	●	●	●	-	●	
Glycolic Acid	羟基乙酸	-	-	-	●	●	-	-	-	-	●	●	●	-	-	-	-	●	-	
Glycols	乙二醇类	●	●	●	●	●	●	-	-	●	●	●	●	●	●	●	●	●	●	
Grease (Ester Base)	脂类润滑脂 (酯基)	●	●	●	●	●	-	-	-	-	-	-	●	-	-	-	-	-	-	
Grease (Petroleum Base)	石油基润滑脂	●	●	●	●	●	-	-	-	-	-	-	●	-	-	-	-	-	-	
Grease (Silicon Base)	硅基润滑脂	●	●	●	●	●	-	-	-	-	●	●	●	-	-	-	-	-	-	
Helium	氦气	●	-	●	●	●	-	-	-	-	●	●	●	-	-	-	-	-	-	
Heptane	庚烷	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Hexane	己烷	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Hexanol	己醇	●	●	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Hydraulic Oil (Petroleum Base)	液压油 (石油基)	●	●	●	●	●	-	-	●	-	●	●	●	-	●	●	●	-	-	
Hydraulic Oil (Synthetic Base)	液压油 (合成基)	●	●	●	●	●	-	-	●	-	●	●	●	-	●	●	●	-	-	
Hydrazine	联氨	●	●	●	●	●	-	-	-	-	●	●	●	-	-	-	-	-	●	
Hydrochloric Acid (10%)	盐酸 (10%)	●	●	●	●	●	●	-	●	●	●	●	●	●	●	●	●	●	●	
Hydrocyanic Acid	氢氰酸	●	●	●	●	●	-	-	-	-	●	●	●	-	-	-	-	●	●	
Hydrofluoric Acid (10%)	氢氟酸 (10%)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Hydrogen (gas)	氢气	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●	●	
Hydrogen Peroxide (1%)	过氧化氢 (1%)	-	-	●	●	●	●	-	●	●	●	●	●	●	●	●	●	●	●	
Hydrogen Peroxide (30%)	过氧化氢 (30%)	●	●	●	●	●	●	-	●	●	●	●	●	●	●	●	●	●	●	
Hydrogen Sulfide	硫化氢	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●	●	
Ink (Printers)	打印墨水	●	●	-	●	●	-	-	●	-	●	●	●	-	-	-	-	-	-	
Iodine	碘	●	●	●	●	●	●	-	-	●	●	●	●	-	-	-	-	-	●	
Iodoform	碘仿	●	-	-	●	-	-	-	-	-	●	●	●	-	-	-	-	-	-	
Iso Butane	异丁烷	-	-	-	-	-	-	-	-	-	●	●	●	-	-	-	-	-	-	
Isooctane	异辛烷	●	●	●	●	●	●	●	●	●	●	●	●	-	-	-	●	●		
Isopentane	异戊烷	-	-	-	-	-	-	-	-	-	●	●	●	-	-	-	-	-	-	
Isopropyl Acetate	醋酸异丙酯	●	●	●	●	●	-	-	-	-	●	●	●	-	-	-	-	-	-	
Isopropyl Alcohol	异丙醇	●	●	●	●	●	-	-	-	-	●	●	●	●	-	-	-	-	●	
Isopropyl Ether	异丙醚	●	●	●	●	●	●	-	-	-	●	●	●	-	-	-	-	-	●	
Isotane	异构烷烃	●	-	-	-	-	-	-	-	-	●	●	●	-	-	-	-	-	-	
Jet Fuel/Kerosene	航空煤油	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Ketones	酮类	●	●	●	●	●	-	-	●	●	●	●	●	-	-	-	-	-	-	
Lactic Acid (20 °C)	乳酸 (20°C)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Lead Acetate	醋酸铅	●	●	●	●	●	-	-	●	-	●	●	●	-	-	-	-	-	●	
Lead Chloride	氯化铅	●	-	-	-	-	-	-	-	-	●	●	●	-	-	-	-	-	-	
Lead Nitrate	硝酸铅	●	-	-	●	-	-	-	-	-	●	●	●	-	-	-	-	-	-	
Lead Sulfamate	磺酰胺铅	●	-	-	●	●	-	-	-	-	-	●	●	●	-	-	-	-	-	
Linoleic Acid	亚油酸	●	●	●	●	-	-	-	-	-	●	●	●	-	-	-	-	-	-	
Lithium Bromide	溴化锂	-	-	-	-	-	-	-	●	-	●	●	●	-	-	-	-	-	-	
Lithium Chloride	氯化锂	●	●	-	●	●	-	-	-	-	●	●	●	-	-	-	-	-	●	
Lithium Hydroxide	氢氧化锂	●	-	-	●	●	-	-	●	-	●	●	●	-	-	-	-	-	-	
Lubricants	润滑剂	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●	●	
Lubricants (Petroleum)	石油润滑剂	●	-	-	●	●	-	-	-	-	-	-	●	-	-	-	-	-	-	
Lubricating Oil	润滑油	●	●	●	●	●	-	-	-	-	●	●	●	●	●	●	●	●	●	
Methane	甲烷	●	-	-	●	●	-	-	●	-	●	●	●	●	●	●	●	●	●	
Methyl Acetate	乙酸甲酯	●	●	●	●	●	-	-	●	●	●	●	●	●	-	-	-	-	●	
Methyl Acetone	甲基丙酮	●	●	●	●	●	-	-	-	-	-	●	●	●	-	-	-	-	-	

化学相容性表 / Chemical compatibility chart

MEDIUM	介质	接头 FITTINGS										垫片 SEALS			管道 HOSES					
		铝	碳钢	黄铜	不锈钢 AISI316L	POM	PEI	PARA	PBT	PPSU	NBR	FPM/FKM	EPDM	PA 11-12	PA6	PA6.6	LDPE	聚氨酯基	PTFE	
Methyl Acrylic Acid	甲基丙烯酸	-	-	-	-	●	-	-	-	-	●	●	●	-	-	-	-	-	-	
Methyl Alcohol (Methanol)	甲醇	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Methyl Amine	甲胺	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Methyl Bromide	溴甲烷	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Methyl Butyl Ketone	甲基丁基酮	●	-	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Methyl Chloride	氯甲烷	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Methyl Ethyl Ketone	甲基乙基酮	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Methylene Bromide	溴化亚甲基	●	-	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Methylene Chloride	二氯甲烷	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Mineral Oil	矿物油	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Motor Oil	机油	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Muriatic Acid	盐酸	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Naphtha	石脑油	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Naphthalene	萘	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Natural Gas	天然气	-	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Neohexane	新己烷	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nickel Acetate	醋酸镍	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nickel Chloride	氯化镍	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nickel Nitrate	硝酸镍	●	●	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nickel Sulfate (10%)	硫酸镍 (10%)	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitric Acid (10%)	硝酸 (10%)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Nitrogen	氮气	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitromethane	硝基甲烷	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitropropane	硝基丙烷	●	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitrous Acid	亚硝酸	●	●	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitrous Gases	亚硝基气体	-	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitrous Oxide	一氧化二氮	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Oleic Acid	油酸	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Olive Oil	橄榄油	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Oxygen (Cold)	冷氧气	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Ozone	臭氧	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Palm Oil	棕榈油	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Palmitic Acid	软脂酸	●	-	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Paraffin	石蜡	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Paraformaldehyde	聚合甲醛	●	●	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pentane	戊烷	●	-	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Perchloric Acid (10%)	高氯酸 (10%)	-	-	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Perchloroethylene	四氯乙烯	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Petroleum Oil	石油	●	-	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phenol	苯酚	●	-	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phenyl Acetate	苯基醋酸酯	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phenyl Ethyl Ether	苯乙醚	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phenyl Hydrazine	苯肼	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phenyl Sulfonic Acid	苯磺酸	●	-	-	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phenylbenzene	苯基苯	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phosphoric Acid (30%)	磷酸 (30%)	●	-	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phosphorus	磷	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Phthalic Acid	邻苯二甲酸	●	-	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Acetate	醋酸钾	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Bicarbonate	碳酸氢钾	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Bisulfate	重硫酸钾	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Bisulfite	亚硫酸氢钾	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Bromide	溴化钾	●	●	-	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Chloride	氯化钾	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Chromate	铬酸钾	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Cyanide	氰化钾	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Hydroxide	氢氧化钾	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Hypochlorite	次氯酸钾	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Nitrate	硝酸钾	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Nitrite	亚硝酸钾	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Permanganate (10%)	高锰酸钾 (10%)	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Phosphate	磷酸钾	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Silicate	硅酸钾	●	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Sulfate	硫酸钾	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Sulfide	硫化钾	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	
Potassium Sulfite	亚硫酸钾	●	●	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-	-	

化学相容性表 / Chemical compatibility chart

MEDIUM 介质		接头 FITTINGS										垫片 SEALS			管道 HOSES					
		铝	碳钢	黄铜	不锈钢 AISI316L	POM	PEI	PARA	PBT	PPSU	NBR	FPM/FKM	EPDM	PA 11-12	PA6	PA6.6	LDPE	聚氨酯基	PTFE	
Propane (liquefied)	液化丙烷	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Salicylic Acid	水杨酸	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sea Water	海水	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Silicone Oil	硅油	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Silver Bromide	溴化银	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Silver Chloride	氯化银	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Silver Cyanide	氰化银	●	-	-	●	-	-	-	●	-	●	●	●	●	●	●	●	●		
Silver Nitrate	硝酸银	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Acetate	醋酸钠	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Acid Sulfate	酸性硫酸钠	●	-	-	●	-	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Bicarbonate	碳酸氢钠	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Bisulfate	重硫酸钠	●	●	-	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Bisulfite	亚硫酸氢钠	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Sodium Borate (Borax)	硼砂	●	-	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Carbonate	碳酸钠	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Sodium Chlorate	氯酸钠	●	-	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Chloride (10%)	氯化钠 (10%)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Sodium Chromate	铬酸钠	●	●	-	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Citrate	柠檬酸钠	-	-	-	-	-	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Fluoride	氟化钠	●	●	-	●	-	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Hydroxide (10%) - Caustic Soda	氢氧化钠 (10%) - 烧碱	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Hypochlorite (5%)	次氯酸钠 (5%)	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Hyposulfate	低硫酸钠	●	●	●	●	-	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Hyposulfite	亚硫酸钠	●	●	●	●	-	-	●	●	-	●	●	●	●	●	●	●	●		
Sodium Nitrate	硝酸钠	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Nitrite	亚硝酸钠	●	-	-	-	-	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Perborate	过硼酸钠	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Peroxide	过氧化钠	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Phosphate	磷酸钠	●	-	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sodium Sulfide	硫化钠	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Steam (< 150 °C)	蒸汽 (<150°C)	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Steam (> 150 °C)	蒸汽 (>150°C)	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Stearic Acid	硬脂酸	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Styrene	苯乙烯	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sulfamic Acid (10% - 20°C)	磺胺酸 (10% - 20°C)	●	-	-	-	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sulfur Chloride	氯化硫	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sulfur Dioxide	二氧化硫	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Sulfuric Acid (30%)	硫酸 (30%)	●	●	●	●	●	●	-	●	-	●	●	●	●	●	●	●	●		
Sulfurous Acid	亚硫酸	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Tannic Acid	单宁酸	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Tartaric Acid	酒石酸	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Tetrachloroethane	四氯乙烷	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Tetrachloroethylene	四氯乙烯	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Tetrahydrofuran	四氢呋喃	●	-	-	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Toluene (Toulol)	甲苯	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Tomato Juice	番茄汁	●	-	-	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Transformer Oil	变压器油	●	-	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Transmission Fluid (Type A)	自动变速器油 (A型)	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Triacetin	三乙酸甘油酯	●	-	-	-	-	-	-	●	-	●	●	●	●	●	●	●	●		
Trichloroacetic Acid	三氯乙酸	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Trichlorobenzenes	三氯苯	●	-	-	-	-	-	-	●	-	●	●	●	●	●	●	●	●		
Trichloroethane	三氯乙烷	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Trichloroethylene	三氯乙烯	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Trichloropropane	三氯丙烷	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Turpentine	松节油	●	-	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Urea (5%)	尿素 (5%)	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Uric Acid	尿酸	●	●	-	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Valeric Acid	戊酸	●	-	-	-	-	-	-	●	-	●	●	●	●	●	●	●	●		
Vinegar	食醋	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Wine	葡萄酒	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Xylene	二甲苯	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Zinc Acetate	醋酸锌	●	-	-	-	-	-	-	●	-	●	●	●	●	●	●	●	●		
Zinc Carbonate	碳酸锌	●	-	-	●	-	-	-	●	-	●	●	●	●	●	●	●	●		
Zinc Chloride	氯化锌	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Zinc Hydrosulfite	亚硫酸氢锌	●	●	-	●	●	-	-	●	-	●	●	●	●	●	●	●	●		
Zinc Nitrate	硝酸锌	-	-	-	●	-	-	-	●	-	●	●	●	●	●	●	●	●		
Zinc Sulfate	硫酸锌	●	●	●	●	●	-	-	●	-	●	●	●	●	●	●	●	●		



## 通用气动

GENERAL PNEUMATIC

快插接头 / Push-in Fittings

**MA** p. 27 | **MB** p. 41 | **AP** p. 55 | **AR** p. 63  
**PN(US)** p. 67 | **PE** p. 79

快拧接头 / Push-on fittings

**MC** p. 83

卡套接头 / Compression fittings

**MO** p. 93

标准接头 / Standard fittings

**RA** p. 101 | **PA(US)** p. 113

快换接头 / Quick couplings

**GU** p. 119 | **PU(US)** p. 131 | **GU Safety** p. 135  
**PU Safety(US)** p. 149

多路接头 / Multiple connectors

**CO** p. 157

功能接头 / Function fittings

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## 食品，化学&制药

FOOD & BEVERAGE,  
CHEMICAL & PHARMACEUTICAL

快插接头 / Push-in Fittings

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**PX(US)** p. 249

快拧接头 / Push-on fittings

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卡套接头 / Compression fittings

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标准接头 / Standard fittings

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快换接头 / Quick couplings

**GX** p. 281 | **PUX(US)** p. 287  
**GX Safety(US)** p. 291

多路接头 / Multiple connectors

-

功能接头 / Function fittings

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## 润滑

LUBRICATION

快插接头 / Push-in Fittings

**HP** p. 317 | **MP** p. 323 | **PM(US)** p. 329

快拧接头 / Push-on fittings

-

卡套接头 / Compression fittings

-

标准接头 / Standard fittings

-

快换接头 / Quick couplings

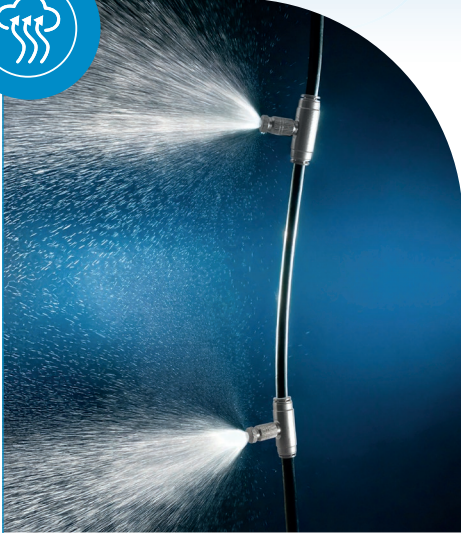
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多路接头 / Multiple connectors

-

功能接头 / Function fittings

-



## 喷雾

MISTING

快插接头 / Push-in Fittings

**MM** p. 333

快拧接头 / Push-on fittings

-

卡套接头 / Compression fittings

-

标准接头 / Standard fittings

-

快换接头 / Quick couplings

-

多路接头 / Multiple connectors

-

功能接头 / Function fittings

-



## 交通

TRANSPORTATION

快插接头 / Push-in Fittings

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快拧接头 / Push-on fittings

-

卡套接头 / Compression fittings

-

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快换接头 / Quick couplings

-

多路接头 / Multiple connectors

-

功能接头 / Function fittings

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## 液压

HYDRAULICS

快插接头 / Push-in Fittings

**QO** p. 363

快拧接头 / Push-on fittings

-

卡套接头 / Compression fittings

-

标准接头 / Standard fittings

-

快换接头 / Quick couplings

-

多路接头 / Multiple connectors

-

功能接头 / Function fittings

-

**AP  
Line**

p.55



“混合” 快插接头  
"Mix" Push-in Fittings

**AR  
Line**

p.63



旋转快插接头  
Rotary Push-in Fittings

**AV  
Line**

p.221



食品行业用高性能黄铜快插接头  
Brass Push-in Fittings

**CO  
Line**

p.157



多路接头  
Multiple Connectors

**CX  
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p.255



316L 不锈钢快拧接头  
316L Stainless Steel Push-on Fittings

**EV  
Line**

p.217



模拟量或者开关量控制的电子比例流量控制  
Electronic Proportional Flow Control

**GU  
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快换接头  
Couplings

**GU  
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安全快换接头  
Safety Couplings

**GX  
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p.281



316L 不锈钢快换接头  
316L Stainless Steel Couplings

**GX  
Safety**

p.291



316L 不锈钢安全快换接头  
316L Stainless Steel Safety Couplings

**HP  
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p.317



250 bar 润滑用快插接头  
High Pressure Push-in Fittings, 250 bar

**MA  
Line**

p.27



快插接头  
Push-in Fittings

**MB  
Line**

p.41



高科技聚合体快插接头  
Technopolymer Push-in Fittings

**MC  
Line**

p.83



镀镍黄铜快拧接头  
Brass Nickel-Plated Push-on Fittings

**MF  
Line**

p.235



食品和饮料应用领域快插接头  
Push-in Fittings for Food and Beverage Applications

**MM  
Line**

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“英寸/NPT” 80bar 雾化用快插接头  
Misting Push-in Fittings

**MO  
Line**

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镀镍黄铜卡套接头  
Brass Nickel-Plated Compression Fittings

**MP  
Line**

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80 bar 润滑用快插接头  
Medium Pressure Push-in Fittings, 80 bar

**MT  
Line**

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工业与商用车辆专用快插式管接头  
Function Fittings for industrial and commercial vehicles

**MV  
Line**

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功能接头  
Function Fittings

**MX  
Line**

p.241



316L 不锈钢快插接头  
316L Stainless Steel Push-in Fittings

**MY  
Line**

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PPSU 材质快插式管接头  
PPSU Push-in fittings

**OX  
Line**  
p.261



316L不锈钢卡套接头  
316L Stainless Steel Compression Fittings

**PA  
Line**  
p.113



NPT镀镍黄铜标准接头  
Brass Nickel-Plated Standard Fittings, NPT

**PE  
Line**  
p.79



“通用”螺纹的Easythread快插接头  
Easythread Push-in Fittings, "Uni" thread

**PM  
Line**  
p.329



“英寸/NPT”80bar润滑用快插接头  
Medium Pressure Push-in Fittings, 80 bar Inch/NPT

**PN  
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“英寸/NPT”快插接头  
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“英寸/NPT”DOT快插接头  
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NPT快换接头  
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NPT安全快换接头  
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NPT 316L不锈钢快换接头  
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“英寸/NPT”功能接头  
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“英寸/NPT”316L不锈钢功能接头  
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“英寸/NPT”316L不锈钢快插接头  
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350 bar液压用快插接头  
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镀镍黄铜标准接头  
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工业与商用车标准管接头  
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316L不锈钢标准接头  
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适用于食品与饮料行业的功能接头  
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工业与商用车功能接头  
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316L不锈钢功能接头  
316L Stainless Steel Function Fittings

