












10.5 Inlet Bushings

10.5.1 Inlet Bushing IB-24 / IB-32 Series

NOTICE

Use torque wrench with wrench insert and the torques indicated in the torque table (section 13).

|  WARNING | | |
|--|--|---|
|  | <p>Hot Surfaces Hazard</p> <p>Contact between the skin and hot surfaces could result in burns.</p> <p>Use personal protective equipment, such as gloves, apron, sleeves and face protection, to guard against burns.</p> <p>When servicing or handling the hot runner system outside the manifold plates or the injection molding machine, care must be taken to heed the hot surface exposure warnings.</p> <p>For first aid contact your medical / safety representing.</p> |    |
|  | <p>Hazard of Pressurized Air</p> <p>Pressurized air blow can result in hot plastic or foreign bodies entering the eyes, causing vision damage.</p> <p>Use personal protective equipment: Face protection, hearing protection and gloves.</p> <p>For first aid contact your medical / safety representing.</p> |    |

10.5.1.1 Thermocouple

Color Coding of Thermocouples

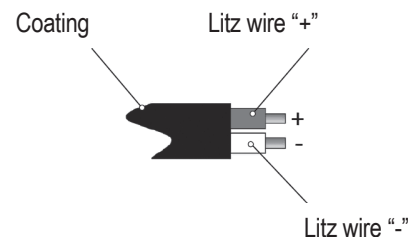
NOTICE

Take notice of the production and color identification of thermocouple cables.

Synventive uses J and K type thermocouples. Their color coding is given in the following table:

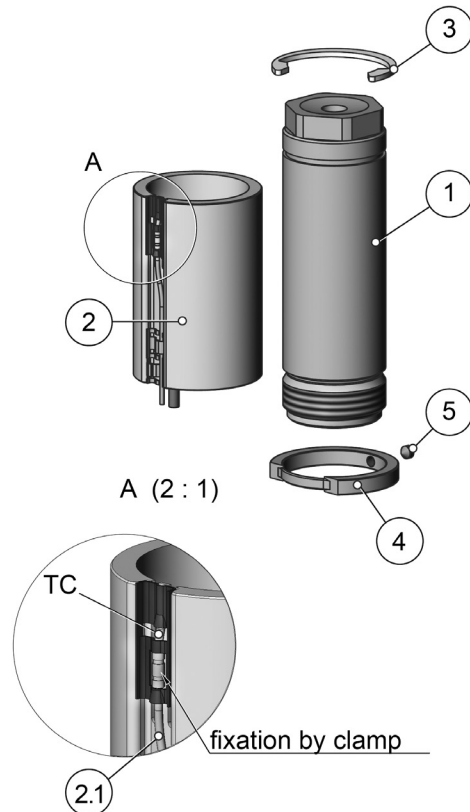
Table 1: International color coding for thermocouples

| Type | International standard IEC 584-3 | |
|------|----------------------------------|---------|
| J | Black | + Black |
| | | - White |
| K | Green | + Green |
| | | - White |



**10.5.1.2 Dismounting and Mounting of the Inlet Bushing on the Manifold**

In this section the inlet bushing parts are identified with the numbers indicated in the following figure.

Technical Data IB-24, IB-32

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Inlet Bushing Parts IB-24

Inlet Bushing without Heater (only short Inlet Bushing)

| Pos. | Qty. | Description | Item |
|------|------|--------------------|-------------------------|
| 1 | 1 | Inlet bushing body | IB24-B-##-##-015-04-R## |

Inlet Bushing with Heater

| | | | |
|-----|---|-----------------------------------|--|
| 1 | 1 | Inlet bushing body | IB24-B-##-##-###-04-R## |
| 2 | 1 | Heater assembly with Thermocouple | HTJ-024-###-01 (J-Type) HTK-024-###-01 (K-Type) |
| 2.1 | 1 | Thermocouple (TC) Spare part | TC#-RC-01-###-01 |
| 3 | 1 | Retaining ring | M1800H25 |
| 4 | 1 | 12E nozzle component ring | 12NC-R-02 |
| 5 | 1 | Hexagon socket set screw | DIN914-M3X3-45H |

Inlet Bushing Parts IB-32

Inlet Bushing without Heater (only short Inlet Bushing)

| Pos. | Qty. | Description | Item |
|------|------|--------------------|-------------------------|
| 1 | 1 | Inlet bushing body | IB32-B-##-##-015-04-R## |

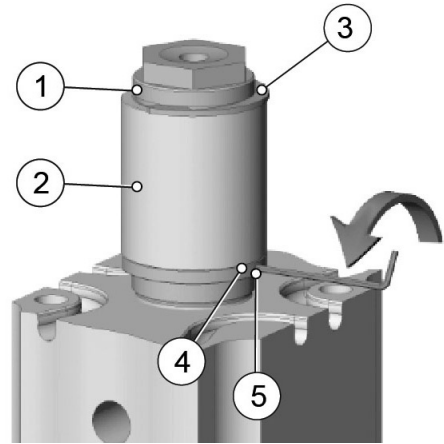
Inlet Bushing with Heater

| | | | |
|-----|---|-----------------------------------|--|
| 1 | 1 | Inlet bushing body | IB32-B-##-##-###-04-R## |
| 2 | 1 | Heater assembly with Thermocouple | HTJ-032-###-01 (J-Type) HTK-032-###-01 (K-Type) |
| 2.1 | 1 | Thermocouple (TC) without heater | TC#-RC-01-###-01 |
| 3 | 1 | Retaining ring | M1800H35 |
| 4 | 1 | 16E nozzle component ring | 16NC-R-02 |
| 5 | 1 | Hexagon socket set screw | DIN914-M3X3-45H |



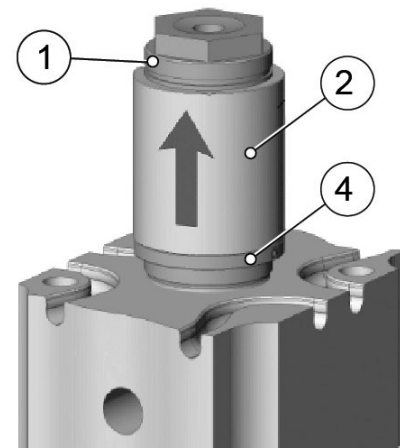
Dismounting of the Inlet Bushing IB-24 / IB-32

- 1) Loosen the hexagon socket set screw (5).
- 2) Dismount the retaining ring (3).



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- 3) Lift up the inlet bushing heater (2) from the inlet bushing body (1).
- 4) Lift up the component ring (4) from the inlet bushing body (1).

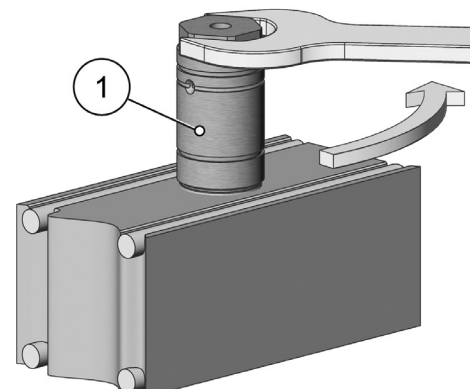


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- 5) Unscrew the inlet bushing body (1) from the manifold.

NOTICE

Use torque wrench with wrench insert and the torques indicated in the torque table (section 13).

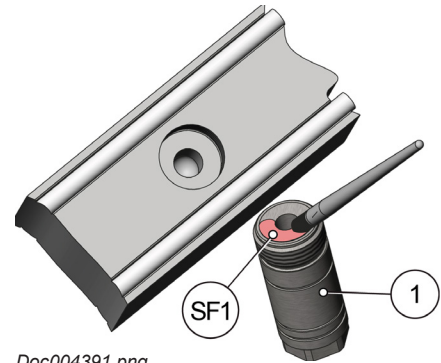


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Mounting of the Inlet Bushing IB-24 / IB-32

- 1) Apply spotting ink on the inlet bushing body (1) bottom surface (SF1).
- 2) Screw in the inlet bushing body (1) hand-tight into the manifold thread until seated.
- 3) Unscrew the inlet bushing body (1) from the manifold.



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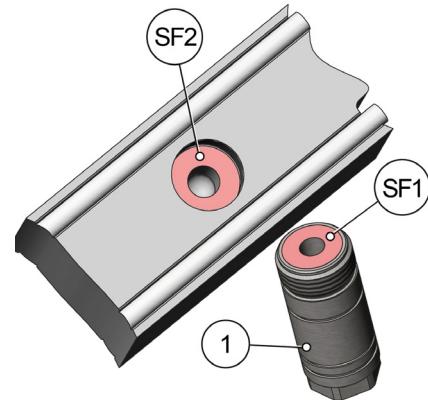
- 4) Check the matching between the manifold bottom surfaces (SF2) and the inlet bushing body (1) surface (SF1).

NOTICE

The manifold must bear on all surfaces uniformly and flatly, in particular on the inlet bushing body contact face.

In case of any uncertainty, clean the surfaces with a cleaning cloth. If the next ink test is still unsatisfactory, please - contact the Synventive Customer Service or Technical Support.

- 5) With a positive ink test clean the surfaces and proceed to the next step.

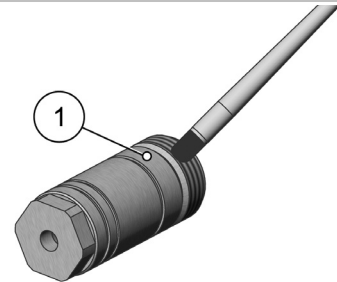


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- 6) Lubricate the thread (not the face) of the nozzle body with high-temperature assembly paste (anti-seize compound).

NOTICE

This is an important measure to prevent thread corrosion due to aggressive gases, which could be released during plastics processing.

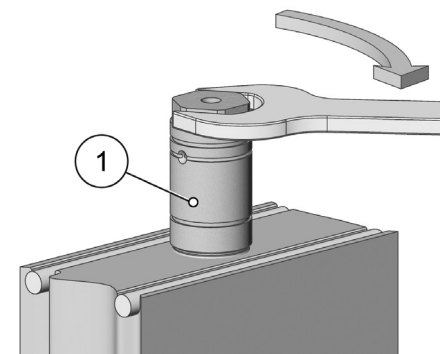


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- 7) Tighten the inlet bushing body (1) on the manifold.

NOTICE

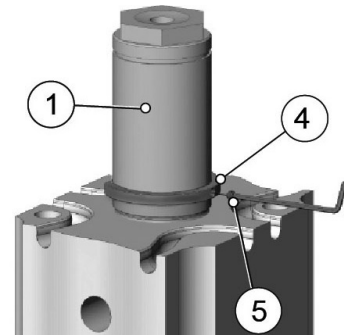
Use torque wrench with wrench insert and the torques indicated in the torque table (section 13).



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- 8) Add nozzle component ring (4) on the inlet bushing body (1).
- 9) Tighten the component ring (4) with the Hexagon socket set screw (5).

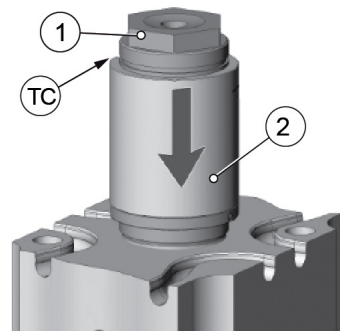


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- 10) Mount the Inlet bushing heater (2) on the inlet bushing body (1).

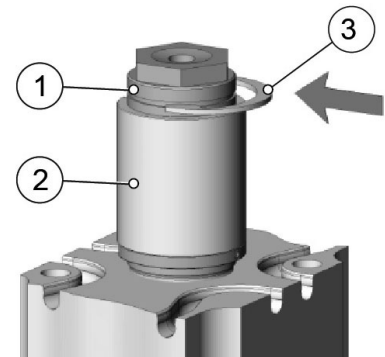
NOTICE

Check the correct position and fixation of the thermocouple (TC).



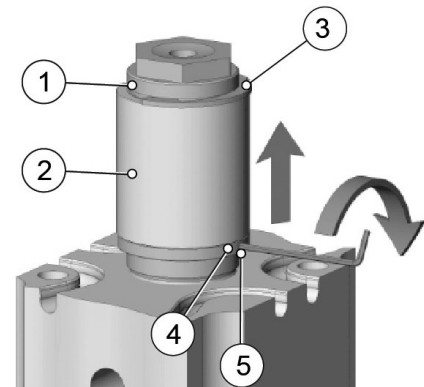
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- 11) Fix with the retaining ring (3) the Inlet bushing heater (2) on the inlet bushing body (1).



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- 12) Slide the Inlet bushing heater (2) up to the retaining ring (3).
- 13) Push the component ring (4) against the Inlet bushing heater (2).
- 14) Fix the component ring (4) by tighten it with the hexagon socket set screw (5).



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