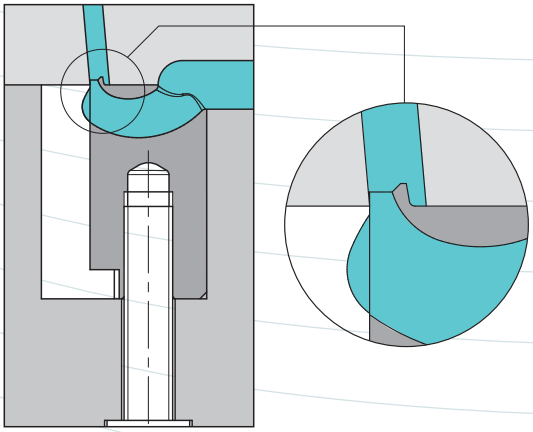
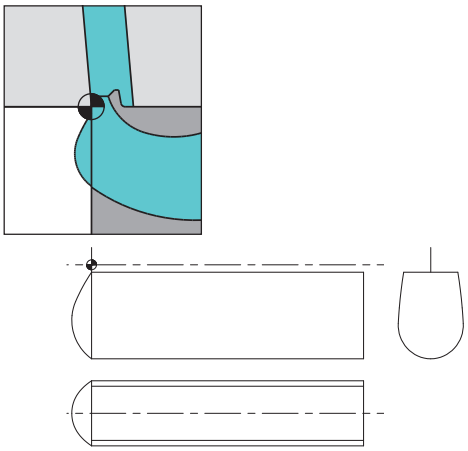
Dead-end recess



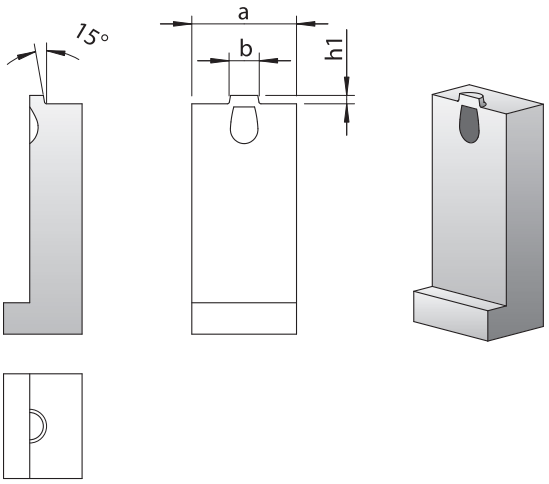
For the gating of housing parts we recommend incorporating a dead-end recess in an auxiliary insert or directly in the mold insert. This feature optimizes the shear velocity in the gate area, gives a superior frontal flow, reduces the pressure loss and helps prevent jetting.

Spark-erosion machining of recesses



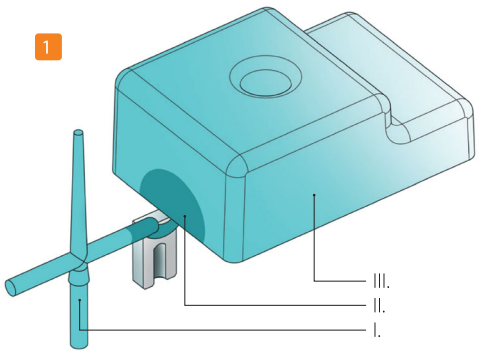
When machining the recess, take care to avoid undercutting the runner. For 3D data relating to standard insert sizes please refer to www.i-mold.com (download section).

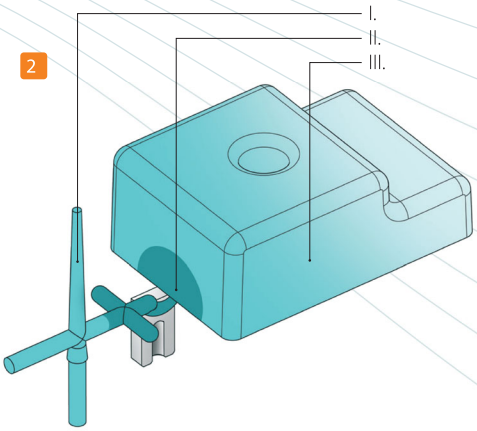
Auxiliary insert



The companion vestige and/or dead-end recess can also be incorpo-rated directly in the mold insert. The auxiliary insert should be made of a highly wear-resistant steel.

The dimensions a, b and h1 depend on the actual standard gate insert used.





To avoid the risk of jetting and the formation of matt halo effects in the gate area, we recommend the use of a graduated injection profile.

1 **Graduated injection profile by machine**
I. High injection speed for filling the cold runner.
II. Low injection speed to ensure optimum frontal (laminar) flow.
III. High injection speed for quick mold filling, followed by holding pressure setting.

2 **Mechanically graduated injectionprofile**
> Transverse runner reduces the velocity of the flow front in the gate area while machine parameters remain constant.
> For molds frequently used on different injection molding machines.

Heat sink paste

PE, PP, POM, PC, PBT, PEI, PPO, PS

Heat sink paste

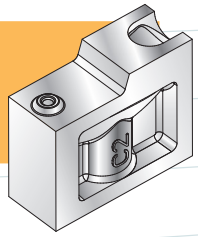
When processing temperature-sensitive materials or plastics susceptible to "stringing", we recommend the use of a heat sink paste in the lateral recesses.

> Prevents localized heating of the gate insert in molding processes with short cycle times.
> Improves heat dissipation so that the gate sealing point can be reached sooner.
> Enhances degating performance (no stringing, important when processing polyolefins).

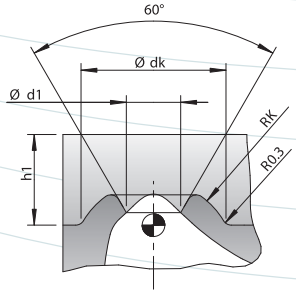
It goes without saying that these gate inserts can also be used without heat sink paste. In certain applications the somewhat higher insert temperature permits a longer holding pressure phase.

Vestiges

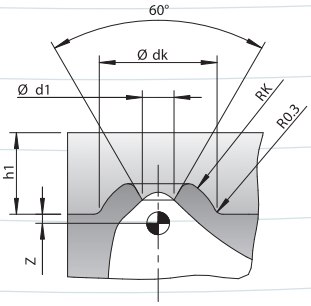
TGC-XS / -S / -1 / -2
TGLL-1 / -2
TGML-1 / -2
TGHL-1 / -2



Standard vestige



Small vestige

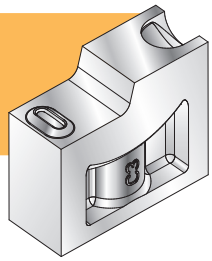


	Vestige	h1	d1max.	dk	Rk	Z
TGC-XS	Standard	1.0	0.6	2.5	1.6	-
TGC-S	Standard	2.0	0.8	2.7	1.7	-
TGC-1 / TGLL-1 / TGML-1 / TGHL-1	Small	1.8	0.7	2.6	1.4	0.2
	Standard	2.0	1.2	3.2	1.8	-
TGC-2 / TGLL-2 / TGML-2 / TGHL-2	Small	2.75	1.2	3.5	2.0	0.25
	Standard	3.0	1.8	4.5	2.6	-

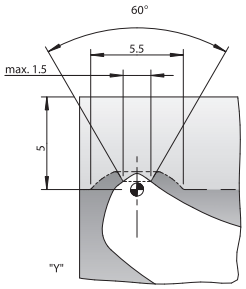
Maintain offset Z from CAD reference point!

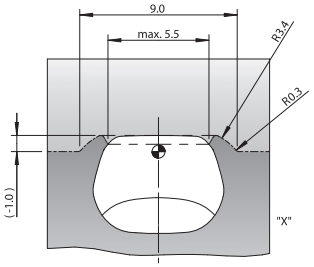
Vestiges

TGC-3 / -4
TGLL-3
TGML-3
TGHL-3

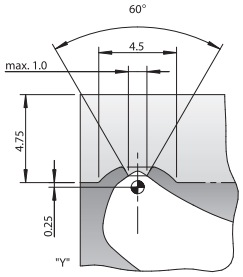


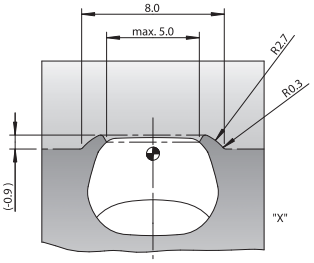
Standard vestige



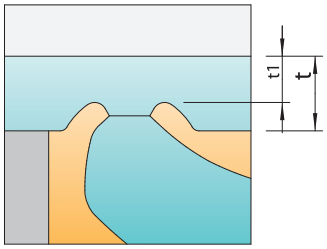


Small vestige

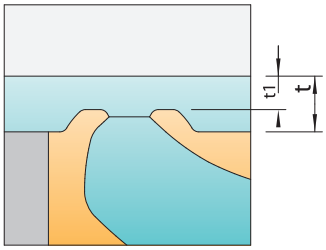




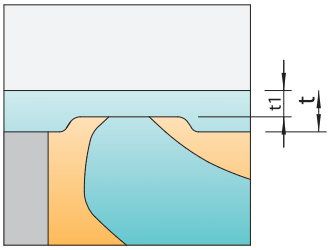
Vestige versions



Spherical vestige with cone



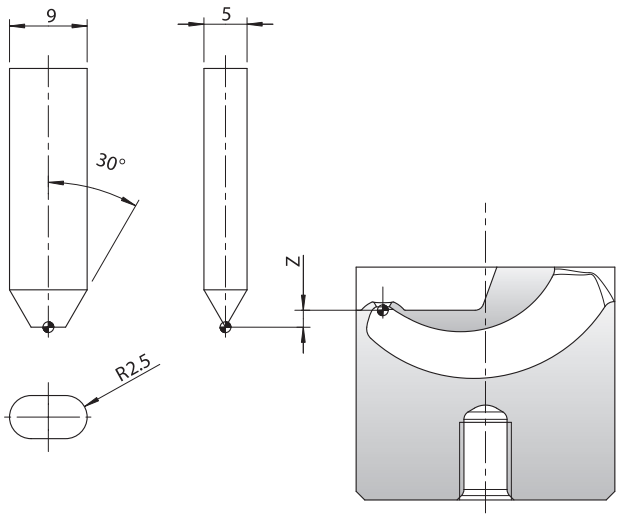
Flattened vestige with cone



Flattened vestige without cone

t1 > t/2 t = wall thickness of plastic part

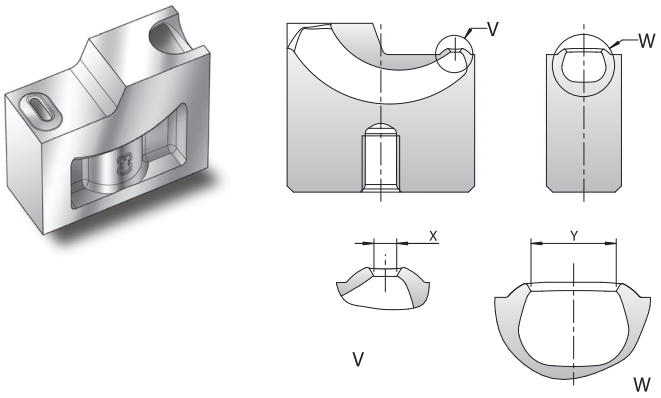
Spark erosion of gate area*



Gate machining by spark erosion

> Simple positioning of electrode via coordinate system
> For 2D and 3D electrode geometry please refer to **www.i-mold.com** (download section)

Milling of gate area*



Gate machining by milling

> Easy milling of gate area via Y and Z-axis travel

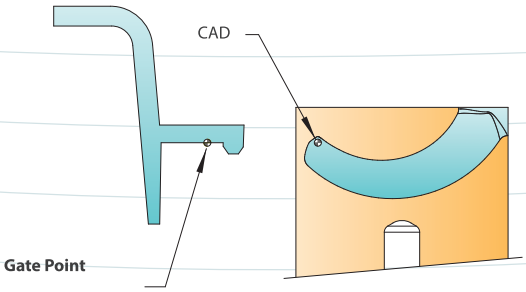
*TGC 3+4 / TGLL-3 / TGML-3 / TGHL-3

	Spark erosion of gate area	Milling of gate area	
Cross-sectional area [mm²]	**Electrode depth Z [mm]**	**Width X [mm]**	**Length Y [mm]**
7,60	-0,86	1,5	5,5
7,00	-0,74	1,4	5,4
6,41	-0,62	1,3	5,3
5,84	-0,49	1,2	5,2
5,27	-0,37	1,1	5,1
4,72	-0,25	1,0	5.0
4,18	-0,13	0,9	4,9
3,65	-0,01	0,8	4,8
3,13	+0,11	0,7	4,7
2,63	+0,23	0,6	4,6
2,14	+0,35	0,5	4,5

Installation TGC / TGLL / TGML / TGHL

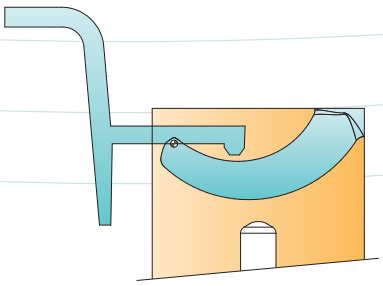
1

CAD reference point



2

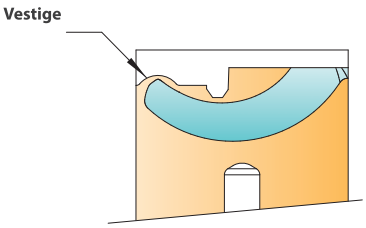
Position the tunnel gate insert



* Contour surface of the vestige in contained in the 3D data

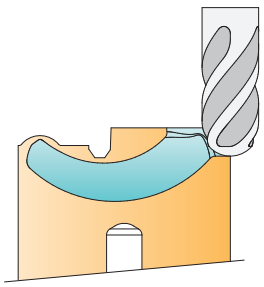
3

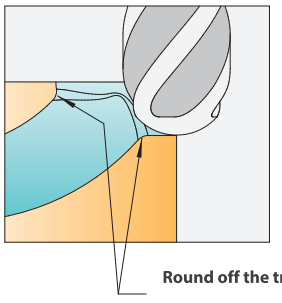
Deduct the part's contour and vestige*



4

Adapt the feed channel*





5

Machine the gate