











Open  
hot runner systems





## 2.3 Gate bushings

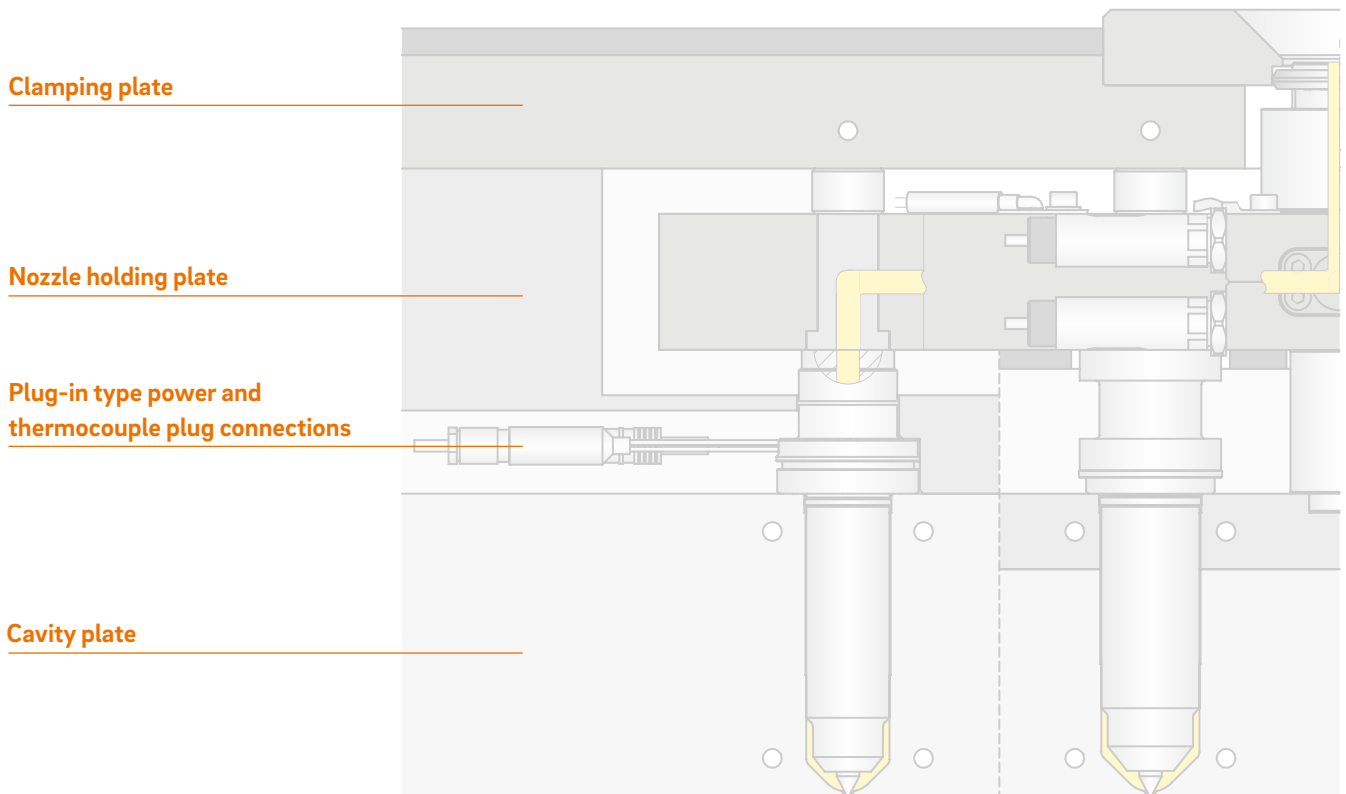
### GATE BUSHINGS

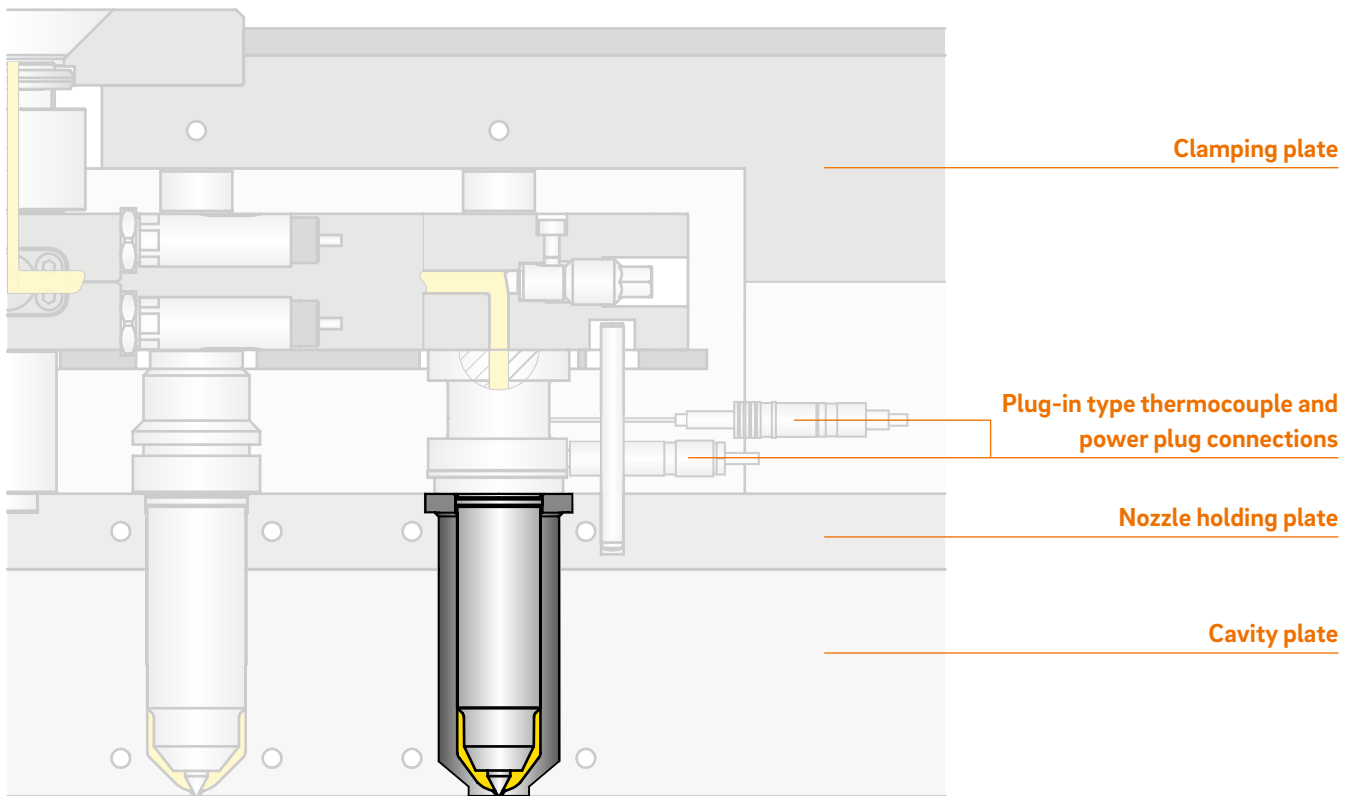
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# Overview of overall design

## Gate bushings







# Gate bushing type LA/LAV

Version LA with extended length and

version LAV with extended length and wear protection

## TECHNICAL DATA

### Dimensions

	Version (mm)						
	ØA	ØS	ØT <sub>1</sub>	s	u	ØA <sub>1</sub>	R
15LA	35	15	22	5	5	36	5
20LA	35	20	28	5	15	36	5
22LA/LAV	38	22	32	5	15	39	8
26LA/LAV	45	26	36	5	15	46 <sup>1,2</sup>	8

<sup>1</sup>ØA<sub>1</sub> = 49 mm with nozzle type 8SET/8DET

<sup>2</sup>ØA<sub>1</sub> = 56 mm with nozzle type 8SHT

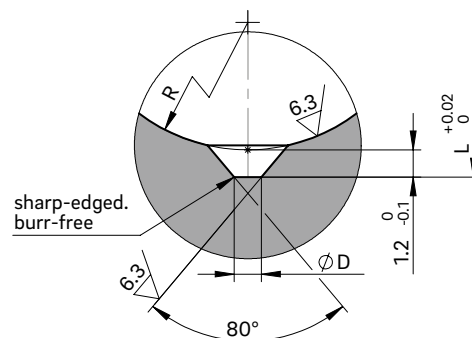
## NOTE

When using a gate bushing of size ØS = 26 mm in conjunction with nozzle types \_ET and \_HT, we recommend consulting with the engineers.

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).



## ANTECHAMBER VERSIONS A/B

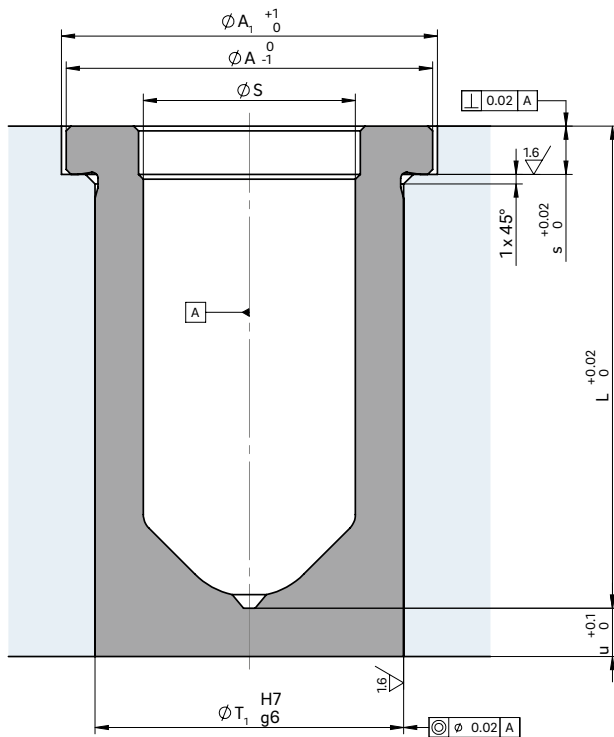


For open nozzles with a tip/open nozzles with a straight outlet for antechamber versions A/B and nozzle piece C

WEBCODE  
23010



**GATE BUSHING INSTALLATION**



For gate bushings with an extended length, the gate contour goes through dimension "L"

Nozzle type designation	Gate bushing type/length (mm)															
	L=50		L=60		L=80		L=100		L=120		L=120		L=120		L=120	
4SHF/4DHF	■	15LA	■	15LA	■	15LA										
4STT/4DTT	■	15LA	■	15LA	■	15LA										
4SMT/4DMT	■	20LA	■	20LA	■	20LA	■	20LA								
5SHT/5DHT	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV
5SMT/5DMT	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV
6SHF/6DHF	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV
6STT/6DTT	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV	■	22LA	□	22LAV
6SHT/6DHT	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV
6SMT/6DMT	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV
8SET/8DET	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV
8SHF/8DHF	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV
8SHT/8DHT	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV
8SMT/8DMT	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV	■	26LA	□	26LAV

■ available □ on request



# Gate bushing type LB

## Version LB with extended length

### TECHNICAL DATA

#### Dimensions

	Version (mm)						
	$\varnothing A$	$\varnothing S$	$\varnothing T_1$	s	u	$\varnothing A_1$	R
<b>18LB</b>	38	18	26	5	6	39 <sup>1</sup>	8
<b>32LB/LBV</b>	50	32	42	9	15	56	13
<b>38LB/LBV</b>	59	38	48	12	20	60	16

<sup>1</sup> $\varnothing A_1 = 43$  mm with nozzle type 5SEF/5DEF

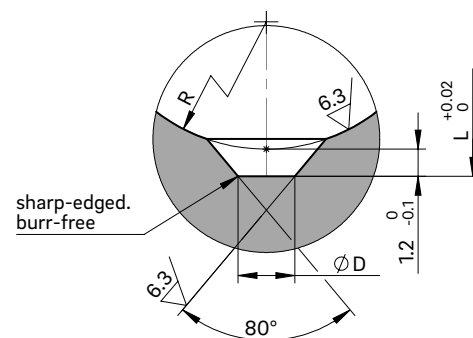
### NOTE

When using a gate bushing of size  $\varnothing S$  32 mm and  $\varnothing S$  38 mm in conjunction with nozzle types \_ET and \_HT, we recommend consulting with the engineers.

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).



### ANTECHAMBER VERSIONS A/B

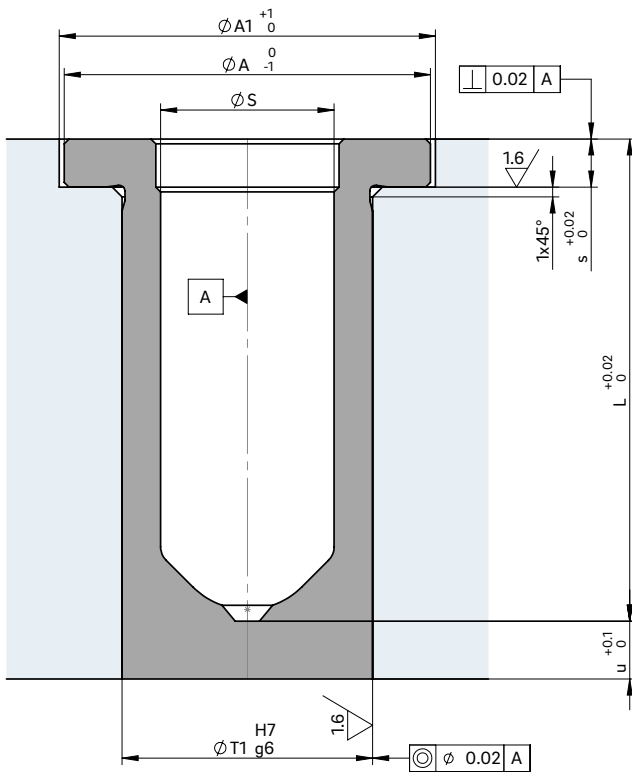


For open nozzles with a tip/open nozzles with a straight outlet for antechamber versions A/B and nozzle piece C

**WEBCODE**  
23020



**GATE BUSHING INSTALLATION**



For gate bushings with an extended length, the gate contour goes through dimension "L"

Nozzle type designation	Gate bushing type/length (mm)											
	L = 50		L = 60		L = 80		L = 100		L = 120			
5SEF/5DEF	■	18LB	■	18LB	■	18LB						
5SHF/5DHF	■	18LB	■	18LB	■	18LB	■	18LB				
5STT/5DTT	■	18LB	■	18LB	■	18LB	■	18LB				
10SHT/10DHT			■	32LB □ 32LBV	■	32LB □ 32LBV	■	32LB □ 32LBV	■	32LB □ 32LBV	■	32LB □ 32LBV
10SMT/10DMT			■	32LB □ 32LBV	■	32LB □ 32LBV	■	32LB □ 32LBV	■	32LB □ 32LBV	■	32LB □ 32LBV
12SET/12DET			■	38LB □ 38LBV	■	38LB □ 38LBV	■	38LB □ 38LBV	■	38LB □ 38LBV	■	38LB □ 38LBV
12SHT/12DHT			■	38LB □ 38LBV	■	38LB □ 38LBV	■	38LB □ 38LBV	■	38LB □ 38LBV	■	38LB □ 38LBV
12SMT/12DMT			■	38LB □ 38LBV	■	38LB □ 38LBV	■	38LB □ 38LBV	■	38LB □ 38LBV	■	38LB □ 38LBV

■ available □ on request



# Gate bushing type LC/LCV

Version LC with extended length and  
version LCV with extended length and wear protection

## TECHNICAL DATA

### Dimensions

	Version (mm)						R
	ØA	ØS	ØT <sub>1</sub>	s	u	ØA <sub>1</sub>	
<b>15LC</b>	35	15	22	5	5	36	5
<b>20LC</b>	35	20	28	5	15	36	5
<b>22LC/LCV</b>	38	22	32	5	15	39	8
<b>26LC/LCV</b>	45	26	36	5	15	46 <sup>1,2</sup>	8

<sup>1</sup>ØA<sub>1</sub> = 49 mm with nozzle type 8DET

<sup>2</sup>ØA<sub>1</sub> = 56 mm with nozzle type 8DHT

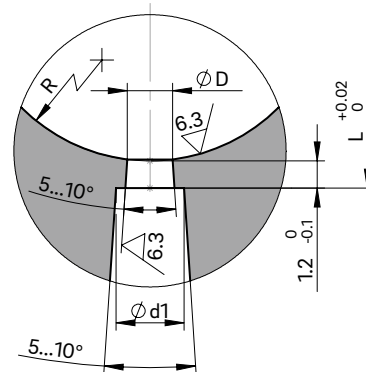
## NOTE

When using a gate bushing of size ØS = 26 mm in conjunction with nozzle types \_ET and \_HT, we recommend consulting with the engineers.

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).



## ANTECHAMBER VERSIONS C AND D



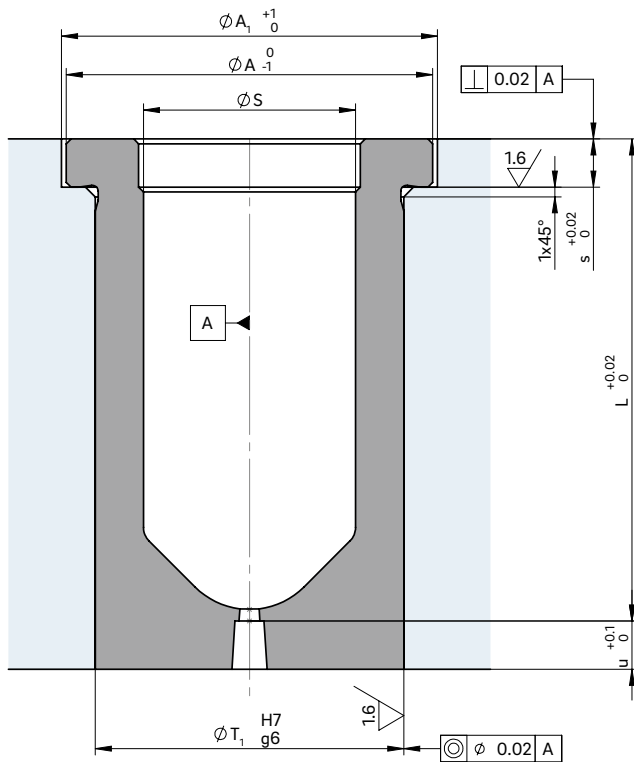
Ød1 0.5 mm larger than ØD

For open nozzles with a straight outlet for antechamber version C and D and nozzle piece A

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23030



**GATE BUSHING INSTALLATION**



For gate bushings with an extended length, the gate contour goes through dimension "L"

Nozzle type designation	Gate bushing type/length (mm)															
	L=50		L=60		L=80		L=100		L=120		L=120		L=120		L=120	
4DHF	■	15LC	■	15LC	■	15LC										
4DTT	■	15LC	■	15LC	■	15LC										
4DMT	■	20LC	■	20LC	■	20LC			■	20LC						
5DHT	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV
5DMT	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV
6DHF	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV
6DTT	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV	■	22LC	□	22LCV
6DHT	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV
6DMT	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV
8DET	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV
8DHF	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV
8DHT	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV
8DMT	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV	■	26LC	□	26LCV

■ available □ on request



# Gate bushing type LD

## Version LD with extended length

### TECHNICAL DATA

#### Dimensions

	Version (mm)						
	ØA	ØS	ØT <sub>1</sub>	s	u	ØA <sub>1</sub>	R
<b>18LD</b>	38	18	26	5	6	39 <sup>1</sup>	8
<b>32LD/LDV</b>	50	32	42	9	15	56	13
<b>38LD/LDV</b>	59	38	48	12	20	60	16

<sup>1</sup>ØA<sub>1</sub> = 43 mm with nozzle type 5DEF

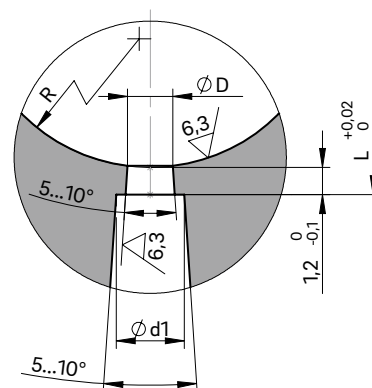
### NOTE

When using a gate bushing of size ØS 32 mm and ØS 38 mm in conjunction with nozzle types \_ET and \_HT, we recommend consulting with the engineers.

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).



### ANTECHAMBER VERSIONS C AND D



Ød1 0.5 mm larger than ØD

For open nozzles with a straight outlet for antechamber version C and D and nozzle piece A

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23040





# Gate bushing type VA/VAV

Versions VA and VAV with wear protection

## TECHNICAL DATA

### Dimensions

	Version (mm)								
	$\varnothing A$	$\varnothing S$	$\varnothing T_1$	s	$\varnothing A_1$	R	$\varnothing P$	$t_1$	t
15VA	35	15	22	5	36	5	12	2.3	2.5
20VA	35	20	28	5	36	5	16	2.3	2.5
22VA/VAV	38	22	32	5	39	8	16	2.3	2.5
26VA/VAV	45	26	36	5	46 <sup>1,2</sup>	8	16	2.3	2.5

<sup>1</sup> $\varnothing A_1 = 49$  mm with nozzle type 8SET/8DET

<sup>2</sup> $\varnothing A_1 = 56$  mm with nozzle type 8SHT

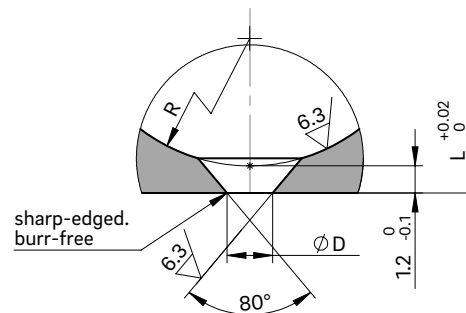
### NOTE

When using a gate bushing of size  $\varnothing S = 26$  mm in conjunction with nozzle types \_ET and \_HT, we recommend consulting with the engineers.

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).



### ANTECHAMBER VERSIONS A/B

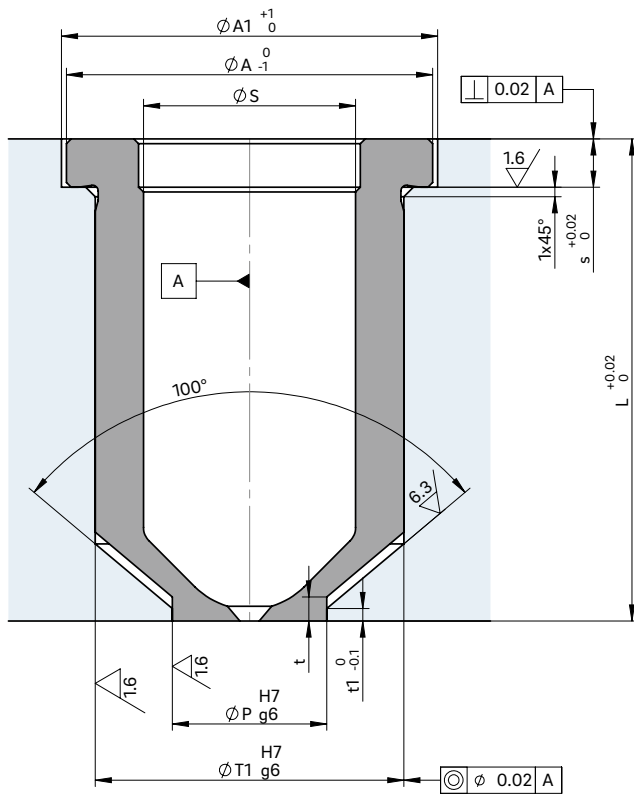


For open nozzles with a tip/open nozzles with a straight outlet for antechamber versions A/B and nozzle piece C

WEBCODE  
23050



**GATE BUSHING INSTALLATION**



Nozzle type designation	Gate bushing type/length (mm)															
	L= 50		L= 60		L= 80		L= 100		L= 120		L= 120		L= 120		L= 120	
4SHF/4DHF	■	15VA			■	15VA			■	15VA						
4STT/4DTT	■	15VA			■	15VA			■	15VA						
4SMT/4DMT	■	20VA			■	20VA			■	20VA			■	20VA		
5SHT/5DHT	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV
5SMT/5DMT	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV
6SHF/6DHF	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV
6STT/6DTT	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV	■	22VA	□	22VAV
6SHT/6DHT	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV
6SMT/6DMT	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV
8SET/8DET	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV
8SHF/8DHF	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV
8SHT/8DHT	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV
8SMT/8DMT	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV	■	26VA	□	26VAV

■ available □ on request



# Gate bushing type VB

## Versions VB

### TECHNICAL DATA

#### Dimensions

	Version (mm)									
	ØA	ØS	ØT <sub>1</sub>	s	ØA <sub>1</sub>	R	ØP	t <sub>1</sub>	t	
<b>18VB</b>	38	18	26	5	39 <sup>1</sup>	8	16	2.3	2.5	
<b>32VB/VBV</b>	50	32	42	9	56	13	20	3.3	3.5	
<b>38VB/VBV</b>	59	38	48	12	60	16	26	4.3	4.5	

<sup>1</sup>ØA<sub>1</sub> = 43 mm with nozzle type 5SEF/5DEF

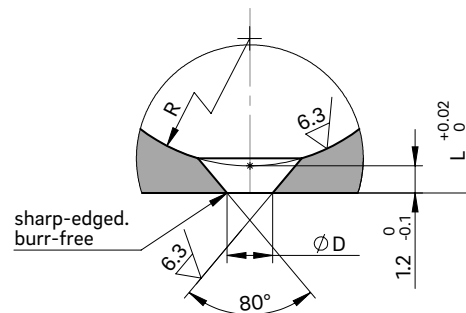
### NOTE

When using a gate bushing of size ØS 32 mm and ØS 38 mm in conjunction with nozzle types \_ET and \_HT, we recommend consulting with the engineers.

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).



### ANTECHAMBER VERSIONS A/B

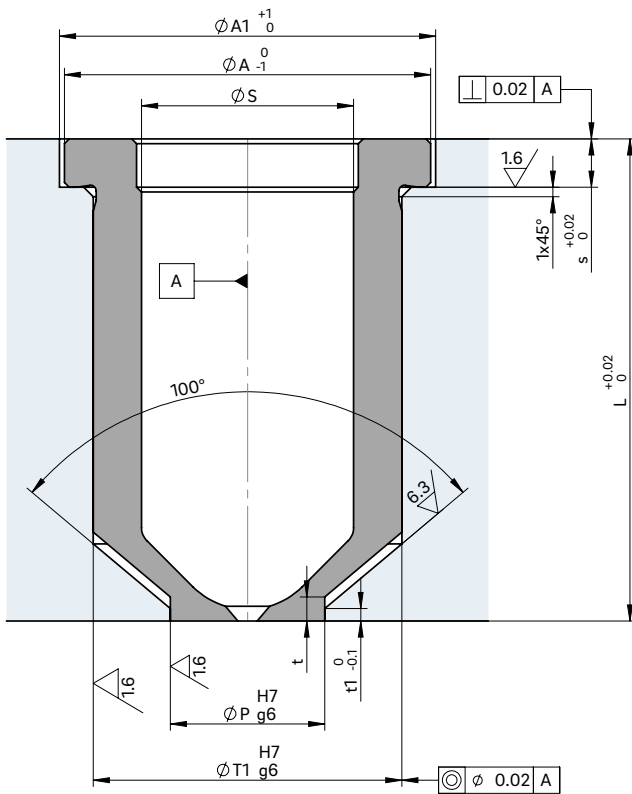


For open nozzles with a tip/open nozzles with a straight outlet for antechamber versions A/B and nozzle piece C

**WEBCODE**  
23055



**GATE BUSHING INSTALLATION**



Nozzle type designation	Gate bushing type/length (mm)										
	L = 50		L = 60		L = 80		L = 100		L = 120		
5SEF/5DEF	■ 18VB	■ 18VB			■ 18VB						
5SHF/5DHF	■ 18VB	■ 18VB			■ 18VB		■ 18VB				
5STT/5DTT	■ 18VB	■ 18VB			■ 18VB		■ 18VB				
10SHT/10DHT		■ 32VB	□ 32VBV	■ 32VB	□ 32VBV	■ 32VB	□ 32VBV	■ 32VB	□ 32VBV	■ 32VB	□ 32VBV
10SMT/10DMT		■ 32VB	□ 32VBV	■ 32VB	□ 32VBV	■ 32VB	□ 32VBV	■ 32VB	□ 32VBV	■ 32VB	□ 32VBV
12SET/12DET		■ 38VB	□ 38VBV	■ 38VB	□ 38VBV	■ 38VB	□ 38VBV	■ 38VB	□ 38VBV	■ 38VB	□ 38VBV
12SHT/12DHT		■ 38VB	□ 38VBV	■ 38VB	□ 38VBV	■ 38VB	□ 38VBV	■ 38VB	□ 38VBV	■ 38VB	□ 38VBV
12SMT/12DMT		■ 38VB	□ 38VBV	■ 38VB	□ 38VBV	■ 38VB	□ 38VBV	■ 38VB	□ 38VBV	■ 38VB	□ 38VBV

■ available □ on request



# Gate bushing type VC/VCV

## Versions VC and VCV with wear protection

### TECHNICAL DATA

#### Dimensions

	Version (mm)								
	ØA	ØS	ØT <sub>1</sub>	s	ØA <sub>1</sub>	R	ØP	t <sub>1</sub>	t
15VC	35	15	22	5	36	5	12	2.3	2.5
20VC	35	20	28	5	36	5	16	2.3	2.5
22VC/VCV	38	22	32	5	39	8	16	2.3	2.5
26VC/VCV	45	26	36	5	46 <sup>1,2</sup>	8	16	2.3	2.5

<sup>1</sup>ØA<sub>1</sub> = 49 mm with nozzle type 8DET

<sup>2</sup>ØA<sub>1</sub> = 56 mm with nozzle type 8DHT

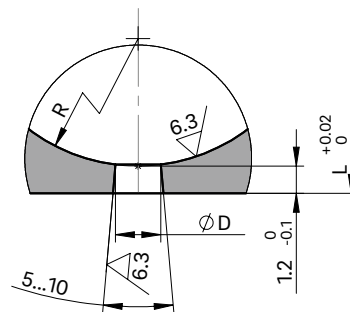
#### NOTE

When using a gate bushing of size ØS = 26 mm in conjunction with nozzle types \_ET and \_HT, we recommend consulting with the engineers.

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).



#### ANTECHAMBER VERSIONS C AND D

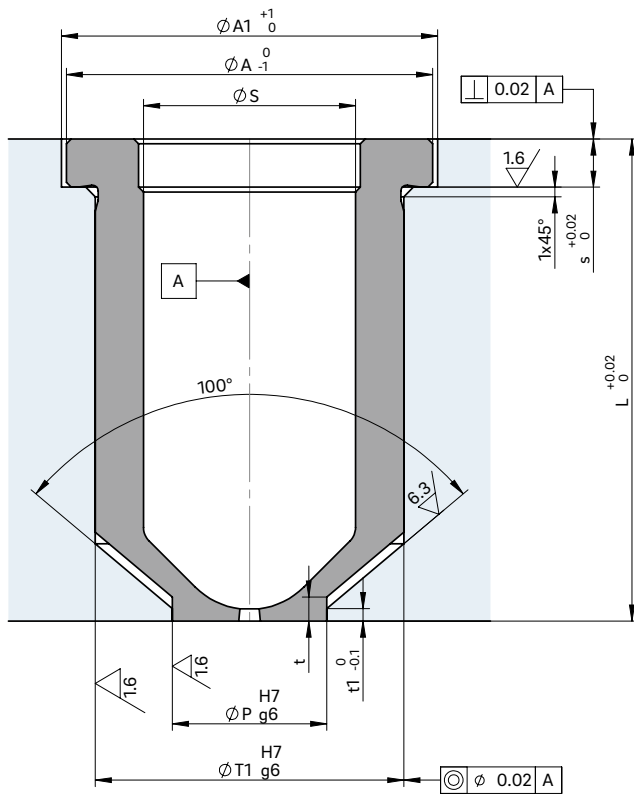


For open nozzles with a straight outlet for antechamber version C and D and nozzle piece A

**WEBCODE**  
23060



**GATE BUSHING INSTALLATION**



Nozzle type designation	Gate bushing type/length (mm)											
	L= 50		L= 60		L= 80		L= 100		L= 120			
4DHF	■ 15VC		■ 15VC		■ 15VC							
4DTT	■ 15VC		■ 15VC		■ 15VC							
4DMT	■ 20VC		■ 20VC		■ 20VC		■ 20VC					
5DHT	■ 22VC □ 22VCV		■ 22VC □ 22VCV		■ 22VC □ 22VCV		■ 22VC □ 22VCV					
5DMT	■ 22VC □ 22VCV		■ 22VC □ 22VCV		■ 22VC □ 22VCV		■ 22VC □ 22VCV		■ 22VC □ 22VCV		■ 22VC □ 22VCV	
6DHF	■ 22VC □ 22VCV		■ 22VC □ 22VCV		■ 22VC □ 22VCV		■ 22VC □ 22VCV		■ 22VC □ 22VCV		■ 22VC □ 22VCV	
6DTT	■ 22VC □ 22VCV		■ 22VC □ 22VCV		■ 22VC □ 22VCV		■ 22VC □ 22VCV		■ 22VC □ 22VCV		■ 22VC □ 22VCV	
6DHT	■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV	
6DMT	■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV	
8DET	■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV	
8DHF	■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV	
8DHT	■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV	
8DMT	■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV		■ 26VC □ 26VCV	

■ available □ on request



# Gate bushing type VD

## Versions VD

### TECHNICAL DATA

#### Dimensions

	Version (mm)									
	ØA	ØS	ØT <sub>1</sub>	s	ØA <sub>1</sub>	R	ØP	t <sub>1</sub>	t	
<b>18VD</b>	38	18	26	5	39 <sup>1</sup>	8	16	2.3	2.5	
<b>32VD/VDV</b>	50	32	42	9	56	13	20	3.3	3.5	
<b>38VD/VDV</b>	59	38	48	12	60	16	26	4.3	4.5	

<sup>1</sup>ØA<sub>1</sub> = 43 mm with nozzle type 5DEF

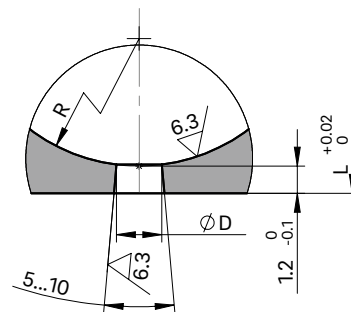
### NOTE

When using a gate bushing of size ØS 32 mm and ØS 38 mm in conjunction with nozzle types \_ET and \_HT, we recommend consulting with the engineers.

After eroding the gate bushing, it must be annealed to remove stress (1 hour at 470 °C).



### ANTECHAMBER VERSIONS C AND D

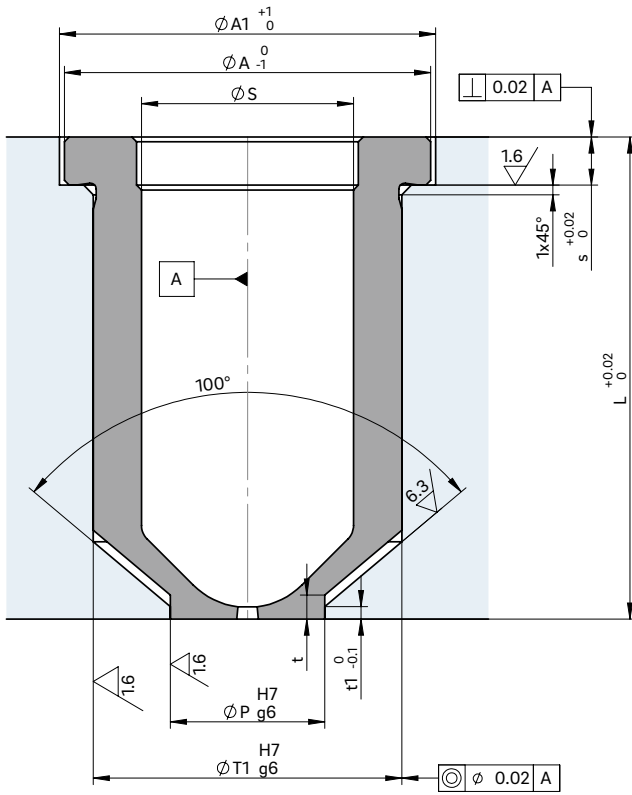


For open nozzles with a straight outlet for antechamber version C and D and nozzle piece A

**WEBCODE**  
23065



**GATE BUSHING INSTALLATION**



Nozzle type designation	Gate bushing type/length (mm)											
	L = 50		L = 60		L = 80		L = 100		L = 120			
5DEF	■ 18VD	■ 18VD			■ 18VD							
5DHF	■ 18VD	■ 18VD			■ 18VD		■ 18VD					
5DTT	■ 18VD	■ 18VD			■ 18VD		■ 18VD					
10DHT		■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV
10DMT		■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV	■ 32VD □ 32VDV
12DET		■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV
12DHT		■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV
12DMT		■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV	■ 38VD □ 38VDV

■ available □ on request