



Amold Hot Runner System



TAIWAN
EXCELLENCE 2016



COMPANY OVERVIEW



ANN TONG, established in 1989, is a pragmatic, focused, professional and innovation oriented Taiwanese enterprise. For years, we have been granted various patents and have won a number of awards as follows : Taiwan Excellence Award, Innovation Research Award, National Invention and Creation Award, Excellent enterprise of New Taipei City, etc.

We provide customer-oriented and all-around services to make sure that our customer will have a smooth production. Our mission statement is 'When customers succeed, Ann Tong succeeds.'

AWARDS & RECOGNITION



Three Business Divisions :

① Hot Runner System

" **AMOLD** " is our hot runner brand and has been sold in the plastic injection molding market worldwide.

We have more than 29-years experiences in the hot runner field and our performance is highly recognized in this area. Our services include product design, mold development, hot runner design, assembly, mold trial, maintenance and operator training to provide our customer all kinds of related solutions measures.

We have launched 'Hot Runner Hospital' program providing all-round consulting services to assist our customers solving the molding issues.



② Liquid Silicone Rubber (LSR)

Liquid Silicone Rubber (LSR) has been widely applied to various industries including medical, optics, automobile, consumer electronics, cell phone, smart wear, children products, daily necessities, sports equipment, etc. LSR has become the best choice materials for water-proof structure due to its injection molding process with silicone(R), insert metal (M+R), and insert plastic (P+R).

We provide silicone mold development, LSR cold runner system, cold deck, heat uniform analysis and design to help our customers improve the quality, save the cost and increase production output.



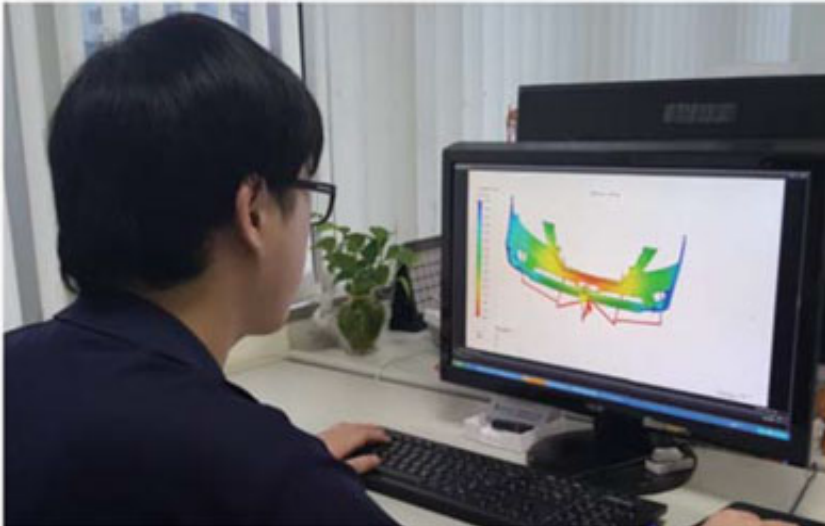
③ Micro Injection Molding

The injection molding machine we utilize is world-renowned for its small size, for consuming the least resin and for its ability to produce small components.

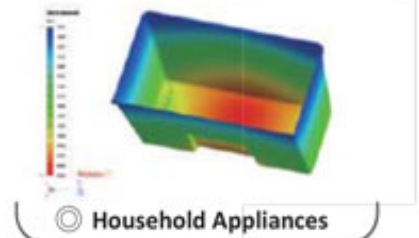
We assist our customers in developing injection molding technology and help integrate this technology into their mass production process for the following products : Medical components, precision electronic parts, connectors, small gears, optical elements, wearable devices, and so on.



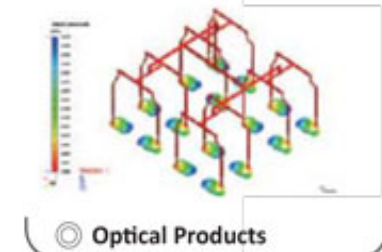
CAE MELT FLOW Analysis Service



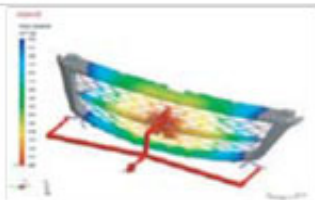
We partner with **Moldex3D** a global leader in the melt flow analysis field, to assist our customers in designing hot runner layouts.



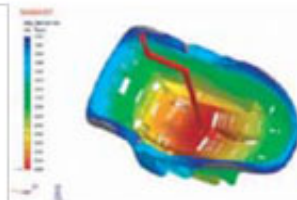
⊙ Household Appliances



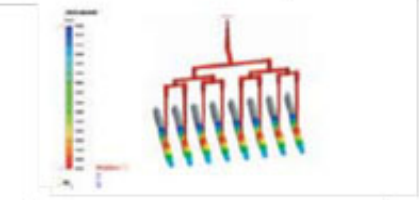
⊙ Optical Products



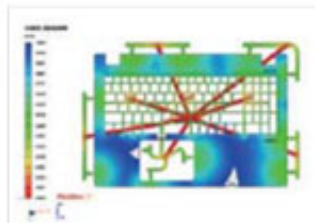
⊙ Automobile Products



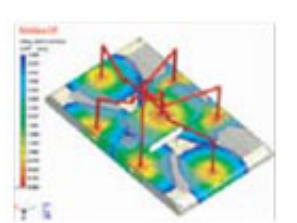
⊙ Child-related Products



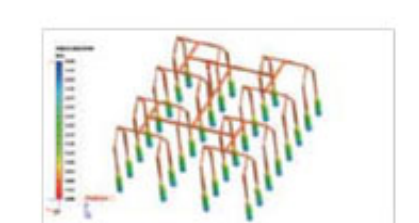
⊙ Medical Products



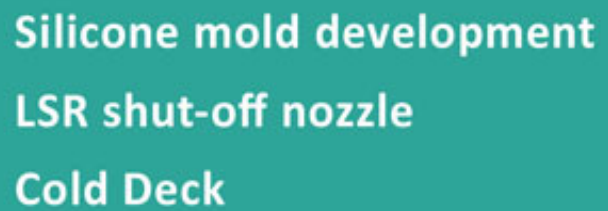
⊙ Laptops



⊙ Televisions



⊙ PET Preforms



The diagram illustrates the components and flow of a hot-chamber die casting machine. Key parts include the **Mixing block**, **Static mixer**, **LSR Injection barrel**, **Cold Deck**, **Heated mould**, **Needle shut-off nozzle**, **Dyes Additives** reservoir, and **LSR dosage** sources for **A material** and **B material**.

System advantages

Module design of Cold Deck

Quick Installation and easy to maintain.



System temperature analysis

High efficiency heat isolation & cooling, uniform heating system.



Shut-off nozzle design



Don't need to cut scrap.

Flow control valve



Control flow balance of multi-cavities.

Temperature alarm device



Over temperature alarm to keep the silicone in the runner no solidification.

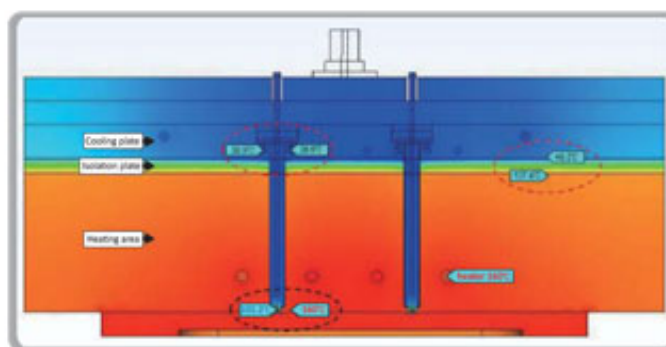


Nozzle specification

(mm)

Type	Nozzle diameter	Cavity diameter
CVRT-10	Ø 12.7	Ø 14
CVRT-20	Ø 20	Ø 22
CVRT-30	Ø 38	Ø 40

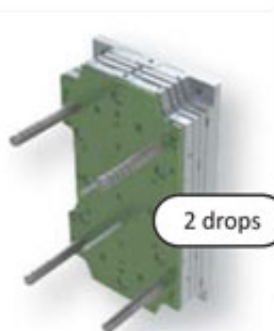
Thermal analysis & heating system design



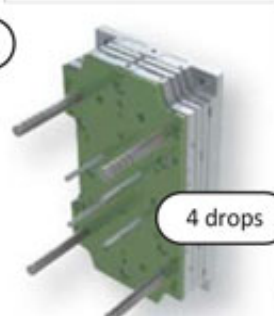
Cold deck



single drop



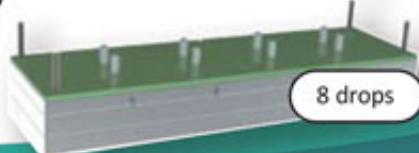
2 drops



4 drops



16 drops



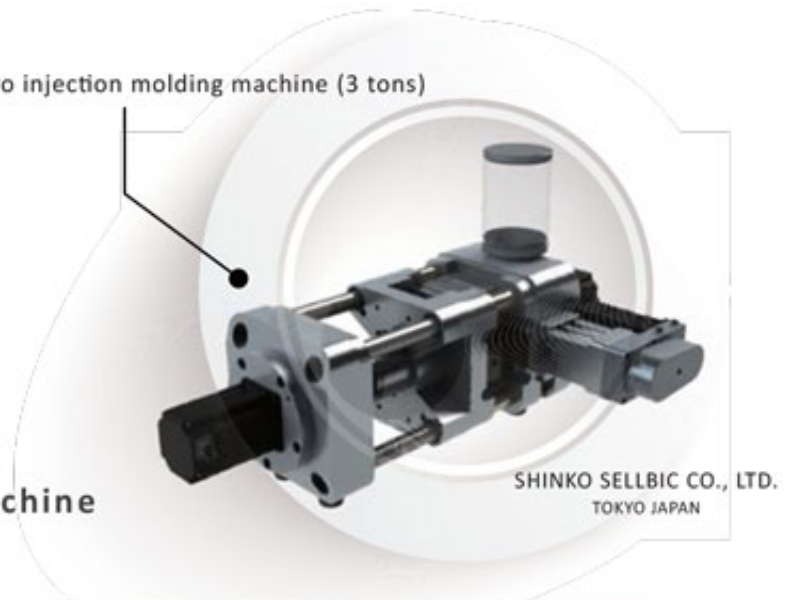
8 drops



Micro Injection Molding

- Mold Manufacturing
- Micro Injection Molding
- Micro Injection Molding Machine

Micro injection molding machine (3 tons)



Machine features :

1. The disc screw is quick disassembly designed and able to quickly color/resin change.
2. Modular design with reliable performance and easy to maintain.
3. With built-in hot runner to save the resin consumption and increase the molding stability.
4. Ultra-small volume/high-level effect can be integrated with other process equipment to the production line for one-stop automated production.
5. With online production and production line modularization to achieve flexible production and rapid change line production.
6. Minimize the waste and transportation of the material and parts.
7. Materials : From regular to engineering grade, all kinds of thermoplastics, even high temperature resins or glass fiber resins. (EX. TPE,TPU,PP,PE,ABS,POM,PA,PC,COC,LCP,PEI,PPSU,PVDF and PEEK.)



Vertical micro injection molding machine (3 tons)

Clamping force (ton)		3
Screw diameter (mm)		80
Plunger diameter (mm)	10	8
Theoretical capacity (cc)	3	2
Maximum injection pressure (kgf/cm ²)	2268	3544
Maximum injection speed (mm/sec)	60 (can upgrade to 120)	
Machine dimensions (mm)	Horizontal type	(W) 640 * (D) 305 * (H) 300
	Vertical type	(W) 260 * (D) 300 {or 519 with piston} * (H) 662
Machine weight (kg)	Horizontal type	45
	Vertical type	85
Power (v)		AC220V Single phase
Mold dimensions (mm)		80 * 130 * 80

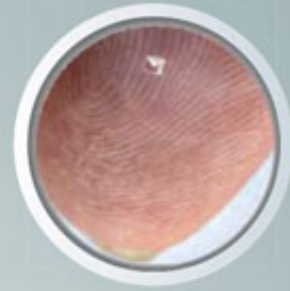




Product : Precision Parts
Material : PMMA/LCP/ABS/PA
Specification : 1~5 (mm)



Product : Connector
Material : LCP 30%GF
Specification : 10*4*2 (mm)



Product : Sensor Hub
Material : PMMA
Specification : 1*1*1 (mm)



Product : Micro Filter
Material : PC
Specification : 18*0.8 (mm)



Product : Gear
Material : POM
Specification : 30*11 / 12*9 (mm)



Product : Screw / Nuts
Material : PEEK
Specification : 18*8 (mm)



Product : VCM Holder
Material : LCP
Specification : 8*8*2 (mm)



Product : Electronic Parts
Material : ABS
Specification : 5*2*1 (mm)



Product : Stent
Material : PLA / PEEK
Specification : 15*4 (mm)

Other services

☛ Provide micro injection molding service and total solution.

- ✓ Accept small orders (minimum order is 300 pieces).
- ✓ Part weight range : 0.0001 g ~ 6 g.
- ✓ Part dimension range : 1mm ~ 20mm.

☛ PEEK Small screw.

- ✓ M1.2 / M1.4 / M1.6 / M1.7... and special sizes.
- ✓ Inch screw size is complete.



HOT RUNNER

Application & Performance



SVG Series



Product : Child safety seat
Resin : PP



Product : Vegetable crisper
Resin : PMMA



PET Series



Product : Container
Resin : PET



Product : Preform
Resin : PET

Multi-colored Series



Product : Organizer bins
Resin : ABS/RPET/RABS/TPE

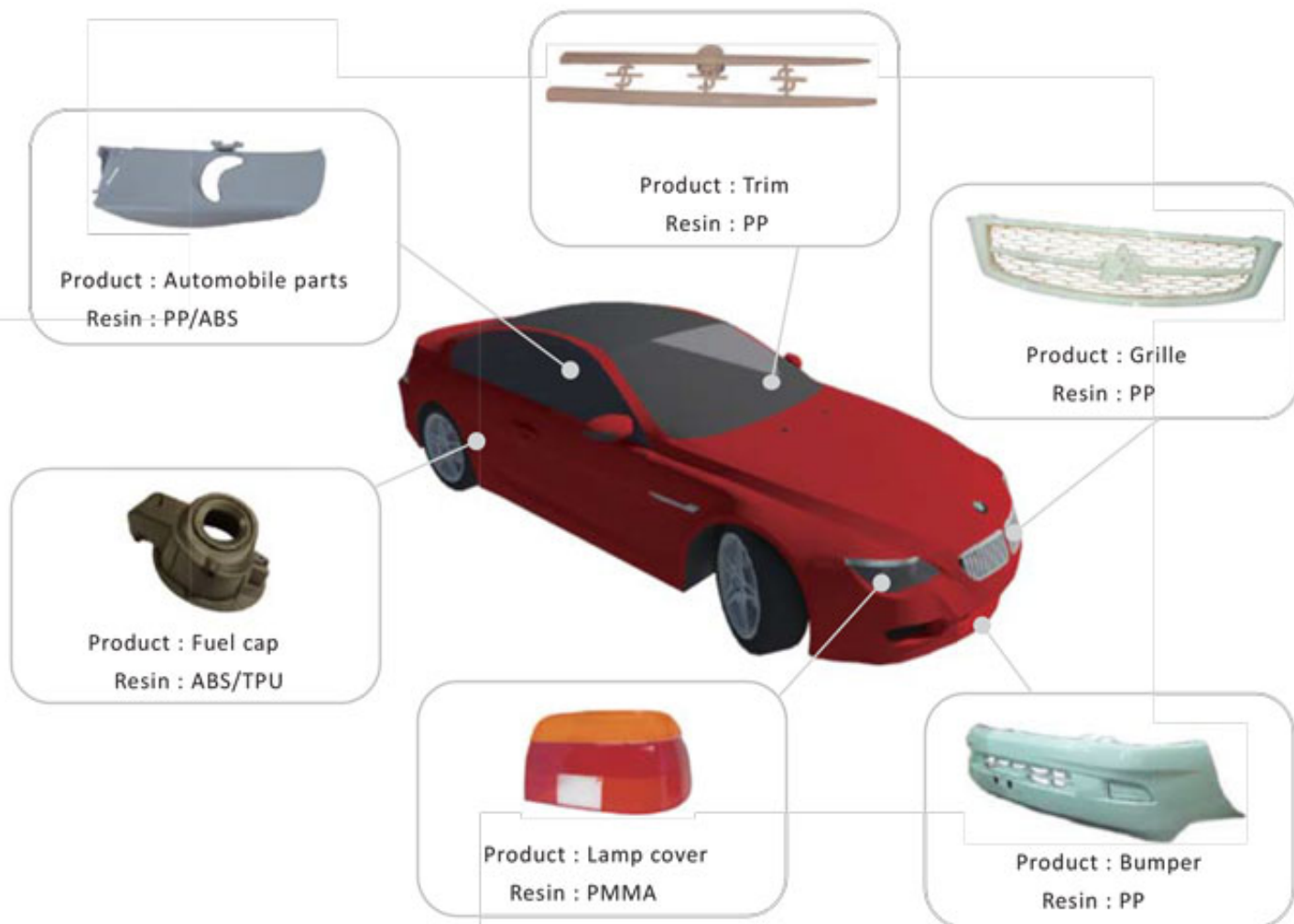


Product : Interdental brush
Resin : PP/TPE



Product : TV base
Resin : PC/ABS

Automobile Series



3C Parts Series



HOT RUNNER

Application & Performance



Optical Parts Series



Product : Contact lens mould
Resin : PP



Product : LED lens
Resin : PMMA



Product : Contact lens box
Resin : PP/COP



Product : Light guide plate
Resin : PMMA/PC

Cosmetic Parts Series



- 1 Product : Cosmetic jar
Resin : PET/PETG
- 2 Product : Cosmetic jar lining
Resin : PET



Product : Cosmetic bottle
Resin : PCTG



Product : Cosmetic jar
Resin : PETG



Product : Mascara shell
Resin : AS



Product : Mascara lining
Resin : PS/ABS

Insert Molding



Product : Mobile accessories
Resin : PPS+GF insert molding
aluminum



Product : Tablet frame
Resin : PC



Product : Sensor
Resin : PC/black

Additive Glass Fiber



Product : Laptop cover
Resin : PA+50%GF



Product : Laptop rear cover
Resin : PC+25%~45%GF



Product : Bicycle mat
Resin : PA+30%GF



Product : Solenoid valve & relay
Resin : PA66+45%GF 、 PA9T+33%GF



Product : Automobile
Resin : PA+33%GF 、 POM+25%GF

Amold Hot Runner System



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HOT RUNNER

Application & Performance



Sports Series



Product : Swim mask
Resin : PC



Product : Swim goggles
Resin : PC



Product : Swim mask
Resin : PC

Daily Necessities



Product : Knife handle
Resin : PA+TPU



Product : Toothbrush handle
Resin : PP



Product : Fork
Resin : PP



Product : Ball-point pen
Resin : PS



Product : Glasses frame
Resin : PP



Product : Shoe cushion
Resin : PP

Medical



Product : Syringe-push rod
Resin : PP



Product : Syringe-barrel
Resin : PP



Product : Syringe
Resin : PP

Others



Product : Cap
Resin : PP



Product : Plug
Resin : PC



Product : Speaker
Resin : PC



Product : Fan
Resin : PA+GF



Product : Lampshade
Resin : PC



Product : Pipe connector
Resin : PP

AMOLD
ANNTONG Ind.co.,Ltd.

Hot Runner System • LSR Cold Runner System • Micro Injection Molding

Hot runner system related products

Temperature Controller

Temperature Controller (RO6012003E-B01)

Features :

1. High sampling rate 50ms for very precise temperature regulation during molding process.
2. 5 LED indicators for different operating status.
3. Automatic self-diagnostics ability and error code warning.
4. Microprocessor based self-tuning temperature controller with PID algorithm.
5. Sophisticated protection for power and current surge.
6. Two ways of power output control : one is Zero-cross control, another is Phase angle control.
7. Soft start mode for longer heating element usage.
8. Accepts two types of thermocouple J or K input. Two temperature units °C and °F setting.
9. Alarm temperature range setting.



TC-H090602

TC-H090601



TC-H090608

TC-H090612

Model	Input Voltage	Apperance Dimension (L * W * H cm)	Weight (kg)
TC-H090601-X	220V	7 * 26 * 20.5	6
TC-H090602-X	220V	23 * 30 * 20.5	8
TC-H090604-X	220V / 380V	35 * 33 * 24.5	15
TC-H090606-X	220V / 380V	45 * 33 * 24.5	20.8
TC-H090608-X	220V / 380V	55 * 33 * 24.5	28.8
TC-H090612-X	220V / 380V	75 * 33 * 24.5	32.8

TC-H090601-X

— wire connection / A : Amold \ I : Incoe

— temperature control zones

— temperature control code

Touch Screen Multi-Zone Temperature Controller

Features :

1. Super security protection.
2. Full alarm indication is easy to view and troubleshoot.
3. Multiple operation options (soft start dehumidification function / standby insulation function / instant heating function / automatic and manual functions / °C, °F unit display / K, J type of temperature sensors are available).
4. There are 4 models at below sheet (24 / 48 / 72 / 96 zones).



HC-170-48

Model	HC-170-24	HC-170-48	HC-170-72	HC-170-96
Control box model	HC-170A-6	HC-170A-6*2	HC-170A-6*3	HC-170A-6*4
Total power capacity	63 A	63 A*2	63 A*3	63 A*4
Output connector SIZE B	24pin x 4	24pin x 8	24pin x 12	24pin x 16
Voltage specification	3 Ø 3W 220V / 3 Ø 4W 380V			
Power cable length	4M	4M*2	4M*3	4M*4
Temperature sensor	K / J			
Control box size W×H×D(mm)	410x250x430	410x490x430	410x730x430	410x970x430
Control box weight	18 KG	38 KG	58 KG	78 KG
Connection cable SIZE B	24P-3M*4 10KG	24P-3M*8 20KG	24P-3M*12 30KG	24P-3M*16 40KG
HC-170 modules	6	12	18	24
Package Size W×H×D(mm)	450x290x470	450x530x470	450x770x470	450x1010x470
Gross weight	40 KG	70 KG	100 KG	135 KG

Sequence Controller

The Valve gate system can solve welding line issue by using the sequence controller to set switch timing for on and off of valve pins.



SC-A-105-06

Model	Apperance Dimension (L * W * H cm)	Weight (kg)
SC-A-105-02	23 * 30 * 20.5	7.5
SC-A-105-04	35 * 33 * 24.5	14
SC-A-105-06	45 * 33 * 24.5	19.8
SC-A-105-08	55 * 33 * 24.5	27.8
SC-A-105-12	75 * 33 * 24.5	31.8

Air Booster

The valve pins of the valve gate system are difficult to control due to the over volume of air loss; however, the Air Booster can enhance the air flow stability.



Model	Apperance Dimension (L * W * H cm)	Weight (kg)
TC-IPTC 04	41 * 66 * 88	47

Filter Nozzle

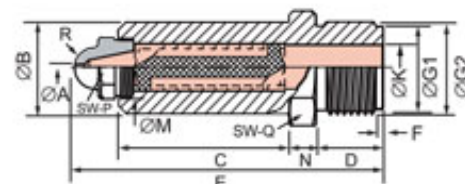
The filter Nozzle was installed in the front tip of the injection molding machine barrel and using different types of inserts lead to reach effectiveness of filtering impurities.

Features :

1. Prevent the runner gate from clogging.
2. Filter impurities.
3. Easy to be installed and maintained.



- N40 : Used by injection machines less than 400 tons with one shot weight less than 1 KG.
- N50 : Used by 400-1000 ton injection machines with one shot weight less than 5 KG.



Model	Ø A	Ø B	C	D	E	F	Ø G1	Ø G2	K	Ø M	N	SW-P	SW-Q	R
N 40	3	40	70							30	16	23	41	10
N 50	3	50	90							38	20	29	54	13

Model	W	H	ØS
M1 	0.8	0.8	15 、 20 、 30 、 45
	1.5	1.5	
M2 	50	0.8	

* M1 : Suitable for general resin.
M2 : Suitable for glass fiber resin.

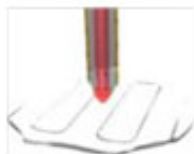
Single Valve Gate Hot Runner System



Dual-Cylinder, powerful for gate seal



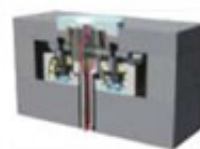
All in one, easy to install



Nice gate mark



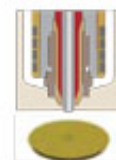
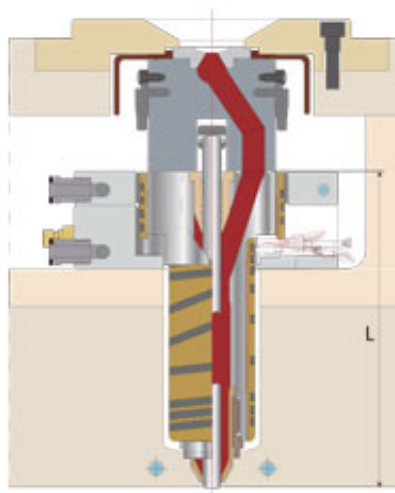
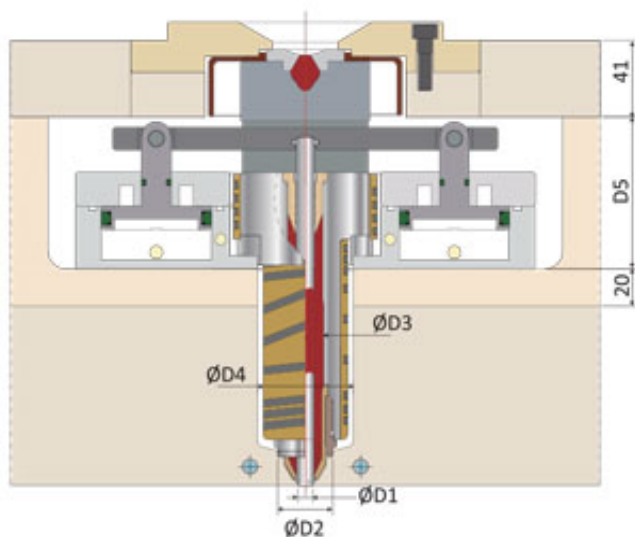
Customize for your need



Single valve gate system is the cutting-edge research product from ANN TONG.



SVG



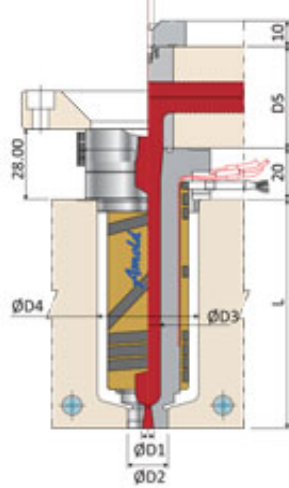
SVG T



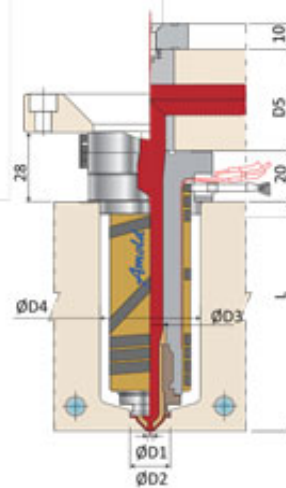
SVG P

Type	SVGT 18	SVGT 38	SVGT 48	SVGT 68	SVGP 18	SVGP 38	SVGP 48	SVGP 68
Ø D1	0.8 ~ 1.5	1.5 ~ 2.5	3.0 ~ 5.0	7.0 ~ 9.0	0.8 ~ 1.5	1.5 ~ 2.5	3.0 ~ 3.5	7.0 ~ 9.0
Ø D2	8	15	18	30	8	12	18	30
Ø D3	5	8	12	20	5	8	12	20
Ø D4	16	30	40	52	16	30	40	52
D5	70	76	82	82	70	76	82	82
L	80 ~ 120	120 ~ 250	120 ~ 400	120 ~ 650	80 ~ 120	120 ~ 250	120 ~ 400	120 ~ 650

AESB



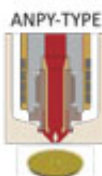
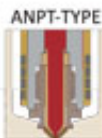
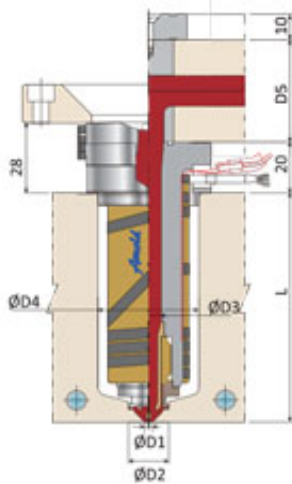
ANPR



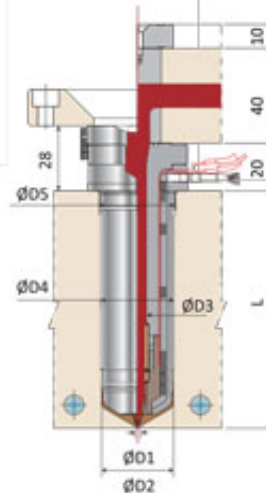
Type	AESB 10	AESB 20	AESB 30	AESB 40	AESB 40
Ø D1	1.0 ~ 3.0	1.5 ~ 5.0	5.0 ~ 7.0	5.0 ~ 8.0	6.0 ~ 10.0
Ø D2	8	9	15	16	20
Ø D3	4	5	7.5	10	14
Ø D4	19	25	32	40	45
D5	40	40	40	40	40
L	55 ~ 95	52 ~ 160	80 ~ 250	80 ~ 400	80 ~ 600

Type	ANPR 20	ANPR 30	ANPR 40	ANPR 50
Ø D1	1.8	1.8	2.0	3.0
Ø D2	9	15	16	20
Ø D3	5	7.5	10	14
Ø D4	25	32	40	45
D5	40	40	40	45
L	52 ~ 160	80 ~ 250	80 ~ 400	80 ~ 600

ANPT / ANPY



NL-ANPT / NL-ANPY



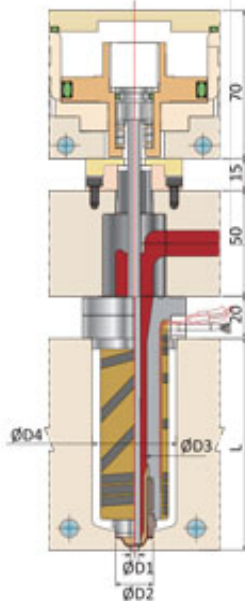
NL-ANPT -TYPE

NL-ANPY -TYPE

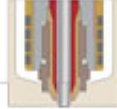
Type	ANPT/Y 10	ANPT/Y 20	ANPT/Y 30	ANPT/Y 40	ANPT/Y 50
Ø D1	0.8 ~ 1.2	1.0 ~ 2.5	1.5 ~ 3.0	1.8 ~ 3.5	3.0 ~ 4.0
Ø D2	8	9	15	16	20
Ø D3	4	5	7.5	10	14
Ø D4	19	25	32	40	45
D5	40	40	40	40	45
L	55 ~ 95	52 ~ 160	80 ~ 250	80 ~ 400	80 ~ 600

Type	NL-ANPT/Y 10	NL-ANPT/Y 20	NL-ANPT/Y 30
Ø D1	0.8 ~ 1.2	1.0 ~ 2.5	1.5 ~ 3.0
Ø D2	17	22	30
Ø D3	3	5	7.5
Ø D4	18	23	31
Ø D5	22	25	32
L	55 ~ 95	52 ~ 112	100 ~ 175

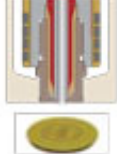
AVMT / AVMP



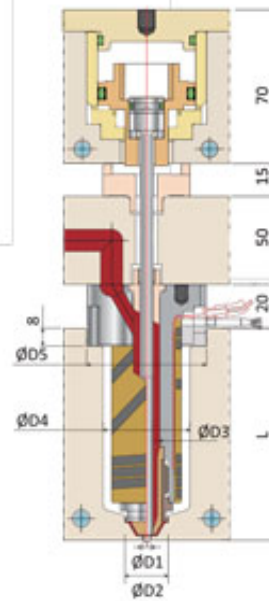
AVMT-TYPE



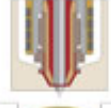
AVMP-TYPE



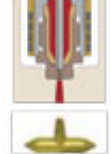
SVDT / SVDP



SVDT-TYPE

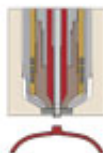
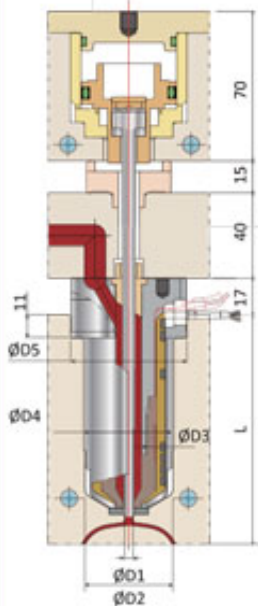


SVDP-TYPE



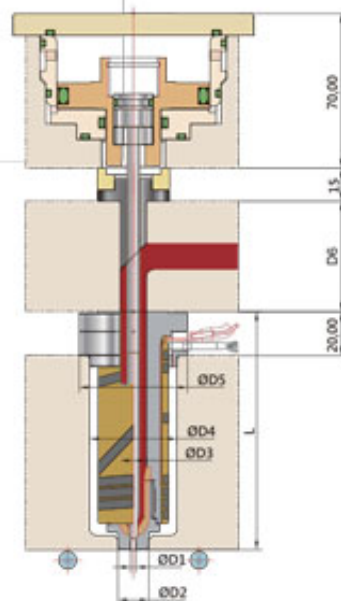
Type	AVMT/P 48	AVMT/P 58	AVMT/P 68	Type	SVDT 18	SVDT 38	SVDT 48	SVDT 58	SVDP 38	SVDP 48	SVDP 58
Ø D1	3.0 ~ 5.0	5.0 ~ 7.0	7.0 ~ 9.0	Ø D1	0.8 ~ 1.5	1.5 ~ 2.5	3.0 ~ 5.0	5.0 ~ 7.0	1.5 ~ 2.5	3.0 ~ 5.0	5.0 ~ 7.0
Ø D2	18	25	30	Ø D2	8	15	20	25	12	14	25
Ø D3	12	16	20	Ø D3	5	8	12	14	8	12	14
Ø D4	40	45	52	Ø D4	16	30	40	45	30	40	45
Ø D5	N / A			Ø D5	32	42	55	60	42	55	60
L	100 ~ 400	100 ~ 600	100 ~ 650	L	60 ~ 120	100 ~ 250	100 ~ 400	100 ~ 600	100 ~ 250	100 ~ 400	100 ~ 600

NL-SVDP



Type	NL-SVDP 48
Ø D1	3.0 ~ 4.0
Ø D2	41.5
Ø D3	12
Ø D4	42.5
Ø D5	55
L	90 ~ 200

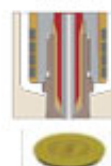
FSDT / FSDP



FSDT



FSDP



Type	FSDT 18	FSDT 28	FSDT 38	FSDT 48	FSDT 58
Ø D1	0.8 ~ 1.5	1.2 ~ 1.5	1.5 ~ 2.5	3.0 ~ 5.0	5.0 ~ 7.0
Ø D2	8	10	15	20	25
Ø D3	5	6	8	12	14
Ø D4	16 ~ 20	20 ~ 25	28 ~ 32	34 ~ 40	42 ~ 45
Ø D5	30	31.5	41.5	49.5	59
D6	40	40	40	50	50
L	80 ~ 120	80 ~ 150	125 ~ 225	125 ~ 225	125 ~ 225

Type	FSDP 18	FSDP 28	FSDP 38	FSDP 48	FSDP 58
Ø D1	0.8 ~ 1.5	1.2 ~ 1.5	1.5 ~ 2.5	3.0 ~ 5.0	5.0 ~ 7.0
Ø D2	8	3.5 / 4	12	14	20
Ø D3	5	6	8	12	14
Ø D4	16 ~ 20	20 ~ 25	28 ~ 32	34 ~ 40	42 ~ 45
Ø D5	30	31.5	41.5	49.5	59
D6	40	40	40	50	50
L	80 ~ 120	80 ~ 150	125 ~ 225	125 ~ 225	125 ~ 225



📍 Headquarter & Branches

📍 Service Office



ANNTONG INDUSTRIAL CO., LTD.



www.anntong.com.tw

E-mail: mold@anntong.com.tw

SERVICE NETWORK

- 📍 Taipei : (886) - 2 - 2999 - 7193
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