

Technical documentation

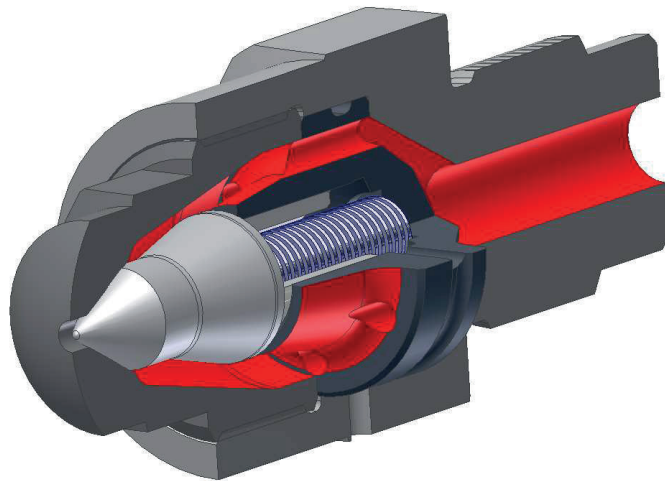
SE Needle shut-off nozzles

Type SES 0

Spring operated Mini Shut-off Nozzle

Version : 1.1

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Swiss made

BMS

Fabricant de fournitures pour la plasturgie

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1 Features

Needle shut-off (NSO) nozzles are used to process thermoplastics and liquids. Clean shut-off of melt and reliable closing during metering are the functions of a NSO nozzle. With the **SES 0** Mini Shut-off Nozzle was realized a simple, compact and economical Needle Shut-Off Nozzle, that meets all requirements for a trouble free and economic production of injection molded parts.

1.1 Advantages of the SES 0 Shut-off Nozzle

Compact and easy construction

The SES 0 nozzle is one of the smallest Needle Shut-off Nozzles

- ⇒ Can be used on small machines
- ⇒ Easy assembling
- ⇒ Quick and easy cleaning

Shut-off in the nozzle tip

- ⇒ No sprue, no drooling
- ⇒ Controlled, clean shut-off of the melt stream
- ⇒ Metering with injection unit raised
- ⇒ Reduced cycle times

Modular system

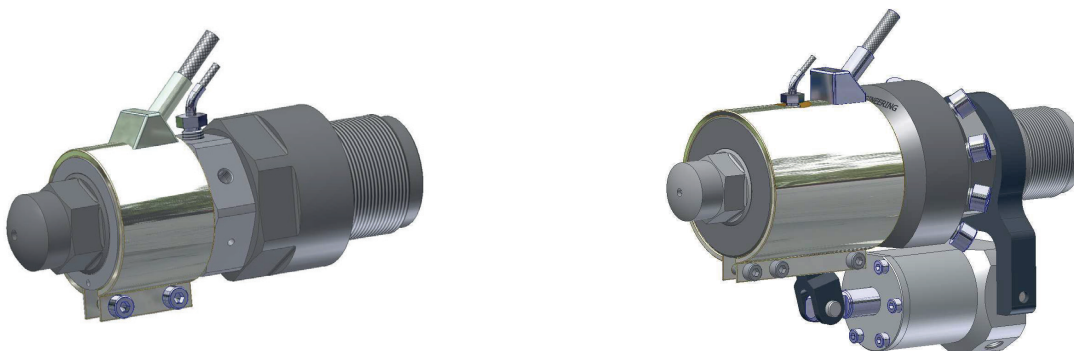
The SES 0 Nozzle is designed as a nozzle tip. For a fast adaptation to different molds and machines corresponding open nozzle bodies are available.

- ⇒ Quick change of nozzle
- ⇒ Different penetration
- ⇒ Same Shut-off Nozzle
- ⇒ Most economic solution

1.2 Alternative from our product range:

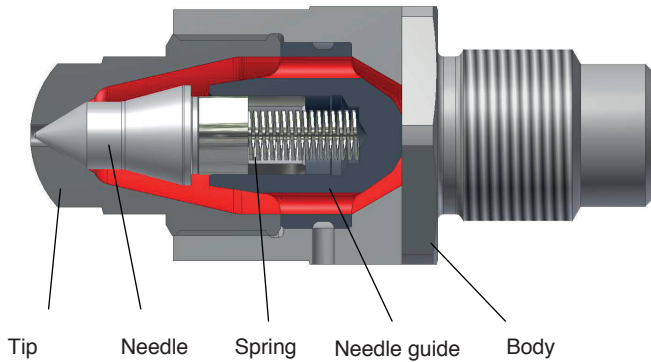
The **SES 0** Mini Shut-off Nozzle is a simple, compact and economical Needle Shut-Off Nozzle for standard applications. For high-tech application we recommend alternative nozzles.

- Spring operated Shut.off Nozzle type SES10-30 (wear protected single hole nozzle)
- Pneumatic or hydraulic operated Shut-off nozzle type SEP10-30 (wear protected High performance nozzle)



2 Technical description

2.1 Function



The needle which moves axially in the nozzle is held in the closed position by the force of the spring. The melt pressure, coming out of the extrusion unit pushes back the needle and opens the hole for injection at 100 bar. After the injection process and pressure decrease under 40 bar, the nozzle is closed again, according to the movement of the spring.

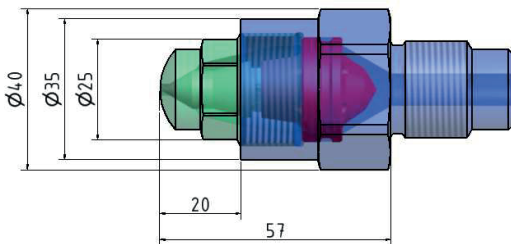
2.2 Technical data

Max. injection rate for PS	1500 cm ³ /sec
Approximate screw-Ø	Up to 100 mm
Max. operating temperature	350 °C
Max. injection pressure	2'500 bar
Max. back pressure	approx. 120 bar
Operating type	Spring
Orifice-Ø range of tip	1,5 - max. 7,5 mm

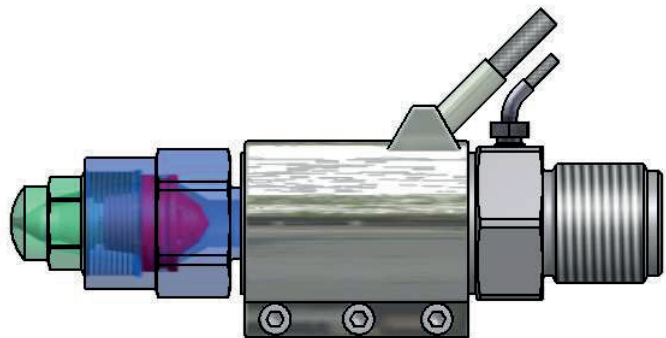
Subject to technical changes

2.2.1 Diving options

For an adaptation to different molds and machines the SES 0 nozzle can also be used as a nozzle tip in combination with an open nozzle body.



Use directly as a nozzle



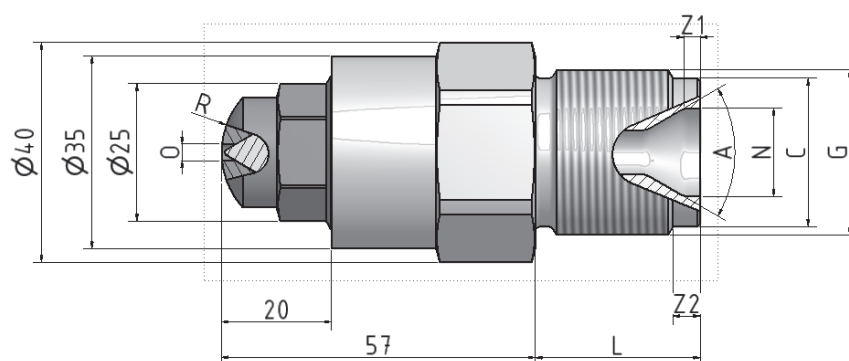
Use as a nozzle tip

3 Information sheet/Order form type SES 0

Company		Contact	
Street		Telephone	
City, ZIP		Fax	
Country		e-mail	

Machine type	
Screw-Ø	
Material to be processed (if known)	

Nozzle adapter with external thread



Dimensions	Key to drawing	
G	Connecting thread on nozzle or cylinder	
L	Thread length incl. length of centering device	
N	Inlet diameter of nozzle or cylinder	
C	Centering diameter of nozzle or cylinder	
Z2	Length of centering device	
R	Tip profile (radius or angle)	
O	Orifice	
A	Angle (if important)	
Z1	Cylindrical length (if important)	

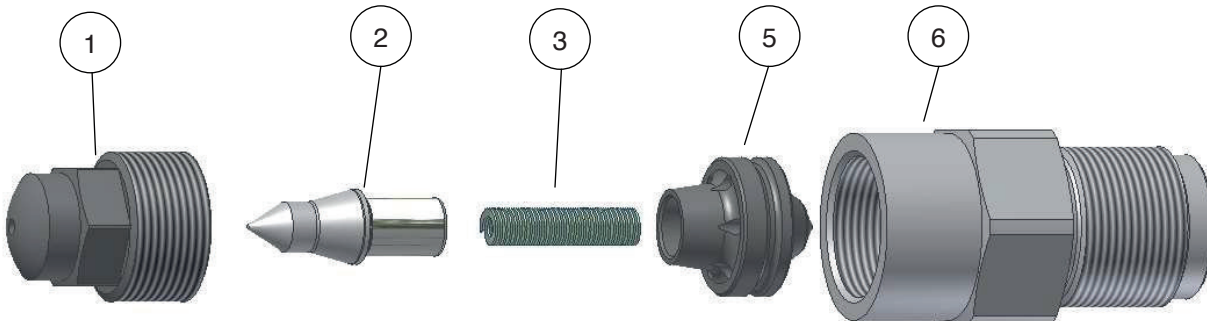
Customer information

We need additional information (e.g. drawing, sample) for requirements that deviate from our standard information sheet. Our customer service shall be pleased to advise you.

Date / Signature

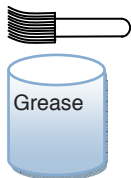
4 Handling

4.1 Parts list

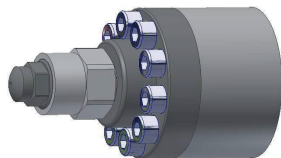


Pos	Description	Wrench
1	Tip	HEX 22
2	Needle	-
3	Spring	-
4	Needle guide	-
5	Body	HEX 36

4.2 Installation instructions



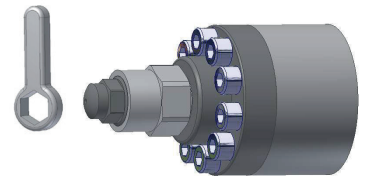
1. Lubricate all threads with high temperature resistant grease



2. Screw nozzle into end cap. **(do not tighten)**



3. Wait until temperature between nozzle and cylinder has equalized



4. Tighten body. Tighten torque in accordance with machine manual
5. Tighten tip 110 Nm

Nozzle is ready for use

Subject to technical changes

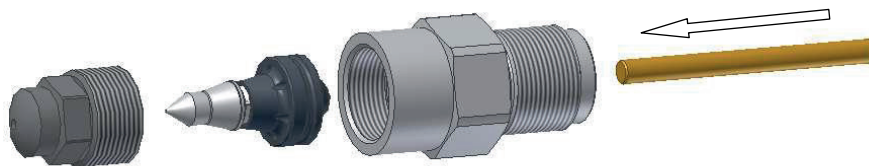
Attention: Move injection unit carefully forward and check the space in the machine plate for the nozzle Assembly.

4.3 Operation

- Heat nozzle up to processing temperature
- Completely melt polymer in the nozzle
- The nozzle is ready for operation when the nozzle temperature complies with the required melt or processing temperature
- First of all purge all molten material until clean material comes out of the nozzle
- When melt is clean, excess grease and other contaminants have been completely removed

4.4 Cleaning instructions

Pre clean the nozzle in hot condition on the machine. Untighten tip and body and unscrew from the machine. Disassemble all parts. Clean single parts.



Attention: Do not damage the sealing edges or sealing surfaces with the wire brush or other objects
Do not heat up the nozzle parts over 450 °C. Do not heat up the spring over 350 °C.

5 Safety instructions

Please read and save



Wear Face Protection



Wear Heat resistant Gloves

- ⇒ Never operate nozzle above maximum operating temperature of 350°C
- ⇒ Maximum injection pressure at maximum operating temperature must not be exceeded
- ⇒ Assembling and cleaning to be done only by trained personnel, in accordance with assembly instructions
- ⇒ Tightening torque must be complied with
- ⇒ Reduce nozzle temperature when machine is stopped

Attention: Some plastics develop gases if they remain for some time in an unused heated nozzle. These can explode through the nozzle outlet hole.

6 Ordering spare parts

You should keep following spare parts in stock to ensure an optimum production run:

- Spring

Ordering spare parts

Company		Contact	
Street		Telephone	
ZIP/City		Fax	
Country		e-mail	


ID-No: Please enter here the number on the body

Quantity	Description (Part designation see parts list in Chapter 4.1)

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 Découvrez nos vidéos explicatives sur notre chaîne Youtube

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