

如何选择行程

How to Choose a Route

氮气弹簧的行程应是满足冲压工艺的要求，不同的冲压工序要求的行程大小都不一样，通常情况下加大3~5mm安全行程，以下是不同冲压工艺特别介绍。

The stroke of a nitrogen spring must meet the requirements of the stamping process; different stamping operations demand varying stroke lengths. Typically, an additional safety stroke of 3-5 mm is recommended. Below are detailed specifications for various stamping processes.

1. 冲裁:

1. Cutting:

在分离工序中往往采用氮气弹簧作为顶件、卸料用。顶件、卸料的

In the separation process, nitrogen springs are commonly employed as lifting elements and for material discharge.

行程都要比较小，根据工序要求的行程，通常有10mm便可满足需要，但实际上我们在选用氮气弹簧行程时，最好都要选择20~30mm行程，这样做方才合理，这样有利于加长氮气弹簧的使用寿命，总之，对冲裁氮气弹簧的行程S选择时建议在20mm以上。

The travel distance should be relatively small; typically, a travel of 10 mm meets process requirements. However, when selecting nitrogen spring travel, it is advisable to choose a range of 20-30 mm, as this approach is more reasonable and helps extend the service life of the nitrogen spring. In summary, for stamping nitrogen springs, a travel distance S of at least 20 mm is recommended.

2. 拉深:

2. Draw:

氮气弹簧大多用于获得压边力。常见使用的行程在40~80mm，对于拉深——整形工序，一般氮气弹簧的行程等于零件的高度加3~5mm就够了，对于筒形件拉深为了取件方便，保证拉深件的质量，提高拉深件的尺寸精度，氮气弹簧的行程应等于零件的高度加8~10mm，总之对拉深件选择氮气弹簧作压边力用，氮气弹簧行程S应等于零件的高度加3~10mm。

Nitrogen springs are primarily used to generate edge pressing force. The commonly employed stroke ranges from 40 to 80 mm. For deep drawing-forming processes, a stroke of 40-80 mm is generally sufficient; for cylindrical parts, a stroke of 40-80 mm is adequate. However, for cylindrical parts, a stroke of 80-100 mm is recommended to facilitate part removal, ensure quality, and improve dimensional accuracy. In summary, when selecting a nitrogen spring for edge pressing in deep-drawn parts, the stroke S should be set at 40-100 mm relative to the part height.

3. 弯曲和翻边:

3. Bending and Flanging:

弯曲和翻边一般要求比较大的氮气弹簧行程，并在整个工作过程中施加弹压力。以防止零件侧滑或错位，由于工艺需要，除了零件的高度外，需要加上10~20mm的余量，在模具进行调整时，调整模具的预紧力。

Bending and flanging processes generally require a substantial stroke for nitrogen springs, with spring pressure applied throughout the operation to prevent part slippage or misalignment. Due to manufacturing requirements, in addition to the part height, a allowance of 10-20 mm must be incorporated; when adjusting the mold, the pre-tension force should be modified accordingly.

客户选择 BBK-JINGBA，因为他们需要的是…

Customers choose BBK-JINGBA because they need exactly what they're looking for...

更安全更可靠的产品

A safer and more reliable product

遍布全球的支持及服务

Support and services available worldwide

符合所有主要行业标准

Complies with all major industry standards

使用我们的创新型氮气弹簧，省钱又省时

“使用 BBK-JINGBA 产品省钱又省时”于 2010 年引进的一个装有超程保护系统的 BBK-JINGBA 气压弹簧曾在一位客户的模具中出现过一次超行程现象。客户本以为他设置的行程较长，但当压机向下移动冲程时，弹簧最终出现了超程现象。打开模具时，客户原本以为模具已完全损坏，并且已经开始计算复杂的维修成本。没想到发现仅因气体泄漏导致气压弹簧出现变形，但程度完全处于可控范围内。

Using our innovative nitrogen spring saves both money and time. The BBK-JINGBA pneumatic spring, equipped with an overtravel protection system introduced in 2010, experienced one instance of overtravel in a customer's mold. The customer initially assumed the set travel distance was too long; however, during the press's downward stroke, the spring ultimately exceeded its limit. Upon opening the mold, the customer believed it was completely damaged and had already begun calculating the substantial repair costs. To their surprise, the issue was caused solely by a gas leak leading to deformation of the pneumatic spring, but the extent remained fully within controllable limits.

“选择 BBK-JINGBA，打造更安全的工作环境”2013 年，因客户模具出现故障，一个装有过载保护系统的气压弹簧停在了压缩位置。打开压机时，活塞杆突然从压缩位置弹出。安全系统一如所设计般运行。这样，气体的泄漏程度处于可控范围内，从而杜绝了任何人员受伤的风险。客户：“使用 The Safer Choice，模具损坏及人员受伤其实是可以避免的。在为营造更安全的工作环境提供创新型解决方案方面，这无疑是在再完美不过的示例。”

"Choose BBK-JINGBA to create a safer working environment." In 2013, due to a mold malfunction, a pneumatic spring equipped with an overload protection system became stuck in the compressed position. Upon startup of the press, the piston rod suddenly ejected from this position. The safety system operated as designed, keeping gas leakage within controllable limits and thereby eliminating any risk of personnel injury. Customer: "By adopting The Safer Choice, mold damage and personal injuries could have been prevented. This is undoubtedly a perfect example of providing innovative solutions for creating safer work environments."

“使用 BBK-JINGBA 气压弹簧，我们倍感安全”

Using the BBK-JINGBA pneumatic spring gives us a great sense of security.

2010 年，一个配有过压保护系统的气压弹簧中的导轨在模具中受到超压。

In 2010, the guide rail of a pneumatic spring equipped with an overpressure protection system was subjected to excessive pressure within the mold.

拔丝油已进入了气压弹簧中，导致气压剧增。片刻后，导轨中的安全片因压力异常而发生变形，这样气体即可以一种有控制且安全的方式泄漏出来。

The lubricating oil has entered the pneumatic spring, causing a sudden surge in pressure. Shortly thereafter, the safety valve in the guide rail deforms due to abnormal pressure, allowing the gas to leak out in a controlled and safe manner.

客户：“使用 BBK-JINGBA 气压弹簧，感觉很安全。如果有些故障避免不了，Customer: "Using the BBK-JINGBA pneumatic spring feels very safe. If some malfunctions occur, they're unavoidable."

而情况有时也正好朝着那个方向发展，那么，The Safer Choice 技术即是最佳之选。”

And sometimes things indeed develop in that direction; in such cases, The Safer Choice technology is the optimal choice.