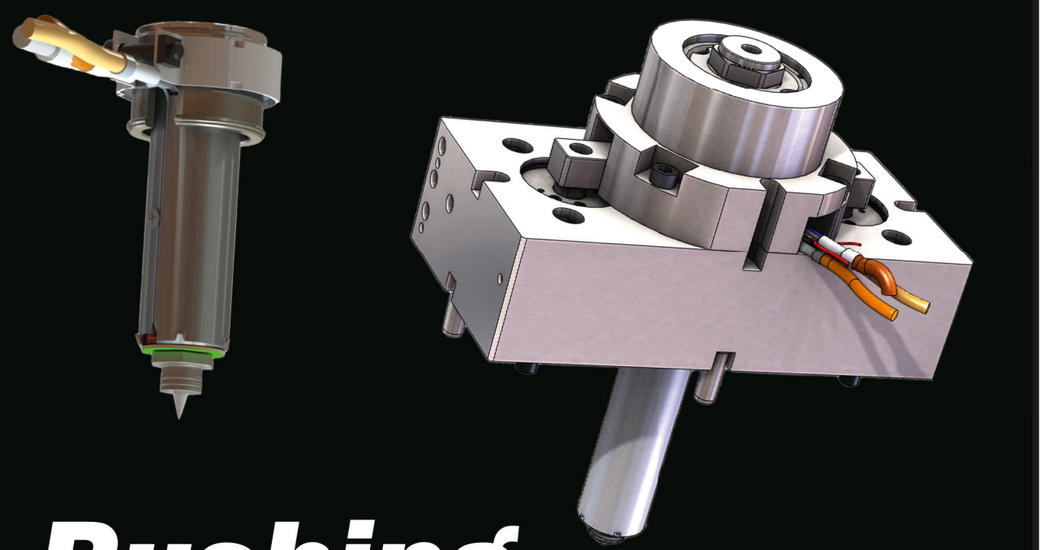
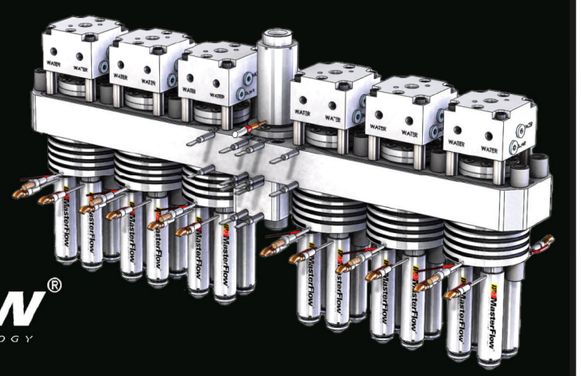
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Bushing Guide



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MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

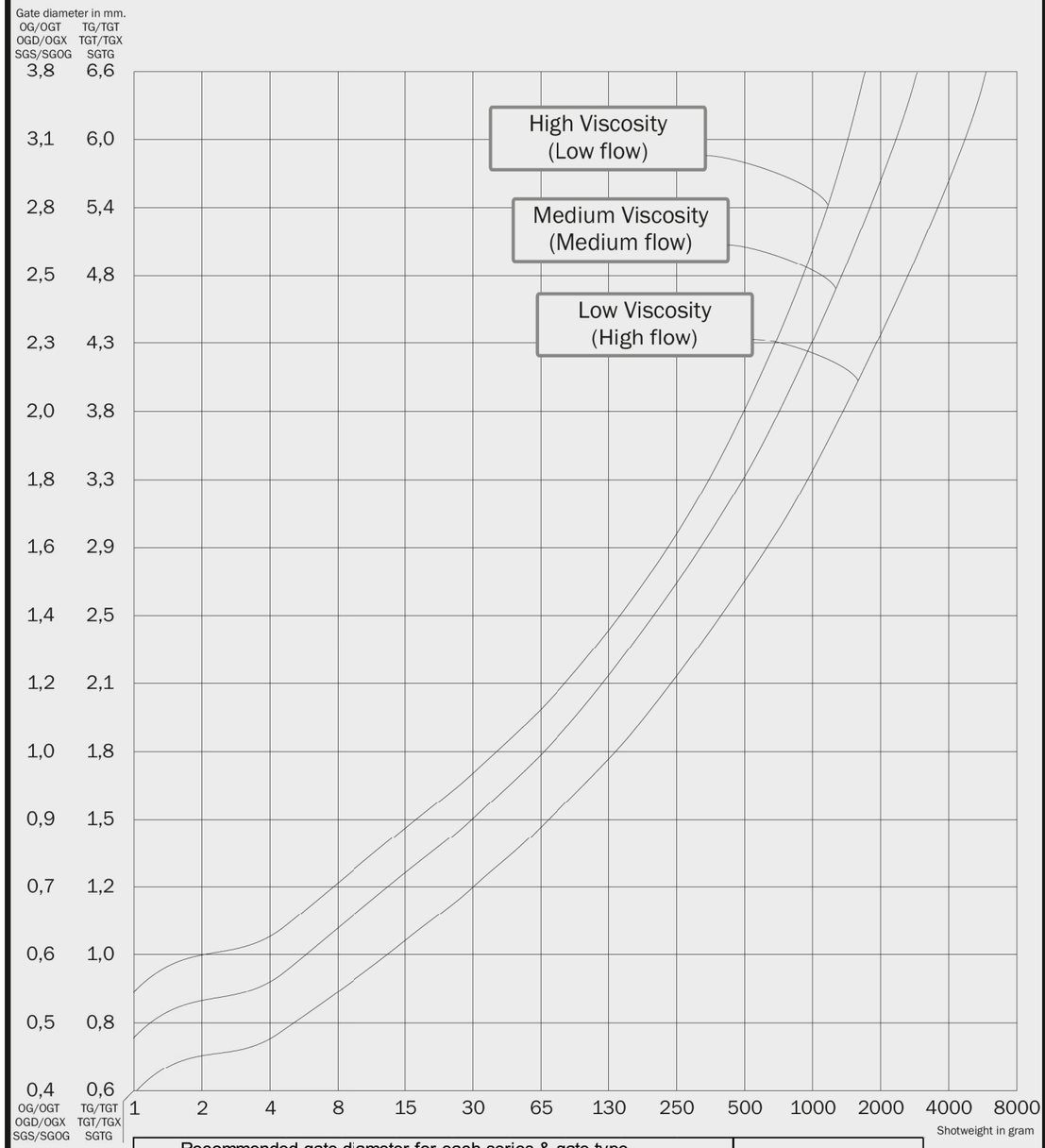
E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

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Choice of gate diameter for material and shot weight.

Optimal gate diameter can vary from diagram below depending on wall thickness, flow length, injection speed, injection pressure and other production conditions. We recommend to start small diameter for later production adjustment. Fcrvery sensitive materials and applications we recommend an additional mould flow analysis.

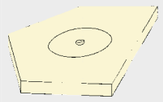
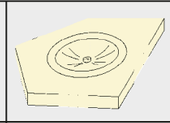
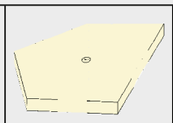
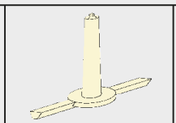
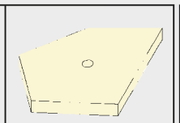
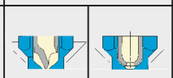
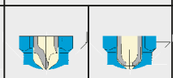
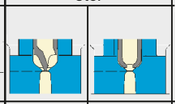
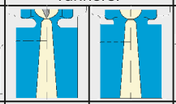
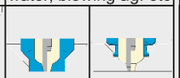


Recommended gate diameter for each series & gate type									Expected height of gate vestige
Gate type	Series 20		Series 30		Series 40		Series 50		
	min	max	min	max	min	max	min	max	
OG/SGS/SGOG	0,4	1,3	0,6	1,8	1,0	2,8	1,5	3,8	Gate diameter * 1,0
TG/SGTG	0,6	2,0	1,0	3,0	1,5	5,0	2,5	7,0	Gate diameter * 0,5

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Your choice of bushing - Guide for your application!

Shape of gate vestige (Can be customized)													
Expected gate vestige and user area.		Point gate with small ring mark. Std gate type för most applications.		Recessed point gate with vestige under surface and small ring mark.		Point gate with small vestige. Also for sloping surface, recessed, cold runner.		Extended point gate for sloping surface, flow support, cold runner, recessed, etc.		Channel gate with high vestige and ring mark. For runner shortening and cold runners.		Valve gate - no gate vestige. For parts with higher demands or production with gas, water, blowing ag. etc	
Type of End Cap and Tip.													
Gate description:		TG	OG	TGD	OGD	TGT	OGT	TGX	OGX	SGTG SGTGX	SGS/SGSX SGOG SGOGX	MP MPX	MPT
Plastic material/Trade names													
PE-HD	Vestolen	☺☺	-	☺☺☺	-	☺☺☺	-	☺☺	☺	☺☺	☺☺	☺☺	☺☺☺
PE-LD	Hostalen, Lupolen	☺☺	-	☺☺☺	-	☺☺☺	-	☺☺	☺	☺☺	☺☺	☺☺	☺☺☺
PP	Hostalen PP, Novol.	☺	-	☺☺	-	☺☺☺	-	☺☺	-	☺☺	☺☺	☺☺	☺☺☺
PS	Polystyrol, Vestyron	☺☺	-	☺☺☺	-	☺☺☺	☺	☺☺	☺	☺☺	☺☺	☺☺	☺☺☺
SB	Styrolux	☺☺	-	☺☺☺	-	☺☺☺	☺	☺☺	☺	☺☺	☺☺	☺☺	☺☺☺
ABS	Cycolac, Novodur	☺☺☺	☺	☺☺☺	☺	☺☺☺	☺	☺☺	☺	☺☺	☺	☺☺	☺☺☺
PA 12	Lauramid, Vestamid	☺☺☺	-	☺☺☺	-	☺☺	-	☺☺	-	☺☺	☺	☺☺☺	☺☺
PA 6	BergamidB, Duruth.B	☺☺☺	-	☺☺☺	-	☺☺	-	☺☺	-	☺☺	☺	☺☺☺	☺☺
PA 6.6	BergamidA, Zytel	☺☺☺	-	☺☺☺	-	☺	-	☺☺	-	☺☺	☺	☺☺☺	☺☺
PMMA	Degalan, Plexiglas	☺☺☺	☺	☺☺☺	☺	☺☺☺	☺	☺☺	☺☺	☺☺	☺☺	☺☺☺	☺☺☺
POM-Co	Hostaform, Ultraform	☺☺	☺	☺☺	☺	☺☺☺	☺☺	☺☺	☺☺	☺☺	☺☺	☺☺☺	☺☺☺
SAN	Luran, Lustran	☺☺	☺	☺☺	☺	☺☺☺	☺	☺☺	☺☺	☺☺	☺☺	☺☺	☺☺☺
SEBS	Evoprene, Thermofl.	☺	☺☺	☺	☺☺	☺☺	☺☺☺	☺	☺☺	☺	☺☺	☺☺	☺☺☺
PBT	Pocan,Ultradur,Valox	☺☺☺	☺	☺☺☺	☺	☺☺	☺	☺☺	☺☺	☺☺☺	☺☺	☺☺☺	☺☺
PC	Lexan,Makrol.,Xenoy	☺☺☺	☺☺	☺☺☺	☺☺	☺☺☺	☺☺	☺☺	☺☺	☺☺☺	☺☺☺	☺☺☺	☺☺☺
PC-ABS	Bayblend, Cycoloy	☺☺☺	☺☺	☺☺☺	☺☺	☺☺☺	☺☺	☺☺	☺☺	☺☺☺	☺☺	☺☺☺	☺☺☺
PC-PBT	Makroblen, Ultrabl.	☺☺☺	☺☺	☺☺☺	☺☺	☺☺☺	☺☺	☺☺	☺☺	☺☺☺	☺☺	☺☺☺	☺☺
PEI	Ultem	☺☺☺	☺	☺☺☺	☺	☺☺☺	☺	☺☺	☺☺	☺☺☺	☺☺	☺☺☺	☺
PES	UltrasonE	☺☺	☺☺	☺☺	☺☺	☺☺☺	☺☺	☺☺	☺☺	☺☺☺	☺☺	☺☺☺	☺☺
PET	Petl,Rynite,UltradurA	☺☺☺	☺☺	☺☺☺	☺☺	☺	☺☺	☺☺	☺☺	☺☺☺	☺☺	☺☺	☺☺
POM-H	Delrin	☺☺	☺	☺☺	☺	☺☺☺	☺☺	☺☺	☺☺	☺☺☺	☺☺	☺☺	☺☺☺
PPE	Luranyl, Resart	☺☺☺	☺	☺☺☺	☺	☺☺☺	☺	☺☺	☺☺	☺☺☺	☺☺	☺☺	☺☺
PPS	Fortron, Ryton, Tedur	☺☺☺	☺☺	☺☺☺	☺☺	☺☺☺	☺☺	☺☺	☺☺	☺☺☺	☺☺	☺☺	☺☺
PSU	Udel, UltrasonL	☺☺	☺☺☺	☺☺	☺☺☺	☺☺	☺☺☺	☺☺	☺☺	☺☺	☺☺☺	☺☺☺	☺☺☺
PUR/TPU	Desmopan	☺	☺☺	☺	☺☺	☺☺	☺☺☺	☺☺	☺☺	☺☺	☺☺☺	☺☺	☺☺
PVC-Soft	Corvic, Vestolit LF	☺	☺☺	☺	☺☺	☺☺	☺☺☺	☺☺	☺☺	☺☺	☺☺☺	☺☺	☺☺
TPE-E	Hytrel, Lomod	☺	☺☺	☺	☺☺	☺☺	☺☺☺	☺☺	☺☺	☺	☺☺☺	☺☺	☺☺
Flame retardment (V0)		☺	☺☺☺	☺	☺☺☺	☺	☺☺☺	☺	☺	☺	☺☺☺	☺☺	☺☺
Glass Fiber		☺☺☺	☺☺☺	☺☺☺	☺☺☺	☺☺☺	☺☺☺	☺	☺	☺☺☺	☺☺☺	☺☺☺	☺☺☺
Mineral		☺☺☺	☺☺☺	☺☺☺	☺☺☺	☺☺☺	☺☺☺	☺	☺	☺☺☺	☺☺☺	☺☺☺	☺☺☺
Steelpowder		-	☺☺☺	-	☺☺☺	-	☺☺☺	-	☺	-	☺☺☺	-	-
Blowing agent		☺	☺	☺	☺	☺	☺	☺	☺	☺	☺	☺☺☺	☺☺☺
Talcum powder		☺☺	☺☺☺	☺☺	☺☺☺	☺☺	☺☺☺	☺	☺	☺☺	☺☺☺	☺☺☺	☺☺☺

How to use this guide:
1) Using the gating-illustrations on this guide page, you can see which principal type of End Cap and Tip that can be used. Note! Several of the End Cap and Tip types can be adapted. Even "impossible" gate options are usually quite possible! Contact Us!
2) By going down the left-hand side of the table you can select the End Cap and Tip type against plastic material.
3) Follow the Viscosity-field for your selected plastic material over to the weight information on the right-hand side of this guide and select the series size with regard to the shot weight of your detail (Max recommended shot weight per hot bushing).
Note! Take into consideration any additives in the plastic material.
4) On the back of this guide page you can determine the diameter of the gate and also the expected height of the gate vestige.
5) Email or call in your order. Please advise us of the plastic material and shot weight for your application, and any cosmetic demands it may have.

MasterFlow Series 20			MasterFlow Series 30			MasterFlow Series 40			MasterFlow Series 50		
TG/TGD TGT/TGX SGTG	OG/OGD OGT/OGX SGS/SGOG	MP/MPT MPX	TG/TGD TGT/TGX SGTG	OG/OGD CGT/OGX SGS/SGOG	MP/MPT MPX	TG/TGD TGT/TGX SGTG	OG/OGD OGT/OGX SGS/SGOG	MP/MPT MPX	TG/TGD TGT/TGX SGTG	OG/OGD OGT/OGX SGS/SGOG	MP/MPT MPX
130 g	165 g	80 g	850 g	1000 g	450 g	2800 g	3400 g	1400 g	6300 g	7700 g	3500 g
65 g	80 g	35 g	400 g	500 g	220 g	1400 g	1700 g	750 g	3200 g	3700 g	1600 g
40 g	50 g	20 g	250 g	310 g	130 g	850 g	1050 g	400 g	1900 g	2400 g	1000 g
- 30% per each additive	- 30% per each additive	- 30% per each additive	- 30% per each additive	- 30% per each additive	- 30% per each additive	- 30% per each additive	- 30% per each additive	- 30% per each additive	- 30% per each additive	- 30% per each additive	- 30% per each additive

- = Not recommended; ☺ = Good for certain applications; ☺☺ = Very good; ☺☺☺ = Excellent!

Explanation, Gate types shortenings:

TG	Tip Gate, Point gate with tip	OG	Open Gate, Point gate with open tip	SGS	Sprue Gate Standard, Channel gate	MP	Movable Pin, Gating with a valve
TGD	Tip Gate Dimple, Point gate recessed	OGD	Open Gate Dimple, Point gate recesssed	SGTG	Sprue Gate Tip Gate, Channel gate with tip	MPT	Movable Pin Topless, seated in mould
TGT	Tip Gate Topless, Point gate seated in mould	OGT	Open Gate Topless, Point gate seated in mould	SGOG	Sprue Gate Open Gate, Channel gate open tip	MPX	Movable Pin eXtended, extended end cap
TGX	Tip Gate eXtend, Point gate extended end cap	OGX	Open Gate eXtend, Point gate extended end cap	.....-X	eXtend, extended end cap		

MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
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1.3E

Table for heat expansion

After choice of bushing/system use the bushing "A"/"AB"-dimension and process temperatures for the plastic material and mold (melt temp. and mold temp.)
From table you see the heat expansion to be added to the bushing "A"/"AB"-length to get the proper build-in dimension. On back page you will find common plastic material process temperatures.

Calculation:	Exp. = Bushing length * Temp.difference between mold and melt * Coefficient of length extension										
	Coefficient of extension				13,2E-6 =0,0000132						
Length Bushing:											
"A"-dim and	Temp.difference between mold and melt (°C):										
"AB"-dim	*120*	*140*	*160*	*180*	*190*	***200***	*210*	*220*	*230*	*240*	*250*
30	0,05	0,06	0,06	0,07	0,08	**0,08**	0,08	0,09	0,09	0,10	0,10
35	0,06	0,06	0,07	0,08	0,09	**0,09**	0,10	0,10	0,11	0,11	0,12
40	0,06	0,07	0,08	0,10	0,10	**0,11**	0,11	0,12	0,12	0,13	0,13
45	0,07	0,08	0,10	0,11	0,11	**0,12**	0,12	0,13	0,14	0,14	0,15
50	0,08	0,09	0,11	0,12	0,13	**0,13**	0,14	0,15	0,15	0,16	0,17
55	0,09	0,10	0,12	0,13	0,14	**0,15**	0,15	0,16	0,17	0,17	0,18
60	0,10	0,11	0,13	0,14	0,15	**0,16**	0,17	0,17	0,18	0,19	0,20
65	0,10	0,12	0,14	0,15	0,16	**0,17**	0,18	0,19	0,20	0,21	0,21
70	0,11	0,13	0,15	0,17	0,18	**0,18**	0,19	0,20	0,21	0,22	0,23
75	0,12	0,14	0,16	0,18	0,19	**0,20**	0,21	0,22	0,23	0,24	0,25
80	0,13	0,15	0,17	0,19	0,20	**0,21**	0,22	0,23	0,24	0,25	0,26
85	0,13	0,16	0,18	0,20	0,21	**0,22**	0,24	0,25	0,26	0,27	0,28
90	0,14	0,17	0,19	0,21	0,23	**0,24**	0,25	0,26	0,27	0,29	0,30
95	0,15	0,18	0,20	0,23	0,24	**0,25**	0,26	0,28	0,29	0,30	0,31
100	0,16	0,18	0,21	0,24	0,25	**0,26**	0,28	0,29	0,30	0,32	0,33
105	0,17	0,19	0,22	0,25	0,26	**0,28**	0,29	0,30	0,32	0,33	0,35
110	0,17	0,20	0,23	0,26	0,28	**0,29**	0,30	0,32	0,33	0,35	0,36
115	0,18	0,21	0,24	0,27	0,29	**0,30**	0,32	0,33	0,35	0,36	0,38
120	0,19	0,22	0,25	0,29	0,30	**0,32**	0,33	0,35	0,36	0,38	0,40
125	0,20	0,23	0,26	0,30	0,31	**0,33**	0,35	0,36	0,38	0,40	0,41
130	0,21	0,24	0,27	0,31	0,33	**0,34**	0,36	0,38	0,39	0,41	0,43
135	0,21	0,25	0,29	0,32	0,34	**0,36**	0,37	0,39	0,41	0,43	0,45
140	0,22	0,26	0,30	0,33	0,35	**0,37**	0,39	0,41	0,43	0,44	0,46
145	0,23	0,27	0,31	0,34	0,36	**0,38**	0,40	0,42	0,44	0,46	0,48
150	0,24	0,28	0,32	0,36	0,38	**0,40**	0,42	0,44	0,46	0,48	0,50
155	0,25	0,29	0,33	0,37	0,39	**0,41**	0,43	0,45	0,47	0,49	0,51
160	0,25	0,30	0,34	0,38	0,40	**0,42**	0,44	0,46	0,49	0,51	0,53
165	0,26	0,30	0,35	0,39	0,41	**0,44**	0,46	0,48	0,50	0,52	0,54
170	0,27	0,31	0,36	0,40	0,43	**0,45**	0,47	0,49	0,52	0,54	0,56
175	0,28	0,32	0,37	0,42	0,44	**0,46**	0,49	0,51	0,53	0,55	0,58
180	0,29	0,33	0,38	0,43	0,45	**0,48**	0,50	0,52	0,55	0,57	0,59
185	0,29	0,34	0,39	0,44	0,46	**0,49**	0,51	0,54	0,56	0,59	0,61
190	0,30	0,35	0,40	0,45	0,48	**0,50**	0,53	0,55	0,58	0,60	0,63
195	0,31	0,36	0,41	0,46	0,49	**0,51**	0,54	0,57	0,59	0,62	0,64
200	0,32	0,37	0,42	0,48	0,50	**0,53**	0,55	0,58	0,61	0,63	0,66
205	0,32	0,38	0,43	0,49	0,51	**0,54**	0,57	0,60	0,62	0,65	0,68
210	0,33	0,39	0,44	0,50	0,53	**0,55**	0,58	0,61	0,64	0,67	0,69
215	0,34	0,40	0,45	0,51	0,54	**0,57**	0,60	0,62	0,65	0,68	0,71
220	0,35	0,41	0,46	0,52	0,55	**0,58**	0,61	0,64	0,67	0,70	0,73
225	0,36	0,42	0,48	0,53	0,56	**0,59**	0,62	0,65	0,68	0,71	0,74
230	0,36	0,43	0,49	0,55	0,58	**0,61**	0,64	0,67	0,70	0,73	0,76
235	0,37	0,43	0,50	0,56	0,59	**0,62**	0,65	0,68	0,71	0,74	0,78
240	0,38	0,44	0,51	0,57	0,60	**0,63**	0,67	0,70	0,73	0,76	0,79
245	0,39	0,45	0,52	0,58	0,61	**0,65**	0,68	0,71	0,74	0,78	0,81
250	0,40	0,46	0,53	0,59	0,63	**0,66**	0,69	0,73	0,76	0,79	0,83
	Heat expansion in table is in millimetre.										

MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

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MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

1.3Eb

Table for process temp of plastic materials

The table below is used together with table on front page to find a temperature difference between melt and mold. This temp difference is only used to find proper position in front page table to decide expected heat expansion of the bushing.
When not sure, please consult your local MasterFlow representative.

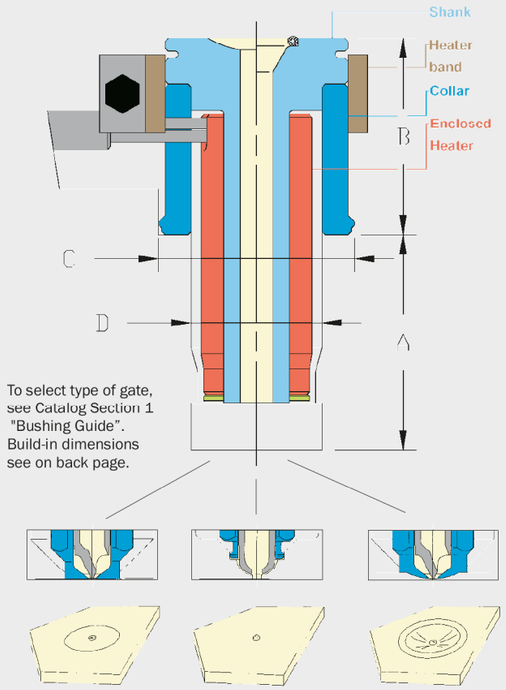
Plastic material / Trade name		Process temperature °C		Mold temperature °C		Temp.difference °C
		Normal	Tolerance	Normal	Tolerance	Process - Mold
Amorphous materials						
ABS	Cycolac, Novodur	250	+/- 30	60	+/- 20	190
PC	Lexan, Makrolon, Xenoy	300	+/- 20	100	+/- 20	200
PAI	Piflon, Torlon	400	+/- 30	225	+/- 5	175
PEI	Ultem	370	+50 / -20	140	+10 / -50	230
PES	Ultrason E	350	+10 / -30	150	+/- 10	200
PMMA	Degalan, Plexiglas	230	+60 / -40	60	+/- 30	180
PPE	Luranyl, Resart	300	+/- 20	100	+/- 20	200
PS	Polystyrol, Vestyron	230	+/- 50	40	+/- 20	190
PSU	Udel, Ulrtason L	330	+/- 30	130	+/- 30	200
PVC-Soft	Corvic, Vetolit LF	185	+/- 10	30	+/- 10	155
SAN	Luran, Lustran	250	+10 / -50	50	+/- 30	200
SB	Styrolux	240	+/- 40	50	+/- 30	190
Blends						
PC-ABS	Bayblend, Cycoloy	270	+10 / -20	80	+/- 20	190
PC-PBT	Makroblend, Ultrablerd	270	+/- 10	70	+/- 10	200
PA-EPDM	Zytel	290	+/- 25	70	+/- 25	220
Partly crystalline materials						
PA 12	Lauramid, Vestamid	230	+/- 20	60	+/- 20	170
PA 6	Bergamid B, Durathan B	260	+/- 20	80	+/- 40	180
PA 6.6	Bergamid A, Zytel	280	+/- 20	80	+/- 40	200
PBT	Pocan,, Ultradur, Valox	260	+/- 20	60	+/- 20	200
PE-HD	Vestolen	240	+60 / -20	30	+/- 20	210
PE-LD	Hostalen, Lupolen	220	+/- 50	30	+/- 20	190
PET	Petlon, Rynite, Ultradur A	280	+/- 20	110	+/- 10	170
POM-Co	Hostaform, Ultraform	210	+/- 20	90	+/- 30	120
POM-H	Delrin	210	+/- 20	90	+/- 30	120
PP	Hostalen PP, Novoler	250	+/- 50	40	+/- 30	210
PPS	Fortron, Ryton, Tedur	330	+/- 20	160	+/- 20	170
Thermoplastic elastomers						
SEBS	Evoprene, Thermoflex	220	+/- 20	30	+/- 10	190
TPE-E	Hytrel, Lomod	240	+20 / -70	40	+/- 20	200
TPU/PUR	Desmopan	210	+/- 20	25	+/- 5	185

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MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

2.1E

MFR for single-cavity, cold runner, cold sprue shortening and "floating" manifold



To select type of gate, see Catalog Section 1 "Bushing Guide". Build-in dimensions see on back page.



* Basic shank for most types of screw in end caps and gates.
* Minimum melt breakdown.
* High conductive heater enclose gives You more exact and even melt temperature.
* Economic and fast colour change.
* Heavy duty and long life proof.

Series	Description	A	B	øC	øD	Heater encl./band	
20	MFR20 034	34	29	30	20	MFH20 034/059	MFVBT 028/012
	MFR20 054	54				MFH20 054/079	
	MFR20 074	74				MFH20 074/099	
	MFR20 094	94				MFH20 094/119	
	MFR20 114	114				MFH20 114/139	
	MFR20 134	134				MFH20 134/159	
30	MFR30 034	34	30	40	30	MFH30 034/059	MFVBT 038/014
	MFR30 054	54				MFH30 054/079	
	MFR30 074	74				MFH30 074/099	
	MFR30 094	94				MFH30 094/119	
	MFR30 114	114				MFH30 114/139	
	MFR30 134	134				MFH30 134/159	
	MFR30 154	154				MFH30 154/179	
	MFR30 174	174				MFH30 174/199	
40	MFR40 041	41	39	50	39	MFH40 041/074	MFVBT 049/017
	MFR40 066	66				MFH40 066/099	
	MFR40 091	91				MFH40 091/124	
	MFR40 116	116				MFH40 116/149	
	MFR40 141	141				MFH40 141/174	
	MFR40 166	166				MFH40 166/199	
	MFR40 191	191				MFH40 191/224	
	MFR40 216	216				MFH40 216/249	
50	MFR50 050	50	44	60	48	MFH50 050/089	MFVBT 058/018
	MFR50 080	80				MFH50 080/119	
	MFR50 110	110				MFH50 110/149	
	MFR50 140	140				MFH50 140/179	
	MFR50 170	170				MFH50 170/209	
	MFR50 200	200				MFH50 200/239	

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Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

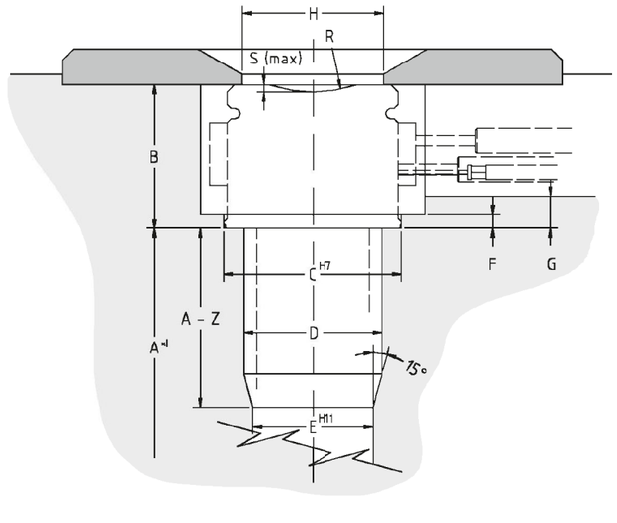
E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

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Catalog: Section 2

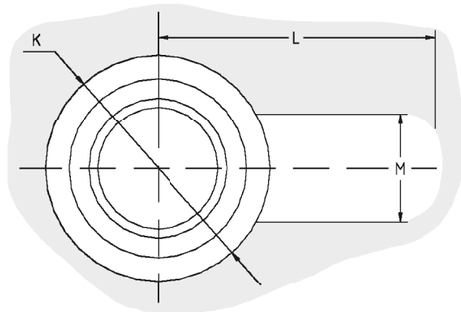
MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

2.1Eb

MFR Boring Details for MFR bushings



Low temperature and less heat sensitive materials do not always need a heaterband. We recommend that you give place, if later needed.
"A"-dim is important.
Bushing is expanding when heated up. See expansion calculation below or quick guide on page 1.3E.
Mold locating ring should always have minimum contact.



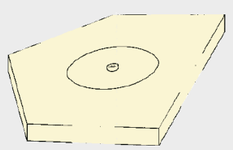
Series	20	30	40	50
B	29	30	39	44
ø C	30	40	50	60
ø D	20	30	39	48
ø E	18	28	37	46
F	3	4	4	4
G	8	8	10	15
ø H	25	33	44	52
ø K	43	53	63	75
L	~100	~100	~100	~100
M	30	30	30	45
R	Delivery R = 0			
S (max)	2	2	3	4
Z	12	20	25	35

x) "A"-dim + heat expansion (Exp.);
Exp. = "A" * (Temp$_{melt}$ - Temp$_{mold}$) * 13,2*10^{-6}
Exampel: A = 91mm, Temp$_{melt}$=210 °C, Temp$_{mold}$=20°C, gives
Exp. = 91*(210-20)*0,0000132 = 0,23 mm
See table, Section 1 page 1.3E.

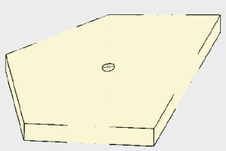
Because of our program of continuos product improvements, MasterFlow reserves the right to change specifcations and design without notice and without incurring obligation.

Build-in dimensions for end caps and tips under section 2, page 2.7E and 2.8E

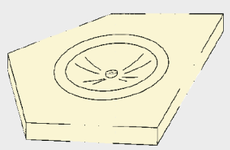
Type TG and OG:
Point Gate with small vestige and ring mark.



Type TGT and OGT:
Point Gate with very small vestige.



Type TGD and OGD:
Point Gate with vestige lower than part surface.



Type TGX and OGX:
For slanting surface and sprue gating.



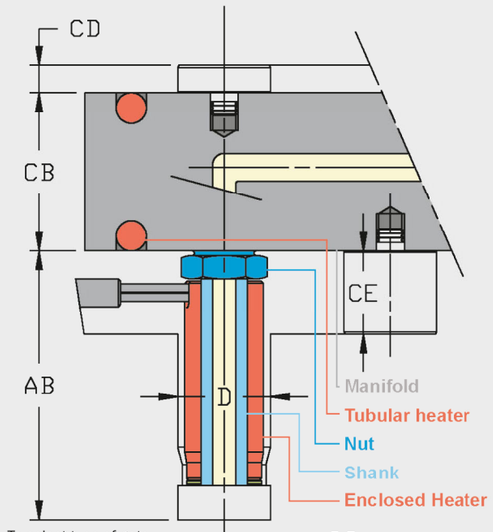
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Catalog: Section 2

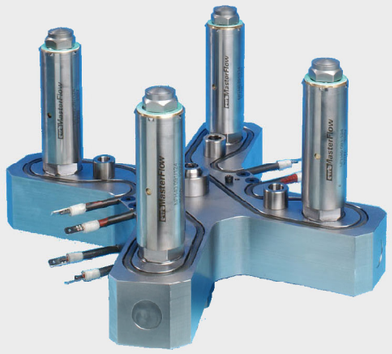
MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

MFC

Screw-In Assembled Compact System for best overall performance

2.3E





* Basic shank for most types of screw in end caps and gates.
* Minimum melt breakdown.
* High conductive heater enclose gives You more exact and even melt temperature.
* Economic and fast colour change.
* Heavy duty and long life proof.

Series	Description		AB	ØD	CB	CD	CE	CC
	Manifold	Bushing						
20	MFCM20	MFC20 059	59	20	36	min 6 - max 20	min 8 - max 25	max 2 * AB
		MFC20 079	79					
		MFC20 099	99					
		MFC20 119	119					
		MFC20 139	139					
		MFC20 159	159					
30	MFCM30	MFC30 059	59	30	44	min 6 - max 20	min 8 - max 25	max 2 * AB
		MFC30 079	79					
		MFC30 099	99					
		MFC30 119	119					
		MFC30 139	139					
		MFC30 159	159					
		MFC30 179	179					
		MFC30 199	199					
40	MFCM40	MFC40 074	74	39	48	min 6 - max 20	min 8 - max 30	max 2 * AB
		MFC40 099	99					
		MFC40 124	124					
		MFC40 149	149					
		MFC40 174	174					
		MFC40 199	199					
		MFC40 224	224					
		MFC40 249	249					
50	MFCM50	MFC50 089	89	48	57	min 6 - max 20	min 8 - max 30	max 2 * AB
		MFC50 119	119					
		MFC50 149	149					
		MFC50 179	179					
		MFC50 209	209					
		MFC50 239	239					

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MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
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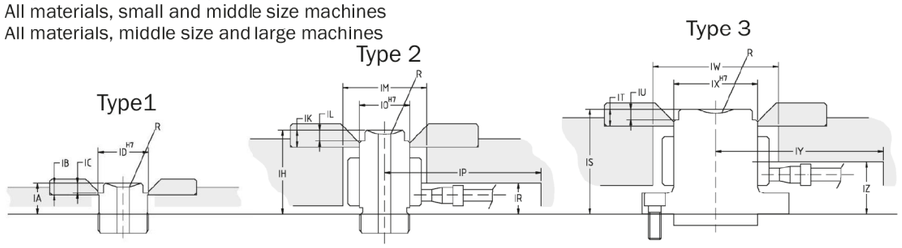
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Effective: 1/10 -08
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Catalog: Section 2

MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

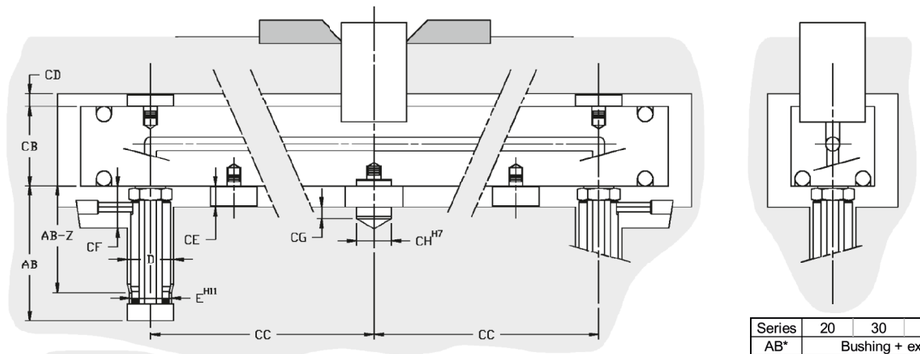
2.3Eb

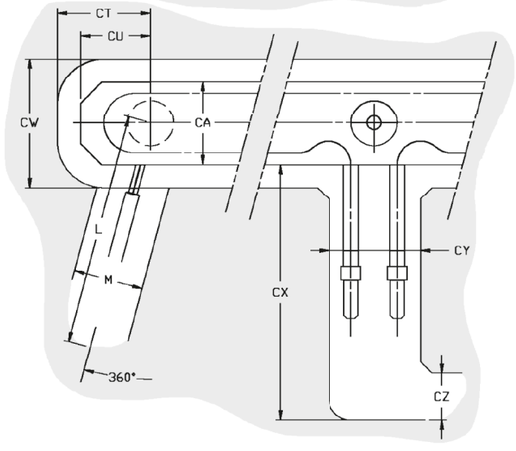
MFC Build-In dimensions for MFC systems

Note material and size of machine when selecting extension nozzle!
Type 1 = Only less heat sensitive plastic materials
Type 2 = All materials, small and middle size machines
Type 3 = All materials, middle size and large machines



Series	IA	IB	IC	ID ø	IH min.	IH med.	IH max.	IK	IL	IM ø	IO ø	IP	IR	IS min.	IS max.	IT	IU	IW ø	IX ø	IY	IZ	R
20	15	6	5	24	40	65	-	8	7	40	24	~100	15	-	-	-	-	-	-	-	-	Nozzle R
30	20	10	9	32	50	80	110	10	9	50	32	~100	20	-	-	-	-	-	-	-	-	
40	25	12	11	38	50	80	110	12	11	55	38	~100	25	80	150	6	4	95	50	~150	45	
50	-	-	-	-	-	-	-	-	-	-	-	-	-	80	150	6	4	95	50	~150	45	





Boring dim for End Caps and Tips under Section 2, pages 2.7E and 2.8E.

MasterFlow® is supplied with heat expansion considered. Manifold expands up to calculated position at process temperature. Note surface finish of mold plates over and below the manifold.

Series	20	30	40	50
AB*	Bushing + expansion			
CA	36	46	58	70
CB	36	44	48	57
CC¹	min D - max 2 * AB			
CC²	min D - max 2 * AB			
CD	min 6 - max 20			
CE	min 8 - max 25		min 8 - max 30	
CF	20	20	25	25
CG	5	5	7	7
ø CH	15	15	20	20
CT	40	55	55	60
CU	30	45	45	50
CW	= CA + 20			
CX	~100	~110	~110	~110
CY	40	40	60	100
CZ	20	20	20	20
ø D	20	30	39	48
ø E	18	28	37	46
L	~100	~100	~100	~100
M	30	30	30	45
Z	12	20	25	35

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x) "AB"-dim + heat expansion (Exp.);
Exp. = "AB" * ($Temp_{melt}$ - $Temp_{mold}$) * $13{,}2*10^{-6}$
Exampel: AB = 59mm, $Temp_{melt}$=210 °C, $Temp_{mold}$=20°C, gives
Exp. = 59*(210-20)*0,0000132 = 0,15 mm
See table, Section 1 page 1.3E.

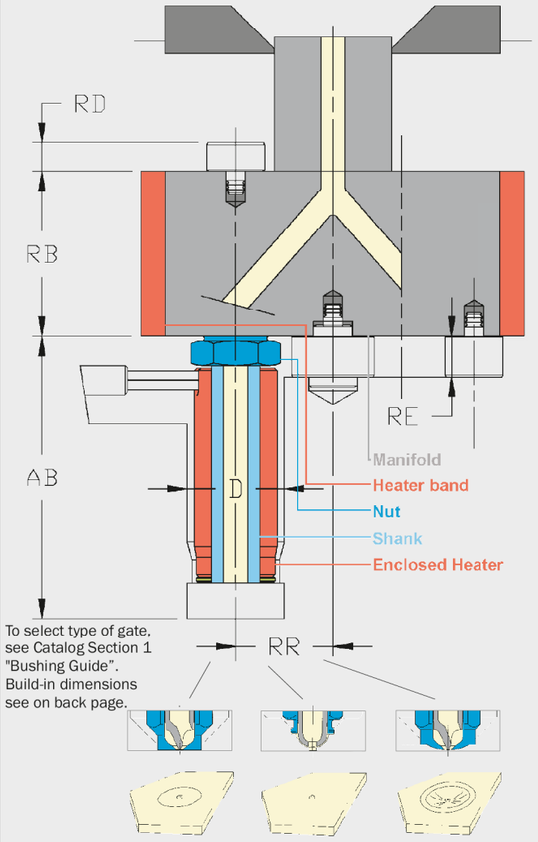
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MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

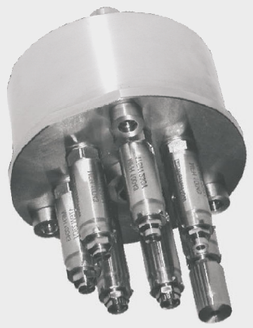
2.4E

MFCR

Round Manifold Compact System for Best Molding Performance



To select type of gate, see Catalog Section 1 "Bushing Guide". Build-in dimensions see on back page.



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* Minimum melt breakdown.
* High conductive heater enclose gives You more exact and even melt temperature.
* Economic and fast colour change.
* Heavy duty and long life proof.

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Series	Manifold	RB	RD	RE	RR_{min}	RR_{max}	Heaterband
20	MFCR20 015	33	min 6 - max 15	min 8 - max 20	R 11	R 15	MFVBT 054/026
	MFCR20 027	45			R 12	R 27	MFVBT 080/039
	MFCR20 041	59			R 26	R 41	MFVBT 108/053
	MFCR20 062	80			R 40	R 62	1 x MFVBT 092/028 1 x MFVBT 150/047

Series	Bushing	AB	øD
20	MFC20 059	59	20
	MFC20 079	79	
	MFC20 099	99	
	MFC20 119	119	
	MFC20 139	139	
	MFC20 159	159	

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MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

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Repl: 2.4E-2, 1/2 -03
Catalog: Section 2

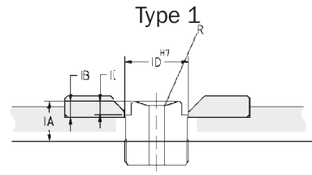
MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

2.4Eb

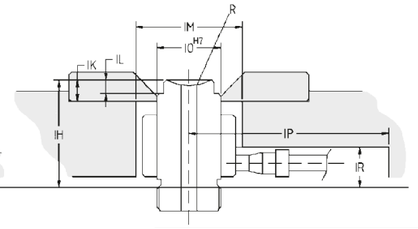
MFCR Build-In dim. for MFC Round manifolds

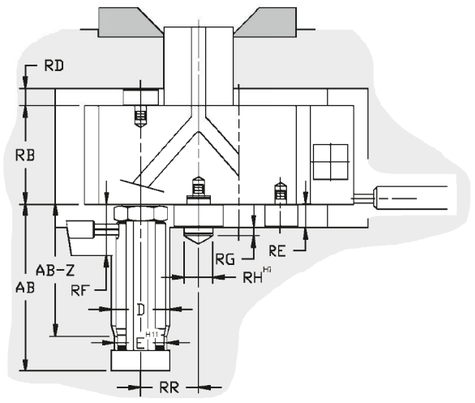
Note material and size of machine when selecting extension nozzle!
Type 1 = Only less heat sensitive plastic materials
Type 2 = All materials, small and middle size machines

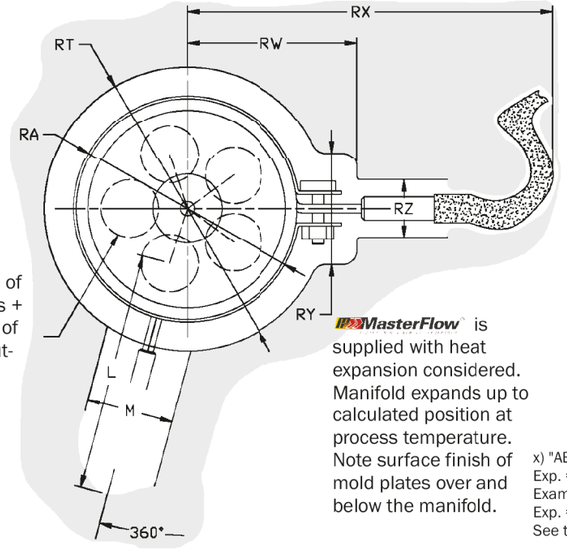
Type 1



Type 2







State no of bushings + position of cable out-let.

MasterFlow® is supplied with heat expansion considered. Manifold expands up to calculated position at process temperature. Note surface finish of mold plates over and below the manifold.

Round-Manifold	MFCR20			
	015	027	041	062
AB*	Bushing + expansion			
ø D	20			
ø E	18			
IA	15			
IB	6			
IC	5			
ø ID	24			
IH min	40			
IH max	65			
IK	8			
IL	7			
ø IM	40			
ø IO	24			
IP	~100			
IR	15			
L	~100			
M	30			
n (max)	4	8	12	12
R	Nozzle Radius			
ø RA	66	90	118	160
RB	33	45	59	80
RD	min 6 - max 15			
RE	min 8 - max 20			
RF	20			
RG	8	5	5	5
ø RH	4	15	15	15
RR^n max	R 15	R 27	R 41	R 62
RR^n min	R 11	R 11	R 19	R 40
ø RT	86	110	138	180
RW	63	75	89	110
RX	~130	~140	~160	~180
RY	45			
RZ	30			
Z	12			

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Boring dim. for End Caps and Tips under Section 2, pages 2.7E and 2.8E.

x) "AB"-dim + heat expansion (Exp.);
Exp. = "AB" * ($Temp_{melt}$ - $Temp_{mold}$) * $13{,}2*10^{-6}$
Exampel: AB = 59mm, $Temp_{melt}$=210 °C, $Temp_{mold}$=20°C, gives
Exp. = 59*(210-20)*0,0000132 = 0,15 mm
See table, Section 1 page 1.3E.

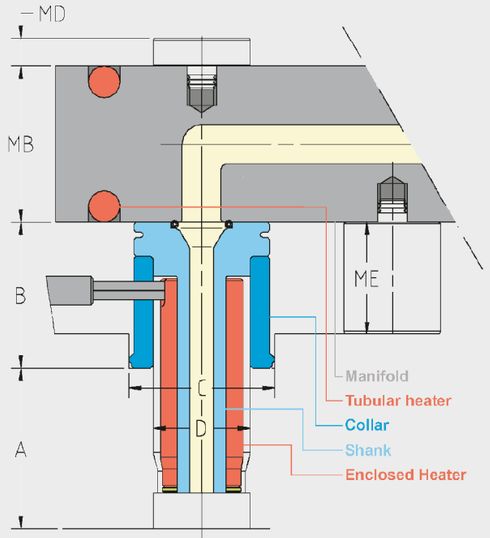
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Effective: 2/5 -08
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Catalog: Section 2

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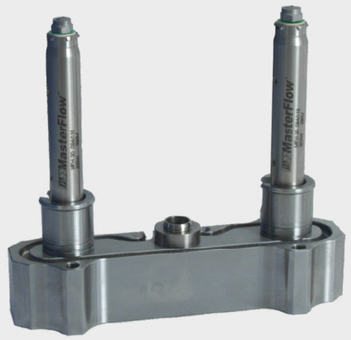
2.5E

MFF

"Floating" O-ring Type Manifold System



To select type of gate, see Catalog Section 1 "Bushing Guide". Build-in dimensions see on back page.



* Basic shank for most types of screw in end caps and gates.
* Minimum melt breakdown.
* High conductive heater enclose gives You more exact and even melt temperature.
* Economic and fast colour change.
* Heavy duty and long life proof.

Series	Description		A	B	øC	øD	MB	MD	ME	CC
	Manifold	Bushing								
20	MFFM20	MFR20 034	34	29	30	20	36	min 6 - max 20	min 8 - max 25	Mold dim.
		MFR20 054	54							
		MFR20 074	74							
		MFR20 094	94							
		MFR20 114	114							
		MFR20 134	134							
30	MFFM30	MFR30 034	34	30	40	30	44	min 6 - max 20	min 8 - max 25	Mold dim.
		MFR30 054	54							
		MFR30 074	74							
		MFR30 094	94							
		MFR30 114	114							
		MFR30 134	134							
		MFR30 154	154							
		MFR30 174	174							
40	MFFM40	MFR40 041	41	39	50	39	48	min 6 - max 20	min 8 - max 30	Mold dim.
		MFR40 066	66							
		MFR40 091	91							
		MFR40 116	116							
		MFR40 141	141							
		MFR40 166	166							
		MFR40 191	191							
		MFR40 216	216							
50	MFFM50	MFR50 050	50	44	60	48	57	min 6 - max 20	min 8 - max 30	Mold dim.
		MFR50 080	80							
		MFR50 110	110							
		MFR50 140	140							
		MFR50 170	170							
		MFR50 200	200							

MasterFlow is an approved quality system for moulding with hot runner technology.
Our engineers have considered both old and new experiences when designing the system. For moulding sensitive components, only verified solutions are chosen.
With more than 35 years in hot runner business and thousands of hot runner systems delivered, we can guarantee best assistance from mold design to production optimization.
MasterFlow is manufactured in Sweden by skilled workers and engineers.
High quality, fast and competent service, satisfied customers and reasonable price.

Because of our program of continuos product improvements, MasterFlow reserves the right to change specifications and design without notice and without incurring obligation.

MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

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Catalog: Section 2

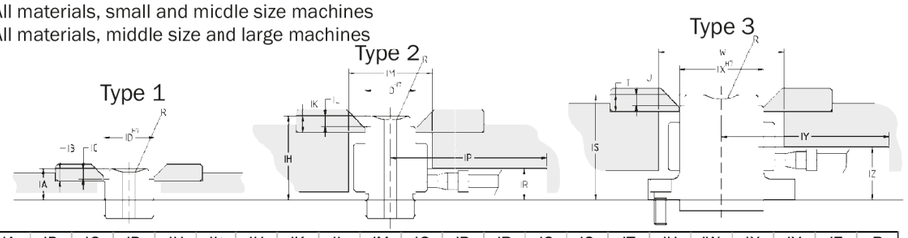
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2.5Eb

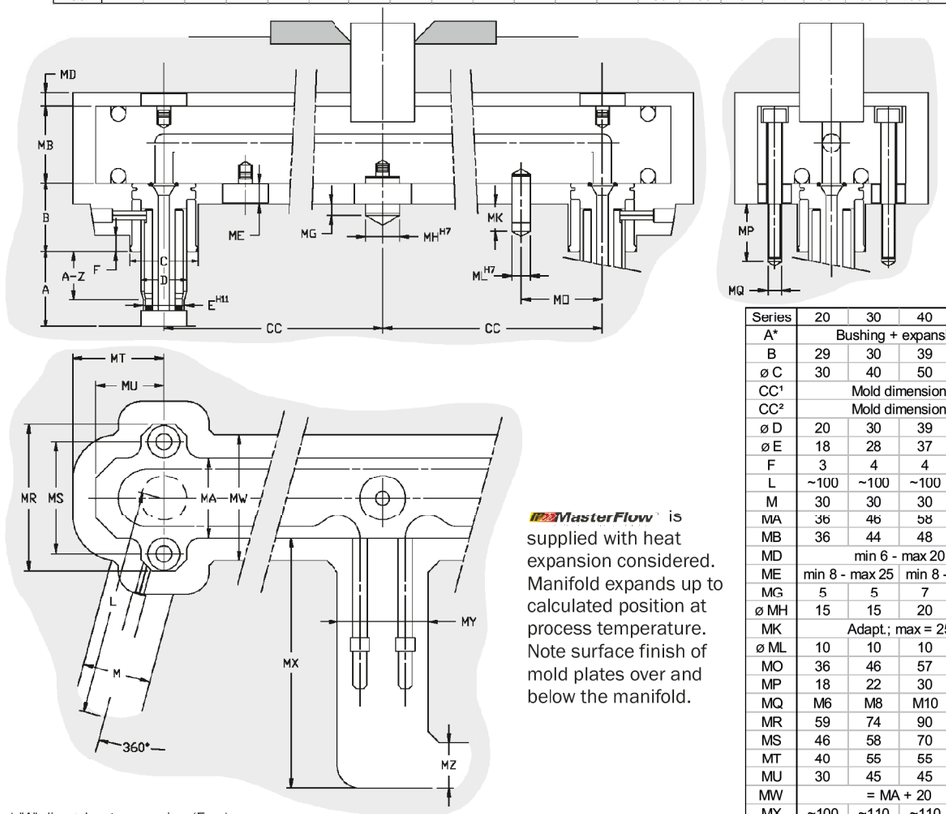
MFF

Boring Dimensions for MFF systems

Note material and size of machine when selecting extension nozzle!
Type 1 = Only less heat sensitive plastic materials
Type 2 = All materials, small and micdle size machines
Type 3 = All materials, middle size and large machines



Series	IA	IB	IC	ID ø	IH min.	IH med.	IH max.	IK	IL	IM ø	IO ø	IP	IR	IS min.	IS max.	IT	IU	IW ø	IX ø	IY	IZ	R
20	15	6	5	24	40	65	-	8	7	40	24	~100	15	-	-	-	-	-	-	-	-	Nozzle R
30	20	10	9	32	50	80	110	10	9	50	32	~100	20	-	-	-	-	-	-	-	-	
40	25	12	11	38	50	80	110	12	11	55	38	~100	25	80	150	6	4	95	50	~150	45	
50	-	-	-	-	-	-	-	-	-	-	-	-	-	80	150	6	4	95	50	~150	45	



MasterFlow is supplied with heat expansion considered. Manifold expands up to calculated position at process temperature. Note surface finish of mold plates over and below the manifold.

x) "A"-dim + heat expansion (Exp.);
Exp. = "A" * ($Temp_{melt}$ - $Temp_{mold}$) * $13{,}2*10^{-6}$
Exampel: A= 91mm, $Temp_{melt}$=210 °C, $Temp_{mold}$=20°C, gives
Exp. = 91*(210-20)*0,0000132 = 0,23 mm
See table, Section 1 page 1.3E.

Boring dim for End Caps and Tips under Section 2, pages 2.7E and 2.8E.

Series	20	30	40	50
A*	Bushing + expansion			
B	29	30	39	44
ø C	30	40	50	60
CC¹	Mold dimension			
CC²	Mold dimension			
ø D	20	30	39	48
ø E	18	28	37	46
F	3	4	4	4
L	~100	~100	~100	~100
M	30	30	30	45
MA	36	46	58	70
MB	36	44	48	57
MD	min 6 - max 20			
ME	min 8 - max 25		min 8 - max 30	
MG	5	5	7	7
ø MH	15	15	20	20
MK	Adapt.; max = 25			
ø ML	10	10	10	10
MO	36	46	57	67
MP	18	22	30	35
MQ	M6	M8	M10	M12
MR	59	74	90	102
MS	46	58	70	80
MT	40	55	55	60
MU	30	45	45	50
MW	= MA + 20			
MX	~100	~110	~110	~110
MY	40	40	60	100
MZ	20	20	20	20
Z	12	20	25	35

Because of our program of continuos product improvements, MasterFlow reserves the right to change specifications and design without notice and without incurring obligation.

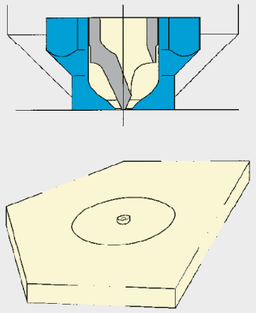
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Effective: 1/10 -08
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Catalog: Section 2

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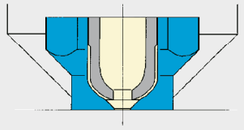
Boring dimensions: End Caps and Tips for MFR, MFC, MFF. Gate applications:

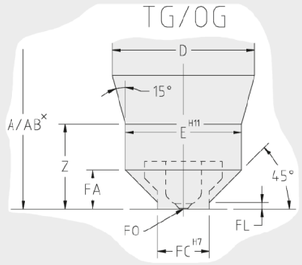
2.7E

TG



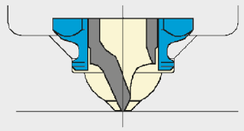
OG



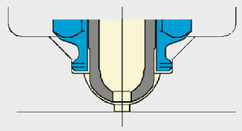


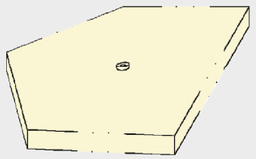
Types TG and OG are designed for direct gating on part with small vestige inside a ring mark. These front/tip types are regarded as our standard assembly.
Note gate dia. See section 1 "Bushing Guide".

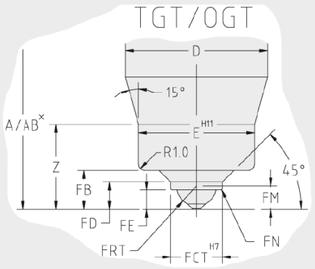
TGT



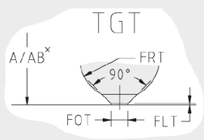
OGT

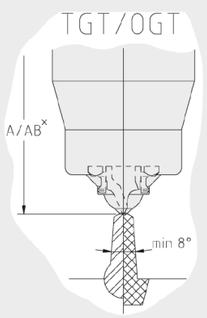




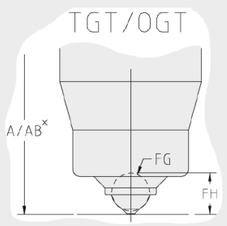


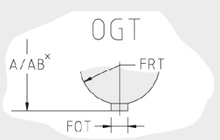
Gate types TGT and OGT are designed for direct gating. Also on contour surface and sprue channel.
Exact dim very important.
Note gate dia. See Section 1 "Bushing Guide"
Note heat sensitive materials.





Boring dimensions can easily be evaluated by using a ball with dia "FG" as shown in the fig. below.





x) "A"/"AB"-dim + heat expansion (Exp.);
Exp. = "A"/"AB" * (Temp$_{melt}$ - Temp$_{mold}$) * 13,2*10^{-6}
Exampel: A= 99mm, Temp$_{melt}$=210 °C, Temp$_{mold}$=20°C,
gives Exp. = 99*(210-20)*0,0000132 = 0,25 mm
Se table, Section 1 page 1.3E.

Because of our program of continuos product improvements, MasterFlow reserves the right to change specifications and design without notice and without incurring obligation.

Series	A* AB*	D Ø	E Ø	FA	FB	FC Ø	FCT Ø	FD	FE	FG Ø	FH	FL	FLT	FM	FN r	FO; Gate dia Ø	std	max	FOT Ø	FRT r	Z
20	Bushing + expansion	20	18	6	6	9	9	4,7	3	6	6,5	1,5	0,1	3,6	0,2	See "Bush Guide"	0,8	2,0	See "Bush Guide"	3,1	12
30		30	28	10	9	11	13	5,9	4	9	9,8	1,5	0,2	5,5	0,2		1,0	3,0		4,7	20
40		39	37	12,5	13	15	19	8,6	6	15	16,4	1,5	0,3	9,0	0,2		1,5	5,0		7,6	25
50		48	46	15	17	21	27	11,5	8	22	23,8	2,5	0,4	13,0	0,5		2,5	7,0		11,2	35

MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

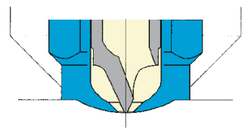
E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

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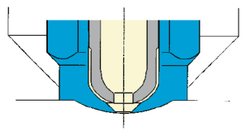
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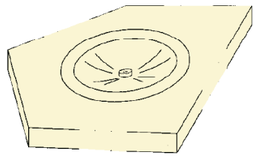
2.7Eb Boring dimensions: End Caps and Tips for MFR, MFC, MFF. Gate applications:

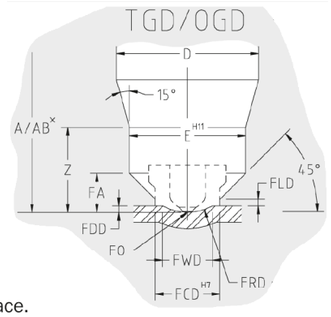
TGD



OGD

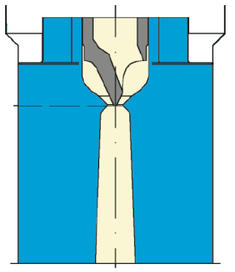




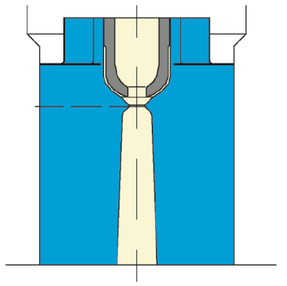


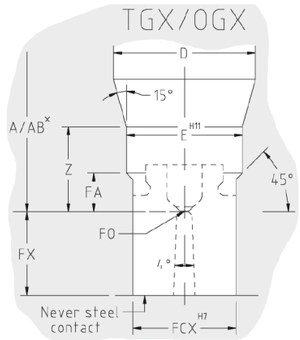
Types TGD and OGD are designed for direct gating on part with vestige below main surface. Corresponding radius on opposite surface. Please notice sticking and heat sensitive plastic materials.

TGX

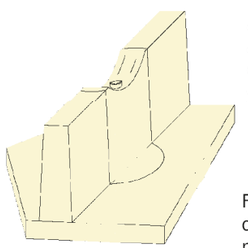


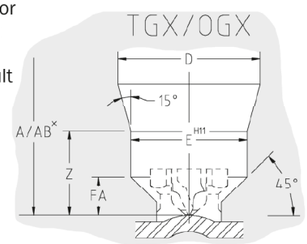
OGX



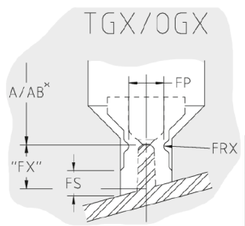


Front/Gate types TGX and OGX are designed for direct gating, when end cap is machined to fit contour. Also on cold runners.
Contact surface dim special important. Consult your local representative.





For channel gate on part or cold runner you can reduce temperature influence by making a groove in line with "A"/"AB"-dim, acc. tc figure to the left. Start with a large "FS"-dim.
Front cap surface never against steel.
A plastic disc always in front of bushing.



x) "A"/"AB"-dim + heat expansion (Exp.);
Exp. = "A"/"AB" * (Temp$_{melt}$ - Temp$_{mold}$) * 13,2*10^{-6}
Exampel: A= 99mm, Temp$_{melt}$=210 °C, Temp$_{mold}$=20°C,
gives Exp. = 99*(210-20)*0,0000132 = 0,25 mm
Se table, Section 1 page 1.3E.

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Series	A* AB*	D Ø	E Ø	FA	FCD Ø	FCX Ø	FDD	FLD	FP Ø	FO; Gate dia Ø	std	max	FRD r	FRX r	FS	FWD Ø	FX	Z
20	Bushing + expansion	20	18	6,0	10	16	1,0	1,0	5,5	See "Bush Guide"	0,8	2,0	8	1,0	=FLD + 0,7 * "FX"	7,7	20	12
30		30	28	10,0	14	18	1,5	1,5	7,5		1,0	3,0	10	1,0		10,5	25	20
40		39	37	12,5	21	28	2,5	2,0	11,0		1,5	5,0	16	1,5		17,2	30	25
50		48	46	15,0	28	30	3,5	2,5	17,0		2,5	7,0	24	2,0		25,0	40	35

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Effective: 31/3 -22
Repl: 2.7E-3, 2/5 -08
Catalog: Section 2

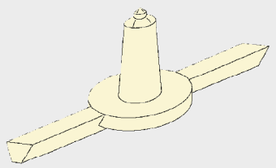
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Boring dimensions: End Caps and Tips for MFR, MFC, MFF
Gate applications:

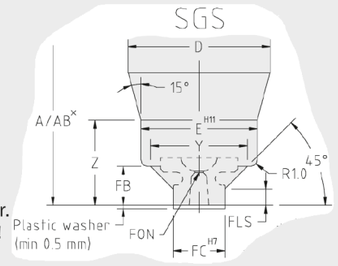
2.8E

SGS

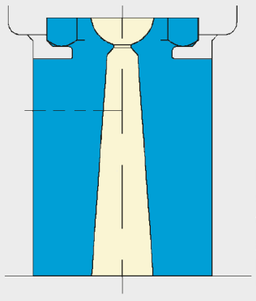




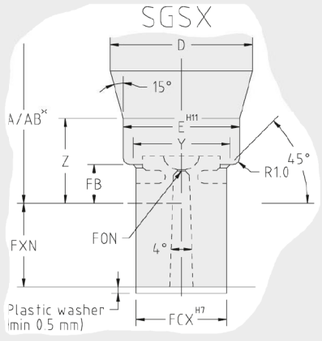
Types SGS and SGSX are designed for channel gating on cold runner with high vestige. Can be used together with gripper.
End cap front surface never against steel!
A plastic disc always in front of bushing.
Please notice orifice dia. See Section 1 in the "Bushing Guide".
For string sensitive materials use SGTG or SGTGX on back page.

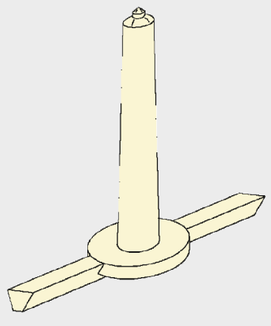


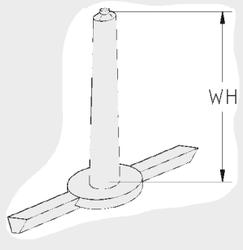
SGSX

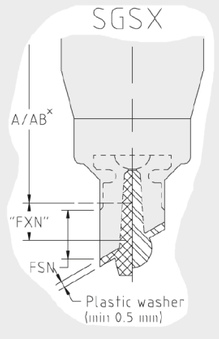


Front type SGX is extended and has an enlarged diameter. Can be used on special type surfaces and as a holder for robot gripper.
Note orifice diameter. See Section 1 in the "Bushing Guide".
Contact to mold very important. Consult your local representative for confirmation.









Series	A* AB*	D ø	E ø	FB	FC ø	FCX ø	FLS	FON; Gate dia ø	std	max	FSN	FXN	WH	Y	Z
20	+ Bushing expansion	20	18	6	9	16	2,5	See "Bush Guide"	1,3	1,5	=FLS + 0,7**"FXN"	15	5+"FXN"	16	12
30		30	28	9	11	18	4		1,5	2,0		15	7+"FXN"	21	20
40		39	37	13	15	28	6		2,0	3,0		20	10+"FXN"	29	25
50		-	-	-	-	-	-					-	-	-	-

x) "A"/"AB"-dim + heat expansion (Exp.);
Exp. = "A"/"AB" * (Temp$_{mat}$ - Temp$_{mold}$) * 13,2*10^{-6}
Exampel: A= 99mm, Temp$_{mat}$=210 °C, Temp$_{mold}$=20°C,
gives Exp. = 99*(210-20)*0,0000132 = 0,25 mm
Se table, Section 1 page 1.3E.

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MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

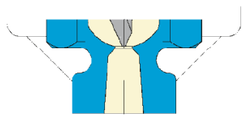
Doc. no: 2.8E-5
Effective: 18/10 -21
Repl: 2.8E-4, 2/5 -08
Catalog: Section 2

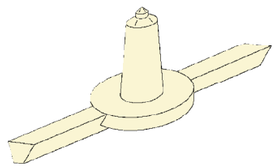
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Boring dimensions: End Caps and Tips for MFR, MFC, MFF
Gate applications:

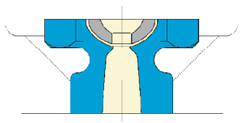
2.8Eb

SGTG

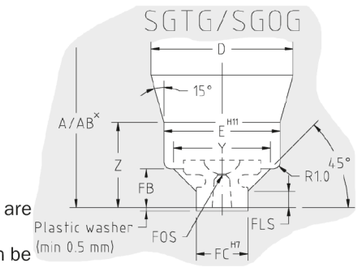




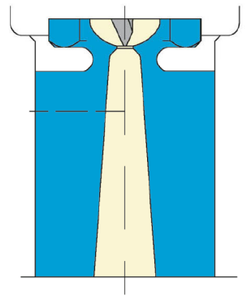
SGOG



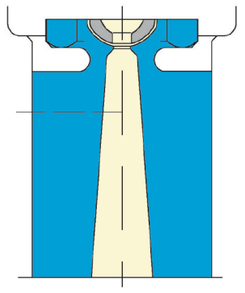
Frcnt types SGTG SGOG SGTGX SGOGX are designed for channel gating on cold runner with high vestige. The sprue can be used together with robot gripper.
End cap front surface never against steel!
A plastic disc always molded in front of bushing end cap.
Notice dim orifice dia. See section 1 in the "Bushing Guide".

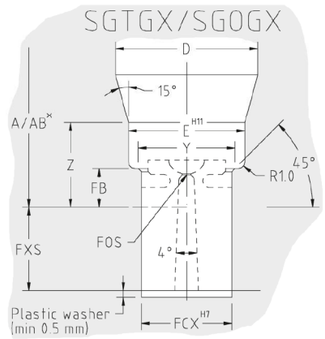


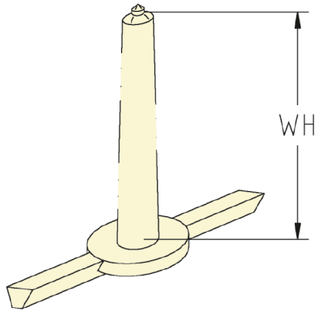
SGTGX



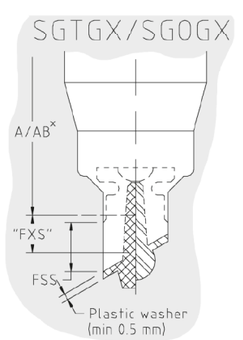
SGOGX







Front types SGTGX/SGOGX are extended and have an enlarged diameter. Can be used on special type surfaces and as a holder for robot gripper.
Note orifice diameter. See section 1 in the "Bushing Guide".
Contact against mold very important! Contact your local representative for confirmation.



Series	A* AB*	D ø	E ø	FB	FC ø	FCX ø	FLS	FOS; Gate dia ø	std	max	FSS	FXS	WH	Y	Z
20	+ Bushing expansion	20	18	6	9	16	2,5	See "Bush Guide"	1,3	2,0	=FLS + 0,7**"FXS"	15	5+"FXS"	16	12
30		30	28	9	11	18	4		1,5	3,0		20	7+"FXS"	21	20
40		39	37	13	15	28	6		2,0	5,0		30	10+"FXS"	29	25
50		48	46	17	21	30	8		3,0	7,0		40	14+"FXS"	39	35

x) "A"/"AB"-dim + heat expansion (Exp.);
Exp. = "A"/"AB" * (Temp$_{mat}$ - Temp$_{mold}$) * 13,2*10^{-6}
Exampel: A= 99mm, Temp$_{mat}$=210 °C, Temp$_{mold}$=20°C,
gives Exp. = 99*(210-20)*0,0000132 = 0,25 mm
Se table, Section 1 page 1.3E.

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Repl: 2.8E-4, 2/5 -08
Catalog: Section 2

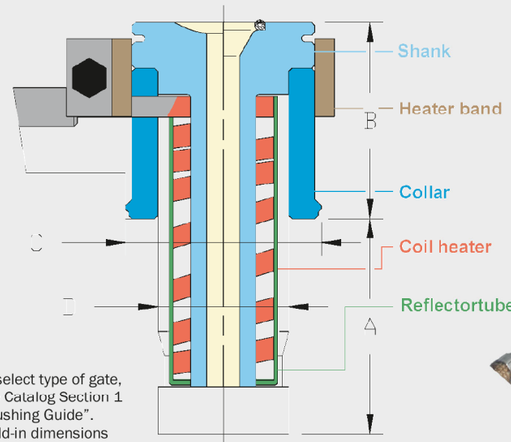
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MFRX

for single-cavity, cold runner, cold sprue shortening and "floating" manifold

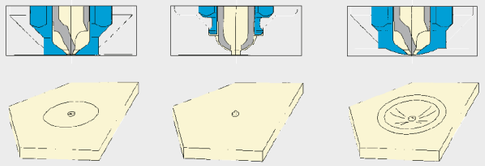
- Version Extra -

2.11E





To select type of gate, see Catalog Section 1 "Bushing Guide". Build-in dimensions see on back page.



* Basic shank for most types of screw in End caps and gates.
* Minimum melt breakdown.
* Economic and fast colour change.
* Heavy duty and long life proof.

Series	Description	A	B	ØC	ØD	Heater/Heater band	
22X	MFRX22 034	34	29	30	22	MFHX22 034/059	MFVBT 028/012
	MFRX22 054	54				MFHX22 054/079	
	MFRX22 074	74				MFHX22 074/099	
	MFRX22 094	94				MFHX22 094/119	
	MFRX22 114	114				MFHX22 114/139	
	MFRX22 134	134				MFHX22 134/159	
30X	MFRX30 034	34	30	40	30	MFHX30 034/059	MFVBT 038/014
	MFRX30 054	54				MFHX30 054/079	
	MFRX30 074	74				MFHX30 074/099	
	MFRX30 094	94				MFHX30 094/119	
	MFRX30 114	114				MFHX30 114/139	
	MFRX30 134	134				MFHX30 134/159	
	MFRX30 154	154				MFHX30 154/179	
	MFRX30 174	174				MFHX30 174/199	
40X	MFRX40 041	41	39	50	39	MFHX40 041/074	MFVBT 049/017
	MFRX40 066	66				MFHX40 066/099	
	MFRX40 091	91				MFHX40 091/124	
	MFRX40 116	116				MFHX40 116/149	
	MFRX40 141	141				MFHX40 141/174	
	MFRX40 166	166				MFHX40 166/199	
	MFRX40 191	191				MFHX40 191/224	
	MFRX40 216	216				MFHX40 216/249	
50X	MFRX50 050	50	44	60	48	MFHX50 050/089	MFVBT 058/018
	MFRX50 080	80				MFHX50 080/119	
	MFRX50 110	110				MFHX50 110/149	
	MFRX50 140	140				MFHX50 140/179	
	MFRX50 170	170				MFHX50 170/209	
	MFRX50 200	200				MFHX50 200/239	

MasterFlow® is an approved quality system for moulding with hot runner technology.
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High quality, fast and competent service, satisfied customers and reasonable price.

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Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

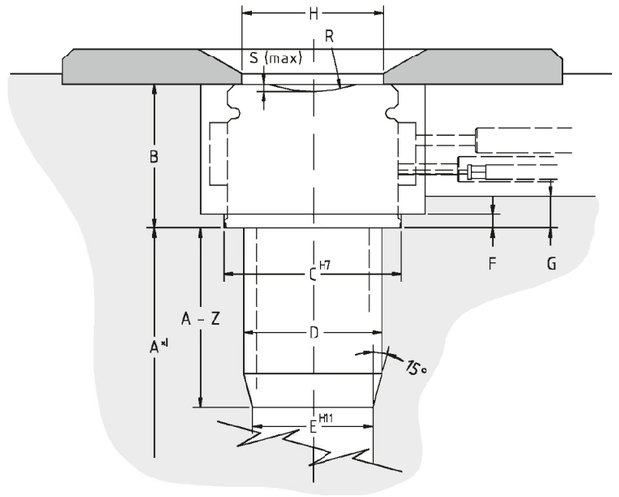
E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

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Repl: 2.11E-3, 2/5 -03
Catalog: Section 2

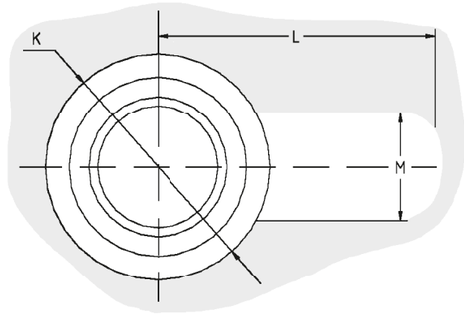
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LEADER IN HOT RUNNER TECHNOLOGY

2.11Eb

MFRX Boring Details for MFRX bushings



Low temperature and less heat sensitive materials do not always need a heaterband. We recommend that you give place, if later needed.
"A"-dim is important.
Bushing is expanding when heated up. See expansion calculation below or quick guide on page 1.3E.
Mold locating ring should always have minimum contact.

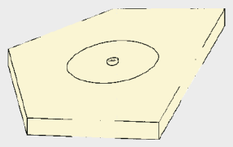


Series	22	30	40	50
B	29	30	39	44
ø C	30	40	50	60
ø D	22	30	39	48
ø E	-	28	37	46
F	3	4	4	4
G	8	8	10	15
ø H	25	33	44	52
ø K	43	53	63	75
L	~100	~100	~100	~100
M	30	30	30	45
R	Delivery R = 0			
S (max)	2	2	3	4
Z	-	20	25	35

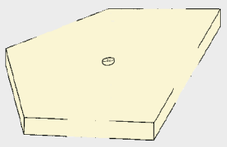
x) "A"-dim + heat expansion (Exp.);
Exp. = "A" * $Temp_{melt}$ - $Temp_{mold}$ * 13,2*10^{-6}
Exampel: A= 91mm, $Temp_{melt}$=210 °C, $Temp_{mold}$=20°C, gives
Exp. = 91*(210-20)*0,0000132 = 0,23 mm
See table, Section 1 page 1.3E.

Build-in dimensions for end caps and tips under section 2, page 2.7E and 2.8E

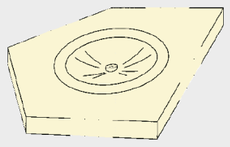
Type TG and OG:
Point Gate with small vestige and ring mark.



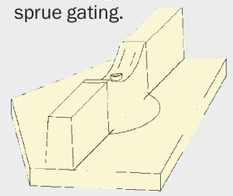
Type TGT and OGT:
Point Gate with very small vestige.



Type TGD and OGD:
Point Gate with vestige lower than part surface.



Type TGX and OGX:
For slanting surface and sprue gating.



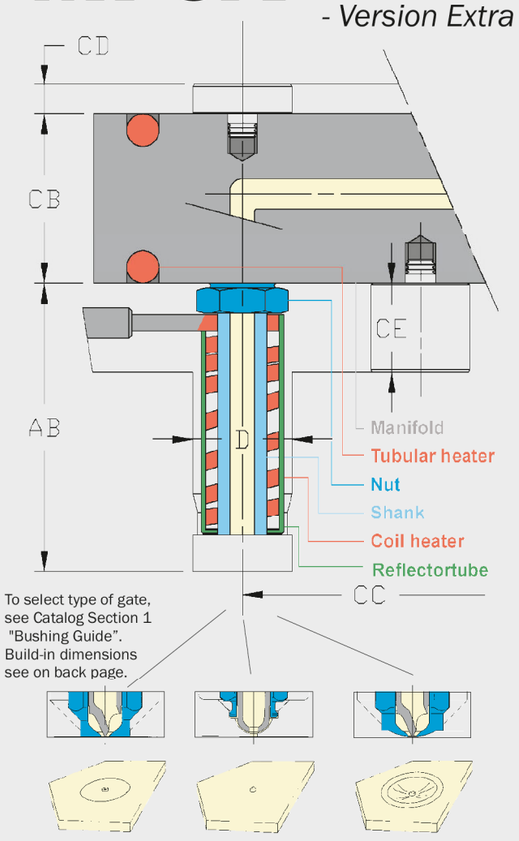
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2.13E

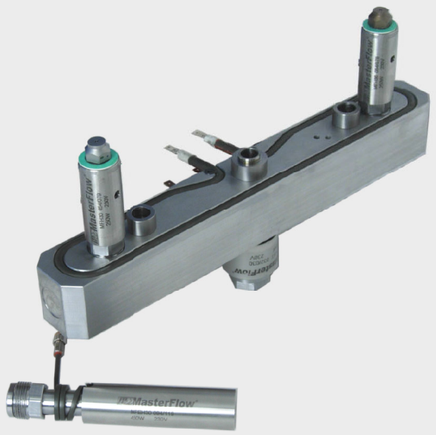
MFCX

Screw-In Assembled Compact Manifold System

- Version Extra -



To select type of gate, see Catalog Section 1 "Bushing Guide". Build-in dimensions see on back page.



* Basic shank for most types of screw in end caps and gates.
* Minimum melt breakdown.
* Economic and fast colour change.
* Heavy duty and long life proof.

Series	Description		AB	ØD	CB	CD	CE	CC
	Manifold	Bushing						
22X	MFCM20	MFCX22 059	59	22	36	min 6 - max 20	min 8 - max 25	max 2 * AB
		MFCX22 079	79					
		MFCX22 099	99					
		MFCX22 119	119					
		MFCX22 139	139					
		MFCX22 159	159					
30X	MFCM30	MFCX30 059	59	30	44	min 6 - max 20	min 8 - max 25	max 2 * AB
		MFCX30 079	79					
		MFCX30 099	99					
		MFCX30 119	119					
		MFCX30 139	139					
		MFCX30 159	159					
		MFCX30 179	179					
		MFCX30 199	199					
40X	MFCM40	MFCX40 074	74	39	48	min 6 - max 20	min 8 - max 30	max 2 * AB
		MFCX40 099	99					
		MFCX40 124	124					
		MFCX40 149	149					
		MFCX40 174	174					
		MFCX40 199	199					
		MFCX40 224	224					
		MFCX40 249	249					
50X	MFCM50	MFCX50 089	89	48	57	min 6 - max 20	min 8 - max 30	max 2 * AB
		MFCX50 119	119					
		MFCX50 149	149					
		MFCX50 179	179					
		MFCX50 209	209					
		MFCX50 239	239					

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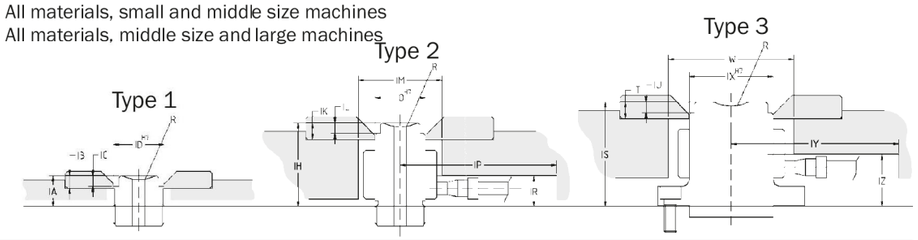
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Catalog: Section 2

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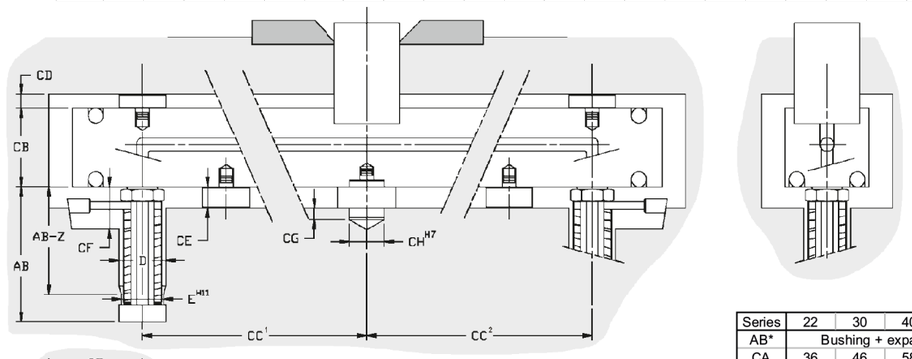
2.13Eb

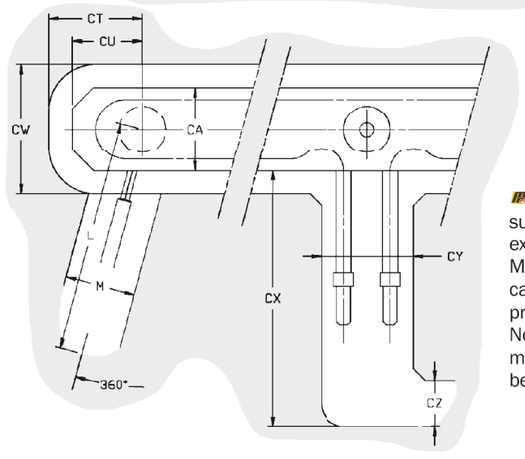
MFCX Build-In dimensions for MFCX systems

Note material and size of machine when selecting extension nozzle!
Type 1 = Only less heat sensitive plastic materials
Type 2 = All materials, small and middle size machines
Type 3 = All materials, middle size and large machines



Series	IA	IB	IC	ID ø	IH min.	IH med.	IH max.	IK	IL	IM ø	IO ø	IP	IR	IS min.	IS max.	IT	IU	IW ø	IX ø	IY	IZ	R
20	15	6	5	24	40	65	-	8	7	40	24	~100	15	-	-	-	-	-	-	-	-	Nozzle R
30	20	10	9	32	50	80	110	10	9	50	32	~100	20	-	-	-	-	-	-	-	-	
40	25	12	11	38	50	80	110	12	11	55	38	~100	25	80	150	6	4	95	50	~150	45	
50	-	-	-	-	-	-	-	-	-	-	-	-	-	80	150	6	4	95	50	~150	45	





MasterFlow® is supplied with heat expansion considered. Manifold expands up to calculated position at process temperature. Note surface finish of mold plates over and below the manifold.

Series	22	30	40	50
AB*	Bushing + expansion			
CA	36	46	58	70
CB	36	44	48	57
CC¹	min D - max 2 * AB			
CC²	min D - max 2 * AB			
CD	min 6 - max 20			
CE	min 8 - max 25		min 8 - max 30	
CF	20	20	25	25
CG	5	5	7	7
ø CH	15	15	20	20
CT	40	55	55	60
CU	30	45	45	50
CW	= CA + 20			
CX	~100	~110	~110	~110
CY	40	40	60	100
CZ	20	20	20	20
ø D	22	30	39	48
ø E	-	28	37	46
L	~100	~100	~100	~100
M	30	30	30	45
Z	-	20	25	35

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Boring dim for end caps you will find on pages 2.7E and 2.8E.

x) "AB"-dim + heat expansion (Exp.);
Exp. = "AB" * ($Temp_{melt}$ - $Temp_{mold}$) * 13,2*10^{-6}
Exampel: AB = 59mm, $Temp_{melt}$=210 °C, $Temp_{mold}$=20°C, gives
Exp. = 59*(210-20)*0,0000132 = 0,15 mm
See table, Section 1 page 1.3.

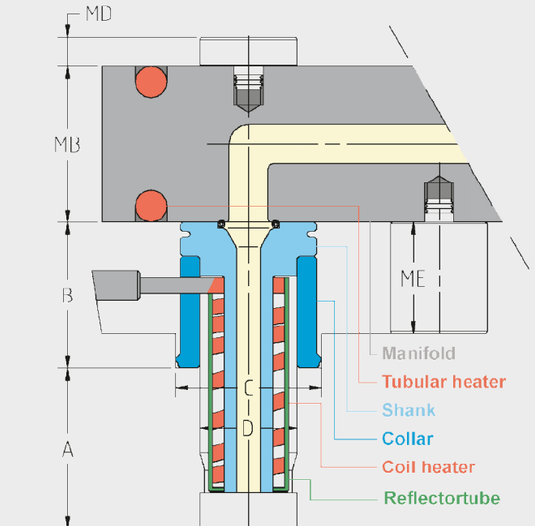
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MFFX

"Floating" O-ring Type Manifold System

- Version Extra -

2.15E



To select type of gate, see Catalog Section 1 "Bushing Guide". Build-in dimensions see on back page.



* Basic shank for most types of screw in end caps and gates.
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* Heavy duty and long life proof.

Series	Description		A	B	øC	øD	MB	MD	ME	CC
	Manifold	Bushing								
22X	MFFM20	MFRX22 034	34	29	30	22	36	min 6 - max 20	min 8 - max 25	Mold dim.
		MFRX22 054	54							
		MFRX22 074	74							
		MFRX22 094	94							
		MFRX22 114	114							
		MFRX22 134	134							
30X	MFFM30	MFRX30 034	34	30	40	30	44	min 6 - max 20	min 8 - max 25	Mold dim.
		MFRX30 054	54							
		MFRX30 074	74							
		MFRX30 094	94							
		MFRX30 114	114							
		MFRX30 134	134							
		MFRX30 154	154							
		MFRX30 174	174							
40X	MFFM40	MFRX40 041	41	39	50	39	48	min 6 - max 20	min 8 - max 30	Mold dim.
		MFRX40 066	66							
		MFRX40 091	91							
		MFRX40 116	116							
		MFRX40 141	141							
		MFRX40 166	166							
		MFRX40 191	191							
		MFRX40 216	216							
50X	MFFM50	MFRX50 050	50	44	60	48	57	min 6 - max 20	min 8 - max 30	Mold dim.
		MFRX50 080	80							
		MFRX50 110	110							
		MFRX50 140	140							
		MFRX50 170	170							
		MFRX50 200	200							

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MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

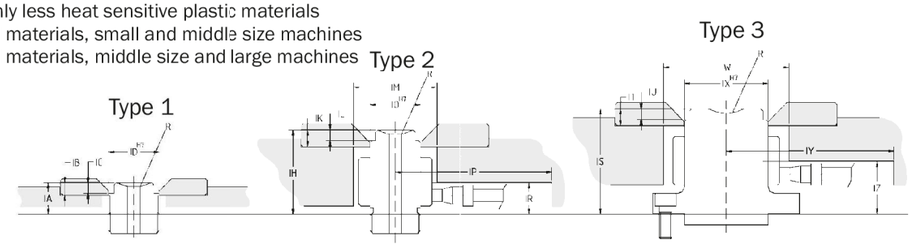
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Catalog: Section 2

MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

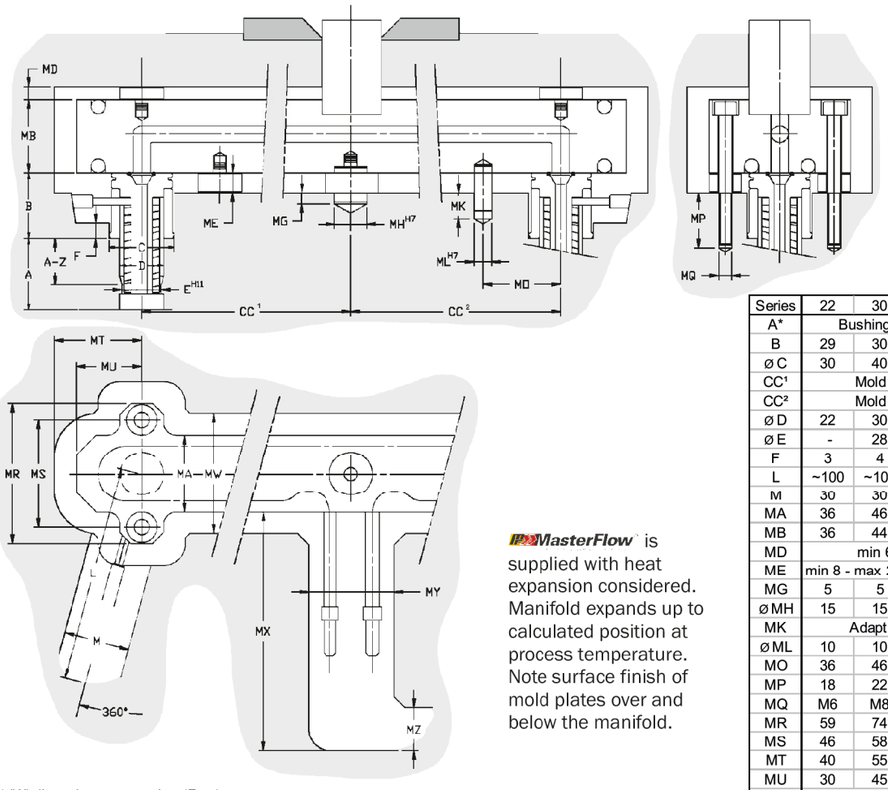
2.15Eb

MFFX Build-In dimensions for MFFX systems

Note material and size of machine when selecting extension nozzle!
Type 1 = Only less heat sensitive plastic materials
Type 2 = All materials, small and middle size machines
Type 3 = All materials, middle size and large machines



Series	IA	IB	IC	ID ø	IH min.	IH med.	IH max.	IK	IL	IM ø	IO ø	IP	IR	IS min.	IS max.	IT	IU	IW ø	IX ø	IY	IZ	R
20	15	6	5	24	40	65	-	8	7	40	24	~100	15	-	-	-	-	-	-	-	-	Nozzle R
30	20	10	9	32	50	80	110	10	9	50	32	~100	20	-	-	-	-	-	-	-	-	
40	25	12	11	38	50	80	110	12	11	55	38	~100	25	80	150	6	4	95	50	~150	45	
50	-	-	-	-	-	-	-	-	-	-	-	-	-	80	150	6	4	95	50	~150	45	



MasterFlow® is supplied with heat expansion considered. Manifold expands up to calculated position at process temperature. Note surface finish of mold plates over and below the manifold.

x) "A"-dim + heat expansion (Exp.);
Exp. = "A" * ($Temp_{melt}$ - $Temp_{mold}$) * $13{,}2*10^{-6}$
Exampel: A = 91mm, $Temp_{melt}$=210 °C, $Temp_{mold}$=20°C, gives
Exp. = 91*(210-20)*0,0000132 = 0,23 mm
See table, Section 1 page 1.3E.

Boring dim for End Caps and Tips under Section 2, pages 2.7E and 2.8E.

Series	22	30	40	50
A*	Bushing + expansion			
B	29	30	39	44
ø C	30	40	50	60
CC¹	Mold dimension			
CC²	Mold dimension			
ø D	22	30	39	48
ø E	-	28	37	46
F	3	4	4	4
L	~100	~100	~100	~100
M	30	30	30	45
MA	36	46	58	70
MB	36	44	48	57
MD	min 6 - max 20			
ME	min 8 - max 25		min 8 - max 30	
MG	5	5	7	7
ø MH	15	15	20	20
MK	Adapt.; max = 25			
ø ML	10	10	10	10
MO	36	46	57	67
MP	18	22	30	35
MQ	M6	M8	M10	M12
MR	59	74	90	102
MS	46	58	70	80
MT	40	55	55	60
MU	30	45	45	50
MW	= MA + 20			
MX	~100	~110	~110	~110
MY	40	40	60	100
MZ	20	20	20	20
Z	-	20	25	35

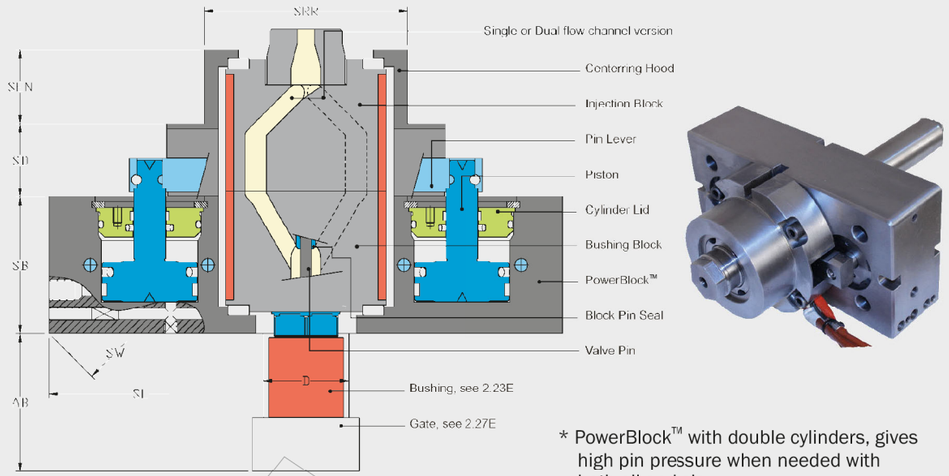
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MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

2.21E

MFSMP

Single Valve Gate with double cylinder PowerBlock™ for best overall performance



To select type of Valve Gate, see Catalog Section 1 "Bushing Guide" Build-in dimensions see on 2.23E, 2.27E and 2.28E.



* PowerBlock™ with double cylinders, gives high pin pressure when needed with both oil and air.
* The PowerBlock™ has integrated cooling line for longer life of seals = less maintenance.
* Low height and many build-in possibilities save costs for the mold maker.
* Our standard bushings are used, with possibilities for several gating applications.
* Very good heat profile enables use of heat sensitive materials.
* Economic and fast colour change.
* Pin Guide for accurate and safe valve closing.
* Heavy duty and long life proof.

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Series	Description		AB	SB	SD	SEN	SL	SW	SRR
	PowerBlock™	Bushing							
30	SPB30	MFC30 050	50	56	31,5	32,5	200	108	Ø82
		MFC30 079	70						
		MFC30 099	90						
		MFC30 119	110						
		MFC30 139	130						
		MFC30 159	150						
		MFC30 179	170						
		MFC30 199	190						
40	SPB40	MFC40 074	64	64	34	34,5	240	120	Ø95
		MFC40 099	89						
		MFC40 124	114						
		MFC40 149	139						
		MFC40 174	164						
		MFC40 199	189						
		MFC40 224	214						
		MFC40 249	239						
50	SPB50	MFC50 089	71	86	56	47	335	150	Ø125
		MFC50 119	101						
		MFC50 149	131						
		MFC50 179	161						
		MFC50 209	191						
		MFC40 239	221						

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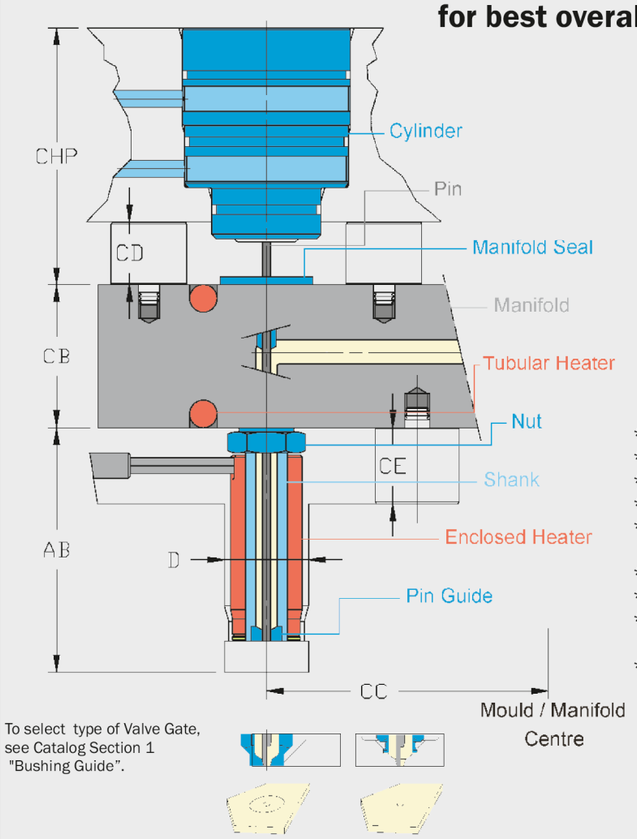
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Effective: 10/10 -11
Repl: 2.21E-1
Catalog: Section 2

MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

MFC-MP

Screw-In Assembled Compact System with Valve Gate for best overall performance

2.22E



To select type of Valve Gate, see Catalog Section 1 "Bushing Guide".

* Designed for pneumatic and hydraulic drive.
* Cylinder for smaller pitch between bushings.
* Basic shank with screw in end caps/gates.
* Minimum melt breakdown.
* High conductive heater enclose gives You more exact and even melt temperature.
* Economic and fast colour change.
* Pin Guide for accurate and safe valve closing.
* Adjustable pin position with conical or cylindrical gating.
* Heavy duty and long life proof.

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Series	Description Manifold	Description Bushing	AB	CHP Hydraulic	CHP Pneumatic	øD	CB	CD	CE	CC Min	CC	CC Max
20	MFCM20-MP	MFC20 059	59	61	61	20	36	min 8 - max 15	min 8 - max 15	42	min 42 mm (pitch between bushings)	max 2 * AB or 200 mm (centre bushing - centre manifold)
		MFC20 079	79									
		MFC20 099	99									
		MFC20 119	119									
		MFC20 139	139									
		MFC20 159	159									
30	MFCM30-MP	MFC30 059	59	61	61	30	44	min 8 - max 15	min 8 - max 15	47		
		MFC30 079	79									
		MFC30 099	99									
		MFC30 119	119									
		MFC30 139	139									
		MFC30 159	159									
		MFC30 179	179									
		MFC30 199	199									
40	MFCM40-MP	MFC40 074	74	61	-	39	48	min 8 - max 15	min 8 - max 15	50		
		MFC40 099	99									
		MFC40 124	124									
		MFC40 149	149									
		MFC40 174	174									
		MFC40 199	199									
		MFC40 224	224									
		MFC40 249	249									

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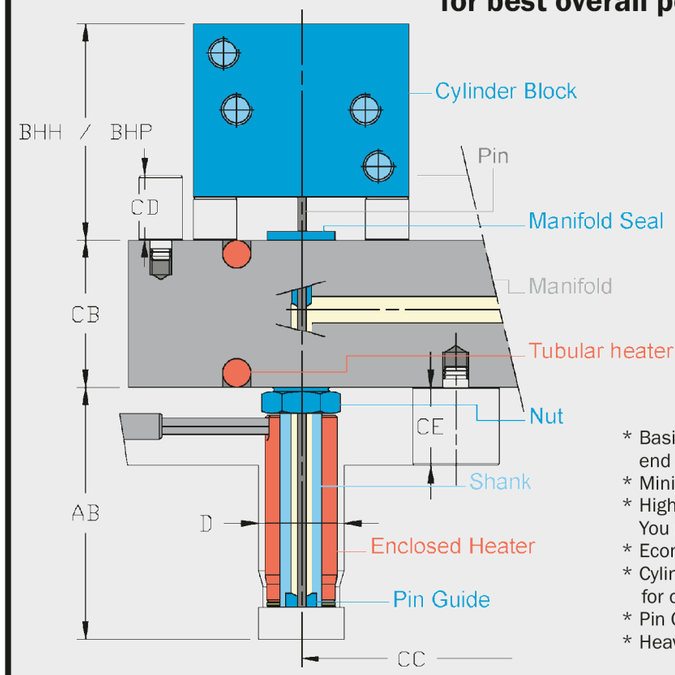
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Effective: 20/2 -23
Repl: 2.22E-2, 2/5 -08
Catalog: Section 2

MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

MFC-MP

Screw-In Assembled Compact System with Valve Gate for best overall performance

2.23E



To select type of Valve Gate, see Catalog Section 1 "Bushing Guide".

* Basic shank for most types of screw in end caps and gates.
* Minimum melt breakdown.
* High conductive heater enclose gives You more exact and even melt temperature.
* Economic and fast colour change.
* Cylinder Block with quick connections for oil/air and cooling water.
* Pin Guide for accurate and safe valve closing.
* Heavy duty and long life proof.

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Series	Description Manifold	Description Bushing	AB	BHH Hydraulic	BHP Pneumatic	øD	CB	CD	CE	CC Min	CC Max
20	MFCM20-MP	MFC20 059	59	65	65	20	36	min 10 - max 20	min 8 - max 25	54	max 2 * AB
		MFC20 079	79								
		MFC20 099	99								
		MFC20 119	119								
		MFC20 139	139								
		MFC20 159	159								
30	MFCM30-MP	MFC30 059	59	65	65	30	44	min 10 - max 20	min 8 - max 25	60	max 2 * AB
		MFC30 079	79								
		MFC30 099	99								
		MFC30 119	119								
		MFC30 139	139								
		MFC30 159	159								
		MFC30 179	179								
		MFC30 199	199								
40	MFCM40-MP	MFC40 074	74	65	100	39	48	min 10 - max 20	min 8 - max 30	Hyd = 64 / Pne = 74	max 2 * AB
		MFC40 099	99								
		MFC40 124	124								
		MFC40 149	149								
		MFC40 174	174								
		MFC40 199	199								
		MFC40 224	224								
		MFC40 249	249								
50	MFCM50-MP	MFC50 089	89	100	Not available	48	57	min 10 - max 20	min 8 - max 30	92	max 2 * AB
		MFC50 119	119								
		MFC50 149	149								
		MFC50 179	179								
		MFC50 209	209								
		MFC50 239	239								

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E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

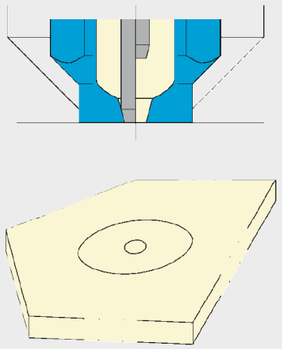
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Catalog: Section 2

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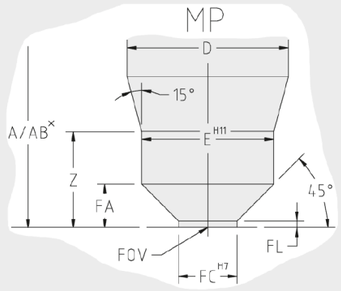
Boring dimensions: Gate types for movable pin systems SMP, MFC-MP and MFF-MP

2.27E

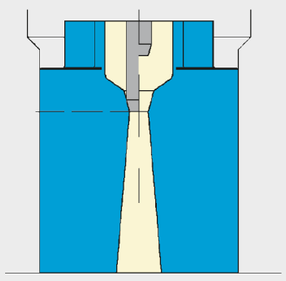
MP



Gate type MP is designed for direct gating on part, leaving only two ring marks.
This gate type is our standard for gating with a movable pin.
Other versions available, contact your local representative.

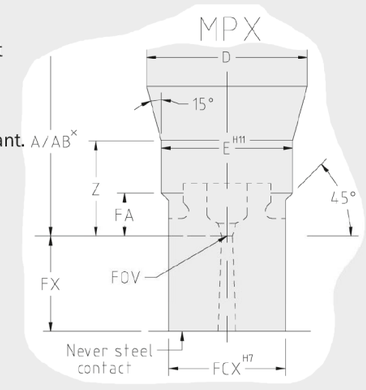


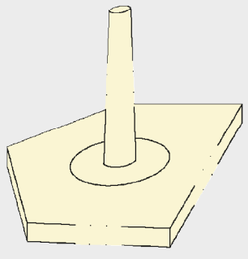
MPX

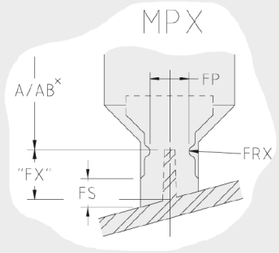


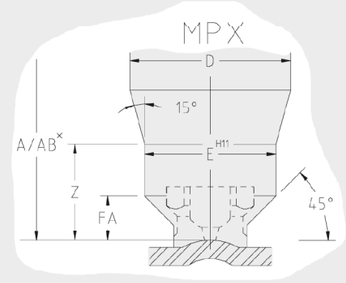
Gate type MPX is designed for direct gating, when end cap is machined to fit contour.
Also on cold runners.
Contact surface dim special important.
Consult your local representative.

For channel gate on part or cold runner you can reduce temperature influence by making a groove in line with "A"/"AB"-dim, acc. to figure below. Start with a large "FS"-dim.
End cap surface never steel-steel contact in parting line.
A plastic disc always in front of bushing.









Series	A* AB*	D Ø	E Ø	FA	FC Ø	FCX Ø	FL	FN r	FOV Ø	FP Ø	FRX r	FS	FX	Z
20	Bushing + expansion	20	18	6	9	16	1,5	0,2	1,5	5,5	1,0	= 0,7*"FX"	20	12
30		30	28	10	11	18	1,5	0,2	2,0	7,5	1,0		25	20
40		39	37	12,5	15	28	1,5	0,2	4,0	11,0	1,5		30	25
50		48	46	15	21	30	2,5	0,5	6,0	17,0	2,0		40	35

x) "A"/"AB"-dim + heat expansion (Exp.);
Exp. = "A"/"AB" * (Temp$_{melt}$ - Temp$_{mold}$) * 13,2*10^{-6}
Exampel: A =99mm, Temp$_{melt}$=210 °C, Temp$_{mold}$=20°C,
gives Exp. = 99*(210-20)*0,0000132 = 0,25 mm
Se table, Section 1 page 1.3E.

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MasterFlow AB
Hultmansgatan 1
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Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
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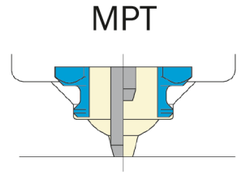
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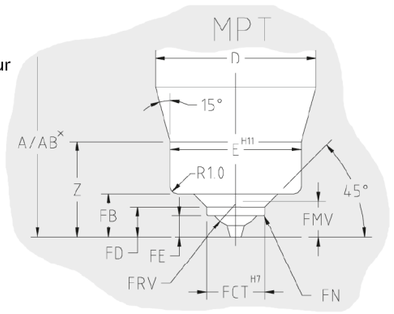
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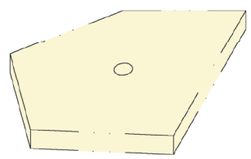
Boring dimensions: Gate types for movable pin systems SMP, MFC-MP och MFF-MP

MPT

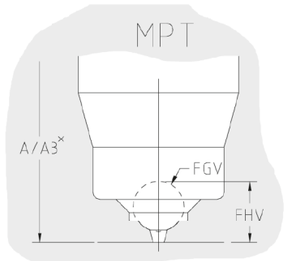


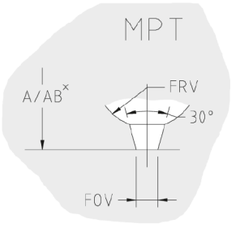
Gate type MPT is designed for direct gating on part. Also on contour surface and sprue channel.
Exact dim very important.



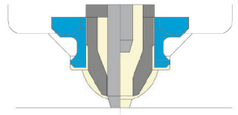


Boring dimensions can easily be evaluated by using a ball with dia "FGV" as shown in the fig. below.

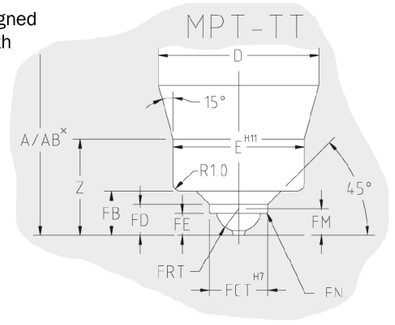


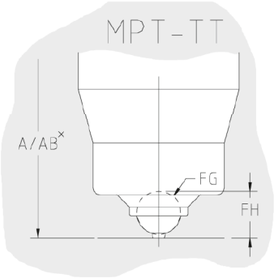


MPT-TT

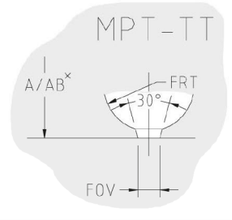


MPT-TT - TaperedTechnical - is designed for Tapered gate in combination with heat sensitive Technical materials.
The gate type is for direct gating on part. Also on contour surface and sprue channel.
The gate type is provided with alternative Pin Guide solutions to fit your application.
Exact dim very important.





Boring dimensions can easily be evaluated by using a ball with dia "FG" as shown in the fig. to the left.



x) "A"/"AB"-dim + heat expansion (Exp.);
Exp. = "A"/"AB" * (Temp$_{melt}$ - Temp$_{mold}$) * 13,2*10^{-6}
Exampel: A = 99mm, Temp$_{melt}$=210 °C, Temp$_{mold}$=20°C,
gives Exp. = 99*(210-20)*0,0000132 = 0,25 mm
Se table, Section 1 page 1.3E.

Series	A* AB*	D Ø	E Ø	FB	FCT Ø	FD	FE	FG Ø	FGV Ø	FH	FHV	FM	FMV	FN r	FOV Ø	FRT r	FRV r	Z
20	Bushing + expansion	20	18	6	9	4,7	3	6	7	6,5	8,5	3,6	5,0	0,2	1,5	3,1	3,5	12
30		30	28	9	13	5,9	4	9	12	9,8	13,9	5,5	7,9	0,2	2,0	4,7	6,0	20
40		39	37	13	19	8,6	6	15	17	16,4	19,3	9,0	10,8	0,2	4,0	7,6	8,5	25
50		48	46	17	27	11,5	8	22	29	23,8	33,0	13,0	18,5	0,5	6,0	11,2	14,5	35

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Doc. no: 2.27E-5
Effective: 30/3 -22
Repl: 2.27E-4, 1/9 -12
Catalog: Section 2

LEADER IN HOT RUNNER TECHNOLOGY

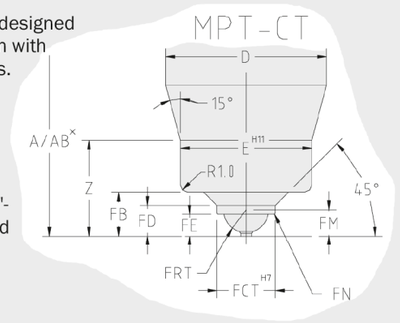
Boring dimensions: Gate types for movable pin systems SMP, MFC-MP and MFF-MP

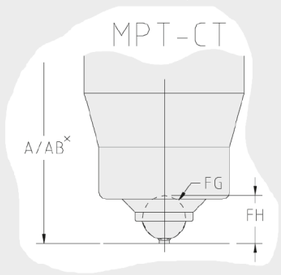
2.28E

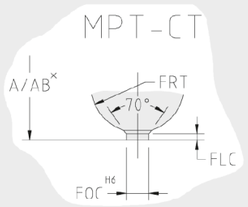
MPT-CT



MPT-CT - CylindricalTechnical - is designed for Cylindrical gate in combination with heat sensitive Technical materials.
The gate type is provided with Double Pin Guide solution for most accurate and durable gate appearence.
Exact dim very important. Check boring dimensions, using dia "FG"-ball as below. FCT and FOC should be concentric within 0,01 mm.



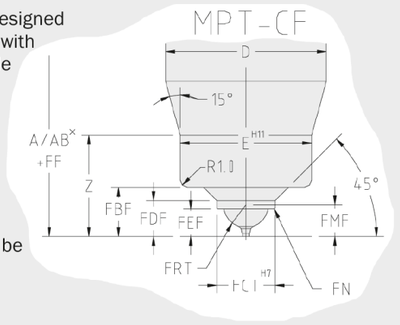


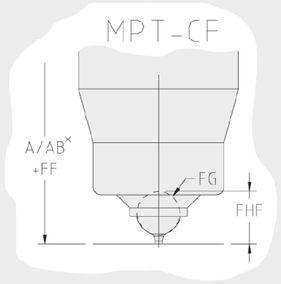


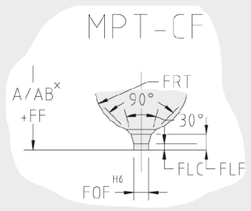
MPT-CF



MPT-CF - CylindricalFastCycle - is designed for Cylindrical gate in combination with polyolefine materials and Fast Cycle applications.
The gate type is provided with Double Pin Guide solution for most accurate and durable gate appearence.
Exact dim very important. Check boring dimensions, using dia "FG"-ball as below. FCT and FOF should be concentric within 0,01 mm.







x) "A"/"AB"-dim + heat expansion (Exp.);
Exp. = "A"/"AB" * (Temp$_{melt}$ - Temp$_{mold}$) * 13,2*10^{-6}
Exampel: A =99mm, Temp$_{melt}$=210 °C, Temp$_{mold}$=20°C,
gives Exp. = 99*(210-20)*0,0000132 = 0,25 mm
Se table, Section 1 page 1.3E.

Series	A* AB*	D Ø	E Ø	FB	FBF	FCT Ø	FD	FDF	FE	FEF	FF	FG Ø	FH	FHF	FLC	FLF	FM	FMF	FN r	FOC Ø	FOF Ø	FRT r	Z
20	+ Bushing expansion	20	18	6	6,5	9	4,7	5,2	3	3,5	0,5	6	6,5	7,0	0,4	0,77	3,6	4,1	0,2	1,5	1,2	3,1	12
30		30	28	9	10	13	5,9	6,9	4	5	1,0	9	9,8	10,8	0,6	1,6	5,5	6,5	0,2	2,0	1,5	4,7	20
40		39	37	13	14,5	19	8,6	10,1	6	7,5	1,5	15	16,4	17,9	1,0	2,45	9,0	10,5	0,2	3,8	3,0	7,6	25
50		48	46	17	-	27	11,5	-	8	-	-	22	23,8	-	1,4	-	13,0	-	0,5	6,0	-	11,2	35

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MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

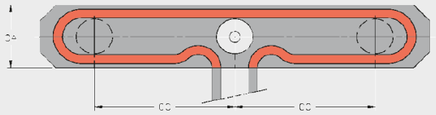
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Effective: 24/4 -21
Repl: 2.28E-3, 6/11 -20
Catalog: Section 2

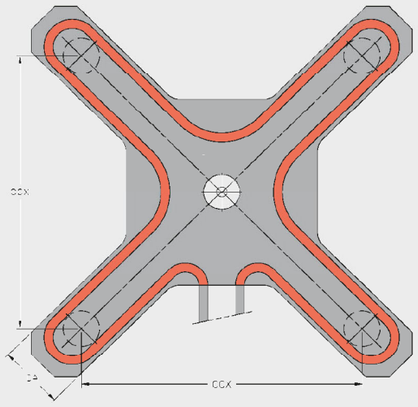
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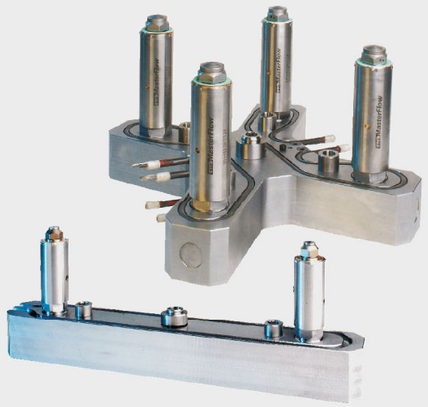
MFCM

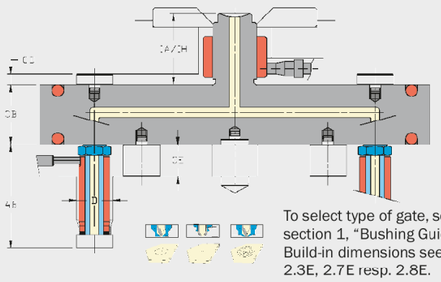
"OFF THE SHELF" SYSTEMS
Manifolds with standard dimensions for faster delivery and more competitive price

2.31E









To select type of gate, see catalog section 1, "Bushing Guide".
Build-in dimensions see pages 2.3E, 2.7E resp. 2.8E.

* Shorter delivery times.
* More competitive price with standard dimensions.
* Leakage proof with MasterFlow famous "screw-in" MFC-system.
* Double manifold tubular heaters for better temp.-profile and safety in production.
* Basic shank for most types of screw in end caps and gates.
* Minimum melt breakdown.
* High conductive heater enclose gives You more exact and even melt temperature.
* Economic and fast colour change.
* Heavy duty and long life proof.

MasterFlow® is an approved quality system for moulding with hot runner technology.
Our engineers have considered both old and new experiences when designing the system.
For moulding sensitive components, only verified solutions are chosen.
With more than 35 years in hot runner business and thousands of hot runner systems delivered, we can guarantee best assistance from mold design to production optimization.
MasterFlow® is manufactured in Sweden by skilled workers and engineers.
High quality, fast and competent service, satisfied customers and reasonable price.

Series	Description	AB	øD	CA	CB	CC	CCX	CD	CE
20	MFCM20 I	Catalog 2.3E/ 2.22E/ 2.23E	20	36	36	50 75 100	-	6	20
	MFCM20 X		20	36	36	-	100 150	6	20
	MFCM20-MP OC		20	70	36	55	-	15	20
30	MFCM30 I		30	46	44	50 75 100	-	6	20
	MFCM30 X		30	46	44	-	100 150 200	6	20
	MFCM30-MP OC		30	74	44	60	-	15	20
40	MFCM40-MP OC	Catalog 2.23E	39	90	48	75	-	15	25
50	MFCM50-MP OC		48	102	57	95	-	15	25

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MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

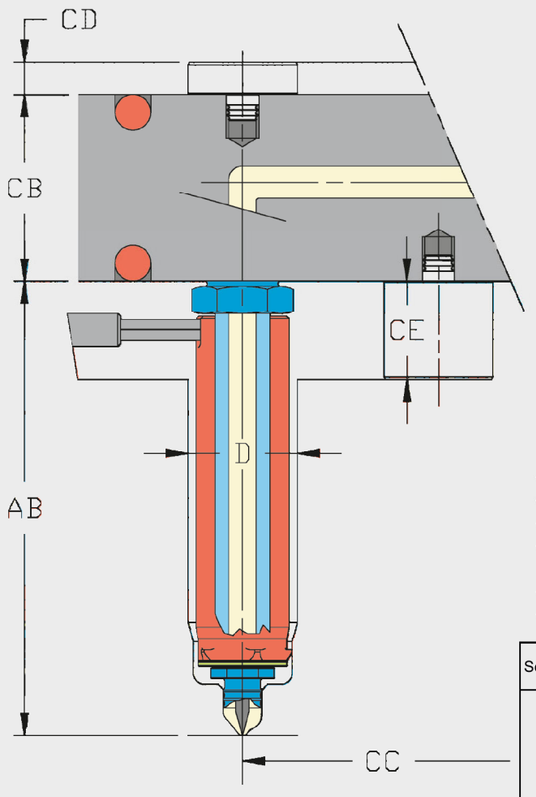
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Effective.: 23/3 -22
Repl: 2.31E-2, 2/5 -08
Catalog: Section 2

MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

2.53E

MEDPAC

Scew-In Assembled Compact Systems for medical and packaging industry





* End Cap with long-life-function.
* Faster colour change with free-flow-design.
* Shanks with screw-in End Caps - service friendly!
* High conductivity enclosed heater for smooth and even temperature over all melt flow length.
* Smaller pitch between bushings.
* Heavy duty and long life proof.

Series	Description		AB	ØD	CB	CD	CE	CC
	Manifold	Bushing						
20	MFCM20	MFC20 064	64	20	36	min 6 - max 20	min 8 - max 25	max 2 * AB
		MFC20 084	84					
		MFC20 104	104					
		MFC20 124	124					
		MFC20 144	144					
		MFC20 164	164					
30	MFCM30	MFC30 067	67	30	44	min 6 - max 20	min 8 - max 25	max 2 * AB
		MFC30 087	87					
		MFC30 107	107					
		MFC30 127	127					
		MFC30 147	147					
		MFC30 167	167					
		MFC30 187	187					
		MFC30 207	207					
40	MFCM40	MFC40 085	85	39	48	min 6 - max 20	min 8 - max 30	max 2 * AB
		MFC40 110	110					
		MFC40 135	135					
		MFC40 160	160					
		MFC40 185	185					
		MFC40 210	210					
		MFC40 235	235					
		MFC40 260	260					

MasterFlow® is an approved quality system for moulding with hot runner technology.
When designing MEDPAC series, our engineers have considered medical- and packaging industry special demands for adopted system components.
With more than 35 years in hot runner business and thousands of hot runner systems delivered, we can guarantee best assistance from mould design to production optimization.
MasterFlow® is manufactured in Sweden by skilled workers and engineers.
High quality, fast and competent service, satisfied customers and reasonable price.

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E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

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Effective: 30/3 -22
Repl: 2.53E-4, 15/10 -21
Catalogue: Section 2

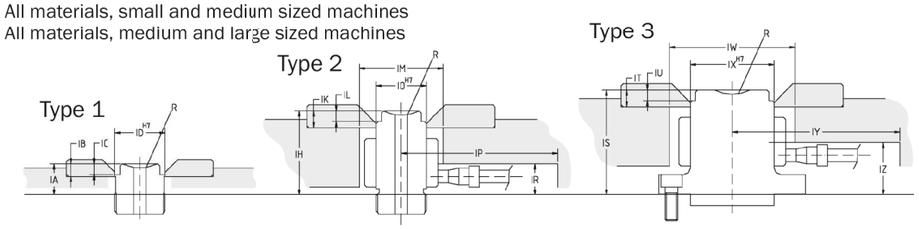
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2.53Eb

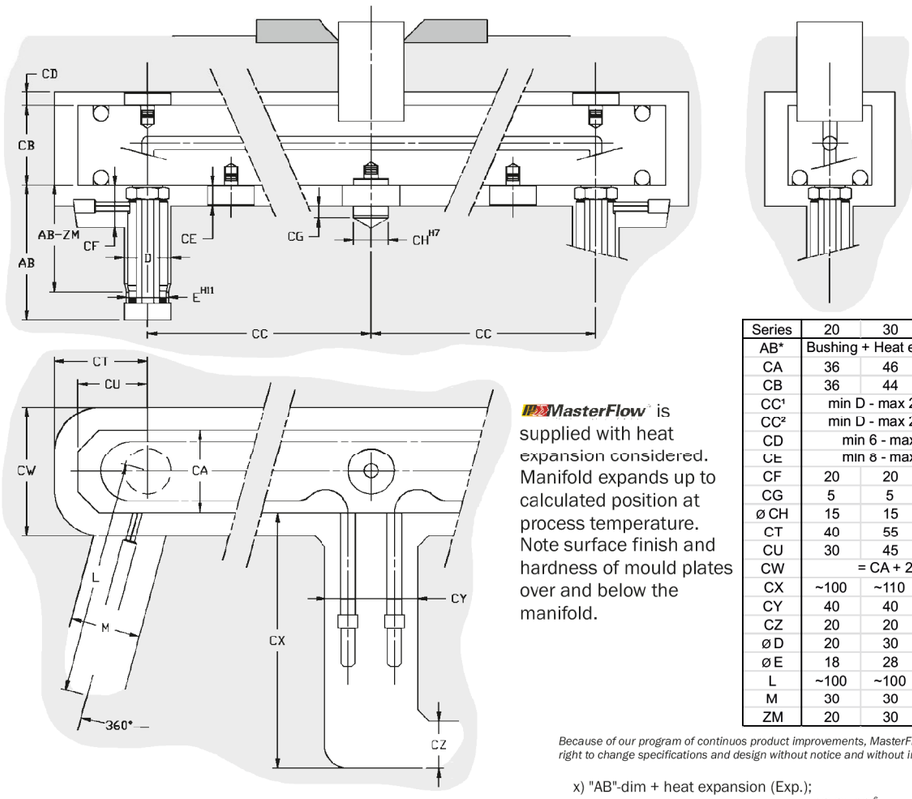
MEDPAC

Build-in dimensions for MEDPAC compact systems

Note material and machine size at extension nozzle selection.
Type 1 = Only for polyolefines (=less heat sensitive)
Type 2 = All materials, small and medium sized machines
Type 3 = All materials, medium and large sized machines



Series	IA	IB	IC	ID ø	IH min.	IH med.	IH max.	IK	IL	IM ø	IO ø	IP	IR	IS min.	IS max.	IT	IU	IW ø	IX ø	IY	IZ	R
20	15	6	5	24	40	65	90	8	7	40	24	~100	15	-	-	-	-	-	-	-	-	Nozzle R
30	20	10	9	32	50	80	110	10	9	50	32	~100	20	-	-	-	-	-	-	-	-	
40	25	12	11	38	50	80	110	12	11	55	38	~100	25	80	150	6	4	95	50	~150	45	



Boring dimensions for End Caps and Tips under Section 2, pages 2.57E.

MasterFlow® is supplied with heat expansion considered. Manifold expands up to calculated position at process temperature. Note surface finish and hardness of mould plates over and below the manifold.

Series	20	30	40
AB*	Bushing + Heat expansion		
CA	36	46	58
CB	36	44	48
CC¹	min D - max 2 * AB		
CC²	min D - max 2 * AB		
CD	min 6 - max 20		
CE	min 8 - max 35		
CF	20	20	25
CG	5	5	7
ø CH	15	15	20
CT	40	55	55
CU	30	45	45
CW	= CA + 20		
CX	~100	~110	~110
CY	40	40	60
CZ	20	20	20
ø D	20	30	39
ø E	18	28	37
L	~100	~100	~100
M	30	30	30
ZM	20	30	35

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x) "AB"-dim + heat expansion (Exp.);
Exp. = "AB" * ($Temp_{melt}$ - $Temp_{mould}$) * 13,2*10^{-6}
Example: AB = 124mm, $Temp_{melt}$=250 °C, $Temp_{mould}$=15°C, gives
Exp. = 124*(250-15)*0,0000132 = 0,38 mm
See table, Section 1 page 1.3E.

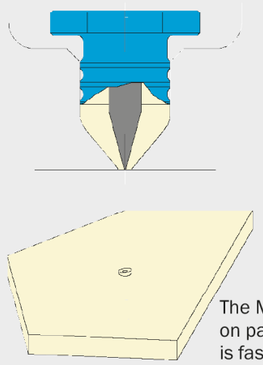
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Repl: 2.53E-4, 15/10 -21
Catalogue: Section 2

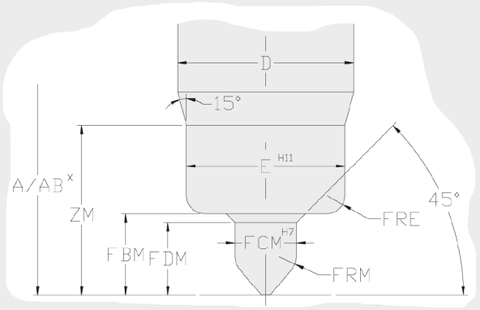
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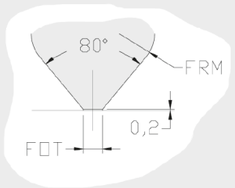
Boring dimensions: End Caps and Tips MEDPAC for MFR, MFC and MFF systems

2.57E

MEDPAC

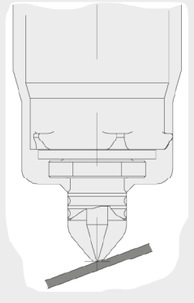


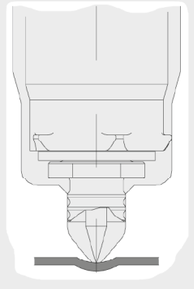


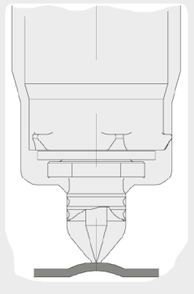


The MEDPAC gate style is especially for direct gating on part. The vestige will be very small and "freeze-off" is faster than by other *MasterFlow* Systems.
The MEDPAC thin design allows gating in narrow cores and complex surfaces.
Minimum pitch distance is very small.

MEDPAC is recommended for all polyolefines. For other plastic materials - please contact your local *MasterFlow* rep.
MEDPAC may be used as direct gating on curved surfaces - inclined plane, in a dimple or with reversed dimple to increase flow (see sketches below).
Note! Dimensions important.
Note! Gate diameter, see Section 1 "Bushing Guide".







Series	A* AB*	D ø	E ø	FBM	FCM ø	FDM	FOT ø	FRE r	FRM r	ZM
20	Bushing + expansion	20	18	9,3	7	8,3	See "Bush. Guide"	3	2,0	20
30		30	28	13,8	12	12,8		4	4,0	30
40		40	37	18,1	18	16,8		5	5,0	38

x) "AB"-dim + heat expansion (Exp.);
Exp. = "AB" * ($Temp_{melt}$ - $Temp_{mould}$) * $13,2*10^{-6}$
Example: AB = 124mm, $Temp_{melt}$=250 °C, $Temp_{mould}$=40°C,
Exp. = 124*(250-40)*0,0000132 = 0,34 mm
See table, Section 1 page 1.3E.

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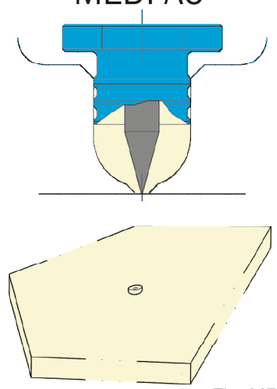
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Catalogue: Section 2

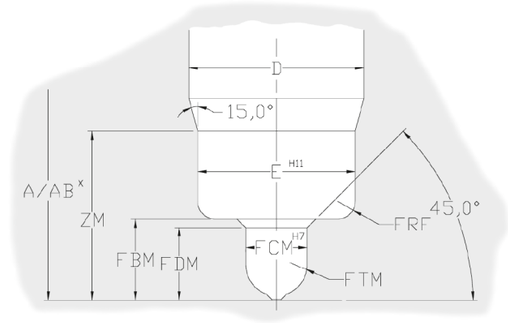
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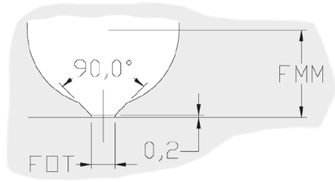
2.57Eb

Boring dimensions: MEDPAC - TECH-COLOUR

MEDPAC

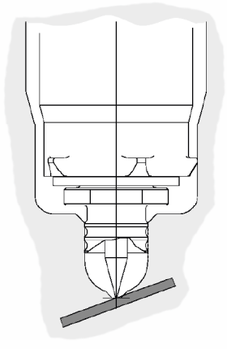


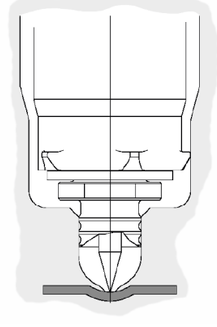


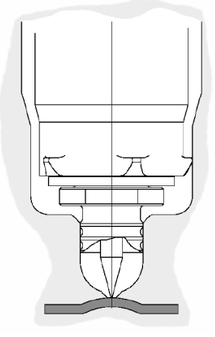


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Note! Dimensions important.
Note! Gate diameter, see Section 1 "Bushing Guide".







x) "AB"-dim + heat expansion (Exp.);
Exp. = "AB" * ($Temp_{melt}$ - $Temp_{mould}$) * $13,2*10^{-6}$
Example: AB = 104mm, $Temp_{melt}$=250 °C, $Temp_{mould}$=40°C,
Exp. = 104*(250-40)*0,0000132 = 0,29mm
See table, Section 1 page 1.3E.

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Series	A* AB*	D ø	E ø	FBM	FCM ø	FDM	FOT ø	FMM	FTM r	ZM
20	Bushing + expansion	20	18	9,3	7	8,3	See "Bush. Guide"	4,0	3,5	20
30		30	28	13,8	12	12,8		6,75	6,0	30
40		40	37	18,1	18	16,8		10,0	9,0	38

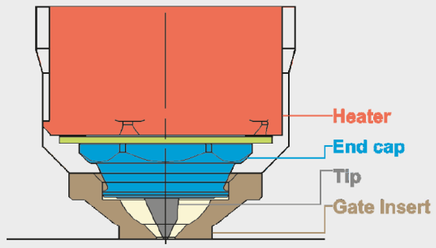
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MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

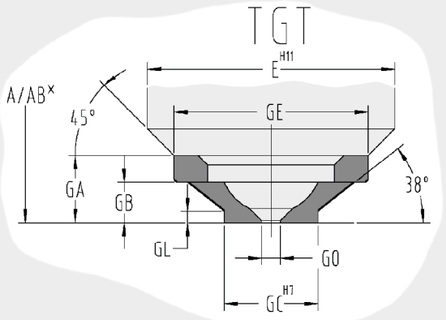
MFGI

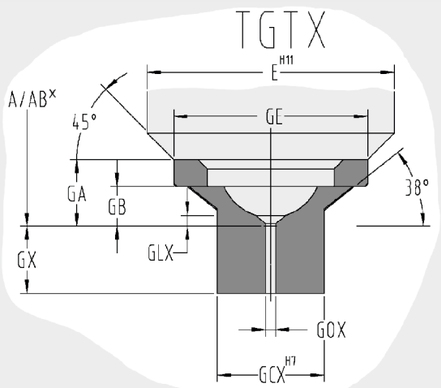
Gate Insert for reliable and repairable Topless gating - TipGate and OpenGate

2.81E









MasterFlow is an approved quality system for moulding with hot runner technology.
Our engineers have considered both old and new experiences when designing the system.
For moulding sensitive components, only verified solutions are chosen.
With more than 35 years in hot runner business and thousands of hot runner systems delivered, we can guarantee best assistance from mold design to production optimizing.
MasterFlow is manufactured in Sweden by skilled workers and engineers.
High quality, fast and competent service, satisfied customers and reasonable price.

Series	20	30	40	50
A/AB*	Bushing + expansion			
GA	5	8	10	15
GB	3	5	6	7
ø GC	7	10	14	24
ø GCX	8	12	16	26
ø GE	16	23	29	43
GL	0,8	1,1	1,7	3
GLX	1,2	1,9	2,5	3,8
ø GO	1,2	1,8	2,8	3,8
ø GOX	0,8	1	1,5	2,5
GX	5	8,5	10	12
ø E	18	28	37	46

Because of our program of continuos product improvements, MasterFlow reserves the right to change specifications and design without notice and without incurring obligation.

MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

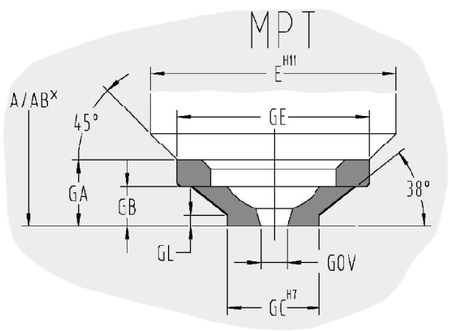
E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

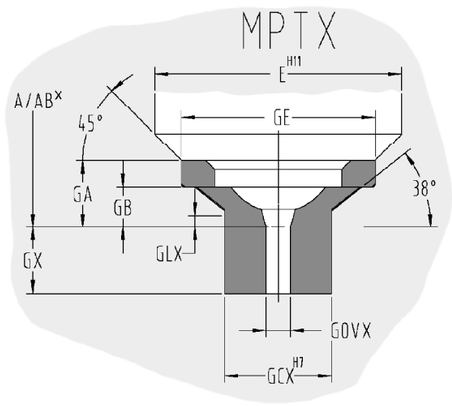
Doc. no: 2.81E-2
Effective: 30/3-22
Repl: 2.81E-1, 4/3-21
Catalog: Section 2

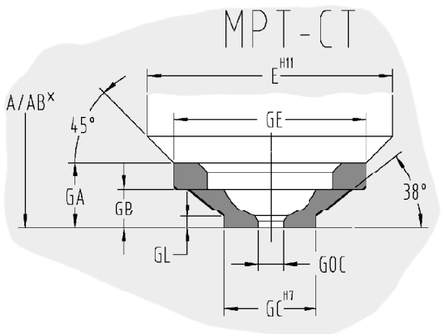
MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

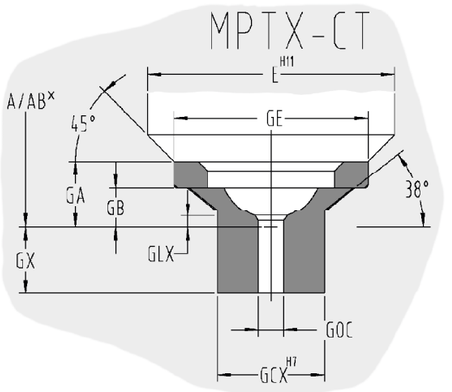
2.81Eb

Gate Insert for reliable and repairable Topless gating - MovablePin (Valve Gate)









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Series	A* AB*	GA	GB	GC ø	GCX ø	GE ø	GL	GLX	GOV ø	GOVX ø	GOC ø	GX
20	Bushing + expansion	5	3	7	8	16	0,8	1,2	1,5	1,2	1,5	5
30		8	5	10	12	23	1,1	1,9	2,0	1,8	2,0	8,5
40		10	6	14	16	29	1,7	2,5	4,0	3,6	3,8	10
50		15	7	24	26	43	3,0	3,8	6,0	5,8	6,0	12

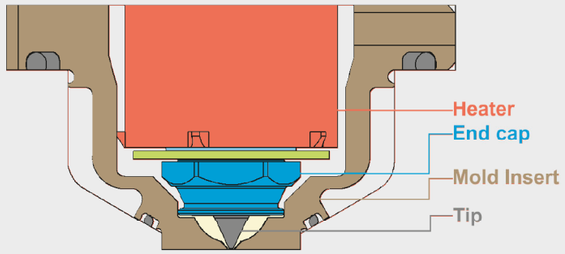
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Effective: 30/3-22
Repl:2.81E-1, 4/3-21
Catalog: Section 2

MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

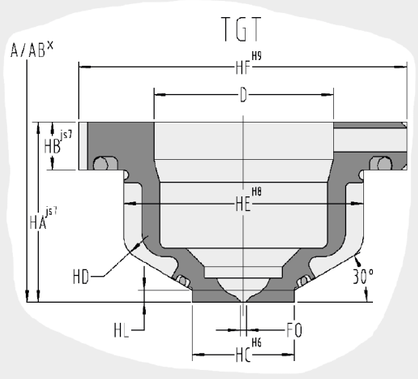
MFMI

Mold Insert for superior cooling and gate control.

2.82E







MasterFlow® is an approved quality system for moulding with hot runner technology.
Our engineers have considered both old and new experiences when designing the system.
For moulding sensitive components, only verified solutions are chosen.
With more than 35 years in hot runner business and thousands of hot runner systems delivered, we can guarantee best assistance from mold design to production optimizing.
MasterFlow® is manufactured in Sweden by skilled workers and engineers.
High quality, fast and competent service, satisfied customers and reasonable price.

Series	30	40
A/AB*	Bushing + expansion	
Ø D	30	39
Ø FO	1,0	1,5
HA	30	30
HB	8	8
Ø HC	17	24
r HD	4	6
Ø HE	40	51
Ø HF	55	64
HL	2	3,65

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Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

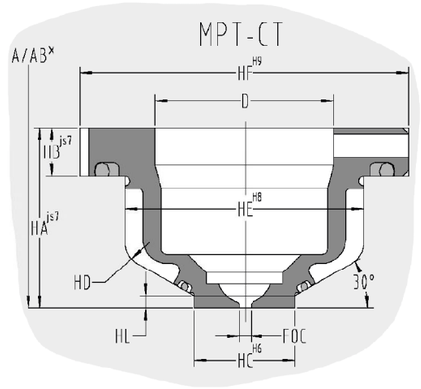
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info@masterflow.se
Hemsida/Website
www.masterflow.se

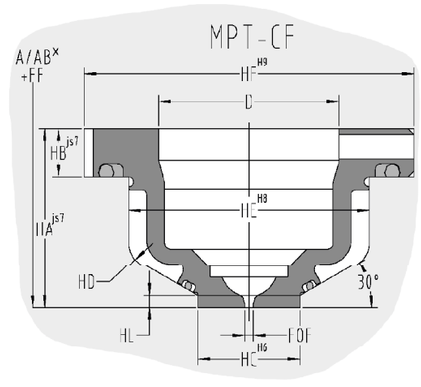
Doc. no: 2.82E-1
Effective: 30/6-21
Repl: New
Catalog: Section 2

MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

2.82Eb

Mold Insert for superior cooling and gate control.





Because of our program of continuos product improvements, MasterFlow reserves the right to change specifications and design without notice and without incurring obligation.

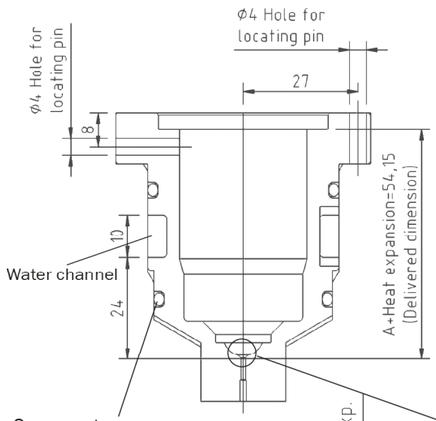
Series	A/AB*	D Ø	FOC Ø	FOF Ø	HA	HB	HC Ø	HD r	HE Ø	HF Ø	HL
30	Bushing + expansion	30	2,0	1,5	30	8	17	4	40	55	2
40		39	3,8	3,0	30	8	24	6	51	64	3,65

Doc. no: 2.82E-1
Effective: 30/6-21
Repl: New
Catalog: Section 2

Topless bushing sleeve series 30

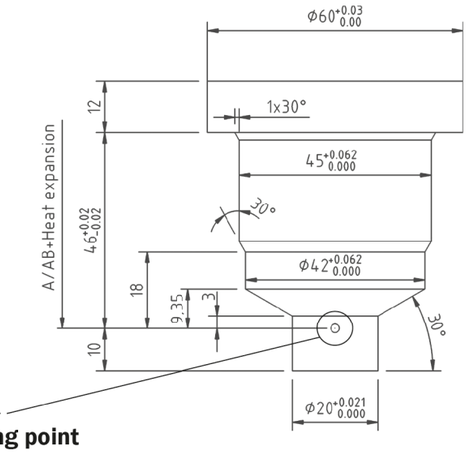
2.92E

Topless sleeve

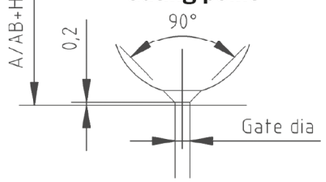


Sparepart:
O-ring kit, MFTBS030
Item No./set: 0008290

Boring dimension



Gating point

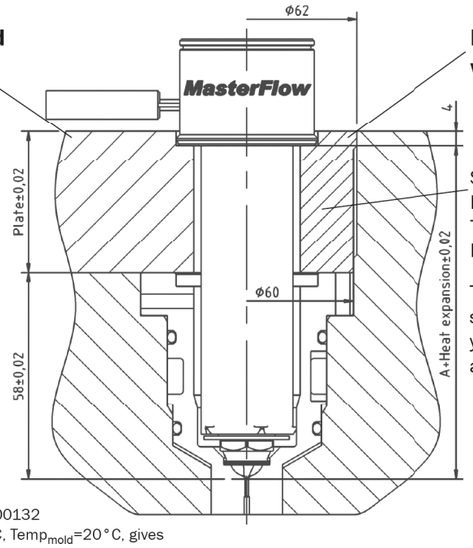


Gate to be modifed by moldmaker.
Delivery gate dia. Ø1,0.
When changing gate dia follow with 90°- angle for minimum vestige.

Build-In dimensions for MFR/MFF-system

Extended and fixed between plates

Extended and fixed with Extension sleeve



Standard extension sleeve,
MFSE30
Total length=120mm.
Item No.: 0008280

The length of the extension sleeve have to be adjusteded to your particular bushing length and molding temperatures.

"A"- dim + heat expansion (Exp.):
Exp. = "A"*(Temp$_{melt}$-Temp$_{mold}$)*0,0000132
Example: A = 94mm, Temp$_{melt}$=210°C, Temp$_{mold}$=20°C, gives
Exp. = 94*(210-20)*0,0000132=0,24mm
See table, catalog section 1 page 1.3E.

MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

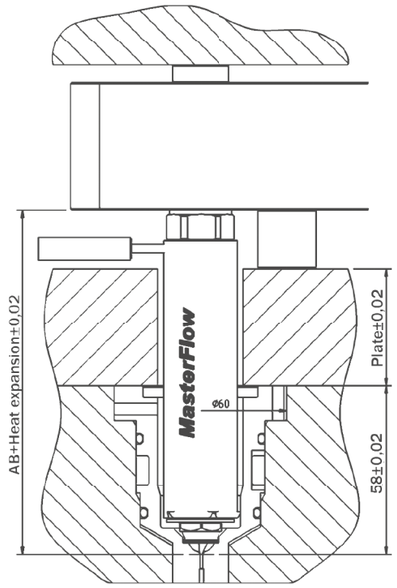
Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

Doc. no: 2.92E-3
Effective: 2/5 -08
Repl: 2.92E-2 9/6 -04
Catalog: Section 2

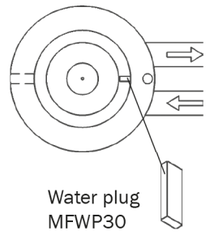
Build-In examples for bushing sleeve series 30

Build-In dimensions for MFC-System



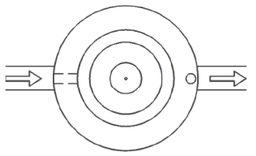
Water cooling

Alt.1 In/Out cooling

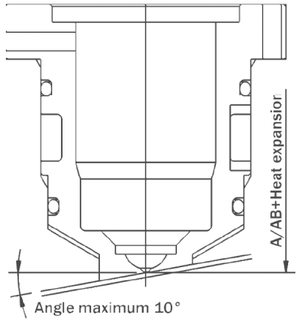


Water plug
MFWP30
Item No.: 0090280
14x4,5x2 Copper

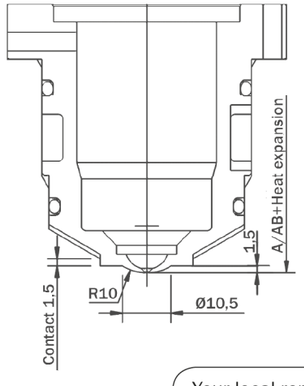
Alt.2 Centerline cooling



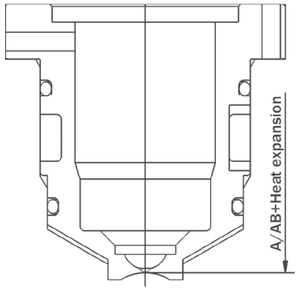
Sloping surface



Dimple



Reverse Dimple



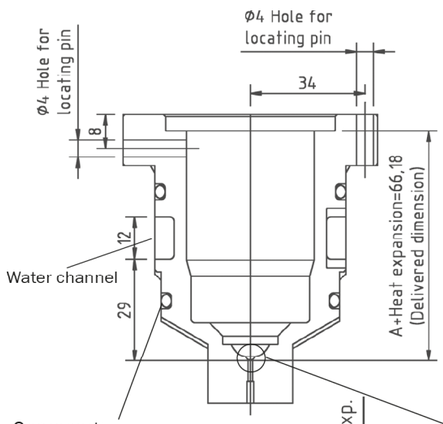
Your local representative:

Doc. no: 2.92E-3
Effective: 2/5 -08
Repl: 2.92E-2 9/6 -04
Catalog: Section 2

Topless bushing sleeve series 40

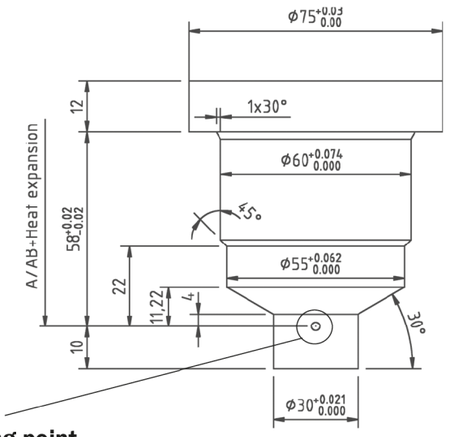
2.93E

Topless sleeve

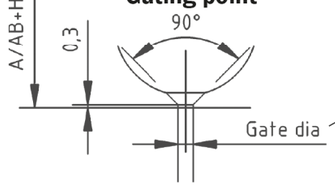


Sparepart:
O-ring kit, MFTBS040
Item No./set: 0012290

Boring dimension



Gating point

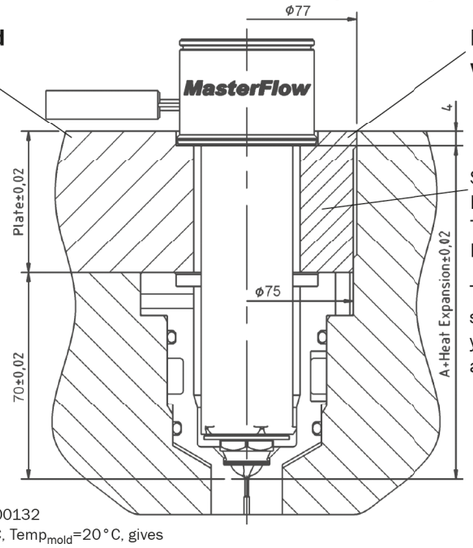


Gate to be modifed by moldmaker.
Delivery gate dia. Ø1,5.
When changing gate dia follow with 90°- angle for minimum vestige.

Build-In dimensions for MFR/MFF-system

Extended and fixed between plates

Extended and fixed with Extension sleeve



Standard extension sleeve,
MFSE40
Total length=150mm.
Item No.: 0012280

The length of the extension sleeve have to be adjusteded to your particular bushing length and molding temperatures.

"A"- dim + heat expansion (Exp.):
Exp. = "A"*(Temp$_{melt}$-Temp$_{mold}$)*0,0000132
Example: A = 91mm, Temp$_{melt}$=210°C, Temp$_{mold}$=20°C, gives
Exp. = 91*(210-20)*0,0000132=0,23mm
See table, catalog section 1 page 1.3E.

MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

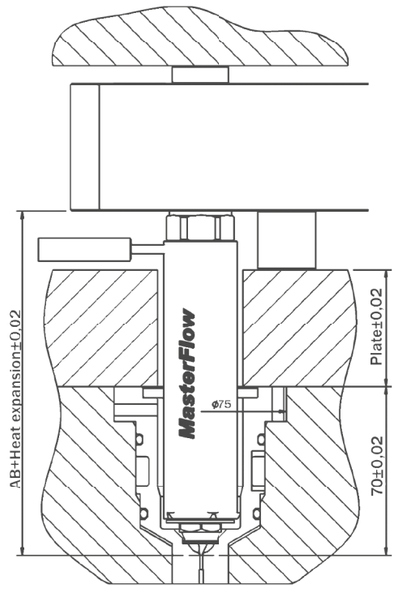
Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

Doc. no: 2.93E-3
Effective: 2/5 -08
Repl: 2.93E-2, 9/6 -04
Catalog: Section 2

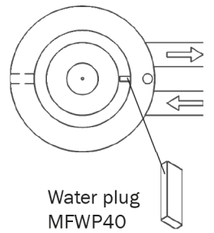
Build-In examples for bushing sleeve series 40

Build-In dimensions for MFC-System



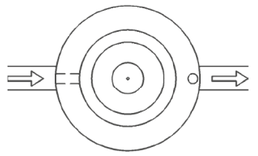
Water cooling

Alt.1 In/Out cooling

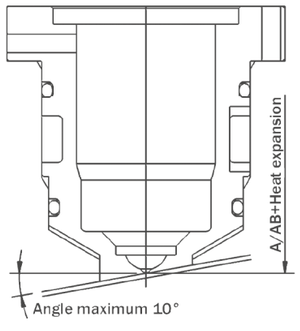


Water plug
MFWP40
Item No.: 0090282
16x5x2 Copper

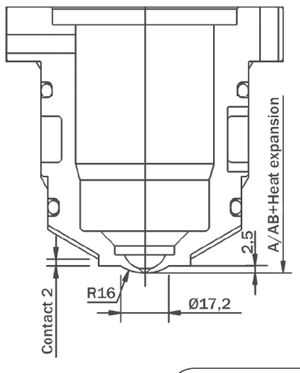
Alt.2 Centerline cooling



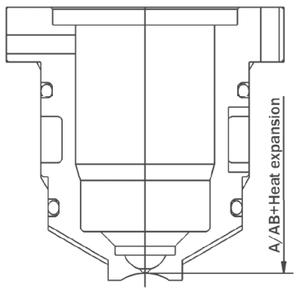
Sloping surface



Dimple



Reverse Dimple



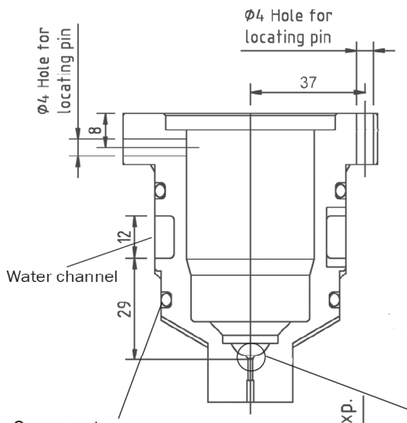
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Repl: 2.93E-2, 9/6 -04
Catalog: Section 2

Topless bushing sleeve series 50

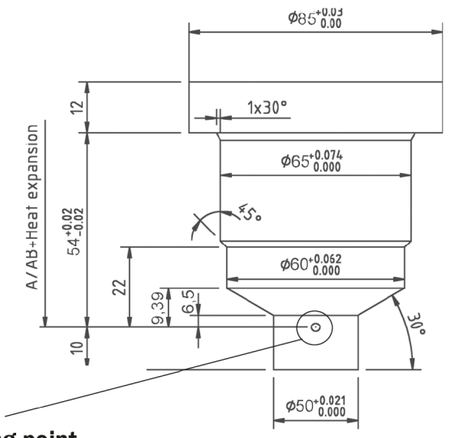
2.94E

Topless sleeve

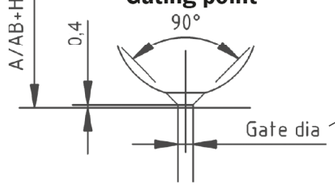


Sparepart:
O-ring kit, MFTBS050
Item No./set: 0018290

Boring dimension



Gating point

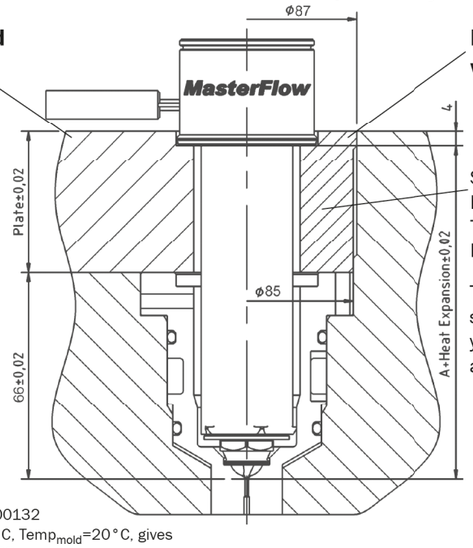


Gate to be modifed by moldmaker.
Delivery gate dia. Ø2,5.
When changing gate dia follow with 90°- angle for minimum vestige.

Build-In dimensions for MFR/MFF-system

Extended and fixed between plates

Extended and fixed with Extension sleeve



Standard extension sleeve,
MFSE50
Total length=138mm.
Item No.: 0018280

The length of the extension sleeve have to be adjusteded to your particular bushing length and molding temperatures.

"A"- dim + heat expansion (Exp.):
Exp. = "A"*(Temp$_{melt}$-Temp$_{mold}$)*0,0000132
Example: A = 110mm, Temp$_{melt}$=210°C, Temp$_{mold}$=20°C, gives
Exp. = 110*(210-20)*0,0000132=0,28mm
See table, catalog section 1 page 1.3E.

MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

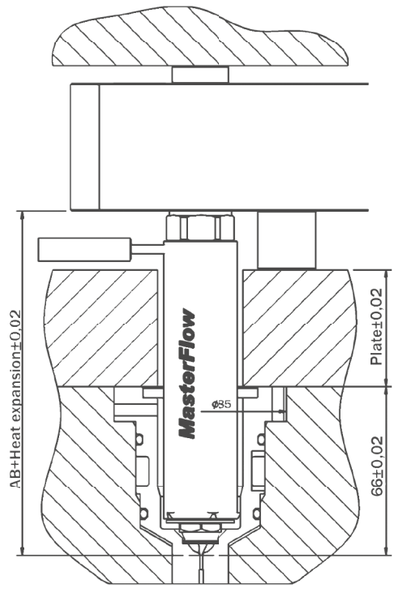
Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

Doc. no: 2.94E-3
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Repl: 2.94E-2, 13/1 -06
Catalog: Section 2

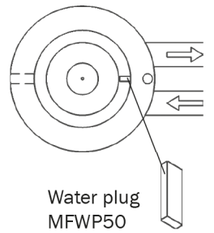
Build-In examples for bushing sleeve series 50

Build-In dimensions for MFC-System



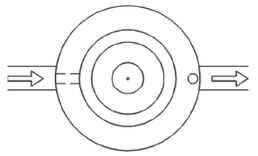
Water cooling

Alt.1 In/Out cooling

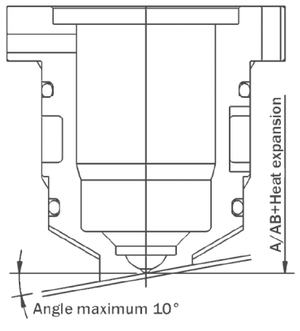


Water plug
MFWP50
Item No.: 0090282
16x5x2 Copper

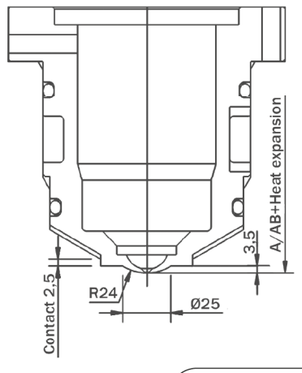
Alt.2 Centerline cooling



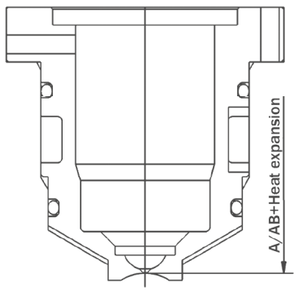
Sloping surface



Dimple



Reverse Dimple



Your local representative:

Doc. no: 2.94E-3
Effective: 2/5 -08
Repl: 2.94E-2, 13/1 -06
Catalog: Section 2

MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

MFH Enclosed Heater for best heat performance MFR, MFC and MFF

4.1E



Series	Enclosed Heater	Power	OD	ID	Length	TC	TC-dia	TC-length	Fit to bushing no	
20	MFH20 034/059	175 W	17,0	10,0	43	MFTC 10079	1,0	79	MFR20 034	MFC20 059
	MFH20 054/079	225 W			63	MFTC 10105		105	MFR20 054	MFC20 079
	MFH20 074/099	250 W			83	MFTC 10117		117	MFR20 074	MFC20 099
	MFH20 094/119	300 W			103	MFTC 10149		149	MFR20 094	MFC20 119
	MFH20 114/139	300 W			123	MFTC 10168		168	MFR20 114	MFC20 139
	MFH20 134/159	350 W			143	MFTC 10168		168	MFR20 134	MFC20 159
30	MFH30 034/059	250 W	26,0	16,0	37	MFTC 10079	1,0	79	MFR30 034	MFC30 059
	MFH30 054/079	250 W			57	MFTC 10079		79	MFR30 054	MFC30 079
	MFH30 074/099	350 W			77	MFTC 10105		105	MFR30 074	MFC30 099
	MFH30 094/119	400 W			97	MFTC 10117		117	MFR30 094	MFC30 119
	MFH30 114/139	450 W			117	MFTC 10149		149	MFR30 114	MFC30 139
	MFH30 134/159	500 W			137	MFTC 10168		168	MFR30 134	MFC30 159
	MFH30 154/179	500 W			157	MFTC 10200		200	MFR30 154	MFC30 179
	MFH30 174/199	500 W			177	MFTC 10200		200	MFR30 174	MFC30 199
40	MFH40 IB/022	175 W	35,0	24,0	22	MFTC 10048	1,0	48		
	MFH40 041/074	400 W			47	MFTC 10079		79	MFR40 041	MFC40 074
	MFH40 066/099	400 W			72	MFTC 10105		105	MFR40 066	MFC40 099
	MFH40 091/124	500 W			97	MFTC 10117		117	MFR40 091	MFC40 124
	MFH40 116/149	500 W			122	MFTC 10149		149	MFR40 116	MFC40 149
	MFH40 141/174	500 W			147	MFTC 10168		168	MFR40 141	MFC40 174
	MFH40 166/199	800 W			172	MFTC 10200		200	MFR40 166	MFC40 199
	MFH40 191/224	800 W			197	MFTC 10219		219	MFR40 191	MFC40 224
	MFH40 216/249	900 W			222	MFTC 10251		251	MFR40 216	MFC40 249
50	MFH50 IB/026	300 W	44,0	32,0	26	MFTC 10048	1,0	48		
	MFH50 050/089	450 W			56	MFTC 10079		79	MFR50 050	MFC50 089
	MFH50 080/119	500 W			86	MFTC 10117		117	MFR50 080	MFC50 119
	MFH50 110/149	700 W			116	MFTC 10149		149	MFR50 110	MFC50 149
	MFH50 140/179	800 W			146	MFTC 10168		168	MFR50 140	MFC50 179
	MFH50 170/209	800 W			176	MFTC 10200		200	MFR50 170	MFC50 209
	MFH50 200/239	900 W			206	MFTC 10251		251	MFR50 200	MFC50 239

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MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

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MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

4.1Eb

MFHX *Economy-Coil-Heaters* for MFRE, MFCE and MFFE Systems



Series	Coil heater	Power	OD	ID	Length	Fit to bushing no	
20	MFHX22 034/059	175 W	17,0	10,0	43	MFRX22 034	MFCX22 059
	MFHX22 054/079	225 W			63	MFRX22 054	MFCX22 079
	MFHX22 074/099	250 W			83	MFRX22 074	MFCX22 099
	MFHX22 094/119	300 W			103	MFRX22 094	MFCX22 119
	MFHX22 114/139	300 W			123	MFRX22 114	MFCX22 139
	MFHX22 134/159	400 W			143	MFRX22 134	MFCX22 159
	MFHX22 174/199	400W			183	MFRX22 174	MFCX22 199
30	MFHX30 034/059	175 W	23,0	16,0	37	MFRX30 034	MFCX30 059
	MFHX30 054/079	225 W			57	MFRX30 054	MFCX30 079
	MFHX30 074/099	250 W			77	MFRX30 074	MFCX30 099
	MFHX30 094/119	350 W			97	MFRX30 094	MFCX30 119
	MFHX30 114/139	400 W			117	MFRX30 114	MFCX30 139
	MFHX30 134/159	450 W			137	MFRX30 134	MFCX30 159
	MFHX30 154/179	500 W			157	MFRX30 154	MFCX30 179
	MFHX30 174/199	500 W			177	MFRX30 174	MFCX30 199
	MFHX30 194/219	600 W			197	MFRX30 194	MFCX30 219
40	MFHX40 041/074	400 W	31,0	24,0	47	MFRX40 041	MFCX40 074
	MFHX40 066/099	450 W			72	MFRX40 066	MFCX40 099
	MFHX40 091/124	450 W			97	MFRX40 091	MFCX40 124
	MFHX40 116/149	600 W			122	MFRX40 116	MFCX40 149
	MHXH40 141/174	700 W			147	MFRX40 141	MFCX40 174
	MFHX40 166/199	800 W			172	MFRX40 166	MFCX40 199
	MFHX40 191/224	800 W			197	MFRX40 191	MFCX40 224
	MFHX40 216/249	900 W			222	MFRX40 216	MFCX40 249
50	MFHX50 050/089	500 W	37,0	32,0	56	MFRX50 050	MFCX50 089
	MFHX50 080/119	600 W			86	MFRX50 080	MFCX50 119
	MFHX50 110/149	800 W			116	MFRX50 110	MFCX50 149
	MFHX50 140/179	800 W			146	MFRX50 140	MFCX50 179
	MFHX50 170/209	900 W			176	MFRX50 170	MFCX50 209
	MFHX50 200/239	1000 W			206	MFRX50 200	MFCX50 239

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Catalog: Section 4

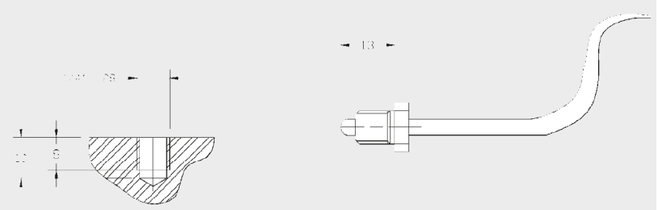
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MFTC Thermocouples for manifolds, bushings and molds

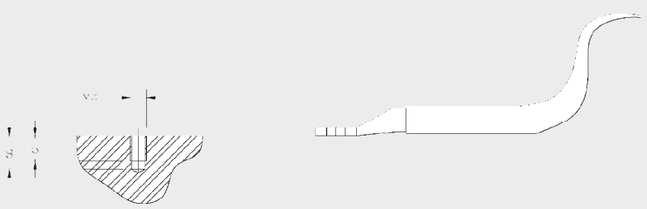
4.2E

MFTC NOZ13

Fe-CuNi - ASA Standard Type J
Colour code
white = + (magnetic)
red = -
or
red = + (magnetic)
blue = -
Cable length: 900 mm



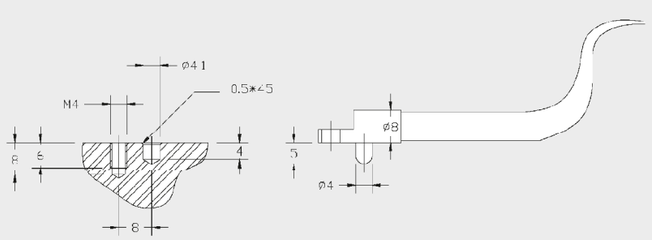
MFTC MAN00



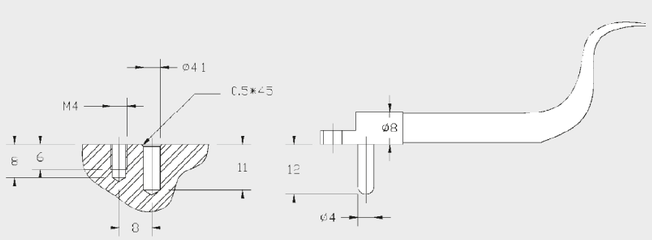
Fe-CuNi - ASA Standard Type J
Colour code:
white = + (magnetic)
red = -
or
red = + (magnetic)
blue = -
Cable length: 900 mm

MFTC MAN05

Fe-CuNi - ASA Standard Type J
Colour code:
white = + (magnetic)
red = -
or
red = + (magnetic)
blue = -
Cable length: 900 mm



MFTC MAN12



Fe-CuNi - ASA Standard Type J
Colour code:
white = + (magnetic)
red = -
or
red = + (magnetic)
blue = -
Cable length: 900 mm

MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

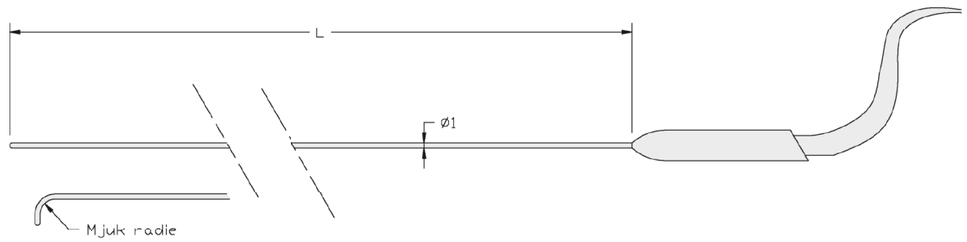
E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

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Repl.: 4.2E-3, 2/5 -08
Catalog: Section 4

MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

4.2Eb

MFTC Thermocouples for manifolds, bushings and molds



MFTC ?????

Fe-CuNi - ASA Standard Type J
Colour code:
white = + (magnetic)
red = -
or
red = + (magnetic)
blue = -
Cable length: 900 mm

Description	TC-dia	L (mm)
MFTC 10048	1,0	48
MFTC 10064		64
MFTC 10079		79
MFTC 10105		105
MFTC 10117		117
MFTC 10149		149
MFTC 10168		168
MFTC 10200		200
MFTC 10219		219
MFTC 10251		251
MFTC 10264		264
MFTC 10314		314

Doc. nr: 4.2E-4
Effective 17/9 -21
Repl.: 4.2E-3, 2/5 -08
Catalog: Section 4

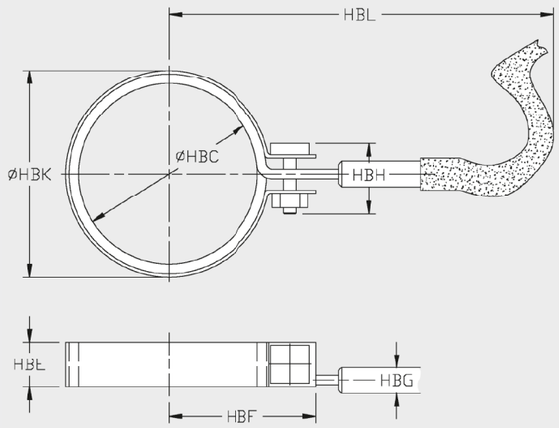
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LEADER IN HOT RUNNER TECHNOLOGY

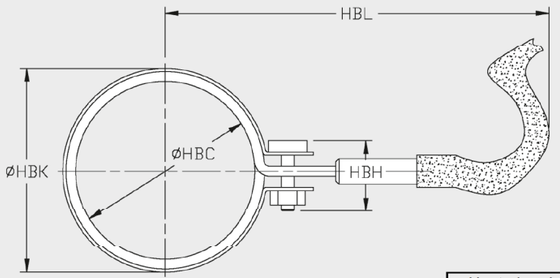
4.3E

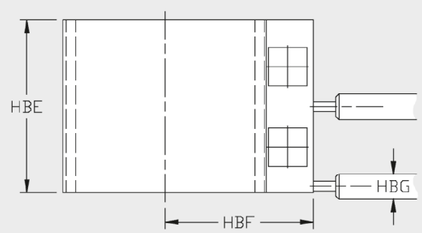
MFVBT

Heater Bands for bushings and manifold extension

MFVBT - Heater Bands with integrated TC.
Voltage: 230 Volt
Cable: appr. 900 mm
TC: Fe-CuNi - ASA Standard Type J
Colour code:
white = + (magnetic)
red = -
or
red = + (magnetic)
blue = -







Heaterband	Power	HBC ø	HBE	HBF	HBG ø	HBH	HBK ø	HBL
MFVBT 024/021	175 W	24	21	27	10	21	33	90
MFVBT 028/012	175 W	28	12	29	10	21	37	90
MFVBT 031/012	175 W	31	12	31	10	21	40	90
MFVBT 032/030	350 W	32	30	31	10	22	41	90
MFVBT 034/014	300 W	34	14	32	10	21	43	90
MFVBT 038/014	300 W	38	14	34	10	22	47	90
MFVBT 038/032	450 W	38	32	37	10	22	47	90
MFVBT 049/017	450 W	49	17	40	10	22	58	90
MFVBT 054/026	700 W	54	26	42	10	22	63	90
MFVBT 058/018	500 W	58	18	44	10	22	67	90
MFVBT 080/039	1400 W	80	39	55	10	22	89	90
MFVBT 092/027	1400 W	92	27	60	10	22	101	90
MFVBT 108/053	2x1400 W	108	53	70	2x10	22	117	90
MFVBT 150/047	2x1400 W	150	47	90	2x10	22	159	90

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MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

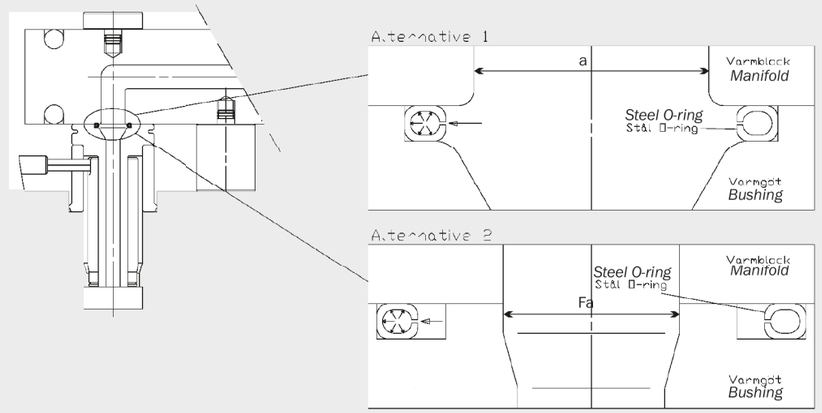
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Repl: 4.3E-2, 1/2 -03
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MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

4.5E

MFO

Sealing Steel O-rings for "floating" Manifold applications

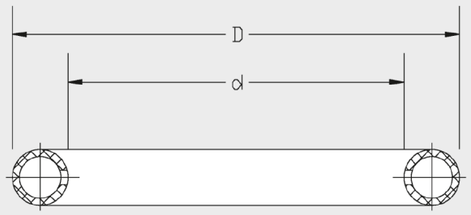


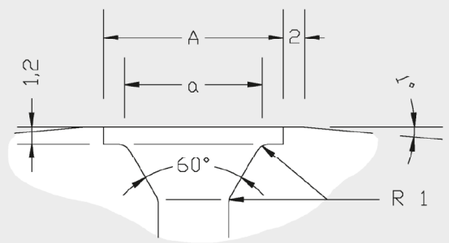
MFO Steel O-rings to be used with MFF "floating" Manifold applications.

The O-ring is hollow and is under pressure when assembled.

Through one or two small holes the O-ring is filled with plastic during production, and make seal proof contact between bushing and manifold.

We recommend always to replace O-ring when having system apart.





Description	607	608	610	620	630	635	640	650
D	12,70	14,27	17,45	20,65	22,23	24,14	26,97	30,18
d	9,56	11,10	14,27	17,45	19,05	21,00	23,80	26,97
A	12,75	14,34	17,53	20,73	22,30	24,20	27,04	30,25
a	8,00	9,50	12,70	16,00	17,50	18,00	22,20	25,40
Fa		8,0	10,0		14,0			
MF-Series		*20*	*30*		*40*	*50*		

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MasterFlow AB
Hultmansgatan 1
Box 501, SE-593 25 Västervik
Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

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Catalog: Section 4

MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

4.7E

MFPH

MasterFlow Premium Heaters



Heater	Power	OD	ID	Length	TC	TC-dia	TC-length
MFPH 08042	175 W	14,0	8,0	42,0	MFTC 10079	1,0	79
MFPH 08062	200 W			62,0	MFTC 10079		79
MFPH 08082	300 W			82,0	MFTC 10105		105
MFPH 09035	225 W	19,0	9,0	34,7	MFTC 10048	1,0	48
MFPH 09050	225 W			49,7	MFTC 10079		79
MFPH 09075	250 W			75,3	MFTC 10105		105
MFPH 09090	300 W			90,4	MFTC 10105		105
MFPH 12024	175 W	24,5	12,7	24,3	MFTC 10048	1,0	48
MFPH 12052	300 W			52,2	MFTC 10079		79
MFPH 12065	350 W			65,3	MFTC 10105		105
MFPH 12078	400 W			78,0	MFTC 10105		105
MFPH 12092	400 W			92,0	MFTC 10117		117
MFPH 12115	450 W			115,8	MFTC 10149		149
MFPH 12141	600 W			141,4	MFTC 10168		168
MFPH 12166	600 W			166,6	MFTC 10200		200
MFPH 12205	700 W			205,1	MFTC 10251		251
MFPH 22024	250 W	38,0	22,22	24,3	MFTC 10048	1,0	48
MFPH 22050	400 W			50,8	MFTC 10079		79
MFPH 22067	600 W			67,1	MFTC 10105		105
MFPH 22080	600 W			80,9	MFTC 10105		105
MFPH 22093	700 W			93,0	MFTC 10117		117
MFPH 22111	700 W			111,0	MFTC 10149		149
MFPH 22135	700 W			135,9	MFTC 10168		168
MFPH 22158	800 W			158,9	MFTC 10200		200
MFPH 22186	900 W			186,7	MFTC 10219		219
MFPH 22212	900 W			212,0	MFTC 10251		251
MFPH 22237	900 W			237,2	MFTC 10314		314
MFPH 31024	400 W	47,8	31,75	24,3	MFTC 10048	1,0	48
MFPH 31029	450 W			29,0	MFTC 10079		79
MFPH 31054	600 W			54,0	MFTC 10079		79
MFPH 31067	700 W			67,6	MFTC 10105		105
MFPH 31079	800 W			79,0	MFTC 10105		105
MFPH 31091	800 W			91,7	MFTC 10117		117
MFPH 31104	800 W			104,0	MFTC 10149		149
MFPH 31122	800 W			122,0	MFTC 10149		149
MFPH 31134	800 W			134,6	MFTC 10168		168
MFPH 31147	800 W			147,3	MFTC 10168		168
MFPH 31157	800 W			157,5	MFTC 10200		200
MFPH 31172	900 W			172,6	MFTC 10200		200
MFPH 31197	1000 W			197,9	MFTC 10219		219
MFPH 31223	1000 W			223,0	MFTC 10251		251
MFPH 38050	600 W	51,0	38,0	50,0	MFTC 10079	1,0	79
MFPH 38075	800 W			75,0	MFTC 10105		105
MFPH 50038	600 W	70,0	50,0	38,0	MFTC 10079	1,0	79
MFPH 50063	700 W			63,0	MFTC 10105		105
MFPH 50088	1100 W			88,0	MFTC 10117		117
MFPH 50107	1100 W			107,1	MFTC 10149		149
MFPH 50113	1100 W			113,0	MFTC 10149		149
MFPH 50138	1100 W			138,6	MFTC 10168		168
MFPH 50157	1100 W			157,0	MFTC 10200		200
MFPH 50207	1400 W			207,0	MFTC 10251		251
MFPH 50257	1400 W			257,0	MFTC 10314		314

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Hultmansgatan 1
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Sweden

Telefon/Telephone
Nat. 0490-822 60
Int. +46-490-822 60

E-post/E-mail
info@masterflow.se
Hemsida/Website
www.masterflow.se

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Catalog: Section 4

Head Office and ITS-centre:
MasterFlow AB, Västervik, Sweden
Phone +46 (0)490 822 60
E-mail: info@masterflow.se
www.masterflow.se

Portugal
MaFloTec, Lda
Marinha Grande, Portugal
Phone: +351 244 561 444
Mobile: +351 91 2242 254
E-mail: maflotec@sapo.pt

Austria
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Czech Republic
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Estonia
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Germany
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Italy
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Lithuania
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Poland
C-TECH Sp.z o.o
Kowary, Poland
Phone office: +48 75 718 24 18
E-mail: masterflow@ctech.com.pl

Switzerland
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

United Kingdom
MasterFlow UK Ltd
Lutterworth Leics LE17 4EH
Phone office: +44 (0)1455 558 764
E-mail: info@masterflowuk.com

Hong Kong/China
MasterFlow Hong Kong Ltd
E-mail: info@masterflow.se

PR China
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Denmark
Indsatsen APS
Vinderup Denmark
Phone office: +45 97 44 33 99
E-mail: jes@indsatsen.com

Finland
MOULDin OY
Noormarkku, Finland
Phone office: +358 26 384 999
E-mail: pekka.vanhatalo@mouldin.fi

Hungary
Prim-Plast Kft
Nagytarcsa
Phone office: +36 1391 6466
E-mail: info@primplast.hu

Latvia
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Norway
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Spain
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

www.masterflow.se

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MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

MasterFlow® ColdHalf

- a completely new concept of "clamping plate with integrated hot runner system"



The EWEBE-group is situated in Västervik. With 9500 m^2 factory- and office floorspace and 35 years in injection moulding business, we run sales, production, technical support and service, development with test-lab and administration.
We have met the challenge to service You from project start-up, through mould design and production optimization.



- Go with EWEBE-Group and *MasterFlow®*!

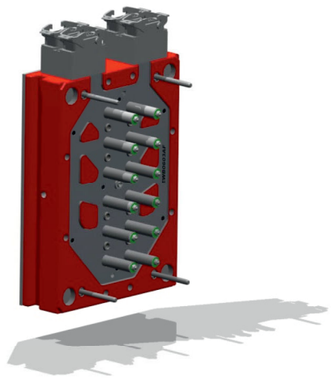
Your local rep:

MasterFlow®
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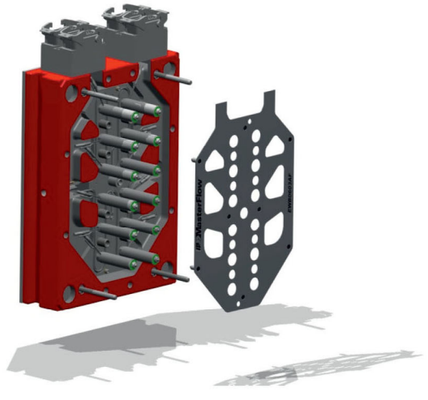
MasterFlow® ColdHalf

* Separates mould and hot runner
  - no heat transfer - ***ColdHalf***
* Reduces cycle times - ***ColdHalf***
* Fast, Robust and Reliable - ***ColdHalf***
* Full service from one side - ***ColdHalf***
* Success granted - ***ColdHalf***
* Swedish quality and design - ***ColdHalf***



MasterFlow® ColdHalf

- Ready to be assembled on mould fixed half.
- Assembly-guidence pins protect hot runner bushings at assembly.

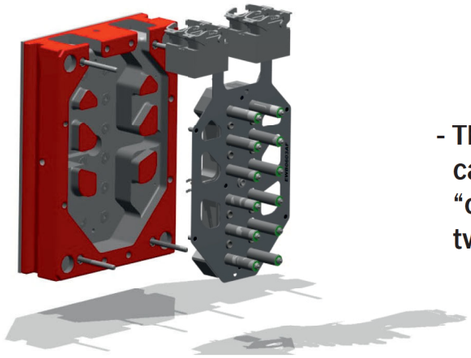


MasterFlow® ColdHalf

- At minor service, only the stainless cable protection is disassembled. All electric components are now easily accessible.

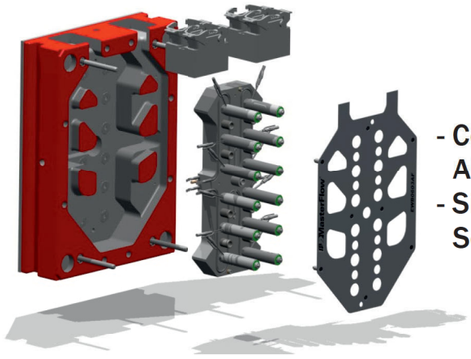
MasterFlow® Head Office:
MasterFlow AB tel. +46-490 822 60
Västervik, Sweden e-mail info@masterflow.se

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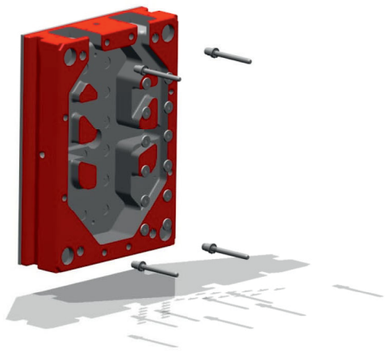
MasterFlow® ColdHalf

- The complete hot runner-assembly can easily be lifted out from the “clamping plate” by unscrewing two bolts + the electric plugs.



MasterFlow® ColdHalf

- Completely disassembled *ColdHalf* - All parts/components are fixed
- Simple and Safe, Robust, and Service-“friendly”.



MasterFlow® ColdHalf

- Also assembly-guidence pins are possible to disassemble from “parting line”.
- Hardened supports are placed “above” the hot runner system, to ensure long life.

Your local rep:

Head Office and ITS-centre:
MasterFlow AB, Västervik, Sweden
Phone +46 (0)490 822 60
E-mail: info@masterflow.se
www.masterflow.se

Portugal
MaFloTec, Lda
Marinha Grande, Portugal
Phone: +351 244 561 444
Mobile: +351 91 2242 254
E-mail: maflotec@sapo.pt

Austria
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Czech Republic
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Estonia
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Germany
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Italy
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Lithuania
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Poland
C-TECH Sp.z o.o
Kowary, Poland
Phone office: +48 75 718 24 18
E-mail: masterflow@ctech.com.pl

Switzerland
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

United Kingdom
MasterFlow UK Ltd
Lutterworth Leics LE17 4EH
Phone office: +44 (0)1455 558 764
E-mail: info@masterflowuk.com

Hong Kong/China
MasterFlow Hong Kong Ltd

E-mail: info@masterflow.se

PR China
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Denmark
Indsatsen APS
Vinderup Denmark
Phone office: +45 97 44 33 99
E-mail: jes@indsatsen.com

Finland
MOULDin OY
Noormarkku, Finland
Phone office: +358 26 384 999
E-mail: pekka.vanhatalo@mouldin.fi

Hungary
Prim-Plast Kft
Nagytarcsa
Phone office: +36 1391 6466
E-mail: info@primplast.hu

Latvia
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Norway
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

Spain
MasterFlow AB
Västervik, Sweden
Phone: +46 (0)490 822 60
E-mail: info@masterflow.se

www.masterflow.se

SBMF-EN-20181009-MTX-51

MasterFlow® Temperature Controllers -smoother temperature control with higher accuracy.....





MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY

Cabinette	2-zone	4-zone	6-zone	8-zone	12-zone
Max. output	per zone 16 A / 3500 W				
Temperature range	0 ~ 600°C / 32 ~ 999°F				
Thermocouple	J / K				
Dimensions in mm					
Width	225	325	430	530	735
Height	215				
Depth	345				
Cable	K4	K4	K6	2*K4	2*K6
Harting connector	16-pin	16-pin	24-pin	2*16-pin	2*24-pin



***MasterFlow*® MTX-51 Temperature Controller is an easy to use controller with excellent process overview.**
MTX-51 offers smoother and higher accuracy temperature control for production with heat sensitive polymers and fast cycle injection moulding.
Adapting to heater response time and ability to keep stable temperature, eliminates disturbances on dimension stability and other mould related heating- and cooling problems.

- **Multi Block settings, sets many setpoints to one value.**
- **Easy Boost/Standby function.**
- **Digital LED display with both SET-and ACTUAL temperature**
- **Plug-in modules for easy service exchange, if necessary**
- **Heavy duty cabinet for industrial environment**
- **Low voltage, soft start function**
- **Alarm indications over all process; short-circuit, high/ and low-temp. alarm, inverted TC detection, TC break, power frequency autodetect, etc.**
- **Auto tuning for exact setting of PID-parametres**
- **Selectable temp. scales, C / F**
- **Manual control when working without TC**

MasterFlow®
LEADER IN HOT RUNNER TECHNOLOGY