

Thermoject® Nozzles Econ



Mini-series

2022 - C-version - ring gate

The principle of thermos results in short cycle times and high quality gates

The principle is similar to a thermos. There is no contact surface between nozzle case and injection area. This makes a complete thermal partition to the tool possible. The Mini series is suitable for a shot weight from 0.5 to 50 g referring to low viscosity materials. Nozzle length from 36 to 76 mm is standard availability.

Technical Data:

- Electrical connection: 230 Volt
- Thermocouple: Fe-CuNi (type J)
- Cable length: 2000 mm
- Max. injection pressure: 1800 bar

Materials:

- Case: Heat resistant steel coated nozzle body; Acid and rust resistant heat treatable steel
- Gate insert: R5=copper alloy + HCN coated; R3=wear protection coated molybdenum alloy

⚠ Important Notice:

The tool must be grounded! ⚡
If the nozzle is operated outside the tool, the nozzle must be grounded.

Lower production time and production costs

The required tool geometry can be set up easily because no fits can be made in the deep position of the cavity plate.

Stock list:

- 1 O-ring
- 2 Nozzle body
- 3 Case
- 4 Alignment dowel Ø3m6x8
- 5 Anti rotation dowel Ø6m6x8
- 6 Heater with integrated thermocouple
- 7 Gate insert
- 8 Nozzle head
- 9 Single nozzle support
- 10 Heater with clamping belt and integrated thermocouple

Ring gate types:

Recommended for:

- R5=plastics without strengthening material
- R3=plastics with reinforcing fillers and corrosive additives

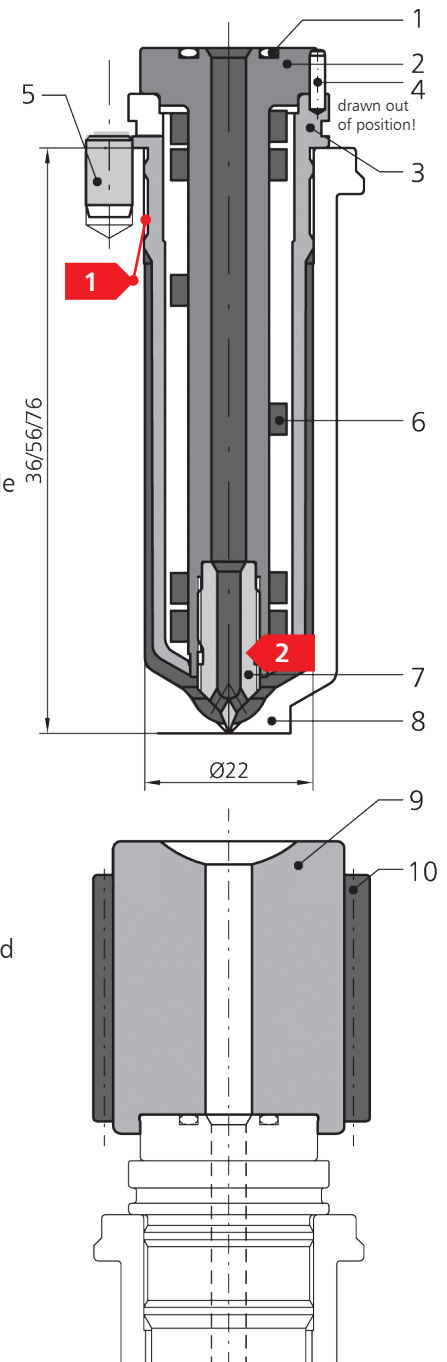
Please note our application guidelines. Our design department is available for you.

⚠ Connecting Leads:

Connecting leads of the nozzles are heat resistant max. up to 200°C and may not have direct contact to the beam of the manifold.

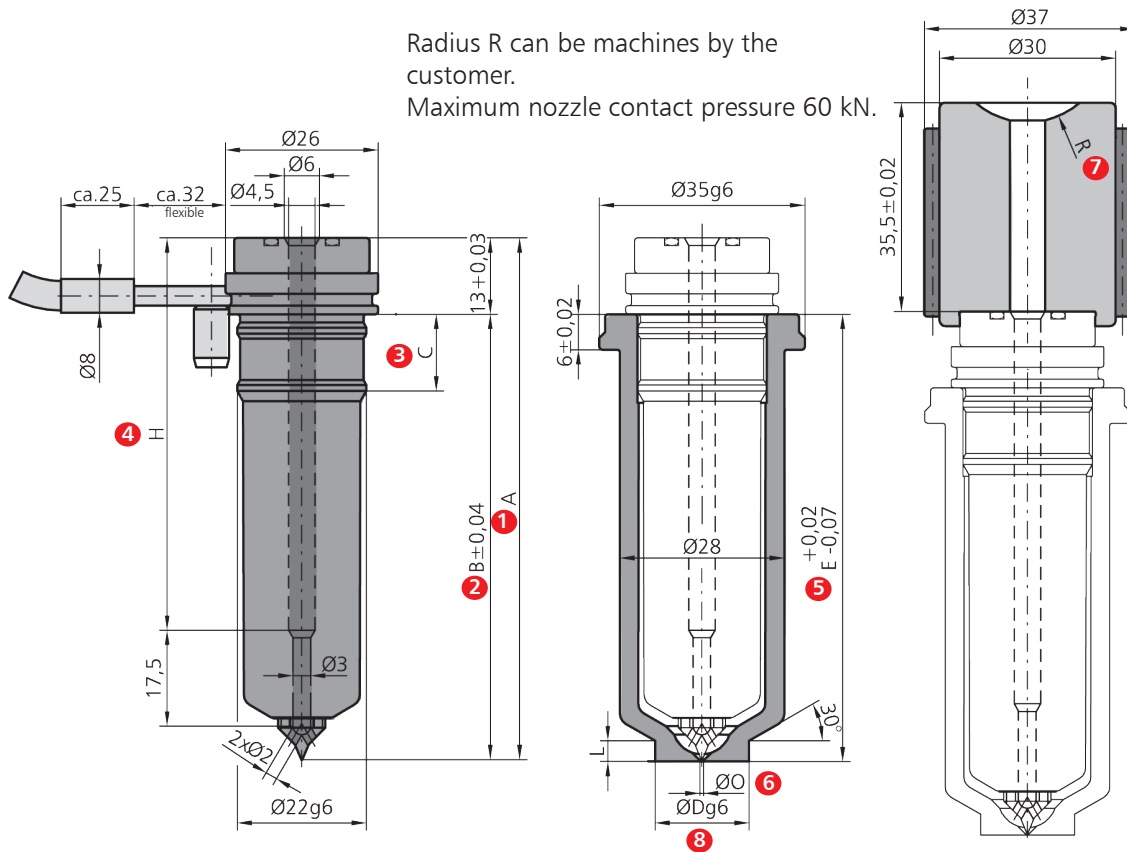
Processing of various plastics

A homogeneous temperature profile will be realized with the principle of thermal partition in combination of thermal insulated and heat conducting materials.



Nozzles dimensions

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Linear expansion of the nozzle is already considered in dimension B for ΔT of 220°C.

Order description nozzle	Article no.	1 A	2 B ^{-0,1}	3 C	4 H	Order description nozzle head	Article no.	5 E ^{+0,02 -0,07}	6 Ø O standard	Order description single nozzle support (pos. 9)	7 Article no. R=0
2022/036/R5/C	297301	48.80	35.80	13	26.80	OKS 2022/036/R	290310	36	0.8	EA 2022-B	297410
2022/036/R3/C	297302	48.80	35.80	13	26.80	OKS 2022/036/R	290310	36	0.8	EA 2022-B	297410
2022/056/R5/C	297305	68.75	55.75	13	46.75	OKS 2022/056/R	290311	56	0.8	EA 2022-B	297410
2022/056/R3/C	297306	68.75	55.75	13	46.75	OKS 2022/056/R	290311	56	0.8	EA 2022-B	297410
2022/076/R5/C	297309	88.70	75.70	13	66.70	OKS 2022/076/R	290312	76	0.8	EA 2022-B	297410
2022/076/R3/C	297310	88.70	75.70	13	66.70	OKS 2022/076/R	290312	76	0.8	EA 2022-B	297410

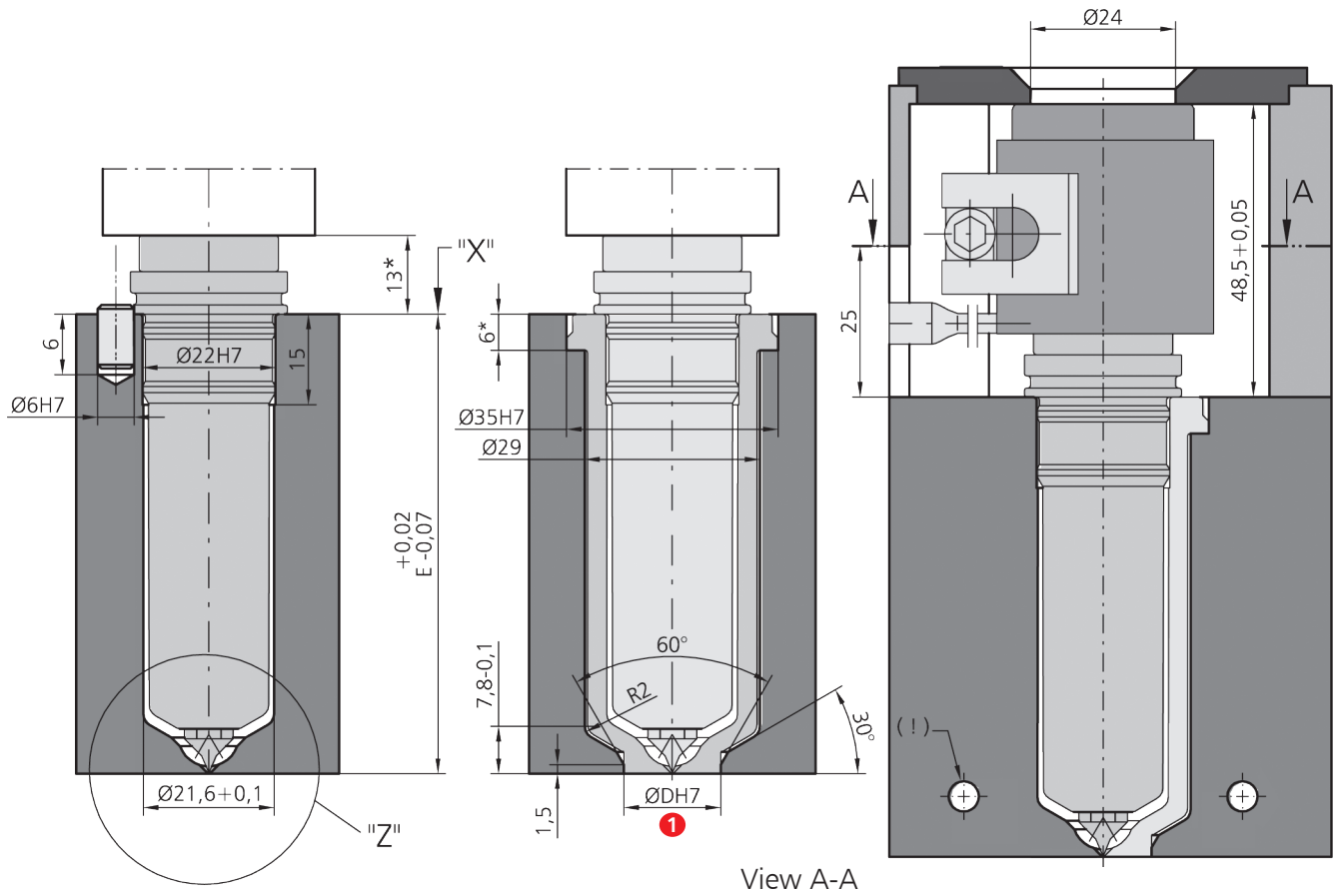
Series	8 Nozzle head			
	Ø Dg6/L Stand.	Ø Dg6/L min.	Ø Dg6/L max.	Ø O Stand.
2022-C	16,0 / 3,5	12,0 / 2,3	18,0 / 4,3	0,8

7
Standard radius R 19.5 = 297410-195
radius R 15.5 = 297410-155
radius R 40.0 = 297410-400

- Selection for gate types R5, R3, see page 1.

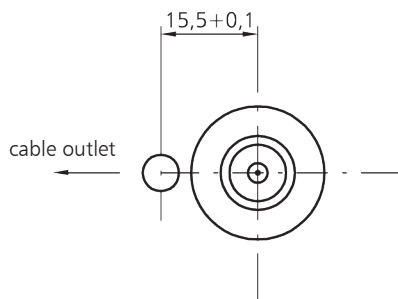
Measurement details: General tolerances DIN ISO 2768 mK.

Installation dimensions
Mini 2022 - C-version - ring gate

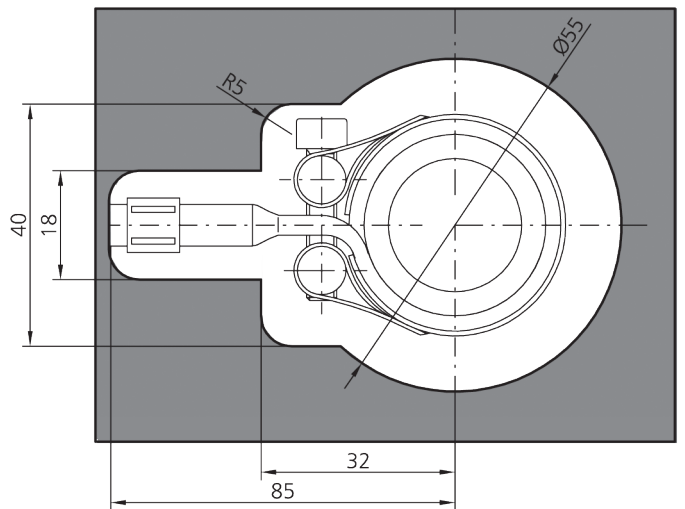
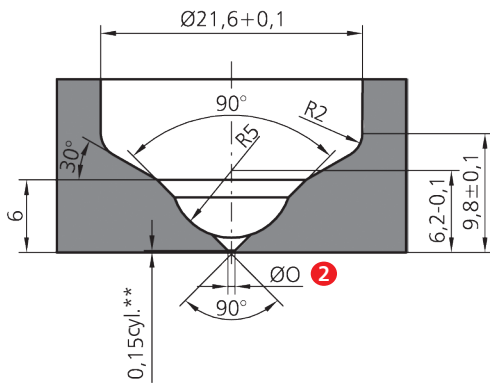


View "X" (without nozzle)

View A-A



View "Z"



Note nozzle head:

- The front face of the nozzle head must be completely in the melt.
- Where the gate is on a sub runner, a thin disc should be molded immediately in front of the nozzle head.
- OKS can only be used without anti rotation dowel (pos.5).

Bau-reihe	Ø D ^{H7} Stand.	Ø D ^{H7} min./max.	Ø O min.-max.
2022-C	16	12,0/18,0	0,6-2,0

* Height adjustment of the complete system acc. data sheet

"Standardized hot runner manifolds".

** For little tear-off height the size 0.15 can be reduced to 0.05 mm or even to 0 mm (sharp edged)!

Please consider higher abrasion.

Spare parts

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Series	Heater with integr. thermocouple (230V), leads 2000, pos.6	Article no.	O-ring, pos.1	Article no.	Heater with clamping belt and integrated thermocouple (230V), leads 1500, pos.10	Article no.	¹ Service toolkit	Article no.	Disassembling appliance	Article no.
2022/036/C	Ø 10.5x30 / 180W	320370	Nr.500	260150	Ø 30x32 / 500W	320730	2022	290472	2022	290477
2022/056/C	Ø 10.5x50 / 180W	320371	Nr.500	260150	Ø 30x32 / 500W	320730	2022	290472	2022	290477
2022/076/C	Ø 10.5x70 / 200W	320372	Nr.500	260150	Ø 30x32 / 500W	320730	2022	290472	2022	290477

Gate insert, pos.7	Article no.
A-22-R5	290520
A-22-R3	290523

¹ Service toolkit is supported by assembling / disassembling set.

Construction note:

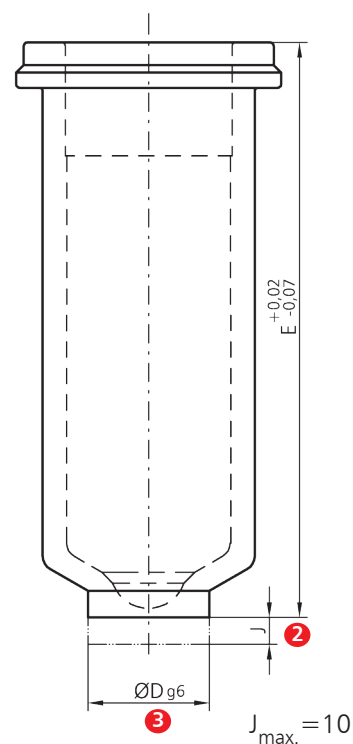
- Cooling must be provided close to the gate, with circulating water. On the moving side of the mold a fountain type cooling, opposite to the gate should be used. Our technical team will assist you by designing the gate diameter (ØO) in the tool.

Order example:

Nozzle:				
2022	056	R5	C	Article no.
Series	Mold dimension E	Gate insert	Nozzle version	297305

Nozzle head:			
OKS 2022	056	R	Article no.
Series	Mold dimension E	Gate insert version	290311

Nozzle head with special measures (on request):					
OKS 2022	056	R	Ø O=2,0	J=10,0	Ø D _{g6} =12



For the correct geometry of the "J" dimension please forward a sketch.