

Quality Solution!
Hot Plus Hot Runner Systems

HOTPLUS CO.,LTD.
(株)HOTPLUS (주)핫플러스

<http://www.hotplus.co.kr>

Hotplus是韩HOTPLUS的注册商标。

Hotplus는 (주)핫플러스의 등록상표입니다.

Improve your plastic quality
Change your plastic standards and your idea about

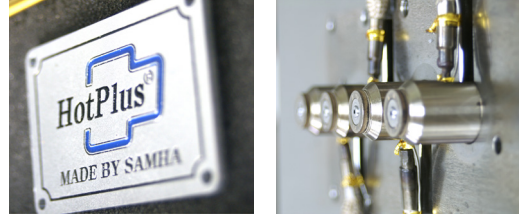
我们将让您提高对塑料质量的标准和眼光。
我们将改变您对热流道系统的观念。

플라스틱 품질에 대한 기준과 안목을 올려 드리겠습니다.
핫러너 시스템에 대한 생각을 바꾸어 드리겠습니다.

PRESIDENT | 황재우 Jae Woo, Hwang



Hot Runner systems !



HotPlus proudly promises Powerful Quality
 HotPlus's specialized solutions for super engineering materials being changed and upgraded.
 HotPlus has a full lineup of Quality Hot Runner systems, GMO/V systems for general and engineering materials, ENV systems for super engineering materials, PET systems for PET Preform, LED super special customized systems for LED Lead Frames and Precise controller products.
 Also we are ready to quickly supply the new custom-made development to suit customer requirements
 You can make better parts with Hotplus advanced quality and technology

Hot plus向您承诺强大的质量保障。
 我们向您介绍专业化应对持续变化的工程树脂的Hot plus热流道系统。
 从广泛适用于从通用树脂到工程树脂产品等的GMO/V system。
 制造PET preform专用PET system。
 应对持续变化的超级工程树脂产品的新一代产品ENV system。
 制造产品和顾客定制型LED Lead Frame专用Super special system、精密的控温控制器产品组、
 一直到满足顾客要求开发New System，通过以更好的质量和技术制造而成的热流道产品验证热流道产品制造出来的更优质的产品。

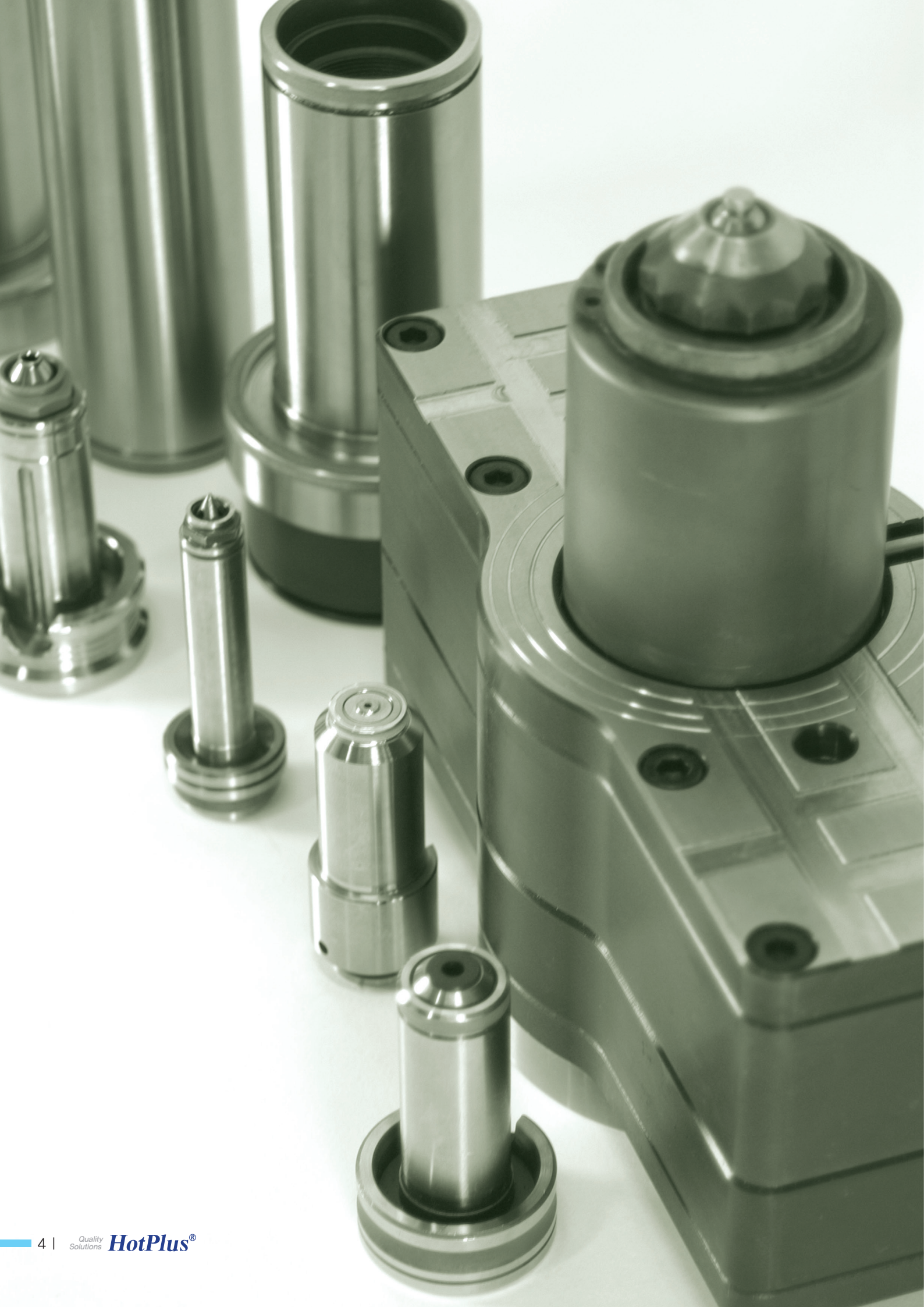
Hotplus가 Powerful Quality를 약속합니다
 지속 변화하는 엔지니어링수지에 특화된 Hot Plus 핫러너 시스템입니다
 범용수지에서부터 엔지니어링 제품등에 광범위하게 적용하는 GMO/V system,
 PET preform 전용 PET system
 지속 변화하는 슈퍼 엔지니어링 제품에도 대응하는 차세대 제품인 ENV system
 제품과 고객 맞춤형 LED Lead Frame 전용 Super special 시스템,정밀한 온도제어 컨트롤러 제품군
 고객 요구에 부응하는 New System 개발에 이르기 까지
 더 나은 품질과 기술로 만들어진 핫러너제품에서 더 나은 제품을 확인해보십시오!



To make our customers better everywhere
 HotPlus Hot runner systems are well manufactured based on powerful quality.
 It did not start on the basis of one-sided understanding for Hot runner systems.
 It did start on the basis of full right understanding for both a mold and a hot runner system at the beginning stage of designing a product.
 We will make your standard about plastic and hot runner system be leveled up.

产品从设计阶段就摆脱目前对热流道的片面标准，是以对热流道和模具的全面正确的认识和理解为基础来开始并制造完成的。
 我们将使顾客提高对塑料的观念和对热流道系统的标准。

제품 설계단계부터 기존의 핫러너의 일반적 기준에서 출발하지 않았으며 핫러너와 금형에 대한 완벽한 이해를 바탕으로 시작되어 완성된 제품입니다
 고객님의 플라스틱에 대한 생각, 핫러너 시스템에 대한 기준을 더 높게 바라보게 하겠습니다





I N D E X

目录

Product Guide of Hot Plus Hot Runner systems

1. Product Introduction	06
2. Material compatibility	10
3. GMO System / General Open Solution	11
- GMO20	
- GMO25	
- GMO35	
- GMO45	
4. GMV System / General Valve Solution	18
- GMV20	
- GMV25	
- GMV35	
- GMV45	
5. MMO & MMV System	26
6. ENV System / Engineering Valve Solution	29
- ENV16	
- ENV19	
7. PET System / PET Preform Valve Solution	34
- PET19	
8. Pneumatic Cylinders	38
9. GSO & GLO System	39
10. SNV System / Single Valve Solution	42
- SNV35	
- SNV45	
11. LED System / Customized Super Special System & PMO System / Specialized Packaging Solution	49
12. Advanced Manifold Technology	52
13. Temperature Controller and Sequence Timer	53
14. Hot Plus Specification Sheet	55



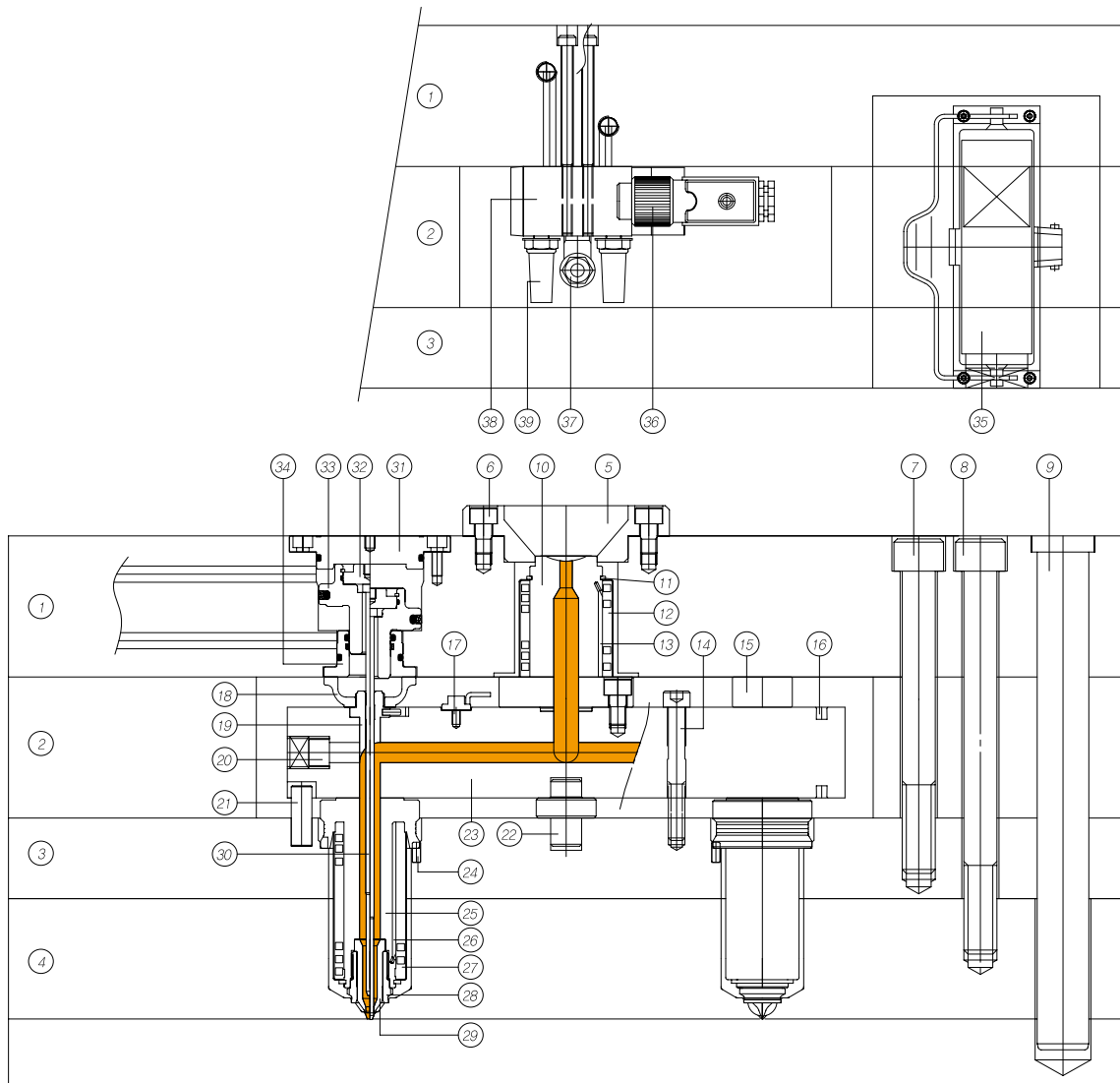
Product Introduction



□ Hot Plus Product Guide

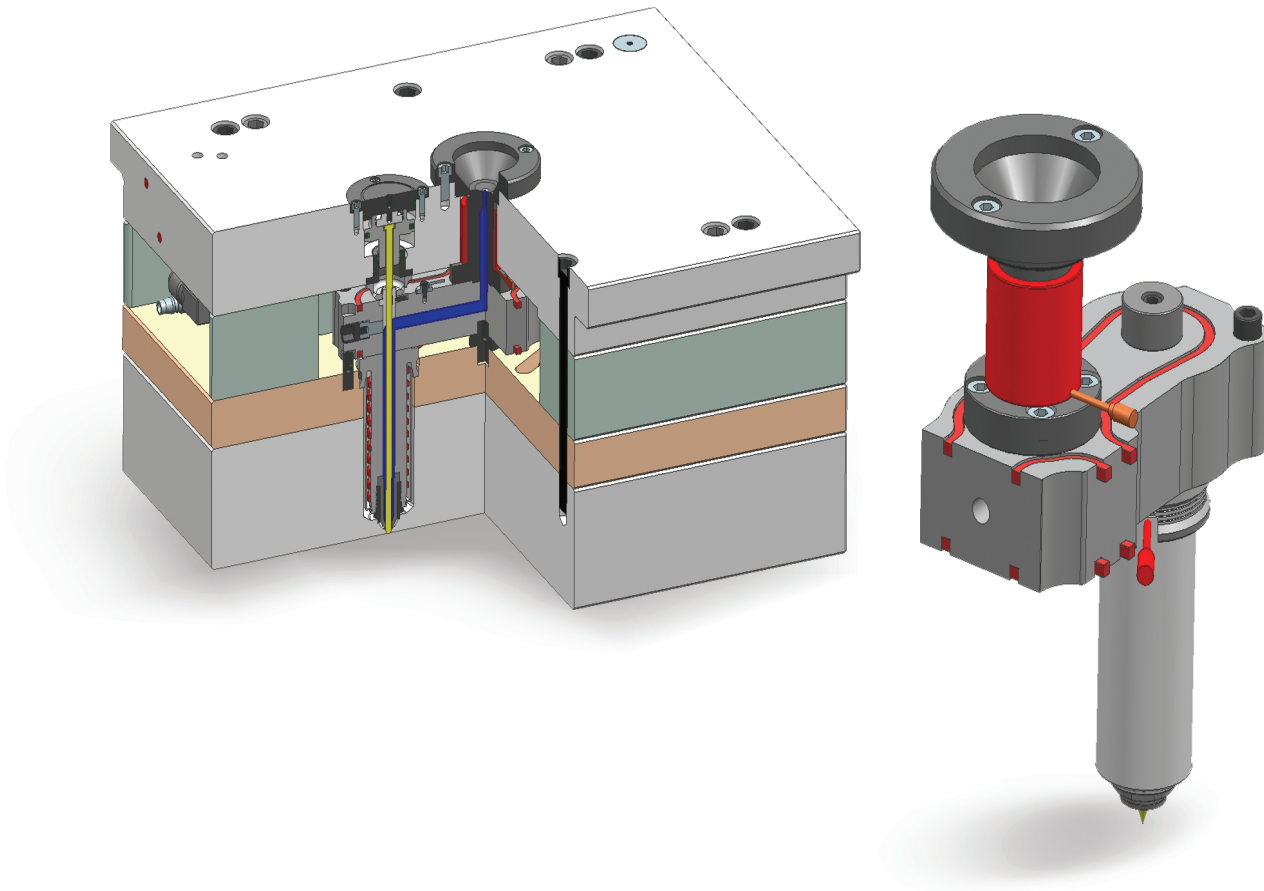
TYPE	SPECIFICATION	OPEN GATE	VALVE GATE	PAGE
GMO System GMV System	Most general applications, Adjust nozzle length to order	YES	YES	11
MMO System MMV System	Packaging applications Adjust nozzle length to order	YES	YES	26
PET System	Proven PET preform applications, Faster and Better Cycle time,	NA	YES	34
ENV System	Engineering applications Excellent Heat Stability	NA	YES	29
GSO System GLO System	Most general applications Adjust nozzle length to order	YES	NA	39
Single Valve System	Most applications Adjust nozzle length to order	NA	YES	42
PMO System	Packaging applications Standard nozzle length,	YES	NA	49
LED System	Customized super special system	To be customized		49

□ Structure of Hot Runner system



MOLD Unit		Manifold Unit		Nozzle Unit		Connecting Unit	
1	Clamping Plate	10	Nozzle Locator	24	Nozzle Lock Pin	35	Heater + T/C Connector
2	Space Plate	11	Snap Ring	25	Nozzle Body	36	Signal Connector
3	Holding Plate	12	Coil Heater & Pipe	26	Nozzle Thermo Couple	37	Air Coupler
4	Cavity Plate	13	Thermo Couple	27	Coil Heater & Pipe	38	Solenoid Valve
		5	Locate Ring	28	Nozzle Tip Bush	39	Silencer
		6	Locate Ring Bolt	29	Nozzle Tip		
		7	Ass'y Clamping Bolt(B2)	30	Valve Pin		
		8	Ass'y Clamping Bolt(B1)	31	Cylinder Cover		
		9	Center Pin	32	Piston Cover		
			16	33	Piston Out		
			17	34	Cylinder Bottom		
			18				
			19				
			20				
			21				
			22				
			23				

□ Channel Diameter and Gate Diameter of Hot Plus Hot Runner system



(Unit : mm)

TYPE	SIZE	CHANNEL DIA		GATE		
		OPEN	VALVE	OPEN		VALVE
				CC	CA	
GMO GMV	20	8	8	0,8/1,0/1,2/1,5	1,5/2,0	1,2/1,5/2,0
	25	10	10	1,0/1,5/2,0	2,0/2,5/3,0	1,5/2,0/2,5
	35	12	12	1,5/2,0/2,5	3,0/3,5/4,0	2,5/3,0/3,5/4,0
	45	16	22	2,0/3,0/4,0	4,0/5,0/6,0	5,0/6,0/7,0/8,0
SNV	35	NA	12	NA		2,5/3,0/3,5/4,0
	45	NA	22	NA		5,0/6,0/7,0/8,0
ENV	16	NA	7	NA		1,2/1,5/2,0
	19	NA	7	NA		1,2/1,5/2,0
PET	19	NA	8	NA		4

Material Compatibility | Nozzle Selection

Nozzle	GMO				GMV		ENV	PET
	CC	CB	CA	CA-E	VC	VB	VC	VV
Amorphous Materials (非结晶性树脂 / 비결정성수지)								
ABS	●	●	○	○	●	●	●	
PC	△	△	△	○	○	○	●	
PMMA	○	○	△	△	●	●	●	
PPO	○	○	○	○	●	○	●	
PS	●	●	○	○	●	●	●	
PUR	△	△	○	○	●	●	●	
PVC	×	×	△	△	△	△	△	
SAN	○	○	△	△	●	●	●	
Crystalline Materials (结晶性树脂 / 결정성수지)								
PET	△	△	△	△	○	○	△	●
PBT	△	△	×	×	○	○	●	
PE	●	●	●	●	●	●	●	
PA	○	○	△	△	○	○	●	
POM	○	○	△	△	○	○	●	
PP	●	●	●	●	●	●	●	
PPS	○	○	×	×	○	○	●	
LCP	△	△	×	×	○	○	●	
Additives (含添加剂 / 첨가제 함유)								
FR	△	△	○	○	○	○	●	
GF	●	●	△	●	●	●	●	
Stabilizer	○	○	○	○	○	○	●	

● : Excellent ○ : Acceptable △ : Contact Hotplus × : Not Recommended

GMO System

General Open Solution

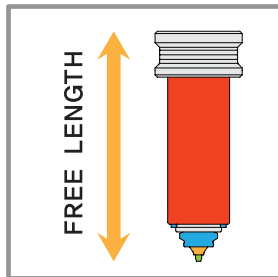


□ GMO System / General Open Solution



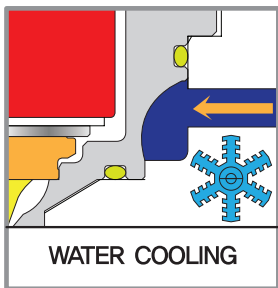
■ Excellent Heat Stability / 优秀的热稳定性 우수한 열적 안정성

Good Part Quality with Excellent Heat Stability on the gate area.
以浇口部的热稳定性为基础消除了塑型时产生问题
GATE부 열적 안정성을 바탕으로 성형상 문제 발생 제거



■ Wide Range of Selections / 广泛的选择范围 폭넓은 선택

Wide range of Selections, Nozzle Length, Gate Bushes, Tips
提供可对应顾客的各种要求的尺寸、规格、长度、衬套
고객 다양한 요구에 대응 가능한 사이즈, 규격, 길이, 부시 제공



■ Cooling Gate Bush / 冷却衬套 냉각부시

Cooling Gate bush is supported
可采用冷却衬套
냉각부시 적용 가능

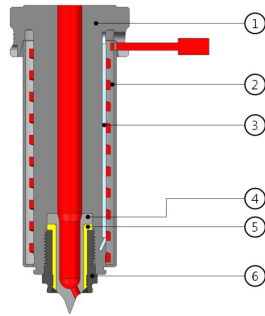
Quality General Open system for Diverse and Wide Solutions
Automobiles, Home Appliances, Office supplies, Livelihood supplies

可在多种领域广泛被采用的通用Open system
汽车、家电产品、办公用品、生活用品

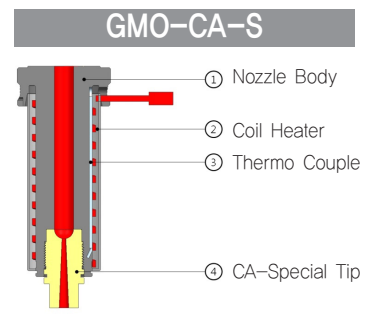
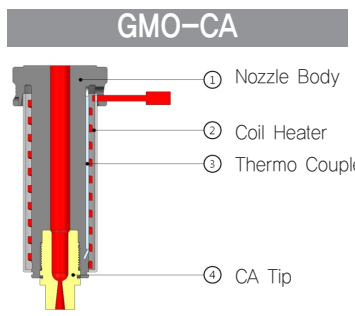
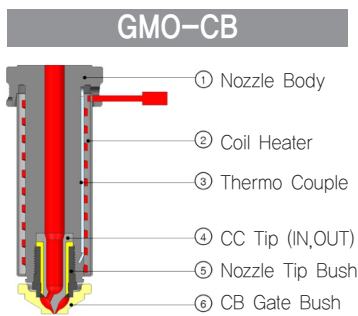
다양하고 광범위하게 적용 가능한 범용 Open system
자동차, 가전제품, 사무용품, 생활용품



■ GMO STRUCTURE



	GMO-CC-Dura
1	Nozzle Body
2	Coil Heater
3	Thermo Couple
4	CC Tip (Out)
5	CC Tip (In)
6	Nozzle Tip Bush

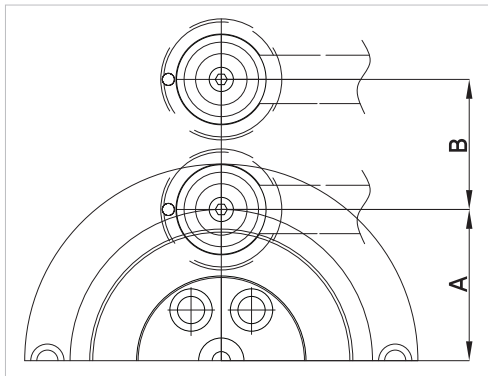


■ GMO Spec

(Unit : mm)

TYPE	SIZE	CHANNEL DIA	GATE	
		OPEN	OPEN	
			CC	CA
GMO	20	8	0.8 / 1.0 / 1.2 / 1.5	1.5 / 2.0
	25	10	1.0 / 1.5 / 2.0	2.0 / 2.5 / 3.0
	35	12	1.5 / 2.0 / 2.5	3.0 / 3.5 / 4.0
	45	16	2.0 / 3.0 / 4.0	4.0 / 5.0 / 6.0

■ Minimum Gate Pitch of GMO



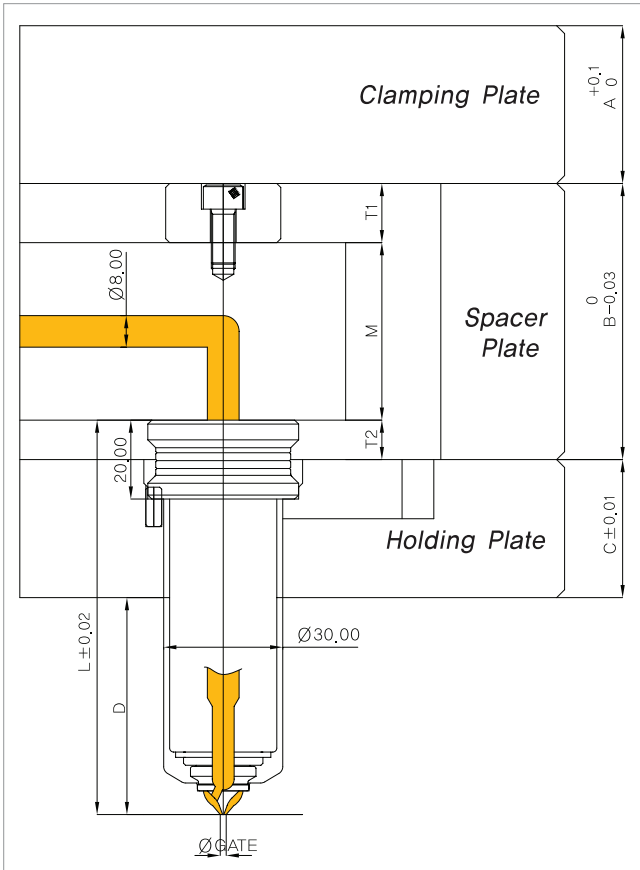
NOZZLE TYPE	N/L and GATE	GATE to GATE
	A	B
GMO-20	50	43
GMO-25	50	53
GMO-35	50	63
GMO-45	55	73

	A	B	C	L	D	M	T1	T2
Dimension	30~	70	30~	70~	L-(T2+C)	45	15	10

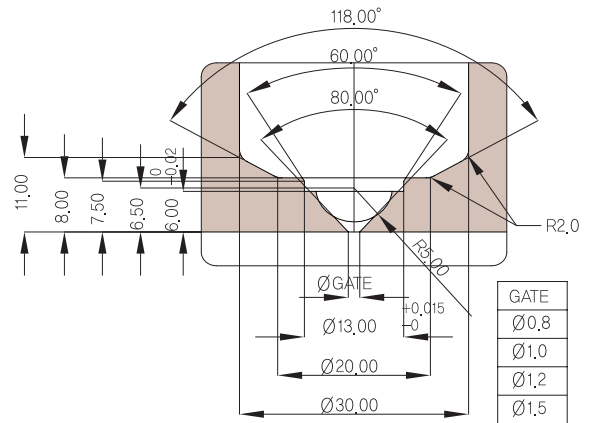
Minimum

Recommended

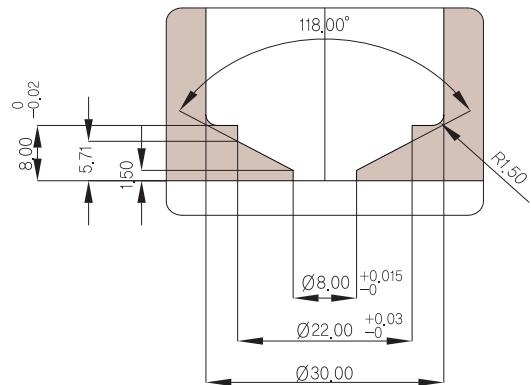
■ **GMO20 - Series**



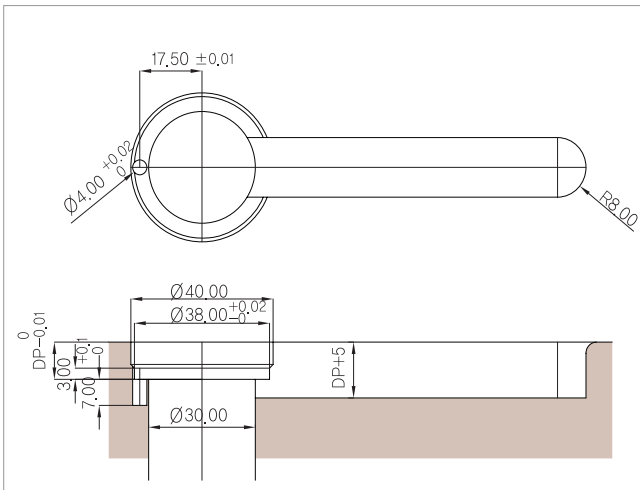
■ **GMO20 - CC**



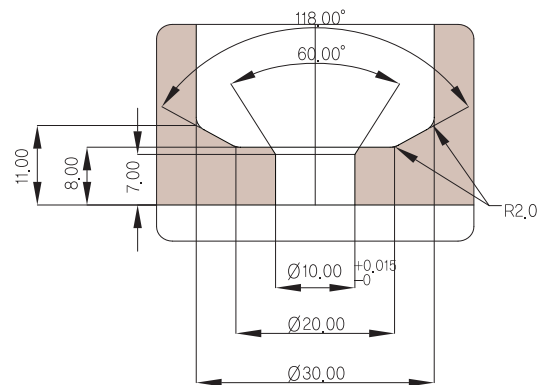
■ **GMO20 - CB**



■ **Flange Machining**



■ **GMO20 - CA**



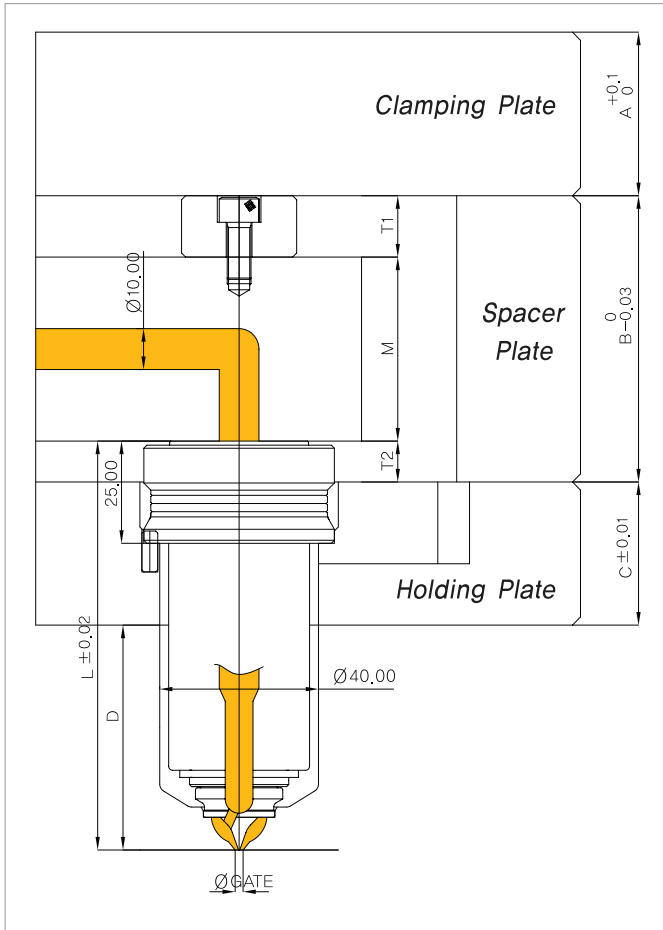
GM025

	A	B	C	L	D	M	T1	T2
Dimension	30~	70	30~	70~	L-(T2+C)	45	15	10

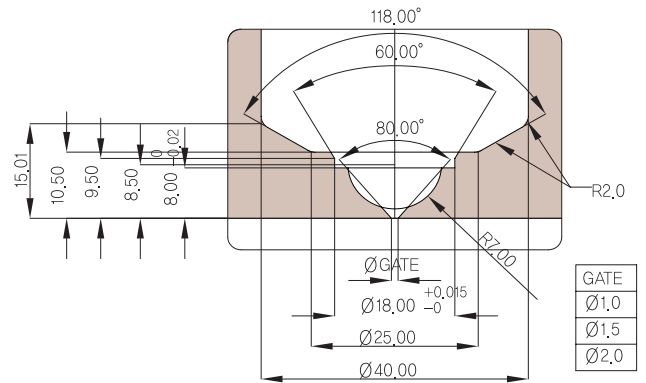
← Minimum

← Recommended

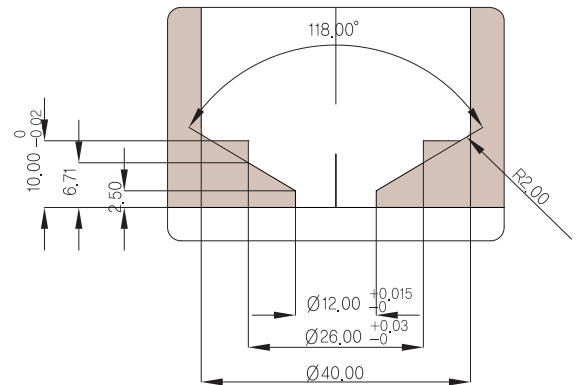
GM025 - Series



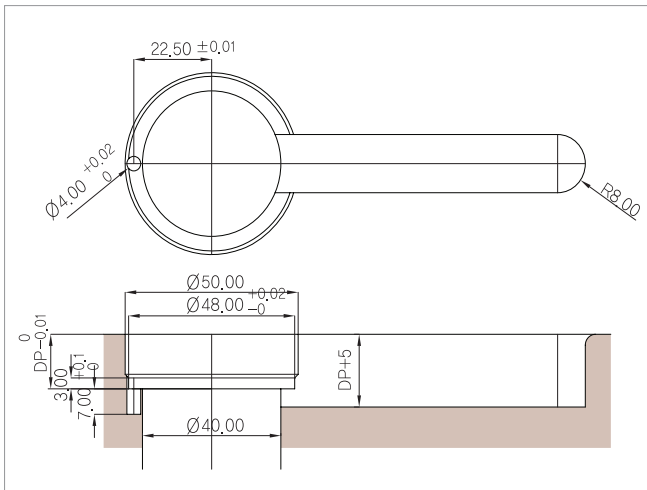
GM025 - CC



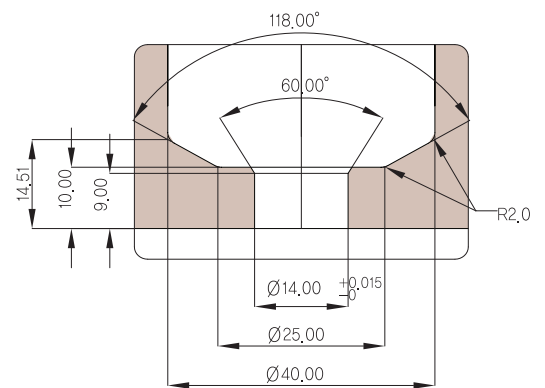
GM025 - CB



Flange Machining



GM025 - CA



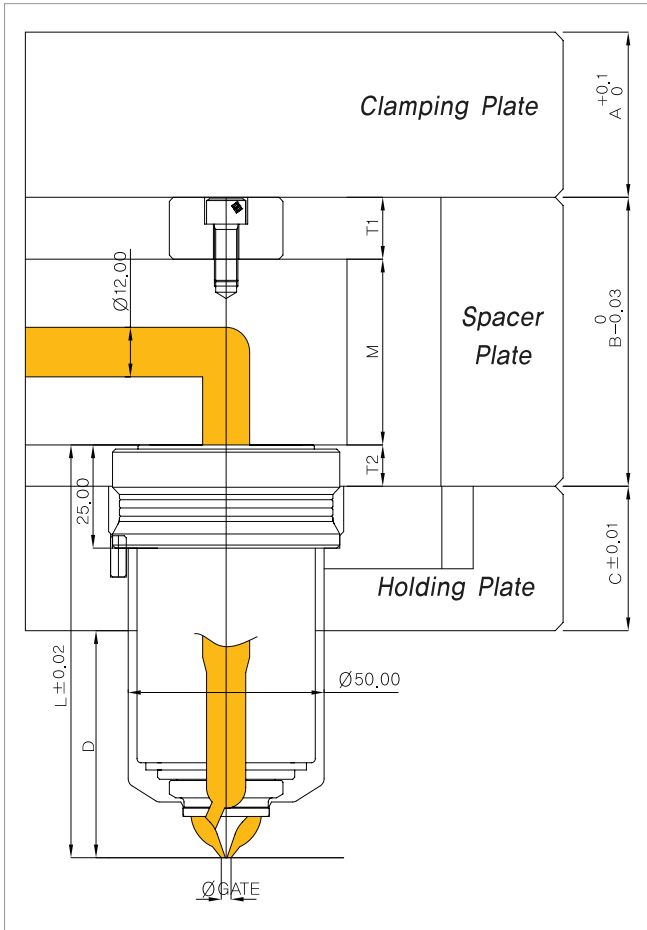
GM035

	A	B	C	L	D	M	T1	T2
Dimension	30~	70	40~	90~	L-(T2+C)	45	15	10

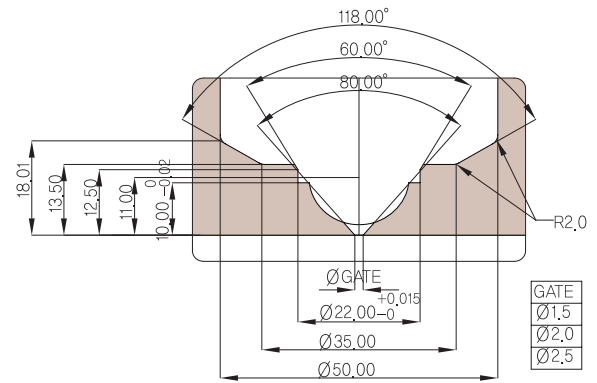
← Minimum

← Recommended

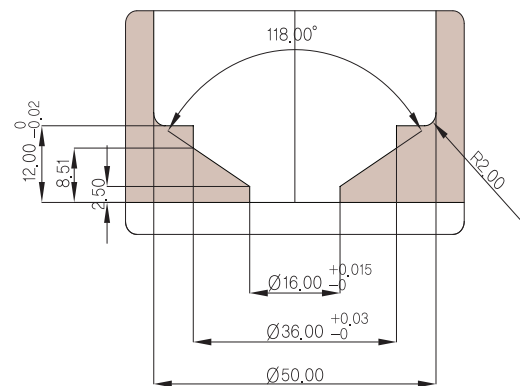
GM035 - Series



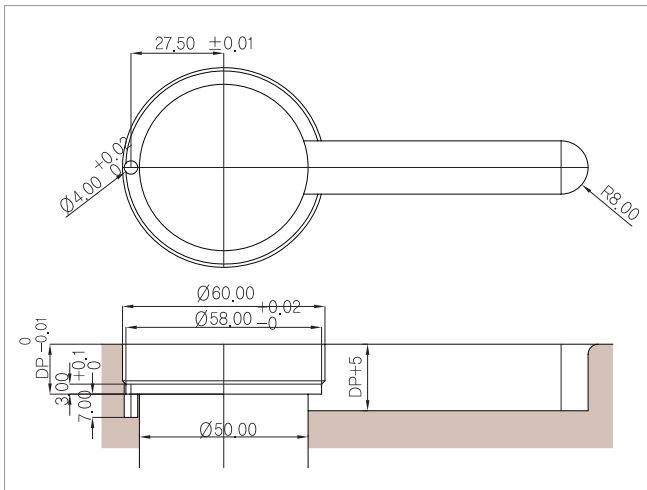
GM035 - CC



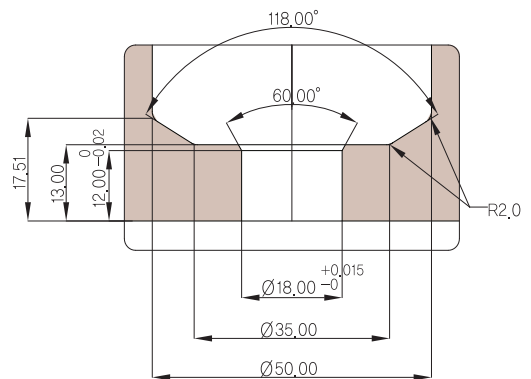
GM035 - CB



Flange Machining



GM035 - CA



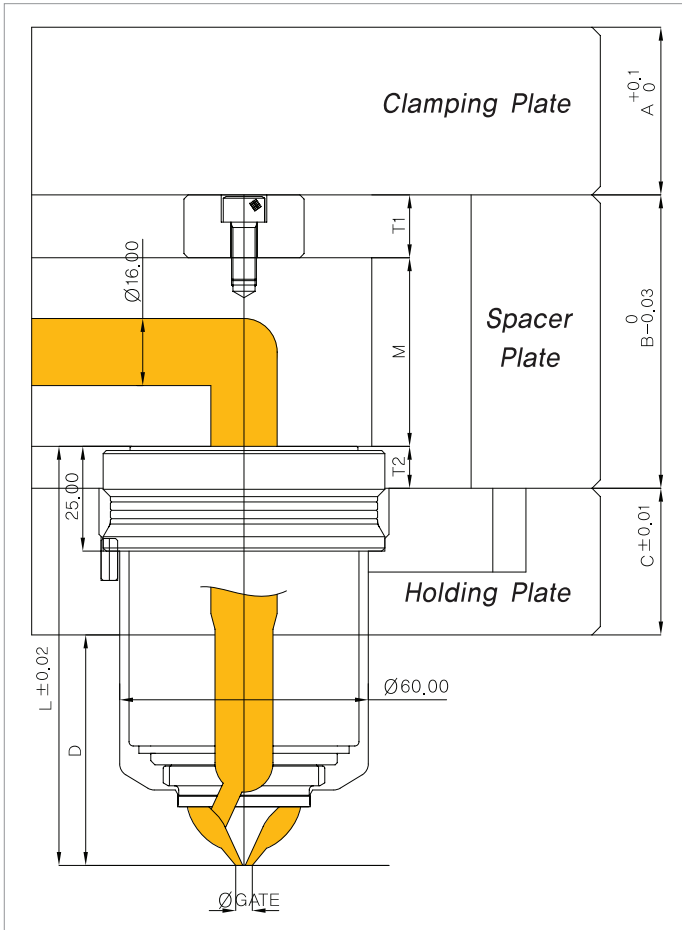
GM045

	A	B	C	L	D	M	T1	T2
Dimension	30~	70	40~	110~	L-(T2+C)	45	15	10

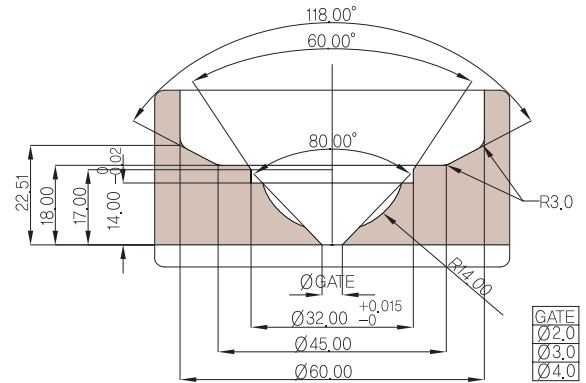
← Minimum

↑ Recommended

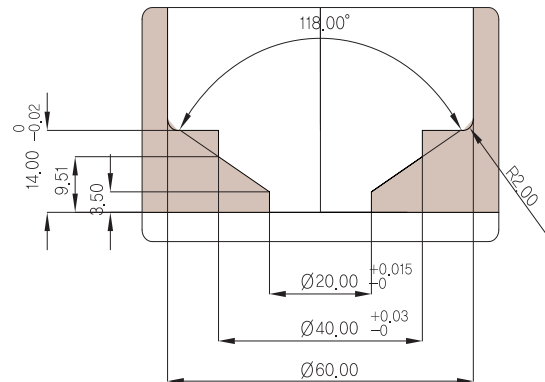
GM045 - Series



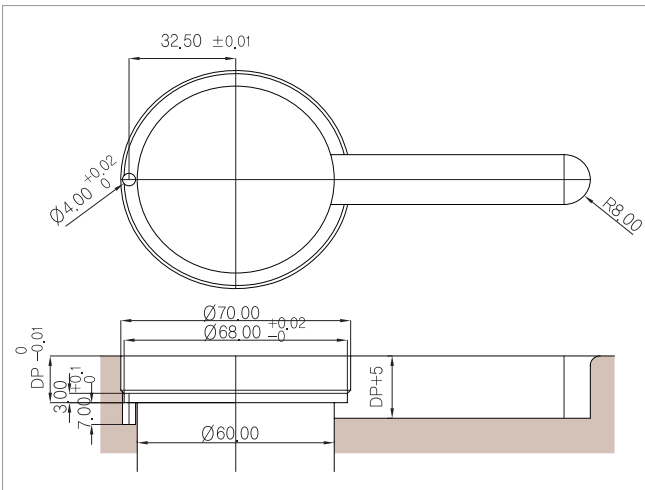
GM045 - CC



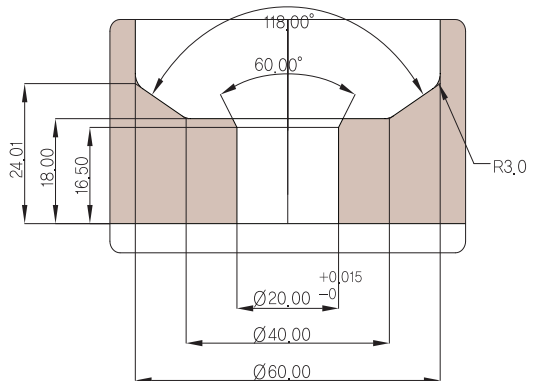
GM045 - CB



Flange Machining

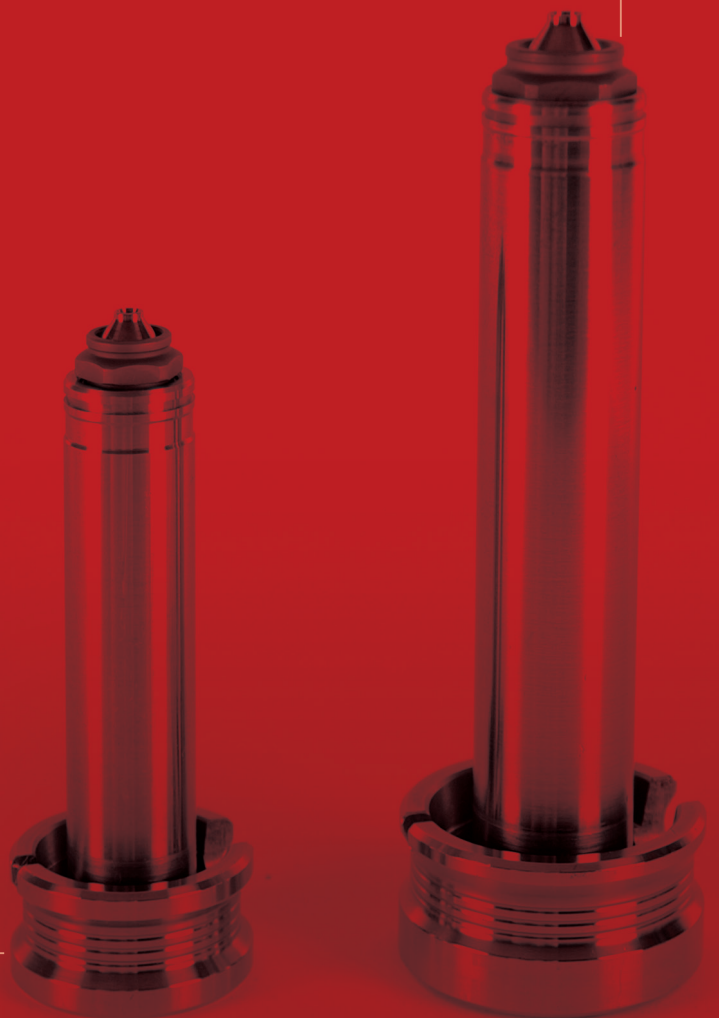


GM045 - CA



GMV System

General Valve Solution



□ GMV System / General Valve Solution

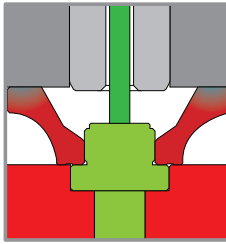


■ Excellent Heat Stability / 优秀的热稳定性 우수한 열적 안정성

Excellent Heat stability and Pin Performance ensures the optimal gate conditions

通过优秀的热稳定性和针的运行对浇口部提供最佳的条件

우수한 열적 안정성과 핀 작동을 통한 GATE부에 최상의 조건을 제공

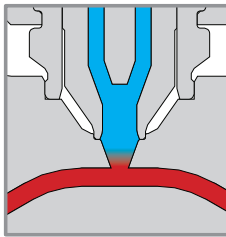


■ Advanced Pin Guide Ring / 优化的导针环 향상된 핀가이드링

More Advanced special design to strongly prevent the material leakage and minimize the heat exchange

采用进一步提升的防树脂泄漏及将热交换最小化的特殊设计

보다 진화된 강력한 수지누수방지 및 열교환 최소화한 Special 특수 디자인 적용

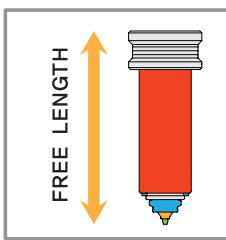


■ Quick Color Change / 迅速换色 신속한 칼라체인지

Quick Color change VC structure on the gate area

适合迅速换色的VC浇口结构

신속한 Color change 에 적합한 VC 게이트 구조

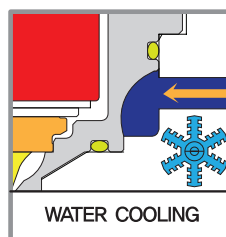


■ Wide Range of Selections / 广泛的选择范围 폭넓은 선택

Wide range of Selections, Nozzle Length, Gate Bushes, Tips and Cylinders

广泛而多样的选择、喷嘴长度、浇口衬套、咀芯、气缸

광범위하고 다양한 선택, 노즐길이, Gate bush, 팁, 실린더



■ Cooling Gate Bush / 冷却衬套 냉각부시

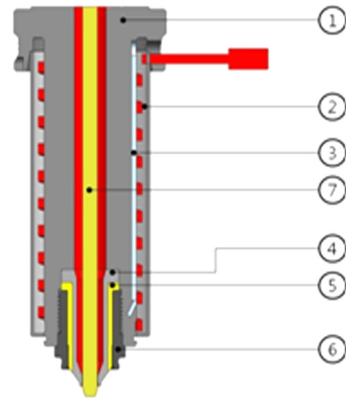
Cooling Gate bush is supported

可采用冷却衬套

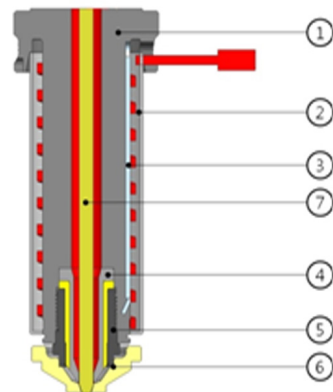
냉각부시 적용가능

■ GMV STRUCTURE

	GMV-VC
1	Nozzle Body
2	Coil Heater
3	Thermo Couple
4	VC Tip (Out)
5	VC Tip (In)
6	Nozzle Tip Bush
7	Valve Pin



	GMV-VB
1	Nozzle Body
2	Coil Heater
3	Thermo Couple
4	VC Tip (IN,OUT)
5	Nozzle Tip Bush
6	VB Gate Bush
7	Valve Pin

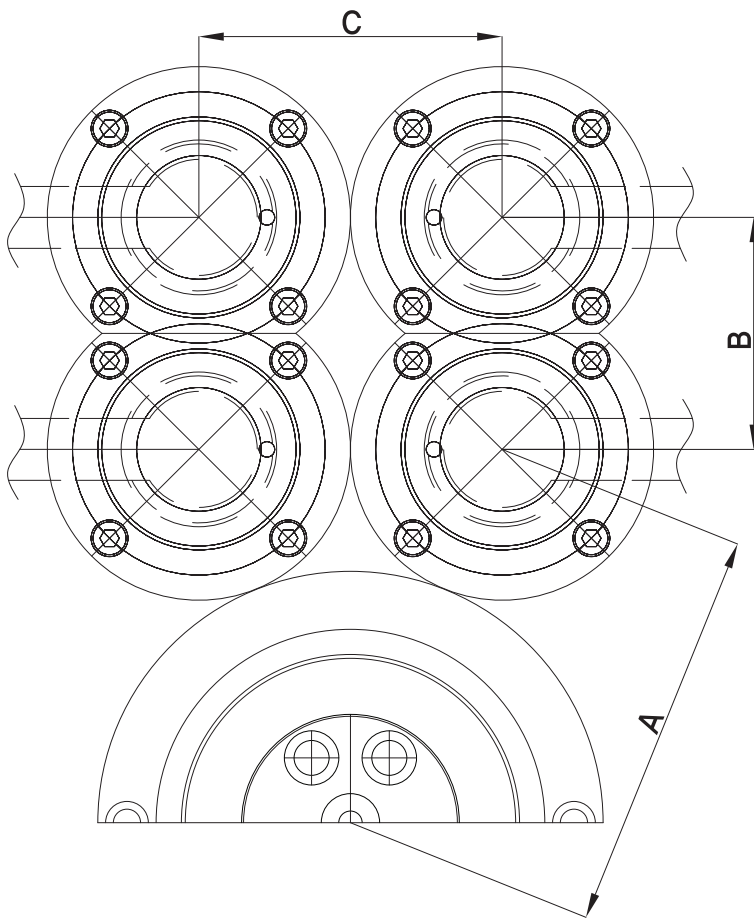


■ GMV Spec

(Unit : mm)

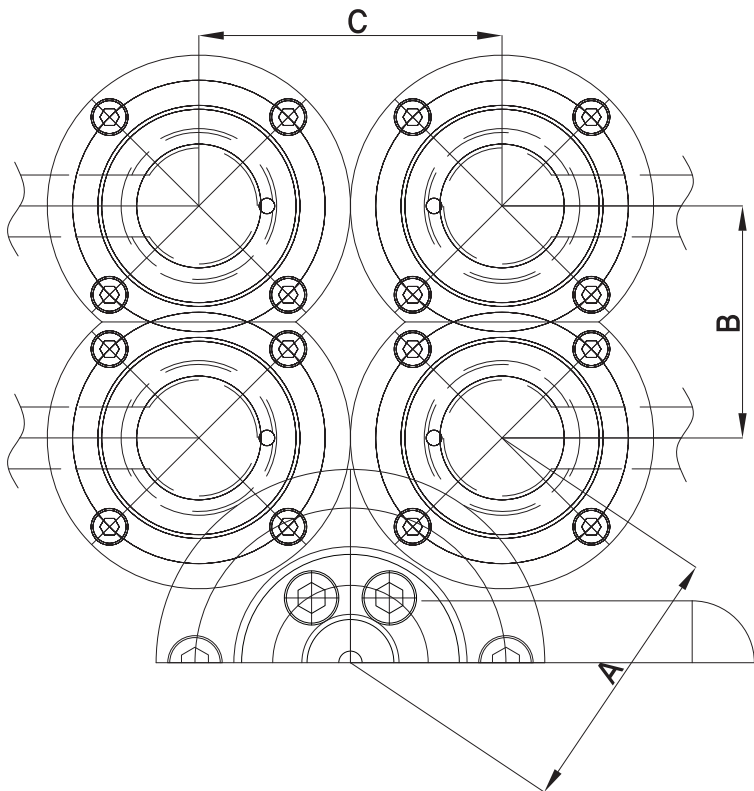
TYPE	SIZE	CHANNEL DIA	GATE
		VALVE	VALVE
GMV	20	8	1,2 / 1,5 / 2,0
	25	10	1,5 / 2,0 / 2,5
	35	12	2,5 / 3,0 / 3,5 / 4,0
	45	22	5,0 / 6,0 / 7,0 / 8,0

■ Minimum Gate Pitch of GMV



VALVE TYPE NL23,33(Without HT)

NOZZLE SIZE	N/L-GATE	GATE RECTANGLE	GATE SQUARE
	A	B	C
GMV-20	105	60	80
GMV-25	105	60	80
GMV-35	105	63	80
GMV-45	120	90	110



VALVE TYPE NL25,35(With HT)

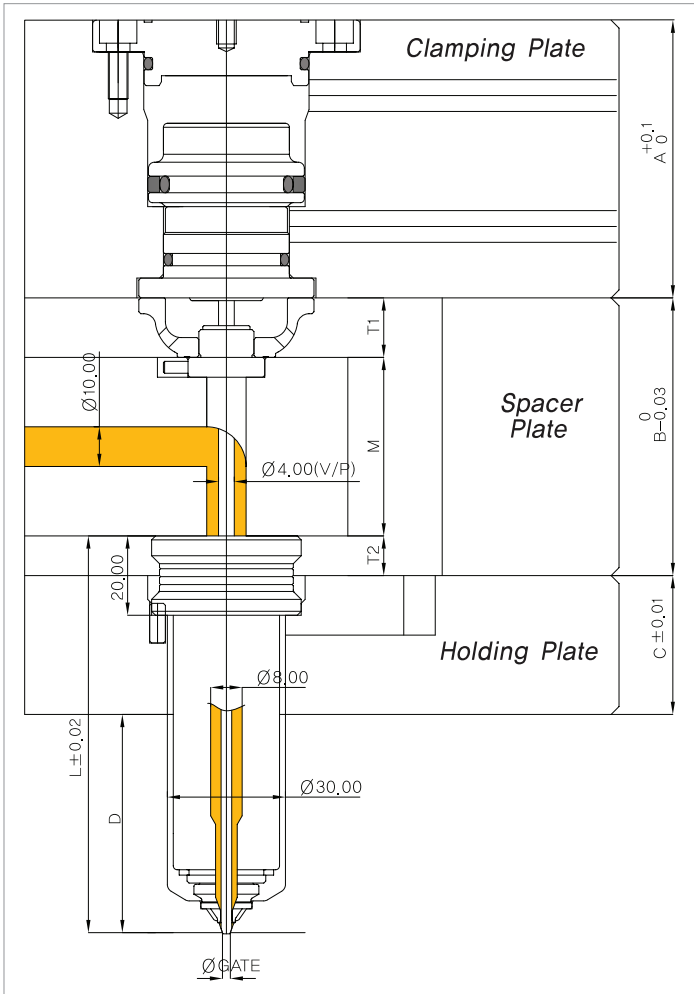
NOZZLE SIZE	N/L-GATE	GATE RECTANGLE	GATE SQUARE
	A	B	C
GMV-20	75	60	80
GMV-25	75	60	80
GMV-35	75	63	80
GMV-45	90	90	110
ENV16,19	75	60	80

	A	B	C	L	D	M	T1	T2
Dimension	70	70	30~	70~	L-(T2+C)	45	10, 15	B-(M+T1)

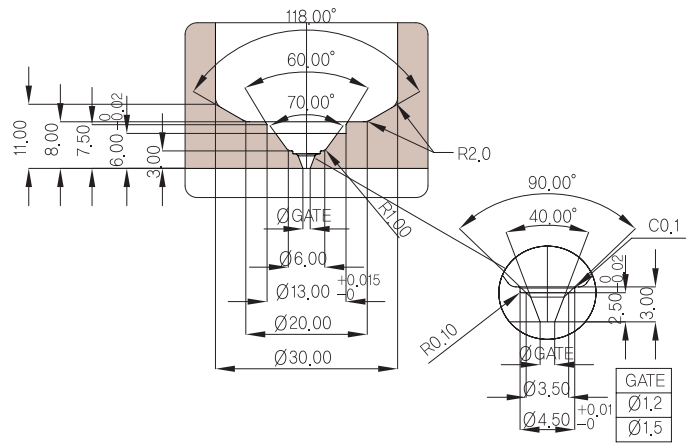
← Minimum

← Recommended

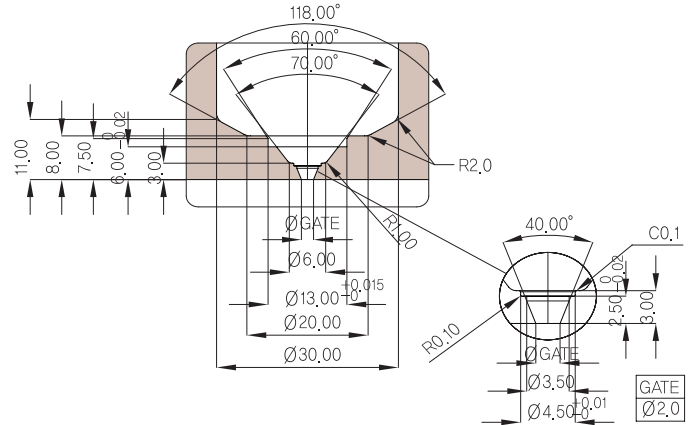
■ GMV20 - Series



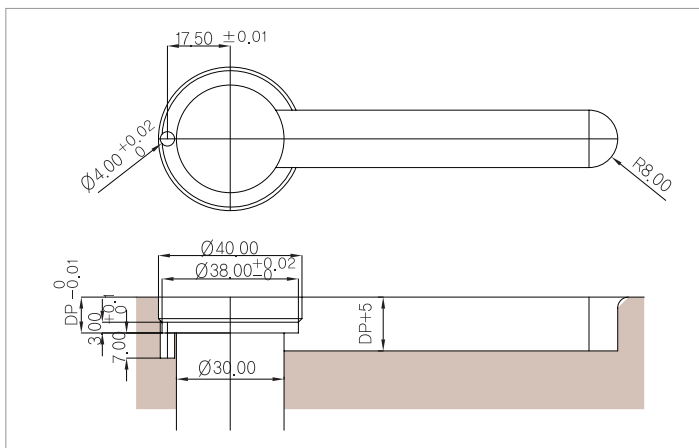
■ GMV20 - VC(G1.2/1.5)



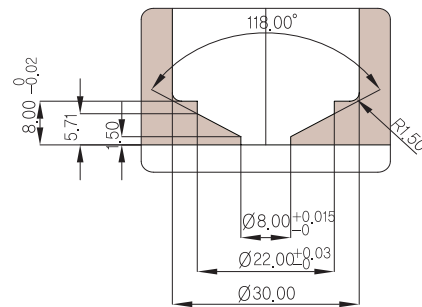
■ GMV20 - VC(G2.0)



■ Flange Machining



■ GMV20 - VB

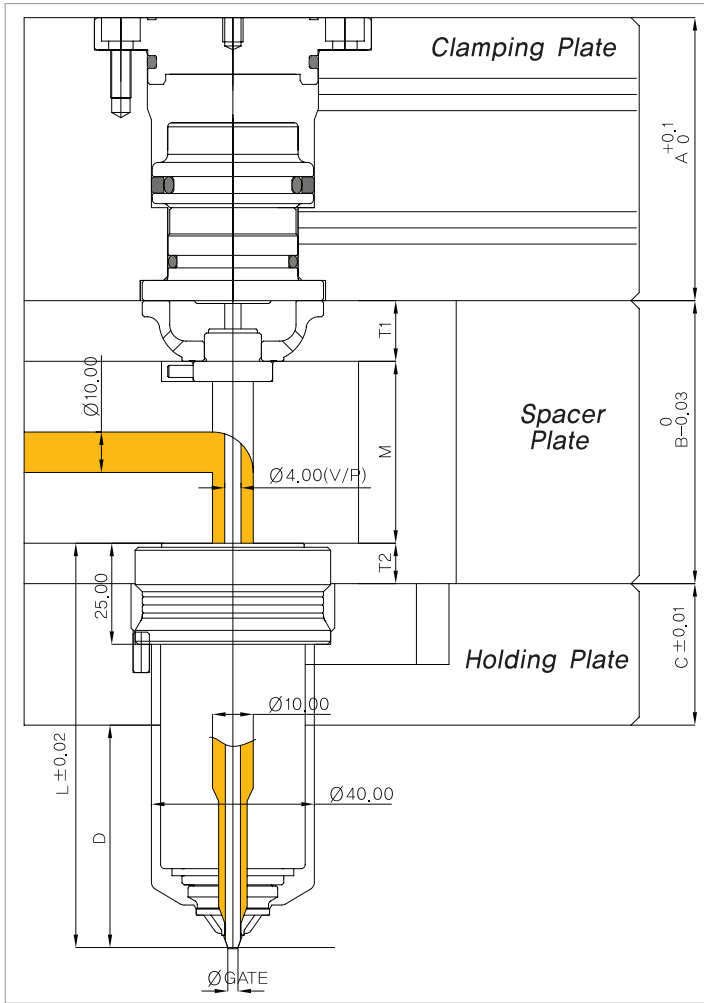


	A	B	C	L	D	M	T1	T2
Dimension	70	70	30~	70~	L-(T2+C)	45	10, 15	B-(M+T1)

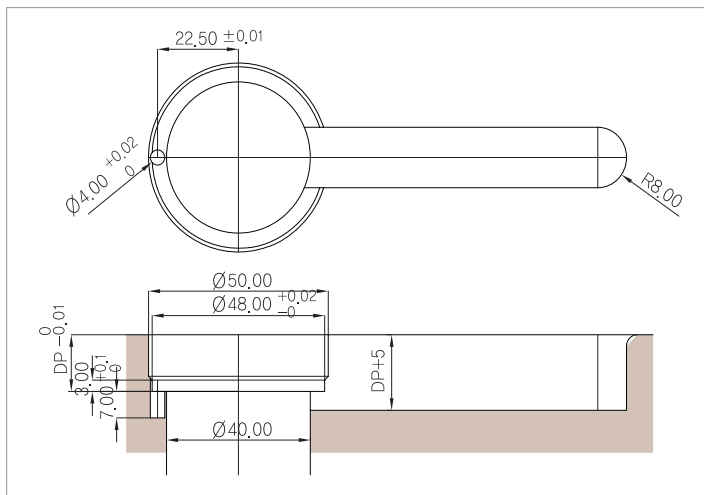
← Minimum

← Recommended

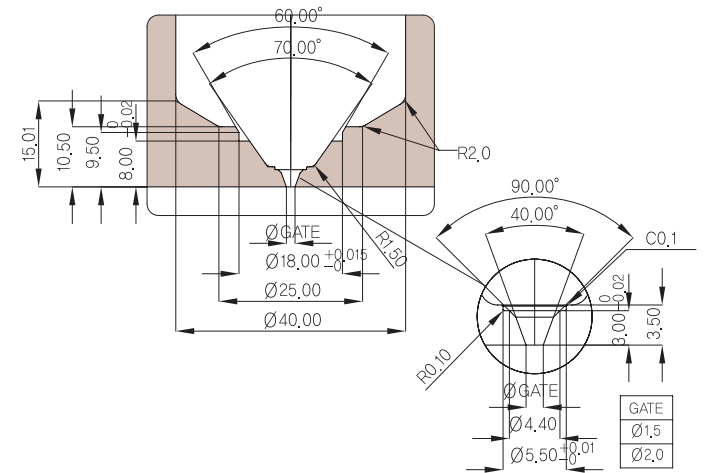
■ GMV25 - Series



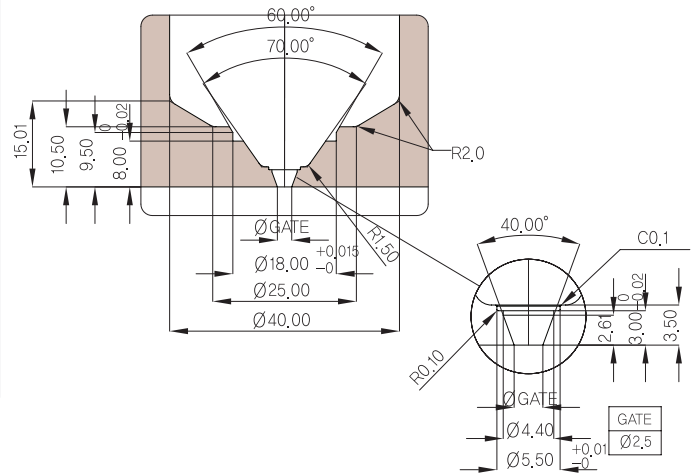
■ Flange Machining



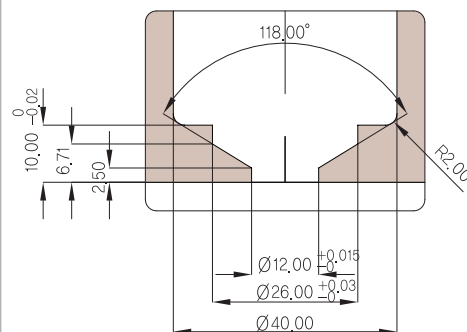
■ GMV25 - VC(G1.5/2.0)



■ GMV25 - VC(G2.5)



■ GMV25 - VB

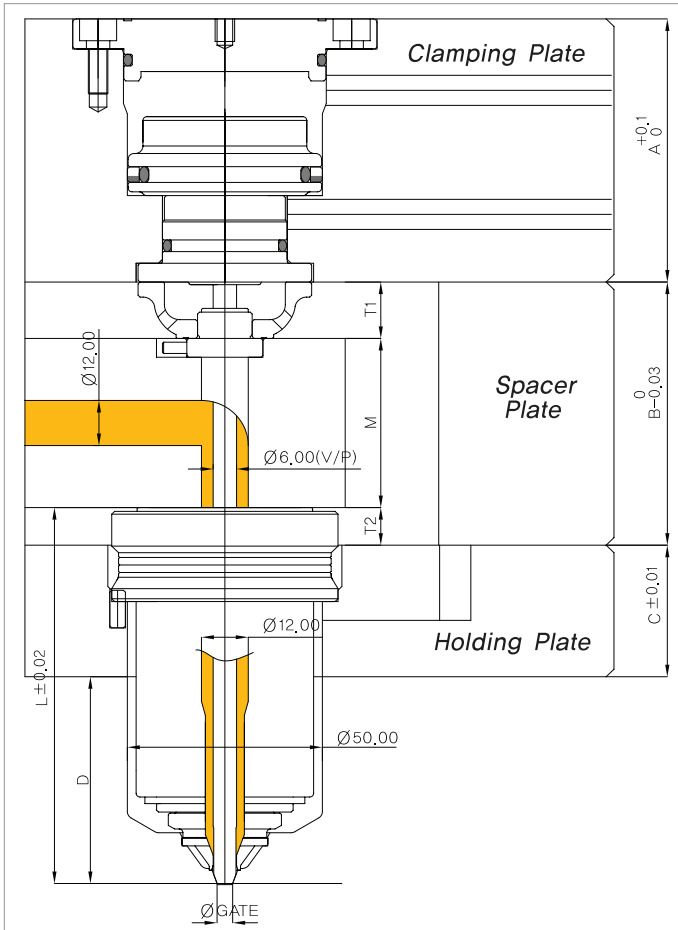


	A	B	C	L	D	M	T1	T2
Dimension	70	70	40~	90~	L-(T2+C)	45	10, 15	B-(M+T1)

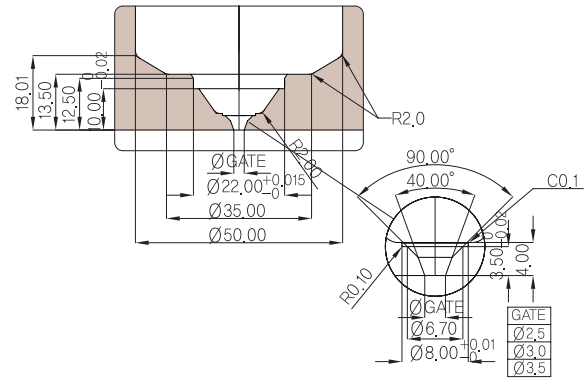
← Minimum

← Recommended

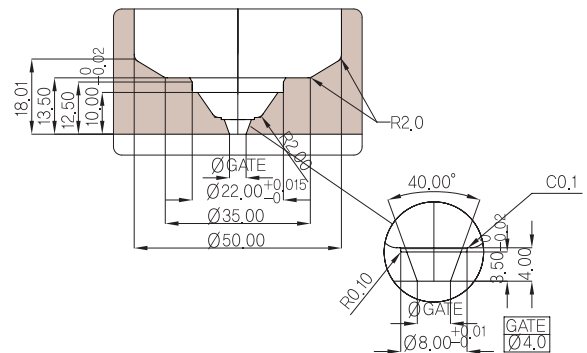
■ GMV35 - Series



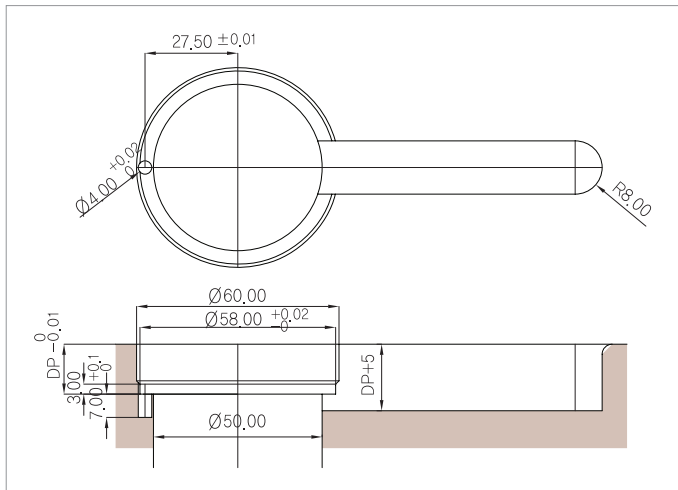
■ GMV35 - VC(G2.5/3.0/3.5)



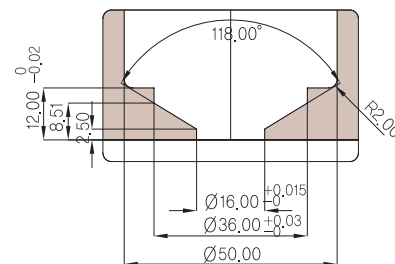
■ GMV35 - VC(G4.0)



■ Flange Machining



■ GMV35 - VB

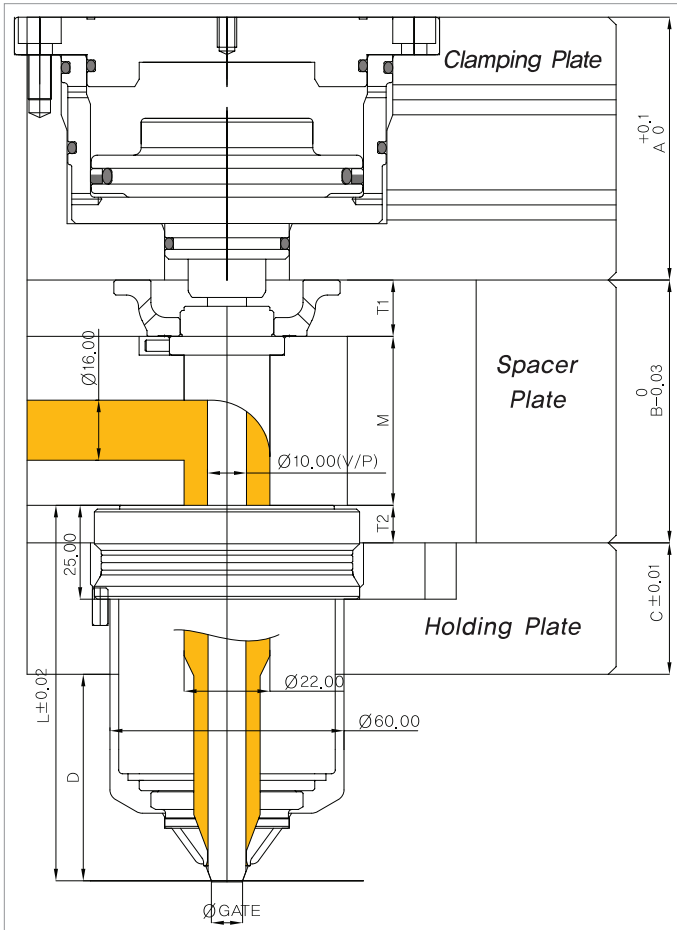


	A	B	C	L	D	M	T1	T2
Dimension	70	70	40~	110~	L-(T2+C)	45	15	10

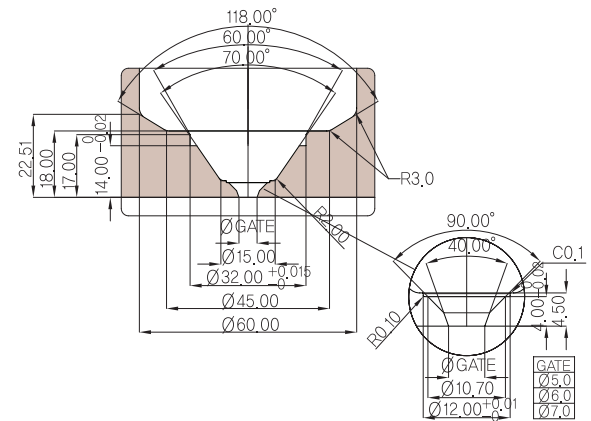
← Minimum

↑ Recommended

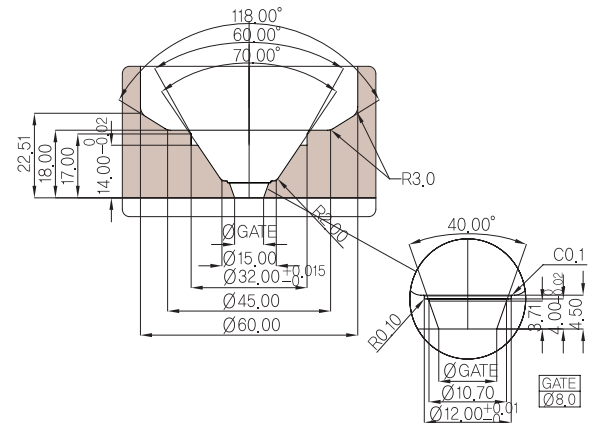
■ GMV45 – Series



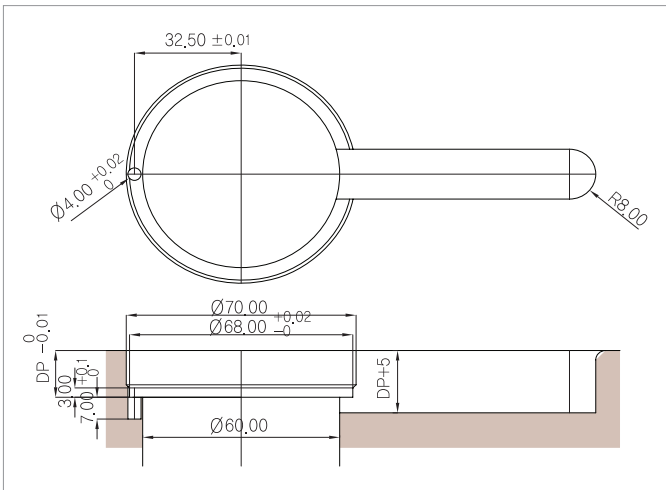
■ GMV45 – VC(G5.0/6.0/7.0)



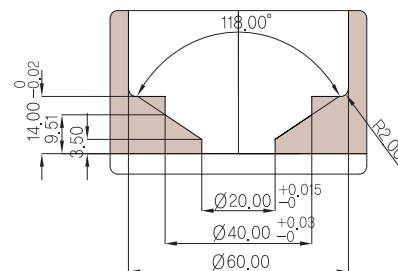
■ GMV45 – VC(G8.0)



■ Flange Machining

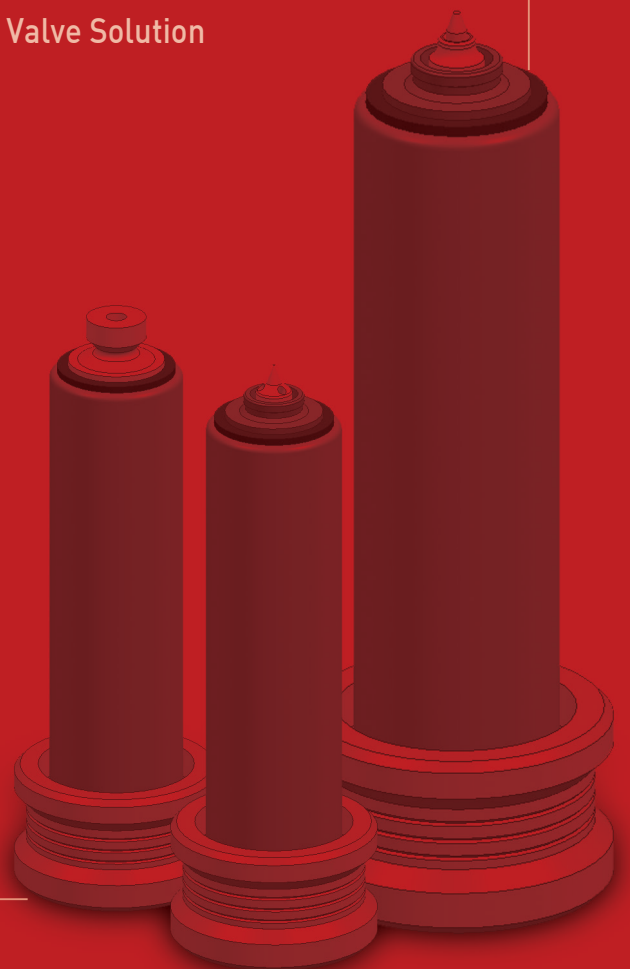


■ GMV45 – VB



MMO & MMV System

General Valve Solution

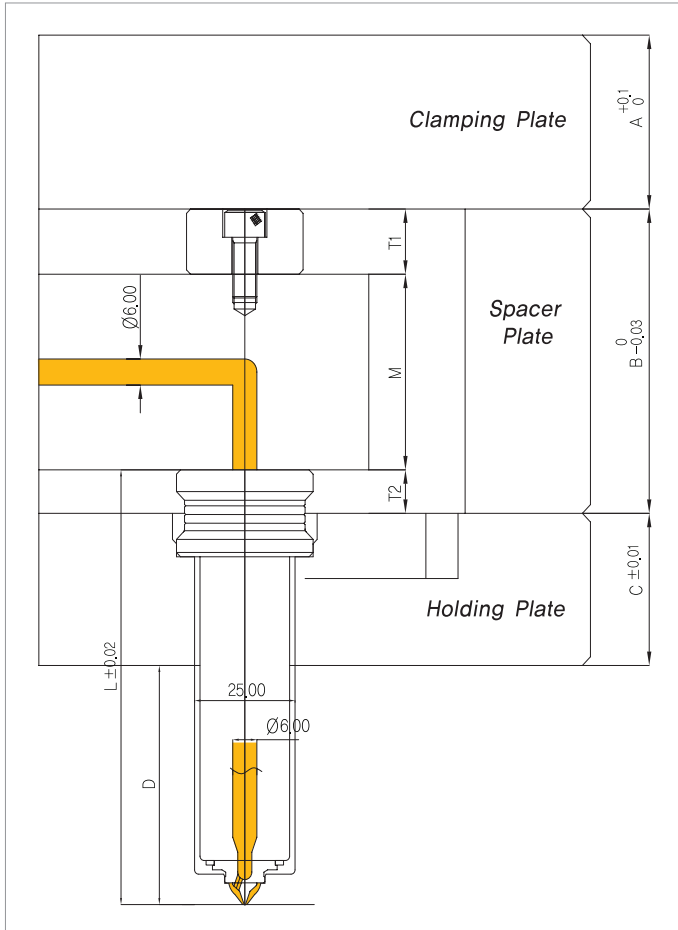


MMO16

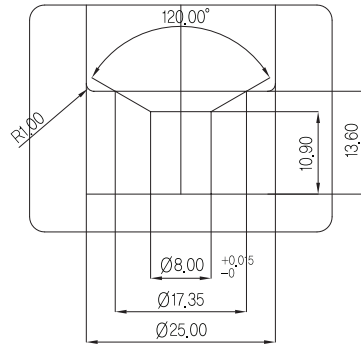
Dimension	A	B	C	L	D	M	T1	T2
	30	70	30	60~	L-(T2+C)	45	15	10

↑ Minimum

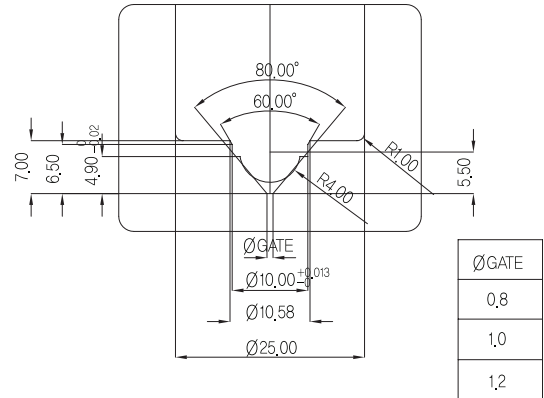
↑ Recommended



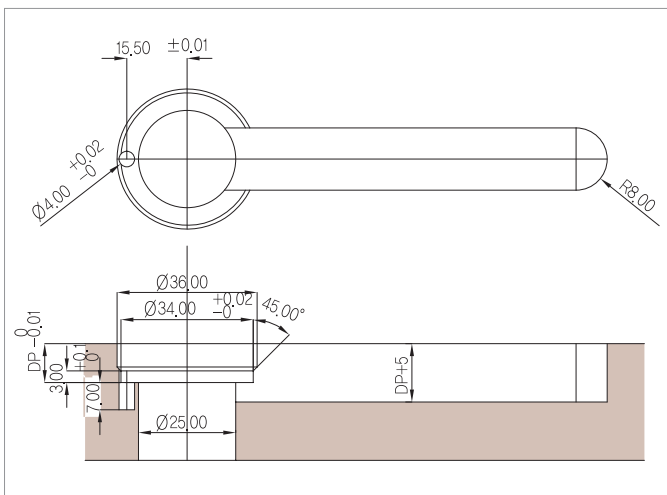
MMO16-CA



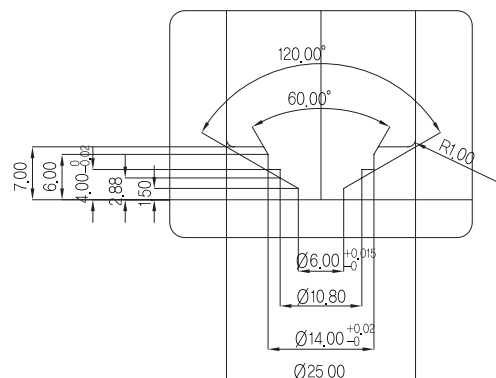
MMO16-CC



Flange Machining



MMO16-CB

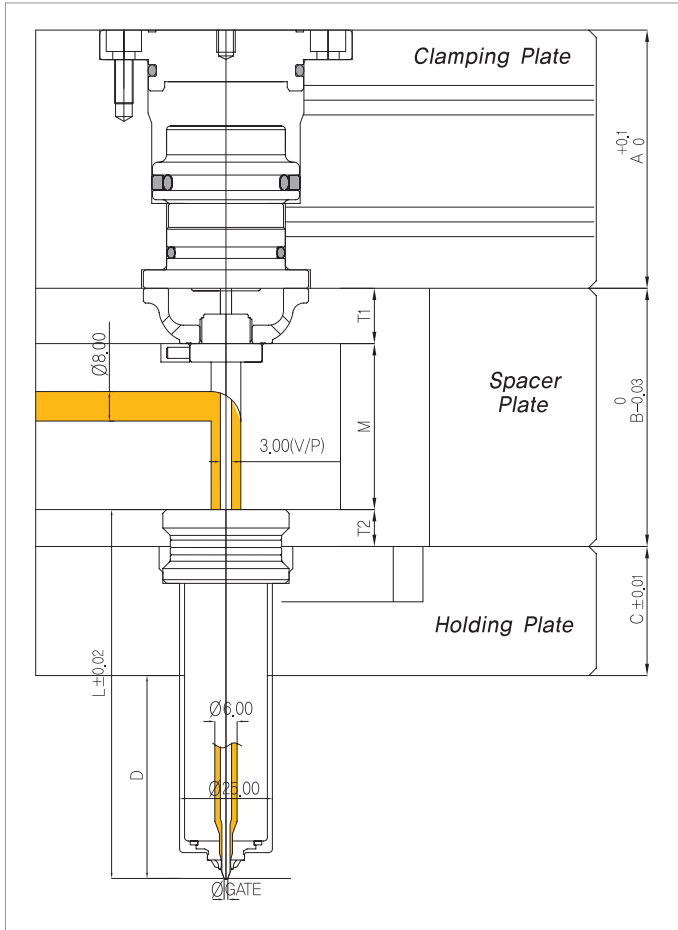


MMV16

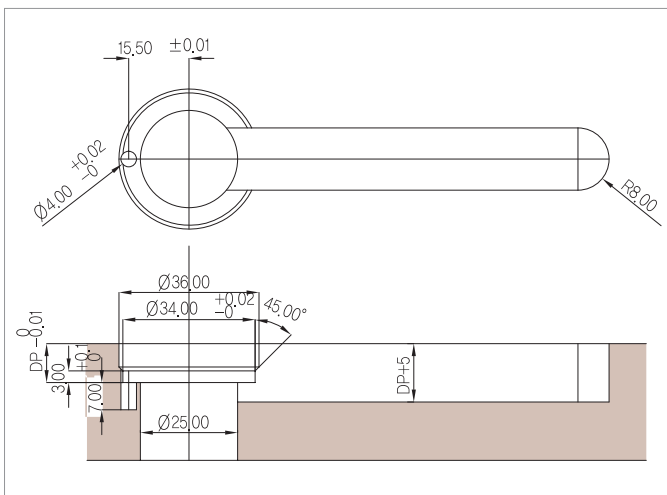
Dimension	A	B	C	L	D	M	T1	T2
	70	70	30	60~	L-(T2+C)	45	15	10

↑ Minimum

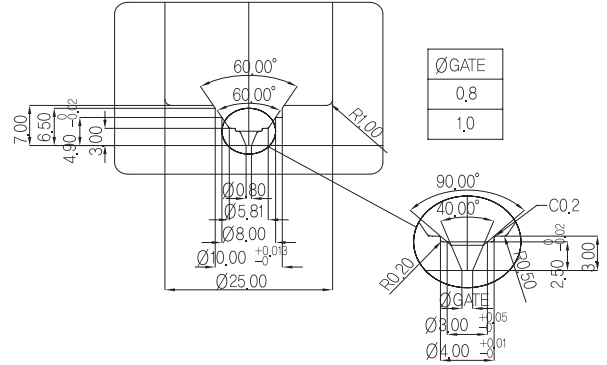
↑ Recommended



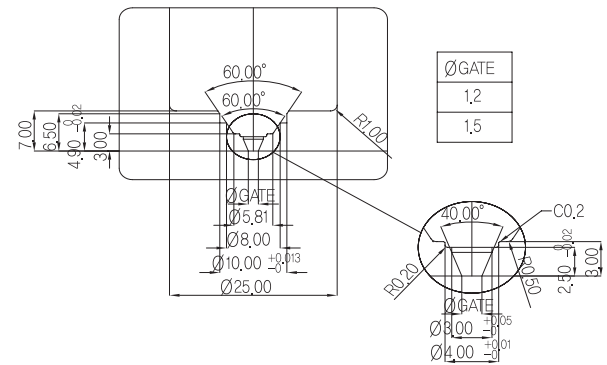
Flange Machining



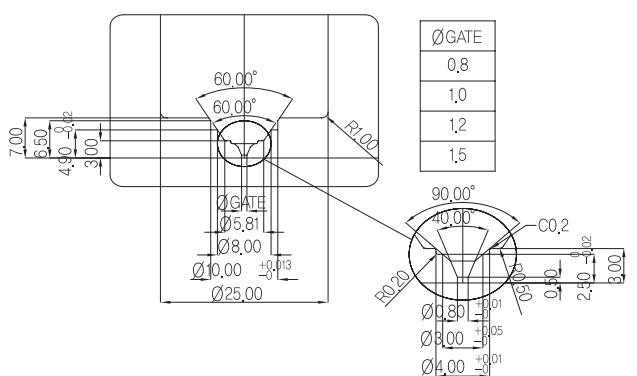
MMV16-VC (G0.8/1.0)



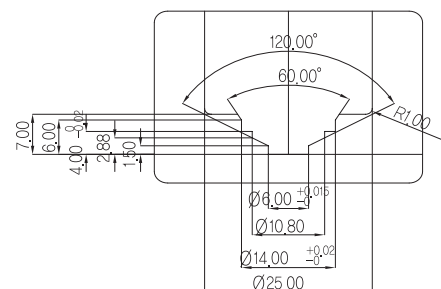
MMV16-VC (G1.2/1.5)



MMV16-VC (Straight)

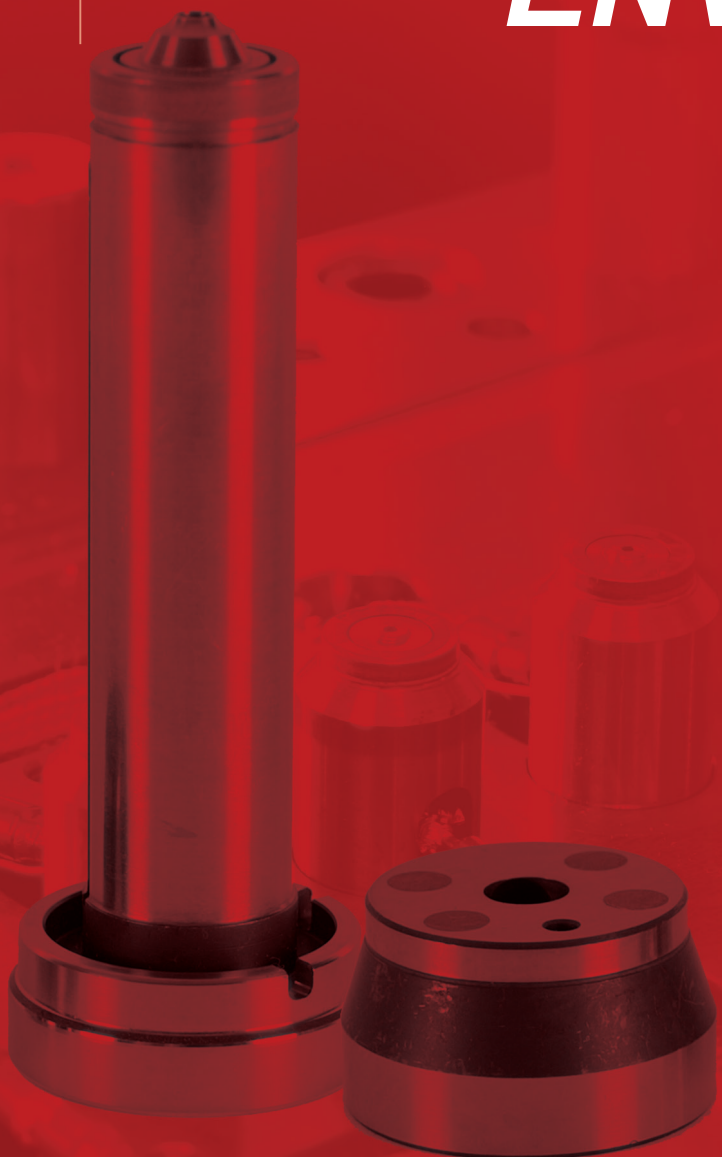


MMV16-VB

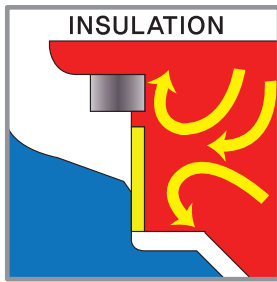


ENV System

Super Engineering Valve Solution



ENV System / Super Engineering Valve Solution



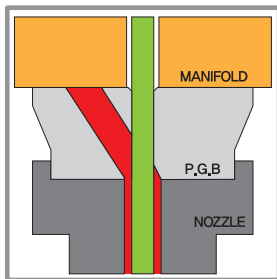
Excellent Heat Stability / 优秀的热稳定性 우수한 열적 안정성

Special insulation structure for Excellent Heat Stability to meet any engineering materials specific needs

强大的热稳定性, 通过特殊隔热结构具有强大的热稳定性, 是对热极度敏感的工程树脂专用的专业化系统

강력한 열적 안정성

특수 단열 구조를 통한 강력한 열적 안정성 갖추어 열에 극도로 민감한 엔지니어링 수지전용 특화 시스템



Excellent Pin Guidance System / 优秀的导针系统 우수한 핀가이딩 시스템

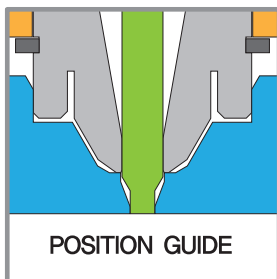
Pin guidance system is positioned under the manifold which results in excellent straight pin operation to make better parts on the gate area and improve the durability of mold.

优秀的导针系统

将导针部分置于多支管的下方, 在不受多支管热膨胀的任何影响的情况下确保准确的针的运行, 并采用圆柱销确保了浇口部产品表面的品质、提升了模具浇口部的耐久性

우수한 핀 Guiding system

핀 Guiding 부분이 매니폴드 아래에 위치케 하여 매니폴드 열팽창과 무관하게 정확한 핀 작동 확보 및 Straight Pin 적용하여 GATE부 제품 표면 품질 확보와 금형 Gate부 내구성 향상

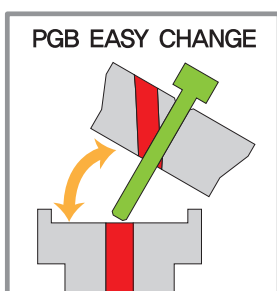


Straight Pin / 圆柱销 / 스트레이트 핀

Excellent Part Quality

优秀的产品表面

우수한 제품 표면



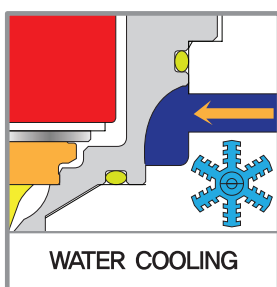
Easy and Quick maintenance / 方便迅速进行修理 쉽고빠른 유지보수

Advanced structure for engineering and abrasive materials adopted which result in easy and quick exchange of Valve pin and Pin guide bush

具有方便迅速进行修理的结构/采用了对工程树脂、耐磨性树脂特别优化的结构可实现迅速替换针和导针衬套

쉽고 빠른 유지 보수 구조

엔지니어링, 내마모성 수지에 특화 진보된 구조를 적용하여 핀과 pin guide bush 신속한 교체 가능



Cooling Gate Bush / 冷却衬套 냉각부시

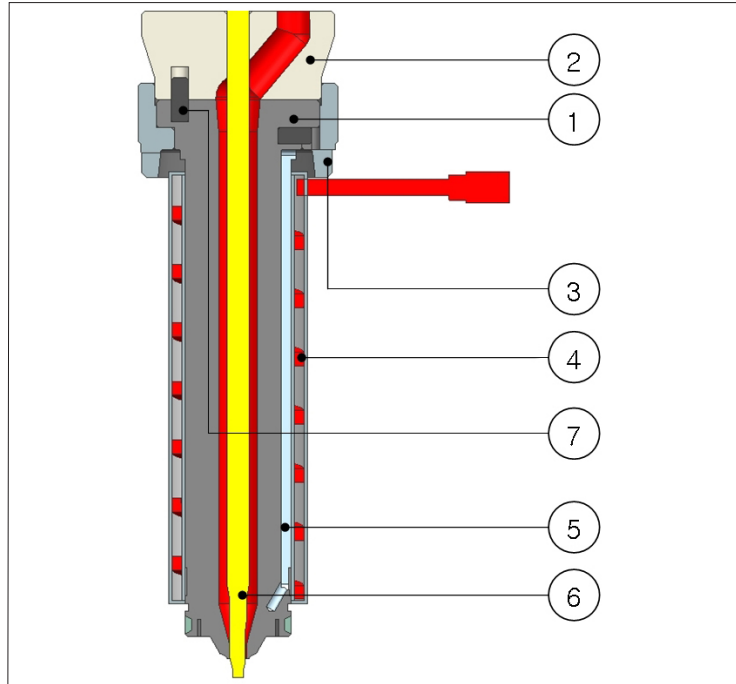
Cooling Gate bush is supported

可采用冷却衬套

냉각부시 적용가능

ENV STRUCTURE

	ENV-VC
1	Nozzle Body
2	Pin Guide Bush
3	Nozzle Flange
4	Tube Heater
5	Thermo Couple
6	Valve Pin
7	Lock Pin

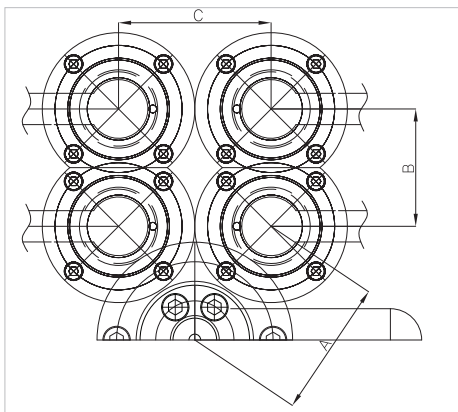


ENV Spec

(Unit : mm)

TYPE	SIZE	CHANNEL DIA		GATE	
		OPEN	VALVE	OPEN	VALVE
ENV	16	NA	7	NA	1,2 / 1,5 / 2,0
	19	NA	7	NA	1,2 / 1,5 / 2,0

Minimum Gate Pitch of ENV



VALVE TYPE NL25.35(With HT)

NOZZLE SIZE	N/L and GATE	GATE (Rectangular)	GATE (Square)
	A	B	C
ENV16-19	75	60	80

※ Please Contact HotPlus if MORE MINIMUM is Required.

※ 若产生数值小于上述所建议的最小间距Pitch的情况, 请联系我们 Hot plus另行协商

※ 상기 권장 최소 피치보다 작은 경우 별도협의 요망.

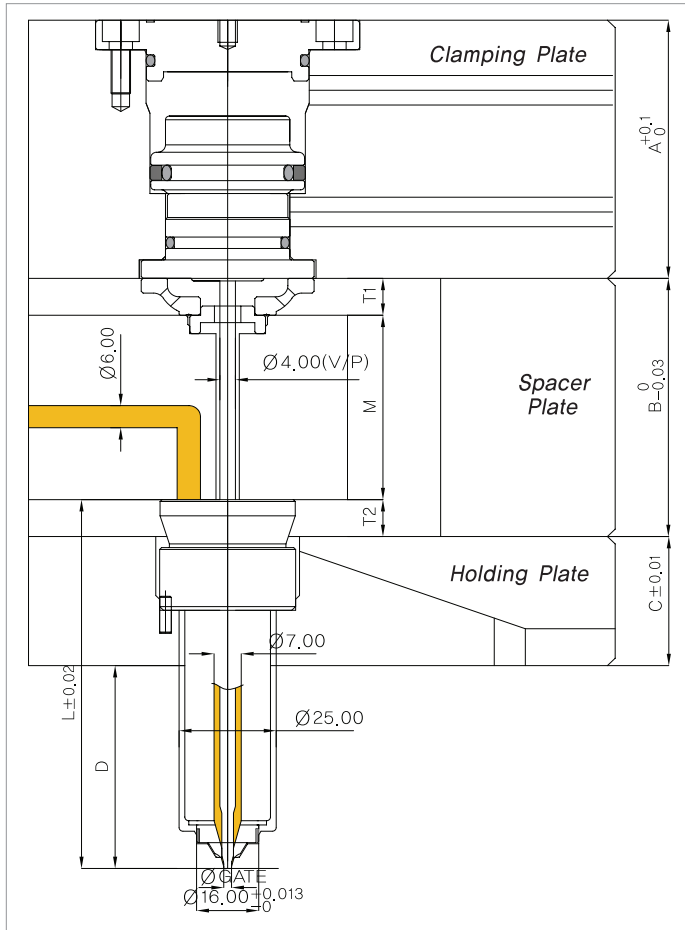
ENV16

	A	B	C	L	D	M	T1	T2
Dimension	70	70	35~	104~154	L-(T2+C)	50	10, 15	B-(M+T1)

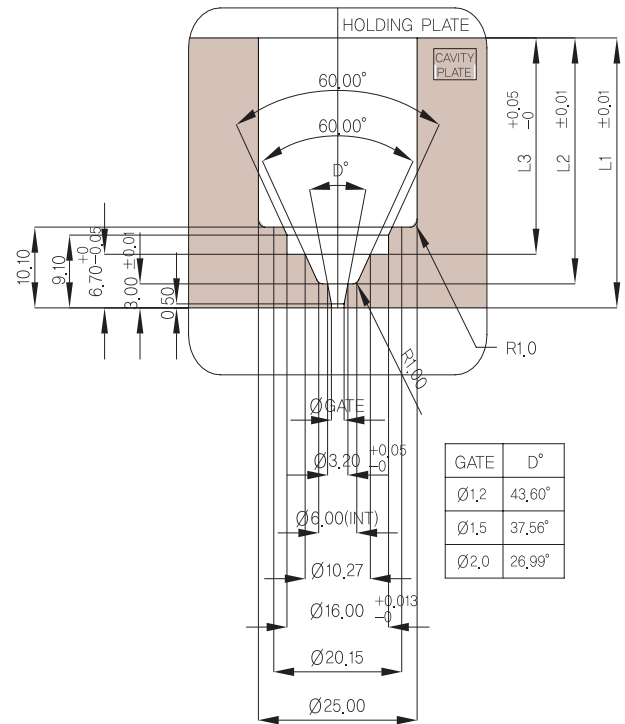
↑ Minimum

↑ Recommended

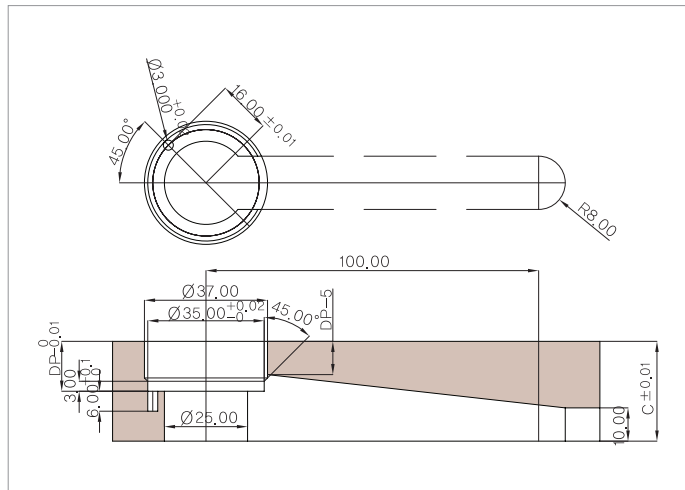
ENV16 - Series



ENV16 - VC



Flange Machining



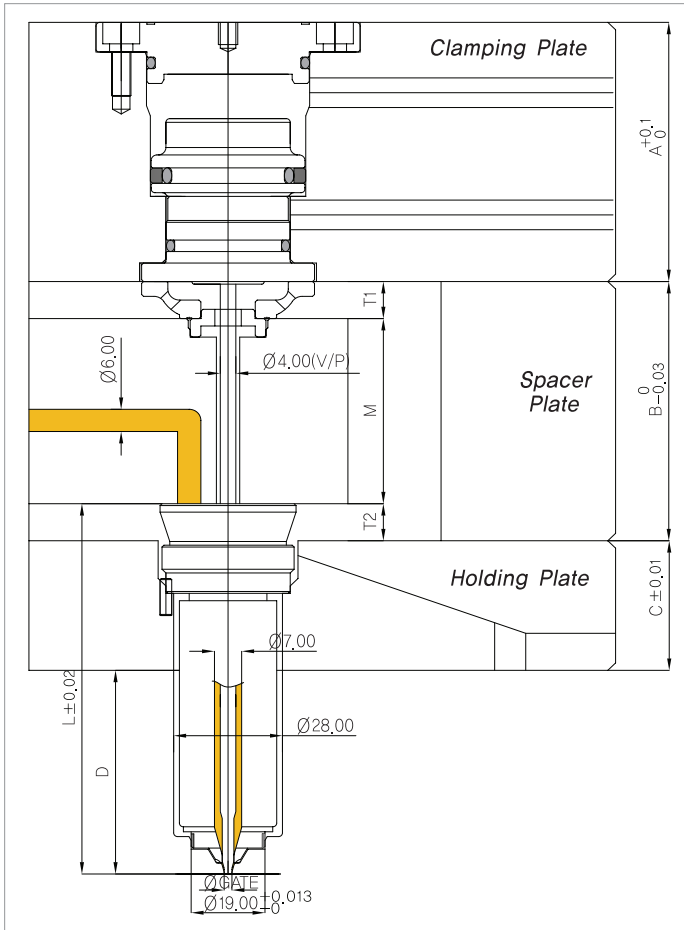
ENV19

	A	B	C	L	D	M	T1	T2
Dimension	70	70	35~	104~154	L-(T2+C)	50	10, 15	B-(M+T1)

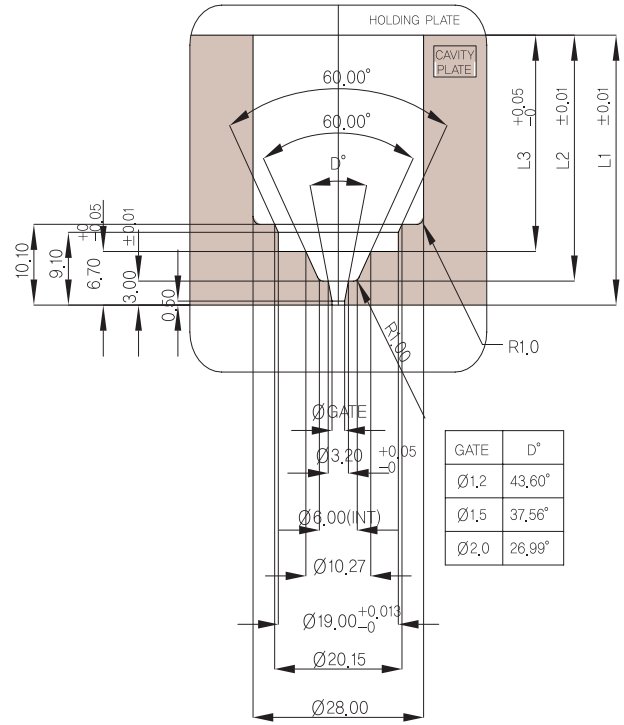
← Minimum

↑ Recommended

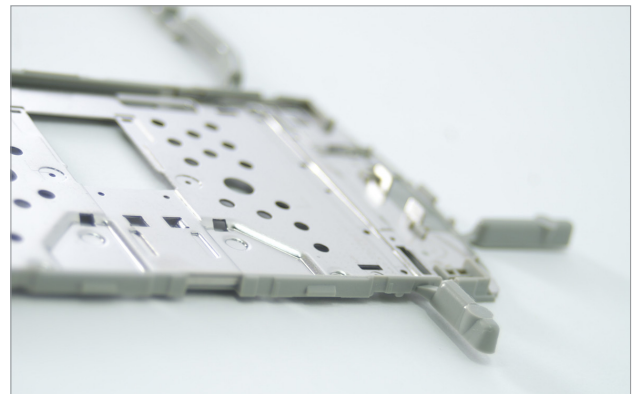
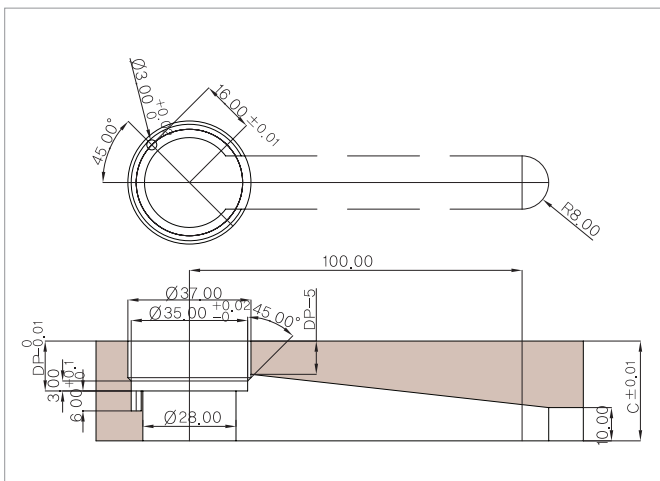
ENV19 - Series



ENV19 - VC



Flange Machining

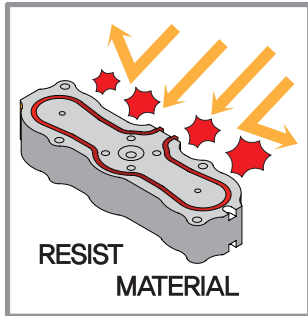


PET System

PET preform Valve Solution



□ PET System / PET preform Valve Solution



■ Durability / 耐久性 / 내구성

Corrosion-resistant material being used in the main parts to keep durability

对主要部分采用耐腐蚀性材料，防止腐蚀并确保耐久性

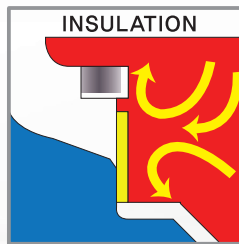
주요 부분에 대한 내부식성 재질 적용하여 부식방지 및 내구성 확보

■ Excellent Heat Stability / 优秀的热稳定性 / 우수한 열적안정성

Special Quality insulation applied on the nozzle body and the end of tip to keep the excellent heat stability which results in a excellent part without the impure or whitening issues.

在喷嘴主体和浇口末端通过特殊隔热形成强大的热均衡消除了白化、浊化等问题并确保了优秀的产品质量

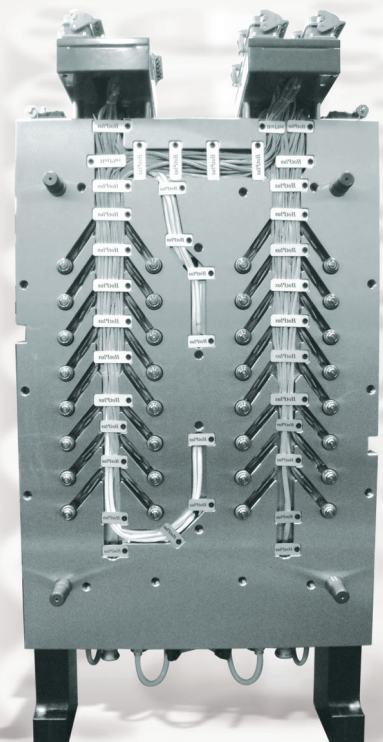
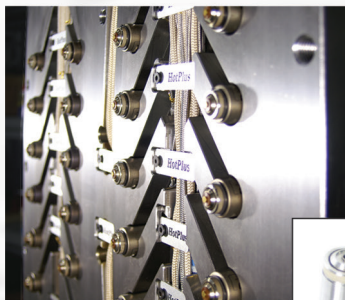
노즐바디와 게이트 끝단 특수 단열을 통한 강력한 열적 균형을 이루어 백화, 탁화등 문제 제거 및 우수한 제품 품질 확보



Specialized Product Range, 2 cavity to 48 cavity
(please contact us if more than 96 cavity)

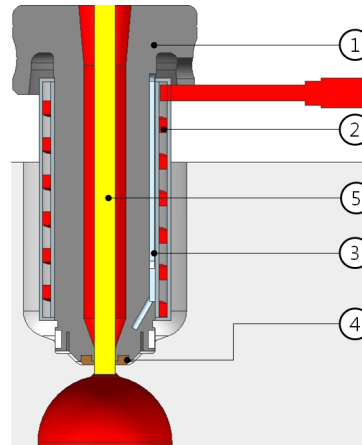
产品组从2缸到48缸经专业化后提供

제품군은 2 cavity에서 48 cavity까지 전문 특화 하여 제공



■ PET STRUCTURE

	PET-VV
1	Nozzle Body
2	Tube Heater
3	Thermo Couple
4	Seal Ring
5	Valve pin

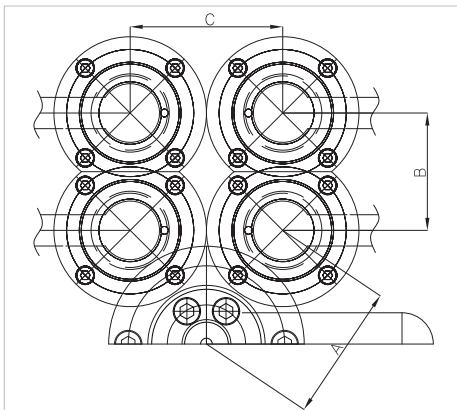


■ PET Spec

(Unit : mm)

TYPE	SIZE	CHANNEL DIA		GATE	
		OPEN	VALVE	OPEN	VALVE
PET	19	NA	8	NA	4

■ Minimum Gate Pitch of PET



VALVE TYPE NL25,35(With HT)

NOZZLE SIZE	N/L and GATE	GATE (Rectangular)	GATE (Square)
	A	B	C
PET-19	75	60	80

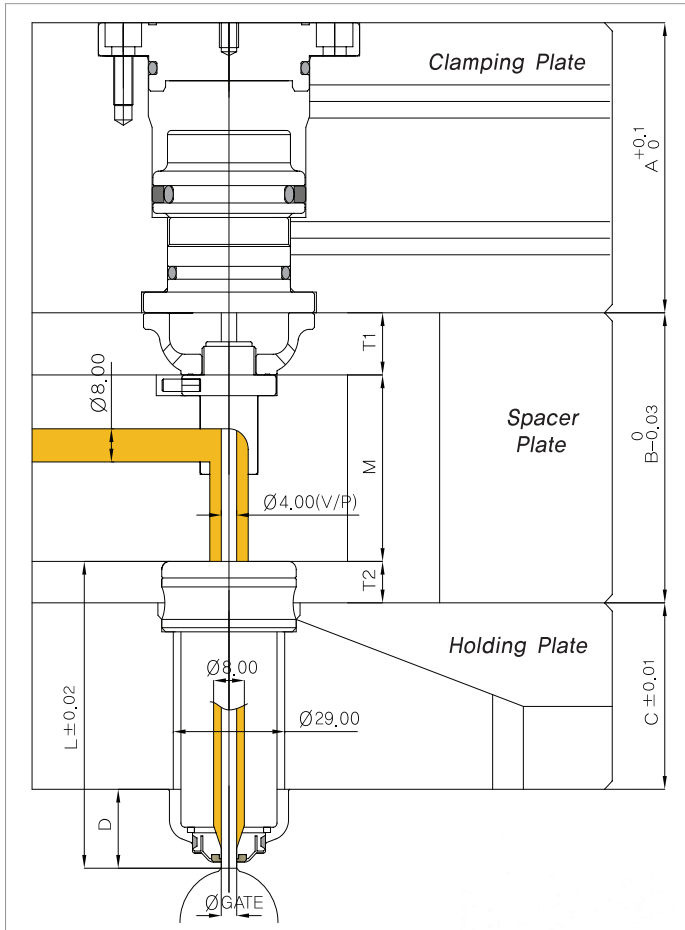
PET19

	A	B	C	L	D	M	T1	T2
Dimension	70	70	45	70 (FIX)	L-(T2+C)	50	15	5

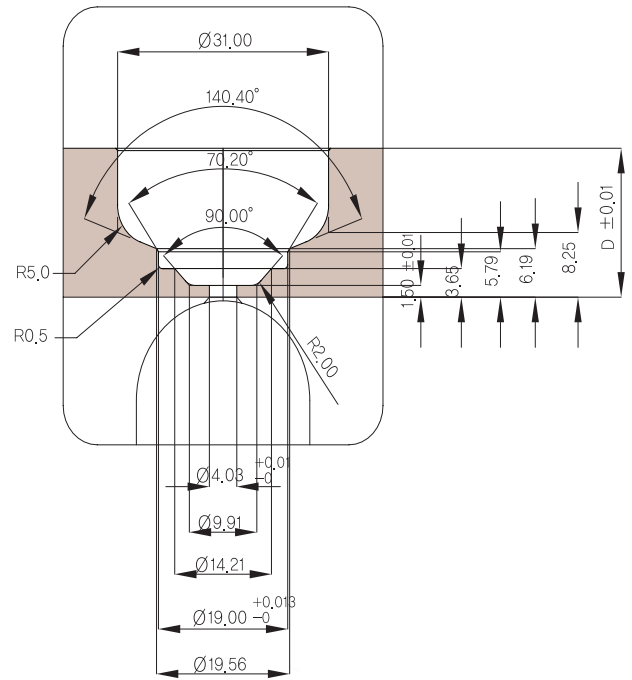
↑ Minimum

← Recommended

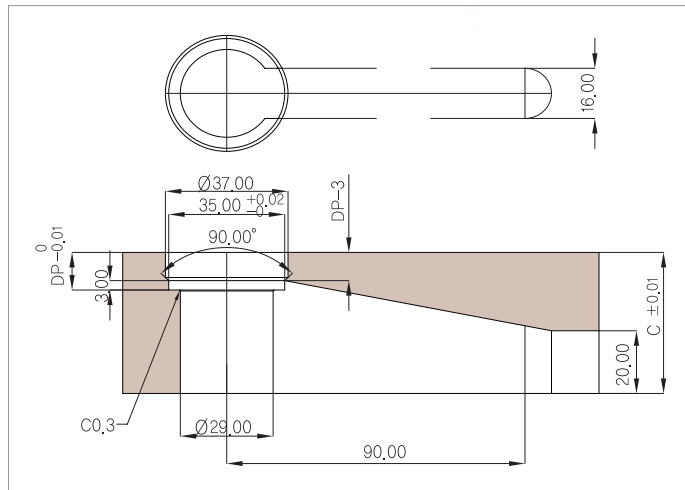
PET19 - Series



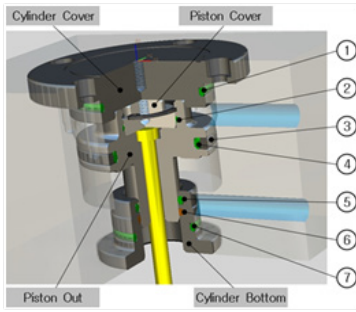
PET19 - VV



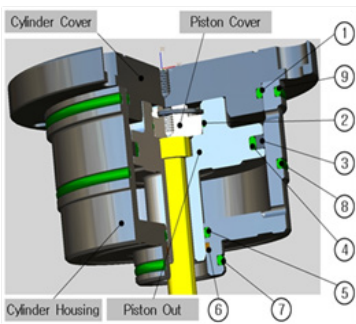
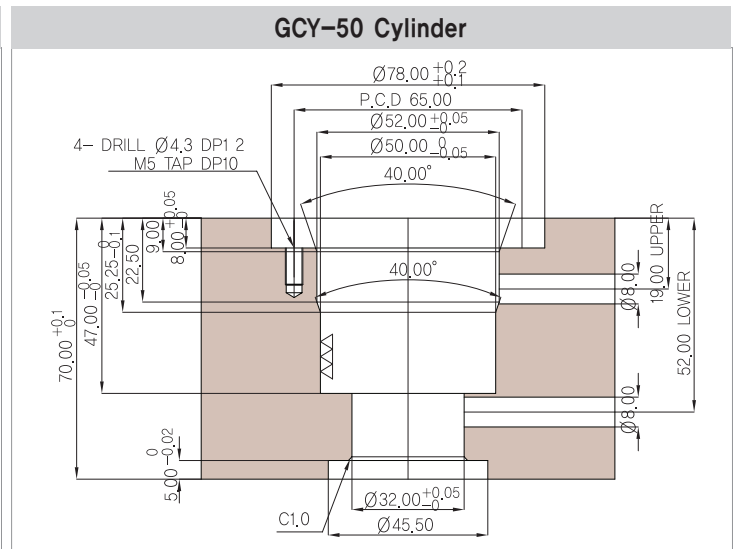
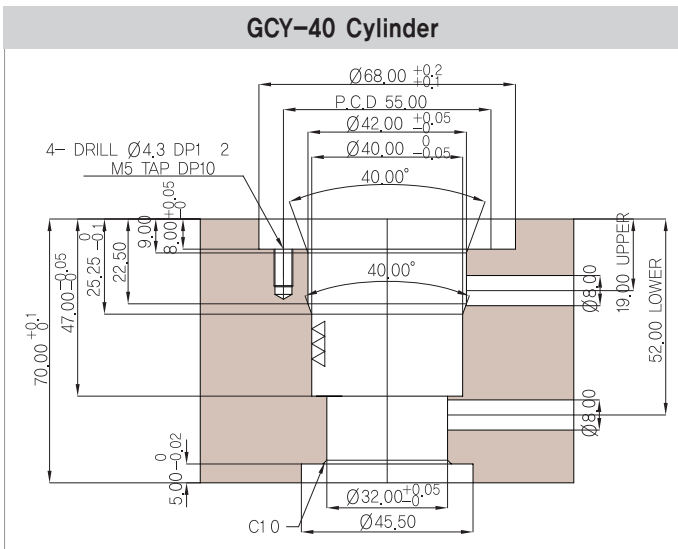
Flange Machining



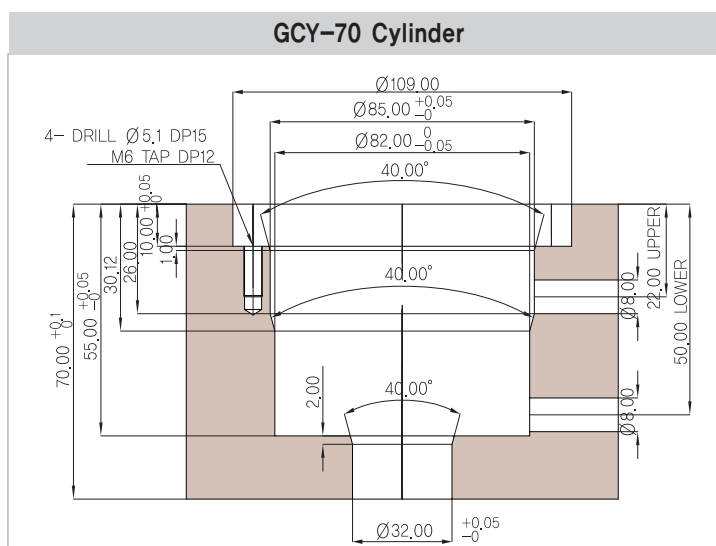
□ Pneumatic Cylinders



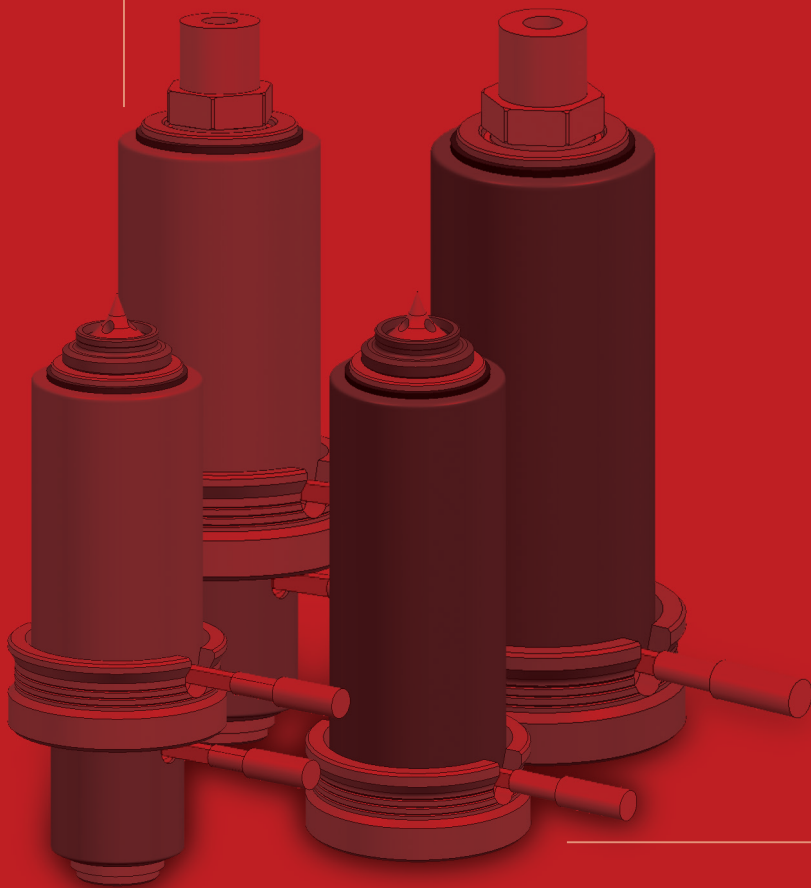
No	Part	GCY-40 Cylinder	GCY-50 Cylinder
1	Cylinder Cover	ARP127	ARP134
2		ARP022	ARP022
3	Piston Out	PT200400 / Glyd Ring	PG4400500 / Glyd Ring
4		ARP216	ARP222
5		ARP117	ARP117
6	Cylinder Bottom	1,55-024-13(GP4100200) / Wear Ring	1,55-024-13(GP4100200) / Wear Ring
7		ARP121	ARP121



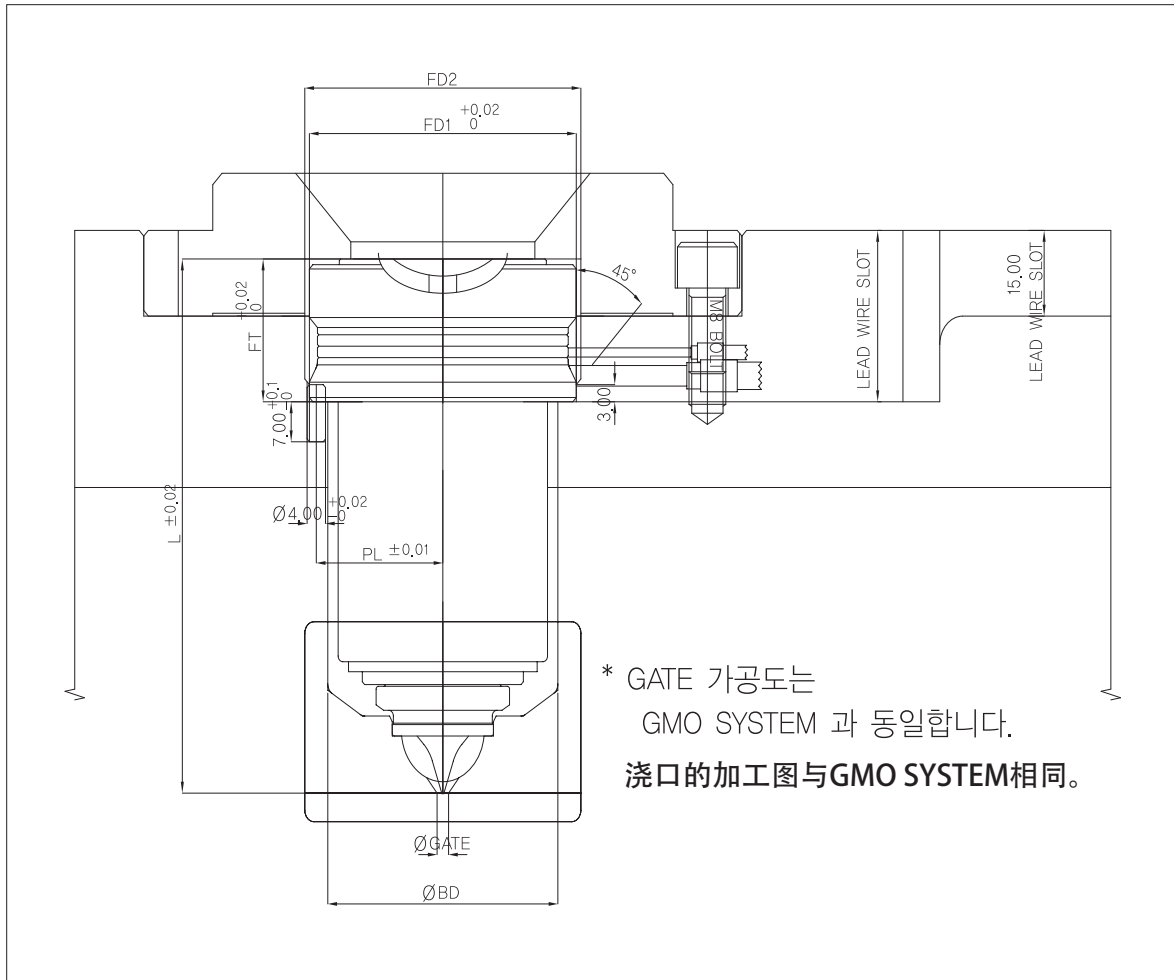
No	Part	GCY-70 Cylinder
1	Cylinder Cover	ARP145
2		ARP022
3	Piston Out	PG5440700 / Glyd Ring
4		ARP228
5		ARP117
6	Cylinder Housing	1,55-024-13(GP4100200) / Wear Ring
7		ARP121
8		ARP151
9		ARP152



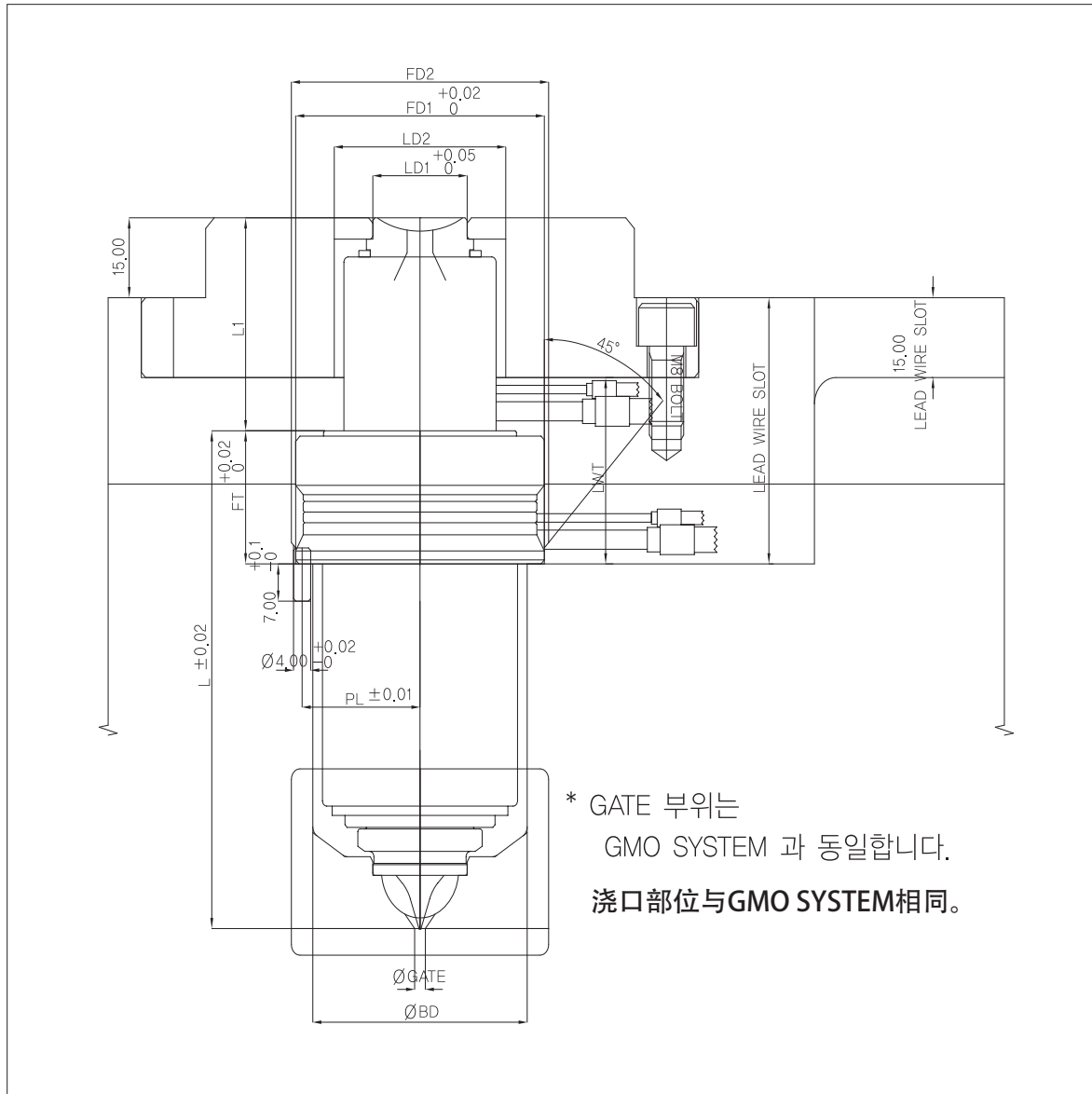
GSO & GLO System



GSO System



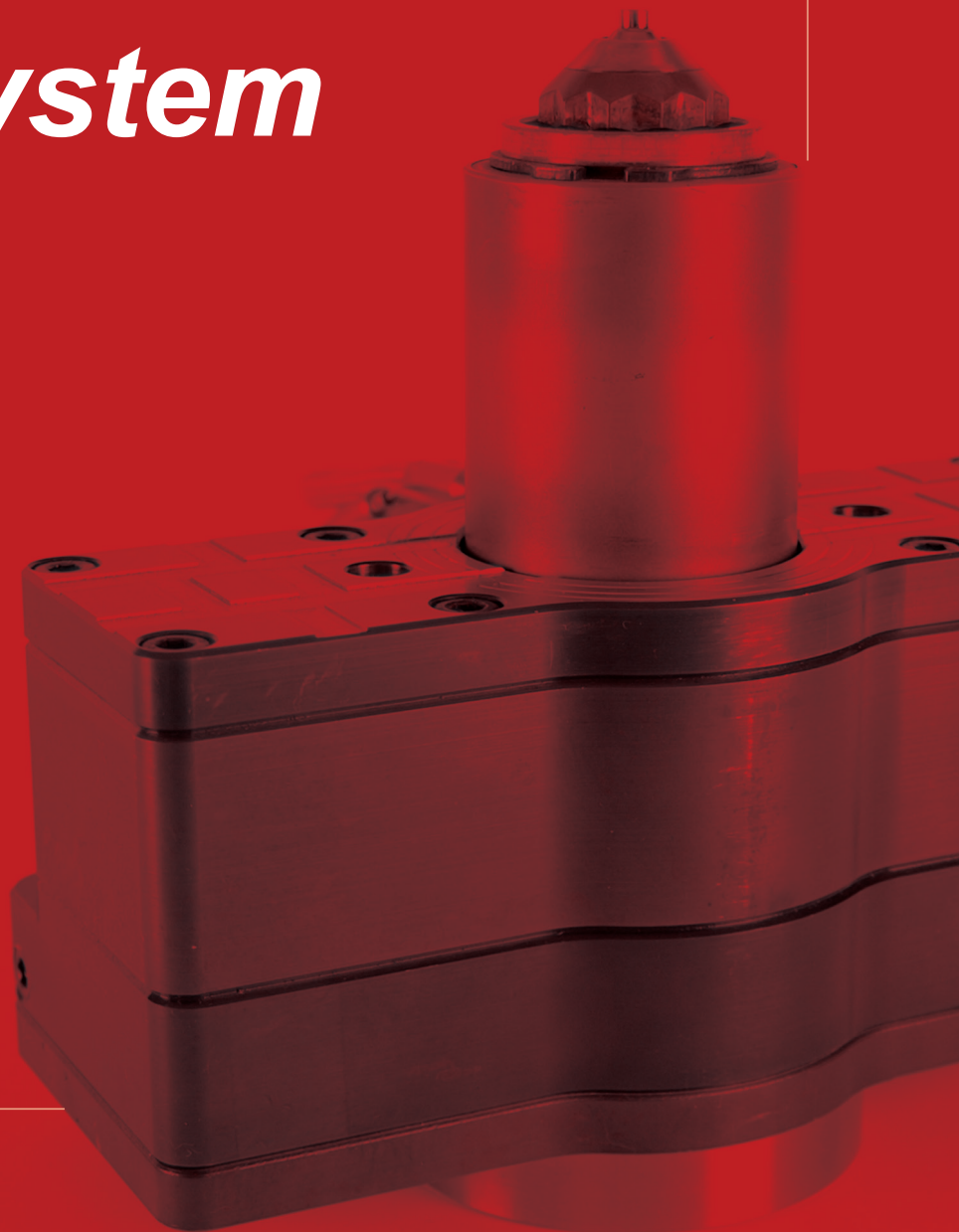
	BD	FT	FD1	FD2	PL
GS020	30	20	38	40	17,5
GS025	40	25	48	50	22,5
GS035	50	25	58	60	27,5
GS045	60	25	68	70	32,5



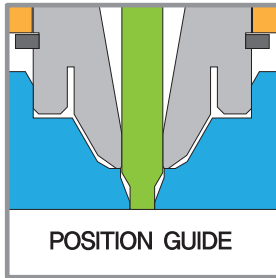
	BD	FT	FD1	FD2	PL	LD1	LD2	LWT	L1
GLO25	40	25	48	50	22,5	22	40	35	40
GLO35	50	25	58	60	27,5	22	40	35	40
GLO45	60	25	68	70	32,5	30	50	40	45

SNV System

Single Valve Solution



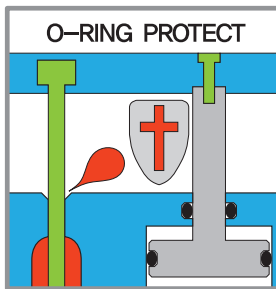
□ SNV System / Single Valve Solution



■ Excellent Part Quality / 优秀的产品质量 우수한 제품 품질

Beautiful part quality with Excellent Straight Pin Operation
通过优秀的圆柱销运行确保美观清洁的浇口质

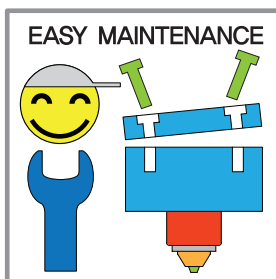
우수한 스트레이트핀 Operation 작동으로 미려하고 깨끗한 GATE 품질 확보



■ Durability / 耐久性 / 내구성

Long durability by the separate structure between a nozzle and a cylinder
通过喷嘴和气缸部分离的结构确保耐久性以及具有能迅速进行维修的结构

노즐과 실린더부의 분리된 구조로 내구성 확보 및 신속한 유지보수 가능 구조

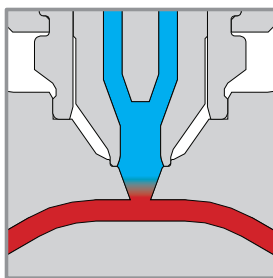


■ Quick & Easy Maintenance / 迅速的维修 신속한 유지보수

Quick Disassembly of Top Cover
Easy Maintenance with Front Exchange Structure for Heater and T/C

顶盖能迅速分离, 为迅速进行维修具有能全面替换加热器、T/C的结构

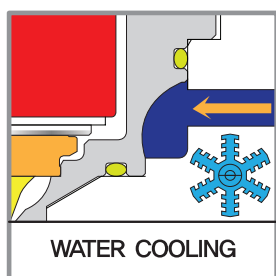
탑커버 신속 분리
신속한 유지보수를 위한 전면 Heater, T/C 교환 구조



■ Quick Color Change / 迅速换色 신속한 칼라체인지

Quick Color change VC structure on the gate area
适合迅速换色的VC浇口结构

신속한 Color change 에 적합한 VC 게이트 구조



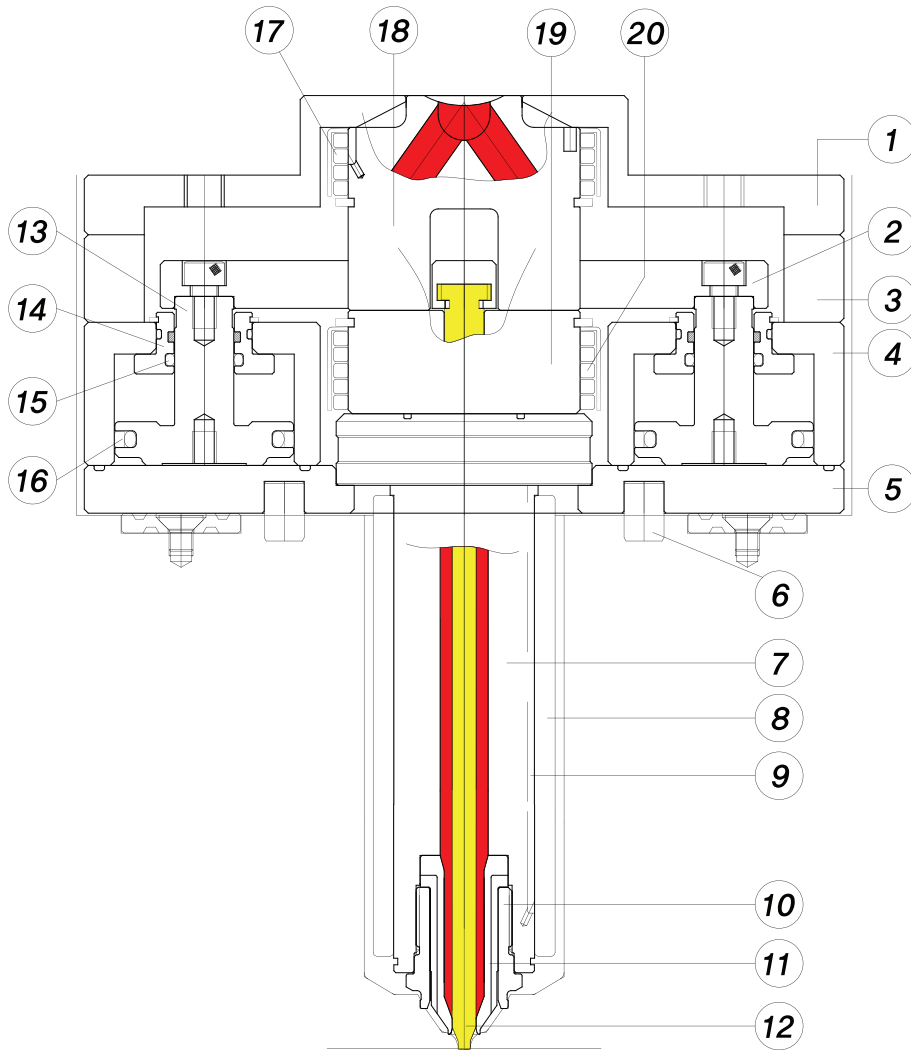
■ Cooling Gate Bush / 冷却衬套 / 냉각부시

Cooling Gate bush is supported

可采用冷却衬

냉각부시 적용가능

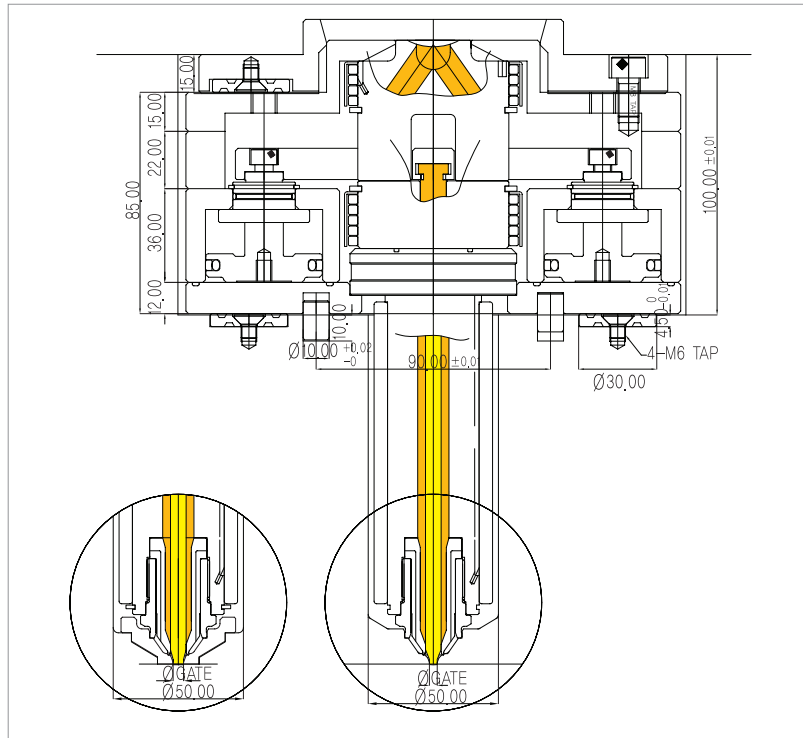
■ SNV System / Single Valve Solution



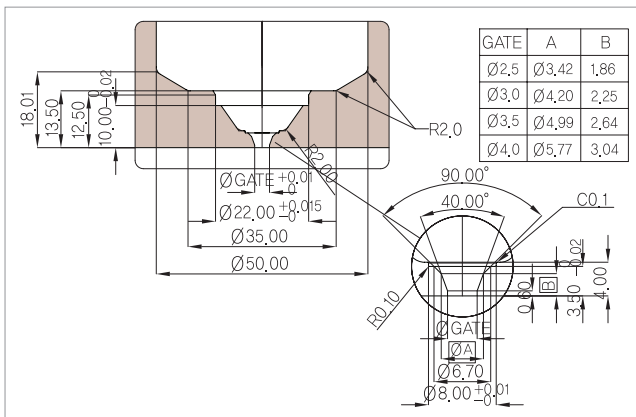
1	Top Cover
2	Cylinder Guide Bar
3	Housing
4	Cylinder Housing
5	Bottom
6	Lock Pin
7	Nozzle Body
8	Nozzle Coil Heater
9	Nozzle Thermp couple
10	Nozzle Tip Bush
11	Nozzle Tip
12	Valve pin
13	Piston
14	Piston Bottom
15	Piston Bottom 'O' -ring
16	Piston 'O' ring + Glyd Ring
17	Head Body Coil Heater
18	Head Body
19	Pin Guide Bush
20	Pin Guide Head Body Coil Heater

SNV35

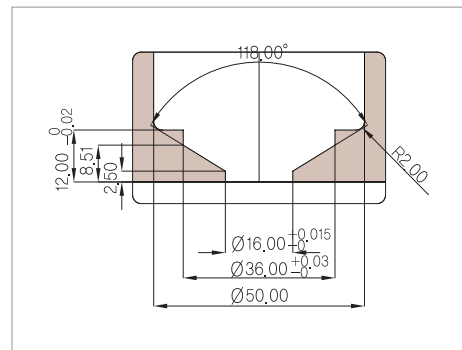
SNV35 – Series



SNV35 – VC



SNV35 – VB

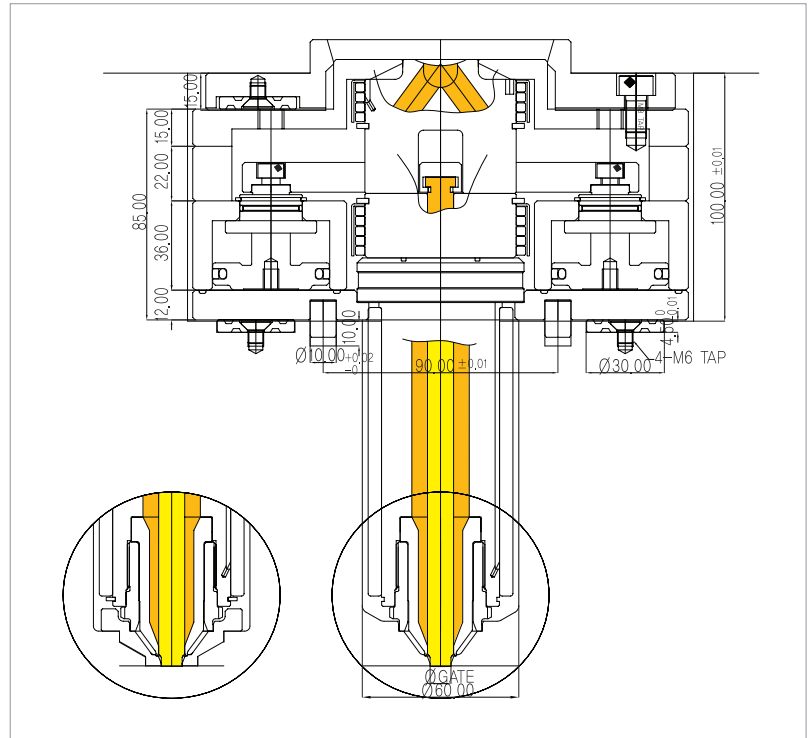


CODE	Coil Heater	T/C
SNV35-160	GNCHTF235030	NZTCCA[IC]161000
SNV35-170	GNCHTF235040	NZTCCA[IC]161100
SNV35-180		NZTCCA[IC]161200
SNV35-190	GNCHTF235050	NZTCCA[IC]161300
SNV35-200		NZTCCA[IC]161400
SNV35-210		NZTCCA[IC]161500
SNV35-220	GNCHTF235060	NZTCCA[IC]161600
SNV35-230		NZTCCA[IC]161700
SNV35-240		NZTCCA[IC]161800
SNV35-250		NZTCCA[IC]161900
SNV35-260	GNCHTF235070	NZTCCA[IC]162000
SNV35-270		NZTCCA[IC]162100
SNV35-280		NZTCCA[IC]162200
SNV35-290	GNCHTF235070	NZTCCA[IC]162300
SNV35-300		NZTCCA[IC]162400

CODE	CODE	T/C
SNV-M Heater	SNHTM258021	NZTCCA[IC]160800

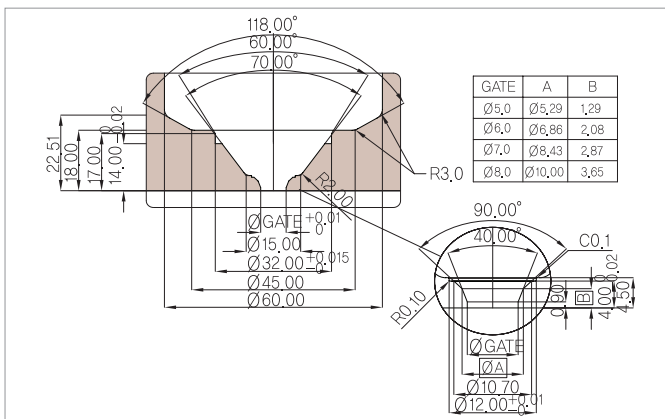
CODE	CODE	T/C
SNV-T Heater	SNHTT258017	NZTCCA[IC]160800

SNV45

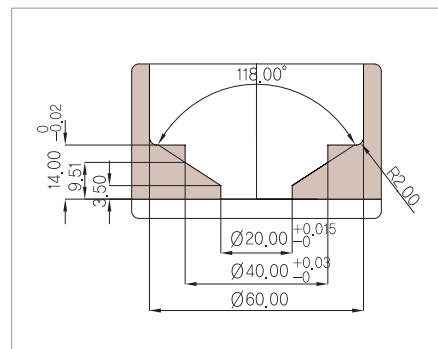


■ SNV45 – Series

■ SNV45 – VC



■ SNV45 – VB

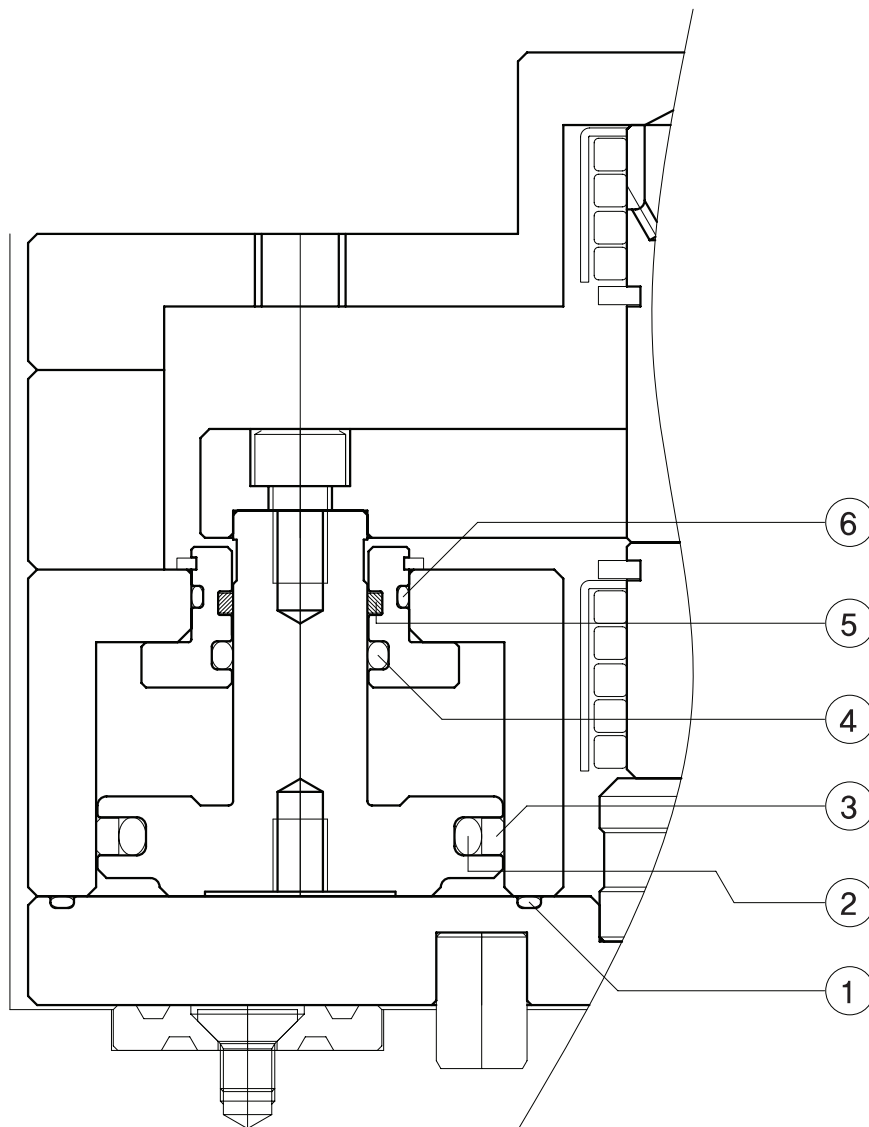


CODE	Coil Heater	T/C
SNV45-160	GNCHTF245030	NZTCCA[IC]160900
SNV45-170		NZTCCA[IC]161000
SNV45-180	GNCHTF245040	NZTCCA[IC]161100
SNV45-190		NZTCCA[IC]161200
SNV45-200		NZTCCA[IC]161300
SNV45-210	GNCHTF245050	NZTCCA[IC]161400
SNV45-220		NZTCCA[IC]161500
SNV45-230		NZTCCA[IC]161600
SNV45-240		NZTCCA[IC]161700
SNV45-250	GNCHTF245060	NZTCCA[IC]161800
SNV45-260		NZTCCA[IC]161900
SNV45-270		NZTCCA[IC]162000
SNV45-280		NZTCCA[IC]162100
SNV45-290	GNCHTF245070	NZTCCA[IC]162200
SNV45-300		NZTCCA[IC]162300

CODE	CODE	T/C
SNV-M Heater	SNHTM258021	NZTCCA[IC]160800

CODE	CODE	T/C
SNV-T Heater	SNHTT258017	NZTCCA[IC]160800

□ **SNV O ring Code**



No	Part	Single Nozzle
1	Cylinder Cover	ARP033
2	Piston Out	ARP219
3		PT200450/Glyd Ring
4	Cylinder Housing	ARP114
5		1,55-040-XX(GP4300150)Wear Ring
6		ARP019

LED System

Customized Super Special System for LED Lead frame

&

PMO System

Specialized Packaging Solution



□ LED System / Customized Super Special System for LED Lead Frame

Market Leader Technology in Hot Runner systems

Super accurate thermal stability required for LED Lead Frames which is Pure White Color and Very Sensitive to small temperature fluctuations

Thermal stability and balance only is the right solution

All else (mold temperature, mold modification, injection machine control, etc) is just window dressing !

引领市场的优秀的热流道系统!

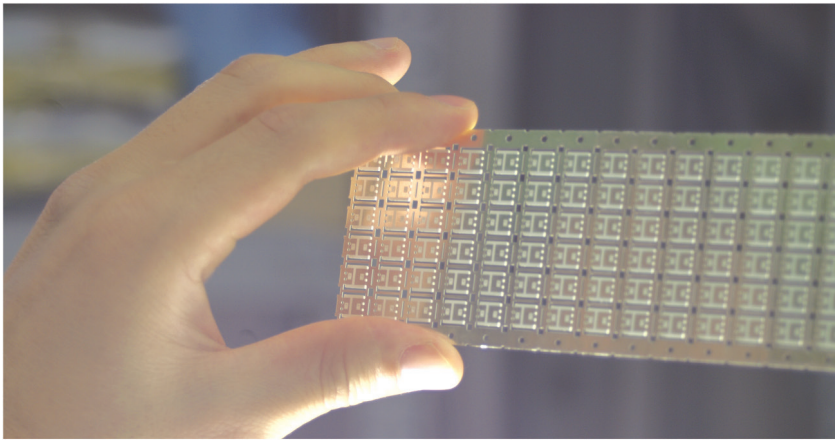
以对热极度敏感的同时颜色以白色没有一点摇晃的精密的热流道技术为要求的LED引线框架!

从此, 除不能解决设定温度、调节模具温度、注塑机的条件、修改模具、修改热流道等的产品本身的热稳定性之外的解决方法虽然会起到一定的帮助, 但终究不会成为最后的答案。

시장을 선도하는 우수한 핫러너 시스템 !

열에 극도로 민감하면서도 색상은 순백색으로 조금의 흔들림도 없는 정밀한 핫러너 기술을 요구하는 Lead frame !

이제는 온도세팅, 금형온도조정, 사출기조건, 금형수정, 핫러너수정등 핫러너 제품상 열적안정성을 해결하지 못한 그 외의 해결책은 도움은 될 수 있으나 결코 답이 될 수 없습니다.



□ PMO System / Specialized Packaging Solution

Packaging Solution

Easy Installation / Easy Molding / Easy Maintenance

Quick & Easy Maintenance with Front Exchange Structure for Heater and T/C

Excellent Heat Stability

适合多种小型盖子的解决方案

可实现便于采用、便于塑型、便于维修的包装专用系统

为迅速进行维修具备全面替换加热器、T/C结构

通过Hot plus的特殊热安全性隔热结构 (Hot plus专利结构)

멀티 소형 Cap 적합 솔루션

Easy 적용, Easy 성형, Easy 유지보수가 가능한 Package 전용 System

신속한 유지보수를 위한 전면 히터 TC 교환 구조

핫플러스의 특수 열적 안정성 단열 구조 (Hotplus 특허구조)



The image features a dark red background with a faint, semi-transparent image of a complex metal manifold assembly. The manifold consists of several interconnected cast metal parts with various ports, flanges, and internal passages. The text "Advanced Manifold Technology" is overlaid in a large, white, italicized sans-serif font. A thin white rounded rectangle frames the central text area. A small orange vertical bar is positioned to the right of the text.

Advanced Manifold Technology

□ Advanced Manifold Technology

Square Heaters for a wide touch, Quick Start and Energy Saving Technology
 Special fine tuning structure to tightly fix Square Heaters in the manifold
 Excellent thermal balance/ Quick Maintenance / Excellent Flexibility for Easy Installation

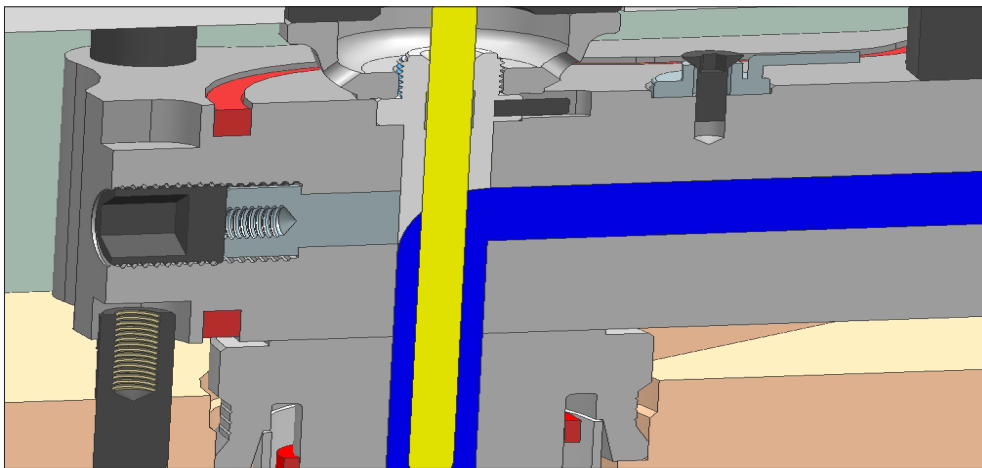
采用方形加热器通过扩大接触面应用快速启动和节约能源的技术
 通过特殊结构维持加热器和多支管完美的紧贴性
 稳定的温度平衡/迅速的维修/便于设置的优秀的加热器的灵活性

사각히터를 적용하여 접촉면 확대를 통한 신속한 Quick Start와 Cost Saving 기술 적용
 특수 구조를 통한 히터와 매니폴드의 완벽 밀착성 유지
 안정적 온도 밸런스 / 신속한 유지보수 / 설치가 용이한 우수한 히터 Flexibility

Streamlined smooth channel (Precise Channel & Round PGB for Quick Color Change) to minimize dead spots
 Optimum flow structure to minimize the pressure drop and improve the flow

采用精密的通道加工和换色型圆形PGB将树脂残留最小化
 在多支管内采用最优流路结构来减少压力损失，并提高树脂的流动性

정밀한 채널가공과 Color change 형 라운드 PGB를 적용하여 수지 잔류 최소화
 매니폴드내 최적 유로구조 적용으로 압력손실은 줄이면서 수지 흐름성 향상



Fluid Dynamical natural balanced channel structure
 Specialized Excellent channel balance for multi cavity system,
 PET perform 24, 32, 48 cavity
 Different steel materials for a long durability to specifications of plastic material

采用按流体动力学产品类别所平衡的树脂通道
 Hot plus의 다支管 시스템은 기본적으로
 내츄럴 밸런스를 고려하여 설계 제작되며,
 특히 PET프리폼 24, 32, 48등 다수캐비티
 시스템에서 우수한 채널 밸런스된 제품을
 제공합니다.
 수지의 특성에 따른
 매니폴드 재질 차별화 적용

유체역학적 제품별 균형된 수지 채널 적용
 핫플러스의 매니폴드 시스템은 기본적으로
 내츄럴 밸런스를 고려하여 설계 제작되며,
 특히 PET프리폼 24, 32, 48등 다수캐비티
 시스템에서 우수한 채널 밸런스된 제품을
 제공합니다.
 수지의 특성에 따른
 매니폴드 재질 차별화 적용



Temperature Controller

High accurate temperature control by using an excellent performance processor
 Natural Heat release system
 Adopting LCD touch screen (TC-3200 series) for User convenience

TC - 880

Controlling temperature more accurate heat with adopting new PID algorithm
 Protecting overvoltage and false connection
 Displaying parameters
 (T/C setting, degree F/C indication, operation status, Soft, etc)
 Detecting errors (alarm, voltage, heater short, triac short)
 Correcting Temperature (difference and slope compensation)
 Algorithm to prevent triac breakage
 (improve cooling efficiency of heat sink, adopt high power triac)
 Protection function against wiring error, heater short, overvoltage, overcurrent
 TC-880 is cartridge type
 When a unit causes problem, just replace the unit cartridge which does not affect whole system operation



通过采用新的PID算法实现更精密的温度控
 具有过电压保护功能（防御配线错误）
 标记主要参数（设定T/C；区分摄氏、华氏温度；运行状态；Soft等）
 搭载了消费者对操作过程中可能会引起的电源配线错误、加热器短路、
 产生过电压/过电流的防御功能。
 TC-880控制器采用盒式磁带方式，若在一个单元发生问题就对该单元进行替
 换即可，因此不会对整个系统的运行产生影响。

새로운 PID 알고리즘 적용으로 정밀한 온도제어
 과전압 입력시 방어기능(오배선 방어)
 주요파라미터의 표기 (T/C설정, 섭씨 화씨 온도구분, 작동상태, Soft등)
 소비자가 작동중 야기 할 수 있는 전원 배선의 오류, 히터 쇼트, 과전압 /
 과전류의 방어기능을 탑재 하였습니다.
 TC-880 컨트롤러는 카트리지 방식으로 유니트에 문제가 발생하면 해당
 유니트만 교체하면 되므로 시스템 전체동작에 영향이 없습니다.

TC - 3200

TC3200 series enables integration management easily because temperature
 controller and sequence injection timer controller and into all-in-one system
 Intuitive UI and Various display panels
 Managing mold files
 Testing Mold
 Reporting function
 Windows operating system
 Controlling 12~256 zones
 Mounted Sequence injection timer (1~16 gate option)
 Protecting over voltage
 Realizing excellent performance with 32 bit processor

TC-3200系列因将温度控制器和顺序注射计时器控制器安装在一个系统上，
 因此便于统一管理。
 直观的用户界面和各种显示画面
 具有模具文件管理功能
 具有测试模具的功能
 具有报告功能
 具有Windows操作系统
 具有控制12~256段的功能
 安装有顺序注射计时器（1~16浇口选项）
 具有过电压保护功能
 安装有32bit处理器，实现高性能化

TC-3200 시리즈는 온도 컨트롤러와 시퀀스 인젝션
 타이머 컨트롤러가 하나의 시스템에 탑재되어
 통합관리에 용이합니다.
 편리한 UI 및 다양한 디스플레이 화면
 몰드파일관리기능
 몰드테스트 기능
 리포트기능
 윈도우즈 운영체제
 12~256 존제어 기능
 시퀀스 인젝션 타이머 탑재 (1~16 게이트옵션)
 과전압 입력시 방어기능
 32비트 프로세서 탑재로 고성능 실현



□ Sequence Injection Timer

Controlling the filling sequence of the mold

A sequence injection timer controls to open and close gate of a hot runner system in order to have effect to eliminate and/or change the position of weld lines, adjust injection quantity of each gate, reduce clamping force, minimize flow mark ,etc

计时器通过调整热流道的浇口的开闭获得消除熔接线、按浇口调整注塑量、减少锁模力、减少留痕的效果。

타이머는 핫러너의 게이트 개폐를 조절하여 웰드라인 제거, 게이트별 사출량 조절, 형체력 감소, 플로우마크 최소화의 효과를 얻을 수 있습니다



■ TS - 800 / Single Gate Type

Free voltages of input signal

Select output voltages

With supporting A/B/C modes, users can set open & close time of gate depending on user's various operating conditions

自动感应输入电压

可选择输出电压 (DC 24V, AC110V, AC220V)

支持A/B/C操作模式, 使用者根据环境对多种模式进行选择, 由此可自由设定浇口的开闭时间

입력전원 자동감지

출력전압선택 가능 (DC 24V, AC110V, AC220V)

동작모드 A/B/C 모드 지원으로 사용자 환경에 따라 다양한 모드를 선택하여 게이트의 개방 및 폐쇄 시간을 자유롭게 설정 가능

■ TS - 780 / Multi Gate Type

Easy controlling and indentifying the operation status of 8 gates

7 segment type display

Supporting Mode A/B1/B2

Mode A/B1/B2 fully Supported

Manual output function

Compact size & Light weight

轻松控制8个浇口以及掌握运行状态

7段类型显示

支持A/B1/B2模式

具有手动输出功能

体积小、重量轻

8점 게이트 컨트롤 및 동작상태 파악용이

7세그먼트 타입 디스플레이

모드 A /B1 /B2 지원

수동출력기능

컴팩트한 사이즈, 경량 실현

■ TS - 910 / Multi Gate Type

Easy monitoring the operation status with supporting various displays

like text, graphic, digital, etc

Advanced Touch Screen

Managing Mold Files

Protecting overpower input

Compact size & Simultaneous Setting and Controlling 40 gates.

支持以各种显示状态显示 (文本、图形、数字)

优化的触摸屏方式

具有模具管理功能

具有过电压保护功能

体积小, 可同时设置和控制40个浇口

다양한 디스플레이 지원 (텍스트, 그래픽, 디지털)

향상된 터치스크린 방식

몰드 파일관리 기능

과전압입력 방어기능

컴팩트한 사이즈 40 게이트 동시설정 및 동시 제어 가능

HOTPLUS / HOT RUNNER QUESTIONNAIRE

HotPlus Hot Runner Questionnaire															
Questionnaire No.				DATE											
MA (Full Hot Half)				MA Plates by Customer				SYSTEM MF&NZ only				SNV Single Valve			
Temperature Controller		4	8	16	32	64	Zone		Timer Controller		2	4	8	Zone	
Purpose for				Quote				Order							
Sales Organization								DWG Delivery							
Customer Information															
Customer				End User				Delivery							
Contact Person				E-MAIL				Destination							
Telephone				Fax				Export							
MOLD	New	Modify	Repeat	SAMHA Dwg No.											
Product Information							Based on Mold DWG								
Product Name							View Point		Parting Line		Machine Nozzle				
Part Description							Datum		RT	RB	LT	LB			
Ref.No.(Part No.)							Unit		mm			inch			
Material Info							Mold Base		()x()						
Gating		Direct to Part			Subrunner										
No. Cavity	Part Weight														
No. Gate	Wall thickness														
Customer Information															
Manifold	I	X	H	T	Y	Plate	Special								
VALVE				OPEN											
GM	ENV	PMO	PET	LED	SNV	Special									
20	25	35	45	Special											
Color hange	Yes			No											
IC(J) TYPE				CA(K) TYPE											
Gate Bush															
Special Gate Bush															
Nozzle Locator															
SR															
Connecting System							Gate	X	Y	D	H-T	GateØ	Timer		
Recessed		Mounted				G1									
Heater,T/C Separated (HOT PLUS STANDARD WIRNG)							G2								
CUSTOMER WIRING							G3								
Sol valve input		24V	110V	220V	G4										
Sequence Control		Yes			No		G5								
Locate Ring		By Buyer			By Hot Plus		G6								
							G7								
Center Pin		By Buyer			By Hot Plus		G8								



Quality Solutions HotPlus Hot Runner Systems

<http://www.hotplus.co.kr>

HOTPLUS Co.,Ltd.
#17, Gilju-ro 431beon-gil, Wonmi-gu, Bucheon-si, Gyeonggi-do, Korea
E-mail : hotplus1@naver.com
TEL : +82-32-684-6778 / FAX : +82-32-684-6779

熱HOTPLUS技研总公司及工厂
京畿道 富川市 遠美區 春衣洞 75-12
E-mail : hotplus1@naver.com
TEL : 032-684-6778 / FAX : 032-684-6779

(주)핫플러스
경기도 부천시 길주로 431번길 17(춘의동 75-12)
E-mail : hotplus1@naver.com
TEL : 032-684-6778 / FAX : 032-684-6779

We reserve the right to make changes without notice.
当本公司产品质量升级时, 本宣传册所记载内容有可能在无事先通知的情况下变更。
본 책자에 수록된 내용은 당사 제품의 품질 향상 시 예고 없이 변경될 수 있습니다.