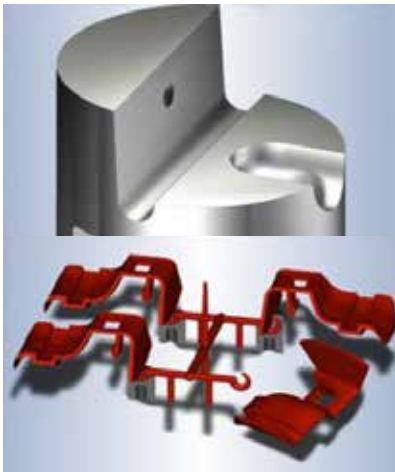




EXA*flow*®

TUNNEL GATE INSERTS
THE INTELLIGENT SOLUTION
MAXIMUM OPERATING EFFICIENCY

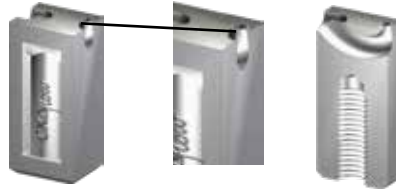
GATE INSERT OPTIONS

Standard Flow Round **GTR Series**



Page 3

Standard Flow Rectangular **GTE Series**



Page 4

Closed Gate Miniflow® **GTM Series**



Page 5

Conturable Gate Midiflow® **GMK Series**



Page 6

Conturable Gate Maxiflow® **GXK Series**



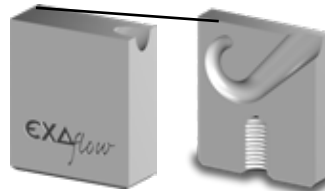
Page 7

Conturable Gate Konturflow® **GTK Series**



Page 8

Conturable Gate Ringelflow® **GRF Series**



Page 9

Anti-Rotational Locking System, Viscosity Tables & Installation Dimensions

Page 10-11

Service:

Need help choosing the correct cashew gate? DME engineers are available to assist with a free consultation to identify the ideal cashew gate for your application.

Please send the following information to: DME_Mech_Eng@dme.net

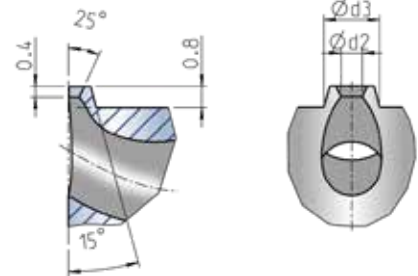
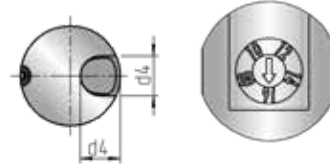
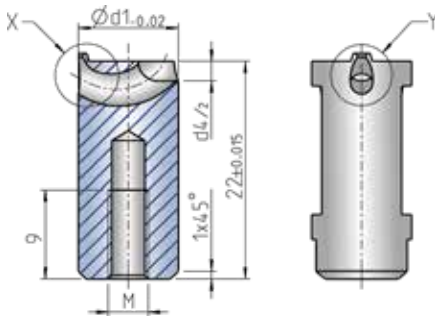
- A copy of your expanded model in XT or Step format
- Gate location
- Resin type
- Number of cavities

We will send you back your model with the cashew gate installed within 24 hours.

STANDARD FLOW GTR SERIES

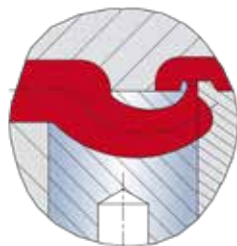
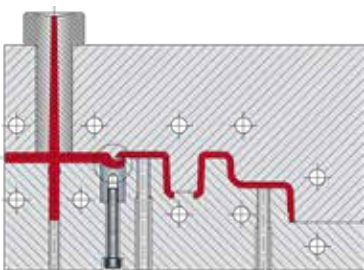
For tunnel gating of small to medium sized moldings along a flat separating plane. The projecting calotte ensures concealed degating.

- Available gate diameters from 0.8 to 2.4mm
- Usable for all thermoplastics including fillers up to 50% glass fiber.



						VISCOSITY (RHEOLOGY)		
ITEM NUMBER	d1	d2	d3	d4	M	HIGH FLOWABILITY	REGULAR FLOWABILITY	POOR FLOWABILITY
GTR1008	10	0.8	2.1	4	4	8	7	5
GTR1012		1.2	2.5			20	16	10
GTR1014		1.4	2.7			30	23	15
GTR1016		1.6	2.9			40	30	20
GTR1208	12	0.8	2.1	5	5	8	7	5
GTR1210		1	2.3			14	12	9
GTR1212		1.2	2.5			20	16	10
GTR1214		1.4	2.7			30	23	15
GTR1216		1.6	2.9			40	30	20
GTR1218		1.8	3.1			54	40	27
GTR1220		2	3.3			68	52	34
GTR1412	14	1.2	2.5	6	6	20	16	10
GTR1414		1.4	2.7			30	23	15
GTR1416		1.6	2.9			40	30	20
GTR1418		1.8	3.1			54	40	27
GTR1420		2	3.3			68	52	34
GTR1422		2.2	3.5			85	65	43
GTR1424		2.4	3.7			100	80	50
						WEIGHT IN GRAMS		

INSTALLATION EXAMPLE



Additional Information:

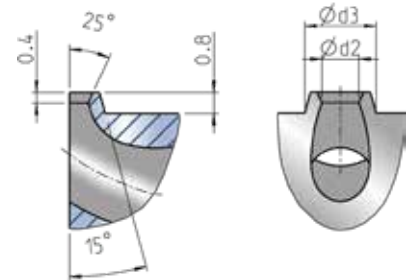
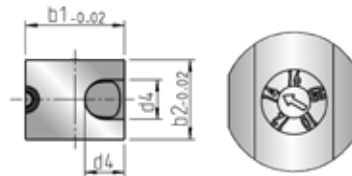
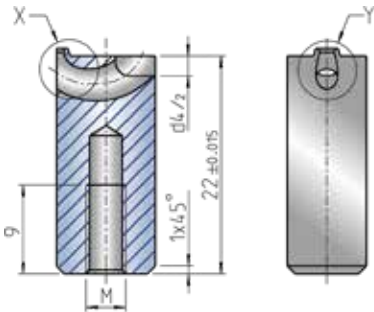
Page 10 - Anti-rotation locking system & Viscosity table

Page 11 - Installation dimensions

STANDARD FLOW GTE SERIES

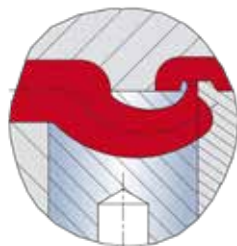
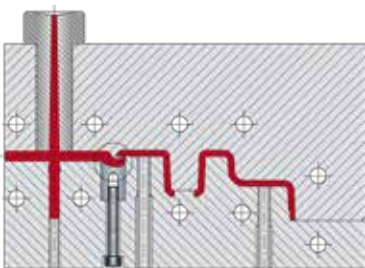
For tunnel gating of small to medium sized moldings along a flat separating plane. The projecting calotte ensures concealed degating.

- Available gate diameters from 0.8 to 2.4mm
- Usable for all thermoplastics including fillers up to 50% glass fiber.



							VISCOSITY (RHEOLOGY)		
ITEM NUMBER	b1	b2	d2	d3	d4	M	HIGH FLOWABILITY	REGULAR FLOWABILITY	POOR FLOWABILITY
GTE1008	10	8	0.8	2.1	4	4	8	7	5
GTE1010			1	2.3			14	12	9
GTE1012			1.2	2.5			20	16	10
GTE1014			1.4	2.7			30	23	15
GTE1016			1.6	2.9			40	30	20
GTE1208	12	10	0.8	2.1	5	5	8	7	5
GTE1210			1	2.3			14	12	9
GTE1212			1.2	2.5			20	16	10
GTE1214			1.4	2.7			30	23	15
GTE1216			1.6	2.9			40	30	20
GTE1218			1.8	3.1			54	40	27
GTE1220			2	3.3			68	52	34
GTE1412	14	12	1.2	2.5	6	6	20	16	10
GTE1414			1.4	2.7			30	23	15
GTE1416			1.6	2.9			40	30	20
GTE1418			1.8	3.1			54	40	27
GTE1420			2	3.3			68	52	34
GTE1422			2.2	3.5			85	65	43
GTE1424			2.4	3.7			100	80	50
							WEIGHT IN GRAMS		

INSTALLATION EXAMPLE

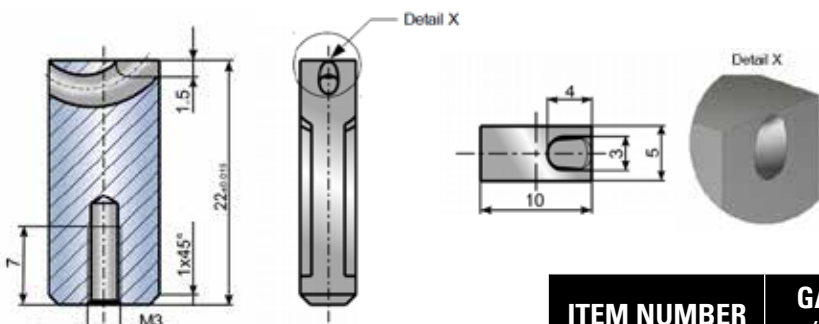


Additional Information:
 Page 10 - Viscosity table
 Page 11 - Installation dimensions

CLOSED GATE MINIFLOW® GTM SERIES

Designed for tunnel gating of small, thin-walled moldings. This gate insert has a closed gate diameter and is therefore suitable for the use of low article weight and for molding very thin-walled parts.

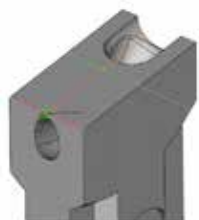
- The closed surface enables the creation of individual gate diameters
- Usable for all thermoplastics including fillers up to 50% glass fiber
- Available for gate diameters from 0.3 to 1.4



MAX SHOT WEIGHT (GRAMS)

ITEM NUMBER	GATE Ø (mm)	HIGH	MEDIUM	LOW
GTM	Closed	17	14	9

Miniflow GTM (without gate) recommended procedure to insert the gate.



1. Create the gate in 3D CAD. Draw a circle on the end face with the diameter or radius of the gate. Above shows a radius R0.8 in green.



2. Extrude this sketch sketch with max. possible angle of inclination, depending on gate size, or remove the material immediately by cutting the material incl. draft/taper angle.



3. Well round off the sharp edge between the bent tunnel and the gate, e.g. by hand using a diamond mounted point.



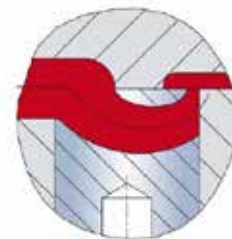
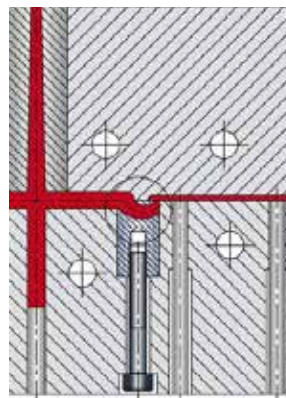
4. Around the gate you can adjust the GTM Miniflow to the contour and leave a calotte standing, as shown above.

The closed surface enable the creation of an individual gate diameter. Examples of suitable gate diameters

MAX SHOT WEIGHT IN GRAMS

	GATE Ø (mm)	HIGH	MEDIUM	LOW
GTM	0.3	3	3	2
	0.5	4	4	3
	0.7	6	5	4
	0.9	12	9	7
	1.1	17	14	9
	1.4	25	20	15

INSTALLATION EXAMPLE



Additional Information:
Page 10 - Viscosity table
Page 11 - Installation dimensions

CONTOURABLE MIDIFLOW® GMK SERIES

For bottom (submarine) gating of medium components. Supports contouring to a depth of 8 mm. Suitable for gate diameters up to 1.8mm, shot weights up to 200g per insert and all common plastics, including reinforced type.

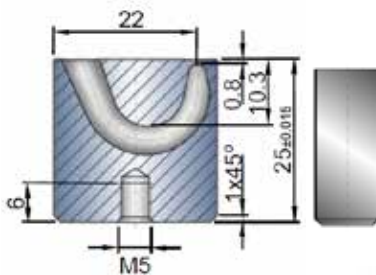
- Permits gating immediately behind projecting ribs
- Gate may be remote from molding wall
- The spherical geometry in the gate area permits gating on inclined or curved surfaces



ITEM NUMBER

GMK1

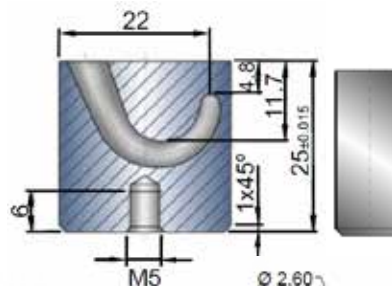
Gating point may be located up to 8mm above the parting line



ITEM NUMBER

GMK2

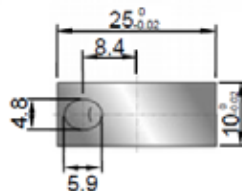
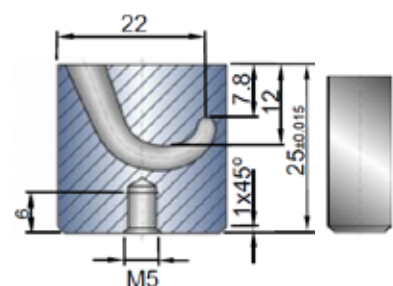
Gating point may be located up to 5mm above the parting line



ITEM NUMBER

GMK3

Gating point may be located up to 8mm above the parting line



The spherical geometry in the gate area permits gating on incline or curved surfaces.

Additional Information:
Page 10 - Viscosity table
Page 11 - Installation dimensions

INSTALLATION EXAMPLES

BELOW PARTING LINE



GMK1

ABOVE PARTING LINE



GMK2



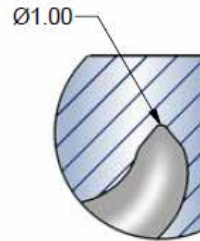
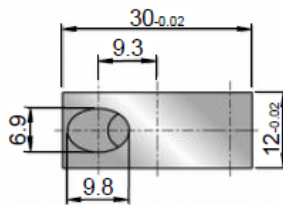
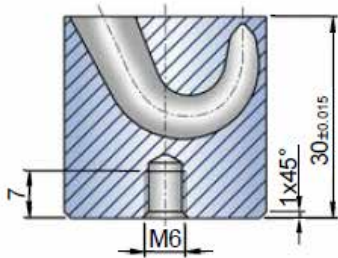
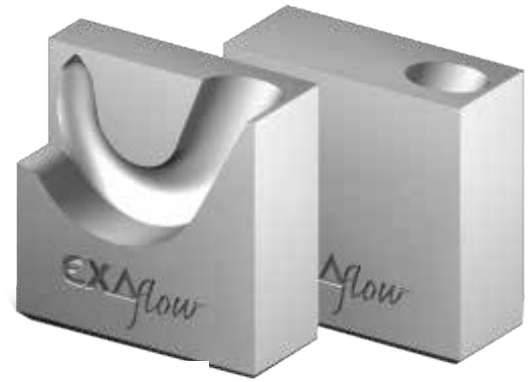
GMK3



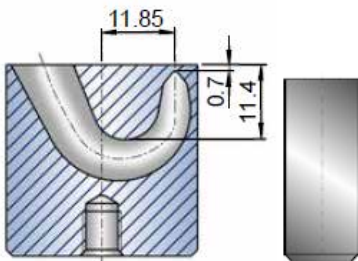
CONTOURABLE MAXIFLOW® G XK SERIES

For bottom (submarine) gating of medium components. Supports contouring to a depth of 10 mm. Suitable for gate diameters up to 3.5mm, shot weights up to 1200g per insert and all common plastics, including reinforced type.

- Permits gating immediately behind projecting ribs
- Gate may be remote from molding wall
- The spherical geometry in the gate area permits gating on inclined or curved surfaces



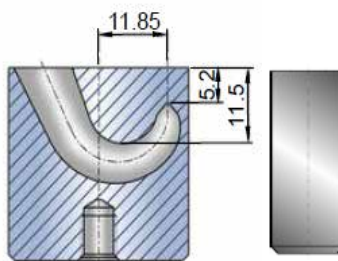
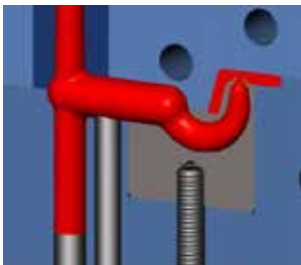
The spherical geometry in the gate area permits gating on incline or curved surfaces.



ITEM NUMBER

G XK1

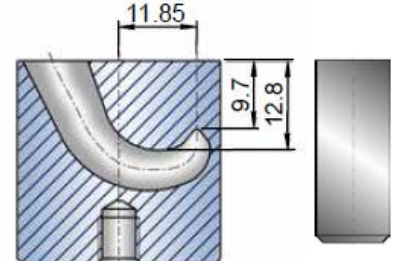
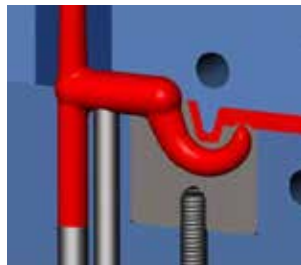
Gating point may be located up to 10mm above the parting line



ITEM NUMBER

G XK2

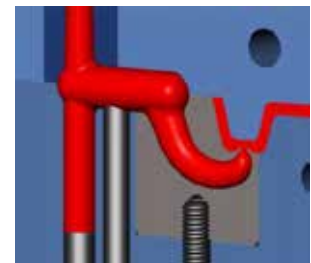
Gating point may be located up to 5mm above the parting line



ITEM NUMBER

G XK3

Gating point may be located up to 10mm above the parting line



For best operating results the Maxiflow® insert requires one central ejector and one supporting ejector. Please ensure that all sharp edges in the runner are thoroughly rounded. For reliable demolding, the diameter of the runner must exceed that of the curved tunnel.

Contouring of a supporting ejector



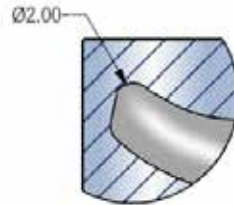
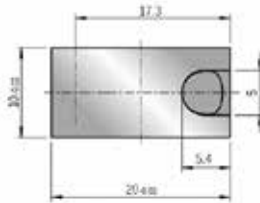
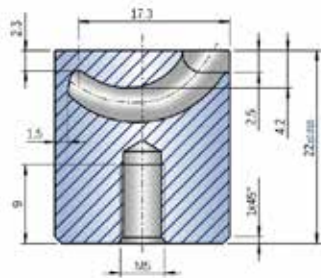
Optimum gate geometry, with edges rounded

Additional Information:
Page 10 - Viscosity table
Page 11 - Installation dimensions

CONTOURABLE KONTURFLOW® GTK SERIES

For tunnel gating of small to medium sized components contoured in the gate area.

- Maximum gate diameter (pointed tunnel) up to 1.7mm
- Contourable up to 3mm depth
- Usable for all thermoplastics including fillers up to 50% glass fiber



The spherical geometry in the gate area permits gating on incline or curved surfaces

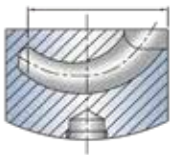
ITEM NUMBER

GTK

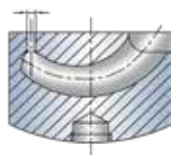
GMK, GTK & GXK CALOTTE DESIGNS

STANDARD

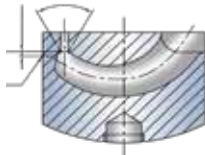
Contourable insert in unfinished state



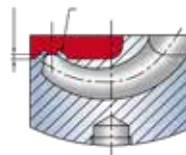
Diameter to be defined in accordance with the table



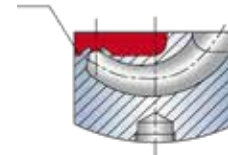
Define 60 to 90° angle at bore / tunnel intersection point



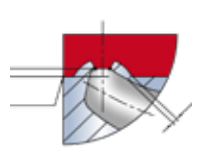
Calotte wall thickness to be between 0.5 and 0.7mm



Provide radius if possible



Finish calotte drawing

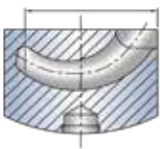


Calotte on molded product

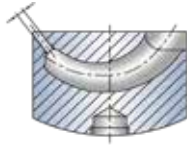


INCLINED SURFACE

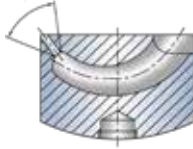
Contourable insert in unfinished state



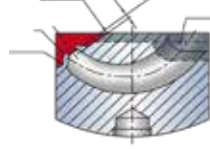
Diameter to be defined in accordance with the table



Define 60 to 90° angle at bore / tunnel intersection point



Calotte wall thickness to be between 0.5 and 0.7mm



Provide radius if possible

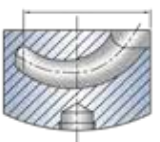


Calotte on molded product

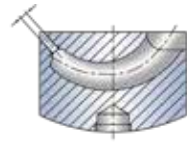


CURVED SURFACE

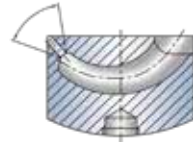
Contourable insert in unfinished state



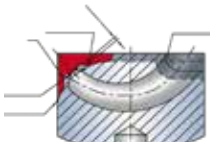
Diameter to be defined in accordance with the table



Define 60 to 90° angle at bore / tunnel intersection point



Calotte wall thickness to be between 0.5 and 0.7mm



Provide radius if possible



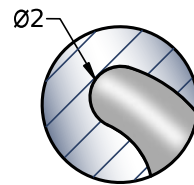
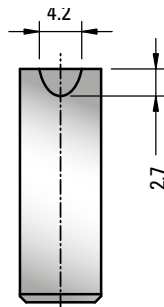
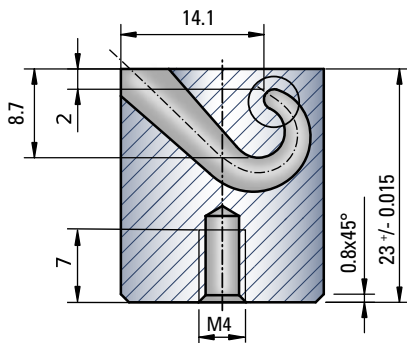
Calotte on molded product



CONTOURABLE RINGFLOW® GRF SERIES

For rear gating of small to medium size components. Optimum solution to prevent jetting and leaves no gate marks on visible external surface and bottom wall. Ideal for fully rounded edges and permits internal gating of 2 component moldings.

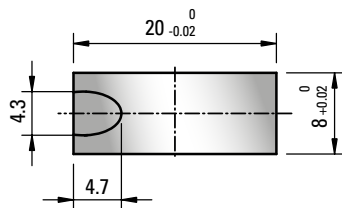
- Maximum gate diameter (pointed tunnel) up to 1.8mm
- Contourable up to 3mm depth
- Usable for all thermoplastics including fillers up to 50% glass fiber



ITEM NUMBER

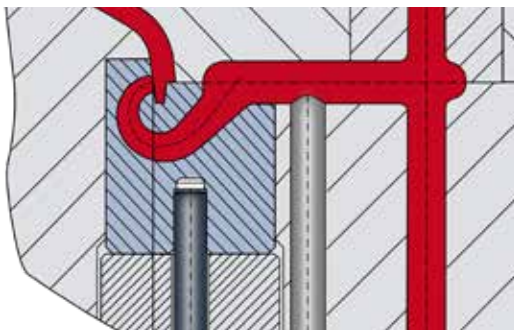
GRF-5

The spherical geometry in the gate permits gating on incline or curved surfaces



INSTALLATION EXAMPLE

For best operating results the Ringelflow® insert requires one central ejector and one supporting ejector. Please ensure that all sharp edges in the runner are thoroughly rounded. For reliable demolding, the diameter of the runner must exceed that of the curved tunnel.

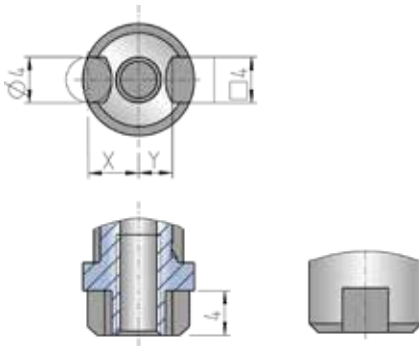


Contouring of a supporting ejector



Optimum gate geometry, with edges rounded

ANTI-ROTATION LOCKING SYSTEM



ANTI-ROTATIONAL LOCKING SYSTEM DIMENSIONS

ITEM NUMBER	PARALLEL PIN DISTANCE X	KEY DISTANCE Y
GTR10	4.5mm	3.0mm
GTR12	5.2mm	3.8mm
GTR14	6.0mm	4.5mm

The insert can be secured against inadvertent rotation by a parallel pin and key system. In most cases the gate insert is adequately secured by the bolt.

TABLE OF VISCOSITY - STANDARD TUNNEL GATES

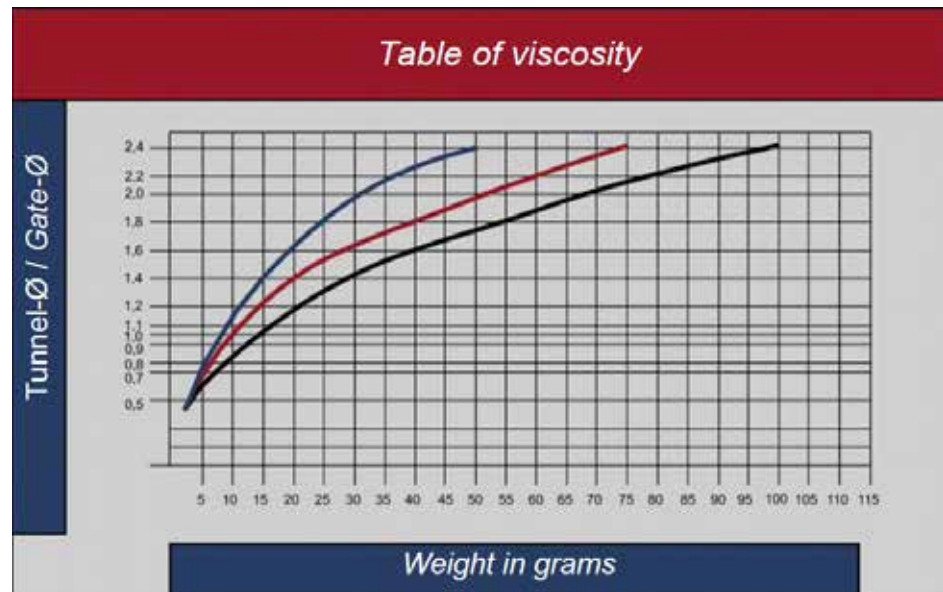
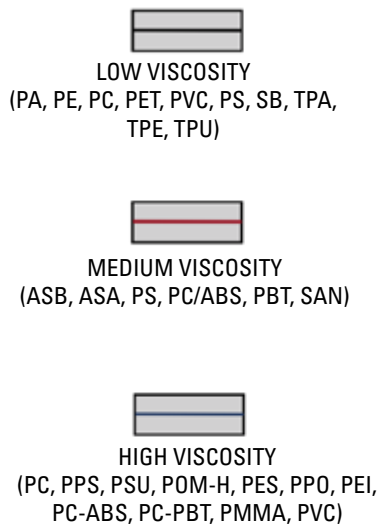
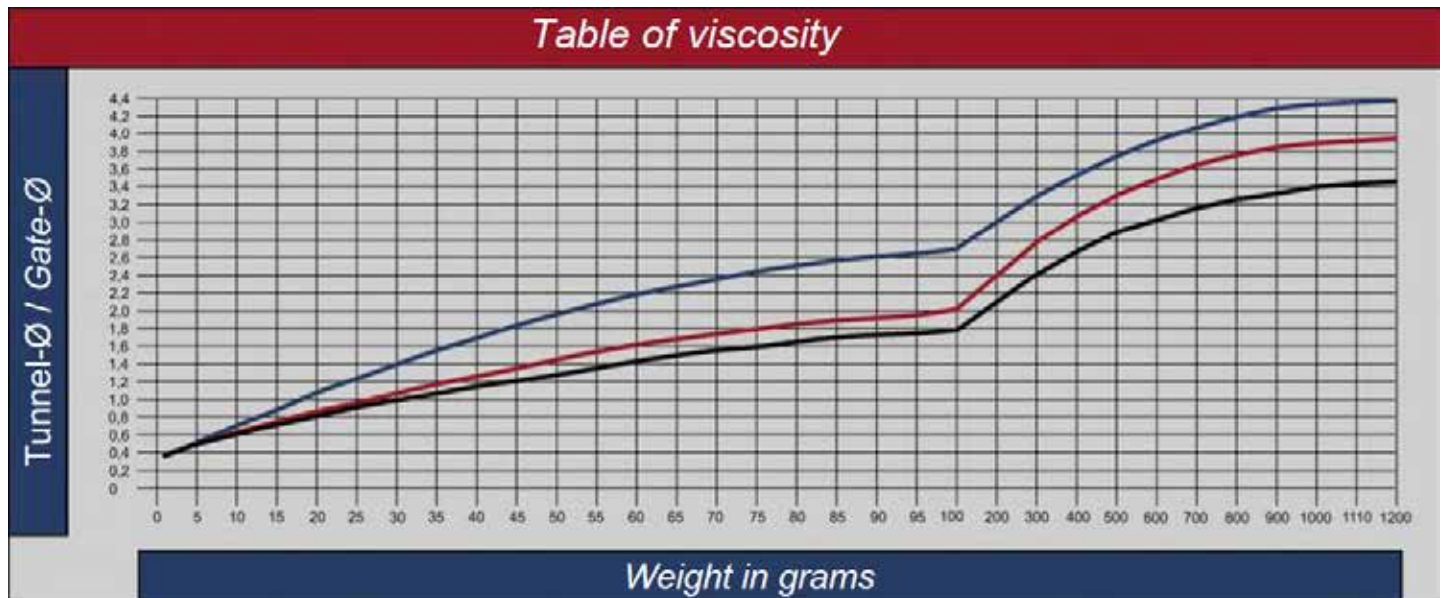
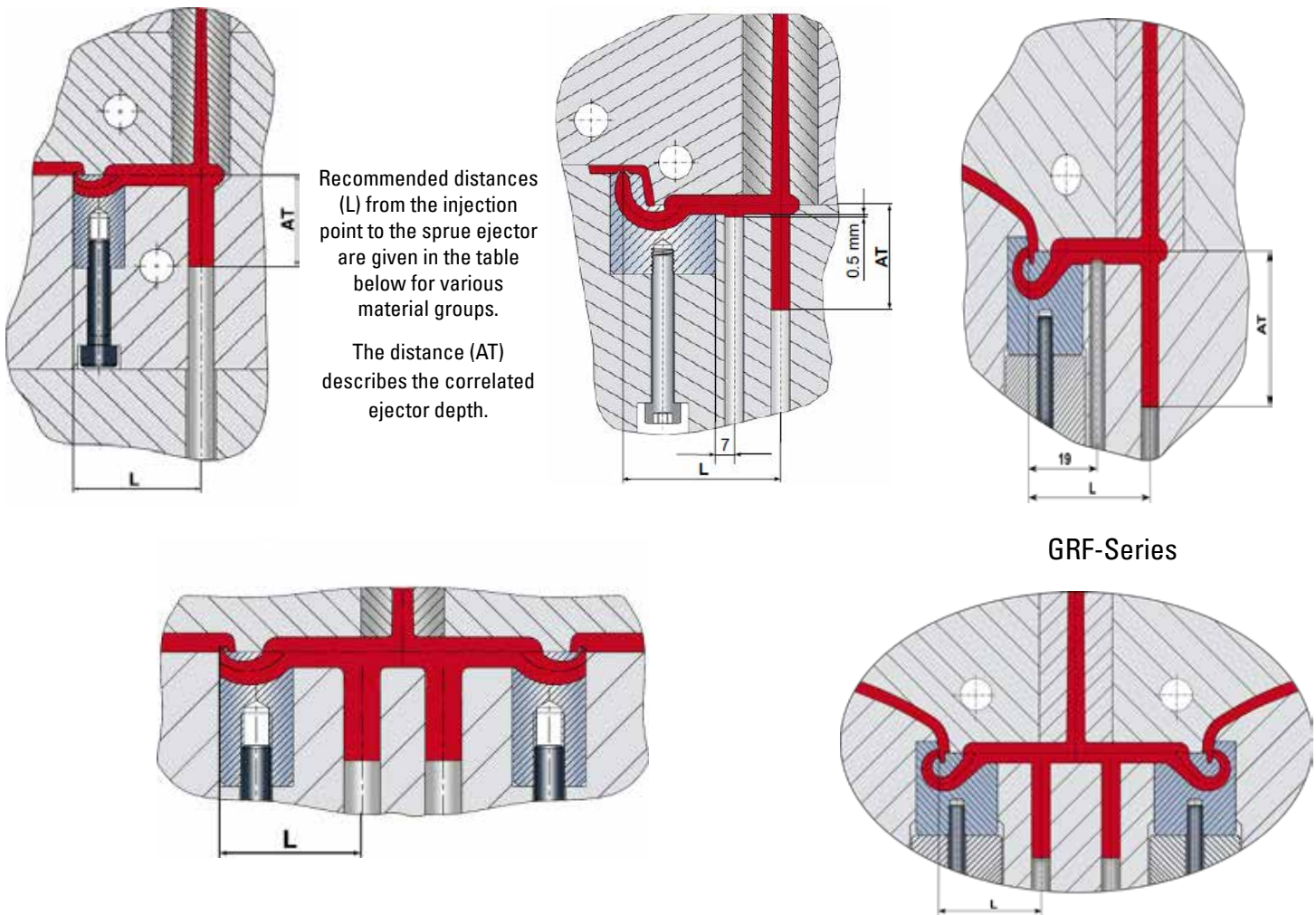


TABLE OF VISCOSITY - CONTOURABLE INSERTS



INSTALLATION DIMENSIONS GTR/GTE, GTM, GMK, GRF



PLASTIC GROUP	GTR/GTE	GTM	GTK	GXK	GMK	GRF
HD-PE, LD-PE, PET, PP, PA, PC, PVC. (L)	>20	>15	>25	>35	>25	>35
RUNNER DESIGN	ROUND					
EJECTOR DEPTH (AT)	>16	>11	>20	>35	>20	>35
ABS, M ABS, ASA, PS, PC/ABS, POM, PBT. (L)	>25	>20	>30	>40	>30	>40
RUNNER DESIGN	ROUND					
EJECTOR DEPTH (AT)	>20	>14	>24	>40	>24	>40
ELASTOMER TPE, TPU, TPP, TPA.(L)	>15	>15	>20	>30	>20	>30
RUNNER DESIGN	ARBITRARY					
EJECTOR DEPTH (AT)	>11	>11	>16	>30	>16	>35
BRITTLE PLASTICS (L)	>30	>25	>40	UPON REQUEST		
RUNNER DESIGN	HALF-ROUND					
EJECTOR DEPTH (AT)	>24	>18	>32	UPON REQUEST		

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DME Company LLC

42827 Irwin Dr.
Harrison Twp., MI 48045
800-626-6653 toll-free tel
248-398-6000 tel
www.DME.net web
DME@DME.net e-mail

DME Canada

41 Todd Road
Georgetown, Ontario
Canada L7G 4R8
800-387-6600 toll-free tel
905-677-6370 tel
DME_Canada@DME.net e-mail

DME Mexico / South America

Circuito el Marques Notre, No.55
Parque Industrial El Marqués
El Marqués, Querétaro, CP 76246
52.442.713.5666 tel
DME_MX@DME.net

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