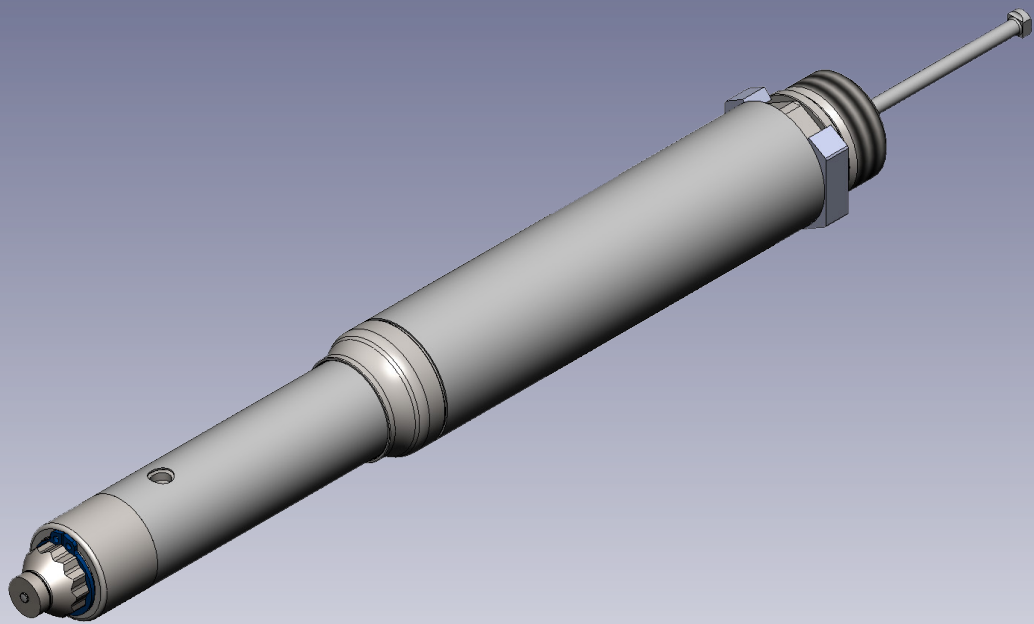


09EX12-03 Product Catalog

Threaded Nozzles Hot Runner Series



Doc009227_RIS.png

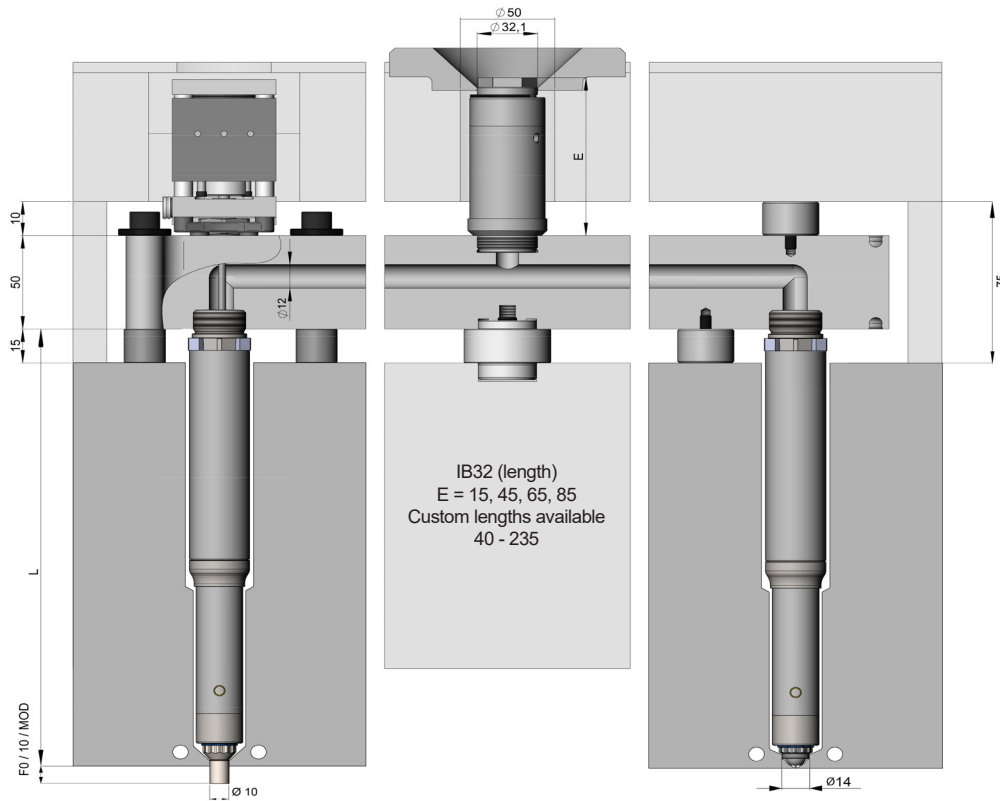
Stabilize your Process _____





Hot Runner System - Bolt Down / Thrust Pad Manifold

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

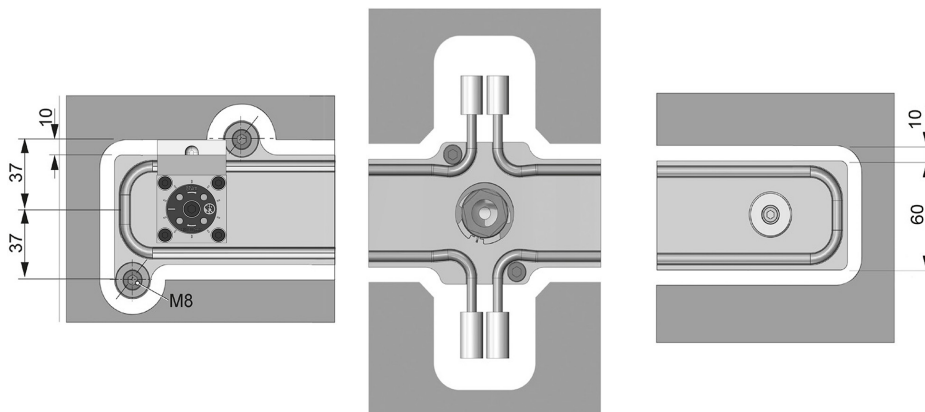


Doc009228_RIS.png

Bolt down selection

Inlet bushing

Thrust pad selection

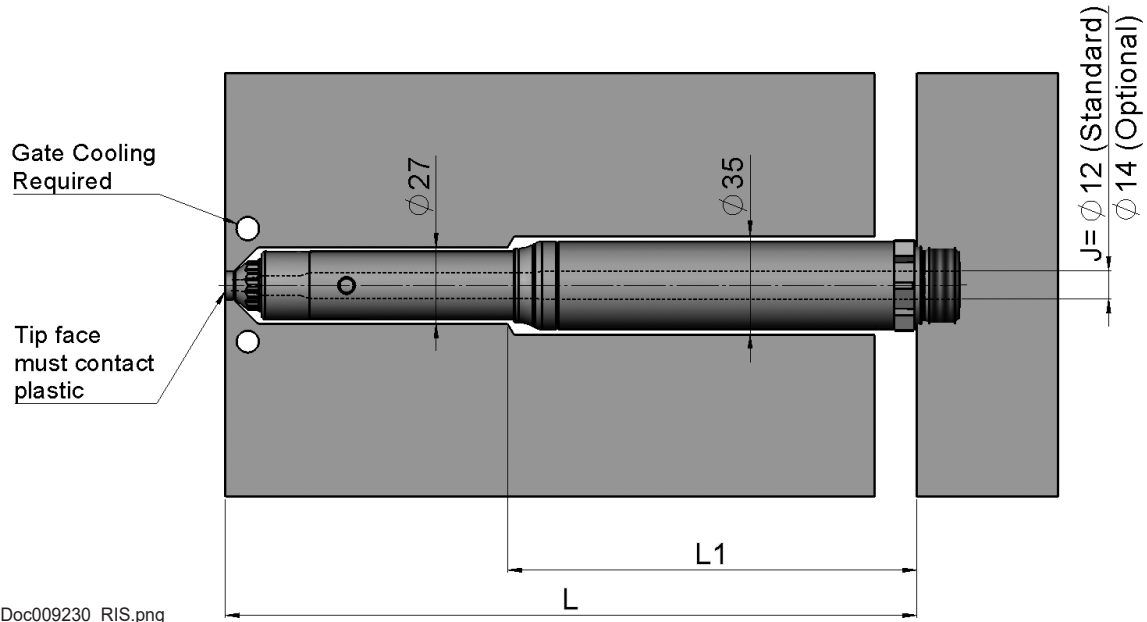


Doc009233_RIS.png



Nozzle Lengths

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.



Doc009230_RIS.png

L (mm)	L1	Heater zone power ¹⁾ (Watt)		
		Power 1	Power 2	Power (Total)
245-269.99	L-100	230 W	265 W	495 W
270-294.99	L-100	230 W	305 W	535 W
295-319.99	L-100	230 W	345 W	575 W
320-344.99	L-100	230 W	385 W	615 W
345-369.99	L-100	230 W	425 W	655 W
370-394.99	L-100	230 W	465 W	695 W
395-419.99	L-100	230 W	505 W	735 W
420-430	L-100	230 W	545 W	775 W

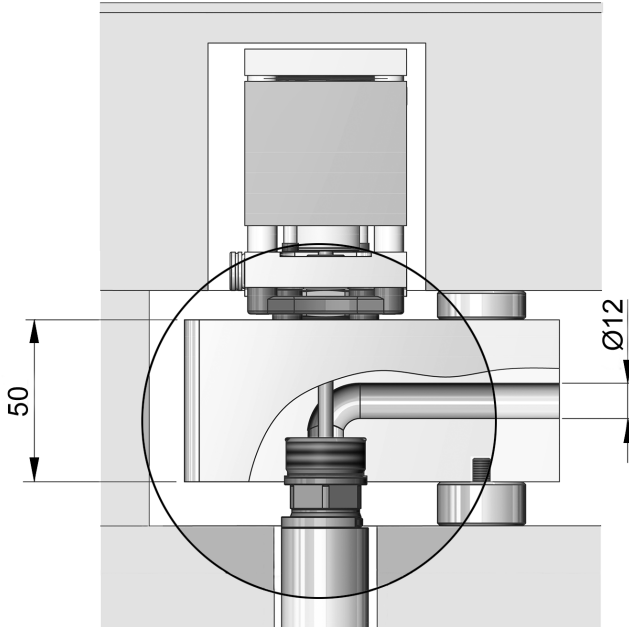
1) The numbering of the heating zones starts at the nozzle tip and ends at the nozzle head



Optional Features

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

Smooth Flow



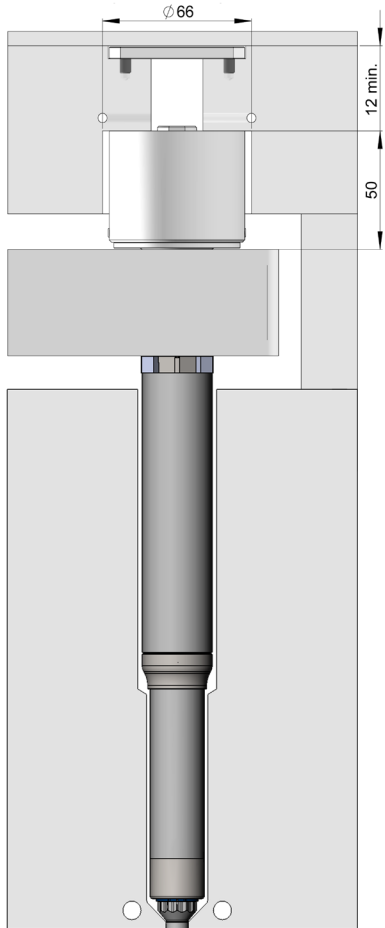
Doc009231_RIS.png



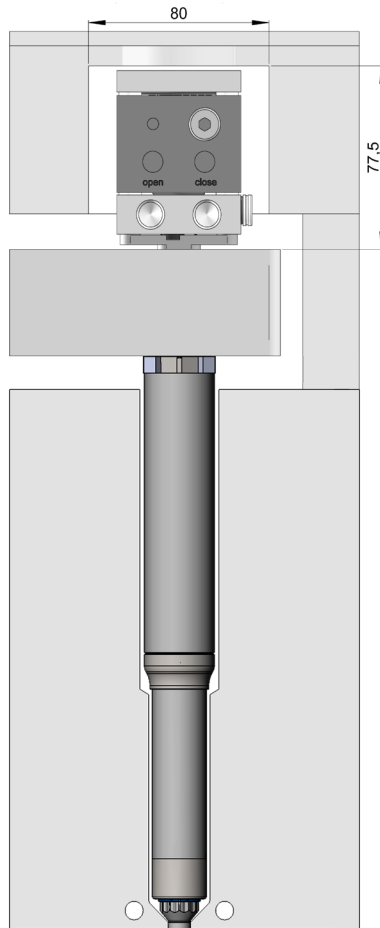
Available Actuators

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

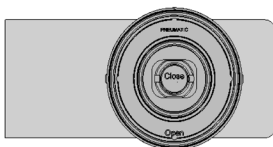
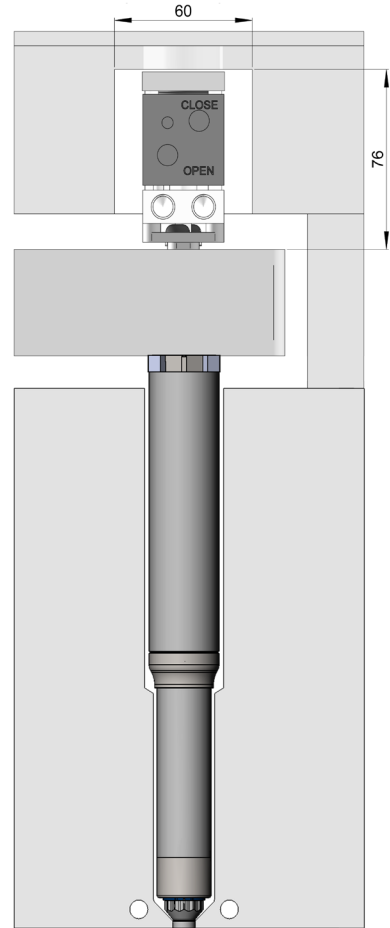
**PNC4508B
(pneumatic)**



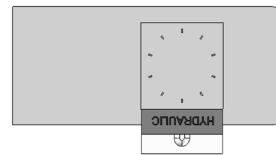
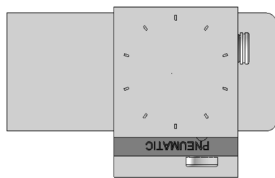
**PB4008
(pneumatic)**



**HB2508
(hydraulic)**



Doc009232_RIS.png



Pressure range:
6 - 12 bar (87 - 174 psi)
Min/Max Close Forces:
954 N / 1908 N

Pressure range:
6 - 12 bar (87 - 174 psi)
Min/Max Close Forces:
754 N / 1508 N

Available features:

- ◆ Position Sensor
- ◆ SynCool®

Pressure range:
40 - 60 bar (600 - 870 psi)
Min/Max Close Forces:
1963 N / 2945 N

Available features:

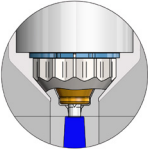
- ◆ Position Sensor
- ◆ SynCool®



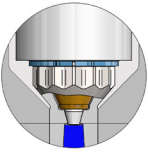
Nozzle Tip Styles

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
H = Gate orifice diameter, F = Tip extension, Dt = Tip Diameter, Mod = Modifiable

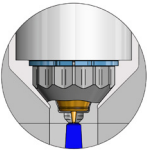
VSP Valve Gate - Straight Pin - Plunged Through

Tip Style	Description	Dt = Ø10 F10, 0, Mod H=2.5		
 Doc009110_RIS.png	VSP Standard			✓

VTP Valve Gate - Tapered Pin - Plunged Through

Tip Style	Description	Dt = Ø10 F10, 0, Mod H=2.5		
 Doc009111_RIS.png	VTP Standard			✓

TTP Thermal Gate – Torpedo - Plunged Through

Tip Style	Description	Dt = Ø10 F10, 0, Mod		
		H=1.5	H=2.0	H=2.5
 Doc009109_RIS.png	TTP Standard	✓	✓	✓

✓ Preferred

(✓) Available

✗ Not Available



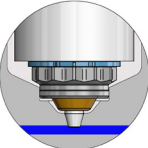
Nozzle Tip Styles

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
H = Gate orifice diameter, F = Tip extension, Dt = Tip Diameter, Mod = Modifiable

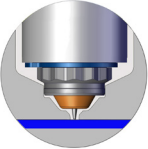
VSW Valve Gate - Straight Pin - Blind

Tip Style	Description	Dt = Ø14			
		H=1.5	H=2.0	H=2.5	H=3.0
 VSW Doc009112_RIS.png	Standard	✓	✓	✓	✓

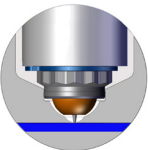
VTW Valve Gate - Tapered Pin - Blind

Tip Style	Description	Dt = Ø14		
		H=1.5	H=2.0	H=2.5
 VTW Doc009113_RIS.png	Standard	✓	✓	✓

TTW Thermal Gate – Torpedo - Blind

Tip Style	Description	Dt = Ø14			
		H=1.2	H=1.6	H=2.0	H=2.5
 TTW Doc009114_RIS.png	Standard	✓	✓	✓	✓

TTW-C Thermal Gate – Torpedo - Blind

Tip Style	Description	Dt = Ø14			
		H=1.2	H=1.6	H=2.0	H=2.5
 TTW-C Doc009115_RIS.png	Standard	✓	✓	✓	✓

✓ Preferred

(✓) Available

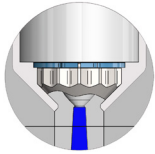
✗ Not Available



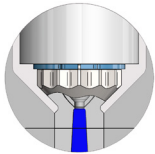
Nozzle Tip Styles

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
 H = Gate orifice diameter, F = Tip extension, Dt = Tip Diameter, Mod = Modifiable

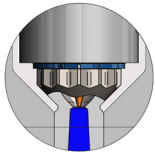
TPK Thermal Gate – Full Flow - Plunged Through

Tip Style		Description	Dt = Ø10 F = 10	
			H=2.0	H=2.5
	TPK Doc009119_RIS.png	Standard	✓	✓

TNK Thermal Gate – Full Flow - Plunged Through

Tip Style		Description	Dt = Ø10 F = 10	
			H=2.0	H=2.5
	TNK Doc009120_RIS.png	Standard Cold Runner	✓	✓

TTK Thermal Gate – Torpedo - Plunged Through

Tip Style		Description	Dt = Ø10 F = 10	
			H=2.0	H=2.5
	TTK Doc009121_RIS.png	Standard Cold Runner	✓	✓

✓ Preferred

(✓) Available

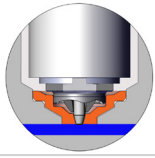
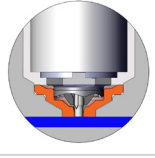
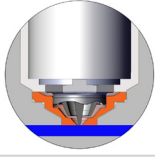
✗ Not Available



Wear Inserts / Cooling Bushings

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
H = Gate orifice diameter, F = Tip extension, Dt = Tip Diameter, Mod = Modifiable

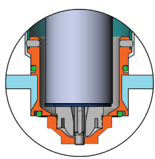
Wear Inserts

Part	Description	F = 0, 10, Mod					
		H=1.2	H=1.5	H=1.6	H=2.0	H=2.5	H=3.0
 WI-VTW <small>Doc009122_RIS.png</small>	Wear Insert for VTW Nozzle tips	✗	✓	✗	✓	✓	✗
 WI-VSW <small>Doc009123_RIS.png</small>	Wear Insert for VSW Nozzle tips	✗	✓	✗	✓	✓	✓
 WI-TTW <small>Doc009124_RIS.png</small>	Wear Insert for TTW Nozzle tips	✓	✗	✓	✓	✓	✗

Cooling Bushings

Part	TTW	VSW	VTW	TTP	VSP	VTP	TPK	TNK	TTK
 NC <small>Doc009125_RIS.png</small>	✓	✓	✓	✓	✓	✓	✓	✓	✓
 Nozzle Cooling Bushing for Nozzle Tips, Blind and Plunged Through <small>Doc009126_RIS.png</small>									

Wear Insert and Cooling Bushing

Part	TTW	VSW	VTW
 NC + WI Wear Insert combined with Nozzle Cooling Bushing for Nozzle Tip Blind <small>Doc009127_RIS.png</small>	✓	✓	✓

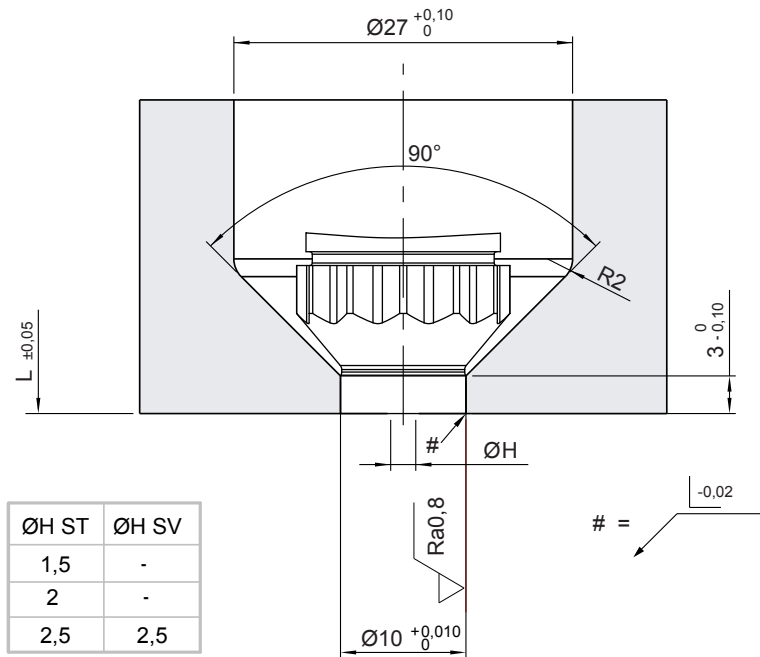
✓ Preferred
 (✓) Available
 ✗ Not Available



Nozzle Tip Cutout Dimensions

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
Dimensions for reference only. Reference system drawing for complete dimensions prior to machining gate detail in mold.

TTP, VSP, VTP Nozzle tip cutout dimensions



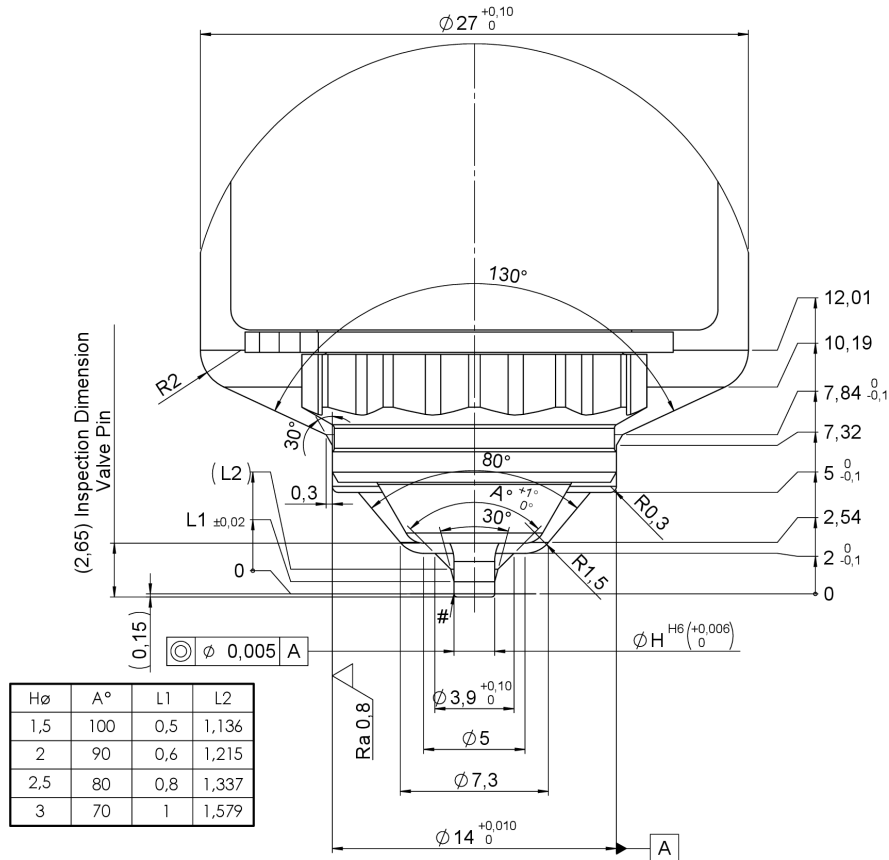
Doc003860.ai



Nozzle Tip Cutout Dimensions

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
Dimensions for reference only. Reference system drawing for complete dimensions prior to machining gate detail in mold.

VSW - Nozzle tip cutout dimensions



Notes:

- Cooling required around the nozzle tip, opposite to the nozzle tip
- The front of the nozzle tip must always be against plastic.

Doc009205_RIS_en.png

General tolerances according to DIN ISO 2768-mK

At the area of the nozzle gate replaceable, hardened (52 +2/-1 HRC) inserts are recommended by Synventive.

Radius / chamfer at the front of the valve pin shall not be removed.

Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of $\sqrt{Ra 0,8}$.

To avoid a deformation at the gate the space to move freely has to be checked at hot condition.

For angled surface the valve pin may not be adjusted toward cavity.

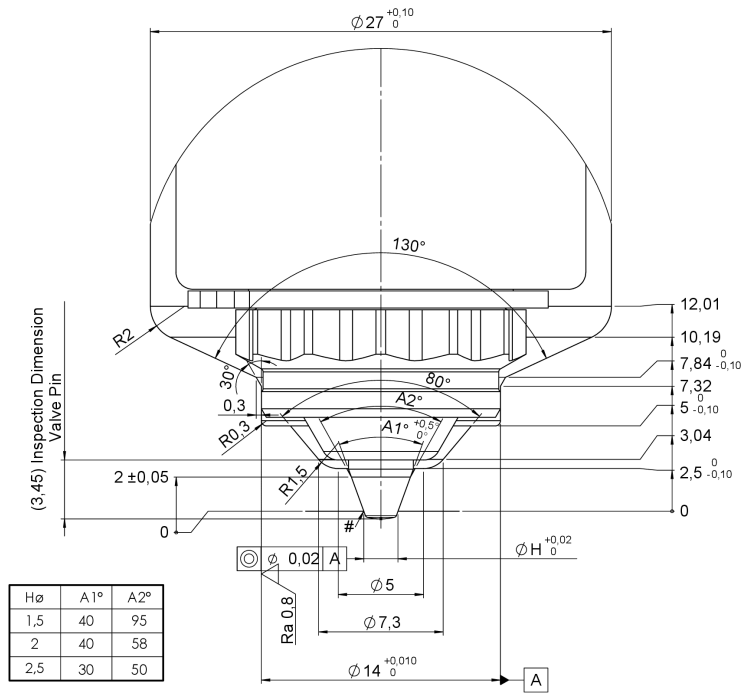
Ensure 0.5 mm sealing surface is maintained.



Nozzle Tip Cutout Dimensions

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm. Dimensions for reference only. Reference system drawing for complete dimensions prior to machining gate detail in mold.

VTW - Nozzle tip cutout dimensions



Notes:

- Cooling required around the nozzle tip, opposite to the nozzle tip
- The front of the nozzle tip must always be against plastic.

Doc009207_RIS_en.png

General tolerances according to DIN ISO 2768-mK

At the area of the nozzle gate replaceable, hardened (52 +2/-1 HRC) inserts are recommended by Synventive.

Radius / chamfer at the front of the valve pin shall not be removed.

Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of $\sqrt{Ra 0,8}$.

To avoid a deformation at the gate the space to move freely has to be checked at hot condition.

For angled surface the valve pin may not be adjusted toward cavity.

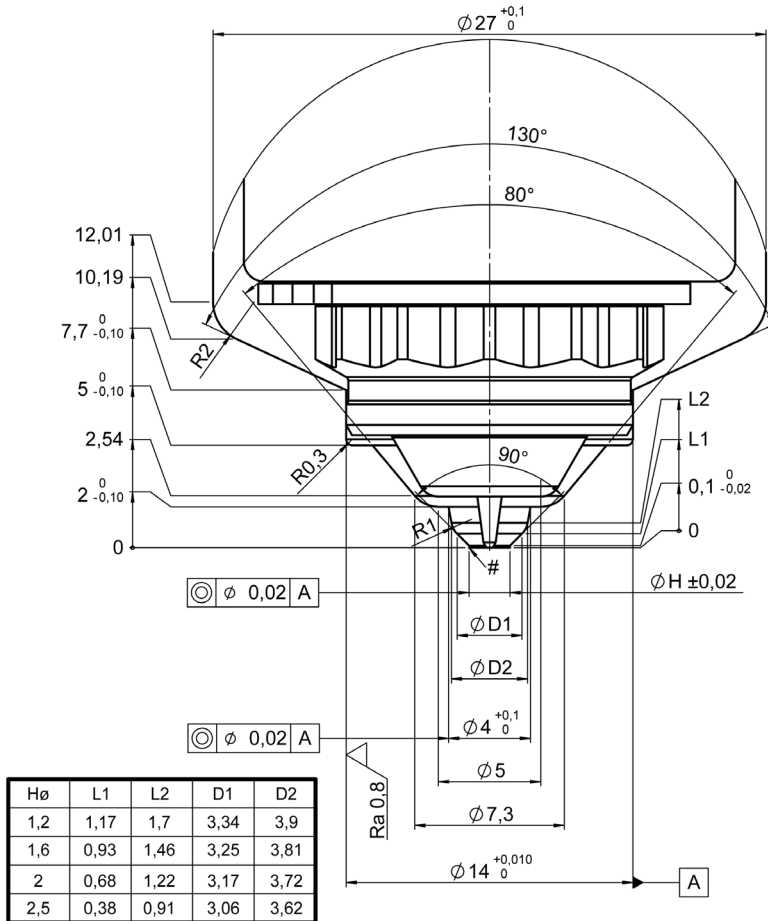
Ensure 0.5 mm sealing surface is maintained.



Nozzle Tip Cutout Dimensions

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm. Dimensions for reference only. Reference system drawing for complete dimensions prior to machining gate detail in mold.

TTW - Nozzle tip cutout dimensions



Doc009206_RIS_en.png

Notes:

- Cooling required around the nozzle tip, opposite to the nozzle tip
- The front of the nozzle tip must always be against plastic.

General tolerances according to DIN ISO 2768-mK

At the area of the nozzle gate replaceable, hardened (52 +2/-1 HRC) inserts are recommended by Synventive.

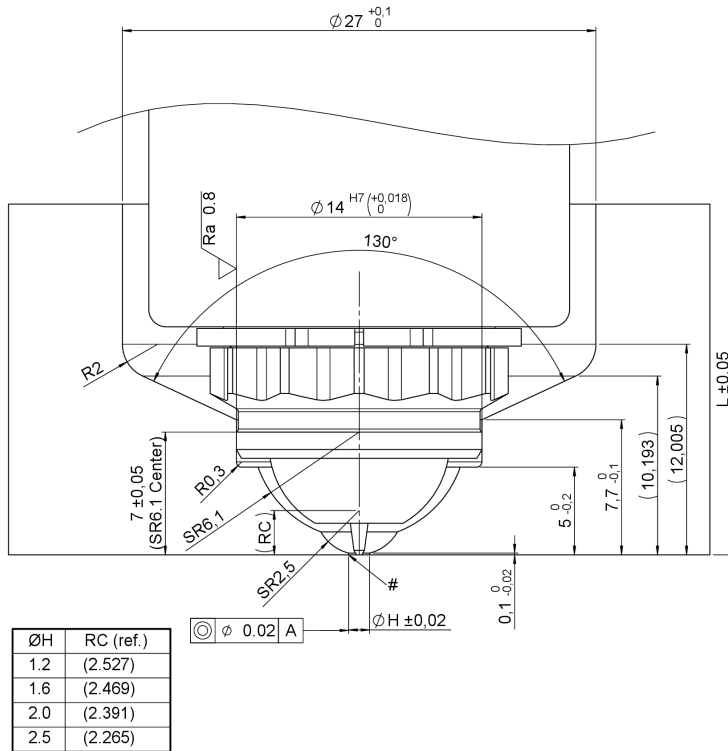
Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of $\sqrt{Ra 0,8}$.



Nozzle Tip Cutout Dimensions

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm. Dimensions for reference only. Reference system drawing for complete dimensions prior to machining gate detail in mold.

TTW-C - Nozzle tip cutout dimensions



Notes:

- Cooling required around the nozzle tip, opposite to the nozzle tip
- The front of the nozzle tip must always be against plastic.

Doc009209_RIS_en.png

General tolerances according to DIN ISO 2768-mK

At the area of the nozzle gate replaceable, hardened ($52 \pm 2/-1$ HRC) inserts are recommended by Synventive.

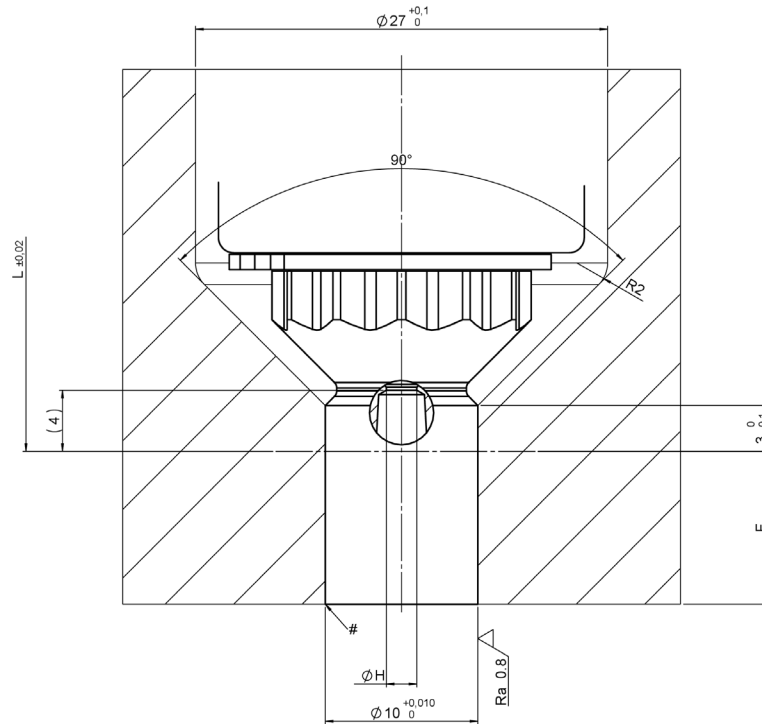
Synventive recommends that the gate area geometry is manufactured by grinding and not EDM with a surface quality of $\sqrt{Ra 0.8}$.



Nozzle Tip Cutout Dimensions

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
Dimensions for reference only. Reference system drawing for complete dimensions prior to machining gate detail in mold.

TPK, TNK, TTK Series - Nozzle tip cutout dimensions



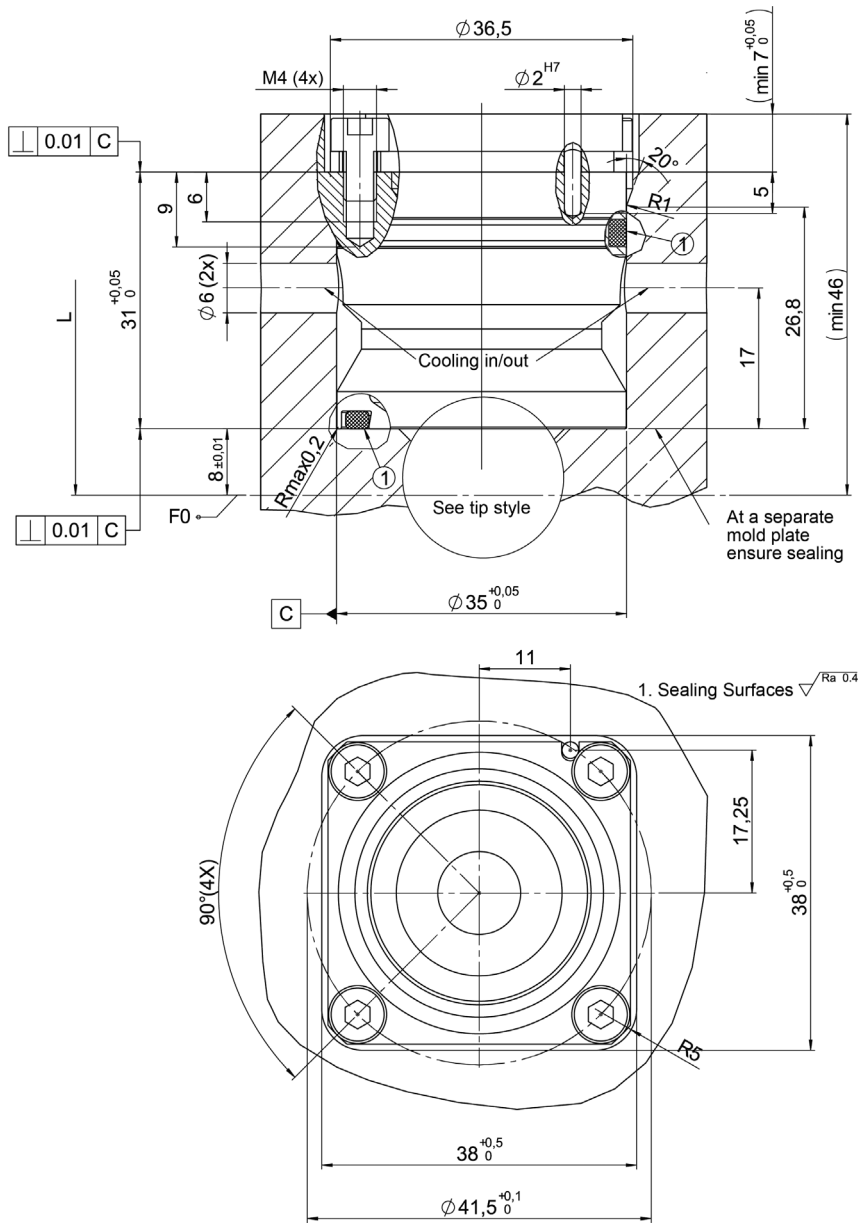
Doc009208_RIS_en.png



Cooling Bushing Cutout Dimensions

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm. Dimensions for reference only. Reference system drawing for complete dimensions prior to machining gate detail in mold.

Cooling Bushing Cutout Dimensions



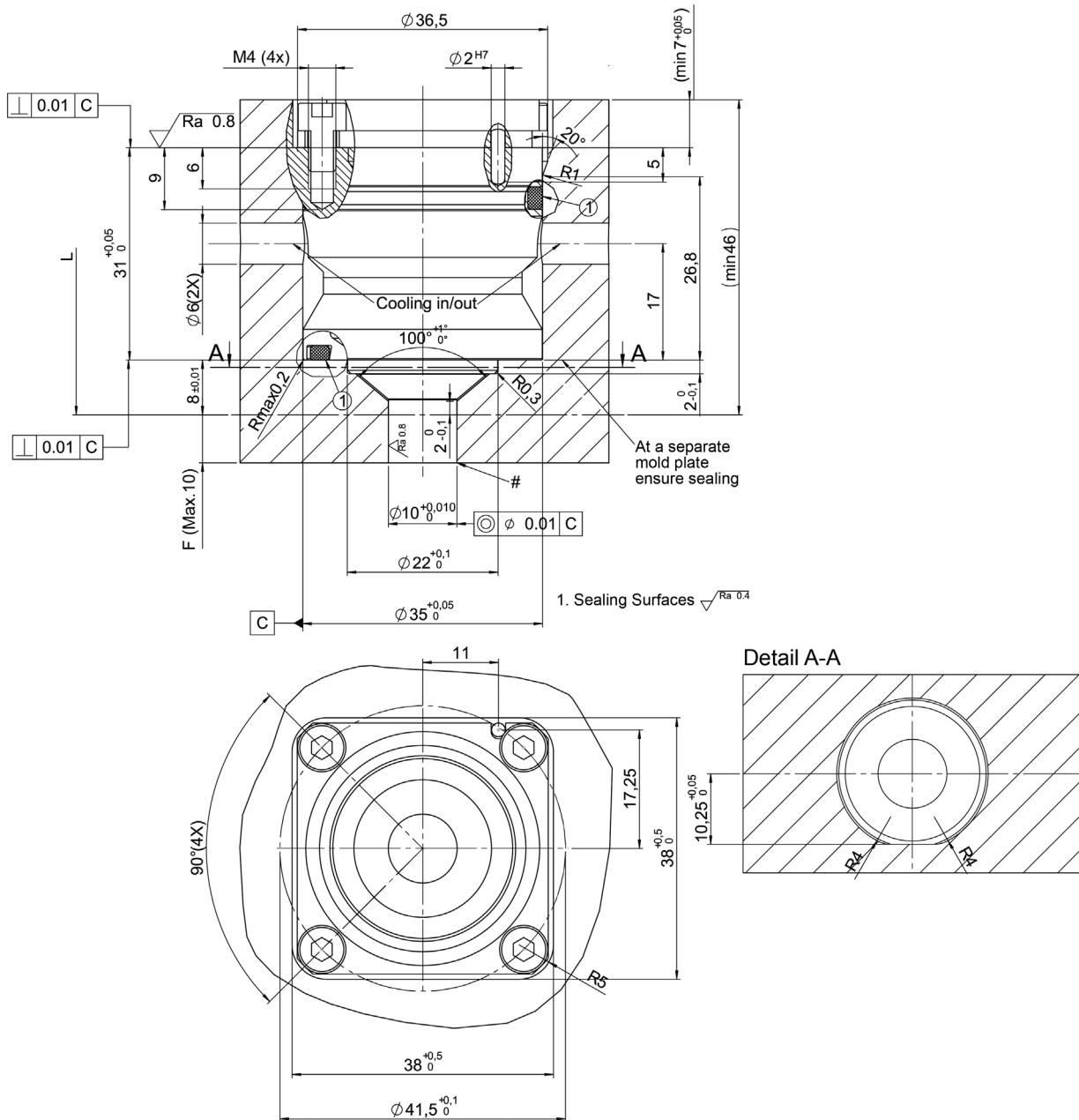
Doc007724.png



Cooling Bushing with Wear Insert Cutout Dimensions

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm. Dimensions for reference only. Reference system drawing for complete dimensions prior to machining gate detail in mold.

VSW, VTW, TTW - Cooling Bushing with Wear Insert Cutout Dimensions



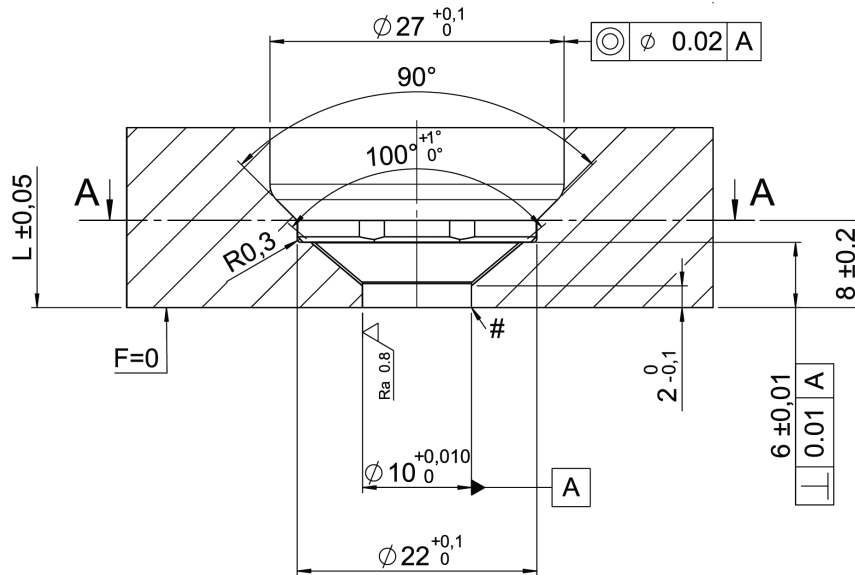
Doc007723.png



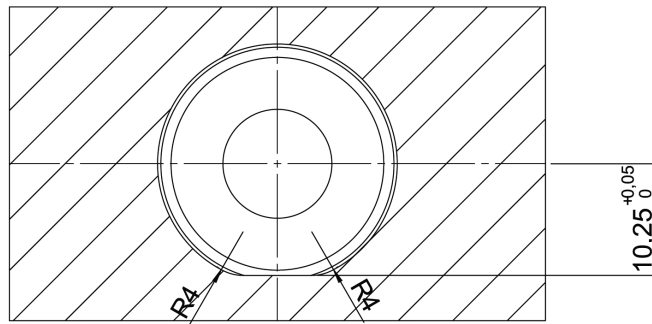
Wear Insert Cutout Dimensions

Illustrations simplified, schematically drawn and not to scale. All dimensions in mm. Dimensions for reference only. Reference system drawing for complete dimensions prior to machining gate detail in mold.

VSW, VTW, TTW - Wear Insert cutout dimensions



Detail A-A



Doc007725.png



Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

The Americas

Synventive Molding Solutions Inc.
10 Centennial Drive
Peabody, MA 01960
Tel.: +1 978 750 8065
Fax: +1 978 646 3600
Email: info@synventive.com

Europe

Synventive Molding Solutions GmbH
Heimrodstraße 10
P. O. Box 3123
64625 Bensheim
Tel. :+49 (0)6251 9332-0
Fax :+49 (0)6251 9332-90
Email: infohrde@synventive.com

Asia

Synventive Molding Solutions (Suzhou) Co. Ltd.
12B Gang Tian Industrial Square
Suzhou Industrial Park, China 215021
Tel.: +86 512 6283 8870
Fax: +86 512 6283 8890
Email: infohrcn@synventive.com

