

# Meca-inox

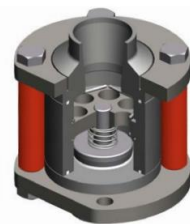
## BALL VALVES

止回阀 (DN10 到 DN50 阀体)



装配&维修维护手册

### ASSEMBLING & MAINTENANCE MANUAL

### CHECK VALVES CL4 (DN10 to DN50)

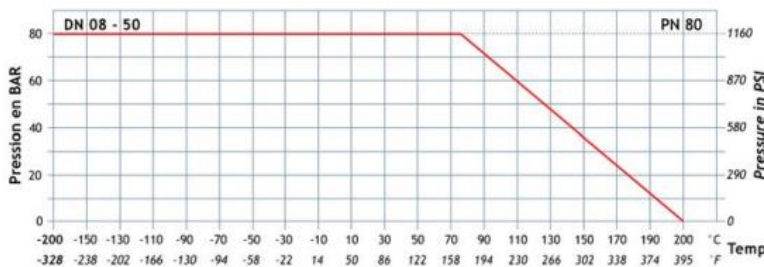


备注	REMARK
MECA-INOX 止回阀是弹簧和活塞设计 建议垂直安装，介质流向自下而上，以保证性能。	<i>CL4 MECA-INOX check valves are spring &amp; piston design They are recommended to be mounted vertically, fluid flow upwards to guarantee the performance</i>

 警告	 Warning
使用前，检查类型和介质的使用条件。	Before any use, check the type and the condition of the admissible fluid.
当使用含有 2014/68/EU 标准规定的危险流体的设备时，用户有责任根据 CE n° 1272/2008 法规规定的流体 O、T、F 分类了解和应用所有安全规则	When using the equipment with hazardous fluids defined according to Standards 2014/68/EU, the user is responsible for understanding the fluid type of O,T,F and applying all safety procedures according to regulation CE n°1272/2008.
在任何情况下，MECA-INOX 都不对可能导致材料和/或人为损坏的处理和调试错误负责。	Under any circumstances, MECA-INOX is not responsible for any testing error cause by material and/or human damage.
该设备符合压力元件 (2014/68/EU)标准要求 在集成的情况下，集成商必须遵守现行法规。	This equipment is subject to the Standard requirements (2014/68/EU) for the Pressure Elements. In the case of an integration, the integrator is required to comply with the regulations in force.
MECA-INOX 不承担任何修改和/或解释技术文件的责任。	MECA-INOX declines all responsibility in the event of modifications and/or interpretation of the technical documents.
设备的使用须受法律约束。用户承认已阅读使用国的现行法规。	The use of the equipment is subject to legislation. The user acknowledges the regulations in force in the country of use.

## 1 使用和性能限制 Performance and Limit of Use

### 1.1 P/T 曲线 – P/T diagram



CL4 止回阀不得在规定的范围之外使用

CL4 check valves shall not be used outside the ranges provided

### 1.2 内漏率 – Internal tightness

MECA-INOX CL4 止回阀 (安装在垂直位置, 上升流量) 的内漏率为:

The internal tightness performance in reverse flow of CL4 MECA-INOX check valves (installation in vertical position, rising flow) are:

阀体尺寸 Body DN	内漏率 EN12266-1, 空气, 20°C, 10 分钟 Internal tightness performance EN12266-1, Air, 20°C, 10 min					
	<1 bar	1 bar	6 bar	10bar	20bar	80 bar
10	1 气泡	0 气泡	0 气泡	0 气泡	0 气泡	1 气泡
15	1 气泡	0 气泡	0 气泡	0 气泡	0 气泡	1 气泡
20	1 气泡	0 气泡	0 气泡	0 气泡	0 气泡	1 气泡
25	1 气泡	0 气泡	0 气泡	0 气泡	0 气泡	1 气泡
32	1 气泡	0 气泡	0 气泡	0 气泡	0 气泡	1 气泡
40	1 气泡	0 气泡	0 气泡	0 气泡	0 气泡	1 气泡
50	1 气泡	0 气泡	0 气泡	0 气泡	0 气泡	1 气泡
↓ A 级 / Class A						

### 1.3 流量限制 – Flow restriction

活塞最大开启压降 = 0,6 bar / Max opening pressure drop of the piston = 0,6 bar

阀体尺寸 Body DN	开启压力的压降来自于活塞的下降, 水, 20°C Pressure Drop, in addition of the opening pressure drop of the piston, Water, 20°C		阀体尺寸 Body DN	开启压力的压降来自于活塞的下降, 水, 20°C Pressure Drop, in addition of the opening pressure drop of the piston, Water, 20°C	
	流量 / Flow (m3/h)	压降 / Pressure Drop (mbar)		流量 / Flow (m3/h)	压降 / Pressure Drop (mbar)
DN15	1	25	DN32	8	70
	4	355		16	280
	6	800		30	960
DN20	4	120	DN40	12	63
	8	450		24	250
	12	1000		36	570
DN25	5	75	DN50	15	40
	12	420		35	220
	18	940		60	650

## 2 库存 - Storage

应将设备原装存放于干净、干燥、无腐蚀性、避免阳光直射、温度低于+50℃的场所。

*It is necessary to store the equipment with its original packaging, in a clean, dry and non-corrosive premise and protected from direct sunlight and at a temperature below +50°C.*

### 2.1 产品在 MECA-INOX KIT 盒中 – Equipment delivered in a MECA-INOX KIT Box

这种包装最佳地保护设备免受冲击，灰尘和湿度影响。我们建议产品在安装前保持这种状态。

*This packaging optimally protects the equipment from shocks, dust and humidity. We recommend keeping the equipment in this condition until installation.*

### 2.2 产品组装交付 – Equipment delivered assembled

产品配有一次性保护盖，保护连接端，建议在安装前妥善保存。

*The product is equipped with disposable caps to protect the connection ends. It is recommended to keep them in place until installation.*

## 3 操作 - HANDLING

这些产品，可手动操作。如果太重，可以使用绕过阀体的纺织吊索来处理止回阀。

*These products can be handled manually. If the weight is too high, it is possible to use textile slings passed around the body to handle the check-valve.*

## 4 第一次组装 – First assembling

### 4.1 对焊接连接端 – Welding ends

- 如果产品是组装好发货，拆卸连接端及无法兰阀体。
- 在管道上插入阀体
- 将连接端放在管线上并进行指向
- 在最终的连接端焊接之前，请先检查：
  - 连接端之间的距离可以方便地插入阀体和组件，而不会对管道造成过大的压力。
  - 连接端表面是平行的。

平行度公差	
阀体尺寸	最大值
DN10 - DN25	0,4mm
DN32 - DN50	0,6mm

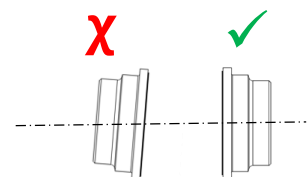
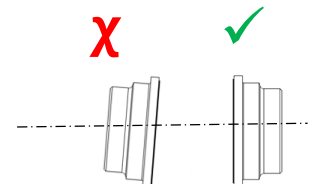
- 连接端需要对齐
- 保持连接端面平整，以确保阀体密封。
- 焊接连接端
- *If the equipment is delivered assembled, disassemble the ends and the body free flanges.*
- *Insert the body free flanges on the piping.*
- *Place the connection ends on the line and proceed to pointing.*
- *Before final welding of the ends, please make sure that:*
  - *the distance between connection ends allows easy insertion of the body and assembly without excessive stress on the piping*
  - *the faces of the connection ends are parallel*

Parallelism tolerance	
DN body	Max value
DN10 - DN25	0,4mm
DN32 - DN50	0,6mm

- *the ends are correctly aligned*
- *the faces of the ends are intact to guarantee a good sealing with the body gaskets.*
- *Weld the ends.*

### 4.2 阀体组装 – Body assembling

为了保证止回阀的产品质量，在阀体组装之前须遵守以下操作规则：



To keep a constant sealing quality of our products, it is necessary to respect the following operations:

- 清除管道中的干扰颗粒，并采用与安装性质相对应的方法进行清洁。  
*Clear the pipes from any disturbing particles and clean it with any method compatible with the nature of the installation use.*
- 组装三个螺栓和 3 个垫片。  
*Assemble 3 bolts and 3 distance pieces.*
- 根据与流体流动有关的活塞总成方向安装止回阀阀体。  
*Install the check valve body respecting the direction of assembly of the piston related to the fluid flow.*
- 组装第 4 个螺栓和它的垫片  
*Assemble the 4<sup>th</sup> bolt with its distance piece.*
- 按照以下拧紧力矩逐步拧紧螺栓。  
*Tighten gradually the bolts following tightening torques below:*

阀体尺寸 / Body DN	10	15	20	25	32	40	50
拧紧扭矩 (Nm) <i>Tightening torques (Nm)</i>	10	10	20	22	40	40	60

## 5 开始安装 - Starting

安装的设备必须与管道进行相同的测试，在工作压力下检查其在阀体密封处的外部密封性。

*The equipment mounted must undergo the same test as the pipes, check their external tightness at the body seals under service pressure.*

在工作一小时后和/或在工作温度稳定后，如果流体管线上使用的阀门温度低于-50° C，需检查阀体螺栓的拧紧力矩。  
*After one hour of use and/or after stabilization of working temperature, in the case of valves used on fluid lines at a temperature below -50°C, check the tightening torque of the body bolts.*

## 6 维修维护 – Maintenance & Repairements

检查和维修的频率取决于使用条件和流体，并由操作员决定。

*The frequency of checks and maintenance depends on the service conditions and the fluids and is therefore to be determined by the operator.*

我们建议每年至少检查一次外部密封件和阀体螺栓的紧固性。

*We recommend at least one check per year of the external seals and the tightness of the body bolts.*

必须根据本指南，并使用 MECA-INOX 零件进行维护，以确保最佳安装。

Maintenance must be carried out exclusively with original MECA-INOX parts, based on this guideline to guarantee optimal installation.

MECA-INOX 止回阀的维护部件参考如下：

*The references of the maintenance parts for the MECA-INOX check valves are as follows:*

阀体尺寸 / Body DN	10	15	20	25	32	40	50
MECA-INOX 维修部件 <i>MECA-INOX Maintenance parts</i>	KCL4I010	KCL4I015	KCL4I020	KCL4I025	KCL4I032	KCL4I040	KCL4I050