



# Venting Solutions

VENTING IS AN INTEGRAL PART OF THE MOLD PROCESS, AN OPTIMAL DESIGN AND FUNCTIONING VENTING SYSTEM ALLOWS EFFICIENT MANUFACTURING OF HIGH QUALITY PARTS.

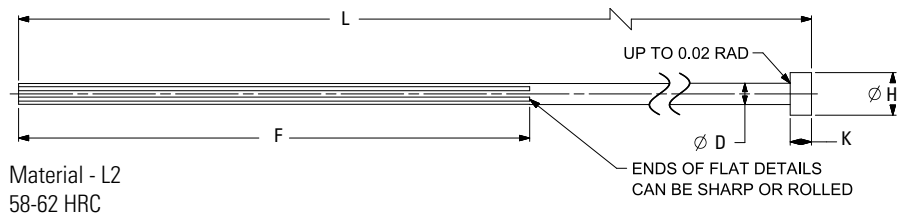
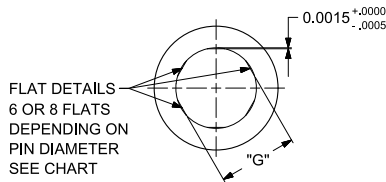
# Vented Pins

**By simply switching from your current ejector pins you will see the difference!**

- Functional air grooves easily allow trapped gas to escape
- Easy cleaning while the mold is in the press
- Interchangeable with standard ejector pins
- Length can be altered without compromising performance
- Precise tolerances allows smooth pin movement
- Available in Inch or Metric

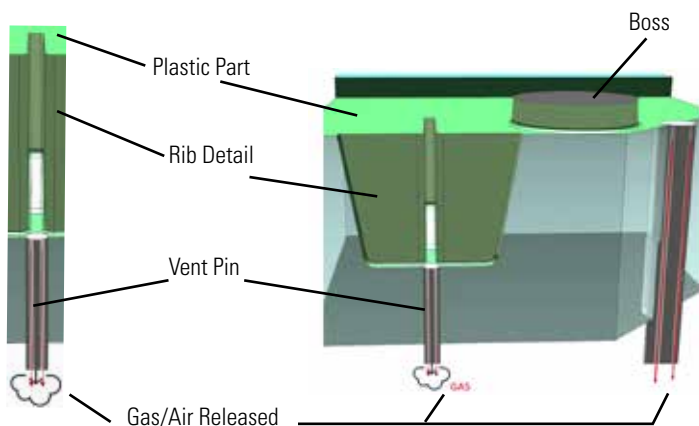


SAVE time and potential costly mistakes making your own!



## INCH

ITEM NUMBER	Ø D DIAMETER -.0003/-0.0006	L OVERALL LENGTH +.380/-0.000	H HEAD DIAMETER +.000/-0.008	K HEAD THICKNESS +.000/-0.002	F LENGTH OF SLOTS +1/-1	G +.001/-0.000	FLAT DETAILS
VP7-06	0.0937	6.0	0.250	0.125	4.0	0.0907	6 = 360°/6
VP7-10		10.0			6.0		
VP9-06	0.125	6.0			4.0	0.122	
VP9-10		10.0			6.0		
VP13-06	0.1875	6.0	0.375	0.1875	4.0	0.1845	
VP13-10		10.0			6.0		
VP15-10	0.2187	10.0			6.0	0.2157	
VP17-06	0.250	6.0			0.4375	0.1875	
VP17-10		10.0	6.0				
VP17-14		14.0	8.0				
VP21-10	0.3125	10.0	0.500	0.250	5.0	0.3095	8 = 360°/8
VP21-14		14.0			5.0		
VP25-06	0.375	6.0			5.0	0.372	
VP25-10		10.0			6.0		
VP25-14		14.0	8.0				
VP33-14	0.500	14.0	0.750		8.0	0.497	



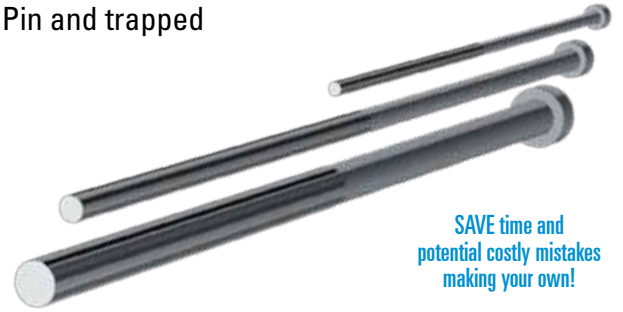
Ideally located in areas of maximum gas build-up within the cavity such as:

- in bottom of ribs
- after cavity features like bosses helping avoid knitlines

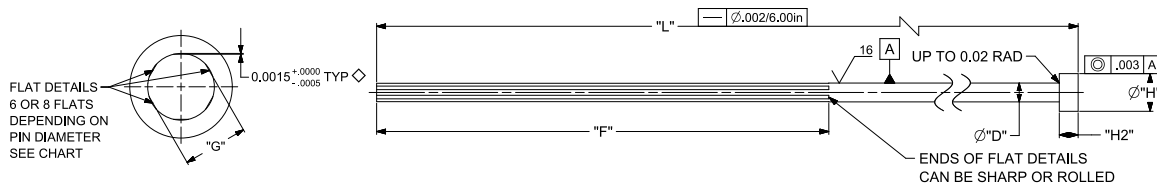
# Vented Pins

Problems with part quality? Entrapped gas/air within the cavity/core can cause issues such as short shots, burns and knit-lines. The solution is the DME Vented Pin. Simply replace your standard ejector pin with a DME Vented Pin and trapped air and gases can be released reducing quality problems.

- Functional air grooves easily allow entrapped gas to escape
- Easy cleaning while the mold is in the press
- Interchangeable with standard ejector pins
- Length can be altered without compromising performance



SAVE time and potential costly mistakes making your own!



Material - L2  
58-62 HRC

## METRIC

ITEM NUMBER	Ø D DIAMETER g6	L OVERALL LENGTH +10/-0	H HEAD DIAMETER +.000/-0.008	K HEAD THICKNESS +0/-2	F LENGTH OF SLOTS +2/-3	G +.026/-0.000	FLAT DETAILS
VEPH3-160-3	3	160	6	3	100	2.924	6 = 360°/6
VEPH3-250-3		250			150		
VEPH4-160-3	4	160	8		100	3.924	
VEPH4-250-3		250			150		
VEPH5-160-3	5	160	10		100	4.924	
VEPH5-250-3		250			150		
VEPH6-160-5	6	160	12	5	100	5.924	
VEPH6-250-5		250			150		
VEPH8-160-5	8	160	14		100	7.924	
VEPH8-250-5		250			150		
VEPH8-400-5		400			250		
VEPH10-160-5	10	160	16		100	9.924	
VEPH10-250-5		250		150			
VEPH10-400-5		400		250			
VEPH12-160-7	12	160	18	7	100	11.924	
VEPH12-250-7		250			150		
VEPH12-400-7		400			250		



COMPLETE PRODUCT DETAILS

# Dynamic Gas Venting System

## Better Part Quality with Greater Output

Ideally suited for large part molding and corrosive environments where excessive gasses can be an issue.

Insufficient venting is a common challenge and can be the source of major challenges in the molding process. Problems can be avoided with good mold design and the incorporation of specially designed engineered components and/or materials that enable the venting of the material. DME is the Industry leader in Venting Solutions and provides a wide selection of products to meet your specific application requirements in both small and large tooling.

The Dynamic Gas Venting System can be installed with minimum machining and is designed to deliver a simple venting solution without the need to add any external vacuum.

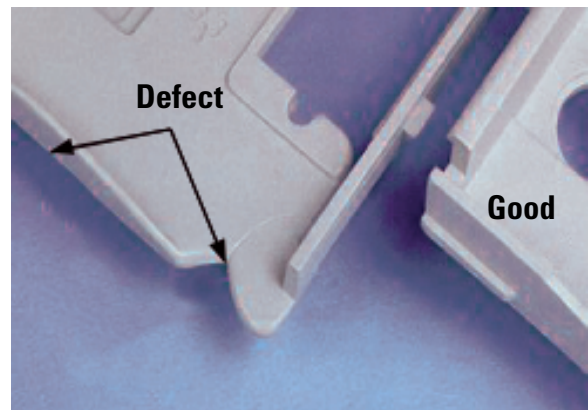
*For assistance selecting the proper vent for your application email [DME\\_Mech\\_Eng@dme.net](mailto:DME_Mech_Eng@dme.net) include the part's CAD STEP file and resin specifications.*

*Incorporating the DME venting products into your tool can save a headache during the molding process. Three of the most common plastic part defects caused by gas and air are Burn Marks, Short Shots and Knitlines. Stop scrapping parts and save unnecessary down time.*



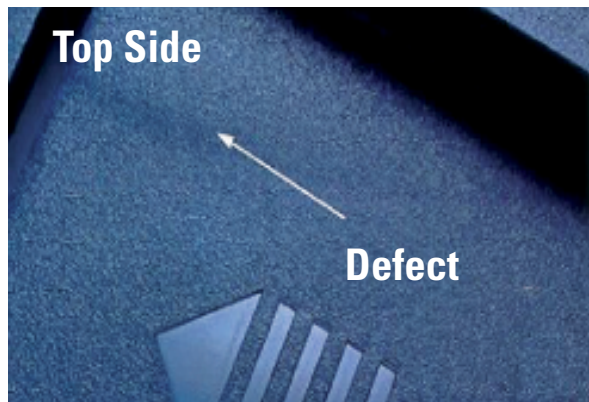
### **Burn Marks**

*Discoloration - usually black, brown or dark yellow/brown depending on severity. Feels rough and crunchy. Frequently accompanied by short shot in burn area*



### **Short Shots**

*Missing plastic or features that are not fully formed. Missing corners or features have a smooth or rounded appearance.*

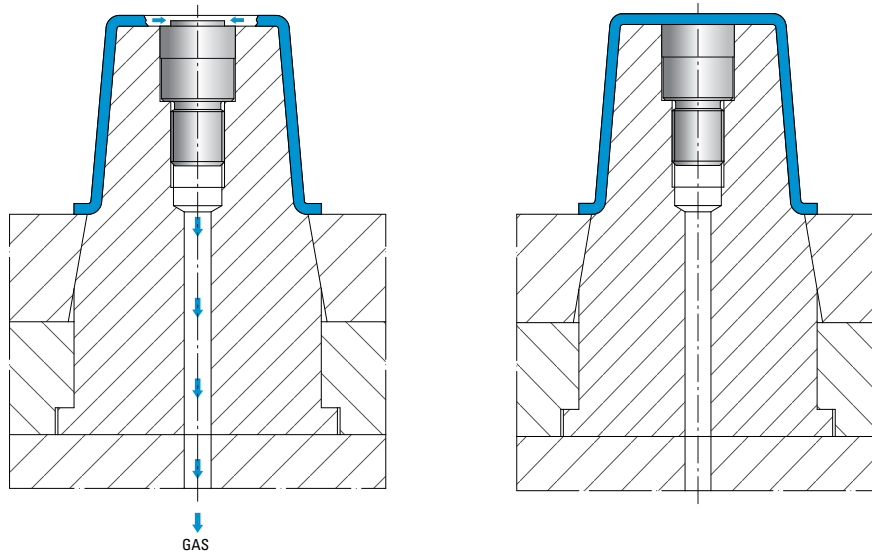


### **Knitlines**

*A knitline is where molten polymer flow fronts meet in the cavity. Incomplete adhesion occurs along a knitline and causes a weak point in the plastic part*

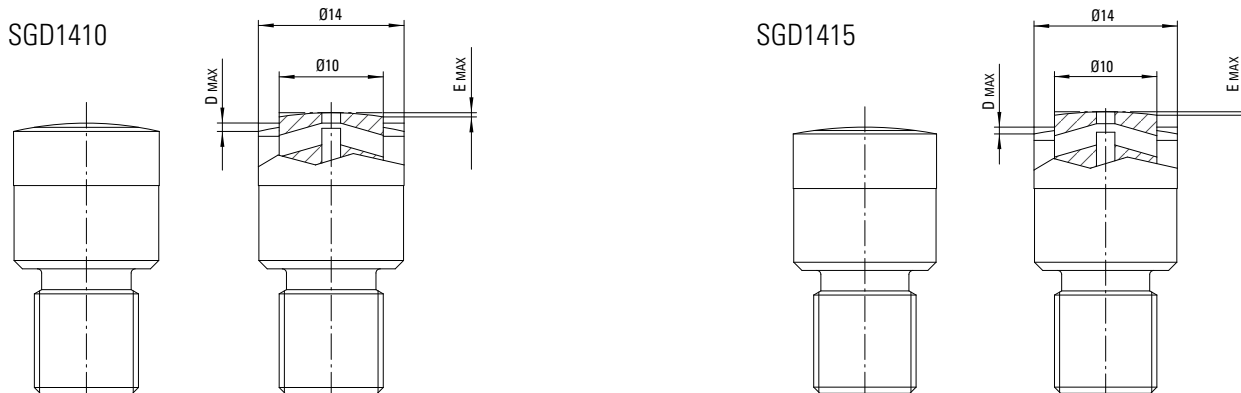
# SGD14-Series Gas Vents

- High venting capacity
- Venting surface slowly affected by mold deposits
- In cavity air back pressure dramatically reduced
- Improvement of aesthetic characteristics of the injected part
- Possibility of front disassembly



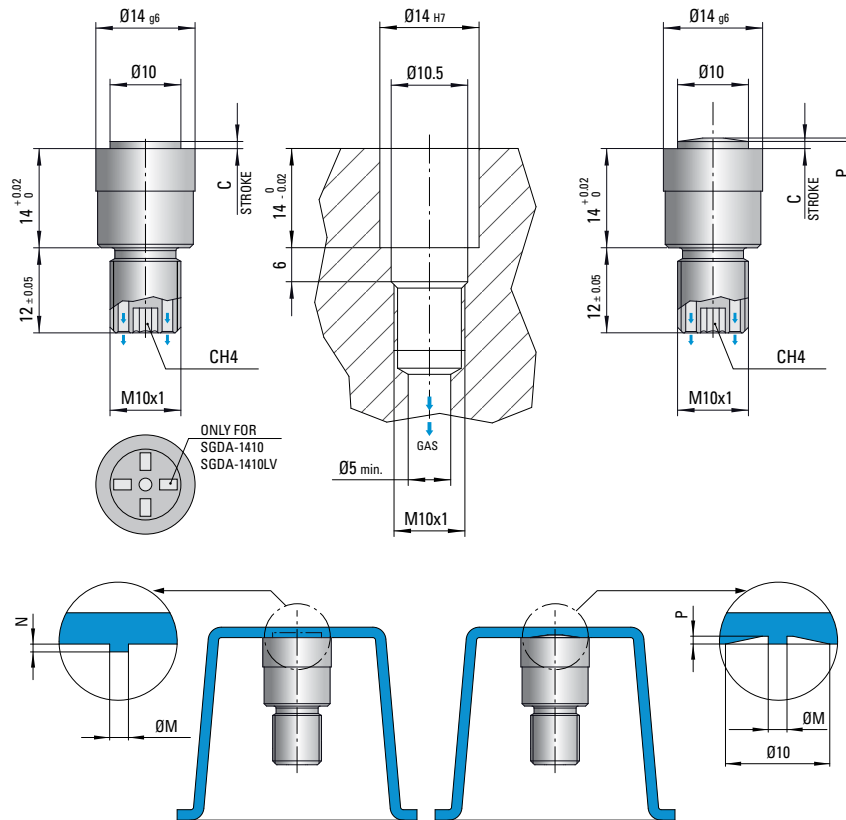
During the injection process the spring keeps the sliding insert in “open position” allowing the gases to exit through the hole on the top of the valve. When the flow front reaches vent the sliding insert moves back under plastic pressure to “close position” and closes the gas venting hole.

The SGD14 valves can be shaped within the maximum limit shown below.



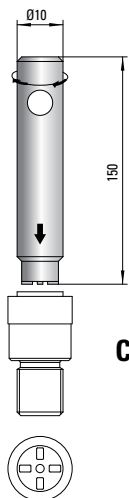
ITEM NUMBER	D	E
SGD1410	0.8	0.4
SGD1415	0.5	0.25

# SGD14-Series Gas Vents



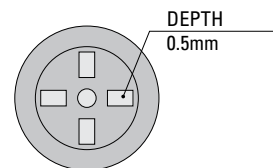
Mat.: 420SS  
Hardness: 50-52 HRC

ITEM NUMBER	C	M	N	P	SUITABLE FOR
SGD1410LV	1	2	0.5	-	High & Low Viscosity Materials
SGDA1410LV	1	2	0.5	-	
SGD1410CLV	1	2	-	0.5	
SGD1415LV	1.5	-	-	-	
SGD1410	1	2	0.5	-	High Viscosity Materials Only
SGDA1410	1	2	0.5	-	
SGD1410C	1	2	-	0.5	
SGD1415	1.5	-	-	-	

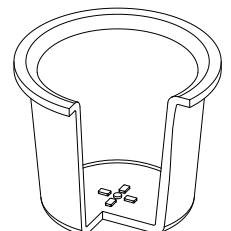


The SGDA1410 valve can be screwed and unscrewed thanks to the special key **CSSGDA**. This application makes faster and simpler the valve maintenance procedure.

The top surface of the valve type SGDA1410 is machined to fit the key code CSSGDA.

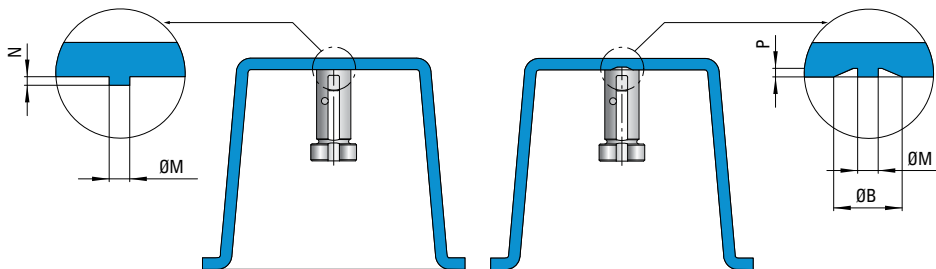
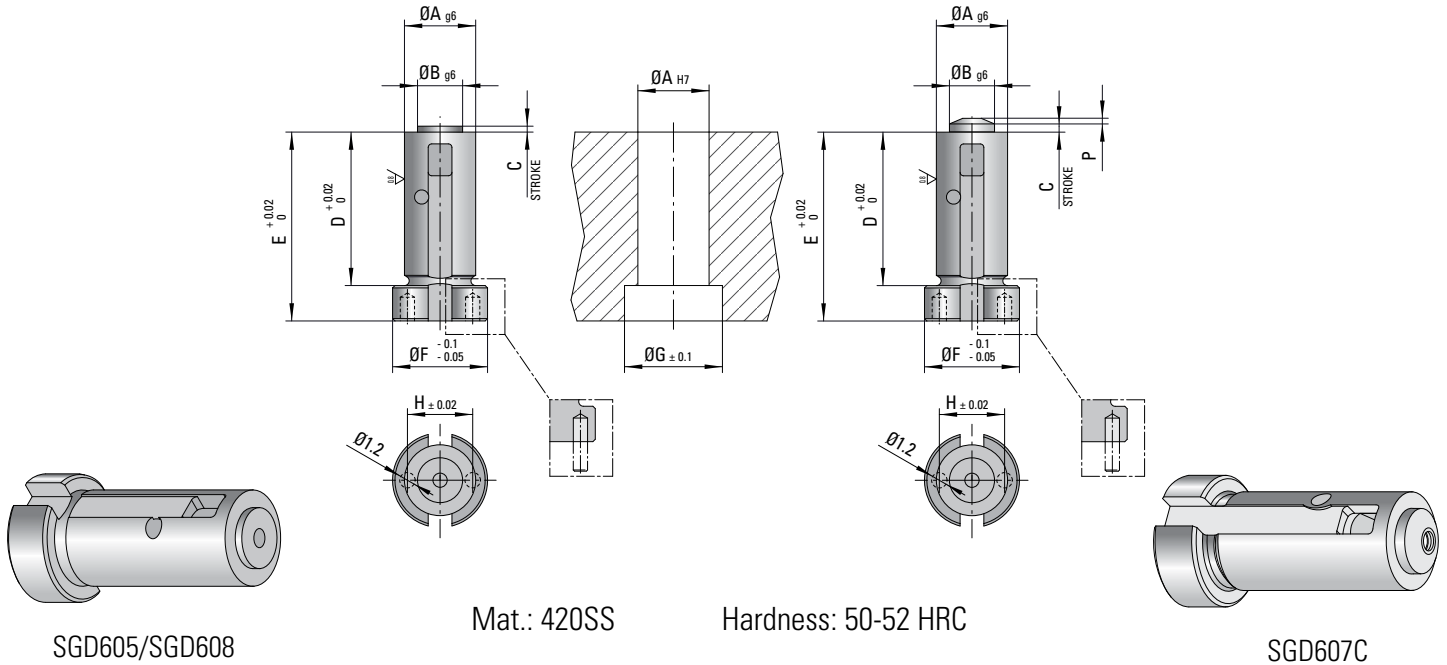


Such special machining creates four protrusions 0.5 mm thick on the injected part.



# SGD6-Series Gas Vents

- High venting capacity
- Venting surface slowly affected by mold deposits
- In cavity air back pressure dramatically reduced
- Improvement of aesthetic characteristics of the injected part
- Possibility of front disassembly

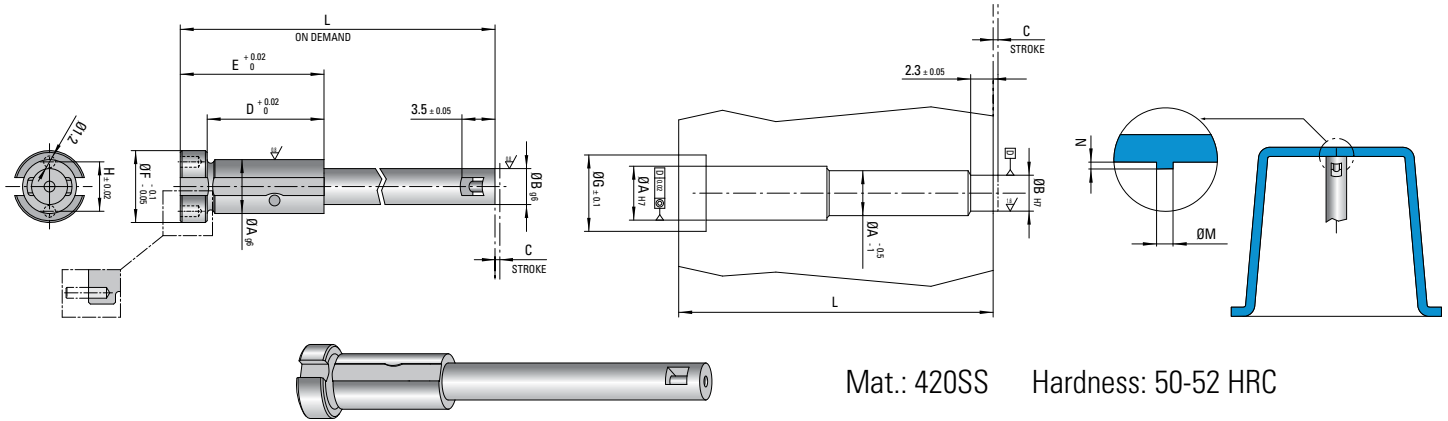


ITEM NUMBER	A	B	C	D	E	F	G	H	M	N	P
SGD605	6	4	0.5	13	16	8	8.5	5.5	1.2	0.3	-
SGD608*	6	4	0.5	13	16	8	8.5	5.5	-	-	-
SGC607C	6	4	0.5	13	16	8	8.5	5.5	1.2	-	0.5

\* It is necessary to inject a blast of air after ejection of plastic part (see Technical Notes)

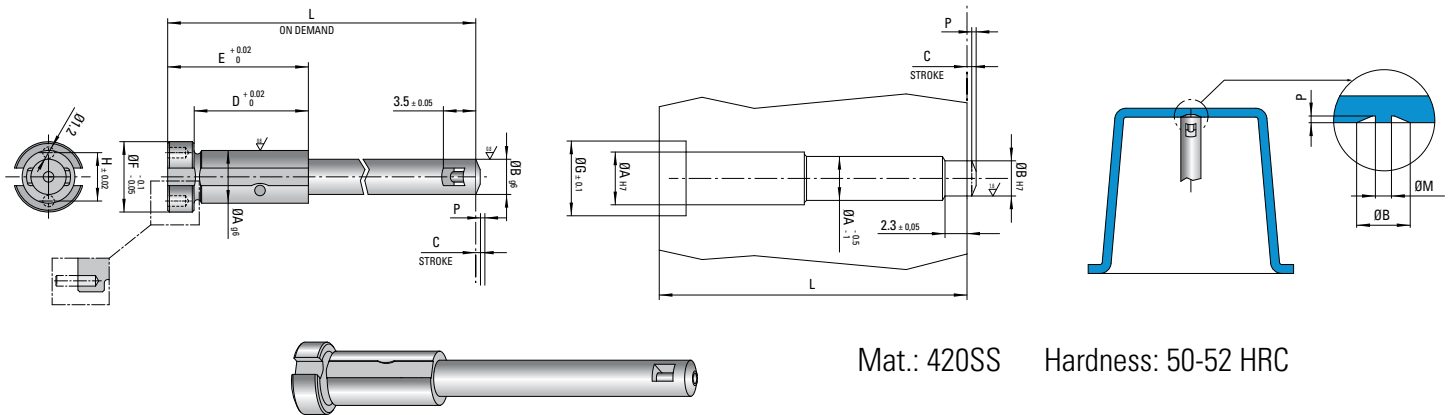
Please see Technical Notes at the back of the document for additional information.

# SGDL6-Series Gas Vents



ITEM NUMBER	A	B	C	D	E	F	G	H	L (min)	L (max)	M	N
SGDL605	6	4	0.5	13	16	8	8.5	5.5	20	105	1.2	0.3
SGDL608*	6	4	0.5	13	16	8	8.5	5.5	20	105	-	-

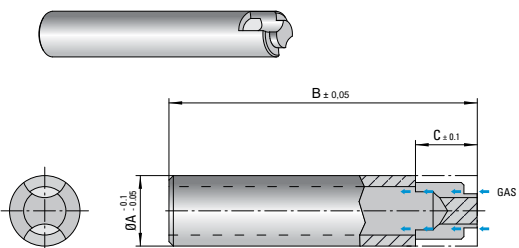
\* It is necessary to inject a blast of air after ejection of plastic part (see Technical Notes)



ITEM NUMBER	A	B	C	D	E	F	G	H	L (min)	L (max)	M	N	P
SGDL607C	6	4	0.7	13	16	8	8.5	5.5	20	105	1.2	0.3	0.5

## GAS VENTING VALVE

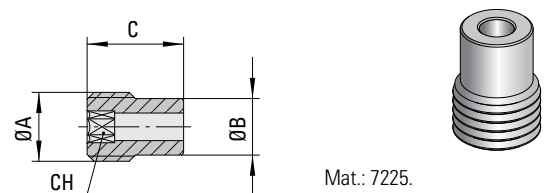
ITEM NUMBER	A	B	C
DSGD6	8	50	7



Mat.: carbon steel  
Hardness: 750 N/mm<sup>2</sup> (220 HB)  
Nitred depth 0.1mm

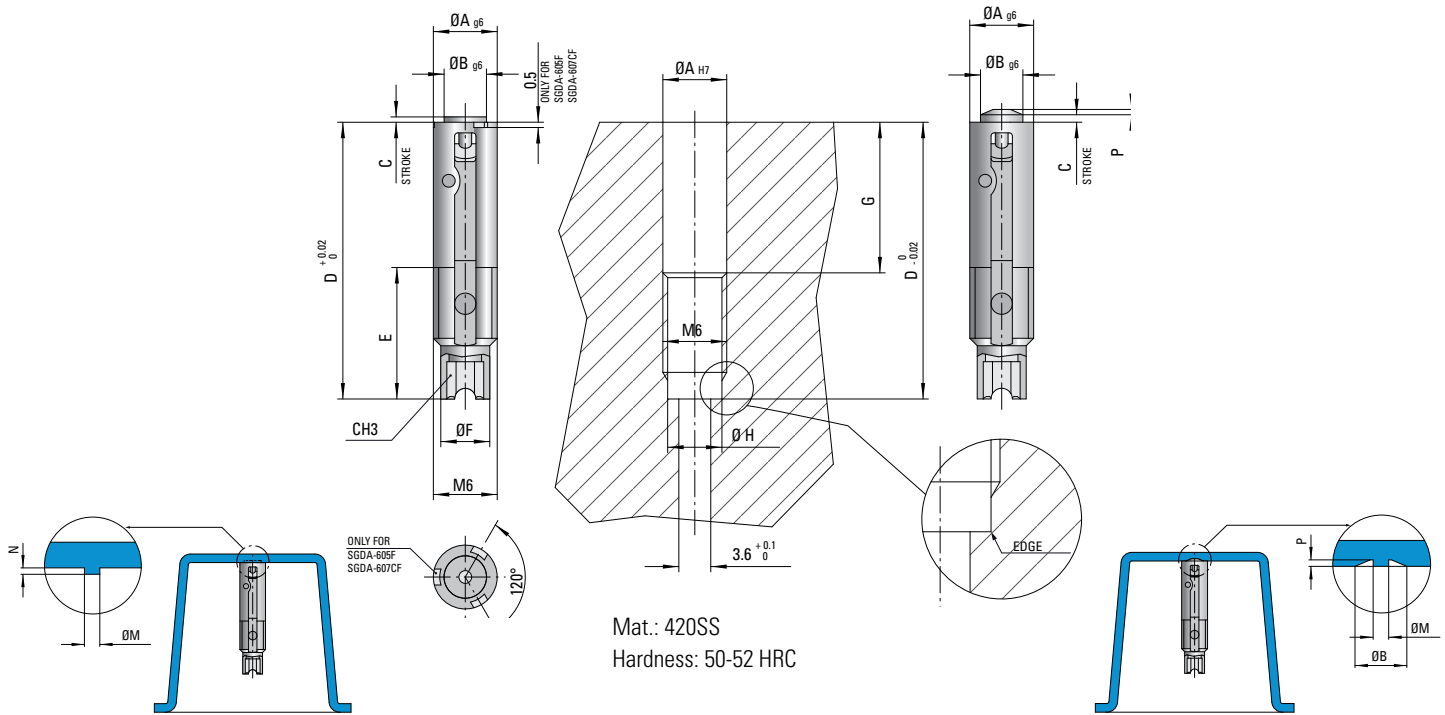
## GAS VENTING VALVE DOWEL

ITEM NUMBER	A	B	C	CH
GSGD6	M10	8.3	14	4



Mat.: 7225.  
Hardness: 750 N/mm<sup>2</sup> (220 HB)  
Nitred depth 0.1mm

# SGD6CF/F-Series Gas Vents



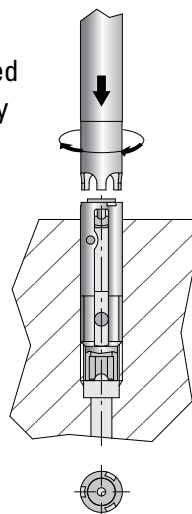
ITEM NUMBER	A	B	C	D	E	F	G	H	M	N	P
SGD605F	6	4	0.5	26	12	4.6	15	5.1	1.2	0.3	-
SGDA605F			0.5						1.2	0.5	-
SGD608F*			0.8						-	-	-
SGD607CF			0.7						1.2	-	0.5
SGDA607CF			0.7						1.2	-	

\* It is necessary to inject a blast of air after ejection of plastic part (see Technical Notes)

## FRONT UNSCREWING

Valve SGDA605F can be screwed and unscrewed with special key **CSSGDAF**.

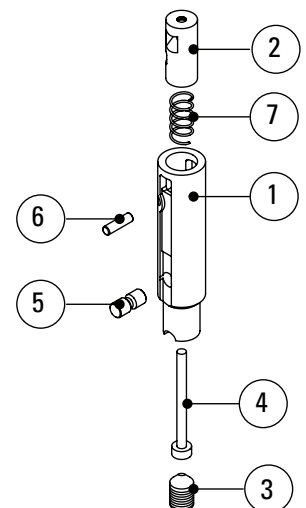
This application makes valve maintenance procedure faster and easier.



## CLEANING & MAINTENANCE

It is possible to disassemble the dynamic venting valve with the following procedure:

- Remove the assembly pin (6)
- Remove the sliding shaft (2) and the spring (7)
- Unscrew the internal dowel (3)
- Remove the pin for body fixing (5) and central pin (4)

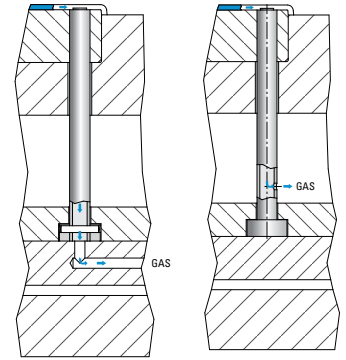


Please see Technical Notes at the back of the document for additional information.

# GAS VENTING EJECTOR PIN



Mat. valve: 420SS  
 Hardness: 50-52 HRC  
 Mat. ejector pin: H13  
 Hardness: 950 HV

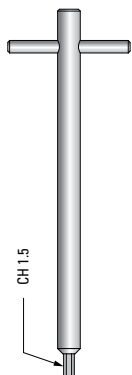


ITEM NUMBER	A	B	C	D	E	F	M	N	P	L1	L	
SGDE605	6	4	0.5	5	3.5	12	1.2	0.3	-	35	300	400
SGDE607C	6	4	0.7	5	3.5	12	1.2	-	0.5	35	300	400
SGDE608*	6	4	0.8	5	3.5	12	-	-	-	35	300	400
SGDE805	8	4	0.5	5	3.5	14	1.2	0.3	-	35	300	400
SGDE807C	8	4	0.7	5	3.5	14	1.2	-	0.5	35	300	400
SGDE808*	8	4	0.8	5	3.5	14	-	-	-	35	300	400
SGDE1005	10	4	0.5	5	3.5	16	1.2	0.3	-	35	300	400
SGDE1007C	10	4	0.7	5	3.5	16	1.2	-	0.5	35	300	400
SGDE1008*	10	4	0.8	5	3.5	16	-	-	-	35	300	400
SGDE1205	12	4	0.5	7	4	18	1.2	0.3	-	35	600	
SGDE1207C	12	4	0.7	7	4	18	1.2	-	0.5	35	600	
SGDE1208*	12	4	0.8	7	4	18	-	-	-	35	600	
SGDE1405	14	4	0.5	7	4	22	1.2	0.3	-	35	600	
SGDE1407C	14	4	0.7	7	4	22	1.2	-	0.5	35	600	
SGDE1408*	14	4	0.8	7	4	22	-	-	-	35	600	

Order example: (ITEM NUMBER) (L) - SGDE605300

\* It is necessary to inject a blast of air after ejection of plastic part (see Technical Notes)

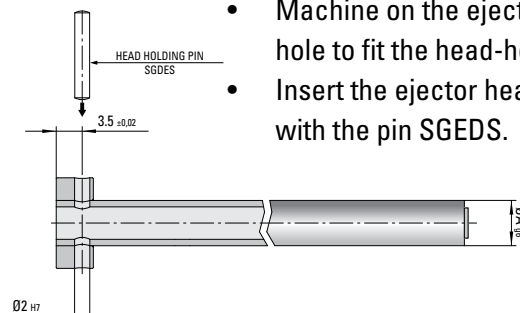
## GAS VENTING KEY



SGDECH

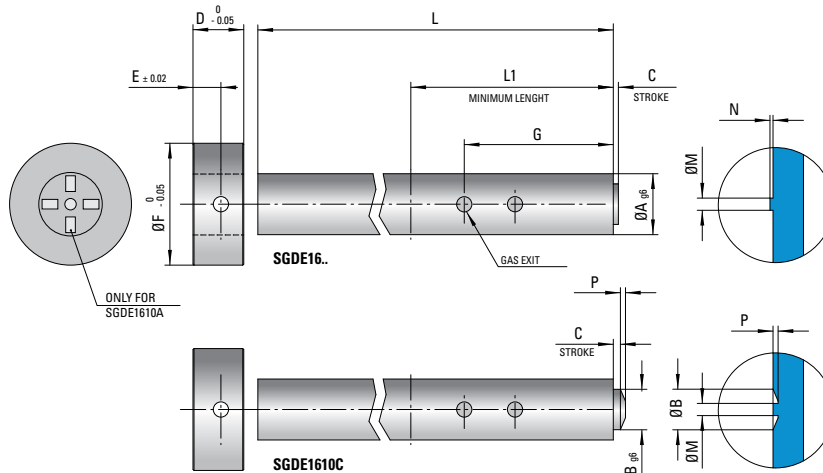
## ASSEMBLY

- Cut the ejector rod to the desired length.
- Machine on the ejector rod the hole to fit the head-holding pin.
- Insert the ejector head and fix it with the pin SGEDS.



Please see Technical Notes at the back of the document for additional information.

# GAS VENTING EJECTOR PIN

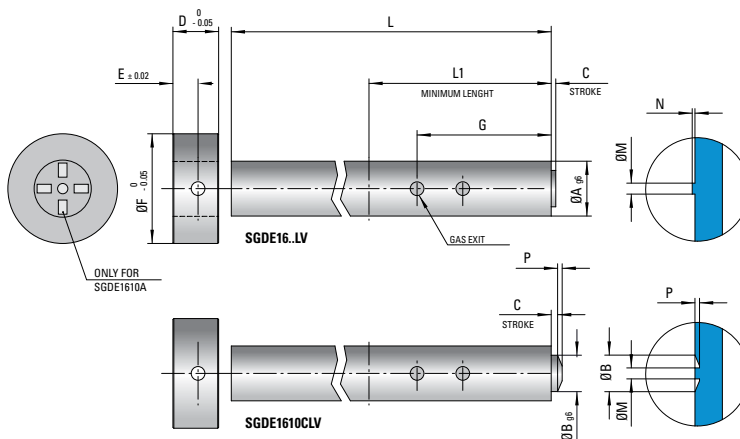


Mat. valve: 420SS  
Hardness: 50-52 HRC

Mat. ejector: H13  
Hardness: 1000/1100 HV

ITEM NUMBER	A	B	C	D	E	F	G	M	N	P	L1	L	SUITABLE FOR
SGDE1610	16	10	1	7	4	22	80	2	0.5	/	100	780	High Viscosity Materials Only
SGDE1610A	16	10	1	7	4	22	80	2	0.5	/	100	780	
SGDE1610C	16	10	1	7	4	22	80	2	/	0.5	100	780	
SGDE1615	16	10	1.5	7	4	22	80	/	/	/	100	780	
SGDE1610LV	16	10	1	7	4	22	80	1.2	0.5	/	100	780	High & Low Viscosity Materials
SGDE1610ALV	16	10	1	7	4	22	80	1.2	0.5	/	100	780	
SGDE1610CLV	16	10	1	7	4	22	80	1.2	/	0.5	100	780	
SGDE1615LV	16	10	1.5	7	4	22	80	/	/	/	100	780	

Order example: (ITEM NUMBER) (L) SGDE1610780

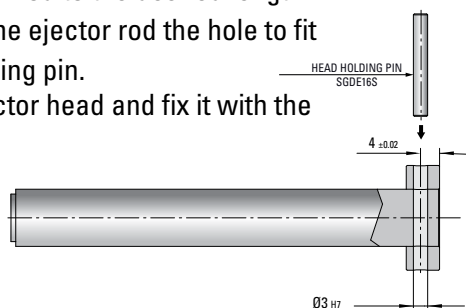


Mat. valve: 420SS  
Hardness: 50-52 HRC

Mat. ejector: H13  
Hardness: 1000/1100 HV

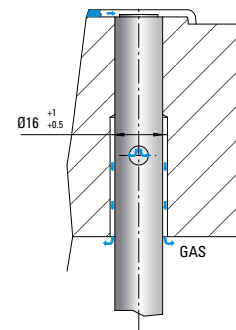
## ASSEMBLY

- Cut the ejector rod to the desired length
- Machine on the ejector rod the hole to fit the head-holding pin.
- Insert the ejector head and fix it with the pin SGEDS.



## VENTING HOLE POSITION

- Position the venting hole in the non-guided area of the ejector's seat



Please see Technical Notes at the back of the document for additional information.

# TECHNICAL NOTES

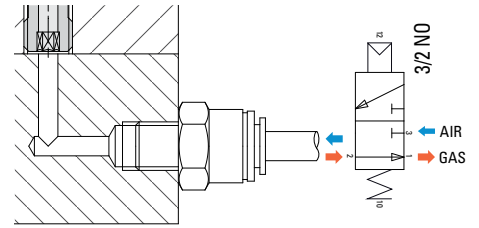
## \* VENTING VALVES

For a correct application of the venting valves

**SGD608/SGDE608F/SGDL608/SGDE608/SGDE808/SGDE1008/SGDE1208/SGDE1408**

it is necessary to inject an air blast after ejection of plastic part, the air will guarantee the valve to open every shot.

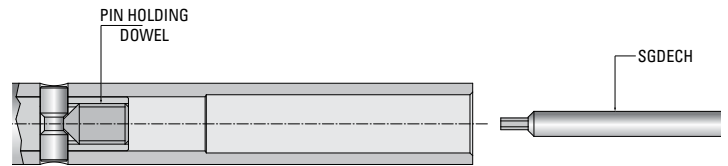
With a normally open 3/2 valve it is possible to use the gas venting channel also to inject the air blast.



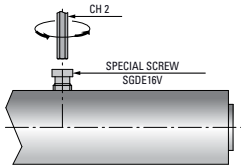
### SGDE6/8/10/12/14-Series

It is possible to disassemble the dynamic venting valve with the following procedure:

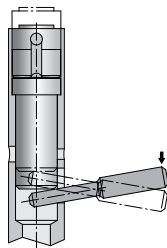
- Remove the head holding pin and the ejector head.
- Unscrew the internal dowel with the key SGDECH, remove the valve holding pin and extract the venting valve from ejector front side.



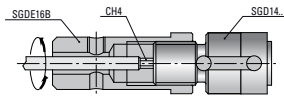
### SGDE16/6-Series



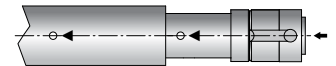
1- Remove the special screw SGDE16V using hexagonal key CH2



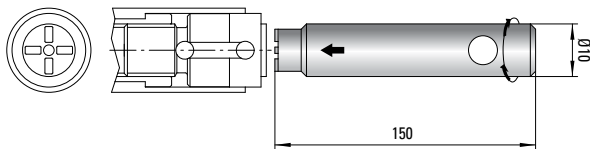
2- Insert a 3-4mm diameter pin in the slot and extract the valve



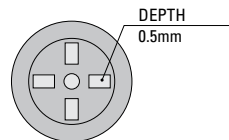
3- Clamp the bushing SGDE16B and unscrew the valve SGD14 using hexagonal key CH2



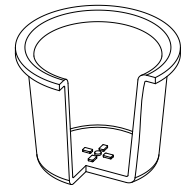
4- During assembly align reference marks for proper fit



Valve SGDE1610A/1610ALV can be screwed and unscrewed with special key CSSGDA



The top surface of valve pin SGDE1610A/1610ALV is machined to fit CSSGDA



The special machining creates four protrusions 0.5mm thick on the injected part

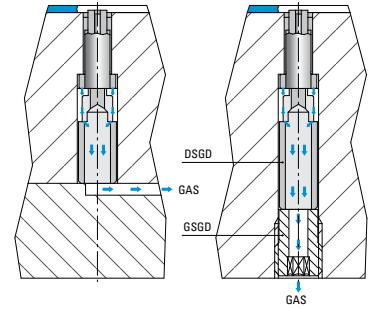
# TECHNICAL NOTES

## SGD6

The valve type SGD6 has to be fixed into the mold insert from the back side. Spacer DSGD and the dowel code GSGD can make this application easier.

The spacer is specially designed to collect the gases from the valve toward a central hole that communicates with the open atmosphere. It is possible to machine the spacer in order to reach the desired length.

The dowel allows to fix the spacer and the valve and collects the gases into the central hole.

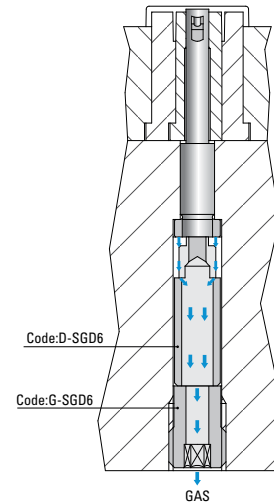


## SGDL

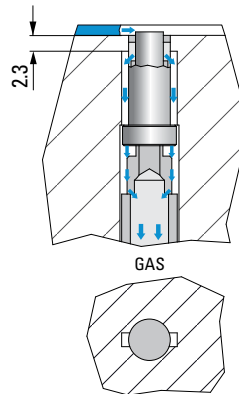
The valve type SGDL has to be fixed into the mold insert from the back side and the valve needle has to stick out from the mold surface for a dimension equal to the stroke "C". The spacer code DSGD... and the dowel code GSGD... can make this application easier.

The spacer is specially designed to collect the gases from the valve toward a central hole that communicates with the open atmosphere. It is possible to machine the spacer in order to reach the desired length.

The dowel allows to fix the spacer and the valve and collects the gases into the central hole.



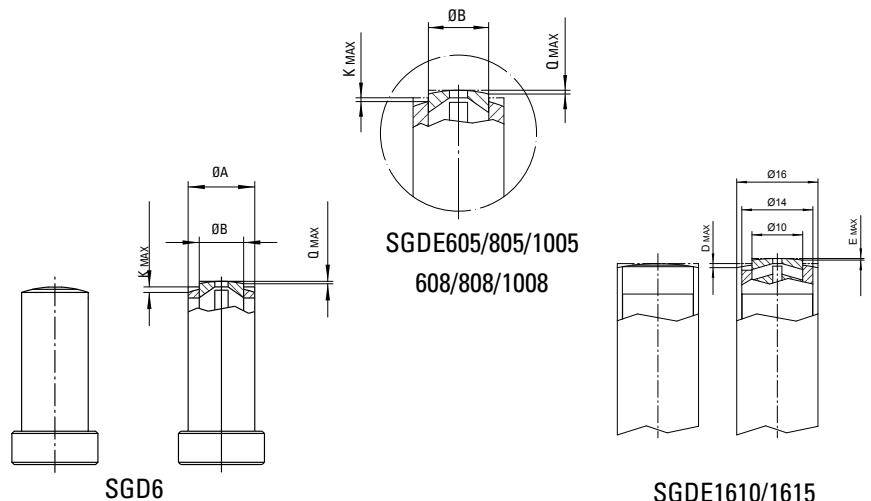
Some polymeric materials produce remarkable gas volume during melting process. Oily gas deposits can pile up and obstruct the gas venting channels. It is possible to machine extra gas venting channel in the mold as shown in the picture to improve valve performance.



## VALVE SHAPING

The SGD6/SGDE1610/SGDE1615 valves can be shaped within the maximum limit shown below.

ITEM NUMBER	A	B	K	Q
SGD605	6	4	0.5	0.25
SGD608	6	4	0.5	0.25
SGDE605/805/1005		4	0.5	0.25
SGDE608/808/1008		4	0.25	0.25
SGDE1610		4	0.5	0.25
SGDE1615		4	0.25	0.25



# VacuumJet

## Mold venting is critical to the quality and consistency of the finished part.

Venting is required to remove air from the sprue, runner and cavity from the tool as the melt flows into the cavity. Inadequate venting may cause short-shots, poor surface appearance, or weak weld-lines.

The Vacuum Jet may be the venting solution for you. Each unit uses compressed air to create a venturi vacuum within the cavity to remove trapped air.



### Benefits:

In the injected plastic part:

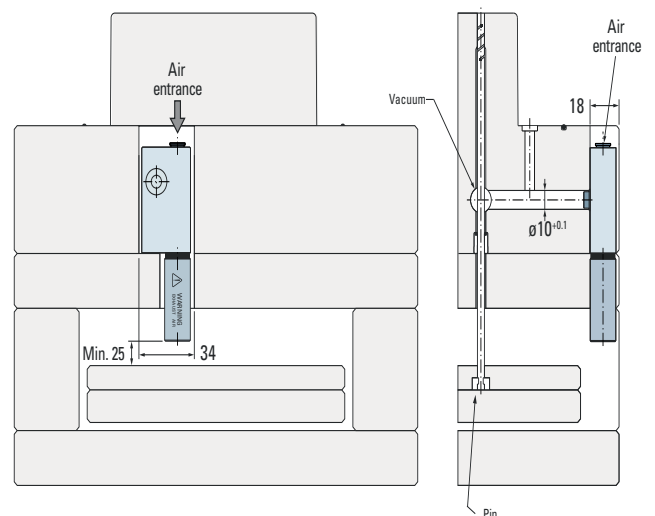
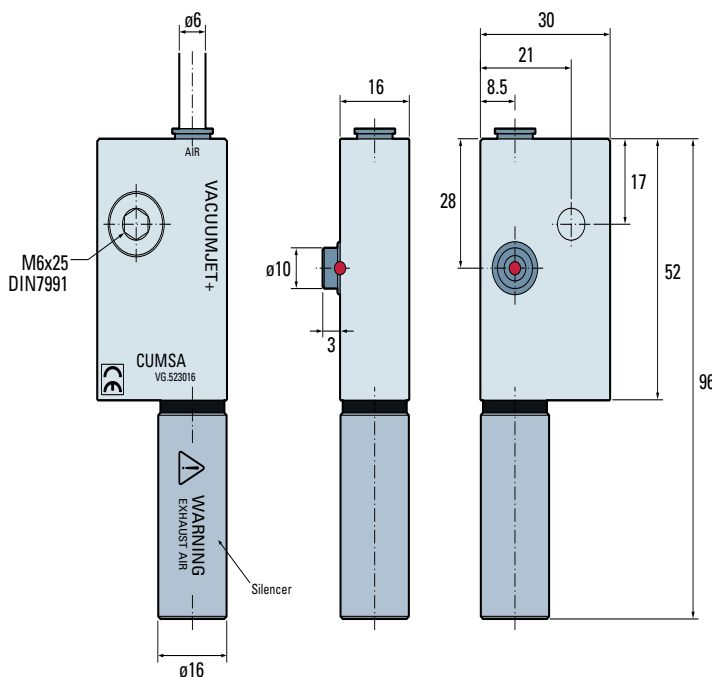
- Superior visual appearance (less sink marks)
- Dimensional stability (decreased weld lines)
- Uniform color
- Improve resin distribution

In the process:

- Reduced scrap
- Lower injection temperature & pressure
- Increase in production

ITEM NUMBER	SUPPLY PRESSURE	MAX VACUUM	MAX. FLOW	CONSUMPTION
VG523016	5-6 BAR	-900MBAR	75 L./Min.	60 L./Min.

Material: Aluminum  
Maximum working temperature 80°C (176°F)  
Patented System



To maximize efficiency place a seal around the cavity.

**CUMSA**

# MoldVac

Vacuum & Blowback controller

## Custom microprocessor allows for precise control of vacuum and blowback.

**Control** - Custom microprocessor allows for precise control of vacuum and blowback functions. Vacuum control can be adjusted to 1/10th of a second, eliminating flash and improving part quality.

**Limit Switches** - One set of limit switches are provided. 1st (mounted on platen) is energized at mold closed (vacuum). The second switch is energized at mold full open (blowback).

**Vacuum Circuit** - Eliminates part burns, voids, and short shots. Reduces reject rates and improves part quality. Vacuum cycle can be adjusted from 0-24"hg.

**Vacuum Reservoir** - All units are designed with a vacuum reservoir which is discharged at mold closed. This feature provides an instant vacuum within the mold.

**Blowback Circuit** - The patented two-phase blowback assists in part ejection (1st phase) and purges vented pins (2nd phase) after each cycle. Purging of the vent pins reduces mold maintenance and increases productivity.



**Series 10,000**      **Series 20,000**      **Series 40,000**

	<b>MV10KDME*</b>	<b>MV20KDME**</b>	<b>MV40KDME**</b>
<b>Performance Characteristics</b>			
Vacuum Rating (in3/s)	36	900	1,665
Vacuum Reservoir (in3)	74	2,700	5,000
Vacuum Level (in of hg) <sup>1</sup>	20-24	20-24	20-24
<sup>1</sup> Vacuum rating and levels are approximate based on mold design & construction			
<b>Physical Dimensions (US)</b>			
Height	42"	42"	50"
Width	18"	18"	20"
Depth	24"	28"	34"
Weight	150 lbs.	180 lbs.	200 lbs.
<b>Utility Requirements</b>			
Voltage	110V/1/60	240/460/3/60	240/460/3/60
Amp Draw	2 Amps	4 Amps/2 Amps	4 Amps/2 Amps
Compressed Air	33 cfm @65 psi	65 psi	65 psi
Air Inlet Size	3/8" NPT	3/8" NPT	3/8" NPT
Pipe Connection (connect to mold)	3/4" NPT	3/4" NPT	3/4" NPT

\* Add 110 to the end of the part number when ordering voltage.

\*\* Add 220 or 480 to the end of the part number when ordering voltage.

# Sintered Vents

For Plastics Injection Molding

## Features and Benefits of Sintered Vents – USV

- Venting of air or gas reduces occurrence of short shots and burned parts
- Self-contained standardized vents save time in design, installation and maintenance
- Wide variety of off-the-shelf standard sizes available
- Fast and easy replacement or cleaning of sintered vents improves productivity
- Field tested to ensure product reliability

Sintered vents are a unique venting plug composed of a large number of straight, parallel and uniform pores made through a powdered metallurgy process. The pores allow trapped air or gas to escape from the mold cavity during the injection molding process, thereby reducing the occurrence of defective parts.

## Application Recommendations

### Plastics injection molding

A 0.03mm vent diameter should be used with polymers such as polyethylene or polypropylene.

Use a vent with a pore diameter of 0.05mm for low-flow polymers such as polycarbonate, nylon, or ABS. When molding highly viscous material (very low-flow properties), use a vent with a 0.10mm pore diameter.

Stainless Steel sintered vents are recommended for plastic materials that are particularly gaseous or corrosive, such as PVC. Stainless Steel sintered vents are also recommended for plastic materials containing flame-retardants.

## Installation Information

- The recommended press-fit is 0.01 to 0.02mm for outside diameters of 10mm or less, and 0.015mm to 0.035mm for outside diameters over 10mm
- Use a plastic or wooden hammer for installation. Do not tap the pore surface of the sintered vent with a metallic or hard tool. The use of hard tools will result in clogging or chipping of the vents
- Do not grind, machine, or cut the pore surfaces



SINTERED VENTS FOR PLASTICS INJECTION MOLDING APPLICATIONS								
VENT MATERIAL: STAINLESS STEEL								
VENT TYPE	ITEM NUMBER	OUTSIDE Ø (mm)	FULL LENGTH (mm)	NO. OF PORES	PORE Ø (mm)	POROSITY % OF EFFECTIVE Ø	EFFECTIVE Ø (mm)	EFFECTIVE LENGTH (mm)
A	USV0035	2	10	280	0.03	25	1	10
	USV0036	3	10	630	0.03	25	1.5	10
	USV0038	2	10	250	0.05	25	1.7	10
	USV0039	3	10	400	0.05	25	2	10
	USV0040	4	10	400	0.05	25	2	10
B	USV0041	6	10	400	0.05	25	2	3
	USV0042	8	10	1600	0.05	25	4	3
	USV0043	10	10	3600	0.05	25	6	3
	USV0044	12	10	6400	0.05	25	8	3
	USV0045	15	10	10000	0.05	25	10	4
	USV0046	5	10	76	0.10	19	2	3
	USV0047	6	10	76	0.10	19	2	3
	USV0048	8	10	300	0.10	19	4	3
	USV0049	10	10	690	0.10	19	6	3
	USV0050	12	10	1200	0.10	19	8	3

SINTERED VENTS FOR PLASTICS INJECTION MOLDING APPLICATIONS								
VENT MATERIAL: IRON ALLOY								
VENT TYPE	ITEM NUMBER	OUTSIDE Ø (mm)	FULL LENGTH (mm)	NO. OF PORES	PORE Ø (mm)	POROSITY % OF EFFECTIVE Ø	EFFECTIVE Ø (mm)	EFFECTIVE LENGTH (mm)
B	USV0026	10	10	880	0.2	35	6	5.5
	USV0027	10	10	880	0.10	29	5.5	5
	USV0028	8	10	880	0.10	29	5.5	5
	USV0029	10	10	880	0.05	18	3.5	5
	USV0030	8	10	880	0.05	18	3.5	5
	USV0031	6	10	880	0.05	18	3.5	5
	USV0032	10	10	880	0.03	13	2.5	5
	USV0033	8	10	880	0.03	13	2.5	5
	USV0034	6	10	880	0.03	13	2.5	5

## Ultrasonic Cleaning

- Use ultrasonic cleaning to periodically clean pores in the sintered vents, as required

# Vortex® Core Pins & Plugs

## Vortex

Vortex Core Pins and Plugs are made from a porous, sintered metal with a porosity of 25% air by volume. With a series of interconnected pores averaging a diameter of 7 (.0003") microns throughout the material. Using Vortex® in appropriate areas **eliminates gas buildup, reduces injection pressure, lowers cycle times, gloss levels and substantially reduces scrap and reject rates.**

Vortex Pins and Plugs provide a location-specific method of venting gas. Due to its porosity volume, one fourth of the surface becomes a vent.

### Vortex Benefits:

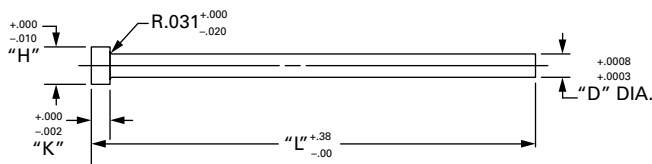
- Tool Simplification
- Prevents Burning
- Eliminates Shrink & Short Shots
- Aids in Part Ejection
- Enhances Part Appearance
- Reduces Gloss & Cycle Time
- Prevention of Knit Lines
- Melt Delivery Simplification

## Vortex Pins & Plugs

- Pins are 3" long and are available in diameters of .250", .375" and .500"
- Plugs are offered in .250", .500" and 1.00" lengths in diameters of .250" and .375"
- Heat treated to 43 HRC
- Tensile strength: 74,000 lbs./sq.in.
- Thermal Linear Expansion Coefficient: (at 68°F - 302°F) 6.67-6.94 E-06 in./in./F°
- Porosity: 25% air by volume
- Heat transfer co-efficient (at room temperature): 16.93–19.35 BTU/ft. hr. F°

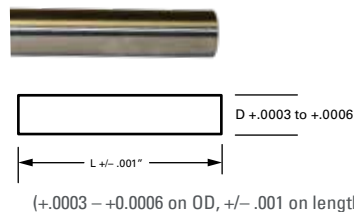


## Vortex Core Pin



ITEM NUMBER	D PIN DIA	H HEAD DIA	L PIN LENGTH	K HEAD THICKNESS	PORE SIZE MICRONS
PC17M307	.250	0.437	3	0.187	7
PC25M307	.375	0.625	3	0.25	7
PC33M307	.5000	0.75	3	0.25	7

## Vortex Plug



ITEM NUMBER	D PIN DIA	L PIN LENGTH	MICRONS
PP141407	0.25	0.25	7
PP141207	.250	0.50	7
PP381207	.375	0.50	7
PP38107	.375	1.00	7

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Vortex Application Guide



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