

**SINGLE VALVE**

**III**

**TECHNICAL DATA**

**YUDO**



SINGLE VALVE III nozzle

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# ● SINGLE VALVE III application note

## 적용기준

### Size of nozzles 노즐의 규격

Unit : mm

Type	Size	Channel dia.	Gate dia.
SAS	22	8	1.5 / 1.8 / 2.0 / 2.5
	32	12	2.5 / 3.0 / 3.5 / 4.0
	42	18	5.0 / 6.0 / 7.0 / 8.0

### Injection volume by nozzle size 노즐 규격에 따른 사출량

- Injection volume varies to the resin used, thickness of the product, injection speed and gate diameter.
- The following figures are the reference for helping to understand the various type of gate system.
- Please contact YUDO representative or agency for an actual application.
- 사출량은 사용할 수지의 특성과 제품 두께, 사출 속도, 게이트의 직경에 따라 결정됩니다.
- 유도 노즐 시스템의 규격별 성능과 적요에 관하여 다음 내용을 참조하기 바라며, 실제 제품에 적용하실 때는 당사와 협의하여 주시기 바랍니다.

Unit : gram

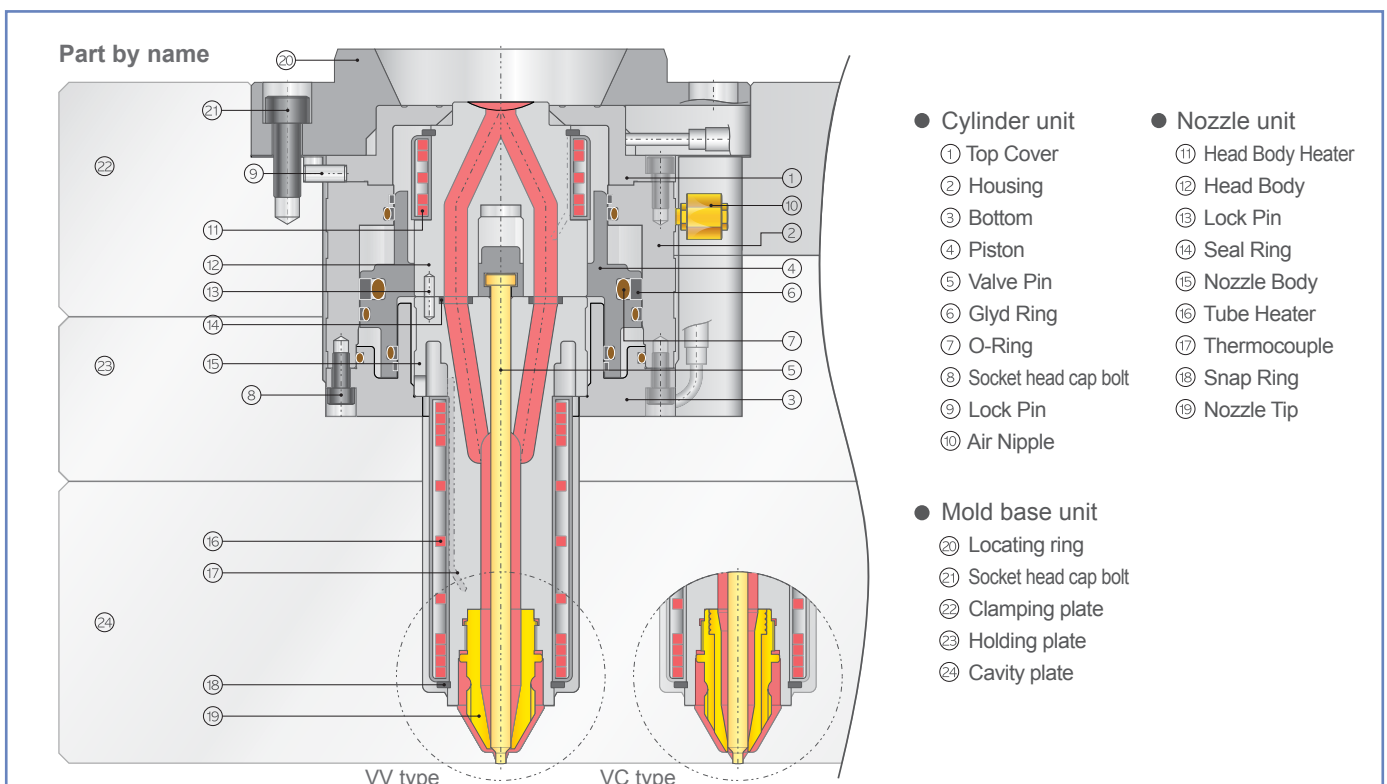
Size	Viscosity			Product thickness		Materials	
	High (Low ml)	Medium	Low (High ml)	Thin (2mm ↓)	Thick (2mm ↑)	Engineering	General
22	~70	~120	~240	~120	~240	~70	~120
32	~350	~600	~1000	~600	~1000	~350	~600
42	350~	600~	1000~	600~	1000~	350~	600~

### Material compatibility 수지의 적합성

☆ : Good ○ : Possible △ : Contact YUDO × : Not recommended

Gating method Gate type	Amorphous materials							Crystalline materials							Additives					
	ABS	PC	PMMA (Acryl)	PPO	PS	PUR	SAN	PA	PBT	PE	PET	POM (Acetal)	PP	PPS	LCP	PEEK	Flame retardants	Glass fiber filled	Stabilizer filled	Color change
VV	☆	○	☆	☆	☆	○	☆	○	○	☆	○	○	☆	△	△	△	○	○	○	○
VC	☆	☆	☆	○	☆	○	☆	○	○	☆	○	○	☆	△	△	△	○	☆	○	☆

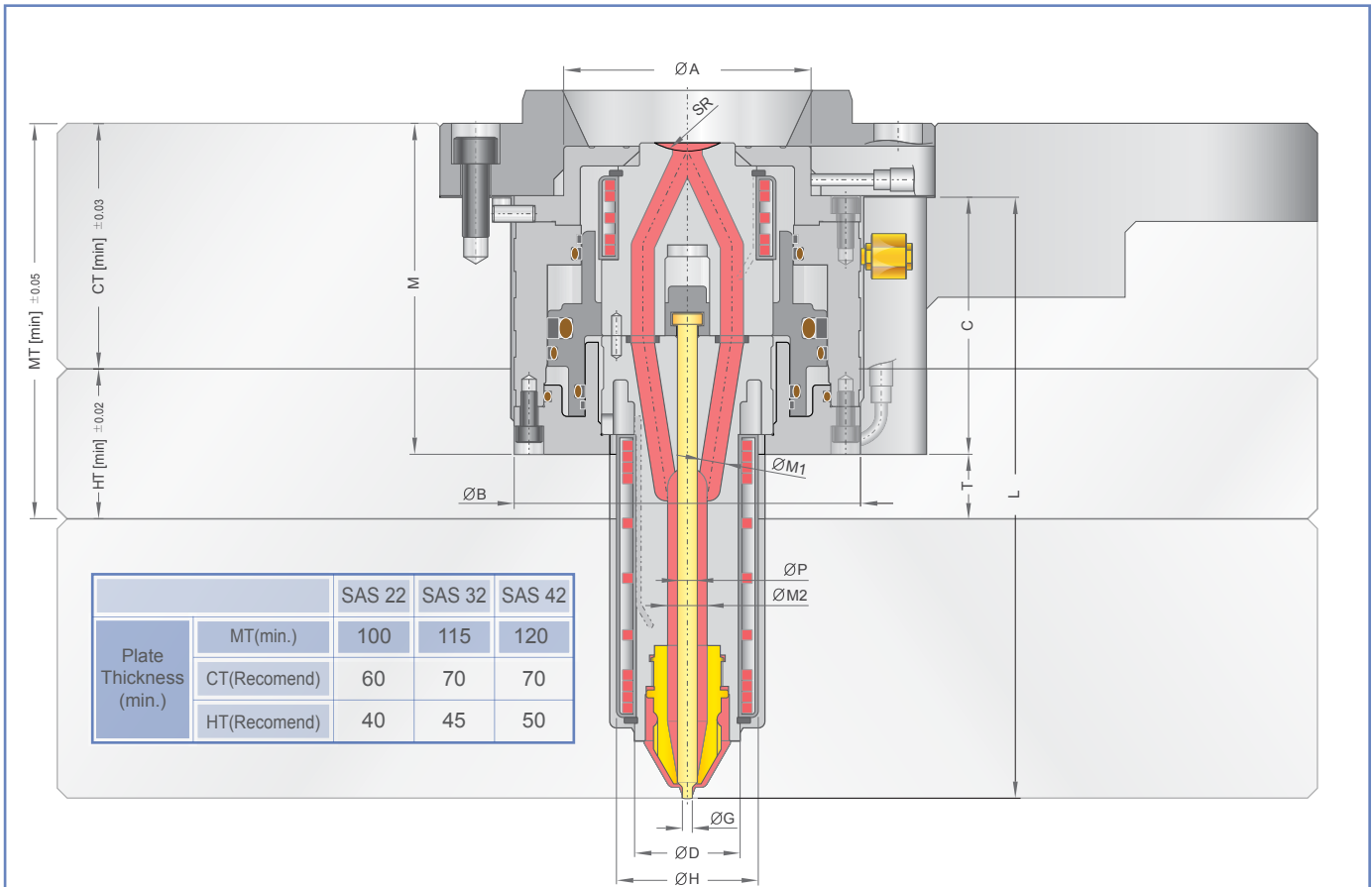
### Terminology of SINGLE VALVE III system 시스템 구성 부품



# ● Specification of SINGLE VALVE III system

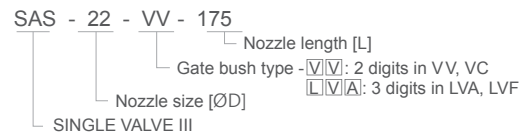
## 시스템 사양

### Structure and specification 구조 및 사양



- SINGLE VALVE III has 3 standardized sizes and each size has various gate diameters.
- Nozzle size is labelled after the Type Name (ex. SAS 22 : SINGLE VALVE III 22) and determines the injection volume of the nozzle.
- SINGLE VALVE III 노즐은 3개의 표준화된 규격과 각 규격별 다양한 크기의 게이트를 갖추고 있습니다.
- 노즐의 규격은 각 타입 뒤에 표시되며, (예. SAS 22 : SINGLE VALVE III 22), 노즐의 사출량을 결정합니다.

#### ● How to read nozzle model 노즐 모델명 보는 법



Unit : mm

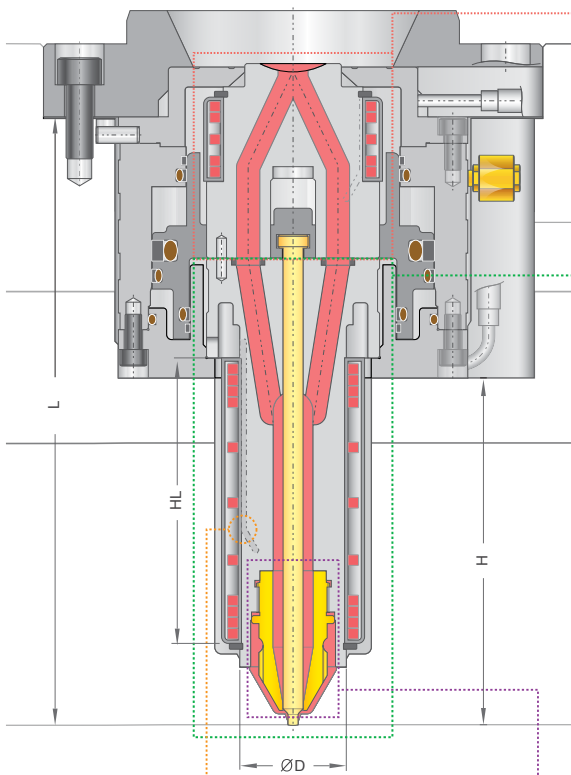
Division	SINGLE VALVE III 22	SINGLE VALVE III 32	SINGLE VALVE III 42
Model number	SAS-22-□□□-□□□	SAS-32-□□□-□□□	SAS-42-□□□-□□□
System	Valve	Valve	Valve
Injection volume	Up to 240 gr	Up to 1000 gr	Over 1000 gr
ØA	65	75	85
SR	21(STD) / Customer Spec.		
M	80 ~ 90	93 ~ 103	98 ~ 108
C	73.5	78.5	80.5
T(min.)	10	12	12
L	Refer to page 4		
ØB	90	105	120
ØP	4	6	10
ØM1	5.5	7	10
ØM2	8	12	18
ØD	22	32	42
ØH	37	47	58
ØG	1.5 / 1.8 / 2.0 / 2.5	2.5 / 3.0 / 3.5 / 4.0	5.0 / 6.0 / 7.0 / 8.0

# ● Model number of SINGLE VALVE III nozzle

노즐 모델명

Nozzle length by heater, T/C, tip code 히터, T/C, 팁 코드에 따른 노즐길이

Unit : mm



### Head body

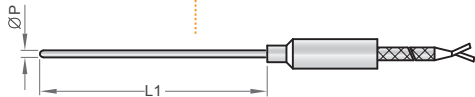
Model	Heater	T / C
SAS22-□□□-□□□	HTFR22320240	NZTP[CA,IC]160650
SAS32-□□□-□□□	HTFR22420240	NZTP[CA,IC]160650
SAS42-□□□-□□□	HTFR22520240	NZTP[CA,IC]160850

### Nozzle body

Model	ØD	L	H	Heater	HL	T / C	L1
SAS22-□□□-119	22	119.5	46	HTSA36220440	44	NZTP[CA,IC]160850	85
SAS22-□□□-130		130.5	57	HTSA36220550	55	NZTP[CA,IC]160950	95
SAS22-□□□-143		143.5	70	HTSA36220680	68	NZTP[CA,IC]161050	105
SAS22-□□□-150		150.5	77	HTSA36220750	75	NZTP[CA,IC]161150	115
SAS22-□□□-167		167.5	94	HTSA36220920	92	NZTP[CA,IC]161250	125
SAS22-□□□-180		180.5	107	HTSA36221050	105	NZTP[CA,IC]161350	135

Model	ØD	L	H	Heater	HL	T / C	L1
SAS32-□□□-151	32	151.5	73	HTSA36320650	65	NZTP[CA,IC]161150	115
SAS32-□□□-162		162.5	84	HTSA36320750	75	NZTP[CA,IC]161250	125
SAS32-□□□-175		175.5	97	HTSA36320890	89	NZTP[CA,IC]161350	135
SAS32-□□□-182		182.5	104	HTSA36320950	95	NZTP[CA,IC]161450	145
SAS32-□□□-199		199.5	121	HTSA36321130	113	NZTP[CA,IC]161550	155
SAS32-□□□-212		212.5	134	HTSA36321250	125	NZTP[CA,IC]161650	165
SAS32-□□□-232		232.5	154	HTSA36321450	145	NZTP[CA,IC]161850	185
SAS32-□□□-252		252.5	174	HTSA36321650	165	NZTP[CA,IC]162050	205
SAS32-□□□-272		272.5	194	HTSA36321850	185	NZTP[CA,IC]162250	225
SAS32-□□□-292		292.5	214	HTSA36322050	205	NZTP[CA,IC]162450	245

Model	ØD	L	H	Heater	HL	T / C	L1
SAS42-□□□-160	42	160.5	80	HTSA36420680	68	NZTP[CA,IC]161050	105
SAS42-□□□-170		170.5	90	HTSA36420780	78	NZTP[CA,IC]161150	115
SAS42-□□□-185		185.5	105	HTSA36420940	94	NZTP[CA,IC]161350	135
SAS42-□□□-209		209.5	129	HTSA36421180	118	NZTP[CA,IC]161550	155
SAS42-□□□-220		220.5	140	HTSA36421280	128	NZTP[CA,IC]161650	165
SAS42-□□□-233		233.5	153	HTSA36421420	142	NZTP[CA,IC]161850	185
SAS42-□□□-250		250.5	170	HTSA36421580	158	NZTP[CA,IC]161950	195
SAS42-□□□-270		270.5	190	HTSA36421780	178	NZTP[CA,IC]162150	215
SAS42-□□□-290		290.5	210	HTSA36421980	198	NZTP[CA,IC]162350	235
SAS42-□□□-310		310.5	230	HTSA36422180	218	NZTP[CA,IC]162550	255

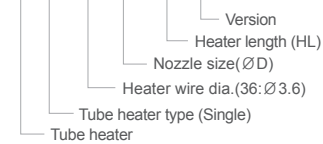


T/C code	ØP
NZTP□□16□□□□	1.6

### ● How to read heater code

히터 모델명 보는 법

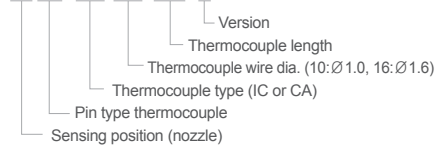
HTSA 36 22 055 0



### ● How to read thermocouple code

T/C 모델명 보는 법

NZTP CA 16 135 0



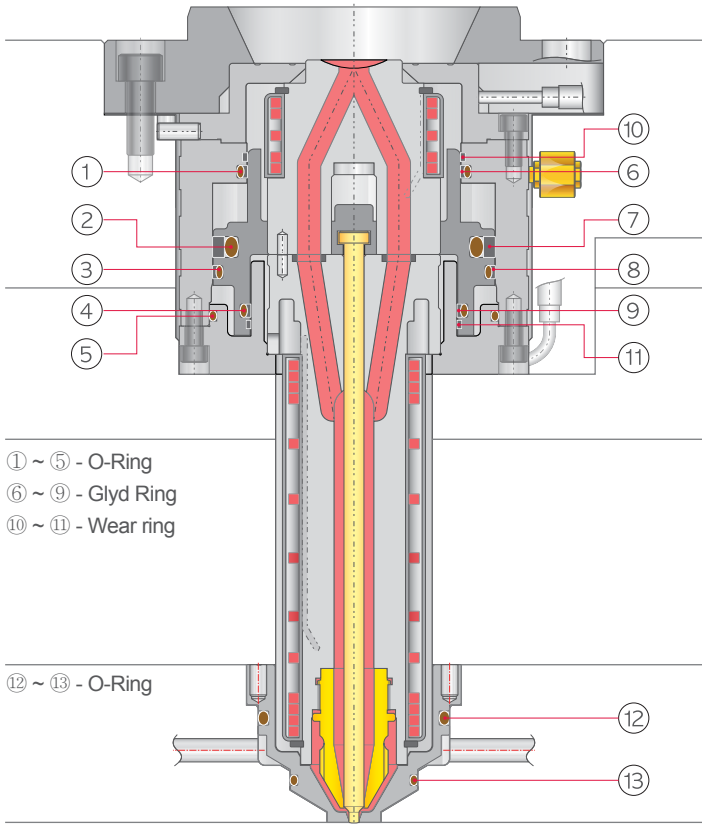
### Nozzle Tip

Model	VV tip code	VC tip code
SAS22	SATGVV220280	SATGVC220000
SAS32	SATGVV320420	SATGVC320000
SAS42	SATGVV420480	SATGVC420000

# ● Cylinder & Gate bush specification of SINGLE VALVE III

실린더 & 게이트 부시 사양

Cylinder & Gate bush O-ring code name 실린더 게이트 부시 "O"링 코드명



### Cylinder

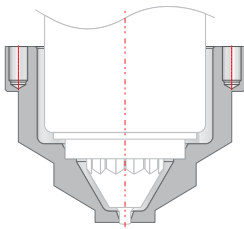
NO.	SAS 22 code	SAS 32 code	SAS 42 code
1	ACRRAV261380	ACRRAV261460	ACRRAV261510
2	ACRRAV352300	ACRRAV533350	ACRRAV533380
3	ACRRAV261510	ACRRAV261510	ACRRAV261530
4	ACRRAV261450	ACRRAV261450	ACRRAV261500
5	ACRRAV261480	ACRRAV261520	ACRRAV261530
6	ACDTTC365540	ACDTTC365640	ACDTTC365740
7	ACRGSO440750	ACRGSO440850	ACRGSO440950
8	ACDTTC384850	ACDTTC384850	ACDTTC384950
9	ACDTTC385620	ACDTTC385620	ACDTTC385720
10	Wear ring B=2.5, W=1.55		
11	Wear ring B=2.5, W=1.55		

### Gate bush

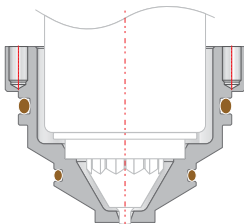
NO.	SAS 22 code	SAS 32 code	SAS 42 code
12	ACRRAV261310	ACRRAV352250	ACRRAV352280
13	ACRRAV170230	ACRRAV261250	ACRRAV261310

Gate bush code name 게이트 부시 코드명

### LVA type



### LVF type



### Gate bush

Nozzle Model	Gate	LVA type code	LVF type code
SAS 22	1.5	MABLVA220150	MABLVF220151
	1.8	MABLVA220180	MABLVF220180
	2	MABLVA220200	MABLVF220201
	2.5	MABLVA220250	MABLVF220250
SAS 32	2.5	MABLVA320250	MABLVF320250
	3	MABLVA320300	MABLVF320301
	3.5	MABLVA320350	MABLVF320350
	4	MABLVA320400	MABLVF320401
SAS 42	5	MABLVA420500	MABLVF420501
	6	MABLVA420600	MABLVF420601
	7	MABLVA420700	MABLVF420701
	8	MABLVA420800	MABLVF420800

# ● Pin specification of SINGLE VALVE III

## 밸브 핀 사양

### Tapper type valve pin

Nozzle model	Gate Ø	Ød1	Ød	ØD	L1
SAS 22	1.5 / 1.8 / 2.0 / 2.5	Gate Ø - 0.3	4	7	4
SAS 32	2.5 / 3.0 / 3.5 / 4.0		6	9	4
SAS 42	5.0 / 6.0 / 7.0 / 8.0		10	11.5	4

Unit : mm

### Straight type valve pin

Nozzle model	Gate Ø	Q°	ØH	ØD	L1	L2	L3
SAS 22	1.5 / 1.8 / 2.0 / 2.5	53.13 / 47.49 / 43.6 / 33.4	7	4	4	2	4.5
SAS 32	2.5 / 3.0 / 3.5 / 4.0	82.37 / 73.74 / 64 / 53.13	9	6	4	3	5
SAS 42	5.0 / 6.0 / 7.0 / 8.0	102.68 / 90 / 73.74 / 53.13	11.5	10	4	4	6

Unit : mm

### How to calculate the length of valve pin 밸브 핀 길이 측정 방법

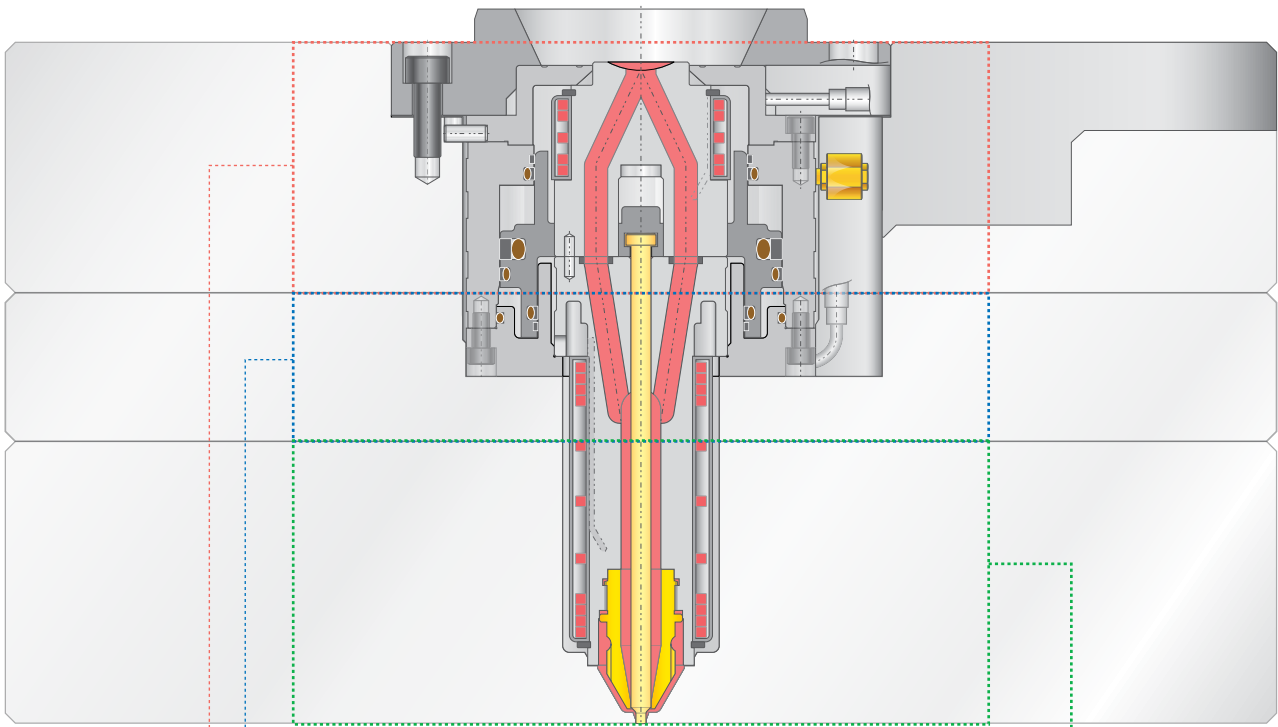
- How to calculate the length of valve pin  
 밸브 핀 길이 계산법
  - Nozzle length - A
  - 노즐길이 - A

Cylinder standard	A
SAS 22	33.5
SAS 32	35.5
SAS 42	38.5

# ● Section of mold machining in SINGLE VALVE III

몰드 가공 부분

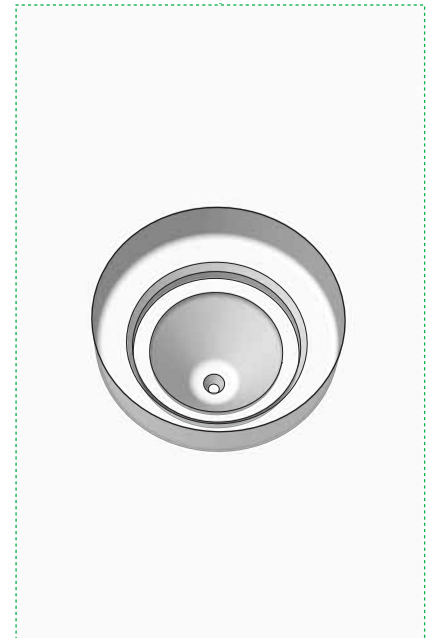
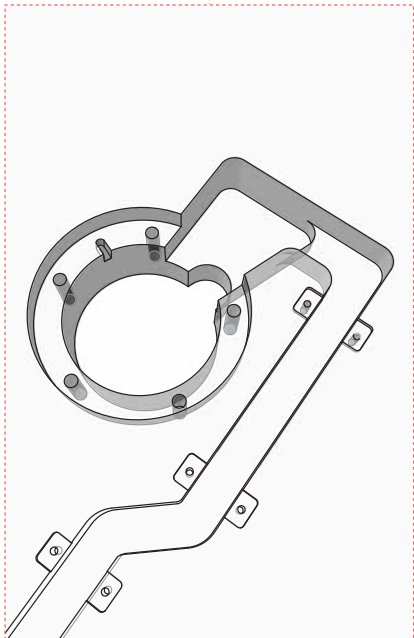
## Section area



Clamping plate

Holding plate

Cavity plate



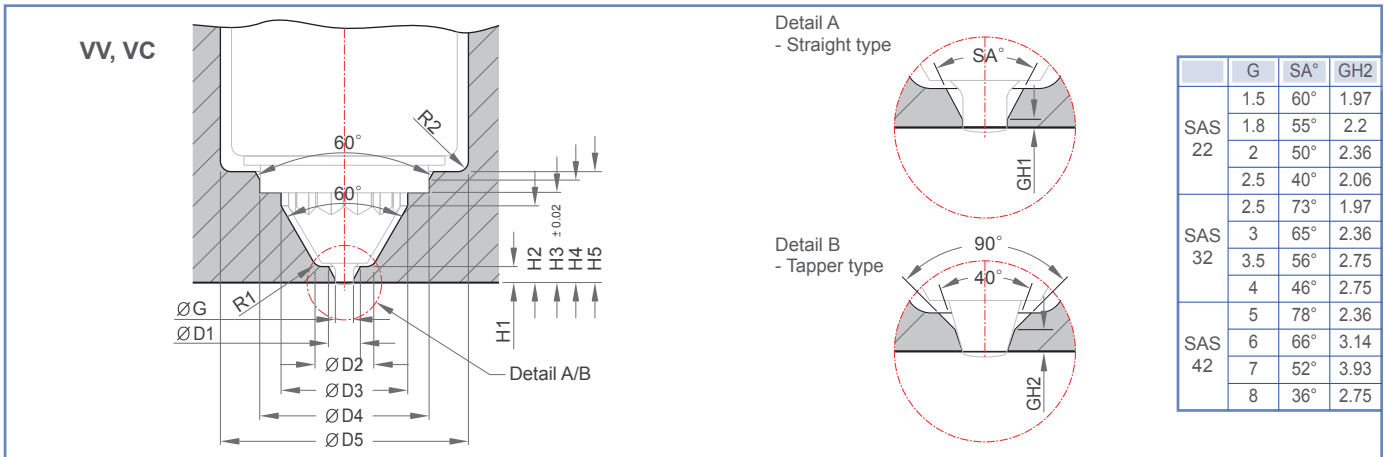
Type	Mold area	Clamping plate	Holding plate	Cavity plate
MODU (Hot half)		YUDO	YUDO	Customer
HRS (M/F + Nozzle)		Customer	Customer	Customer





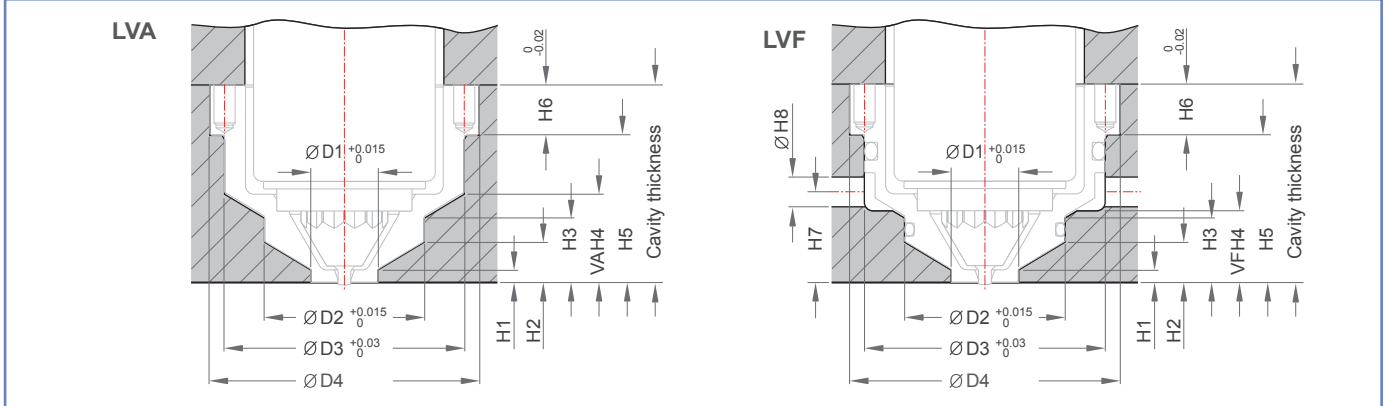
# ● Gate area machining of SINGLE VALVE III

## 게이트 가공도



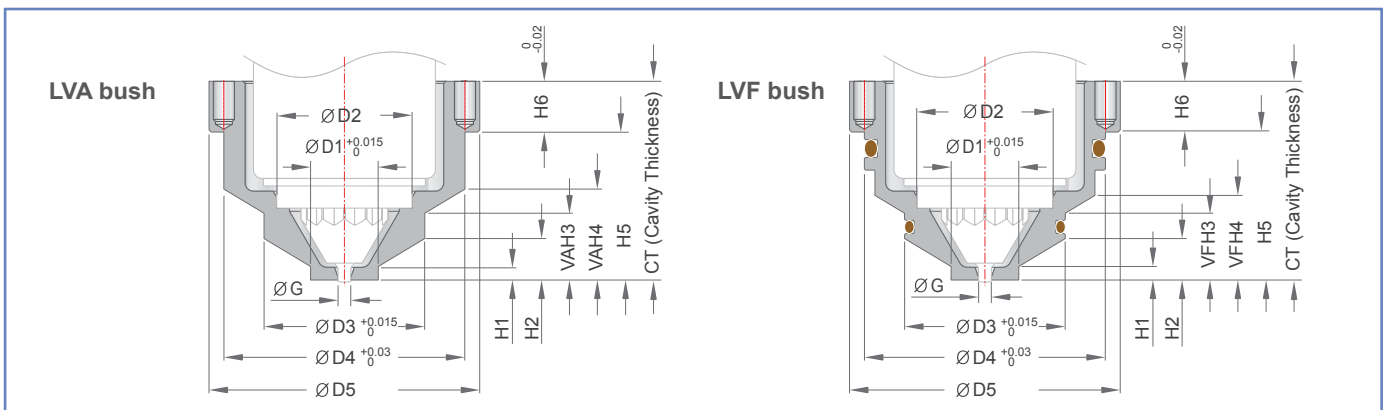
	G	SA°	GH2
SAS 22	1.5	60°	1.97
	1.8	55°	2.2
	2	50°	2.36
	2.5	40°	2.06
SAS 32	2.5	73°	1.97
	3	65°	2.36
	3.5	56°	2.75
SAS 42	4	46°	2.75
	5	78°	2.36
	6	66°	3.14
	7	52°	3.93
	8	36°	2.75

	D1	D2	D3	D4	D5	GH1	H1	H2	H3	H4	H5	R1	R2
SAS 22	4	8.5	17	22	37	0.3	2.5	9.86	10	12	14	1.5	1.5
SAS 32	6	10.7	24	32	47	0.6	3	14.52	17	19.4	21	2	2
SAS 42	10	14.8	36	42	58	0.9	4	19.14	20	22.5	24	2.5	2.5



	D1	D2	D3	D4	H1	H2	H3	VAH4	VFH4	H5	H6	H7	H8	CT
SAS 22	14	30	48	54	2	6.81	10	15.41	11	22	10	13.5	5	32
SAS 32	16	38	57	64	3	9.61	15.3	21.01	17	35	12	21.5	7	47
SAS 42	25	48	67	74	3.5	10.41	15.5	21.21	16.5	45	15	20.5	8	60

## Gate bush machining



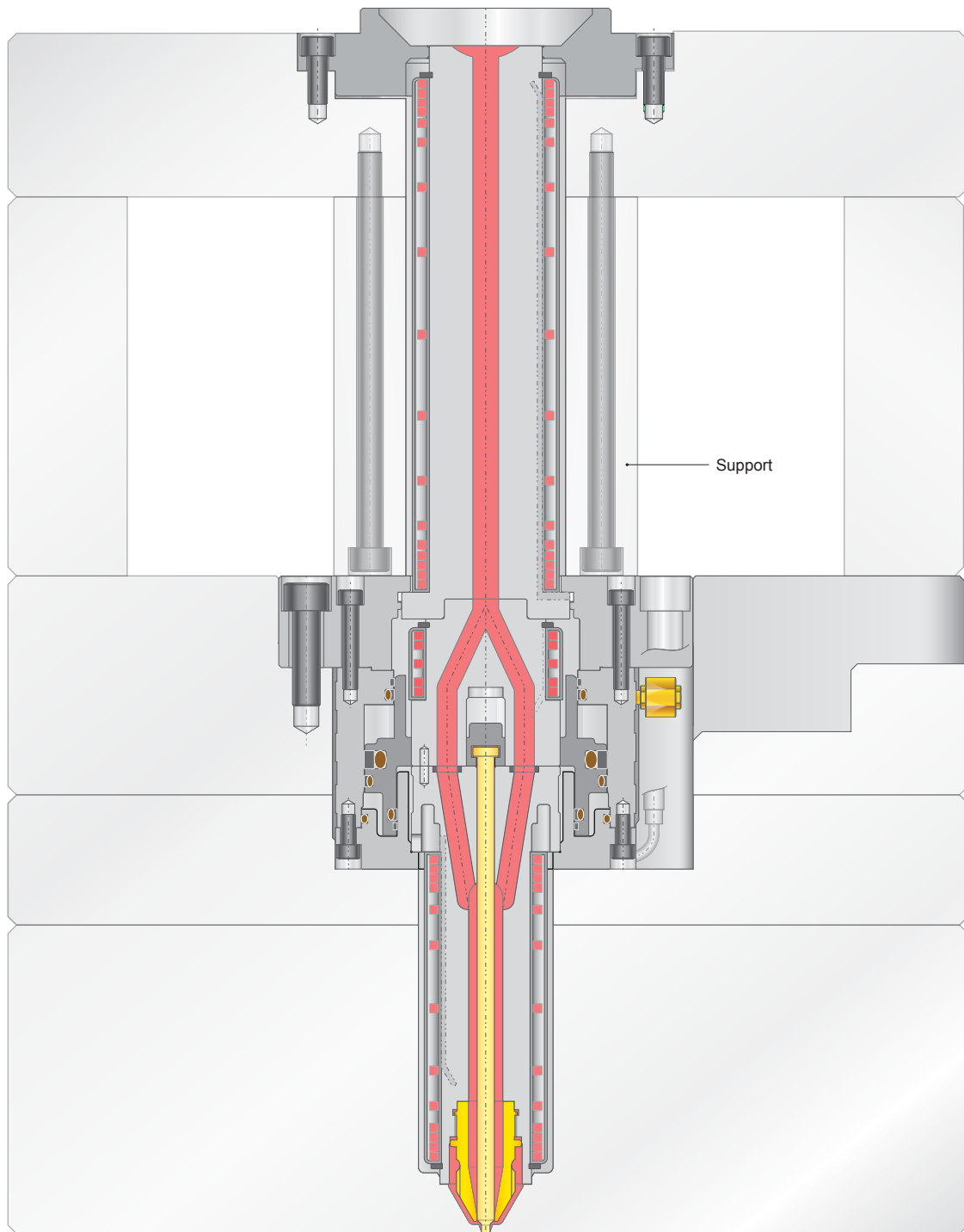
\* CT is the standard length of LVA, LVF gate bush, It will be able to be extended according to customer's need.  
 \* CT 는 LVA, LVF 게이트 부시의 표준 길이이며, 고객요구에 따라 길게 연장 가능합니다.

	D1	D2	D3	D4	D5	H1	H2	VAH3	VFH3	VAH4	VFH4	H5	H6	CT	G
SAS 22	14	22	30	48	54	2.2	7.01	10.3	10.3	15.91	15.71	22	10	32	1.5/1.8/2.0/2.5
SAS 32	16	32	38	57	64	3.2	9.81	15.8	15.8	21.51	20.01	35	12	47	2.5/3.0/3.5/4
SAS 42	25	42	48	67	74	3.7	10.61	16	17.09	21.71	21	45	15	60	5.0/6.0/7.0/8.0

# ● Long type of SINGLE VALVE III (SLS III)

롱타입 노즐 (SLS III)

Long type (Order made) 롱타입 (주문제작사양)

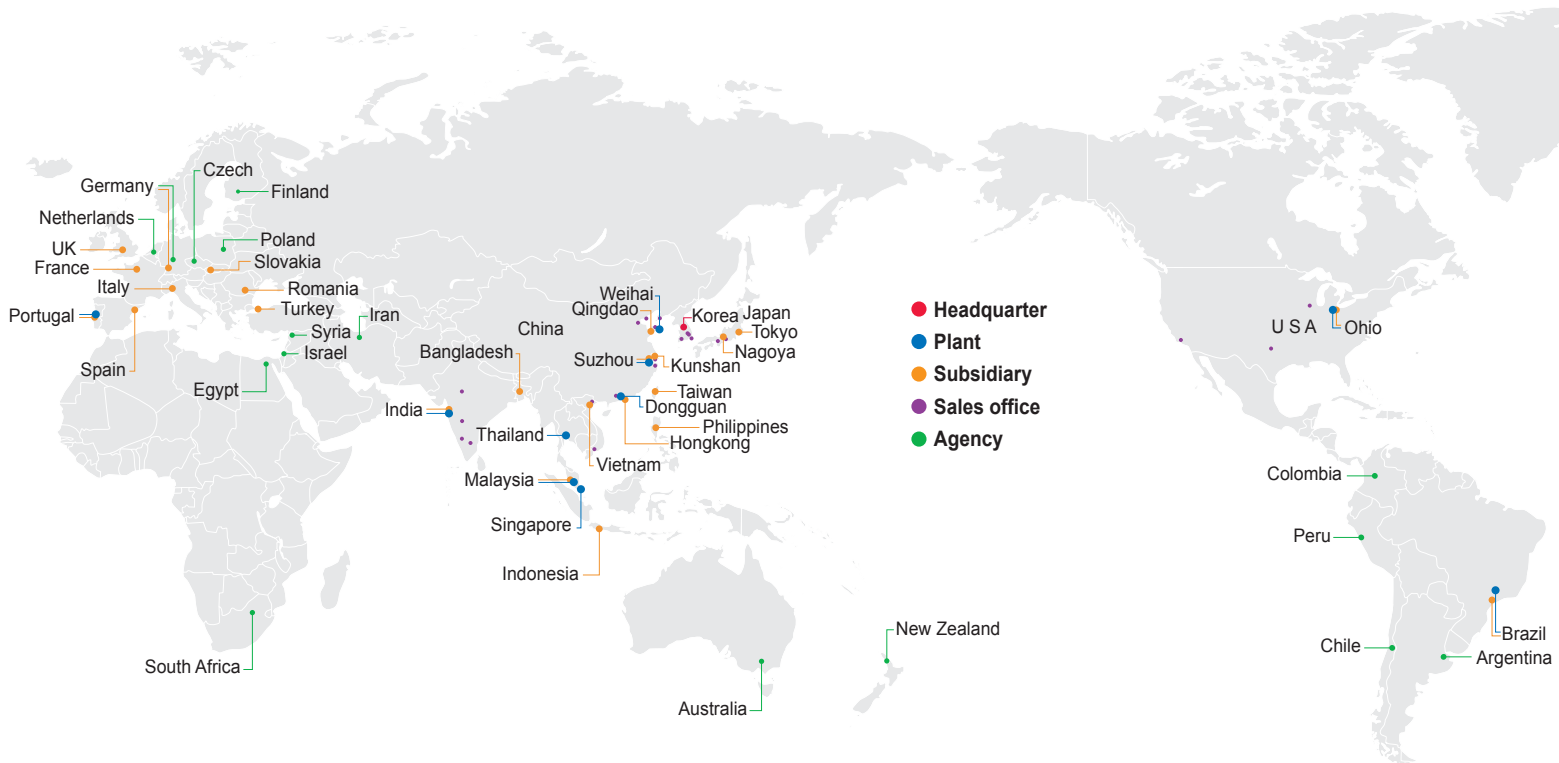


※ If you need the longer nozzle than standard size of SINGLE VALVE III (SLS III), You can apply to Long type SLS III.

※ SINGLE VALVE III (SLS III) 의 표준노즐 Size보다 긴 노즐이 필요한 경우 Long type인 SLS III를 적용 합니다.

# www.yudo.com

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