

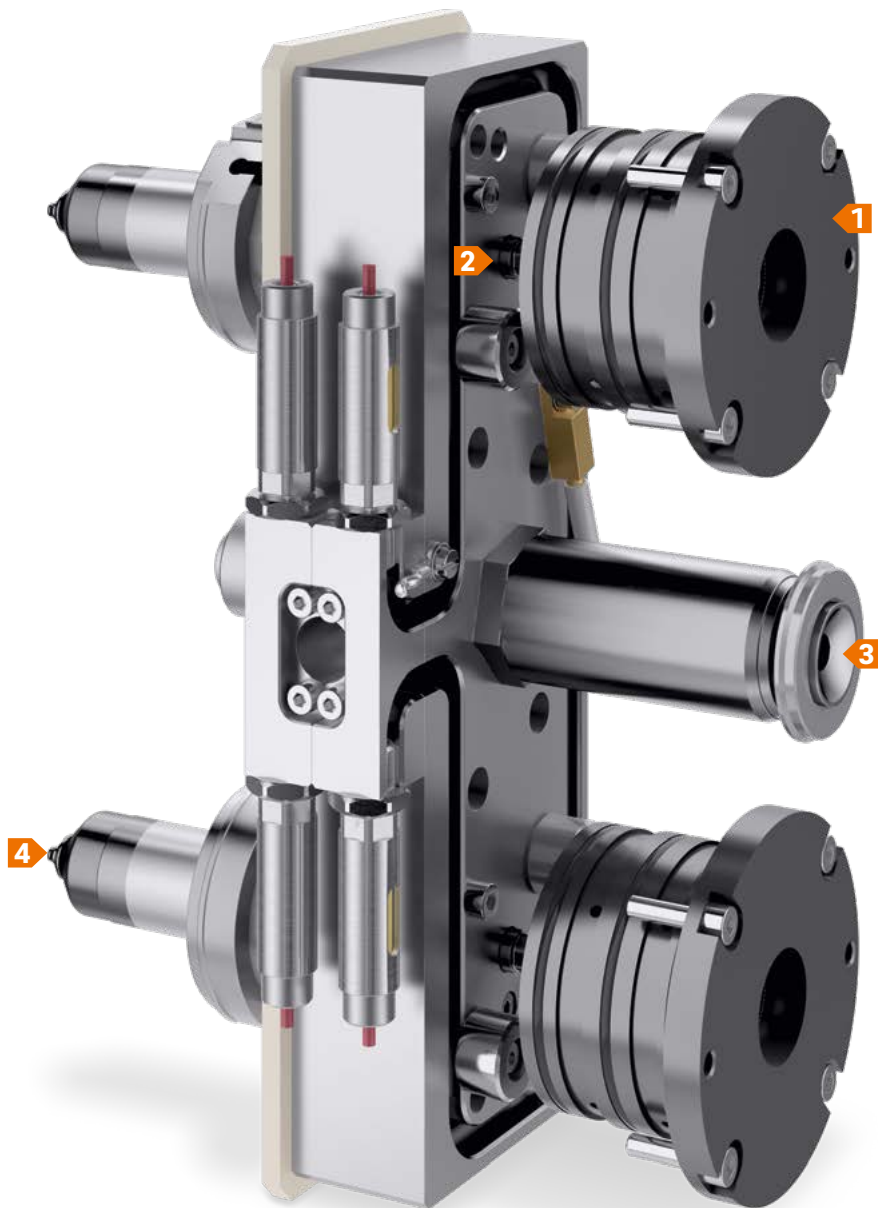


Valve gate systems



Valve gate technology

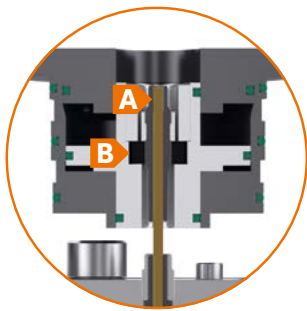
High visual requirements, a variety of applications, minimal shear stress, variable gate diameters and high process reliability. These are just a few of the requirements for which GÜNTHER valve gate technology has the right answer.



GÜNTHER's portfolio includes a variety of valve gate nozzles and needle actuation options. This enables perfect application-specific adaptation to the mould concept, both technically and financially. Both the smallest and large shot volumes and gate diameters from 0.8 to 4.0 mm can be implemented with valve gate technology.

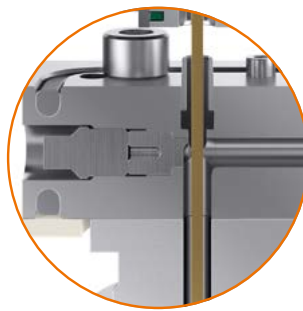
The innovative design of the needle guide and the optimised shut-off needle enable low-wear operation. During the shut-off movement, the needle is first led over a cone up

to the cylindrical pre-centring device for precise immersion into the cylindrical gate point. The needle guide is supported floating in the melt channel. In case of wear, the needle guide can be changed with minimal effort. Special openings in the mould clamping plate enable individual adjustment of the immersion depth of the shut-off needle from the outside. Depending on the application, highly filled plastics can be processed.



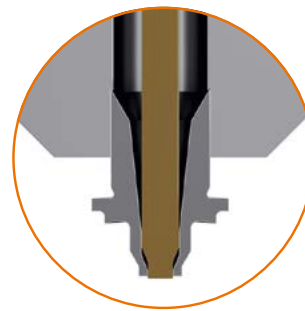
1 ENV single-needle valve

- A** Adjustment of the needle position
- B** Installation independent of heat expansion



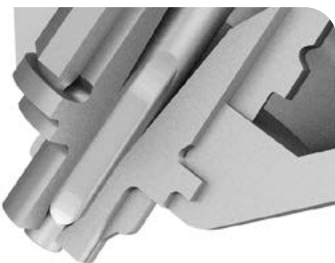
2 Needle guide and sealing in the manifold

3 Heated connecting nozzle



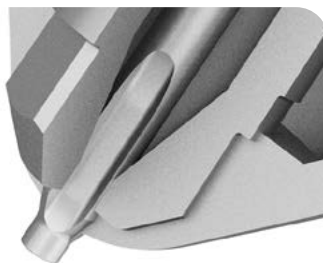
4 Needle guide in the nozzle

POSSIBLE NEEDLE GUIDE DESIGNS



LA NEEDLE GUIDE

Second mark on the part



KA NEEDLE GUIDE

Application-dependent use

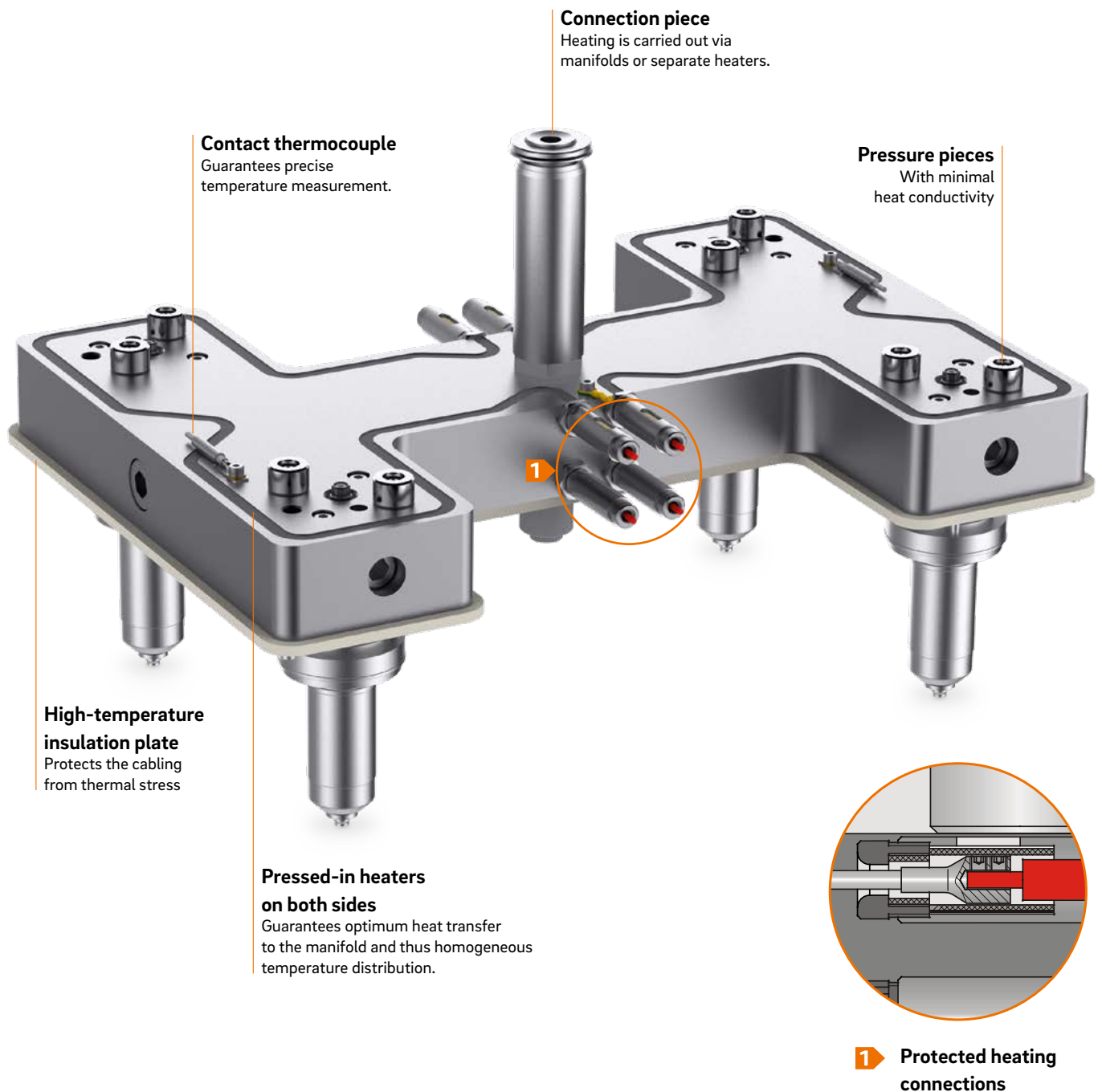
THE ADVANTAGES AT A GLANCE

- + Unambiguous opening behaviour
- + Consistent gate point quality
- + Sequential injection
- + Long needle guide service life
- + Time and cost savings
- + Wear parts are easy to replace



Manifold systems

Different manifold versions can be selected for different applications, from partially or fully balanced to customer-specific special solutions. Flexible positioning of hot runner nozzles with a manifold make individualised mould design possible.



HOMOGENEOUS TEMPERATURE MANAGEMENT THANKS TO PRESSED-IN HEATERS

All melt-conducting components are heated externally, which ensures optimum plastic flow with the smallest possible pressure loss. Pressed-in heaters on both sides guarantee optimum heat transfer to the manifold block. This results in homogeneous temperature distribution.

PROTECTED POWER CONNECTIONS – HIGHLY MAINTENANCE FRIENDLY

Steel and ceramic sleeves protect the power connections from damage. Mechanical cleaning of the manifold channels is easy and fast. Cleaning in the fluid bed bath and oven is also possible. The model data in the CADHOC® System Designer library can be configured (and are thus quickly available) for both individual and standard manifolds.

CADHOC® SYSTEM DESIGNER – TOP-NOTCH SOFTWARE PROVIDED FOR YOUR SUPPORT

CADHOC® System Designer enables us to meet your needs for fast provision of product data on everything from individual components to complete hot runner systems, including negative volume.

Among other things, CADHOC® System Designer enables you to:

- Design nozzle sizes in an optimum way
- Select plastic types from a comprehensive list
- Make a direct configuration without any specifications of the processing parameters
- Make an application-based configuration with specifications of the processing parameters

3D CAD models on every hot runner system are available for download in a variety of different data formats. After entering your configuration parameters, you will receive an e-mail with a link to the product data of the configured hot runner system.

THE ADVANTAGES AT A GLANCE

- + Homogeneous temperature distribution
- + Variable nozzle positions
- + Power connections with external damage protection
- + Easy and fast cleaning
- + Model data is stored in the CADHOC® online library





3.3 Valve gate manifolds

Manifold

Page

STRAIGHT MANIFOLDS



NGCP

Manifold length (VL) 160-360

30



NGCP

Manifold length (VL) 410-510

40



NGDP

Manifold length (VL) 160-360

50



NGDP

Manifold length (VL) 410-510

60

H-MANIFOLDS



NHCP/NHDP/NHEP

70

CROSS MANIFOLDS



NKCP4/NKDP4

Manifold length (VL) 135-165

80



NKCP4/NKDP4

Manifold length (VL) 180

90



NKCP4/NKDP4

Manifold length (VL) 210

100



NKCP4/NKDP4

Manifold length (VL) 240/270/300

110

STAR MANIFOLDS



NSCP/NSDP/NSEP

120

T-MANIFOLDS



NTCP/NTDP/NTEP

130

Rapid Systems



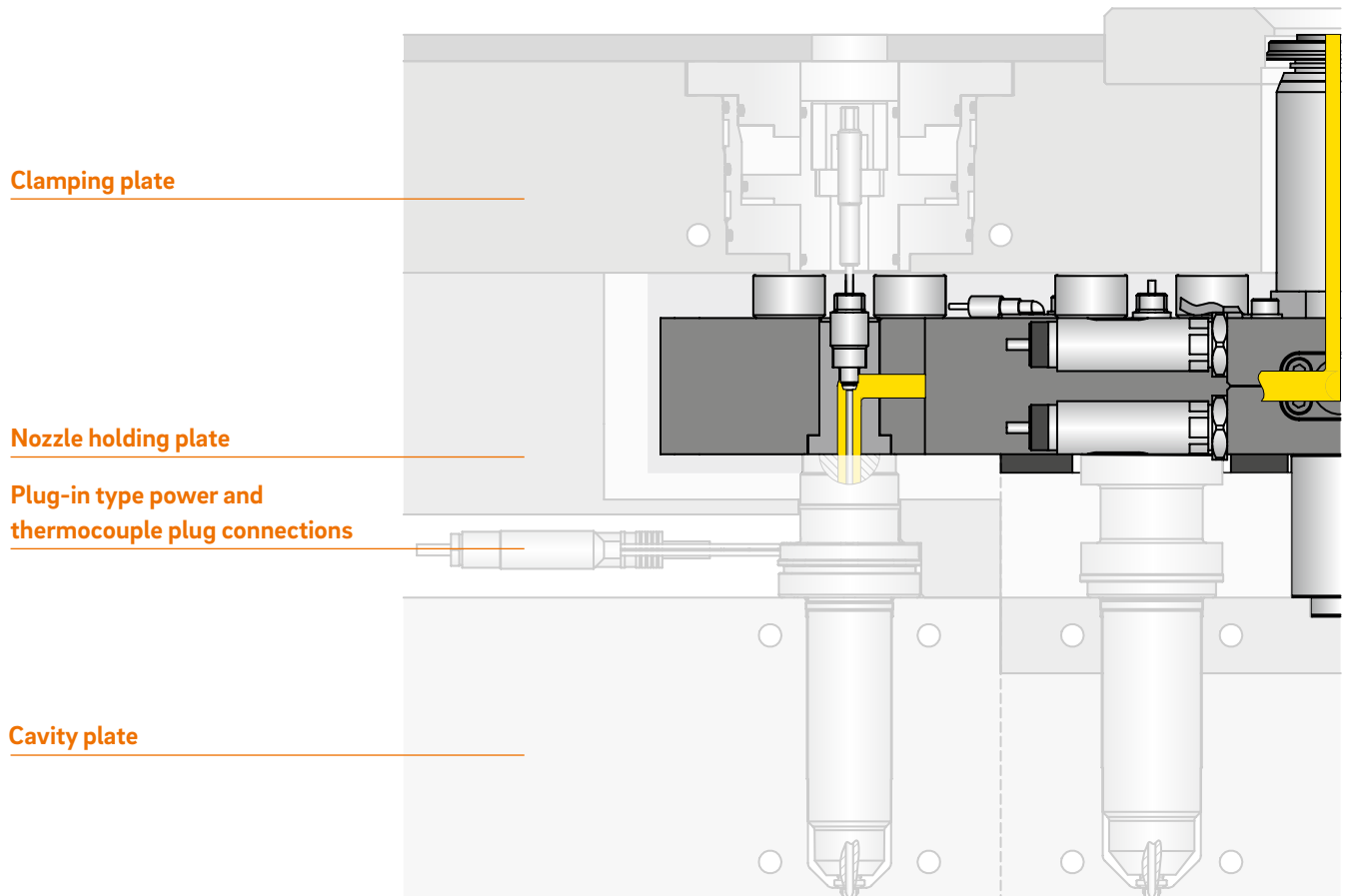
Rapid Systems

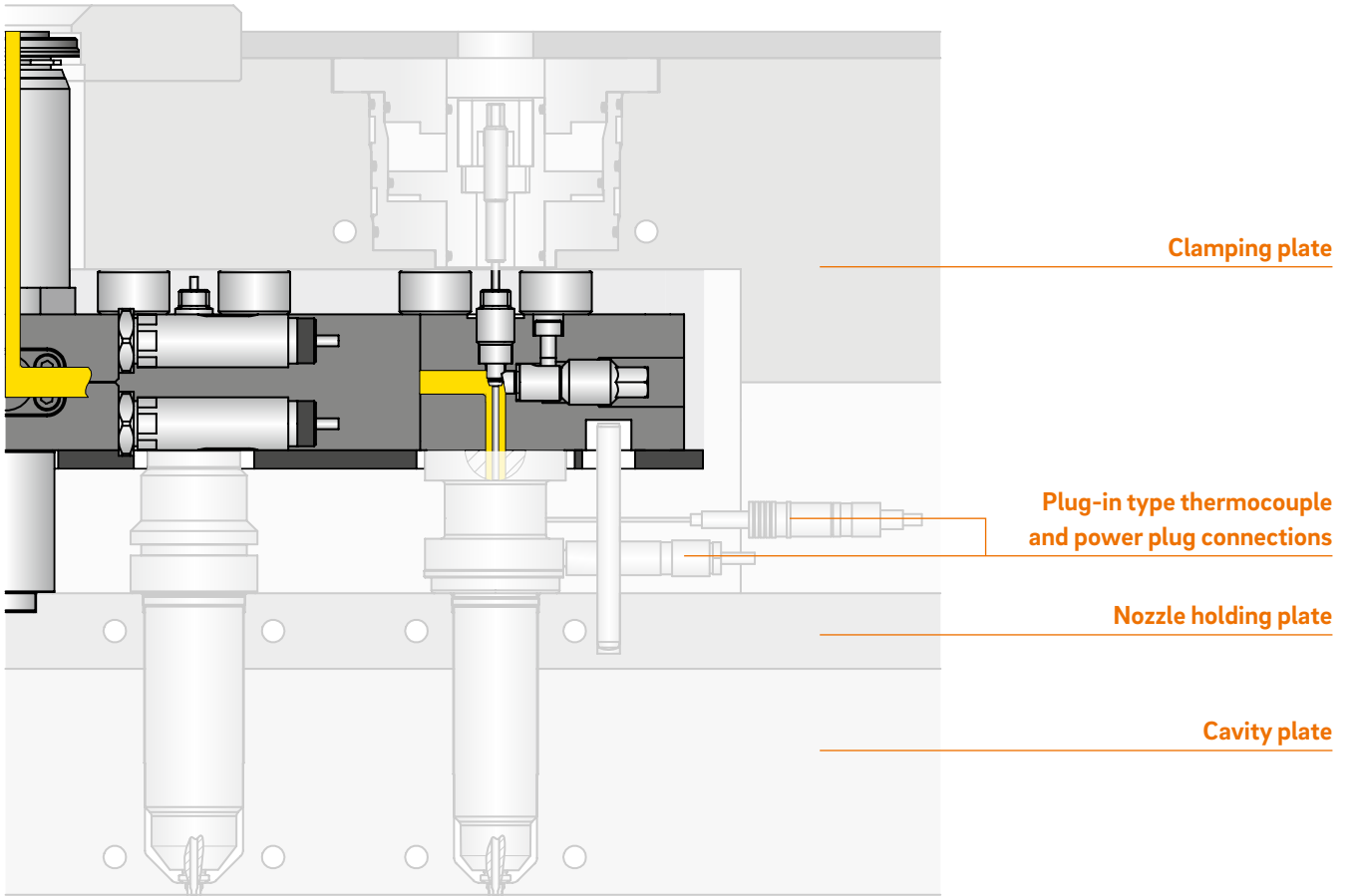
Configuration in CADHOC® System-Designer

140



Overview of overall design for valve gate manifolds

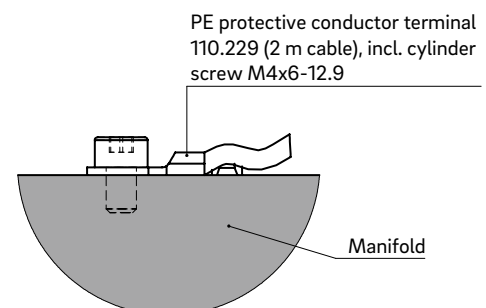
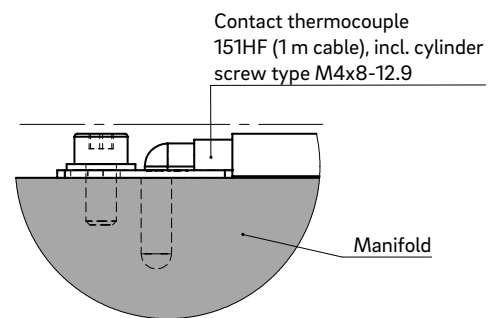
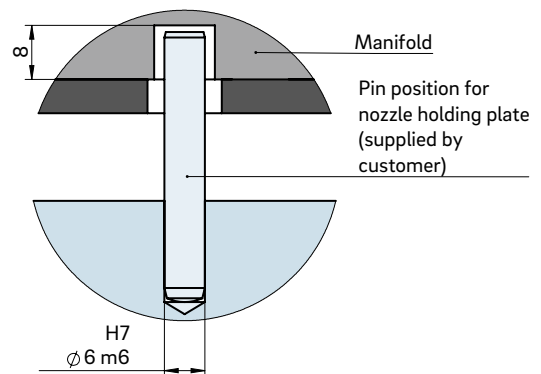






Straight manifold type NGCP

Manifold length (VL) 160-360



TECHNICAL DATA

NGCP VL 160-360

Manifold height (VH) 36 mm

Operating voltage 230 V_{AC} *

Manifold length (VL)	160	210	260	310	360
Control circuits	1	1	1	1	1
Power (watts) per control circuit	2 × 750	2 × 950	2 × 1000	2 × 1350	2 × 1500

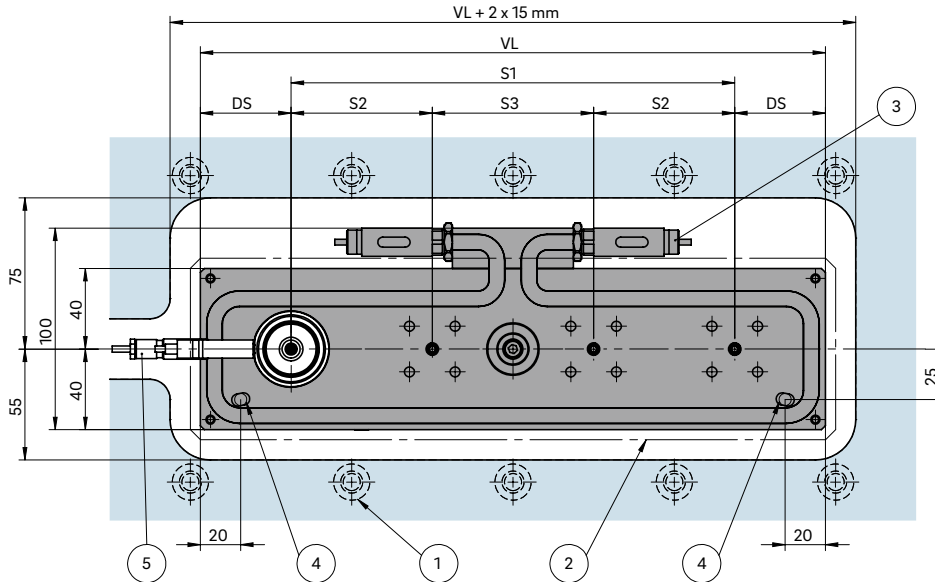
*Volts alternating current

WEBCODE
33010



INSTALLATION

Nozzle tip view



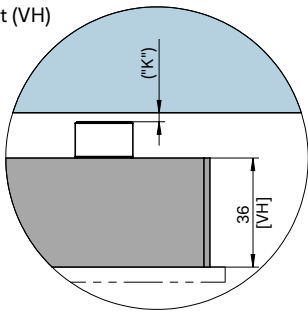
DS Edge distance:
 a. min. 35.0 with nozzle size ≤ 6
 b. min. 45.0 with nozzle size 8

S1 Largest pitch (max. pitch)
 S2 Pitch between the nozzles (min./max. pitch)

S3 Pitch between the nozzles, taking connecting element and spacer into account (min./max. pitch)

- ① Screw connection close to manifold
- ② High-temperature insulation plate
- ③ Heating connections
- ④ Possible pin position
- ⑤ Opening and plug location dependent upon nozzle type

Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217

Design examples/Balancing

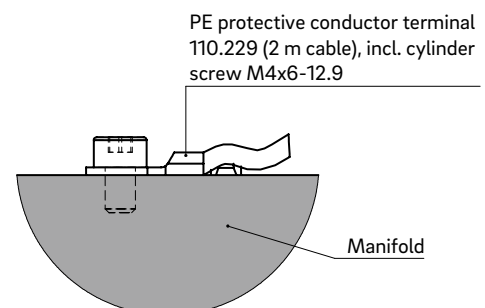
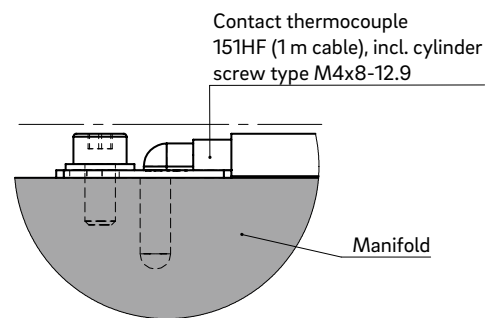
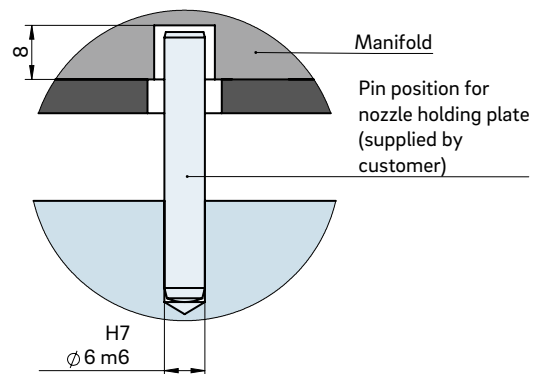
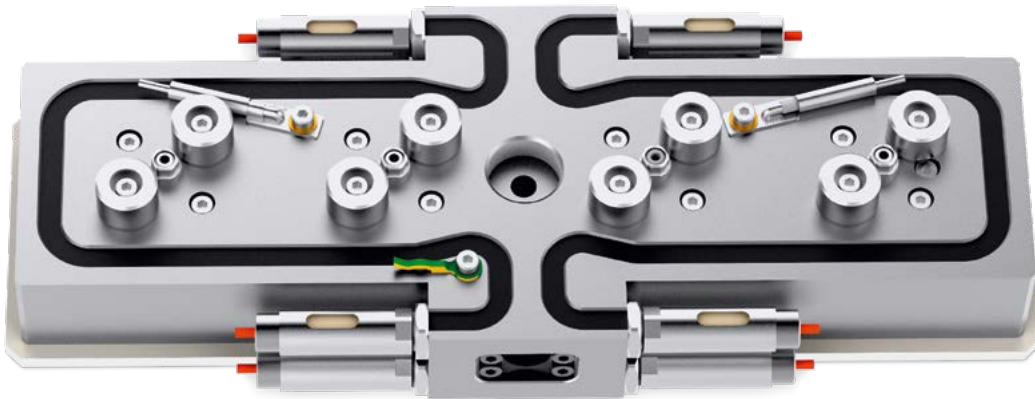
Type		Melt channel \varnothing in mm	Number of drops
NGCP1B		≤ 8	1
NGCP2B		≤ 8	2
NGCP4B		≤ 8	4
NGCP8T		≤ 8	8

B = balanced T = partially balanced



Straight manifold type NGCP

Manifold length (VL) 410-510



TECHNICAL DATA

NGCP VL 410-510

Manifold height (VH) 36 mm

Operating voltage 230 V_{AC} *

Manifold length (VL)	410	460	510
----------------------	-----	-----	-----

Control circuits	2	2	2
------------------	---	---	---

Power (watts) per control circuit	2 × 850	2 × 950	2 × 1000
--------------------------------------	------------	------------	-------------

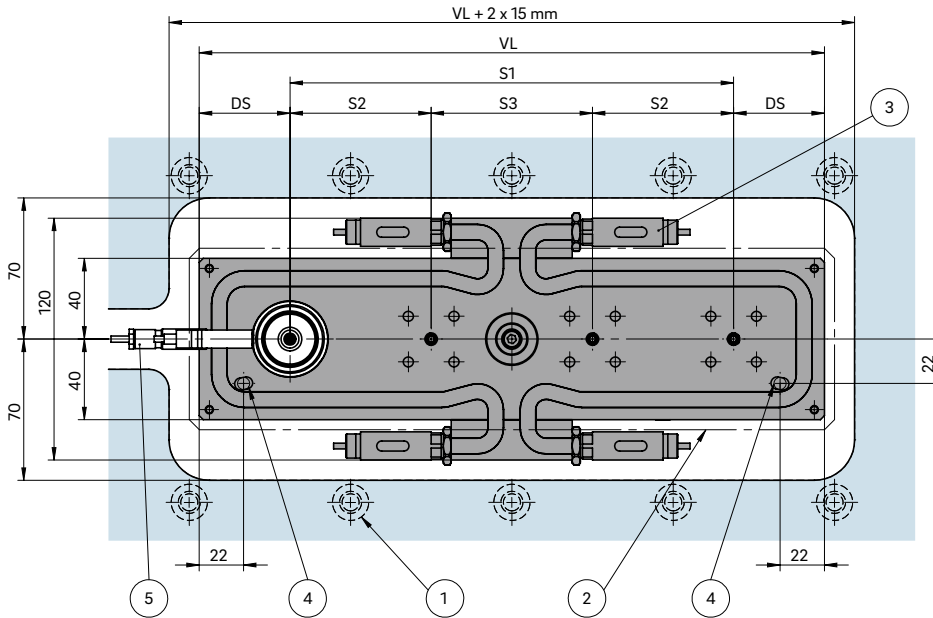
*Volts alternating current

WEBCODE
33020



INSTALLATION

Nozzle tip view



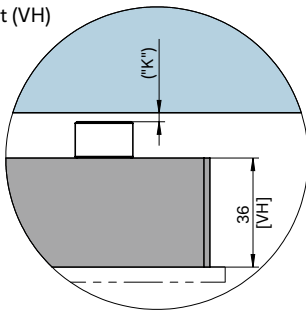
DS Edge distance:
 a. min. 35.0 with nozzle size ≤ 6
 b. min. 45.0 with nozzle size 8

S1 Largest pitch (max. pitch)
 S2 Pitch between the nozzles (min./max. pitch)

S3 Pitch between the nozzles, taking connecting element and spacer into account (min./max. pitch)

- ① Screw connection close to manifold
- ② High-temperature insulation plate
- ③ Heating connections
- ④ Possible pin position
- ⑤ Opening and plug location dependent upon nozzle type

Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217

Design examples/Balancing

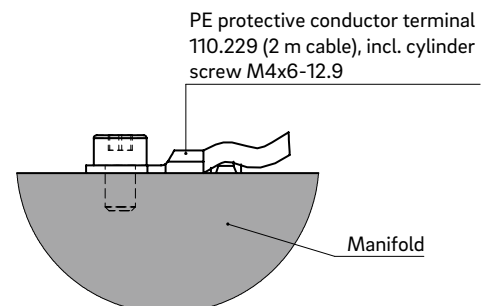
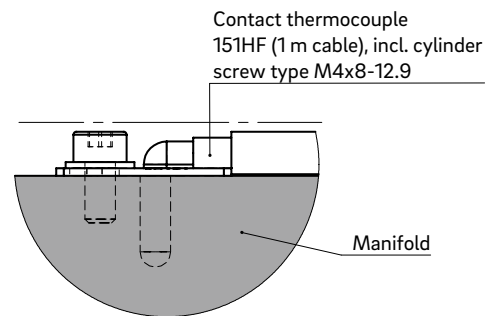
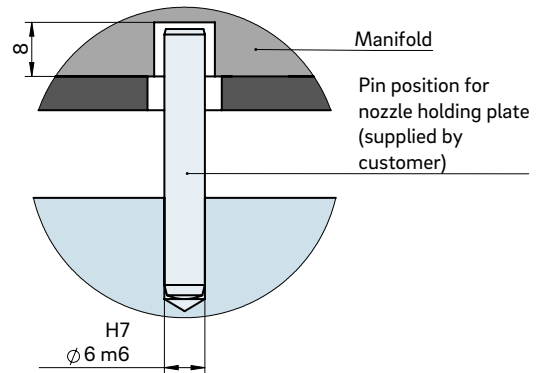
Type		Melt channel $\varnothing d$ in mm	Number of drops
NGCP1B		≤ 8	1
NGCP2B		≤ 8	2
NGCP4B		≤ 8	4
NGCP6T		≤ 8	6
NGCP8T		≤ 8	8

B = balanced T = partially balanced



Straight manifold type NGDP

Manifold length (VL) 160-360



TECHNICAL DATA

NGDP VL 160-360

Manifold height (VH) 46 mm

Operating voltage 230 V_{AC} *

Manifold length (VL)	160	210	260	310	360
Control circuits	1	1	1	1	1
Power (watts) per control circuit	2 × 750	2 × 950	2 × 1000	2 × 1350	2 × 1500

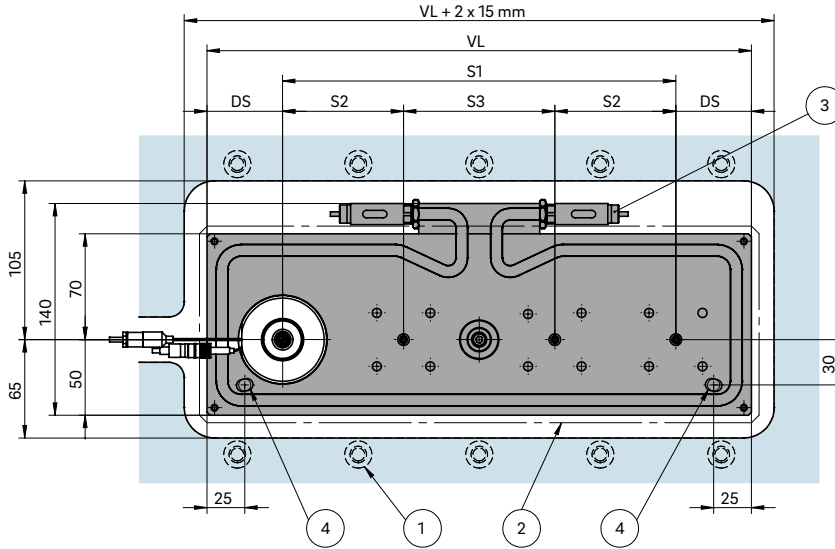
*Volts alternating current

WEBCODE
33030



INSTALLATION

Nozzle tip view

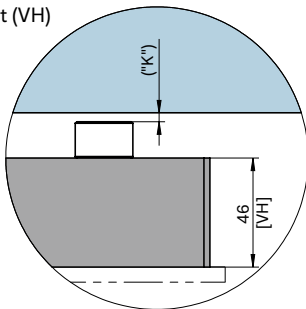


DS Edge distance:
 a. min. 35.0 with nozzle size ≤ 6
 b. min. 45.0 with nozzle size 8 or 10
 c. min. 50.0 with nozzle size ≥ 12

S1 Largest pitch (max. pitch)
 S2 Pitch between the nozzles (min./max. pitch)
 S3 Pitch between the nozzles, taking connecting element and spacer into account (min./max. pitch)

- ① Screw connection close to manifold
- ② High-temperature insulation plate
- ③ Heating connections
- ④ Possible pin position
- ⑤ Opening and plug location dependent upon nozzle type

Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264

Design examples/Balancing

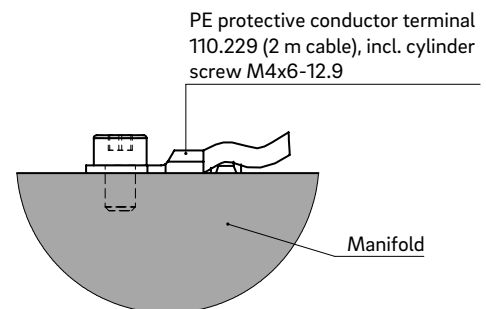
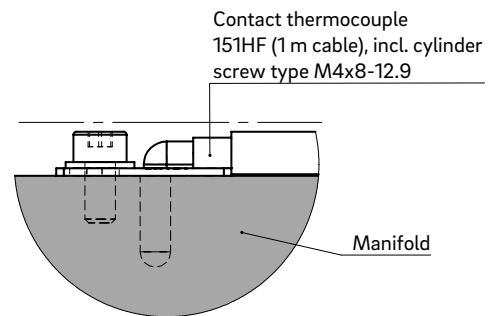
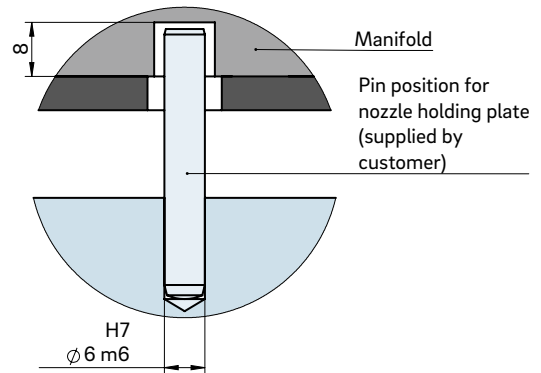
Type		Melt channel \varnothing d in mm	Number of drops
NGDP1B		≥ 10 to 12	1
NGDP2B		≥ 10 to 12	2
NGDP4B		≥ 10 to 12	4
NGDP6T		≤ 8	6

B = balanced T = partially balanced



Straight manifold type NGDP

Manifold length (VL) 410-510



TECHNICAL DATA

NGDP VL 410-510

Manifold height (VH) 46 mm

Operating voltage 230 V_{AC} *

Manifold length (VL)	410	460	510
----------------------	-----	-----	-----

Control circuits	2	2	2
------------------	---	---	---

Power (watts) per control circuit	2 × 850	2 × 950	2 × 1000
--------------------------------------	------------	------------	-------------

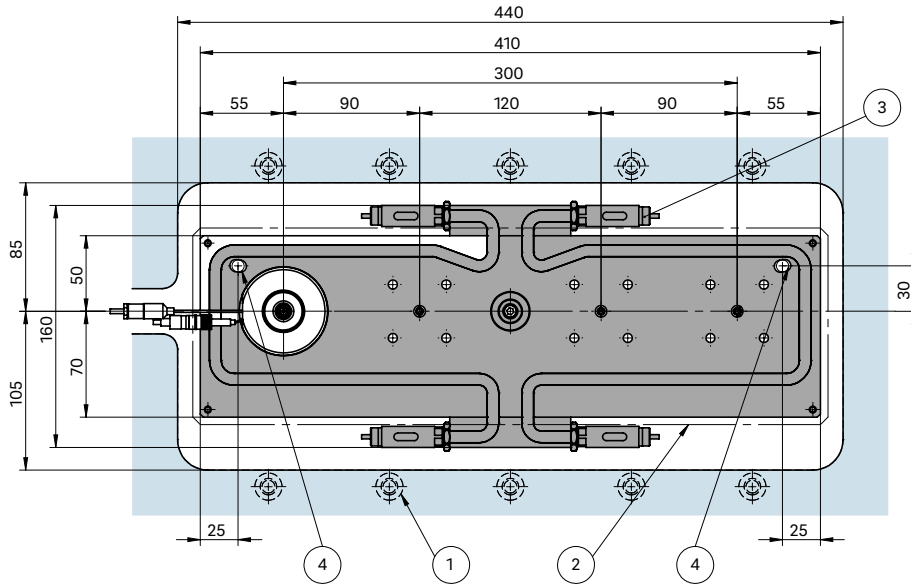
*Volts alternating current

WEBCODE
33040



INSTALLATION

Nozzle tip view

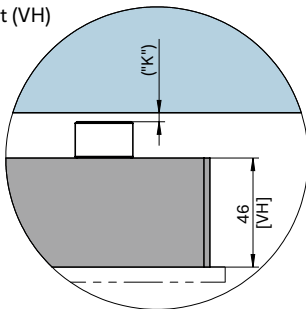


DS Edge distance:
 a. min. 35.0 with nozzle size ≤ 6
 b. min. 45.0 with nozzle size 8 or 10
 c. min. 50.0 with nozzle size ≥ 12

S1 Largest pitch (max. pitch)
 S2 Pitch between the nozzles (min./max. pitch)
 S3 Pitch between the nozzles, taking connecting element and spacer into account (min./max. pitch)

- ① Screw connection close to manifold
- ② High-temperature insulation plate
- ③ Heating connections
- ④ Possible pin position
- ⑤ Opening and plug location dependent upon nozzle type

Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264

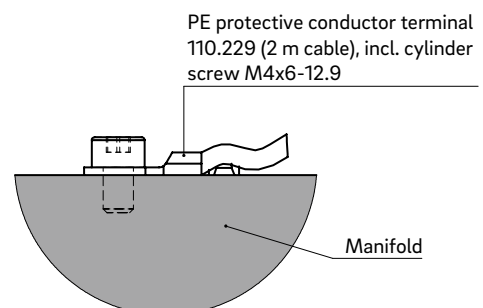
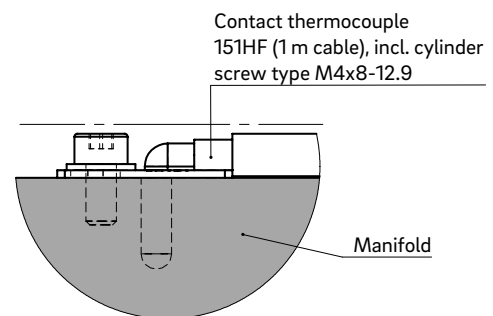
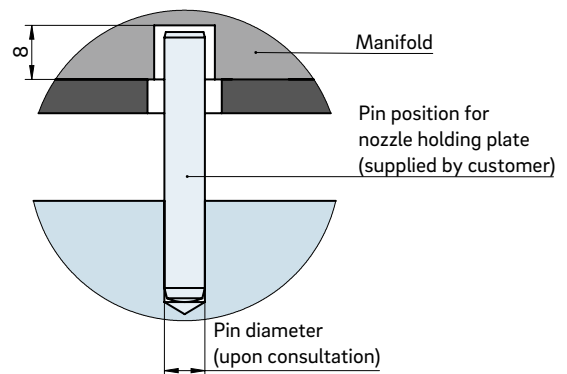
Design examples/Balancing

Type		Melt channel \varnothing d in mm	Number of drops
NGDP1B		≥ 12	1
NGDP2B		≥ 12	2
NGDP4B		≥ 12	4
NGDP6T		≤ 8	6
NGDP8T		≥ 12	8

B = balanced T = partially balanced



H-manifold type NHCP/NHDP/NHEP



TECHNICAL DATA

NHCP/NHDP/NHEP

Manifold height (VH) NHCP: 36 mm
NHDP: 46 mm
NHEP: 56 mm

Operating voltage 230 V_{AC}*

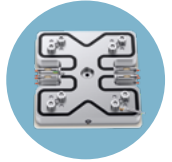
Manifold length (VL) $H + 2 \times DS$

Manifold width (VB) $B + 2 \times DS$

The heating output of each control circuit is calculated individually.

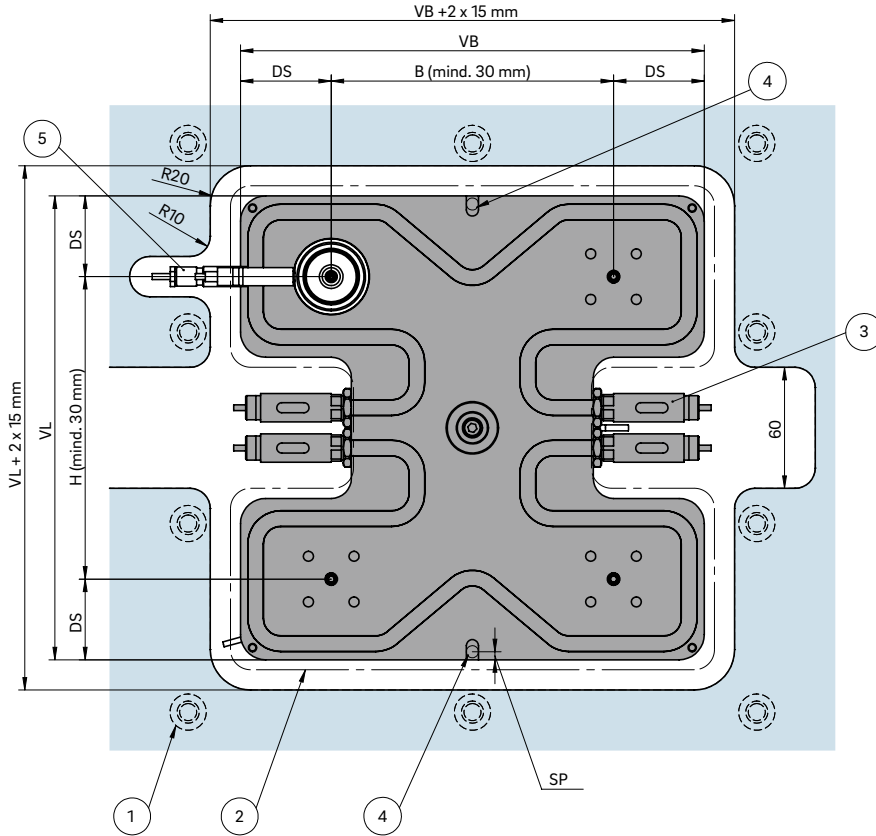
*Volts alternating current

WEBCODE
33050



INSTALLATION

Nozzle tip view

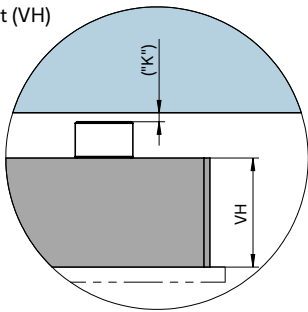


DS Edge distance:
 a. min. 35.0 with nozzle size ≤ 6
 b. min. 45.0 with nozzle size 8 or 10
 c. min. 50.0 with nozzle size ≥ 12

H Pitch between the nozzles
 B Pitch between the nozzles

- ① Screw connection close to manifold
- ② High-temperature insulation plate
- ③ Heating connections
- ④ Possible pin position
"SP" = $d/2 + 1$ mm
- ⑤ Opening and plug location dependent upon nozzle type

Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad ($12 + 0.1$ mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

Design examples/Balancing

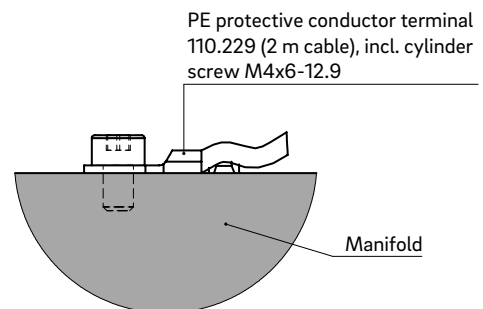
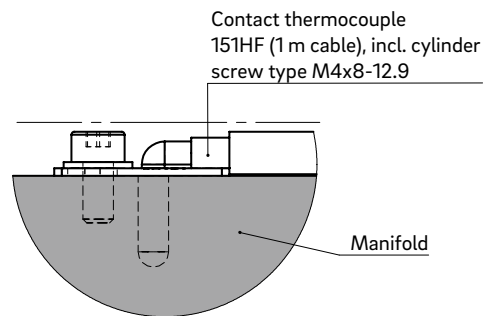
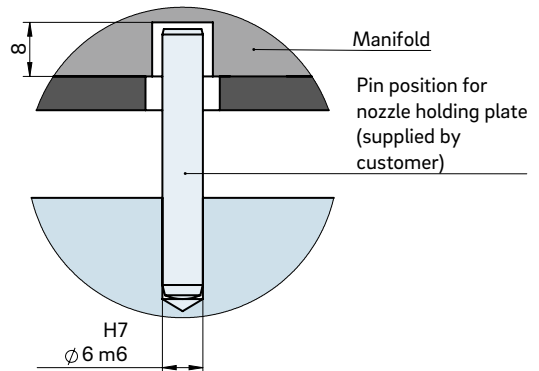
Type		NHCP = 36 (VH) Melt channel $\varnothing d$ in mm	NHDP = 46 (VH) Melt channel $\varnothing d$ in mm	NHEP = 56 (VH) Melt channel $\varnothing d$ in mm	Number of drops
NH_P4B		≤ 8	≥ 10 to 12	≥ 16	4
NH_P6T		≤ 8	≥ 10 to 12	≥ 16	6
NH_P6B			≤ 8	≤ 10	6
NH_P8B		≤ 8	≥ 10 to 12	≥ 16	8
NH_P12B			≤ 8	≤ 10	12
NH_P16B		≤ 8	≥ 10 to 12	≥ 16	16

B = balanced T = partially balanced



Cross manifold type NKCP4/NKDP4

Manifold length (VL) 135-165



TECHNICAL DATA

NKCP4/NKDP4 135/165

Manifold height (VH) NKCP: 36 mm
NKDP: 46 mm

Operating voltage 230 V_{AC} *

Manifold length (VL)	135	165
-----------------------------	-----	-----

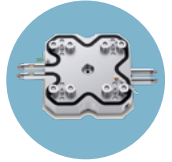
Pin position (SP)	63.5	68.0
--------------------------	------	------

Control circuits	1	1
-------------------------	---	---

Power (watts) per control circuit	2 × 850	2 × 1000
--	---------	----------

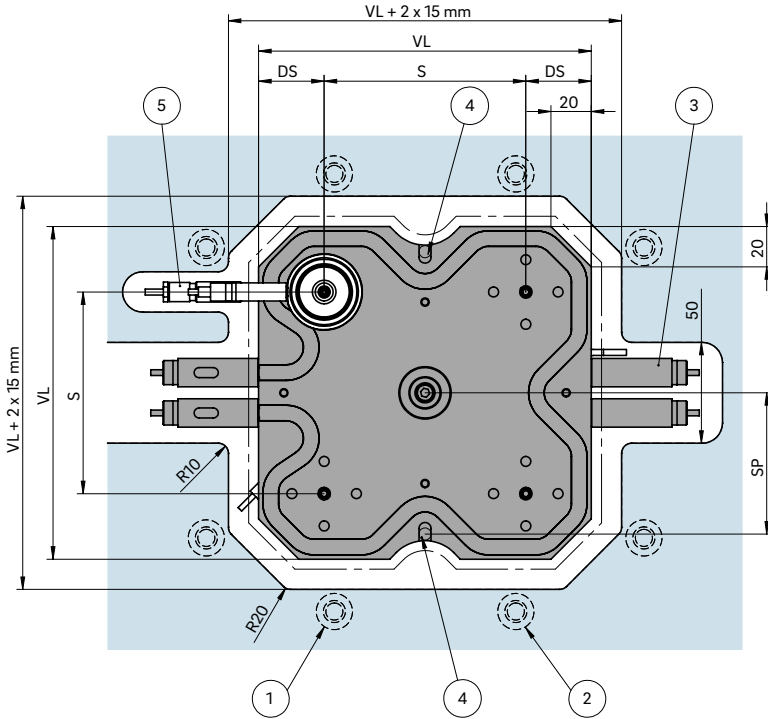
*Volts alternating current





INSTALLATION

Nozzle tip view

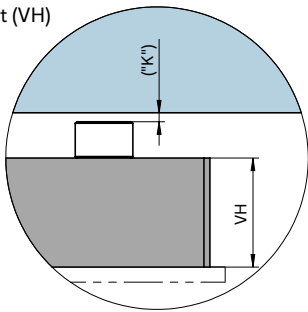


DS Edge distance:
 a. min. 35.0 with nozzle size ≤ 6
 b. min. 45.0 with nozzle size 8 or 10
 c. min. 50.0 with nozzle size ≥ 12

S Pitch between the nozzles

- ① Screw connection close to manifold
- ② High-temperature insulation plate
- ③ Heating connections
- ④ Possible pin position
- ⑤ Opening and plug location dependent upon nozzle type

Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264

Design examples/Balancing

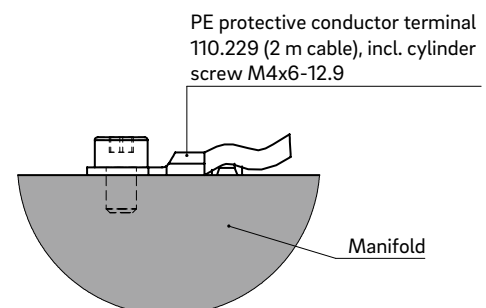
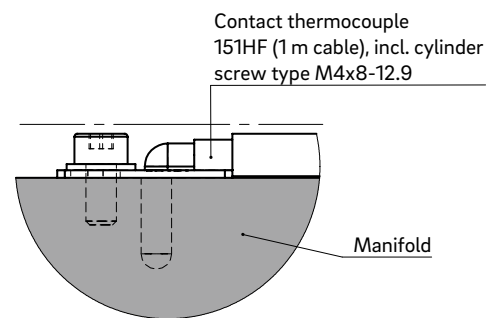
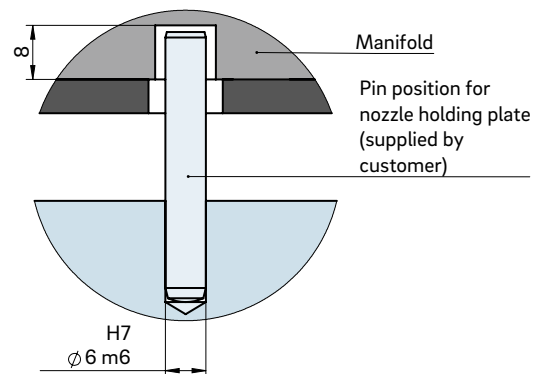
Type		NKCP = 36 (VH) Melt channel $\varnothing d$ in mm	NKDP = 46 (VH) Melt channel $\varnothing d$ in mm	Number of drops
NK_P4B		≤ 8 DS min. 35	≥ 10 to 12 DS min. 50	4

B = balanced



Cross manifold type NKCP4/NKDP4

Manifold length (VL) 180



TECHNICAL DATA

NKCP4/NKDP4 180

Manifold height (VH) NKCP: 36 mm
NKDP: 46 mm

Operating voltage 230 V_{AC}*

Manifold length (VL) 180

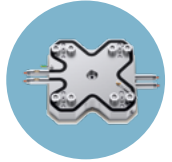
Pin position (SP) 59.0

Control circuits 1

Power (watts) per control circuit 2 × 1000

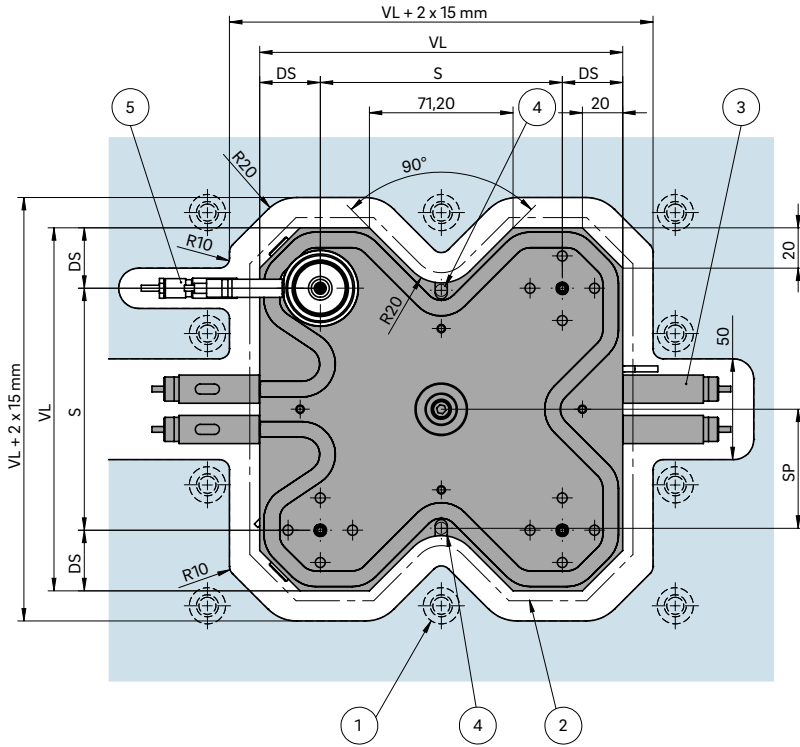
*Volts alternating current

WEBCODE
33070



INSTALLATION

Nozzle tip view

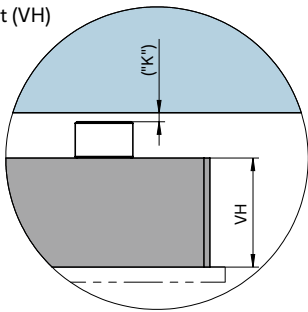


DS Edge distance:
 a. min. 35.0 with nozzle size ≤ 6
 b. min. 45.0 with nozzle size 8 or 10
 c. min. 50.0 with nozzle size ≥ 12

S Pitch between the nozzles

- ① Screw connection close to manifold
- ② High-temperature insulation plate
- ③ Heating connections
- ④ Possible pin position
- ⑤ Opening and plug location dependent upon nozzle type

Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264

Design examples/Balancing

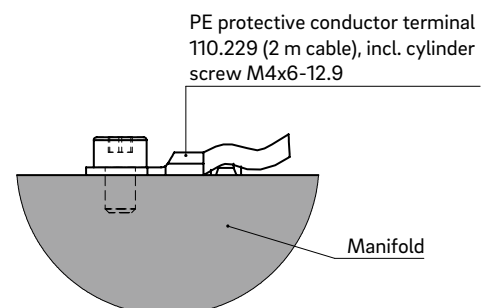
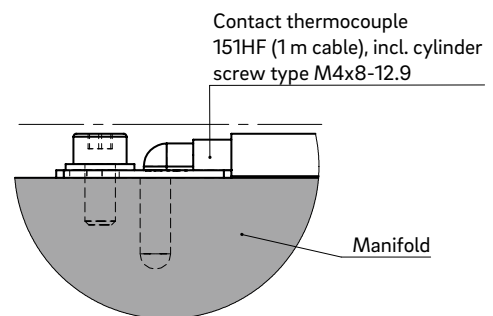
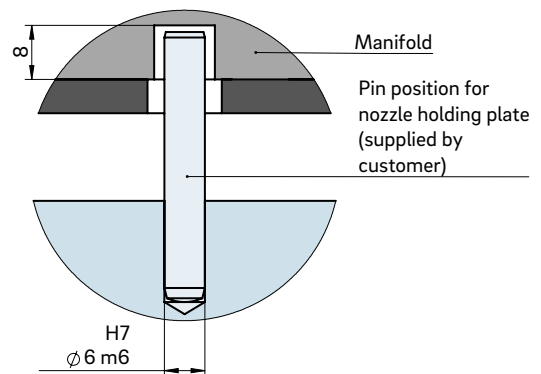
Type		NKCP = 36 (VH) Melt channel $\varnothing d$ in mm	NKDP = 46 (VH) Melt channel $\varnothing d$ in mm	Number of drops
NK_P4B		≤ 8 DS min. 35	≥ 10 to 12 DS min. 50	4

B = balanced



Cross manifold type NKCP4/NKDP4

Manifold length (VL) 210



TECHNICAL DATA

NKCP4/NKDP4 210

Manifold height (VH) NKCP: 36 mm
NKDP: 46 mm

Operating voltage 230 V_{AC}*

Manifold length (VL) 210

Pin position (SP) 60.8

Control circuits 1

Power (watts) per control circuit 2 × 1000

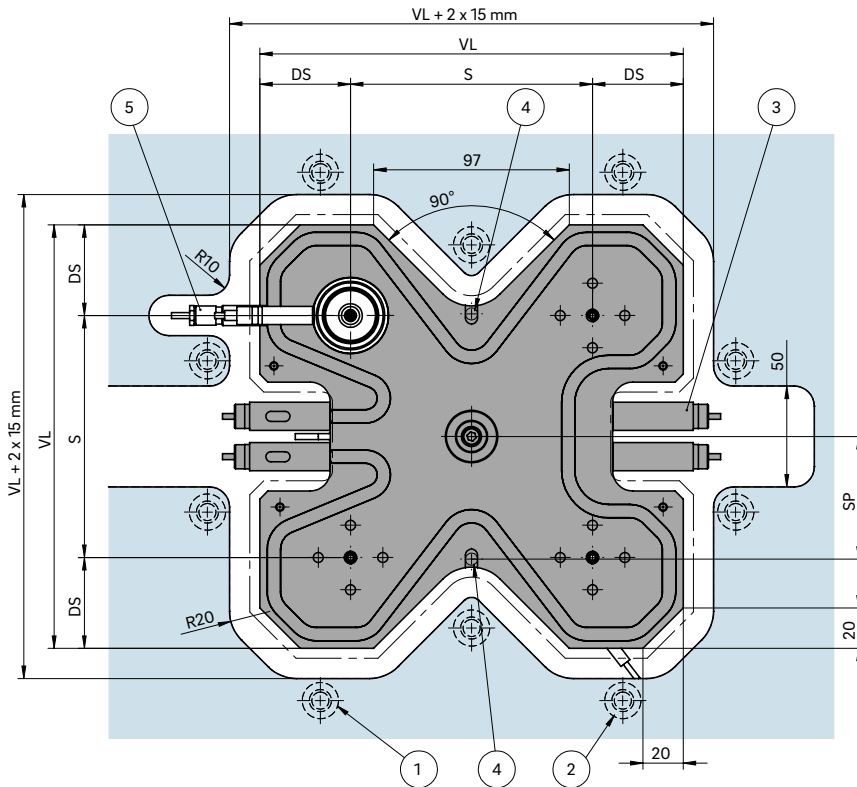
*Volts alternating current

WEBCODE
33080



INSTALLATION

Nozzle tip view

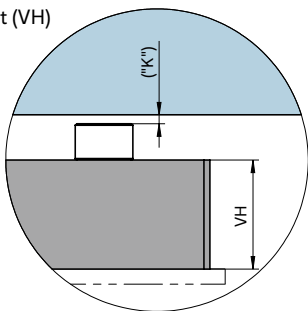


DS Edge distance:
 a. min. 35.0 with nozzle size ≤ 6
 b. min. 45.0 with nozzle size 8 or 10
 c. min. 50.0 with nozzle size ≥ 12

S Pitch between the nozzles

- ① Screw connection close to manifold
- ② High-temperature insulation plate
- ③ Heating connections
- ④ Possible pin position
- ⑤ Opening and plug location dependent upon nozzle type

Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264

Design examples/Balancing

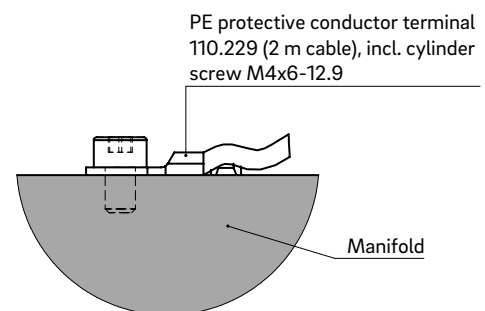
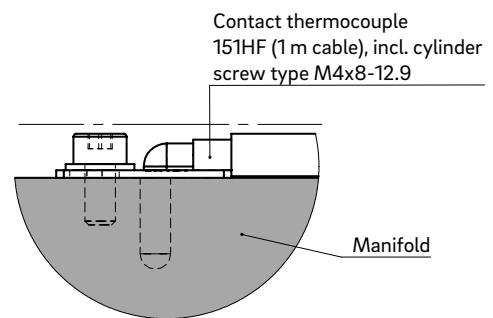
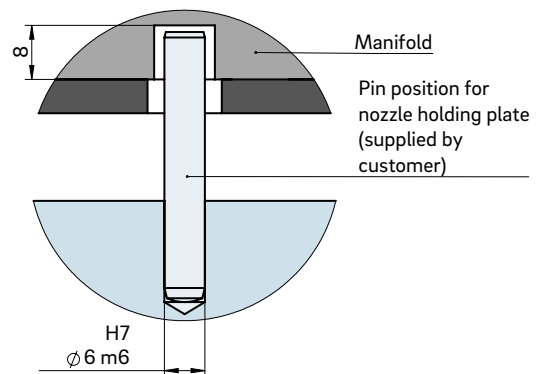
Type		NKCP = 36 (VH) Melt channel $\varnothing d$ in mm	NKDP = 46 (VH) Melt channel $\varnothing d$ in mm	Number of drops
NK_P4B		≤ 8 DS min. 35	≥ 10 to 12 DS min. 50	4

B = balanced



Cross manifold type NKCP4/NKDP4

Manifold length (VL) 240/270/300



TECHNICAL DATA

NKCP4/NKDP4 240/270/300

Manifold height (VH) NKCP: 36 mm
NKDP: 46 mm

Operating voltage 230 V_{AC} *

Manifold length (VL)	240	270	300
Pin position (SP)	81.0	87.5	101.0
Dimension B	127.0	156.6	187.0
Control circuits	2	2	2
Power (watts) per control circuit	2 × 1000	2 × 1350	2 × 1500

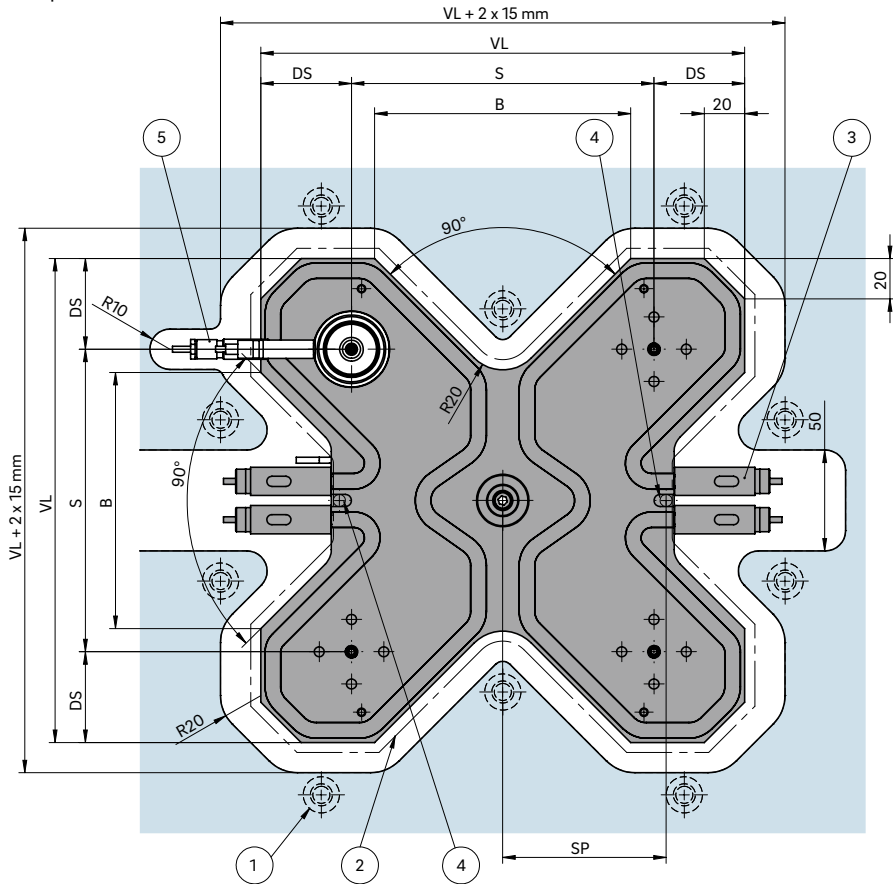
*Volts alternating current

WEBCODE
33090



INSTALLATION

Nozzle tip view

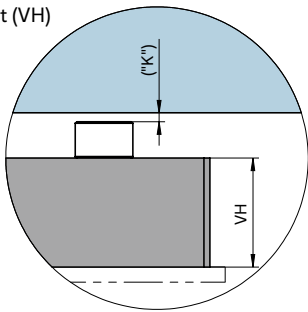


DS Edge distance:
 a. min. 35.0 with nozzle size ≤ 6
 b. min. 45.0 with nozzle size 8 or 10
 c. min. 50.0 with nozzle size ≥ 12

S Pitch between the nozzles

- ① Screw connection close to manifold
- ② High-temperature insulation plate
- ③ Heating connections
- ④ Possible pin position
- ⑤ Opening and plug location dependent upon nozzle type

Manifold height (VH)



Design examples/Balancing

Type		NKCP = 36 (VH) Melt channel Ød in mm	NKDP = 46 (VH) Melt channel Ød in mm	Number of drops
NK_P4B		≤ 8	≥ 10 to 12	4
		DS min. 35	DS min. 50	

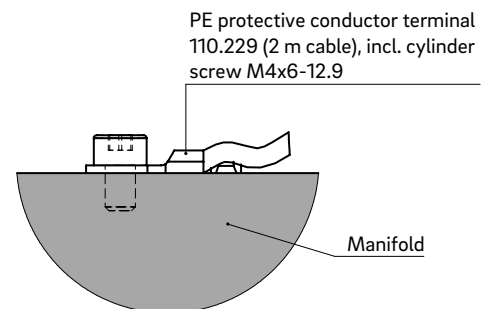
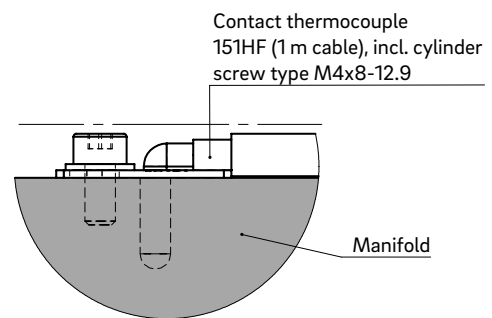
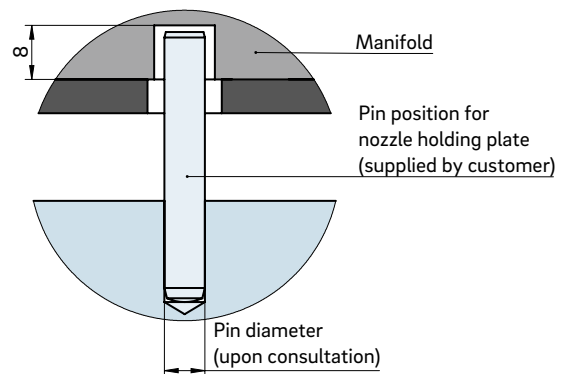
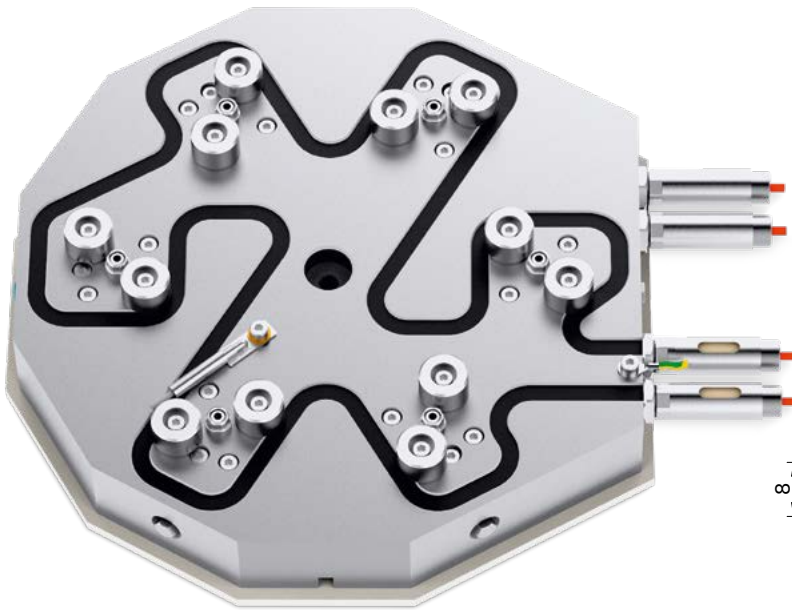
B = balanced

Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad (12 + 0.1 mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264



Star manifold type NSCP/NSDP/NSEP



TECHNICAL DATA

NSCP/NSDP/NSEP

Manifold height (VH) NSCP: 36 mm
NSDP: 46 mm
NSEP: 56 mm

Operating voltage 230 V_{AC}*

Manifold length (VL) ØTK + 2 × DS

The heating output of each control circuit is calculated individually.

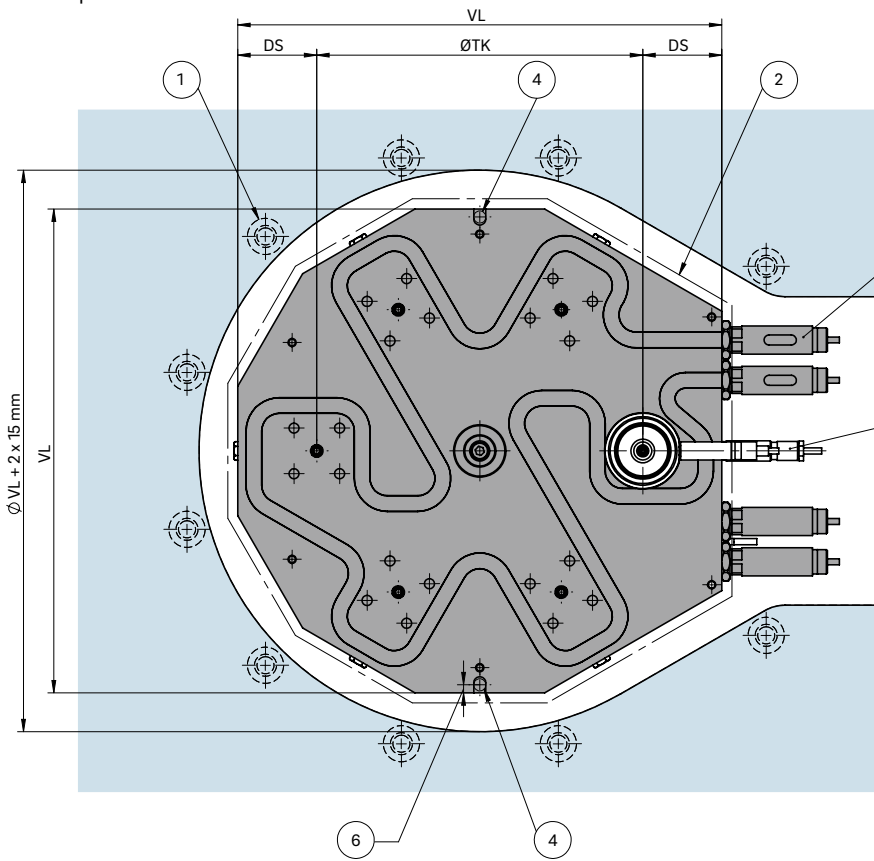
*Volts alternating current

WEBCODE
33100



INSTALLATION

Nozzle tip view

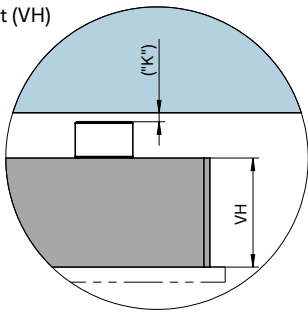


DS Edge distance:
 a. min. 35.0 with nozzle size ≤ 6
 b. min. 45.0 with nozzle size 8 or 10
 c. min. 50.0 with nozzle size ≥ 12

ØTK Pitch circle diameter

- ① Screw connection close to manifold
- ② High-temperature insulation plate
- ③ Heating connections
- ④ Possible pin position
- ⑤ Opening and plug location dependent upon nozzle type
- ⑥ Pin position "SP" = $d/2 + 1$ mm

Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad ($12 + 0.1$ mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

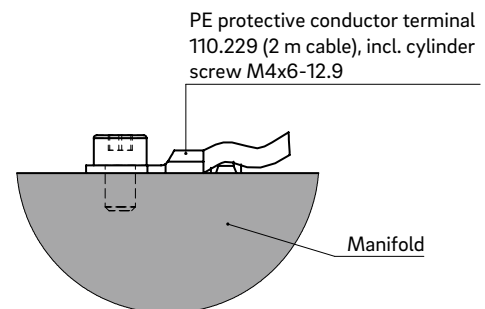
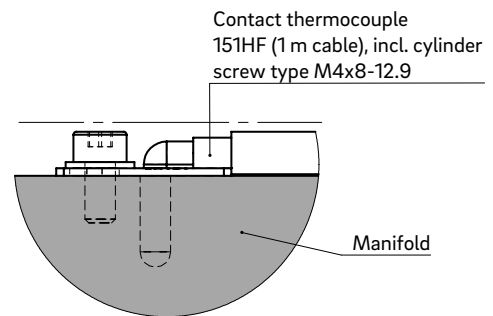
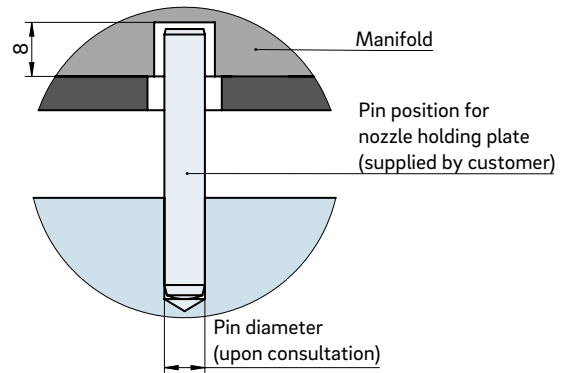
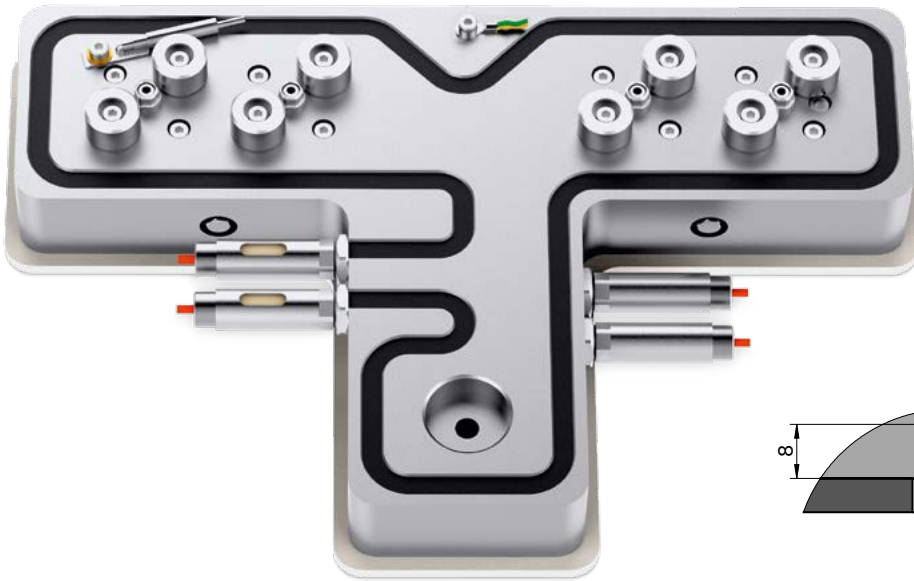
Design examples/Balancing

Type		NSCP = 36 (VH) Melt channel Ød in mm	NSDP = 46 (VH) Melt channel Ød in mm	NSP = 56 (VH) Melt channel Ød in mm	Number of drops
NS_P3B		≤ 8	≥ 10 to 12	≥ 16	3
NS_P6B			≤ 8	≤ 10	6
NS_P8B			≤ 8	≤ 10	8

B = balanced



T-manifold type NTCP/NTDP/NTEP



TECHNICAL DATA

NTCP/NTDP/NTEP

Manifold height (VH) NTCP: 36 mm
 NTDP: 46 mm
 NTEP: 56 mm

Operating voltage 230 V_{AC}*

Manifold length (VL) S1 + 2 × DS

Manifold width (VB) T + 2 × 40 mm

The heating output of each control circuit is calculated individually.

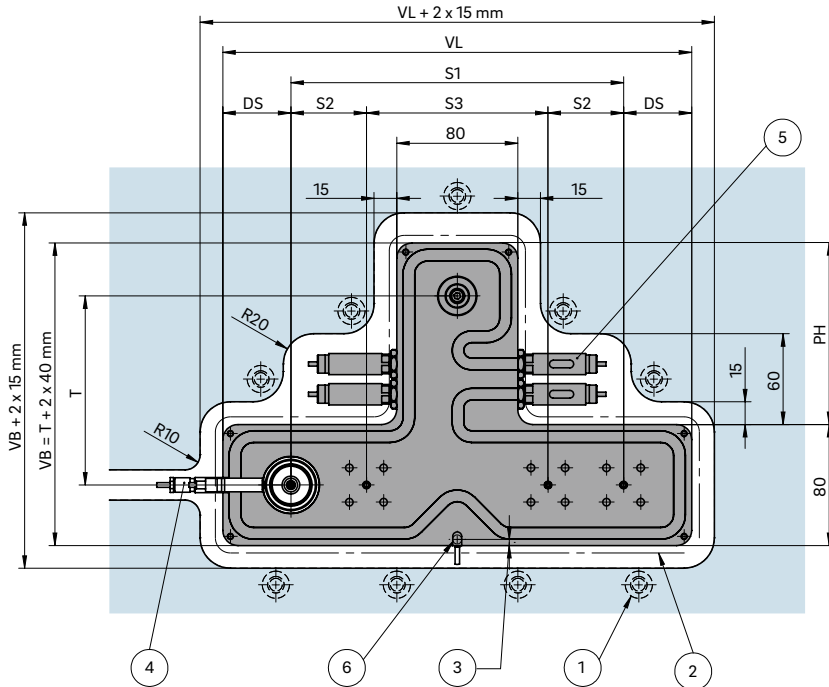
*Volts alternating current





INSTALLATION

Nozzle tip view

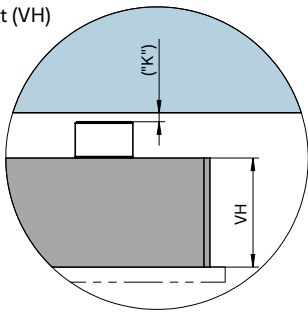


DS Edge distance:
 a. min. 35.0 with nozzle size ≤ 6
 b. min. 45.0 with nozzle size 8 or 10
 c. min. 50.0 with nozzle size ≥ 12

T Distance from the connecting nozzle to the nozzle row

- ① Screw connection close to manifold
- ② High-temperature insulation plate
- ③ Pin position "SP" = $d/2 + 1$ mm
- ④ Opening and plug location dependent upon nozzle type
- ⑤ Position of the heating connections with $PH \geq 100$
- ⑥ Position of the heating connections with $PH \leq 100$; different heating connection positions require consultation with the design office

Manifold height (VH)



Dimension "K" required for heat expansion is to be ensured by grinding the pressure pad ($12 + 0.1$ mm)! Determine the difference between the height of the manifold system and the height of the frame plate when installed! ΔT specifies the temperature differential between the processing temperature and the mould temperature!

VH	ΔT (°C)	100	150	200	250	300	350
36 mm	K (mm)	0.021	0.059	0.098	0.137	0.177	0.217
46 mm	K (mm)	0.033	0.078	0.124	0.170	0.218	0.264
56 mm	K (mm)	0.046	0.097	0.150	0.203	0.258	0.311

Design examples/Balancing

Type	NTCP = 36 (VH) Melt channel $\varnothing d$ in mm	NTDP = 46 (VH) Melt channel $\varnothing d$ in mm	NTEP = 56 (VH) Melt channel $\varnothing d$ in mm	Number of drops
NT_P2B	≤ 8	≥ 10 to 12	≥ 16	2
NT_P4-	≤ 8	≥ 10 to 12	≥ 16	4
NT_P4B	≤ 8	≥ 10 to 12	≥ 16	4
NT_P6T	≤ 8	≥ 10 to 12	≥ 16	6
NT_P8T	≤ 8	≥ 10 to 12	≥ 16	8

B = balanced T = partially balanced - = not balanced

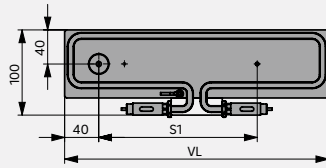


Rapid Systems – Valve Gate Systems, pneumatic

Fully configured valve gate system comprised of manifolds, nozzles and accessories.
Delivery time three working weeks.

N91

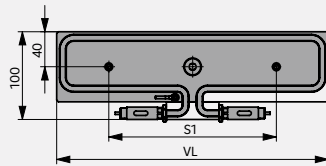
NGCP1-1 SERIES



Manifold length (VL)	Pitch (S1 mm) for nozzle type 6NHF + ENV	Pitch (S1 mm) for nozzle type 6NHF + EEV
160	≥ 54 - 85	≥ 45.5 - 85
210	> 85 - 135	> 85 - 135
260	> 135 - 185	> 135 - 185
310	> 185 - 235	> 185 - 235
360	> 235 - 285	> 235 - 285

N93

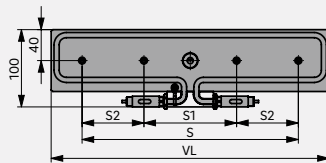
NGCP2-1 SERIES



Manifold length (VL)	Pitch (S1 mm) for nozzle type 6NHF + ENV	Pitch (S1 mm) for nozzle type 6NHF + EEV
210	≥ 108 - 140	≥ 91 - 140
260	> 140 - 190	> 140 - 190
310	> 190 - 240	> 190 - 240
360	> 240 - 290	> 240 - 290

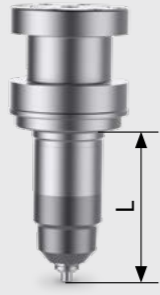
N94

NGCP4B SERIES

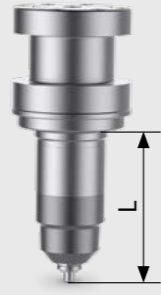


Manifold length (VL)	Pitch S=total (min. to max.) mm for nozzle type 6NHF + EEV
310	≥ 207 - 240
360	> 240 - 290

6NHF NOZZLE TYPE + ENV



6NHF NOZZLE TYPE + EEV



8NMT3 NOZZLE TYPE + ENV



8NMT3 NOZZLE TYPE + EEV



Pitch (S1 mm) for nozzle type 8NMT3 + ENV	Pitch (S1 mm) for nozzle type 8NMT3 + EEV
≥ 54 - 75	≥ 45.5 - 75
> 75 - 125	> 75 - 125
> 125 - 175	> 125 - 175
> 175 - 225	> 175 - 225
> 225 - 275	> 225 - 275

Melt channel Ø (mm) / nozzle length (L mm)

6 / 50, 60, 80

Smallest pitch S1 ≥ 54
 - Needle guide type: LA1.2 to 1.6 / LAZ1.2 to 1.6
 - Configuration option: S-096¹
 - Needle drive: ENV3/10/L(/G²)
 - Connecting nozzle type: AKD6

Melt channel Ø (mm) / nozzle length (L mm)

6 / 50, 60, 80

Smallest pitch S1 ≥ 45.5
 - Needle guide type: LA1.2 to 1.6 / LAZ1.2 to 1.6
 - Configuration option: S-096¹
 - Needle drive: EEV2-3/10/L(/G²)
 - Connecting nozzle type: AKD6

Melt channel Ø (mm) / nozzle length (L mm)

7.5 / 50, 60, 80

Smallest pitch S1 ≥ 54
 - Needle guide type: LA1.6 to 2.5 / LAZ1.6 to 2.5
 - Configuration option: S-096¹
 - Needle drive: ENV3/10/L(/G²)
 - Connecting nozzle type: AKD8

Melt channel Ø (mm) / nozzle length (L mm)

7.5 / 50, 60, 80

Smallest pitch S1 ≥ 45.5
 - Needle guide type: LA1.6 to 2.5 / LAZ1.6 to 2.5
 - Configuration option: S-096¹
 - Needle drive: EEV2-3/10/L(/G²)
 - Connecting nozzle type: AKD8

Pitch (S1 mm) for nozzle type 8NMT3 + ENV	Pitch (S1 mm) for nozzle type 8NMT3 + EEV
= 120	≥ 103 - 120
> 120 - 170	> 120 - 170
> 170 - 220	> 170 - 220
> 220 - 270	> 220 - 270

Melt channel Ø (mm) / nozzle length (L mm)

6 / 50, 60, 80

Smallest pitch S1 ≥ 108
 - Needle guide type: LA1.2 to 1.6 / LAZ1.2 to 1.6
 - Configuration option: S-096¹
 - Needle drive: ENV3/10/L(/G²)
 - Connecting nozzle type: AKD8

Melt channel Ø (mm) / nozzle length (L mm)

6 / 50, 60, 80

Smallest pitch S1 ≥ 91
 - Needle guide type: LA1.2 to 1.6 / LAZ1.2 to 1.6
 - Configuration option: S-096¹
 - Needle drive: EEV2-3/10/L(/G²)
 - Connecting nozzle type: AKD8

Melt channel Ø (mm) / nozzle length (L mm)

7.5 / 50, 60, 80

Smallest pitch S1 ≥ 120
 - Needle guide type: LA1.6 to 2.5 / LAZ1.6 to 2.5
 - Configuration option: S-096¹
 - Needle drive: ENV3/10/L(/G²)
 - Connecting nozzle type: ASD10

Melt channel Ø (mm) / nozzle length (L mm)

7.5 / 50, 60, 80

Smallest pitch S1 ≥ 103
 - Needle guide type: LA1.6 to 2.5 / LAZ1.6 to 2.5
 - Configuration option: S-096¹
 - Needle drive: EEV2-3/10/L(/G²)
 - Connecting nozzle type: ASD10

Melt channel Ø (mm) / nozzle length (L mm)

6 / 50, 60, 80

Smallest pitch S1 ≥ 108
 Smallest pitch S2 ≥ 67
 - Needle guide type: LA1.2 to 1.6 / LAZ1.2 to 1.6
 - Configuration option: S-096¹
 - Needle drive: ENV3/10/L(/G²)
 - Connecting nozzle type: AKD8

Melt channel Ø (mm) / nozzle length (L mm)

6 / 50, 60, 80

Smallest pitch S1 ≥ 91
 Smallest pitch S2 ≥ 58
 - Needle guide type: LA1.2 to 1.6 / LAZ1.2 to 1.6
 - Configuration option: S-096¹
 - Needle drive: EEV2-3/10/L(/G²)
 - Connecting nozzle type: AKD8

You can create CAD data and price information via the CADHOC portal. When configuring your Rasant system, you will be asked for the necessary information about the application and the mould.

RAPID SYSTEM – VALVE GATE SYSTEMS, PNEUMATIC

Consisting of:

- 1 Connecting nozzle type AKD or ASD incl. titanium ring
- 2/4/8 Pressure pads
- 1 Manifold, insulating plate optional
- 1 Contact thermocouple 151 HF
- 1/2/4 Nozzle type NHF, NMT3
- 1/2/4 Power connector CHF (NHF), fixed power connection (NMT3)
- 1/2/4 Thermocouple plug CMLK (NHF), fixed thermocouple connection (NMT3)
- 1 Spacer
- 1/2/4 Needle guide (LA/LAZ)
- 1/2/4 Single-needle valve ENV, pneumatic
- 1/2/4 Single-needle valve EEV, pneumatic
- 1/2/4 Sealing needles

Cylindrical pin to prevent rotation is not included in the scope of delivery.

ORDER

You choose:

1. Manifold Rapid series NGCP2-1		N 93							
2. Manifold length 210 mm	(21)	N 93		21					
3. Melt channel Ø 6 mm	(06)	N 93		21		06			
4. Nozzle length 60 mm	(06)	N 93		21		06		06	
5. Nozzle type NHF	(HF)	N 93		21		06		06	
6. Model	(-1)	N 93		21		06		06	
7. Pneumatic drive	(-ENV)	N 93		21		06		06	
		N 93		21		06		06	

The article no. for the selected Rapid valve gate system, single needle valve ENV, with pneumatic drive and nozzle type 6NHF60 is:

N93210606HF-1-ENV

You can add a pitch distance, straight line, radius or angle, needle guide (LA/LAZ), gate point Ø and needle drive with housing or without housing to your specifications.

Delivery time three working weeks.

¹ Configuration option S-096: Needle guide with reduced contact surface.

² Configuration option: with housing or without housing.