DME HOT RUNNER SOLUTIONS

EcoONE-SERIES
SINGLE NOZZLES

EcoONE-SERIES HOT SPRUE BUSHINGS

The smart solution for simple hot sprue applications

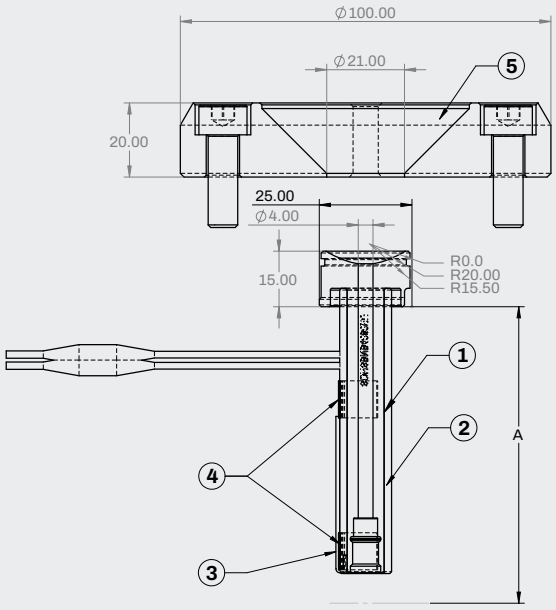
The EcoONE Single Nozzle / Hot Sprue Bushing is an economical solution for simple hot sprue requirements. The one-piece body, single heater construction is suitable for commodity, non-filled resin applications.

The nozzle uses the same tips / gate seals as DME's multi-drop StellarONE hot runner system, making this single nozzle perfect for prototype tools intended to go to multi-drops after validation.

Six runner sizes and length combinations with five gating options makes EcoONE a cost effective and versatile solution for single drop applications.

POLYMER VISCOSITY KEY L- low M- medium H- high	**EcoONE-Series Gate Selection Guide**						**November 2024**					
	The values expressed in grams are for reference only and are determined by using a nominal wall thickness of 1.8mm (.070") and unfilled polypropylene. Part dimension, wall thickness, length of fill within part, mould conditions and moulding parameters must also be considered.	Recommended Gate Diameter Range		Flow Capacity (grams)			Generic polymer name (Trade name) [A = amorphous or C = crystaline]					
							Common resins					
							TPE (Elastomer) [A]	PE (Polyethylene) [C] Includes LDPE, HDPE LLDPE and MDPE	PS (Polystyrene) [A]	TPO [C]	PP (Polypropylene) [C]	ABS [A]
NOZZLES	TIP	Min (mm)	Max (mm)	Viscosity								
				Low	Medium	High	L	L	M	L	M	M
EcoONE-04	Sprue gate	1,5	2,0	20	15	10						
	Point gate bodyless	0,8	1,5	10	10	7						
	Point gate full body	1,0	1,5	10	10	7						
EcoONE-06	Sprue gate	1,5	3,0	500	400	225						
	Point gate bodyless	0,8	2,0	175	125	80						
	Point gate full body	1,0	2,0	175	125	80						
EcoONE-09	Sprue gate	2,5	3,0	625	575	325						
	Point gate bodyless	0,8	2,5	250	175	125						
	Point gate full body	1,5	2,5	250	175	125						
EcoONE-10	Sprue gate	2,5	3,5	850	700	425						
	Point gate bodyless	1,0	3,0	310	200	150						
	Point gate full body	1,5	3,0	310	200	150						
EcoONE-12	Sprue gate	3,0	4,0	1000	775	475						
	Point gate bodyless	1,0	3,2	500	375	275						
	Point gate full body	2,0	3,2	500	375	275						
EcoONE-16	Sprue gate	3,0	4,5	1500	1100	750						
	Point gate bodyless	1,5	3,5	800	550	400						
	Point gate full body	2,5	3,5	800	550	400						

EcoONE-SERIES
SINGLE NOZZLE ASSEMBLIES
ECOONE-04 SERIES SINGLE NOZZLES



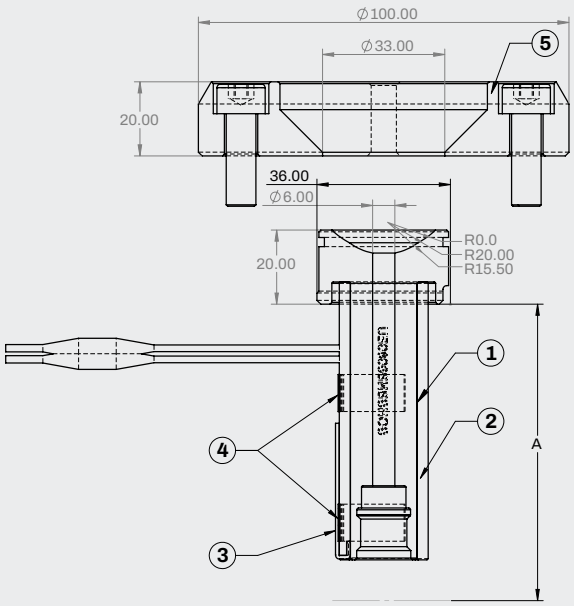
A	Assembly item #	Tip type	Gate package	Nozzle body	Body heater	Watts (230)	Thermo-couple	T/C retainer	Locating ring
50	**ECOSN0450PGASTDLR**	Point gate	SOPGA04	SOHSBNB4050	SONH10047	200	SOTC10150-J	SONHC04	SOHSBLR04
	ECOSN0450PGAWRSLR	Point gate (bodyless) wear resistant	SOPGA04-WR						
	ECOSN0450FBOSTDLR	Full body standard	SOFBOP04						
	ECOSN0450FBOWRSLR	Full body wear resistant	SOFBOP04-WR						
	ECOSN0450FBEXSTLR	Full body extended standard	SOFBOP04EX						
	ECOSN0450FBEXWRLR	Full body extended wear resistant	SOFBOP04EX-WR						
	ECOSN0450SPRGATLR	Sprue gate	SOSRT0401						
	ECOSN0450SPRGEXLR	Sprue gate extended	SOSRT0402						
100	**ECOSN04100PGASTDLR**	Point gate (bodyless) standard	SOPGA04	SOHSBNB4100	SONH10097	240	SOTC10200-J		
	ECOSN04100PGAWRSLR	Point gate (bodyless) wear resistant	SOPGA04-WR						
	ECOSN04100FBOSTDLR	Full body standard	SOFBOP04						
	ECOSN04100FBOWRSLR	Full body wear resistant	SOFBOP04-WR						
	ECOSN04100FBEXSTLR	Full body extended standard	SOFBOP04EX						
	ECOSN04100FBEXWRLR	Full body extended wear resistant	SOFBOP04EX-WR						
	ECOSN04100SPRGATLR	Sprue gate	SOSRT0401						
	ECOSN04100SPRGEXLR	Sprue gate extended	SOSRT0402						

*As of now WR-Wear resistant torpedoes are not applicable

EcoONE-SERIES

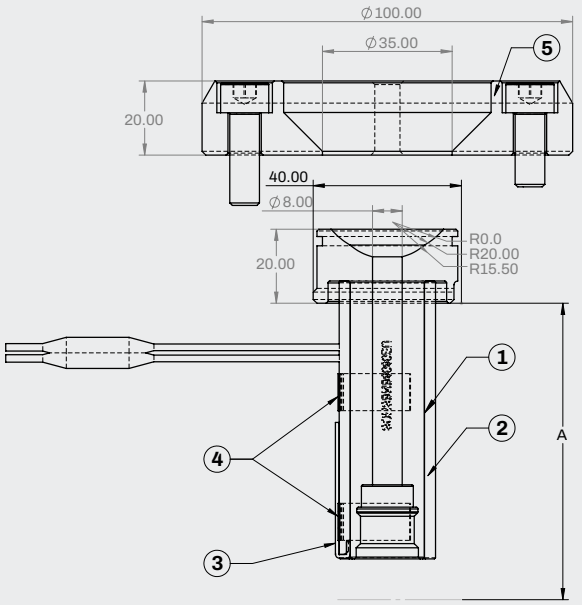
SINGLE NOZZLE ASSEMBLIES

ECOONE-06 SERIES SINGLE NOZZLES



A	Assembly item #	Tip type	Gate package	Nozzle body	Body heater	Watts (230)	Thermo-couple	T/C retainer	Locating ring
60	**ECOSN0650PGASTDLR**	Point gate (body-less) standard	SOPGA06	SOHSBNB6060	SONH18055	350	SOTC10150-J	SONHC06	SOHSBLR06
	ECOSN0650PGAWRSLR	Point gate (bodyl-ess) wear resistant	SOPGA06-WR						
	ECOSN0650FBOSTDLR	Full body standard	SOFBOP06						
	ECOSN0650FBOWRSLR	Full body wear resistant	SOFBOP06-WR						
	ECOSN0650FBEXSTLR	Full body extended standard	SOFBOP06EX						
	ECOSN0650FBEXWRLR	Full body extended wear resistant	SOFBOP06EX-WR						
	ECOSN0650SPRGATLR	Sprue gate	SOSRT0601						
	ECOSN0650SPRGEXLR	Sprue gate extended	SOSRT0602						
100	**ECOSN06100PGASTDLR**	Point gate (bodyl-ess) standard	SOPGA06	SOHSBNS6100	SONH18095	400	SOTC10200-J		
	ECOSN06100PGAWRSLR	Point gate (bodyl-ess) wear resistant	SOPGA06-WR						
	ECOSN06100FBOSTDLR	Full body standard	SOFBOP06						
	ECOSN06100FBOWRSLR	Full body wear resistant	SOFBOP06-WR						
	ECOSN06100FBEXSTLR	Full body extended standard	SOFBOP06EX						
	ECOSN06100FBEXWRLR	Full body extended wear resistant	SOFBOP06EX-WR						
	ECOSN06100SPRGATLR	Sprue gate	SOSRT0601						
	ECOSN06100SPRGEXLR	Sprue gate extended	SOSRT0602						

EcoONE-SERIES
SINGLE NOZZLE ASSEMBLIES
ECOONE-08 SERIES SINGLE NOZZLES



A	Assembly item #	Tip type	Gate package	Nozzle body	Body heater	Watts (230)	Thermo-couple	T/C retainer	Locating ring
60	**ECOSN0860PGASTDLR**	Point gate	SOPGA08	SOHSBNB8060	SONH20055	350	SOTC10150-J	SONHC08	SOHSBLR08
	ECOSN0860PGAWRSLR	Point gate (bodyl-ess) wear resistant	SOPGA08-WR						
	ECOSN0860FBOSTDLR	Full body standard	SOFBOP08						
	ECOSN0860FBOWRSLR	Full body wear resistant	SOFBOP08-WR						
	ECOSN0860FBEXSTLR	Full body extended standard	SOFBOP08EX						
	ECOSN0860FBEXWRLR	Full body extended wear resistant	SOFBOP08EX-WR						
	ECOSN0860SPRGATLR	Sprue gate	SOSRT0801						
	ECOSN0860SPRGEXLR	Sprue gate extended	SOSRT0802						
	ECOSN08100PGASTDLR	Point gate (bodyl-ess) standard	SOPGA08	SOHSBNS8100	SONH20095	400	SOTC10200-J		
	ECOSN08100PGAWRSLR	Point gate (bodyl-ess) wear resistant	SOPGA08-WR						
	ECOSN08100FBOSTDLR	Full body standard	SOFBOP08						
	ECOSN08100FBOWRSLR	Full body wear resistant	SOFBOP08-WR						
	ECOSN08100FBEXSTLR	Full body extended standard	SOFBOP08EX						
	ECOSN08100FBEXWRLR	Full body extended wear resistant	SOFBOP08EX-WR						
	ECOSN08100SPRGATLR	Sprue gate	SOSRT0801						
	ECOSN08100SPRGEXLR	Sprue gate extended	SOSRT0802						

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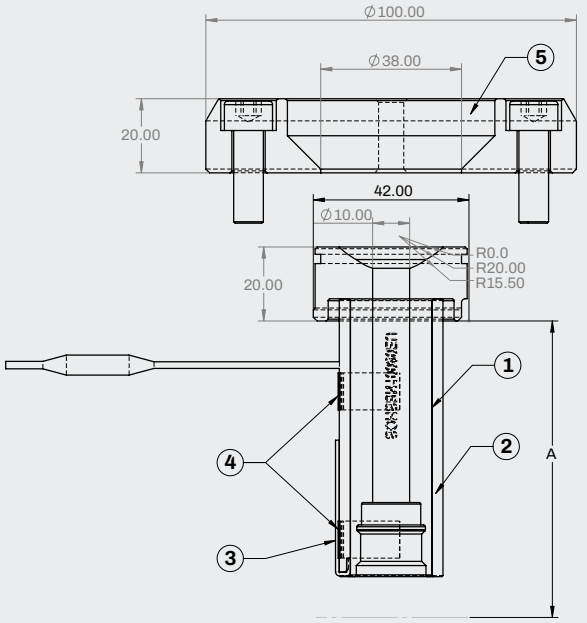
SINGLE NOZZLE ASSEMBLIES

ECOONE-10 SERIES SINGLE NOZZLES



A	Assembly item #	Tip type	Gate package	Nozzle body	Body heater	Watts (230)	Thermo-couple	T/C retainer	Locating ring
70	**ECOSN1070PGASTDLR**	Point gate (body-less) standard	SOPGA10	SOHSBN10070	SONH22065	400	SOTC10150-J	SONHC10	SOHSBLR10
	ECOSN1070PGAWRSLR	Point gate (bodyl-ess) wear resistant	SOPGA10-WR						
	ECOSN1070FBOSTDLR	Full body standard	SOFBOP10						
	ECOSN1070FBOWRSLR	Full body wear resistant	SOFBOP10-WR						
	ECOSN1070FBEXSTLR	Full body extended standard	SOFBOP10EX						
	ECOSN1070FBEXWRLR	Full body extended wear resistant	SOFBOP10EX-WR						
	ECOSN1070SPRGATLR	Sprue gate	SOSRT1001						
	ECOSN1070SPRGEXLR	Sprue gate extended	SOSRT1002						
120	**ECOSN10120PGASTDLR**	Point gate (bodyl-ess) standard	SOPGA10	SOHSBN10120	SONH22115	600	SOTC10200-J		
	ECOSN10120PGAWRSLR	Point gate (bodyl-ess) wear resistant	SOPGA10-WR						
	ECOSN10120FBOSTDLR	Full body standard	SOFBOP10						
	ECOSN10120FBOWRSLR	Full body wear resistant	SOFBOP10-WR						
	ECOSN10120FBEXSTLR	Full body extended standard	SOFBOP10EX						
	ECOSN10120FBEXWRLR	Full body extended wear resistant	SOFBOP10EX-WR						
	ECOSN10120SPRGATLR	Sprue gate	SOSRT1001						
	ECOSN10120SPRGEXLR	Sprue gate extended	SOSRT1002						

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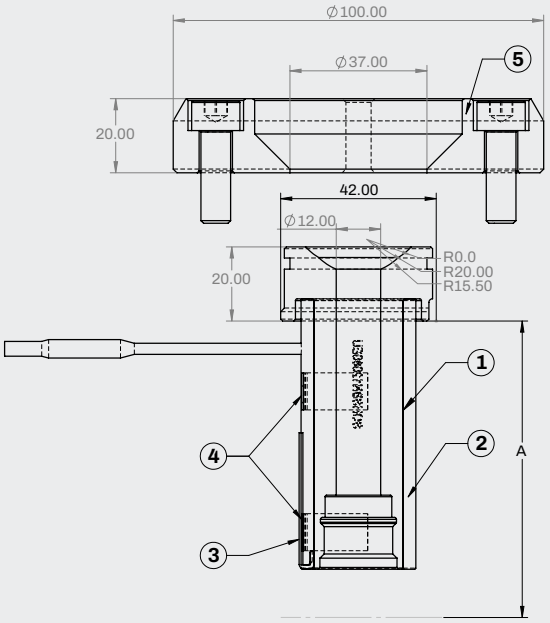
SINGLE NOZZLE ASSEMBLIES

ECOONE-12 SERIES SINGLE NOZZLES

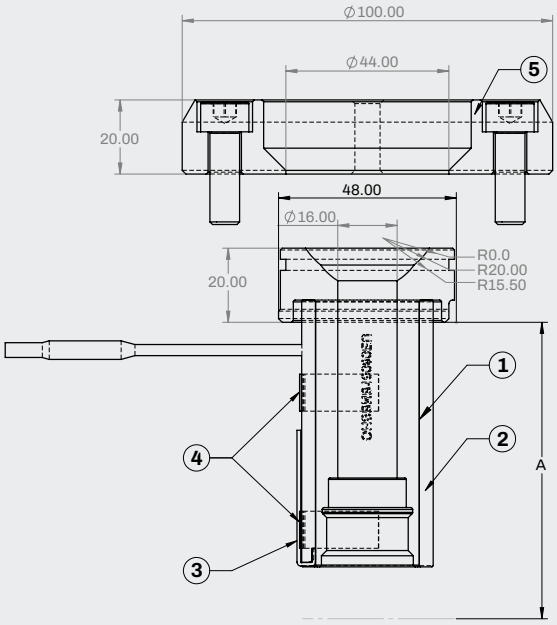


A	Assembly item #	Tip type	Gate package	Nozzle body	Body heater	Watts (230)	Thermo-couple	T/C retainer	Locating ring
70	**ECOSN1270PGASTDLR**	point gate	SOPGA12	SOHSBN12070	SONH24063	450	SOTC10150-J	SONHC12	SOHSBLR12
	ECOSN1270PGAWRSLR	Point gate (bodyl-ess) wear resistant	SOPGA12-WR						
	ECOSN1270FBOSTDLR	Full body standard	SOFBOP12						
	ECOSN1270FBOWRSLR	Full body wear resistant	SOFBOP12-WR						
	ECOSN1270FBEXSTLR	Full body extended standard	SOFBOP12EX						
	ECOSN1270FBEXWRLR	Full body extended wear resistant	SOFBOP12EX-WR						
	ECOSN1270SPRGATLR	Sprue gate	SOSRT1201						
	ECOSN1270SPRGEXLR	Sprue gate extended	SOSRT1202						
110	**ECOSN12110PGASTDLR**	Point gate (bodyl-ess) standard	SOPGA12	SOHSBN12110	SONH24103	600	SOTC10200-J		
	ECOSN12110PGAWRSLR	Point gate (bodyl-ess) wear resistant	SOPGA12-WR						
	ECOSN12110FBOSTDLR	Full body standard	SOFBOP12						
	ECOSN12110FBOWRSLR	Full body wear resistant	SOFBOP12-WR						
	ECOSN12110FBEXSTLR	Full body extended standard	SOFBOP12EX						
	ECOSN12110FBEXWRLR	Full body extended wear resistant	SOFBOP12EX-WR						
	ECOSN12110SPRGATLR	Sprue gate	SOSRT1201						
	ECOSN12110SPRGEXLR	Sprue gate extended	SOSRT1202						
200	**ECOSN12200PGASTDLR**	point gate	SOPGA12	SOHSBN12200	SONH24193	800	SOTC10250-J		
	ECOSN12200PGAWRSLR	Point gate (bodyl-ess) wear resistant	SOPGA12-WR						
	ECOSN12200FBOSTDLR	Full body standard	SOFBOP12						
	ECOSN12200FBOWRSLR	Full body wear resistant	SOFBOP12-WR						
	ECOSN12200FBEXSTLR	Full body extended standard	SOFBOP12EX						
	ECOSN12200FBEXWRLR	Full body extended wear resistant	SOFBOP12EX-WR						
	ECOSN12200SPRGATLR	Sprue gate	SOSRT1201						
	ECOSN12200SPRGEXLR	Sprue gate extended	SOSRT1202						

EcoONE-SERIES

SINGLE NOZZLE ASSEMBLIES

ECOONE-16 SERIES SINGLE NOZZLES

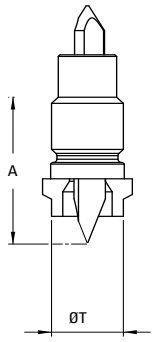


A	Assembly item #	Tip type	Gate package	Nozzle body	Body heater	Watts (230)	Thermo-couple	T/C retainer	Locating ring
70	**ECOSN1670PGASTDLR**	Point gate	SOPGA16	SOHSBN16070	SONH28062	450	SOTC10200-J	SONHC16	SOHSBLR16
	ECOSN1670PGAWRSLR	Point gate (bodyless) wear resistant	SOPGA16-WR						
	ECOSN1670FBOSTDLR	Full body standard	SOFBOP16						
	ECOSN1670FBOWRSLR	Full body wear resistant	SOFBOP16-WR						
	ECOSN1670FBEXSTLR	Full body extended standard	SOFBOP16EX						
	ECOSN1670FBEXWRLR	Full body extended wear resistant	SOFBOP16EX-WR						
	ECOSN1670SPRGATLR	Sprue gate	SOSRT1601						
	ECOSN1670SPRGEXLR	Sprue gate extended	SOSRT1602						
120	**ECOSN16120PGASTDLR**	Point gate (bodyless) wear resistant	SOPGA16	SOHSBN16120	SONH28112	600	SOTC10250-J		
	ECOSN16120PGAWRSLR	Full body standard	SOPGA16-WR						
	ECOSN16120FBOSTDLR	Full body wear resistant	SOFBOP16						
	ECOSN16120FBOWRSLR	Full body wear resistant	SOFBOP16-WR						
	ECOSN16120FBEXSTLR	Full body extended standard	SOFBOP16EX						
	ECOSN16120FBEXWRLR	Full body extended wear resistant	SOFBOP16EX-WR						
	ECOSN16120SPRGATLR	Sprue gate	SOSRT1601						
	ECOSN16120SPRGEXLR	Sprue gate extended	SOSRT1602						
200	**ECOSN16200PGASTDLR**	Point gate	SOPGA16	SOHSBN16200	SONH28192	900	SOTC10250-J		
	ECOSN16200PGAWRSLR	Point gate (bodyless) wear resistant	SOPGA16-WR						
	ECOSN16200FBOSTDLR	Full body standard	SOFBOP16						
	ECOSN16200FBOWRSLR	Full body wear resistant	SOFBOP16-WR						
	ECOSN16200FBEXSTLR	Full body extended standard	SOFBOP16EX						
	ECOSN16200FBEXWRLR	Full body extended wear resistant	SOFBOP16EX-WR						
	ECOSN16200SPRGATLR	Sprue gate	SOSRT1601						
	ECOSN16200SPRGEXLR	Sprue gate extended	SOSRT1602						

THERMAL GATE TIPS

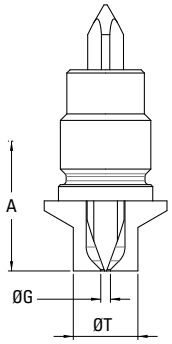
Bodyless Point Gate

Series	REF	Includes		T Dia.
		Needle	Retainer	
StellarONE-04	**SOPGA04**	SOPGN0401	SOBRT0401	8
StellarONE-06	**SOPGA06**	SOPGN0601	SOBRT0601	10
StellarONE-08	**SOPGA08**	SOPGN0801	SOBRT0801	12
StellarONE-10	**SOPGA10**	SOPGN1001	SOBRT1001	14
StellarONE-12	**SOPGA12**	SOPGN1201	SOBRT1201	16
StellarONE-16	**SOPGA16**	SOPGN1601	SOBRT1601	20



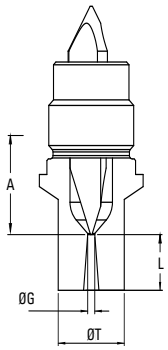
Full Body Point Gate

Series	REF	Includes		g dia.	T Dia.
		Needle	Retainer		
StellarONE-04	**SOFBOP04**	SOPGN0401	SOFRT0401	1.0	8
StellarONE-06	**SOFBOP06**	SOPGN0601	SOFRT0601	1.5	10
StellarONE-08	**SOFBOP08**	SOPGN0801	SOFRT0801	1.5	12
StellarONE-10	**SOFBOP10**	SOPGN1001	SOFRT1001	1.5	14
StellarONE-12	**SOFBOP12**	SOPGN1201	SOFRT1201	2.0	16
StellarONE-16	**SOFBOP16**	SOPGN1601	SOFRT1601	2.5	20



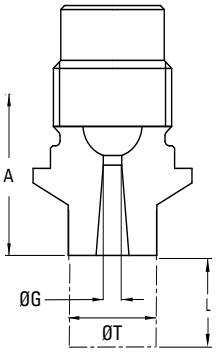
Full Body Extended Point Gate

Series	REF	Includes		G dia.	T Dia.	L
		Needle	Retainer			
StellarONE-04	**SOFBOP04EX**	SOPGN0401	SOFRT0402	1.0	8	10
StellarONE-06	**SOFBOP06EX**	SOPGN0601	SOFRT0602	1.5	10	10
StellarONE-08	**SOFBOP08EX**	SOPGN0801	SOFRT0802	1.5	12	10
StellarONE-10	**SOFBOP10EX**	SOPGN1001	SOFRT1002	1.5	14	10
StellarONE-12	**SOFBOP12EX**	SOPGN1201	SOFRT1202	2.0	16	10
StellarONE-16	**SOFBOP16EX**	SOPGN1601	SOFRT1602	2.5	20	10



Standard Sprue Gate

Series	REF	G DIA.	T DIA.	L
StellarONE-04	**SOSRT0401**	1.5	8	NA
StellarONE-06	**SOSRT0601**	2	10	NA
StellarONE-08	**SOSRT0801**	2.5	12	NA
StellarONE-10	**SOSRT1001**	2.5	14	NA
StellarONE-12	**SOSRT1201**	3.0	16	NA
StellarONE-16	**SOSRT1601**	3.0	20	NA



Extended Sprue Gate

Series	REF	G DIA.	T DIA.	L
StellarONE-04	**SOSRT0402**	1.5	8	10
StellarONE-06	**SOSRT0602**	2	10	10
StellarONE-08	**SOSRT0802**	2.5	12	10
StellarONE-10	**SOSRT1002**	2.5	14	10
StellarONE-12	**SOSRT1202**	3.0	16	10
StellarONE-16	**SOSRT1602**	3.0	20	10

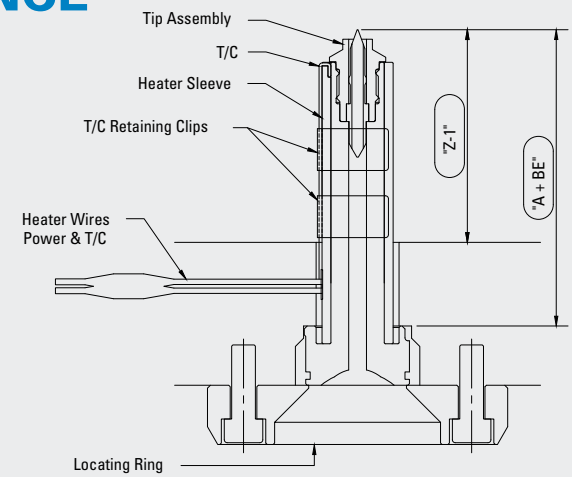
THERMAL EXPANSION ALLOWANCE

The expansion factor must be taken into consideration prior to machining and installing the nozzle. This factor must be added to the nozzle nominal "A" dimension. Z-1 = Nozzle Length "A" + "BE" Thermal Expansion (ΔL) - Nozzle Plate Thickness.

The formula for determining the thermal expansion is as follows: BE = "A" dimension * 0.0000115 * (nozzle setpoint temperature - mould temperature °C).

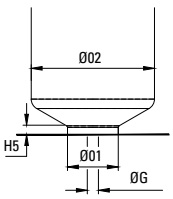
Note: The expansion coefficient for °F is 0.00000633.

Example: Nozzle "A" dimension 120mm, setpoint temperature 260°C, mould operating temperature 50°C. BE = 120mm * 0.0000115 * (260° - 50°) = 0.2898mm. Thus nozzle length "A" 120mm + BE 0.2898 = 120.290mm.

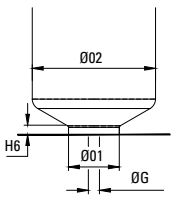


EcoONE SNHR / HSB Nozzle Pocket Dimensions						
Nozzle series	**Ø 01**	**Ø 02**	**H1**	**H2**	**H5**	**H6**
EcoONE-04	8	18	2.6	4.5	4.5	14.5
EcoONE-06	10	28	2.6	4.6	5	15
EcoONE-08	12	30	2.6	4.7	5	15
EcoONE-10	14	34	2.6	4.7	5	15
EcoONE-12	16	36	4.6	6.7	6.5	14
EcoONE-16	20	42	4.6	7.1	7	17

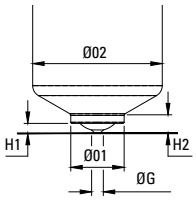
THERMAL SPRUE
THERMAL FULL BODY



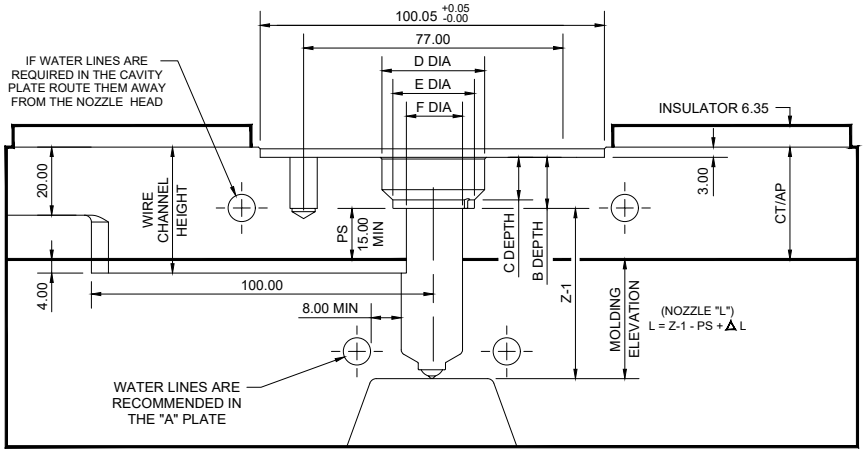
THERMAL EXT SPRUE
THERMAL EXT FULL BODY

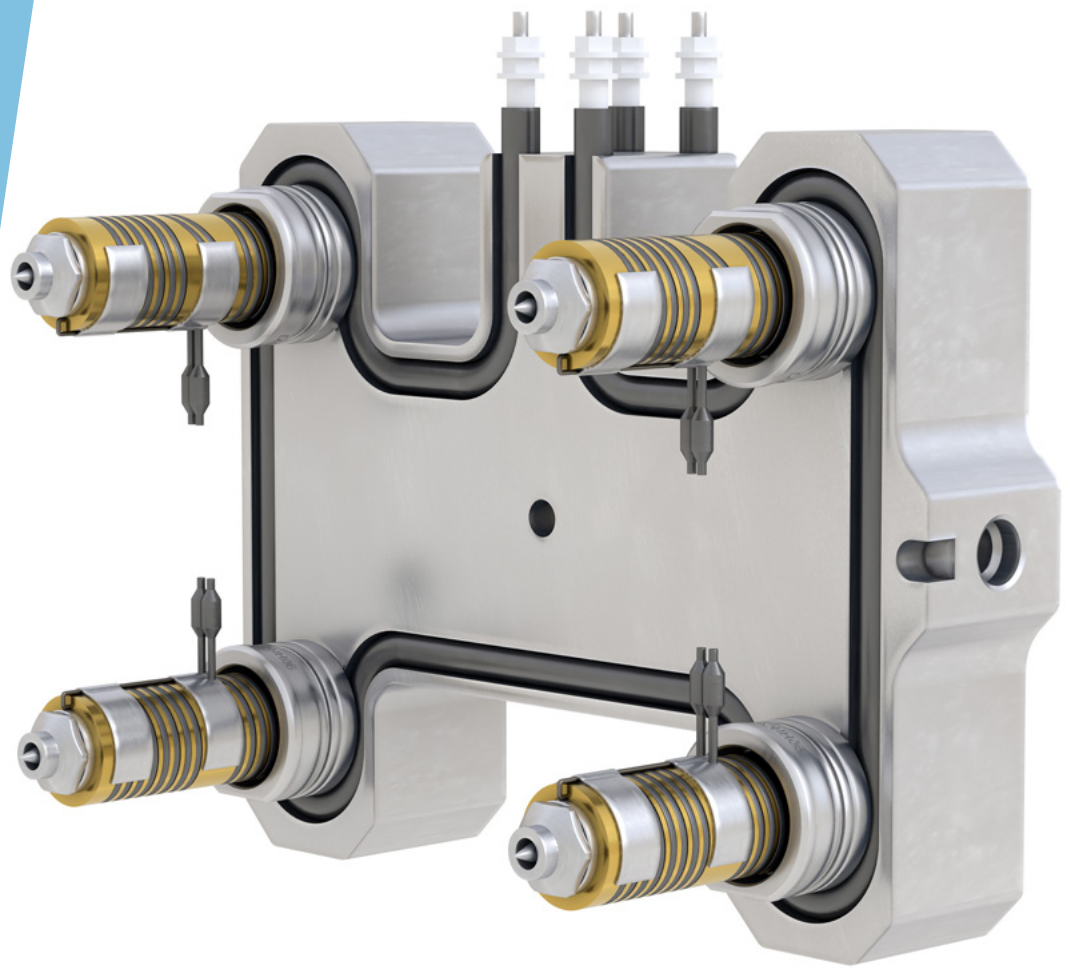


THERMAL BODYLESS



EcoONE SNHR / HSB Plate & Nozzle Pocket Dimensions								
Nozzle series	**Head height mm**	**B depth mm (+0.02mm / -0.00mm)**	**C depth mm**	**D Ø mm**	**E Ø mm (+0.02mm /-0.00mm)**	**F Ø mm**	**PS mm minimum**	**CT/AP mm minimum**
EcoONE-04	15	15	12.5	31	25	18	15	33
EcoONE-06	20	20	16.5	42	36	28	15	38
EcoONE-08	20	20	16.5	46	40	30	15	38
EcoONE-10	20	20	16.5	48	42	32	15	38
EcoONE-12	20	20	16.5	48	42	36	15	38
EcoONE-16	20	20	16.5	54	48	42	15	38





EcoONE-SERIES
MULTI NOZZLES

A HIGHLY ECONOMICAL STANDARDIZED SYSTEM FOR SIMPLE COMMODITY APPLICATIONS

A configurable 1-16 drop hot runner system suitable for applications processing commodity resins. Allows simple projects to get off the ground faster with minimal investment. Ideal for many cost sensitive consumer goods, small home appliances, basic automotive components, electronic peripherals/accessories and other similar applications.

Available as a system only.

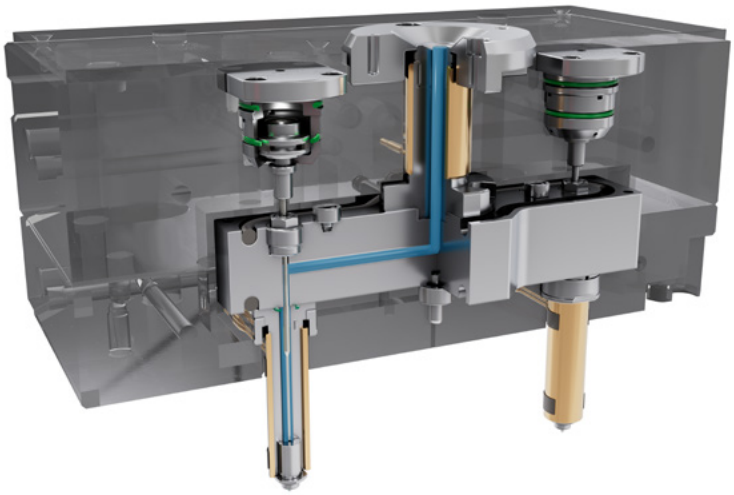
EcoONE-Series Gate Selection Guide

POLYMER VISCOSITY KEY
L- low
M- medium
H- high

The values expressed in grams are for reference only and are determined by using a nominal wall thickness of 1.8mm (.070") and unfilled polypropylene. Part dimension, wall thickness, length of fill within part, mould conditions and moulding parameters must also be considered.

NOZZLES	TIP	Recommended Gate Diameter Range Min (mm)	Max (mm)	Flow Capacity (grams) Viscosity Low	Medium	High	Generic polymer name (Trade name) [A = amorphous or C = crystaline] Common resins: TPE (Elastomer) [A]	PE (Polyethylene) [C] Includes LDPE, HDPE LLDPE and MDPE	PS (Polystyrene) [A]	TPO [C]	PP (Polypropylene) [C]	ABS [A]
Thermal gate												
EcoONE-04	Point gate bodiless	0,8	1,5	10	10	7						
	Point gate full body	1,0	1,5	10	10	7						
	Sprue gate	1,5	2,0	20	15	10						
EcoONE-06	Point gate bodiless	0,8	2,0	175	125	80						
	Point gate full body	1,5	2,0	175	125	80						
	Sprue gate	2,0	3,0	500	400	225						
EcoONE-09	Point gate bodiless	0,8	2,5	250	175	125						
	Point gate full body	1,5	2,5	250	175	125						
	Sprue gate	2,5	3,0	625	575	325						
EcoONE-10	Point gate bodiless	1,0	3,0	310	200	150						
	Point gate full body	1,5	3,0	310	200	150						
	Sprue gate	2,5	3,5	850	700	425						
EcoONE-12	Point gate bodiless	1,0	3,2	500	375	275						
	Point gate full body	2,0	3,2	500	375	275						
	Sprue gate	3,0	4,0	1000	775	475						
EcoONE-16	Point gate bodiless	1,5	3,5	800	550	400						
	Point gate full body	2,5	3,5	800	550	400						
	Sprue gate	3,0	4,5	1500	1100	750						
Valve gate												
EcoONE-06	Point tip bodiless	1,0	2,0	225	150	90						
	Point tip full body	1,5	2,0	225	150	90						
EcoONE-08	Point tip bodiless	1,0	2,5	450	300	220						
	Point tip full body	2,5	2,5	450	300	220						
EcoONE-10	Point tip bodiless	1,0	2,5	610	460	280						
	Point tip full body	2,5	2,5	610	460	280						
EcoONE-12	Point tip bodiless	1,5	4,5	725	525	315						
	Point tip full body	4,0	4,5	725	525	315						
EcoONE-16	Point tip bodiless	2,0	6,0	940	640	475						
	Point tip full body	2,0	6,0	940	640	475						

OK | Review required | Not recommended



Key features:

CONFIGURABLE DESIGNS

- Standard nozzles.
- Standard gating options.
- Standard manifold layouts.
- Custom manifold pitch ranges.

FIELD REPLACEABLE COMPONENTS

- Quick and simple to service.
- Replaceable nozzle and manifold heaters.
- Minimizes downtime and operating costs.

RAPID LEAD TIMES

- Drawings available within 48 hours.
- Delivery within 3-4 weeks.

GLOBAL SUPPORT

- Strong local aftermarket support.
- On-hand inventory of spare parts.
- Parts available with short lead times.

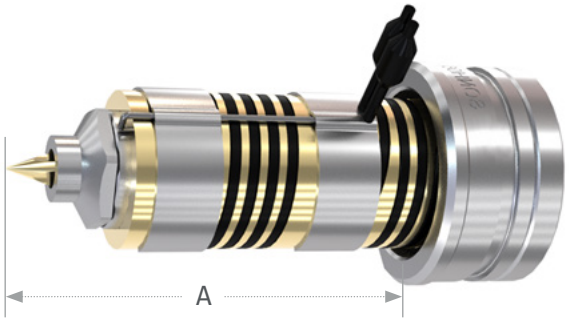
Compatible materials*	
ABS	PS
PE	TPE
PP	TPO

* Fillers/Additives not permitted

SPECIFICATIONS

Nozzle range		04	06	08	10	12	16
	Shot size (g)	<10	<50	<150	<400	<1,000	<1,500
Runner ø	**Non-Valved (mm)**	4	6	8	10	12	16
	Valved (mm)	-	6	8	10	12	16
Pitch (Min)	**Non-Valved (mm)**	28	38	42	44	44	50
	Valved (mm)	-	54	61	70	86	104
	Nozzle Bore ø (mm)	18	30	32	34	36	42
	Length Range[1] (mm)	50 – 140	60 – 160	60 – 180	50 – 160	50 – 200	70 – 300

*Application dependent.



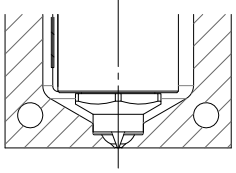
Nozzle Series	A	Nozzle body #	Heater #	Wattage @ 230V
04	50	SONB4050	SONH10047	200
	70	SONB4070	SONH10067	200
	80	SONB4080	SONH10077	240
	100	SONB4100	SONH10097	240
	120	SONB4120	SONH10117	240
	140	SONB4140	SONH10137	300
06	60	SONB6060	SONH18055	350
	70	SONB6070	SONH18065	400
	80	SONB6080	SONH18075	400
	90	SONB6090	SONH18085	400
	100	SONB6100	SONH18095	400
	140	SONB6140	SONH18135	600
	160	SONB6160	SONH18155	600
08	60	SONB8060	SONH20055	350
	80	SONB8080	SONH20075	400
	100	SONB8100	SONH20095	500
	120	SONB8120	SONH20115	500
	180	SONB8180	SONH20175	700

Nozzle Series	A	Nozzle body #	Heater #	Wattage @ 230V
10	50	SONB10050	SONH22045	350
	70	SONB10070	SONH22065	400
	90	SONB10090	SONH22085	500
	100	SONB10100	SONH22095	500
	120	SONB10120	SONH22115	600
	160	SONB10160	SONH22155	700
12	50	SONB12050	SONH24043	280
	70	SONB12070	SONH24063	450
	90	SONB12090	SONH24083	525
	110	SONB12110	SONH24103	600
	140	SONB12140	SONH24133	660
	160	SONB12160	SONH24153	660
	200	SONB12200	SONH24193	800
16	70	SONB16070	SONH28062	450
	100	SONB16100	SONH28092	600
	120	SONB16120	SONH28112	660
	140	SONB16140	SONH28132	660
	200	SONB16200	SONH28192	900
	260	SONB16260	SONH28252	1000
	300	SONB16300	SONH28292	1000

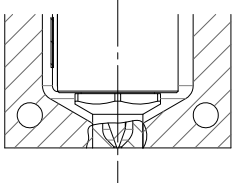
GATING OPTIONS

Non-Valved

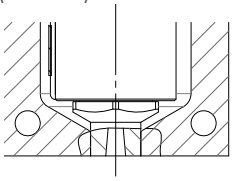
Point Gate (Bodyless)



Point Gate (Full Body +EXT)

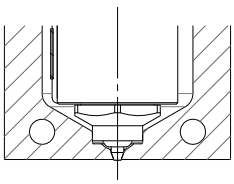


Sprue Gate (+EXT)

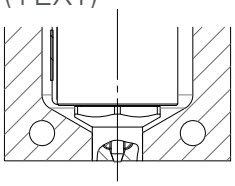


Valved (Tapered VP)

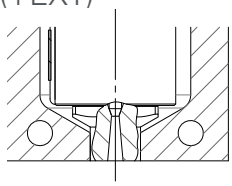
Bodyless Tip



Full Body Tip (+EXT)



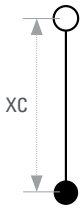
Sprue Tip (+EXT)



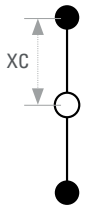
MANIFOLD LAYOUTS

1-Drop

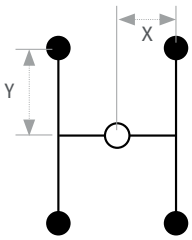
1-Drop Offset



2-Drop Inline



4-Drop H

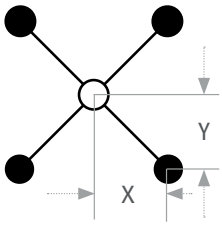


- Single Level Only
- Gun-Drilled
- Pressed-in Heater

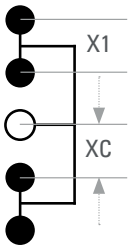
Manifold Thickness: 40-60mm

NOTE: Maximum manifold block size is 600mm x 600mm (24"x24")

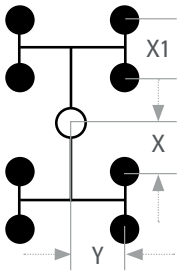
4-Drop X



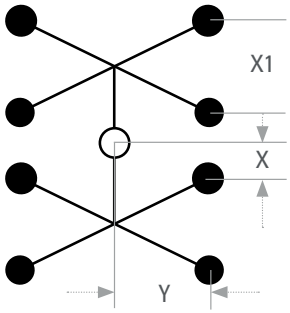
4-Drop Inline



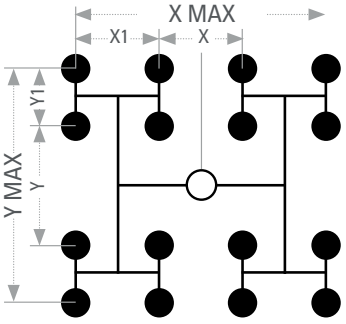
8-Drop HH



8-Drop XX



16-Drop HH



Manifold Layout Dimensions

Nozzle series	THERMAL GATE (mm)								VALVE GATE (mm)							
	xC min*	x min	X max	x1 min	Y min	y max	Y1 min	ØD min	xC min*	x min	X max	x1 min	Y min	y max	Y1 min	ØD min
04	30	20	538	28	20	538	28	56.6	-	-	-	-	-	-	-	-
06	35	24	538	38	24	538	38	67.9	65	45	538	54	45	538	72	127.3
08	35	25	538	42	25	538	42	70.7	75	45	538	61	50	538	82	134.5
10	40	26	534	44	26	534	44	73.5	80	50	534	70	56	534	94	150.1
12	40	26	516	44	26	516	44	73.5	88	54	516	86	66	516	112	170.6
16	45	28	500	50	28	500	50	79.2	98	64	500	104	73	500	130	194.2

GATE SEALS

Non-Valved

	POINT GATE BODYLESS	POINT GATE FULL BODY	POINT GATE FULL BODY EXT.	SPRUE GATE	SPRUE GATE EXT.
04	SOPGA04 SOPGA04-WR	SOFBOP04 SOFBOP04-WR	SOFBOP04EX SOFBOP04EX-WR	SOSRT0401	SOSRT0402
06	SOPGA06 SOPGA06-WR	SOFBOP06 SOFBOP06-WR	SOFBOP06EX SOFBOP06EX-WR	SOSRT0601	SOSRT0602
08	SOPGA08 SOPGA08-WR	SOFBOP08 SOFBOP08-WR	SOFBOP08EX SOFBOP08EX-WR	SOSRT0801	SOSRT0802
10	SOPGA10 SOPGA10-WR	SOFBOP10 SOFBOP10-WR	SOFBOP10EX SOFBOP10EX-WR	SOSRT1001	SOSRT1002
12	SOPGA12 SOPGA12-WR	SOFBOP12 SOFBOP12-WR	SOFBOP12EX SOFBOP12EX-WR	SOSRT1201	SOSRT1202
16	SOPGA16 SOPGA16-WR	SOFBOP16 SOFBOP16-WR	SOFBOP16EX SOFBOP16EX-WR	SOSRT1601	SOSRT1602

WR = Wear Resistant

GATING SEALS

Valved

	BODYLESS TIP	FULL BODY TIP	FULL BODY TIP EXT.	SPRUE TIP	SPRUE TIP EXT.
06	SOVGBA06 SOVGBA06-WR	SOVGFBA06 SOVGFBA06-WR	SOVGFBA06EX SOVGFBA06EX-WR	SOSRT0603	SOSRT0604
08	SOVGBA08 SOVGBA08-WR	SOVGFBA08 SOVGFBA08-WR	SOVGFBA08EX SOVGFBA08EX-WR	SOSRT0803	SOSRT0804
10	SOVGBA10 SOVGBA10-WR	SOVGFBA10 SOVGFBA10-WR	SOVGFBA10EX SOVGFBA10EX-WR	SOSRT1003	SOSRT1004
12	SOVGBA12 SOVGBA12-WR	SOVGFBA12 SOVGFBA12-WR	SOVGFBA12EX SOVGFBA12EX-WR	SOSRT1203	SOSRT1204
16	SOVGBA16 SOVGBA16-WR	SOVGFBA16 SOVGFBA16-WR	SOVGFBA16EX SOVGFBA16EX-WR	SOSRT1603	SOSRT1604

WR = Wear Resistant

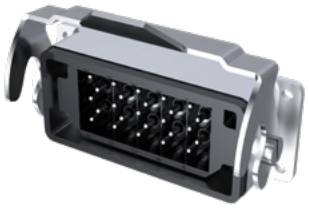
ELECTRICAL CONNECTORS - OPTIONAL

Thermocouple connector

REF	Zones
MTC12G	12

Mold power input connector

REF	Zones
PIC24G	12



Terminal mounting boxes for power and thermocouple connector

REF	Installation possibilities for
PICX2412K	PIC24G / MTC12G

OPTIONAL COMPONENTS & SERVICES

- Locating ring
- Drool ring
- Application review
- Installation support

RADIUS OPTION

1. dual metric nozzle radii
2. no radius options.

Thermal gate inlet with metric radius

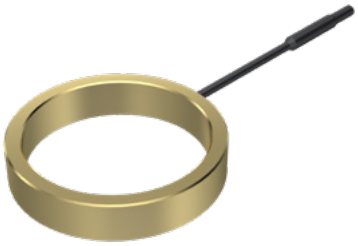
Height: 18,5 mm
Radius: 15,5 mm / 20 mm
OD: 55 mm
Mat.: P20

Thermal gate inlet with no radius

Height: 18,5 mm
Radius: NONE
OD: 55 mm
Mat.: P20

Optional inlet heater - thermal gate

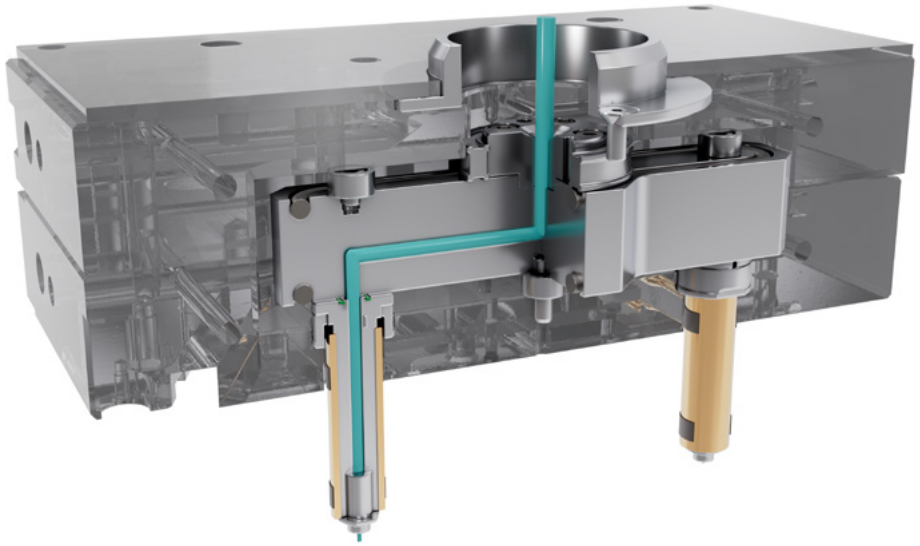
Cylindrical heater for 55 mm inlets



Inlet extension for valve gate

Available with no radius

INSTALLATION DETAILS



1 Preassemble (without nozzles) and check all fitting dimensions.
Insert the nozzles into the manifold plate and make sure that they are within design dimension tolerance (do not install nozzle heaters or thermocouples yet).

2 Adjust the manifold center support pad to the height of the nozzle heads. Grind both sides of the manifold center support pad to ensure parallelism.
In heated condition, the nozzles and center support pad should be level.

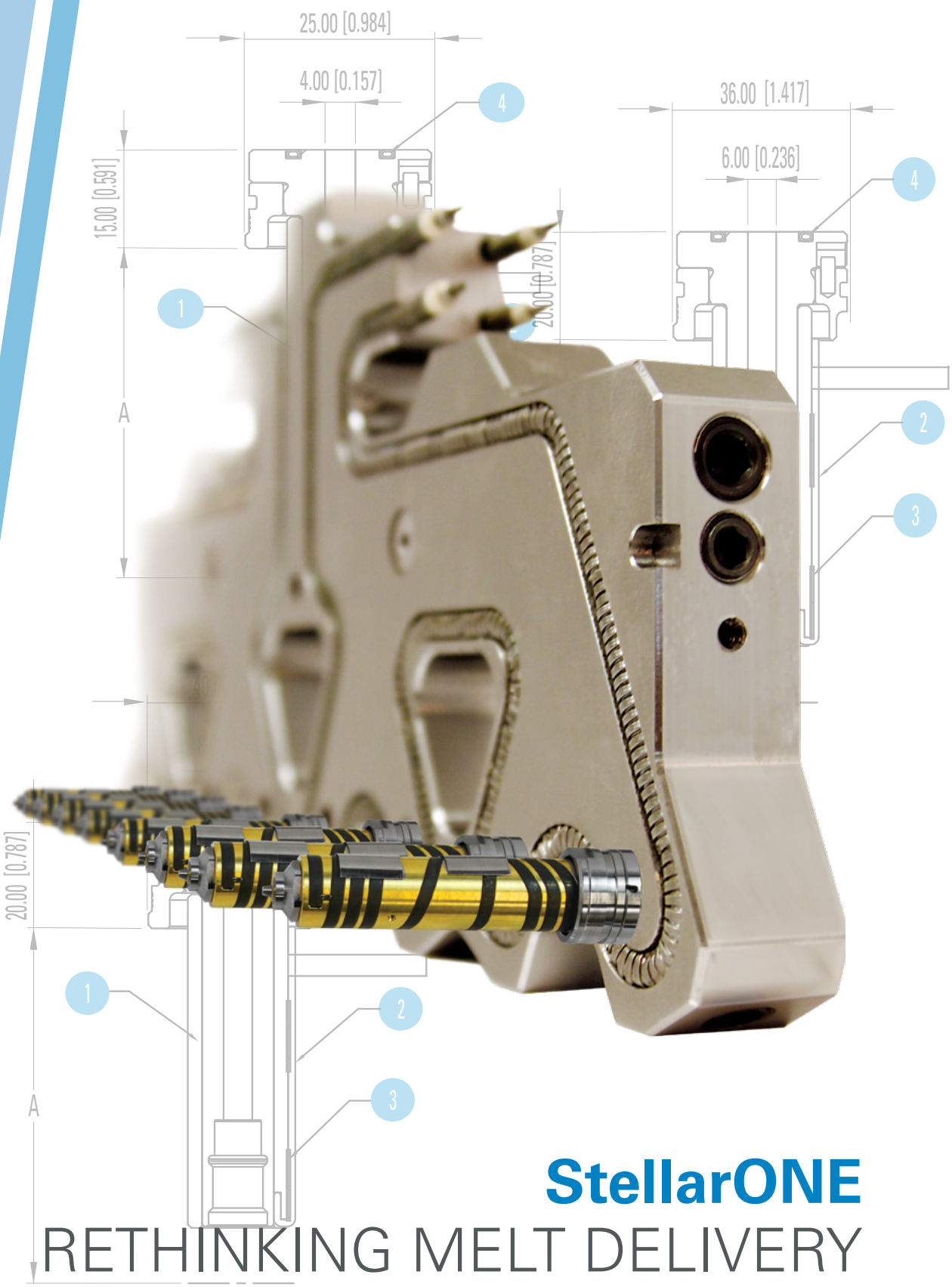
3 Test fit the manifold block over the nozzles and dowel pins, making sure that the manifold lies flat across the nozzles with no rocking motion

4 Remove the manifold from the manifold plate. Clean nozzle head seal ring counterbores and install seal rings in the nozzle heads. Carefully install the manifold back into positio in the pocket of the manifold plate without displacing the seal rings from their locations

5 Connect wires to the manifold heater leads and route the wires to the electrical box according to the wiring schematic.

6 Install the inlet to the manifold and torque screws as per the GA drawing. Test fit the top clamp plate to check for interference from the upper support pads, manifold components or wiring.
Torque the assembly screws that hold the top clamp plate and manifold plate together to the required spec.

7 Rotate the hot half assembly so the nozzles face upward and install the nozzle body heaters. The power wire lead is to be toward the nozzle head. Install the nozzle T/C's. It is necessary to bend a small "hook" (3 mm long) at the end of the probe. Apply high-temperature anti-seize lubricant to the gate seal threads, install in the nozzle, and torque to spec.



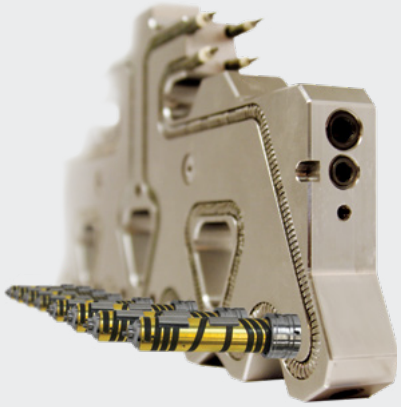
StellarONE

RETHINKING MELT DELIVERY

KEY TO A BALANCED THERMAL DYNAMICS SYSTEM

A Global offering from DME, providing a common design platform no matter where your moulds are built. This DME-Engineered solution is available as a Manifold & Components offering, or as a complete Hot Half, ready to interface with your cavity plate.

Cost efficient and capable, the DME StellarONE provides all you need in a melt delivery system at an economical price.



StellarONE-Series Gate Selection Guide

RESIN APPLICATION KEY
- Good
- Contact DME
- Not recommended

POLYMER VISCOSITY KEY
L- low
M- medium
H- high

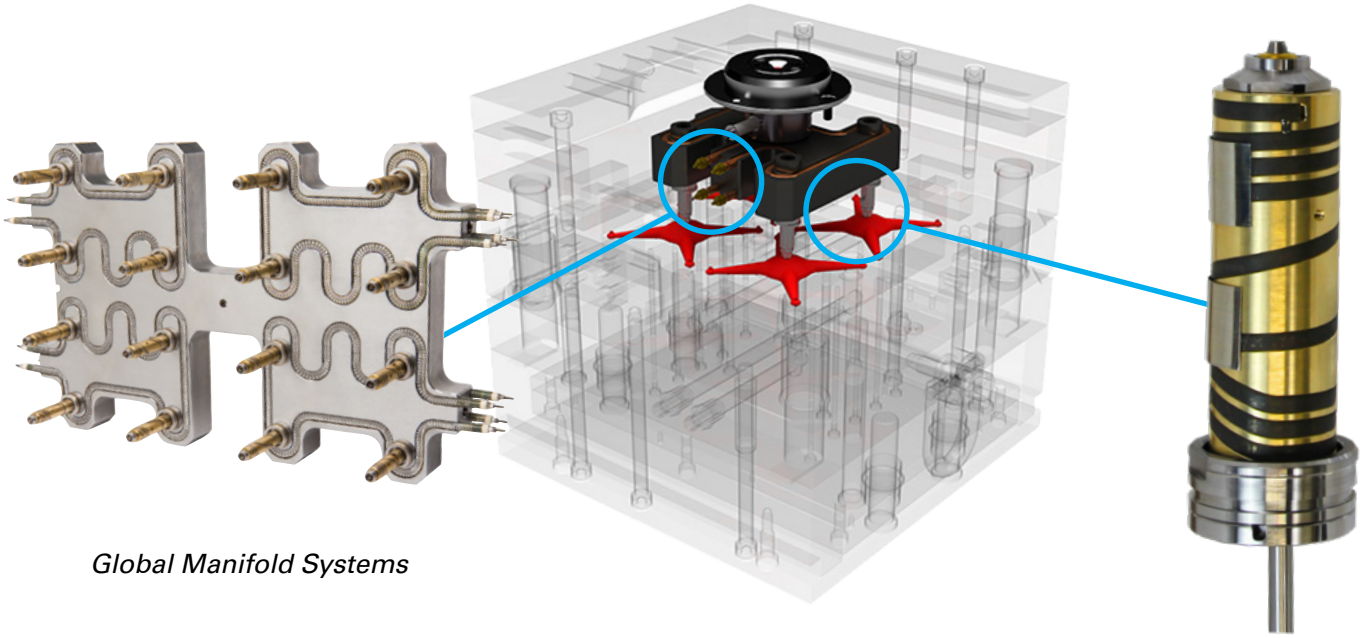
The values expressed in grams are for reference only and are determined by using a nominal wall thickness of 1.8mm (.070") and unfilled polypropylene. Part dimension, wall thickness, length of fill within part, mould conditions and moulding parameters must also be considered.

Generic polymer name (Trade name)
[A = amorphous or C = crystaline]

Note: the chart below shows commodity resins in red type, all others are engineering resins

NOZZLES	TIP	Recommended Gate Diameter Range Min (mm)	Recommended Gate Diameter Range Max (mm)	Flow Capacity (grams) Viscosity Low MFI.16	Flow Capacity (grams) Viscosity Med. MFI 7-16	Flow Capacity (grams) Viscosity High MFI .02-7	TPE (Elastomer) [A]	PE (Polyethylene) [C]	PE GF (Polyethylene) [C]	PS (Polystyrene) [A]	PS GF (Polystyrene) [A]	SAN [A]	TPO [C]	PP (Polypropylene) [C]	PP GF (Polypropylene) [C]	PP TF (Polypropylene) [C]	TPU	ABS	ABS/PC	PMMA (Acrylic)	POM (Acetal)	PA (Nylon)	PA GF (Nylon)	PA MF GF (Minlon)	PPE	PPO (Noryl)	PPO GF (Polyester)	PBT (Polyester)	PBT GF (Polyester)	PET	PC (Polycarbonate)	PC GF (Polycarbonate)	PPS	PSU	PSU GF	PUR	LCP	PEI (Ultem)	PEI GF (Ultem)	PEEK	PVC (Flex Vinyl)
							L	L	H	M	H	M	L	M	H	M	M	M	H	H	M	L	H	H	H	H	H	H	H	L	H	H	M	H	H	L	L	H	H	H	M
StellarONE-04 Thermal Gate	Sprue gate	1,5	2,0	20	15	10																																			
	Point gate bodyless	0,8	1,5	10	10	7																																			
	Point gate full body	1,0	1,5	10	10	7																																			
StellarONE-06 Thermal Gate	Sprue gate	1,5	3,0	500	400	225																																			
	Point gate bodyless	0,8	2,0	175	125	80																																			
	Point gate full body	1,0	2,0	175	125	80																																			
StellarONE-09 Thermal Gate	Sprue gate	2,5	3,0	625	575	325																																			
	Point gate bodyless	0,8	2,5	250	175	125																																			
	Point gate full body	1,5	2,5	250	175	125																																			
StellarONE-10 Thermal Gate	Sprue gate	2,5	3,5	850	700	425																																			
	Point gate bodyless	1,0	3,0	310	200	150																																			
	Point gate full body	1,5	3,0	310	200	150																																			
StellarONE-12 Thermal Gate	Sprue gate	3,0	4,0	1000	775	475																																			
	Point gate bodyless	1,0	3,2	500	375	275																																			
	Point gate full body	2,0	3,2	500	375	275																																			
StellarONE-16 Thermal Gate	Sprue gate	3,0	4,5	1500	1100	750																																			
	Point gate bodyless	1,5	3,5	800	550	400																																			
	Point gate full body	2,5	3,5	800	550	400																																			
StellarONE-06 Valve Gate	Sprue tip	1,5	2,0	400	300	150																																			
	Point gate bodyless Direct valve gate	1,0	2,0	225	150	90																																			
	Point gate full body Direct valve gate	1,5	2,0	225	150	90																																			
StellarONE-08 Valve Gate	Sprue tip	2,5	2,5	500	450	250																																			
	Point gate bodyless Direct valve gate	1,0	2,5	450	300	220																																			
	Point gate full body Direct valve gate	2,5	2,5	450	300	220																																			
StellarONE-10 Valve Gate	Sprue tip	2,5	2,5	775	625	375																																			
	Point gate bodyless Direct valve gate	1,0	2,5	610	460	280																																			
	Point gate full body Direct valve gate	2,5	2,5	610	460	280																																			
StellarONE-12 Valve Gate	Sprue tip	4,0	4,5	900	725	425																																			
	Point gate bodyless Direct valve gate	1,5	4,5	725	525	315																																			
	Point gate full body Direct valve gate	4,0	4,5	725	525	315																																			
StellarONE-16 Valve Gate	Sprue tip	5,0	6,0	1200	950	600																																			
	Point gate bodyless Direct valve gate	2,0	6,0	940	640	475																																			
	Point gate full body Direct valve gate	5,0	6,0	940	640	475																																			

Available only as a DME Designed and Manufactured Manifold & Components or Fully Assembled and Wired Hot Half



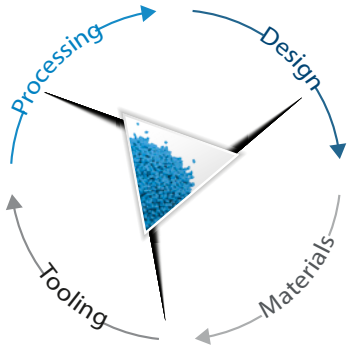
Global Manifold Systems

PRECISION TEMPERATURE

Our heat control technology offers stable heating with minimized loss. Direct heating via replaceable brass sleeve heaters for diffusion into the nozzle body. Thermocouples are ideally positioned for accurate temperature control, all serviceable within the moulding machine. The result is an even temperature profile along the entire length of the nozzle guaranteeing high process reliability. The system balance allows for the use with a broad range of polymers.

MORE PROCESSING CONTROL

Accurate melt distribution from the barrel to the gate and throughout the cavity delivers consistent moulding results. Our specially designed melt seal directly at the gate, ensures quick color change performance.



EXTREME DURABILITY

Our systems are built to perform through the life cycle of the tool 24/7. Our Hardened Nozzle body can handle melt pressures up to 1380 bar (20,000 psi).

Features:

- 6 different nozzles sizes to match your application requirements
- Tip styles include Bodyless, Full Body, Full Body with Extended Sprue, and Sprue Gate
- Valve Gate actuators can be pneumatically or hydraulically operated (700 PSI MAX)
- Actuation options include individual (sequential) or all open/all close
- Available for 2- to 32-drops, using a geometrically balanced manifold flow path design

Benefits:

- Valve Gate style available for superior gate quality, sequential part filling and the elimination of trimming and secondary operations
- Valve Gate Cylinder design allows removal/setting of Valve Pins without system disassembly
- Easily matched with DME Pneumatic or Hydraulic control systems
- Replacement/spare part availability in North America
- A value offering to provide a competitive edge over other manufacturers
- Designed, Manufactured and Supported by DME North America

STELLARONE HOT RUNNER MANIFOLD SYSTEMS

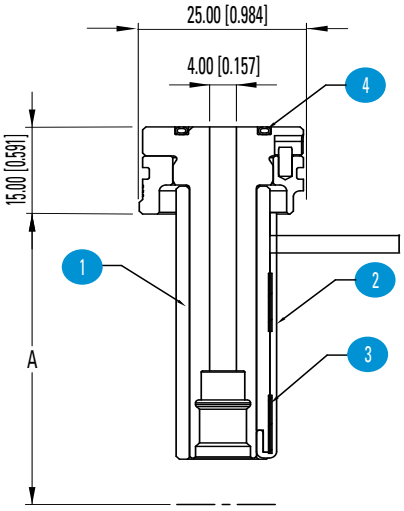
StellarONE Hot Runner Manifold Systems are designed with balanced runner systems to maximize part uniformity. The final design is based on process variables such as resin, shot size, gate vestige and overall system performance requirements.

- All Manifold systems come complete with: Tubular Heaters, Thermocouples, Titanium Pressure Pads, Manifold & Nozzle Locators to suit.
- All Manifold systems are supplied with full system drawings.
- Balanced Design: Thermal and geometric balancing provides uniform production, cavity to cavity.
- Turn-Key Systems: These are ready to install, eliminating the need for machining, wiring and testing the hot half.
- Tubular Heating Element: These provide excellent heat distribution throughout the manifold and standard replacement parts are available off the shelf for quick service
- Streamlined Flow Channels: To ensure optimized melt flow and come complete with fully radiused corners and plugs.
- Hardened Steel Construction: To provide a solid, stress-free foundation.
- Titanium Pressure Pads minimize heat transfer to the plates, ensuring a consistent and efficient heat profile.
- Mould flow analysis is available, on request, for all manifold inquiries.

NOZZLE SUB-ASSEMBLIES

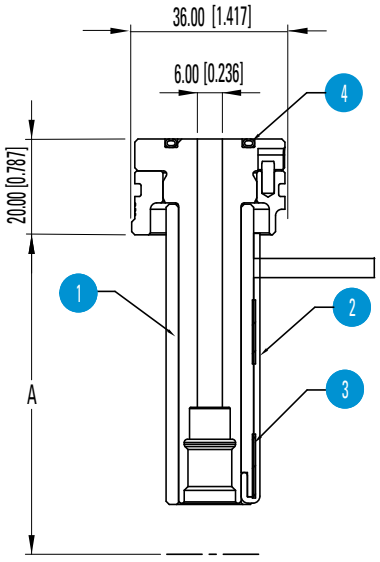
StellarONE-04 SERIES NOZZLE SUB-ASSEMBLY

A	1 Nozzle Heater (230V)	Watts	2 TC	3 TC retainer 2 pc.	4 SEAL RING
50	SONH10047	180	SOTC10150-J	SONHC04	EHR7154
60	SONH10057	250			
70	SONH10067	250			
80	SONH10077	250			
90	SONH10087	250	SOTC10200-J		
100	SONH10097	250			
110	SONH10107	260			
120	SONH10117	270			
130	SONH10127	280			
140	SONH10137	290			
150	SONH10147	300			



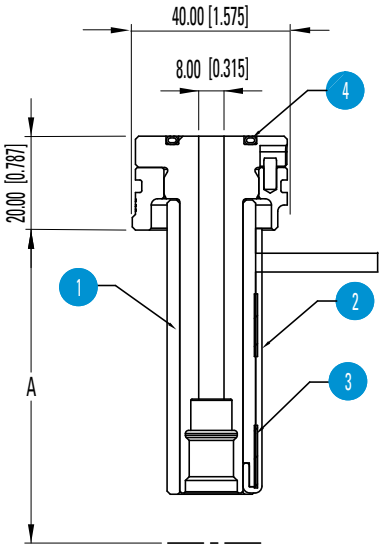
StellarONE-06 SERIES NOZZLE SUB-ASSEMBLY

A	1 Nozzle Heater (230V)	Watts	2 TC	3 TC retainer 2 pc	4 SEAL RING
50	SONH18045	300	SOTC10150-J	SONHC06	EHR7154
60	SONH18055	350			
70	SONH18065	400			
80	SONH18075	400			
90	SONH18085	450	SOTC10200-J		
100	SONH18095	450			
120	SONH18115	550			
140	SONH18135	600			
160	SONH18155	700	SOTC10250-J		
180	SONH18175	800			



StellarONE-08 SERIES NOZZLE SUB-ASSEMBLY

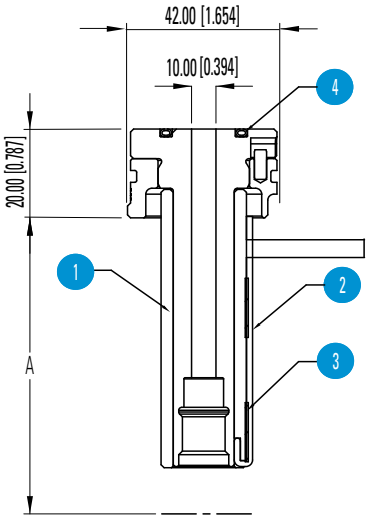
A	1 Nozzle Heater (230V)	Watts	2 TC	3 TC RETAINER 2 PC	4 SEAL RING
50	SONH20045	350	SOTC10150-J	SONHC08	EHR7155
60	SONH20055	350			
70	SONH20065	400			
80	SONH20075	400			
90	SONH20085	450	SOTC10200-J		
100	SONH20095	450			
110	SONH20105	450			
120	SONH20115	550			
140	SONH20135	600			
160	SONH20155	650	SOTC10250-J		
180	SONH20175	700			



NOZZLE SUB-ASSEMBLIES

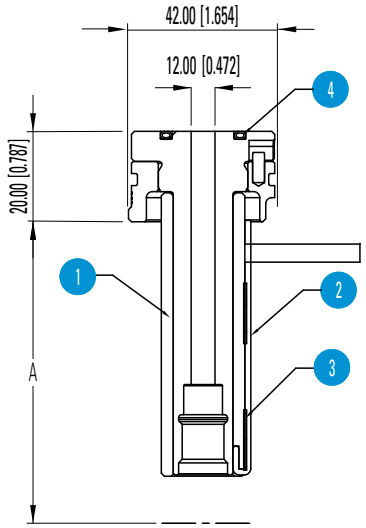
StellarONE-10 SERIES NOZZLE SUB-ASSEMBLY

A	1 Nozzle Heater (230V)450	Watts	2 TC	3 TC Retainer 2 Pc.	4 SEAL RING
50	SONH22045	450	SOTC10150-J	SONHC10	EHR7155
60	SONH22055	450			
70	SONH22065	500			
80	SONH22075	500			
90	SONH22085	550	SOTC10200-J		
100	SONH22095	550			
110	SONH22105	600			
120	SONH22115	600			
140	SONH22135	700			
160	SONH22155	700	SOTC10250-J		
180	SONH22175	700			



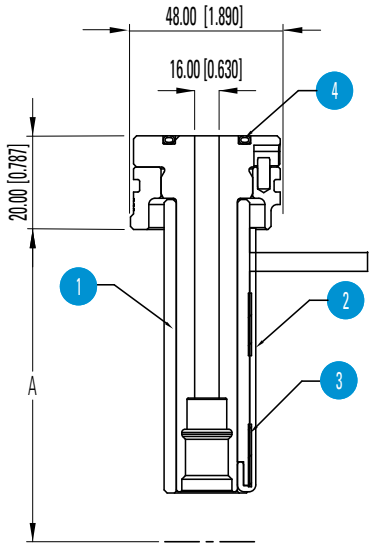
StellarONE-12 SERIES NOZZLE SUB-ASSEMBLY

A	1 Nozzle Heater	Watts	2 TC	3 TC Retainer 2 Pc.	4 SEAL RING
50	SONH24043	500	SOTC10150-J	SONHC12	EHR7001
60	SONH24053	550			
70	SONH24063	700			
80	SONH24073	800			
90	SONH24083	850	SOTC10200-J		
100	SONH24093	850			
110	SONH24103	900			
120	SONH24113	950			
140	SONH24133	950			
160	SONH24153	1000	SOTC10250-J		
180	SONH24173	1100			
200	SONH24193	1100			



StellarONE-16 SERIES NOZZLE SUB-ASSEMBLY

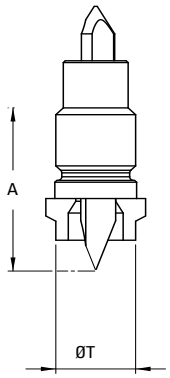
A	1 Nozzle Heater	Watts	2 TC	3 TC Retainer 2 Pc.	4 SEAL RING
70	SONH28062	550	SOTC10200-J	SONHC16	EHR7156
80	SONH28072	550			
90	SONH28082	700			
100	SONH28092	800			
120	SONH28112	850			
140	SONH28132	850			
160	SONH28152	900	SOTC10250-J		
180	SONH28172	950			
200	SONH28192	950			
220	SONH28212	1000	SOTC10350-J		
240	SONH28232	1050			
260	SONH28252	1050			
280	SONH28272	1100			
300	SONH28292	1100			



THERMAL GATE TIPS

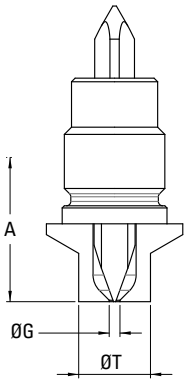
Point Gate (Bodyless)

Series	Gate Tip	REF	Includes		T Ø
			Needle	Retainer	
StellarONE-04	Standard	SOPGA04	SOPGN0401	SOBRT0401	8
	Wear Resistant	SOPGA04-WR	SOPGN0401-WR		
StellarONE-06	Standard	SOPGA06	SOPGN0601	SOBRT0601	10
	Wear Resistant	SOPGA06-WR	SOPGN0601-WR		
StellarONE-08	Standard	SOPGA08	SOPGN0801	SOBRT0801	12
	Wear Resistant	SOPGA08-WR	SOPGN0801-WR		
StellarONE-10	Standard	SOPGA10	SOPGN1001	SOBRT1001	14
	Wear Resistant	SOPGA10-WR	SOPGN1001-WR		
StellarONE-12	Standard	SOPGA12	SOPGN1201	SOBRT1201	16
	Wear Resistant	SOPGA12-WR	SOPGN1201-WR		
StellarONE-16	Standard	SOPGA16	SOPGN1601	SOBRT1601	20
	Wear Resistant	SOPGA16-WR	SOPGN1601-WR		



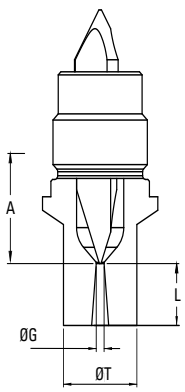
Point Gate (Full Body)

Series	Gate Tip	REF	Includes		g Ø	T Ø
			Needle	Retainer		
StellarONE-04	Standard	SOFBOP04	SOPGN0401	SOFRT0401	1.0	8
	Wear Resistant	SOFBOP04-WR	SOPGN0401-WR			
StellarONE-06	Standard	SOFBOP06	SOPGN0601	SOFRT0601	1.5	10
	Wear Resistant	SOFBOP06-WR	SOPGN0601-WR			
StellarONE-08	Standard	SOFBOP08	SOPGN0801	SOFRT0801	1.5	12
	Wear Resistant	SOFBOP08-WR	SOPGN0801-WR			
StellarONE-10	Standard	SOFBOP10	SOPGN1001	SOFRT1001	1.5	14
	Wear Resistant	SOFBOP10-WR	SOPGN1001-WR			
StellarONE-12	Standard	SOFBOP12	SOPGN1201	SOFRT1201	2.0	16
	Wear Resistant	SOFBOP12-WR	SOPGN1201-WR			
StellarONE-16	Standard	SOFBOP16	SOPGN1601	SOFRT1601	2.5	20
	Wear Resistant	SOFBOP16-WR	SOPGN1601-WR			



Point Gate (Full Body Extended)

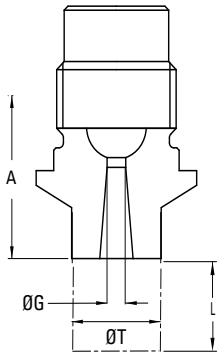
Series	Gate Tip	REF	Includes		G Ø	T Ø	L
			Needle	Retainer			
StellarONE-04	Standard	SOFBOP04EX	SOPGN0401	SOFRT0402	1.0	8	10
	Wear Resistant	SOFBOP04EX-WR	SOPGN0401-WR				
StellarONE-06	Standard	SOFBOP06EX	SOPGN0601	SOFRT0602	1.5	10	10
	Wear Resistant	SOFBOP06EX-WR	SOPGN0601-WR				
StellarONE-08	Standard	SOFBOP08EX	SOPGN0801	SOFRT0802	1.5	12	10
	Wear Resistant	SOFBOP08EX-WR	SOPGN0801-WR				
StellarONE-10	Standard	SOFBOP10EX	SOPGN1001	SOFRT1002	1.5	14	10
	Wear Resistant	SOFBOP10EX-WR	SOPGN1001-WR				
StellarONE-12	Standard	SOFBOP12EX	SOPGN1201	SOFRT1202	2.0	16	10
	Wear Resistant	SOFBOP12EX-WR	SOPGN1201-WR				
StellarONE-16	Standard	SOFBOP16EX	SOPGN1601	SOFRT1602	2.5	20	10
	Wear Resistant	SOFBOP16EX-WR	SOPGN1601-WR				



THERMAL GATE TIPS

Sprue Gate

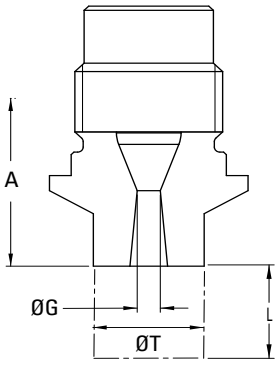
Series	Gate Tip	REF	G Ø	T Ø	L
StellarONE-04	Sprue Gate	**SOSRT0401**	1.5	8	NA
	Extended Sprue Gate	**SOSRT0402**			10
StellarONE-06	Standard	**SOSRT0601**	2	10	NA
	Extended Sprue Gate	**SOSRT0602**			10
StellarONE-08	Standard	**SOSRT0801**	2.5	12	NA
	Extended Sprue Gate	**SOSRT0802**			10
StellarONE-10	Standard	**SOSRT1001**	2.5	14	NA
	Extended Sprue Gate	**SOSRT1002**			10
StellarONE-12	Standard	**SOSRT1201**	3.0	16	NA
	Extended Sprue Gate	**SOSRT1202**			10
StellarONE-16	Standard	**SOSRT1601**	3.0	20	NA
	Extended Sprue Gate	**SOSRT1602**			10



VALVE GATE TIPS

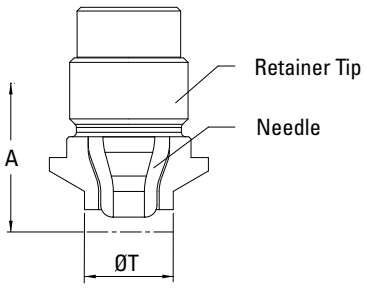
Valve Gate (Sprue Tip)

Series	Gate Tip	REF	G Ø	T Ø	L
StellarONE-06	Standard	**SOSRT0603**	1.5	10	NA
	Extended Sprue Gate	**SOSRT0604**			10
StellarONE-08	Standard	**SOSRT0803**	2.5	12	NA
	Extended Sprue Gate	**SOSRT0804**			10
StellarONE-10	Standard	**SOSRT1003**	2.5	14	NA
	Extended Sprue Gate	**SOSRT1004**			10
StellarONE-12	Standard	**SOSRT1203**	4.0	16	NA
	Extended Sprue Gate	**SOSRT1204**			10
StellarONE-16	Standard	**SOSRT1603**	5.0	20	NA
	Extended Sprue Gate	**SOSRT1604**			10



Valve Gate (Bodyless)

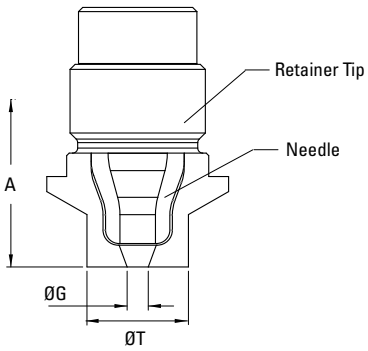
Series	Gate Tip	REF	Includes		T Ø
			Needle	Retainer	
StellarONE-06	Standard	**SOVGBA06**	**SOVGN0601**	**SOBRT0602**	10
	Wear Resistant	**SOVGBA06-WR**	**SOVGN0601-WR**		
StellarONE-08	Standard	**SOVGBA08**	**SOVGN0801**	**SOBRT0802**	12
	Wear Resistant	**SOVGBA08-WR**	**SOVGN0801-WR**		
StellarONE-10	Standard	**SOVGBA10**	**SOVGN1001**	**SOBRT1002**	14
	Wear Resistant	**SOVGBA10-WR**	**SOVGN1001-WR**		
StellarONE-12	Standard	**SOVGBA12**	**SOVGN1201**	**SOBRT1202**	16
	Wear Resistant	**SOVGBA12-WR**	**SOVGN1201-WR**		
StellarONE-16	Standard	**SOVGBA16**	**SOVGN1601**	**SOBRT1602**	20
	Wear Resistant	**SOVGBA16-WR**	**SOVGN1601-WR**		



VALVE GATE TIPS

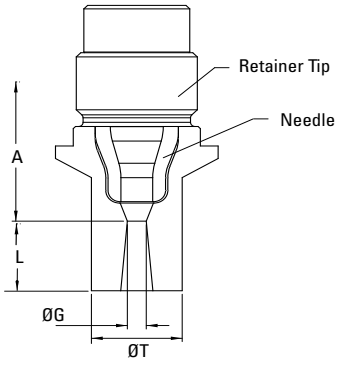
Valve Gate (Full Body)

Series	Gate Tip	REF	Includes		G Ø	T Ø
			Needle	Retainer		
StellarONE-06	Standard	SOVGFBA06	SOVGN0601	SOFRT0603	1.5	10
	Wear Resistant	SOVGFBA06-WR	SOVGN0601-WR			
StellarONE-08	Standard	SOVGFBA08	SOVGN0801	SOFRT0803	2.5	12
	Wear Resistant	SOVGFBA08-WR	SOVGN0801-WR			
StellarONE-10	Standard	SOVGFBA10	SOVGN1001	SOFRT1003	2.5	14
	Wear Resistant	SOVGFBA10-WR	SOVGN1001-WR			
StellarONE-12	Standard	SOVGFBA12	SOVGN1201	SOFRT1203	4.0	16
	Wear Resistant	SOVGFBA12-WR	SOVGN1201-WR			
StellarONE-16	Standard	SOVGFBA16	SOVGN1601	SOFRT1603	5.0	20
	Wear Resistant	SOVGFBA16-WR	SOVGN1601-WR			

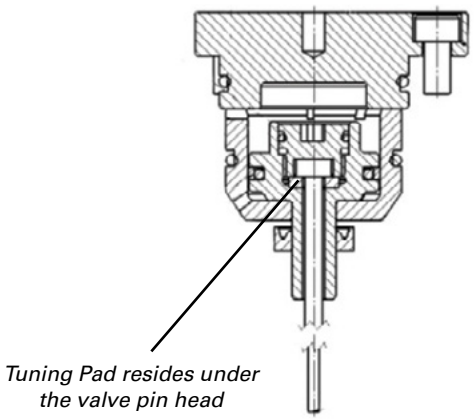


Valve Gate (Full Body Extended)

Series	Gate Tip	REF	Includes		G Ø	T Ø	L
			Needle	Retainer			
StellarONE-06	Standard	SOVGFBA06EX	SOVGN0601	SOFRT0604	1.5	10	10
	Wear Resistant	SOVGFBA06EX-WR	SOVGN0601-WR				
StellarONE-08	Standard	SOVGFBA08EX	SOVGN0801	SOFRT0804	2.5	12	10
	Wear Resistant	SOVGFBA08EX-WR	SOVGN0801-WR				
StellarONE-10	Standard	SOVGFBA10EX	SOVGN1001	SOFRT1004	2.5	14	10
	Wear Resistant	SOVGFBA10EX-WR	SOVGN1001-WR				
StellarONE-12	Standard	SOVGFBA12EX	SOVGN1201	SOFRT1204	4.0	16	10
	Wear Resistant	SOVGFBA12EX-WR	SOVGN1201-WR				
StellarONE-16	Standard	SOVGFBA16EX	SOVGN1601	SOFRT1604	5.0	20	10
	Wear Resistant	SOVGFBA16EX-WR	SOVGN1601-WR				



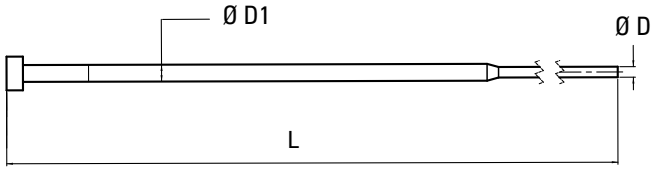
PNEUMATIC & HYDRAULIC CYLINDERS



Tuning Pad resides under the valve pin head

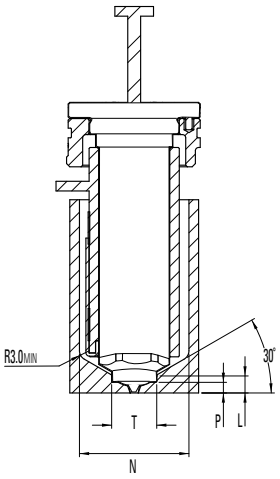
Series	D-Ø Ref.	Seal kit #	Valve pin tuning pad (Ø)
StellarONE-06			
30 Series-B	70mm	**SM30BSK**	**PTPSC30025A (Ø11.5)**
SmarONE-08			
40 Series-B	80mm	**SM40BSK**	**PTPSC40025A (Ø12.0)**
StellarONE-10			
50 Series-B	92mm	**SM50BSK**	**PTPSC50025A (Ø14.0)**
StellarONE-12			
65 Series-A	110mm	**SM65ASK**	**PTPSC65025A (Ø16.0)**
StellarONE-16			
80 Series-A	128mm	**SM80ASK**	**PTPSC80025A (Ø17.0)**

VALVE PINS

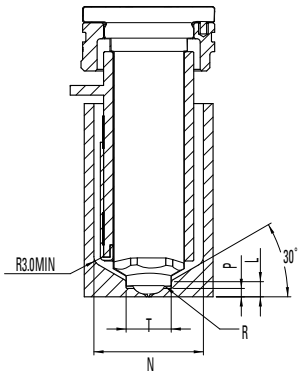


REF	Ø D	Ø D1	L (mm)	Tuning Pad
P25VP40210A	2.5	4	210	**PTPSC30025A**
P25VP40260A			260	
P30VP40230A	3		230	**PTPSC40025A**
P30VP40280A			280	
P37VP40250A	3.7		250	**PTPSC50025A**
P37VP40280A			280	
P37VP40330A			330	

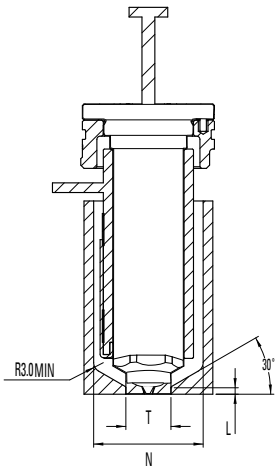
REF	Ø D	Ø D1	L (mm)	Tuning Pad
P57VP60270A	5.7	6	270	**PTPSC65025A**
P57VP60320A			320	
P57VP60370A			370	
P57VP60420A			420	
P57VP60450A			450	
P57VP80270A	7.7	8	270	**PTPSC80025A**
P57VP80320A			320	
P57VP80370A			370	
P57VP80420A			420	
P57VP80450A			450	



BODILESS - VALVE GATE



BODILESS - THERMAL



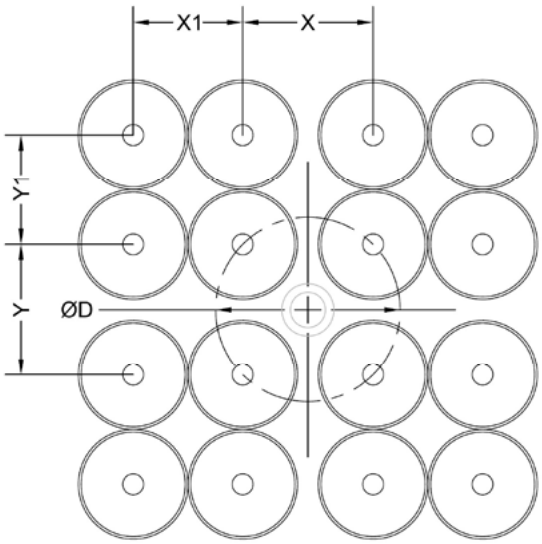
FULL BODY - VG/THERMAL

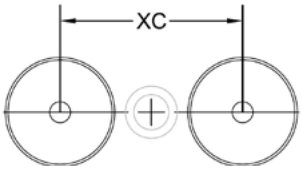
Valve Gate	L	N	P	T
StellarONE-06	5.6	30	3.1	10
StellarONE-08	5.6	32	3.3	12
StellarONE-10	5.6	34	3.3	14
StellarONE-12	7.0	36	4.6	16
StellarONE-16	7.5	42	4.6	20

THERMAL	L	N	P	R	T
StellarONE-04	4.7	18	2.6	3.5	8
StellarONE-06	4.9	30	2.6	3.6	10
StellarONE-08	5.0	32	2.6	5.5	12
StellarONE-10	5.0	34	2.6	6.5	14
StellarONE-12	7.0	36	4.6	7.0	16
StellarONE-16	7.4	42	4.6	10.0	20

VG/Thermal	I	N	T
StellarONE-04	3.0	18	8
StellarONE-06	4.0	30	10
StellarONE-08	4.0	32	12
StellarONE-10	4.0	34	14
StellarONE-12	4.0	36	16
StellarONE-16	4.0	42	20

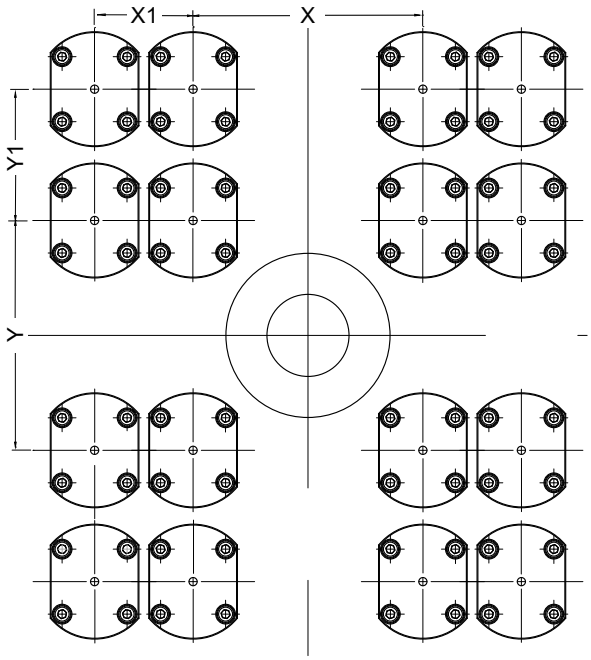
THERMAL GATE MINIMUM PITCH

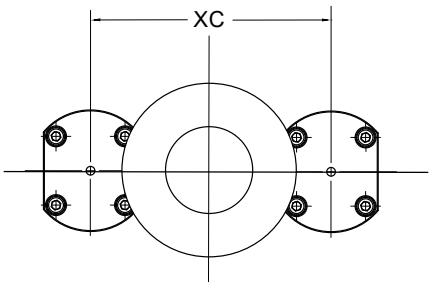




Nozzle series	X1 min mm	Y1 min mm	X min mm	Y min mm	XC min mm	D Ø mm
StellarONE-04	28	28	40	40	60	56,6
StellarONE-06	38	38	48	48	70	67,9
StellarONE-08	42	42	50	50	70	70,7
StellarONE-10	44	44	52	52	80	73,5
StellarONE-12	44	44	52	52	80	73,5
StellarONE-16	50	50	56	56	90	79,2

VALVE GATE MINIMUM PITCH





Valve Gate Series	X1 min mm	Y1 min mm	X min mm	y min mm	XC min mm	D Ø mm
StellarONE-06	54	72	90	84	90	127,3
StellarONE-08	61	82	98	92	98	134,5
StellarONE-10	70	94	106	100	106	150,1
StellarONE-12	86	112	118	112	118	170,6
StellarONE-16	104	130	130	124	130	194,2

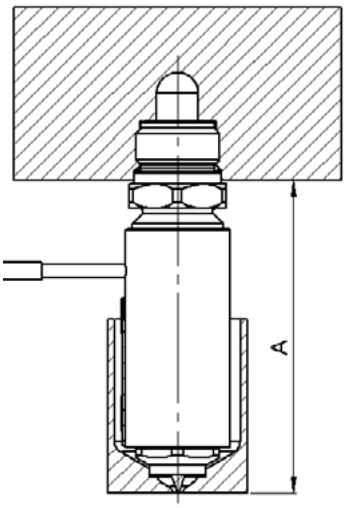
THREADED NOZZLES

The StellarONE Hot Runner System brings high performance, exacting precision, and flexible, cost-effective modular construction to very small part molding. With as little as 17mm between centers, StellarONE is also ideal for high-cavitation molding. StellarONE was designed to perform in a broad spectrum of applications- including electrical, electronic, medical, and cosmetic packaging. And StellarONE was designed to process demanding engineering resins without property degradation.

StellarONE threaded nozzles are available for thermal gates. All the parts are like the legendary StellarONE except the threaded nozzles. This is a semi drop in system which will not have wire channel rack.

Semi-Drop in System

- Available from 2 drop to 16 drop
- Gating style: point gate bodiless, full body and sprue gate
- Lead time is 3-4 weeks approximately



Thread StellarONE Nozzle Series Type		
Nozzle type	**Nozzle series**	**A-dimension length range (mm)**
Open gate (thermal gate)	Thread SmartONE-04 Series	50-150
	Thread SmartONE-06 Series	50-180
	Thread SmartONE-08 Series	50-180
	Thread SmartONE-12 Series	50-200
	Thread SmartONE-16 Series	70-300

Thread StellarONE Series Injection Capacity								
			Shot weight (grams)					
			Sprue gate			Point gate/bodies gate		
Nozzle type	**Nozzle series**	**Flow channel**	**Low viscosity**	**Medium viscosity**	**High viscosity**	**Low viscosity**	**Medium viscosity**	**High viscosity**
Open gate (thermal gate)	SmartONE-04	4	40	30	20	10	10	10
	SmartONE-06	6	625	475	315	200	150	100
	SmartONE-08	8	815	605	385	255	175	115
	SmartONE-12	12	1250	925	600	550	370	270
	SmartONE-16	16	1500	1100	750	800	550	400

Advantages:

- Nozzle and manifold per-assembled, so easy to install onto the mold
- Potential leaks eliminated with proper installation between nozzle and manifold
- Embedded heaters provide superior heat profile and separated TC providing exact temperature control
- Specifically engineered for crystalline resins! Suitable for both engineering and commodity resins or with filled and unfilled
- All components of StellarONE nozzle series to be engineered DME global standard item products, very easy to replace spare part with maintenance service

D-MAX
HIGH PERFORMANCE
HOT SPRUE BUSHINGS

HIGH PERFORMANCE CAPABILITY WITH ENGINEERED & COMMODITY-GRADE RESINS

PLASTIC MATERIALS & SPECIFICATIONS

- Three flow channel sizes
- Lengths up to 90mm
- High performance capability
- Standard and wear-resistant tips
- Precise thermal control

PLASTIC MATERIAL PROCESS CONDITIONS											
MATERIAL	STANDARD RESIN SYMBOL	PROCESS TEMPERATURE		Mould TEMPERATURE		HOT RUNNER TEMPERATURE		DENSITY MELTING		SOLID DENSITY	
		[°C]	[°F]	[°C]	[°F]	[°C]	[°F]	[g/cm³]	[lbs/inch³]	[g/cm³]	[lbs/inch³]
Styrene Butadiene	SB	210	410	70	158	230	446	0.93	0.0366	1.02	0.0369
Polyurethane	PUR	220	428	45	113	240	464	0.93	0.0366	1.11	0.0401
Styrene-acrylonitrile	SAN	230	446	80	176	255	491	0.99	0.0358	1.08	0.0390
Polystyrene	PS	210	410	45	113	230	446	0.95	0.0343	1.05	0.0379
Polycarbonate	PC	300	572	80	176	330	626	1.08	0.0390	1.20	0.0434
Polyphenylene Oxide-Styrene	PPO	260	500	80	176	300	572	0.99	0.0358	1.13	0.0408
Polyethylene	PE	200	392	25	77	225	437	0.74	0.0267	0.96	0.0347
Polypropylene	PP	225	437	40	104	245	473	0.73	0.0264	0.91	0.0329
Polyether-etherketone	PEEK	330	626	165	329	370	698	1.13	0.0408	1.37	0.0495
Polyphenylene Sulfide	PPS	300	572	110	230	330	626	1.53	0.0553	1.70	0.0614
Polyebutylene Terephthalate	PBT	265	509	60	140	290	554	1.44	0.0520	1.57	0.0567
Polyamide 6	PA 6	220	428	90	194	250	482	0.98	0.0354	1.14	0.0412
Polyamide 66	PA 66	255	491	90	194	280	536	1.09	0.0394	1.26	0.0455
Thermal Plastic Elastomers	TPE	240	464	35	95	265	509	0.78	0.0282	0.90	0.0325
Polyoxymethylene (Polyacetal)	POM	180	356	100	212	200	392	1.16	0.0419	1.42	0.0513
Polymethyl Methacrylate	PMMA	235	455	70	158	250	482	1.09	0.0394	1.18	0.0426
Acrylonitrile Butadiene Styrene	ABS	225	437	70	158	250	482	0.95	0.0343	1.08	0.0390

NOTE: Temperature and density values shown above are general, and may not apply to your application. Please refer to proper processing data for the resin grade intended for your specific application. Failure to use temperature settings appropriate to the specific resin and resin grade intended for your application may result in poor part quality, or inability to produce acceptable moulded parts.

HIGH PERFORMANCE HOT SPRUE BUSHING - 250 SERIES

For selection of gate diameter it is important to take into consideration the material flow characteristics, share rate of resin, moulding conditions, fill time requirements, gate vestige, wall thickness and configuration of parts to be moulded. Situations requiring high injection velocities must be considered when selecting small gate diameters. High injection rates may require larger gates due to shear heat build up (e.g. high weight thin wall applications). See material manufacturer's literature for further information regarding material to be moulded.

To compensate for nozzle's growth when heat is applied, the linear expansion of the nozzle (BE) at a given temperature must be added to the nominal "A" dimension. The formula below shows how to figure boring depth (dimension "A" + BE). The tip of the nozzle will now be flush with the cavity line at processing temperature.

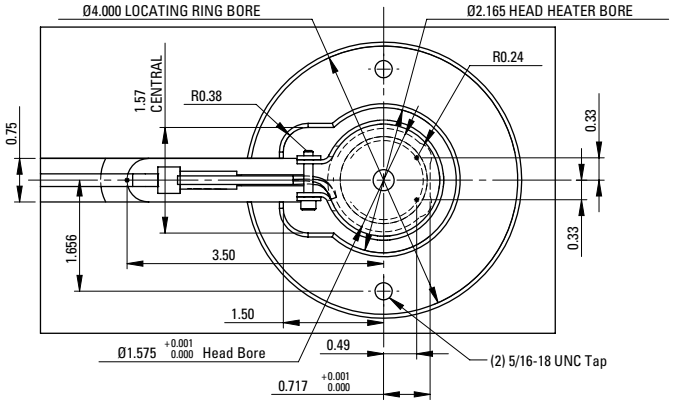
Formula for determining this expansion factor is as follows:

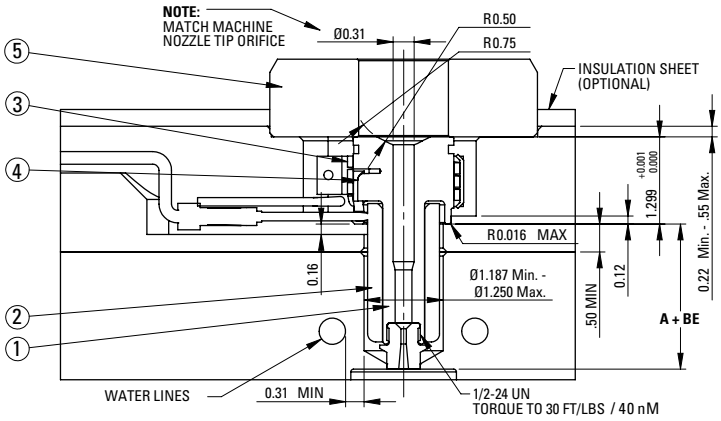
BE = "A" dimension x 0.00000633 x nozzle set point - 68°F / 20°C (assuming the mould is at 68°F / 20°C during operation). If mould temperature is different, substitute 68°F / 20°C with actual mould temperature.

EXAMPLE: Given a 4.134 inch "A" dimension, with a set point of 500°F:

BE = 4.134 x 0.00000633 x (500- 68) = 0.011
Thus "A" + BE will be 4.145

NOTE: The above information is only given as an example; variations may occur based on mould configurations and cooling factor. In some instances, it may be necessary to obtain an empirical factor.





"O" dia.		"S" dia.
Unfilled resin	Filled rersin	
0.028 Min.	0.062 Min.	*0.3750
		0.5005
		0.7505
		1.0005

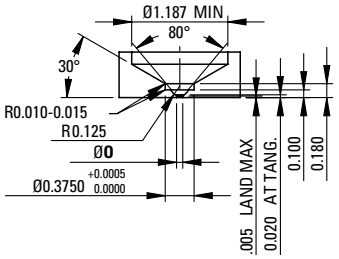
* Point Gate (Full Body) only.

HIGH PERFORMANCE SPRUE BUSHING - 250 SERIES

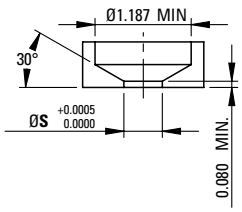
Bushings and components specification							
		Assembly components					
Assembly	"A" Dimension	Bushing body detail #1	High performance heater detail #2	Wattage	Head heater detail #3	Wattage	Thermocouple detail #4
DMAX06055	55 mm	**DEP06055**	**CIH0081S**	440	**RDP38021**	500	**DTC38001 or DTC38002* (High-Heat)**
DMAX06067	67,5 mm	**DEP06067**	**CIH0082S**	350			

* Locating rings must be ordered separately.

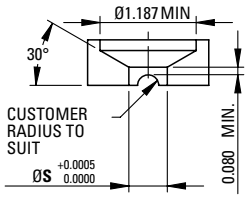
POINT GATE (Bodyless)



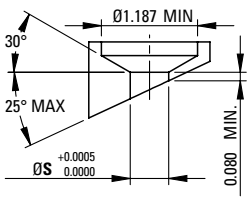
STD. SPRUE AND POINT GATE (FULL BODY)



EXTENDED SPRUE AND EXTENDED POINT GATE (FULL BODY) RUNNER DESIGN



EXTENDED SPRUE AND EXTENDED POINT GATE (FULL BODY) ANGLE DESIGN



HIGH PERFORMANCE HOT SPRUE BUSHING - 375 SERIES

For selection of gate diameter it is important to take into consideration the material flow characteristics, share rate of resin, moulding conditions, fill time requirements, gate vestige, wall thickness and configuration of parts to be moulded. Situations requiring high injection velocities must be considered when selecting small gate diameters. High injection rates may require larger gates due to shear heat build up (e.g. high weight thin wall applications). See material manufacturer's literature for further information regarding material to be moulded.

To compensate for nozzle's growth when heat is applied, the linear expansion of the nozzle (BE) at a given temperature must be added to the nominal "A" dimension. The formula below shows how to figure boring depth (dimension "A" + BE). The tip of the nozzle will now be flush with the cavity line at processing temperature.

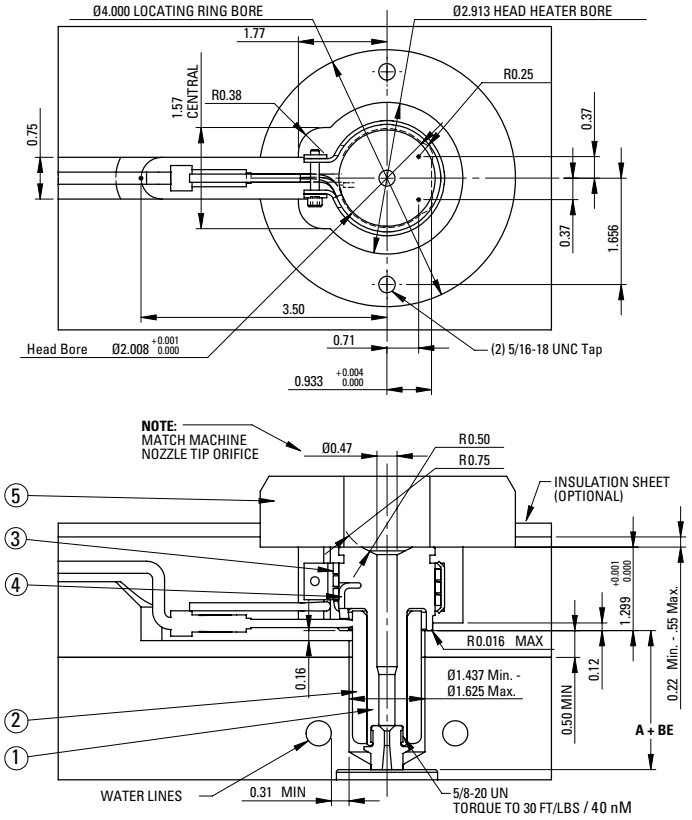
Formula for determining this expansion factor is as follows:

BE = "A" dimension x 0.00000633 x nozzle set point - 68°F / 20°C (assuming the mould is at 68°F during operation). If mould temperature is different, substitute 68°F / 20°C with actual mould temperature.

EXAMPLE: Given a 2.362 inch "A" dimension, with a set point of 500°F:

BE = 2.362 x 0.00000633 x (500- 68) = 0.0064
Thus "A" + BE will be 2.368

NOTE: The above information is only given as an example; variations may occur based on mould configurations and cooling factor. In some instances, it may be necessary to obtain an empirical factor.



NOTE: Dimensions shown in inches unless specified otherwise.

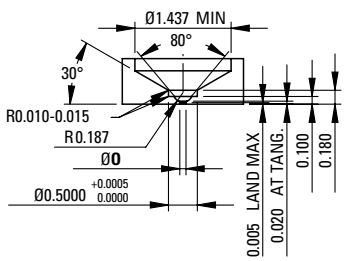
"O" dia.		"S" dia.
Unfilled resin	Filled rersin	
0.028 Min.	0.062 Min.	0.5005
		0.7505
		1.0005

HIGH PERFORMANCE SPRUE BUSHING - 375 SERIES

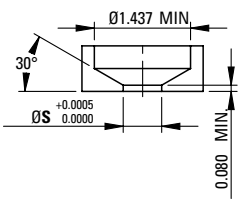
Bushings and components specification							
		Assembly components					
Assembly	"A" Dimension	Bushing body detail #1	High perfor-mance heater detail #2	Wattage	Head heater detail #3	Wattage	Thermocouple detail #4
DMAX10060	2.362in (60.00mm)	**DEP10060**	**CIH0088S**	400	RDP50021	750	**DTC38001** or **DTC38002*** (High-Heat)
DMAX10072	2.854in (72.50mm)	**DEP10072**	**CIH0089S**	450			
DMAX10085	3.346in (85.00mm)	**DEP10085**	**CIH0090S**	550			

* Locating rings must be ordered separately.

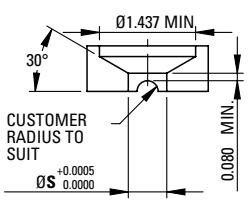
POINT GATE (Bodyless)



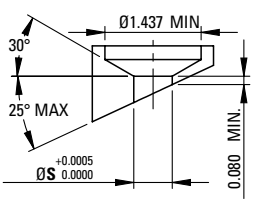
STD. SPRUE AND POINT GATE (FULL BODY)



EXTENDED SPRUE AND EXTENDED POINT GATE (FULL BODY) RUNNER DESIGN



EXTENDED SPRUE AND EXTENDED POINT GATE (FULL BODY) ANGLE DESIGN



HIGH PERFORMANCE HOT SPRUE BUSHING - 625 SERIES

For selection of gate diameter it is important to take into consideration the material flow characteristics, share rate of resin, moulding conditions, fill time requirements, gate vestige, wall thickness and configuration of parts to be moulded. Situations requiring high injection velocities must be considered when selecting small gate diameters. High injection rates may require larger gates due to shear heat build up (e.g. high weight thin wall applications). See material manufacturer's literature for further information regarding material to be moulded.

To compensate for nozzle's growth when heat is applied, the linear expansion of the nozzle (BE) at a given temperature must be added to the nominal "A" dimension. The formula below shows how to figure boring depth (dimension "A" + BE). The tip of the nozzle will now be flush with the cavity line at processing temperature.

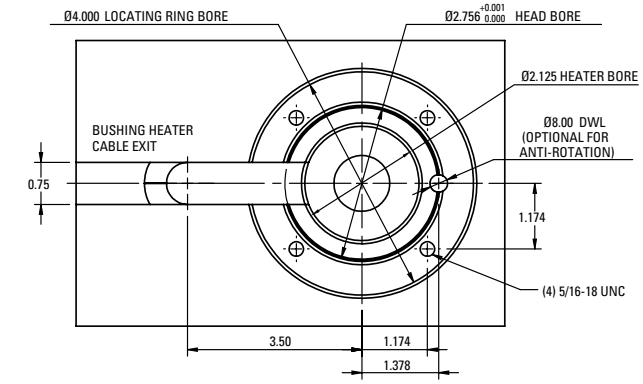
Formula for determining this expansion factor is as follows:

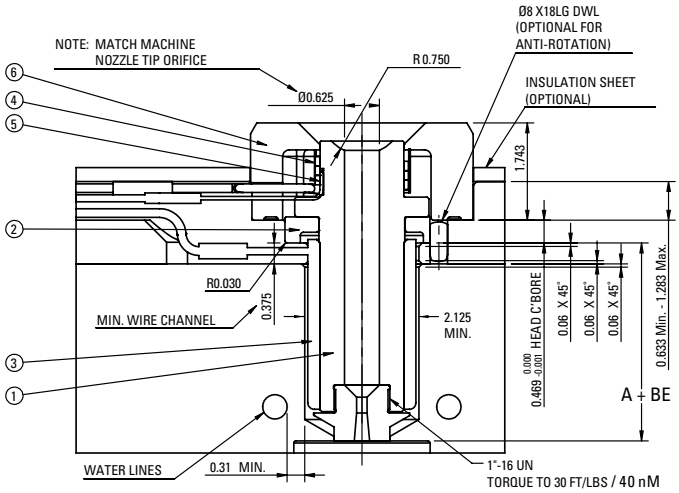
BE = "A" dimension x 0.00000633 x nozzle set point - 68°F / 20°C (assuming the mould is at 68°F during operation). If mould temperature is different, substitute 68°F / 20°C with actual mould temperature.

EXAMPLE: Given a 3.543in "A" dimension, with a set point of 500°F and mould temperature 68°F:

BE = 3.543 x 0.00000633 x (500- 68) = .010
Thus "A" + BE will be 3.553

NOTE: The above information is only given as an example; variations may occur based on mould configurations and cooling factor. In some instances, it may be necessary to obtain an empirical factor.





NOTE: Dimensions shown in inches unless specified otherwise.

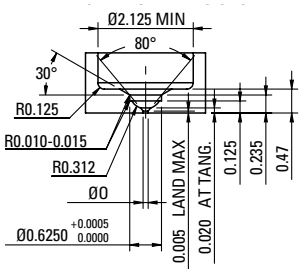
"O" dia.		"S" dia.
Unfilled resin	Filled resin	
0.080 Min.	0.100 Min.	1.0005

HIGH PERFORMANCE SPRUE BUSHING - 625 SERIES

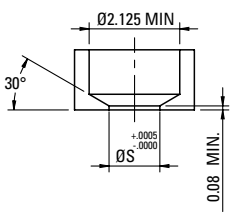
Bushings and components specification								
		Assembly components						
Assembly	"A" Dimension	Bushing body detail #1	Bushing head detail #2	Cast-in heater detail	Wattage	Head heater detail #4	Wattage	Thermocouple detail #5
DMAX16090	3.543in (90.00mm)	**DEP16090**	**DBP16001**	**CIH0104-S**	847	**RDP38021**	500	**DTC62501**

* Locating rings must be ordered separately.

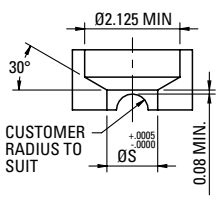
POINT GATE (Bodyless)



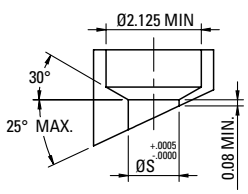
STD. SPRUE AND POINT GATE (FULL BODY)



EXTENDED SPRUE RUNNER DESIGN



EXTENDED SPRUE AND ANGLE DESIGN

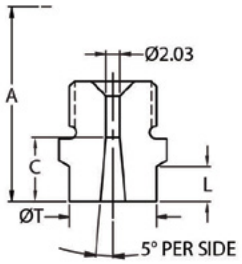


GATE TIP DETAILS

Sprue Gate/Extended Sprue Gate

Series	Gate tip	REF	B dia.	T dia.	L	C
250	Sprue gate	EHT0010	.080	.500	.250	.375
		EHT0011		.750		
		EHT0012		1.000	.100	1.125
	Extended sprue gate	EHT0013		.500	1.000	
		EHT0014		.750		
		EHT0015		1.000	.850	
375	Sprue gate	EHT0016	.125	.500	.250	.375
		EHT0017		.750		
		EHT0018		1.000		
	Extended sprue gate	EHT0019		.500	1.000	1.125
		EHT0020		.750		
		EHT0021		1.000		
625	Sprue gate	EHT0022	.187	1.000	.250	.500
	Extended sprue gate	EHT0023			1.000	1.250

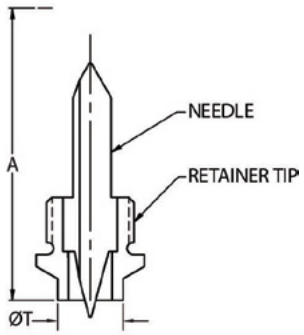
(Add .750 to **A** dimension for extended sprue gate tips.)



Series	Thread type
250	1/2-24 UN
375	5/8-20 UN
625	1"-16 UN

Point Gate (Bodyless)

Series	Gate tip	REF	T dia.	Includes	
				Needle	Retainer tip
250	Standard	EHT0005	.375	EHN0015	EHT0024
		EHT1314			EHT0324
	Wear resistant	EHT1308		EHN0401	EHT0324
		EHT1313			EHT1324
375	Standard	EHT0039	.500	EHN0016	EHT0025
		EHT1312			EHT0325
	Wear resistant	EHT1303		EHN0400	EHT0325
		EHT1309			EHT1325
625	Standard	EHT1306	.625	EHN0019	EHT1354
		EHT1311			EHT0326
	Wear resistant	EHT1307		EHN0402	EHT0326
		EHT1310			EHT1354

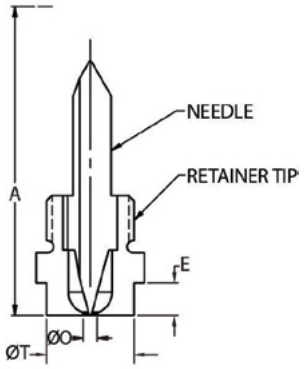


Series	Thread type
250	1/2-24 UN
375	5/8-20 UN
625	1"-16 UN

GATE TIP DETAILS

Point Gate (Full Body)

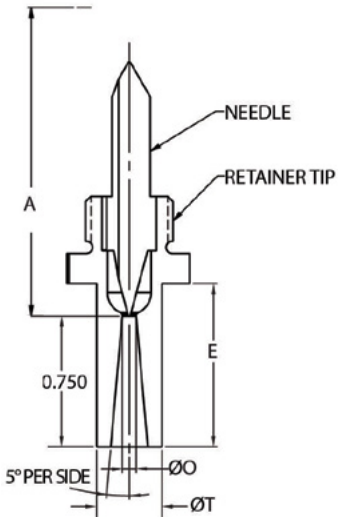
Series	Type	REF	T dia.	O dia.	E	Includes	
						Needle	Retainer tip
250	Standard	EHT2001	.375	.060	.187	EHN0015	EHT0026
		EHT2002		.080			EHT0027
		EHT2003	.500	.060			EHT0028
		EHT2004		.080			EHT0029
	Wear resistant	EHT2005	.375	.060		EHN0401	EHT1326
		EHT2006		.080			EHT1327
		EHT2007	.500	.060			EHT1328
		EHT2008		.080			EHT1329
375	Standard	EHT2009	.500	.080	.230	EHN0016	EHT0030
		EHT2010		.100			EHT0031
		EHT2011	.750	.080			EHT0032
		EHT2012		.100			EHT0033
		EHT2013	1.000	.080			EHT0034
		EHT2014		.100			EHT0035
	Wear resistant	EHT2015	.500	.080		EHN0400	EHT1330
		EHT2016		.100			EHT1331
		EHT2017	.750	.080			EHT1332
		EHT2018		.100			EHT1333
		EHT2019	1.000	.080			EHT1334
		EHT2020		.100			EHT1335
625	Standard	EHT2021	1.000	.125	.250	EHN0019	EHT0036
	Wear resistant	EHT2022				EHN0402	EHT1336



Series	Thread type
250	1/2-24 UN
375	5/8-20 UN
625	1"-16 UN

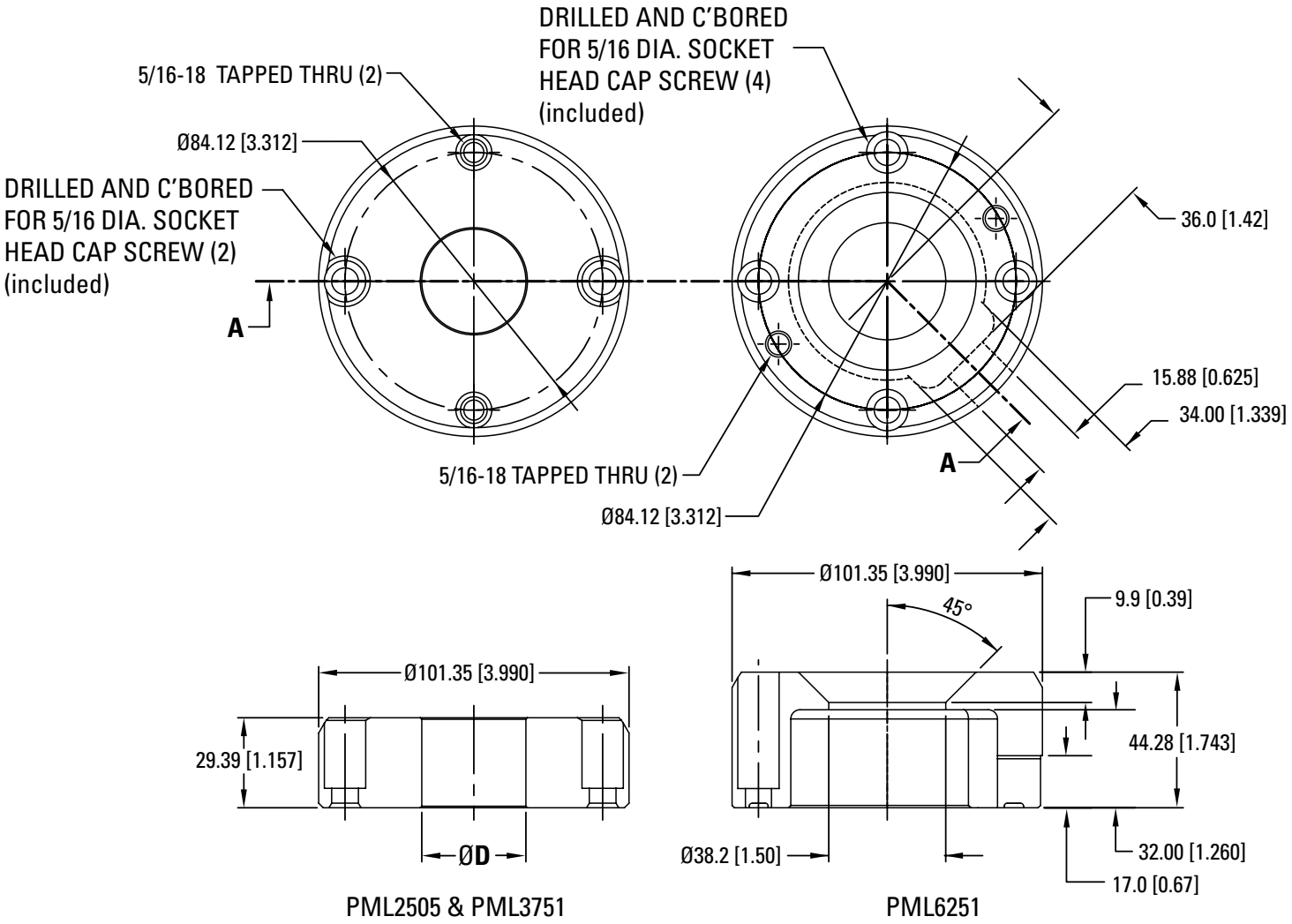
Point Gate (Full Body Extended)

Series	Type	REF	T dia.	O dia.	E	Includes	
						Needle	Retainer tip
250	Standard	EHT2301	.375	.060	.938	EHN0015	EHT2326
		EHT2302		.080			EHT2327
		EHT2303	.500	.060			EHT2328
		EHT2304		.080			EHT2329
	Wear resistant	EHT2305	.375	.060		EHN0401	EHT2326
		EHT2306		.080			EHT2327
		EHT2307	.500	.060			EHT2328
		EHT2308		.080			EHT2329
375	Standard	EHT2309	.500	.080	.980	EHN0016	EHT2330
		EHT2310		.100			EHT2331
		EHT2311	.750	.080			EHT2332
		EHT2312		.100			EHT2333
		EHT2313	1.000	.080			EHT2334
		EHT2314		.100			EHT2335
	Wear resistant	EHT2315	.500	.080		EHN0400	EHT2330
		EHT2316		.100			EHT2331
		EHT2317	.750	.080			EHT2332
		EHT2318		.100			EHT2333
		EHT2319	1.000	.080			EHT2334
		EHT2320		.100			EHT2335
625	Standard	EHT2321	1.000	.125	1.000	EHN0019	EHT2336
	Wear resistant	EHT2322				EHN0402	



Series	Thread type
250	1/2-24 UN
375	5/8-20 UN
625	1"-16 UN

250, 375 & 625 SERIES LOCATING RINGS



PML2505 & PML3751

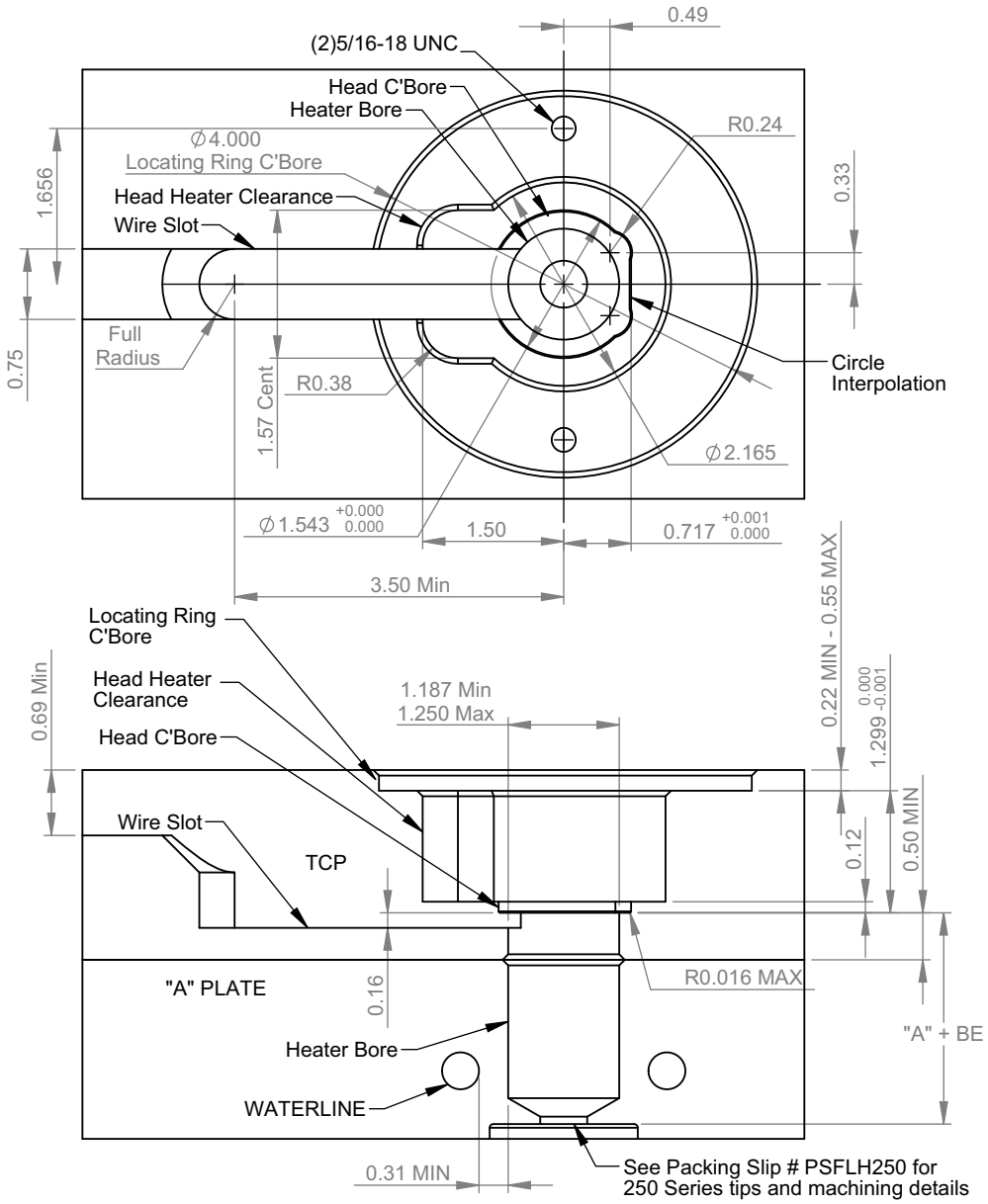
PML6251

SECTION A-A

REF	Ø D
DMAXLR1034	34.00 (1.34")
DMAXLR1046	46.00 (1.81")
DMAXLR1063	63.00 (2.48")
NOTE:	Dimensions shown in millimeters, inches in parentheses

INSTALLATION GUIDE - DMAX 250 SERIES

NOTE: 375 and 625 Series details available upon request



Assembly	A
DMAX06055	2.165in (55.00mm)
DMAX06067	2.657in (67.50mm)

1. All dimensions are in inches.
2. The expansion factor must be taken into considera- tion prior to maching ans installing bushing. This factor (BE) must then be added to the nominal "A" dimension.
   Formula for determining this expansion is as follows:
   BE = "A" dimension x 0.00000633 x (nozzle set point- 68 F) Assuming the mould is at 68 F during operation. If mould temperature is different, sub- stitute 68 F with actual mould temperature.
   EXAMPLE: Given a 3.150 inch "A" dimension, with a set point of 500 F
   BE = 3.150 x 0.00000633 x (500-68) = 0.009
   Thus "A" + BE will be 3.159

INSTALLATION GUIDE

The above information is only given as a example, variations may occur based on mould confiruration and cooling factor. In some instances, it may be necessary to obtain an empirical factor.

3. For protection of heater leads, use wire covers to contain leads in wire channel 3.00 minimum between covers.
4. Break all sharp edges in wire channel for protection of heater leads.

IMPORTANT SAFETY INFORMATION

DANGER

The High performance Hot Sprue Bushing includes electrical elements and may contain molten plastic
at elevated temperature and pressure. To avoid injury, exercise caution by reading these instructions before servicing or operating the system.
These instructions must be passed on to the end user where they should be read before using this product. Failure to do so can result in serious injury or death.

ELECTRICAL HAZARDS

Improper voltages or grounding can result in electrical shock. Use only with proper voltage and proper earth ground.
To avoid electrical shock, do not operate product when wet. Do not operate this equipment with covers or panels removed.
To avoid electrical shock, turn off main power disconnect and lockout / tag out power. It will damage the prodcut and could cause fire, servere injuries or even death.
If green ground wire present, wire must be connected to the ground.
Do not rebend rigid leads. Rebending leads might result in damage to circuit. Product might absorb moisture when cool. Use low voltage or power to drive out residual moisture before applying full power. Failure to do so may cause damage to this product.

STORED ENERGY AND HIGH TEMPERATURE HAZARDS

WARNING

This product maintains molten plastic at high pressure. Use caution when operating and servicing this system.
This product has heated surfaces. Use caution when operating and servicing the system to avoid servere burns. Proper protective equipment should be worn.

DME SHALL NOT BE LIABLE FOR FAILURE TO FOLLOW THE ENCLOSED INSTRUCTIONS AND SPECIFICATIONS. DME HEREBY TO DISCLAIM ALL IMPLIED WARRANTIES. INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL DME BE RESPONIBLE FOR LOSS OF USE, REVENUE OR PROFIT, OR FOR INCIDENTIAL OR CONSEQUENTIAL DAMAGE.

OPERATING PROCEDURE

The bushings are supplied with a High Performance heater with Type "J" thermocouple.
It is recommended to use a DME closed loop Temperature Controller for opimum temperature controll with Step Smart ..... or Smart Start . These systems will allow heater to dissipate any moisture and then change automatically to set point. It is essential to use controllers with the proper voltage and wattage capabilities. The voltage ans wattage of each heater is clearly marked on the heater tag.
Step Smart, Smart Start and DMEare all registed trademarks of DME Co. LLC.

INSTALLATION GUIDE

RECOMMENDATION AND GUIDELINES

1. Proper protective equipment, including eye protection and gloves, must be worm.
2. Bushing head must be held in such a manner to keep it from rotating. Aligning heater leads into wire channel and if tip has runner or angle aligning these to cavity surface. This may be done by machining the Top Clamp Plate for a key (customer to suit) to align with the flat on the bushing head or circle interpola the plate for the flat.
3. Tip and bushing threaded area must be clean of any material before assembly.
4. Apply an anti-seize compound on the tip thread.
5. Screw tip into shank of the bushing. Torque and loosen tip from the bushing 3 times making sure that there is good contact between the tip and the bushing and that the tip will not rotate any more when torqued. Use 30 5 ft. lbs. of torque with a six point deep well socket. If applicable, after assembled into mould , customer can then mark tip for runner or angle. Upon removal of tip and runner or angle is machined onto tip, the tip can then be retorqued and assembled back into mould. Insuring alignment between runner or angle in the tip and runner or angle in mould.
6. Carefull attention should be taken to the heater/thermocouple leads as damage could occur when working on the bushing assembly.
7. Slip-On Rear-Load High Performance Heaters must be installed on the bushing before installing bushing in the mould as follows:
   a. Slide heater (lead end towards head) onto the bushing body.
   b. Align heater leads within the center of bushing head wire slot.
   c. Snap end of heater onto bushing body.
8. Place bushing into mould aligning heater leads into wire channel of Top Clamp Plate.
9. Secure locating ring over bushing onto Top Clamp Plate.
10. Wire heater power and thermocouple leads into DME electrical connector (see Wiring Information)
11. The power and thermocouple leads may be spliced in wiring channel for ease oh heater replacement. Leads may be spliced using Thomas & Betts PA plastic insulated disconnects:
    Male Cat# 18RA-251T
    Female Cat# 18RA-2577
12. Sercure wires in Top Clamp Plate wire channel with DME Wire overs.
13. For removal of bushing from mould, follow these steps:
    a. Remove DME connector from power.
    b. Remove mould form press.
    c. Remove locating ring and wire covers.
    d. Unwire heater and thermocouple leads from DME connector or unplug insulated disconnects.
    e. Remove bushing from mould.
14. Place bushing head into a vise with copper jaw caps. Caution do not over tighten.
15. For removal of tip from bushing, a six point deep well socket is recommended. The bushing must be at processing temperature and the heater should be turned off before removing tip counter-clockwise from bushing.
16. For safety, heater should only be removed when cooled down to room temperature.

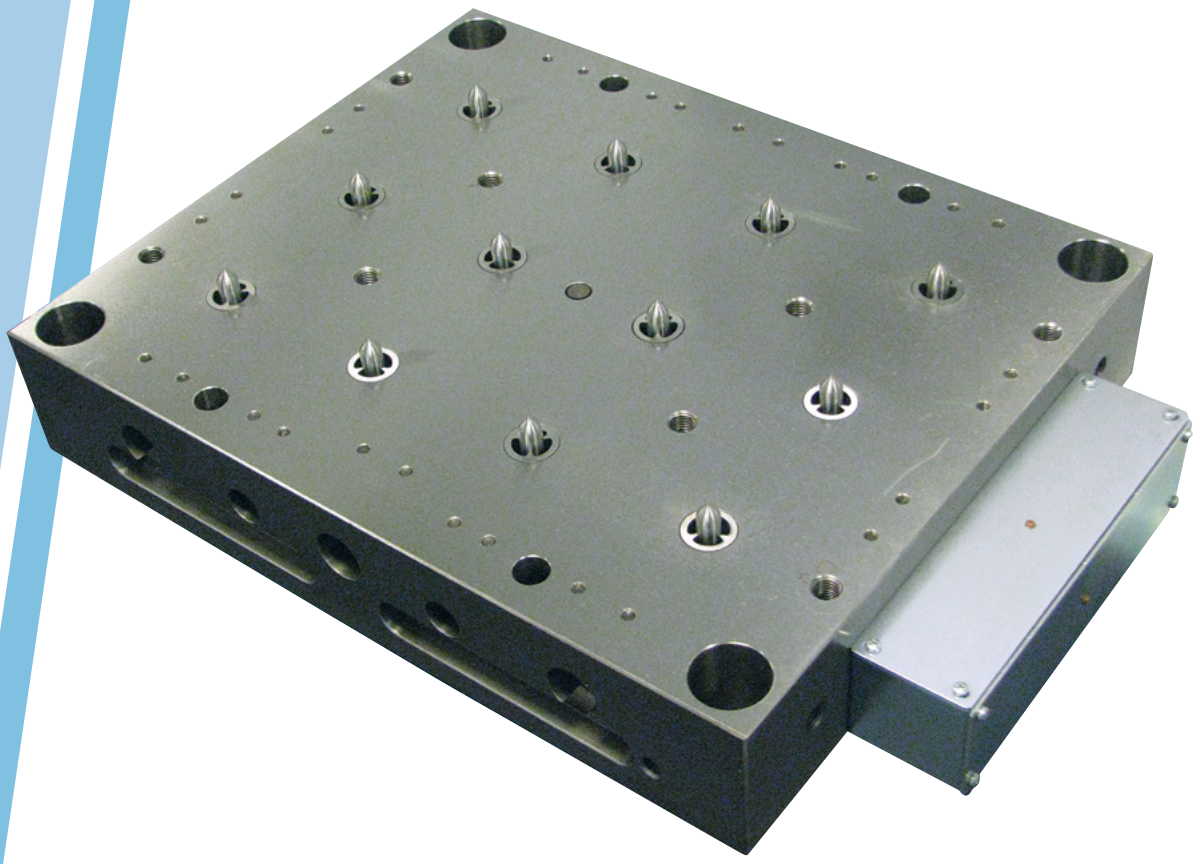
INSTALLATION GUIDE

17. Grip end of heater by hand and pull heater off bushing shank. Caution do not twist heater off bushing body, this can damage heater leads that are still in the bushing head wire slot. If heater will not slip off, place the tip end of a small flat screw drive behind the clip of the heater, which is at the tip end of the heater. Carefully remove the pressure of the clip allowing the heater to slip off the body. Do not bend clip.

WIRING INFORMATION

Heaters are supplied with 2" prestripped 36" long leads. Heaters are 240 VAC
2 power leads are milticolor 1 ground lead is Green color
Thermocouple is "J" Type.
Thermocouple is supplied with 36" long leads
1 T/C lead is White and negative (-) constantan (non-magnetic) 1 T/C lead is Black and positive (+) iron (magnetic)

Note:
Thermocouple color code described above follows international IEC 584-3 convention. The thermocouple is "J" Type. The white (negative) wire used in IEC 584-3 convention is REVERSE of the white (positive) wire used in ASTM E230 (white = positive, red = negative) convention.



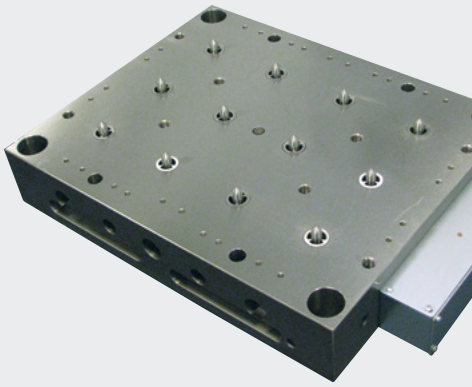
COOL ONE

RESIN HEATING-UP SYSTEM

COOL ONE

When reliability and cost efficiency are critical the use of a DME Cool One system can provide important cost savings, both at the mould construction and processing levels, resulting in a lower overall piece part cost.

Cool one is the only leakage free HRS solution in the market which makes it perfect choice for the clean room applications.



The Cool-One is a standardized and pre-engineered system, which heats up the resin and brings it from the nozzle of the injection machine to the cavity. Its design places particular emphasis on temperature control along the melt delivery process.

This is possible thanks to a distribution structure that goes from the Heated Nozzle Locator, through the distribution channels up to the probes and to the injection point.

What makes the Cool One different from common hot runner systems is the location of the heaters, which are not around the plastic flow, but in the middle of it. This means that the distributor tubes, which contain the heaters are in the middle of the distribution channel, which are in fact simple holes machined in the plate. The centering rings keep the heater well located.

The the distribution structure has a single primary distributor tube, with intersecting probes to direct the flow of material to the gates. According to the complexity of the project it can be necessary to create more distributor channels to reach every cavity. A wide variety of intersecting layouts are possible to carry molten material to virtually any number or pattern of cavities. In any case the plastic flow is constantly heated.

During start up the first plastic flow entering the mould, gets in touch with the external wall of the distributor channel and solidifies on it, creating a natural INSULATING BARRIER. This is an important feature of the Cool One, because that insulation separates the plastic flow from the mould reducing the need of cooling and generating a very high energy saving. DME delivers the complete system, consisting of nozzle, distribution system, probes and machined plates.

As the heaters are in the middle of the flow, the heat they generate remains within the tube and is transferred to the plate in a very little quantity. The heat is generated only where is needed and all along the pattern of the plastic. That means that the system needs less energy. This makes the Cool One a very efficient system.

The way the insulating barrier is created, makes the Cool One a system that requires no seal rings; in fact it can be defined as self-sealing and for the way it is generated it makes leakage impossible.

The insulation also means that the plates will suffer much less thermal expansion / distortion.

For being self-sealing and having less thermal stress, it requires less maintenance.

The features mentioned before make the Cool One a solid system, which is able to run for years, without having to bench the tool.

An important feature that the Cool One shares with common hot runner systems, is that it allows great

material savings. almost 100% of the plastic entering the system is transformed into final product.

As any hot runner system it is suited for use in single or multi cavity moulds and generally speaking it suits most of the possible applications for hot runners on the market and its mounting is very easy.

If you compare the Cool One with any mould with non heated runners, the quality of plastic parts is much better and the cycle time is shorter: the same advantages you look for in a Hot Runner system, but in a cheaper and more solid solution.

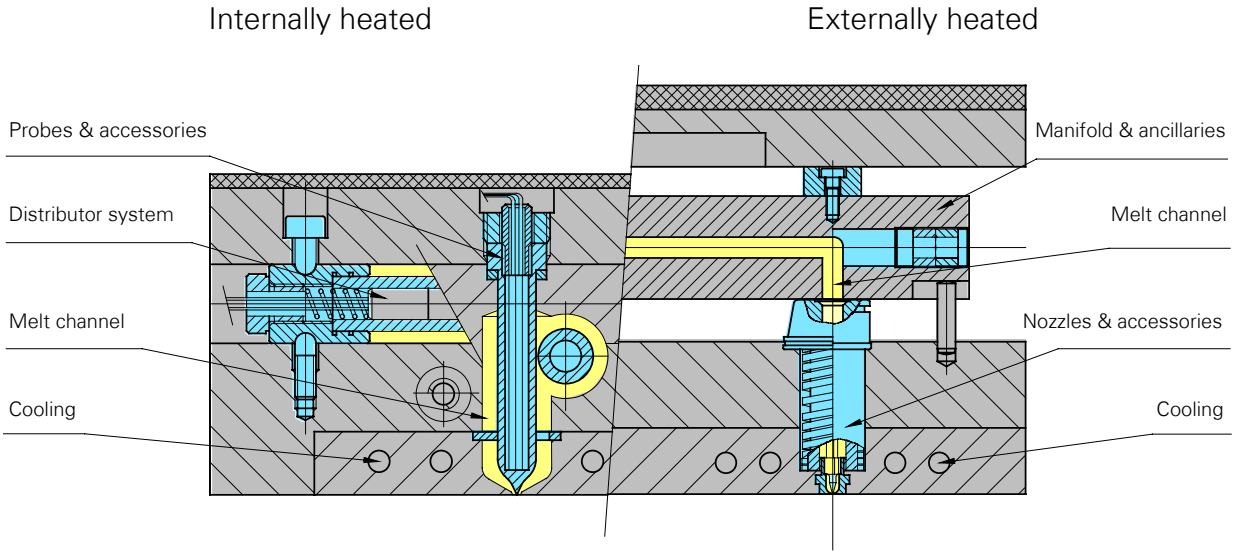
Our experts will draw the system for you. DME designs the best solution for you based on the main requirements of your project (plastic material, number of cavities etc.) and provides you the 3D and 2D drawings necessary for your approval.

The Cool One is a standard system that makes it easy for the designer to build the mould as there is no special parts required; the design is much easier. DME delivers not only standard system, we can do also specials. Please get in touch with our special projects department at their email DMEEU_SpecialProjects@dme.net and ask for feasibility.

The Cool One is not recommended on technical material, charged materials and if color changed is needed.

Advantages

- Simple, solid manifold construction
- Reduced heater loads
- Reduced mould surface temperatures
- Good thermal insulation
- No heat distortion problems
- Quicker startups
- No secondary operations
- Faster cycle times
- 100% leakfree
- Energy saving
- Material savings
- Balanced flow in many cases
- No moulded-in part stress
- Less mould cooling media usage
- Fewer maintenance procedures
- Completely assembled and wired system
- No thermal expansion of the block
- Use in single and multiple cavity moulds
- Less expensive than Hot-One system



SELECTING THE RIGH PROBE REGARDING THE SHOT WEIGHT

Maximum shot weight in grams with a maximum orifice diameter			
Probes Cool-One system	Viscosity		
	High	Medium	Low
AFP - AFIP Mini Probes	40	300	800
AFP - AFIP - AFM Standard Probes	100	500	1200
AFP Maxi Probes	200	800	2000

Plastic modality table (Unifilled resins)
Low viscosity
PE
PP
PS
SB

Remark:
Addition of fillers e.g. glass fibres may change the viscosity considerably.

THE DISTRIBUTOR SYSTEM

Material is injected from the machine nozzle, through the D-M-E heated nozzle adapter, into the distributor system.

The system consists of distributor bores within the distributor block, into which smaller diameter heater tubes are inserted. These tubes are positioned and retained by end caps.

Material flowing in the bore, around the central tube, is kept molten by a thermocouple-cartridge heater in the tube.

Heating the material "from the inside out" is highly efficient, since it allows heater loads to be con-side-rably less than with externally heated systems.

Heat is generated only where it is needed, conti-nuously from the machine nozzle up to the mould cavity, the hottest point is actually in the gate area.

By intersecting bores, molten material can be carried to virtually any number and pattern of cavities.

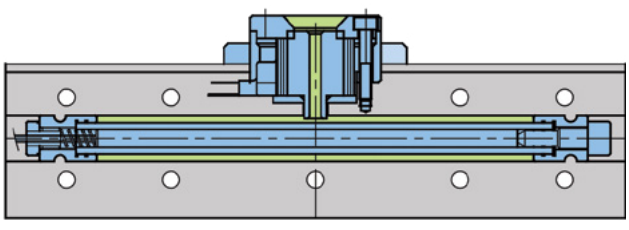
In many cases the flow design has a single primary distributor tube with intersecting probes to direct the flow of material to the gates.

A primary and secondary distributor tube layout using a common "H" pattern is also a typical method of providing a balanced flow of material to probes intersecting the secondary tubes.

A wide variety of intersection layouts are possible to convey the molten material to virtually any number or pattern of cavities.

The type of plastic material, processing temperature, shot weight and wall sections of the component are all factors to be considered for the design of a runnerless system in order to get a reproducible top quality coupled with best productivity.

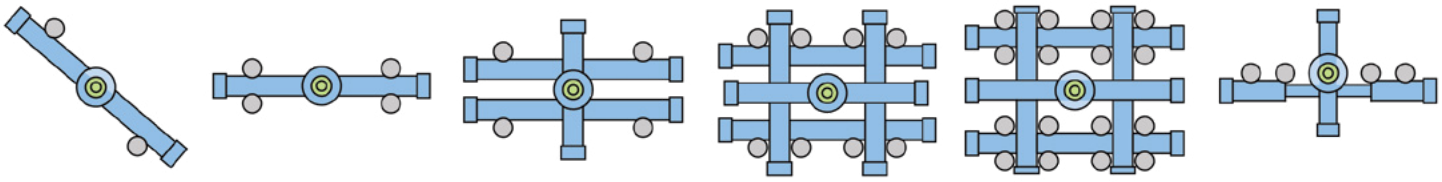
A good thermal and rheological layout of the runnerless system and mould helps to achieve an ideally controlled plastic melt and a reproducibly high quality of the moulded parts.



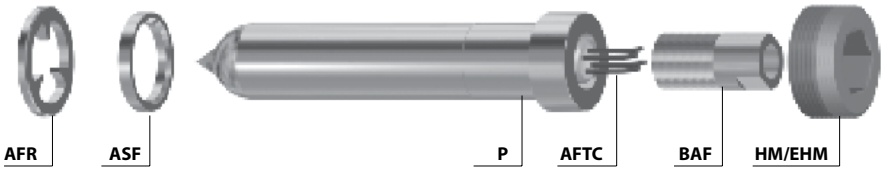
The distributor bore and probe size is governed by how much plastic that channel must carry for each shot. As with conventional runner systems, the primary distributor bores and melt channels must be equal to or larger than the secondary distributor bores and melt channels. Also, the distributor bore must be equal to or larger in size than the gating probe bore diameter.

PATTERNS FOR BALANCED FLOW

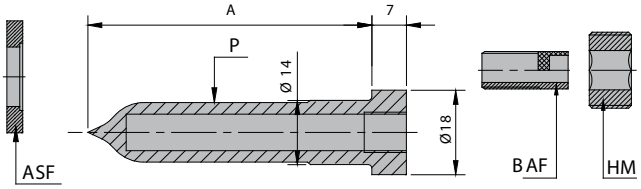
SHOWING RUNNER LAY-OUTS

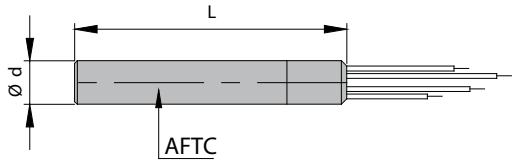


AFP MINI PROBE



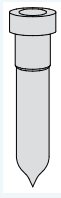
Regular AFP probe is suited for unfilled material.
In case you work with filled and generated material, ask for a TiN coated probe.
The AFP probe is a kit consisting of P, ASF, BAF and HM; see below for more information.



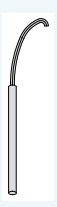
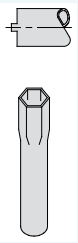


REF	L
AFP 201 N	58
AFP 251 N	73
AFP 271 N	93
AFP 291 N	118

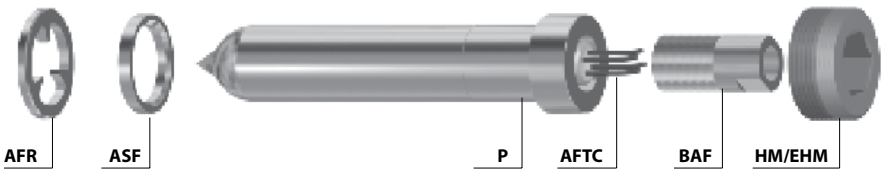
AFP is built up by following items

	P	ASF	BAF	HM
				
REF	REF	REF	REF	REF
AFP 201 N	P 201 N	ASF 3 N	BAF 10 N	HM 22
AFP 251 N	P 251 N			
AFP 271 N	P 271 N			
AFP 291 N	P 291 N			

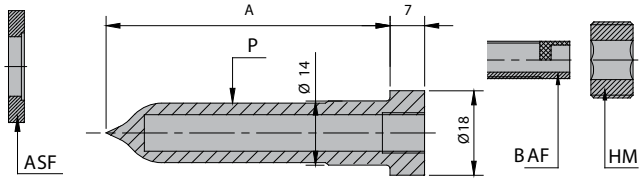
REF	d	L	Watt 230V	Amp.
AFTC 0825 E	8	50	140	0,6
AFTC 0826 E	8	65	185	0,8
AFTC 0827 E	8	85	215	0,9
AFTC 0828 E	8	110	300	1,3

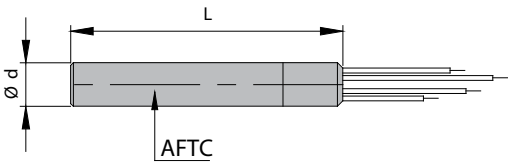
To be ordered seperately			
	AFTC + TC	AFR	WRI
			
REF	REF	REF	REF
AFP 201 N	AFTC 0825 E	AFR 3114	WRI 92
AFP 251 N	AFTC 0826 E		
AFP 271 N	AFTC 0827 E	AFR 3414	
AFP 291 N	AFTC 0828 E		

AFP STANDARD PROBE



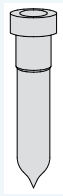
Regular AFP probe is suited for unfilled material.
In case you work with filled and generated material, ask for a TiN coated probe.
The AFP probe is a kit consisting of P, ASF, BAF and HM; see below for more information.



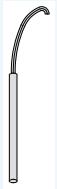
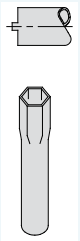


REF	L
AFP 301 N	74
AFP 401 N	91
AFP 501 N	118
AFP 601 N	143

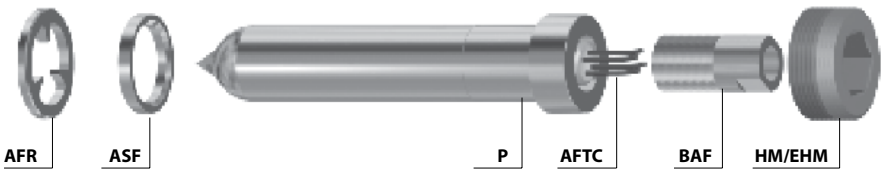
AFP is built up by following items

	P	ASF	BAF	HM
				
REF	REF	REF	REF	REF
AFP 301 N	P 301 N	ASF 4 N	BAF 12 N	EHM 2730
AFP 401 N	P 401 N			
AFP 501 N	P 501 N			
AFP 601 N	P 601 N			

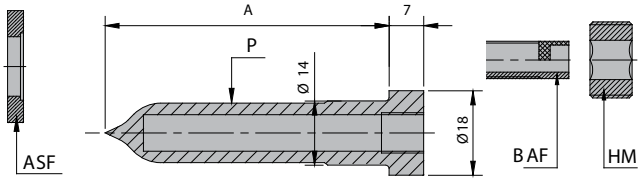
REF	d	L	Watt 230V	Amp.
AFTC 3022 E	9,52	66	190	0,8
AFTC 3032 E	9,52	83	240	1,0
AFTC 3042 E	9,52	110	310	1,4
AFTC 3052 E	9,52	136	390	1,7

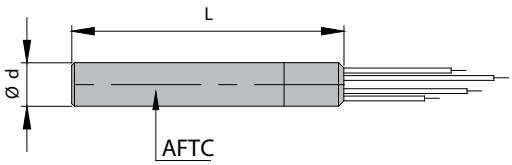
To be ordered seperately			
	AFTC +TC	AFR	WRI
			
REF	REF	REF	REF
AFP 301 N	AFTC 3022 E	AFR 3416	DS 1011
AFP 401 N	AFTC 3032 E		
AFP 501 N	AFTC 3042 E	AFR 4016	
AFP 601 N	AFTC 3052 E		

AFP MAXI PROBE



Regular AFP probe is suited for unfilled material.
In case you work with filled and generated material, ask for a TiN coated probe.
The AFP probe is a kit consisting of P, ASF, BAF and HM; see below for more information.

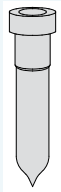




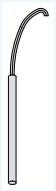
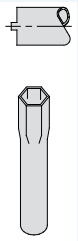
REF	L
AFP 502 N	115
AFP 602 N	140
AFP 702 N	168
AFP 802 N	198
AFP 902 N	248
AFP 1002 N	320
AFP 1102 N	370

REF	d	L	Watt 230V	Amp.
AFTC 1210 E	12,5	104	305	1,4
AFTC 1212 E	12,5	130	365	1,6
AFTC 1215 E	12,5	162	440	1,9
AFTC 1218 E	12,5	190	515	2,2
AFTC 1223 E	12,5	242	645	2,8
AFTC 1230 E	12,5	312	930	4,1
AFTC 1236 E	12,5	362	1300	5,5

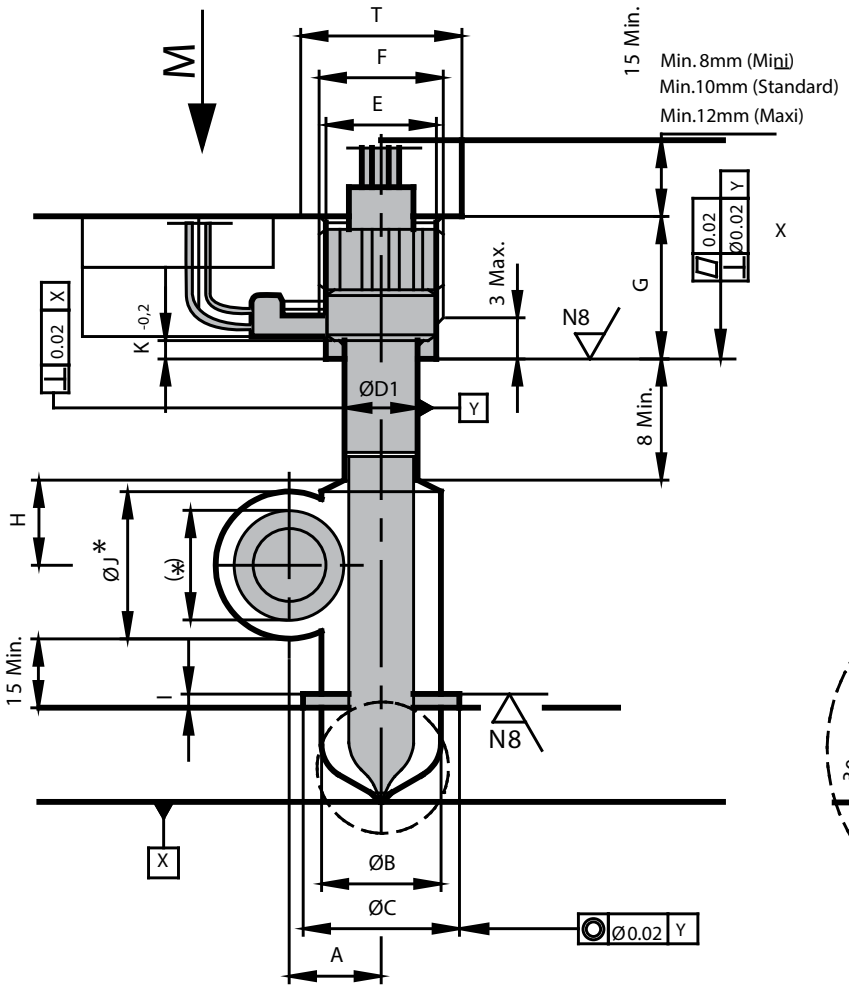
AFP is built up by following items

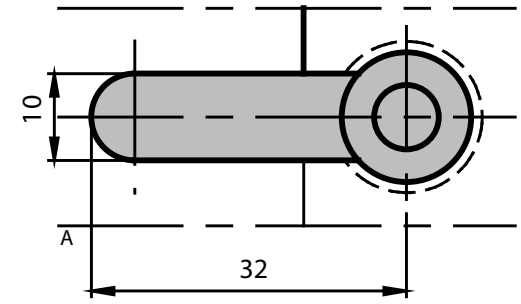
	P	ASF	BAF	HM
				
REF	REF	REF	REF	REF
AFP 502 N	P 502 N	ASF 5 N	BAF 16 N	EHM 3215
AFP 602 N	P 602 N			
AFP 702 N	P 702 N			
AFP 802 N	P 802 N			
AFP 902 N	P 902 N			
AFP 1002 N	P 1002 N			
AFP 1102 N	P 1102 N			

To be ordered seperately

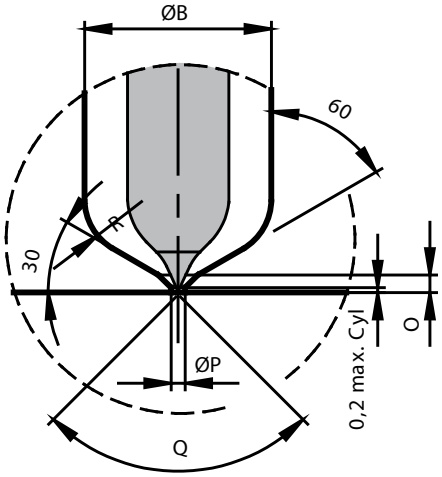
	AFTC + TC	AFR	WRI
			
REF	REF	REF	REF
AFP 502 N	AFTC 1210 E	AFR 4022	DS 1314
AFP 602 N	AFTC 1212 E		
AFP 702 N	AFTC 1215 E		
AFP 802 N	AFTC 1218 E		
AFP 902 N	AFTC 1223 E		
AFP 1002 N	AFTC 1230 E		
AFP 1102 N	AFTC 1236 E		

BUILT IN DIMENSIONS OF AFP PROBES





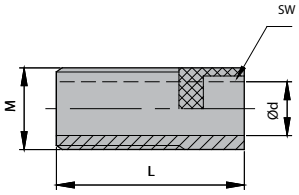
M = Top view — Cable exit 90°
M = Draufsicht — Ausfräsung fur 90° Kabelausgang
M = Bovenaanzicht — Uitfrezing voor kabeluitgang 90°
M = Vue du dessus — Fraisage pour sortie de câble 90°



PROBES - ACCESSORIES

BAF

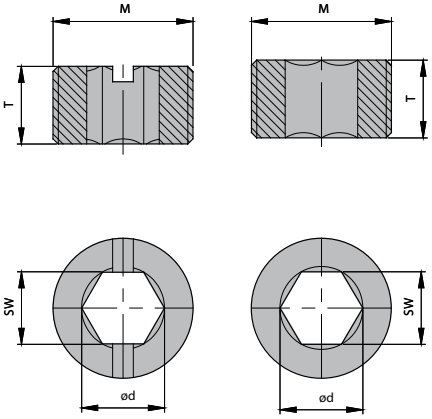
Stop sleeves for cartridge heaters



	REF	d	M	L	SW
Mini	**BAF10N**	6	M10x1	23	9
Standard	**BAF12N**	8	M12x1	30	10
Maxi	**BAF16N**	10	M16x1	35	14

HM EHM

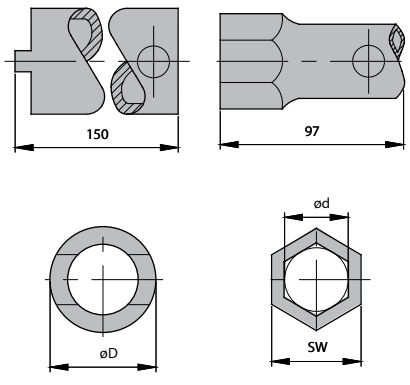
Hold down nuts



	REF	Type	M	T	d	SW
Mini	**HM 22**	A	M22	12,5	14,0	12
Standard	**EHM 2730**	B	M27	15,0	16,0	14
Maxi	**EHM 3215**	B	M32x1.5	15,0	19,5	17

WRI DS

Keys for hold down nuts

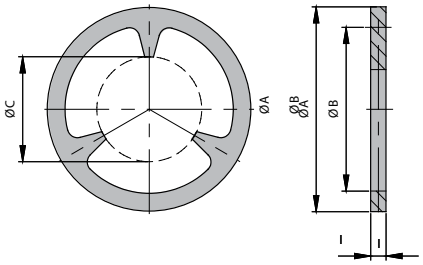


	REF	Type	D	d	SW
Mini	**WRI 92**	a	18	12	-
Standard	**DS 1011**	b	-	7	14
Maxi	**DS 1314**	b	-	9	17

PROBES - ACCESSORIES

AFR

Centering rings

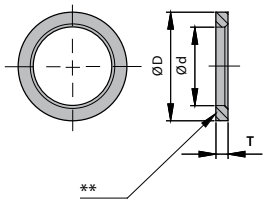


REF	A	B	C	I	For
AFR 3114	31	23	13,5	3	**AFP MINI**
AFR 3414	34	26	13,5	3	**AFP MINI**
AFR 3416	34	26	15,5	3	**AFP STAN**
AFR 4016	40	32	15,5	3	**AFP STAN.**
AFR 4022	40	32	21,5	3	**AFP MAXI**

It might be necessary to grind the AFR,
please read instrcutions at page <?>

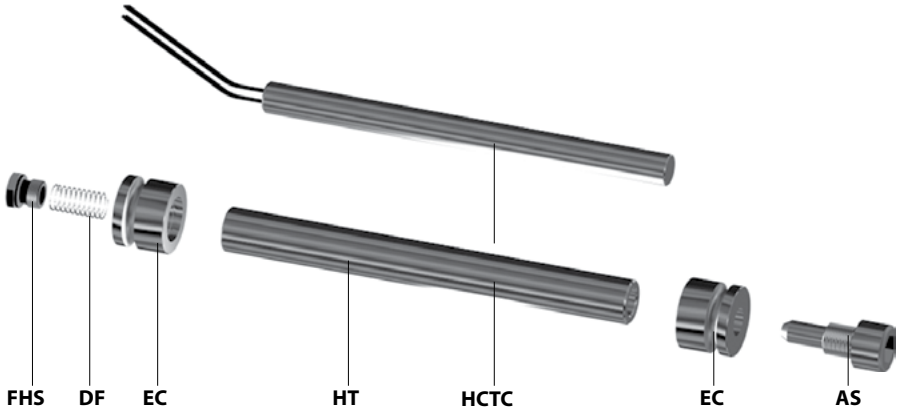
ASF

Spacer washers



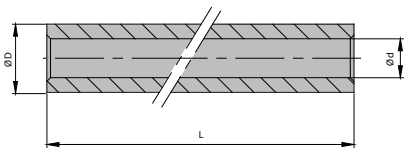
REF	D	d	T
ASF 3 N	18	14,5	3
ASF 4 N	22	16,5	4
ASF 5 N	28	22,5	4

DISTRIBUTOR SYSTEM



HT

Distributor tubes



	REF	D	d	L
MINI	**HT 03 40 N**	16	9,52	400
	HT 03 50 N			500
	HT 03 60 N			600

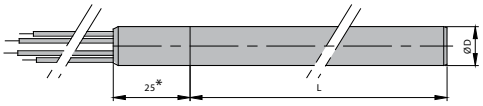
	REF	D	d	L
STANDARD	**HT 04 40 N**	22,22	12,7	400
	HT 04 60 N			600
	HT 04 90 N			900

	REF	D	d	L
MAXI	**HT 05 50 N**	41,27	15,87	500
	HT 05 80 N			800
	HT 05 120 N			1200

DISTRIBUTOR SYSTEM

HCTC

Cartridge heaters with TC type 'J' (Teflon sealed, waterproof)



* Unheated zone

	REF	D	L	Watt 230V	Amp
MINI	HCTC 03-4E	9,52	102	350	1,6
	HCTC 03-45E		114	370	1,6
	HCTC 03-5E		127	435	1,9
	HCTC 03-55E		140	470	2,1
	HCTC 03-6E		152	490	2,1
	HCTC 03-65E		165	515	2,2
	HCTC 03-7E		178	525	2,3
	HCTC 03-8E		203	600	2,6
	HCTC 03-9E		229	710	3,1

	REF	D	L	Watt 230V	Amp
STANDARD	HCTC 04-05E	12,7	127	425	1,9
	HCTC 04-6E		152	435	1,9
	HCTC 04-7E		178	480	2,1
	HCTC 04-8E		203	600	2,6
	HCTC 04-9E		229	710	3,1
	HCTC 04-10E		254	765	3,3
	HCTC 04-11E		279	850	3,7
	HCTC 04-12E		305	940	4,1
	HCTC 04-13E		330	1040	4,5
	HCTC 04-14E		356	1110	4,8
	HCTC 04-15E		381	1200	5,2
	HCTC 04-16E		406	1310	5,7
	HCTC 04-17E		432	1420	6,2
	HCTC 04-18E		457	1475	6,4

	REF	D	L	Watt 230V	Amp
MAXI	HCTC 05-6E	15,87	152	570	2,5
	HCTC 05-7E		178	670	3,0
	HCTC 05-8E		203	810	3,6
	HCTC 05-9E		229	930	4,1
	HCTC 05-10E		254	1060	4,6
	HCTC 05-11E		279	1190	5,2
	HCTC 05-12E		305	1310	5,7
	HCTC 05-13E		330	1440	6,3
	HCTC 05-14E		356	1560	6,8
	HCTC 05-15E		381	1690	7,3
	HCTC 05-16E		406	1815	7,8
	HCTC 05-17E		432	1935	8,4
	HCTC 05-18E		457	2065	9,0
	HCTC 05-19E		483	2200	9,5
	HCTC 05-20E		508	2320	10,0
	HCTC 05-21E		533	2450	10,7
	HCTC 05-22E		559	2570	11,2
	HCTC 05-23E		584	2690	11,7
	HCTC 05-24E		610	2820	12,2
	HCTC 05-25E		635	2940	12,8

REF	D	L	Watt 230 V	Amp
HCTC 03-10E	9,52	254	775	3,3
HCTC 03-11E		279	785	3,5
HCTC 03-12E		305	830	3,7
HCTC 03-13E		330	885	3,9
HCTC 03-14E		356	905	4,0
HCTC 03-15E		381	1200	5,2
HCTC 03-16E		406	1310	5,7
HCTC 03-17E		432	1420	6,2
HCTC 03-18E		457	1530	6,7

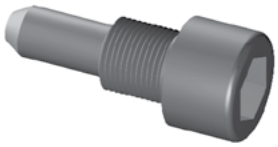
REF	D	L	Watt 230 V	Amp
HCTC 04-19E	12,7	483	1575	6,8
HCTC 04-20E		508	1661	7,2
HCTC 04-21E		533	1750	7,6
HCTC 04-22E		559	1870	8,2
HCTC 04-23E		584	1980	8,6
HCTC 04-24E		610	2200	9,6
HCTC 04-25E		635	2280	9,9
HCTC 04-26E		660	2450	10,7
HCTC 04-27E		686	2550	11,1
HCTC 04-28E		711	2635	11,5
HCTC 04-29E		737	2840	12,3
HCTC 04-30E		762	2940	12,8
HCTC 04-31E		787	3150	13,7

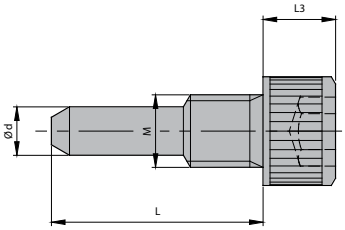
REF	D	L	Watt 230 V	Amp
HCTC 05-26E	15,87	660	3070	13,4
HCTC 05-27E		686	3190	13,9
HCTC 05-28E		711	3320	14,4
HCTC 05-29E		737	3475	15,2
HCTC 05-30E		762	3550	15,5
HCTC 05-31E		787	3700	16,1
HCTC 05-32E		813	3825	16,6
HCTC 05-33E		838	3945	17,1
HCTC 05-34E		864	4065	17,7
HCTC 05-35E		889	4200	18,3
HCTC 05-36E		914	4330	18,8
HCTC 05-37E		940	4480	19,4
HCTC 05-38E		965	4590	20,0
HCTC 05-39E		991	4700	20,4
HCTC 05-40E		1016	4820	20,9
HCTC 05-41E		1041	4950	21,5
HCTC 05-42E		1067	5000	21,7
HCTC 05-43E		1092	5070	22,1
HCTC 05-44E		1118	5070	22,1
HCTC 05-45E		1143	5070	22,1

DISTRIBUTOR SYSTEM ACCESSORIES

AS

Stop screws

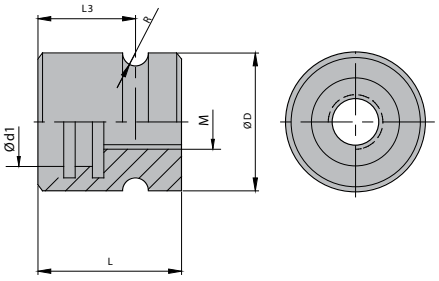




	REF	L	M	d	L3
Mini	**AS 12 N**	35	M12	8	12
Standard	**AS 16 N**	50	M16	11	16
Maxi	**AS 20 N**	50	M20	14	20

EC

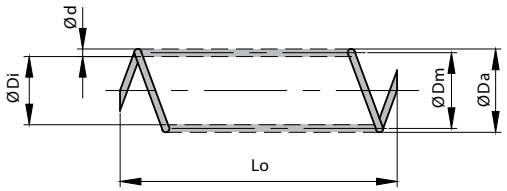
End caps



	REF	D	d1	L	L3	R	M
Mini	**EC 03 N**	24	16	25	17	4,5	M12
	EC 03/5 N	32					
Standard	**EC 04 N**	32	22,22	38	26		M16
	EC 04/5 N	40					
Maxi	**EC 05 N**	50	41,27				M20
	EC 05/5 N	50	32				

DF / WZ

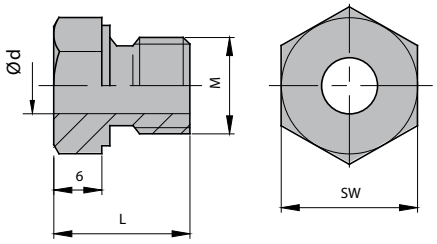
Positioning springs



	REF	Da	Lo	Di	Dm	d
Mini	**DF930**	9	30	7,4	8,2	0,8
Standard	**WZ80611200550**	12	55	9	10,5	1,5
Maxi	**WZ80611500550**	15	55	12	13,5	1,5

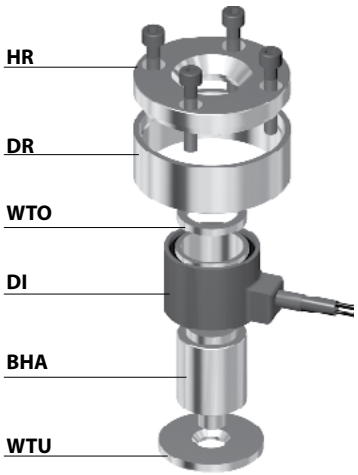
FHS

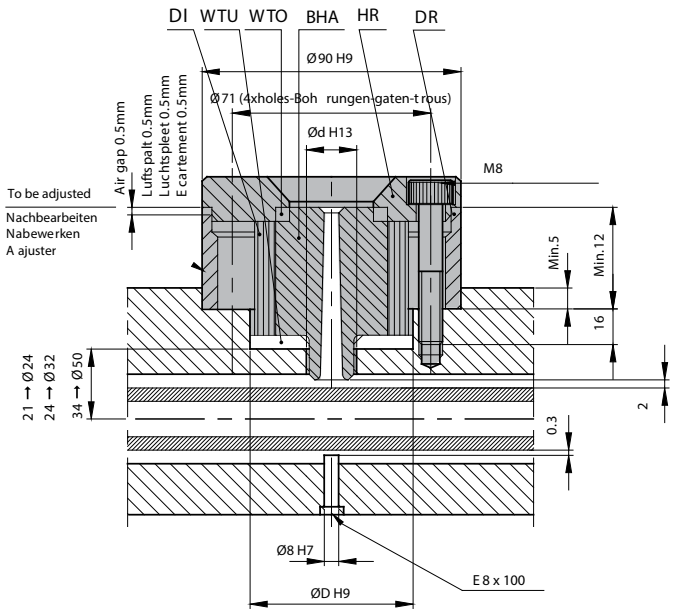
Spring retainers



	REF	L	M	d	SW
Mini	**FHS 12**	17	M12	7	17
Standard	**FHS 16**	20	M16	10	19
Maxi	**FHS 20**	23	M20	12	24

HEATED NOZZLE ADAPTER





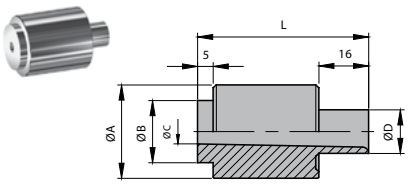
BHA

REF	dH13	DH9
BHA 30x30 N	16	50
BHA 40x30 N	18	60
BHA 40x40 N	18	60

DISTRIBUTOR SYSTEM ACCESSORIES

AS

Body for heated nozzle adapters

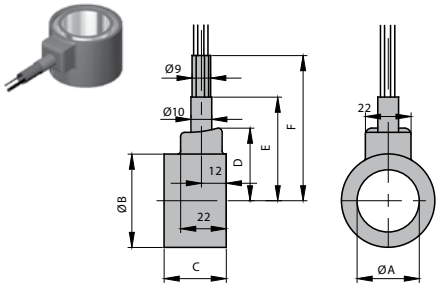


If the radius is required it can be realized by the mould maker

REF	A	B	C	D	L
BHA 30X30N	30	20	6	14	55
BHA 40X30N	40	30	8	16	55
BHA 40X40N	40	30	8	16	65

EC

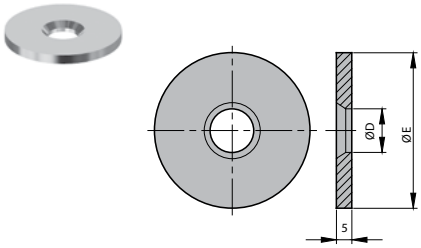
Band heaters with TC type 'J'



REF	A	B	C	D	E	F	Watt 230V
DI 30X30	30	40	30	35	50	70	330
DI 40X30	40	50	30	40	55	75	380
DI 40X40	40	50	40	40	55	75	490

EC

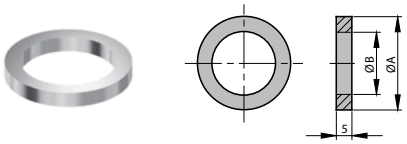
Insulating disc (lower)



REF	E	D
WTU 50	50	14
WTU 60	60	16

WTO

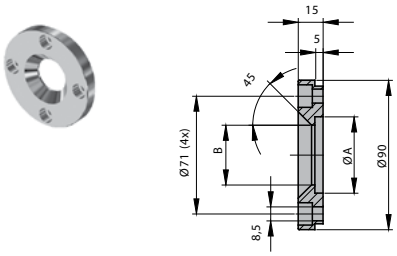
Insulating disc (upper)



REF	A	D
WTO 30	30	20
WTO 40	40	30

HR

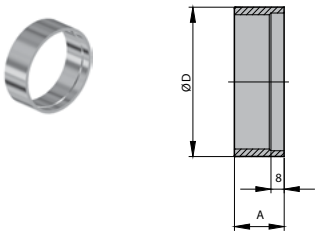
Nozzle locaters



REF	A	D
HR 30	30	20
HR 40	40	30

DR

Distance ring



REF	A	D
DR 40	30	90
DR 90	60	90

GUIDELINES FOR THE CONSTRUCTION OF A DISTRIBUTION BLOCK

A
Min dimensions:
Min. 27 mm (Mini)
Min. 30 mm (Standard)
Min. 40 mm (Maxi)

Min. 32 mm (Mini)
Min. 35 mm (Standard)
Min. 41 mm (Maxi)

B
45 mm (Mini)
55 mm (Standard)
90 mm (Maxi)

C
Expansion allowance between end caps and distributor tube: length ≤ 600 mm = 1,5 mm
length ≥ 600 mm = 3,0 mm

D
5,5 mm (Mini)
11,0 mm (Standard)
11,0 mm (Maxi)

CONSULT DME ACCORDING TO THE APPLICATION

E
20 mm (Mini)
25 mm (Standard)
25 mm (Maxi)

F
45 mm (Mini)
55 mm (Standard)
90 mm (Maxi)

G
70 mm (Mini)
80 mm (Standard)
115 mm (Maxi)

CONSULT DME ACCORDING TO THE APPLICATION

H
20 mm (Mini)
25 mm (Standard)
25 mm (Maxi)

I
Center distance probe to tube:

Mini probes
AFP(201-291N)
- 16 mm with Mini distributor tube
- 19 mm with Standard distributor tube

Standard probes
AFP (301-601N)
- 17 mm with Mini distributor tube
- 20 mm with Standard distributor tube
- 29,5 mm with Maxi distributor tube

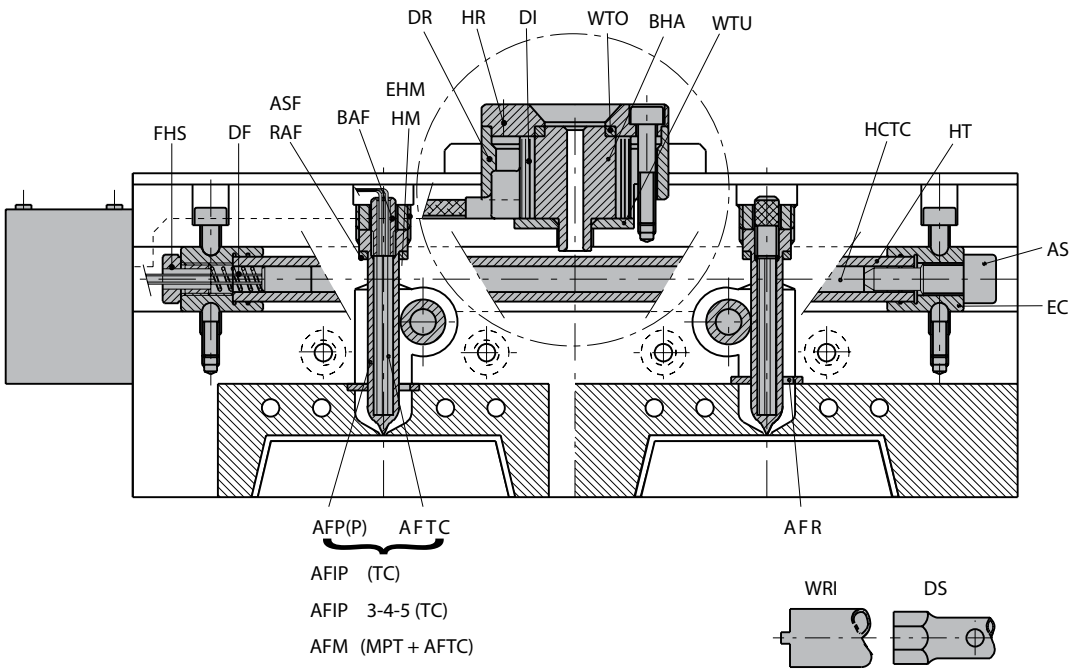
Maxi probes
- AFP(502-1102N)
- 23 mm with Standard distributor
- tube 32,5 mm with Maxi distributor tube

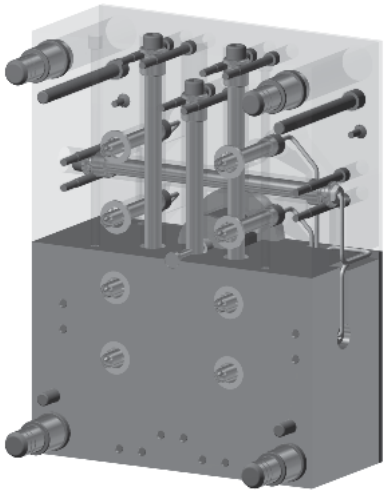
J
Insulating plate for cable protection:
thickness 6- 10 mm

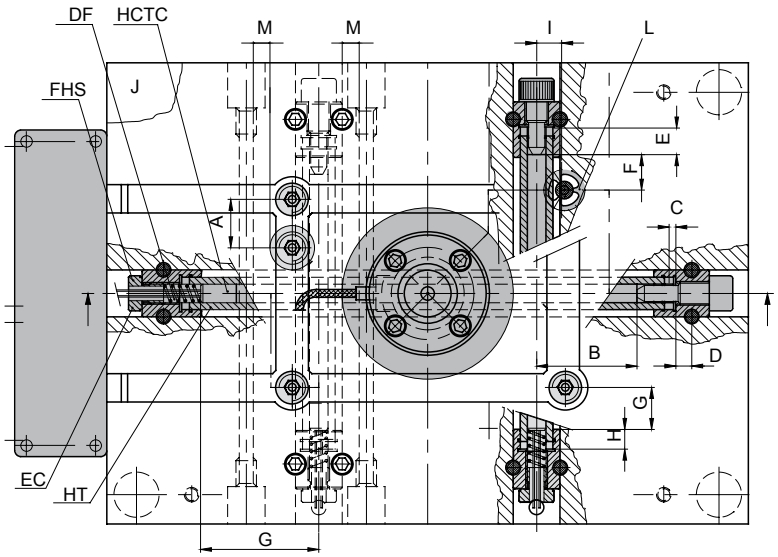
K
Center distance tube to tube:
- 17 ± 0,5 mm for distributor tubes diameter 16
- 23,5 ± 0,5 mm for distributor tubes diameter 22,22
- 42,5 ± 0,5 mm for distributor tubes diameter 41,27
- 20 ± 0,5 mm for combination diameter 16 with diameter 22,22
- 33 ± 0,5 mm for combination diameter 22,22 with diameter 41,27

L
Centering ring position:
pin always opposite the distributor tube

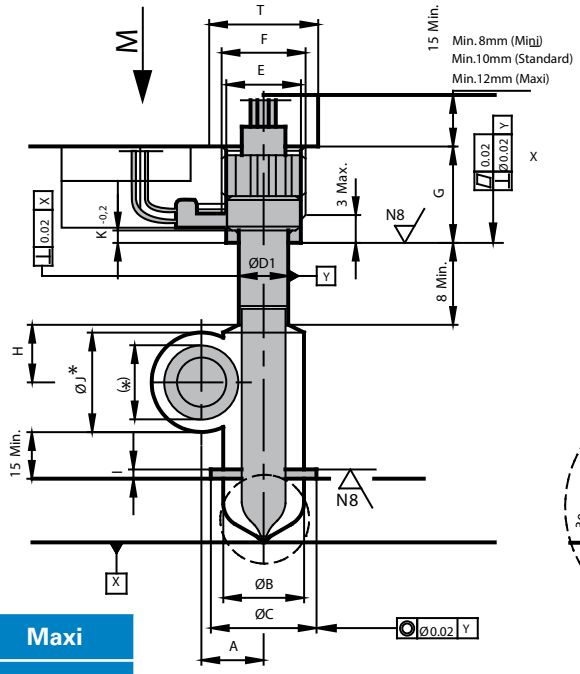
M
Minimum distance of the cooling lines to the distributor bore and/or probe bore = 10 mm.

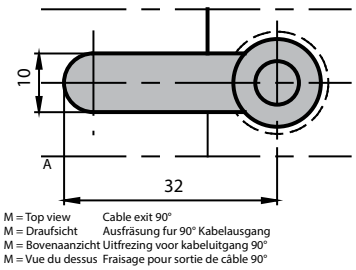


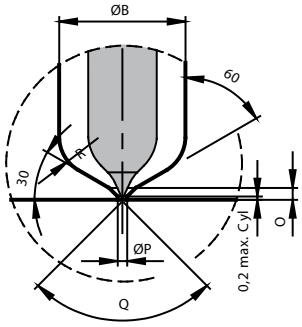




CONSTRUCTION INSTRUCTIONS







Built-in dimensions for Tube of 16mm

Type	Mini	Standard	Maxi
REF	AFP (201-291 N)	AFP (3016-601 N)	AFP (502-1102 N)
A	16	17	-
H	14,5	14,5	-
J	24	-	-

Built-in dimensions for Tube of 22.22mm

Type	Mini	Standard	Maxi
REF	AFP (201-291 N)	AFP (3016-601 N)	AFP (502-1102 N)
A	19	20	23
H	18,5	18,5	27,5
J	32	32	32

Built-in dimensions for Tube of 27mm

Type	Mini	Standard	Maxi
REF	AFP (201-291 N)	AFP (3016-601 N)	AFP (502-1102 N)
A	28,4	29,5	32,5
H	-	27,5	27,5
J	-	-	-

Type	Mini	Standard	Maxi
REF	AFP (201-291 N)	AFP (3016-601 N)	AFP (502-1102 N)
B MIN	23	26	32
C H7	Ø31	Ø34	Ø40
D1 H7	Ø14	Ø15,9	Ø22
E	Ø19,5	Ø24	Ø30,5
F	M22	M27	M32x1,5
T MIN	27	30	40
G MIN	25	27,5	27,5
I AFR $^{+0,02}_{0}$	3,0	3,0	3,0
K	3	4	4
M Cable exit	Straight	Straight	Straight
O	1,5	2	2
P MIN	0,8	1,0	1,0
Q	80°	80°	90°
R	6	8	13

B larger with AFR

COOL-ONE ASSEMBLY INSTRUCTIONS

PROBES:

It is important before beginning the assembly to know the precise height of the probe during production (therefore at the needed temperature), as shown in the picture.
That correct height is given by the length A of the probe, the thickness of the ring ASF and the depth of the hole in the plate. It may be then necessary to grind the ring ASF to reach the correct positioning of the probe P due to the different tolerances of these elements. Therefore the first operation to be carried out is marking the 3 elements so that one probe will be measured and mounted with "its" ring and into "its" hole.
After marking the parts, insert the AFTC into the probe P and fix it with the BAF. Insert the ring ASF and then the assembly in the hole and fix it with the HM / EHM.
Measure the height of every probe in cold condition and after heating at the exercise temperature, if it is not correct, it will be necessary to grind the ring ASF until reaching the necessary dimension.
Once the height of all probes is correct mount them all.

TUBES:

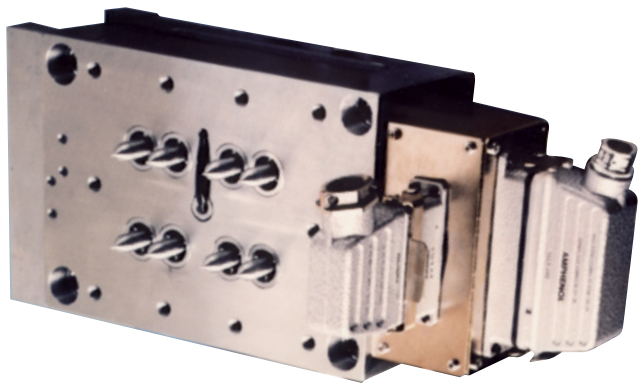
Cut the HT tubes to the right length, with a tolerance on total length of ±0,05mm
Start mounting the tubes from the hole closest to the cavity.
Mount the AS onto the EC, then pull it in its hole from the side opposite to where you want the cables to come out, until you can fix it with the screws from the top.
Ensemble the rest of components (HCTC, HT, EC, DF and FHS) according to the image at page 14.
Ensemble the other tubes in the same way.

HEATER NOZZLE:

The DI must not be mounted in cold condition.
Heat it up at 450°C and install it onto the BHA, let then cool down.
Mount the WTU in the hole on the plate, then the BHA and DI on it and then the WTO. Mount the DR and then the HR on it. Once everything is mounted measure the gap between the external DR distance ring and the HR Nozzle locator, that must be 0,5mm. If not so, remove the HR and take the DR distance ring and grind it until you reach the correct gap, as shown in the picture.
When the DR has the correct height, mount it again and fix the HR on it with the screws.

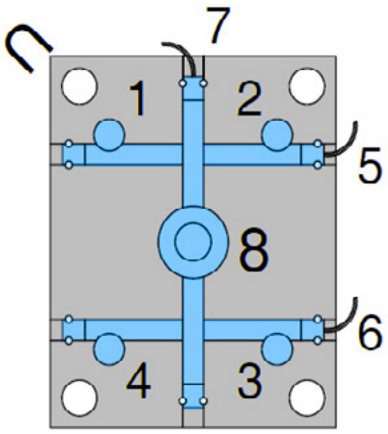
SUPPORT PIN:

Cut the ejector pin at the dimension accordingly to the drawing of your system, so that the gap between it and the distributor tube is 0,3mm.

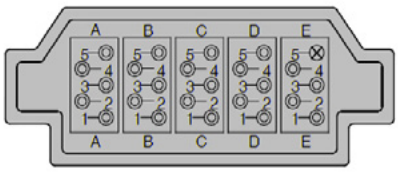


COOL-ONE ASSEMBLY INSTRUCTIONS

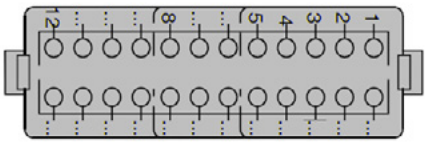
MOULD CHECK-OUT



1. Guidelines for zone numbering: Zone number 1 is the probe closest to the "U" corner. This is stamped on the mould and indicates the position of the undersized leader pin. The numbers for the other probes run in the most logical order (mostly clockwise). The distributor bores are next and the one closest to the "U" corner takes the next number. The remainder of the distributor bores are numbered working up through the different levels with the heated adapter taking the last number.
2. Connect electric power and thermocouples according to the wiring diagram.
3. Connect mould to the mould temperature controller.
4. Check mould cooling for operation.
5. Switch on temperature controller
6. Adjust in 50 °C increments until operating temperature is reached.



POWER	PIC 24 G
Zone	Contact numbers
1	A1 - A2
2	A3 - A4
3	B1 - B2
4	B3 - B4
5	A5 - B5
6	C1 - C2
7	C3 - C4
8	D1 - D2
9	D3 - D4
10	C5 - D5
11	E1 - E2
12	E3 - E4



T.C.	MTC-5-G	MTC-8-G	MTC-12-G
Zone	+ -	+ -	+ -
1	1 - 6	1 - 9	1 - 13
2	2 - 7	2 - 10	2 - 14
3	3 - 8	3 - 11	3 - 15
4	4 - 9	4 - 12	4 - 16
5	5 - 10	5 - 13	5 - 17
6		6 - 14	6 - 18
7		7 - 15	7 - 19
8		8 - 16	8 - 20
9			9 - 21
10			10 - 22
11			11 - 23
12			12 - 24

START-UP

1. Bring machine cylinder up to required temperature, purge cylinder and leave screw in forward position.
2. With machine in "Manual" mode, open mould and bring machine cylinder fully forward into moulding position with machine nozzle in contact with the locator of the mould.
3. Set screw back pressure and RPM to maximum, and extrude material into distributor block until filled. Material should appear at gates. Screw will automatically recover, indicating that distributor block is full. (Setting the back pressure and screw RPM to max. are for filling block only and not for use during processing).
4. Turn on controllers with set points to the recommended melt temperature of the material being used.
5. When deviation meters have stabilized, the temperature set points have been attained and normal moulding can now begin.
6. During injection adjust the temperature of the distributor, adaptor and machine so that perfect units are produced.

COOL-ONE ASSEMBLY INSTRUCTIONS

SERVICING

1. Screwing of the mould plate to the distributor plate makes for easy access for mould separation. Remove fixing screws on the mould plate (fixed side), close press.
2. With mould closed, fix carrier or bolt to the mould plates. Open press slowly. Then one has access to all probes and gates. Remove any impurities at the gates. Close press. Remove carrier, replace fixing screws, open up mould. Screw mould plate to distributor plate.

CARTRIDGE HEATER REPLACEMENT

Distributor cartridge heater:
Switch off temperature controller, take out plug, cut off connection leads to the cartridge. Remove positioning screws and knock-out cartridge heater. It is not necessary to dismantle the mould.

Probe cartridge heater:
Switch off temperature controller, take out plugs. Close press and remove fixing clamps of the fixed half of the

CARTRIDGE HEATER REPLACEMENT

Distributor cartridge heater:
Switch off temperature controller, take out plug, cut off connection leads to the cartridge. Remove positioning screws and knock-out cartridge heater. It is not necessary to dismantle the mould.

Probe cartridge heater:
Switch off temperature controller, take out plugs. Close press and remove fixing clamps of the fixed half of the mould, fix carrier or bolt to the mould plates. Open press slowly. Then one has free access to all probe cartridge heaters. Remove hold down nuts, remove heater and replace with new one. Make sure all wire constructions are satisfactory and no wires can be trapped. Slowly close press and replace fixing screws. Remove carrier or bolts and open press. Reconnect power and thermocouple cables.

ASSEMBLY GUIDELINES FOR HCTC

Conditions:
Distributor bore and tube must be free from dirt, oil, and fats. Distance screw must be screwed into the correct position in the end caps. Wire channels must be large enough and all sharp edges removed.

Assembly:
CAUTION! Do not use any assembly materials as heat conductive paste, etc.. for the cartridge heaters.

1. The distributor cartridge heaters are pushed into the already assembled distributor tube until they reach the stop screw.

   Caution! The distributor cartridge heater must fit easily into the bore.
2. Thermocouple and power cables can then be connected to the terminal housings.
3. Continuity checks on the connected heating elements should be carried out using a universal electrical measuring appliance.

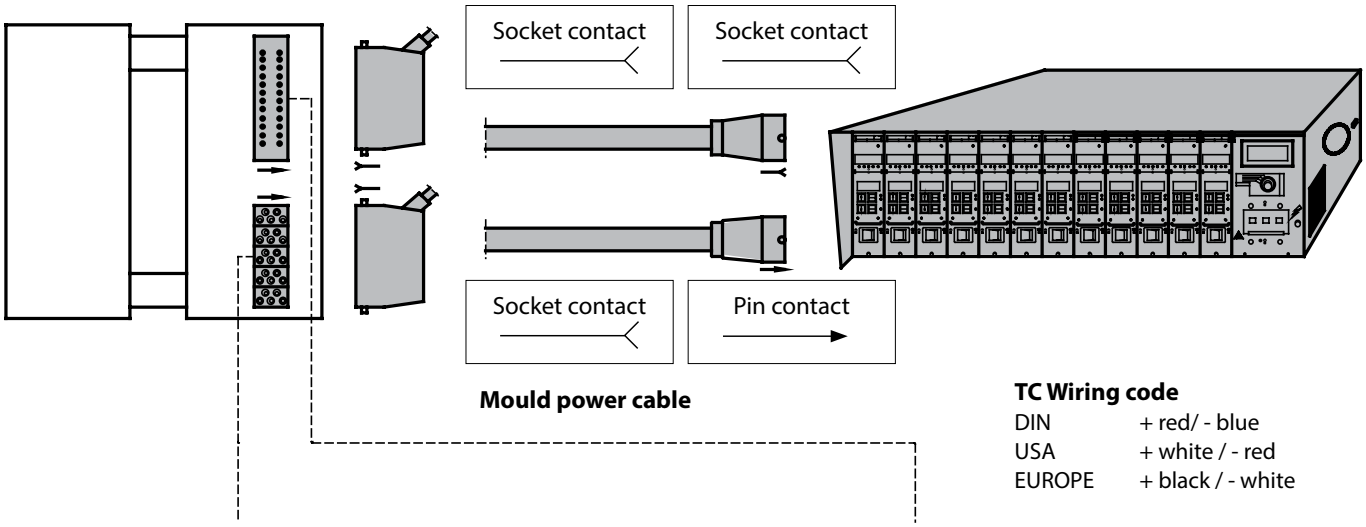
   Caution! Before commissioning the hot-runner system, re-check that the distributor cartridge heaters lie against the stop screws.

WIRING INSTRUCTIONS

WIRING INSTRUCTIONS FOR DME HEATERS

1. Power wires can only be extended with crimp connectors (HWCC-1,2 and 5) and power wires of the same cross-section area (total length max. 8 m).
2. Fe-Co thermocouple wires can only be extended with Fe-Co wires. With the exception of the polarity of the extension cable (US standards: red = negative, white = positive; European standards: red = positive, blue = negative). One must take care that the thermocouple wires are in good contact with the cable joint.
3. Mould power input connector (PIC-24-G) and terminal mounting box (PTCX, PICX, PTC) must be connected with the protective conductor to the mould.
4. Take care that wiring is correct to the position of the modules.
5. Use Ohm-meter to check each heater for proper function prior to starting the DME Hot Runnerless System.

Wiring diagram



TC Wiring code

DIN	+ red/ - blue
USA	+ white / - red
EUROPE	+ black / - white

Mould power input connector

REF	PIC24G Zone	Contr. No.
	1	A1, A2
	2	A3, A4
	3	B1, B2
	4	B3, B4
5-zone MF	5	A5, B5
	6	C1, C2
	7	C3, C4
8-zone MF	8	D1, D2
	9	D3, D4
	10	C5, D5
	11	E1, E2
12-zone MF	12	E3, E4

Thermocouple connector

REF MTC5G

Zone	Contr. No. +	–
1	1,	6
2	2,	7
3	3,	8
4	4,	9
5	5,	10

REF MTC8G

Zone	Contr. No. +	–
1	1,	9
2	2,	10
3	3,	11
4	4,	12
5	5,	13
6	6,	14
7	7,	15
8	8,	16

REF MTC12G

Zone	Contr. No. +	–
1	1,	13
2	2,	14
3	3,	15
4	4,	16
5	5,	17
6	6,	18
7	7,	19
8	8,	20
9	9,	21
10	10,	22
11	11,	23
12	12,	24

THERMOCOUPLE ACCESSORIES

HR

Thermocouple connectors

REF	Zones
MTC5G	5
MTC8G	8
MTC12G	12

DR

Thermocouple cables

to mould

to frame

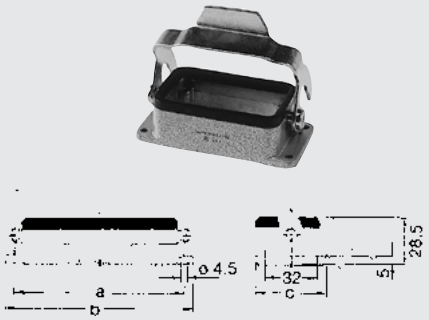
REF	Zones	Cable length
TC54-5G	5	4,5 m
TC84-5G	8	4,5 m
TC124-5G	12	4,5 m

TC

REF	Zones	Cable length
TC5DE	5	0,5 m
TC8DE	8	0,5 m
TC12DE	12	0,5 m

C14610F

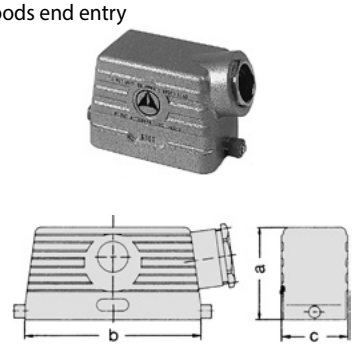
Thermocouple cables



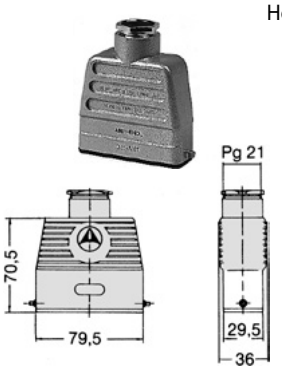
REF	a	b	c	contacts
C14610F0100011	83	93	43	10+
C14610F0160011	103	113	43	16+
C14610F0240011	130	140	43	24+

C14610G

Hoods end entry



Hoods top entry

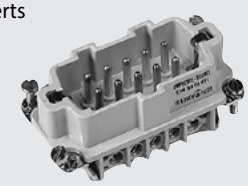


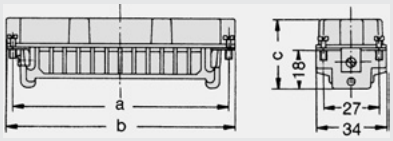
REF	a	b	c	contacts
C14610G0101061	51	73	43	10+
C14610G0161061	61	93	43	16+
C14610G0241061	61	119,5	43	24+

REF
C14610G0252002

C14610A

Male inserts

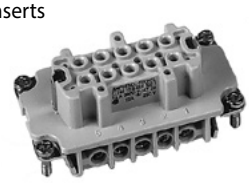


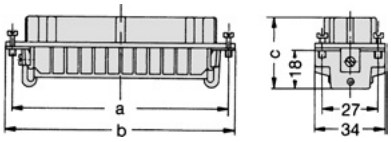


REF	a	b	c	contacts
C14610A0101021	57	64	34	10+
C14610A0161021	77,5	84,5	34	16+
C14610A0241021	104	111	34	24+

C14610B

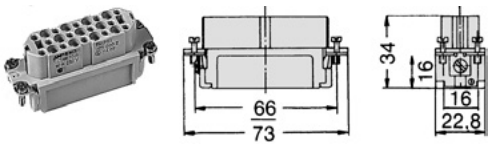
Female inserts





REF	a	b	c	contacts
C14610B0101021	57	64	34	10+
C14610B0161021	77,5	84,5	34	16+
C14610B0241021	104	111	34	24+

Female inserts (without contacts)



REF
C14610B0250002

C14610A

Female socket contacts

REF
VN02

C14610B

Thermocouples cables

REF	Identification	
Oe160-5	FeCo Thermocouplescables(**tobeorderedperm.)	16poles0,5mm2(FeCo)
Oe240-5		24poles0,5mm2(FeCo)

POWER ACCESSORIES

PIC

Mould power input connectors

REF	Amp.
PIC24G	15

MPC

Mould power cables

to mould — to frame

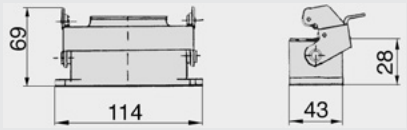
REF	Amp.	Cable length
MPC244-5G	15	4,5 m

Conversion table

REF	Cable length	Male	Female
MPC2524	0,5 m	24	25
MPC2425	0,5 m	25	24

C14610P

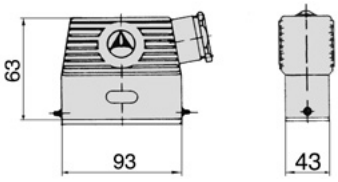
Thermocouple cables



REF
C14610FBA24P

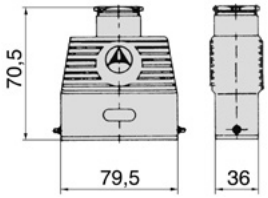
C14610G

Hoods end entry



REF
C14610GHL24P

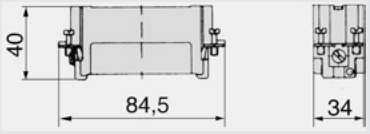
Hoods top entry



REF
C14610G0252002

C14610A

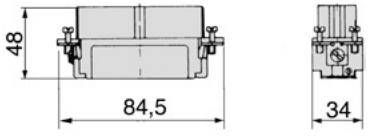
Male inserts (without contacts)



REF
C14610A2416

C14610B

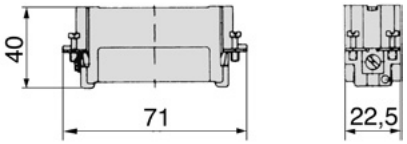
Female inserts (without contacts)



REF
C14610B2416

C14610A

Female inserts (without contacts)



REF
C14610A0250002

VN01

Male pin contacts

REF	
VN012416	1,5 mm²
VN012420	2,0 mm²

VN02

Female socket contacts

REF	
VN022416	1,5 mm²
VN022420	2,0 mm²

VN01

Male pin contacts

REF
C14610A0250002

POWER ACCESSORIES

OE...

Powercabels (1,5 mm², 25 poles)

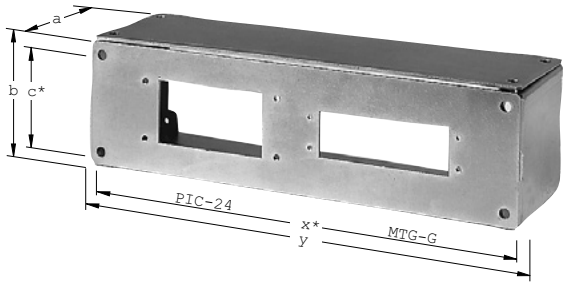
REF	Identification	
0e251-5	Powercabels (**to be ordered per m.)	25 poles 1,5 mm2

MOUNTING BOXES

PTCX

Terminal mounting boxes for power and thermocouple connectors

REF	a	b	c	x	y	Installation possibilities for
PTCX5K						PIC24G / MTC5G
PTCX8K	70	70	55	243	258	PIC24G / MTC8G
PTCX12K						PIC24G / MTC12G

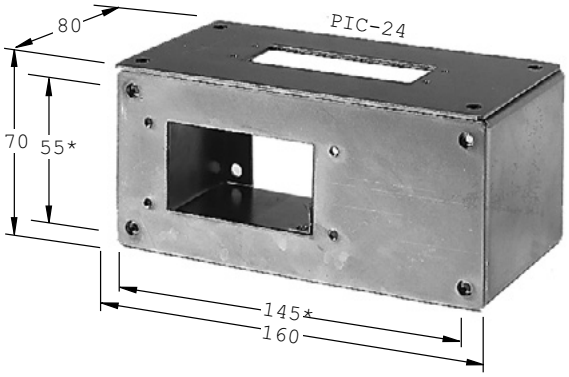


* Distance of mounting screws on the mould with M5 x 15.

PICX

Terminal mounting boxes for power and thermocouple connectors

REF	Installation possibilities for
PICX245K	PIC24G / MTC5G
PICX248K	PIC24G / MTC8G
PICX2412K	PIC24G / MTC12G



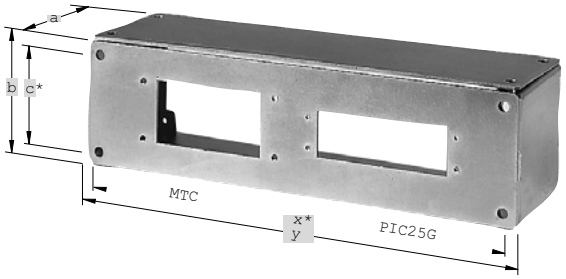
* Distance of mounting screws on the mould with M5 x 15.

PTC

Terminal mounting boxes for power and thermocouple connectors

UK only

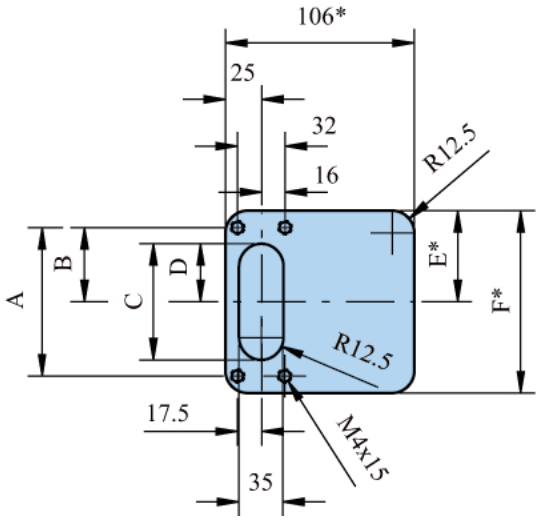
REF	a	b	c	x	y	Installation possibilities for
PTC5TBG	105	60	38	205	220	PIC5G / MTC5G
PTC8TBG	105	60	38	225	240	PIC8G / MTC8G
PTC12TBG	105	60	38	253	265	PIC12G / MTC12G



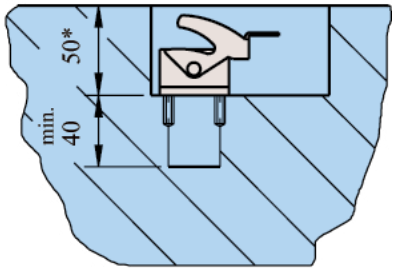
* Distance of mounting screws on the mould with M5 x 15.

MOUNTING WITHOUT BORES

Pocket for thermocouple connectors MTC...G

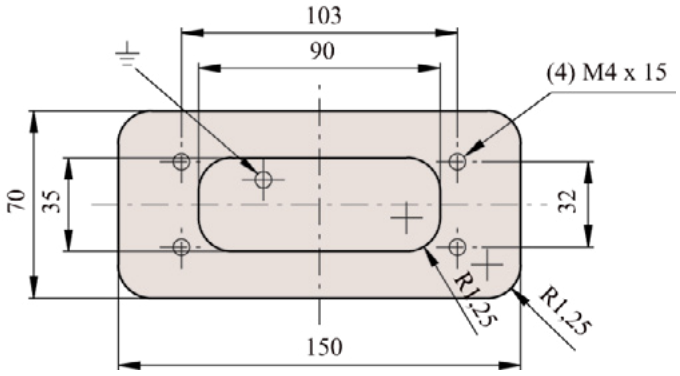


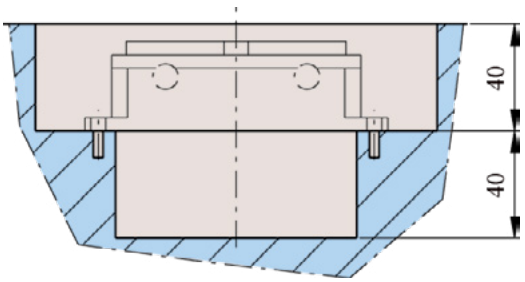
Note: Drawing depicts below flush mounting.
For surface mounting, disregard dimensions marked with *.



Dimensions	For connector		
	MTC5G	MTC8G	MTC12G
A	83	103	130
B	41,5	51,5	65
C	65	85	112
D	32,5	42,5	56
E	51	61	74,5
F	102	122	149

Pocket for mould power input connectors PIC24G



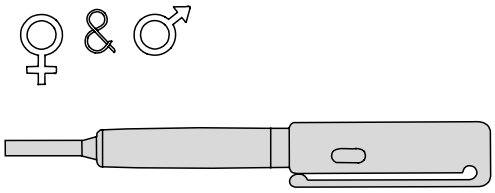


Note: Drawing depicts below flush mounting.
For surface mounting, disregard dimensions marked with *.

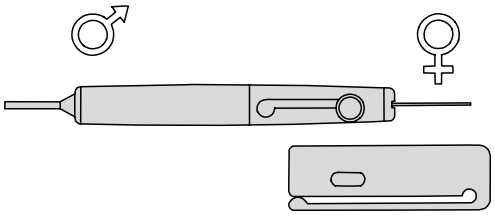
POWER ACCESSORIES

FG / FGN

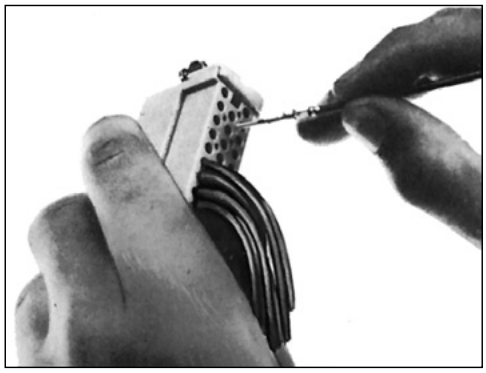
Removal tools for pin contacts VN-01 and socket contacts VN 02



REF	for
FGN2416	VN012416 / VN022416



REF	for
FG0300146	VN01 / VN02



- Rear insertion
- Contact to snap in audibly
- Check longitudinal clearance of 0,2 mm
- Front release
- Female contact
- Male contact

TA

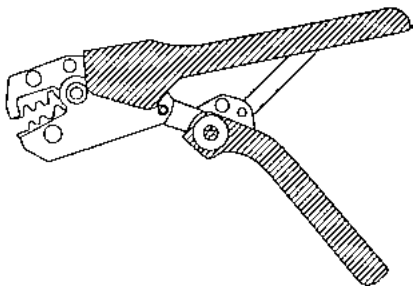
Contact crimp tools

REF	for
TA0100146	VN01
	VN02

FAN

Contact crimp tools

REF	for
FAN2416	VN01241620
	VN02241620

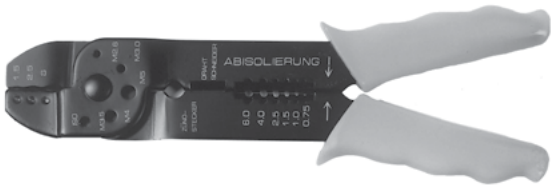


ASSEMBLY TOOLS

KT

Crimptools

REF	for
KT9500014	HWCC1



HWCC

Crimp connectors

REF	AMPS	Rating
HWCC1 (Cool-One)	10-15	16-22 RED
HWCC2 (Cool-One)	10-15	14-16 BLUE
HWCC5 (Hot-One)	15-30	10-12 YELLOW

ABC

Fuses for SSMX and DSS

REF	Amp.
ABC1	1
ABC5	5
ABC10	10
ABC15	15

THERMOCONTROLLERS

SmartSeries Me TEMPERATURE CONTROLLER

The MT platform combines essential features with advanced APS Technology for precision temperature control and essential protection features. Powerful performance from a compact unit that helps improve part quality and minimize scrap.

Optimize the performance of any hot runner system and unlock your operations full potential with Smart Series.

KEY FEATURES

INTUITIVE TOUCH SCREEN COLOR DISPLAY

- Simple, user friendly interface
- Allows for immediate familiarization
- Monitor up to 12 zones at once

INTEGRATED 15-AMP CONTROL CARDS

- Power to control a wide range of hot runner zones from nozzle tips to larger manifolds
- On-board heater fuses
- Quick and easy service access from the cabinet top and bottom

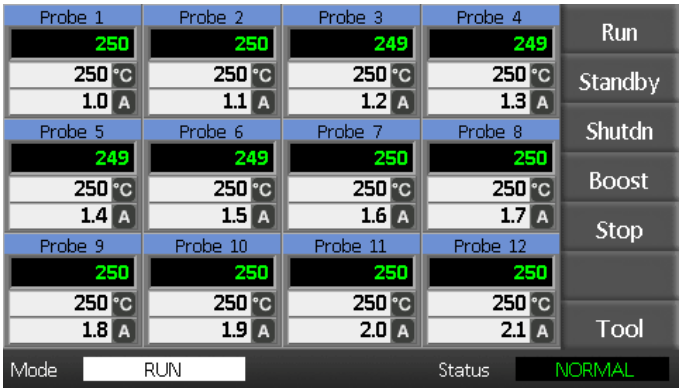
COMPACT, STACKABLE CABINET DESIGN

- Preserves valuable space
- Can be placed almost anywhere
- Available in 6 or 12 zone configurations
- Lightweight

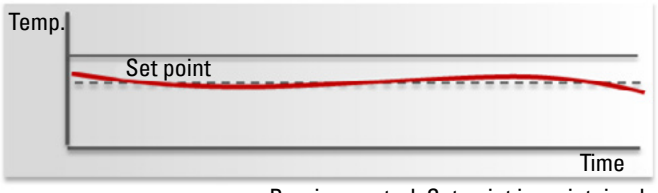
2 YEAR COMPREHENSIVE WARRANTY

- Worry free global support coverage
- Protects against manufacturers defects (fuses excluded)

SIMPLE TOUCH SCREEN CONTROLS



REF	# of zones	Note
ME6EU-D	6	Without cables
ME12EU-D	12	



Precise control. Set point is maintained.

Without APS

Less control. Set-point fluctuates.

CAPABILITIES

Control Features
APS (Adaptive Process System)
Phase Angle, Burst Firing
Infield Calibration Mode
Thermocouple Slave (Manual)
Auto Standby/Alarm Output
Wet Heater Bakeout
T/C Filtering
Delta/Wye Convertible Option
Interface Autopilot Control
Set Point Limit
Set Power Limit
Auto Load % Output
Uniform Start-Up

Operational Features
Auto/Manual Control
Zone "on", "off" and "locked off"
Menu "Auto Save"
Tool Store (4)
USB Port

Monitoring/Reporting
2-D Historical Graph

Protection Features
On-Board Load Fuses
Soft Start
Continuous Ground Fault Detection
Current Measurement
Overload Protection
Automatic Tool Diagnostics
Plastic Leak Detection (Manual)
LED Fault Indicator (Scan)

Alarms
Audible Alarm
Zone Alarm Configure
(+) High Temperature
(-) Low Temperature
T/C Open (remembered % output)
T/C Reversed
Open Fuse
Open Heater
Shorted Heater/Wet
Ground Fault Detection
Plastic Leak Detection

INCLUDES:

- Supply cord
- Quick Start Guide

UPON REQUEST:

- 4.8m (15') Cable Set

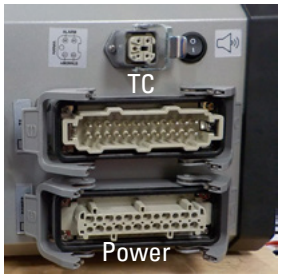
SPECIFICATIONS

User Interface	Full Color LCD Touch Screen
Display Size	5"
Cabinet Dimensions	36cm x 39cm x 20cm (14" x 15" x 8")
# of Zones (Max)	6 or 12
Control Algorithm	APS (Adaptive Process System)
Power Control	Phase Angle & Burst Firing Modes (Time Proportional, Zero-Crossing)
Temp. Resolution	1 (0°C or 0°F)
Power Response Time	8.3 ms at 60 Hz
Temperature Scale	0°C or 0°F (Software Selectable)
Thermocouple	J or K-Type (Software Selectable)
Operating Range	0- 472°C (32- 882°F)
Output Voltage (Max)	264 VAC
Supply Voltage	200/240V 3P Delta or 380/415V 3P Star with Neutral (480V, 3P with optional transformer)

Frequency	50- 60 Hz Automatic Switching
Ambient Temperature Range	5- 450°C (41- 113°F)
Humidity Range	Up to 95% non-condensing
Ground Fault Detection	40mA per Zone
Alarm Output	Closing Contact Relay 5A, 230V (Max)
T/C Connector	HBE-24
Power Connector	HBE-24
Overload Protection	Semi-conductor fuses on both heater legs
Heater Fuses	15A @ 220V Super Fast Blow Type (FF)
Control Modes	Closed Loop (Auto), Open Loop (Manual), Standby, Boost, Slave
Ports	USB
LED Indicators	Scan
Languages	English, French, German, Spanish, Polish, Russian, Chinese,Japanese, Czech, Italian, Hungarian, Turkish, Portuguese, Korean

SOCKETS AT THE BACK SIDE:

12 zones - separate connectors



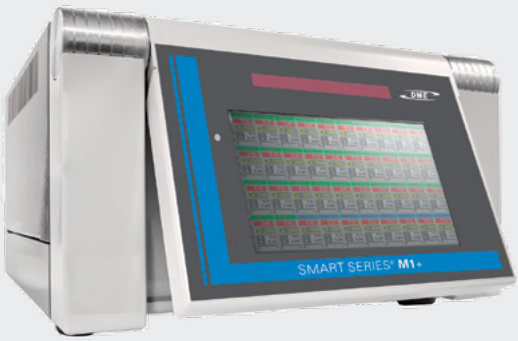
ZONE	PIN	ZONE	PIN
R1	1(L), 13(N)	T/C 1	1(+), 13(-)
R2	2(L), 14(N)	T/C 2	2(+), 14(-)
R3	3(L), 15(N)	T/C 3	3(+), 15(-)
R4	4(L), 16(N)	T/C 4	4(+), 16(-)
R5	5(L), 17(N)	T/C 5	5(+), 17(-)
R6	6(L), 18(N)	T/C 6	6(+), 18(-)
R7	7(L), 19(N)	T/C 7	7(+), 19(-)
R8	8(L), 20(N)	T/C 8	8(+), 20(-)
R9	9(L), 21(N)	T/C 9	9(+), 21(-)
R10	10(L), 22(N)	T/C 10	10(+), 22(-)
R11	11(L), 23(N)	T/C 11	11(+), 23(-)
R12	12(L), 24(N)	T/C 12	12(+), 24(-)
MAX. 230VAC / 16A			

6 zones - combined PWR+T/C connector

ZONE	PIN
R1	1(L), 2(N)
R2	3(L), 4(N)
R3	5(L), 6(N)
R4	7(L), 8(N)
R5	9(L), 10(N)
R6	11(L), 12(N)
T/C 1	13(+), 14(-)
T/C 2	15(+), 16(-)
T/C 3	17(+), 18(-)
T/C 4	19(+), 20(-)
T/C 5	21(+), 22(-)
T/C 6	23(+), 23(-)
MAX. 230VAC / 16A	

SmartSeries M1+ TEMPERATURE CONTROLLER

The M1 platform combines popular features with advanced APS Technology for precision control of up to 48 zones. Powerful performance in a compact unit. Optimize the performance of any hot runner system and unlock your operations full potential with SmartSeries.



KEY FEATURES

LARGE, INTUITIVE 7" TOUCH SCREEN COLOR HMI

- Easily monitor and control multiple zones at once
- Simple to set-up and operate
- Data displayed in real time

ADVANCED FEATURES & SETTINGS

- Excellent control and precision
- Achieve greater process stability
- Mould parts with higher quality and reduce scrap

COMPACT CABINET DIMENSIONS

- Preserves valuable space, can be placet anywhere
- Up to 32% smaller dimensions than competition

HIGH CAPACITY MODULAR CONTROL CARD

- Reduces number of cards required by up to 60%
- On-board heater and thermocouple fuses
- Eliminates excess wiring and improves accessibility
- Simple to access and maintain

IMM COMMUNICATION

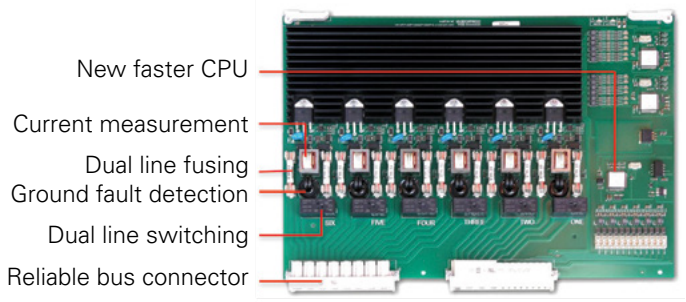
- Centralized alarm interlock
- Enhanced process control
- Prevents damage to equipment

Precise control. Set point is maintained.

Without APS

Less control. Set-point fluctuates.

REF	# of Zones	Slots for control cards	Cabinet size	Dimensions WxDxH in cm	Main switch fuse
M1P1212NC	12	2	XS	35 x 51 x 22	40A
M1P2424NC	24	4	S	35 x 51 x 28	63A
M1P3648NC	36	6	M	35 x 51 x 50	
M1P4848NC	48	8			



6-Zone, 15A/Zone Control Card
(Spare part REF: M1PCARD6Z)

CAPABILITIES

Control Features
APS (Adaptive Process System)
Phase Angle, Burst Firing
Low Mass High Watt Nozzle Control
Infield Calibration Mode
Thermocouple Slave (Auto/Manual)
Auto Standby/Alarm Output
T/C Auto/Man Kick-Off
Wet Heater Bakeout
T/C Filtering
Delta/Wye Convertable Option
Circuit Breaker Sized to Load
Interface Autopilot Control
Set Point Limit
Set Power Limit
Standby Timer
Sequential Melt-Start
Even Heat (Controlled Heating)
Even Cool (Controlled Cooling)

Operational Features
Auto/Manual Control
Zone "on", "off" and "locked off"
Menu "Auto Save"
Boost (Manual/Auto)
Tool Store (100 Limit)
USB Port
Zone Naming
Programmable Display Groups
Purge Wizard (Color Change)
Sequence Start
Sequence Shutdown
Sequenced Power Up (Manual)
Tool Data Export/Archive
Multi-Level Password (2)
Time and Date Change
Network Printing (Ethernet IP)
Touch Screen Calibration
On-Line Help

Protection Features
On-Board Load Fuses
On-Board T/C Fuses
Soft Start
Continuous Ground Fault Detection
Current Measurement
Overload Protection
Short Circuit Protection
Automatic Tool Diagnostics
Plastic Leak Detection (Manual)
LED Fault Indicators (2)
I/O Card (Optional)

Monitoring/Reporting
Instant Data Reporting
Data Report Archive
Print Screen in jpg, png, pdf Format
Save to USB Drive
2-D Historical Graph

Alarms
Audible Alarm (Optional)
Alarm Beacon (Optional)
Zone Alarm Configure
(+) High Temperature
(-) Low Temperature
T/C Open (Remembered % Output)
T/C Reversed
Open Fuse
Open Heater
Shorted Heater/Wet
Ground Fault Detection
Plastic Leak Detection
Programmable Action

INCLUDES

- Supply Cord
- Quick start guide
- I/O Card (standard in EU)

UPON REQUEST

- 4.8m (15') Cable Set
- Alarm beacon
- Portable stand

SPECIFICATIONS

User Interface	Full Color LCD Touch Screen
Display Sizes	7" (178 mm)
Control Algorithm	APS (Adaptive Process System)
Power Control	Phase Angle and Burst Firing Modes (Time Proportional, Zero-Crossing)
Display Resolution	0.1 (°C or °F)
Power Response Time	8.3 ms at 60 Hz
Temperature Scale	°C or °F (Software Selectable)
Thermocouple	J or K-Type (Software Selectable)
Operating Range	0 - 472°C (32 - 882°F)
Output Voltage (Max)	264 VAC
Supply Voltage	200/240V 3P Delta or 380/415V 3P Star with Neutral (480V, 3P with optional transformer)
Frequency	50 - 60 Hz Automatic Switching
Ambient Temperature Range	5 - 45°C (41 - 113°F)
Humidity Range	Up to 95% non-condensing

Ground Fault Detection	40mA per Zone
Alarm Output	Closing Contact Relay 5A, 230V (Max)
T/C Connector	HAN 24e
Power Connector	HAN 24e
Input Protection	63mA Nano Fuses on Both T/C Legs
Overload Protection	Semi-conductor fuses on both heater legs
Heater Fuses	15A @ 220V Fast Blow Type
Control Modes	Closed Loop (Auto), Open Loop (Manual), Standby, Boost, Slave
Ports	USB and Ethernet
LED Indicators	Scan, Fuse, Thermocouple, Failure, Ground Fault, Power%
Communications	SPI, Modbus
Languages	English, French, German, Spanish, Chinese, Japanese, Czech, Italian, Hungarian

SOCKETS AT THE BACK SIDE OF 24-ZONE M1+:

separate 12-zone connectors

Power TC Power TC

Easy access to control cards

ZONE	PIN
R1	1(L), 13(N)
R2	2(L), 14(N)
R3	3(L), 15(N)
R4	4(L), 16(N)
R5	5(L), 17(N)
R6	6(L), 18(N)
R7	7(L), 19(N)
R8	8(L), 20(N)
R9	9(L), 21(N)
R10	10(L), 22(N)
R11	11(L), 23(N)
R12	12(L), 24(N)
MAX. 230VAC / 16A	

ZONE	PIN
T/C 1	1(+), 13(-)
T/C 2	2(+), 14(-)
T/C 3	3(+), 15(-)
T/C 4	4(+), 16(-)
T/C 5	5(+), 17(-)
T/C 6	6(+), 18(-)
T/C 7	7(+), 19(-)
T/C 8	8(+), 20(-)
T/C 9	9(+), 21(-)
T/C 10	10(+), 22(-)
T/C 11	11(+), 23(-)
T/C 12	12(+), 24(-)

SmartSeries M2+ TEMPERATURE CONTROLLER

A fully featured controller platform with advanced capabilities for superior moulding performance. Well suited for tight process control on all co-injection applications, it is your best choice as a direct replacement for many existing outdated controller platforms.

Unlock your operations full potential.

KEY FEATURES

LARGE INTUITIVE TOUCH SCREEN CONTROLS

- Modernized interface
- Quick and easy to use
- Rapid response rates
- Familiar gestures like pinch-to-zoom
- Available in 8", 12" and 17" formats
- Locate monitor/user interface away from control cabinet with optional cable set

ADVANCED FUNCTIONALITY

- APS (Advanced Process System) Technology, the indutry´s most advanced heat control algorithm
- Auto leak detection
- Auto tool diagnostics
- TC auto slave
- Hot Runner power consumption (kW per hour) monitoring
- Graphical presentation of Hot Runner system for easy zone identification
- Purge Wizard
- And much more

IO ALARM INTERLOCK

- Interface with any injection machine
- Triggers an alarm when issues are identified
- Pauses the moulding process until corrected
- Helps maintain process consistency

WIRELESS NETWORK CONTROL (WLAN)

- Multi cell operation
- Multiple IP operation
- Download/Upload tool set-up
- Valuable for clean room applications

DME's Smart Series M2+ is available in zones numbering from 48 to 120, with touch screen ranging from 8 to 17" to suit your specific needs.

SPECIFICATIONS

User Interface	Full Color LCD Touch Screen
Display Sizes	8" (203mm), 12" (305mm), or 17" (432mm)
Control Algorithm	APS (Adaptive Process System)
Power Control	Phase Angle and Burst Firing Modes (Time Proportional, Zero-Crossing)
Control Accuracy	+/- 0.5°C (1°F)
Display Resolution	0.1 (°C or °F)
Power Response Time	8.3 ms at 60 Hz
Temperature Scale	°C or °F (Software Selectable)
Thermocouple	J or K-Type (Software Selectable)
Operating Range	0 - 472°C (32 - 882°F)
Output Voltage (Max)	264 VAC
Supply Voltage	200/240V 3P Delta or 380/415V 3P Star with Neutral (480V, 3P with optional transformer)
Frequency	50 - 60 Hz Automatic Switching
Ambient Temperature Range	5 - 45°C (41 - 113°F)
Humidity Range	Up to 95% non-condensing
Ground Fault Detection	40mA per Zone
Alarm Output	Closing Contact Relay 5A, 230V (Max)
T/C Connector	Various Options Available
Power Connector	Various Options Available
Input Protection	63mA Nano Fuses on Both T/C Legs
Overload Protection	Semi-conductor fuses on both heater legs
Heater Fuses	15A @ 220V Fast Blow Type
Control Modes	Closed Loop (Auto), Open Loop (Manual), Standby, Boost, Slave
Ports	USB and Ethernet
LED Indicators	Scan, Fuse, Thermocouple, Failure, Ground Fault, Power%
Communications	SPI, Real VNC, Modbus, OPC-UA
Languages	English, French, German, Portuguese, Spanish, Polish, Russian, Chinese, Japanese, Czech, Italian, Turkish

Cabinet Size	# of Cards (Max)	# of Zones (Max)	Dimensions WxDxH cm (in.)
XS	6	24	31x45x81 (12x18x32)
S	12	48	36x45x96 (14x18x38)
M	24	96	45x60x116 (18x24x46)
L	36	144	45x60x141 (18x24x56)
XL	63	252	56x61x168 (22x24x66)

Based on 4z-15A cards. Increase max zones with 6z-5A cards.

INCLUDES:

- Supply cord
- Quick Start Guide

UPON REQUEST:

- 4.8m (15') Cable Set

SmartSeries MT2 TEMPERATURE CONTROLLER

The MT platform combines essential features with advanced APS Technology for precision temperature control and essential protection features. Powerful performance from a compact unit that helps improve part quality and minimize scrap.

Optimize the performance of any hot runner system and unlock your operations full potential with Smart Series.

KEY FEATURES

INTUITIVE TOUCH SCREEN COLOR DISPLAY

- Simple, user friendly interface
- Allows for immediate familiarization
- Monitor 2 zones at once
- Continuous display of % power and current

2 ZONE CONTROL CARD

- On-board heater and thermocouple fuses
- Eliminates excess wiring and improves accessibility
- Servicing is quick and easy, minimizing downtime

COMPACT CABINET DESIGN

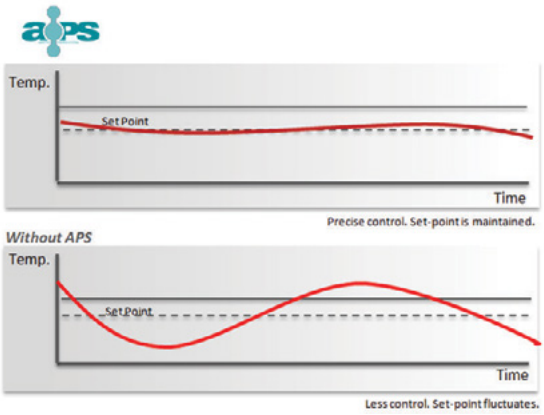
- Preserves valuable space
- Can be placed almost anywhere

DURABLE INDUSTRIAL DESIGN

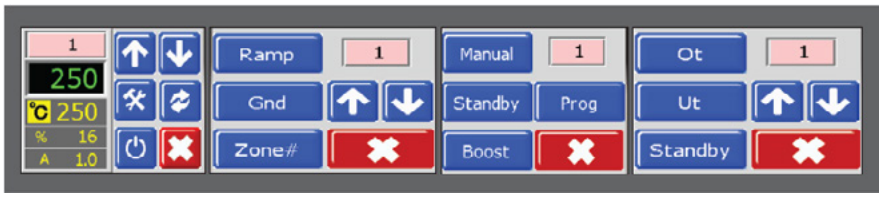
- Metal enclosure and heavy duty connectors
- High reliability

2 YEAR COMPREHENSIVE WARRANTY

- Worry free global support coverage
- Protects against manufacturers defects (fuses excluded)



SIMPLE TOUCH SCREEN CONTROLS



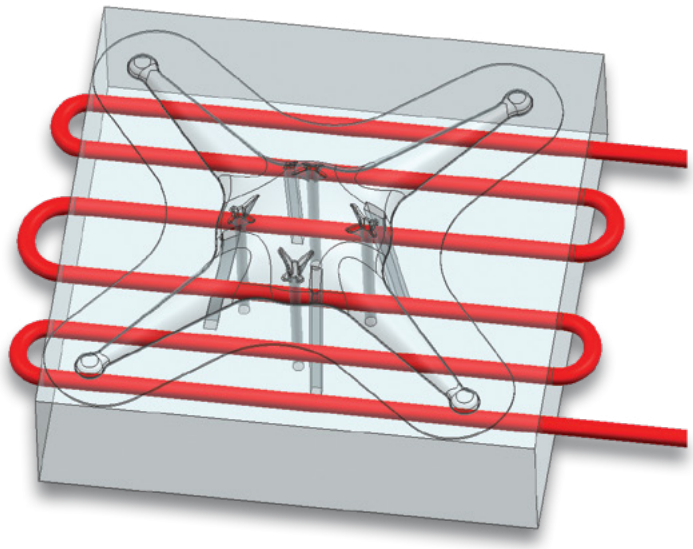
CAPABILITIES

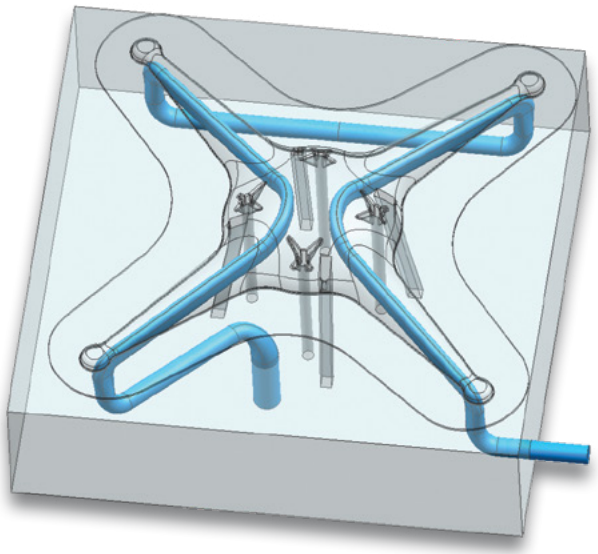
Control Features	Operational Features	Protection Features	Alarms
APS (Adaptive Process System)	Auto/Manual Control	On-Board Load Fuses	Zone Alarm Configure
Phase Angle, Burst Firing	Zone “on”, “off”	On-Board T/C Fuses	(+) High Temperature
Infield Calibration Mode	Menu “Auto Save”	Soft Start	(-) Low Temperature
Thermocouple Slave (Manual)	Boost/Standby (Manual)	Continuous Ground Fault Detection	T/C Open (remembered % output)
T/C Auto/Man Kick-Off		Current Measurement	T/C Reversed
Wet Heater Break-out		Overload Protection	Open Fuse
T/C Filtering		Short Circuit Protection	Open Heater
			Shorted Heater/Wet
			Ground Fault Detection

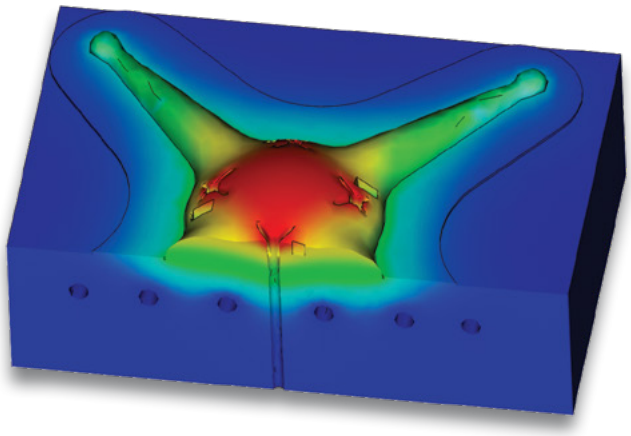
SPECIFICATIONS

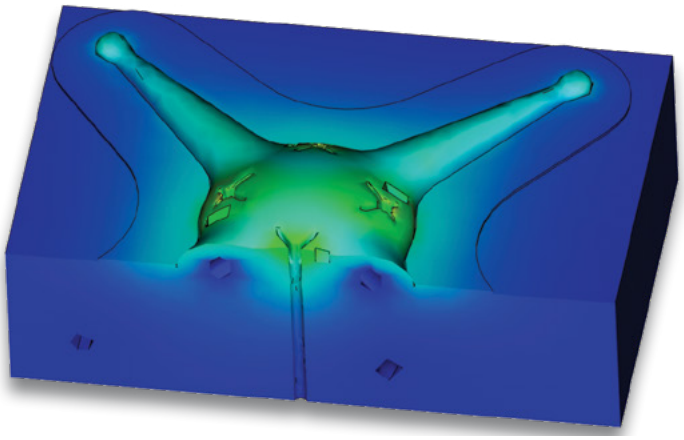
User Interface	Full Color LCD Touch Screen
Display Size	2” (51mm) - 176 x 200 pixels
Control Algorith	36cm x 39cm x 20cm (14” x 15” x 8”)
Power Control	Phase Angle & Burst Firing Modes (Time Proportional, Zero-Crossing)
Control Accuracy	+/- 0.5˚C (+/-1˚F)
Display Resolution	+/- 1˚C (+/-1˚F)
Power Response Time	8.3 ms at 60 Hz
Temp. Resolution	+/- 1˚C (+/-1˚F)
Temperature Scale	°C or °F (Software Selectable)
Thermocouple	J or K-Type (Software Selectable)
Operating Range	0 - 472°C (32 - 882°F)
Output Voltage (Max)	264 VAC
Supply Voltage	240V Single Phase - 10’ Power Cord Included
Frequency	50 - 60 Hz Automatic Switching
Ambient Temperature Range	5 - 45°C (41 - 113°F)
Humidity Range	Up to 95% non-condensing
Ground Fault Detection	40mA per Zone
Mould Power and Thermocouple Connection	10’ Integrated Power and T/C Cable HAN10A
Input Protection	63mA Nano Fuses on Both T/C legs
Overload Protection	Semi-conductor fuses on both heater legs
Heater Fuses	15A or 10A @ 220V Fast Blow Type
Control Modes	Closed Loop (Auto), Open Loop (Manual)
Languages	English, French, German, Chinese

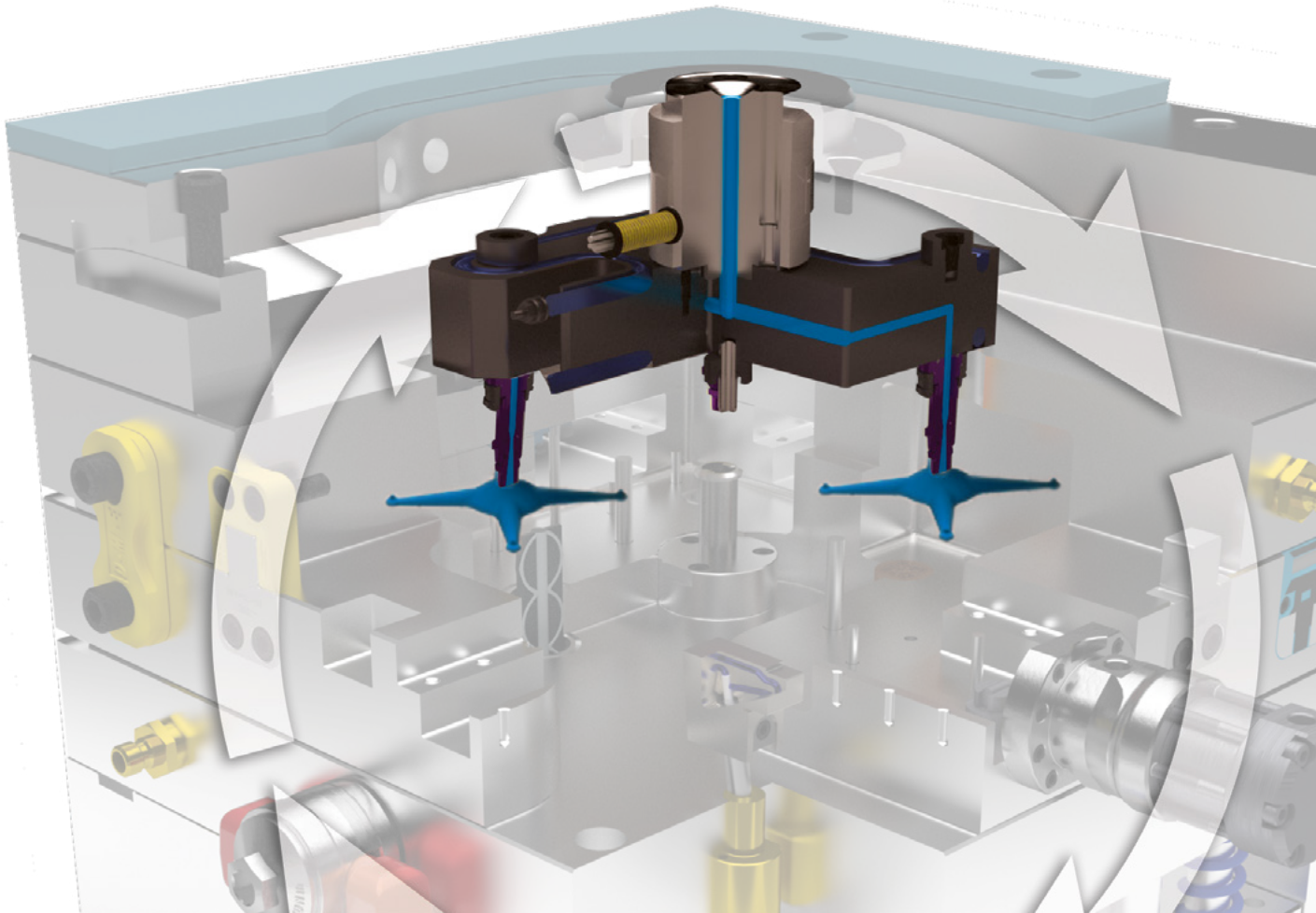
REF	Description
MT20202HAN10A	Set
HAN10A	16 A mould end connector











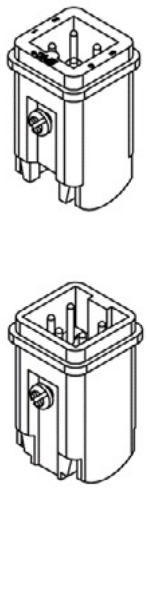
DME®

ELECTRO COMPONENTS

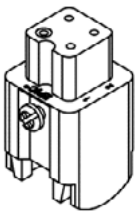
OVERVIEW AND COMPATIBILITY / SIZE - A / INSERTS / HOODS

NUMBER OF CONTACTS: 3 / 4

INSERTS

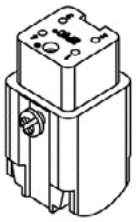


HA03INSFSCRW



HA03INSMSCRW

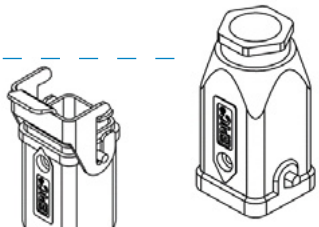
HA04INSFSCRW



HA04INSMSCRW

HOODS

HA03HT1M20L1



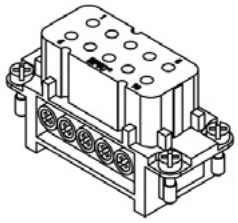
HA03HT1M20L0

HA03SS1M20L1

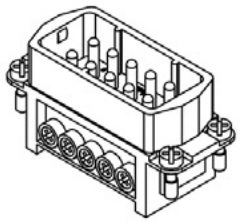
HA03ST1HOLL1

NUMBER OF CONTACTS: 10

INSERTS



HA10INSFSCRW



HA10INSMSCRW

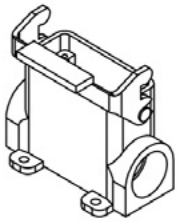
HOODS

HA10HT1M25L1

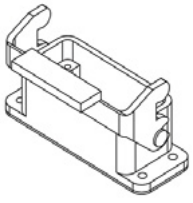
HA10HS1M25L1

HA10SS1M25L1

HA10SS2M20L1



HA10SR1HOLL1



OVERVIEW AND COMPATIBILITY / SIZE - A / INSERTS / HOODS

NUMBER OF CONTACTS: 16

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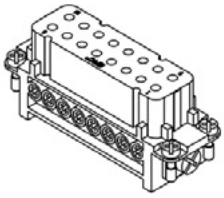
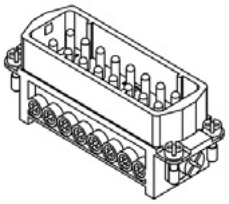


HA16INSFSCRW

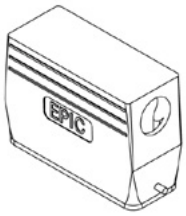


HA16INSMSCRW

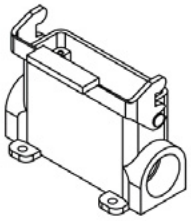
HOODS

HA16HT1M20L1
HA16HT1M25L1

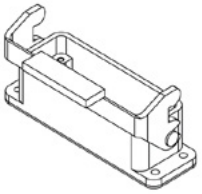
HA16HS1M20L1
HA16HS1M25L1



HA16SS1M25L1
HA16SS2M25L1

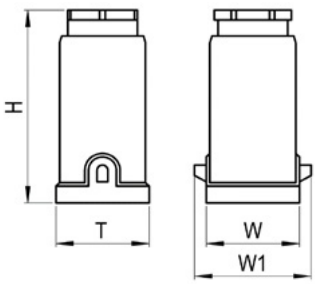


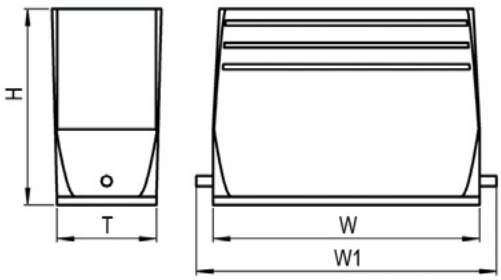
HA16SR1HOLL1



CABLE HOOD / RECTANGULAR CONNECTOR / SIZE - A

HA

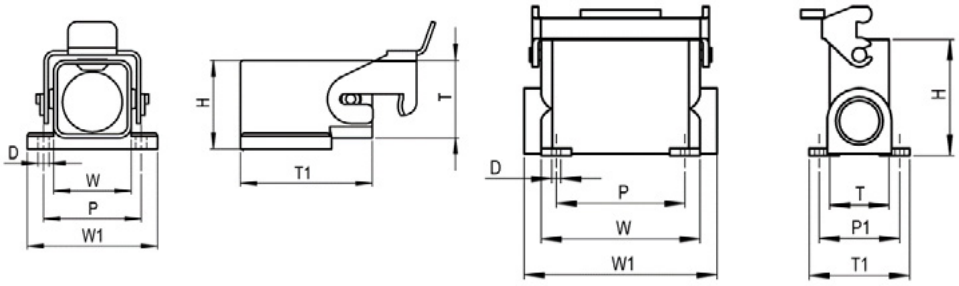




Material:
Aluminum / powder coated
Zinc alloy / powder coated

REF	Size	Number of contacts	Cable inlet direction	Number of cable inblets	Cable inlet thread size	Number of locking levers	H	T	W	W1	Material
HA03HT1M20L1	3 A	3	Top	1	M20	1	58,0	26,8	26,8	33,5	Zinc alloy
HA03HT1M20L0	3 A	3	Top	1	M20	1*	65,5	26,8	26,8	34,0	Zinc alloy
HA10HT1M25L1	10 A	10	Top	1	M25	1	53,5	29,5	63,0	73,0	Aluminium
HA10HS1M25L1	10 A	10	Side	1	M25	1	53,5	29,5	63,0	73,0	Aluminium
HA16HT1M20L1	16 A	16	Top	1	M20	1	58,3	29,5	79,0	89,0	Aluminium
HA16HS1M20L1	16 A	16	Side	1	M20	1	58,3	29,5	79,0	89,0	Aluminium
HA16HT1M25L1	16 A	16	Top	1	M25	1	58,3	29,5	79,0	89,0	Aluminium
HA16HS1M25L1	16 A	16	Side	1	M25	1	58,3	29,5	79,0	89,0	Aluminium

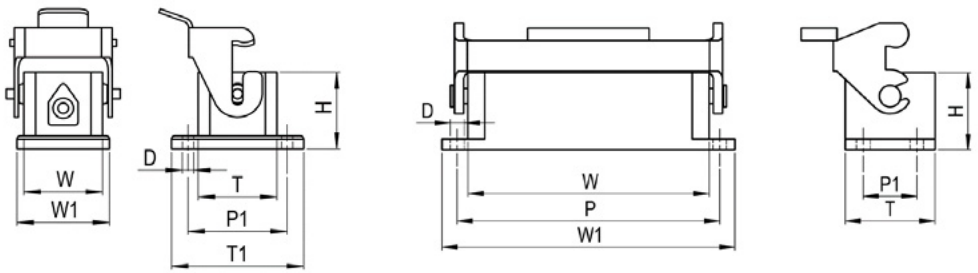
SURFACE MOUNTED HOOD / SIDE INLET / RECTANGULAR CONNECTOR / SIZE - A HA



Material:
Aluminum / powder coated
Zinc alloy / powder coated

REF	Size	Number of contacts	Cable inlet direction	Number of cable inblets	Cable inlet thread size	Number of locking levers	H	T	T1	W	W1	P	P1	D	Material
HA03SS1M20L1	3 A	3	Side	1	M20	1	27,3	23,8	40,5	23,8	40,0	30,0	-	3,4	Zinc alloy
HA10SS1M25L1	10 A	10	Side	1	M25	1	57,0	29,5	50,0	63,0	80,0	48,0	40,0	4,5	Aluminium
HA10SS2M20L1	10 A	10	Side	2	M20	1	57,0	29,5	50,0	63,0	80,0	48,0	40,0	4,5	Aluminium
HA16SS1M25L1	16 A	16	Side	1	M25	1	57,0	29,5	50,0	79,0	96,0	64,0	40,0	4,5	Aluminium
HA16SS2M25L1	16 A	16	Side	2	M25	1	57,0	29,5	50,0	79,0	96,0	64,0	40,0	4,5	Aluminium

PANEL-MOUNT HOOD / BOTTOM INLET / RECTANGULAR CONNECTOR / SIZE - A HA



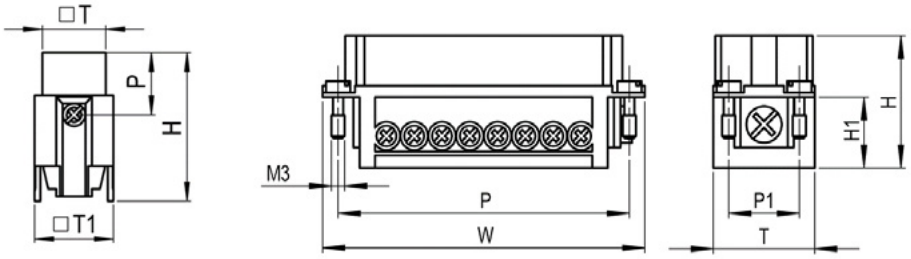
Material:
Aluminum / powder coated
Zinc alloy / powder coated

REF	Size	Number of contacts	Cable inlet di-rection	Number of cable inblets	Number of locking levers	H	T	T1	W	W1	P	P1	Material
HA03ST1HOLL1	3 A	3	Bottom	1	23,5	23,8	40,0	23,8	28,0	-	30,0	3,4	Zinc alloy
HA10SR1HOLL1	10 A	10	Bottom	1	25,0	29,5	-	63,0	81,0	70,0	17,5	3,6	Aluminium
HA16SR1HOLL1	16 A	16	Bottom	1	25,0	29,5	-	79,0	96,0	86,0	17,5	3,6	Aluminium

FEMALE INSERT / RECTANGULAR CONNECTOR / SIZE - A

HA

Material:
Aluminum / powder coated
Zinc alloy / powder coated

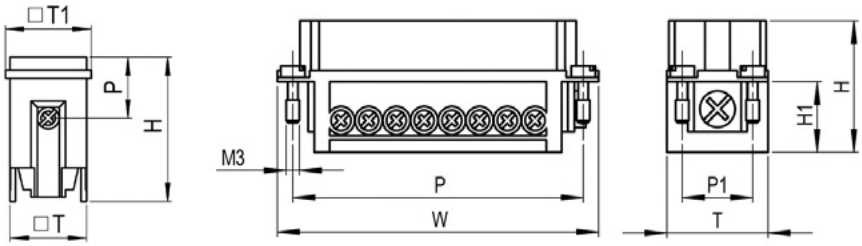


REF	Size	Number of contacts	Wire connection	H	H1	T	T1	W	P	P1	U max.	I max.	Wire cross-section
HA03INSFSCRW	3 A	3	screws	39,2	-	14,0	20,8	-	16,4	-	400V	10A	0,5 - 2,5mm²
HA04INSFSCRW	3 A	4	screws	39,2	-	16,7	20,8	-	16,4	-	400V	10A	0,5 - 2,5mm²
HA10INSFSCRW	10 A	10	screws	29,0	15,5	23,0	-	56,6	49,5	16,0	400V	14A	0,5 - 2,5mm²
HA16INSFSCRW	16 A	16	screws	29,0	15,5	23,0	-	73,0	66,0	16,0	400V	14A	0,5 - 2,5mm²
HA16SS2M25L1	16 A	16	Side	2	M25	1	57,0	29,5	50,0	79,0	96,0	64,0	40,0

MALE INSERT / RECTANGULAR CONNECTOR / SIZE - A

HA

Material:
Aluminum / powder coated
Zinc alloy / powder coated

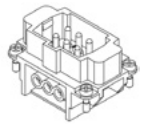


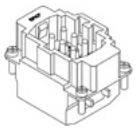
REF	Size	Number of contacts	Wire connection	H	H1	T	T1	W	P	P1	U max.	I max.	Wire cross-section
HA03INSMSCRW	3 A	3	screws	39,5	-	20,8	23,3	-	16,7	-	400V	10A	0,5 - 2,5mm²
HA04INSMSCRW	3 A	4	screws	39,5	-	20,8	23,3	-	16,7	-	400V	10A	0,5 - 2,5mm²
HA10INSMSCRW	10 A	10	screws	29,0	15,5	23,0	-	56,6	19,5	16	400V	14A	0,5 - 2,5mm²
HA16INSMSCRW	16 A	16	screws	29,0	15,5	23,0	-	73,0	66,0	16	400V	14A	0,5 - 2,5mm²

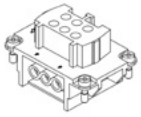
OVERVIEW AND COMPATIBILITY / SIZE - B / INSERTS / HOODS

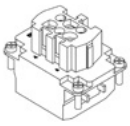
NUMBER OF CONTACTS: 6

INSERTS


HB06INSMSCRW


HB06INSMCLMP


HB06INSFSCRW

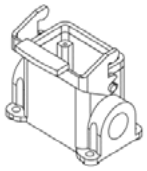

HB06INSFCLMP

HOODS

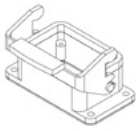
HB06HS1M20L1

HB06HT1M20L1

HB06SS1M20L1

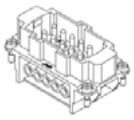


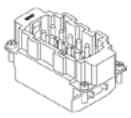
HB06SR1HOLL1



NUMBER OF CONTACTS: 10

INSERTS


HB10INSMSCRW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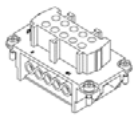
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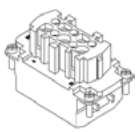

HB10INSFCLMP

HOODS

HB10HS1M20L1

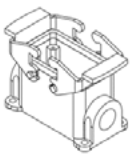
HB10HT1M20L1

HB10HT1M20L2

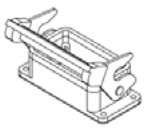
HB10HS1M20L2

HB10SS1M20L1

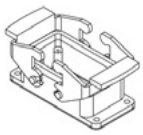
HB10SS1M20L2



HB10SR1HOLL1



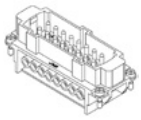
HB10SR1HOLL2

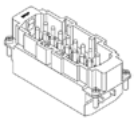


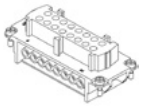
OVERVIEW AND COMPATIBILITY / SIZE - B / INSERTS / HOODS

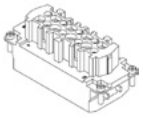
NUMBER OF CONTACTS: 16

INSERTS


HB16INSMSCRW


HB16INSMCLMP


HB16INSFSCRW


HB16INSFCLMP

HOODS

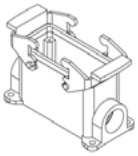
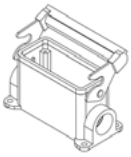
HB16HS1M25L1
HB16HS1M32L1


HB16HT1M25L1
HB16HT1M32L1

HB16HS1M25L2
HB16HS1M32L2

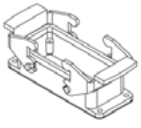
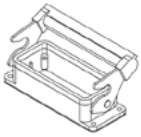

HB16HT1M25L2
HB16HT1M32L2

HB16SS1M25L1
HB16SS2M25L1

HB16SS1M25L2
HB16SS2M25L2

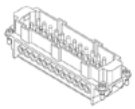
HB16SR1HOLL1

HB16SR1HOLL2

NUMBER OF CONTACTS: 24

INSERTS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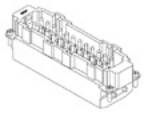
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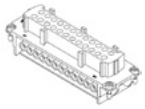
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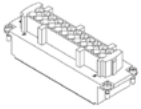

HB24INSFCLMP

HOODS

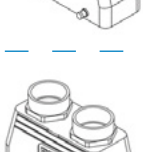
HB24HS1M25L1
HB24HS1M32L1


HB24HT1M25L1
HB24HT1M32L1

HB24HS1M25L2
HB24HS1M32L2

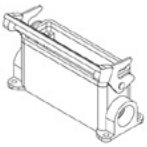

HB24HT1M25L2
HB24HT1M32L2

HB24HT2M32L1



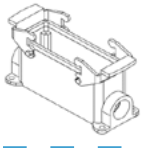
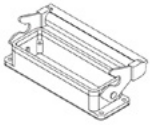

HB24HT2M32L2

HB24SS1M25L1
HB24SS2M25L1

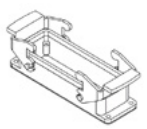


HB24SS1M25L2
HB24SS2M25L2

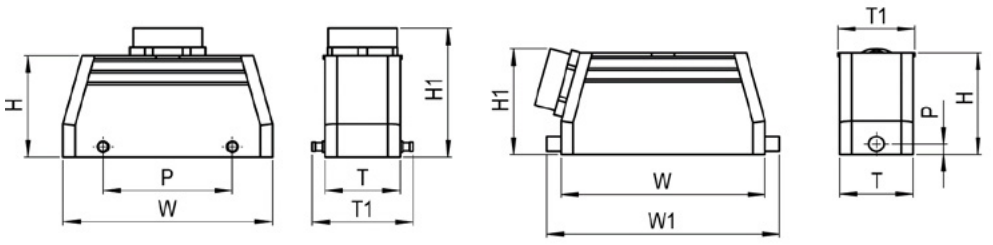
HB24SR1HOLL1

HB24SR1HOLL2



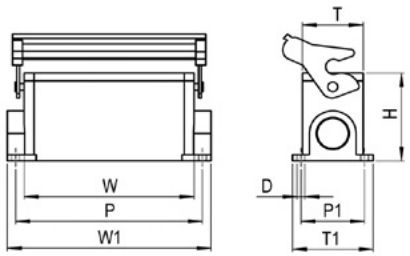
CABLE HOOD / RECTANGULAR CONNECTOR / SIZE - B — HB



Material:
Aluminum / powder coated
Zinc alloy / powder coated

REF	Size	Number of contacts	Cable inlet direction	Number of cable inblets	Cable inlet thread size	Number of locking levers	H	H1	T	T1	W	W1	P
HB06HT1M20L1	6 B	6	Top	1	M20	1	52,0	-	43,0	45,0	60,0	74,8	6,3
HB06HS1M20L1	6 B	6	Side	1	M20	1	52,0	-	43,0	45,0	60,0	74,8	6,3
HB10HT1M20L1	10 B	10	Top	1	M20	1	52,0	-	43,0	45,0	73,0	90,0	6,3
HB10HT1M20L2	10 B	10	Top	1	M20	2	52,0	-	43,0	57,8	73,0	-	27,0
HB10HS1M20L1	10 B	10	Side	1	M20	1	52,0	-	43,0	45,0	73,0	90,0	6,3
HB10HS1M20L2	10 B	10	Side	1	M20	2	52,0	-	43,0	57,8	73,0	-	27,0
HB16HT1M25L2	16 B	16	Top	1	M25	2	61,0	-	43,0	57,8	93,3	-	47,5
HB16HT1M32L2	16 B	16	Top	1	M32	2	61,0	-	43,0	57,8	93,3	-	47,5
HB16HT1M25L1	16 B	16	Top	1	M25	1	61,0	-	43,0	45,0	93,3	110,0	6,3
HB16HT1M32L1	16 B	16	Top	1	M32	1	61,0	-	43,0	45,0	93,3	110,0	6,3
HB16HS1M25L2	16 B	16	Side	1	M25	2	61,0	-	43,0	57,8	93,3	-	47,5
HB16HS1M32L2	16 B	16	Side	1	M32	2	61,0	-	43,0	57,8	93,3	-	47,5
HB16HS1M25L1	16 B	16	Side	1	M25	1	61,0	-	43,0	45,0	93,3	110,0	6,3
HB16HS1M32L1	16 B	16	Side	1	M32	1	61,0	-	43,0	45,0	93,3	110,0	6,3
HB24HT1M25L2	24 B	24	Top	1	M25	2	61,0	77,5	43,0	57,8	120,0	-	74,0
HB24HT1M32L2	24 B	24	Top	1	M32	2	61,0	77,5	43,0	57,8	120,0	-	74,0
HB24HT2M32L2	24 B	24	Top	2	M32	2	61,0	77,5	43,0	57,8	120,0	-	74,0
HB24HT2M32L1	24 B	24	Top	2	M32	1	61,0	77,5	43,0	57,8	120,0	-	74,0
HB24HT1M25L1	24 B	24	Top	1	M25	1	61,0	63,4	43,0	45,0	120,0	137,0	6,3
HB24HT1M32L1	24 B	24	Top	1	M32	1	61,0	63,4	43,0	45,0	120,0	137,0	6,3
HB24HS1M25L2	24 B	24	Side	1	M25	2	61,0	77,5	43,0	57,8	120,0	-	74,0
HB24HS1M32L2	24 B	24	Side	1	M32	2	61,0	77,5	43,0	57,8	120,0	-	74,0
HB24HS1M25L1	24 B	24	Side	1	M25	1	61,0	63,4	43,0	45,0	120,0	137,0	6,3
HB24HS1M32L1	24 B	24	Side	1	M32	1	61,0	63,4	43,0	45,0	120,0	137,0	6,3

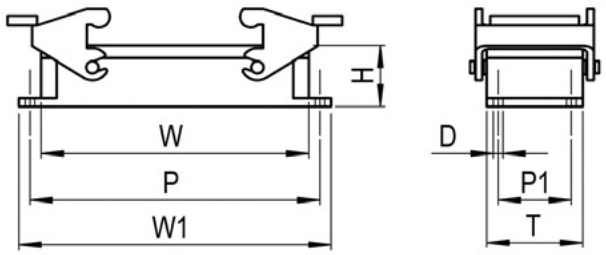
PANEL-MOUNT HOOD / RECTANGULAR CONNECTOR / SIZE - B — HB



Material:
Aluminum / powder coated
Zinc alloy / powder coated

REF	Size	Number of contacts	Cable inlet position	Number of cable inblets	Cable inlet thread size	Number of locking levers	H	T	T1	W	W1	P	P1	D
HB06SS1M20L1	6 B	6	Side	1	M20	1	57,0	43,0	52,0	60,0	84,0	70,0	40,0	5,5
HB10SS1M20L1	10 B	6	Side	1	M20	1	57,0	43,0	52,0	73,0	94,0	82,0	40,0	5,5
HB10SS1M20L2	10 B	10	Side	1	M20	2	57,0	43,0	52,0	73,0	94,0	82,0	40,0	5,5
HB16SS1M25L1	16 B	16	Side	1	M25	1	64,0	43,0	57,0	93,3	117,0	105,0	45,0	5,5
HB16SS2M25L1	16 B	16	Side	2	M25	1	64,0	43,0	57,0	93,3	117,0	105,0	45,0	5,5
HB16SS1M25L2	16 B	16	Side	1	M25	2	64,0	43,0	57,0	93,3	117,0	105,0	45,0	5,5
HB16SS2M25L2	16 B	16	Side	2	M25	2	64,0	43,0	57,0	93,3	117,0	105,0	45,0	5,5
HB24SS1M25L1	24 B	24	Side	1	M25	1	64,0	43,0	57,0	120,0	144,0	132,0	45,0	5,5
HB24SS2M25L1	24 B	24	Side	2	M25	1	64,0	43,0	57,0	120,0	144,0	132,0	45,0	5,5
HB24SS1M25L2	24 B	24	Side	1	M25	2	64,0	43,0	57,0	120,0	144,0	132,0	45,0	5,5
HB24SS2M25L2	24 B	24	Side	2	M25	2	64,0	43,0	57,0	120,0	144,0	132,0	45,0	5,5

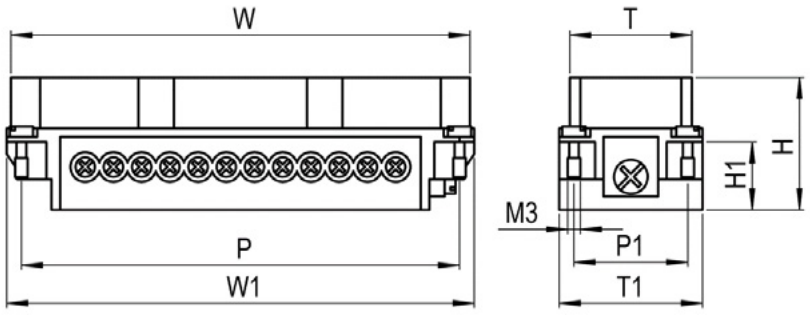
PANEL MOUNT HOOD / RECTANGULAR CONNECTOR / SIZE - B HB



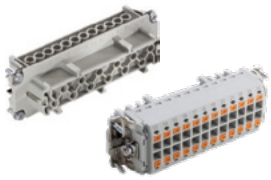
Material:
Aluminum / powder coated
Zinc alloy / powder coated

REF	Size	Number of contacts	Wire connection	H	H1	T	T1	W	P	P1	U max.
HB06SR1HOLL1	6 B	6	Bottom	1	57,0	43,0	52,0	60,0	84,0	70,0	40,0
HB10SR1HOLL1	10 B	10	Bottom	1	57,0	43,0	52,0	73,0	94,0	82,0	40,0
HB10SR1HOLL2	10 B	10	Bottom	2	57,0	43,0	52,0	73,0	94,0	82,0	40,0
HB16SR1HOLL1	16 B	16	Bottom	1	64,0	43,0	57,0	93,3	117,0	105,0	45,0
HB16SR1HOLL2	16 B	16	Bottom	2	64,0	43,0	57,0	93,3	117,0	105,0	45,0
HB24SR1HOLL1	24 B	24	Bottom	1	64,0	43,0	57,0	93,3	117,0	105,0	45,0
HB24SR1HOLL2	24 B	24	Bottom	2	64,0	43,0	57,0	93,3	117,0	105,0	45,0

FEMALE INSERT / RECTANGULAR CONNECTOR / SIZE - B HB

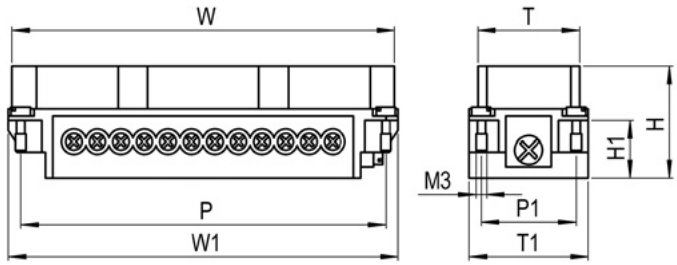


Material:
Aluminum / powder coated
Zinc alloy / powder coated

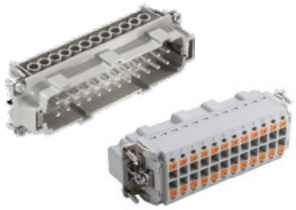


REF	Size	Number of contacts	Wire connection	H	H1	T	T1	W	W1	P	P1	U max.	I max.	Wire cross-section
HB06INSFSCRW	6 B	6	Screw	31,5	16,0	23,0	34,0	32,0	51,0	44,0	27,0	500V	16A	0,5 - 2,5mm²
HB06INSFCLMP	6 B	6	Push-in	37,0	19,4	23,0	34,0	32,0	50,0	44,0	27,0	500V	16A	0,14 - 2,5mm²
HB10INSFSCRW	10 B	10	Screw	31,5	16,0	25,0	34,0	45,0	64,0	57,0	27,0	500V	16A	0,5 - 2,5mm²
HB10INSFCLMP	10 B	10	Push-in	37,0	19,4	25,0	34,0	45,0	63,4	57,0	27,0	500V	16A	0,14- 2,5mm²
HB16INSFSCRW	16 B	16	Screw	31,5	16,0	25,0	34,0	65,5	84,5	77,5	27,0	500V	16A	0,5 - 2,5mm²
HB16INSFCLMP	16 B	16	Push-in	37,0	19,4	25,0	34,0	65,5	83,5	77,5	27,0	500V	16A	0,14- 2,5mm²
HB24INSFSCRW	24 B	24	Screw	31,5	16,0	25,0	34,0	92,0	111,0	104,0	27,0	500V	16A	0,5 - 2,5mm²
HB24INSFCLMP	24 B	24	Push-in	37,0	19,4	25,0	34,0	92,0	110,3	104,0	27,0	500V	16A	0,14- 2,5mm²

MALE INSERT / RECTANGULAR CONNECTOR / SIZE - B HB

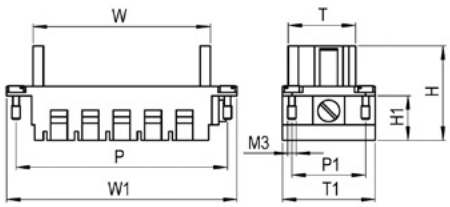


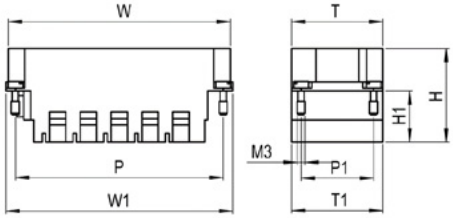
Material:
Aluminum / powder coated



REF	Size	Number of contacts	Wire connection	H	H1	T	T1	W	W1	P	P1	U max.	I max.	Wire cross-section
HB06INSMSCRW	6 B	6	Screw	31,2	16,0	26,5	34,0	49,0	51,0	44,0	27,0	500V	16A	0,5 - 2,5mm²
HB06INSMCLMP	6 B	6	Push-in	34,4	19,4	32,5	34,0	44,0	-	44,0	27,0	500V	16A	0,14 - 2,5mm²
HB10INSMSCRW	10 B	10	Screw	31,2	16,0	29,0	34,0	62,0	64,0	57,0	27,0	500V	16A	0,5 - 2,5mm²
HB10INSMCLMP	10 B	10	Push-in	34,4	19,4	32,5	34,0	63,4	-	57,0	27,0	500V	16A	0,14- 2,5mm²
HB16INSMSCRW	16 B	16	Screw	31,2	16,0	29,0	34,0	82,5	84,5	77,5	27,0	500V	16A	0,5 - 2,5mm²
HB16INSMCLMP	16 B	16	Push-in	34,4	19,4	33,9	34,0	83,5	-	77,5	27,0	500V	16A	0,14- 2,5mm²
HB24INSMSCRW	24 B	24	Screw	31,2	16,0	29,0	34,0	109,0	111,0	104,0	27,0	500V	16A	0,5 - 2,5mm²
HB24INSMCLMP	24 B	24	Push-in	34,4	19,4	33,8	34,0	110,3	-	104,0	27,0	500V	16A	0,14- 2,5mm²

MALE INSERT / RECTANGULAR CONNECTOR / SIZE - B HB





Material:
Polyamid / black

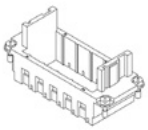
REF	Size	Number of slots	Version	H	H1	T	T1	W	W1	P	P1
HB16FRMFMCR5	16 B	5	Female	35,0	16,5	24,7	34,0	65,0	84,5	77,5	27,0
HB16FRMMMCR5	16 B	5	Male	35,0	19,0	34,0	34,0	82,9	84,5	77,5	27,0

REF	Size:
MCBINSF5CONT	Female modul
MCBINSM5CONT	Male modul

REF	Size:	Wire connection	Wire cross-section
MCBINSF5CONT	Female modul	Crimp	1,5 mm²
MCBINSM5CONT	Male modul	Crimp	1,5 mm²

FEMALE MODULAR CONNECTOR ASSEMBLY

Frame



HB16FRMFMCR5 1pc

Modul

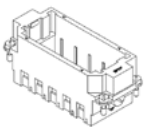
MCBINSF5CONT 5pcs

Turned contact

VN012416 25pcs

MALE MODULAR CONNECTOR ASSEMBLY

Frame



HB16FRMMMCR5 1pc

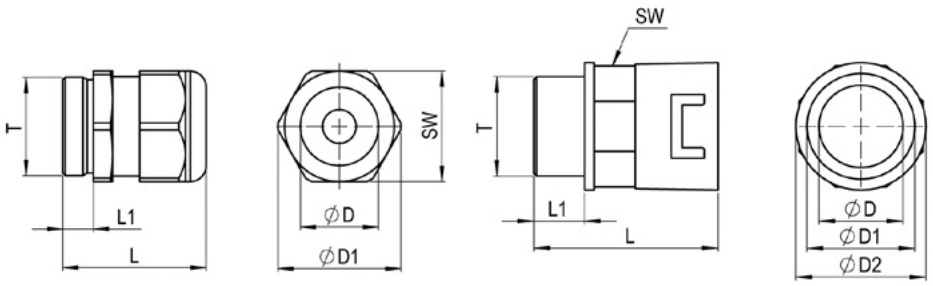
Modul

MCBINSM5CONT 5pcs

Turned contact

VN022416 25pcs

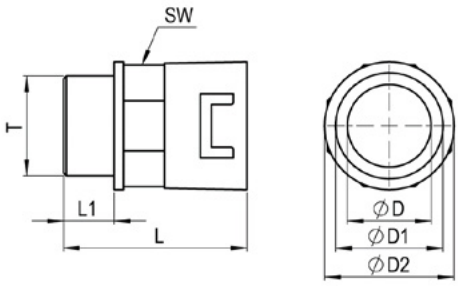
MALE INSERT / RECTANGULAR CONNECTOR / SIZE - B HB



Material:
Polyamid / RAL 7001

REF	T	SW	D (Clamping range)	D1	D2	L min.	L max.	L	L1
HBSKINTOPM20	M20x1,5	25	6 - 13	27,6	-	34	37	-	9
HBSKINTOPM25	M25x1,5	30	8 - 17	33,6	-	35	40	-	10
HBSKINTOPM32	M32x1,5	36	9 - 21	40,3	-	39	47	-	10
HBSKINTOPG11	PG11	22	4 - 10	24,4	-	30	38	-	8
HBSKINTOPG16	PG16	27	9 - 14	29,5	-	35	44	-	10
HBSKINTOPG21	PG21	33	13 - 18	36,2	-	40	49	-	11
HBSKINTOPG29	PG29	42	14 - 25	46,3	-	44	56	-	11

MALE INSERT / RECTANGULAR CONNECTOR / SIZE - B HB



Material:
Polyamid / black

REF	T	SW	D	D1	D2	L	L1
HBFLEXILOK34	M32x1,5	39	27	34,0	41,0	58,0	16

REF	Inner diameter	Outer diameter	Bending radius
HBFPASHOSE34	28,1	34,5	60

MOULD PLUGS

KEY FEATURES

- 5 types of plugs: 2 zones, 4 zones, 6 zones, 12 zones and 16 zones
- thermocouple and power combined in housing

MPLUG.16				
	Heater (L)	Heater (N)	T/C (+)	T/C (-)
Zone	Male	Male	Female	Female
1	1	9	1	9
2	2	10	2	10
3	3	11	3	11
4	4	12	4	12
5	5	13	5	13
6	6	14	6	14
7	7	15	7	15
8	8	16	8	16
9	17	25	17	25
10	18	26	18	26
11	19	27	19	27
12	20	28	20	28
13	21	29	21	29
14	22	30	22	30
15	23	31	23	31
16	24	32	24	32
Male (1-16)	10.5300	HA16	Epic/Contact	
Female (1-16)	10.5310	HA16		
Male (17-32)	10.5400	HA16		
Female (17-32)	10.5410	HA16		
Base (SL)	10.1520	HBE48		

MPLUG.12				
	Heater (L)	Heater (N)	T/C (+)	T/C (-)
Zone	Male	Male	Female	Female
1	1	13	1	13
2	2	14	2	14
3	3	15	3	15
4	4	16	4	16
5	5	17	5	17
6	6	18	6	18
7	7	19	7	19
8	8	20	8	20
9	9	21	9	21
10	10	22	10	22
11	11	23	11	23
12	12	24	12	24
Male	10.1960	HBE24	Epic/Contact	
Female	10.1970	HBE24		
Base (SL)	10.1520	HBE48		

THERMOCOUPLE ACCESSORIES

HR

Thermocouple connectors

REF	Zones
MTC5G	5
MTC8G	8
MTC12G	12

DR

Thermocouple cables

to mould

to frame

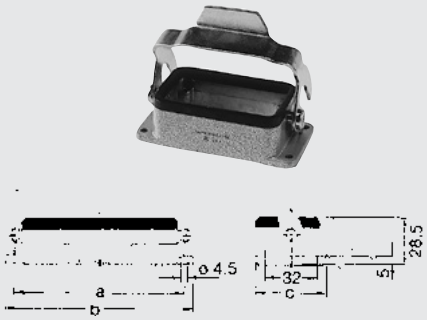
REF	Zones	Cable length
TC54-5G	5	4,5 m
TC84-5G	8	4,5 m
TC124-5G	12	4,5 m

TC

REF	Zones	Cable length
TC5DE	5	0,5 m
TC8DE	8	0,5 m
TC12DE	12	0,5 m

C14610F

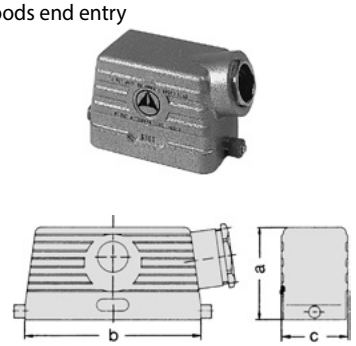
Thermocouple cables



REF	a	b	c	contacts
C14610F0100011	83	93	43	10+
C14610F0160011	103	113	43	16+
C14610F0240011	130	140	43	24+

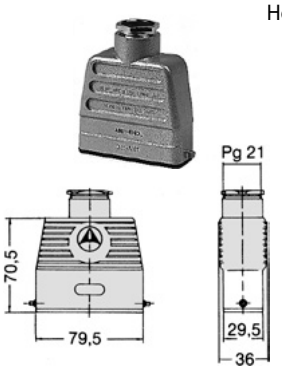
C14610G

Hoods end entry



REF	a	b	c	contacts
C14610G0101061	51	73	43	10+
C14610G0161061	61	93	43	16+
C14610G0241061	61	119,5	43	24+

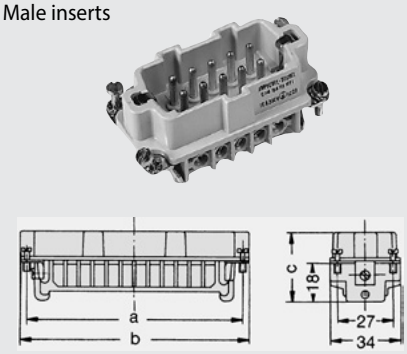
Hoods top entry



REF
C14610G0252002

C14610A

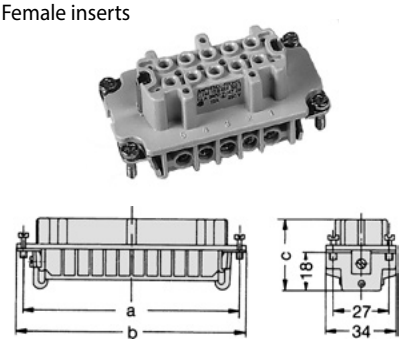
Male inserts



REF	a	b	c	contacts
C14610A0101021	57	64	34	10+
C14610A0161021	77,5	84,5	34	16+
C14610A0241021	104	111	34	24+

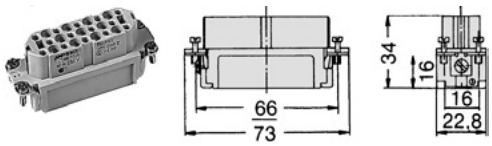
C14610B

Female inserts



REF	a	b	c	contacts
C14610B0101021	57	64	34	10+
C14610B0161021	77,5	84,5	34	16+
C14610B0241021	104	111	34	24+

Female inserts (without contacts)



REF
C14610B0250002

C14610A

Female socket contacts

REF
VN02

C14610B

Thermocouples cables

REF	Identification	
Oe160-5	FeCo Thermocouplescables(**toberorderedperm.)	16poles0,5mm2(FeCo)
Oe240-5		24poles0,5mm2(FeCo)

POWER ACCESSORIES

PIC

Mould power input connectors

REF	Amp.
PIC24G	15

MPC

Mould power cables

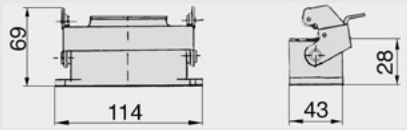
to mould — to frame

REF	Amp.	Cable length
MPC244-5G	15	4,5 m

Conversion table			
REF	Cable length	Male	Female
MPC2524	0,5 m	24	25
MPC2425	0,5 m	25	24

C14610P

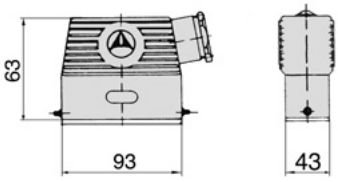
Thermocouple cables



REF
C14610FBA24P

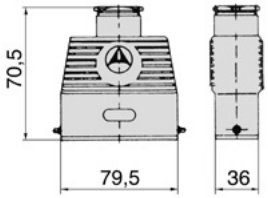
C14610G

Hoods end entry



REF
C14610GHL24P

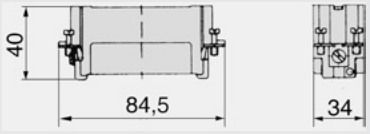
Hoods top entry



REF
C14610G0252002

C14610A

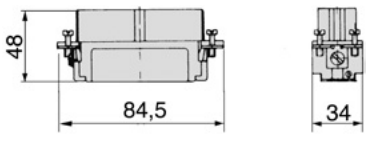
Male inserts (without contacts)



REF
C14610A2416

C14610B

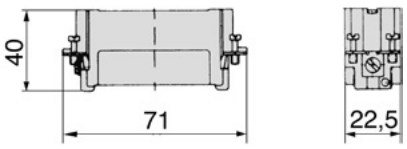
Female inserts (without contacts)



REF
C14610B2416

C14610A

Female inserts (without contacts)



REF
C14610A0250002

VN01

Male pin contacts

REF	
VN012416	1,5 mm²
VN012420	2,0 mm²

VN02

Female socket contacts

REF	
VN022416	1,5 mm²
VN022420	2,0 mm²

VN01

Male pin contacts

REF
C14610A0250002

POWER ACCESSORIES

OE...

Powercabels (1,5 mm², 25 poles)

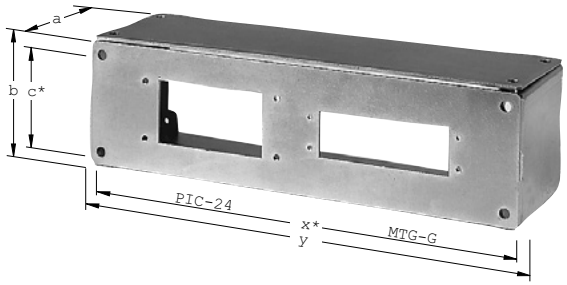
REF	Identification	
0e251-5	Powercabels (**to be ordered per m.)	25 poles 1,5 mm2

MOUNTING BOXES

PTCX

Terminal mounting boxes for power and thermocouple connectors

REF	a	b	c	x	y	Installation possibilities for
PTCX5K						PIC24G / MTC5G
PTCX8K	70	70	55	243	258	PIC24G / MTC8G
PTCX12K						PIC24G / MTC12G

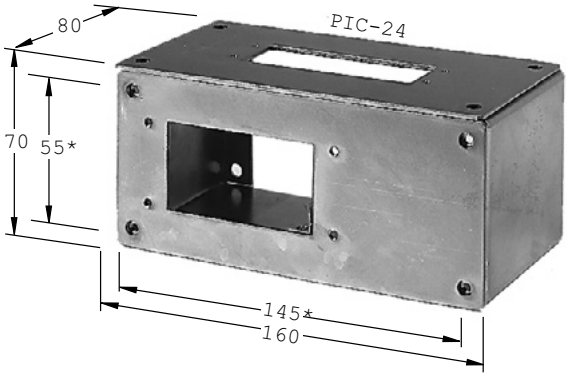


* Distance of mounting screws on the mould with M5 x 15.

PICX

Terminal mounting boxes for power and thermocouple connectors

REF	Installation possibilities for
PICX245K	PIC24G / MTC5G
PICX248K	PIC24G / MTC8G
PICX2412K	PIC24G / MTC12G



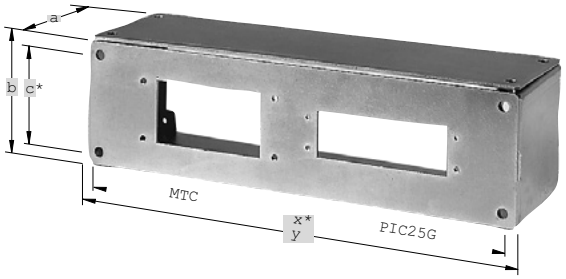
* Distance of mounting screws on the mould with M5 x 15.

PTC

Terminal mounting boxes for power and thermocouple connectors

UK only

REF	a	b	c	x	y	Installation possibilities for
PTC5TBG	105	60	38	205	220	PIC5G / MTC5G
PTC8TBG	105	60	38	225	240	PIC8G / MTC8G
PTC12TBG	105	60	38	253	265	PIC12G / MTC12G



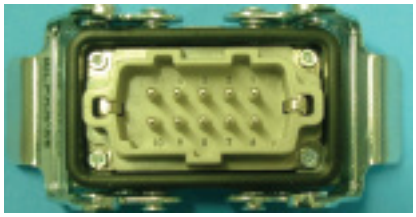
* Distance of mounting screws on the mould with M5 x 15.

MOULD PLUGS

MPLUG.06				
Zone	Heater (L) Male	Heater (N) Male	T/C (+) Female	T/C (-) Female
1	1	2	13	14
2	3	4	15	16
3	5	6	17	18
4	7	8	19	20
5	9	10	21	22
6	11	12	23	24
Male	10.1960	HBE24	Epic/Contact	
Base (DL)	10.1020	HBE24		

MPLUG.04				
Zone	Heater (L) Male	Heater (N) Male	T/C (+) Female	T/C (-) Female
1	9	10	1	2
2	11	12	3	4
3	13	14	5	6
4	15	16	7	8
Male	10.1940	HBE16	Epic/Contact	
Base (DL)	10.1720	HBE16		

MPLUG.02				
Zone	Heater (L) Male	Heater (N) Male	T/C (+) Female	T/C (-) Female
1	1	2	6	7
2	4	5	9	10
Male	10.1920	HBE10	Epic/Contact	
Base (DL)	10.0320	HBE10		



MOULD CABLES

KEY FEATURES

- DME cables use a very flexible conduit-type couple with a 360 degree rotated cable gland making mold - controller connection easy and painless
- 5 types of cables: 2 zones, 4 zones, 6 zones, 12 zones and 16 zones







DME®

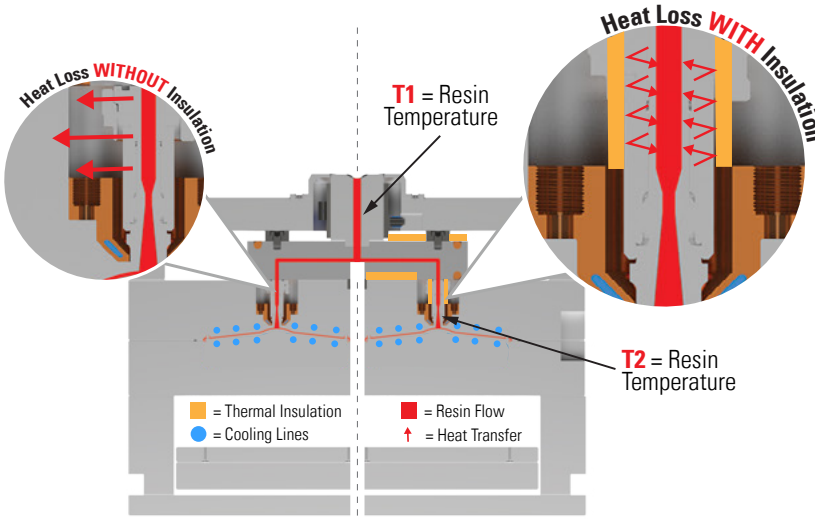
iCONTROL

DME iControl™ HOT RUNNER INSULATION

Providing breakthrough moulding performance when used with hot runner systems

The unique nano microporous material of iControl improves the insulation of the hot runner system by reducing the thermal variation of the mould. Easily installed at time of original build or later as a retrofit, iControl will greatly reduce the thermal variation throughout the manifold and nozzles so the temperature of the incoming resin (T1), closely matches the temperature at entry to the cavity (T2). Balancing the temperature across the system opens the possibility to lower both melt and mould temperatures.

Result: Less heat in means less heat out for accelerated startups and faster cycle time.

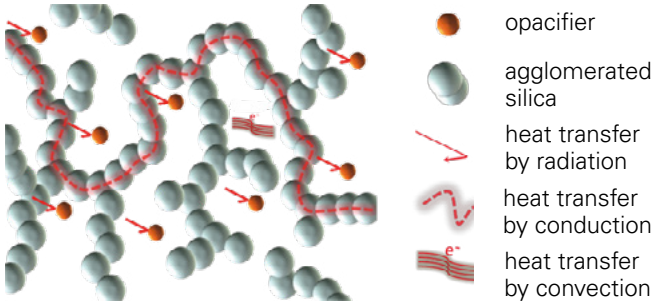


BENEFITS OF LOWER MELT TEMPERATURE:

- Reduced cycle times
- Faster start up times
- Reduced energy consumption
- Processing of heat sensitive materials such as optical grade resins, bioplastics and resins with high post-consumer recycle content which are all prone to degradation with elevated processing temperatures and a more homogenous melt assuring better part quality

HOT RUNNER INSULATION - MINIMIZING THERMAL VARIATION

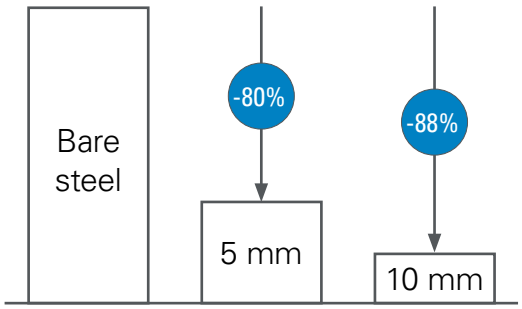
Today's hot runner systems rely on the use of an air gap to minimize the thermal transfer between the plates. However, air is a less effective insulator at elevated temperatures and, as a result of the difference in the temperature between the hot and cold plates, heat is transfered and the mould's cooling process is negatively impacted. iControl Insulation can alleviate this problem due to its superior insulation properties, especially at elevated processing temperatures.



The extremely low thermal conductivity of iControl is a result of its microporous structure and the addition of opacifiers. iControl material insulates against all three components of heat transmission: conduction, convection and radiation. Low conduction is a result of the very small silica particle agglomerates of approximately 10nm which only have a single point to touch each other. Convection heat transfer is minimized by the unique nature of the micro pores which prevent the movement of air and hence the transfer of heat. Finally, the inclusion of opacifiers minimize heat transfer due to

Hot Runner surface temperature at thermocouple

230°C / 450°F - thermal transfer rate



Heat loss by insulation thickness

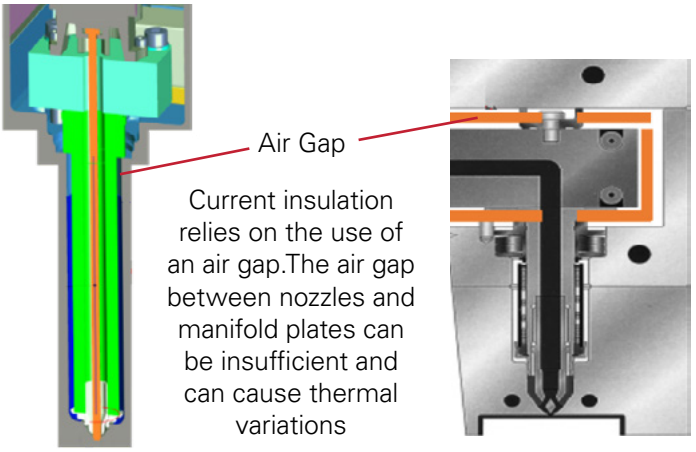


Image on the cover shows iControl insulation installed on an Incoe® Hot Runner System.
DME is not affiliated with Incoe Corporation

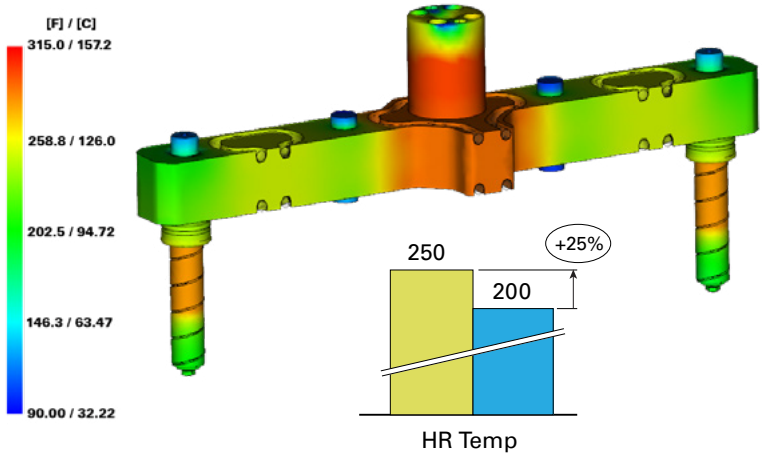
CYCLE TIME ADVANTAGES & LOWER ENERGY REQUIREMENTS

WITHOUT iCONTROL

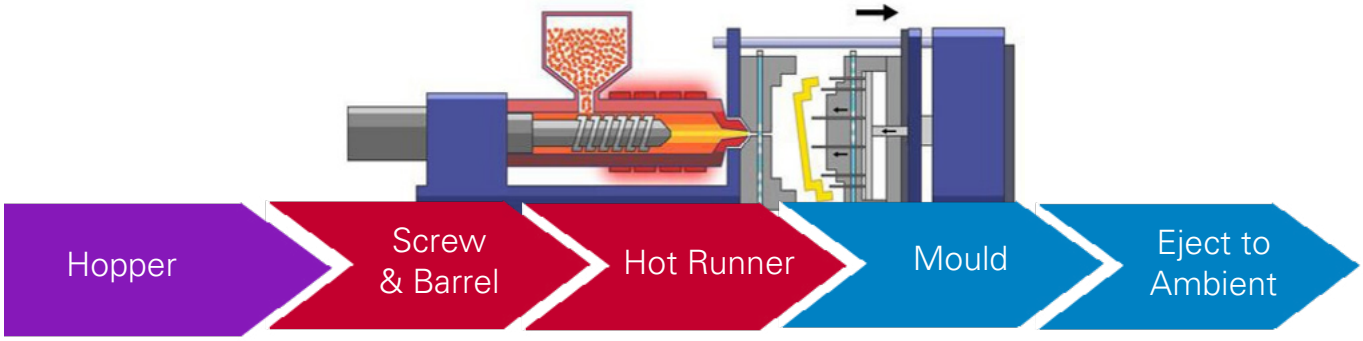
- Longer cycle times
- Part quality issues
- Polymer degradation
- Higher Energy Use on Heating and Cooling
- Double digit thermal variation in Hot Runner Systems (Not accounted for in mouldflow simulation) - Red to Blue areas in manifold
- Often requires higher melt temperature to compensate for the lowest temperature profile

HOT RUNNER THERMAL ANALYSIS TEMPERATURE VARIANCE

- Blue areas are in direct contact with the mould
- Green areas are the cold section relevant to the process which drives the temperature setting
- Yellow areas are now “hot” relative to ideal for the material



BALANCING THE VARIATION IN TEMPERATURE ALLOWS FOR LESS ENERGY IN = LESS ENERGY OUT



Melt Phase

The lower the heat required to reach the molten phase = the less heat required to be removed during the mould cooling phase

Cooling Phase

Cooling in the mould can represent 50-80% of cycle time- a function of part geometry, mould cooling and polymer temp when injected

DME iControl™ HOT RUNNER INSULATION

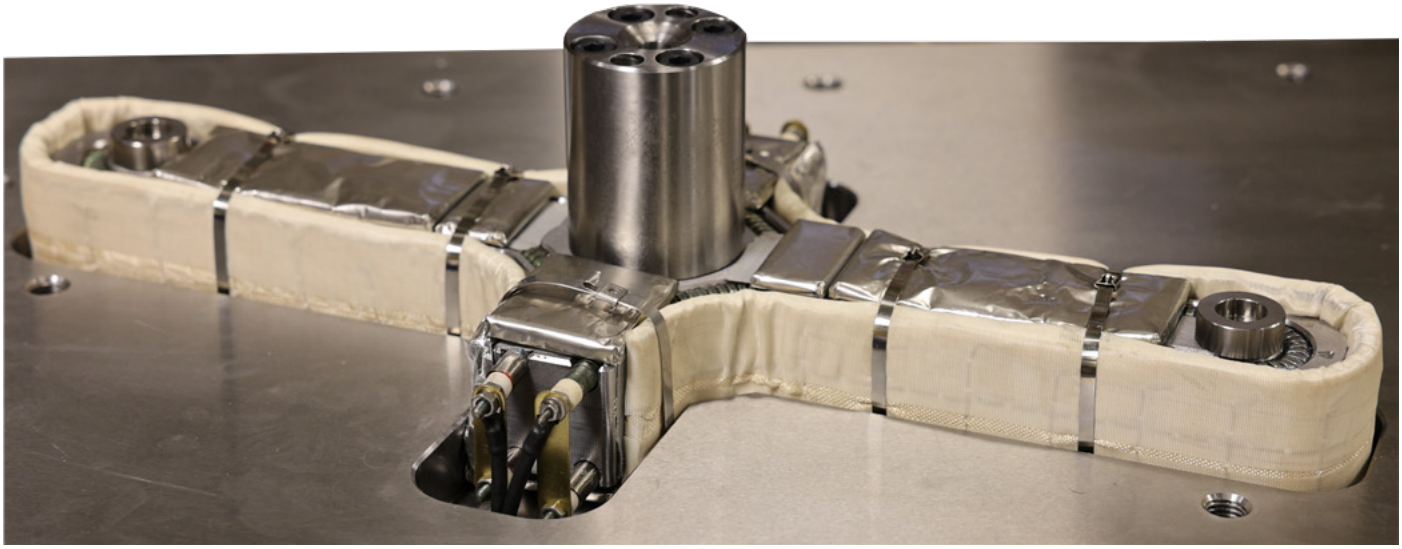
1. DME offers the below standard parts customer can cut them to the desired size to fit the HRS layout
2. We recommend the high temp resistant tape to seal the cut insulations and stainless steel cable ties for fixing the insulation sheet
3. Please send your questions and requests to: dmeeu_specialprojects@dme.net

REF	Description and size	Size (L x T x W)
IC-PLATE-5X300X300	i_Control insulation plate	300 x 5 x 300
IC-PLATE-5X300X500	i_Control insulation plate	300 x 5 x 500
IC-PLATE-5X450X700	i_Control insulation plate	450 x 5 x 700
IC-PLATE-5X600X900	i_Control insulation plate	600 x 5 x 900
IC-BAND-5X30X2000	i_Control insulation flexible band	30 x 5 x 2000
IC-BAND-5X35X2000	i_Control insulation flexible band	35 x 5 x 2000
IC-BAND-5X40X2000	i_Control insulation flexible band	40 x 5 x 2000
IC-BAND-5X45X2000	i_Control insulation flexible band	45 x 5 x 2000
IC-BAND-5X50X2000	i_Control insulation flexible band	50 x 5 x 2000
IC-BAND-5X55X2000	i_Control insulation flexible band	55 x 5 x 2000
IC-BAND-5X60X2000	i_Control insulation flexible band	60 x 5 x 2000
SSCT10_0	Stainless steel cable tie, length 25,5 cm	25,5 cm (10”)
SSCT12_0	Stainless steel cable tie, length 30,5 cm	30,5 cm (12”)
SSCT16_5	Stainless steel cable tie, length 42 cm	42 cm (16,5”)
SSCT22_5	Stainless steel cable tie, length 57 cm	57 cm (22,5”)

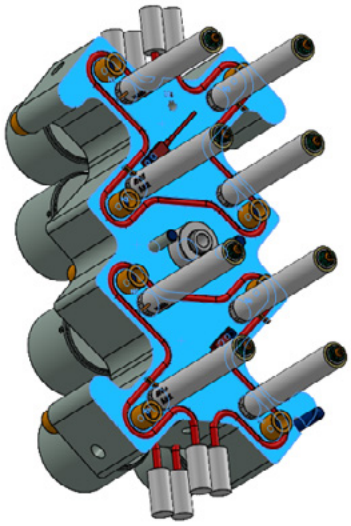
I-CONTROL ASSEMBLY PROCEDURE:

Using rigid Top and Bottom panels and flexible perimeter wrap.

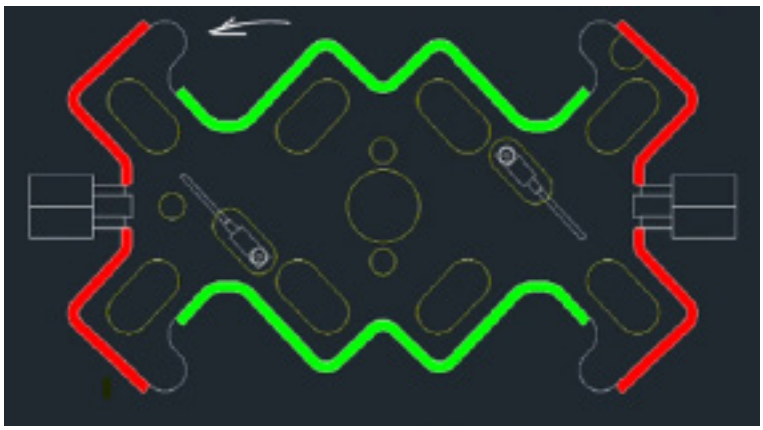
DME offers blank insulation plate and flexible band with standard length. Customer has to cut the blank sheet according to the manifold profile or layout and assemble it with high temperature resistant tape and cable tiles. Few pictures below for the better understanding.



BLANK SHEET TO THE DESIRED PROFILE:



FLEXIBLE BAND TO COVER THE PERIMETER:



DME®

fresh start

Polymer Solutions Inc.

FRESH START PURGING SOLUTIONS™ WHEN YOU NEED MORE THAN JUST ANOTHER PURGING COMPOUND

Fresh Start Purging Solutions™ are a patented, revolutionary, all-purpose purging compounds which are intended to cover the needs of the plastic processing industry. The MC2-HH™ & GP-HH Hybrid solutions are only two in a series of innovative and ground breaking purges designed for the removal of unwanted pigments, polymers and contaminates without leaving residue.

Both formulas have been engineered to pass through hot runner systems with a min 0,254 mm or 254µm (microns) to completely clean the entire flow path. No need for soak time or to increase the heat over your normal processing temperatures.

MC2-HH™ and GP-HH Hybrid formulas encompass many capabilities all in one formula vs other compounds that are engineered for only one issue or process type:

1. High Heat
2. Hot Runner Cleaning
3. Clear Applications
4. Process Type

Why buy all these grades, manage inventory, and hope the correct grade is used for each application. Streamline your processes and consolidate into one purge that will satisfy all your needs.

	Grades	GP-HH Hybrid	MC2-HH™
Injection Molding	Hot Runner Systems	•	•
	Cold Runner / Conventional	•	•
Other Processes	Blow Molding	•	•
	Compounding	•	•
Extrusion	Blown Film	•	•
	Cast Film	•	•
	Sheet	•	•
	Profile	•	•
Processing Tempera-tures	Low (˚F)	350	350
	High (˚F)	625	625
	Low (˚C)	177	177
	High (˚C)	329	329

WEEKENDER FEATURE

MC2-HH™ allows the purge to sit in the barrel over a shut-down period without degrading and seals the screw and barrel from moisture. This feature allows for easy start-ups by simply adding your process resin to the hopper and start running production parts.

MC2-HH™ & GP-HH HYBRID FORMULATIONS

MC2-HH™

MC2-HH™ is a proprietary solution for mechanical purge applications where hybrid / chemical purges are not preferred.

- Engineered thermoplastic purging solutions, formulated for the effective removal of resins, pigments and contaminants
- Designed for quick color changes
- Specifically formulated for cleaning manifolds, hot runners and other channels with tight clearance
- Safe, non-abrasive, non-hazardous purging solution developed around Generally Recognized As Safe (GRAS) ingredients under FDA 21 CFR
- Formulated for ease of use with no purging solution residue

REF	Description
MC2A55	MC2-A PE BASED 55LBS - MECHANICAL
MC2A1320	MC2-A PE BASED 1320LBS - MECHANICAL

DIFERENTIATORS

1. The flexibility of Fresh Start Purging Compounds allows users to replace a number of formulas/grades typically used for a specific application. This feature could reduce inventory, purchasing costs, and accidental missuse.
2. Unlike other purging compounds, Fresh Start Purging Compounds require zero soak time for the chemical reactions to take place. Other purging formula brands require the temp to be raised to get the best performance out of the purge. Fresh Start MC2-HH™ and GP-HH Hybrid do not require or suggest raising the barrel temps.

GP-HH HYBRID

GP-HH Hybrid is a patent pending mechanical/chemical purging solution designed for the superior removal of the most difficult engineering resins from plastics processing equipment.

- Engineered thermoplastic purging solutions, formulated for the effective removal of even the most difficult resins, pigments and contaminants
- Designed for ease of use with no purging solution residue
- Ideal for quick color changeovers, particular liquid pigment dispersions and dyes
- Safe, non-abrasive, non-hazardous purging solution developed around Generally Recognized As Safe (GRAS) ingredients under FDA 21 CFR
- Not recommended for POM resins

REF	Description
GPA55	GP-A PE BASED 55LBS - HYBRID CHEMICAL/MECHANICAL
GPA1320	GP-A PE BASED 1320LBS - HYBRID CHEMICAL/MECHANICAL

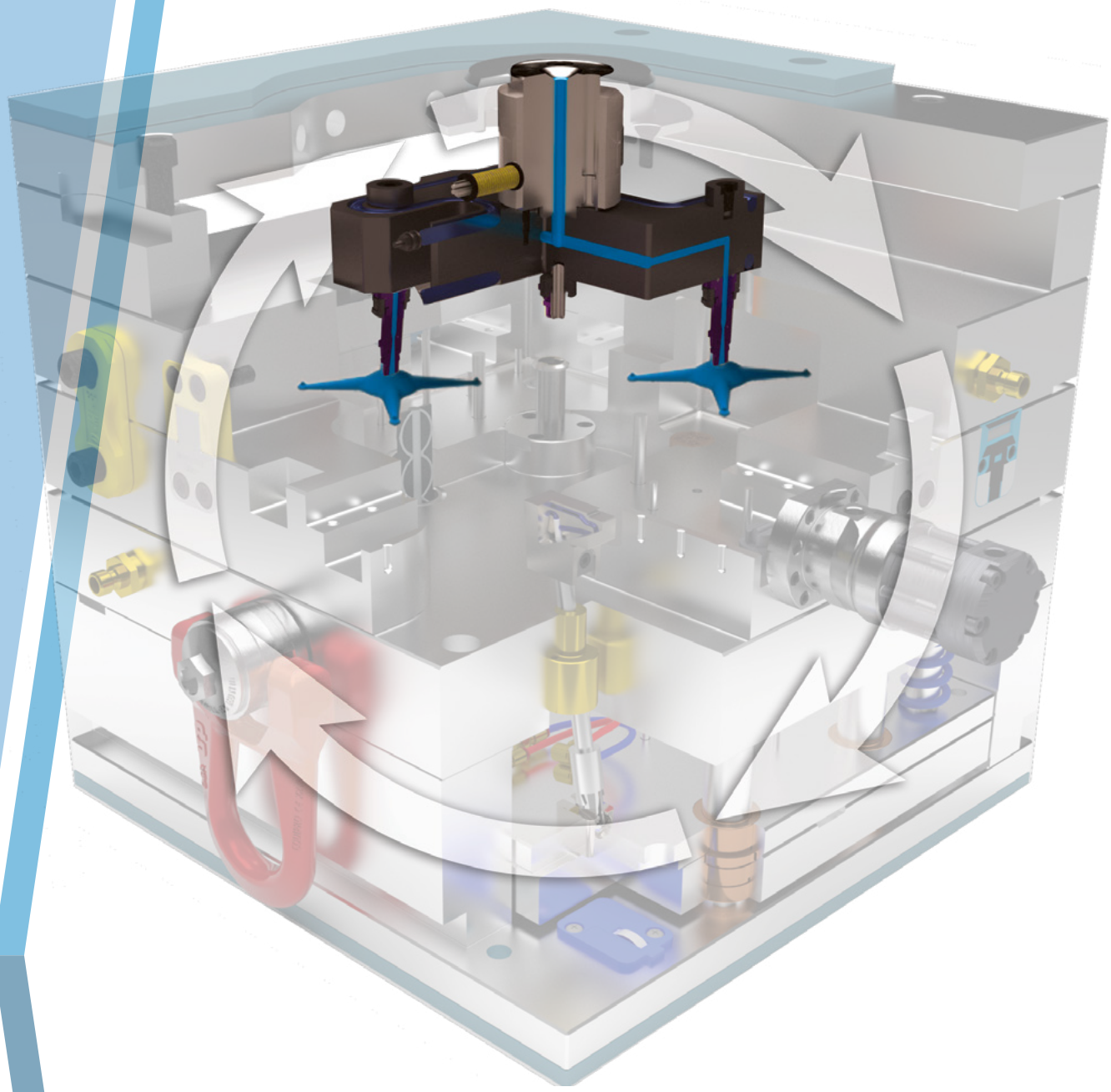
APPLICATIONS & SPECIFICATIONS

Applications:	Injection- cold and hot runners, blow moulding Extrusion- profile, sheet, cast film, compounding, blow film
Temperature Range:	177° C - 329°C
Types of Resins:	All types
Minimum Clearance:	0,254mm or 254µm (microns)
Amount of Purge	Generally requiring 1 to 3 times the barrel capacity depending on the machine condition
Shelf-life	For best results use within 12 months. The purging compounds have been adjusted to address the challenge of exposure to moisture. (Keep bag sealed for maximum shelf life.)

Machine Clamping Force	Suggested Purge Quantity Guideline	
	Initial Purge	Regular Use
100 ton machine	2,268 kg	0,68 kg
200 ton machine	3,402 kg	1,134 kg
300 ton machine	4,536 kg	1,814 kg
400 ton machine	6,804 kg	2,495 kg
500 ton machine	8,165 kg	2,948 kg
600 ton machine	9,072 kg	3,629 kg
700 ton machine	11,34 kg	4,309 kg
800 ton machine	12,701 kg	4,763 kg
900 ton machine	14,515 kg	5,443 kg
1000 ton machine	15,876 kg	6,123 kg
1500 ton machine	18,144 kg	9,072 kg
2000 ton machine	20,412 kg	11,793 kg
2500 ton machine	22,68 kg	14,969 kg
3000 ton machine	29,484 kg	18,144 kg

Process		Grades	
		GP-HH Hybrid	MC2-HH™
Injection Molding	Hot Runner Systems	•	•
	Cold Runner/Conventional	•	•
Other Processes	Blow Molding	•	•
	Compounding	•	•
Extrusion	Blown Film	•	•
	Cast Film	•	•
	Sheet	•	•
	Profile	•	•
Processing Tempera-ture	Low (°C)	177	177
	High (°C)	329	329

Suggested Purge Quantity is a guideline for purging the barrel and screw only. Purging through the manifold/ mold may require an additional 30 – 50% of the suggested amounts



HOT RUNNER SYSTEMS
WARRANTY AND SAFETY

HOT RUNNER & TEMPERATURE CONTROLLER WARRANTY

DME Europe B.V.
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DME Hot Runner Systems and Temperature Controllers are warranted pursuant to DME Company's standard terms and conditions (see page 5) for the time periods set forth below. The warranty (i) covers items sold and shipped [supplied in accordance with orders placed by the customer with DME on or after JULY 1, 2003], (ii) applies only to the original DME customer and, (iii) is not transferable to subsequent owners of the product except as specifically set forth herein (see Transferability below for conditions).

WARRANTY PERIODS APPLICABLE TO SPECIFIED DME PRODUCTS; COVERAGE STARTS UPON DATE OF SHIPMENT:

Item	Coverage
DME EcoONE Systems and Hot Halves (plates designed, machined & assembled by DME, excluding Electrical Parts)	1) Heater elements two (2) years 2) Non-wear components one (1) year 3) Wear components sixty (60) days. For hot halves, plastic leakage due to manufacturing defect of plates (2) years, excluding Gate Detail.
DME StellarONE Thermal and Valve Gate Hot Halves (plates designed, machined & assembled by DME, excluding Electrical Parts) DME-Global Blue Warranty tag provided with components	Plastic leakage, due to manufacturing defect, within hot runner plates covered for one (1) year; excluding Gate Detail.
DME StellarONE Thermal and Valve Gate Manifold and Components (neither plates nor assembly supplied by DME, excluding Electrical Parts) DME-Global Blue Warranty tag provided with components	One (1) year on components only. Wear components sixty (60) days
DME-CN Smart Thermal Gate and Valve Gate Hot Halves and Manifold & Components (excluding Electrical Parts) DME-Global Black Warranty tag provided with components	No warranty outside of Country of Manufacture. Contact Country of Manufacture for local warranty coverage. Warranty Coverage is not transferrable outside of country of origin.
DME Electrical Parts (all heaters and thermocouples)	One (1) year
DME Mold Temperature Controls and Valve Gate Controls (excluding Fuses & Triacs, Power Packs & Trolley as appropriate)	One (1) year - Pumping systems, Valves & Solenoids Two (2) years - Smart Series Mainframes & Modules, Me, ITSP and M2 temperature controllers & SVG valve gate controllers

Replacement or repair will be made at the election of DME; implemented at a DME facility and/or by shipment of replacement parts to the customer for installation and/or return of defective parts to DME for repair.

Transferability:

This warranty may be transferred by the original DME Customer to a subsequent owner of the product if all of the following conditions exist: (i) the original DME Customer purchased the product for purposes of re-sale or other immediate transfer and DME was made aware of these purposes at the time of purchase in writing, (ii) within thirty (30) days from the date of invoice, DME is notified in writing of the transfer and provided with the name of the new owner (hereafter "Transferee"), the contact person of the Transferee and the Transferee's address.

Exclusions:

- Normal wear of the system and components including, but not limited to: Nozzle Tips, Nozzle Seal Rings, and Electrical connectors
- Damage to the critical seal-off areas on the manifold, nozzle bodies, or in the mating cavities or cavity inserts

caused by improper assembly, operation, disassembly and maintenance

- Wear or damage resulting from corrosion or processing of abrasive/aggressive resins not perviously approved by DME
- Damage due to failure to follow recommended operation and maintenance procedures specified in the DME Hot Runner Manual, Hot Runner Nameplate, Service Bulletins, User Manuals or failure to follow standard industry operation and maintenance procedures
- Damage caused by abuse, neglect, and failure to adhere to DME instructions and operational recommendations
- Damage caused by improper installation, operation and maintenance
- Damage resulting from modifications to the product or component parts, abuse or neglect
- Failure caused by modifications made to the product without the prior written approval of DME
- Damage resulting from operation of products at injection pressures greater than 20,000 psi (1360 bar) on EcoONE & StellarONE hot runner systems and hydraulic pressure greater than 700 psi (48bar) on EcoONE and StellarONE valve gate systems; unless specifically designed and manufactured for higher pressure applications in agreement with manufacturer
- Damage or failure caused by the product's inability to perform as a component of a system design not supplied by DME
- Operator absence or operator error
- Inadequate operator maintenance and training
- Electrical interruptions and/or instability
- Events beyond the control of DME
- Errors or actions by a third party
- Non-compliance with local laws, codes, ordinances or regulations codes or bylaws unless DME is informed of them by our customer at the time of order placement

HOT RUNNER SAFETY

1. Check Heater Ohm Reading: On new systems, record and save ohm (resistance) readings for all heaters. During maintenance of the tool, measure current resistance of the heaters and compare against the original record. Any reading higher or lower than baseline (original) usually indicates an impending failure. While the tool is down for preventative maintenance, it may be beneficial to change those heaters. In most cases, DME's "front load" nozzle Heaters can be changed while the mold is in the press. Replacing suspect heaters early can eliminate down time.
2. Proper Heating: follow this hot runner start-up procedure to ensure thermal expansion happens in the correct order to properly set the nozzle seal rings. Improper start-up of any hot runner system is a common error, resulting in plastic leaks from scrape marks or scoring on the manifold. Be sure, particularly with a new system, to heat up the manifold first and allow it to expand, then turn on the nozzle zones. This will allow the nozzle heads to expand and contact the manifold after the manifold has already reached the neces-sary operating temperature and expanded to its operating size. Failure to do so could lead to burr creation between the manifold and one or more of the nozzle head surfaces. DME hot runner nozzles have seal rings between the manifold and nozzle head, making burr creation more likely if this procedure is not followed.
3. Heating the Hot Runner System:
4. Set the manifold system temperature controller zones to the correct processing / setpoint temperature for the material being molded (reference the general assembly drawing). Allow the manifold to soak for 20-30 minutes once setpoint temperature has been reached.
5. Set the nozzles and inlet heater (if equipped) controller zones to the correct processing / setpoint temperatures. Allow the nozzle and inlet (if heated) to soak for 5-10 minutes once setpoint temperature has been reached.
6. Check the nozzle tips / retainer (gate seal) torque to be sure it is still the value listed on the general assembly drawing.
7. Check the Injection Nozzle Centering: Leakage occurs between the molding machine nozzle tip and the seat of the hot runner system if they aren't properly centered. One method to check nozzle centering is to put a sheet of paper between the nozzle tip and seat. Move the barrel forward so that the nozzle tip touches the seat and look for a clean

circle cut in the paper. Make adjustments as needed. Always check the seats for distortion, nicks, scoring or denting before use.

8. After Preventative Maintenance: If new heaters were installed, if is good practice to cycle the temperature three times before com-mencing molding production. If a heater is going to fail prematurely it will often fail over three temperature cycles. This will also help ensure any internal moisture is baked out of the heater element.
9. Fill the hot runner system to prepare for molding bake out:
10. If the injection molding machine will allow resin to be extruded with the mold open, use back pressure to fill the hot runner system with material until it consistently flows out of the nozzles (valve gates must be open). Clean resin from all gates and mold surfaces and close the mold.
11. If the injection molding machine will not extrude with the mold open, jog the screw forward, open the mold and look for plastic. Repeat this process until plastic starts coming through the gates (valve gates must be open). Once plastic is freely flowing from the nozzles, clear the gates and mold surface of material and close the mold
12. Begin molding

Hot Runner Shut-Down Guidelines

Note: When processing engineering grade materials (crystalline), DME recommends purging all hot runner systems with polyethylene before shut-down.

1. When the molding operation is completed, turn off all zones of the hot runner temperature controller.
2. Reduce mold water temperature to tower temperature to keep the manifold temperature from rising.
3. For valve gate systems, leave the top clamp plate water on for at least 30 minutes to allow the valve gate actuators to cool gradually. This will extend the life of the sealing o-rings.
4. Blow out all residual water from the mold cooling lines.

Notes & General Comments

If the hot runner system is to be torn down for service, do not disassemble the system until it has cooled down to ambient (room) tem-perature.
Disassembly of the hot runner, including from the cavity plate, while at elevated temperature can damage components and especially the gate seal if the components have not cooled enough to contract and release from mating surfaces.

IMPORTANT SAFETY INFORMATION FOR HOT RUNNERS

PLEASE READ THE FOLLOWING WARNINGS BEFORE OPERATING OR SERVICING YOUR HOT RUNNER SYSTEM

1. A hot runner system includes electrical elements and may contain molten plastic at elevated temperature and pressure. To avoid injury, exercise caution by reading these instructions before servicing or operating the system.
2. These instructions must be passed on to the end user where they should be read before using this product.

DANGER FAILURE TO DO SO CAN RESULT IN SERIOUS INJURY OR DEATH

1. Improper voltages or grounding can result in electrical shock. Use only with proper voltage and a proper earth ground.
2. To avoid electrical shock, do not operate product when wet.
3. Do not operate this equipment with covers or panels removed.
4. To avoid electrical shock, turn off main power disconnect and lockout/ tag out before servicing this device. Do not connect temperature sensors to electrical power. It will damage the product and it can cause fire, severe injuries or even death.
5. The hot runner system utilizes the direct contact of the molding machine nozzle, mold plates and machine platens to establish a path for grounding.
6. There must be an appropriately sized ground conductor between the mold hot half and the temperature control system or operatory injury and/or damage the hot runner electrical components and/or temperature control system may occur.
7. Do not re-bend rigid leads. Re-bending leads might result in damage to circuit.
8. Product may absorb moisture when cool. Use low voltage or power to bake out residual moisture before applying full power. Failure to do so may cause damage to hot runner system heaters.

DANGER FAILURE TO DO SO CAN RESULT IN SERIOUS INJURY OR DEATH

1. This product maintains molten plastic at high pressure. Use caution when operating and servicing the system.
2. Physical contact with molten plastic may result in severe burns. Proper protective equipment, including eye protection, must be worn. This product has heated surfaces. Use caution when operating and servicing the system to avoid severe burns. Proper protective equipment should be worn.

For questions not covered by this document or the technical documents provided with the DME hot runner or control systems, please contact DME Technical Support in your region.

FROM PELLET TO PART...
YOUR PARTNER FOR PRODUCTIVITY
& SUSTAINABILITY

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