AutomotiveLine & HighTemperature Gas Springs

汽车线&高温应用专用氮气弹簧

NITROGEN GAS SPRINGS FOR PRESS TOOLS, DIES AND MOULDS

冲压工具,冲压模具氮气弹簧



HIGH TEMPERATURE GAS SPRINGS: BUILT TO RESIST UP TO 200°C (392°F)
高温氮气弹簧:可耐受高达 200°C (392°F) 的温度

Where innovation happens
创新发生之地
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博迪龙 氮气弹簧

WHERE
INNOVATION
HAPPENS.

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Automotive line: flexibility and performance for the manufacturers worldwide.

汽车专用产品线:为全球制造商提供灵活性与高性能

Through our long-term and close collaboration with the manufacturers of the automotive market, we are familiar with their needs. That's why we have created a line of gas springs and accessories that combines performance, flexibility and optimization.

我们与汽车市场中的制造商长期合作，因此非常了解他们的需求。这便是我们得以创造一系列结合高性能、灵活性和优化性的氮气弹簧及配件之原因所在 。



The Bordignon nitrogen gas springs, if properly used, will last more than 200,000,000 mm of total stroke in normal working conditions.
如使用正确,Bordignon氮气弹簧可在正常使用条件下拥有总冲程超过200.000.000毫米的寿命。

SYSTEM CERTIFICATION UNI EN ISO 9001 ITALCERT® *

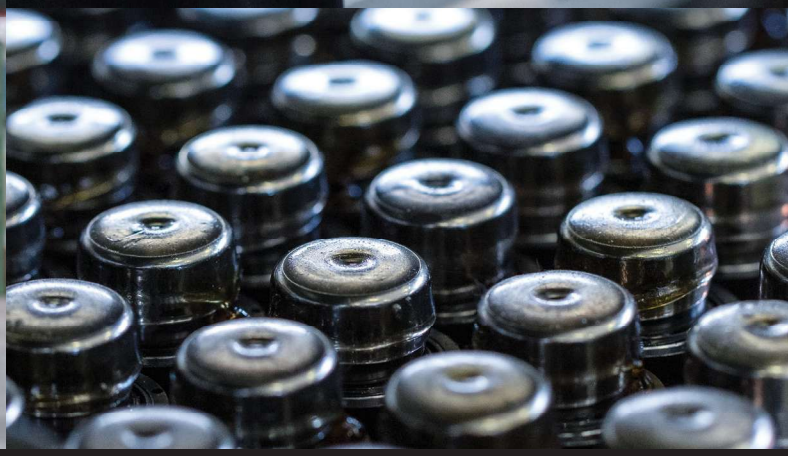
RoHS 2011/65/EU

PED In accordance with 2014/68/EU

* ISO 9001 certificate available for download on www.bordignon.com
ISO 9001认证证书可从网站 www.bordignon.com上下载







A pioneering approach extending the boundaries.

一种突破界限的开创性方法

Starting 60 years ago, Bordignon succeeded in becoming the leading company in the reference market, developing new technological solutions applied to springs, nitrogen gas springs and solutions for press tools, dies and moulds.

Our vision about business investments aims to mainly focus on research and development, and at the same time it guarantees the highest standards of products quality and performance, thanks to highly specialised manpower and to the innovative technologies that characterise our production plants.

在这条始于60年前的旅程中,Bordignon成功跻身于相关市场,成为适用于弹簧、氮气弹簧及冲模解决方案的全新技术解决方案开发领域中的领军企业。

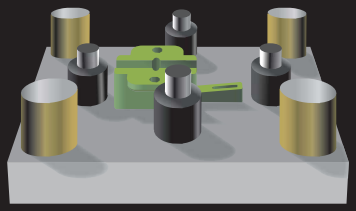
我们的愿景旨在将公司投资聚焦于研发,同时凭借高度专业化的员工队伍和我们生产基地的特有先进技术来保证最高标准的质量及产品性能。

Power & compactness

功率与紧凑性



Wire springs (low power)
钢丝弹簧(低功率)



Gas springs (high power)
氮气弹簧(高功率)

Nitrogen gas springs offer many advantages over traditional wire springs: higher force, more compact dimensions (height and diameter), no pre-compression (pre-load) needed, no damage to the tool because of breakage, longer potential service life.

Reduction of die size translates into cost reduction and higher productivity, with advantages for both the die-maker and the die-user.

与传统钢丝弹簧相比,氮气弹簧优势颇多:功率更高、尺寸更为紧凑(高度和直径),无需预应力(预紧),不会因破损而损坏模具且使用寿命明显更为长久。

模具尺寸的减小可降低成本并提高生产力,对于模具制造师和模压工而言均有益处。



Durability, reliability, cost reduction

耐用性、可靠性、低成本

The Bordignon "Automotive Line" nitrogen gas springs have been developed as a reliable, standard solution for the automotive industry. Part of their design and technology comes from the well-known Bordignon "High Performance Line" nitrogen gas springs and therefore they offer – at an advantageous price – superior performance and durability when compared to the other nitrogen gas springs on the market.
Die makers will appreciate the Bordignon "Automotive Line" nitrogen gas springs as a standard solution for the automotive industry (as well as for other fields/applications) and will be confident in a superior product reliability.
Die users will appreciate the Bordignon "Automotive Line" nitrogen gas springs for their superior durability, which translates into the reduction of production stops and costs.

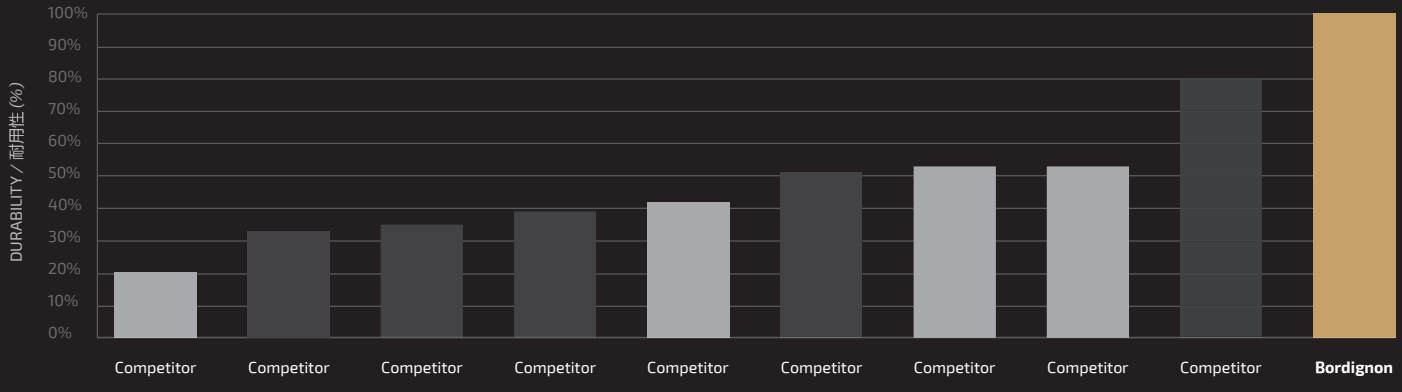
Bordignon "Automotive Line 汽车专用产品线"的氮气弹簧是作为标准可靠的解决方案而开发的,专门针对"汽车"工业。它们的部分设计和技术出自享有盛誉的Bordignon "High Performance Line 高性能产品线"中的氮气弹簧,因此可提供比市场上其它氮气弹簧更具优势的价格、性能和寿命。
模具制造商可将Bordignon氮气弹簧视为用于"汽车"工业(以及其它领域和应用)的标准解决方案,并且可对这款具有极高可靠性的产品赋予信任。终端用户将对Bordignon "Automotive Line 汽车专用产品线"氮气弹簧卓越的耐用性称赞不已,这意味着在生产停机时间和成本上的大力减少。

The following graph shows a relative comparison between the service life of two Bordignon "Automotive Line" nitrogen gas springs series (AGS and TGS, taken as samples for all the other series) and the service life of the other four most durable nitrogen gas springs on the market (according to the tests performed by Bordignon*). The data have been collected from tests that were performed in several, different use conditions. In all these comparison tests, the Bordignon gas spring and the corresponding "non-Bordignon" model have always been tested in the same identical use conditions: the result is that, under the same use conditions, the service life of Bordignon nitrogen gas springs is from 1.2 up to 5 times longer than the service life of the other gas springs*.

下图展示Bordignon "Automotive Line 汽车专用产品线"中的两个氮气弹簧系列(AGS和TGS,作为所有其它系列的样本),根据由Bordignon执行的测试,将它们的使用寿命与市场上其它四款最为耐用的氮气弹簧做出了比较*。
这些数据是从执行于多种使用条件下的测试中收集的。在所有对比测试中, Bordignon 氮气弹簧和对应的 "非 Bordignon" 氮气弹簧始终在完全相同的使用条件下进行测试: 结果是, 在相同使用条件下, Bordignon 氮气弹簧的使用 寿命要长于其它氮气弹簧 1.2 到 5 倍*。

DURABILITY UNDER THE SAME OPERATING CONDITIONS * / 相同使用条件下的使用寿命*

(The graph shows reference values / 图表显示参考值)



* The results of the tests performed by Bordignon are freely available on request
* 由 Bordignon 执行的测试可通过申请免费提供

Tests vs. Bordignon AGS
对比Bordignon AGS系列的测试

Tests vs. Bordignon TGS
对比Bordignon TGS系列的测试

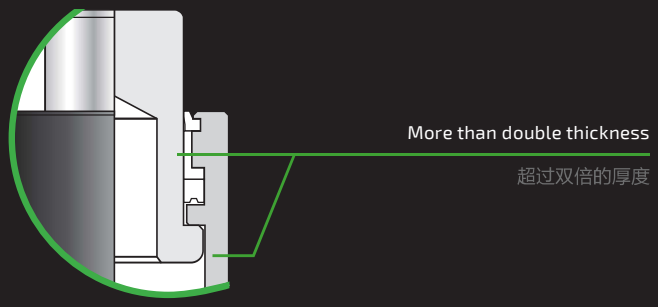
Safety & reliability

安全性和可靠性

Safety

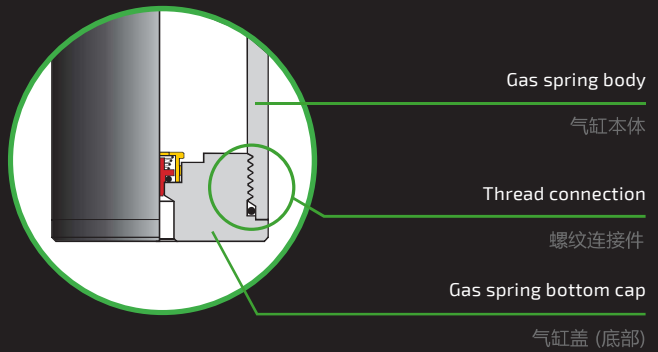
Bordignon nitrogen gas springs have always been built with single ("monolithic") thick mechanical components, in order to ensure product integrity and maximum user's safety even under the most extreme wrong use conditions (collisions, etc.).

Bordignon construction - Single "monolithic" components
Bordignon 构造 - "单体式" 单一部件



Bordignon gas spring components are coupled through thread connections, for the highest possible safety. Thread connections are standard in high pressure equipment around the world, such as waterjet cutting nozzles and ultra high pressure vessels (~10000 bar).

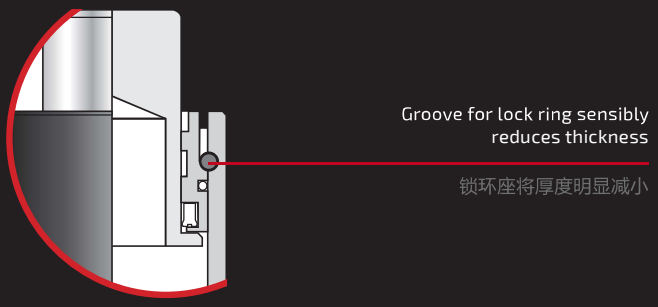
Bordignon construction - Body/bottom cap threaded junction
Bordignon 构造 - 本体/底部螺纹连接



安全性

*Bordignon*氮气弹簧一直由高厚度的单一机械部件("单体式")构成。即使在最为极端的不当使用条件下(碰撞等)也可确保产品的完整性,并为用户保障最大的安全性。

Other constructions - Several assembled components
其它构造 - 各种组装部件



Bordignon 氮气弹簧的组件通过螺纹组装,以确保最大的安全性。
螺纹连接件是世界各地高压设备的标准配置, 例如水切割喷嘴和超高压容器 (~10000 巴)。

Other constructions - Body/bottom cap junction with lock ring
其它构造 - 使用锁环进行本体/底部连接

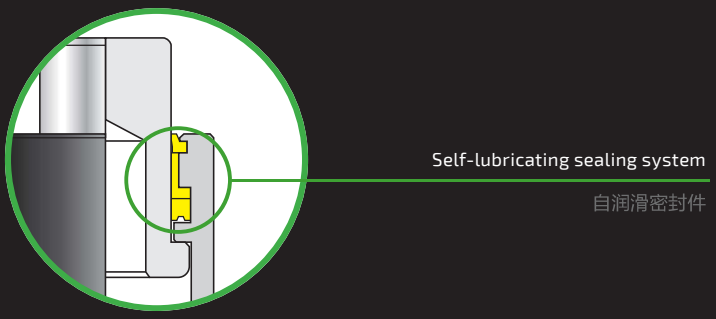


Reliability

All Bordignon nitrogen gas springs are self-lubricated, for millions of cycles, thanks to a solid lubricant.

可靠性

凭借一种固体润滑剂，所有的Bordignon氮气弹簧均已经过了数百万次循环的自润滑。





FMEA & Safety protections

失效模式与影响分析及安全保护

ISO 11901-5

VDI 3003 Part 1

FMEA - Failure Mode and Effect Analysis

In addition to the reliable design and construction, Bordignon nitrogen gas springs have always been built with safety systems (tested) which minimize the possible risks arising from non-proper use, even in extreme situations, thus ensuring the highest safety level for the end user. The safety protections of the Bordignon nitrogen gas springs are in accordance with the **ISO 11901-5** and **VDI 3003 Part 1** reference standards.

FMEA - 失效模式与影响分析

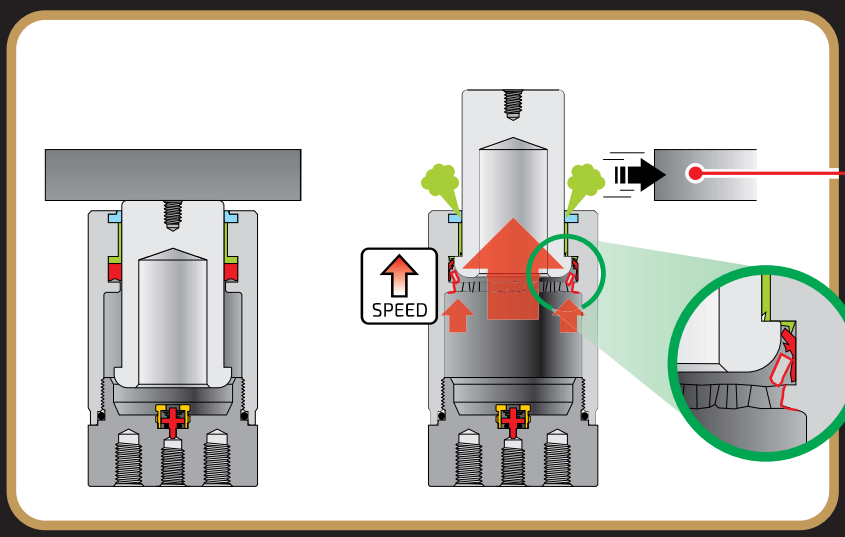
除了其设计和构造的可靠性之外,Bordignon氮气弹簧还始终配备安全系统(已测试),即使在极端情况下也可最大限度地减少因错误使用而产生的风险,从而保障用户的最高安全水准。Bordignon氮气弹簧的安全保护符合ISO 11901-5和VDI 3003第1部分中的参考标准。

Uncontrolled return stroke safety protection (piston rod free release)

It is possible that the piston rod of the nitrogen gas spring does not immediately follow the return stroke of the press: this can be caused by a jammed tool part or cam. As a result, when the jammed part is released, the piston rod of the nitrogen gas spring exceeds the permitted speed during the return stroke and the piston rod slams unchecked onto the final stop (return stroke of the rod pushing out the jammed parts without stamping counterforce).
In this case, Bordignon nitrogen gas springs are designed to vent the gas to the atmosphere – thereby depressurizing the gas spring – in the event that the maximum permitted piston rod speed is exceeded. This reduces the risks caused by the possible ejection of gas spring parts.

不受控回程 (活塞杆自由释放)情况下的安全保护

氮气弹簧的活塞杆有可能不会立即追随压机的回程:这可能是由于组件卡在模具内造成的。结果便是,当卡住的部件被释放时,氮气弹簧的活塞杆便超过回程期间所允许的最大速度且活塞杆本身亦会不受控制地碰撞其机械止动件 (活塞杆的回程在没有压机反推力的情况下弹出卡住的组件)。
这种情况下,Bordignon氮气弹簧的设计可在超过活塞杆允许的最大速度时将气体排放到大气中去,从而使气缸减压。这便降低了气缸部件可能弹出的风险。



PISTON ROD FREEE/UNCONTROLLED RELEASE
(no press counterforce)

活塞杆自由释放/不受控
(没有压机的反推力)

The piston rod mechanical stop (which is part of the gas spring body) is designed to break in case of excessive piston rod speed. The piston rod is safely retained inside the gas spring thanks to a secondary mechanical stop. This process damages the rod seal, so that the nitrogen gas leaks and the gas spring is discharged in complete safety.

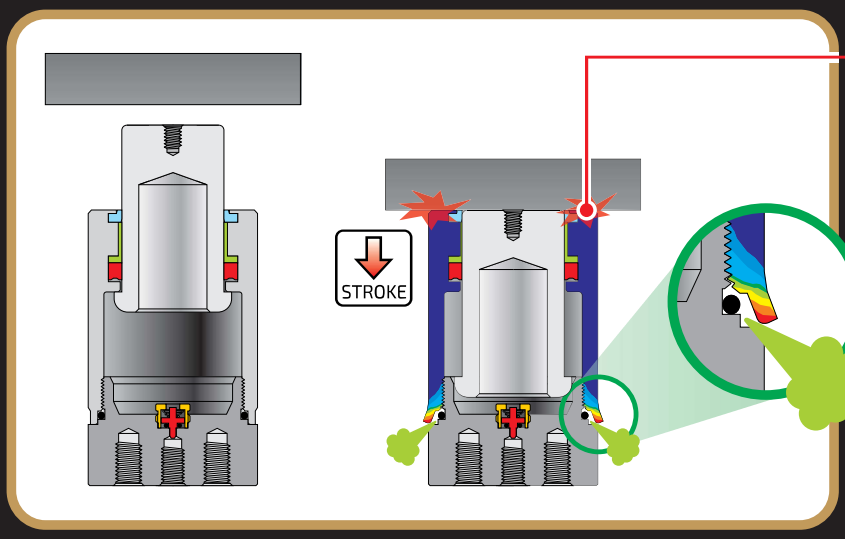
活塞杆机械止动件(它是缸体的一部分)的设计使其会在活塞杆本身速度过快的情况下断裂。由于另一个机械止动件的存在,活塞杆才被安全固定在气缸内。这个过程会损坏活塞杆密封件,因此氮气逸出且气缸也会继而会完全安全地排气。

Overstroke safety protection

Overstroke occurs when the piston rod is pushed deeper into the gas spring body than nominal stroke. This could damage the gas spring.
Bordignon nitrogen gas springs are designed to vent the nitrogen gas to the atmosphere in a controlled manner in the event of overstroke.

超程情况下的安全保护

活塞杆在缸体内的推压深度超过标称冲程时便会形成超程情况。这样可能会损坏气缸。
Bordignon氮气弹簧的设计使其能够在超程情况下以受控方式将气体排放到大气中去。



OVERSTROKE
(collision against the gas spring)

超程
(与气缸碰撞)

The metal wall of the gas spring body is thinner at the bottom (where it retains the body/bottom cap junction sealing O-Ring), so that – in case of overstroke – it gets deformed first and allows a safe discharge of the gas spring, preventing the possible breakage of the gas spring body when still under pressure.

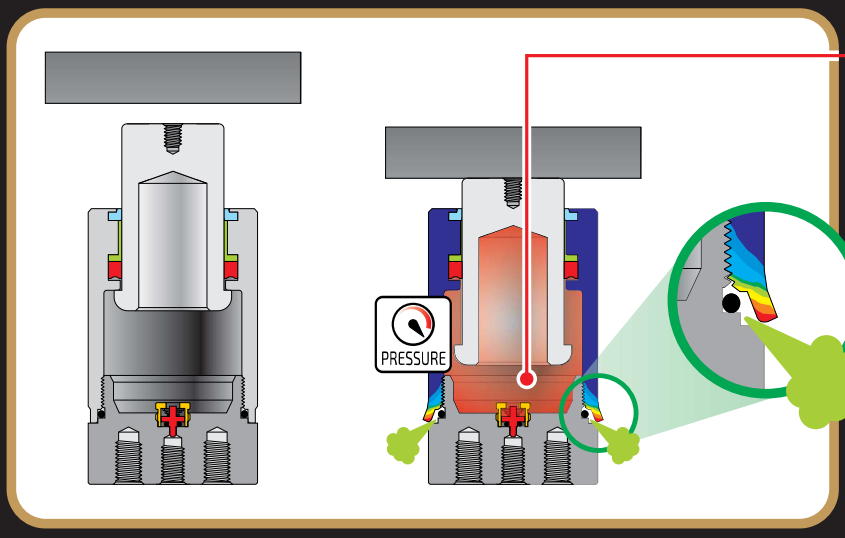
缸体的金属壁在底部较薄(那里固定着缸体/底部接头的O型密封圈):
超程情况下,它会首先发生形变并允许气缸安全排气,同时防止缸体在仍处于压力下时发生有可能的破损。

Overpressure safety protection

If the pressure inside the gas spring rises above the permitted limit, due to fluid penetration or incorrect charging, there is the risk of gas spring breakage.
Bordignon nitrogen gas springs are designed with an overpressure protection: when the overpressure protection system is triggered, the gas is vented to the atmosphere.

超压情况下的安全保护

如果气缸内部压力由于流体渗透或不正确充气而超过允许极限,则气缸便有破裂危险。
Bordignon氮气弹簧设计了一个超压情况下的安全保护系统:系统激活时,气体便会排放到大气中



OVERPRESSURE
(excessive pressure inside the gas spring)

超压
(缸内压力过大)

The metal wall of the gas spring body is thinner at the bottom (where it retains the body/bottom cap junction sealing O-Ring), so that – in case of overpressure – it gets deformed first and allows a safe discharge of the gas spring, preventing the possible breakage of the gas spring body due to extreme pressure values.
NOTE: the body/bottom cap junction sealing O-Ring is always under gas pressure, even in normal operating conditions (the thread junction does not stop the gas flow).

缸体的金属壁在底部较薄(那里固定着缸体/底部接头的O型密封圈):
超压情况下,它会首先发生形变并允许气缸安全排气,同时防止缸体在处于极度压力下时发生有可能的破损。
注意:缸体/底部接头的O型密封圈始终处于压力状态下,即使在正常作业状态下也是如此(螺纹连接不会对气体流动造成障碍)。

Use instructions

使用说明

NO



The threaded hole on the piston rod is for transport and maintenance purposes only.
Do not use it for fastening the nitrogen gas spring.

活塞杆上的螺纹孔仅用于运输和维修。
不可用来固定气缸。



No side forces. Work stroke always perpendicular to the base of the nitrogen gas spring.

无横向力。运作冲程始终垂直于气缸底部。.



Avoid scratching and scoring on the piston rod.

避免刮划损伤活塞杆。



Do not make mechanical work on the nitrogen gas spring.

请勿对气缸执行机械加工。



Do not disassemble the nitrogen gas spring. Maintenance only by authorized people. The authorization is given only after a class held by Bordignon.

请勿拆卸气缸。维护只可由授权人员进行。只有在Bordignon完成课程培训后方能获得授权。



Max impact and max release speed: 1.6 m/s (1 m/s for TGS series). Maximum number of working cycles per minute: see product tables with the technical specifications.

最大冲击和最大释放速度:1,6米/秒(TGS 系列为1米/秒)。每分钟最多循环次数:
参阅产品列表和技术规格



Do not freely release the piston rod.
The piston rod goes up together with the press.
If the screws used for the base-mounting are broken or deformed (stretched), find out the possible causes and eliminate them: there might have been free/uncontrolled releases of the piston rod.

请勿自由释放活塞杆。
应与压机一同上升。
如果用于底座紧固的螺丝损坏或变形(被拉伸),请检查并消除可能的原因:可能由于活塞杆被自由/不受控释放。



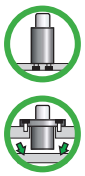
Protect against liquid or solid contaminants.
The nitrogen gas springs are protected against contaminants by wiper ring.
Do not use chemical products with low flash point (petrol, solvents, alcohol, etc.).
Clean only with a dry cloth.

防止冲模乳液、清洁剂、水和灰尘的侵蚀。
气缸由刮垢环保护而免收污染。
请勿使用低闪点的化学品(汽油、溶剂、酒精等)。
仅可用干布清洁。

The products in this catalogue are designed for the use in press tools, dies and moulds. We can not take any responsibility for any not proper or different use.

本目录中的产品均为冲模专用产品。如使用不当或用途相异,我们概不承担任何责任。

YES



Always fasten the nitrogen gas spring at the base to a flat and clean support surface with high resistance screws.
Gas springs with more than one threaded hole at the base: the center hole is for charging/discharging only.
Use all the other holes at the base for fixing.
Fixing with flange: fasten the flange to a flat and clean support surface with high resistance screws. A safety plate must be present under the gas spring.

请始终使用高强度螺丝在平坦干净的表面上将气缸固定于底座上。
底座带有多个螺纹孔的气缸:中心孔仅用于充/放气。请使用底座上的所有其它孔眼进行紧固。使用法兰紧固:请用高强度螺丝将法兰固定在平坦干净的表面上。气缸下方必须有一块密封板。



Charge only with NITROGEN (N_2).

仅充装氮气(N_2)。



Hole for cylinder body Ø +1 mm. Draining hole for liquids.

用于Ø +1毫米气缸的孔眼。液体排放孔。



Lubricate the piston rod with grease with disulfide molybdenum (MoS_2).

请用二硫化钼润滑脂(MoS)润滑活塞杆。



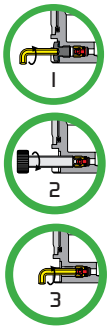
Operating temperature: MIN 0°C (32°F) - MAX 80°C (176°F).
Do not heat.

操作温度:最低0°C(32°F) – 最高80°(176°F)
请勿加热。



Protect against solid contaminants with a metal bellow, liquid contaminants with a polymeric bellow.
Fasten the protection bellow to the die plate.

请用金属波纹管防护固体污染物,用聚合物波纹管防护液体污染物。应固定在模板上。



When using nitrogen gas springs in a LINKED SYSTEM, make sure to request/order the gas springs "discharged, without valve" ("L-version").
Otherwise, to adapt a self-contained gas spring for a linked system, BEFORE installing any fittings and hoses: remove the side cap using a flat-end allen key (hexagonal key); discharge the gas spring completely using the proper ADS discharging device; remove the valve cartridge using a flat-end 3 mm allen key (hexagonal key).

如您使用的是联动系统氮气弹簧,请务必要求订购"无阀排气"气缸("L版")。
否则,要使自主气缸在连上连接件和管子之前与系统相连:3 使用扁平内六角扳手拆下侧盖;使用合适的ADS排气装置使气缸完全排气;用3毫米的扁平内六角扳手卸下插装阀。



IMPORTANT: periodically check for use instructions updates on our website. For possible additional use instructions not explicitly specified here, refer to the ISO 11901-5 standard. Pass the nitrogen gas springs use instructions to the end-user of the product.

重要事项:定期在我们的网站上查阅使用说明的更新。
有关此处未明确指定的任何使用说明,请参阅ISO 11901-5标准。请将氮气弹簧的使用说明传达至产品用户。

Information

信息

- Stroke available at 100%
- You might adjust the initial force with the charging and discharging set (model COMPL)
- Charging pressure: MIN 20 bar - MAX see table on catalogue
- Initial force increases by ~0.34% per each 1°C increase from the reference temperature of 20°C (room temperature, do not heat)
- How to calculate the charging pressure (bar) for initial forces (daN) lower than $F_{initial\ in\ table}$:

$$\text{Charging pressure (bar)} = \frac{F\ (daN) \times \text{max charging pressure (bar)}}{F_{initial\ in\ table}}$$

- How to calculate the force (daN) at intermediate strokes:

$$F = F_{initial} + \frac{\text{intermediate stroke}}{\text{max stroke}} \times (F_{final} - F_{initial})$$

- Please note: the final forces (forces at full stroke) indicated in the catalogue are reference values measured in static conditions. The actual final forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

- 100% 可用冲程
- 带有充放套件(COMPL 型号)的可调节初始力

- 充气压力:最小20 巴 – 最大值参阅目录列表
- 20°C 的参考温度(环境温度,请勿加热)每增加1°C,初始力便增加 ~0,34%
- 小于F的初始力(daN)的充气压力(巴)计算 $F_{表中初始力}$:

$$\text{充气压力(巴)} = \frac{F\ (daN) \times \text{最大充气压力(巴)}}{F_{表中初始力}}$$

- 中间冲程的力度计算(daN):

$$F = F_{初始力} + \frac{\text{中间冲程}}{\text{最大冲程}} \times (F_{最终} - F_{初始力})$$

- 注:目录中标明的最终力度(冲程末端力)为静态条件下测得的参考值。使用过程中产生的实际最终力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)。

Catalogue Help

目录使用

How to order (Gas Springs)

You order (example): **No. 8 AGS1000-25-A**
You receive: 8 pieces AGS series nitrogen gas springs, ready for use, diameter Ø 50 mm, stroke 25 mm, initial force 920 daN (other specifications on the AGS series pages).

如何订购(氮气弹簧)

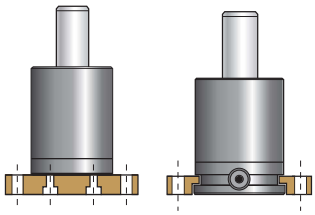
如订购(举例): **No. 8 AGS1000-25-A**
将收到: 8 个 AGS 系列即用型氮气弹簧,直径 Ø 50 毫米, 冲程 25 毫米, 初始力 920 daN (其它规格请参阅 AGS 系列的页面)。

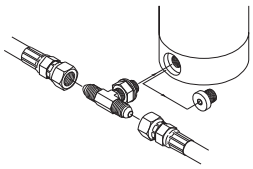
Gas Spring Accessories

Accessories for fixing, charging/discharging, linking to open system, etc. can be found in this catalogue further on.
ATTENTION: use Bordignon nitrogen gas springs with Bordignon accessories only.

氮气弹簧配件

用于紧固、充/放、联动系统等的配件均呈现于本目录中 (见下文)。注意:仅用 Bordignon 配件来使用 Bordignon 氮气弹簧。







How to order (Accessories)

You order (example): **No. 1 AP01**
You receive: 1 piece AP01 control panel (see technical specifications on the dedicated page further on).

如何订购 (配件)

如订购(举例): **No. 1 AP01**
将收到:1 个AP01 控制面板(特定规格请参阅下文页面)。



AP01

2D & 3D Technical drawings

Download various 2D & 3D file formats from
www.bordignon.com

2D 和 3D 技术图纸

各种 2D 和3D 格式可从以下网站中下载
www.bordignon.com

Nitrogen gas springs

for press tools, dies and moulds

冲压工具, 冲压模具专用氮气弹簧

60 YEARS of INNOVATION

- One series of nitrogen gas ejectors in accordance to the VDI 3004 standard: EGS series
- Three series of nitrogen gas springs in accordance to the ISO 11901 and VDI 3003 standards: VGS (small diameters, standard forces), AGS (compact-height, high force), IGS (standard dimensions, standard force)
- One series of ultra-high power, compact-diameter nitrogen gas springs: TGS series
- Two series of nitrogen gas springs for high temperature applications: CHT and CSMHT (selection from Bordignon HIGH PERFORMANCE LINE)
- Several other gas spring series for an enhanced use versatility
- Accessories for fixing (base plates, half-flanges, collar flanges, foot brackets, front supports)
- Accessories for linked system (hoses, fittings, control panels, pressure switches, safety valves, distribution blocks)
- Accessories for charging and discharging (charging and discharging set, charging adapters, discharging devices, booster)
- One series of OV nitrogen gas springs for “OV system” (alternative manifold system): AGS-OV (and related accessories)
- Other accessories (identifying plates, lubrication grease, initial force gauge)

- 一个符合VDI 3004 标准的氮气顶出器系列: EGS 系列
- 三个符合 ISO 11901 和 VDI 3003 标准的氮气弹簧系列: VGS (小直径, 标准力), AGS (紧凑高度, 高力度), IGS (标准尺寸, 标准力)
- 一个具有超高力度和紧凑直径的氮气弹簧系列: TGS 系列
- 两个针对高温对用的氮气弹簧系列: CHT 和 CSMHT (选自 Bordignon HIGH PERFORMANCE LINE 高性能产品线)
- 针对广泛用途的其它氮气弹簧系列
- 用于紧固的配件 (底板, 对开法兰, 环状法兰, 支架, 前支撑件)
- 用于联动系统的配件 (管子, 连接件, 控制面板, 压力开关, 安全阀, 分流块)
- 充放配件 (充放套件, 充气适配器, 排放装置, 助推器)
- 一个用于 "OV 系统" (歧管替代系统) 的氮气弹簧系列: AGS-OV (及相对配件)
- 其它配件 (铭牌、润滑脂、初始力控制装置)

EGS

nitrogen gas ejectors / 氮气喷射器

VDI 3004

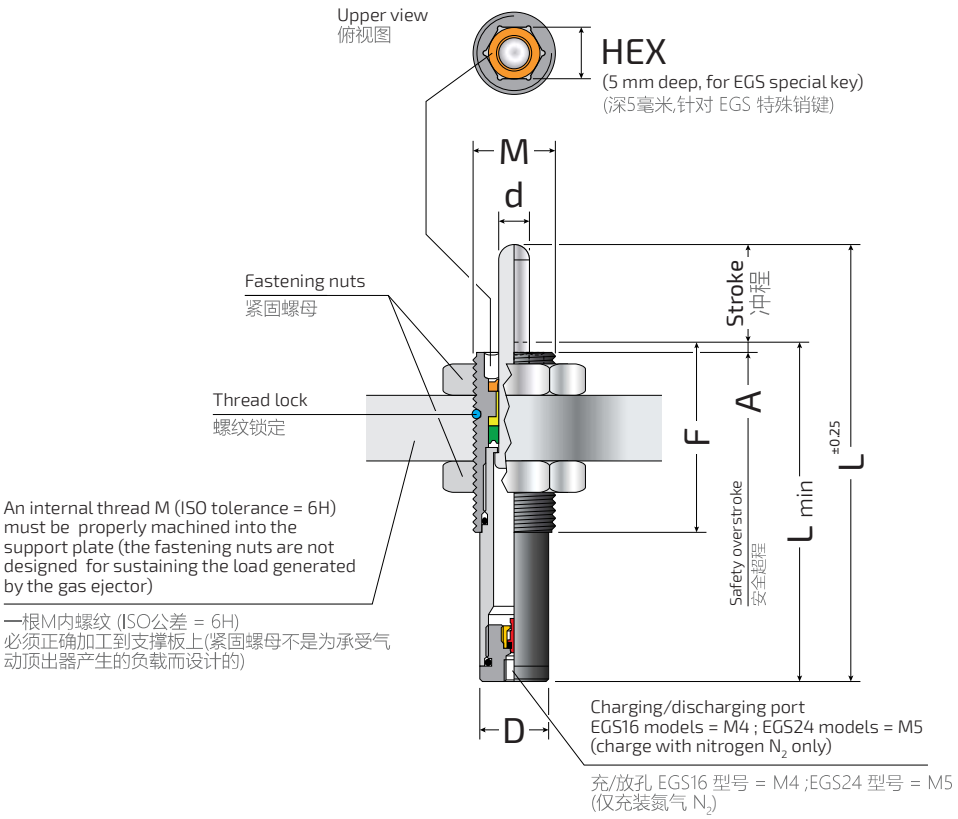
This gas spring series includes the models compliant with automotive standards / 该氮气弹簧系列包含符合以下汽车标准的型号

Ford	W-DX35-60M
VW	39D 549



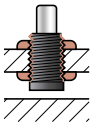
EGS series nitrogen gas ejectors feature compact length and several standard forces to choose from. EGS series nitrogen gas ejectors are self-lubricated.

EGS 系列氮气顶出器高度紧凑并具有多种标准力度可供选择。EGS 系列氮顶出器为自润滑型。



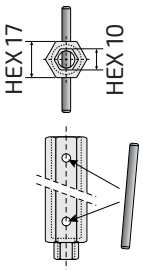
Technical notes / 技术说明
Important use instructions in the dedicated catalogue section.
重要使用说明位于目录中的相应部分。

Fixing possibilities / 可用紧固方式

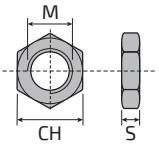


threaded hole on the die plate
在底板上使用螺纹孔

ACCESSORIES FOR INSTALLATION / 安装配件



	Model 型号
Special key for installation 安装特殊销键	**EGS-CH**



Model 型号	Description 说明	M	S mm	CH mm
EG-D-16	Fastening nut 紧固螺母	M16 x 1.5	8	24
EG-D-16-2		M16 x 2	8	24
EG-D-24		M24 x 1.5	10	36

SAFETY PROTECTIONS / 安全保护



UNCONTROLLED RETURN SPEED / 不受控返回速度



OVERSTROKE / 超程



OVERPRESSURE / 超压

EGS

Model 型号	MAX Stroke 最大冲程 mm	Lmin mm	L mm	M mm	F mm	A mm	d mm	D mm	HEX mm	bar (MPa)	daN	daN		Cycles per minute MAX 每分钟最多循环次数	Gas volume 气体体积 Litres	Weight 重量 kg
EGS16x1.5-10-...	10	55	65	M16 x 1.5	35	1	6	13.5	10	See table below 见下表		x	1.51	300	0.001	0.05
20-...	20	65	85										1.60	150	0.002	0.06
30-...	30	75	105										1.63	100	0.003	0.07
40-...	40	85	125										1.65	75	0.003	0.07
50-...	50	95	145										1.66	60	0.004	0.08
60-...	60	105	165										1.67	50	0.005	0.08
70-...	70	115	185										1.68	45	0.006	0.09
80-...	80	125	205										1.68	40	0.007	0.10
100-...	100	145	245										1.69	30	0.008	0.11
125-...	125	170	295										1.70	25	0.010	0.12
EGS16x2-10-...	10	55	65	M16 x 2	35	1	6	13.5	10	See table below 见下表		x	1.51	300	0.001	0.05
20-...	20	65	85										1.60	150	0.002	0.06
30-...	30	75	105										1.63	100	0.003	0.07
40-...	40	85	125										1.65	75	0.003	0.07
50-...	50	95	145										1.66	60	0.004	0.08
60-...	60	105	165										1.67	50	0.005	0.08
70-...	70	115	185										1.68	45	0.006	0.09
80-...	80	125	205										1.68	40	0.007	0.10
100-...	100	145	245										1.69	30	0.008	0.11
125-...	125	170	295										1.70	25	0.010	0.12
EGS24x1.5-10-...	10	55	65	M24 x 1.5	35	1	12	21.5	17	See table below 见下表		x	1.74	300	0.003	0.16
20-...	20	65	85										1.85	150	0.006	0.18
30-...	30	75	105										1.89	100	0.008	0.20
40-...	40	85	125										1.92	75	0.011	0.23
50-...	50	95	145										1.93	60	0.013	0.25
60-...	60	105	165										1.94	50	0.016	0.27
70-...	70	115	185										1.95	45	0.018	0.29
80-...	80	125	205										1.96	40	0.021	0.30
100-...	100	145	245										1.97	30	0.026	0.33
125-...	125	170	295										1.97	25	0.032	0.35

All the gas ejector models in this table are in accordance with Article 4.3 of the 2014/68/EU Pressure Equipment Directive (PED)
本表中所有气体顶出器的型号均符合欧盟 2014/68/EU 压力设备指令 (PED) 第 4.3 条中的规定

Basic code 底座代码	Force code 力度代码	bar (MPa)	daN	daN	Label color 铭牌颜色
EGS16x1.5-...-	4	12 (1.2)	4	See table above 见上表	Purple / 紫色
	6	20 (2.0)	6		Green / 绿色
	11	40 (4.0)	11		Blue / 蓝色
	21	75 (7.5)	21		Red / 红色
	42	150 (15.0)	42		Yellow / 黄色
	(other / 其它)	10 (1.0)-150 (15.0)	3-42		Black / 黑色
EGS16x2-...-	4	12 (1.2)	4	See table above 见上表	Purple / 紫色
	6	20 (2.0)	6		Green / 绿色
	11	40 (4.0)	11		Blue / 蓝色
	21	75 (7.5)	21		Red / 红色
	42	150 (15.0)	42		Yellow / 黄色
	(other / 其它)	10 (1.0)-150 (15.0)	3-42		Black / 黑色
EGS24x1.5-...-	23	20 (2.0)	23	See table above 见上表	Green / 绿色
	45	40 (4.0)	45		Blue / 蓝色
	85	75 (7.5)	85		Red / 红色
	170	150 (15.0)	170		Yellow / 黄色
	(other / 其它)	10 (1.0)-150 (15.0)	11-170		Black / 黑色

How to order
如何订购

EGS16x1.5-50-42
EGS nitrogen gas ejector with M16x1.5 threaded body, 50 mm maximum available stroke length, 42 daN initial force (150 bar / 15.0 MPa charging pressure), yellow label.
EGS 氮气顶出器, 带 M16x1.5 螺纹体, 最大可用冲程 50 mm, 初始力 42 daN (充气压力 150 bar / 15.0 MPa), 黄色标签。

EGS24x1.5-80-120
EGS nitrogen gas ejector with M24x1.5 threaded body, 80 mm maximum available stroke length, 120 daN initial force (custom), black label.
EGS 氮气顶出器, 带 M24x1.5 螺纹体, 最大可用冲程 80 mm, 初始力 120 daN (定制), 黑色标签。

ALL EGS MODELS ARE DISPOSABLE (REPAIR KIT NOT AVAILABLE) /
所有 EGS 型号均为一次性 产品(不供应维修套件)

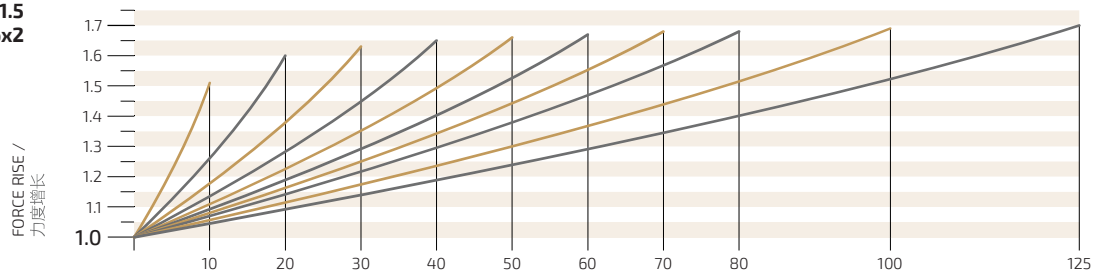
FORCE RISE VS. USED STROKE LENGTH CHARTS

力度增长与所用冲程的对照图表

The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

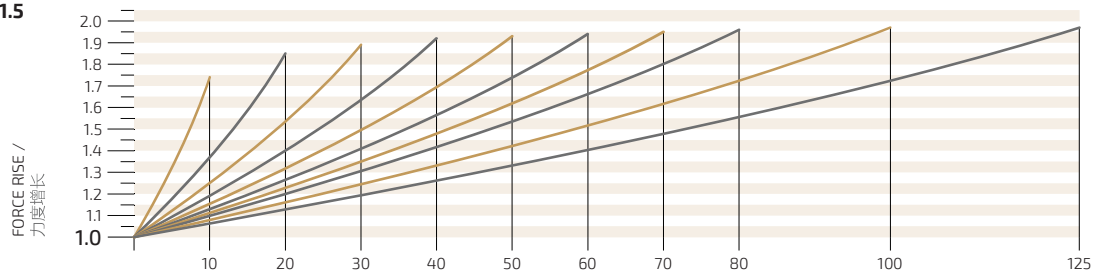
下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

EGS16x1.5
EGS16x2



STROKE LENGTH / 冲程 (毫米)

EGS24x1.5



STROKE LENGTH / 冲程 (毫米)

VGS

50~200

ISO 11901-1 VDI 3003 Part 2

This gas spring series includes the models compliant with automotive standards / 该氮气弹簧系列包含符合以下汽车标准的型号

BMW	B2 4007	**PSA**	E24.54.815.G
FCA	075.90.50	**Renault**	EM24.54.700
MB	B8 3180 220 000 002	**VW**	39D 878
Nissan	K32D2-2400-50		

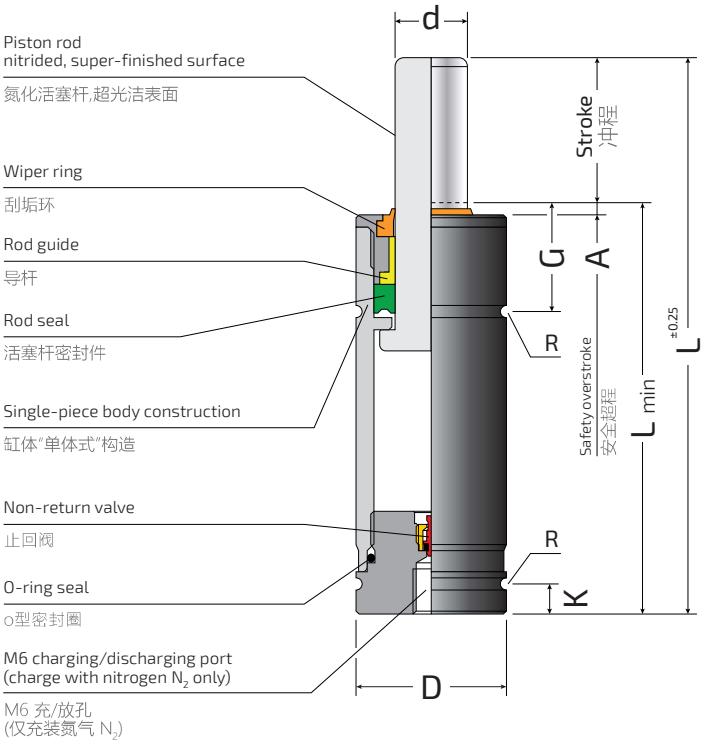
COMPACT POWER

COMPACT HEIGHT



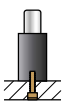
VGS series nitrogen gas springs feature standard dimensions for small diameters. With the VGS series nitrogen gas springs, Bordignon now ensures a great interchangeability and a superior reliability.
VGS series nitrogen gas springs are self-lubricated.

VGS 系列氮气弹簧具有用于小直径的标准尺寸。凭借 VGS 系列氮气弹簧, Bordignon 现可确保优良的互换性及卓越的可靠性。
VGS 系列氮气弹簧为自润滑型。

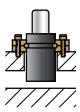


Technical notes / 技术说明
Important use instructions
in the dedicated catalogue section.
重要使用说明位于
目录中的相应部分。

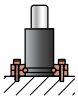
Fixing possibilities / 可用紧固方式



at the base
with screw
在底座上使用螺丝



with collar flange
使用环状法兰
FL

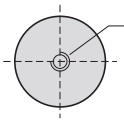


with collar flange (base)
使用环状法兰(底座)

FV
for VGS90 only
仅用于 *VGS90*

FL
for VGS200 only
仅用于 *VGS200*

GAS SPRING BASE / 气缸底座



Ma
for charging/discharging
for fixing
用于充/放
用于紧固

VGS50, VGS70,
VGS90, VGS200

SAFETY PROTECTIONS / 安全保护



UNCONTROLLED RETURN SPEED / 不受控返回速度



OVERSTROKE / 超程



OVERPRESSURE / 超压

VGS

Model 型号	MAX Stroke 最大冲程 mm	Lmin mm	L mm	D mm	d mm	G mm	A mm	R mm	K mm	Ma	bar (MPa)	daN	daN	Cycles per minute MAX 每分钟最多循环次数	Gas volume 气体体积 Litres	Weight 重量 kg
VGS50-07-...	7	49	56	12 ±0.1	6	17	1	0.8	-	M6 x 6	See table below 见下表	x	1.50	300	0.001	0.03
10-...	10	52	62										1.50	300	0.001	0.03
13-...	12.7	54.7	67.4										1.60	235	0.001	0.03
15-...	15	57	72										1.60	200	0.001	0.03
19-...	19	61	80										1.70	160	0.002	0.03
25-...	25	67	92										1.70	120	0.002	0.03
38-...	38	80	118										1.80	80	0.003	0.04
50-...	50	92	142										1.80	60	0.004	0.05
63-...	63.5	108.5	172										1.80	50	0.005	0.06
75-...	75	120	195										1.80	40	0.005	0.06
80-...	80	125	205										1.80	40	0.006	0.07
100-...	100	145	245										1.90	30	0.007	0.08
125-...	125	170	295										1.90	25	0.008	0.09
VGS70-07-...	7	49	56	15 ±0.1	7	17	1	0.8	-	M6 x 6	See table below 见下表	x	1.43	300	0.001	0.04
10-...	10	52	62										1.50	300	0.001	0.05
13-...	12.7	54.7	67.4										1.50	235	0.002	0.05
15-...	15	57	72										1.57	200	0.002	0.05
19-...	19	61	80										1.57	160	0.002	0.05
25-...	25	67	92										1.64	120	0.003	0.06
38-...	38.1	80.1	118.2										1.71	80	0.004	0.07
50-...	50	92	142										1.71	60	0.005	0.08
63-...	63.5	108.5	172										1.71	50	0.007	0.09
75-...	75	120	195										1.71	40	0.008	0.10
80-...	80	125	205										1.71	40	0.008	0.10
100-...	100	145	245										1.79	30	0.010	0.12
125-...	125	170	295										1.79	25	0.013	0.14
VGS90-07-...	7	49	56	19 +0/-0.3	8	17	1	1	6	M6 x 8	See table below 见下表	x	1.39	300	0.002	0.07
10-...	10	52	62										1.39	300	0.002	0.07
13-...	12.7	54.7	67.4										1.44	235	0.003	0.08
15-...	15	57	72										1.44	200	0.003	0.08
25-...	25	67	92										1.50	120	0.005	0.09
38-...	38.1	80.1	118.2										1.50	80	0.007	0.11
50-...	50	92	142										1.50	60	0.009	0.12
63-...	63.5	108.5	172										1.50	50	0.012	0.14
80-...	80	125	205										1.50	40	0.015	0.15
100-...	100	145	245										1.50	30	0.019	0.17
125-...	125	170	295										1.50	25	0.023	0.20
VGS200-07-...	7	49	56	25 +0/-0.3	12	17	1	1	5	M6 x 9	See table below 见下表	x	1.43	300	0.004	0.12
10-...	10	52	62										1.48	300	0.005	0.13
13-...	12.7	54.7	67.4										1.50	235	0.006	0.13
15-...	15	57	72										1.53	200	0.006	0.14
16-...	16	58	74										1.53	190	0.007	0.14
25-...	25	67	92										1.55	120	0.010	0.16
38-...	38.1	80.1	118.2										1.60	80	0.014	0.19
50-...	50	92	142										1.60	60	0.018	0.20
63-...	63.5	108.5	172										1.60	50	0.024	0.23
80-...	80	125	205										1.60	40	0.029	0.26
100-...	100	145	245										1.60	30	0.036	0.30
125-...	125	170	295										1.63	25	0.044	0.34

All the gas ejector models in this table are in accordance with Article 4.3 of the 2014/68/EU Pressure Equipment Directive (PED)
本表中所有气体顶出器的型号均符合欧盟 2014/68/EU 压力设备指令 (PED) 第 4.3 条中的规定

Basic code 底座代码	Force code 力度代码	bar (MPa)	daN	daN	Label color 铭牌颜色
VGS50-...-	13	45 (4.5)	13	See table above 见上表	Green / 绿色
	25	90 (9.0)	25		Blue / 蓝色
	38	135 (13.5)	38		Red / 红色
	50	180 (18.0)	50		Yellow / 黄色
	(other / *altro*)	20 (2.0)-180 (18.0)	6-50		Black / 黑色
VGS70-...-	18	45 (4.5)	18	See table above 见上表	Green / 绿色
	35	90 (9.0)	35		Blue / 蓝色
	50	135 (13.5)	50		Red / 红色
	70	180 (18.0)	70		Yellow / 黄色
	(other / 其它)	20 (2.0)-180 (18.0)	8-70		Black / 黑色
VGS90-...-	5	10 (1.0)	5	See table above 见上表	Orange / 橙色
	10	20 (2.0)	10		Purple / 紫色
	30	60 (6.0)	30		Green / 绿色
	50	100 (10.0)	50		Blue / 蓝色
	70	140 (14.0)	70		Red / 红色
	90	180 (18.0)	90		Yellow / 黄色
	(other / 其它)	10 (1.0)-180 (18.0)	5-90		Black / 黑色
VGS200-...-	17	15 (1.5)	17	See table above 见上表	Orange / 橙色
	28	25 (2.5)	28		Purple / 紫色
	50	45 (4.5)	50		Green / 绿色
	100	90 (9.0)	100		Blue / 蓝色
	150	135 (13.5)	150		Red / 红色
	200	180 (18.0)	200		Yellow / 黄色
	(other / 其它)	10 (1.0)-180 (18.0)	11-200		Black / 黑色

How to order
如何订购

VGS90-50-90
VGS nitrogen gas spring with 19 mm body diameter, 50 mm maximum available stroke length, 90 daN initial force (180 bar / 18.0 MPa charging pressure), yellow label.
VGS 氮气弹簧直径 19 mm, 最大可用冲程 50 mm, 初始力 90 daN (充气压力 180 bar / 18.0 MPa),黄色标签。

VGS200-80-175
VGS nitrogen gas spring with 25 mm body diameter, 80 mm maximum available stroke length, 175 daN initial force (custom), black label.
VGS 氮气弹簧直径 25 mm, 最大可用冲程 80 mm, 初始力 175 daN (定制),黑色标签。

REPAIR KIT / 维修套件

Gas spring code 气缸代码	Repair kit code 维修套件代码
VGS90-...	**KR/VGS90**
VGS200-...	**KR/VGS200**

VGS50-... AND VGS70-... MODELS ARE DISPOSABLE (REPAIR KIT NOT AVAILABLE) /
VGS50 和 VGS70 所有型号均为一次性 产品(不供应维修套件)

Download repair instructions from www.bordignon.com /
可从网站 www.bordignon.com 上下载维修说明

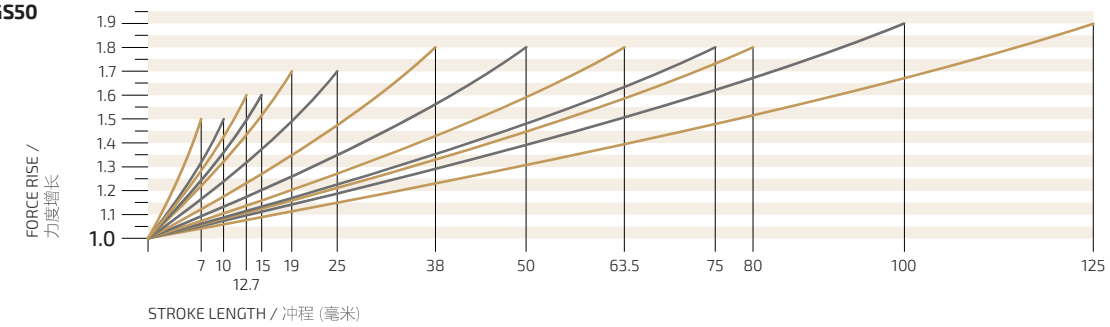
FORCE RISE VS. USED STROKE LENGTH CHARTS

The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

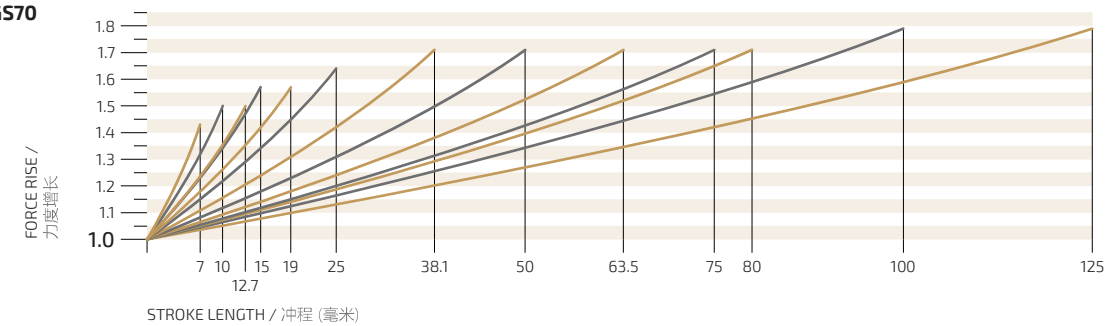
力度增长与所用冲程的对照图表

下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

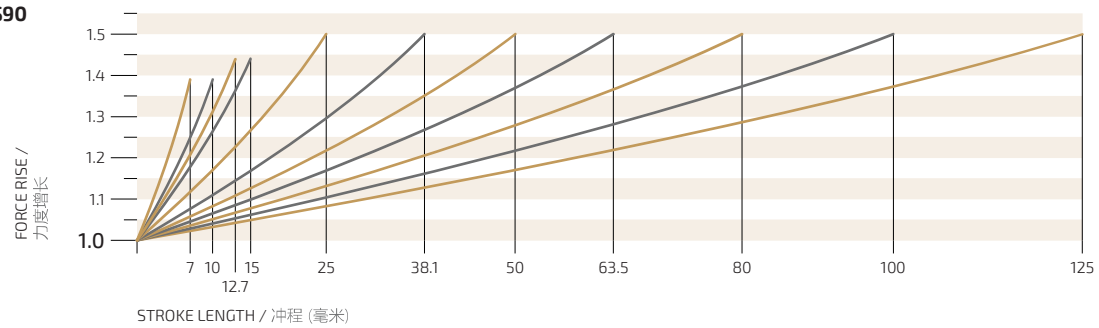
VGS50



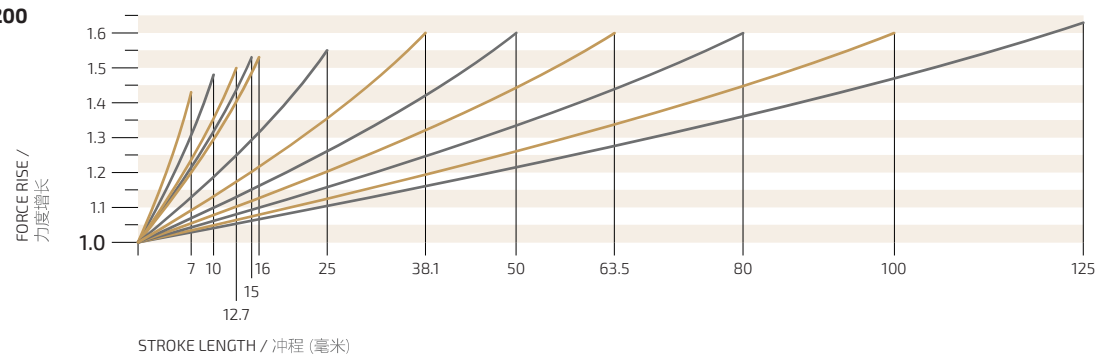
VGS70



VGS90



VGS200



AGS

170-320

ISO 11901-3 VDI 3003 Part 3

This gas spring series includes the models compliant with automotive standards / 该氮气弹簧系列包含符合以下汽车标准的型号

BMW	B2 4005	**MB**	B8 3180 220 000 004
FCA	075.90.60	**VW**	39D 997

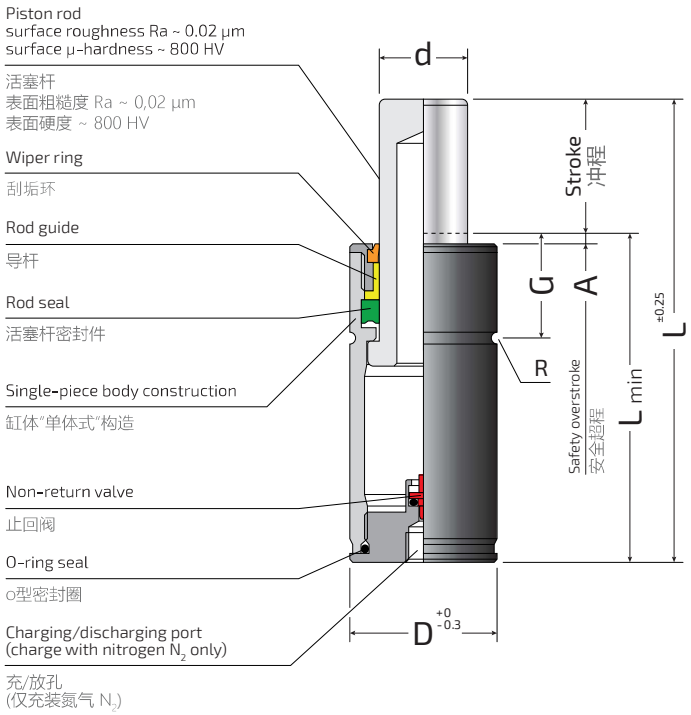
COMPACT POWER

COMPACT HEIGHT



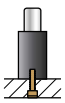
AGS series nitrogen gas springs are highly appreciated in the automotive industry thanks to the compact dimensions, the fixing and linking possibilities. With the AGS series nitrogen gas springs, Bordignon now ensures a great interchangeability and a superior reliability.
AGS series nitrogen gas springs are self-lubricated.

AGS 系列氮气弹簧因其紧凑的尺寸以及不同紧固方式和进行系统联动的各种可能性而在汽车工业内饱受赞誉。凭借 AGS 系列氮气弹簧, Bordignon 现可确保优良的互换性及卓越的可靠性。
AGS 系列氮气弹簧为自润滑型。

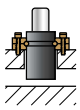


Technical notes / 技术说明
Important use instructions
in the dedicated catalogue section.
重要使用说明位于
目录中的相应部分。

Fixing possibilities / 可用紧固方式

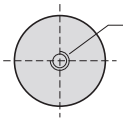


at the base
with screw
在底座上使用螺丝



with collar flange
使用环状法兰
FL

GAS SPRING BASE / 气缸底座



AGS170, AGS320

SAFETY PROTECTIONS / 安全保护



UNCONTROLLED RETURN SPEED / 不受控返回速度



OVERSTROKE / 超程



OVERPRESSURE / 超压

AGS 170-320

Model 型号	MAX Stroke 最大冲程 mm	Lmin mm	L mm	D mm	d mm	G mm	A mm	R mm	Ma	bar (MPa)	daN	daN	Cycles per minute MAX 每分钟最多循环次数	Gas volume 气体体积 Litres	Weight 重量 kg
AGS170-07-A	7	37	44	19	11	17	1	1	M6 x 5	180 (18.0)	170	290	300	0.002	0.06
10-A	10	40	50									295	300	0.003	0.06
13-A	13	43	56									300	230	0.003	0.07
15-A	15	45	60									310	200	0.004	0.07
19-A	19	49	68									320	160	0.005	0.08
25-A	25	55	80									330	120	0.006	0.08
32-A	32	62	94									340	90	0.007	0.09
38-A	38	68	106									340	80	0.009	0.10
50-A	50	80	130									350	60	0.011	0.12
63-A	63	93	156									355	50	0.014	0.14
75-A	75	110	185									360	40	0.017	0.16
80-A	80	115	195									360	40	0.018	0.16
100-A	100	135	235									360	30	0.023	0.19
125-A	125	160	285									360	25	0.028	0.23
AGS320-07-A	7	37	44	25	15	17	1	1	M6 x 5	180 (18.0)	320	490	300	0.004	0.10
10-A	10	40	50									490	300	0.005	0.11
13-A	13	43	56									550	230	0.006	0.12
15-A	15	45	60									550	200	0.007	0.12
19-A	19	49	68									580	160	0.008	0.13
25-A	25	55	80									600	120	0.011	0.14
32-A	32	62	94									630	90	0.013	0.16
38-A	38	68	106									640	80	0.015	0.17
50-A	50	80	130									640	60	0.020	0.20
63-A	63	93	156									640	50	0.025	0.23
75-A	75	110	185									640	40	0.031	0.26
80-A	80	115	195									640	40	0.033	0.27
100-A	100	135	235									650	30	0.040	0.32
125-A	125	160	285									660	25	0.050	0.38

All the gas spring models in this table are in accordance with Article 4.3 of the 2014/68/EU Pressure Equipment Directive (PED)
本表中所有氮气缸的型号均符合欧盟 2014/68/EU 压力设备指令 (PED) 第 4.3 条中的规定

REPAIR KIT / 维修套件

Gas spring code 气缸代码	Repair kit code 维修套件代码
AGS170-...-A	**KR/AGS170-A**
AGS320-...-A	**KR/AGS320-A**

Download repair instructions from www.bordignon.com /
可从网站 www.bordignon.com 上下载维修说明

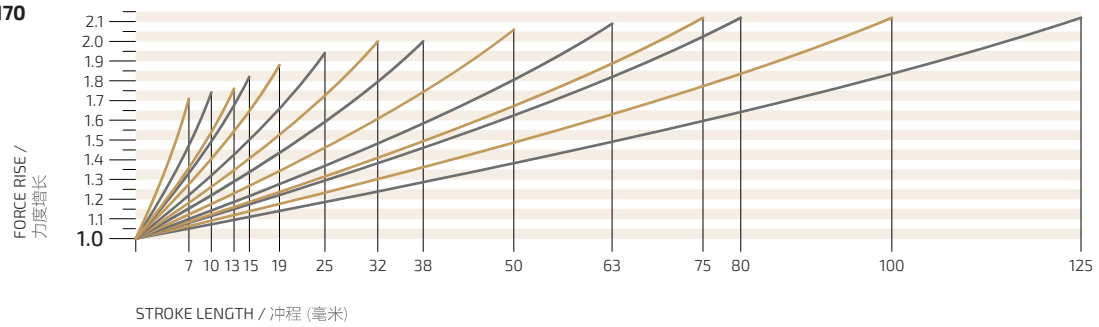
FORCE RISE VS. USED STROKE LENGTH CHARTS

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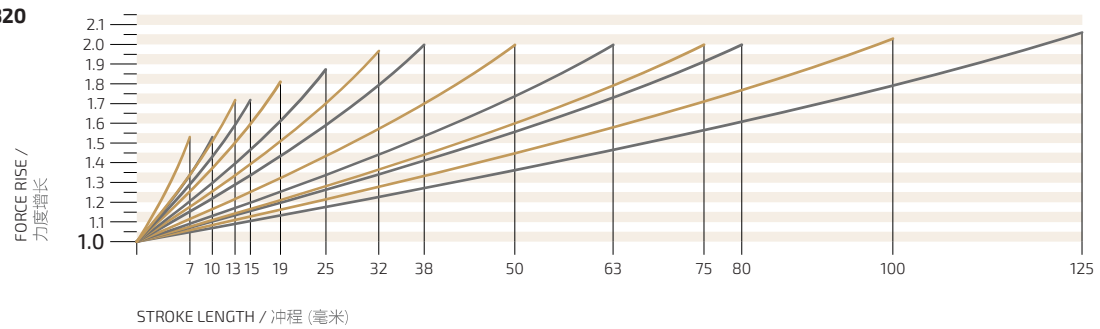
力度增长与所用冲程的对照图表

下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)。

AGS170



AGS320



AGS

350~2400

ISO 11901-3 VDI 3003 Part 3

This gas spring series includes the models compliant with automotive standards / 该氮气弹簧系列包含符合以下汽车标准的型号

BMW	B2 4005	**Nissan**	K 32 H
FCA	075.90.60	**PSA**	E24.54.815.G
Ford	W-DX35-6204	**VW**	39D 997
MB	B8 3180 220 000 004		

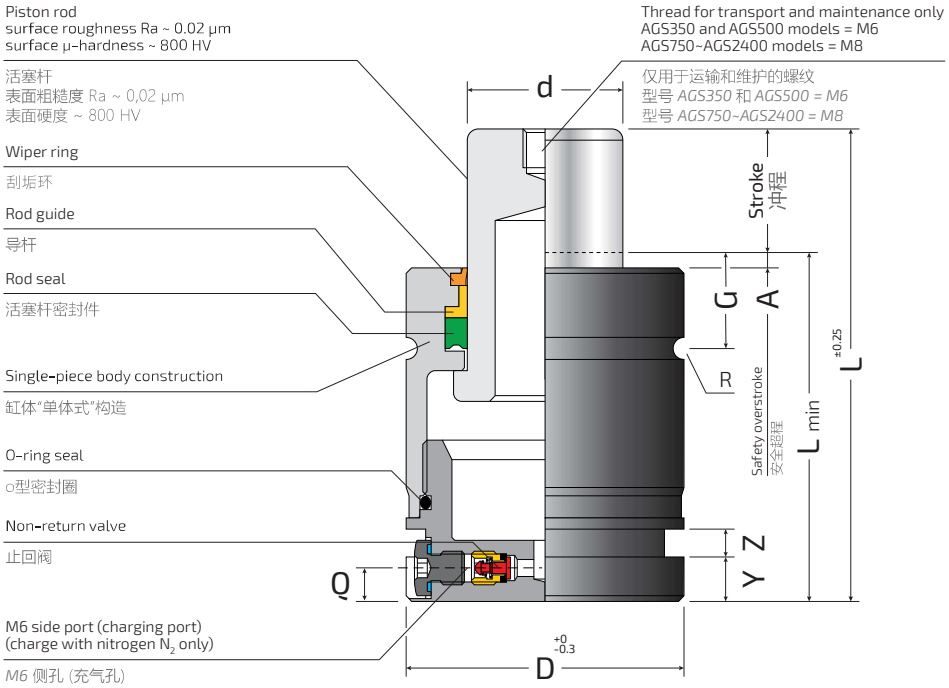
COMPACT POWER

COMPACT HEIGHT



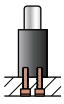
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AGS 系列氮气弹簧为自润滑型。

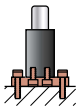


Technical notes / 技术说明
Important use instructions
in the dedicated catalogue section.
重要使用说明位于
目录中的相应部分。

Fixing possibilities / 可用紧固方式



at the base
with screw
在底座上使用螺丝



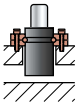
with base-plate
使用底板
BF, BFA, BFB
for AGS750 ~ AGS2400
针对 *AGS750 ~ AGS2400*



with half-flanges
使用对开法兰
SF, SFA



with foot brackets
使用支架
ST, STA
for AGS500 ~ AGS2400
针对 *AGS500 ~ AGS2400*

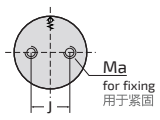


with collar flange
使用环状法兰
FL, FLQ

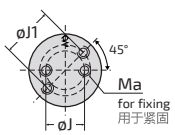


with front support
使用前支撑件
FT, FTA
(Not for all AGS models)
(不适用所有 AGS 型号)

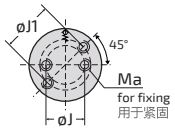
GAS SPRING BASE / 气缸底座



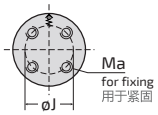
AGS350, AGS750, AGS1000



AGS500



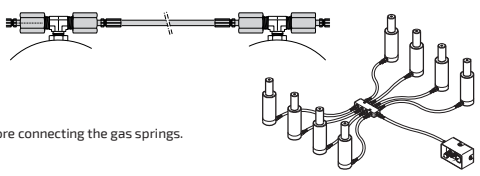
AGS1500



AGS2400

LINKING TO OPEN SYSTEM / 系统连接

	AGS350~AGS2400 (M6 side port / M6 侧孔)	
Hoses 管子	**ATM**	**ATNM**
Gas spring-hose fittings 氮气缸-管子连接件	**ARM**	**ARNM**



ATTENTION! Follow the instructions in the "LINKED SYSTEM" section before connecting the gas springs.
注意!连接气缸前请参阅 "联动系统" 章节中的说明。

LINKING TO "OV SYSTEM" / 连接至 "OV系统"

AGS350~AGS2400 models are also available as "OV-version" (without valve, for direct connection to alternative manifold system).
See dedicated catalogue section.
AGS350~AGS2400 型号还提供 "OV版本" (不带阀门, 用于直接连接到歧管替代系统)。
请参阅目录中的相关章节。



SAFETY PROTECTIONS / 安全保护



UNCONTROLLED RETURN SPEED / 不受控返回速度



OVERSTROKE / 超程



OVERPRESSURE / 超压

AGS 350~2400

Model 型号	MAX Stroke 最大冲程 mm	Lmin mm	L mm	D mm	d mm	G mm	A mm	R mm	Y mm	Z mm	Q mm	Ma	J mm	J1 mm	bar (MPa)	daN	daN	Cycles per minute MAX 每分钟最多 循环次数	Gas volume 气体 体积 Litres	Weight 重量 kg
AGS350-10-A	10	40	50	32	16	12.5	2	1	4	4	6	M6 x 6 (2x)	20	-	180 (18.0)	360	570	300	0.006	0.19
13-A	13	43	56														570	230	0.007	0.20
16-A	16	46	62														580	190	0.009	0.21
19-A	19	49	68														580	160	0.011	0.22
25-A	25	55	80														580	120	0.015	0.24
32-A	32	62	94														590	90	0.019	0.26
38-A	38	68	106														590	80	0.022	0.28
50-A	50	80	130														590	60	0.029	0.32
63-A	63	93	156														590	50	0.037	0.36
75-A	75	105	180														590	40	0.044	0.40
80-A	80	110	190														590	40	0.047	0.42
100-A	100	130	230														590	30	0.059	0.49
125-A	125	155	280														610	25	0.074	0.58
AGS500-10-A	10	40	50	38	20	12.5	2	1	4	4	6	M6 x 6 (2x or 2x) *(2x o 2x)*	20	25	150 (15.0)	470	720	300	0.009	0.26
13-A	13	43	56														720	230	0.012	0.28
16-A	16	46	62														730	190	0.014	0.29
19-A	19	49	68														730	160	0.017	0.30
25-A	25	55	80														740	120	0.023	0.32
32-A	32	62	94														740	90	0.029	0.35
38-A	38	68	106														740	80	0.035	0.38
50-A	50	80	130														750	60	0.046	0.43
63-A	63	93	156														750	50	0.059	0.48
75-A	75	105	180														750	40	0.070	0.52
80-A	80	110	190														750	40	0.075	0.55
100-A	100	130	230														750	30	0.094	0.63
125-A	125	155	280														760	25	0.117	0.73
AGS750-10-A	10	42	52	45	25	16.5	2	1	4	4	6	M8 x 6 (2x)	20	-	150 (15.0)	740	1200	300	0.013	0.40
13-A	13	45	58														1230	230	0.017	0.42
16-A	16	48	64														1230	190	0.021	0.44
19-A	19	51	70														1250	160	0.025	0.45
25-A	25	57	82														1250	120	0.033	0.49
32-A	32	64	96														1250	90	0.042	0.53
38-A	38	70	108														1250	80	0.050	0.57
50-A	50	82	132														1250	60	0.066	0.64
63-A	63	95	158														1260	50	0.084	0.72
75-A	75	107	182														1260	40	0.100	0.79
80-A	80	112	192														1260	40	0.106	0.82
100-A	100	132	232														1260	30	0.133	0.95
125-A	125	157	282														1260	25	0.167	1.10
AGS1000-13-A	13	51	64	50	28	17.5	3	2	8	5	6	M8 x 6 (2x)	20	-	150 (15.0)	920	1540	230	0.02	0.57
16-A	16	54	70														1540	190	0.03	0.59
19-A	19	57	76														1560	160	0.03	0.61
25-A	25	63	88														1580	120	0.04	0.66
32-A	32	70	102														1580	90	0.05	0.71
38-A	38	76	114														1580	80	0.06	0.75
50-A	50	88	138														1580	60	0.08	0.84
63-A	63	101	164														1580	50	0.11	0.93
75-A	75	113	188														1580	40	0.13	1.02
80-A	80	118	198														1580	40	0.13	1.06
100-A	100	138	238														1600	30	0.17	1.21
125-A	125	163	288														1600	25	0.21	1.40
AGS1500-10-A	10	54	64	63	36	19	3	2	8	5	6	M8 x 6 (2x or 4x) *(2x o 4x)*	20	40	150 (15.0)	1530	2220	300	0.03	0.96
13-A	13	57	70														2280	230	0.04	0.99
16-A	16	60	76														2300	190	0.05	1.02
19-A	19	63	82														2350	160	0.06	1.06
25-A	25	69	94														2390	120	0.08	1.12
32-A	32	76	108														2450	90	0.10	1.20
38-A	38	82	120														2450	80	0.11	1.26
50-A	50	94	144														2500	60	0.15	1.39
63-A	63	107	170														2510	50	0.18	1.52
75-A	75	119	194														2530	40	0.22	1.65
80-A	80	124	204														2550	40	0.23	1.71
100-A	100	144	244														2580	30	0.29	1.92
125-A	125	169	294														2640	25	0.35	2.24
AGS2400-16-A	16	61	77	75	45	21	3	2.5	8	5	6	M8 x 6 (4x)	40	-	150 (15.0)	2385	3800	190	0.07	1.54
19-A	19	64	83														3850	160	0.08	1.58
25-A	25	70	95														3900	120	0.11	1.68
32-A	32	77	109														4000	90	0.14	1.79
38-A	38	83	121														4050	80	0.16	1.89
50-A	50	95	145														4100	60	0.21	2.09
63-A	63	108	171														4100	50	0.26	2.30
75-A	75	120	195														4150	40	0.31	2.49
80-A	80	125	205														4200	40	0.33	2.57
100-A	100	145	245														4200	30	0.41	2.90
125-A	125	170	295														4200	25	0.51	3.28

All the gas spring models in this table are in accordance with Article 4.3 of the 2014/68/EU Pressure Equipment Directive (PED)
本表中所有氮气缸的型号均符合欧盟 2014/68/EU 压力设备指令 (PED) 第 4.3 条中的规定

"L-VERSION" (FOR LINKED SYSTEM) / "L 版本" (用于联动系统)

When the AGS gas springs are to be used in a linked system, make sure to order the "L-version" by adding "-L" after the gas spring code. The "L-version" gas springs are supplied already discharged and without valve, ready for the connection to linked system.
Example: "**AGS1000-50-A-L**"

当 AGS 气缸要用于联动系统时, 请务必在气缸代码后添加 "-L" 字样来订购 "L 版本"。"L 型" 气缸已排气且不带阀门, 可随时连接至联动系统。
例如: "***AGS1000-50-A-L***"



REPAIR KIT / 维修套件

Gas spring code 气缸代码	Repair kit code 维修套件代码
AGS350-...-A	**KR/AGS350-A**
AGS500-...-A	**KR/AGS500-A**
AGS750-...-A	**KR/AGS750-A**
AGS1000-...-A	**KR/AGS1000-A**
AGS1500-...-A	**KR/AGS1500-A**
AGS2400-...-A	**KR/AGS2400-A**

Download repair instructions from www.bordignon.com /
可从网站 www.bordignon.com 上下载维修说明

AGS 350~2400

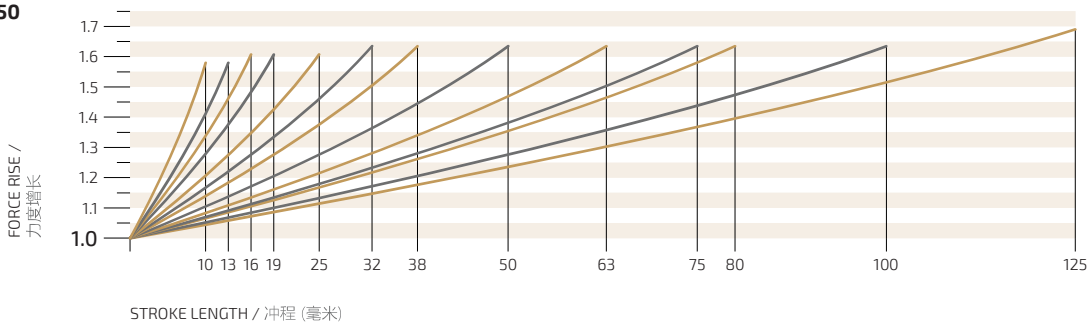
FORCE RISE VS. USED STROKE LENGTH CHARTS

The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

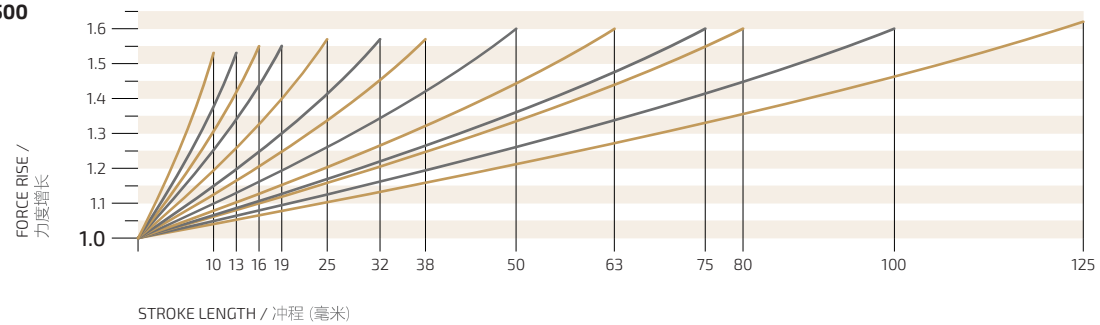
力度增长与所用冲程的对照图表

下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

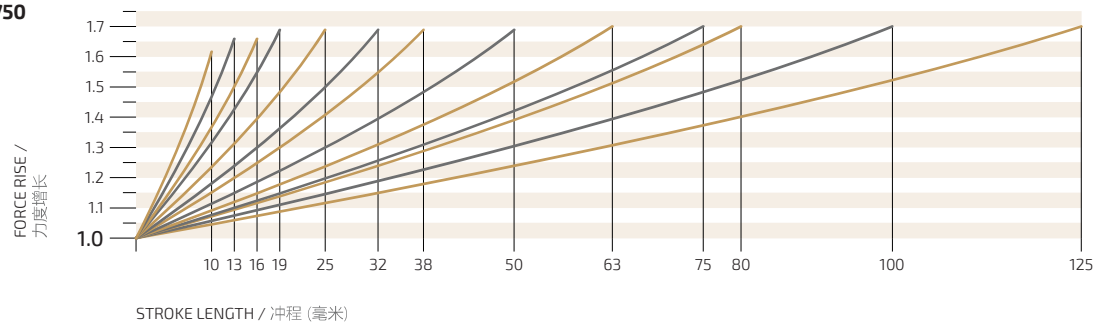
AGS350



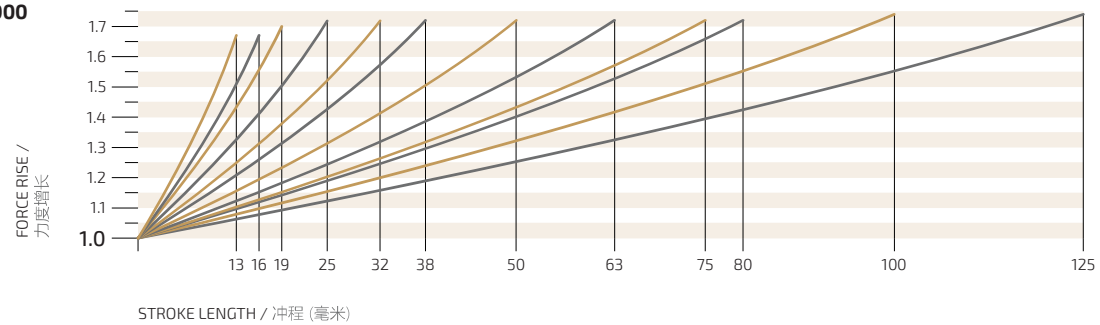
AGS500



AGS750



AGS1000



AGS 350~2400

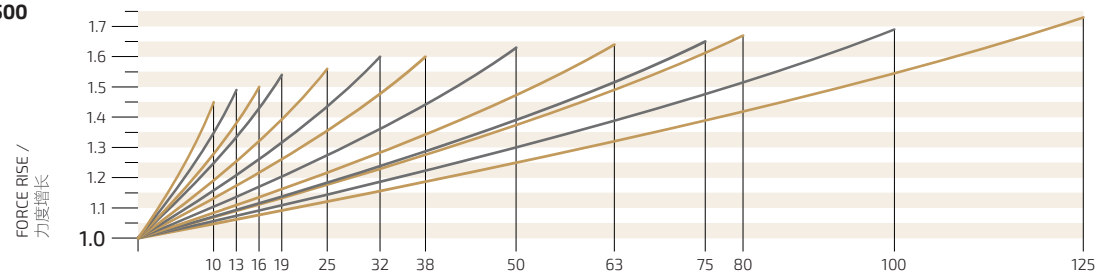
FORCE RISE VS. USED STROKE LENGTH CHARTS

力度增长与所用冲程的对照图表

The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

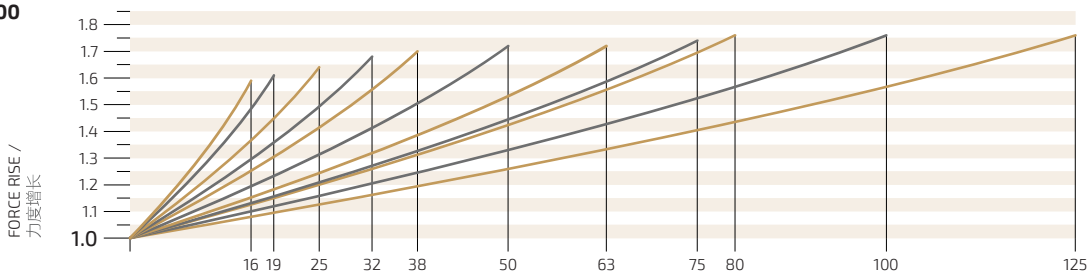
下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

AGS1500



STROKE LENGTH / 冲程 (毫米)

AGS2400



STROKE LENGTH / 冲程 (毫米)

AGS

4200~20000

ISO 11901-3 VDI 3003 Part 3

This gas spring series includes the models compliant with automotive standards / 该氮气弹簧系列包含符合以下汽车标准的型号

BMW	B2 4005	**MB**	B8 3180 220 000 004
FCA	075.90.60	**Nissan**	K 32 H
Ford	W-DX35-6204	**PSA**	E24.54.815.G
Mazda	PG 24D	**VW**	39D 997

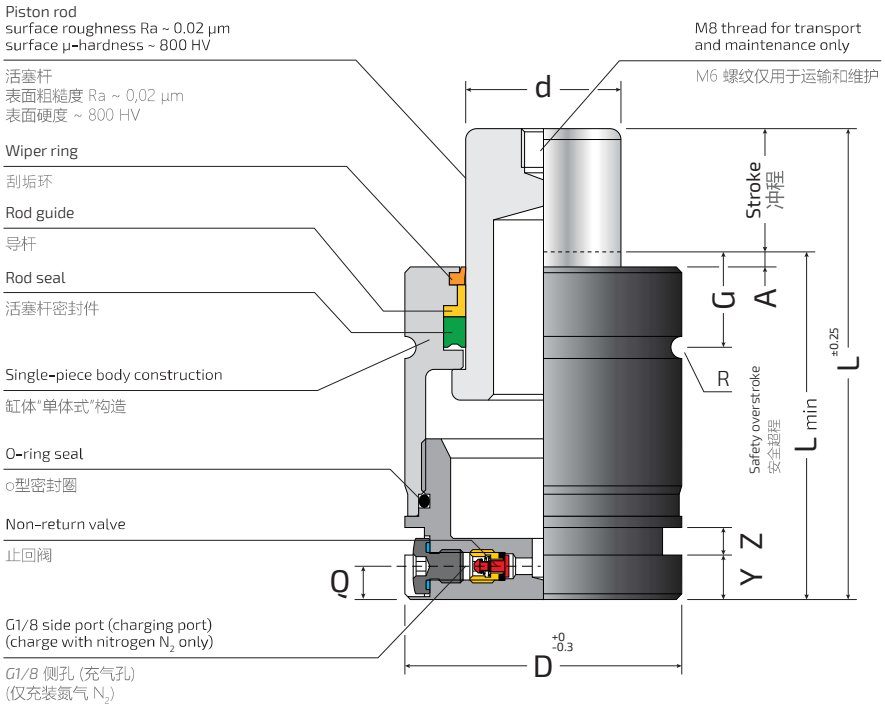
COMPACT POWER

COMPACT HEIGHT



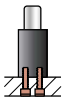
AGS series nitrogen gas springs are highly appreciated in the automotive industry thanks to the compact dimensions, the fixing and linking possibilities. With the AGS series nitrogen gas springs, Bordignon now ensures a great interchangeability and a superior reliability.
AGS series nitrogen gas springs are self-lubricated.

AGS 系列氮气弹簧因其紧凑的尺寸以及不同紧固方式和进行系统联动的各种可能性而在汽车工业内饱受赞誉。凭借 AGS 系列氮气弹簧, Bordignon 现可确保优良的互换性及卓越的可靠性。
AGS 系列氮气弹簧为自润滑型。

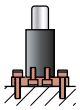


Technical notes / 技术说明
Important use instructions
in the dedicated catalogue section.
重要使用说明位于
目录中的相应部分。

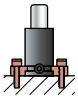
Fixing possibilities / 可用紧固方式



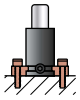
at the base
with screw
在底座上使用螺丝



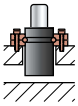
with base-plate
使用底板
BF, BFA, BFB



with half-flanges
使用对开法兰
SF, SFA



with foot brackets
使用支架
ST, STA
(Not for all AGS models)
(不适用所有 AGS 型号)

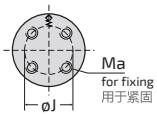


with collar flange
使用环状法兰
FL, FLQ



with front support
使用前支撑件
FT, FTA
(Not for all AGS models)
(不适用所有 AGS 型号)

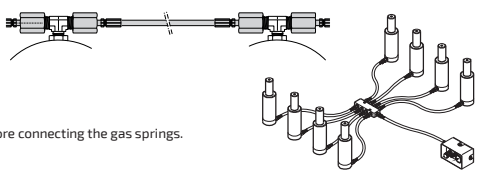
GAS SPRING BASE / 气缸底座



AGS4200~AGS20000

LINKING TO OPEN SYSTEM / 系统连接

	AGS4200~AGS20000 (G1/8 side port / G1/8 侧孔)		
Hoses 管子	**ATM**	**ATN**	**AT**
Gas spring-hose fittings 氮气缸-管子连接件	**ARM**	**ARN**	**AR**



ATTENTION! Follow the instructions in the "LINKED SYSTEM" section before connecting the gas springs.
注意!连接气缸前请参阅 "联动系统" 章节中的说明。

LINKING TO "OV SYSTEM" / 连接至 "OV系统"

AGS4200~AGS20000 models are also available as "OV-version" (without valve, for direct connection to alternative manifold system).
See dedicated catalogue section.
AGS4200~AGS20000 型号还提供 "OV版本" (不带阀门, 用于直接连接到歧管替代系统)。
请参阅目录中的相关章节。



SAFETY PROTECTIONS / 安全保护



UNCONTROLLED RETURN SPEED / 不受控返回速度



OVERSTROKE / 超程



OVERPRESSURE / 超压

AGS 4200~20000

Model 型号	MAX Stroke 最大冲程 mm	Lmin mm	L mm	D mm	d mm	G mm	A mm	R mm	Y mm	Z mm	Q mm	Ma	J mm	bar (MPa)	daN	daN	Cycles per minute MAX 每分钟最多循环次数	Gas volume 气体体积 Litres	Weight 重量 kg
AGS4200-16-A	16	74	90	95	60	24	3	2.5	8	5	10.5	M8 x 12 (4x)	60	150 (15.0)	4240	6800	190	0.13	3.13
19-A	19	77	96													6800	160	0.15	3.21
25-A	25	83	108													7000	120	0.19	3.37
32-A	32	90	122													7300	90	0.24	3.55
38-A	38	96	134													7300	80	0.28	3.69
50-A	50	108	158													7500	60	0.36	3.98
63-A	63	121	184													7500	50	0.45	4.30
75-A	75	133	208													7600	40	0.54	4.59
80-A	80	138	218													7700	40	0.57	4.72
100-A	100	158	258													7800	30	0.71	5.22
125-A	125	183	308													7900	25	0.88	5.85
AGS6600-16-A	16	84	100	120	75	25.5	3	2.5	8	5	10.5	M10 x 12 (4x)	80	150 (15.0)	6630	9400	190	0.22	5.67
19-A	19	87	106													9600	160	0.25	5.81
25-A	25	93	118													10100	120	0.31	6.08
32-A	32	100	132													10400	90	0.38	6.39
38-A	38	106	144													10500	80	0.44	6.66
50-A	50	118	168													10700	60	0.56	7.21
63-A	63	131	194													11200	50	0.69	7.79
75-A	75	143	218													11300	40	0.81	8.32
80-A	80	148	228													11300	40	0.86	8.53
100-A CE	100	168	268													11400	30	1.07	9.45
125-A CE	125	193	318													11500	25	1.32	10.57
AGS9500-19-A	19	97	116	150	90	27.5	3	2.5	8	5	10.5	M10 x 16 (4x)	100	150 (15.0)	9540	16000	160	0.35	10.85
25-A	25	103	128													16300	120	0.45	11.23
32-A	32	110	142													16500	90	0.56	11.69
38-A	38	116	154													16600	80	0.65	12.06
50-A	50	128	178													16800	60	0.85	12.84
63-A CE	63	141	204													17000	50	1.05	13.67
75-A CE	75	153	228													17000	40	1.24	14.45
80-A CE	80	158	238													17100	40	1.32	14.77
100-A CE	100	178	278													17100	30	1.64	16.05
125-A CE	125	203	328													17200	25	2.04	17.67
AGS20000-19-A	19	129	148	195	130	33.5	3	2.5	8	8	15	M12 x 18 (4x)	120	150 (15.0)	19910	30400	160	0.90	23.29
25-A CE	25	135	160													31600	120	1.08	23.92
32-A CE	32	142	174													32600	90	1.29	24.66
38-A CE	38	148	186													33300	80	1.47	25.30
50-A CE	50	160	210													34400	60	1.83	26.55
63-A CE	63	173	236													35100	50	2.22	27.91
75-A CE	75	185	260													35600	40	2.58	29.17
80-A CE	80	190	270													35800	40	2.73	29.69
100-A CE	100	210	310													36400	30	3.33	31.80
125-A CE	125	235	360													36900	25	4.08	34.42

CE The gas spring models for which the CE symbol is indicated have an internal gas volume > 1 litre. They fall into Category II of the 2014/68/EU Pressure Equipment Directive (PED).
All the other gas spring models in this table are in accordance with Article 4.3 of the 2014/68/EU Pressure Equipment Directive (PED).
注有 CE 符号的气缸型号内部气体体积>1升。属于 2014/68/UE 压力设备指令 (PED) 的II类。
本表中所有其它气缸型号均符合欧盟 2014/68/EU 压力设备指令 (PED) 第4.3条中的规定。

"L-VERSION" (FOR LINKED SYSTEM) / "L 版本" (用于联动系统)

When the AGS gas springs are to be used in a linked system, make sure to order the "L-version" by adding "-L" after the gas spring code. The "L-version" gas springs are supplied already discharged and without valve, ready for the connection to linked system.
Example: "**AGS6600-50-A-L**"

当 AGS 气缸要用于联动系统时, 请务必在气缸代码后添加 "-L" 字样来订购 "L 版本"。"L 型" 气缸已排气且不带阀门, 可随时连接至联动系统。
例如: "***AGS6600-50-A-L***"



REPAIR KIT / 维修套件

Gas spring code 气缸代码	Repair kit code 维修套件代码
AGS4200-...-A	**KR/AGS4200-A**
AGS6600-...-A	**KR/AGS6600-A**
AGS9500-...-A	**KR/AGS9500-A**
AGS20000-...-A	**KR/AGS20000-A**

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可从网站 www.bordignon.com 上下载维修说明

AGS 4200~20000

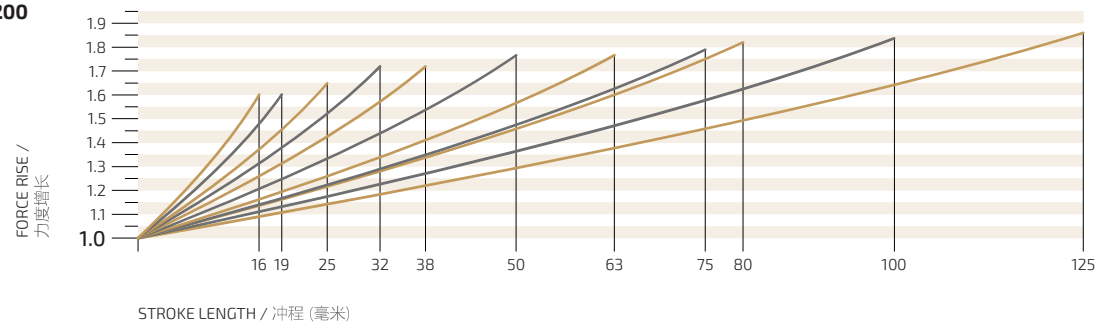
FORCE RISE VS. USED STROKE LENGTH CHARTS

力度增长与所用冲程的对照图表

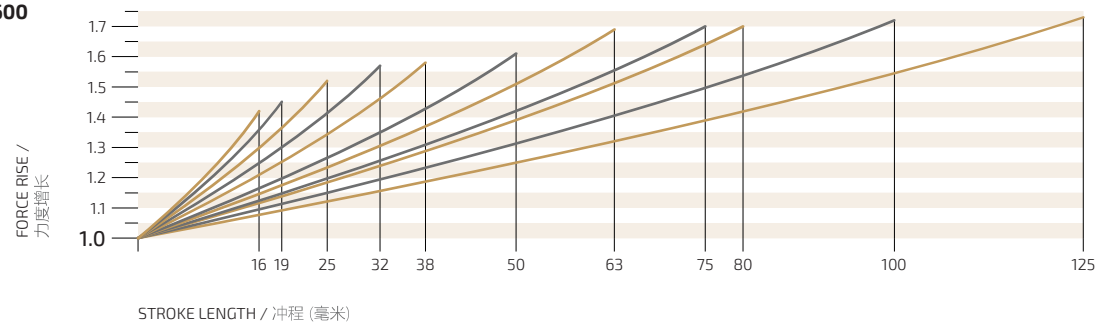
The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

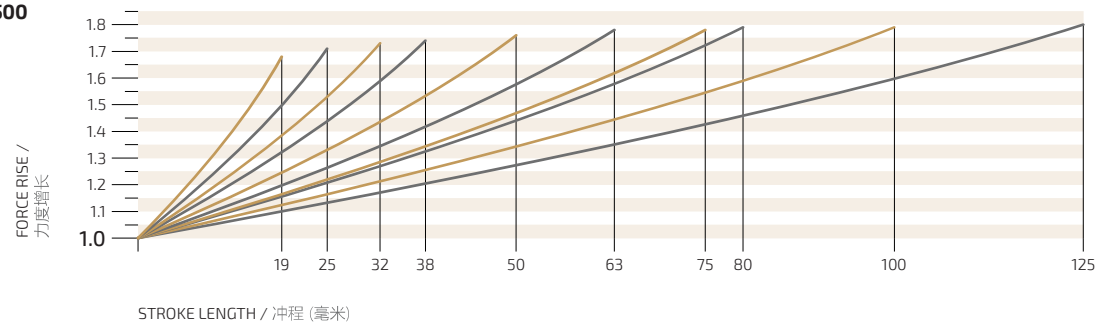
AGS4200



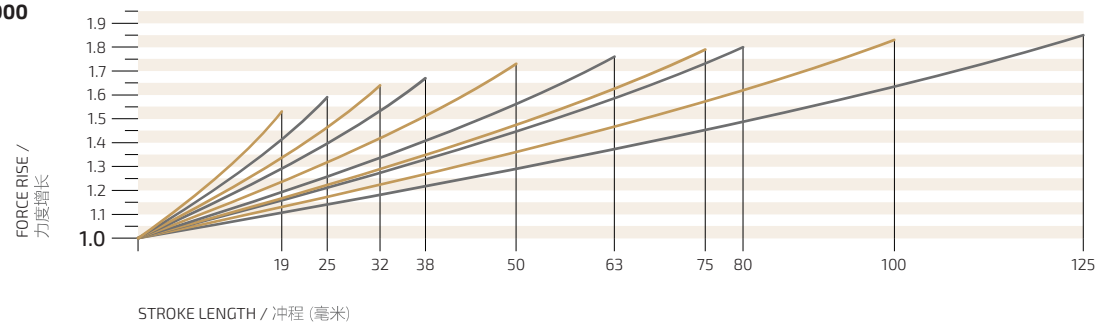
AGS6600



AGS9500



AGS20000



TGS

400~12000

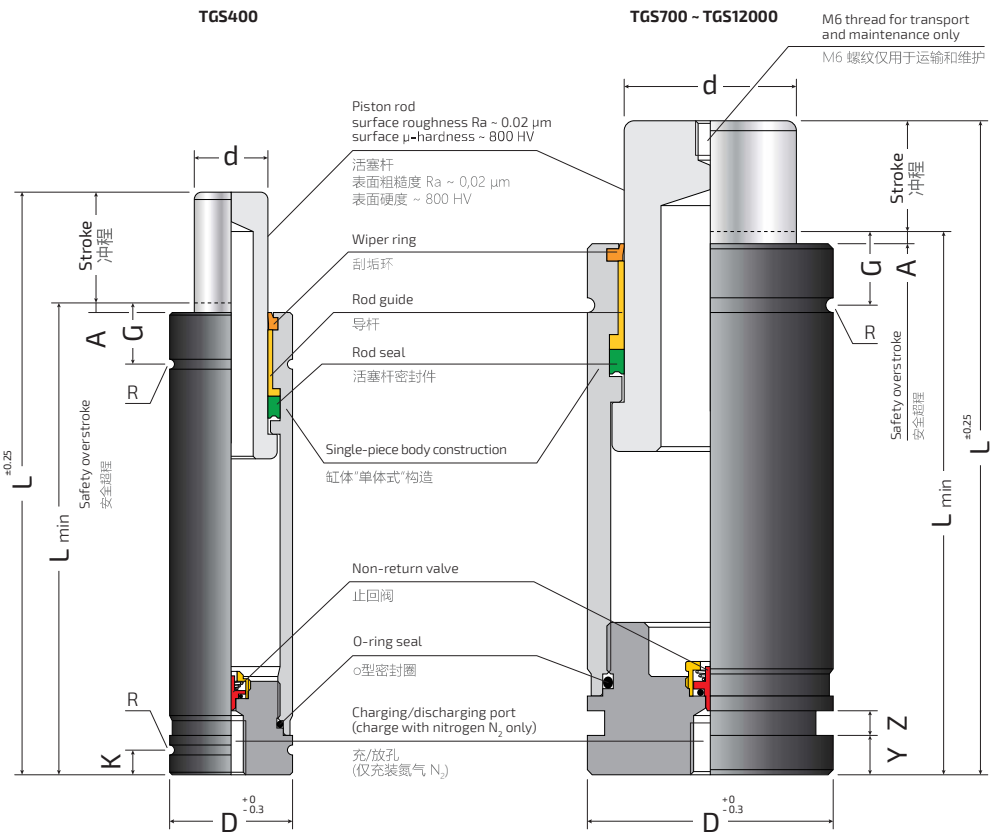
COMPACT POWER

COMPACT HEIGHT



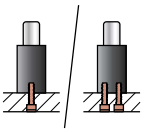
TGS series nitrogen gas springs feature high forces and compact diameters in a rod seal design. They ensure a great interchangeability (forces, dimensions and fixing possibilities) with the bore seal design nitrogen gas springs commonly available on the market, offering a higher performance (high number of cycles per minute, self-lubrication, better protection against liquid contaminants) and reliability thanks to the rod seal design. TGS series nitrogen gas springs are self-lubricated.

TGS系列氮气弹簧力度强大且直径紧凑,采用活塞杆密封设计。它们可确保与市场上常见的采用活塞密封设计的氮气弹簧良好互换（力度、尺寸及可用紧固方式),同时凭借活塞杆密封系统提供卓越的性能（每分钟冲程数高、自润滑、更好地防止液体污染物) 及可靠性。TGS 系列氮气弹簧为自润滑型。

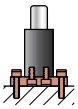


Technical notes / 技术说明
Important use instructions
in the dedicated catalogue section.
重要使用说明位于
目录中的相应部分。

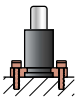
Fixing possibilities / 可用紧固方式



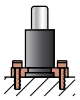
at the base
with screw(s)
在底座上使用螺丝



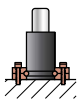
with base-plate
使用底板
BF, BFA, BFB
for TGS5000 only
仅针对 *TGS5000*



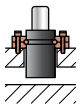
with half-flanges
使用对开法兰
SF, SFA
for TGS700~TGS12000
针对 *TGS700~TGS12000*



with foot brackets
使用支架
ST, STA
for TGS1000~TGS12000
针对 *TGS1000~TGS12000*



with collar flange (base)
使用环状法兰(底座)
FL
for TGS400 only
仅针对 *TGS400*

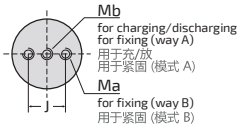


with collar flange
使用环状法兰
FL, FLA, FLQ, FLQA

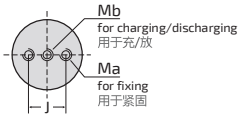


with front support
使用前支撑件
FT, FTA
(Not for all TGS models)
(不适用所有 TGS 型号)

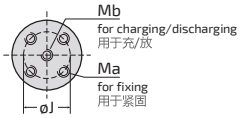
GAS SPRING BASE / 气缸底座



TGS400



TGS700, TGS1000,
TGS2000, TGS3000



TGS5000, TGS8000,
TGS12000

SAFETY PROTECTIONS / 安全保护



UNCONTROLLED
RETURN SPEED /
不受控返回速度



OVERSTROKE /
超程



OVERPRESSURE /
超压

TGS

Model 型号	MAX Stroke 最大冲程 mm	Lmin mm	L mm	D mm	d mm	G mm	A mm	R mm	K mm	Y mm	Z mm	Ma	J mm	Mb	bar (MPa)	daN	daN	Cycles per minute MAX 每分钟最多循环次数	Gas volume 气体体积 Litres	Weight 重量 kg
TGS400-10-A	10	60	70	25	15	11.5	1	1	5	-	-	M5 x 6 (2x)	14	M6 x 11	204 (20.4)	360	510	300	0.006	0.18
16-A	16	75	91			11.5		1		-	-						510	190	0.011	0.20
25-A	25	95	120			11.5		1		-	-						520	120	0.018	0.24
32-A	32	108	140			11.5		1		-	-						520	90	0.022	0.26
40-A	40	125	165			11.5		1		-	-						530	75	0.028	0.30
50-A	50	145	195			11.5		1		-	-						530	60	0.035	0.33
TGS700-06-A ●	6	57	63	32	20	11.5	2	1	-	-	-	M6 x 8 (2x)	15	M4	210 (21.0)	660	840	300	0.008	0.27
10-A ●	10	65	75			11.5		1		-	-						870	300	0.014	0.29
16-A	16	77	93			11.5		1		4	3.5						940	190	0.018	0.33
25-A	25	95	120			11.5		1		4	3.5						950	120	0.030	0.38
32-A	32	108	140			11.5		1		4	3.5						950	90	0.038	0.42
40-A	40	125	165			11.5		1		4	3.5						960	75	0.049	0.46
50-A	50	145	195			11.5		1		4	3.5						960	60	0.062	0.51
TGS1000-06-A ●	6	55	61	38	25	10.5	2	1	-	-	-	M6 x 8 (2x)	17	M8	205 (20.5)	1000	1350	300	0.010	0.38
10-A	10	68	78			10.5		1		4	3.5						1400	300	0.016	0.46
16-A	16	84	100			10.5		1		4	3.5						1400	190	0.028	0.52
25-A	25	110	135			10.5		1		4	3.5						1400	120	0.049	0.63
32-A	32	135	167			10.5		1		4	3.5						1450	90	0.068	0.73
40-A	40	155	195			10.5		1		4	3.5						1450	75	0.084	0.81
50-A	50	180	230			10.5		1		4	3.5						1450	60	0.104	0.92
TGS2000-06-A ● ●	6	60	66	50	35	-	2	-	-	-	-	M6 x 8 (2x)	26	M8	209 (20.9)	2000	3000	300	0.02	0.74
10-A ● ●	10	70	80			-		-		-	-						3100	300	0.03	0.82
16-A ●	16	90	106			14.5		1.5		-	-						3200	190	0.05	1.02
25-A	25	110	135			14.5		1.5		8	5						3300	120	0.07	1.25
32-A	32	130	162			14.5		1.5		8	5						3400	90	0.10	1.39
40-A	40	150	190			14.5		1.5		8	5						3400	75	0.12	1.54
50-A	50	170	220			14.5		1.5		8	5						3400	60	0.15	1.70
65-A	65	206	271			14.5		1.5		8	5						3200	45	0.20	1.99
TGS3000-10-A ● ●	10	75	85	63	45	-	2	-	-	-	-	M8 x 12 (2x)	34	M8	189 (18.9)	3000	4600	300	0.05	1.45
16-A ●	16	87	103			19		2		-	-						5000	190	0.07	1.62
25-A	25	105	130			19		2		8	5						5200	120	0.10	1.91
32-A	32	118	150			19		2		8	5						5200	90	0.14	2.07
40-A	40	135	175			19		2		8	5						5300	75	0.18	2.27
50-A	50	155	205			19		2		8	5						5300	60	0.23	2.52
65-A	65	191	256			19		2		8	5						5000	45	0.31	2.97
TGS5000-10-A ● ●	10	70	80	75	58	-	2	-	-	-	-	M8 x 12 (4x)	40	M8	190 (19.0)	5000	7400	300	0.08	1.87
16-A ●	16	90	106			18		1.5		-	-						7400	190	0.12	2.33
25-A	25	110	135			18		1.5		8	5						7600	120	0.18	2.74
32-A	32	135	167			18		1.5		8	5						7600	90	0.27	3.05
40-A	40	160	200			18		1.5		8	5						7600	75	0.36	3.38
50-A	50	190	240			18		1.5		8	5						7200	60	0.47	3.78
65-A	65	208	273			18		1.5		8	5						8000	45	0.55	4.12
TGS8000-10-A ● ●	10	80	90	95	75	-	2	-	-	-	-	M8 x 12 (4x)	52	M8	182 (18.2)	8000	10500	300	0.17	3.29
16-A ●	16	100	116			21		1.5		-	-						10800	190	0.25	3.94
25-A	25	120	145			21		1.5		8	5						11500	120	0.36	4.50
32-A	32	150	182			21		1.5		8	5						11500	90	0.54	5.05
40-A	40	170	210			21		1.5		8	5						11600	75	0.66	5.46
50-A	50	205	255			21		1.5		8	5						11600	60	0.88	6.14
65-A	65	214	279			21		1.5		8	5						12500	45	0.96	6.46
TGS12000-10-A ● ●	10	90	100	120	90	-	2	-	-	-	-	M10 x 15 (4x)	68	M8	189 (18.9)	12000	15500	300	0.25	6.22
16-A ●	16	110	126			22.5		2.5		-	-						16500	190	0.35	7.45
25-A	25	130	155			22.5		2.5		8	5						17000	120	0.49	8.59
32-A	32	155	187			22.5		2.5		8	5						17000	90	0.70	9.48
40-A	40	180	220			22.5		2.5		8	5						17000	75	0.92	10.41
50-A CE	50	210	260			22.5		2.5		8	5						16500	60	1.19	11.52
65-A CE	65	255	320			22.5		2.5		8	5						18000	45	1.59	13.27

● Without lower (square) groove / 无上方（方）槽
● Without upper (round) groove / 无上方（圆）槽

CE The gas spring models for which the CE symbol is indicated have an internal gas volume > 1 litre. They fall into Category II of the 2014/68/EU Pressure Equipment Directive (PED).
All the other gas spring models in this table are in accordance with Article 4.3 of the 2014/68/EU Pressure Equipment Directive (PED).
注有 CE 符号的气缸型号内部气体体积>1升。属于 2014/68/UE 压力设备指令 (PED) 的II类。
本表中所有其它气缸型号均符合欧盟 2014/68/EU 压力设备指令 (PED) 第4.3条中的规定。

REPAIR KIT / 维修套件

Gas spring code 气缸代码	Repair kit code 维修套件代码
TGS400-...-A	**KR/TGS400-A**
TGS700-...-A	**KR/TGS700-A**
TGS1000-...-A	**KR/TGS1000-A**
TGS2000-...-A	**KR/TGS2000-A**
TGS3000-...-A	**KR/TGS3000-A**
TGS5000-...-A	**KR/TGS5000-A**
TGS8000-...-A	**KR/TGS8000-A**
TGS12000-...-A	**KR/TGS12000-A**

Download repair instructions from www.bordignon.com /
可从网站 www.bordignon.com 上下载维修说明

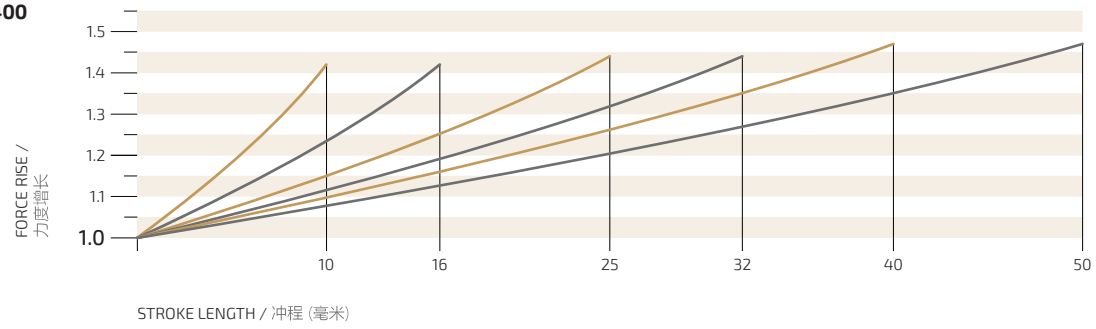
FORCE RISE VS. USED STROKE LENGTH CHARTS

力度增长与所用冲程的对照图表

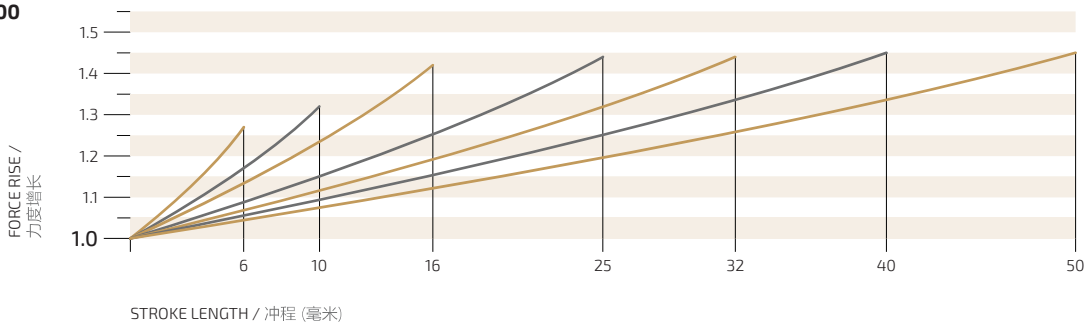
The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

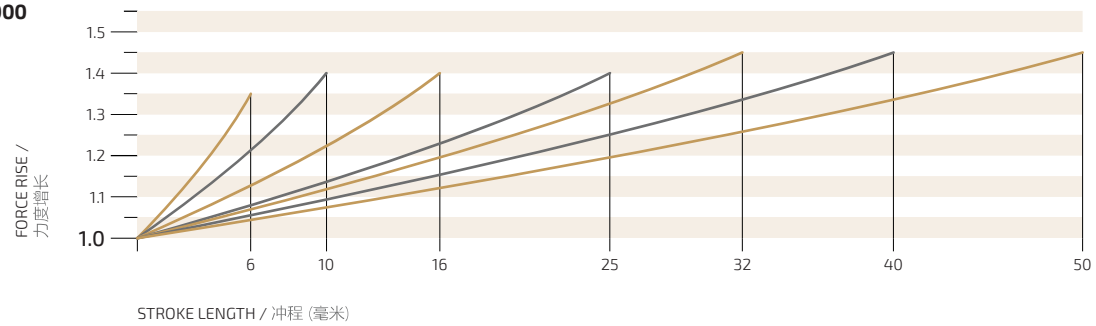
TGS400



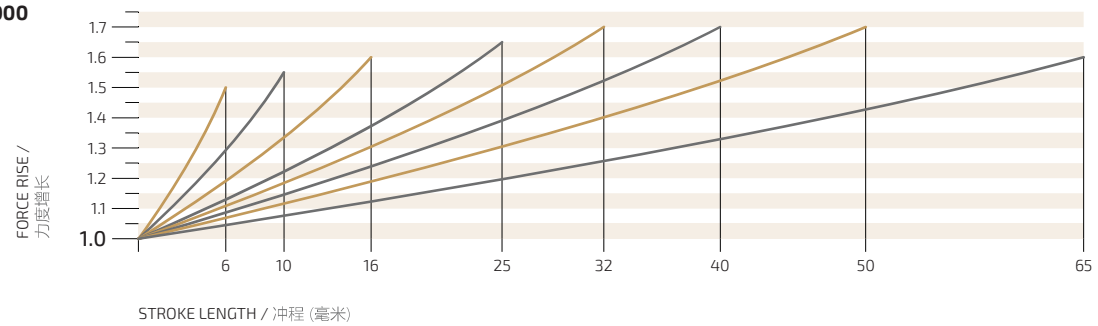
TGS700



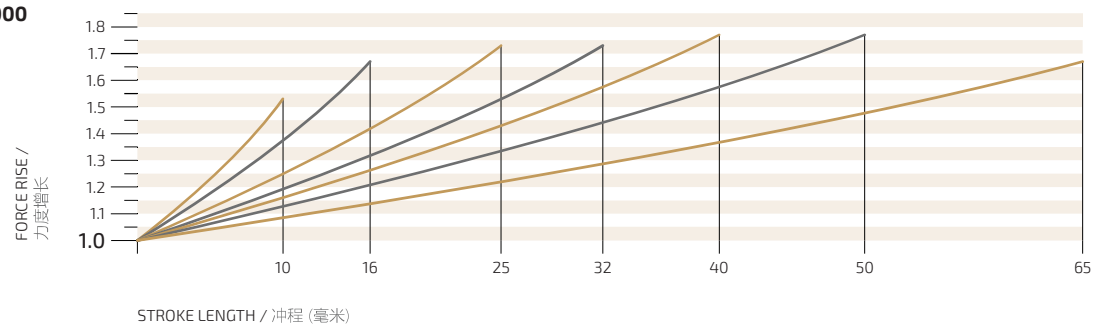
TGS1000



TGS2000



TGS3000



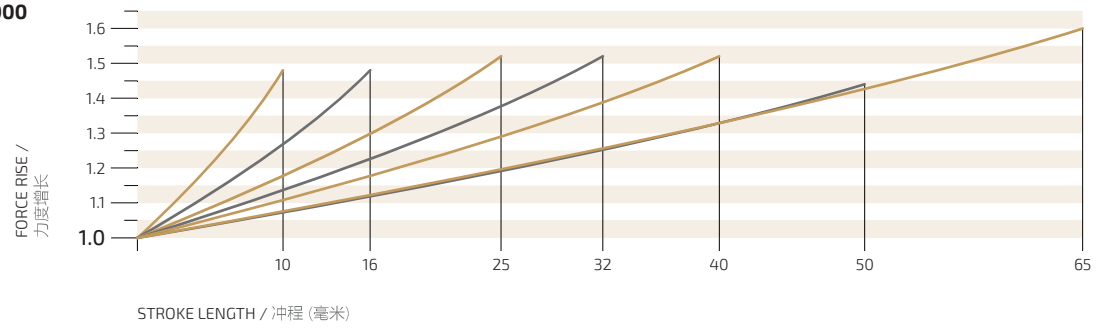
FORCE RISE VS. USED STROKE LENGTH CHARTS

力度增长与所用冲程的对照图表

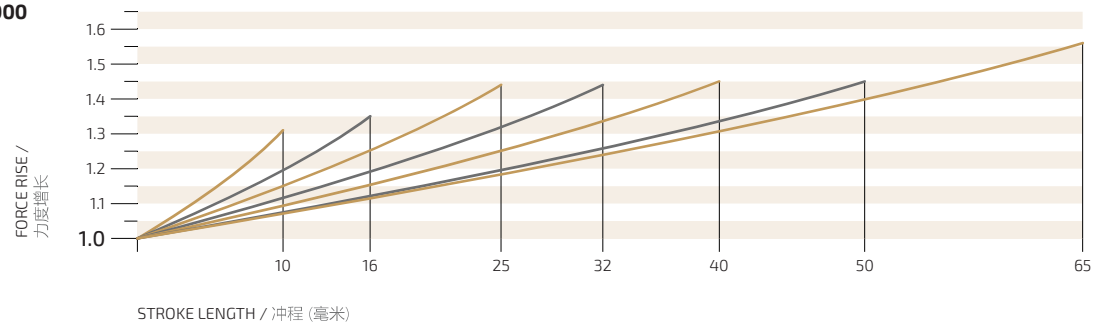
The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

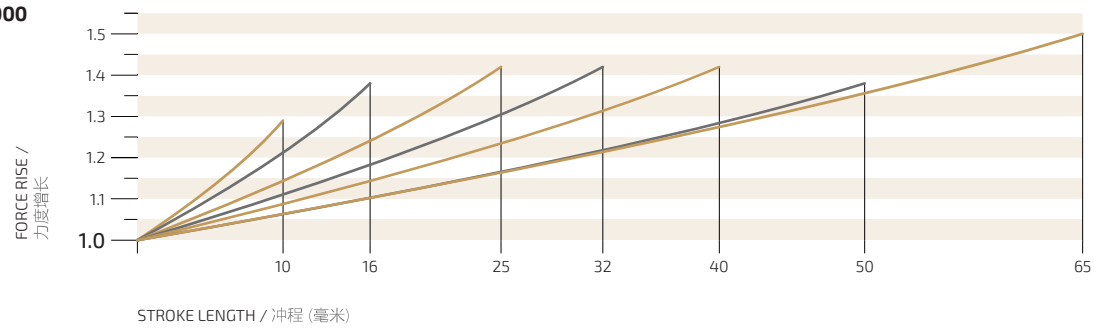
TGS5000



TGS8000



TGS12000



IGS

150~1500

ISO 11901-1 VDI 3003

This gas spring series includes the models compliant with automotive standards / 该氮气弹簧系列包含符合以下汽车标准的型号

BMW	B2 4006	**Nissan**	K 32 S
FCA	075.90.55	**PSA**	E24.54.815.G
Ford	W-DX35-6203	**Renault**	EM24.54.700
Mazda	PG23D	**Suzuki**	SES-K 5404e
MB	B8 3180 220 000 001	**VW**	39D 878

COMPACT POWER

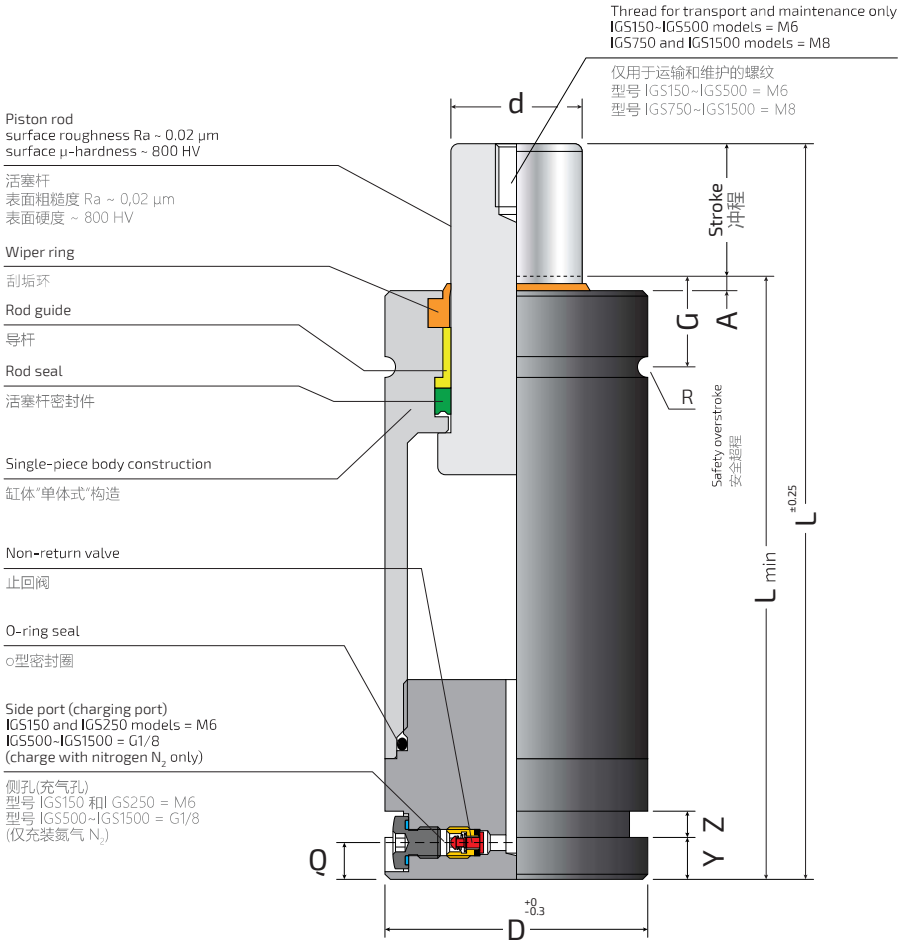
COMPACT HEIGHT



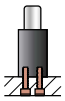
Technical notes / 技术说明
Important use instructions
in the dedicated catalogue section.
重要使用说明位于
目录中的相应部分。

IGS series nitrogen gas springs feature standard dimensions and forces, as well as several fixing and linking possibilities. With the IGS series nitrogen gas springs, Bordignon now ensures a great interchangeability and a superior reliability.
IGS series nitrogen gas springs are self-lubricated.

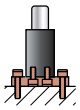
IGS 系列氮气弹簧具有标准尺寸和力度, 以及不同紧固和联动方式。凭借 IGS 系列氮气弹簧, Bordignon 现可确保优良的互换性及卓越的可靠性。
IGS 系列氮气弹簧为自润滑型。



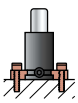
Fixing possibilities / 可用紧固方式



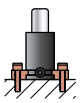
at the base
with screws
在底座上使用螺丝



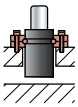
with base-plate
使用底板
BF, BFA, BFB
for IGS500 ~ IGS1500
针对 *IGS500 ~ IGS1500*



with half-flanges
使用对开法兰
SF, SFA



with foot brackets
使用支架
ST, STA
for IGS250 ~ IGS1500
针对 *IGS250 ~ IGS1500*

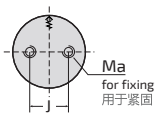


with collar flange
使用环状法兰
FL, FLQ

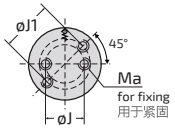


with front support
使用前支撑件
FT, FTA

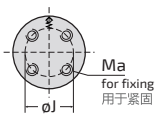
GAS SPRING BASE / 气缸底座



IGS150, IGS500, IGS750



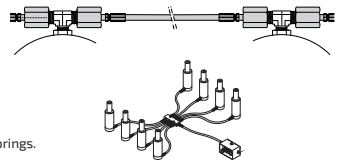
IGS250



IGS1500

LINKING TO OPEN SYSTEM / 系统连接

	IGS150~IGS250 (M6 side port / M6 侧孔)		IGS500~IGS1500 (G1/8 side port / G1/8 侧孔)		
Hoses 管子	**ATM**	**ATNM**	**ATM**	**ATN**	**AT**
Gas spring-hose fittings 氮气缸-管子连接件	**ARM**	**ARNM**	**ARM**	**ARN**	**AR**



ATTENTION! Follow the instructions in the "LINKED SYSTEM" section before connecting the gas springs.
注意!连接气缸前请参阅 "联动系统" 章节中的说明。

SAFETY PROTECTIONS / 安全保护



UNCONTROLLED RETURN SPEED / 不受控返回速度



OVERSTROKE / 超程



OVERPRESSURE / 超压

IGS 150~1500

Model 型号	MAX Stroke 最大冲程 mm	Lmin mm	L mm	D mm	d mm	G mm	A mm	R mm	Y mm	Z mm	Q mm	Ma	J mm	J1 mm	bar (MPa)	daN	daN	Cycles per minute MAX 每分钟最多 循环次数	Gas volume 气体 体积 Litres	Weight 重量 kg
IGS150-10	10	60	70	32	12	12.5	2	1	4	4	6	M6 x 11 (2x)	18	-	150 (15.0)	170	215	300	0.009	0.30
13	12.7	62.7	75.4														220	235	0.010	0.32
16	16	66	82														220	190	0.012	0.33
25	25	75	100														225	120	0.017	0.36
38	38.1	88.1	126.2														230	80	0.024	0.39
50	50	100	150														230	60	0.030	0.44
63	63.5	113.5	177														230	50	0.037	0.48
80	80	130	210														235	40	0.046	0.54
100	100	150	250														235	30	0.057	0.60
125	125	175	300														235	25	0.070	0.70
IGS250-10	10	60	70	38	15	12.5	2	1	4	4	6	M6 x 9 (2x or 2x) *(2x o 2x)*	18	25	150 (15.0)	260	305	300	0.029	0.30
13	12.7	62.7	75.4														310	235	0.031	0.31
16	16	66	82														310	190	0.034	0.33
19	19	69	88														315	160	0.037	0.34
25	25	75	100														320	120	0.042	0.37
38	38.1	88.1	126.2														330	80	0.052	0.43
50	50	100	150														335	60	0.062	0.48
63	63.5	113.5	177														335	50	0.074	0.54
80	80	130	210														340	40	0.087	0.61
100	100	150	250														345	30	0.104	0.66
125	125	175	300														350	25	0.125	0.83
IGS500-10	10	95	105	45	20	16.5	2	1	4	4	10.5	M8 x 13 (2x)	20	-	150 (15.0)	470	570	300	0.033	0.78
13	12.7	97.7	110.4														580	235	0.036	0.87
25	25	110	135														610	120	0.051	0.95
38	38.1	123.1	161.2														630	80	0.066	1.04
50	50	135	185														640	60	0.080	1.12
63	63.5	148.5	212														660	50	0.095	1.20
80	80	165	245														660	40	0.115	1.30
100	100	185	285														670	30	0.138	1.41
125	125	210	335														680	25	0.167	1.60
160	160	245	405														700	19	0.192	1.93
200	200	285	485														700	15	0.239	2.10
IGS750-13	12.7	107.7	120.4	50	25	17.5	3	2	8	5	10.5	M8 x 13 (2x)	20	-	150 (15.0)	740	930	235	0.05	1.16
25	25	120	145														990	120	0.07	1.26
38	38.1	133.1	171.2														1040	80	0.09	1.37
50	50	145	195														1070	60	0.10	1.47
63	63.5	158.5	222														1090	50	0.12	1.59
75	75	170	245														1110	40	0.14	1.70
80	80	175	255														1110	40	0.15	1.74
88	87.5	182.5	270														1120	35	0.16	1.80
100	100	195	295														1130	30	0.17	1.92
113	112.5	207.5	320														1140	27	0.19	2.03
125	125	220	345														1150	25	0.21	2.13
138	137.5	232.5	370														1210	22	0.21	2.36
150	150	245	395														1210	20	0.22	2.51
160	160	255	415														1220	19	0.24	2.60
175	175	270	445														1220	17	0.26	2.73
200	200	295	495														1220	15	0.30	2.94
225	225	320	545														1220	13	0.33	3.16
250	250	345	595														1220	12	0.37	3.31
275	275	370	645														1230	11	0.40	3.59
300	300	395	695														1230	10	0.44	3.81
IGS1500-13	12.7	122.3	135	75	36	21	3	2.5	8	5	10.5	M8 x 13 (4x)	40	-	150 (15.0)	1530	1870	235	0.13	3.01
25	25	135	160														1980	120	0.17	3.27
38	38.1	148.1	186.2														2060	80	0.21	3.51
50	50	160	210														2110	60	0.25	3.73
63	63.5	173.5	237														2160	50	0.29	3.97
75	75	185	260														2190	40	0.33	4.18
80	80	190	270														2200	40	0.35	4.27
88	87.5	197.5	285														2220	35	0.37	4.39
100	100	210	310														2240	30	0.41	4.63
113	112.5	222.5	335														2260	27	0.45	4.84
125	125	235	360														2270	25	0.49	5.08
138	137.5	247.5	385														2390	22	0.47	5.77
150	150	260	410														2400	20	0.51	5.99
160	160	270	430														2400	19	0.55	6.17
175	175	285	460														2410	17	0.59	6.45
200	200	310	510														2410	15	0.67	6.90
225	225	335	560														2420	13	0.75	7.35
250	250	360	610														2420	12	0.83	7.81
275	275	385	660														2430	11	0.92	8.26
300	300	410	710														2430	10	0.99	8.72

All the gas spring models in this table are in accordance with Article 4.3 of the 2014/68/EU Pressure Equipment Directive (PED)
本表中所有氮气弹簧的型号均符合欧盟 2014/68/EU 压力设备指令 (PED) 第 4.3 条中的规定

"L-VERSION" (FOR LINKED SYSTEM) / "L 版本" (用于联动系统)

When the IGS gas springs are to be used in a linked system, make sure to order the "L-version" by adding "-L" after the gas spring code. The "L-version" gas springs are supplied already discharged and without valve, ready for the connection to linked system.
Example: "**IGS750-50-L**"

当 IGS 气缸要用于联动系统时, 请务必在气缸代码后添加 "-L" 字样来订购 "L 版本"。"L 型" 气缸已排气且不带阀门, 可随时连接至联动系统。
例如: "***IGS750-50-L***"



REPAIR KIT / 维修套件

Gas spring code 气缸代码	Repair kit code 维修套件代码
IGS150-...	**KR/IGS150**
IGS250-...	**KR/IGS250**
IGS500-10 ~ IGS500-63	**KR/IGS500-1**
IGS500-80 ~ IGS500-200	**KR/IGS500-2**
IGS750-13 ~ IGS750-50	**KR/IGS750-1**
IGS750-63 ~ IGS750-300	**KR/IGS750-2**
IGS1500-13 ~ IGS1500-50	**KR/IGS1500-1**
IGS1500-63 ~ IGS1500-300	**KR/IGS1500-2**

Download repair instructions from www.bordignon.com /
可从网站 www.bordignon.com 上下载维修说明

IGS 150~1500

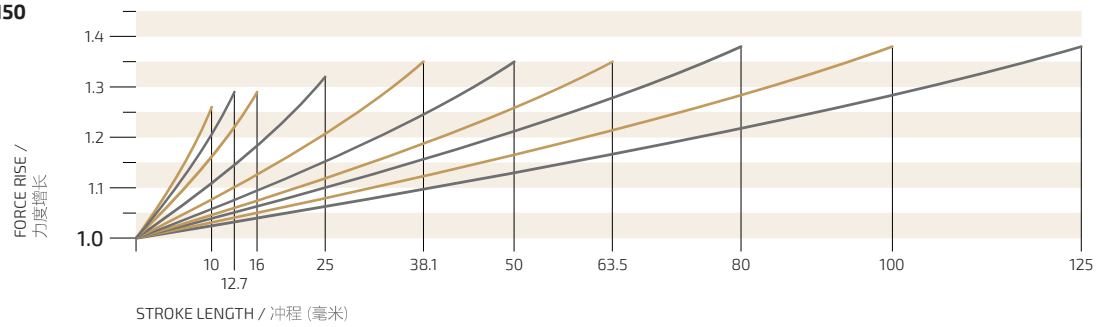
FORCE RISE VS. USED STROKE LENGTH CHARTS

The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

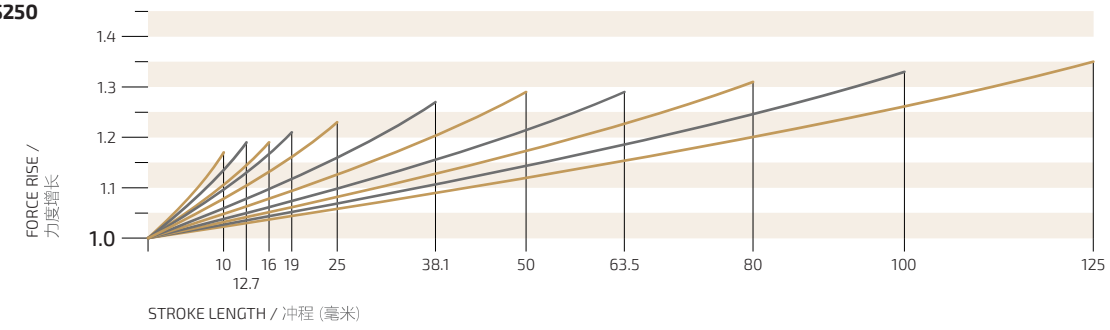
力度增长与所用冲程的对照图表

下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

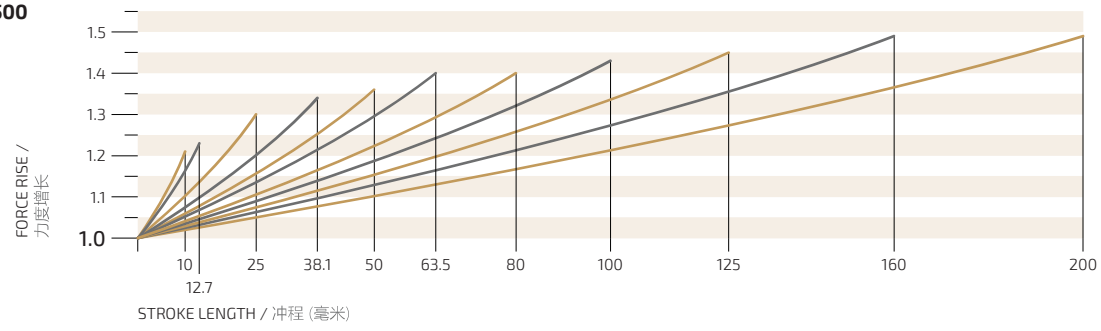
IGS150



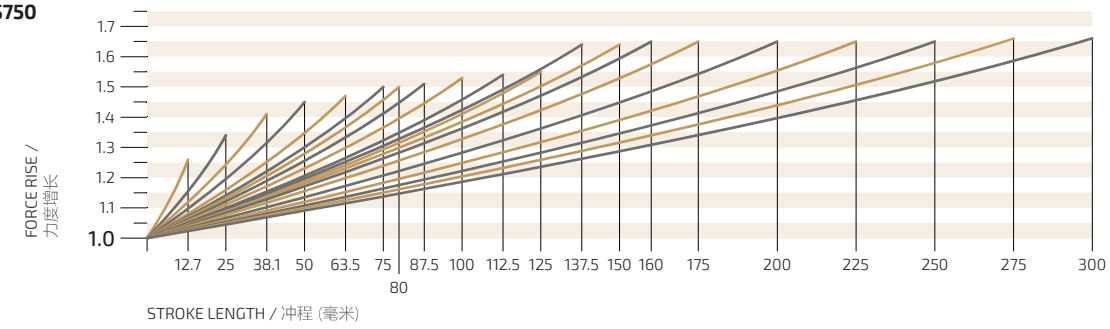
IGS250



IGS500



IGS750



IGS 150~1500

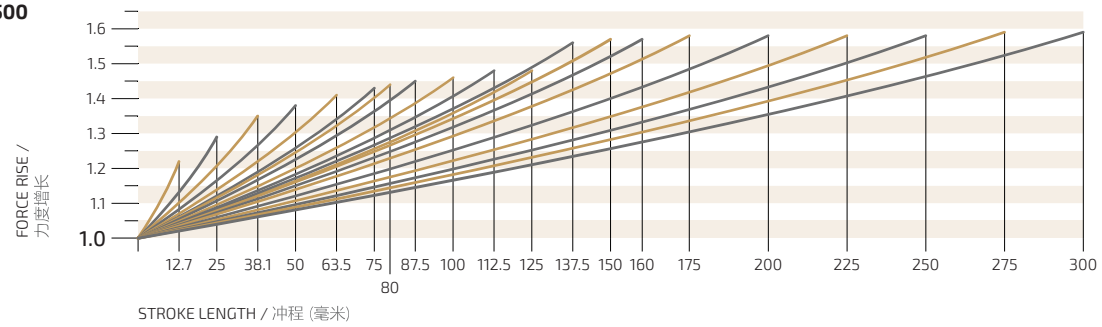
FORCE RISE VS. USED STROKE LENGTH CHARTS

The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

力度增长与所用冲程的对照图表

下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

IGS1500



IGS

3000~10000

ISO 11901-1 VDI 3003

This gas spring series includes the models compliant with automotive standards / 该氮气弹簧系列包含符合以下汽车标准的型号

BMW	B2 4006	**Nissan**	K 32 S
FCA	075.90.55	**PSA**	E24.54.815.G
Ford	W-DX35-6203	**Renault**	EM24.54.700
Mazda	PG23D	**Suzuki**	SES-K 5404e
MB	B8 3180 220 000 001	**VW**	39D 878

COMPACT POWER

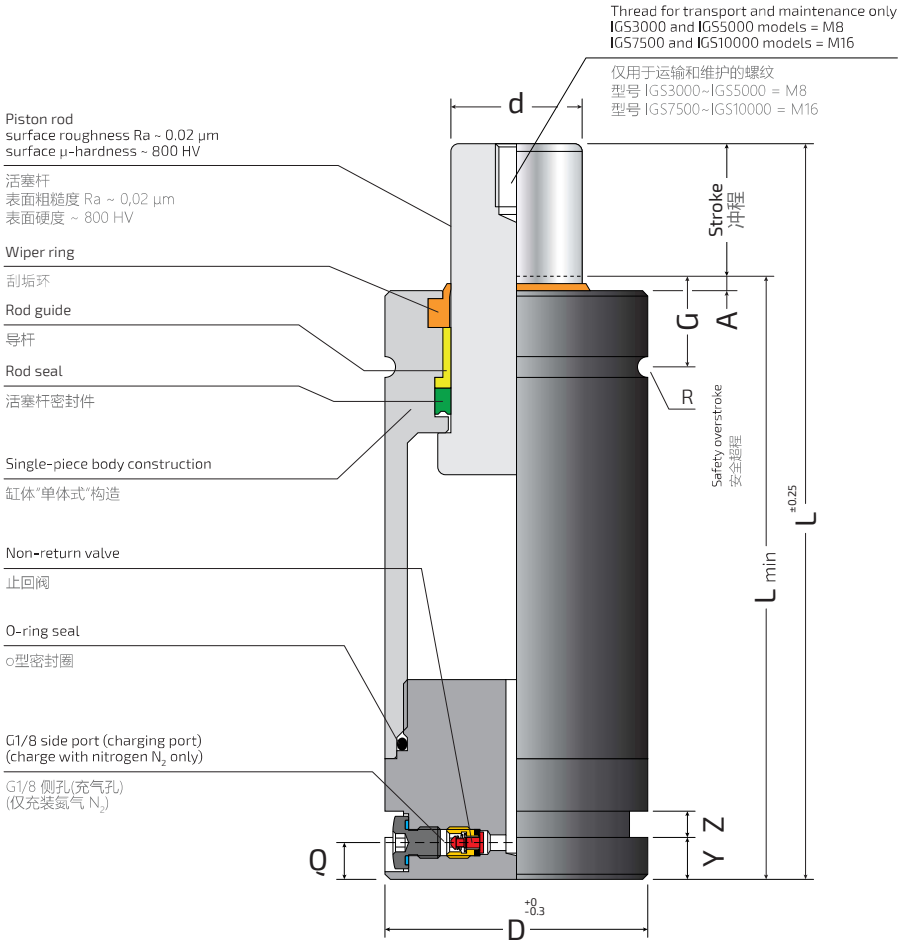
COMPACT HEIGHT



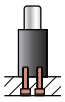
Technical notes / 技术说明
Important use instructions
in the dedicated catalogue section.
重要使用说明位于
目录中的相应部分。

IGS series nitrogen gas springs feature standard dimensions and forces, as well as several fixing and linking possibilities. With the IGS series nitrogen gas springs, Bordignon now ensures a great interchangeability and a superior reliability.
IGS series nitrogen gas springs are self-lubricated.

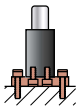
IGS 系列氮气弹簧具有标准尺寸和力度, 以及不同紧固和联动方式。凭借 IGS 系列氮气弹簧, Bordignon 现可确保优良的互换性及卓越的可靠性。
IGS 系列氮气弹簧为自润滑型。



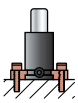
Fixing possibilities / 可用紧固方式



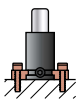
at the base
with screws
在底座上使用螺丝



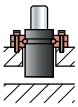
with base-plate
使用底板
BF, BFA, BFB



with half-flanges
使用对开法兰
SF, SFA



with foot brackets
使用支架
ST, STA
(Not for all IGS models)
(不适用所有 IGS 型号)

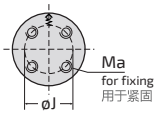


with collar flange
使用环状法兰
FL, FLQ



with front support
使用前支撑件
FT, FTA
(Not for all IGS models)
(不适用所有 IGS 型号)

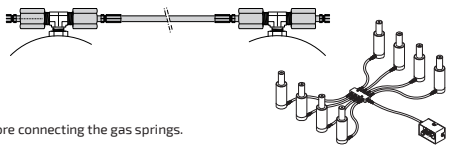
GAS SPRING BASE / 气缸底座



IGS3000, IGS5000,
IGS7500, IGS10000

LINKING TO OPEN SYSTEM / 系统连接

	IGS3000~IGS10000 (G1/8 side port / G1/8 侧孔)		
Hoses 管子	**ATM**	**ATN**	**AT**
Gas spring-hose fittings 氮气缸-管子连接件	**ARM**	**ARN**	**AR**



ATTENTION! Follow the instructions in the "LINKED SYSTEM" section before connecting the gas springs.
注意!连接气缸前请参阅 "联动系统" 章节中的说明。

SAFETY PROTECTIONS / 安全保护



UNCONTROLLED RETURN SPEED / 不受控返回速度



OVERSTROKE / 超程



OVERPRESSURE / 超压

IGS 3000~10000

Model 型号	MAX Stroke 最大冲程 mm	Lmin mm	L mm	D mm	d mm	G mm	A mm	R mm	Y mm	Z mm	Q mm	Ma	J mm	bar (MPa)	daN	daN	Cycles per minute MAX 每分钟最多 循环次数	Gas volume 气体 体积 Litres	Weight 重量 kg
IGS3000-13	12.7	132.3	145	95	50	24	3	2.5	8	5	10.5	M8 x 13 (4x)	60	150 (15.0)	2945	3650	235	0.24	5.15
25	25	145	170													3850	120	0.30	5.58
38	38.1	158.1	196.2													4050	80	0.37	5.97
50	50	170	220													4200	60	0.43	6.33
63	63.5	183.5	247													4300	50	0.51	6.76
75	75	195	270													4400	40	0.57	7.10
80	80	200	280													4400	40	0.59	7.25
88	87.5	207.5	295													4450	35	0.63	7.49
100	100	220	320													4500	30	0.70	7.83
113	112.5	232.5	345													4550	27	0.76	8.21
125	125	245	370													4600	25	0.83	8.59
138	137.5	257.5	395													4900	22	0.80	9.72
150	150	270	420													4900	20	0.87	10.10
160	160	280	440													4900	19	0.92	10.42
175	175	295	470													4950	17	0.99	10.87
200 CE	200	320	520													4950	15	1.13	11.64
225 CE	225	345	570													5000	13	1.26	12.40
250 CE	250	370	620													5000	12	1.39	13.16
275 CE	275	395	670													5000	11	1.53	13.92
300 CE	300	420	720													5000	10	1.66	14.70
IGS5000-25	25	165	190	120	65	25.5	3	2.5	8	5	10.5	M10 x 16 (4x)	80	150 (15.0)	4980	6600	120	0.48	10.78
38	38.1	178.1	216.2													7000	80	0.58	11.52
50	50	190	240													7300	60	0.67	12.20
63	63.5	203.5	267													7600	50	0.77	13.00
75	75	215	290													7700	40	0.85	13.62
80	80	220	300													7800	40	0.89	13.91
88	87.5	227.5	315													7900	35	0.95	14.27
100 CE	100	240	340													8000	30	1.04	14.98
113 CE	112.5	252.5	365													8200	27	1.14	15.70
125 CE	125	265	390													8300	25	1.23	16.41
138 CE	137.5	277.5	415													8900	22	1.19	18.18
150 CE	150	290	440													8900	20	1.29	18.88
160 CE	160	300	460													9000	19	1.36	19.45
175 CE	175	315	490													9000	17	1.47	20.30
200 CE	200	340	540													9100	15	1.66	21.72
225 CE	225	365	590													9200	13	1.85	23.14
250 CE	250	390	640													9200	12	2.04	24.56
275 CE	275	415	690													9300	11	2.23	25.98
300 CE	300	440	740													9300	10	2.42	27.40
IGS7500-25 CE	25	180	205	150	80	27.5	3	2.5	8	5	10.5	M10 x 16 (4x)	100	150 (15.0)	7540	9300	120	1.15	15.72
38 CE	38.1	193.1	231.2													9700	80	1.32	16.73
50 CE	50	205	255													10000	60	1.47	17.69
63 CE	63.5	218.5	282													10300	50	1.64	18.74
75 CE	75	230	305													10500	40	1.79	19.65
80 CE	80	235	315													10600	40	1.86	20.04
88 CE	87.5	242.5	330													10700	35	1.95	20.52
100 CE	100	255	355													10900	30	2.11	21.55
113 CE	112.5	267.5	380													11000	27	2.27	22.48
125 CE	125	280	405													11200	25	2.43	23.52
138 CE	137.5	292.5	430													11800	22	2.33	26.50
150 CE	150	305	455													11900	20	2.49	27.53
160 CE	160	315	475													12000	19	2.62	28.33
175 CE	175	330	505													12000	17	2.82	29.49
200 CE	200	355	555													12200	15	3.14	31.47
225 CE	225	380	605													12300	13	3.46	33.43
250 CE	250	405	655													12400	12	3.78	35.39
275 CE	275	430	705													12500	11	4.10	37.36
300 CE	300	455	755													12600	10	4.43	39.33
IGS10000-25 CE	25	185	210	195	95	33.5	3	2.5	8	8	15	M12 x 18 (4x)	120	150 (15.0)	10600	12900	120	1.87	28.39
38 CE	38.1	198.1	236.2													13300	80	2.16	29.90
50 CE	50	210	260													13700	60	2.42	31.33
63 CE	63.5	223.5	287													14000	50	2.72	32.92
80 CE	80	240	320													14300	40	3.09	34.87
100 CE	100	260	360													14600	30	3.53	37.22
125 CE	125	285	410													14900	25	4.08	40.17
160 CE	160	320	480													15900	19	4.23	49.23
200 CE	200	360	560													16100	15	5.12	53.95
250 CE	250	410	660													16300	12	6.22	59.84
300 CE	300	460	760													17200	10	6.62	71.32

CE The gas spring models for which the CE symbol is indicated have an internal gas volume > 1 litre. They fall into Category II of the 2014/68/EU Pressure Equipment Directive (PED).
All the other gas spring models in this table are in accordance with Article 4.3 of the 2014/68/EU Pressure Equipment Directive (PED).
注有 CE 符号的气缸型号内部气体体积>1升。属于 2014/68/UE 压力设备指令 (PED) 的II类。
本表中所有其它气缸型号均符合欧盟 2014/68/EU 压力设备指令 (PED) 第4.3条中的规定。

"L-VERSION" (FOR LINKED SYSTEM) / "L 版本" (用于联动系统)

When the IGS gas springs are to be used in a linked system, make sure to order the "L-version" by adding "-L" after the gas spring code. The "L-version" gas springs are supplied already discharged and without valve, ready for the connection to linked system.
Example: "**IGS5000-50-L**"

当 IGS 气缸要用于联动系统时, 请务必在气缸代码后添加 "-L" 字样来订购 "L 版本"。"L 型" 气缸已排气且不带阀门, 可随时连接至联动系统。
例如: "***IGS5000-50-L***"



REPAIR KIT / 维修套件

Gas spring code 气缸代码	Repair kit code 维修套件代码
IGS3000-13 ~ IGS3000-50	**KR/IGS3000-1**
IGS3000-63 ~ IGS3000-300	**KR/IGS3000-2**
IGS5000-25, IGS5000-38	**KR/IGS5000-1**
IGS5000-50 ~ IGS5000-300	**KR/IGS5000-2**
IGS7500-25, IGS7500-38	**KR/IGS7500-1**
IGS7500-50 ~ IGS7500-300	**KR/IGS7500-2**
IGS10000-25, IGS10000-38	**KR/IGS10000-1**
IGS10000-50 ~ IGS10000-300	**KR/IGS10000-2**

Download repair instructions from www.bordignon.com /
可从网站 www.bordignon.com 上下载维修说明

IGS 3000~10000

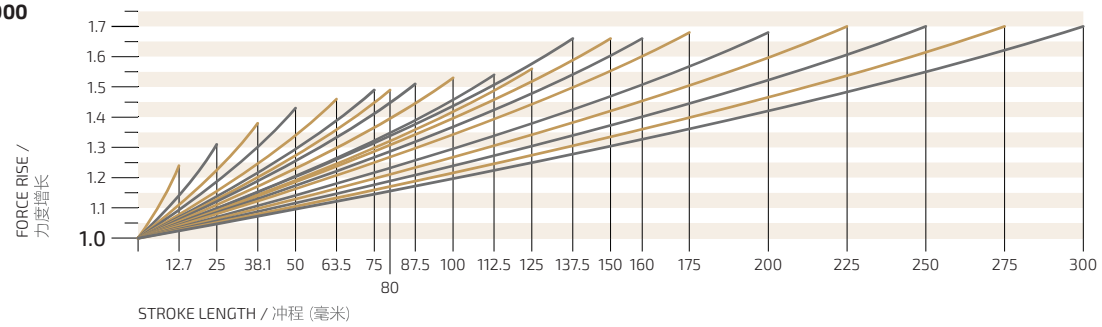
FORCE RISE VS. USED STROKE LENGTH CHARTS

The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

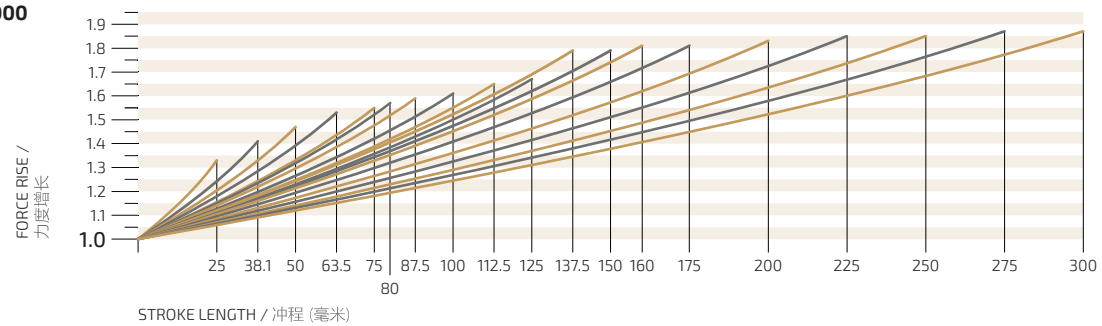
力度增长与所用冲程的对照图表

下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

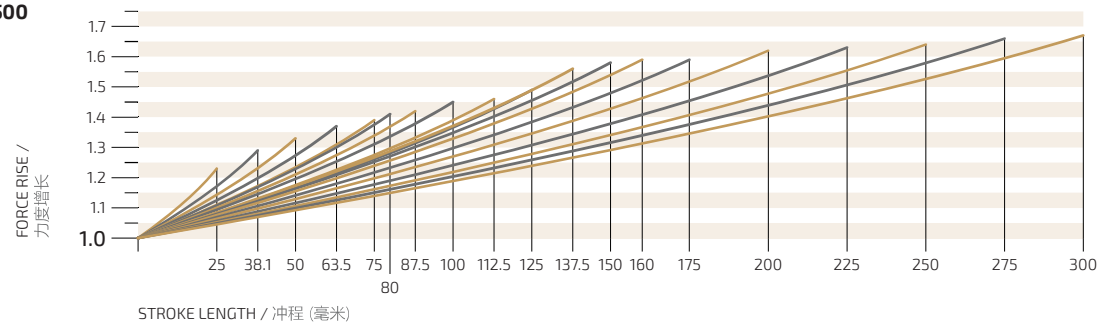
IGS3000



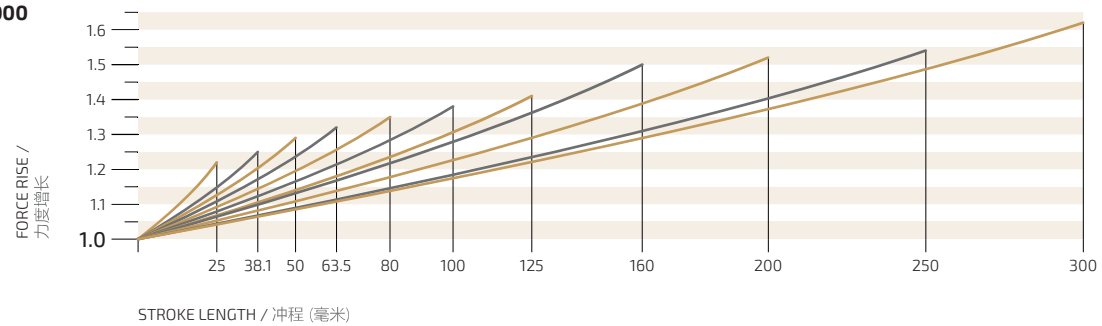
IGS5000



IGS7500



IGS10000



LGS

500

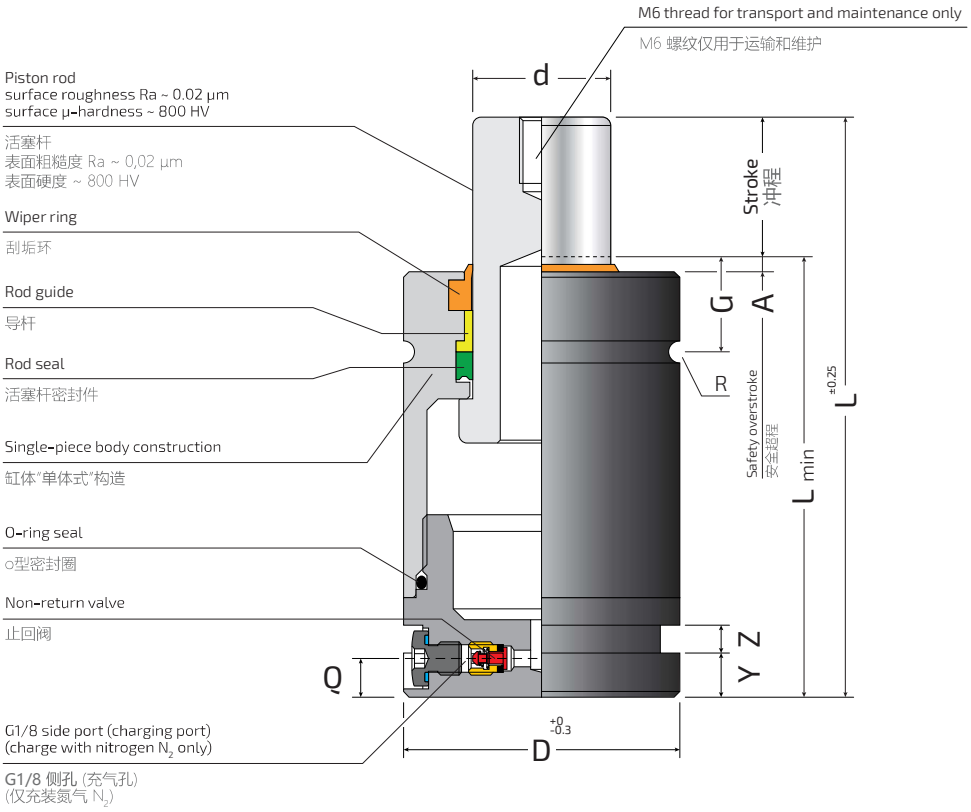
COMPACT POWER

COMPACT HEIGHT

LGS series nitrogen gas springs feature standard forces and compact length, as well as several fixing and linking possibilities. With the LGS series nitrogen gas springs, Bordignon now ensures a great interchangeability and a superior reliability.
LGS series nitrogen gas springs are self-lubricated.

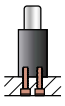
LGS 系列氮气弹簧具有标准尺寸和力度，以及不同紧固和联动方式。凭借 LGS 系列氮气弹簧，Bordignon 现可确保优良的互换性及卓越的可靠性。
LGS 系列氮气弹簧为自润滑型。



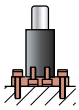


Technical notes / 技术说明
Important use instructions
in the dedicated catalogue section.
重要使用说明位于
目录中的相应部分。

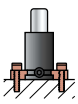
Fixing possibilities / 可用紧固方式



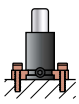
at the base
with screws
在底座上使用螺丝



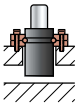
with base-plate
使用底板
BF, BFA, BFB



with half-flanges
使用对开法兰
SF, SFA



with foot brackets
使用支架
ST, STA

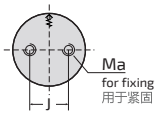


with collar flange
使用环状法兰
FL, FLQ



with front support
使用前支撑件
FT, FTA

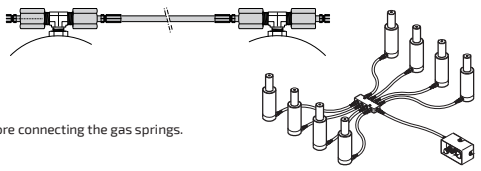
GAS SPRING BASE / 气缸底座



LGS500

LINKING TO OPEN SYSTEM / 系统连接

	LGS500 (G1/8 side port / G1/8 侧孔)		
Hoses 管子	**ATM**	**ATN**	**AT**
Gas spring-hose fittings 氮气缸-管子连接件	**ARM**	**ARN**	**AR**



ATTENTION! Follow the instructions in the "LINKED SYSTEM" section before connecting the gas springs.
注意!连接气缸前请参阅 "联动系统" 章节中的说明。

SAFETY PROTECTIONS / 安全保护



UNCONTROLLED RETURN SPEED / 不受控返回速度

OVERSTROKE / 超程

OVERPRESSURE / 超压

LGS

Model 型号	MAX Stroke 最大冲程 mm	Lmin mm	L mm	D mm	d mm	G mm	A mm	R mm	Y mm	Z mm	Q mm	Ma	J mm	bar (MPa)	daN	daN	Cycles per minute MAX 每分钟最多 循环次数	Gas volume 气体 体积 Litres	Weight 重量 kg
LGS500-80	80	130	210	45	20	15.5	2	1	4	4	10.5	M8 x 13 (2x)	20	150 (15.0)	470	700	40	0.097	0.89

All the gas spring models in this table are in accordance with Article 4.3 of the 2014/68/EU Pressure Equipment Directive (PED)
本表中所有气缸的型号均符合欧盟 2014/68/EU 压力设备指令 (PED)第 4.3 条中的规定

"L-VERSION" (FOR LINKED SYSTEM) / "L 版本" (用于联动系统)

When the LGS gas springs are to be used in a linked system, make sure to order the "L-version" by adding "-L" after the gas spring code. The "L-version" gas springs are supplied already discharged and without valve, ready for the connection to linked system.
Example: "**LGS500-80-L**"

当 LGS 气缸要用于联动系统时, 请务必在气缸代码后添加 "-L" 字样来订购 "L 版本"。"L 型" 气缸已排气且不带阀门, 可随时连接至联动系统。
例如: "***LGS500-80-L***"



REPAIR KIT / 维修套件

Gas spring code 气缸代码	Repair kit code 维修套件代码
LGS500-...	**KR/LGS500**

Download repair instructions from www.bordignon.com /
可从网站 www.bordignon.com 上下载维修说明

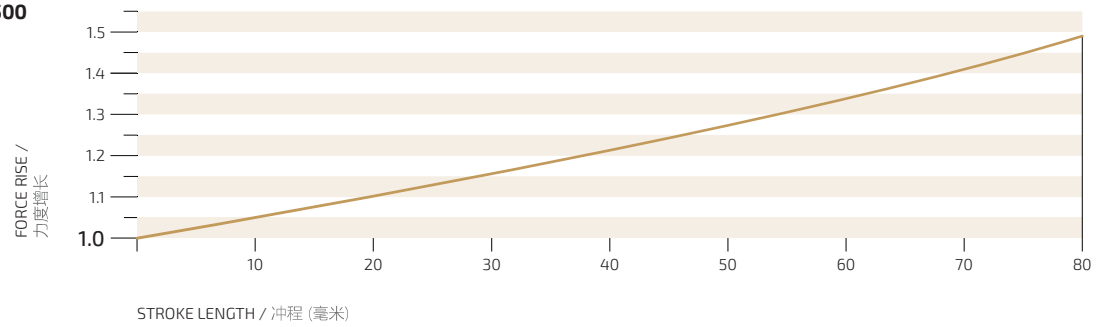
FORCE RISE VS. USED STROKE LENGTH CHARTS

The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

力度增长与所用冲程的对照图表

下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

LGS500



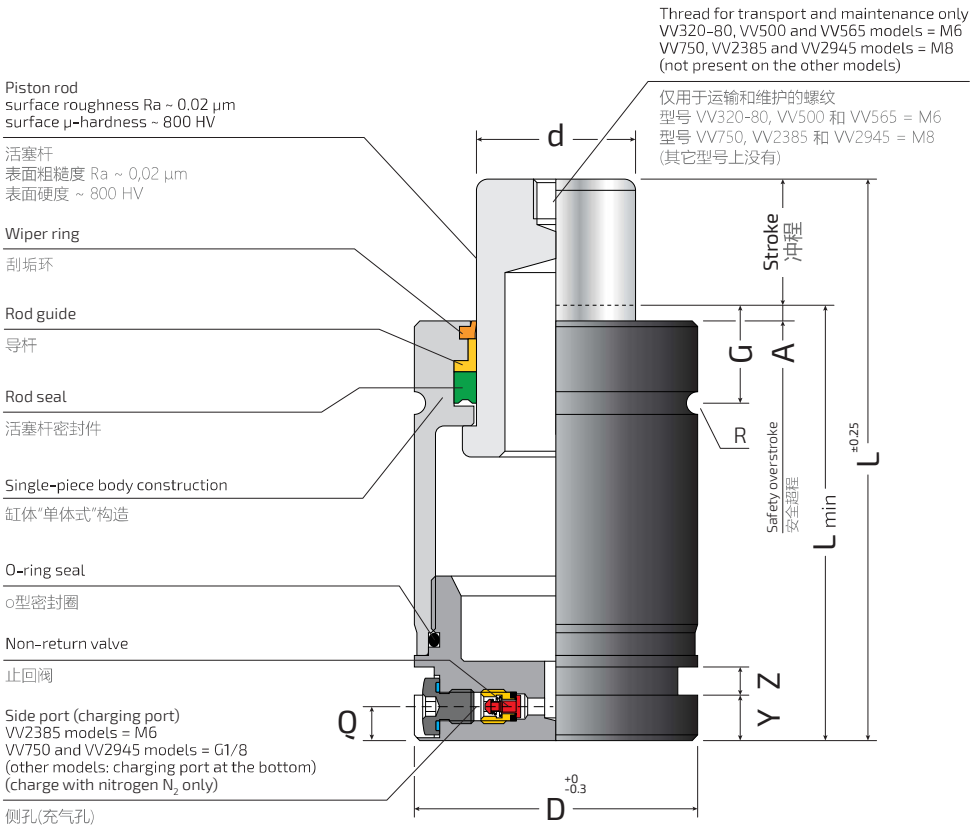
VV

170~2945

VV series nitrogen gas springs feature different dimensions and forces.
VV series nitrogen gas springs are self-lubricated.

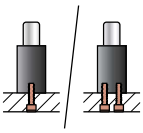
VV 系列氮气弹簧具有不同尺寸和力度。
VV 系列氮气弹簧为自润滑型。



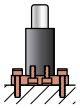


Technical notes / 技术说明
Important use instructions
in the dedicated catalogue section.
重要使用说明位于
目录中的相应部分。

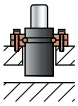
Fixing possibilities / 可用紧固方式



at the base
with screws
在底座上使用螺丝



with base-plate
使用底板
BF, BFA, BFB
for VV750 ~ VV2945
针对 *VV750 ~ VV2945*

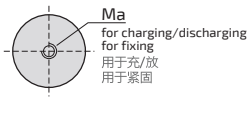


with collar flange
使用环状法兰
FL, FLQ
(Not for all VV models)
(不适用所有 VV 型号)

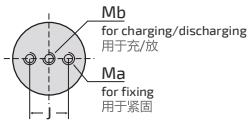


with front support
使用前支撑件
FT, FTA
(Not for all VV models)
(不适用所有 VV 型号)

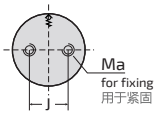
GAS SPRING BASE / 气缸底座



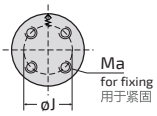
VV170, VV320-63/63H



VV320-80, VV500-63, VV565-63



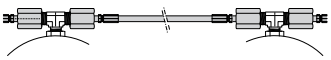
VV750

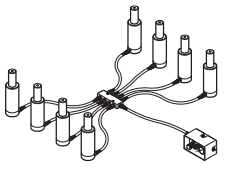


VV2385, VV2495

LINKING TO OPEN SYSTEM / 系统连接

	VV2385 (M6 side port / M6 侧孔)		VV750, VV2945 (G1/8 side port / G1/8 侧孔)		
Hoses 管子	ATM	ATNM	ATM	ATN	AT
Gas spring-hose fittings 氮气缸-管子连接件	ARM	ARNM	ARM	ARN	AR





ATTENTION! Follow the instructions in the "LINKED SYSTEM" section before connecting the gas springs.
注意!连接气缸前请参阅 "联动系统" 章节中的说明。

SAFETY PROTECTIONS / 安全保护



UNCONTROLLED RETURN SPEED / 不受控返回速度



OVERSTROKE / 超程



OVERPRESSURE / 超压

VV

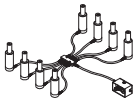
Model 型号	MAX Stroke 最大冲程 mm	Lmin mm	L mm	D mm	d mm	G mm	A mm	R mm	Y mm	Z mm	Q mm	Ma	J mm	Mb	bar (MPa)	daN	daN	Cycles per minute MAX 每分钟最多循环次数	Gas volume 气体体积 Litres	Weight 重量 kg
VV170-38	38	97	135	19	11	17	1	1	-	-	-	M6 x 10	-	-	180 (18.0)	170	275	80	0.011	0.14
50	50	110	160														285	60	0.014	0.17
63	63	127	190														285	50	0.017	0.18
VV320-63	63	127	190	25	15	17	1	1	-	-	-	M6 x 9	-	-	180 (18.0)	320	540	50	0.032	0.31
63H	63	145	208														500	50	0.038	0.33
VV320-80	80	125	205	32	15	-	2	-	-	-	-	M6 x 8 (2x)	18	M6	180 (18.0)	320	520	40	0.044	0.44
VV500-63	63	132	195	32	20	-	2	-	-	-	-	M5 x 8 (2x)	15	M6	160 (16.0)	500	830	50	0.058	0.48
VV565-63	63	142	205	32	20	-	2	-	-	-	-	M5 x 8 (2x)	15	M6	180 (18.0)	565	900	50	0.064	0.50
VV750-63	63	113	176	50	25	-	2	-	-	-	10.5	M8 x 13 (2x)	20	-	150 (15.0)	740	1280	50	0.085	1.40
80	80	130	210														1270	40	0.109	2.00
VV2385-80	80	128	208	75	45	21	3	2.5	-	-	6	M8 x 9 (4x)	40	-	150 (15.0)	2385	4250	40	0.33	2.48
100	100	148	248														4300	30	0.41	2.79
VV2945-63	62.5	182.5	245	95	50	-	3	-	-	-	10.5	M8 x 13 (4x)	60	-	150 (15.0)	2945	3950	50	0.70	5.16
80	80	138	218														4850	40	0.47	5.21
100	100	158	258														4850	30	0.60	5.09
125	125	183	308														4800	25	0.75	7.24

All the gas spring models in this table are in accordance with Article 4.3 of the 2014/68/EU Pressure Equipment Directive (PED)
本表中所有氮气缸的型号均符合欧盟 2014/68/EU 压力设备指令 (PED) 第 4.3 条中的规定

"L-VERSION" (FOR LINKED SYSTEM) / "L 版本" (用于联动系统)

When the VV gas springs are to be used in a linked system, make sure to order the "L-version" by adding "-L" after the gas spring code. The "L-version" gas springs are supplied already discharged and without valve, ready for the connection to linked system.
Example: "**VV750-80-L**"

当 VV 气缸要用于联动系统时, 请务必在气缸代码后添加 "-L" 字样来订购 "L 版本"。"L 型" 气缸已排气且不带阀门, 可随时连接至联动系统。
例如: "***VV750-80-L***"



REPAIR KIT / 维修套件

Gas spring code 气缸代码	Repair kit code 维修套件代码
VV170-...	**KR/VV170**
VV320-63, VV320-63H	**KR/VV320-63-63H**
VV320-80	**KR/VV320-80**
VV500-63	**KR/VV500**
VV565-63	**KR/VV565**
VV750-...	**KR/VV750**
VV2385-...	**KR/VV2385**
VV2945-...	**KR/VV2945**

Download repair instructions from www.bordignon.com /
可从网站 www.bordignon.com 上下载维修说明

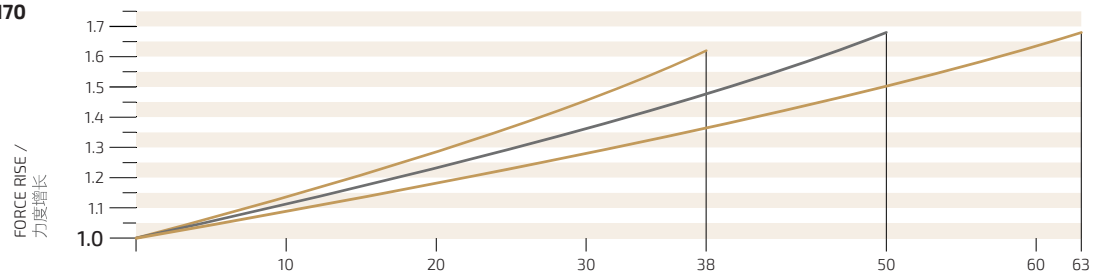
FORCE RISE VS. USED STROKE LENGTH CHARTS

力度增长与所用冲程的对照图表

The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

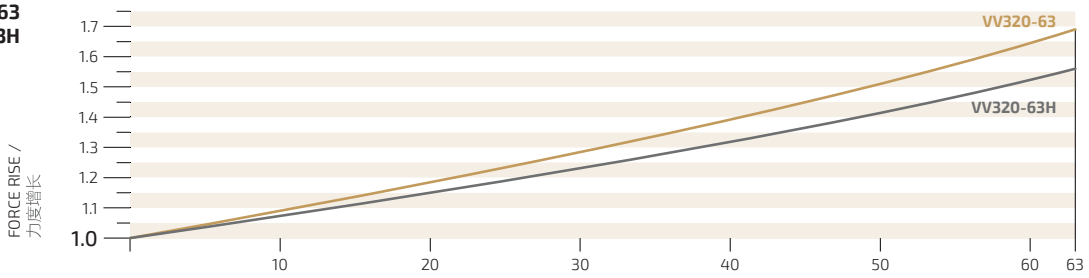
下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

VV170



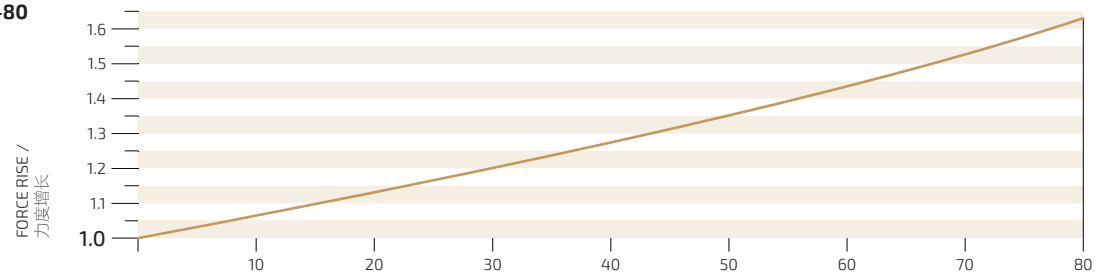
STROKE LENGTH / 冲程 (毫米)

VV320-63
VV320-63H



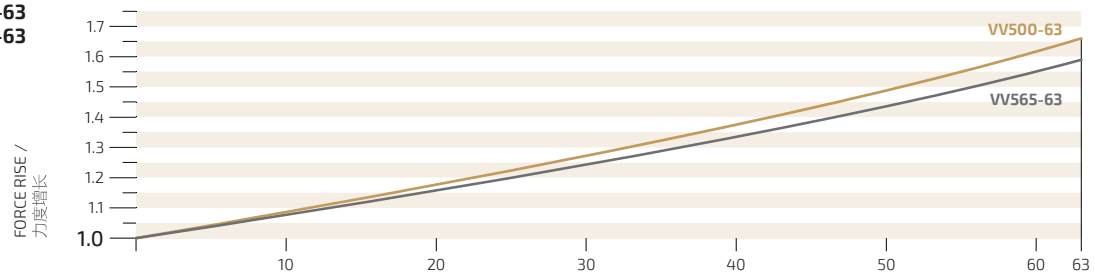
STROKE LENGTH / 冲程 (毫米)

VV320-80



STROKE LENGTH / 冲程 (毫米)

VV500-63
VV565-63



STROKE LENGTH / 冲程 (毫米)

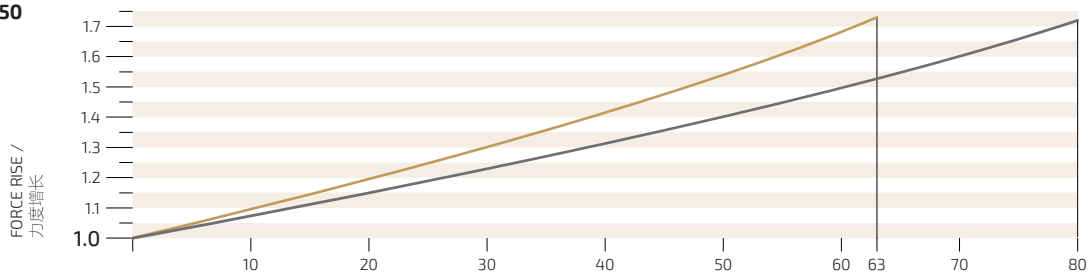
FORCE RISE VS. USED STROKE LENGTH CHARTS

力度增长与所用冲程的对照图表

The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

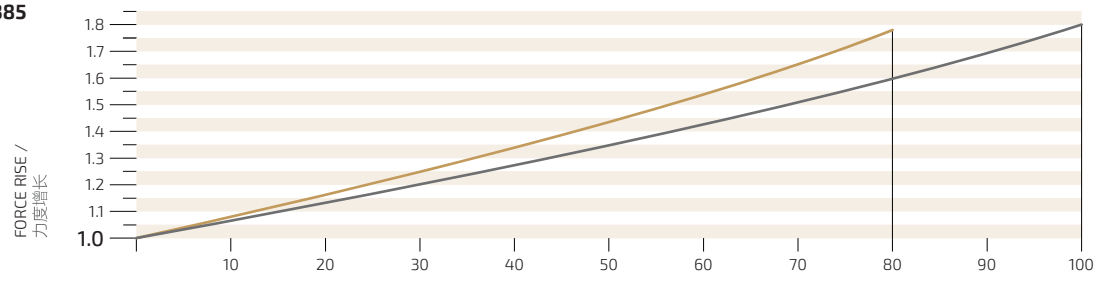
下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

VV750



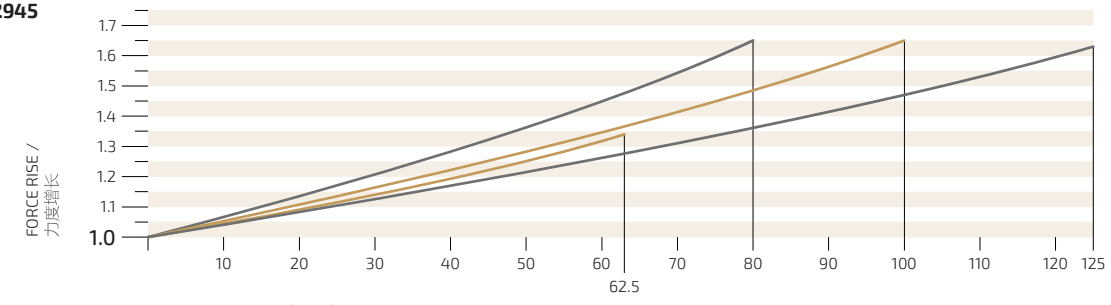
STROKE LENGTH / 冲程 (毫米)

VV2385



STROKE LENGTH / 冲程 (毫米)

VV2945



STROKE LENGTH / 冲程 (毫米)

CHT

19~120

200°C
392°F
MAX TEMPERATURE

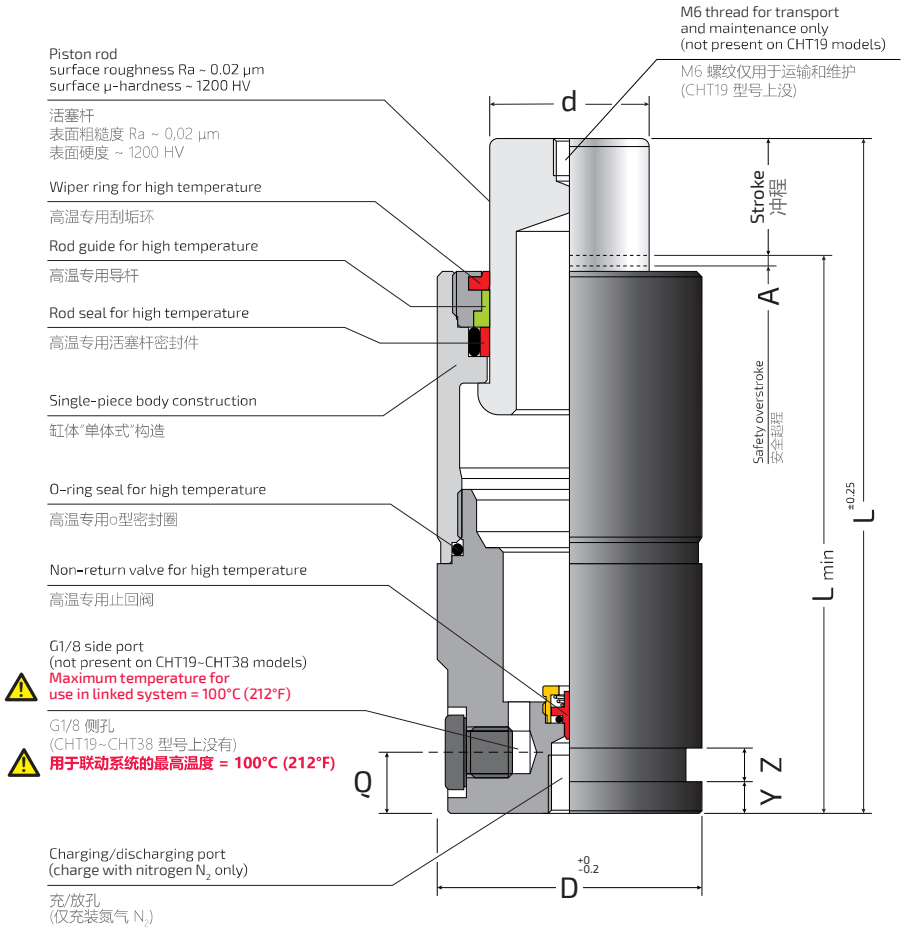
COMPACT POWER
COMPACT HEIGHT



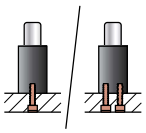
Technical notes / 技术说明
Important use instructions
in the dedicated catalogue section.
重要使用说明位于
目录中的相应部分。

CHT series has been developed to work up to 200°C (392°F), for the most demanding high temperature applications.
The piston rod has to be lubricated with grease "PLUB".

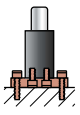
CHT 系列可在最高 200°C (392°F) 的温度下作业, 适用于最为苛刻的高温应用。
活塞杆必须用 "PLUB" 润滑脂进行润滑。



Fixing possibilities / 可用紧固方式



at the base
with screw(s)
在底座上使用螺丝



with base-plate
使用底板
BF, BFA, BFB
(Not for all CHT models)
(不适用所有 CHT 型号)

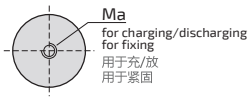


with half-flanges
使用对开法兰
FSC
(Not for all CHT models)
(不适用所有 CHT 型号)

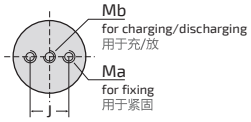


with front support
使用前支撑件
FT, FTA
(Not for all CHT models)
(不适用所有 CHT 型号)

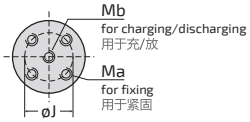
GAS SPRING BASE / 气缸底座



CHT19, CHT25,
CHT32, CHT38



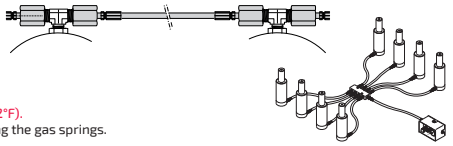
CHT50, CHT63



CHT75, CHT95,
CHT120

LINKING TO OPEN SYSTEM / 系统连接

	CHT50~CHT120 (G1/8 side port / G1/8 侧孔)		
Hoses 管子	ATM	ATN	AT
Gas spring-hose fittings 氮气缸-管子连接件	ARM	ARN	AR



ATTENTION! Maximum temperature for use in linked system = 100°C (212°F).
Follow the instructions in the "LINKED SYSTEM" section before connecting the gas springs.
注意! 用于联动系统的最高温度 = 100°C (212°F).
连接气缸前请参阅 "联动系统" 章节中的说明。

SAFETY PROTECTIONS / 安全保护



UNCONTROLLED
RETURN SPEED /
不受控返回速度



OVERSTROKE /
超程



OVERPRESSURE /
超压

HOW TO ORDER / 订购示例

IMPORTANT: it is necessary to contact our technical department in order to make sure that CHT gas springs are ok for the required application. Bordignon technical department will send you a dedicated form to be filled with the application data.
The **maximum charging pressure** (bar) depends on the use conditions (declared actual operating temperature).
You will be informed about the maximum charging pressure if your application is approved by our technical department.
重要提示: 您需联系我们的技术部门, 以确保 CHT 气缸适用于所需应用。Bordignon 相关部门会向您发送一张填写应用资料的专用表格。
最大充气压力 (巴) 取决于使用条件 (实际声明的工作温度)。
如果您的应用被我们的技术部门接受, 我们将向您通告最大充气压力。

CHT 19~120

Model 型号		MAX Stroke 最大冲程 mm	Lmin mm	L mm	D mm	d mm	A mm	Y mm	Z mm	Q mm	Ma	J mm	Mb	bar (MPa)	daN	daN	Cycles per minute MAX 每分钟最多循环次数	Gas volume 气体体积 Litres	Weight 重量 kg
CHT19-10	●	10	70	80	19	10	1	-	-	-	M8 x 14	-	-	See "How to order" on page 54 参阅 54 页的 "订购示例"	100	130	See "How to order" on page 54 参阅 54 页的 "订购示例"	0.003	0.12
15	●	15	75	90				-	-							135		0.005	0.12
25	●	25	85	110				-	-							140		0.007	0.14
38	●	38	98	136				-	-							145		0.010	0.15
50	●	50	110	160				-	-							155		0.012	0.17
80	●	80	140	220				-	-							165		0.017	0.21
CHT25-10	●	10	70	80	25	14	1	-	-	-	M8 x 11	-	-	See "How to order" on page 54 参阅 54 页的 "订购示例"	200	250	See "How to order" on page 54 参阅 54 页的 "订购示例"	0.008	0.19
15	●	15	75	90				-	-							270		0.009	0.22
25	●	25	85	110				-	-							290		0.013	0.25
38	●	38	98	136				-	-							320		0.017	0.28
50	●	50	110	160				-	-							330		0.021	0.31
80	●	80	140	220				-	-							350		0.031	0.38
125	●	125	185	310				-	-							370		0.045	0.50
CHT32-10	●	10	60	70	32	18	1	-	-	-	M8 x 8	-	-	See "How to order" on page 54 参阅 54 页的 "订购示例"	350	480	See "How to order" on page 54 参阅 54 页的 "订购示例"	0.008	0.31
15	●	15	65	80				-	-							490		0.014	0.33
25	●	25	75	100				-	-							520		0.021	0.37
38	●	38	88	126				-	-							530		0.030	0.42
50	●	50	100	150				-	-							540		0.034	0.46
80	●	80	130	210				-	-							550		0.061	0.58
125	●	125	175	300				-	-							560		0.092	0.75
160	●	160	210	370				-	-							570		0.115	0.87
CHT38-10	●	10	65	75	38	22	1	-	-	-	M8 x 9	-	-	See "How to order" on page 54 参阅 54 页的 "订购示例"	500	650	See "How to order" on page 54 参阅 54 页的 "订购示例"	0.016	0.46
15	●	15	70	85				-	-							700		0.020	0.50
25	●	25	80	105				-	-							750		0.030	0.53
38	●	38	93	131				-	-							780		0.043	0.59
50	●	50	105	155				-	-							800		0.054	0.63
80	●	80	140	220				-	-							820		0.084	0.78
125	●	125	185	310				-	-							840		0.127	1.00
160	●	160	220	380				-	-							860		0.158	1.17
200	●	200	260	460				-	-							880		0.191	1.36
CHT50-10	●	10	95	105	50	30	1	6	6.3	11.5	M8 x 12 (2x)	20	M8	See "How to order" on page 54 参阅 54 页的 "订购示例"	1000	1250	See "How to order" on page 54 参阅 54 页的 "订购示例"	0.04	1.11
25	●	25	110	135				6	6.3							1400		0.07	1.23
38	●	38	123	161				6	6.3							1500		0.09	1.33
50	●	50	135	185				6	6.3							1550		0.11	1.45
63	●	63	148	211				6	6.3							1600		0.13	1.55
80	●	80	165	245				6	6.3							1650		0.16	1.71
100	●	100	195	295				6	6.3							1700		0.19	1.89
125	●	125	220	345				6	6.3							1720		0.23	2.05
160	●	160	255	415				6	6.3							1730		0.31	2.33
200	●	200	295	495				6	6.3							1750		0.39	2.79
250	●	250	345	595				6	6.3							1770		0.45	3.24
CHT63-10	●	10	95	105	63	40	1	6	6.3	11.5	M8 x 12 (2x)	20	M8	See "How to order" on page 54 参阅 54 页的 "订购示例"	1500	2200	See "How to order" on page 54 参阅 54 页的 "订购示例"	0.05	1.80
25	●	25	110	135				6	6.3							2400		0.10	1.96
38	●	38	123	161				6	6.3							2500		0.13	2.10
50	●	50	135	185				6	6.3							2600		0.17	2.24
63	●	63	148	211				6	6.3							2650		0.21	2.39
80	●	80	165	245				6	6.3							2700		0.27	2.50
100	●	100	185	285				6	6.3							2750		0.32	2.80
125	●	125	220	345				6	6.3							2800		0.37	3.30
160	●	160	255	415				6	6.3							2850		0.48	3.77
200	●	200	295	495				6	6.3							2900		0.60	4.27
CHT75-10	●	10	105	115	75	45	1	6	6.3	11.5	M8 x 12 (4x)	40	M8	See "How to order" on page 54 参阅 54 页的 "订购示例"	2500	3400	See "How to order" on page 54 参阅 54 页的 "订购示例"	0.08	2.86
25	●	25	120	145				6	6.3							3800		0.13	3.10
38	●	38	133	171				6	6.3							4200		0.18	3.32
50	●	50	145	195				6	6.3							4300		0.22	3.50
63	●	63	158	221				6	6.3							4400		0.27	3.71
80	●	80	175	255				6	6.3							4450		0.34	3.89
100	●	100	200	300				6	6.3							4500		0.42	4.36
125	●	125	225	350				6	6.3							4550		0.51	4.75
160	●	160	265	425				6	6.3							4650		0.62	5.57
200	●	200	310	510				6	6.3							4800		0.74	6.74
CHT95-25	●	25	130	155	95	58	1	6	6.3	11.5	M8 x 12 (4x)	60	M8	See "How to order" on page 54 参阅 54 页的 "订购示例"	4000	6200	See "How to order" on page 54 参阅 54 页的 "订购示例"	0.23	5.56
38	●	38	143	181				6	6.3							6500		0.31	5.90
50	●	50	155	205				6	6.3							6700		0.39	6.22
63	●	63	168	231				6	6.3							6800		0.47	6.60
80	●	80	190	270				6	6.3							6900		0.58	7.29
100	●	100	210	310				6	6.3							7000		0.71	7.85
125	●	125	245	370				6	6.3							7150		0.81	8.96
CHT120-25	●	25	140	165	120	75	1	6	6.3	11.5	M10 x 15 (4x)	80	M8	See "How to order" on page 54 参阅 54 页的 "订购示例"	6500	9100	See "How to order" on page 54 参阅 54 页的 "订购示例"	0.51	8.55
38	●	38	153	191				6	6.3							9700		0.64	9.29
50	●	50	165	215				6	6.3							10000		0.76	9.87
63	●	63	178	241				6	6.3							10400		0.89	10.47
80	●	80	195	275				6	6.3							10700		0.98	11.17

● Available on request (see "How to order" on page 54) / 可申请获得 (参阅 54 页的 "订购示例")

All the gas spring models in this table are in accordance with Article 4.3 of the 2014/68/EU Pressure Equipment Directive (PED)
本表中所有氮气弹簧的型号均符合欧盟 2014/68/EU 压力设备指令 (PED) 第 4.3 条中的规定

"L-VERSION" (FOR LINKED SYSTEM) / "L 版本" (用于联动系统)

When the CHT gas springs are to be used in a linked system, make sure to order the "L-version" by adding "-L" after the gas spring code. The "L-version" gas springs are supplied already discharged, ready for the connection to linked system.
Example: **"CHT50-50-L"**

当 CHT 气缸要用于联动系统时, 请务必在气缸代码后添加 "-L" 字样来订购 "L 版本"。"L 型" 气缸已排气且不带阀门, 可随时连接至联动系统。
例如: ***"CHT50-50-L"***

⚠ Maximum temperature for use in linked system = 100°C (212°F).
用于联动系统的最高温度 = 100°C (212°F).



REPAIR KIT / 维修套件

Gas spring code 气缸代码	Repair kit code 维修套件代码
CHT19-...	**KR/CHT19**
CHT25-...	**KR/CHT25**
CHT32-10 ~ CHT32-125	**KR/CHT32-1**
CHT32-160	**KR/CHT32-2**
CHT38-10 ~ CHT38-125	**KR/CHT38-1**
CHT38-160, CHT38-200	**KR/CHT38-2**
CHT50-10 ~ CHT50-125	**KR/CHT50-1**
CHT50-160 ~ CHT50-250	**KR/CHT50-2**

Gas spring code 气缸代码	Repair kit code 维修套件代码
CHT63-10 ~ CHT63-125	**KR/CHT63-1**
CHT63-160, CHT63-200	**KR/CHT63-2**
CHT75-10 ~ CHT75-125	**KR/CHT75-1**
CHT75-160, CHT75-200	**KR/CHT75-2**
CHT95-...	**KR/CHT95**
CHT120-...	**KR/CHT120**

Download repair instructions from www.bordignon.com /
可从网站 www.bordignon.com 上下载维修说明

CHT

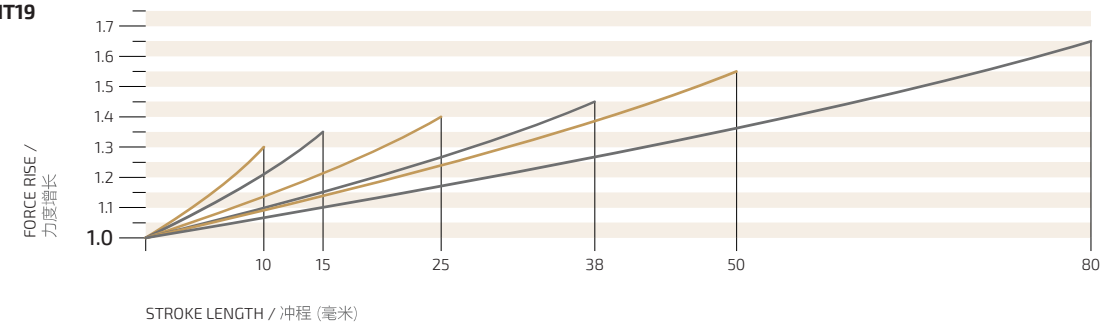
FORCE RISE VS. USED STROKE LENGTH CHARTS

力度增长与所用冲程的对照图表

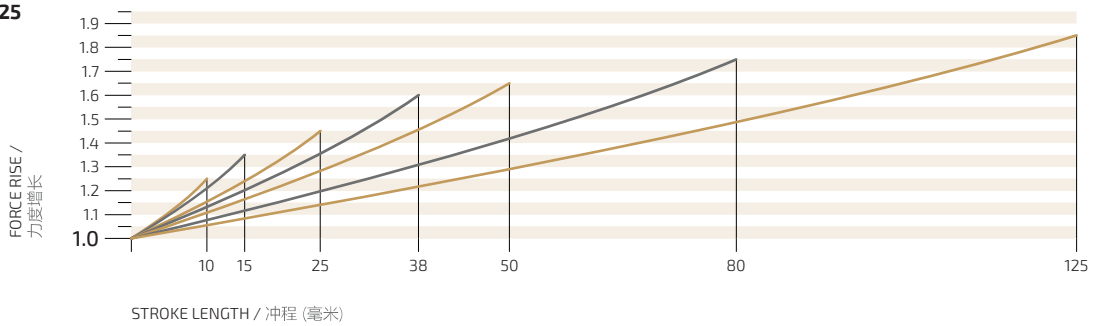
The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

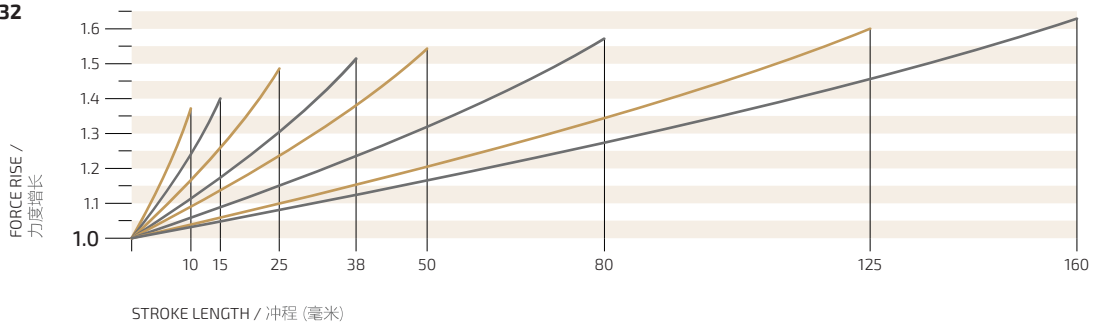
CHT19



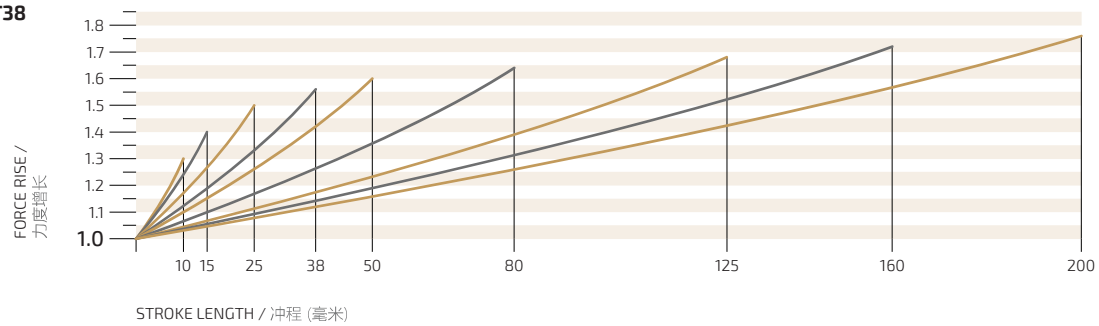
CHT25



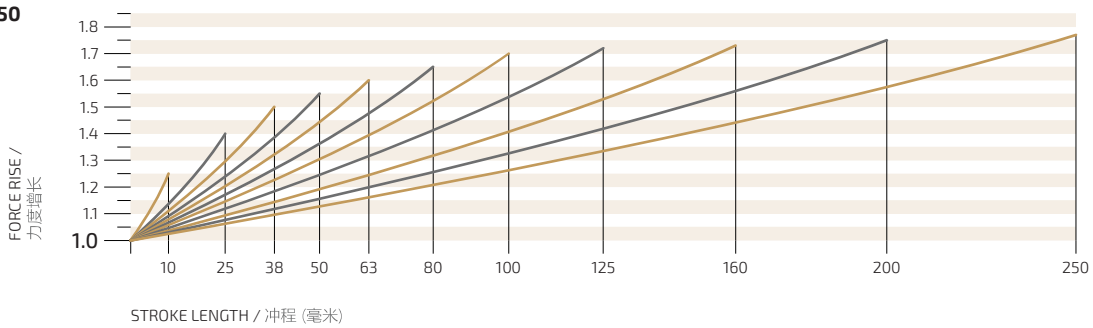
CHT32



CHT38



CHT50



CHT

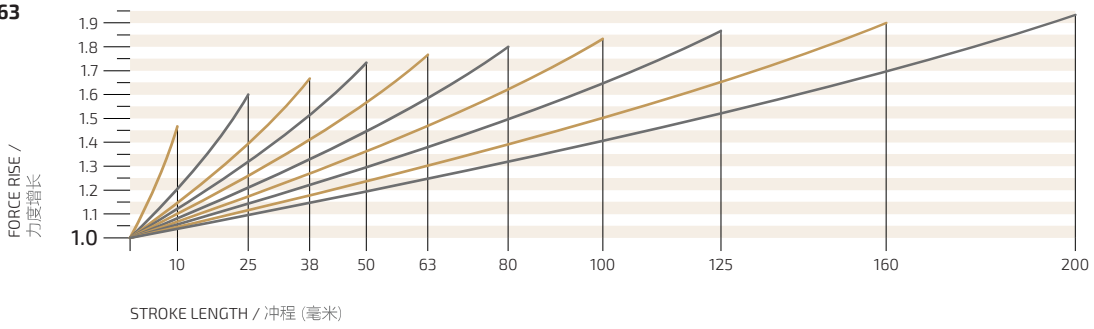
FORCE RISE VS. USED STROKE LENGTH CHARTS

力度增长与所用冲程的对照图表

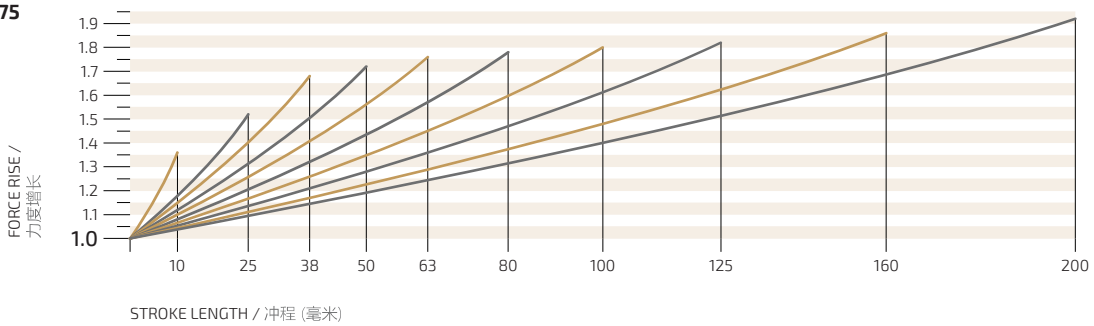
The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

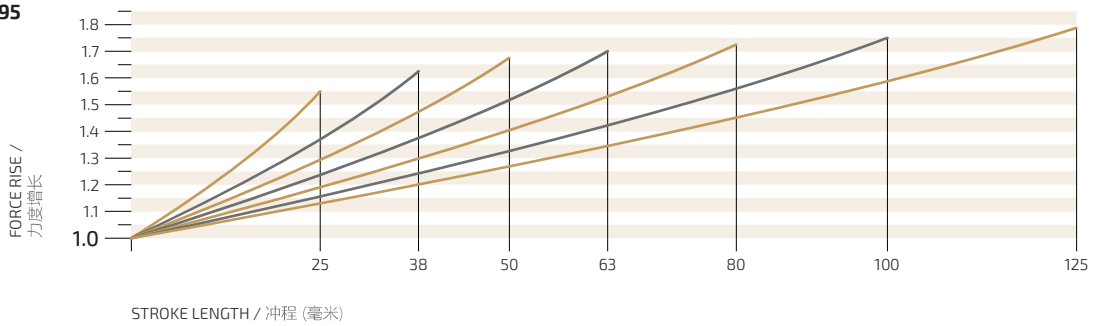
CHT63



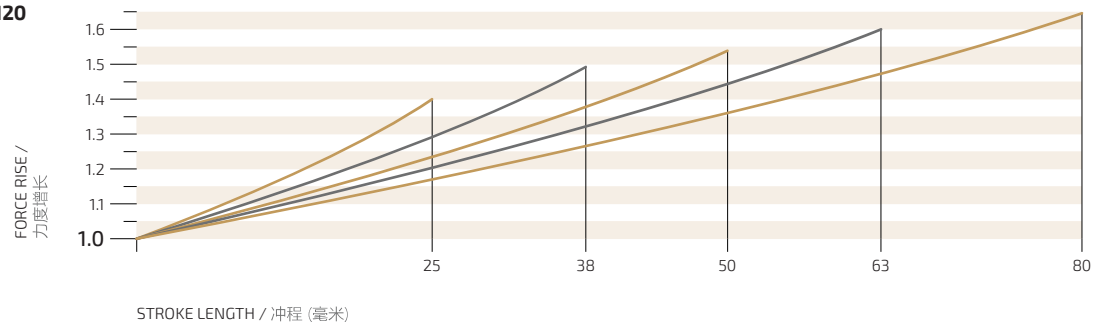
CHT75



CHT95



CHT120



CSMHT

19~120

PED In accordance with 2014/68/EU

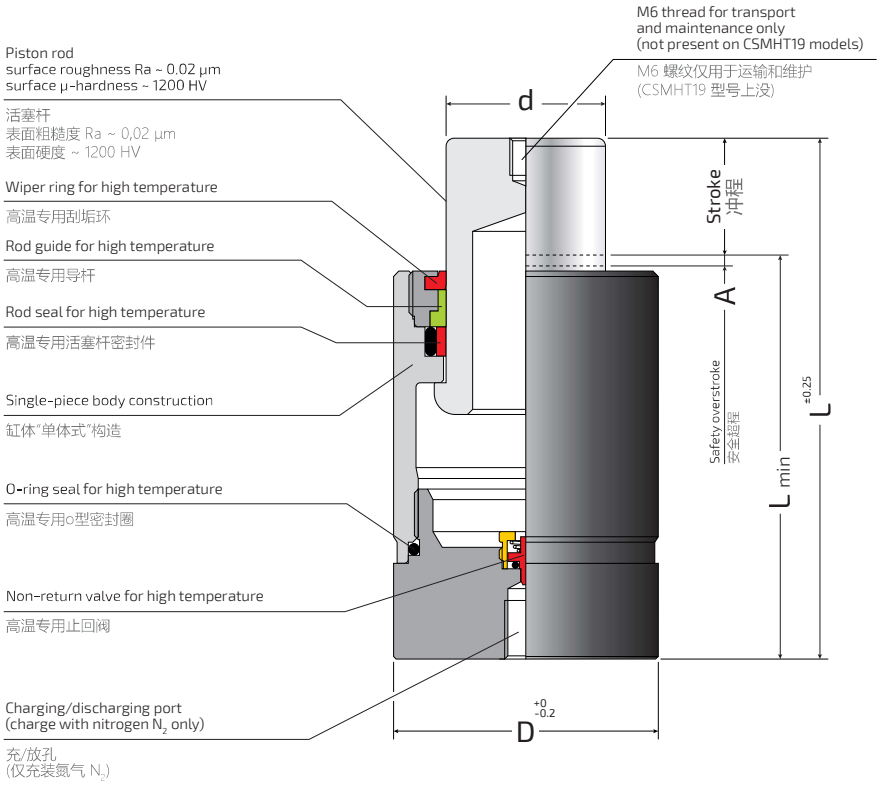
200°C
392°F
MAX TEMPERATURE

COMPACT POWER
COMPACT HEIGHT



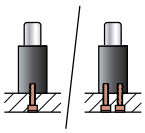
CSMHT series has been developed to work up to 200°C (392°F), for the most demanding high temperature applications.
The piston rod has to be lubricated with grease "PLUB".

CSMHT 系列可在最高 200°C (392°F) 的温度下作业，适用于最为苛刻的高温应用。
活塞杆必须用 "PLUB" 润滑脂进行润滑。

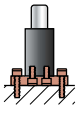


Technical notes / 技术说明
Important use instructions
in the dedicated catalogue section.
重要使用说明位于
目录中的相应部分。

Fixing possibilities / 可用紧固方式



at the base
with screw(s)
在底座上使用螺丝

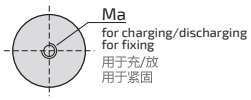


with base-plate
使用底板
BF, BFA, BFB
(Not for all CSMHT models)
(不适用所有 CSMHT 型号)

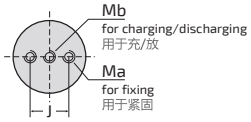


with front support
使用前支撑件
FT, FTA
(Not for all CSMHT models)
(不适用所有 CSMHT 型号)

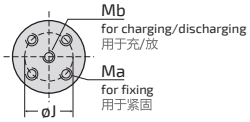
GAS SPRING BASE / 气缸底座



CSMHT19, CSMHT25, CSMHT32, CSMHT38



CSMHT50, CSMHT63



CHSMT75, CSMHT95, CSMHT120

SAFETY PROTECTIONS / 安全保护



UNCONTROLLED RETURN SPEED / 不受控返回速度



OVERSTROKE / 超程



OVERPRESSURE / 超压

HOW TO ORDER / 订购示例

IMPORTANT: it is necessary to contact our technical department in order to make sure that CSMHT gas springs are ok for the required application. Bordignon technical department will send you a dedicated form to be filled with the application data.
The **maximum charging pressure** (bar) depends on the use conditions (declared actual operating temperature).
You will be informed about the maximum charging pressure if your application is approved by our technical department.
重要提示: 您需联系我们的技术部门, 以确保 CSMHT 气缸适用于所需应用。Bordignon 相关部门会向您发送一张填写应用资料的专用表格。
最大充气压力 (巴) 取决于使用条件 (实际声明的工作温度)。
如果您的应用被我们的技术部门接受, 我们将向您通告最大充气压力。

CSMHT 19~120

Model 型号		MAX Stroke 最大冲程 mm	Lmin mm	L mm	D mm	d mm	A mm	Ma	J mm	Mb	bar (MPa)	daN	daN	Cycles per minute MAX 每分钟最多循环次数	Gas volume 气体体积 Litres	Weight 重量 kg
CSMHT19-10	●	10	50	60	19	10	1	M6 x 8	-	-	See "How to order" on page 58 参阅 58 页的 "订购示例"	100	130	See "How to order" on page 58 参阅 58 页的 "订购示例"	0.003	0.09
15	●	15	55	70									140		0.004	0.09
25	●	25	65	90									150		0.006	0.10
38	●	38	78	116									160		0.008	0.12
50	●	50	90	140									165		0.011	0.13
80	●	80	120	200									170		0.016	0.17
CSMHT25-10	●	10	50	60	25	14	1	M6 x 8	-	-	See "How to order" on page 58 参阅 58 页的 "订购示例"	200	290	See "How to order" on page 58 参阅 58 页的 "订购示例"	0.005	0.16
15	●	15	55	70									340		0.006	0.17
25	●	25	65	90									350		0.010	0.19
38	●	38	78	116									370		0.014	0.22
50	●	50	90	140									380		0.018	0.25
80	●	80	120	200									390		0.027	0.32
125	●	125	165	290									400		0.042	0.44
CSMHT32-10	●	10	55	65	32	18	1	M6 x 8	-	-	See "How to order" on page 58 参阅 58 页的 "订购示例"	350	490	See "How to order" on page 58 参阅 58 页的 "订购示例"	0.007	0.27
15	●	15	60	75									500		0.013	0.28
25	●	25	70	95									530		0.020	0.31
38	●	38	83	121									550		0.029	0.39
50	●	50	95	145									570		0.036	0.42
80	●	80	125	205									580		0.056	0.58
125	●	125	170	295									590		0.085	0.72
160	●	160	205	365									600		0.107	0.82
CSMHT38-10	●	10	55	65	38	22	1	M8 x 11	-	-	See "How to order" on page 58 参阅 58 页的 "订购示例"	500	720	See "How to order" on page 58 参阅 58 页的 "订购示例"	0.012	0.34
15	●	15	60	75									750		0.014	0.37
25	●	25	70	95									780		0.024	0.42
38	●	38	83	121									820		0.040	0.49
50	●	50	95	145									830		0.051	0.56
80	●	80	125	205									850		0.080	0.72
125	●	125	170	295									860		0.123	0.96
160	●	160	205	365									870		0.155	1.15
200	●	200	245	445									880		0.191	1.37
CSMHT50-10	●	10	60	70	50	30	1	M8 x 12 (2x)	20	M8	See "How to order" on page 58 参阅 58 页的 "订购示例"	1000	1600	See "How to order" on page 58 参阅 58 页的 "订购示例"	0.02	0.65
25	●	25	75	100									1630		0.05	0.79
38	●	38	88	126									1670		0.07	0.91
50	●	50	100	150									1690		0.09	1.02
63	●	63	113	176									1700		0.12	1.14
80	●	80	130	210									1710		0.15	1.29
100	●	100	150	250									1720		0.19	1.48
125	●	125	190	315									1730		0.23	1.70
160	●	160	235	395									1740		0.31	2.02
200	●	200	275	475									1750		0.38	2.39
250	●	250	325	575									1760		0.45	2.85
CSMHT63-10	●	10	65	75	63	40	1	M8 x 12 (2x)	20	M8	See "How to order" on page 58 参阅 58 页的 "订购示例"	1500	2200	See "How to order" on page 58 参阅 58 页的 "订购示例"	0.04	1.25
25	●	25	80	105									2400		0.09	1.42
38	●	38	93	131									2500		0.13	1.56
50	●	50	105	155									2550		0.17	1.69
63	●	63	118	181									2600		0.21	1.84
80	●	80	135	215									2650		0.26	1.96
100	●	100	160	260									2700		0.31	2.35
125	●	125	190	315									2750		0.39	2.76
160	●	160	235	395									2800		0.47	3.32
200	●	200	275	475									2900		0.58	3.89
CSMHT75-10	●	10	65	75	75	45	1	M8 x 12 (4x)	40	M8	See "How to order" on page 58 参阅 58 页的 "订购示例"	2500	4000	See "How to order" on page 58 参阅 58 页的 "订购示例"	0.05	1.78
25	●	25	80	105									4500		0.10	2.02
38	●	38	93	131									4650		0.15	2.24
50	●	50	105	155									4700		0.19	2.43
63	●	63	118	181									4730		0.24	2.64
80	●	80	135	215									4740		0.31	2.81
100	●	100	155	255									4750		0.38	3.13
125	●	125	200	325									4760		0.49	4.11
160	●	160	250	410									4800		0.59	5.55
200	●	200	300	500									4950		0.71	6.70
CSMHT95-25	●	25	90	115	95	58	1	M8 x 12 (4x)	60	M8	See "How to order" on page 58 参阅 58 页的 "订购示例"	4000	6900	See "How to order" on page 58 参阅 58 页的 "订购示例"	0.18	3.76
38	●	38	103	141									7050		0.26	4.12
50	●	50	115	165									7150		0.34	4.51
63	●	63	128	191									7180		0.42	5.03
80	●	80	155	235									7200		0.54	5.72
100	●	100	185	285									7250		0.68	6.41
125	●	125	220	345									7400		0.81	7.48
CSMHT120-25	●	25	100	125	120	75	1	M10 x 15 (4x)	80	M8	See "How to order" on page 58 参阅 58 页的 "订购示例"	6500	10300	See "How to order" on page 58 参阅 58 页的 "订购示例"	0.36	6.45
38	●	38	113	151									10900		0.49	7.03
50	●	50	125	175									11200		0.61	7.64
63	●	63	138	201									11400		0.74	8.20
80	●	80	160	240									11500		0.93	8.86

● Available on request (see "How to order" on page 58) / 可申请获得 (参阅 58 页的 "订购示例")

All the gas spring models in this table are in accordance with Article 4.3 of the 2014/68/EU Pressure Equipment Directive (PED)
本表中所有氮气弹簧的型号均符合欧盟 2014/68/EU 压力设备指令 (PED) 第 4.3 条中的规定

REPAIR KIT / 维修套件

Gas spring code 气缸代码	Repair kit code 维修套件代码
CSMHT19-...	**KR/CSMHT19**
CSMHT25-...	**KR/CSMHT25**
CSMHT32-10 ~ CSMHT32-125	**KR/CSMHT32-1**
CSMHT32-160	**KR/CSMHT32-2**
CSMHT38-10 ~ CSMHT38-125	**KR/CSMHT38-1**
CSMHT38-160, CSMHT38-200	**KR/CSMHT38-2**
CSMHT50-10 ~ CSMHT50-125	**KR/CSMHT50-1**
CSMHT50-160 ~ CSMHT50-250	**KR/CSMHT50-2**

Gas spring code 气缸代码	Repair kit code 维修套件代码
CSMHT63-10 ~ CSMHT63-125	**KR/CSMHT63-1**
CSMHT63-160, CSMHT63-200	**KR/CSMHT63-2**
CSMHT75-10 ~ CSMHT75-125	**KR/CSMHT75-1**
CSMHT75-160, CSMHT75-200	**KR/CSMHT75-2**
CSMHT95-...	**KR/CSMHT95**
CSMHT120-...	**KR/CSMHT120**

Download repair instructions from www.bordignon.com /
可从网站 www.bordignon.com 上下载维修说明

CSMHT

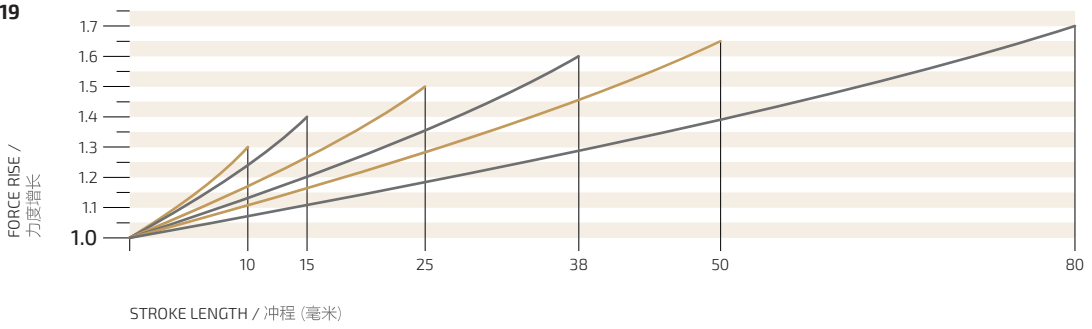
FORCE RISE VS. USED STROKE LENGTH CHARTS

力度增长与所用冲程的对照图表

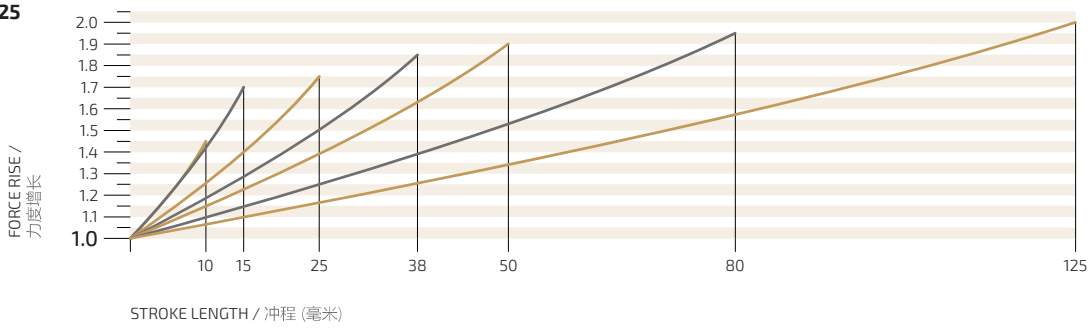
The force curves in the charts below are obtained from reference values measured in static conditions. The actual forces generated under use conditions may vary, since they depend on the specific parameters of the application, such as the working speed (cycles per minute).

下图所示力度趋势为静态条件下测得的参考值。使用过程中产生的实际力度可能会有所不同,因为它们取决于应用的具体参数,例如运作速度(每分钟循环次数)

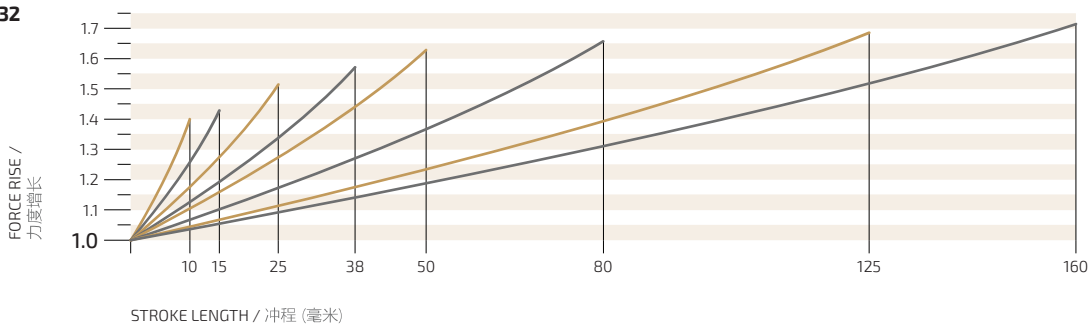
CSMHT19



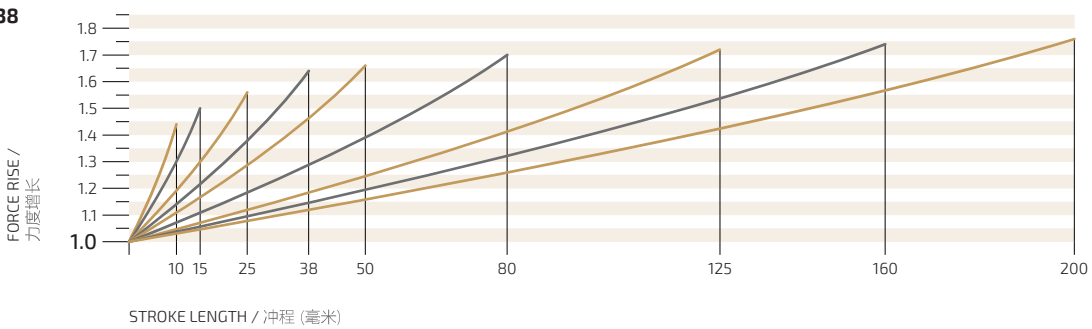
CSMHT25



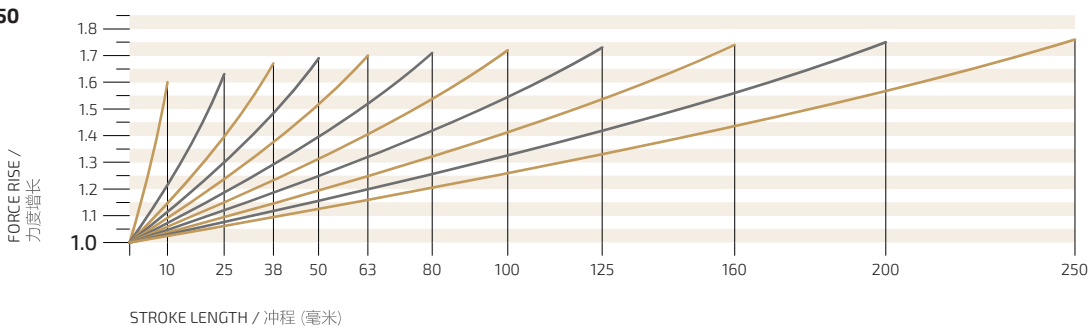
CSMHT32



CSMHT38



CSMHT50



CSMHT

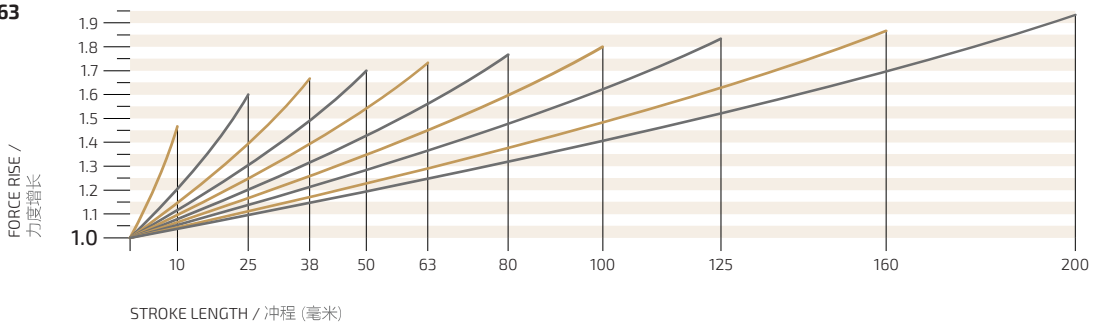
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力度增长与所用冲程的对照图表

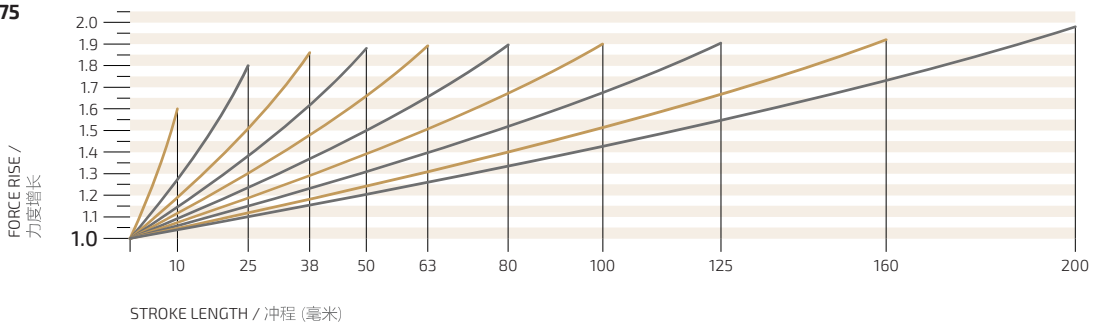
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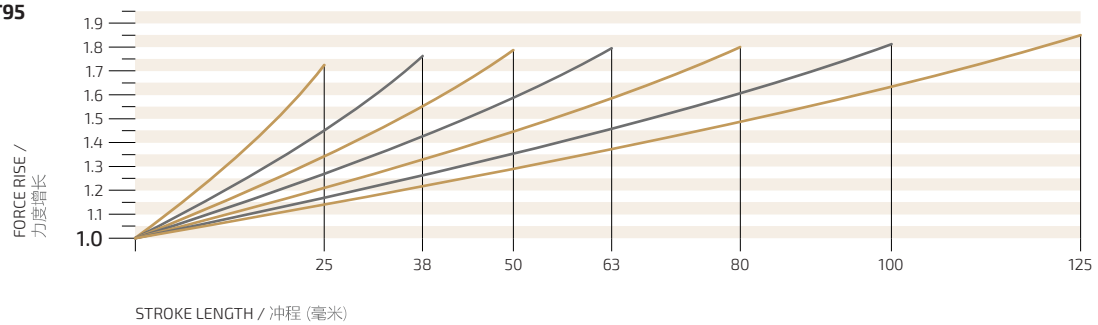
CSMHT63



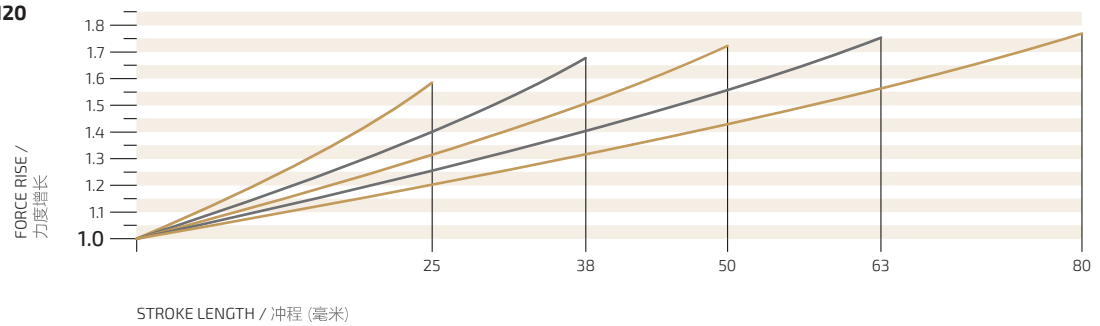
CSMHT75



CSMHT95



CSMHT120



BF

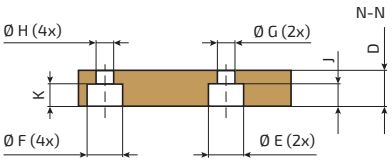
ISO 11901-2 VDI 3003

Fixing base plate / 紧固底板

This series includes the models compliant with automotive standards /
该系列包含符合以下汽车标准的型号

General Motors	90.25.04
PSA	E24.54.815.G
Renault	EM24.54.700





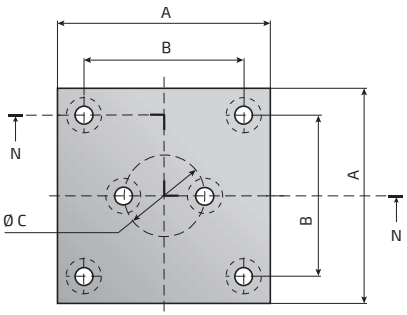
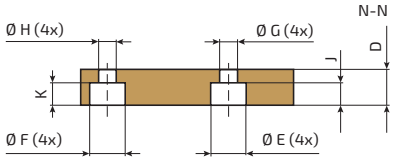


FIG. 1



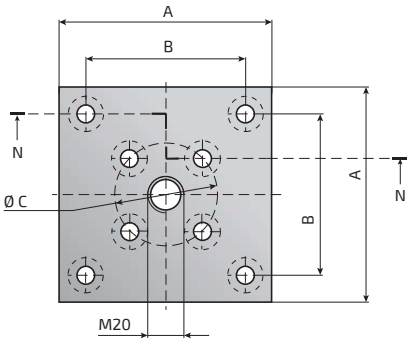
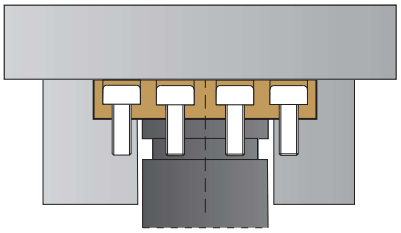


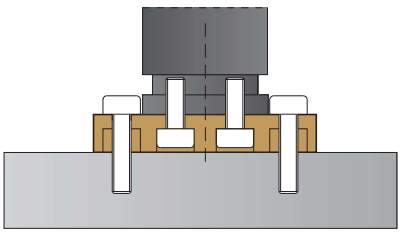
FIG. 2



Model 型号	Reference to Standards 参考标准	For models... 针对型号...	A mm	B mm	Ø C mm	D mm	Ø E mm	Ø F mm	Ø G mm	Ø H mm	J mm	K mm	FIG.
BF 45	ISO 11901-2, VDI 3003	AGS750, IGS500, LGS500	70	50	20	20	15	15	9	9	14	12	1
50	ISO 11901-2, VDI 3003	AGS1000, AGS1500, IGS750, VV750, CHT50, CSMHT50	75	56.5	20	20	15	15	9	9	14	12	1
63	ISO 11901-2	AGS1500, CHT63, CSMHT63	100	73.5	20	20	15	18	9	11	14	12	1
75	ISO 11901-2, VDI 3003	AGS1500, AGS2400, IGS1500, TGS5000, VV2385, CHT75, CSMHT75	100	73.5	40	20	15	18	9	11	14	12	2
95	ISO 11901-2, VDI 3003	AGS4200, IGS3000, VV2945, CHT95, CSMHT95	120	92	60	20	15	20	9	13.5	14	13	2
120	ISO 11901-2, VDI 3003	AGS6600, IGS5000, CHT120, CSMHT120	140	109.5	80	20	18	20	11	13.5	15	13	2
150	ISO 11901-2, VDI 3003	AGS9500, IGS7500	190	138	100	25	18	26	11	17.5	15	17	2
195	ISO 11901-2, VDI 3003	AGS20000, IGS10000	210	170	120	25	20	26	13.5	17.5	13	17	2

Fixing possibilities / 可用紧固方式





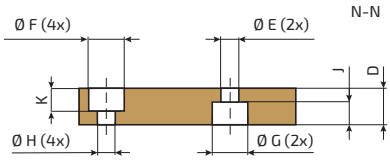
BFA

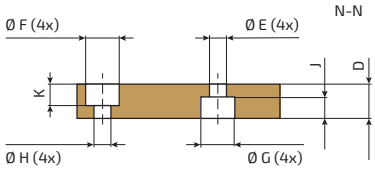
This series includes the models compliant with automotive standards / 该系列包含符合以下汽车标准的型号

Renault	EM24.54.700

Fixing base plate / 紧固底板









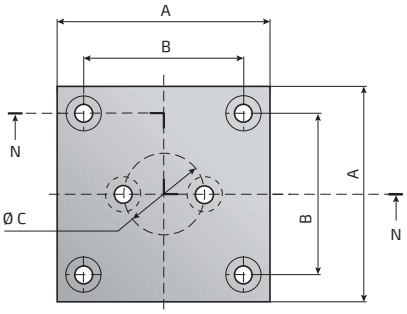


FIG. 1

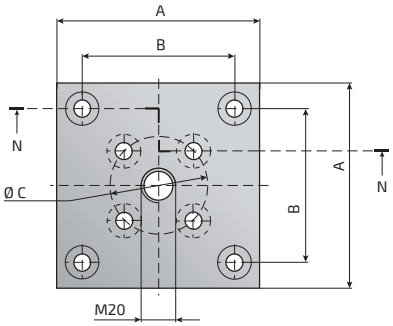
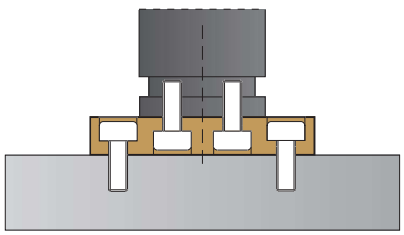


FIG. 2

Model 型号	Reference to Standards 参考标准	For models... 针对型号...	A mm	B mm	Ø C mm	D mm	Ø E mm	Ø F mm	Ø G mm	Ø H mm	J mm	K mm	FIG.
BFA 45	-	AGS750, IGS500, LGS500	70	50	20	20	9	18	15	11	14	12	1
50	-	AGS1000, AGS1500, IGS750, VV750, CHT50, CSMHT50	75	56.5	20	20	9	18	15	11	14	12	1
75	-	AGS1500, AGS2400, IGS1500, TGS5000, VV2385, CHT75, CSMHT75	100	73.5	40	20	9	18	15	11	14	12	2
95	-	AGS4200, IGS3000, VV2945, CHT95, CSMHT95	120	92	60	20	9	20	15	13.5	14	13	2
120	-	AGS6600, IGS5000, CHT120, CSMHT120	140	109.5	80	20	11	20	18	13.5	15	13	2
150	-	AGS9500, IGS7500	190	138	100	25	11	26	18	17.5	15	17	2
195	-	AGS20000, IGS10000	210	170	120	25	13.5	26	20	17.5	15	17	2

Fixing possibilities / 可用紧固方式



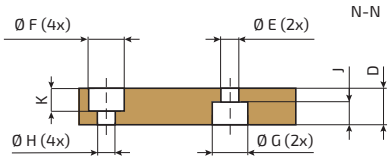
BFB

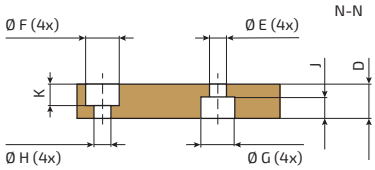
Fixing base plate / 紧固底板

This series includes the models compliant with automotive standards /
该系列包含符合以下汽车标准的型号

BMW	B2 4009
MB	B8 0132 110 008 801
Renault	EM24.54.700









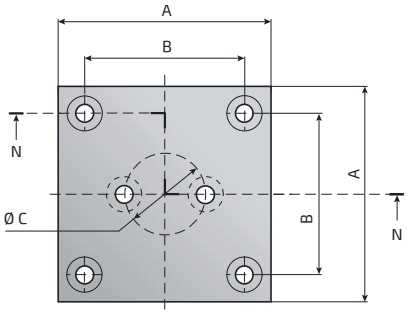


FIG. 1

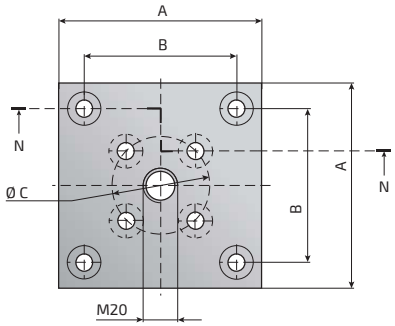
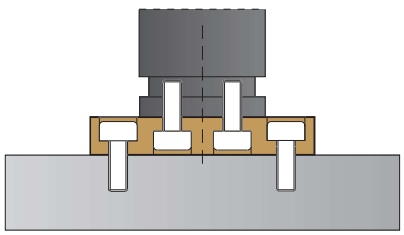


FIG. 2

Model 型号	Reference to Standards 参考标准	For models... 针对型号...	A mm	B mm	Ø C mm	D mm	Ø E mm	Ø F mm	Ø G mm	Ø H mm	J mm	K mm	FIG.
BFB 45	-	AGS750, IGS500, LGS500	70	50	20	20	9	15	15	9	12	12	1
50	-	AGS1000, AGS1500, IGS750, VV750, CHT50, CSMHT50	75	56.5	20	20	9	15	15	9	12	12	1
63	-	AGS1500, CHT63, CSMHT63	100	73.5	20	20	9	18	15	11	12	12	1
75	-	AGS1500, AGS2400, IGS1500, TGS5000, VV2385, CHT75, CSMHT75	100	73.5	40	20	9	18	15	11	12	14	2
95	-	AGS4200, IGS3000, VV2945, CHT95, CSMHT95	120	92	60	20	9	20	15	13.5	14	13	2
120	-	AGS6600, IGS5000, CHT120, CSMHT120	140	109.5	80	20	11	20	18	13.5	15	13	2
150	-	AGS9500, IGS7500	190	138	100	20	11	20	18	13.5	15	13	2
195	-	AGS20000, IGS10000	210	170	120	25	13.5	26	20	17.5	15	17	2

Fixing possibilities / 可用紧固方式

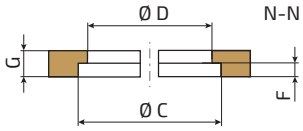


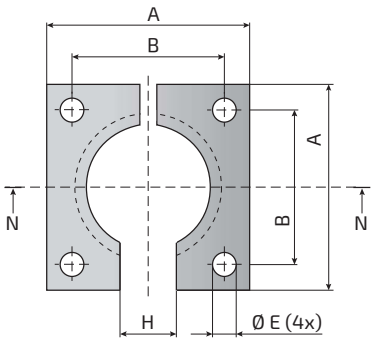
FSC

Fixing half-flanges / 对开法兰紧固夹



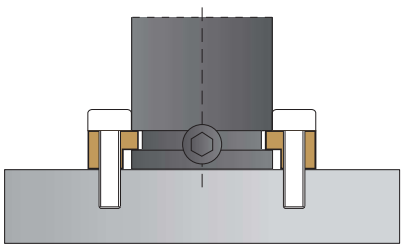






Model 型号	Reference to Standards 参考标准	For models... 针对型号...	A mm	B mm	Ø C mm	Ø D mm	Ø E mm	F mm	G mm	H mm
FSC 50	-	CHT50	75	56.5	50	44	13	5.8	12	20
63	-	CHT63	100	73.5	63	55	13	5.8	12	20
75	-	CHT75	100	73.5	75	67	13	5.8	12	20
95	-	CHT95	120	92	95	87	18	5.8	12	20
120	-	CHT120	140	109.5	120	112	18	5.8	12	20

Fixing possibilities / 可用紧固方式



SF

Fixing half-flanges / 对开法兰紧固夹

ISO 11901-2 VDI 3003

This series includes the models compliant with automotive standards /
该系列包含符合以下汽车标准的型号

BMW	B2 4009	**MB**	B8 0138 100 000 001
FCA	075.90.90	**Renault**	EM24.54.700
Ford	W-DX35-62M	**VW**	39D 848
General Motors	90.25.01		





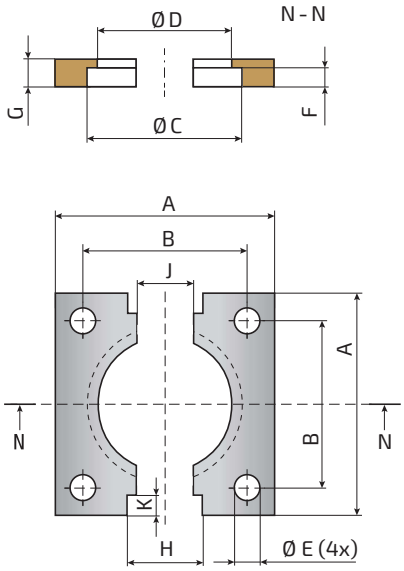


FIG. 1

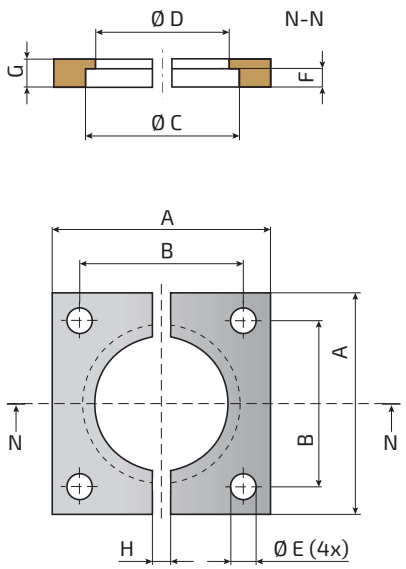
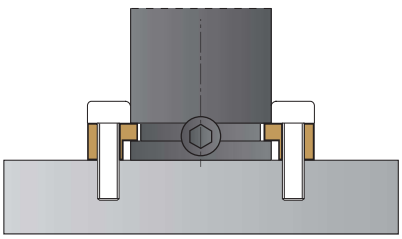


FIG. 2

Model 型号	Reference to Standards 参考标准	For models... 针对型号...	A mm	B mm	Ø C mm	Ø D mm	Ø E mm	F mm	G mm	H mm	J mm	K mm	FIG.
SF 32	-	AGS350, IGS150, TGS700	50	35	32.5	28.5	6.6	4	7	21	17	6.5	1
38	-	AGS500, IGS250, TGS1000	55	40	38.5	34.5	6.6	4	7	21	17	6.5	1
45	ISO 11901-2, VDI 3003	AGS750, IGS500, LGS500	70	50	45.5	41.5	9	4	7	20	-	-	2
50	ISO 11901-2, VDI 3003	AGS1000, IGS750, TGS2000	75	56.5	50.5	44.5	9	8	12	24	-	-	2
63	-	AGS1500, TGS3000	85	63.5	63.5	57.5	11	8	12	24	-	-	2
63A	ISO 11901-2	AGS1500, TGS3000	100	73.5	64	57	11	8	12	24	-	-	2
75	ISO 11901-2, VDI 3003	AGS2400, IGS1500, TGS5000	100	73.5	75.5	68.5	11	8	12	24	-	-	2
95	ISO 11901-2, VDI 3003	AGS4200, IGS3000, TGS8000	120	92	95.5	88.5	13.5	8	12	24	-	-	2
120	ISO 11901-2, VDI 3003	AGS6600, IGS5000, TGS12000	140	109.5	120.5	113.5	13.5	8	12	24	-	-	2
150	ISO 11901-2, VDI 3003	AGS9500, IGS7500	190	138	150.5	143.5	17.5	8	12	24	-	-	2
195	ISO 11901-2, VDI 3003	AGS20000, IGS10000	210	170	195.5	188	17.5	8	13	24	-	-	2

Fixing possibilities / 可用紧固方式

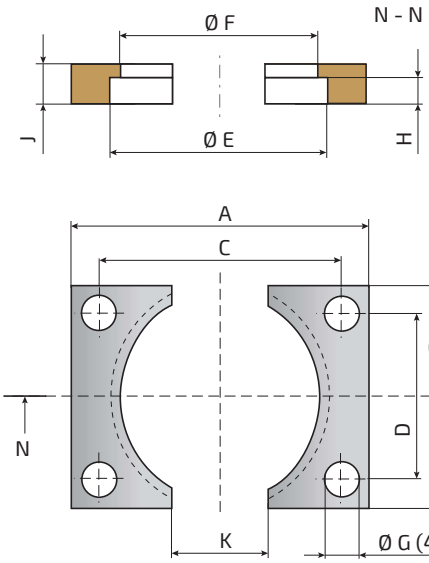


SFA

Fixing half-flanges / 对开法兰紧固夹

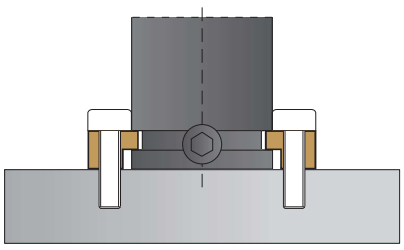






Model 型号	Reference to Standards 参考标准	For models... 针对型号...	A mm	B mm	C mm	D mm	Ø E mm	Ø F mm	Ø G mm	H mm	J mm	K mm
SFA 32	-	AGS350, IGS150, TGS700	50	27	40	18	32.5	28.5	6.6	4	7	20
38	-	AGS500, IGS250, TGS1000	55	33	44	20	38.5	34.5	6.6	4	7	20
45	-	AGS750, IGS500, LGS500	70	40	57	27	45.5	41.5	9	4	7	25
50	-	AGS1000, IGS750, TGS2000	75	45	62	32	50.5	44.5	9	8	12	25
63	-	AGS1500, TGS3000	85	58	69	42	63.5	57.5	11	8	12	30
75	-	AGS2400, IGS1500, TGS5000	100	70	84	54	75.5	68.5	11	8	12	30
95	-	AGS4200, IGS3000, TGS8000	120	90	100	70	95.5	88.5	13.5	8	12	40
120	-	AGS6600, IGS5000, TGS12000	140	115	120	95	120.5	113.5	13.5	8	12	50
150	-	AGS9500, IGS7500	190	145	165	120	150.5	143.5	17.5	8	12	60
195	-	AGS20000, IGS10000	210	190	185	165	195.5	188	17.5	8	13	80

Fixing possibilities / 可用紧固方式



ST

Fixing foot brackets / 紧固支架





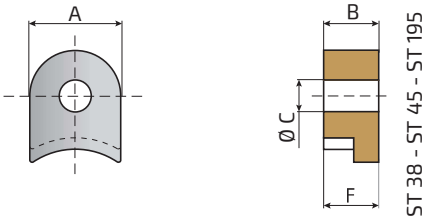
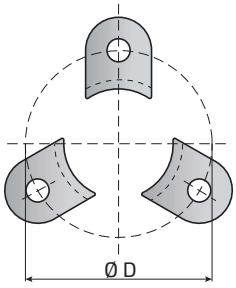


FIG. 1



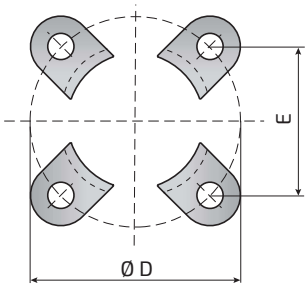
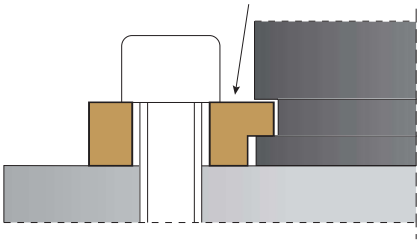


FIG. 2

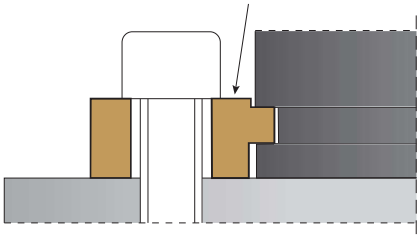
Model 型号	Reference to Standards 参考标准	For models... 针对型号...	A mm	B mm	C mm	Ø D mm	E mm	F mm	FIG.
ST 38	-	AGS500, IGS250, TGS1000	20	7	7	56.6	-	7	1
45	-	AGS750, IGS500, LGS500	25	7	9	70.7	-	7	1
50	-	AGS1000, IGS750, TGS2000	30	14.2	13	80	-	13	1
63	-	AGS1500, TGS3000	30	14.2	13	92	65	13	2
75	-	AGS2400, IGS1500, TGS5000	30	14.2	13	104	73.5	13	2
95	-	AGS4200, IGS3000, TGS8000	40	14.2	17	130	92	13	2
120	-	AGS6600, IGS5000, TGS12000	50	14.2	17	155	109.5	13	2
150	-	AGS9500, IGS7500	50	14.2	21	195	138	13	2
195	-	AGS20000, IGS10000	58	16	21	240	169	16	2

Fixing possibilities / 可用紧固方式

ST 38 - ST 45 - ST 195



ST 50 ~ 150

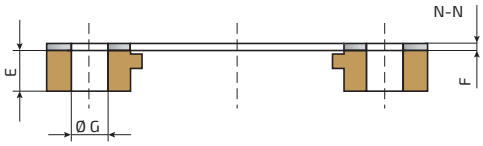


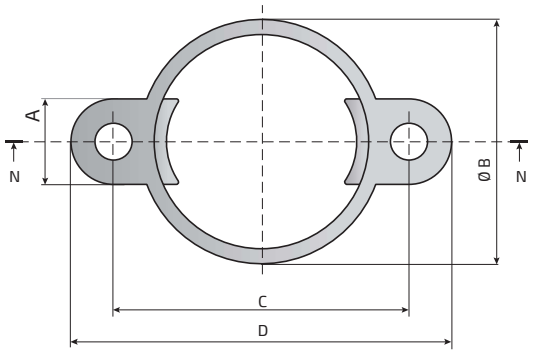
STA

Fixing foot brackets / 紧固支架



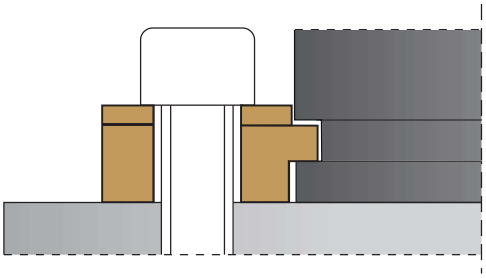






Model 型号	Reference to Standards 参考标准	For models... 针对型号...	A mm	Ø B mm	C mm	D mm	E mm	F mm	Ø G mm
STA 38	-	AGS500, IGS250, TGS1000	20	48	56.6	76.6	7	2.5	7
45	-	AGS750, IGS500, LGS500	25	56	70.7	95.7	7	2.5	9
50	-	AGS1000, IGS750, TGS2000	30	61	80	110	14.2	2.5	13
63	-	AGS1500, TGS3000	30	73	92	122	14.2	2.5	13
75	-	AGS2400, IGS1500, TGS5000	30	86	104	134	14.2	2.5	13
95	-	AGS4200, IGS3000, TGS8000	40	106	130	170	14.2	2.5	17
120	-	AGS6600, IGS5000, TGS12000	50	131	155	205	14.2	2.5	17
150	-	AGS9500, IGS7500	50	170	195	245	14.2	2.5	21

Fixing possibilities / 可用紧固方式



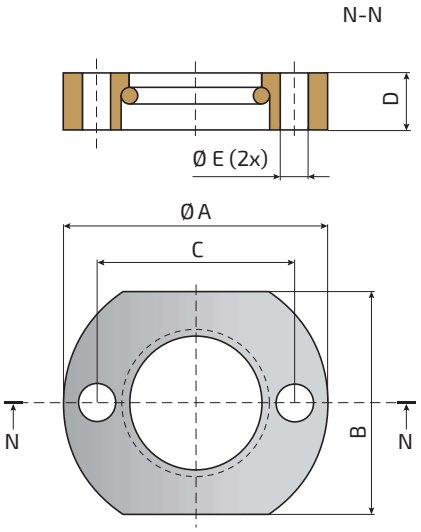
FV

Collar flange (for base-fixing) / 环状法兰 (用于底座紧固)



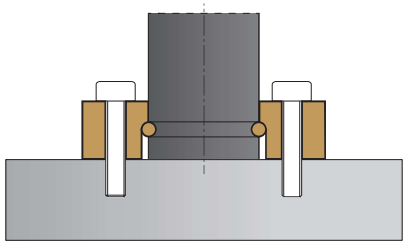






Model 型号	Reference to Standards 参考标准	For models... 针对型号...	Ø A mm	B mm	C mm	D mm	Ø E mm
FV 19	-	VGS90	45	25	32	9.2	7

Fixing possibilities / 可用紧固方式



FL 12~25

Collar flange / 环状法兰

ISO 11901-2 VDI 3003

This series includes the models compliant with automotive standards /
该系列包含符合以下汽车标准的型号

BMW	B2 4009	**MB**	B8 0134 400 008 801
FCA	075.90.75	**PSA**	E24.54.815.G
Ford	W-DX35-80M	**VW**	39D 848





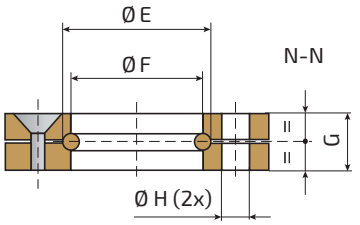
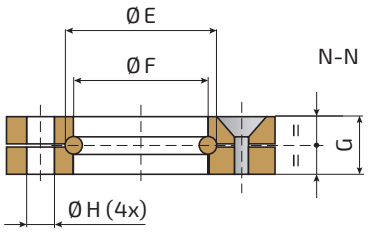


FIG. 1



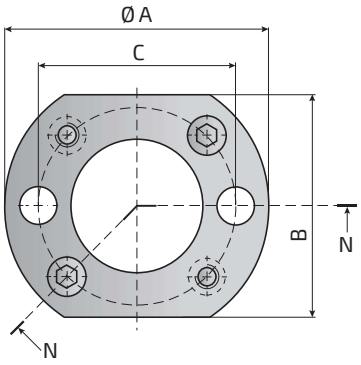
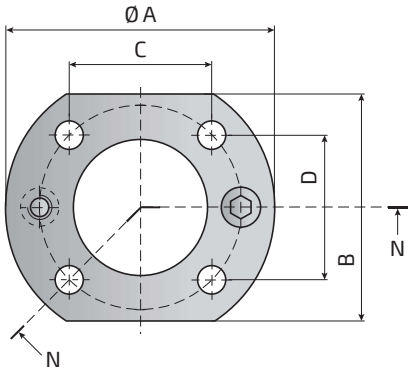
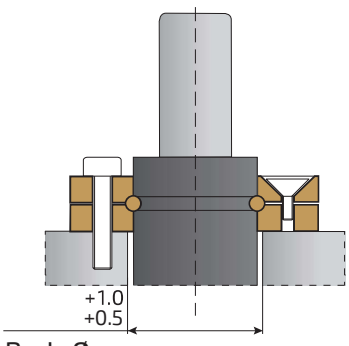


FIG. 2

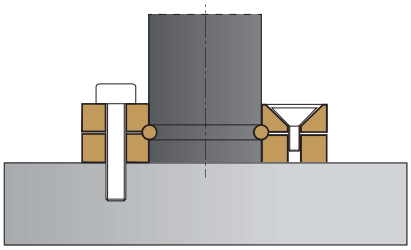


Model 型号	Reference to Standards 参考标准	For models... 针对型号...	Ø A mm	B mm	C mm	D mm	Ø E mm	Ø F mm	G mm	Ø H mm	FIG.
FL 12	-	VGS50	34	21	24	-	13.6	12.5	9	6.6	1
15	-	VGS70	37	24	27	-	16.6	15.5	9	6.6	1
19 A	VDI 3003	AGS170, VGS90, VV170	44	25	32	-	21	19.5	9	6.6	1
19 B	ISO 11901-2	AGS170, VGS90, VV170	44	25	30	12	21	19.5	9	6.6	2
25 A	VDI 3003	AGS320, TGS400, VGS200, VV320-63/63H	50	30	38	-	27	25.5	9	6.6	1
25 B	ISO 11901-2	AGS320, TGS400, VGS200, VV320-63/63H	50	30	34	18	27	25.5	9	6.6	2

Fixing possibilities / 可用紧固方式



Body Ø



(For VGS200 and TGS400 models only)
(仅针对 VGS200 和 TGS400 型号)

FL 32~195

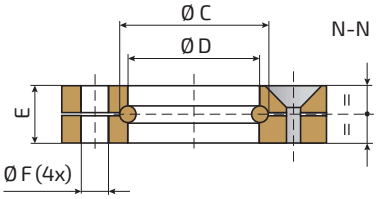
ISO 11901-2 VDI 3003

Collar flange / 环状法兰

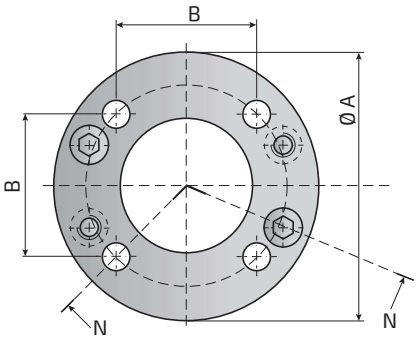
This series includes the models compliant with automotive standards / 该系列包含符合以下汽车标准的型号

BMW	B2 4009	**MB**	B8 0134 300 000 001
FCA	075.90.80	**Renault**	EM24.54.700
General Motors	90.25.03		



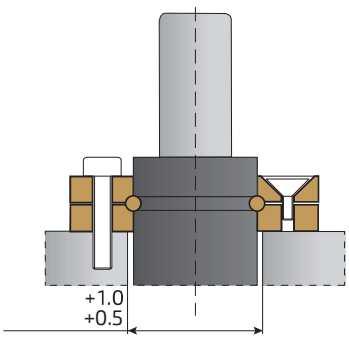






Model 型号	Reference to Standards 参考标准	For models... 针对型号...	Ø A mm	B mm	Ø C mm	Ø D mm	E mm	Ø F mm
FL 32	ISO 11901-2, VDI 3003	AGS350, IGS150, TGS700	60	35	34	32.5	9	6.6
38	ISO 11901-2, VDI 3003	AGS500, IGS250, TGS1000	68	40	40	38.5	9	6.6
45	ISO 11901-2, VDI 3003	AGS750, IGS500, LGS500	86	50	47	45.5	13	9
50	ISO 11901-2, VDI 3003	AGS1000, IGS750	95	56.5	54	50.5	13	9
63	ISO 11901-2	AGS1500, TGS3000	122	73.5	67	63.5	16	11
75	ISO 11901-2, VDI 3003	AGS2400, IGS1500, VV2385	122	73.5	80	75.5	16	11
95	ISO 11901-2, VDI 3003	AGS4200, IGS3000	150	92	100	95.5	18	13.5
120	ISO 11901-2, VDI 3003	AGS6600, IGS5000, TGS12000	175	109.5	125	120.5	21	13.5
150	ISO 11901-2, VDI 3003	AGS9500, IGS7500	220	138	155	150.5	27	17.5
195	ISO 11901-2, VDI 3003	AGS20000, IGS10000	290	170	200	195.5	27	17.5

Fixing possibilities / 可用紧固方式



Body Ø

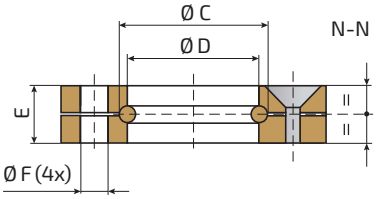
FLA

This series includes the models compliant with automotive standards / 该系列包含符合以下汽车标准的型号

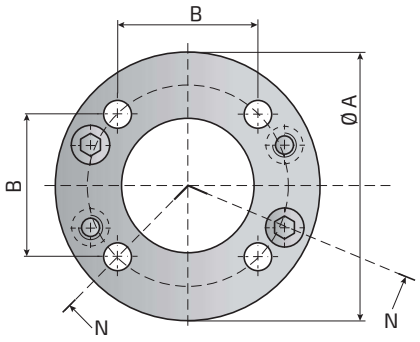
Renault	EM24.54.700

Collar flange / 环状法兰



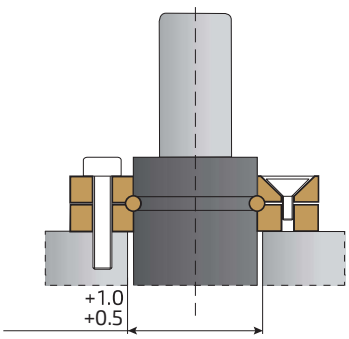






Model 型号	Reference to Standards 参考标准	For models... 针对型号...	Ø A mm	B mm	Ø C mm	Ø D mm	E mm	Ø F mm
FLA 50	-	TGS2000	95	56.5	53	50.5	13	9
75	-	TGS5000	122	73.5	78	75.5	16	11
95	-	TGS8000	150	92	98	95.5	18	13.5

Fixing possibilities / 可用紧固方式



Body Ø

FLQ

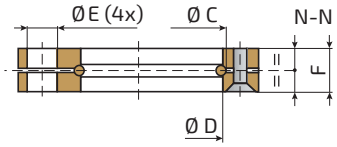
Collar flange / 环状法兰

ISO 11901-2 VDI 3003

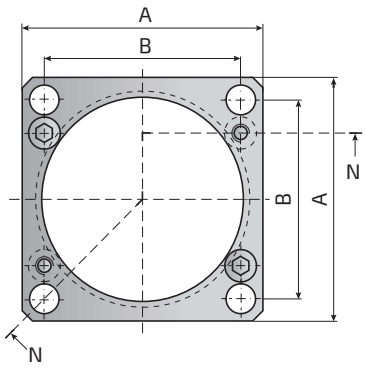
This series includes the models compliant with automotive standards /
该系列包含符合以下汽车标准的型号

BMW	B2 4009	**General Motors**	90.25.02
FCA	075.90.85	**VW**	39D 848
Ford	W-DX35-62M		



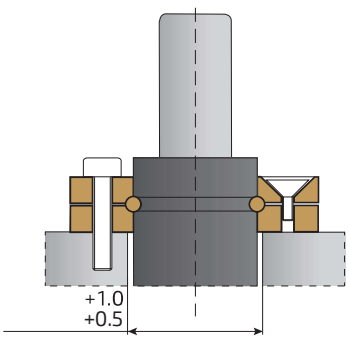






Model 型号	Reference to Standards 参考标准	For models... 针对型号...	A mm	B mm	Ø C mm	Ø D mm	Ø E mm	F mm
FLQ 32	ISO 11901-2, VDI 3003	AGS350, IGS150, TGS700	45	35	34	32.5	6.6	9
38	ISO 11901-2, VDI 3003	AGS500, IGS250, TGS1000	52	40	40	38.5	6.6	9
45	ISO 11901-2, VDI 3003	AGS750, IGS500, LGS500	64	50	47	45.5	9	13
50	ISO 11901-2, VDI 3003	AGS1000, IGS750	70	56.5	54	50.5	9	13
63 A	ISO 11901-2, VDI 3003	AGS1500, TGS3000	80	64	67	63.5	11	16
63 B	-	AGS1500, TGS3000	90	73.5	67	63.5	11	16
75	ISO 11901-2, VDI 3003	AGS2400, IGS1500, VV2385	90	73.5	80	75.5	11	16
95	ISO 11901-2, VDI 3003	AGS4200, IGS3000	110	92	100	95.5	13.5	18
120	ISO 11901-2, VDI 3003	AGS6600, IGS5000, TGS12000	130	109.5	125	120.5	13.5	21
150	ISO 11901-2, VDI 3003	AGS9500, IGS7500	162	138	155	150.5	17.5	27
195	ISO 11901-2, VDI 3003	AGS20000, IGS10000	210	170	200	195.5	17.5	27

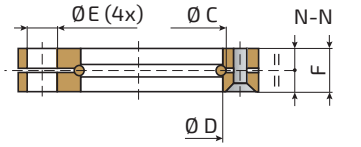
Fixing possibilities / 可用紧固方式



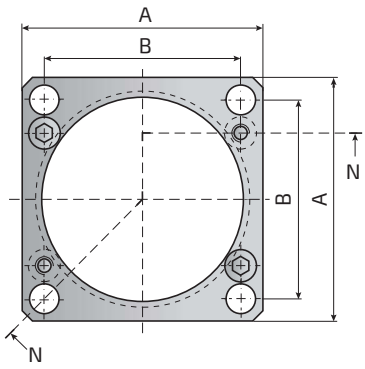
FLQA

Collar flange / 环状法兰



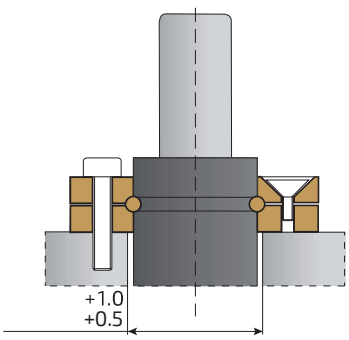






Model 型号	Reference to Standards 参考标准	For models... 针对型号...	A mm	B mm	Ø C mm	Ø D mm	Ø E mm	F mm
FLQA 50	-	TGS2000	70	56.5	53	50.5	9	13
75	-	TGS5000	90	73.5	78	75.5	11	16
95	-	TGS8000	110	92	98	95.5	13.5	18

Fixing possibilities / 可用紧固方式



FT

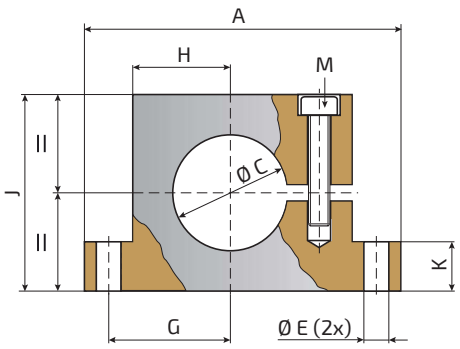
ISO 11901-2 VDI 3003

This series includes the models compliant with automotive standards / 该系列包含符合以下汽车标准的型号

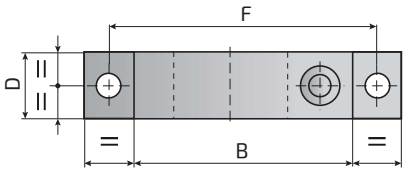
BMW	B2 4009	**PSA**	E24.54.815.G
General Motors	90.25.455		

Front support / 前支撑件







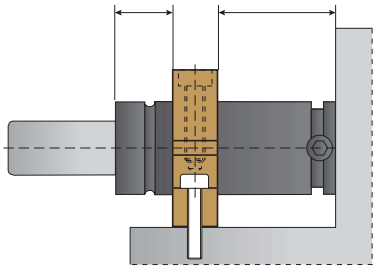


Model 型号	Reference to Standards 参考标准	For models... 针对型号...	A mm	B mm	Ø C mm	D mm	Ø E mm	F mm	G mm	H mm	J mm	K mm	M
FT 32	VDI 3003	AGS350, IGS150, TGS700, VV320-80, VV500, VV565, CHT32, CSMHT32	90	54	32	20	9	72	31	22	45	15	M8
38	VDI 3003	AGS500, IGS250, TGS1000, CHT38, CSMHT38	95	59	38	20	9	77	34	25	55	15	M8
45	VDI 3003	AGS750, IGS500, LGS500	100	64	45	20	9	82	37	28	60	15	M8
50	ISO 11901-2, VDI 3003	AGS1000, IGS750, TGS2000, VV750, CHT50, CSMHT50	130	90	50	30	9	110	50	40	80	20	M8
75	ISO 11901-2, VDI 3003	AGS2400, IGS1500, TGS5000, VV2385, CHT75, CSMHT75	160	115	75	30	11	137	63.5	52.5	105	20	M10
95	ISO 11901-2, VDI 3003	AGS4200, IGS3000, TGS8000, VV2945, CHT95, CSMHT95	195	145	95	30	13.5	170	80	67.5	125	20	M12
120	ISO 11901-2, VDI 3003	AGS6600, IGS5000, TGS12000, CHT120, CSMHT120	220	165	120	30	13.5	195	92.5	77.5	148	20	M12
150	ISO 11901-2, VDI 3003	AGS9500, IGS7500	260	200	150	30	13.5	230	110	95	200	20	M12

Fixing possibilities / 可用紧固方式

MAX
0.5 x diameter of the gas spring body
缸体直径的 0,5 x

MIN
1/3 (one third) of dimension **Lmin** of the gas spring
气缸**最小极限**尺寸的 1/3 (三分之一)



Dimension **MIN** must be respected to allow the over-pressure and over-stroke safety system to work properly (see dedicated catalogue section).
最小极限尺寸必须遵守,以使安全系统能够在超压和超程的情况下正常运作 (参阅目录中的相应章节)。

FTA

Front support / 前支撑件

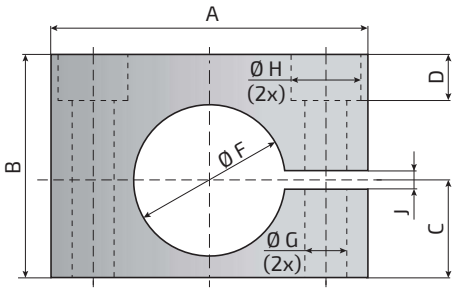
ISO 11901-2 VDI 3003

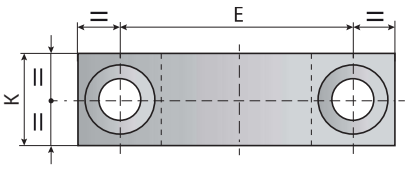
This series includes the models compliant with automotive standards /
该系列包含符合以下汽车标准的型号

BMW	B2 4009	**General Motors**	90.25.07
FCA	075.90.95	**MB**	B8 ...
Ford	W-DX35-62M	**VW**	39D 848







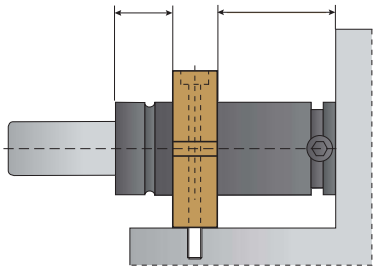


Model 型号	Reference to Standards 参考标准	For models... 针对型号...	A mm	B mm	C mm	D mm	E mm	Ø F mm	Ø G mm	Ø H mm	J mm	K mm
FTA 32	ISO 11901-2, VDI 3003	AGS350, IGS150, TGS700, VV320-80, VV500, VV565, CHT32, CSMHT32	68	48	20.9	10	50	32.5	9	15	4	20
38	ISO 11901-2, VDI 3003	AGS500, IGS250, TGS1000, CHT38, CSMHT38	74	54	23.9	16	54	38.5	9	15	4	20
45	ISO 11901-2, VDI 3003	AGS750, IGS500, LGS500	80	60	27.5	22	60	45.5	9	15	4	20
50	ISO 11901-2, VDI 3003	AGS1000, IGS750, TGS2000, VV750, CHT50, CSMHT50	90	70	30	25	68	50.5	11	18	5	30
63 A	ISO 11901-2, VDI 3003	AGS1500, TGS3000, CHT63, CSMHT63	108	82	36.5	27	84	63.5	11	18	5	30
63 B	-	AGS1500, TGS3000, CHT63, CSMHT63	105	80	40	11	80	63	10.5	17	10	30
75	ISO 11901-2, VDI 3003	AGS2400, IGS1500, TGS5000, VV2385, CHT75, CSMHT75	125	94	42	32	100	75.5	13.5	20	5	30
95	ISO 11901-2, VDI 3003	AGS4200, IGS3000, TGS8000, VV2945, CHT95, CSMHT95	140	115	52.5	33	115	95.5	13.5	20	5	30
120	ISO 11901-2, VDI 3003	AGS6600, IGS5000, TGS12000, CHT120, CSMHT120	170	140	65	58	145	120.5	13.5	20	7	30
150	ISO 11901-2, VDI 3003	AGS9500, IGS7500	200	170	80	68	175	150.5	13.5	20	7	30

Fixing possibilities / 可用紧固方式

MAX
0.5 x diameter of the gas spring body
缸体直径的 0,5 x

MIN
1/3 (one third) of dimension **Lmin** of the gas spring
气缸**最小极限**尺寸的 1/3 (三分之一)



Dimension **MIN** must be respected to allow the over-pressure and over-stroke safety system to work properly (see dedicated catalogue section).
最小极限尺寸必须遵守,以使安全系统能够在超压和超程的情况下正常运作 (参阅目录中的相应章节)。

LINKED SYSTEM

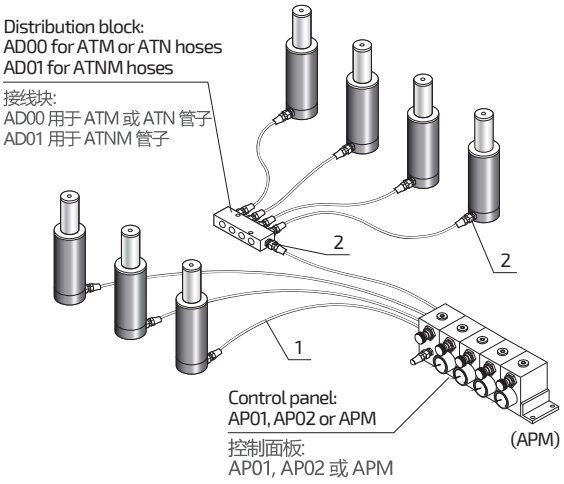
联动系统

LINKED SYSTEM EXAMPLES

联动系统示例

With Ø5 mm hoses

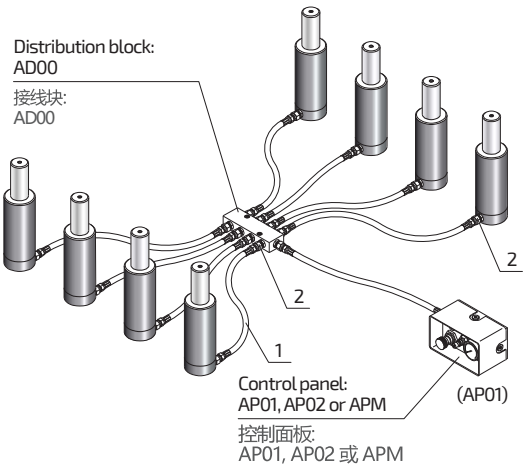
使用 Ø5 毫米的管子



1 - Hoses ATM or ATN or ATNM / ATM 或 ATN 或 ATNM 管子
2 - Fittings ARM (for hoses ATM) or ARN (for hoses ATN) or ARNM (for hoses ATNM)
ARM (用于 ATM 管子) 或 ARN (用于 ATN 管子) 或 ARNM (用于 ATNM 管子) 连

With Ø8 mm hoses

使用 Ø8 毫米的管子



1 - Hoses AT / AT 管子
2 - Fittings AR / AR 连接件

1 CHOOSE GAS SPRING MODEL 选择 氮气弹簧型号



Gas spring models 气缸型号	Side port 侧孔
AGS350~AGS2400	M6
IGS150, IGS250	
VV2385	
AGS4200~AGS20000	G1/8
IGS500~IGS10000	
LGS500	
VV750, VV2945	
CHT50~CHT120 ⚠	

⚠ CHT series: maximum temperature for use in linked system = 100°C (212°F).
CHT系列: 用于联动系统的最高温度 = 100°C (212°F)。

2 CHOOSE HOSE MODEL 选择 管子型号

For gas springs with M6 side port

针对带 M6 侧孔的气缸

For gas springs with G1/8 side port

针对带 G1/8 侧孔的气缸



ATNM
Hose Ø 5 mm
(Micro-type)
Ø 5 毫米管子
(微型)



ATM
Hose Ø 5 mm
(Minimess-type)
Ø 5 毫米管子
(极简型)



ATN
Hose Ø 5 mm
(for small available spaces)
Ø 5 毫米管子
(针对小空间)

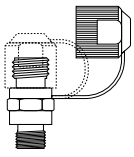


AT
Hose Ø 8 mm
(for big available spaces)
Ø 8 毫米管子
(针对大空间)

3 CHOOSE PROPER FITTINGS 选择 合适的 连接件



ARNM
For hoses ATNM Ø 5 mm
针对 Ø 5 毫米的 ATNM 管子



ARM
For hoses ATM Ø 5 mm
针对 Ø 5 毫米的 ATM 管子



ARN
For hoses ATN Ø 5 mm
针对 Ø 5 毫米的 ATN 管子



AR
For hoses AT Ø 8 mm
针对 Ø 8 毫米的 AT 管子

4 CHOOSE CONTROL PANEL MODEL 选择 控制面板 型号



AP01
Standard
标准型



AP02
Compact
紧凑型



APM
Modular
模块型

... and other available models
... 以及其它型号

5 DISTRIBUTION BLOCKS (IF NEEDED) 接线快 (如有需要)



AD01



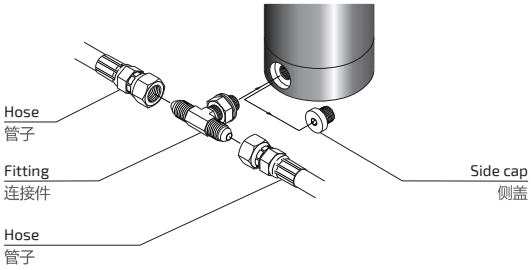
AD00



AD04

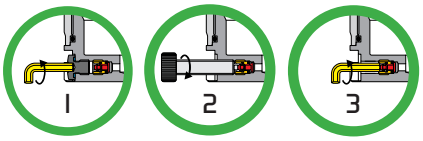
... and other available models
... 以及其它型号

6 CONNECTING THE GAS SPRINGS 链接氮气弹簧



⚠ ATTENTION!
Follow the instructions on page 12 before connecting the gas springs

⚠ 注意!
连接氮气弹簧前请参阅第 12 页的说明



Discharge the gas spring and remove the valve before connecting to system

连接至系统之前请对氮气弹簧进行排气并摘下阀门

7 CHARGING AND DISCHARGING 充气 与 排气



COMPL
Charging and discharging set
(also for self-contained gas springs)
充放套件
(也用于自主型氮气弹簧)



CUC01
Charging unit
(also for self-contained gas springs)
included in the complete set COMPL
充气装置
(也用于自主型氮气弹簧)
包含在 COMPL 完整套件中



AN-1/4
Charging adapter for the quick coupling on the control panels
用于快速连接至控制面板的
充气适配器

HOSES Ø 5 mm and FITTINGS (MINIMESS-TYPE)

Ø 5 毫米管子及连接件 (极简型)

Flexible hose diameter 5 mm with fittings, for connecting nitrogen gas springs and many other devices.

直径 5 毫米的带连接件的软管, 用于氮气弹簧和各种设备的连接。



HOSE MECHANICAL SPECIFICATIONS

- Working temperature: -40 +100 °C
- Working pressure: max 630 bar
- Minimum bending radius: 20 mm
- Outside diameter: 5 mm

管子的机械特性

- 作业温度: -40 +100 °C
- 作业压力: 最大 630 巴
- 最小曲率半径: 20毫米
- 外直径: 5 毫米

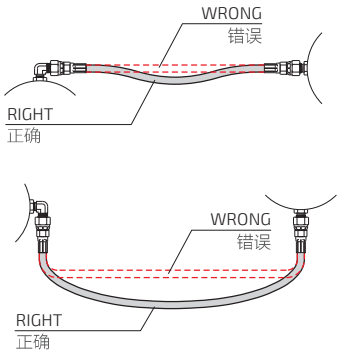
TECHNICAL NOTES

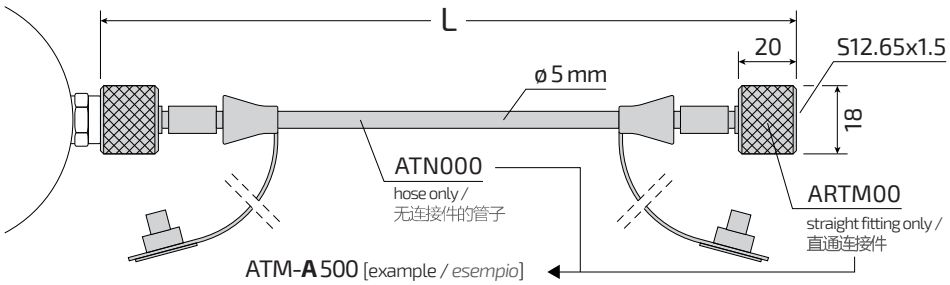
Choose the proper hose length considering the "Assembly" indications.

技术说明

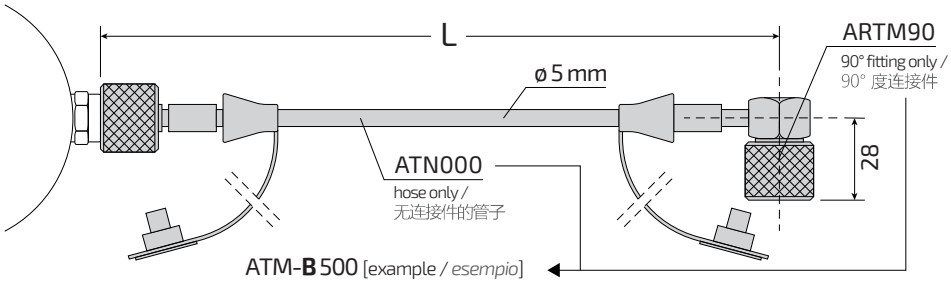
遵循 "组装" 说明选择管子的正确长度。

Assembly / 组装

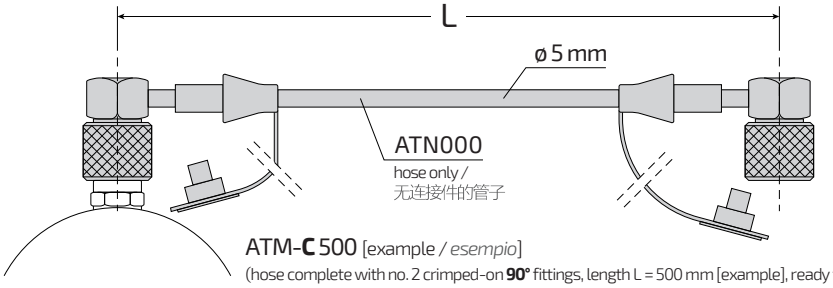




ATM-**A** 500 [example / *esempio*]
(hose complete with no. 2 crimped-on **straight** fittings, length L = 500 mm [example], ready for use)
(带有 2 只已卷好的**直通**连接件的管子, 长度 L = 500 毫米[示例], 即时可用)



ATM-**B** 500 [example / *esempio*]
(hose complete with no. 2 crimped-on fittings (**straight** + **90°**), length L = 500 mm [example], ready for use)
(带有 2 只已卷好的连接件的管子 (**直通** + **90°**), 长度 L = 500 毫米[示例], 即时可用)



ATM-**C** 500 [example / *esempio*]
(hose complete with no. 2 crimped-on **90°** fittings, length L = 500 mm [example], ready for use)
(带有 2 只已卷好的 **90°** 度连接件的管子, 长度 L = 500 毫米[示例], 即时可用)

ORDER HOSE cod. ATN000 (quantity in metres, for example: "ATN000 10 m") and FITTINGS cod. ARTM00/ARTM90 for SELF-CUTTING and SELF-CRIMPING
订购代码 ATN000 的管子 (用米来显示数量, 例如: "ATN000 10米) 和
代码 ARTM00/ARTM90 的连接件, 以便自己执行切割和卷边

LENGTH OF STANDARD HOSES, FITTINGS INCLUDED (Different lengths can be prepared on request - Minimum lengths: see "L MIN")
标准管子的长度, 包含连接件 (可按要求准备不同尺寸 - 最小长度: 见 "最小极限")

Model 型号	L mm
ATM-.... 150	150
ATM-... 175	175
ATM-... 200	200
ATM-... 250	250
ATM-... 300	300
ATM-... 350	350

Model 型号	L mm
ATM-... 400	400
ATM-... 500	500
ATM-... 600	600
ATM-... 700	700
ATM-... 800	800
ATM-... 900	900

Model 型号	L mm
ATM-... 1000	1000
ATM-... 1500	1500
ATM-... 2000	2000

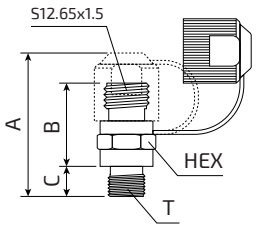
Model 型号	L MIN* mm
ATM-A	90
ATM-B	95
ATM-C	105

* No plastic caps for L < 150 mm
* 没有用于长度 < 150 毫米的塑料侧盖

FITTINGS for ATM HOSES (MINIMESS-TYPE)

ATM 管子专用连接件 (极简型)

FITTINGS FOR LINKING GAS SPRINGS, CONTROL PANELS AND DISTRIBUTION BLOCKS
用于连接氮气弹簧, 控制面板和接线块的连接件

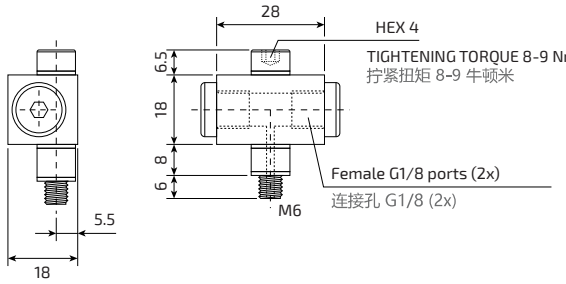


Model 型号	A mm	B mm	C mm	T	HEX	Tightening torque 拧紧扭矩	Non-return valve 止回阀
ARM000-1/8	48	30	8	G1/8	14	ca. 18	NO
ARM000-1/8V	48	30	8	G1/8	14	ca. 18	YES
ARM000-1/4	43	21	12	G1/4	19	ca. 45	NO
ARM000-1/4V	43	21	12	G1/4	19	ca. 45	YES

ATTENTION! Use fittings **without** non-return valve when connecting gas springs and other devices to open system (hose system).
注意!连接氮气弹簧系统或其它设备时, 请使用不带止回阀的连接件。

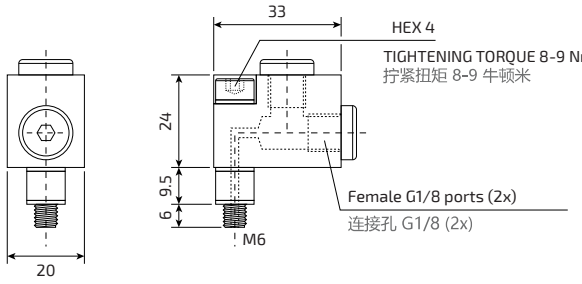
Model 型号

ARM270-M6



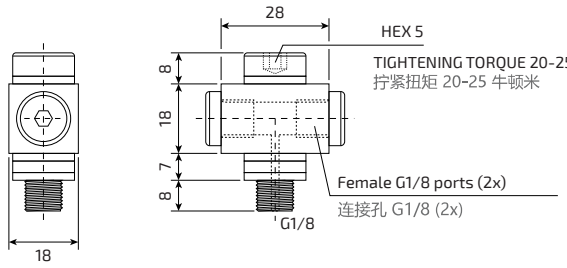
Model 型号

ARM270R-M6



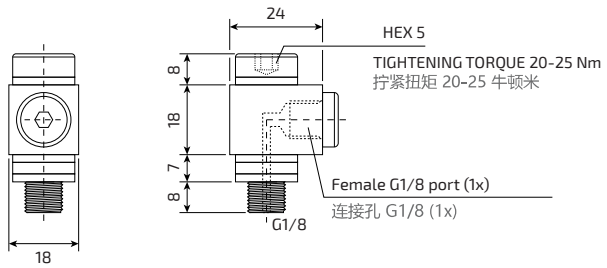
Model 型号

ARM270-1/8



Model 型号

ARM090-1/8

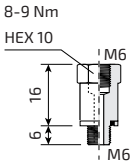


OTHER ACCESSORIES
其它配件

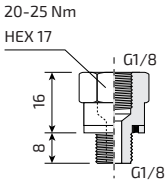
Extension fittings which may be needed in case of fixing with half-flanges
使用对开法兰进行紧固时可能需要的加长连接件



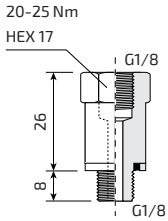
PL-M6



PL-1/8A

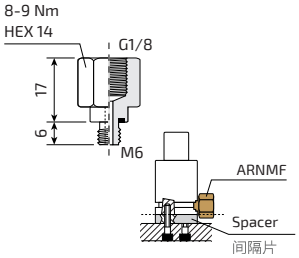


PL-1/8B



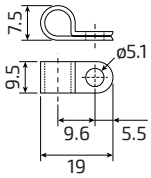
M6 to G1/8 side port converter
从 M6 到 G1/8 的侧孔转换器

ARNMF



Model 型号

CFT-5



HOSE CLIP FOR HOSES Ø5 mm (10 pc. box)
Ø5 毫米管子专用定管夹 (10只装)

HOSES Ø 5 mm and FITTINGS (MICRO-TYPE)

Ø 5 毫米管子及连接件 (微型)



Flexible hose diameter 5 mm with fittings, for connecting nitrogen gas springs and many other devices.

直径 5 毫米的带连接件的软管, 用于氮气弹簧和各种设备的连接。

HOSE MECHANICAL SPECIFICATIONS

- Working temperature: -40 +100 °C
- Working pressure: max 630 bar
- Minimum bending radius: 20 mm
- Outside diameter: 5 mm

管子的机械特性

- 作业温度: -40 +100 °C
- 作业压力: 最大 630 巴
- 最小曲率半径: 20毫米
- 外直径: 5 毫米

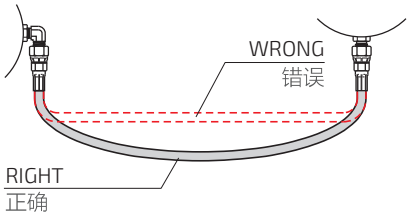
TECHNICAL NOTES

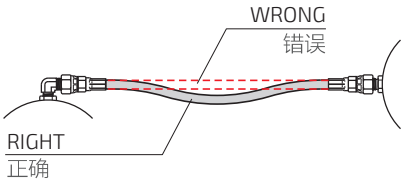
Calculating hose length:
L = (A - 20) x 1.05 (dimensions in millimetres)
L = Hose length (fittings included)
A = Distance between gas springs to be connected

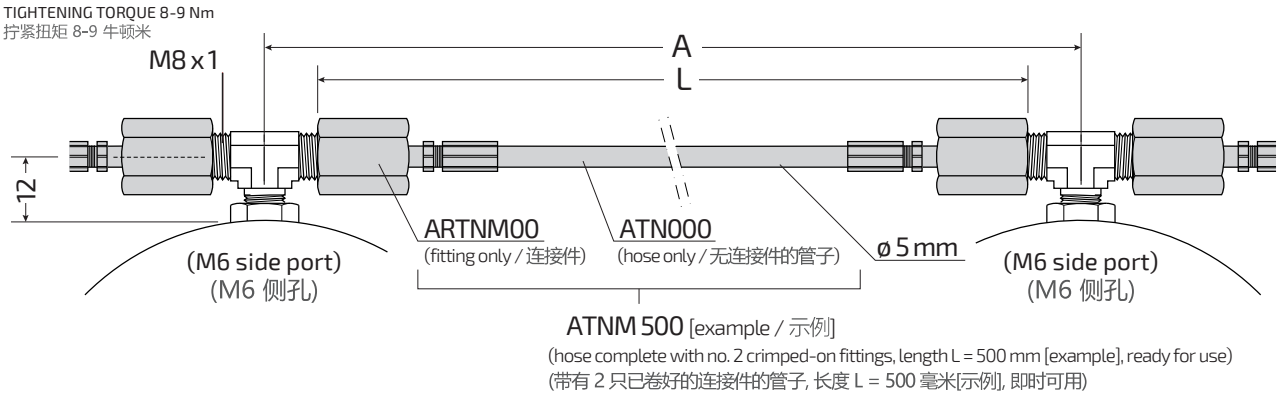
技术说明

管子长度计算:
L = (A - 20) x 1.05 (以毫米为单位的尺寸)
L = 含连接件在内的管子长度
A = 待连接的气缸之间的轴距

Assembly / 组装







ATNM 500 [example / 示例]
(hose complete with no. 2 crimped-on fittings, length L = 500 mm [example], ready for use)
(带有 2 只已卷好的连接件的管子, 长度 L = 500 毫米[示例], 即时可用)

ORDER HOSE cod. ATN000 (quantity in metres, for example: "ATN000 10 m") and FITTINGS cod. ARTNM00 for SELF-CUTTING and SELF-CRIMPING
订购代码 ATN000 的管子 (用米来显示数量, 例如: "ATN000 10 米") 和代码 ARTNM00 的连接件, 以便自己执行切割和卷边

LENGTH OF STANDARD HOSES, FITTINGS INCLUDED (Different lengths can be prepared on request - Minimum length L = 90 mm)
标准管子的长度, 包含连接件 (可按要求准备不同尺寸-最小长度 L = 90 毫米)

Model 型号	A mm	L mm	Model 型号	A mm	L mm	Model 型号	A mm	L mm
ATNM 100	115	100	**ATNM 300**	306	300	**ATNM 800**	782	800
ATNM 125	139	125	**ATNM 350**	353	350	**ATNM 900**	877	900
ATNM 150	163	150	**ATNM 400**	401	400	**ATNM 1000**	972	1000
ATNM 175	187	175	**ATNM 500**	496	500	**ATNM 1500**	1449	1500
ATNM 200	210	200	**ATNM 600**	591	600	**ATNM 2000**	1925	2000
ATNM 250	258	250	**ATNM 700**	687	700			

FITTINGS for ATNM HOSES (MICRO-TYPE)

ATNM 管子专用连接件 (微型)

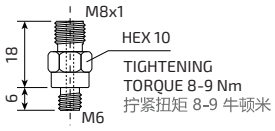
FITTINGS FOR LINKING GAS SPRINGS, CONTROL PANELS AND DISTRIBUTION BLOCKS

用于连接氮气弹簧, 控制面板和接线块的连接件

Model 型号

ARNM000

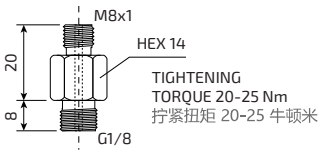




Model 型号

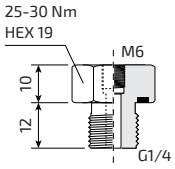
ARNM000CP





Model 型号

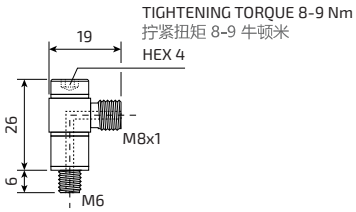
ARNM00P



Model 型号

ARNM090

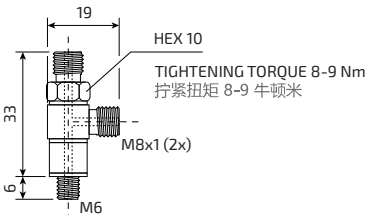




Model 型号

ARNM270R

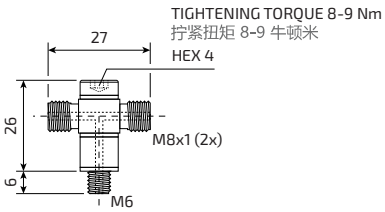




Model 型号

ARNM270

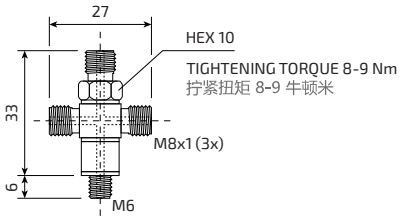




Model 型号

ARNM360



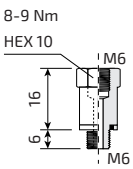


Extension fittings which may be needed in case of fixing with half-flanges
使用对开法兰进行紧固时可能需要的加长连接件



Model 型号

PL-M6



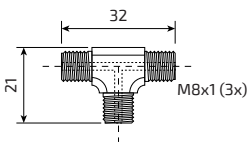
FITTINGS FOR HOSE-HOSE CONNECTION

管-管相连专用连接件

Model 型号

ARNM270T

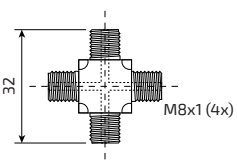




Model 型号

ARNM360T



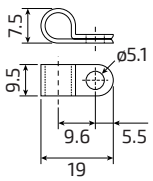


OTHER ACCESSORIES

其它配件

Model 型号

CFT-5



HOSE CLIP FOR HOSES Ø5 mm (10 pc. box)

Ø5 毫米管子专用定管夹 (10只装)

HOSES Ø 5 mm and FITTINGS

Ø 5 毫米管子及连接件



Flexible hose diameter 5 mm with fittings, for connecting nitrogen gas springs and many other devices.

直径 5 毫米的带连接件的软管, 用于氮气弹簧和各种设备的连接。

HOSE MECHANICAL SPECIFICATIONS

- Working temperature: -40 +100 °C
- Working pressure: max 630 bar
- Minimum bending radius: 20 mm
- Outside diameter: 5 mm

管子的机械特性

- 作业温度: -40 +100 °C
- 作业压力: 最大 630 巴
- 最小曲率半径: 20毫米
- 外直径: 5 毫米

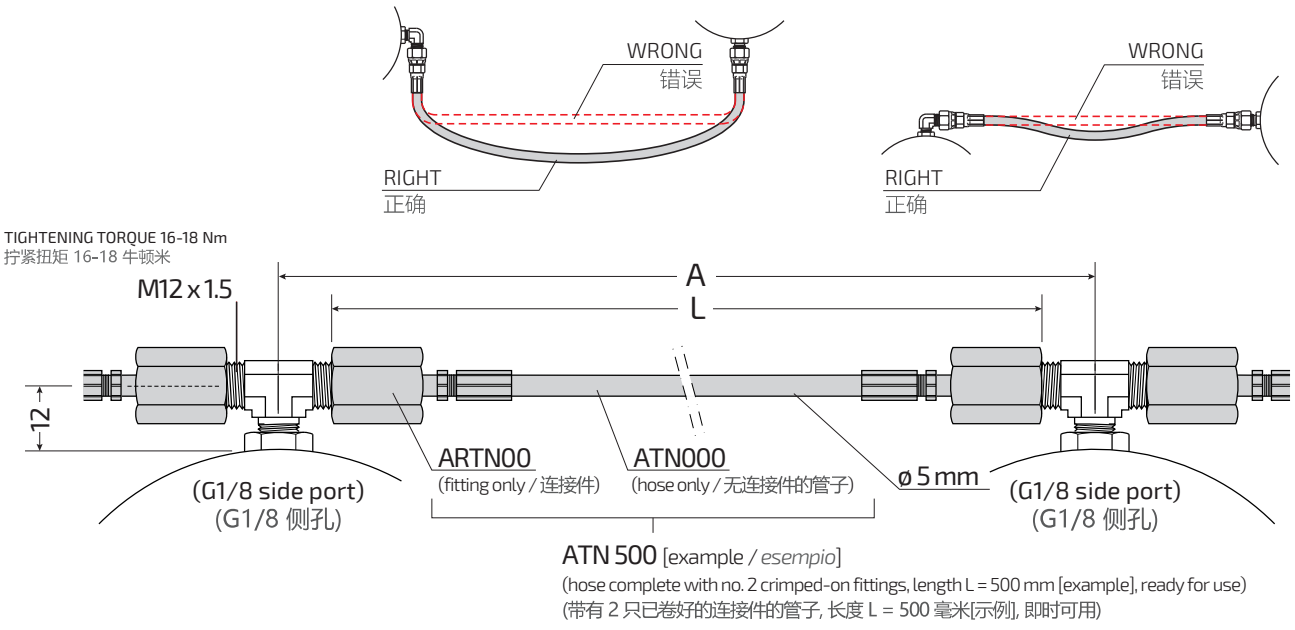
TECHNICAL NOTES

Calculating hose length:
L = (A - 25) x 1.05 (dimensions in millimetres)
L = Hose length (fittings included)
A = Distance between gas springs to be connected

技术说明

管子长度计算:
L = (A - 25) x 1.05 (以毫米为单位的尺寸)
L = 含连接件在内的管子长度
A = 待连接的氮气弹簧之间的轴距

Assembly / 组装



ATN 500 [example / *esempio*]
(hose complete with no. 2 crimped-on fittings, length L = 500 mm [example], ready for use)
(带有 2 只已卷好的连接件的管子, 长度 L = 500 毫米[示例], 即时可用)

ORDER HOSE cod. ATN000 (quantity in metres, for example: "ATN000 10 m") and FITTINGS cod. ARTN00 for SELF-CUTTING and SELF-CRIMPING
订购代码 ATN000 的管子 (用米来显示数量, 例如: "ATN000 10 米") 和代码 ARTN00 的连接件, 以便自己执行切割和卷边

LENGTH OF STANDARD HOSES, FITTINGS INCLUDED (Different lengths can be prepared on request - Minimum length L = 90 mm)
标准管子的长度, 包含连接件 (可按要求准备不同尺寸-最小长度 L = 90 毫米)

Model 型号	A mm	L mm	Model 型号	A mm	L mm	Model 型号	A mm	L mm
ATN 100	120	100	**ATN 300**	311	300	**ATN 800**	787	800
ATN 125	144	125	**ATN 350**	358	350	**ATN 900**	882	900
ATN 150	168	150	**ATN 400**	406	400	**ATN 1000**	977	1000
ATN 175	192	175	**ATN 500**	501	500	**ATN 1500**	1454	1500
ATN 200	215	200	**ATN 600**	596	600	**ATN 2000**	1930	2000
ATN 250	263	250	**ATN 700**	692	700			

FITTINGS for ATN HOSES

ATN 管子专用连接件

FITTINGS FOR LINKING GAS SPRINGS, CONTROL PANELS AND DISTRIBUTION BLOCKS

用于连接氮气弹簧, 控制面板和接线块的连接件

Model 型号

ARN000





Model 型号

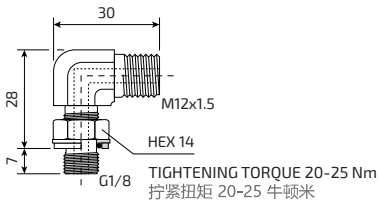
ARN000-1/4



Model 型号

ARN090

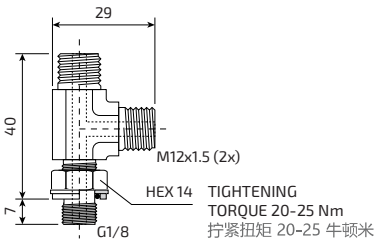




Model 型号

ARN270R

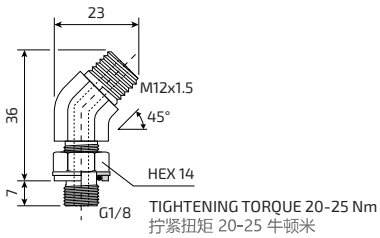




Model 型号

ARN045

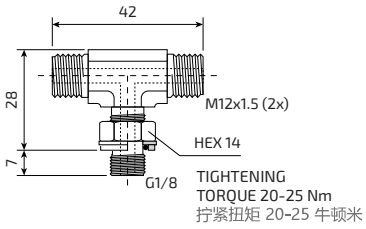




Model 型号

ARN270



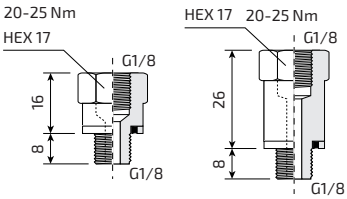


Extension fittings which may be needed in case of fixing with half-flanges
使用对开法兰进行紧固时可能需要的加长连接件



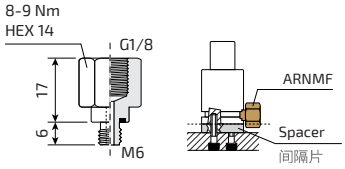
Model 型号

PL-1/8A **PL-1/8B**



M6 to G1/8 side port converter
从 M6 到 G1/8 的侧孔转换器

ARNMF



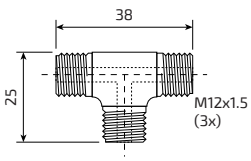
FITTINGS FOR HOSE-HOSE CONNECTION

管-管相连专用连接件

Model 型号

ARN270T

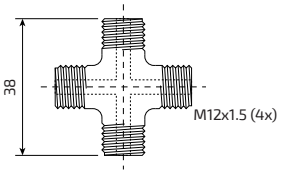




Model 型号

ARN360T



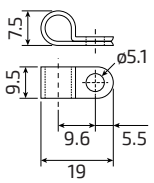


OTHER ACCESSORIES

其它配件

Model 型号

CFT-5



HOSE CLIP FOR HOSES Ø5 mm (10 pc. box)

Ø5 毫米管子专用定管夹 (10只装)

HOSES Ø 8 mm and FITTINGS

Ø 8 毫米管子及连接件



Flexible hose diameter 8 mm with fittings, for connecting nitrogen gas springs and many other devices.

直径 8 毫米的带连接件的软管,用于氮气弹簧和各种设备的连接。

HOSE MECHANICAL SPECIFICATIONS

- Working temperature: -40 +100 °C
- Working pressure: max 630 bar
- Minimum bending radius: 40 mm
- Outside diameter: 8 mm

管子的机械特性

- 作业温度: -40 +100 °C
- 作业压力: 最大 630 巴
- 最小曲率半径: 40毫米
- 外直径: 8 毫米

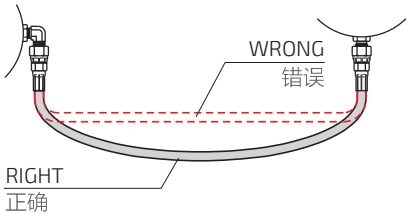
TECHNICAL NOTES

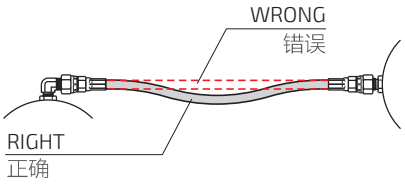
Calculating hose length:
L = (A - 25) x 1.05 (dimensions in millimetres)
L = Hose length (fittings included)
A = Distance between gas springs to be connected

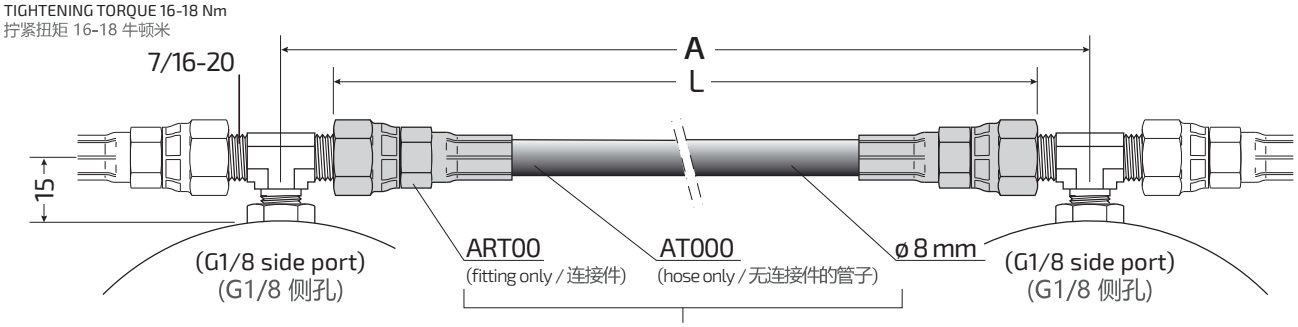
技术说明

管子长度计算:
L = (A - 25) x 1.05 (以毫米为单位的尺寸)
L = 含连接件在内的管子长度
A = 待连接的氮气弹簧之间的轴距

Assembly / 组装







AT 500 [example / *esempio*]
(hose complete with no. 2 crimped-on fittings, length L = 500 mm [example], ready for use)
(带有 2 只已卷好的连接件的管子, 长度 L = 500 毫米[示例], 即时可用)

ORDER HOSE cod. AT000 (quantity in metres, for example: "AT000 10 m") and FITTINGS cod. ART00 for SELF-CUTTING and SELF-CRIMPING
订购代码 AT000 的管子 (用米来显示数量, 例如: "AT000 10 米") 和代码 ART00 的连接件, 以便自己执行切割和卷边

LENGTH OF STANDARD HOSES, FITTINGS INCLUDED (Different lengths can be prepared on request - Minimum length L = 125 mm)
标准管子的长度, 包含连接件 (可按要求准备不同尺寸-最小长度 L = 125 毫米)

Model 型号	A mm	L mm	Model 型号	A mm	L mm	Model 型号	A mm	L mm
-	-	-	**AT 300**	311	300	**AT 800**	787	800
AT 125	144	125	**AT 350**	358	350	**AT 900**	882	900
AT 150	168	150	**AT 400**	406	400	**AT 1000**	977	1000
AT 175	192	175	**AT 500**	501	500	**AT 1500**	1454	1500
AT 200	215	200	**AT 600**	596	600	**AT 2000**	1930	2000
AT 250	263	250	**AT 700**	692	700			

FITTINGS for AT HOSES

AT 管子专用连接件

FITTINGS FOR LINKING GAS SPRINGS, CONTROL PANELS AND DISTRIBUTION BLOCKS

用于连接氮气弹簧, 控制面板和接线块的连接件

Model
型号

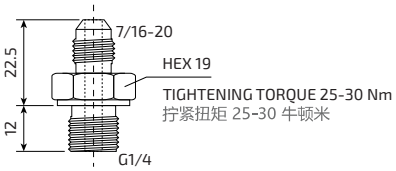
AR000





Model
型号

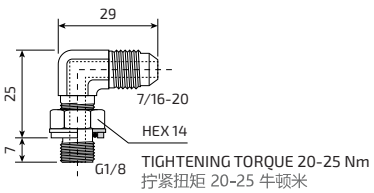
AR000-1/4



Model
型号

AR090

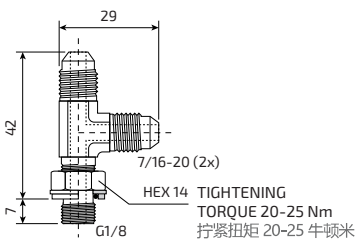




Model
型号

AR270R

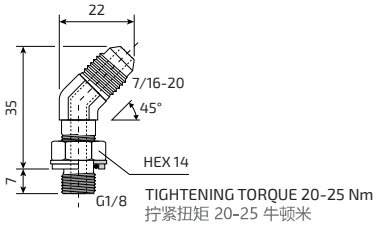




Model
型号

AR045

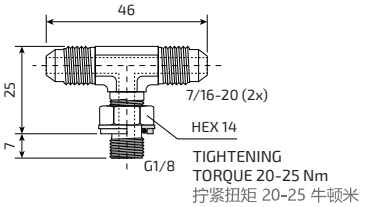




Model
型号

AR270



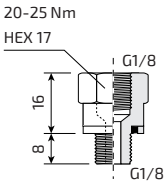


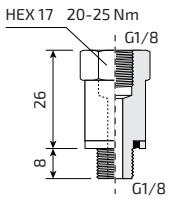
Extension fittings which may be needed in case of fixing with half-flanges
使用对开法兰进行紧固时可能需要的加长连接件



Model
型号

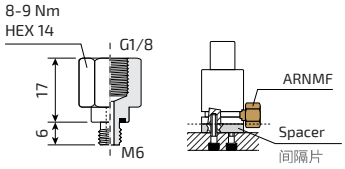
PL-1/8A **PL-1/8B**





M6 to G1/8 side port converter
从 M6 到 G1/8 的侧孔转换器

ARNMF



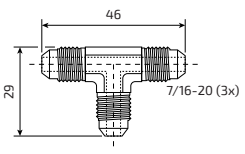
FITTINGS FOR HOSE-HOSE CONNECTION

管-管相连专用连接件

Model
型号

AR270T

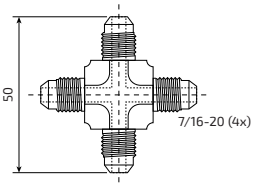




Model
型号

AR360T



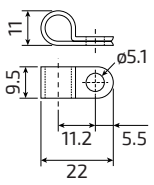


OTHER ACCESSORIES

其它配件

Model
型号

CFT-8



HOSE CLIP FOR HOSES Ø8 mm (10 pc. box)

Ø8 毫米管子专用定管夹 (10只装)

AP01
CONTROL PANEL

AP01 控制面板



This panel allows to charge and discharge a nitrogen gas spring or a nitrogen gas springs system, and to monitor the pressure.

这款紧凑型面板允许为氮气缸或氮气弹簧系统进行充气和排气，并对其压力做到监控。

TECHNICAL NOTES

A No. 3 connection ports (G1/8)
B Discharging valve
C Plug ready for safety pressure switch
D Charging valve, Bordignon-standard, to be used only with CUC01 or COMPL or BOOSTER
E Pressure gauge
F No. 2 fixing holes for M6 hex-socket screws
G The connection ports are plugged

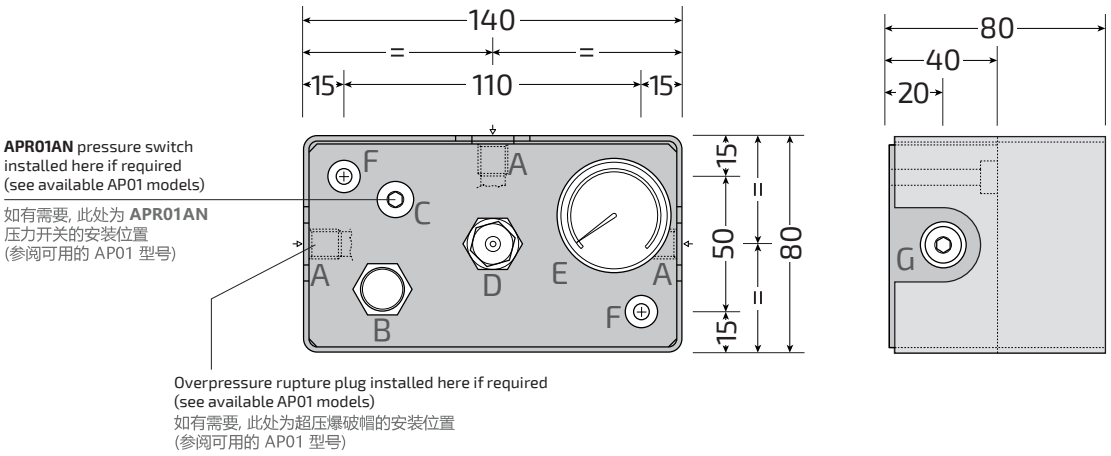
⚠ ATTENTION! USE NITROGEN N_2 ONLY

技术说明

A 3 个连接孔 (G1/8)
B 排气阀
C 安全压力开关预留盖
D 充气阀, Bordignon 标准型, 仅与 CUC01 或 COMPL 或 BOOSTER 助推器一起使用
E 压力计
F 2 个用于 M6 内六角螺丝的紧固孔
G 连接孔均被塞住

⚠ 注意! 仅使用氮气N_2

Dimensions / 尺寸



Model 型号	
AP01	Control panel 控制面板
AP01PAN	Control panel with APR01AN pressure switch (50-300 bar normally open) 带 APR01AN 压力开关 (50-300 巴常开) 的控制面板
AP01RP	Control panel with overpressure rupture plug 带超压爆破帽的控制面板
AP01F	Control panel with APR01AN pressure switch (50-300 bar normally open) and with overpressure rupture plug 带 APR01AN 压力开关 (50-300 巴常开) 和超压爆破片的控制面板



Add "LOCK" after the control panel code to receive it with lockable discharging valve for Lockout-Tagout applications. Order padlock (code: PADLOCK) separately (also usable with BRADY part no. 850821 padlock). Example: "AP01FLOCK" = control panel AP01F with lockable discharging valve.
添加 "LOCK", 以接收带有可锁定倾倒阀的上锁挂牌应用程序。挂锁 (代码 PADLOCK) 请单独订购 (也可与零件号为 850821 的布雷迪挂锁一起使用)。
例如: "AP01FLOCK" = 带有可锁定排气阀的 AP01F 控制面板。



Add "CV" after the control panel code to receive it with CEJN-type charging valve instead of the Bordignon-standard charging valve.
Example 1: "AP01PANCV" = control panel AP01PAN with CEJN-type charging valve. Example 2: "AP01LOCKCV" = control panel AP01LOCK with CEJN-type charging valve.
在控制面板代码后添加 "CV", 以接收带有 CEJN 类型充气阀的产品, 而非 Bordignon 标准充气阀。例1: "AP01PANCV" = 带有 CEJN 类型充气阀的 AP01PAN 控制面板。例2: "AP01LOCKCV" = 带有 CEJN 类型充气阀的 AP01LOCK 控制面板。

All models are available with safety valve VS500 already assembled (on request). / 所有型号均可预先组装 VS500 安全阀而提供 (申请获得)。

AP02
CONTROL PANEL (COMPACT)

AP02 紧凑型控制面板



This compact panel allows to charge and discharge a nitrogen gas spring or a nitrogen gas springs system, and to monitor the pressure.

这款紧凑型面板允许为氮气缸或氮气弹簧系统进行充气和排气，并对其压力做到监控。

TECHNICAL NOTES

A Charging valve, Bordignon-standard, to be used only with CUC01 or COMPL or BOOSTER
B Discharging valve
C Pressure gauge
- No. 2 fixing holes for M5 hex-socket screws
- No. 5 connection ports (G1/8)
- The connection ports are plugged

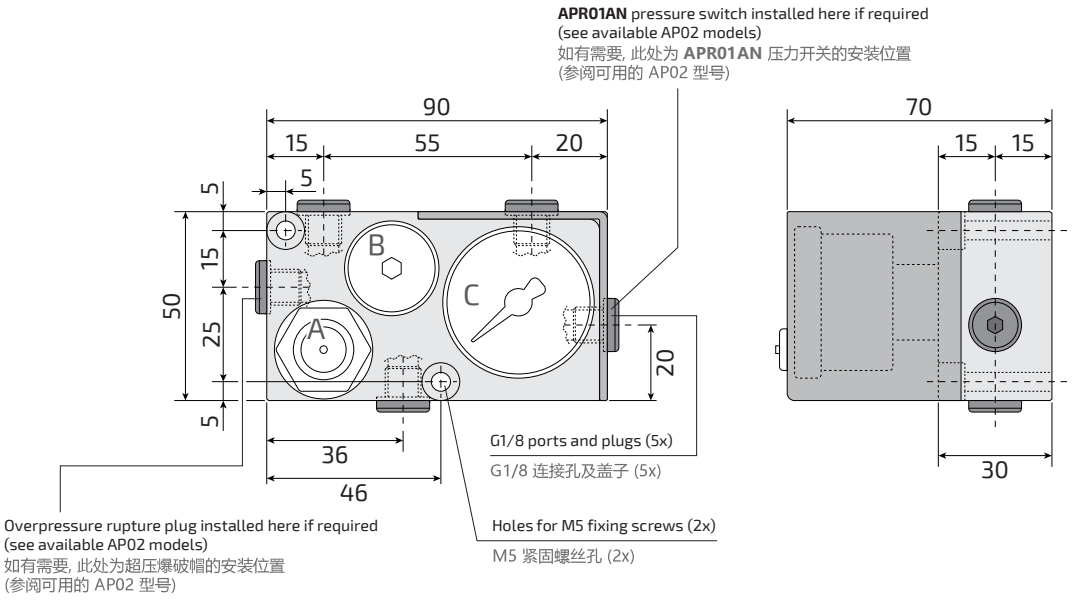
⚠ ATTENTION! USE NITROGEN N_2 ONLY

技术说明

A 充气阀, Bordignon 标准型, 仅与 CUC01 或 COMPL 或 BOOSTER 助推器一起使用
B 排气阀
C 压力计
- 2 个用于 M5 内六角螺丝的紧固孔
- 5 个连接孔 (G1/8)
- 连接孔均被塞住

⚠ 注意! 仅使用氮气N_2

Dimensions / 尺寸



Model 型号	
AP02	Control panel (compact version) 控制面板 (紧凑版)
AP02PAN	Control panel (compact version) with APR01AN pressure switch (50-300 bar normally open) 带 APR01AN 压力开关 (50-300 巴常开) 的控制面板 (紧凑版)
AP02RP	Control panel (compact version) with overpressure rupture plug 带超压爆破帽的控制面板 (紧凑版)
AP02F	Control panel (compact version) with APR01AN pressure switch (50-300 bar normally open) and with overpressure rupture plug 带 APR01AN 压力开关 (50-300 巴常开) 和超压爆破片的控制面板 (紧凑版)



Add "CV" after the control panel code to receive it with CEJN-type charging valve instead of the Bordignon-standard charging valve.
Example: "AP02PANCV" = control panel AP02PAN with CEJN-type charging valve.
制面板代码后添加 "CV", 以接收带有 CEJN 类型充气阀的产品, 而非 Bordignon 标准充气阀。
例: "AP02PANCV" = 带有 CEJN 类型充气阀的 AP02PAN 控制面板。

All models are available with safety valve VS500 already assembled (on request). / 所有型号均可预先组装 VS500 安全阀而提供 (申请获得)。

AP03
CONTROL PANEL (COMPACT)

AP03 紧凑型控制面板



This compact panel allows to charge and discharge a nitrogen gas spring or a nitrogen gas springs system, and to monitor the pressure.

这款紧凑型面板允许为氮气缸或氮气弹簧系统进行充气和排气，并对其压力做到监控。

TECHNICAL NOTES

A Charging valve, Bordignon-standard, to be used only with CUC01 or COMPL or BOOSTER
B Discharging valve
C Pressure gauge
D No. 3 connection ports G1/4
E No. 2 connection ports G1/8
- The connection ports are plugged
- No. 2 fixing holes for M6 hex-socket screws

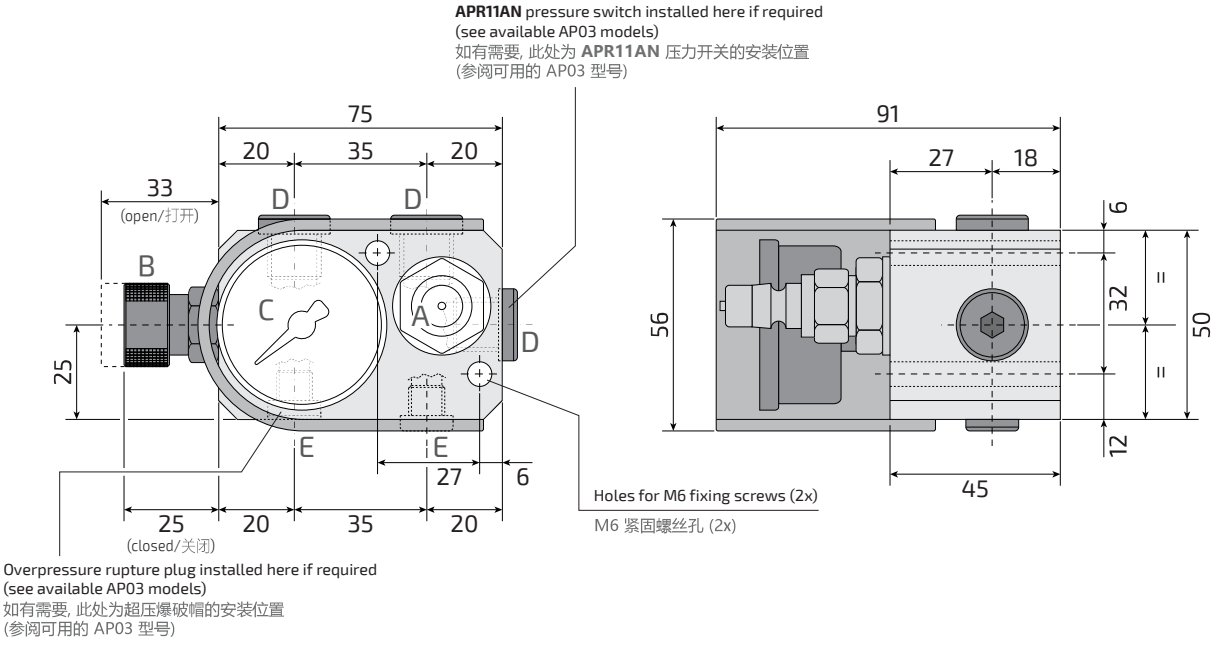
⚠ ATTENTION! USE NITROGEN N_2 ONLY

技术说明

A 充气阀, Bordignon 标准型, 仅与 CUC01 或 COMPL 或 BOOSTER 助推器一起使用
B 排气阀
C 压力计
D 3 个连接孔 G1/4
E 2 个连接孔 G1/8
- 连接孔均被塞住
- 2 个用于 M6 内六角螺丝的紧固孔

⚠ 注意! 仅使用氮气N_2

Dimensions / 尺寸



Model 型号	
AP03	Control panel (compact version) 控制面板 (紧凑版)
AP03PAN	Control panel (compact version) with APR11AN pressure switch (50-300 bar normally open) 带 APR11AN 压力开关 (50-300 巴常开) 的控制面板 (紧凑版)
AP03RP	Control panel (compact version) with overpressure rupture plug 带超压爆破帽的控制面板 (紧凑版)
AP03F	Control panel (compact version) with APR11AN pressure switch (50-300 bar normally open) and with overpressure rupture plug 带 APR11AN 压力开关 (50-300 巴常开) 和超压爆破片的控制面板 (紧凑版)



Add "CV" after the control panel code to receive it with CEJN-type charging valve instead of the Bordignon-standard charging valve.
Example: "AP03PANCV" = control panel AP03PAN with CEJN-type charging valve.
在控制面板代码后添加 "CV", 以接收带有 CEJN 类型充气阀的产品, 而非 Bordignon 标准充气阀。
例如: "AP03PANCV" = 带有 CEJN 类型充气阀的 AP03PAN 控制面板。

All models are available with safety valve VS500 already assembled (on request). / 所有型号均可预先组装 VS500 安全阀而提供 (申请获得)。

AP04
CONTROL PANEL

AP04 控制面板



This panel allows to charge and discharge a nitrogen gas spring or a nitrogen gas springs system, and to monitor the pressure.

这款紧凑型面板允许为氮气缸或氮气弹簧系统进行充气和排气，并对其压力做到监控。

TECHNICAL NOTES

A Charging valve, Bordignon-standard, to be used only with CUC01 or COMPL or BOOSTER
B Discharging valve
C Pressure gauge
D No. 1 connection port G1/4
E No. 7 connection ports G1/8
- The connection ports are plugged
- No. 2 fixing holes for M10 hex-socket screws

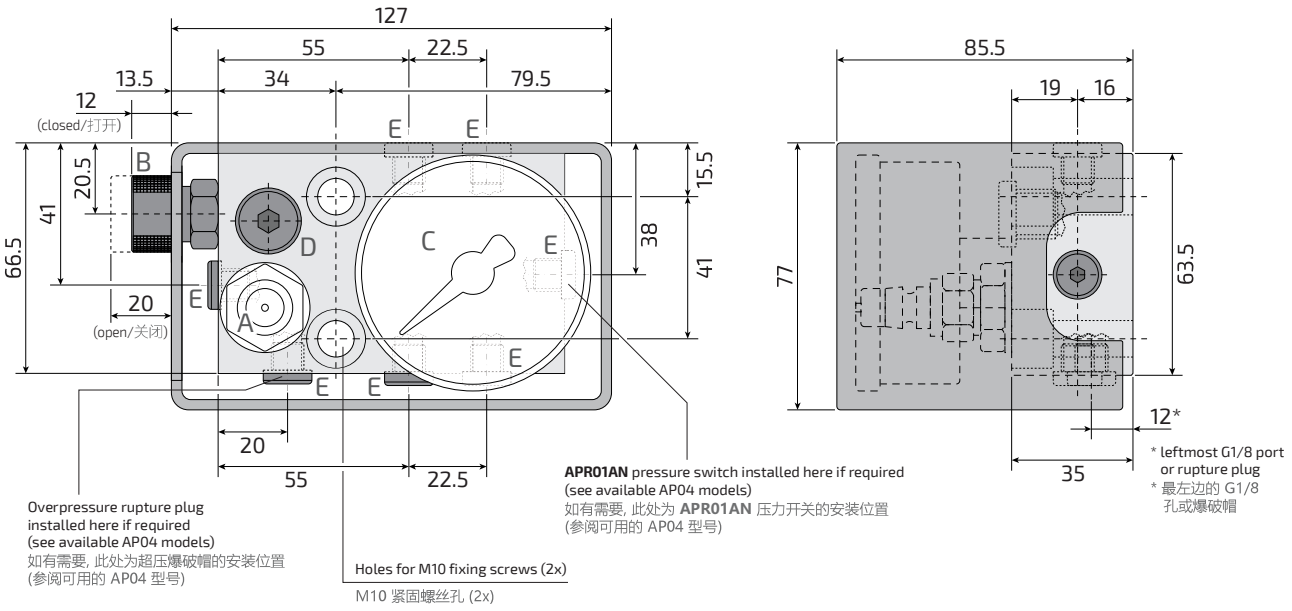
⚠ ATTENTION! USE NITROGEN N_2 ONLY

技术说明

A 充气阀, Bordignon 标准型, 仅与 CUC01 或 COMPL 或 BOOSTER 助推器一起使用
B 排气阀
C 压力计
D 1 个连接孔 G1/4
E 7 个连接孔 G1/8
- 连接孔均被塞住
- 2 个用于 M10 内六角螺丝的紧固孔

⚠ 注意! 仅使用氮气N_2

Dimensions / 尺寸



Model 型号	
AP04	Control panel 控制面板
AP04PAN	Control panel with APR01AN pressure switch (50-300 bar normally open) 带 APR01AN 压力开关 (50-300 巴常开) 的控制面板
AP04RP	Control panel with overpressure rupture plug 带超压爆破帽的控制面板
AP04F	Control panel with APR01AN pressure switch (50-300 bar normally open) and with overpressure rupture plug 带 APR01AN 压力开关 (50-300 巴常开) 和超压爆破片的控制面板



Add "CV" after the control panel code to receive it with CEJN-type charging valve instead of the Bordignon-standard charging valve.
Example: "AP04PANCV" = control panel AP04PAN with CEJN-type charging valve. NOTE: for the AP04 models, the CEJN-type charging valve will not allow the connection of safety switches or safety valves on the front G1/4 port (port "D" on the drawing above).
在控制面板代码后添加 "CV", 以接收带有 CEJN 类型充气阀的产品, 而非 Bordignon 标准充气阀。例如: "AP04PANCV" = 带有 CEJN 类型充气阀的 AP04PAN 控制面板。注: 对于 AP04 型号, CEJN 类型充气阀将不允许在正前方的 G1/4 孔上连接 压力开关或安全阀 (上图中的 "D" 连接孔)。

All models are available with safety valve VS500 already assembled (on request). / 所有型号均可预先组装 VS500 安全阀而提供 (申请获得)。

AP05
CONTROL PANEL

AP05 控制面板



This panel allows to charge and discharge a nitrogen gas spring or a nitrogen gas springs system, and to monitor the pressure.

这款紧凑型面板允许为氮气缸或氮气弹簧系统进行充气和排气，并对其压力做到监控。

TECHNICAL NOTES

A Charging valve, Bordignon-standard, to be used only with CUC01 or COMPL or BOOSTER
B Discharging valve
C Pressure gauge
D No. 9 connection ports G1/4
E No. 1 connection port G1/8
- The connection ports are plugged
- No. 2 fixing holes for M8 hex-socket screws
- Shut off valve for protecting the pressure gauge from pulsating pressure during operation

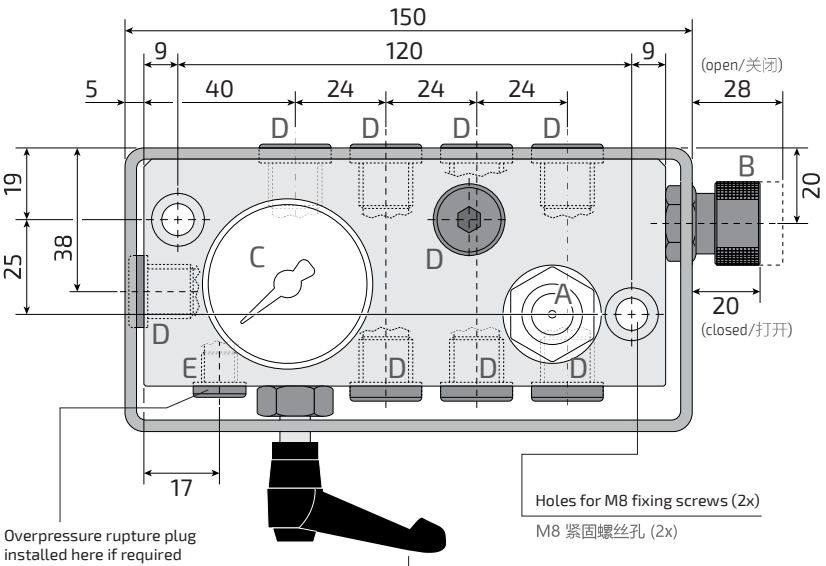
⚠ ATTENTION! USE NITROGEN N_2 ONLY

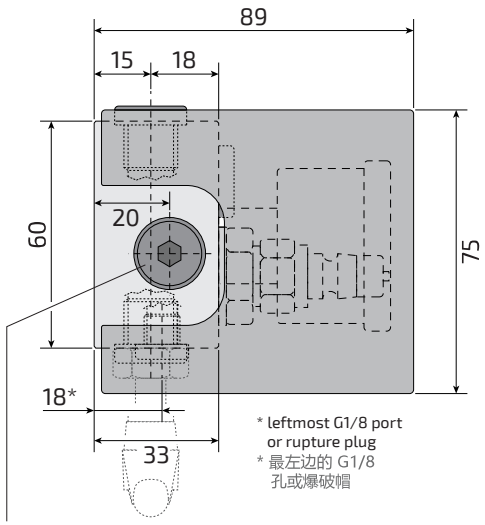
技术说明

A 充气阀, Bordignon 标准型, 仅与 CUC01 或 COMPL 或 BOOSTER 助推器一起使用
B 排气阀
C 压力计
D 9 个连接孔 G1/4
E 1 个连接孔 G1/8
- 连接孔均被塞住
- 2 个用于 M8 内六角螺丝的紧固孔
- 用于在运行期间保护压力计免收脉压影响的截流阀

⚠ 注意! 仅使用氮气N_2

Dimensions / 尺寸





Model 型号	
AP05	Control panel 控制面板
AP05PAN	Control panel with APR01AN pressure switch (50-300 bar normally open) 带 APR01AN 压力开关 (50-300 巴常开) 的控制面板
AP05RP	Control panel with overpressure rupture plug 带超压爆破帽的控制面板
AP05F	Control panel with APR11AN pressure switch (50-300 bar normally open) and with overpressure rupture plug 带 APR11AN 压力开关 (50-300 巴常开) 和超压爆破片的控制面板



Add "CV" after the control panel code to receive it with CEJN-type charging valve instead of the Bordignon-standard charging valve. Example: "AP05PANCV" = control panel AP05PAN with CEJN-type charging valve.
在控制面板代码后添加 "CV", 以接收带有 CEJN 类型充气阀的产品, 而非 Bordignon 标准充气阀。例如: "AP05PANCV" = 带有 CEJN 类型充气阀的 AP05PAN 控制面板。

All models are available with safety valve VS500 already assembled (on request). / 所有型号均可预先组装 VS500 安全阀而提供 (申请获得)。

AP06
CONTROL PANEL (MICRO-TYPE PORTS)

AP06 控制面板 (微型连接口)



This panel allows to charge and discharge a nitrogen gas spring or a nitrogen gas springs system, and to monitor the pressure.

这款紧凑型面板允许为氮气缸或氮气弹簧系统进行充气和排气，并对其压力做到监控。

TECHNICAL NOTES

A Charging valve, Bordignon-standard, to be used only with CUC01 or COMPL or BOOSTER
B Discharging valve
C Pressure gauge
D No. 1 connection port G1/4
E No. 1 connection port G1/8
F No. 15 connection ports M6 (5x top, 5x bottom, 5x rear)
- The connection ports are plugged
- No. 6 (4x + 2x) fixing holes for M6 hex-socket screws

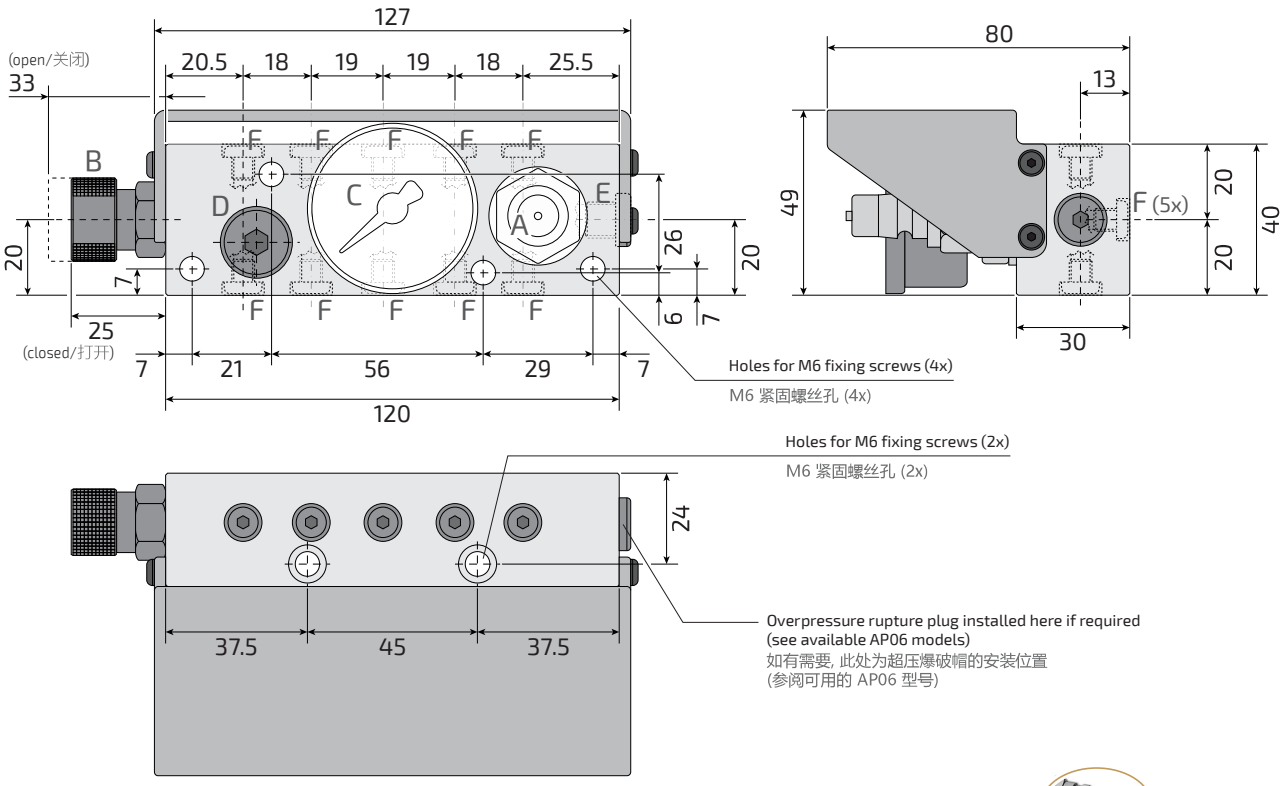
⚠ ATTENTION! USE NITROGEN N_2 ONLY

技术说明

A 充气阀, Bordignon 标准型, 仅与 CUC01 或 COMPL 或 BOOSTER 助推器一起使用
B 排气阀
C 压力计
D 1 个连接孔 G1/4
E 1 个连接孔 G1/8
F 15 个 M6 连接孔 (5x 上方, 5x 下方, 5x 后方)
- 连接孔均被塞住
- 6 个(4x + 2x) 用于 M6 内六角螺丝的紧固孔

⚠ 注意! 仅使用氮气N_2

Dimensions / 尺寸





Add "CV" after the control panel code to receive it with CEJN-type charging valve instead of the Bordignon-standard charging valve. Example: "AP06RPCV" = control panel AP06RP with CEJN-type charging valve.
在控制面板代码后添加 "CV", 以接收带有 CEJN 类型充气阀的产品, 而非 Bordignon 标准充气阀。
例如: "AP06RPCV" = 带有 CEJN 类型充气阀的 AP06RP 控制面板。

Model 型号	
AP06	Control panel (MICRO-type ports) 控制面板(微型连接)
AP06RP	Control panel (MICRO-type ports) with overpressure rupture plug 带超压爆破帽的控制面板 (微型连接)

APM
MODULAR CONTROL PANEL

APM 模块式控制面板



APM3

APM1

This panel allows to charge and discharge a nitrogen gas spring, or a nitrogen gas springs system, or multiple independent nitrogen gas springs systems, and to monitor the pressure. Each module can be charged at a different pressure.

该面板允许为氮气缸或氮气弹簧系统以及多个独立的氮气弹簧系统进行充气和排气，并对其压力做到监控。每个模块都可在不同压力下进行充气。

TECHNICAL NOTES

A M5 fixing hole
B Charging valve, Bordignon-standard, to be used only with CUC01 or COMPL or BOOSTER
C Discharging valve
D Single-module charging or discharging valve (always turned off during use)
E Connection ports (G1/8)
F Each module may be connected with more nitrogen gas springs

技术说明

A M5紧固孔
B 充气阀, Bordignon 标准型, 仅与 CUC01 或 COMPL 或 BOOSTER 助推器一起使用
C 排气阀
D 单模块充放阀 (使用期间始终关闭)
E 连接孔(G1/8)
F 每个模块都可连接多个氮气弹簧

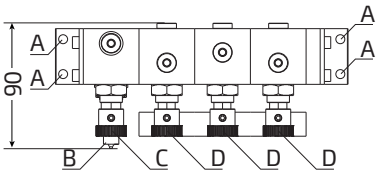
It allows to check the pressure of each module separately
No limit as to the quantity of connectible modules

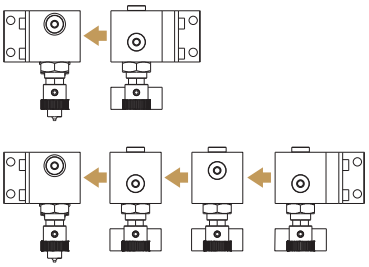
允许单独控制每个模块的压力
可连接的模块数量没有限制

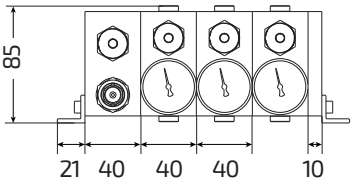
⚠ ATTENTION! USE NITROGEN N_2 ONLY

⚠ 注意! 仅使用氮气N_2

Dimensions / 尺寸

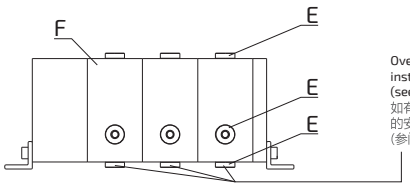








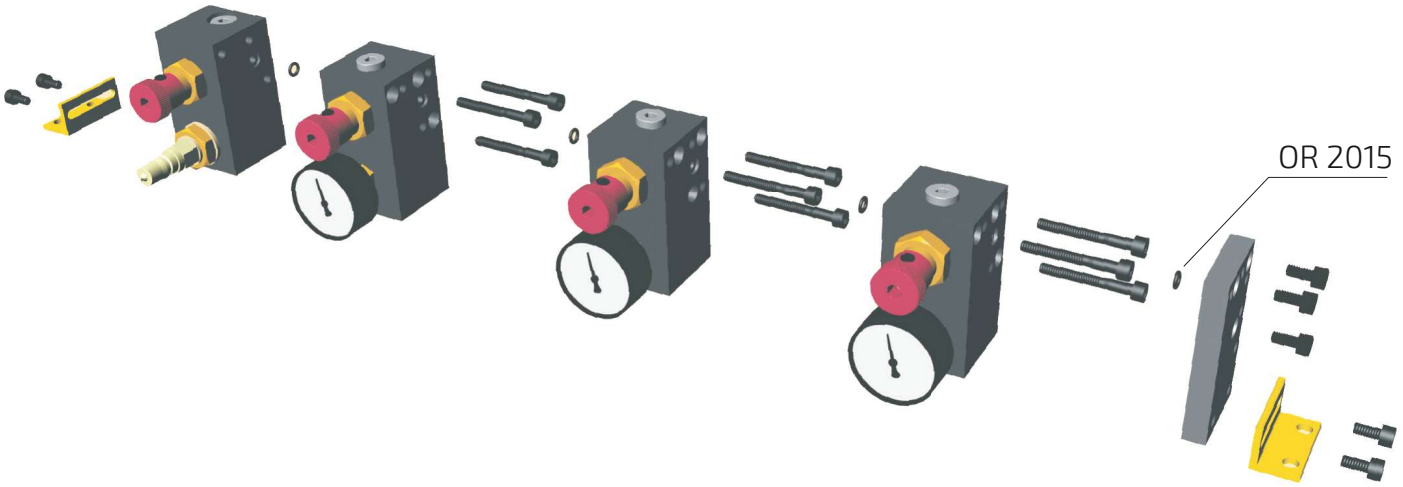
Add "CV" after the control panel code to receive it with CEJN-type charging valve instead of the Bordignon-standard charging valve. Example: "APM1CV" = control panel APM1 with CEJN-type charging valve.
在控制面板代码后添加 "CV", 以接收带有 CEJN 类型充气阀的产品, 而非 Bordignon 标准充气阀。例如: "APM1CV" = 带有 CEJN 类型充气阀的 APM1 控制面板。



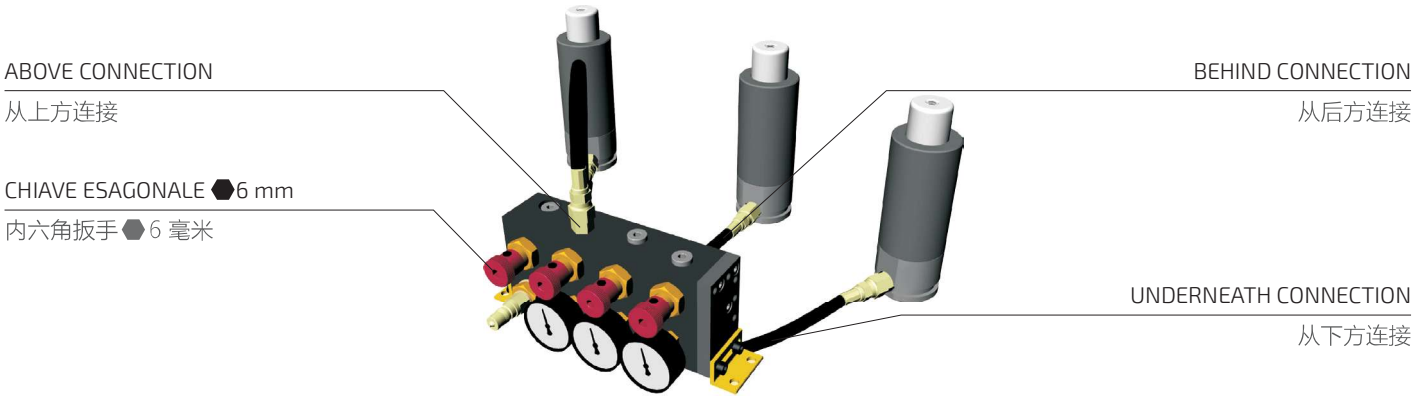
Overpressure rupture plugs (one for each module) installed here if required (see available APM models)
如有需要, 此处为超压爆破帽 (每个模块都有一个) 的安装位置 (参阅可用的 APM 型号)

Model 型号		Model 型号	
APM1	Control panel with 1 module 带有 1 个模块的控制面板	**APM1RP**	Control panel with 1 module, with overpressure rupture plug 带有 1 个模块的控制面板, 含超压爆破帽
APM2	Control panel with 2 modules 带有 2 个模块的控制面板	**APM2RP**	Control panel with 2 modules, with 2 pcs. overpressure rupture plugs 带有 2 个模块的控制面板, 含 2 个超压爆破帽
APM3	Control panel with 3 modules 带有 3 个模块的控制面板	**APM3RP**	Control panel with 3 modules, with 3 pcs. overpressure rupture plugs 带有 3 个模块的控制面板, 含 3 个超压爆破帽
APM4	Control panel with 4 modules 带有 4 个模块的控制面板	**APM4RP**	Control panel with 4 modules, with 4 pcs. overpressure rupture plugs 带有 4 个模块的控制面板, 含 4 个超压爆破帽
APMX	Control panel with X modules 带有 多 个模块的控制面板	**APMXRP**	Control panel with X modules, with X pcs. overpressure rupture plugs 带有 多 个模块的控制面板, 含 多 个超压爆破帽

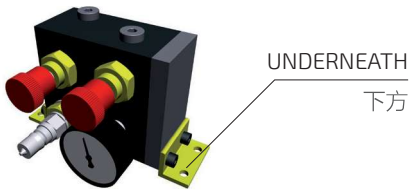
ASSEMBLY SCHEME / 装配图

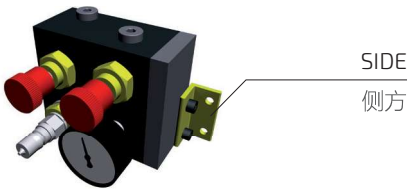


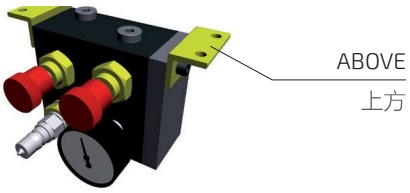
VARIOUS POSSIBILITIES FOR CONNECTING THE NITROGEN GAS SPRINGS / 氮气弹簧的不同连接方式



FIXING POSSIBILITIES / 可用紧固方式







USE INSTRUCTIONS

Nitrogen N_2 charging:

1 Assemble modular control panel, fix it onto the die and connect the nitrogen gas springs.
2 Turn off all the valves.
3 Connect N_2 tank via the quick coupling, and **turn it on slowly.**
4 **Turn on slowly** the valve of the module to be charged and turn it off once the required pressure is reached.
5 Turn off the N_2 tank, then turn on the discharging valve.
6 Disconnect the N_2 tank and turn off the discharging valve.

Nitrogen N_2 discharging:

1 Turn on the discharging valve and then turn on the valve of the module to be discharged.
2 Once the required pressure is reached, turn off both valves

⚠ ATTENTION!
USE NITROGEN N_2 ONLY

使用说明

氮气充装:

1 装上模块式控制面板, 将其固定在模具上并与气缸连接。
2 关闭所有的阀门。
3 通过快速连接装置连接氮气瓶并将其**缓慢打开**。
4 **缓慢打开**需要充气的模块的阀门, 达到所需压力后将其关闭。
5 关闭氮气瓶, 然后打开排气阀。
6 断开氮气瓶并关闭排气阀。

氮气排放:

1 打开排气阀并打开需要排气的模块的阀门。
2 达到所需压力后将两个阀门都关闭。

⚠ 注意! 仅使用氮气N_2

SAFETY PRESSURE SWITCHES

安全压力开关



DIGITAL 数显型

Digital pressure switch that can be set from 6 to 600 bar, available for the assembly on control panels.

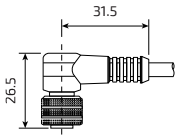
数显压力开关可在 6 至 600 巴的范围内设置调节，用于安装在控制面板上。

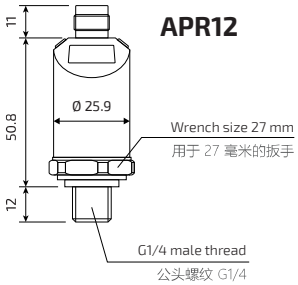
TECHNICAL NOTES

- No. 2 PNP transistor switching outputs
- Switching current: max 250 mA per output
- Technical data sheet on request

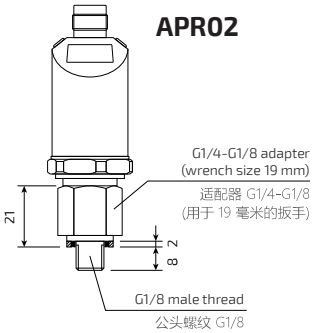
技术说明

- 2 个 PNP 晶体管开关输出口
- 开关电流: 每个输出口最大 250 mA
- 可要求获取技术数据表



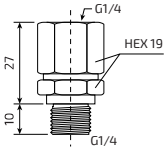


TIGHTENING TORQUE 25-30 Nm
拧紧扭矩 25-30 牛顿米



TIGHTENING TORQUE 20-25 Nm
拧紧扭矩 25-30 牛顿米

Model 型号	Thread 螺纹
APR02	G1/8
APR12	G1/4



Model 型号
RGV14

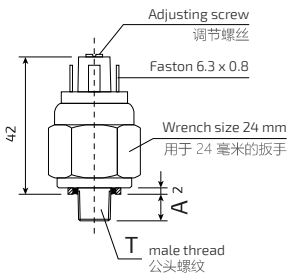
Swivel fitting for pressure switch orientation (for APR02 model: install between pressure switch body and G1/4-G1/8 adapter - see drawing)
用于压力开关方向的旋转式连接件
(针对 APR02 型号: 安装在压力开关本体和 G1/4 - G1/8 适配器之间 – 参阅图纸)

ANALOG 模拟型

Pressure switches, which can be set from 50 to 150-300 bar depending on model, available for the assembly on control panels.

压力开关，根据型号可在 50 至 150-300 巴的范围内调节设置，用于安装在控制面板上。





Model 型号	T	Tight. torque 拧紧扭矩 Nm	A mm	Range 范围 bar	Type 类型	MAX voltage 最大电压	MAX current 最大电流
APR01A	G1/8	20-25	8	50-150	Normally open 常开	48V ac/dc	0.5 A
APR01AN	G1/8	20-25	8	50-300	Normally open 常开	48V ac/dc	0.5 A
APR11A	G1/4	25-30	10	50-150	Normally open 常开	48V ac/dc	0.5 A
APR11AN	G1/4	25-30	10	50-300	Normally open 常开	48V ac/dc	0.5 A

SAFETY VALVE

安全阀



Overpressure safety valve, available for the assembly on control panels.

超压专用安全阀, 用于安装在控制面板上。

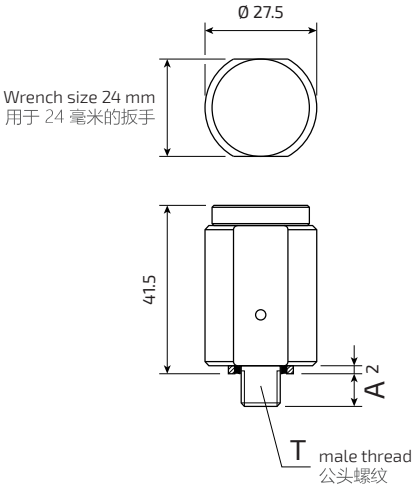
TECHNICAL NOTES

- Nominal activation pressure: 500 bar
- In case of valve activation, contact Bordignon for reparation

技术说明

- 标称激活压力: 500 巴
- 如阀门激活, 请联系 Bordignon 进行维修

Dimensions / 尺寸



Model 型号	T	Tightening torque 拧紧扭矩 Nm	A mm
VS500	G1/8	20-25	8
VS500-1/4	G1/4	25-30	10

DISTRIBUTION BLOCKS

接线块

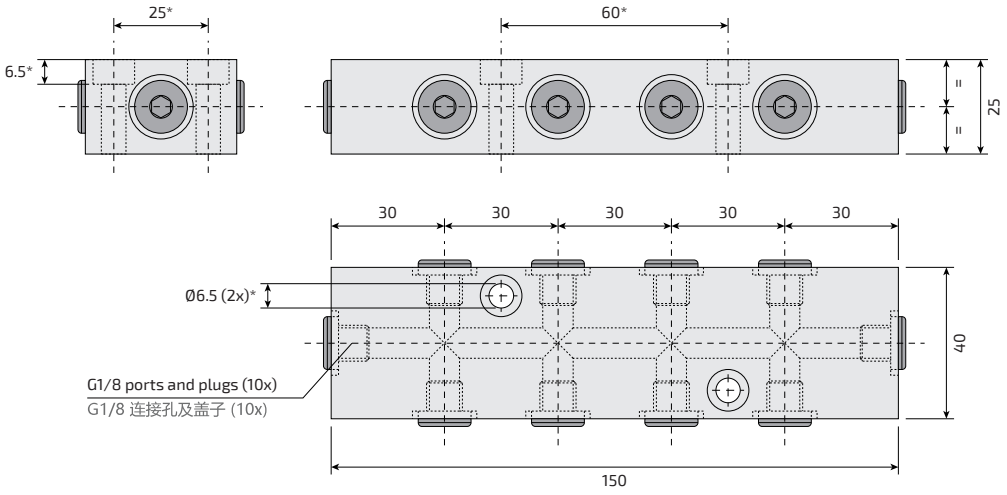
The distribution blocks allow several gas springs to be connected in a battery.
Each block can connect several gas springs equipped with side port, and several blocks can be interconnected.
Choose the proper fittings for hose connection.

接线块可使多个氮气弹簧相连。
每个块体可连接多个带有侧孔的氮气弹簧且多个块体之间也可相连。
若要连接管子, 请使用合适的连接件。

Dimensions / 尺寸

Model 型号
AD00

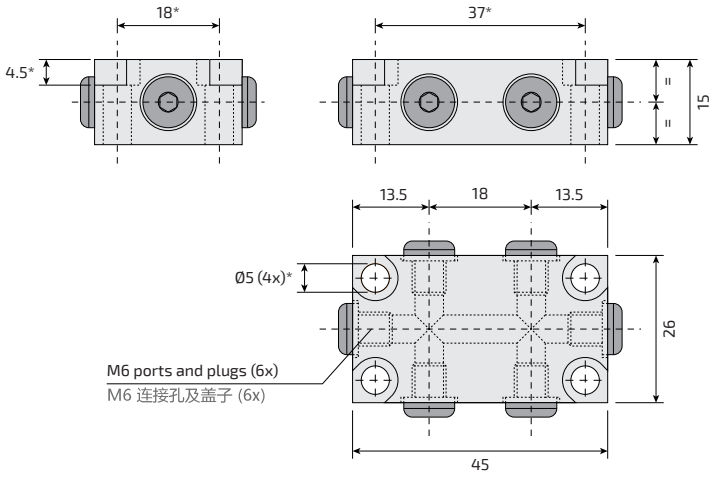




* For M6 fixing screws (2x) / 用于 M6 紧固螺丝 (2x)

Model 型号
AD01



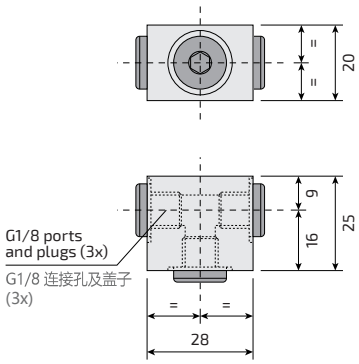


* For M4 fixing screws (4x) / 用于 M4 紧固螺丝 (4x)



Model
Modello

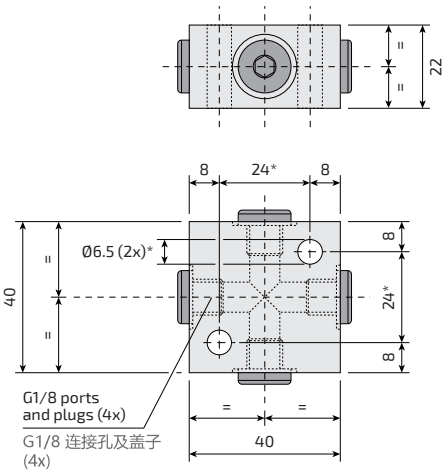
AD02





Model
Modello

AD03

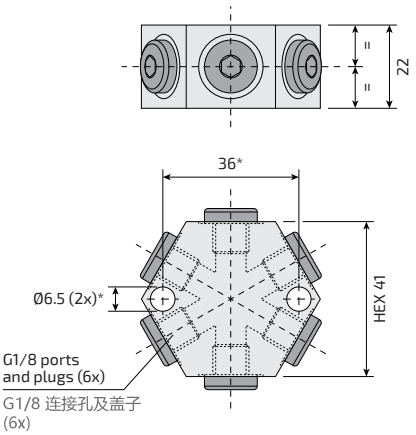


* For M6 fixing screws (2x) / 用于 M6 紧固螺丝 (2x)



Model
Modello

AD04



* For M6 fixing screws (2x) / 用于 M6 紧固螺丝 (2x)

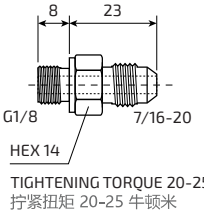
FITTINGS for CONNECTING SEVERAL DISTRIBUTION BLOCKS

连接多个接线块的连接件

Model
型号

AR000



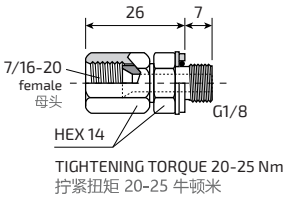


(only for G1/8 ports)
(仅用于 G1/8 连接孔)

Model
型号

AR000G





(only for G1/8 ports)
(仅用于 G1/8 连接孔)

CHARGING and DISCHARGING SET

充放套件



Complete series of charging unit, charging adapters and discharging devices, for both self-contained gas springs and control panels

该系列包含充气装置，充装适配器和排放装置，既可用于自主型氮气弹簧，也可用于控制面板。

Model 型号
COMPL

CHARGING UNIT

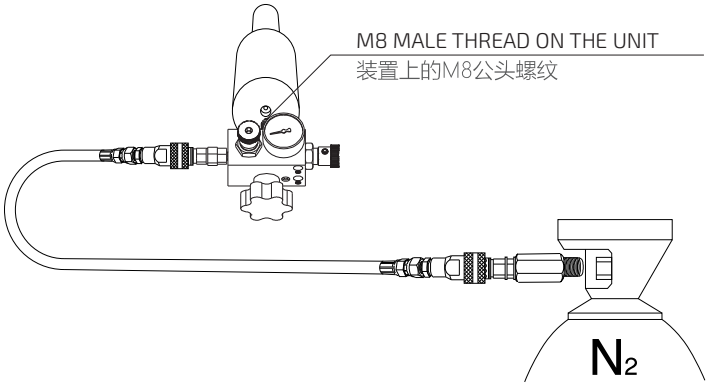
充气装置



This device allows to charge Bordignon self-contained gas springs and control panels with nitrogen gas.

该装置可为自主型氮气弹簧以及 Bordignon 控制面板充装氮气。

Specifications / 特性



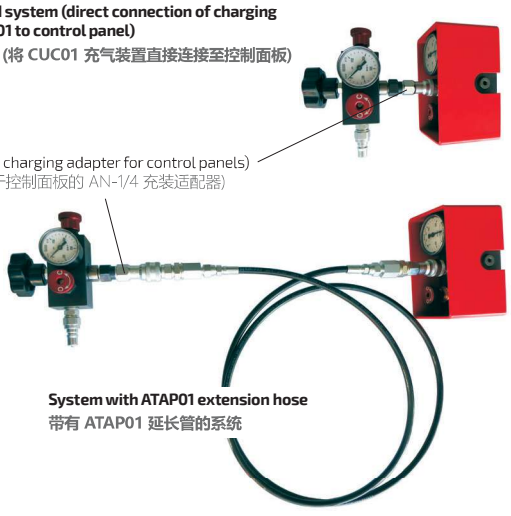
Model 型号
CUC01



Model (optional) 型号(可选型)	
ATAP01	Extension hose (length: 2 metres) for an easier charging of control panels 延长管 (长度: 2 米) 可更加便捷地为控制面板充气

Standard system (direct connection of charging unit CUC01 to control panel)
标准系统 (将 CUC01 充气装置直接连接至控制面板)

(AN-1/4 charging adapter for control panels)
(用于控制面板的 AN-1/4 充装适配器)



System with ATAP01 extension hose
带有 ATAP01 延长管的系统

CHARGING ADAPTERS

充装适配器



Adapters for the nitrogen gas springs charging unit (only for gas springs with charging hole different from M8). Gas springs with charging hole M8 (not listed in table below) must be charged with CUC01 unit with no adapter.

氮气弹簧充气装置专用适配器 (仅用于充气孔不是 M8 型的氮气弹簧)。带有 M8 充气孔的气缸 (下表中未列出)应在不带任何适配器的情况下使用 CUC01 装置进行充气。

	Model 型号	For gas spring models... 适用气缸型号...	Control panels 控制面板
M4 M8	**AN-M4**	EGS16, TGS700	-
M5 M8	**AN-M5**	EGS24	-
M6 M8	**AN-M6**	AGS170-AGS320, TGS400, VGS (all models), VV170, VV320-63/63H, VV320-80, VV500, VV565, CSMHT19~CSMHT32	-
M6 M8	**AN-M6/2**	AGS350~AGS2400, IGS150-IGS250, VV2385	-
G1/8 M8	**AN-1/8**	AGS4200~AGS20000, IGS500~IGS10000, LGS500, VV750, VV2945	-
Quick coupling 快捷接头 M8	**AN-1/4**	-	All models 所有型号

DISCHARGING DEVICES

排放装置



Devices for discharging the nitrogen gas springs.

氮气排放专用装置。

	Model 型号	For gas spring models... 适用气缸型号...	Control panels 控制面板
M4	**ADS-M4/2**	TGS700	-
M4	**ADS-M4/3**	EGS16	-
M5	**ADS-M5/2**	EGS24	-
M6	**ADS-M6**	TGS400, CSMHT19~CSMHT32	-
M6	**ADS-M6/2**	AGS170-AGS320	-
M6	**ADS-M6/3**	AGS350~AGS20000, IGS (all models), LGS500, VV750, VV2385, VV2945	-
M6	**ADS-M6/4**	VGS (all models), VV170, VV320-63/63H, VV320-80, VV500, VV565	-
M8	**ADS-M8**	TGS1000~TGS12000, CHT (all models), CSMHT38~CSMHT120	-

BOOSTER for NITROGEN N_2

氮气助推器



The Bordignon Booster is a pneumatic pump.
By using compressed air, it increases the nitrogen N_2 pressure during the charging operation of gas springs for dies, in a safe and very precise way.
Light and compact, the Bordignon Booster has a low compressed air consumption, resulting in savings of time and costs.

Bordignon 氮气助推器是一种气动泵。借助压缩空气，它可在冲模气缸的充气阶段中以精准安全的方式倍增氮气压力。Bordignon 氮气助推器轻便紧凑，低能耗的特性能够使时间和成本均有节省。

USE INSTRUCTIONS

- Connect nitrogen N_2 tank (pressure: minimum 20 bar / maximum 220 bar) to the Booster.
- Connect Booster to the nitrogen gas spring (it's necessary to have the charging set mod. COMPL).
- Connect the compressed air (max pressure 8 bar; use lubricated air when working continuously for more than 30 minutes).
- Turn off the discharging valve.
- Turn on the charging valve of the Booster.
- Turn on the compressed air and slowly turn on nitrogen N_2 tank.
- When the nitrogen gas spring has reached the required pressure, turn the charging valve off, turn on discharging valve and disconnect the nitrogen gas spring.
- Once finished, turn off both the compressed air and the nitrogen N_2 tank.

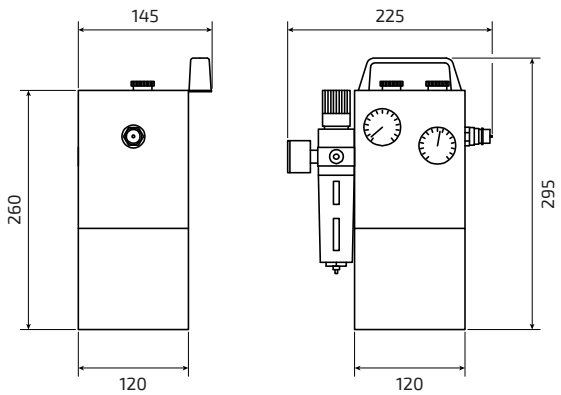
⚠ ATTENTION! USE NITROGEN N_2 ONLY

使用说明

- 将氮气瓶连接 (压力: 最小 20 巴/最大 220 巴) 至助推器。
- 将助推器连接至氮气弹簧 (需要 COMPL 充装套件)。
- 连接压缩空气 (最小压力 8 巴; 如连续使用 30 分钟以上, 请使用润滑空气)。
- 关闭排气阀。
- 打开助推器的充气阀。
- 打开压缩空气并缓慢的打开氮气瓶。
- 当气缸达到所需压力时, 关闭充气阀, 打开排气阀并断开气缸。
- 程序结束时请关闭压缩空气和氮气瓶。

⚠ 注意! 仅使用氮气N_2

Dimensions / 尺寸



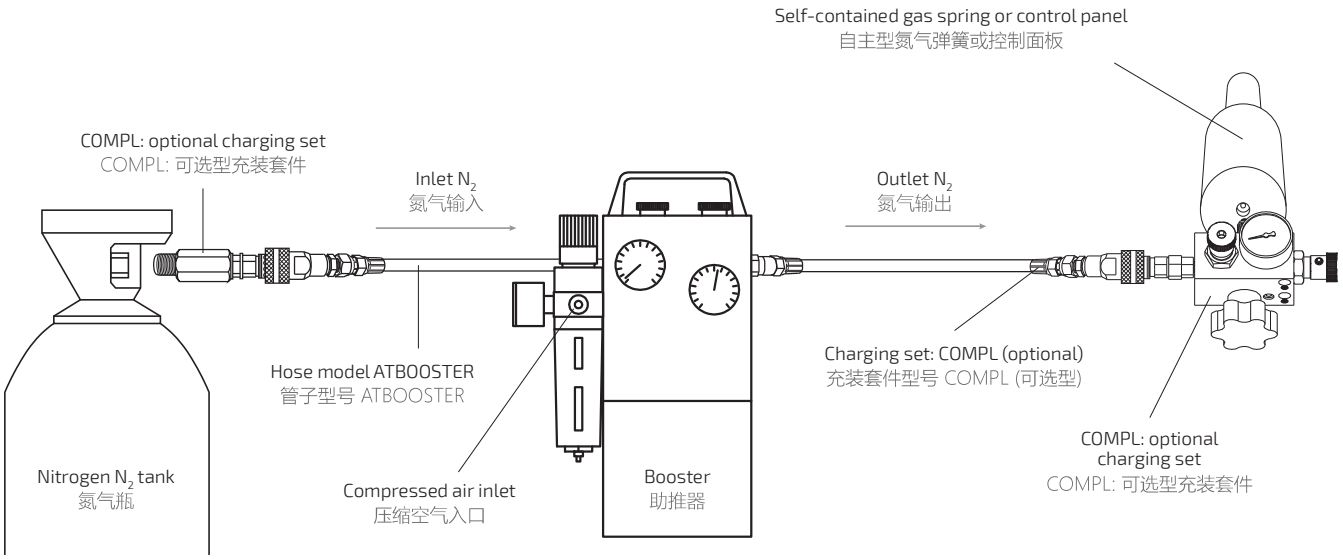
Model 型号	Weight (kg) 重量(kg)
BOOSTER	9.5

COMPONENTS / 组件



The support for on-tank installation is always supplied together with the BOOSTER as a separate component. To install it on the BOOSTER: unscrew the handle, fit the support, screw the handle back on.
用于气瓶体上安装的支撑件始终作为单独组件与助推器一起提供。
若要将其安装在助推上：拧下手柄，插入支撑件，重新拧上手柄。

OPERATING SCHEME / 运行图



Max reachable outlet nitrogen pressure in relation to the compressed air pressure
与压缩空气压力相关的输出氮气最大可达压力

Compressed air pressure (bar) 压缩空气压力 (巴)	7	4	2
N_2 max outlet pressure (bar) 氮气输出最大压力 (巴)	220	125	60

OV GAS SPRING SYSTEM (ALTERNATIVE MANIFOLD)

OV 气缸系统 (替代歧管)

Valveless nitrogen gas springs for an **alternative manifold connection ("OV system"):**

- Use of standard gas springs, fast delivery!
- Lower manufacturing and maintenance costs than traditional manifold plates and dedicated manifold gas springs
- More compact plate dimensions
- Simple gas spring fixing with through-plate screws
- OV gas springs available strokes, dimensions, and the other specifications not listed on the next page, are the same as the corresponding standard models (example: the unlisted specifications of model AGS1000-50-A-OV are the same as model AGS1000-50-A)

用于替代歧管连接的无阀氮气弹簧 ("OV系统"):

- 使用标准氮气弹簧, 快捷交货!
- 与传统歧管板和专用歧管氮气弹簧相比，生产和维护成本更低
- 歧管板尺寸更小
- 用螺丝穿过歧管板即可将氮气弹簧简单固定
- 下页未列出的可用冲程, 尺寸及其它 OV 氮气弹簧规格均与对应的标准型号相同 (例如: 针对未列出的 AGS1000-50-A-OV 型号的规格, 请参阅 AGS1000-50-A 型号)

TECHNICAL NOTES

- **OV gas springs use instructions:**
  - Mounting instructions on the next page
  - Use instructions, information and catalogue help: see dedicated catalogue section
  - Cycles per minute MAX: see specifications tables for the corresponding standard model
- Plate material requirements:
  - Resilience KV ≥ 27 J (at 0°C)
  - Elongation at break A ≥ 14%
  - Respect national regulations about pressure equipment
- Minimum plate thickness = 25 mm

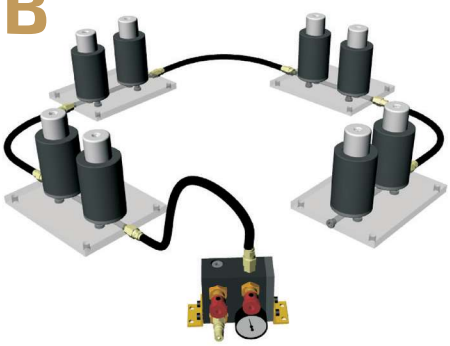
技术说明

- **OV 氮气弹簧使用说明:**
  - 组装说明见下一页
  - 使用说明, 信息及目录使用: 参阅目录中的相应章节
  - 每分钟最多循环次数: 参阅对应的标准型号的技术规格表
- 歧管板的材料要求:
  - KV 弹力 ≥ 27 J (为 0°C)
  - 断裂伸长率 A ≥ 14%
  - 请遵守有关压力设备的国家法规
- 歧管板最小厚度 = 25 毫米

A



B



USE EXAMPLES

A OV gas springs and OV control panel fixed on a single low-thickness plate, without connection hoses.

B OV gas springs fixed on smaller plates connected by hoses, and standard control panel connected by hose.

使用示例

A 固定在一块厚度有限的歧管板上的 OV 气缸和 OV 控制面板, 无连接管。

B 固定在连着管子的较小歧管板上的 OV 氮气弹簧, 以及连着管子的标准控制面板。

OV CONTROL PANELS & OTHER ACCESSORIES FOR OV SYSTEM

See further on in this catalogue.

OV 控制面板及其它 OV 系统专用配件

请参阅本目录下文。

OV GAS SPRINGS

OV 氮气弹簧

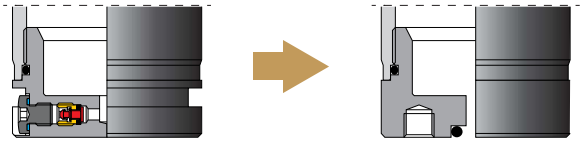
This gas spring series includes the models compliant with automotive standards / 该系列包含符合以下汽车标准的型号

VW	39D 22100

GENERAL FEATURES / 一般特性

In comparison with the corresponding standard models, OV gas springs are valveless (no side port), they have a bottom hole for direct connection (OR-sealed) to manifold plate, and they do not feature the bottom (square) groove.

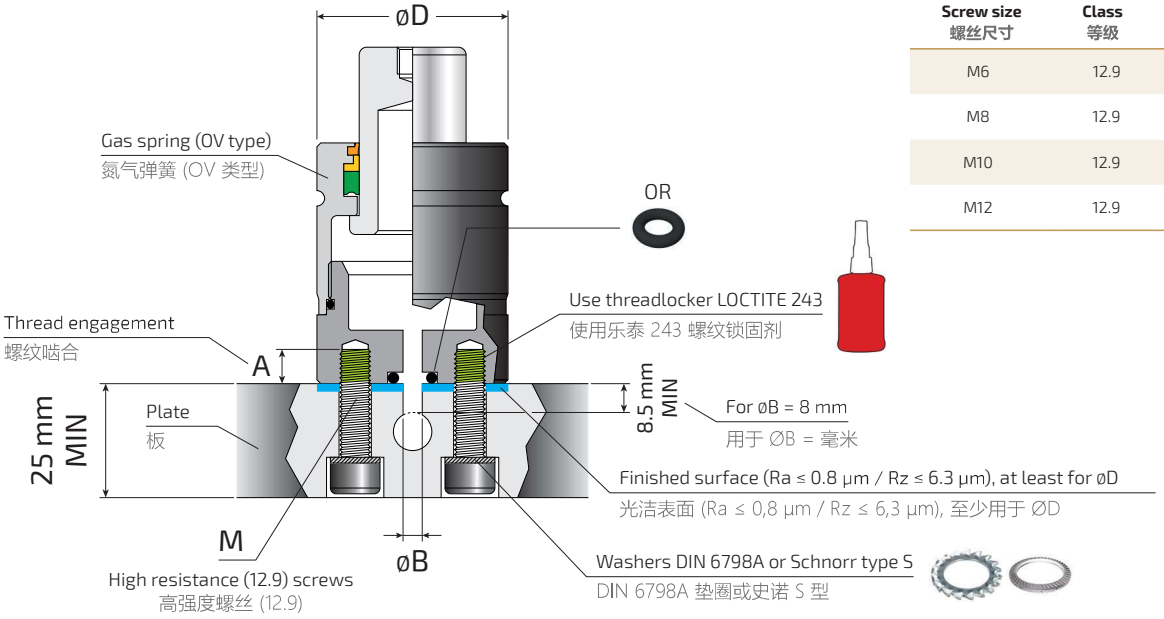
与对应的标准型号相比, OV 氮气弹簧不带阀门 (它们没有侧方连接孔), 它们在底座上有一个用于直接连接 (通过 O 型密封圈) 到带孔板上的孔眼, 并且没有下方凹槽 (方形)。



Standard model
标准型号

Corresponding OV model
对应的 OV 型号

MOUNTING AND TECHNICAL SPECIFICATIONS / 装配和技术规格



Screw size 螺丝尺寸	Class 等级	Tightening torque 拧紧扭矩
M6	12.9	10.5 Nm
M8	12.9	26 Nm
M10	12.9	51 Nm
M12	12.9	89 Nm

Model 型号	Ø D (MIN) mm	Ø B ± 0.1 mm	M ●	A ● mm	OR ● NBR 90 Sh. A
AGS 350-...-A-**OV**	32	5	M6	6	2025-010 (6.07 x 1.78)
AGS 500-...-A-**OV**	38	5	M6	6	2025-010 (6.07 x 1.78)
AGS 750-...-A-**OV**	45	5	M8	6	2025-010 (6.07 x 1.78)
AGS 1000-...-A-**OV**	50	5	M8	6	2025-010 (6.07 x 1.78)
AGS 1500-...-A-**OV**	63	5	M8	6	2025-010 (6.07 x 1.78)
AGS 2400-...-A-**OV**	75	5	M8	6	2025-010 (6.07 x 1.78)
AGS 4200-...-A-**OV**	95	8	M8	12	112-613 (9.92 x 2.62)
AGS 6600-...-A-**OV**	120	8	M10	12	112-613 (9.92 x 2.62)
AGS 9500-...-A-**OV**	150	8	M10	16	112-613 (9.92 x 2.62)
AGS 20000-...-A-**OV**	195	8	M12	18	112-613 (9.92 x 2.62)

● Number and layout of the threaded holes on the gas springs base: see corresponding standard models.
氮气弹簧底座上的螺纹孔的数量和排列: 参阅对应的标准型号

● The thread engagement length **A** is the maximum available thread depth. Do not use thread engagement lengths < **A**.
螺纹啮合的长度 **A** 是螺纹的最大可用深度。
不要使用 < **A** 的螺纹啮合长度。

● 1 pc. OR is supplied with each OV gas spring
随同每个 OV 氮气弹簧均有提供 1 只 O 型密封圈

APVA / APVB
CONTROL PANEL FOR OV SYSTEM

OV 系统专用 APVA/APVB 控制面板

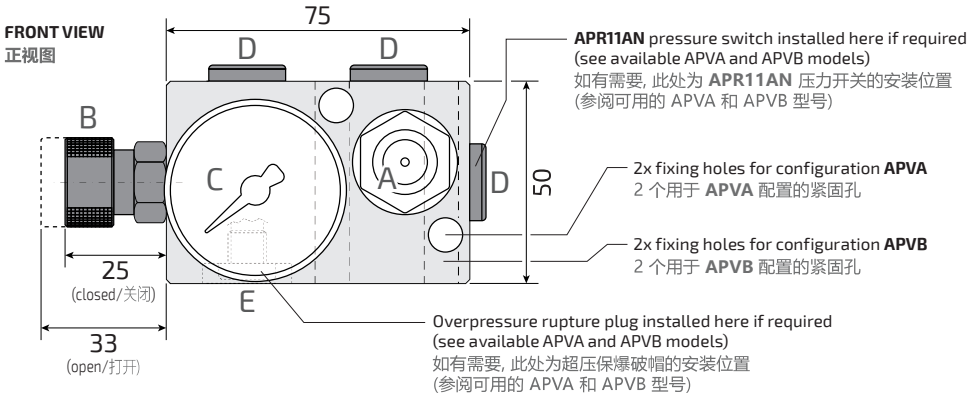


This panel allows to charge and discharge a manifold plate ("OV system" or other) using a direct-coupling to the plate (no need for hoses).

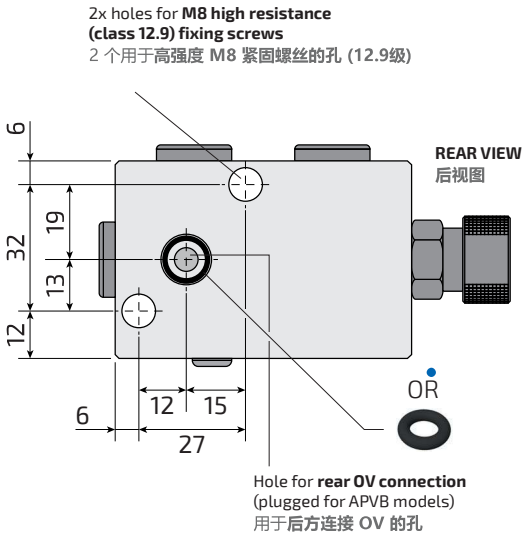
该面板允许通过直接连接至歧管板 (无需管子) 来对一个歧管板系统 ("OV" 系统或其它) 进行充气和排气。

CONFIGURATIONS AND DIMENSIONS / 配置与尺寸

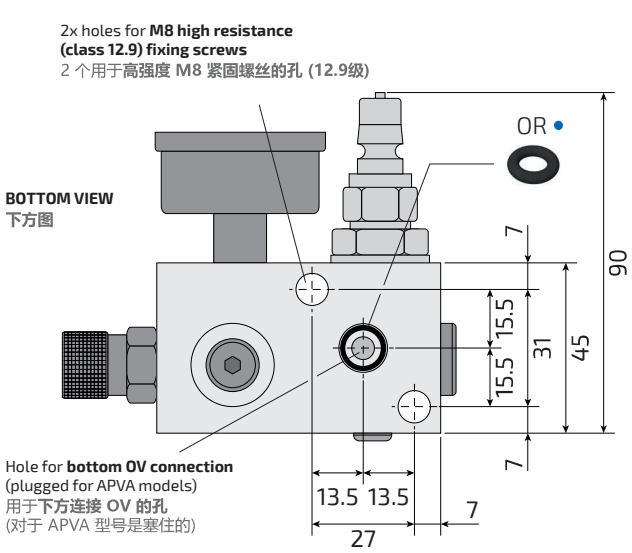
APVA / APVB



Configuration for model APVA
APVA 型号的配置



Configuration for model APVB
APVB 型号的配置



Model 型号	
APVA	Control panel for OV system with **rear** direct-connection to plate 用于 OV 系统的控制面板, 从**后方**直接连接到板上。
APVB	Control panel for OV system with **bottom** direct-connection to plate 用于 OV 系统的控制面板, 从**下方**直接连接到板上。
APVAPAN / APVBPAN	Control panel APVA or APVB with APR11AN pressure switch (50-300 bar normally open) 带 APR11AN 压力开关的 APVA 或 APVB 控制面板 (50-300 巴常开)
APVARP / APVBRP	Control panel APVA or APVB with overpressure rupture plug 带超压爆破帽的 APVA 或 APVB 控制面板
APVAF / APVBF	Control panel APVA or APVB with APR11AN pressure switch (50-300 bar normally open) and with overpressure rupture plug 带 APR11AN 压力开关和超压爆破片的 APVA 或 APVB 控制面板 (50-300 巴常开)

All models are available with safety valve VS500 already assembled (on request). / 所有型号均可预先组装 VS500 安全阀而提供 (申请获得)。

TECHNICAL NOTES

A Charging valve, Bordignon-standard, to be used only with CUC01 or COMPL or BOOSTER
B Discharging valve
C Pressure gauge
D No. 3 connection ports G1/4
E No. 1 connection port G1/8
- The connection ports are plugged
- No. 2 fixing holes for M8 high resistance (12.9) hex-socket screws

⚠ ATTENTION! USE NITROGEN N_2 ONLY

技术说明

A 充气阀, Bordignon 标准型, 仅与 CUC01 或 COMPL 或 BOOSTER 助推器一起使用
B 排气阀
C 压力计
D 3 个连接孔 G1/4
E 71个连接孔 G1/8
- 连接孔均被塞住
- 2 个用于 M8 高强度内六角螺丝 (12.9) 的紧固孔

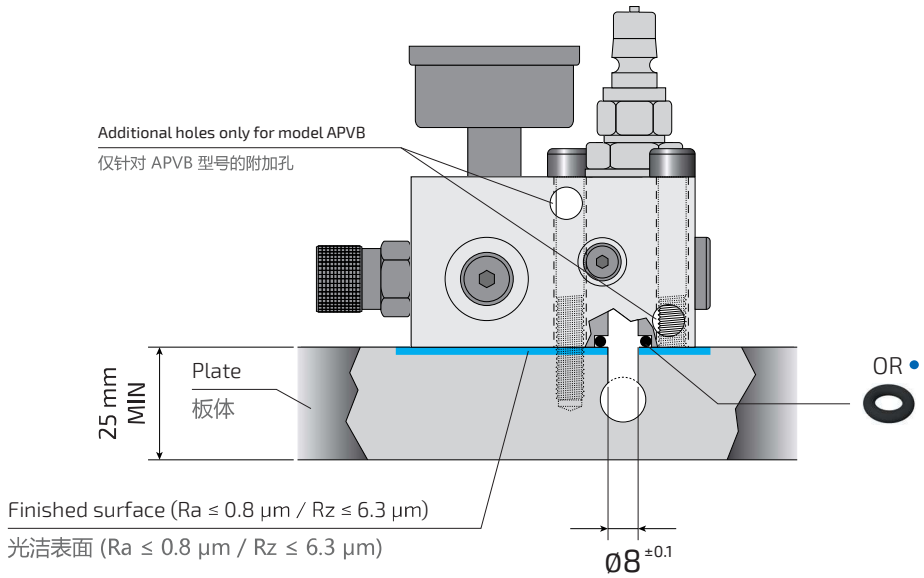
⚠ 注意! 仅使用氮气N_2



Add "CV" after the control panel code to receive it with CEJN-type charging valve instead of the Bordignon-standard charging valve.
Example: "APVAFCV" = control panel APVAF with CEJN-type charging valve.
在控制面板代码后添加 "CV", 以接收带有 CEJN 类型充气阀的产品, 而非 Bordignon 标准充气阀。
例如: "APVAFCV" = 带有 CEJN 类型充气阀的 APVAFCV 控制面板。

APVA MOUNTING / APVA 装配

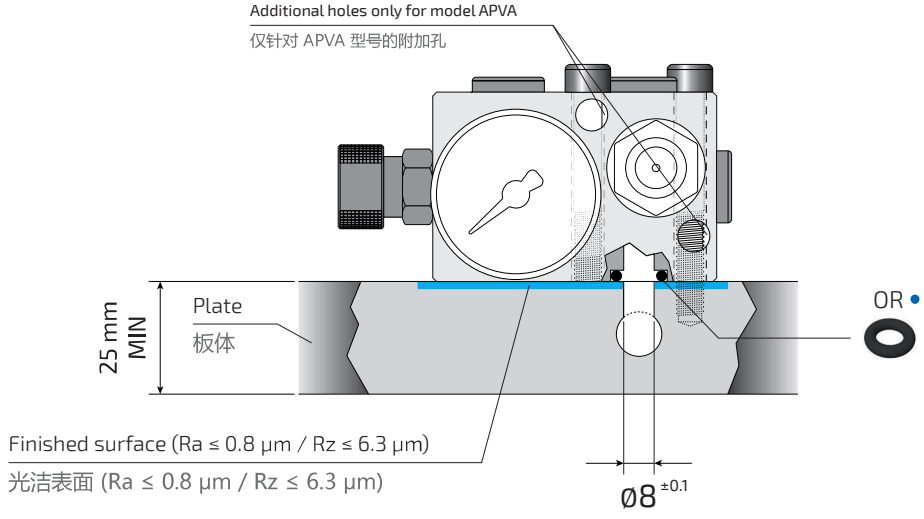
APVA



● 1 pc. OR NBR 90 Shore A model 2037-012 (9.25 x 1.78 mm) is supplied with the control panel / 随附面板提供1只 NBR 90 Shore A 丁腈橡胶 O 型密封圈, 2037-012 型号 (9,25 x 1,78 毫米)

APVB MOUNTING / APVB 装配

APVB



● 1 pc. OR NBR 90 Shore A model 2037-012 (9.25 x 1.78 mm) is supplied with the control panel / 随附面板提供1只 NBR 90 Shore A 丁腈橡胶 O 型密封圈, 2037-012 型号 (9,25 x 1,78 毫米)

IDENTIFYING PLATE

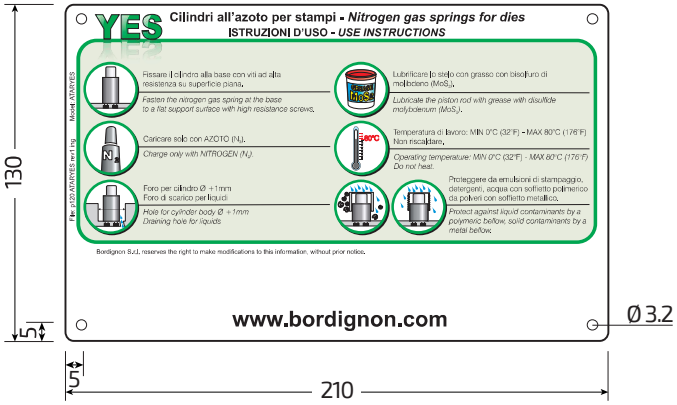
铭牌

Identifying plate to be used on the press tools, dies and moulds equipped with nitrogen gas springs.
Different languages on request.
Different writings on request.

铭牌只可在配备氮气弹簧的模具上使用。
可按要求书写不同语言。
可按要求进行不同注册。

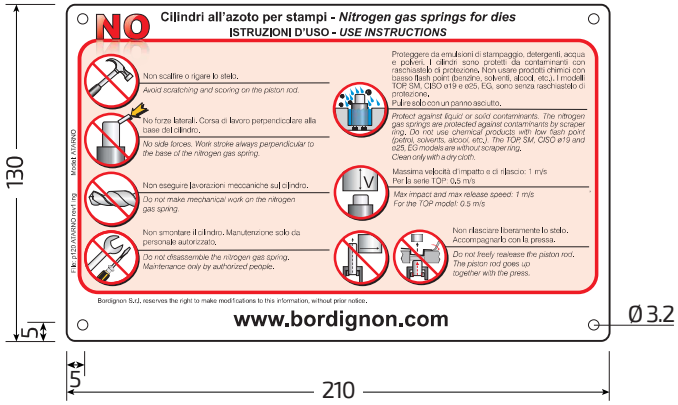
Model
型号

ATARYES



Model
型号

ATARNO



Model
型号

ATAR EN

Model
型号

ATAR IT

Model
型号

ATAR DE







Model
型号

ATAR CN



LUBRICATION GREASE

润滑脂



It is necessary to keep the piston rod lubricated for a longer life of the gas spring.
We can supply grease with molibdenum disulfide by can of 800 g.

想要获得更长的氮气弹簧寿命,便需要对活塞杆进行润滑。
根据需求,我们可提供 800克罐装型二硫化钼润滑脂。

Model 型号
PLUB

DEVICE for the NITROGEN GAS SPRINGS INITIAL LOAD CHECK

氮气弹簧初始力测量装置



This device is a load gauge for nitrogen gas springs. This device is usually used to measure the initial force of nitrogen gas springs, in order to verify that they are actually charged.

该装置是一款用于氮气弹簧的充气测量仪。
该装置通常用于测量氮气弹簧的初始力,以验证它们是否已实际充入气体。

Model 型号	Description 说明
AK2	HYDRAULIC FORCE-MEASURING DEVICE MAX 12000 daN 液压型力度控制装置 最大 12000 daN
AH1000	LOAD CELL 100-1000 daN 压力传感器 100-1000 daN
AH4000	LOAD CELL 400-4000 daN 压力传感器 400-4000 daN
AH10000	LOAD CELL 1000-10000 daN 压力传感器 1000-10000 daN

