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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 20914.4-2019

**Stamping dies -- Gas springs -- Part 4: Gas spring with
increased spring force and same built height**

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Foreword

GB/T 20914 "die nitrogen gas spring" is divided into 4 parts.

- Part 1. General specifications;
- Part 2. Accessories specifications;
- Part 3. Compact and powerful nitrogen springs;
- Part 4. Contour high-strength gas springs.

This part is the fourth part of GB/T 20914.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This section uses the redrafting method to modify the use of ISO 11901-4:2014 "die nitrogen gas springs part 4. contour high-strength nitrogen bombs

Spring.

There are technical differences between this section and ISO 11901-4:2014, and the terms involved in these differences have been passed on the outside margins.

The vertical single line (-) of the position is marked. The corresponding technical differences and their reasons are as follows.

---About the normative reference documents, this standard has made technical adjustments to adapt to China's technical conditions, adjustments

The situation is reflected in Chapter 2, "Regulatory Citations", and the specific adjustments are as follows.

- * Replace ISO 2768-1 with GB/T 1804 equivalent to the international standard;
- * Replace ISO 7-1 with GB/T 7306.1 and GB/T 7306.2 equivalent to international standards.

This section has made the following editorial changes.

- "1 Scope", the description of "unit is millimeter" is deleted;
- "3 terms and descriptions", change "see Figure 1" to "nitrogen spring terminology shown in Figure 1", the picture title is changed accordingly;
- In Figure 1, the footnote "c" is changed to a number, and the footnote "b" is changed to F, which represents the working force, and the corresponding changes are made in the description;
- In Figure 1, add the label and explain "5---cylinder";
- 4.1, change "see Table 1" to "general nominal specifications see Table 1";
- Table 1, change the head "stroke end point working force increase coefficient" to "boost ratio a", increase the footnote "a boost ratio. end of stroke
The ratio of the force to the nominal initial force. ";
- 4.2, change "see Figure 2 and Table 2" to "Model 10000 gas spring structure type shown in Figure 2, size is shown in Table 2";
- 4.3, the words "see Figure 3 and Table 2" are changed to "model 24000 ~ 95000 gas spring structure type shown in Figure 3, the size is shown in Table 2";
- Table 2, "Nominal stroke a is changed to "nominal stroke s", unified with Figure 2, Figure 3.

This part is proposed and managed by the National Die Standardization Technical Committee (SAC/TC33).

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Introduction

Users of GB/T 20914 "die nitrogen gas spring" please note that the nitrogen gas spring must comply with the relevant national regulations.

Die nitrogen gas spring

Part 4. Contour high-strength gas springs

1 Scope

This part of GB/T 20914 specifies the dimensions, nominal initial force and type of contour high-strength gas springs. This section also specifies

Identification, delivery technical conditions and marking of high-strength nitrogen gas springs.

This section applies to models 10000~95000, using nitrogen pressure, nominal initial force is $10000 \times (1 \pm 5\%) \text{ N}$ to $95000 \times$

The $(1 \pm 5\%) \text{ N}$ die is a high-strength nitrogen gas spring.

Note. For specifications of nitrogen spring installation accessories, refer to GB/T 20914.2.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 1804 General tolerances Part 1. Tolerances for linear and angular dimensions without tolerances (GB/T 1804-2000,

EqvISO 2768-1. 1989)

GB/T 7306.1 55° sealing pipe thread Part 1. cylindrical internal thread and cylindrical external thread (GB/T 7306.1-2000,

eqvISO 7-1.1994)

GB/T 7306.2 55° sealing pipe thread Part 2. Conical internal thread and conical external thread (GB/T 7306.2-2000,

eqvISO 7-1.1994)

3 Terms and description

The gas spring terminology is shown in Figure 1.

The present nitrogen gas spring is an elastic member that is pressurized with nitrogen.

In the rest position, the plunger rod is in the push-out state.

The nitrogen gas spring is provided with an inflation hole for pressurizing or

decompressing, and the inflation hole is located on the side of the cylinder and is sealed with a cover.

The pressure inflation hole is an Rp1/8 screw hole conforming to GB/T 7306.1 and GB/T 7306.2.

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