

ICS 25.120.30

CCS J 46



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

GB/T 41860.1-2022

**Tools for moulding - Locating rings - Part 1: Locating rings for
mounting without thermal insulating sheets in small or medium
moulds (types A and B)**

Issued on: October 12, 2022

Implemented on: October 12, 2022

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

- foreword
- Introduction
- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 4 Structure type and size
- 4.1 Type A (with hole) positioning ring

foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules for Standardization Documents" drafting.

This document is the first part of GB/T 41860 "Positioning Ring of Forming Die". GB/T 41860 "Positioning ring of forming die" has been released

The following 2 parts.

--- Part 1. Type A and Type B positioning rings for small and medium-sized molds without heat shields;

--- Part 2. C-type and D-type small and medium-sized mold positioning rings with heat shields.

This document is modified to adopt ISO 10907-1:2008 "Mould positioning ring - Part 1. Small and medium-sized mold positioning ring without heat shield

Type A and Type B".

Compared with ISO 10907-1:2008, this document has made the following structural adjustments.

--- Added Chapter 2 "Normative References";

--- Added Chapter 3 "Terms and Definitions".

The technical differences between this document and ISO 10907-1:2008 and their reasons are as follows.

--- Modify "Applicable to injection molding machines of models no larger than E12

(according to EUROMAP2)" in "Scope" to "Applicable to clamping force

"Plastic injection molding machines less than 3800kN" (see Chapter 1), after modification to match the specifications of domestic equipment;

---Change the reference diameter dia. 90 to the variable dia. D1 (see Figure 1~Figure 7, 4.1, 4.2), and increase D1 to be 100mm in size (see

Table 2, Table 3), the changed size series are consistent with the domestic market conditions;

--- Subdivide the A-type positioning ring into A1, A2, A3 types (see 4.1), and match the three structural types of the A-type positioning ring after subdivision

It is more convenient to describe and use;

--- Subdivide the B-type positioning ring into B1, B2, B3 types (see 4.2), and match the three structural types of the B-type positioning ring after subdivision,

And more convenient to describe and use;

---Remove the requirements on the surface roughness Ra0.4 μ m in all the drawings, and change it to require "the surface roughness of the mating surface" in the clause

Ra should be 1.6 μ m" (see 4.1 and 4.2), because the roughness of all surfaces is Ra0.4mm is not realistic, after the change

more accurate;

---In the upper right corner of all figures, the "surface roughness value unit is micron" is changed to "dimension unit is millimeter" (see Figure 1~Figure 7), because

The requirements for surface roughness have been specified in the clauses, and the size units specified in the drawings are sufficient;

---Change the thickness dimensions in the figure from fixed values "12.5, 4, 1" to variables "t1, t2, t3" (see Figure 2~Figure 7), and align them in the table

The values are divided into series and stipulated (see Table 1~Table 3), which are consistent with the size series of positioning rings in the domestic market after modification;

---Delete the corner mark "a" in the original Table 1 and Table 2 (see Table 1 and Table 3), because EUROMAP2 is not applicable in China, and the size series

Has been fixed, indicating the source is not necessary;

---Delete the description of steel grades in the "Materials" chapter (see Chapter 5), "Steel grades are determined by the manufacturer" is not necessary here;

---In the chapter "marking", add the mark of diameter D1 (see Chapter 6), because after changing dia. 90 to the variable dia. D1, the mark needs

change accordingly;

---In the references, replace the reference [2] with GB/T 38533-2020, the dimensions and specifications of the positioning ring in this document are the same as

Match the "plastic injection molding machine" in GB/T 38533-2020.

The following editorial changes have been made to this document.

--- Change the chapter title "Dimensions" to "Structural Types and Dimensions";

--- In Figure 1, the index and serial number of the "locating circle" are added;

---Adjusted the table format;

--- In references, replace reference [2] with the national standard GB/T 131-2006 equivalent to ISO 1302:2002.

Introduction

With the development of technology and the expansion of foreign trade, the standards issued by ISO and other international standardization organizations are adopted to eliminate the

The technical barriers are of great significance.

The "molding mold positioning ring" specified in this document is used to determine the installation position of the mold on the plastic injection molding machine to ensure that the plastic injection molding

It is a standard part for the centering of the nozzle of the molding machine and the sprue sleeve of the mold. It can also be used as a fastener to fix the accessories. It has the characteristics of high temperature resistance and high precision.

There are usually four types of points, and the specialized production and application are relatively mature.

ISO 10907 divides the positioning ring into two parts according to whether it has a heat shield or not. When adopting standards, in order to ensure the consistency between domestic standards and international standards

Consistency, GB/T 41860 is also divided into 2 parts.

--- Part 1.Type A and Type B positioning rings for small and medium-sized molds without heat shields;

--- Part 2.C-type and D-type small and medium-sized mold positioning rings with heat shields.

Because the installation structure of the locating ring with a heat shield is different from that

without a heat shield, and each type of locating ring A, B, C, and D is different

It is subdivided into three types, so it is divided into two parts to avoid excessive length of the document and facilitate reference by standard users.

Mold retaining rings - part 1. without heat shields

Small and medium mold locating ring type A and type B

1 Scope

This document specifies the structural type, size, material and marking of the positioning ring for molds without heat shields. See Figure 1 for the schematic diagram of its installation (Type A).

This document applies to molds without heat shields for plastic injection molding machines with a clamping force of less than 3800kN.

a) Type A1 b) Type A2 c) Type A3

Description of index number.

1---fixed mold seat plate;

2---Plastic injection molding machine fixed template;

3---Positioning circle.

Figure 1 Schematic diagram of positioning ring (type A) installation

2 Normative references

This document has no normative references.

3 Terms and Definitions

This document does not have terms and definitions that need to be defined.

4.1 Type A (with hole) positioning ring

The structure type of A-type positioning ring should be consistent with Figure 2, Figure 3 and Figure 4. When D1 is 90mm, the size of the positioning ring should comply with Table 1 given value. When D1 is 100mm, the size of the positioning ring should comply with the values given in Table 2. Surface roughness Ra of mating surfaces in all figures