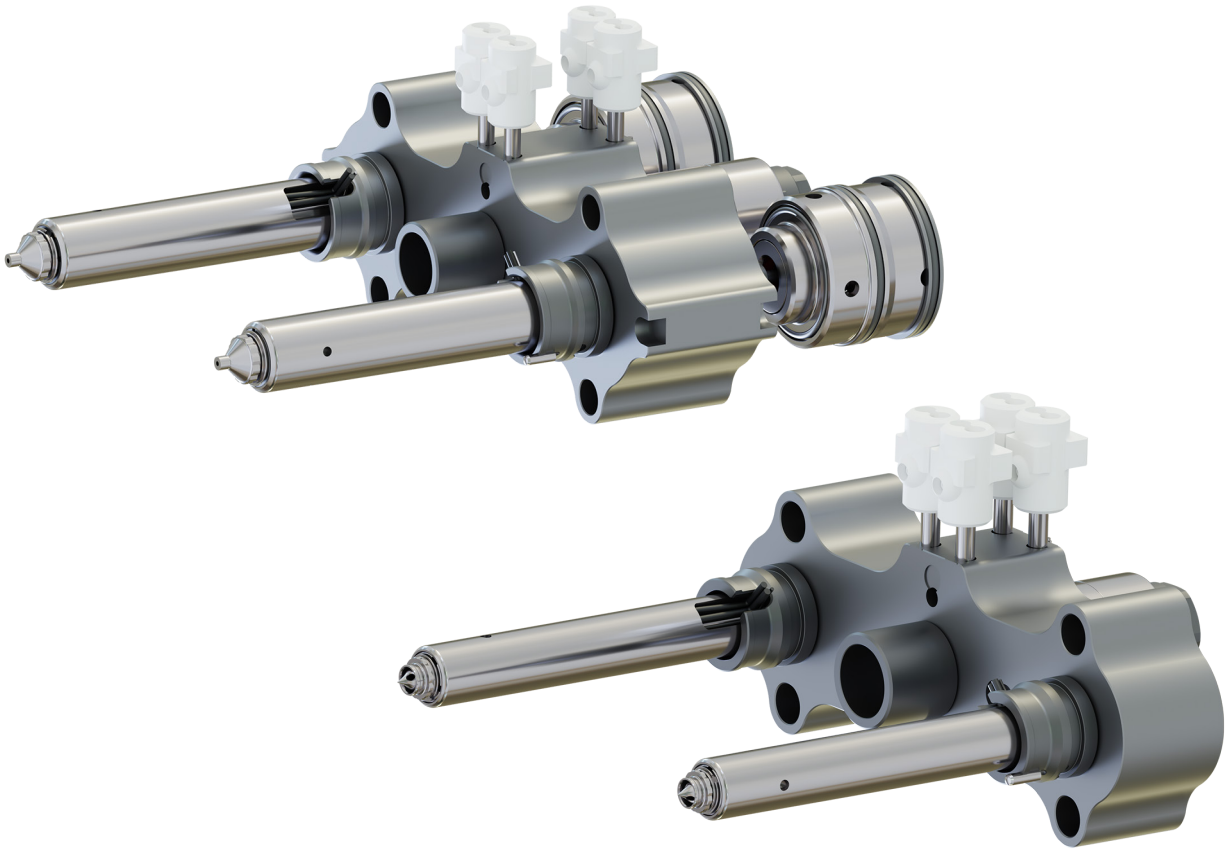
BARNES™
MOLDING SOLUTIONS

HOT RUNNER TECHNOLOGY

M08
Performance Line
Product Catalog



männer

MPN08_000005_EN_Rev02 / 2026-02

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Hot Runner Technology

This catalog gives an overview of the latest product, including descriptions, dimensions and technical data.
The text next to the graphics gives additional instructions on the use of the product.
If available, options are explained with pictures and text.
All available accessories for this product are specified. Where necessary, a separate chapter gives the information and important technical data.

General Description of the Nozzle

Hot runner nozzles are the connection to the cavity. They either gate directly into the part or into a sub runner which will feed into the cavity.

General Description of MPN-08

MPN-08 series nozzles have an enlarged flow bore to optimize injection and reduce pressure lose.
The nozzles have a patented heating system and are made of special steel. Different lengths are available.
The nozzles are suitable for the most commonly used polymers.
MPN-08 series nozzles are the ideal combination with Bolt Down Manifolds.

Target Group

The target groups of this product catalog are mold designers, toolmakers, molders and service technicians.
They will find the needed information in the relevant chapters.

Applied Standards and Norms

- DIN EN IEC/IEEE 82079-1 Edition 2 Creation of usage information for products
- Standard and norms for Technical drawings

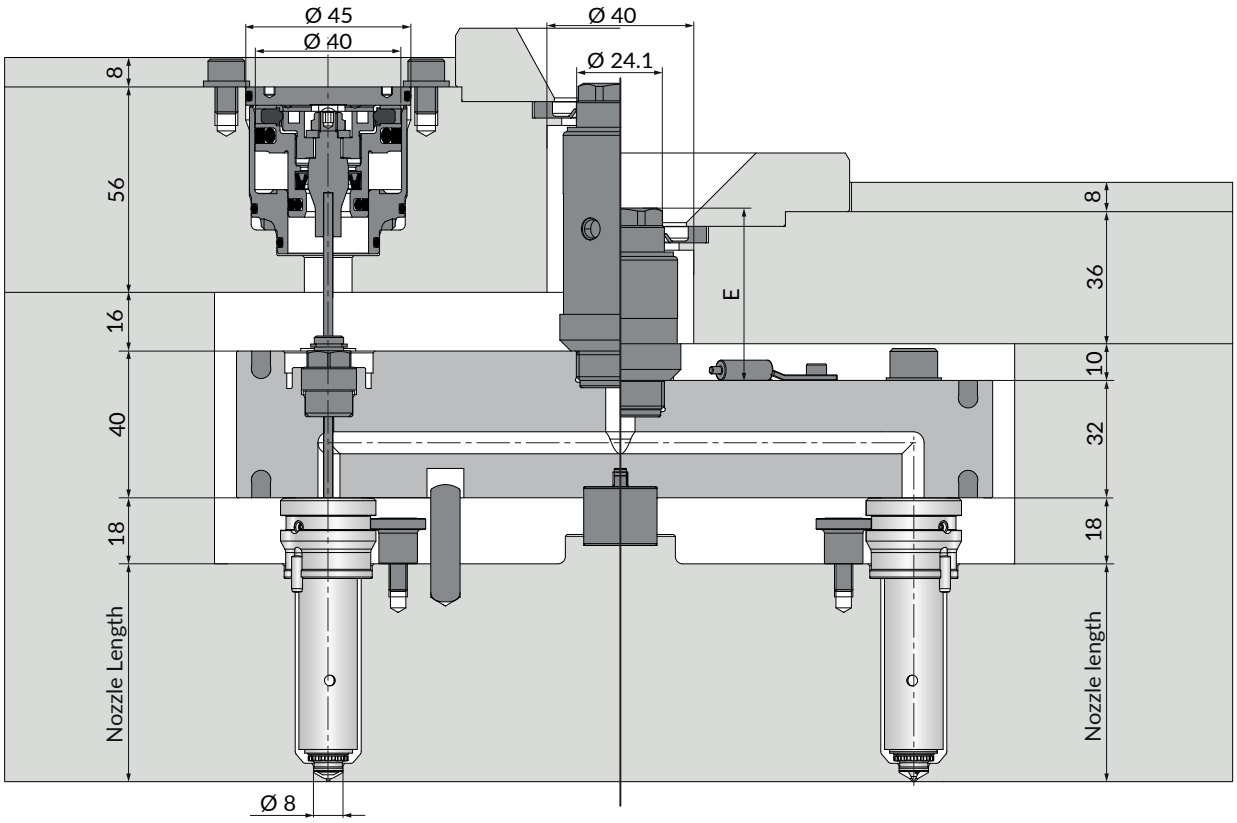
Tolerances and Customer Graphics

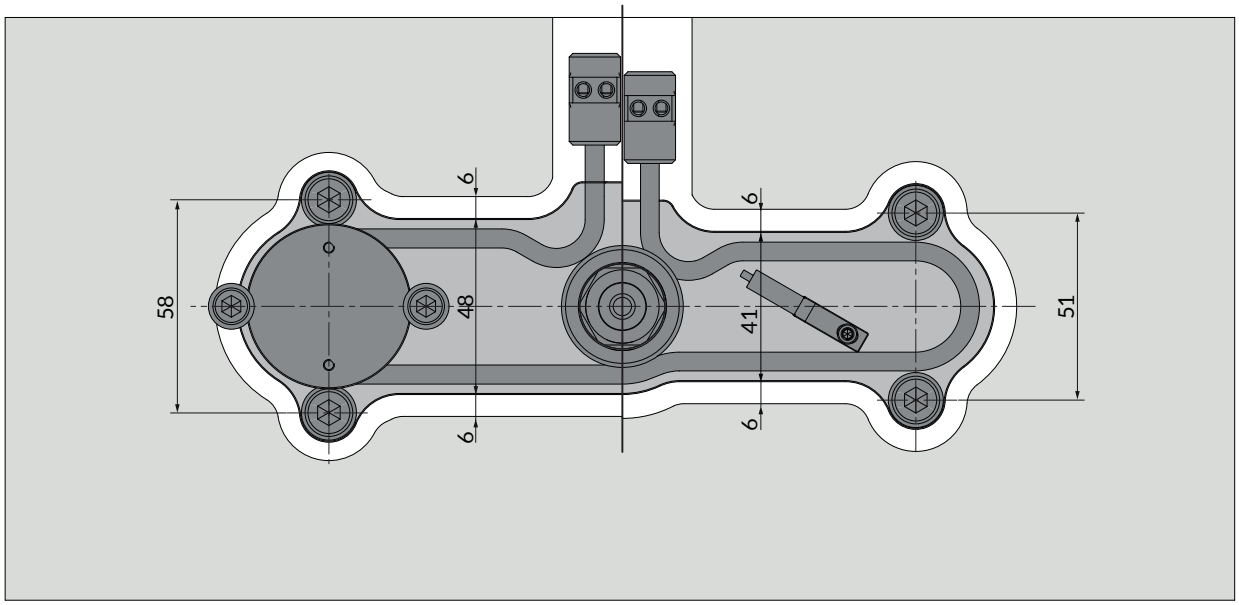
The product catalog gives a general information about the product. For tolerances and other details, use the customer drawings. There you find the detailed information.

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

Bolt Down Manifold

The following picture shows the standard design, components and dimensions.
Pin adjustment ± 0.75 with step ± 0.05.
On the left side you can find the valve gate manifold. On the right side you see the open gate one.





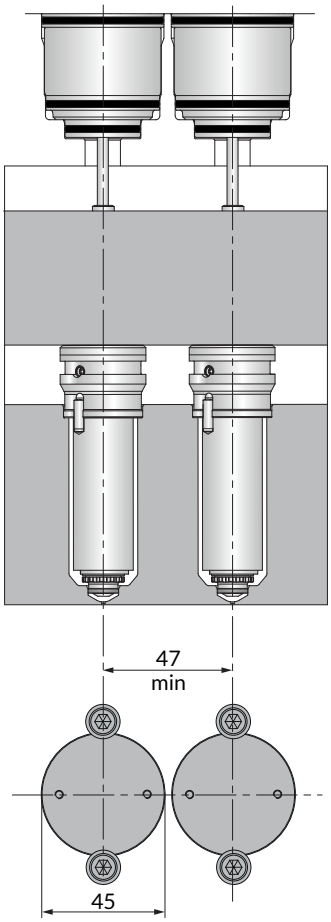
E (length)
E = 45, 65, 85

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

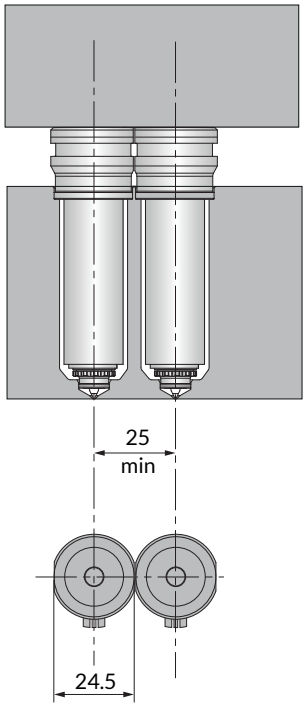
Minimum Distance between Nozzle Centers

In this graphic the minimum distance between the nozzle centers is drawed, as example.
Other minimum distance between nozzles centers are available on request.

Valve Gate



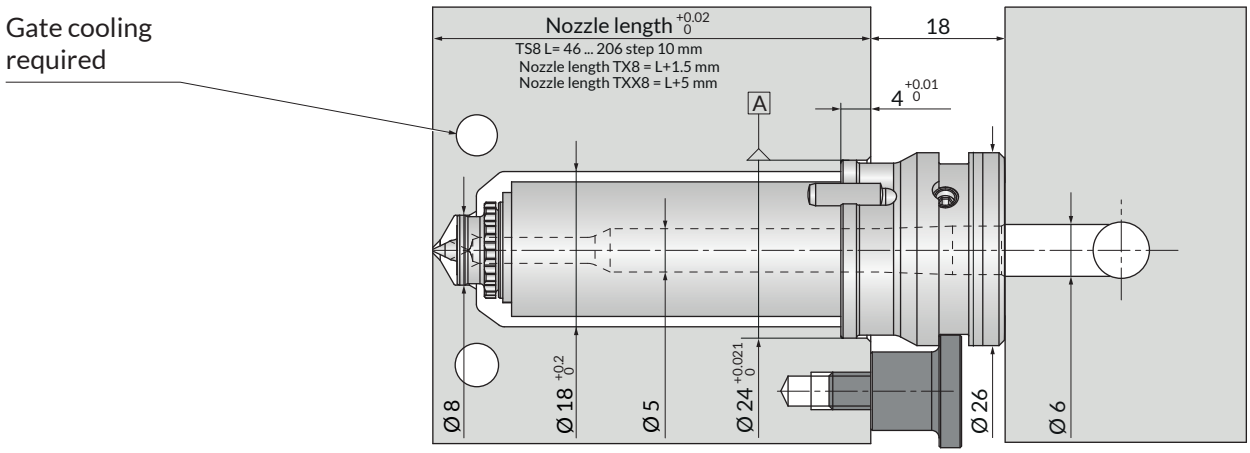
OpenGate



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

Technical Data TS8, TX8 and TXX8

There are slight differences in the length range of different tip types.
E18762 Bi-hex Ø 10 Tightening torque 18 Nm.



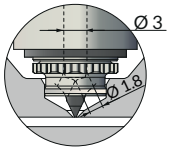
TS8 Nozzle length [mm] **(L)**	TX8 Nozzle length [mm] **(L+1.5)**	TXX8 Nozzle length [mm] **(L+5)**	Nozzle Code	Watt [W]
46	47.5	51	MPN-08-24-...-046	200
56	57.5	61	MPN-08-24-... -056	200
66	67.5	71	MPN-08-24-...-066	200
76	77.5	81	MPN-08-24-...-076	200
86	87.5	91	MPN-08-24-...-086	220
96	97.5	101	MPN-08-24-...-096	220
106	107.5	111	MPN-08-24-...-106	220
116	117.5	121	MPN-08-24-...-116	220
126	127.5	131	MPN-08-24-...-126	220
136	137.5	141	MPN-08-24-...-136	240
146	147.5	151	MPN-08-24-...-146	240
156	157.5	161	MPN-08-24-...-156	240
166	167.5	171	MPN-08-24-...-166	240
176	177.5	181	MPN-08-24-...-176	260
186	187.5	191	MPN-08-24-...-186	260
196	197.5	201	MPN-08-24-... 196	260
206	207.5	211	MPN-08-24-...-206	260

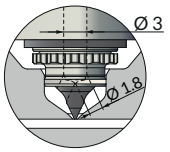
Example nozzle code: MPN-08-24 - TS8 - 206
Tip style
Length L

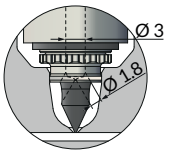
Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

Nozzle Tip Styles TS8, TX8 and TXX8

The following nozzle tip styles are available.

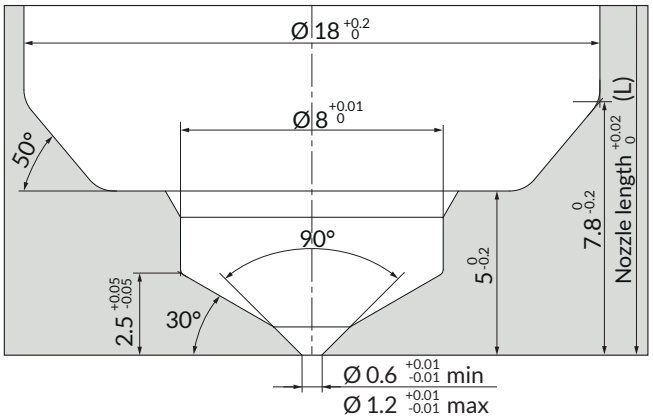
Thermal gate - Torpedo - Blind			
Tip Style with Description	Tip Group Code	Picture	Gate diameter
TS8 Standard	MS00153		Ø 0.6 min - Ø 1.2 max

Thermal gate - Torpedo - Blind - Extended tip			
Tip Style with Description	Tip Group Code	Picture	Gate diameter
TX8 Extended 1.5 mm	MS00167		Ø 0.6 min - Ø 1.2 max

Thermal gate - Torpedo - Blind - Extended tip			
Tip Style with Description	Tip Group Code	Picture	Gate diameter
TXX8 Extended 5 mm	MS00154		Ø 0.6 min - Ø 1.2 max

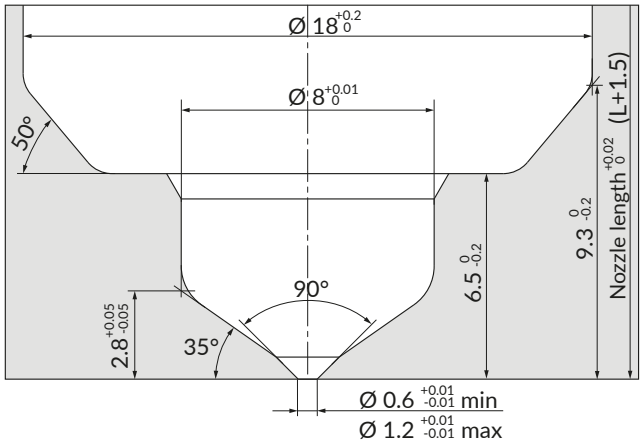
Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
Dimensions for reference only. Reference system drawing for complete dimensions prior to machining gate detail in mold.
The following pictures shows the nozzle tip cutout dimensions for this nozzle.

Nozzle Tip Cutout Dimensions TS8

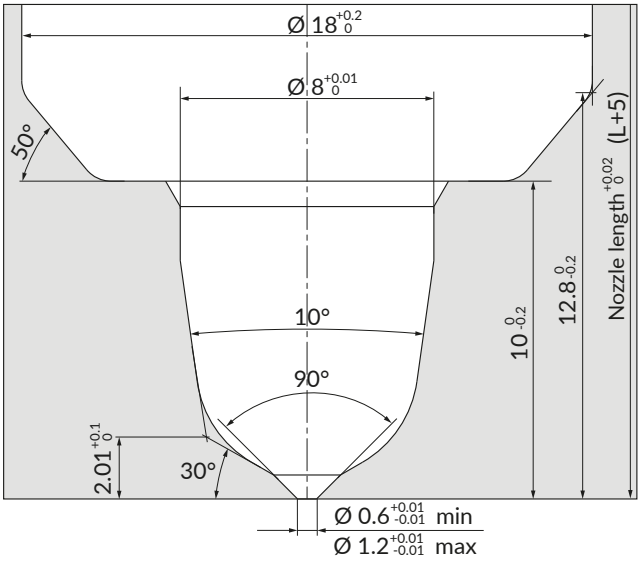


L= 46 ... 206 step 10 mm

Nozzle Tip Cutout Dimensions TX8



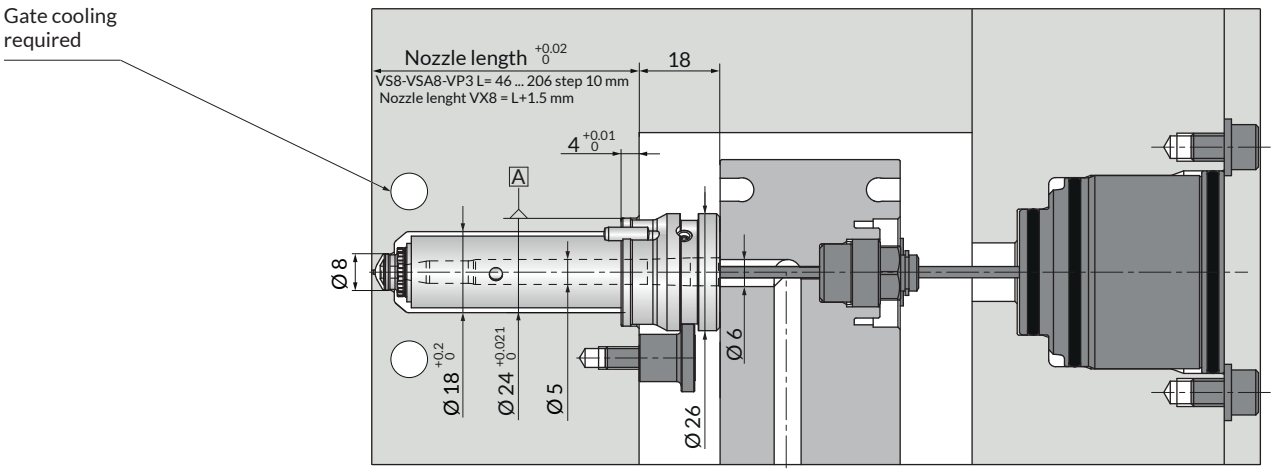
Nozzle Tip Cutout Dimensions TXX8



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

Technical Data VS8, VSA8, VX8 and VP3

There are slight differences in the length range of different tip types.
E18762 Bi-hex Ø 10 Tightening torque 18 Nm.



VS8-VSA8-VP3 Nozzle length [mm] **(L)**	VX8 Nozzle length [mm] **(L+1.5)**	Nozzle code	Watt [W]
46	47.5	MPN-08-24-...-046	200
56	57.5	MPN-08-24-...-056	200
66	67.5	MPN-08-24-...-066	200
76	77.5	MPN-08-24-...-076	200
86	87.5	MPN-08-24-...-086	220
96	97.5	MPN-08-24-...-096	220
106	107.5	MPN-08-24-...-106	220
116	117.5	MPN-08-24-...-116	220
126	127.5	MPN-08-24-...-126	220
136	137.5	MPN-08-24-...-136	240
146	147.5	MPN-08-24-...-146	240
156	157.5	MPN-08-24-...-156	240
166	167.5	MPN-08-24-...-166	240
176	177.5	MPN-08-24-...-176	260
186	187.5	MPN-08-24-...-186	260
196	197.5	MPN-08-24-...-196	260
206	207.5	MPN-08-24-...-206	260

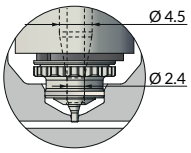
Example nozzle code: MPN-08-24 - VS8 - 206

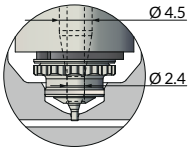
Nozzle serie
Tip style
Length L

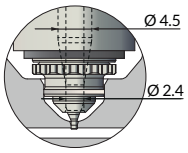
Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

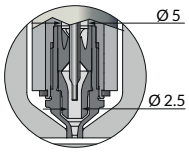
Nozzle Tip Styles VS8, VSA8, VX8 and VP3

The following nozzle tip styles are available.

Valve gate - Straight pin - Blind			
Tip Style with Description	Tip Group Code	Picture	Gate diameter
VS8 Standard	MS00160		Ø 0.8 min - Ø 2 max

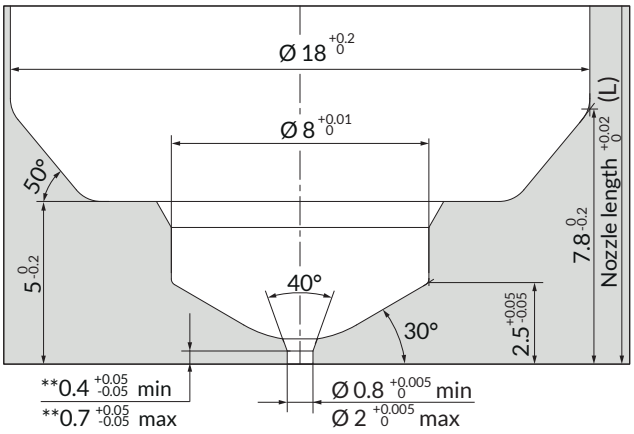
Valve gate - Straight pin - Blind			
Tip Style with Description	Tip Group Code	Picture	Gate diameter
VSA8 Standard - Advanced	MS00229		Ø 0.8 min - Ø 2 max

Valve gate - Straight pin - Blind - Extended tip			
Tip Style with Description	Tip Group Code	Picture	Gate diameter
VX8 Standard - Extended 1.5 mm	MS00173		Ø 0.8 min - Ø 2 max

Valve gate - Straight pin - Plunged Through			
Tip Style with Description	Tip Group Code	Picture	Gate diameter
VP3 Plunged Through	MS00164		Ø 1.2

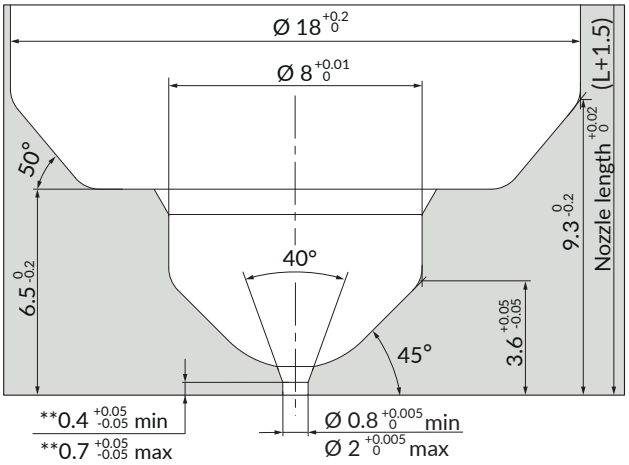
Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.
Dimensions for reference only. Reference system drawing for complete dimensions prior to machining gate detail in mold.
The following pictures shows the nozzle tip cutout dimensions for this nozzle.

Nozzle Tip Cutout Dimensions VS8 and VSA8



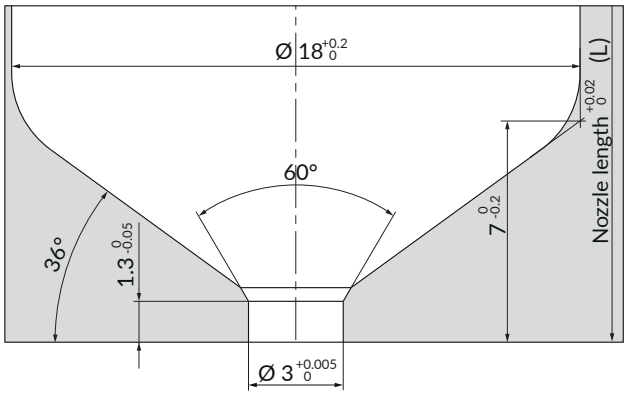
L= 46 ... 206 step 10 mm

Nozzle Tip Cutout Dimensions VX8



** To be defined according to polymers characteristics, injection cycle and cooling cycles.

Nozzle Tip Cutout Dimensions VP3

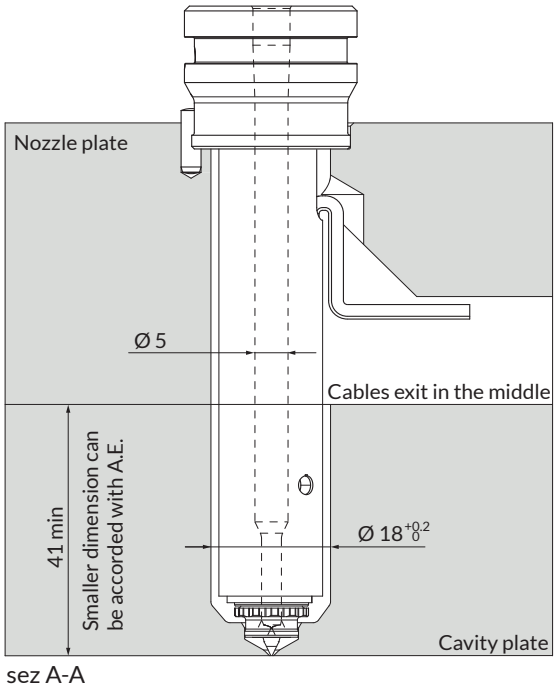


Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

Options

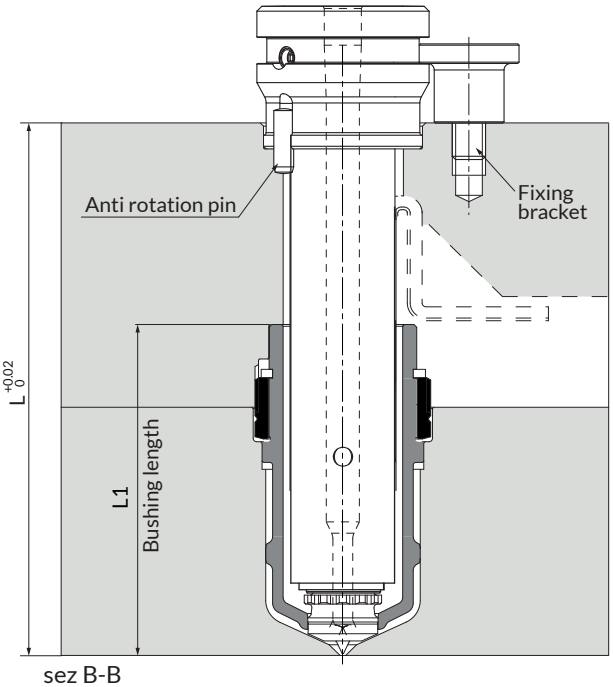
This following options are available for this product.

Optional cables exit in the middle



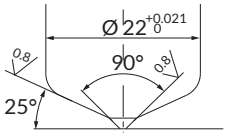
sez A-A

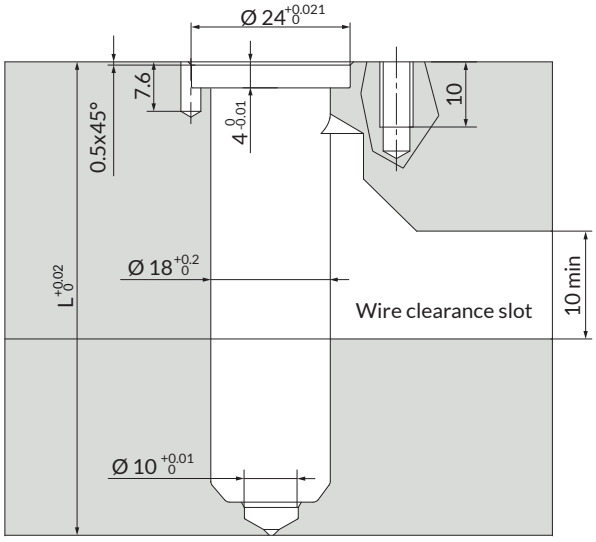
Optional D Bushing

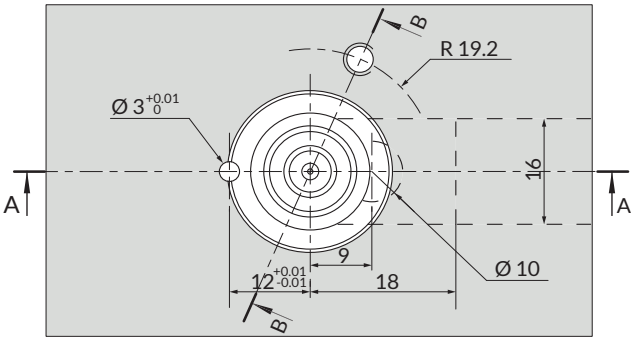


sez B-B

Alternative cutout with D bushing



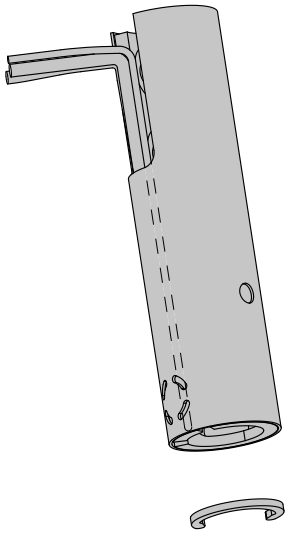




Illustrations simplified, schematically drawn and not to scale. All dimensions in mm.

Heater with integrated Thermocouple

This chapter gives a schematic overview of the Heater including Technical Data.



Example heater code: MPH08 - 206

Nozzle serie

Length L

Description	Code
Heater fixing ring	B03106

Heater group cables		
Heater	Orange / Grey	230 V
Thermocouple	Black	TC+
	White	TC-

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

Nozzle length [mm]			Heater group code	Watt [W]
TS8, VS8, VSA8, VP3	TX8, VX8	TXX8		
46	47.5	51	MPH08-046-...	200
56	57.5	61	MPH08-056-...	200
66	67.5	71	MPH08-066-...	200
76	77.5	81	MPH08-076-...	200
86	87.5	91	MPH08-086-...	220
96	97.5	101	MPH08-096-...	220
106	107.5	111	MPH08-106-...	220
116	117.5	121	MPH08-116-...	220
126	127.5	131	MPH08-126-...	220
136	137.5	141	MPH08-136-...	240
146	147.5	151	MPH08-146-...	240
156	157.5	161	MPH08-156-...	240
166	167.5	171	MPH08-166-...	240
176	177.5	181	MPH08-176-...	260
186	187.5	191	MPH08-186-...	260
196	197.5	201	MPH08-196-...	260
206	207.5	211	MPH08-206-...	260

Maintenance Kit

Code	Description
E22390	Maintenance kit for MPN-08 nozzles

Composed by:
1. Bi-hexagon socket
2. Heater extractor
3. Insertion tool for heater

Resin - Tip suitability

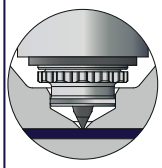
Nozzle Series	Thermal Gate			Valve Gate			
	TS	TX	TXX	VS	VX	VSA	VP
MPN-08 / MPN-10 Sliding							
Polyolefine							
PE, HDPE, LDPE, LLDPE	✓	✓	✓	✓	✓	✓	✓
PP, PP/PE, PP+Talc	✓	✓	✓	✓	✓	✓	✓
Polyolefin ≤GF35	✓	✓		⊗	⊗		
TPE							
TPE-O/S/V, PP/EPDM	⊗	⊗		✓	✓	✓	✓
TPE-U	⊗			✓	✓	✓	✓
Semi-Crystalline							
PBT	✓	✓		✓	✓	✓	✓
PBT≤35GF	✓	✓		⊗	⊗	✓	✓
PA6	✓	✓	⊗	✓	✓	✓	✓
PA6 ≤35GF	✓	✓	⊗	⊗	⊗	✓	✓
PA6.6	✓	✓		✓	✓	✓	✓
PA6.6≤35GF	✓	✓		⊗	⊗	✓	✓
PA4.6	⊗	⊗				⊗	⊗
PPA	✓	✓		✓	✓	✓	✓
PPA≤35GF	✓	✓		⊗	⊗	✓	✓
POM	✓	✓		✓	✓	✓	✓
PET				✓	✓	✓	✓
PET≤35GF	✓	✓		⊗	⊗	✓	✓
Amorphous							
PMMA	✓	✓		✓	✓	✓	✓
ABS	✓	✓	✓	✓	✓	✓	✓
ASA	✓	✓	✓	✓	✓	✓	✓
SAN	✓	✓	⊗	✓	✓	✓	✓
SMA	✓	✓		✓	✓	✓	✓
PS (HIPS, PS clear)	✓	✓	✓	✓	✓	✓	✓
PC	✓	✓		✓	✓	✓	✓
PC ≤35GF	✓	✓		✓	✓	✓	✓
PPE/PS	✓	✓		✓	✓	✓	✓
PPE/PA (Noryl GTX)	✓	✓		✓	✓	✓	✓
Blends							
PC/ABS	✓	✓	⊗	✓	✓	✓	✓
PC/ABS ≤GF35	✓	✓		✓	✓	✓	✓
PC/ASA	✓	✓	⊗	✓	✓	✓	✓
PC/ASA ≤GF35	✓	✓		✓	✓	✓	✓
PC/PBT	✓	✓	⊗	✓	✓	✓	✓
PC/PBT ≤GF35	✓	✓		✓	✓	✓	✓
PC/PET	✓	✓		✓	✓	✓	✓
PC/PET ≤GF35	✓	✓		✓	✓	✓	✓
PA/ABS	✓	✓		✓	✓	✓	✓
PA/ABS ≤GF35	✓	✓		✓	✓	✓	✓
High Temperature							
PEEK	⊗			⊗	⊗	⊗	⊗
PPS	⊗			⊗	⊗	⊗	⊗
PES	⊗			⊗	⊗	⊗	⊗
PSU	⊗			⊗	⊗	⊗	⊗
PEI	⊗			⊗	⊗	⊗	⊗
Special							
PET Clear	⊗			⊗	⊗	⊗	⊗
PETG	⊗			✓	✓	✓	✓
PCTG	⊗			✓	✓	✓	✓
COC, COP	⊗			✓	✓	✓	✓
LCP	●			✓	✓	✓	✓
PVC soft							
PVC rigid							

⊗ Requires review

Tip performance & Suitability overview

THERMAL GATE

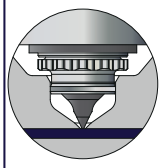
TS



Resin group	Suitability
Polyolefine	
Amorphous	
Semi-Crystalline	
Blends	
Specials	

Feature	Performance
Processing window	
Wear resistance	
Color change	
Cosmetic gating	

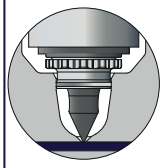
TX



Resin group	Suitability
Polyolefine	
Amorphous	
Semi-Crystalline	
Blends	
Specials	

Feature	Performance
Processing window	
Wear resistance	
Color change	
Cosmetic gating	

TXX

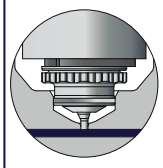


Resin group	Suitability
Polyolefine	
Amorphous	
Semi-Crystalline	
Blends	
Specials	

Feature	Performance
Processing window	
Wear resistance	
Color change	
Cosmetic gating	

VALVE GATE

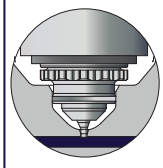
VS



Resin group	Suitability
Polyolefine	
Amorphous	
Semi-Crystalline	
Blends	
Specials	

Feature	Performance
Processing window	
Wear resistance	
Color change	
Cosmetic gating	

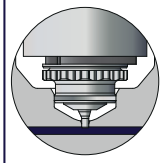
VX



Resin group	Suitability
Polyolefine	
Amorphous	
Semi-Crystalline	
Blends	
Specials	

Feature	Performance
Processing window	
Wear resistance	
Color change	
Cosmetic gating	

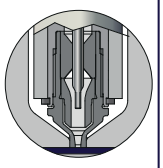
VSA



Resin group	Suitability
Polyolefine	
Amorphous	
Semi-Crystalline	
Blends	
Specials	

Feature	Performance
Processing window	
Wear resistance	
Color change	
Cosmetic gating	

VP



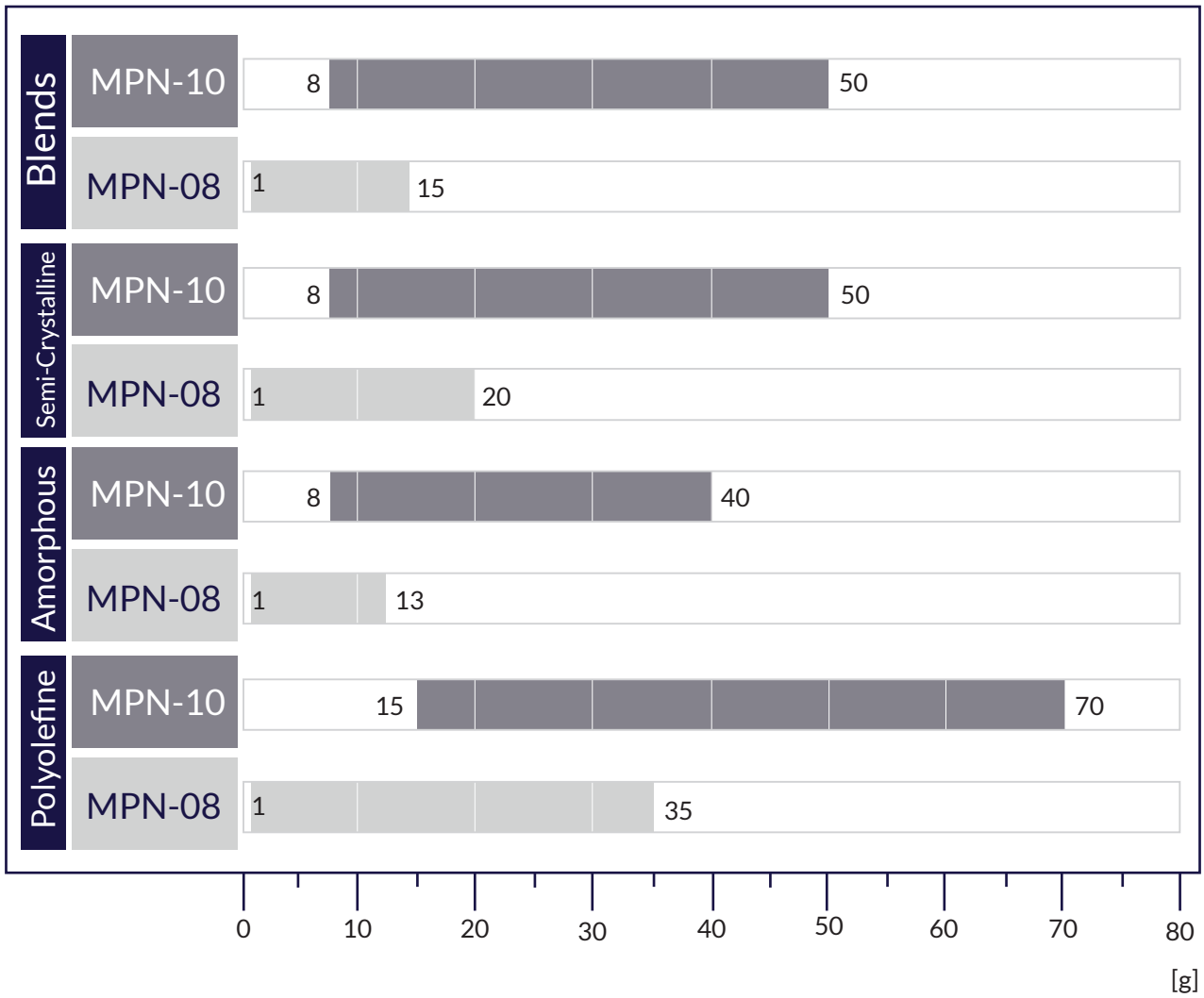
Resin group	Suitability
Polyolefine	
Amorphous	
Semi-Crystalline	
Blends	
Specials	

Feature	Performance
Processing window	
Wear resistance	
Color change	
Cosmetic gating	

Tipycal resins	
Polyolefine	PE, HDPE, LDPE, LLDPE, PP/EPDM, (TPE *)
Amorphous	PMMA, ABS, SAN, SMA, PS, PC, PPE, PPE/PA
Semi-Crystalline	PBT, PA&, PA6.6, PA4.6, PPA, POM, (TPU *)
Blends	PC/ABS, PC/ASA, PC/PBT, PA/ABS
Specials	PEEK, PPS, PES, PSU, PEI, PET, PETG, PCTG, COC, COP, LCP

* Check for application

Maximum shot weight



The chart shows indicative values of the max shot weight by nozzle series.
For more accurate shot weights, the exact material grade and a complete application data set are needed.

Tipycal resins		
	Polyolefine	PE, HDPE, LDPE, LLDPE
	Amorphous	PMMA, ABS, SAN, SMA, PS, OC, PPE, PPE/PA
	Semi-Crystalline	PBT, PA&, PA6.6, PA4.6, PPA, POM, PET
	Blends	PC/ABS, PC/ASA, PC/PBT, PA/ABS

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