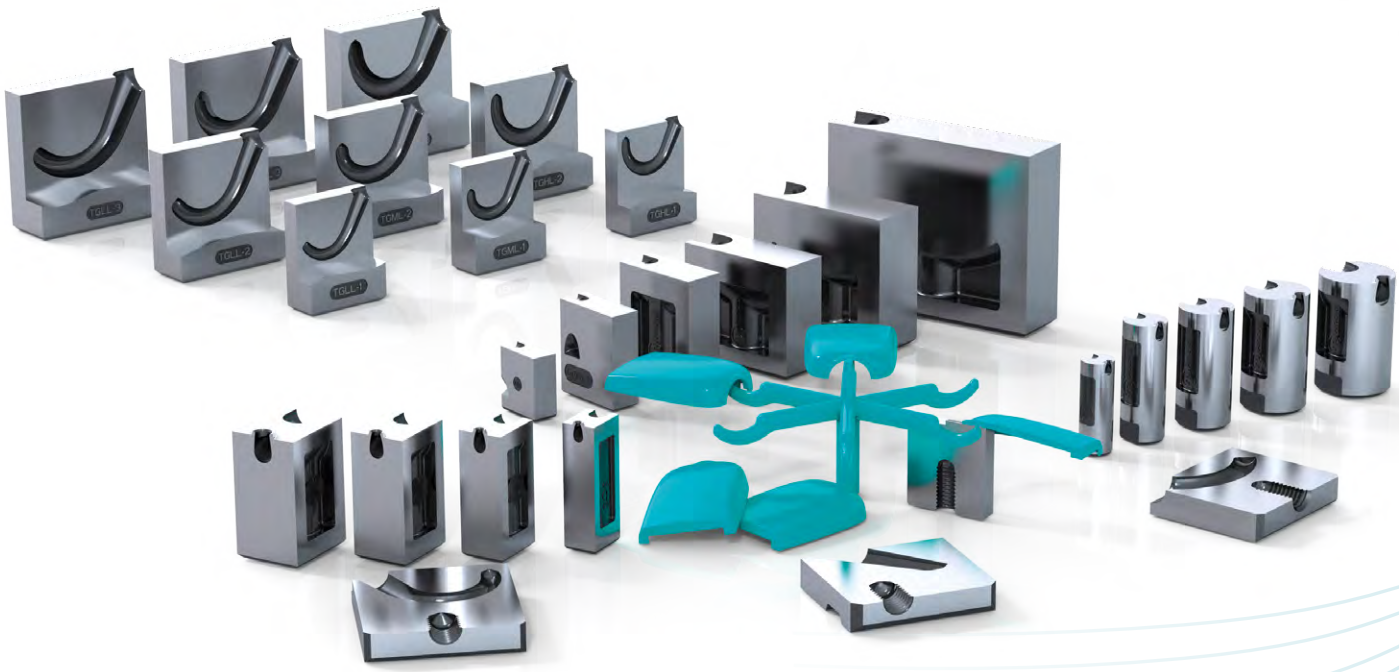
i-mold
MOLDING INNOVATIONS

TUNNEL-ANGUSS-EINSÄTZE

tunnel gate inserts
inserti d'iniezione a tunnel

Vers. 5



MADE IN GERMANY

Molding Innovations made by i-mold.

DE

i-mold "molding innovations" steht für intelligente Lösungen und innovative Produkte in der Spritzgusstechnik.

Die aus dem Hause i-mold erhältlichen Tunnel-Anguss-Einsätze sind weltweit ein Begriff für innovative Produkte mit hohem Einsparpotential für Formenbau und Spritzguss.

EN

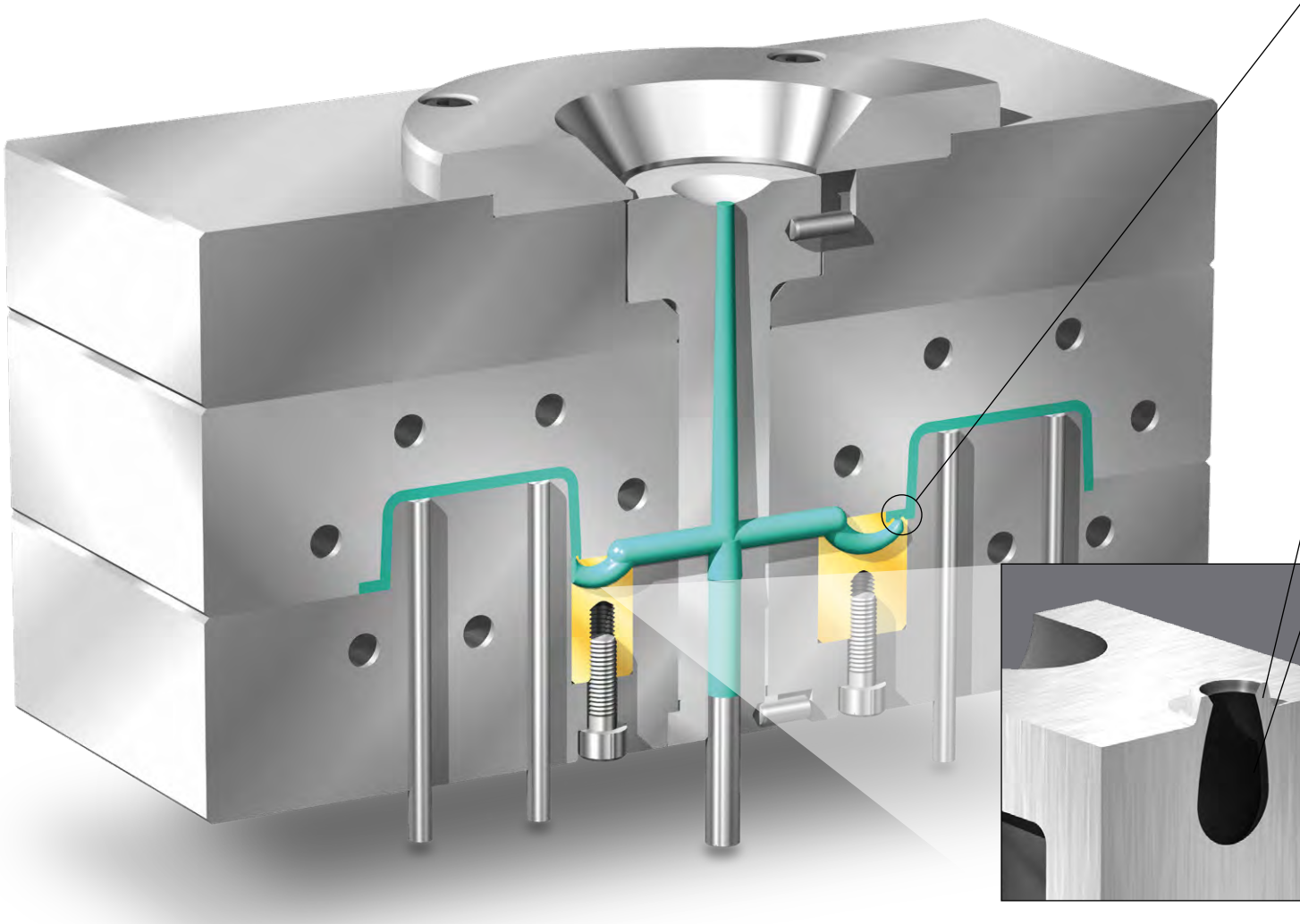
i-mold "molding innovations" stands for intelligent solutions and unique, innovative injection molded products.

The tunnel gate inserts from i-mold are recognized worldwide as innovative products with high cost-reducing potential for moldmakers and molders.

IT

i-mold "molding innovations" è sinonimo di soluzioni intelligenti e di innovativi prodotti per lo stampaggio ad iniezione.

Gli inserti d'iniezione a tunnel della i-mold sono noti in tutto il mondo come prodotti innovativi con un elevato potenziale di risparmio per la costruzione di stampi e per lo stampaggio ad iniezione.



Warum Anguss-Einsätze?

Why gate inserts?

Perché inserti d'iniezione?

DE

- Zeit- und Kostenersparnis durch einfache Verwendung
- Hoch verschleißfester Warmarbeitsstahl M2 (1.3343)
- Hohe Prozesssicherheit bei der Produktion
- Verdeckte Angussmarkierung durch unterseitige Anspritzung
- Einteilige Bauform ermöglicht kompakte Abmessungen
- Viele verschiedene Varianten und unterschiedliche Größen erhältlich
- Exakte Angusstrennung durch integrierte Abrisskante
- Durch optimierte Kanalgeometrie für alle Kunststoffe geeignet – Füllstoffanteile (z. B. GF) bis zu 60% möglich
- Glatte Angusskanäle und exakte Anschnittgrößen durch MIM-Verfahren

EN

- Time and cost reduction thanks to fast and easy application
- Made of highly wear-resistant hot work tool steel M2 (1.3343)
- High degree of reliability in production process
- Invisible gate marks through underside gating
- Single-part design for compact dimensions
- Available in many different versions and sizes
- Integrated cutting edge for exact sprue separation
- Suitable for all plastics thanks to optimized feed channel geometry – up to 60% filler content (e.g. glass fibre) is possible
- Use of MIM process ensures smooth feed channels and exact gate sizes

IT

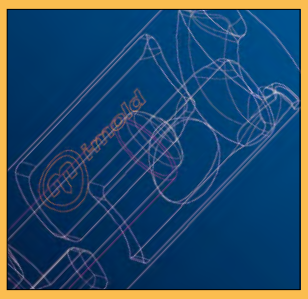
- Risparmio di tempo e costi grazie al facile impiego
- Elevata resistenza all'usura grazie al materiale sinterizzato M2 (1.3343)
- Elevata affidabilità dei processi di produzione
- Tracce d'iniezione invisibili grazie all'iniezione dal lato inferiore
- La forma monoblocco consente dimensioni compatte
- Disponibile in numerose differenti versioni e dimensioni
- Esatta separazione della materozza grazie al bordo di distacco integrato.
- Adatto per tutte le materie plastiche, grazie alla geometria dei canali ottimizzata – consente percentuali di riempitivo (p. es. GF) fino al 60%
- Canali d'iniezione lisci ed esatte dimensioni dei punti d'iniezione grazie al processo MIM

DE_Auf unserer Website halten wir für unsere Kunden sämtliche benötigten 3D-CAD-Daten zum Download bereit.

EN_Visit our website www.i-mold.com for complete 3D-CAD data.

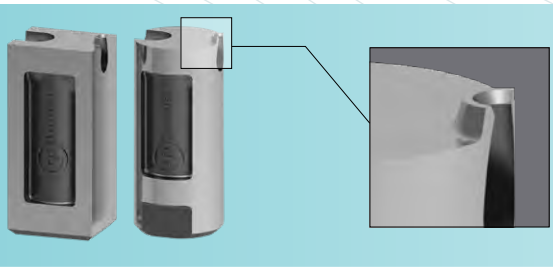
IT_I dati 3D-CAD completi sono disponibili presso la nostra website www.i-mold.com.

→ **www.i-mold.de**

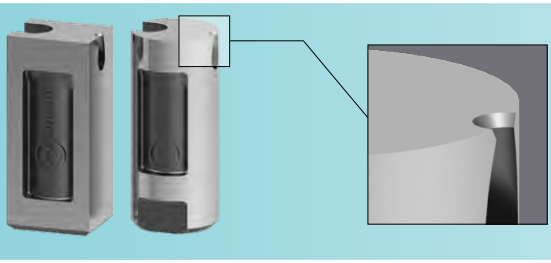


Produktübersicht
Product overview · Panoramica prodotti

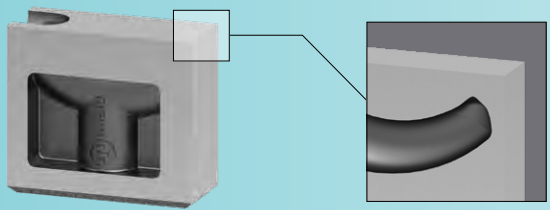
Standard Version S2



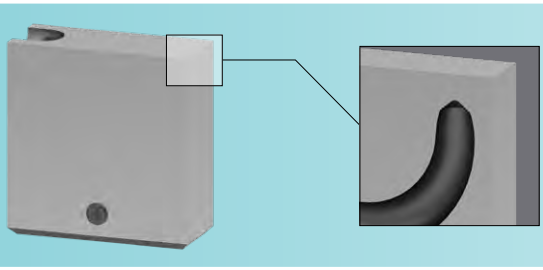
Standard Version S1



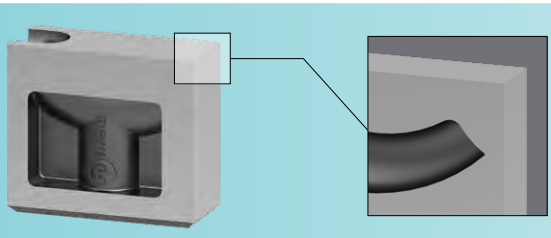
Konturierbar
Contourable
Contornabile



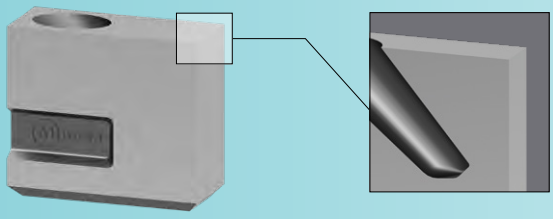
Konturierbar
Contourable
Contornabile



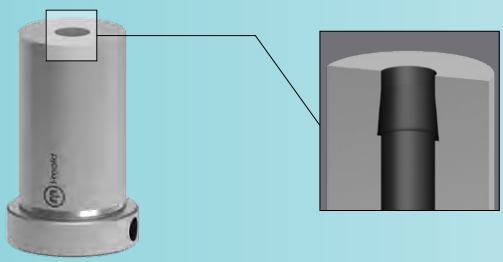
Seitliche Anspritzung
Side gating
Iniezione laterale

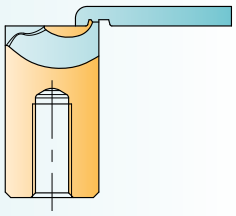


Seitliche Anspritzung
Side gating
Iniezione laterale



Haltebuchse
Retaining bush
Boccola di arresto



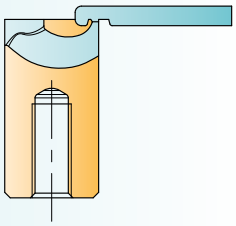


TGR TGS S2

PRODUKTDETAILS 7-8
Product details · Dettagli prodotto

EINBAUANLEITUNG 9
Installation instructions · Istruzioni per il montaggio

EINBAUBEISPIELE 10
Examples of installation · Esempi di montaggio

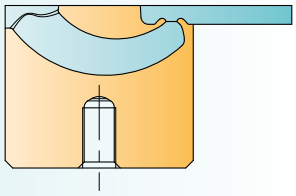


TGR TGS S1

PRODUKTDETAILS 11-12
Product details · Dettagli prodotto

EINBAUANLEITUNG 13
Installation instructions · Istruzioni per il montaggio

EINBAUBEISPIELE 14
Examples of installation · Esempi di montaggio

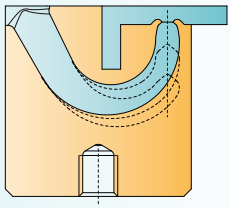


TGC

PRODUKTDETAILS 15-16
Product details · Dettagli prodotto

EINBAUANLEITUNG 37
Installation instructions · Istruzioni per il montaggio

EINBAUBEISPIELE 17
Examples of installation · Esempi di montaggio

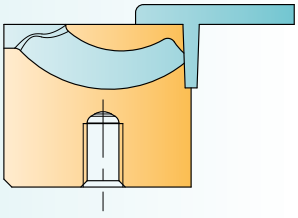


TGLL TGML TGHL

PRODUKTDETAILS 21-23
Product details · Dettagli prodotto

EINBAUANLEITUNG 37
Installation instructions · Istruzioni per il montaggio

EINBAUBEISPIELE 24
Examples of installation · Esempi di montaggio

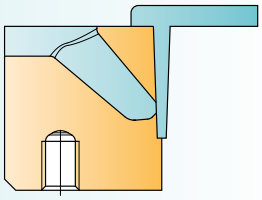


SGC

PRODUKTDETAILS 25-26
Product details · Dettagli prodotto

EINBAUANLEITUNG 27
Installation instructions · Istruzioni per il montaggio

EINBAUBEISPIELE 28
Examples of installation · Esempi di montaggio

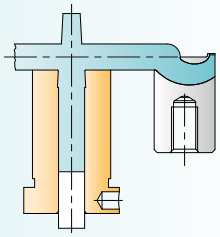


TPS

PRODUKTDETAILS 29-30
Product details · Dettagli prodotto

EINBAUANLEITUNG 31
Installation instructions · Istruzioni per il montaggio

EINBAUBEISPIELE 32
Examples of installation · Esempi di montaggio



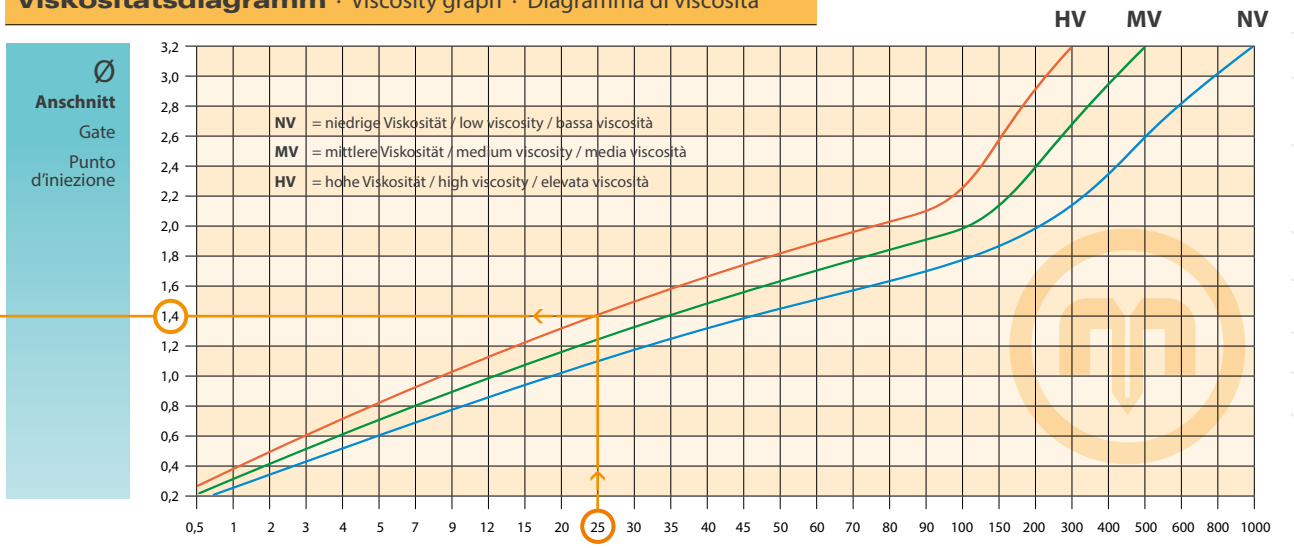
PRODUKTDETAILS 33
Product details · Dettagli prodotto

ERGÄNZENDE TIPPS 34-39
Supplementary tips · Consigli supplementari

Technische Information

Technical information · Informazioni tecniche

Viskositätsdiagramm · Viscosity graph · Diagramma di viscosità



Beispiel für 25 g PC · Example for 25 g PC · Esempi per 25 g PC

Schussgewicht (g) · Shotweight (g) · Peso d'iniezione (g)

DE

Achtung: Bei Verwendung von gefüllten Kunststoffen (Glasfaser, Kohlefaser, etc.), den mit der Tabelle ermittelten Anschnittdurchmesser um 20 % vergrößern!

Die empfohlenen Schussgewichte und Anschnittdurchmesser sind nur Richtwerte. Geometrie des Teiles, Werkzeugkonzept, Kunststofftyp und Füllstoffe müssen individuell berücksichtigt werden.

EN

Caution: When using filled plastics (glass fibres, carbon fibres etc.) you should increase the computed gate diameter by 20%.

The recommended shotweights and gate diameters are guide values only! Please also take into account such individual parameters as part geometry, mold design, type of plastic and fillers.

IT

Attenzione: In caso di impiego di plastica caricata (fibre di vetro, di carbonio ecc.) è necessario aumentare del 20% il diametro d'iniezione calcolato in base alla tabella!

I pesi ed i diametri d'iniezione consigliati sono soltanto valori indicativi. La geometria del pezzo, il sistema di stampo, il tipo di plastica ed i riempitivi devono essere considerati individualmente.

Anschnittdurchmesser · Gate Diameter · Diametro del punto d'iniezione

Ø	Querschnittsfläche in mm² · Cross-sectional area mm² · Superficie trasversale mm²	TGS/TGR	TGC-XS SGC-XS	TGC-S SGC-S TPS-S	TGC-1 SGC-1 TPS-1 TGLL-1 TGML-1 TGHL-1	TGC-2 SGC-2 TPS-2 TGLL-2 TGML-2 TGHL-2	TGC-3 / -4 SGC-3 / -4 TPS-3 TGLL-3 TGML-3 TGHL-3
0,4	0,13	0,6	0,4	0,4	0,6	0,8	0,5 x (4,5)
0,6	0,28	0,8	0,6	0,6	0,8	1,0	0,6 x (4,6)
0,8	0,50	1,2	0,8	0,8	1,0	1,2	0,7 x (4,7)
1,0	0,78	1,6		1,0	1,2		0,8 x (4,8)
1,2	1,13			1,2	1,4		0,9 x (4,9)
1,4	1,54	2,0				1,4	1,0 x (5,0)
1,6	2,01	2,4			1,8	1,6	1,1 x (5,1)
1,8	2,54	2,8				1,8	1,2 x (5,2)
2,0	3,14					2,1	1,3 x (5,3)
2,2	3,8						1,4 x (5,4)
2,4	4,52					2,8	1,5 x (5,5)
2,6	5,31						
2,8	6,15						4,5
3,0	7,07						
3,2	8,04						
:	:						
4,5	18,8						

TGR / TGS / TGC / TGLL / TGML / TGHL | SGC | TPS

TGR TGS S2

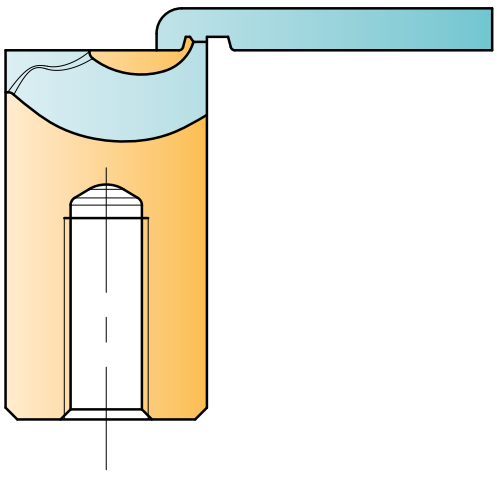
mit Kalotte
with vestige
con calotta

Geeignet für alle Kunststoffe · Suitable for all plastics · Adatto per ogni tipo di plastica

DE
> **für flache Trennungen, inkl. Kalotte mit integrierter Abrisskante**
> **direkt einsetzbar! Keine Anpassungen erforderlich**
> **in Härte 60 HRC erhältlich**
> **erhältlich in runder (TGR) und eckiger (TGS) Ausführung**

EN
> for flat parting surfaces, including vestige with integrated cutting edge
> ready to use! No adjustments necessary
> available with hardness 60 HRC
> available in round (TGR) and square (TGS) versions

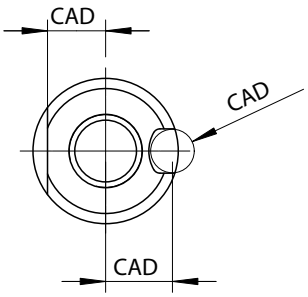
IT
> per separazioni piatte, inclusa calotta con bordo di distacco integrato
> impiego diretto! Non sono necessari adattamenti
> disponibile in durezze 60 HRC
> disponibile in versione tonda (TGR) e squadrata (TGS)



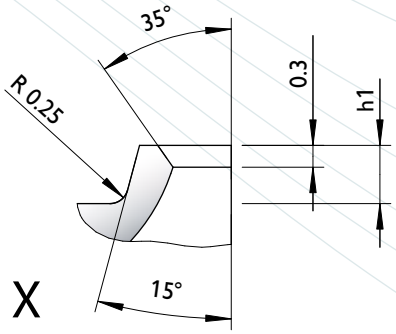
	TGR 6	TGR/TGS 8	TGR/TGS 10	TGR/TGS 12	TGR/TGS 14
Anschnitt / gate point / punto d'iniezione	0.6	0,6 / 0,8	0,8 / 1,2 / 1,6	1,2 / 1,6 / 2,0	1,6 / 2,0 / 2,4 / 2,8
Ø Kanal / runner / canale	2.5	3	4	5	6

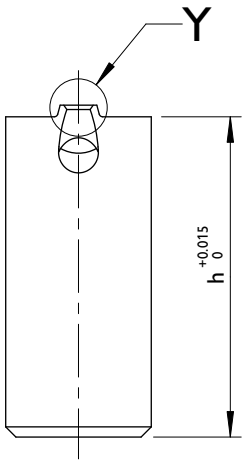
max. Schussgewichte (g) · max. shotweight (g) · pesi d'iniezione max. (g)					
NV	3	5	30	50	200
MV	2	4	20	35	120
HV	1	3	12	25	75

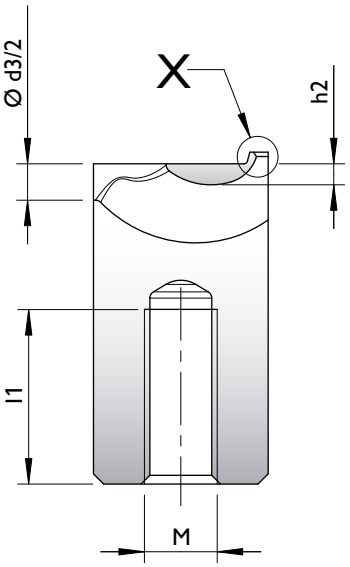
NV = niedrige Viskosität / low viscosity / bassa viscosità
MV = mittlere Viskosität / medium viscosity / media viscosità
HV = hohe Viskosität / high viscosity / elevata viscosità

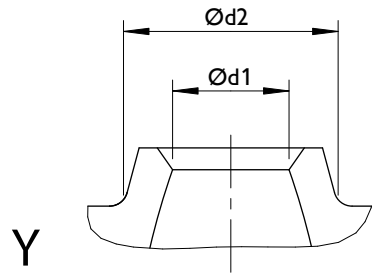


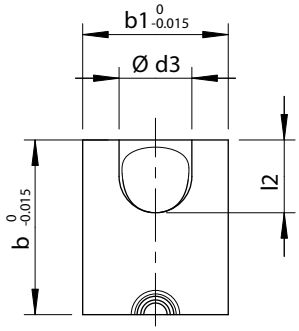
Mögliche Verdrehsicherung
Anti-rotation locking possibility
Possibilità di protezione antitorsione

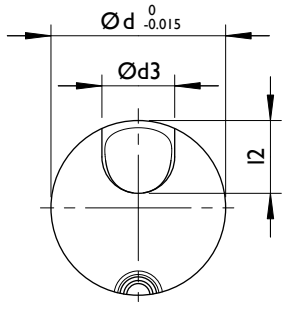




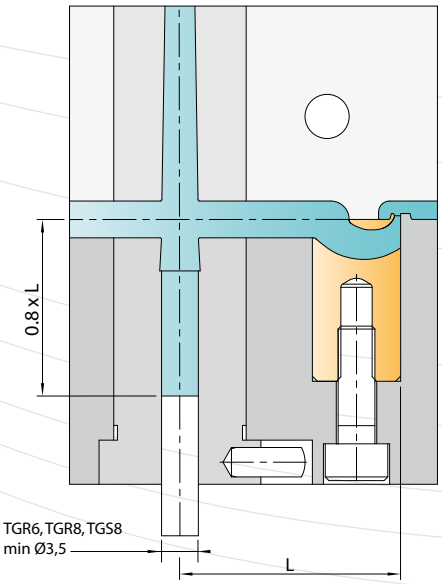


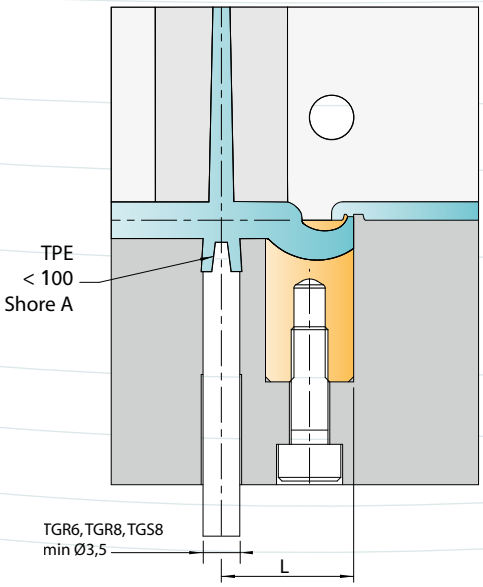


TGS	Typ	b	b1	d1	d2	d3	h	h1	h2	l1	l2	M	Version
	TGS8	8	6	0.6	1.9	3	22.0	0.6	1.1	13	3.25	4	S2
				0.8	2.1								
	TGS10	10	8	0.8	2.2	4	22.0	0.8	1.2	12	4	5	S2
				1.2	2.6								
				1.6	3.0								
	TGS12	12	10	1.2	2.6	5	22.0	0.8	1.40	11	5	5	S2
				1.6	3.0								
				2.0	3.4								
	TGS14	14	12	1.6	3.0	6	22.0	0.8	1.6	10	6	6	S2
				2.0	3.4								
				2.4	3.8								
				2.8	4.2								

TGR	Typ	d	d1	d2	d3	h	h1	h2	l1	l2	M	Version
	TGR6	6	0.6	1.9	2.5	17.0	0.6	0.8	10	2.5	4	S2
	TGR8	8	0.6	1.9	3	22.0	0.6	1.1	13	3.25	4	
			0.8	2.1								
	TGR10	10	0.8	2.2	4	22.0	0.8	1.2	12	4	5	S2
			1.2	2.6								
			1.6	3.0								
	TGR12	12	1.2	2.6	5	22.0	0.8	1.4	11	5	5	S2
			1.6	3.0								
			2.0	3.4								
	TGR14	14	1.6	3.0	6	22.0	0.8	1.6	10	6	6	S2
			2.0	3.4								
			2.4	3.8								
			2.8	4.2								

Beispiel Bestellbezeichnung · Example of order specification · Esempio codice di ordinazione: **TGR6-06-S2**





DE **Thermoplastische Elastomere (TPE)**
- > Kleine Shorehärte = geringeres Abstandsmaß L
- > Zentrierzapfen verwenden
- > Shorehärte max. 100 Shore A

EN **Thermoplastic elastomers (TPE)**
- > Low Shore hardness = shorter distance L
- > Use centring pin
- > Max. hardness 100 Shore A

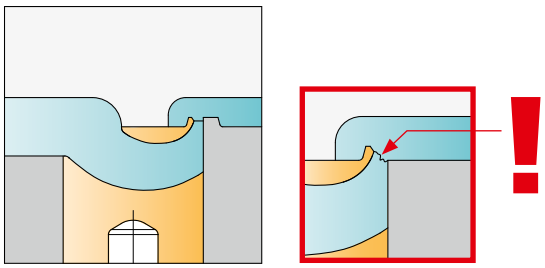
IT **Elastomeri termoplastici (TPE)**
- > Bassa durezza Shore = distanza L più ridotta
- > Utilizzare un perno di guida
- > Durezza: max. 100 Shore A

Diagramm für Abstandsmaß L · Table for distance L · Diagramma per la distanza L

	Materialart · Material type · Tipo di materiale			
	TPE, TPU etc.	**PE, PP, PET etc.**	**PC/ABS, PA, POM, HI-PC etc.**	**PA+GF, PC, SAN, PMMA, etc.**
TGR 6	9-12	12-18	15-22	18-25
TGR/TGS 8	11-14	15-22	19-27	23-30
TGR/TGS 10	15-18	19-27	24-33	28-36
TGR/TGS 12	18-22	22-30	27-36	32-40
TGR/TGS 14	20-25	25-33	30-37	35-43

Empfehlungen · Recommendations · Consigli

Gegenkalotte
Companion vestige / Controcalotta

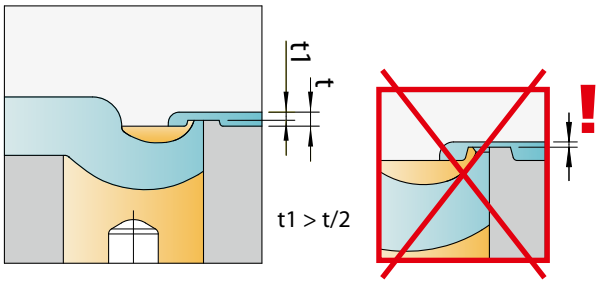


DE_Um ein optimales Abreißen des Anschnittes zu gewährleisten (insbesondere bei flachen Teilen) empfehlen wir im Bereich der Kalotte mit Abrisskante eine Gegenkalotte vorzusehen. Diese gewährleistet ein Abreißen parallel zur Trennebene. Besonders bei Materialien zu empfehlen, die zu Fadenzug neigen.

EN_For optimum degating (especially of flat parts), we recommend the use of a companion vestige supplementing the vestige with cutting edge. This configuration will ensure that the part is separated from the runner flush with the parting line. Users will find this particularly advantageous in cases where materials are susceptible to stringing.

IT_Per garantire un ottimale distacco del punto d'iniezione (soprattutto con pezzi piatti) è consigliabile l'impiego di un una controcalotta nella zona della calotta con bordo di distacco. In questo modo si garantisce un distacco parallelo alla linea di giunzione. Questo metodo è consigliabile soprattutto per i materiali che tendono a sfilacciarsi.

Flache Teile
Flat parts / Pezzi piatti



DE_Bei sehr dünnen Teilen muss die Kalotte abgeschliffen werden. (t1>t/2)

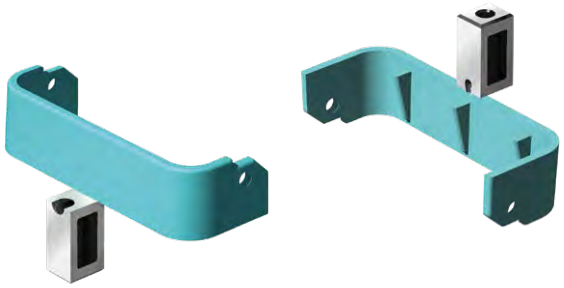
EN_If the molded part is very thin, the calotte must be ground down. (t1>t/2)

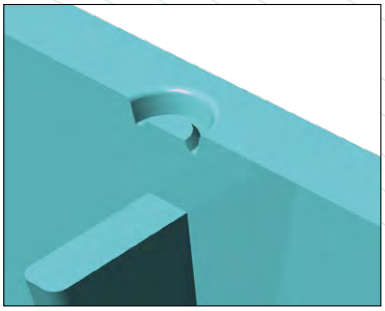
IT_Per la realizzazione di pezzi molto sottili è necessario rettificare la calotta. (t1>t/2)

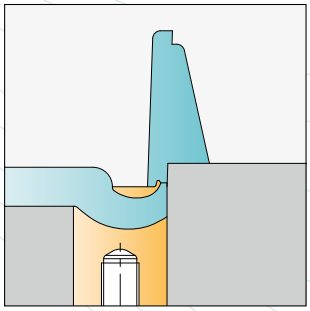
Einbaubeispiele

Examples of installation · Esempi di montaggio

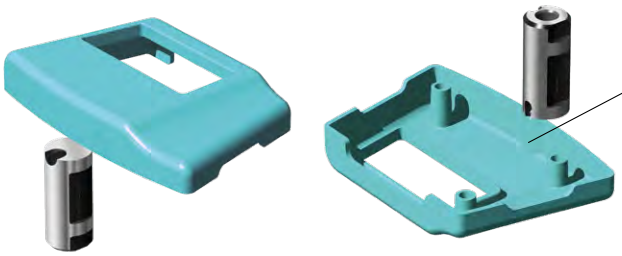
unter Wand / under wall / sotto parete

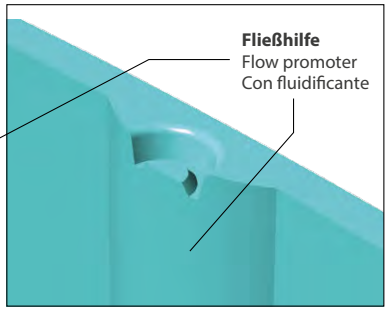


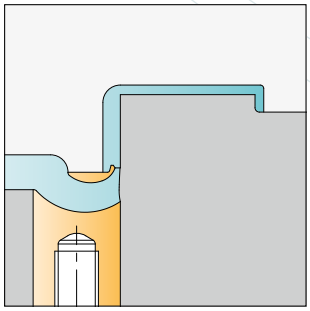




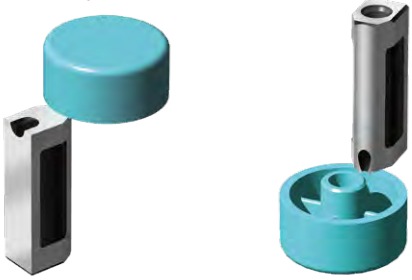
mit Fließhilfe / with flow promoter / con fluidificante

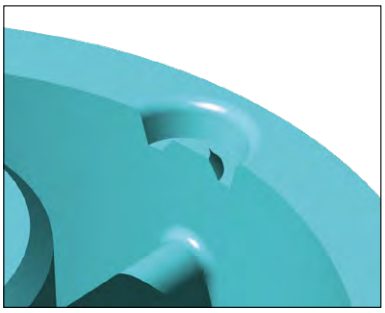


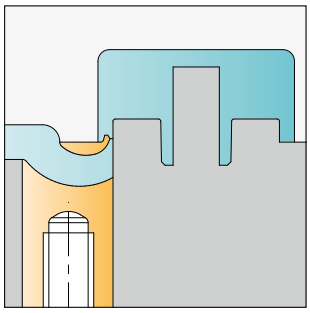




angepasst an Kunststoffteil / adapted to part / adattato al pezzo



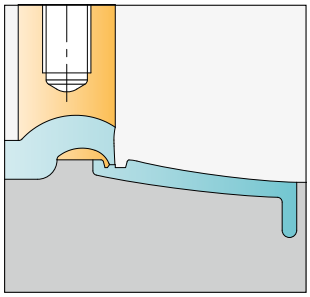




flaches Teil mit Gegenkalotte – Einbau in Düsenseite

flat part with companion vestige – installation in fixed half of the mold

pezzo piatto con controcalotta – montaggio nel lato ugello



flaches Teil ohne Gegenkalotte

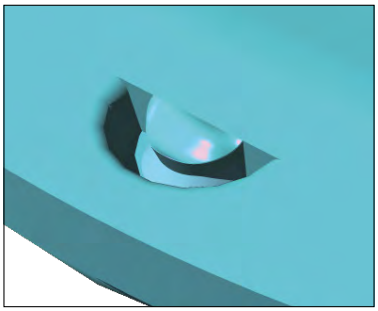
flat part without companion vestige

pezzo piatto senza controcalotta

DE_wenn kein 100%iger Abriss gefordert ist oder verstärkte Kunststoffe verwendet werden, kann bei flachen Teilen ohne Gegenkalotte gearbeitet werden. (siehe Seite 9).

EN_If a 100% clean separation of the sprue is not necessary or if reinforced plastics are being processed, the use of a companion vestige may be waived when molding flat parts. (see page 9).

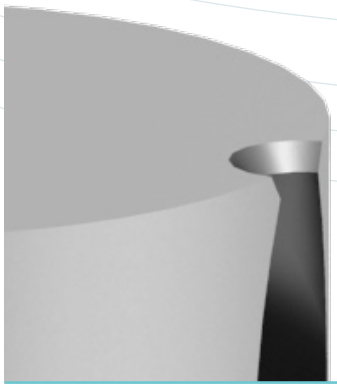
IT_la controcalotta non è necessaria se non è richiesto un distacco al 100% oppure se vengono impiegate plastiche rinforzate. (Vedasi pagina 9).



TGR TGS S1

mit Aufmaß
with machining allowance
con tolleranza dimensionale

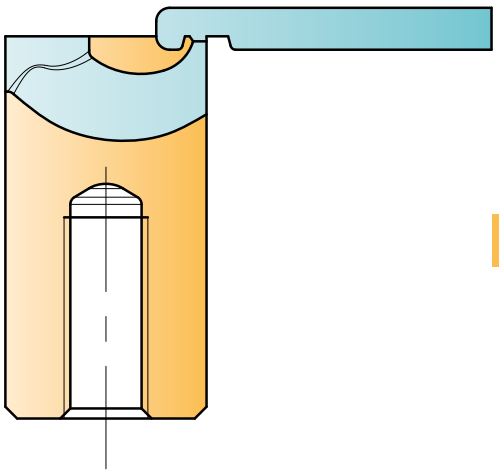
Geeignet für alle Kunststoffe · Suitable for all plastics · Adatto per ogni tipo di plastica



DE
> **mit Aufmaß an der oberen Fläche**
> **leichte Konturierungen möglich**
> **gleiche Eigenschaften wie Version S2**
> **erhältlich in runder (TGR) und eckiger (TGS) Ausführung**

EN
> with machining allowance on upper surface
> slight contourings possible
> same properties as version S2
> available in round (TGR) and square (TGS) versions

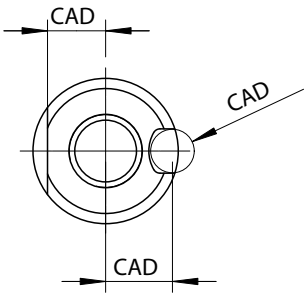
IT
> con tolleranza dimensionale sulla superficie superiore
> consente semplici contornature
> caratteristiche identiche a quelle della versione S2
> disponibile in versione tonda (TGR) e squadrata (TGS)



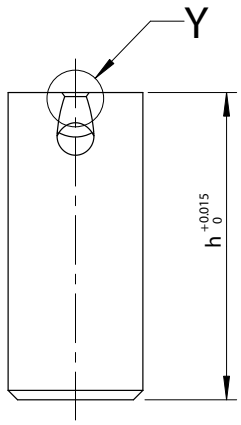
	TGR 6	TGR/TGS 8	TGR/TGS 10	TGR/TGS 12	TGR/TGS 14
Anschnitt / gate point / punto d'iniezione	0.6	0,6 / 0,8	0,8 / 1,2 / 1,6	1,2 / 1,6 / 2,0	1,6 / 2,0 / 2,4 / 2,8
Ø Kanal / runner / canale	2.5	3	4	5	6

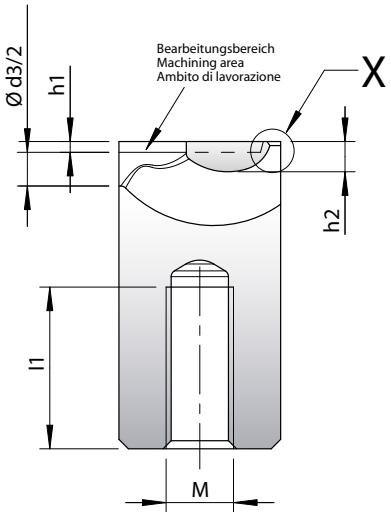
max. Schussgewichte (g) · max. shotweight (g) · pesi d'iniezione max. (g)					
NV	3	5	30	50	200
MV	2	4	20	35	120
HV	1	3	12	25	75

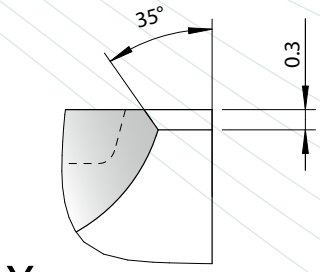
NV = niedrige Viskosität / low viscosity / bassa viscosità
MV = mittlere Viskosität / medium viscosity / media viscosità
HV = hohe Viskosität / high viscosity / elevata viscosità



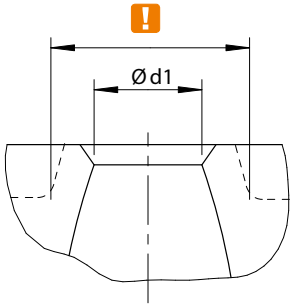
Mögliche Verdrehsicherung
Anti-rotation locking possibility
Possibilità di protezione antitorsione





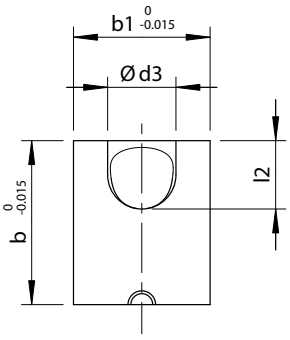


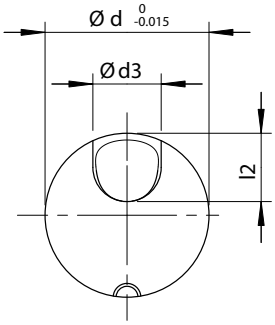
X



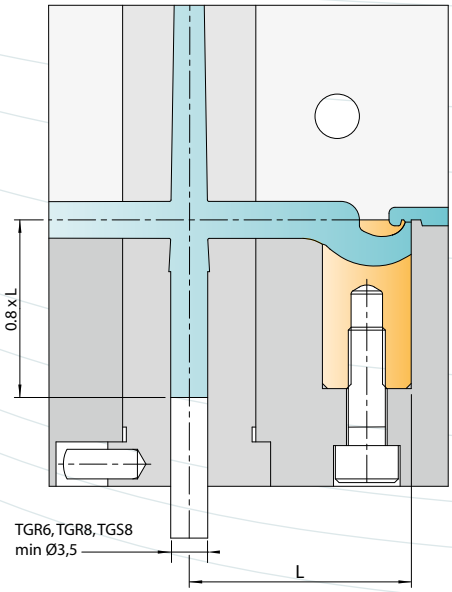
Y

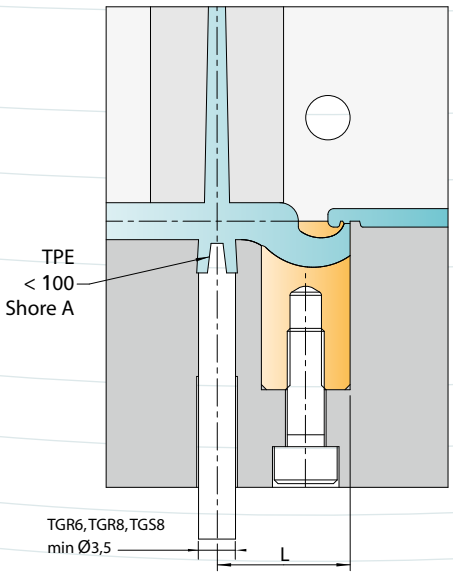
Mindestgröße der Kalotte wie bei S2
Minimum size of vestige same as version S2
Dimensioni minime della calotta come per la versione S2

TGS	Typ	b	b1	d1	d3	h	h1	h2	l1	l2	M	Version
	TGS8	8	6	0.6	3	22.6	0.6	1.7	13	3.25	4	S1
				0.8								
	TGS10	10	8	0.8	4	22.8	0.8	2.0	12	4	5	S1
				1.2								
				1.6								
	TGS12	12	10	1.2	5	22.8	0.8	2.2	11	5	5	S1
				1.6								
				2.0								
	TGS14	14	12	1.6	6	22.8	0.8	2.4	10	6	6	S1
				2.0								
				2.4								
				2.8								

TGR	Typ	d	d1	d3	h	h1	h2	l1	l2	M	Version
	TGR6	6	0.6	2.5	17.6	0.6	1.4	10	2.5	4	S1
	TGR8	8	0.6	3	22.6	0.6	1.7	13	3.25	4	S1
			0.8								
	TGR10	10	0.8	4	22.8	0.8	2.0	12	4	5	S1
			1.2								
			1.6								
	TGR12	12	1.2	5	22.8	0.8	2.2	11	5	5	S1
			1.6								
			2.0								
	TGR14	14	1.6	6	22.8	0.8	2.4	10	6	6	S1
			2.0								
			2.4								
			2.8								

Beispiel Bestellbezeichnung · Example of order specification · Esempio codice di ordinazione: **TGR6-06-S1**





DE **Thermoplastische Elastomere (TPE)**
- > Kleine Shorehärte = geringeres Abstandsmaß L
- > Zentrierzapfen verwenden
- > Shorehärte max. 100 Shore A

EN **Thermoplastic elastomers (TPE)**
- > Low Shore hardness = shorter distance L
- > Use centring pin
- > Max. hardness 100 Shore A

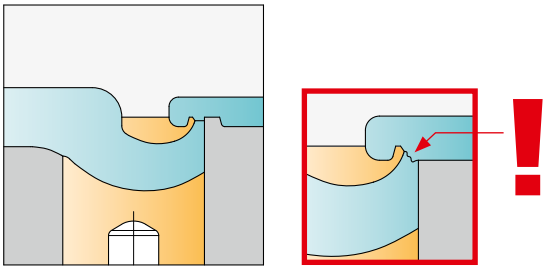
IT **Elastomeri termoplastici (TPE)**
- > Bassa durezza Shore = distanza L più ridotta
- > Utilizzare un perno di guida
- > Durezza: max. 100 Shore A

Diagramm für Abstandsmaß L · Table for distance L · Diagramma per la distanza L

	Materialart · Material type · Tipo di materiale			
	TPE, TPU etc.	**PE, PP, PET etc.**	**PC/ABS, PA, POM, HI-PC etc.**	**PA+GF, PC, SAN, PMMA etc.**
TGR 6	9-12	12-18	15-22	18-25
TGR/TGS 8	11-14	15-22	19-27	23-30
TGR/TGS 10	15-18	19-27	24-33	28-36
TGR/TGS 12	18-22	22-30	27-36	32-40
TGR/TGS 14	20-25	25-33	30-37	35-43

Empfehlungen · Recommendations · Consigli

Gegenkalotte
Companion vestige / Controcalotta

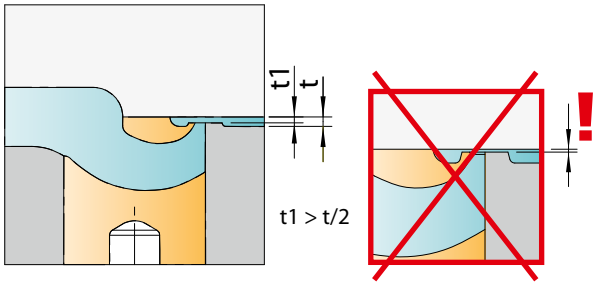


DE_Um ein optimales Abreißen des Anschnittes zu gewährleisten (insbesondere bei flachen Teilen) empfehlen wir im Bereich der Kalotte mit Abrisskante eine Gegenkalotte vorzusehen. Diese gewährleistet ein Abreißen parallel zur Trennebene. Besonders bei Materialien zu empfehlen, die zu Fadenzug neigen.

EN_For optimum degating (especially of flat parts), we recommend the use of a companion vestige supplementing the vestige with cutting edge. This configuration will ensure that the part is separated from the runner flush with the parting line. Users will find this particularly advantageous in cases where materials are susceptible to stringing.

IT_Per garantire un ottimale distacco del punto d'iniezione (soprattutto con pezzi piatti) è consigliabile l'impiego di un una controcalotta nella zona della calotta con bordo di distacco. In questo modo si garantisce un distacco parallelo alla linea di giunzione. Questo metodo è consigliabile soprattutto per i materiali che tendono a sfilacciarsi.

Flache Teile
Flat parts / Pezzi piatti



DE_Bei sehr dünnen Teilen muss die Kalotte abgeschliffen werden. (t1>t/2)

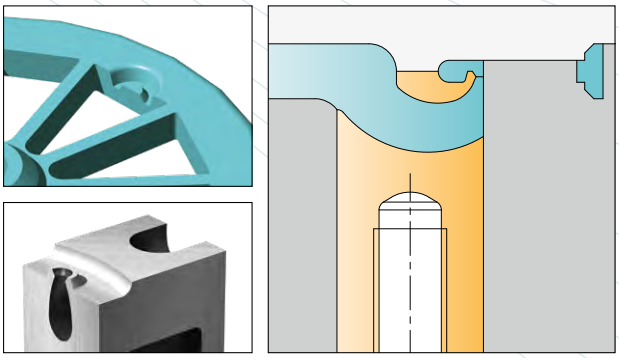
EN_If the molded part is very thin, the calotte must be ground down. (t1>t/2)

IT_Per la realizzazione di pezzi molto sottili è necessario rettificare la calotta. (t1>t/2)

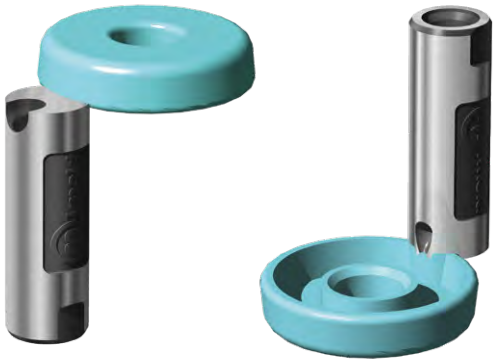
Einbaubeispiele

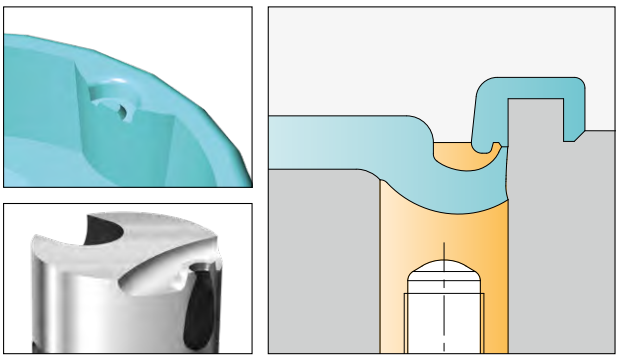
Examples of installation · Esempi di montaggio

abgerundete Kante / rounded edge / bordo arrotondato

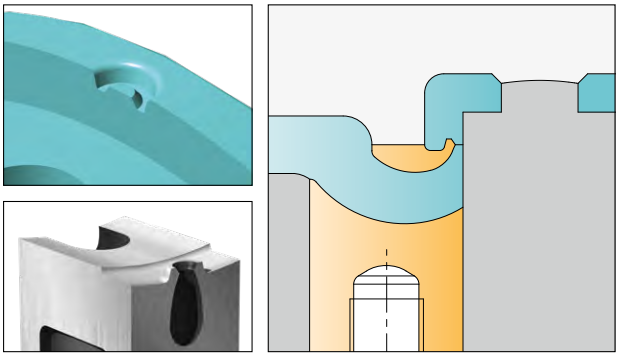


mit Fließhilfe / with flow promoter / con fluidificante

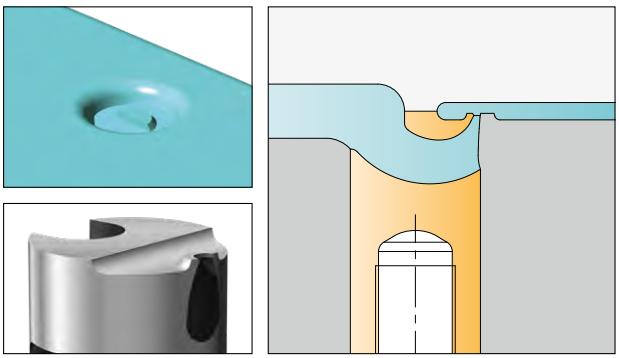




gewölbte Trennung / rounded separation / separazione bombata



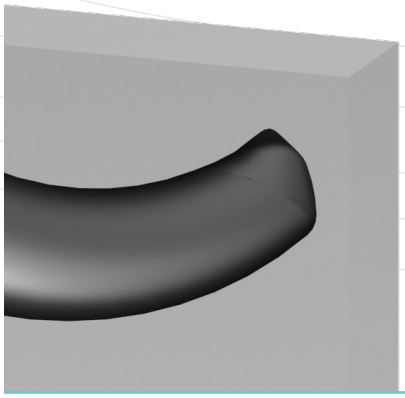
flach mit Gegenkalotte / flat, with companion vestige / piatto, con controcalotta



TGC

konturierbar
contourable
contornabile

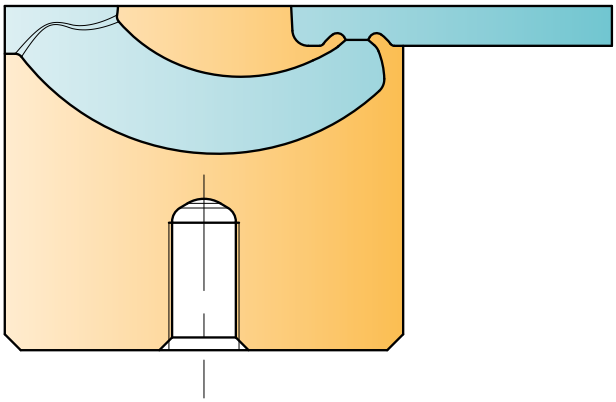
Optimal für spröde und verstärkte Kunststoffe · Perfect for rigid and enforced plastics · Adatto per ogni tipo di plastica



DE
> **für Konturierungen bis zu 10mm**
> **individuell anpassbar**
> **in 2 Härteklassen (60 HRC / 40 HRC) erhältlich**

EN
> for contouring up to 10mm
> individually adjustable
> available in 2 degrees of hardness (60 HRC / 40 HRC)

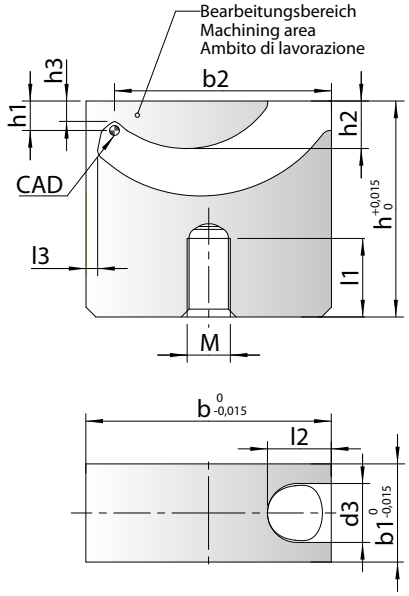
IT
> per contornature fino a 10mm
> adattamento individuale
> disponibile in 2 differenti durezze (60 HRC / 40 HRC)



	TGC-XS	TGC-S	TGC-1	TGC-2	TGC-3	TGC-4
max. Konturtiefe / max. contour depth / max. profondità di contornatura	1	2	2	3	5	10
Anschnitt / gate point / punto d'iniezione	0,4 - 0,6	0,4 - 0,8	0,6 - 1,2	0,8 - 1,8	0,5x4,5 - 1,5x5,5	0,5x4,5 - 1,5x5,5
Ø Kanal / runner / canale	2.5	2.5	4	6	8	8

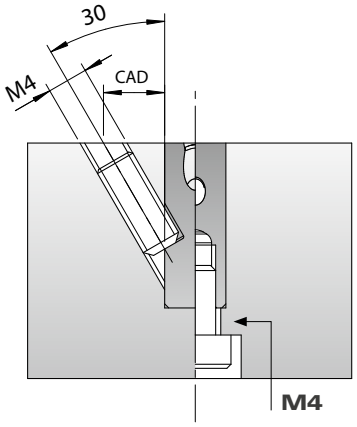
max. Schussgewichte (g) · max. shotweight (g) · pesi d'iniezione max. (g)						
NV	5	12	35	120	1000	1000
MV	4	7	25	75	500	500
HV	3	5	15	50	300	300

NV = niedrige Viskosität / low viscosity / bassa viscosità
MV = mittlere Viskosität / medium viscosity / media viscosità
HV = hohe Viskosität / high viscosity / elevata viscosità



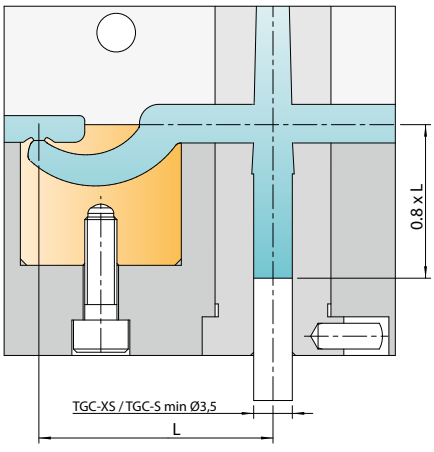
TGC-XS / TGC-S

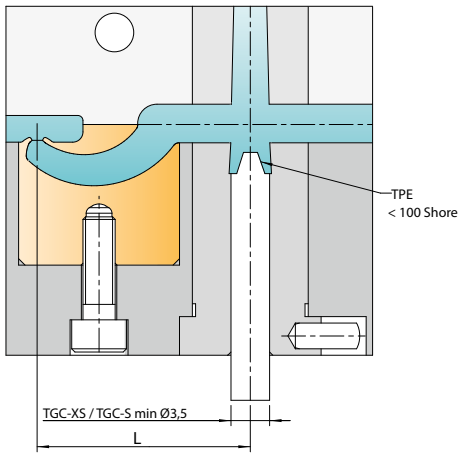
Befestigungsmöglichkeiten
Mounting possibilities
Possibilità di fissaggio



Typ	b	b1	b2	d3	h	h1	h2	h3	l1	l2	l3	M	HRC
TGC-XS	10	5	8.5	2.5	12	1	1.9	0.6	5	3.2	0.7	4	Version U = 40 HRC Version H = 60 HRC
TGC-S	15	6	13.3	2.5	18	2	3.5	1.5	8	4	0.9	4	
TGC-1	18	8	16	4	22	2	3.5	1.3	9	5.2	0.9	5	
TGC-2	25	10	22.1	6	22	3	4.8	2.1	8	6.5	1.2	5	
TGC-3	30	12	26.9	8	27	5	7.5	4.1	9	7	1.2	6	
TGC-4	45	12	41.2	8	36	10	16.7	9.1	8	9.6	1.8	6	

Beispiel Bestellbezeichnung · Example of order specification · Esempio codice di ordinazione: **TGC-XS-U**





DE Thermoplastische Elastomere (TPE)
- > Kleine Shorehärte = geringeres Abstandsmaß L
- > Zentrierzapfen verwenden
- > Shorehärte max. 100 Shore A

EN Thermoplastic elastomers (TPE)
- > Low Shore hardness = shorter distance L
- > Use centring pin
- > Max. hardness 100 Shore A

IT Elastomeri termoplastici (TPE)
- > Bassa durezza Shore = distanza L più ridotta
- > Utilizzare un perno di guida
- > Durezza: max. 100 Shore A

Diagramm für Abstandsmaß L · Table for distance L · Diagramma per la distanza L

	Materialart · Material type · Tipo di materiale			
	TPE, TPU etc.	PE, PP, PET etc.	PC/ABS ABS, PA, POM, HI-PC etc.	PA+GF, PC, SAN, PMMA etc.
TGC-XS	12-16	13-20	16-23	22-29
TGC-S	16-21	18-25	21-28	27-34
TGC-1	21-26	26-34	31-39	36-45
TGC-2	28-33	31-39	36-44	41-50
TGC-3	33-38	38-48	43-53	48-58
TGC-4	48-53	53-63	58-68	X

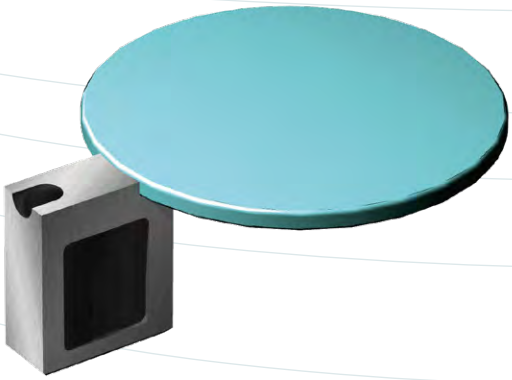
X = Für spröde und verstärkte Kunststoffe bedingt geeignet · Restrictedly suitable for rigid and reinforced plastics · Adatto esclusivamente per plastiche rigide e rinforzate

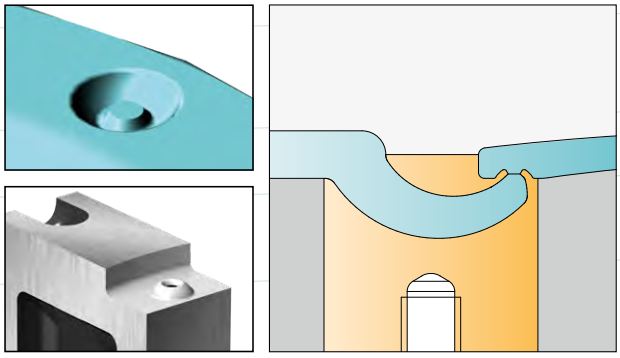
Kalottengestaltung > siehe ergänzende Tipps (Seite 36) · Vestige design > see additional tips (page 36) · Design della calotta à vedi dati aggiuntivi (pagina 36)

Einbaubeispiele

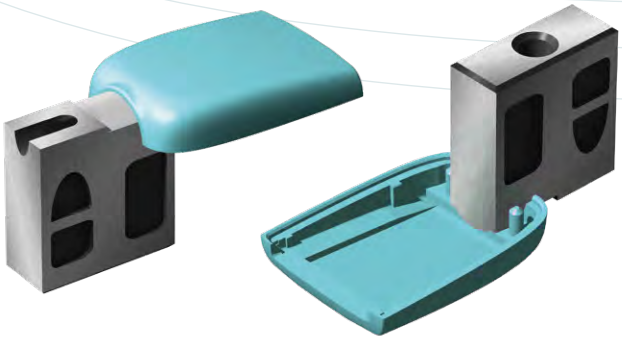
Examples of installation · Esempi di montaggio

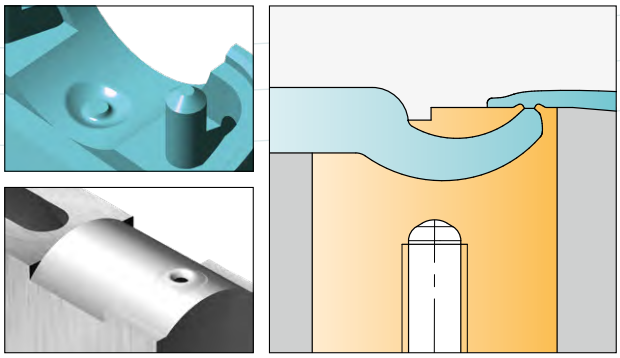
unter Flächen / under surface / sotto superficie



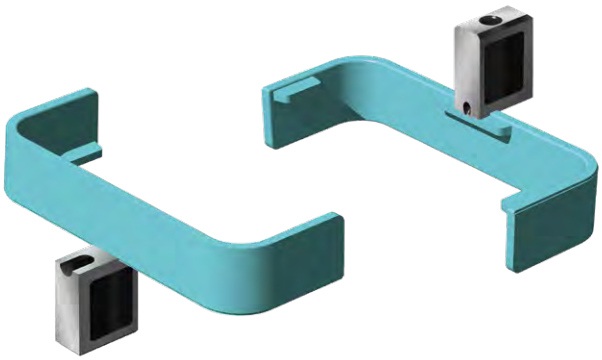


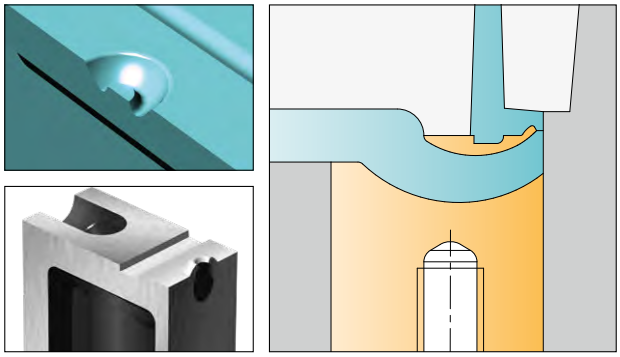
unter gewölbter Fläche / under rounded surface / sotto superficie bombata



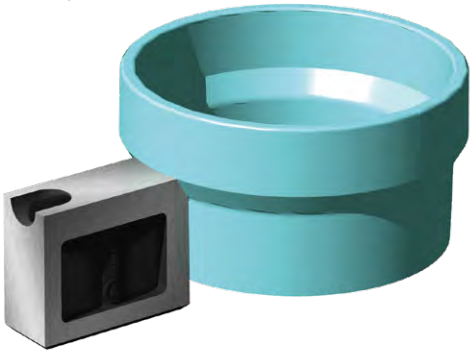


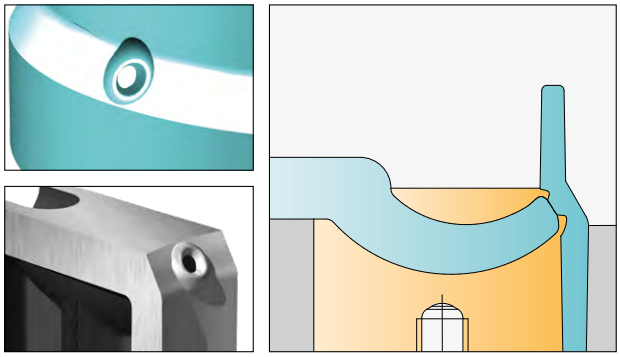
halbierter Anspritzpunkt / half gate point / punto d'iniezione dimezzato





Anspritzung auf Schräge / angled gating / iniezione su superficie obliqua





TGC

TGLL

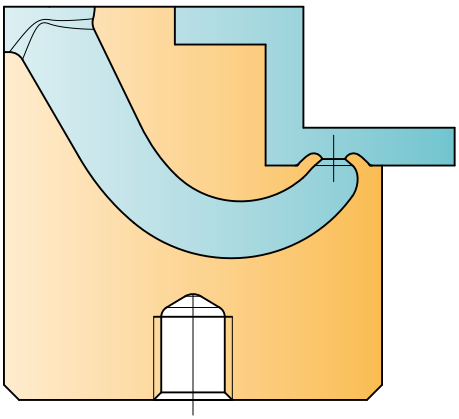
konturierbar
contourable
contornabile

Für spröde und verstärkte Kunststoffe bedingt geeignet · Restrictedly suitable for rigid and reinforced plastics · Adatto esclusivamente per plastiche rigide e rinforzate

DE > **platzsparender, konturierbarer Angusseinsatz für Anspritzung unterhalb der Formtrennung**
> **hoch verschleißfester Warmarbeitsstahl M2 (1.3343) 54+2 HRC**

EN > Space-saving, contourable Tunnel Gate insert for gating below the parting line
> Highly wear resistant hot working steel M2 (1.3343) 54+2 HRC

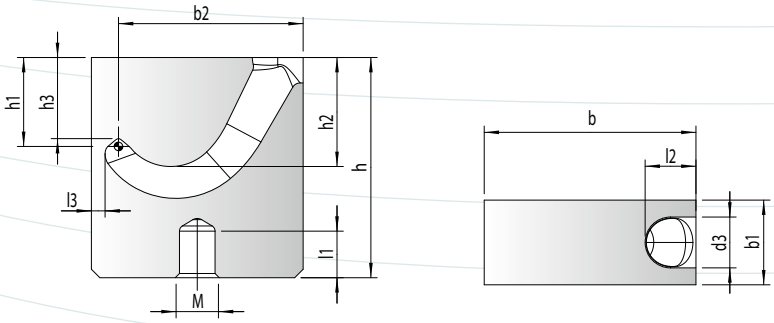
IT > Inserto lavorabile, che fa risparmiare molto spazio, per punto d'iniezione sotto la linea di divisione dello stampo
> Acciaio per lavorazioni a coldo particolarmente resistente all`usura M2 (1.3343) 54+2 HRC



	TGLL-1	TGLL-2	TGLL-3
max. Konturtiefe / max. contour depth / max. profondità di contornatura	8,5	10,5	12,5
Anschnitt / gate point / punto d'iniezione	0,6 - 1,2	0,8 - 1,8	0,5x4,5 - 1,5x5,5
Ø Kanal / runner / canale	4	6	8

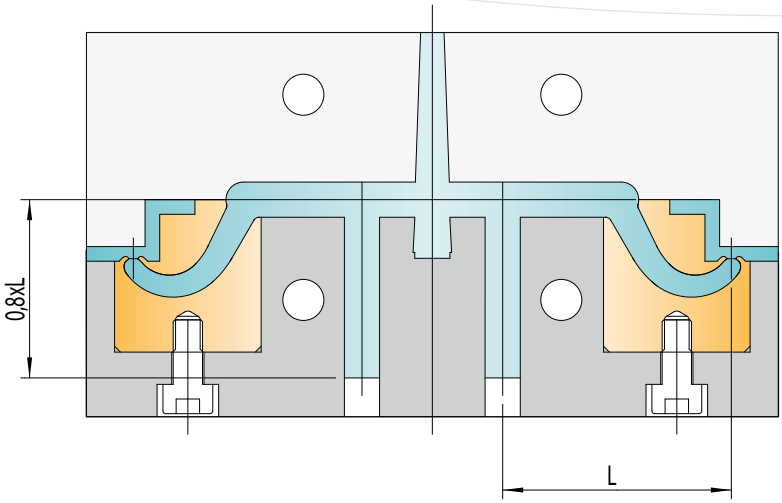
max. Schussgewichte (g) · max. shotweight (g) · pesi d'iniezione max. (g)			
NV	35	120	1000
MV	25	75	500
HV	15	50	300

NV = niedrige Viskosität / low viscosity / bassa viscosità
MV = mittlere Viskosität / medium viscosity / media viscosità
HV = hohe Viskosität / high viscosity / elevata viscosità

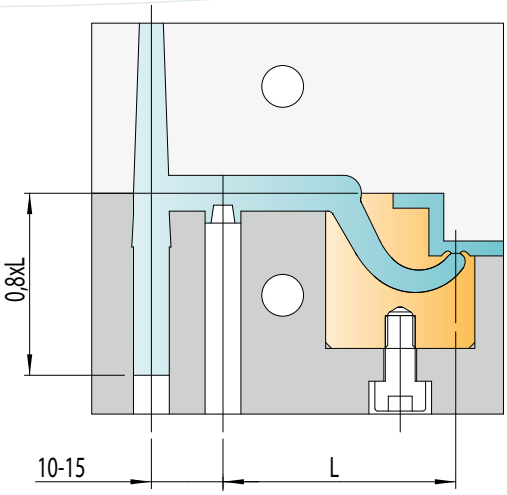


Typ LL	b	b1	b2	d3	h	h1	h2	h3	l1	l2	l3	M	HRC
TGLL-1	18	8	15,7	4	22	8,5	9,9	7,8	5,5	4,5	1,2	5	54+2
TGLL-2	25	10	21,8	6	26	10,5	12,9	9,6	5,5	6	1,6	5	
TGLL-3	30	12	26	8	30	12,5	14,8	11,6	6,5	7	2,2	6	

Beispiel für 2-fach Ausführung
Example for 2 cavities
Esempio di stampo a 2 cavità



Beispiel für 1-fach Ausführung
Example for single cavity
Esempio di stampo a 1 cavità



Beispiel Geometrie für Hilfsauswerfer
Example for suplementary ejector
Esempio con estrattore ausiliare

Diagramm für Abstandsmaß L · Table for distance L · Diagramma per la distanza L

	Materialart · Material type · Tipo di materiale			
	TPE, TPU, etc.	PE, PP, PET etc.	PC/ABS, PA, POM, HI-PC etc.	PA+GF, PC, SAN, PMMA etc.
TG-1(HL,ML,LL)	21-27	27-34	34-40	X
TG-2 (HL,ML,LL)	28-34	33-40	39-45	X
TG-3 (HL,ML,LL)	33-40	40-49	46-55	X

X = Für spröde und verstärkte Kunststoffe bedingt geeignet · Restrictedly suitable for rigid and reinforced plastics · Adatto esclusivamente per plastiche rigide e rinforzate

Kalottengestaltung > siehe ergänzende Tipps (Seite 36) · Vestige design > see additional tips (page 36) · Design della calotta à vedi dati aggiuntivi (pagina 36)

TGML

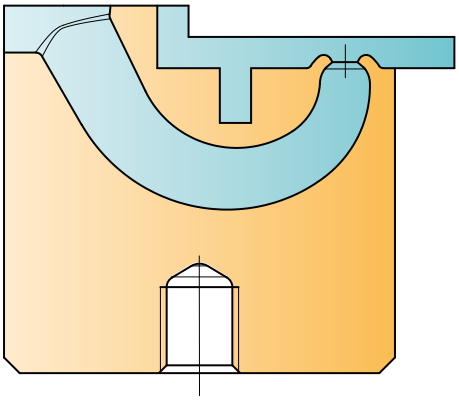
konturierbar
contourable
contornabile

Für spröde und verstärkte Kunststoffe bedingt geeignet · Restrictedly suitable for rigid and reinforced plastics · Adatto esclusivamente per plastiche rigide e rinforzate

DE
> **platzsparender, konturierbarer Angusseinsatz für Anspritzung oberhalb der Formtrennung**
> **hoch verschleißfester Warmarbeitsstahl M2 (1.3343) 54+2 HRC**

EN
> Space-saving, contourable Tunnel Gate insert for gating above the parting line
> Highly wear resistant hot working steel M2 (1.3343) 54+2 HRC

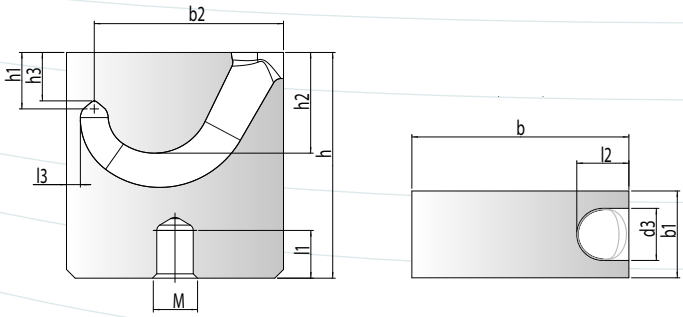
IT
> Inserto lavorabile, che fa risparmiare molto spazio, per punto d'iniezione sotto la linea di divisione dello stampo
> Acciaio per lavorazioni a coldo particolarmente resistente all`usura M2 (1.3343) 54+2 HRC



	TGML-1	TGML-2	TGML-3
max. Konturtiefe / max. contour depth / max. profondità di contornatura	5,5	6,5	7,5
Anschnitt / gate point / punto d'iniezione	0,6 - 1,2	0,8 - 1,8	0,5x4,5 - 1,5x5,5
Ø Kanal / runner / canale	4	6	8

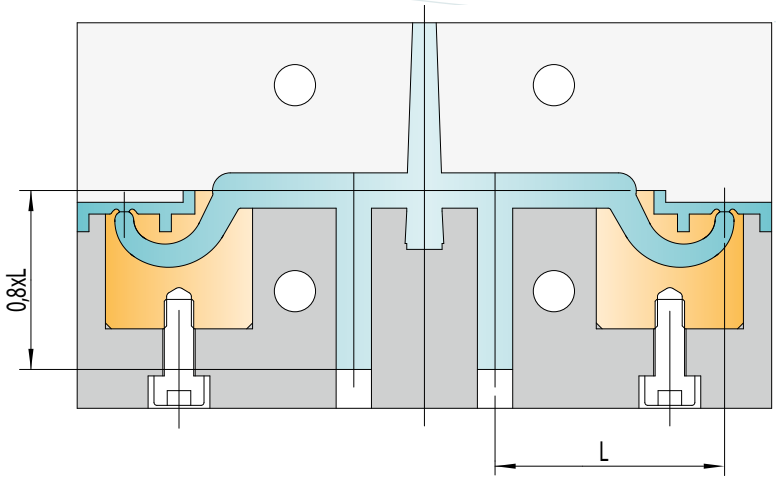
max. Schussgewichte (g) · max. shotweight (g) · pesi d'iniezione max. (g)			
NV	35	120	1000
MV	25	75	500
HV	15	50	300

NV = niedrige Viskosität / low viscosity / bassa viscosità
MV = mittlere Viskosität / medium viscosity / media viscosità
HV = hohe Viskosität / high viscosity / elevata viscosità

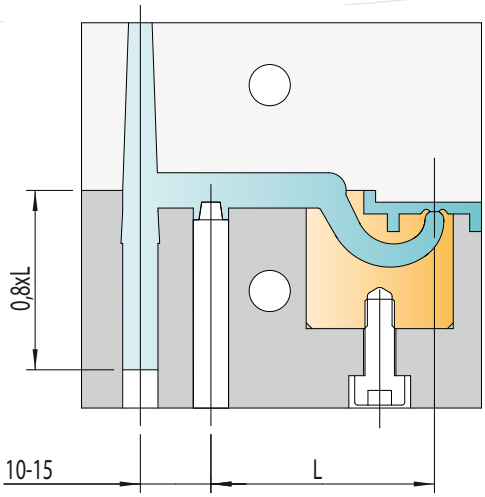


Typ ML	b	b1	b2	d3	h	h1	h2	h3	l1	l2	l3	M	HRC
TGML-1	18	8	15,7	4	22	5,5	9,5	4,86	5,5	4,5	1,2	5	54+2
TGML-2	25	10	21,8	6	26	6,5	11,6	5,6	5,5	6	1,6	5	
TGML-3	30	12	26	8	30	7,5	14,5	6,6	6,5	7	2,0	6	

Beispiel für 2-fach Ausführung
Example for 2 cavities
Esempio di stampo a 2 cavità



Beispiel für 1-fach Ausführung
Example for single cavity
Esempio di stampo a 1 cavità



Beispiel Geometrie für Hilfsauswerfer
Example for suplementary ejector
Esempio con estrattore ausiliare

Diagramm für Abstandsmaß L · Table for distance L · Diagramma per la distanza L

	Materialart · Material type · Tipo di materiale			
	TPE, TPU etc.	PE, PP, PET etc.	PC/ABS, PA, POM, HI-PC etc.	PA+GF, PC, SAN, PMMA etc.
TG-1(HL,ML,LL)	21-27	27-34	34-40	X
TG-2 (HL,ML,LL)	28-34	33-40	39-45	X
TG-3 (HL,ML,LL)	33-40	40-49	46-55	X

X = Für spröde und verstärkte Kunststoffe bedingt geeignet · Restrictedly suitable for rigid and reinforced plastics · Adatto esclusivamente per plastiche rigide e rinforzate

Kalottengestaltung > siehe ergänzende Tipps (Seite 36) · Vestige design > see additional tips (page 36) · Design della calotta à vedi dati aggiuntivi (pagina 36)

TGHL

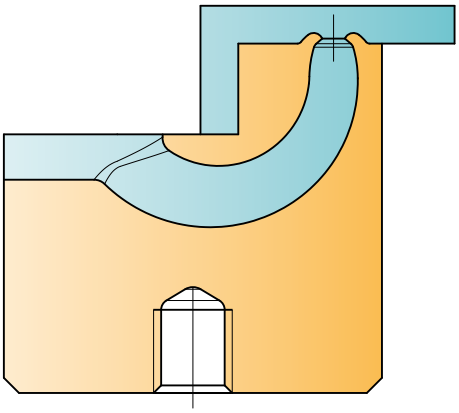
konturierbar
contourable
contornabile

Für spröde und verstärkte Kunststoffe nicht geeignet · Not suitable for rigid and reinforced plastics · Non adatto per plastiche rigide e rinforzate.

DE
> **platzsparender, konturierbarer Angusseinsatz für Anspritzung oberhalb der Formtrennung**
> **hoch verschleißfester Warmarbeitsstahl M2 (1.3343) 54+2 HRC**

EN
> Space-saving, contourable Tunnel Gate insert for gating above the parting line
> Highly wear resistant hot working steel M2 (1.3343) 54+2 HRC

IT
> Inserto lavorabile, che fa risparmiare molto spazio, per punto d'iniezione sotto la linea di divisione dello stampo
> Acciaio per lavorazioni a coldo particolarmente resistente all`usura M2 (1.3343) 54+2 HRC

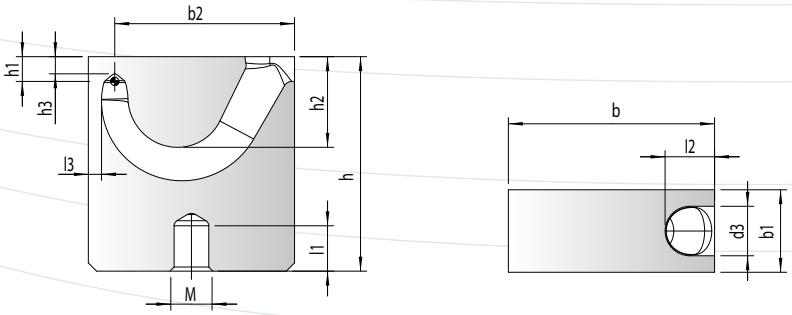


	TGHL-1	TGHL-2	TGHL-3
max. Konturtiefe / max. contour depth / max. profondità di contornatura	2	3	3
Anschnitt / gate point / punto d'iniezione	0,6 - 1,2	0,8 - 1,8	0,5x4,5 - 1,5x5,5
Ø Kanal / runner / canale	4	6	8

max. Schussgewichte (g) · max. shotweight (g) · pesi d'iniezione max. (g)			
NV	35	120	1000
MV	25	75	500
HV	15	50	300

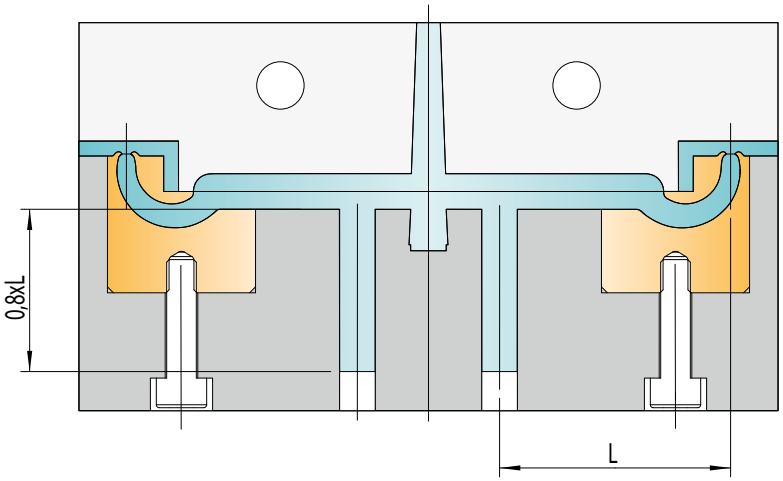
NV = niedrige Viskosität / low viscosity / bassa viscosità
MV = mittlere Viskosität / medium viscosity / media viscosità
HV = hohe Viskosität / high viscosity / elevata viscosità

Kalotte nach 3D Datensatz
Vestige by 3D file
Calotta 3D

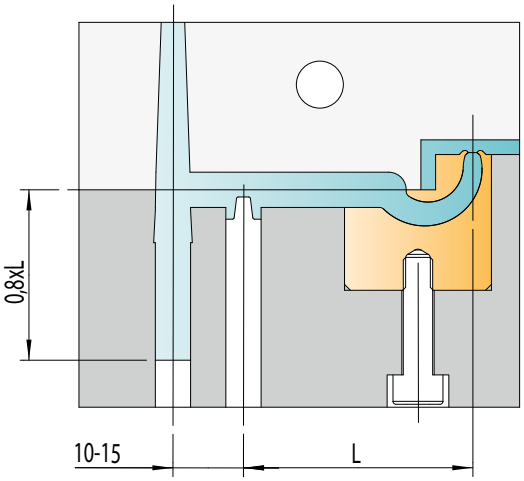


Typ HL	b	b1	b2	d3	h	h1	h2	h3	l1	l2	l3	M	HRC
TGHL-1	18	8	15,7	4	22	2	7,6	1,3	5,5	4,5	1,2	5	54+2
TGHL-2	25	10	21,8	6	26	3	11	2,1	5,5	6	1,6	5	
TGHL-3	30	12	26	8	30	3	12,2	2,1	6,5	7	2,0	6	

Beispiel für 2-fach Ausführung
Example for 2 cavities
Esempio di stampo a 2 cavità



Beispiel für 1-fach Ausführung
Example for single cavity
Esempio di stampo a 1 cavità



Beispiel Geometrie für Hilfsauswerfer
Example for suplementary ejector
Esempio con estrattore ausiliare

Diagramm für Abstandsmaß L · Table for distance L · Diagramma per la distanza L

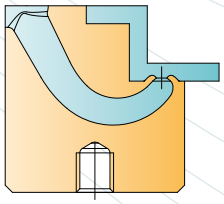
	Materialart · Material type · Tipo di materiale			
	TPE, TPU etc.	PE, PP, PET etc.	PC/ABS, PA, POM, HI-PC etc.	PA+GF, PC, SAN, PMMA etc.
TG-1(HL,ML,LL)	21-27	27-34	34-40	X
TG-2 (HL,ML,LL)	28-34	33-40	39-45	X
TG-3 (HL,ML,LL)	33-40	40-49	46-55	X

X = Für spröde und glasfaserverstärkte Materialien nicht geeignet · Not suitable for rigid and reinforced plastics · Non adatto per plastiche rigide e rinforzate

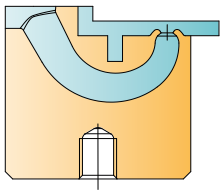
Einbaubeispiele TGLL / TGML / TGHL

Examples of installation · Esempi di montaggio

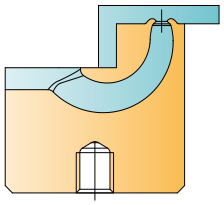
TGLL tiefer Konturspung / TGLL low contour step / TGLL profilo inferiore



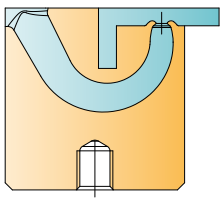
TGML mit umlaufender Rippe / TGML with peripheral rib / TGML con nervatura circostante



TGHL hoher Konturspung / TGHL high contour step / TGHL profilo superiore



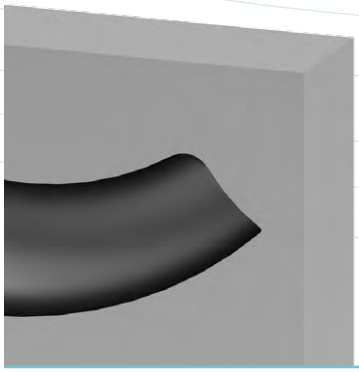
TGHL mit umlaufender Rippe / TGHL with peripheral rib / TGHL con nervatura circostante



SGC

seitliche Anspritzung
side gating
iniezione laterale

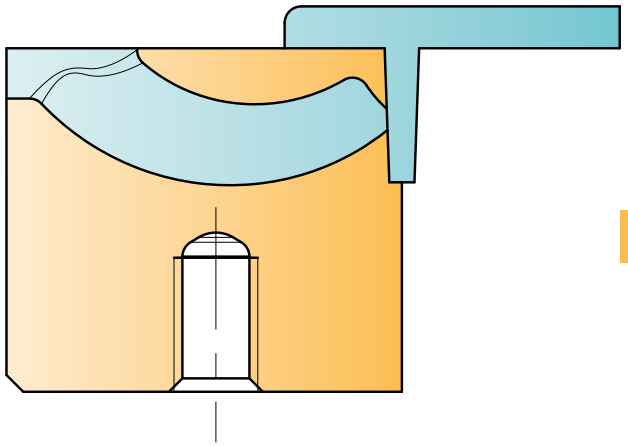
Geeignet für alle Kunststoffe · Suitable for all plastics · Adatto per ogni tipo di plastica



DE
> **gebogener Kanal ermöglicht die Anspritzung in Bereichen, die tief im Bauteil liegen**
> **integrierter Stauboden reduziert Druckverlust und Scherung**
> **hoch verschleißfester Warmarbeitsstahl M2 (1.3343) – 54+2 HRC**

EN
> curved tunnel permits gating deep inside the part
> integrated dead-end recess reduces loss of pressure and shear stress.
> highly wear-resistant hot working steel M2 (1.3343) – 54+2 HRC

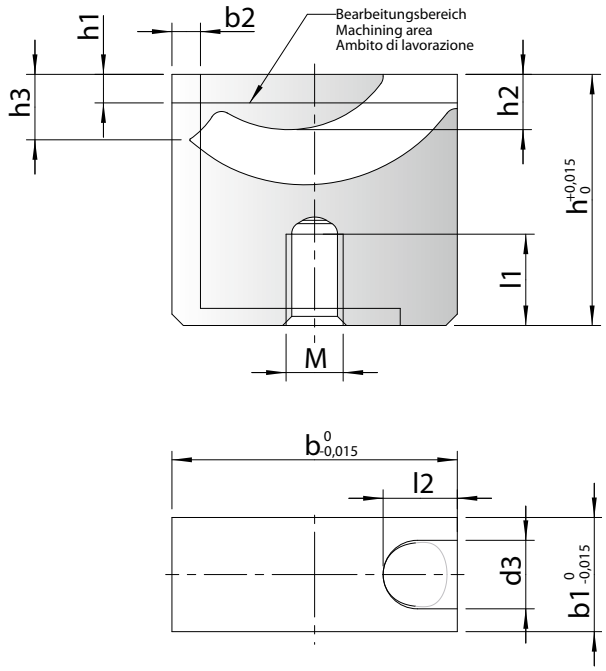
IT
> il canale curvato consente l'iniezione in zone profonde del componente
> il fondo di ritenzione integrato riduce la perdita di pressione e l'attrito
> acciaio per lavorazioni a caldo particolarmente resistente all'usura M2 (1.3343) – 54+2 HRC



	SGC-XS	SGC-S	SGC-1	SGC-2	SGC-3
Anschnitt / gate point / punto d'iniezione	0,4 - 0,8	0,4 - 1,0	0,6 - 1,4	0,8 - 2,1	~ Ø 1,1 - 3,3
Ø Kanal / runner / canale	2.5	2.5	4	6	8

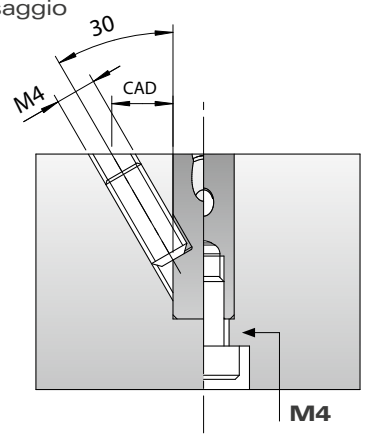
max. Schussgewichte (g) · max. shotweight (g) · pesi d'iniezione max. (g)					
NV	12	20	35	250	1000
MV	7	12	25	120	500
HV	5	8	15	90	300

NV = niedrige Viskosität / low viscosity / bassa viscosità
MV = mittlere Viskosität / medium viscosity / media viscosità
HV = hohe Viskosität / high viscosity / elevata viscosità



SGC-XS / SGC-S

Befestigungsmöglichkeiten
Mounting possibilities
Possibilità di fissaggio

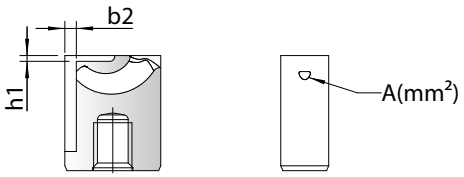


Typ	b	b1	b2 max.	d3	h	h1 max.	h2	h3	l1	l2	M
SGC-XS	10	5	1.1	2.5	12	0.6	1.9	2.0	5	3.2	4
SGC-S	15	6	2.0	2.5	18	2	3.5	4.0	8	4	4
SGC-1	18	8	1.8	4	22	2	3.5	4.1	9	5.2	5
SGC-2	25	10	2.5	6	22	2.5	4.8	5.7	8	6.5	5
SGC-3	30	12	2.8	8	27	4.5	7.5	8.4	9	7	6

Beispiel Bestellbezeichnung · Example of order specification · Esempio codice di ordinazione: **SGC-XS**

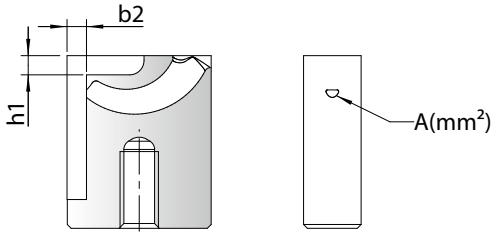
SGC-XS

A [mm²]	~ Ø [mm]	b2 [mm]
0.13	0.4	0.9
0.3	0.6	1.0
0.53	0.8	1.1



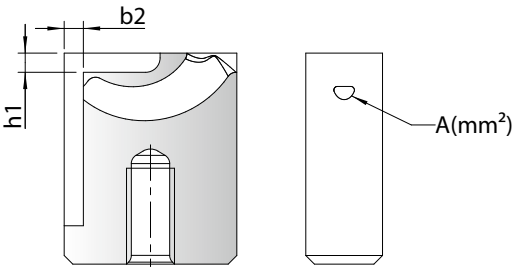
SGC-S

A [mm²]	~ Ø [mm]	b2 [mm]
0.15	0.4	1.7
0.33	0.6	1.8
0.55	0.8	1.9
0.79	1.0	2.0



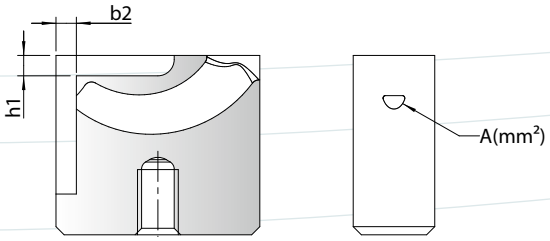
SGC-1

A [mm²]	~ Ø [mm]	b2 [mm]
0.28	0.6	1.4
0.53	0.8	1.5
0.82	1	1.6
1.15	1.2	1.7
1.52	1.4	1.8



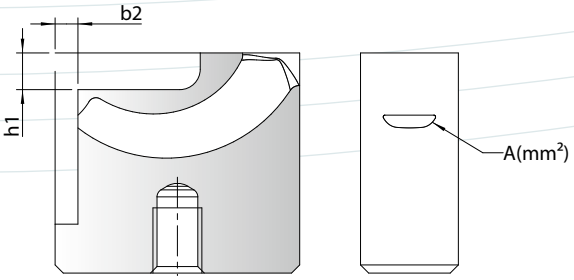
SGC-2

A [mm²]	~ Ø [mm]	b2 [mm]
0.28	0.6	1.7
0.54	0.8	1.8
0.84	1	1.9
1.2	1.2	2
1.57	1.4	2.1
2	1.6	2.2
2.43	1.75	2.3
2.9	1.9	2.4
3,4	2,1	2,5



SGC-3

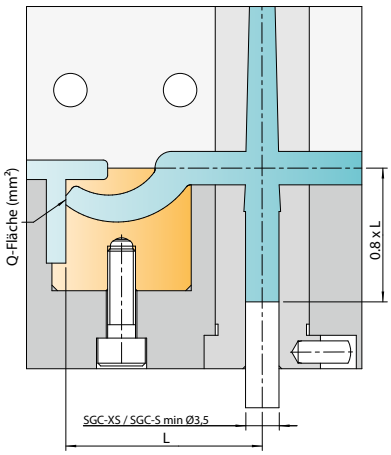
A [mm²]	~ Ø [mm]	b2 [mm]
1	1.1	2
1.75	1.5	2.1
2.56	1.8	2.2
3.43	2.1	2.3
4.35	2.35	2.4
5.32	2.6	2.5
6.33	2.85	2.6
7.38	3	2.7
8.48	3.3	2.8



Standardeinbau für flache und mittlere Konturtiefen

Standard installation for shallow and medium contour depths

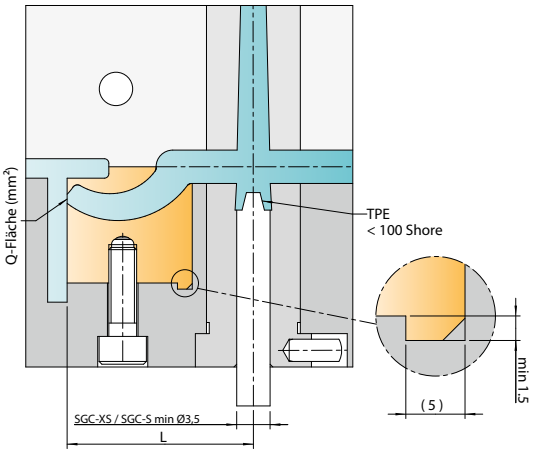
Montaggio standard per medie ed elevate profondità di contornatura



Sondereinbau für große Konturtiefen

Special installation for deep contours

Montaggio speciale per grandi profondità di contornatura



DE Thermoplastische Elastomere (TPE)
- > Kleine Shorehärte = geringeres Abstandsmaß L
- > Zentrierzapfen verwenden
- > Shorehärte max. 100 Shore A

EN Thermoplastic elastomers (TPE)
- > Low Shore hardness = shorter distance L
- > Use centring pin
- > Max. hardness 100 Shore A

IT Elastomeri termoplastici (TPE)
- > Bassa durezza Shore = distanza L più ridotta
- > Utilizzare un perno di guida
- > Durezza: max. 100 Shore A

Diagramm für Abstandsmaß L · Table for distance L · Diagramma per la distanza L

	Materialart · Material type · Tipo di materiale			
	TPE, TPU etc.	PE, PP, PET etc.	PC/ABS, PA, POM, HI-PC etc.	PA+GF, PC, SAN, PMMA etc.
SGC-XS	12-16	13-20	16-23	22-29
SGC--S	16-21	18-25	21-28	27-34
SGC--1	21-26	26-34	31-39	36-45
SGC--2	28-33	31-39	36-44	41-50
SGC--3	33-38	38-48	43-53	48-58

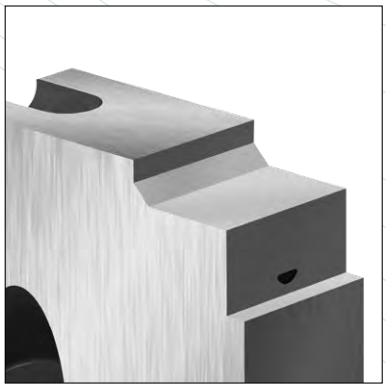
Einbaubeispiele

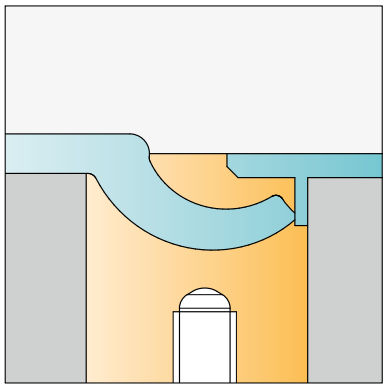
Examples of installation · Esempi di montaggio

Seitliche Anspritzung – Standard Einbau

Side gating – standard installation

Iniezione laterale – montaggio standard

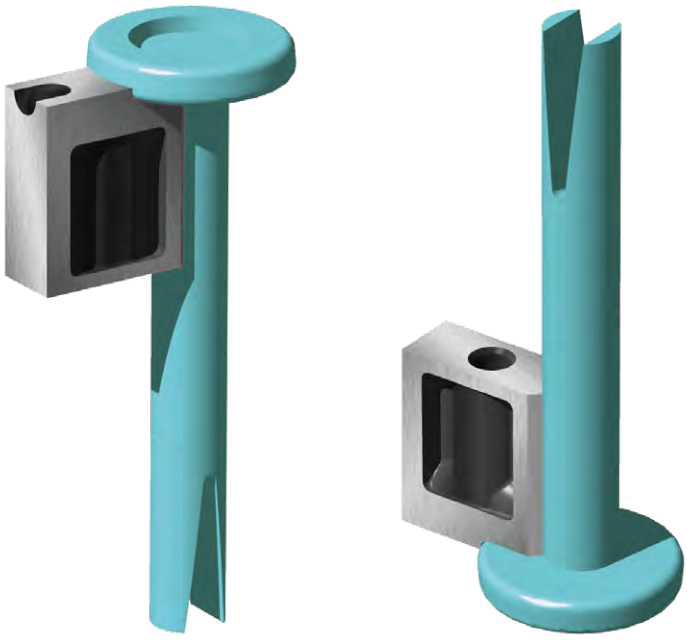


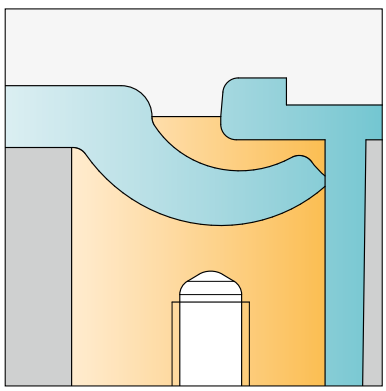


Seitliche Anspritzung – angepasst an Teil

Side gating – adapted to part

Iniezione laterale – adattata al pezzo

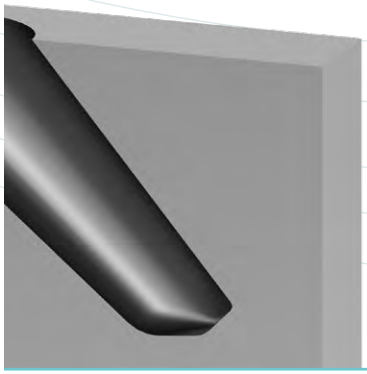




TPS

seitliche Anspritzung
side gating
iniezione laterale

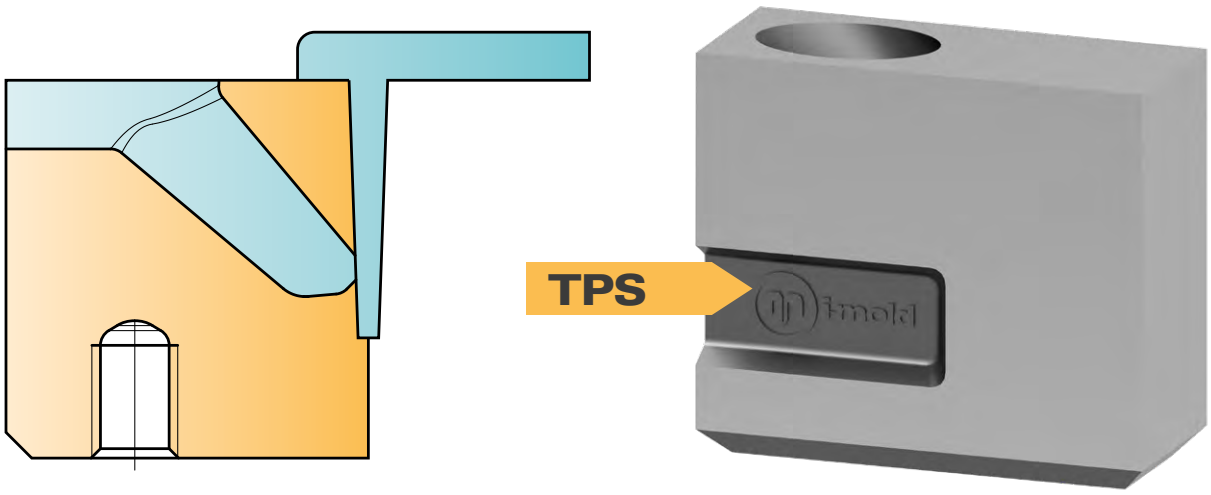
Geeignet für alle Kunststoffe · Suitable for all plastics · Adatto per ogni tipo di plastica



DE
> **standardisierter Spitztunnel zur seitlichen Anspritzung**
> **integrierter Stauboden reduziert Druckverlust und Scherung**
> **hoch verschleißfester Warmarbeitsstahl M2 (1.3343) – 54+2 HRC**

EN
> straight standard sub-gate for side-gating
> integrated dead-end recess reduces loss of pressure and shear stress.
> highly wear-resistant hot working steel M2 (1.3343) – 54+2 HRC

IT
> tunnel di iniezione standard per iniezione laterale
> il fondo di ritenzione integrato riduce la perdita di pressione e l'attrito
> acciaio per lavorazioni a caldo particolarmente resistente all'usura M2 (1.3343) – 54+2 HRC

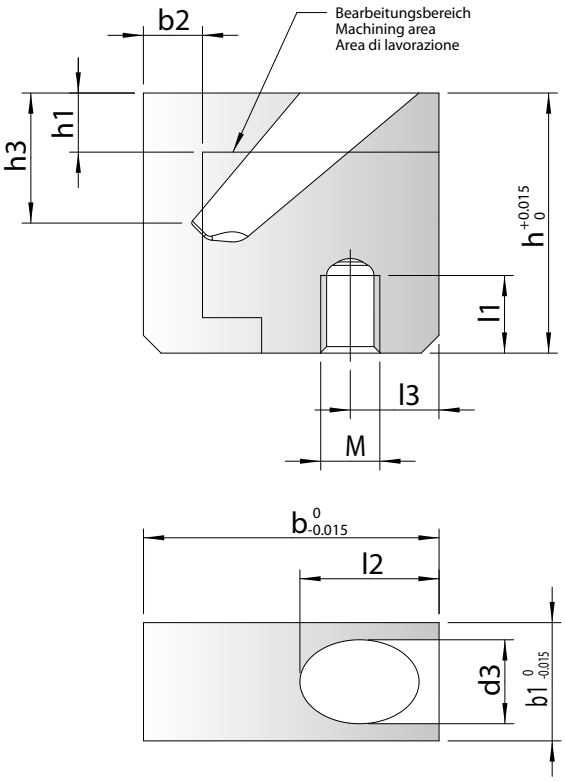


	TPS-S	TPS-1	TPS-2	TPS-3
Anschnitt / gate point / punto d'iniezione	0,4 - 0,8	0,8 - 1,8	0,8 - 2,8	1,1 - 4,5

max. Schussgewichte (g) · max. shotweight (g) · pesi d'iniezione max. (g)				
NV	30	120	600	1800
MV	20	75	350	1000
HV	12	50	175	600

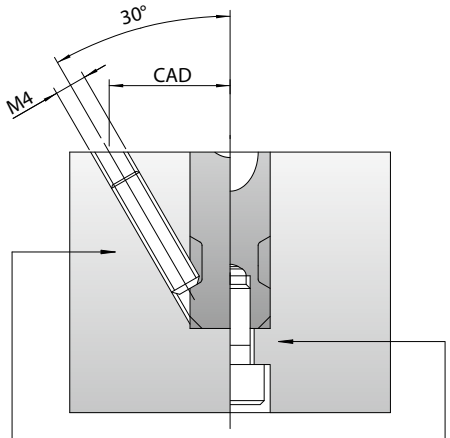
NV = niedrige Viskosität / low viscosity / bassa viscosità
MV = mittlere Viskosität / medium viscosity / media viscosità
HV = hohe Viskosität / high viscosity / elevata viscosità

TPS seitliche Anspritzung · side gating · iniezione laterale



TPS

Befestigungsmöglichkeiten
Mounting possibilities
Possibilità di fissaggio



Befestigung über Madenschraube M4
Fixed with headless screw M4
Fissaggio mediante vite senza testa M4

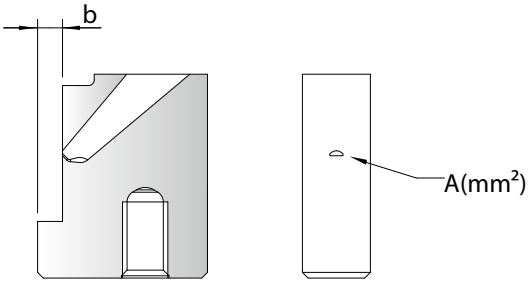
Befestigung über Zylinderschraube M4
Fixed with hexagon screw M4
Fissaggio mediante vite a testa cilindrica M4

Typ	b	b1	b2 max.	d3	h	h1 max.	h3	l1	l2	l3	M
TPS-S	15	6	2.4	4	18	4	~7	6	7.1	5.5	4
TPS-1	18	8	2.6	6	22	5	~9	6	8.4	6	4
TPS-2	25	10	5	8	22	6	~11	6	11.8	7.5	5
TPS-3	30	12	6.5	10	27	7	~13	6	14.1	8	5

Beispiel Bestellbezeichnung · Example of order specification · Esempio codice di ordinazione: **TPS-1**

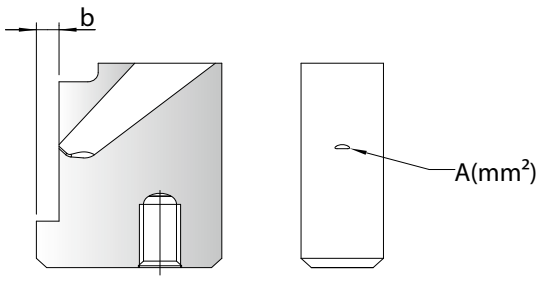
TPS-S

A [mm²]	~ Ø [mm]	b2 [mm]
0.12	0.4	2.1
0.40	0.7	2.2
0.75	1.0	2.3
1.13	1.2	2.4



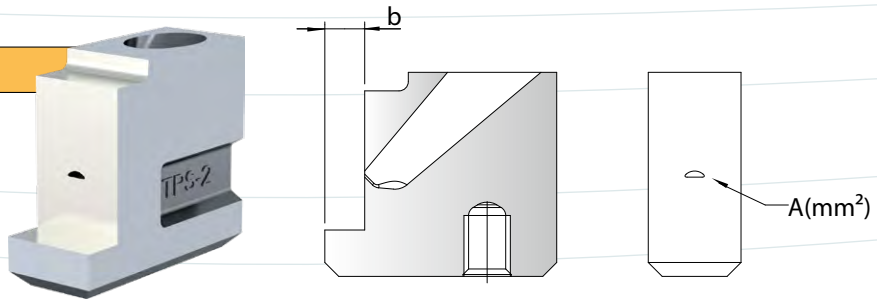
TPS-1

A [mm²]	~ Ø [mm]	b2 [mm]
0.49	0.8	2.2
0.92	1.1	2.3
1.42	1.4	2.4
1.97	1.6	2.5
2.56	1.8	2.6



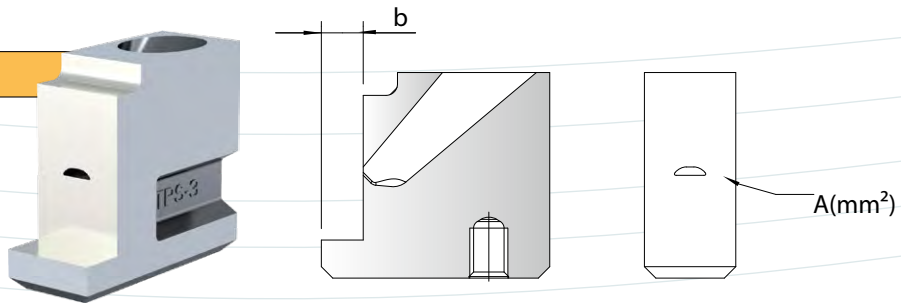
TPS-2

A [mm²]	~ Ø [mm]	b2 [mm]
0.54	0.8	4.2
1.05	1.2	4.3
1.64	1.5	4.4
2.3	1.7	4.5
3.0	1.9	4.6
3.76	2.2	4.7
4.55	2.4	4.8
5.37	2.6	4.9
6.23	2.8	5.0



TPS-3

A [mm²]	~ Ø [mm]	b2 [mm]
1.0	1.1	5.2
1.81	1.5	5.3
2.7	1.9	5.4
3.67	2.2	5.5
4.7	2.4	5.6
5.78	2.7	5.7
6.92	3.0	5.8
8.09	3.2	5.9
9.3	3.4	6.0
max. 15.8	4.5	6.5



Standardeinbau für flache und mittlere Konturtiefen

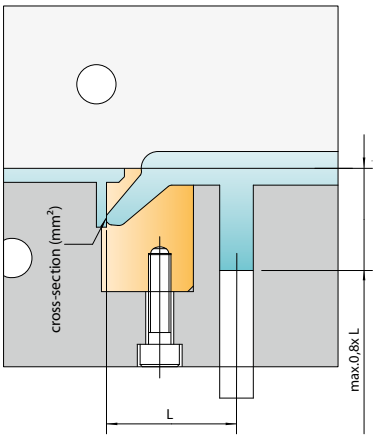
Standard installation for shallow and medium contour depths

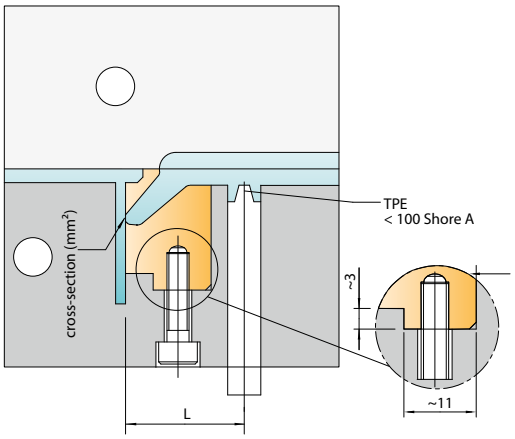
montaggio standard per pareti di bassa e media profondità

Sondereinbau für große Konturtiefen

Special installation for deep contours

montaggio standard per pareti di alta profondità





DE Thermoplastische Elastomere (TPE)
- > Niedrige Shorehärte = geringeres Abstandsmaß L
- > Zentrierzapfen verwenden
- > Shorehärte max. 100 Shore A

EN Thermoplastic elastomers (TPE)
- > Low Shore hardness = shorter distance L
- > Use centring pin
- > Max. hardness 100 Shore A

IT Elastomeri termoplastici (TPE)
- > Bassa durezza Shore = distanza L più ridotta
- > Utilizzare un perno di guida
- > Durezza: max. 100 Shore A

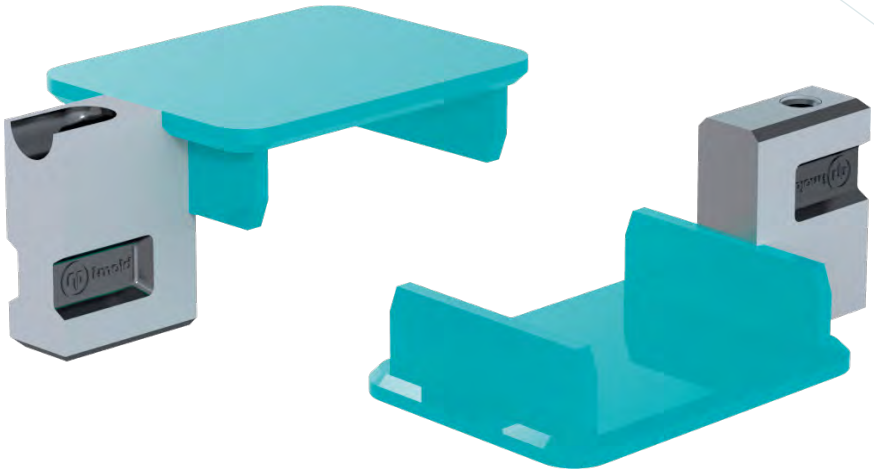
Diagramm für Abstandsmaß L · Table for distance L · Diagramma per la distanza L

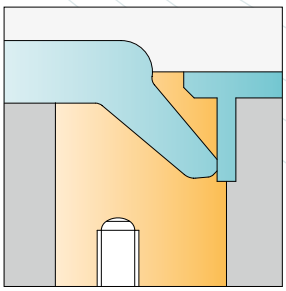
	Materialart · Material type · Tipo di materiale	
	flexible Materialien flexible materials · materiali flessibili	**steife Materialien** rigid materials · materiali rigidi
TPS-S	~ 18	~ 23
TPS-1	~ 22	~ 30
TPS-2	~ 28	~ 38
TPS-3	~ 33	~ 47

Einbaubeispiele

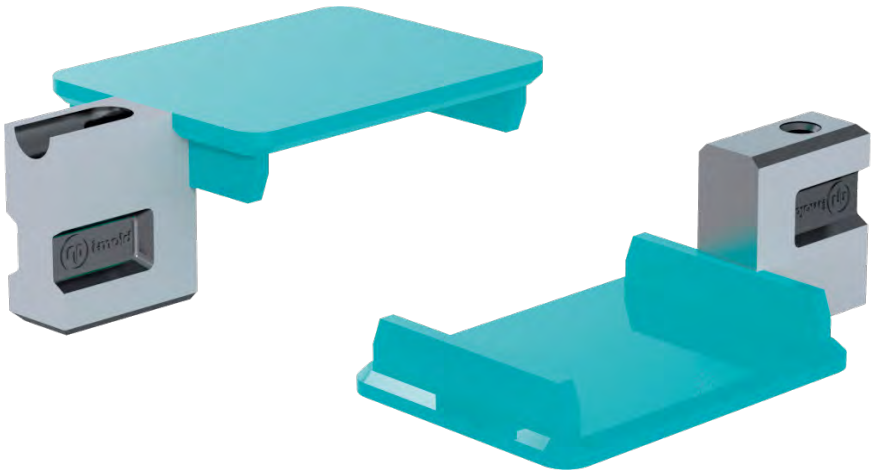
Examples of installation · Esempi di montaggio

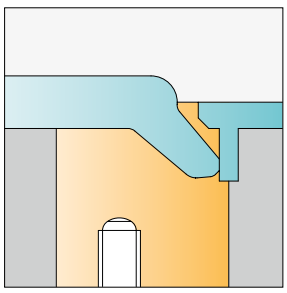
Seitliche Anspritzung – Standard Einbau
Side gating – standard installation
Iniezione laterale – montaggio standard



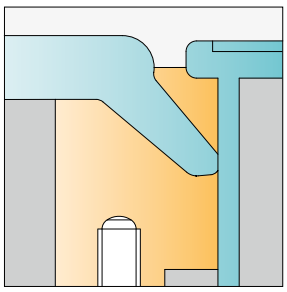


Seitliche Anspritzung – für flache Konturtiefen
Side gating – for flat contours
Iniezione per pareti laterali poco profonde



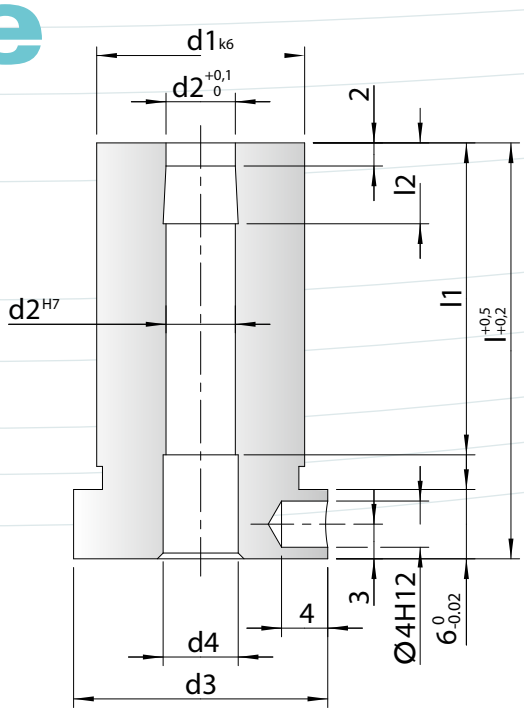


Seitliche Anspritzung – für große Konturtiefen
Side gating – for deep contours
iniezione per pareti laterali molto profonde



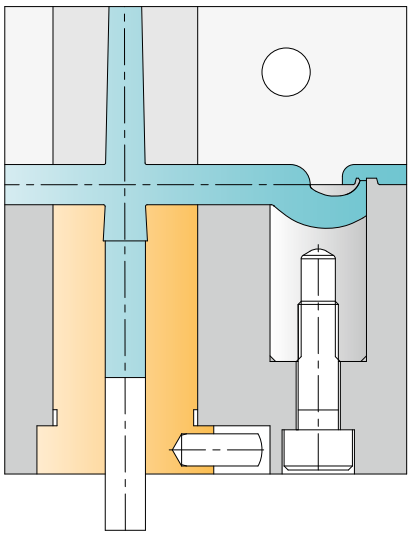
Haltebuchse

Retaining bush
Boccola di arresto



l	l1	l2	d1	d2	d3	d4	Order No:
36	36	7	12	4	16	4.5	RB4-36
46	46						RB4-46
56							RB4-56
36	36	7	18	6	22	6.5	RB6-36
46	46						RB6-46
56	56						RB6-56
66							RB6-66
46	46	9.5	24	8	28	8.5	RB8-46
56	56						RB8-56
66	66						RB8-66

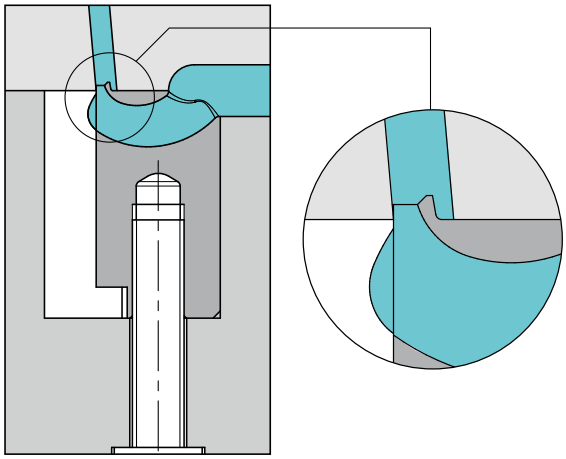
Material: 2826 ~58 HRC



Ergänzende Tipps

Supplementary tips · Consigli supplementari

Stauboden · Dead-end recess · Fondo di ritenzione

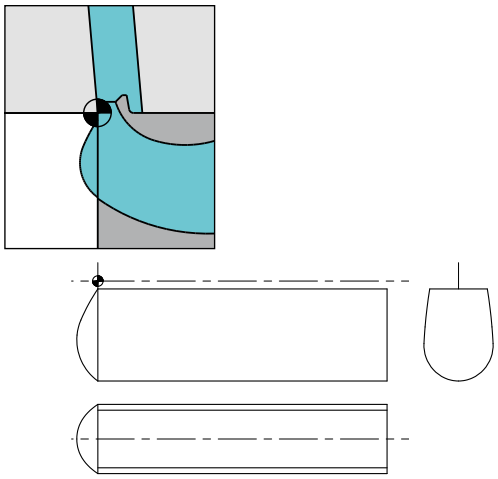


DE_Zur Anspritzung von Gehäuseteilen empfehlen wir einen Stauboden in ein Hilfsplättchen oder direkt in den Formeinsatz einzubringen. Der Stauboden verringert die Schergeschwindigkeit im Anschnittbereich, verbessert den Quellfluss, reduziert den Druckverlust und wirkt der Freistrahlbildung entgegen.

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

IT_Per l'iniezione di parti di contenitori consigliamo di inserire un fondo di ritenzione in una piastrina ausiliare o direttamente nell'inserto dello stampo. Il fondo di ritenzione riduce la velocità di taglio nella zona d'iniezione, migliora il flusso laminare, riduce la perdita di pressione e previene la formazione di un getto libero.

Stauboden-Elektrode · Spark-erosion machining of recesses · Elettrodo del fondo di ritenzione

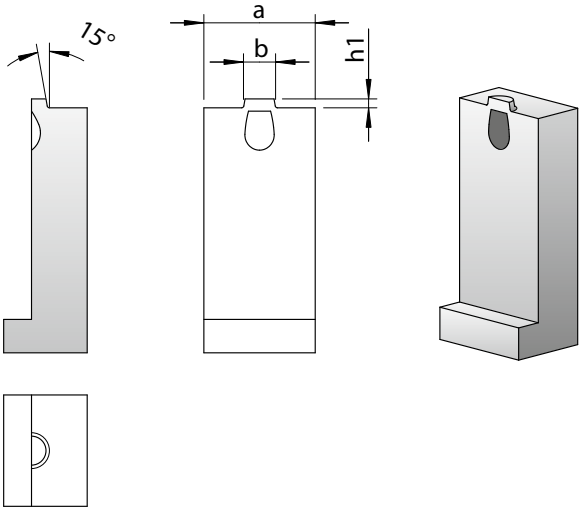


DE_Beim Fertigen des Staubodens sollte darauf geachtet werden, dass kein Hinterschnitt zum Angusskanal entsteht. Die 3D-Daten für die jeweilige Größe der Standard-Angusseinsätze finden Sie unter www.i-mold.de im Downloadbereich.

EN_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).

IT_Per la realizzazione del fondo di ritenzione si deve fare attenzione ad evitare un sotto squadra verso il canale di alimentazione. I dati 3D per le rispettive dimensioni degli inserti d'iniezione standard possono essere scaricati presso www.i-mold.com nell'area di download.

Hilfsplättchen · Auxiliary insert · Piastrine ausiliari



DE_Gegenkalotte und/oder Stauboden können auch direkt in den Formeinsatz eingebracht werden. Das Hilfsplättchen sollte aus einem hoch verschleißfesten Stahl hergestellt werden.

Maße a, b und h1 sind vom jeweiligen Standard-Angusseinsatz abhängig.

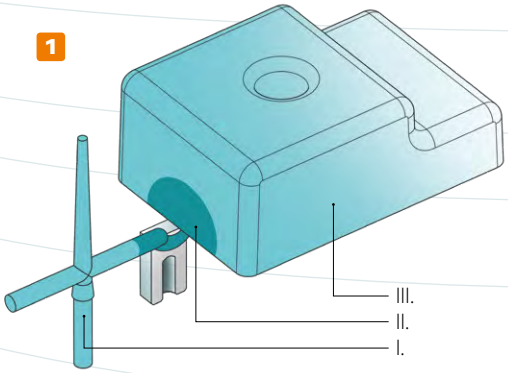
EN_The companion vestige and/or dead-end recess can also be incorporated directly in the mould insert. The auxiliary insert should be made of a highly wear-resistant steel.

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

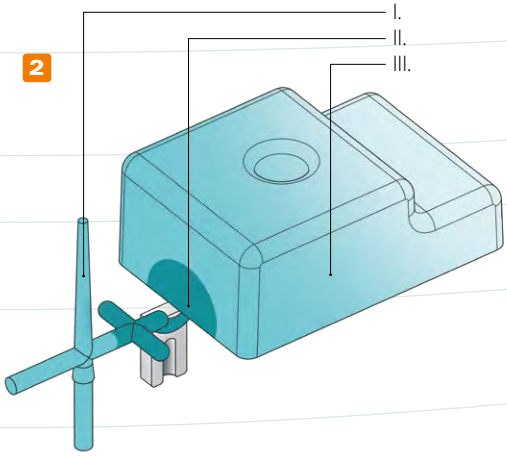
IT_La controcalotta e/o il fondo di ritenzione possono anche essere inseriti direttamente nell'inserto dello stampo. Per la piastrina ausiliare si dovrebbe utilizzare un acciaio particolarmente resistente all'usura.

Le misure a, b e h1 dipendono dal rispettivo inserto d'iniezione standard.

1



2



DE_Um die Gefahr von Freistrahlbildung und einem matten Hof im Anschnittbereich zu mindern, empfehlen wir ein gestuftes Einspritzprofil zu verwenden.

EN_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.

IT_Consigliamo l'impiego di un profilo d'iniezione graduato per ridurre il rischio di formazione di un getto libero e di un alone opaco nella zona d'iniezione.

DE

1 Maschinell gestuftes Einspritzprofil

I. Hohe Einspritzgeschwindigkeit zum Füllen des Kaltkanalverteilers.
II. Niedrige Einspritzgeschwindigkeit, um optimalen Quellfluss zu erreichen.
III. Hohe Einspritzgeschwindigkeit, um zügiges Füllen des Formteils zu gewährleisten; anschließend Nachdruck einstellen.

2 Mechanisch gestuftes Einspritzprofil

> Querverteiler reduziert die Geschwindigkeit der Fließfront im Anschnittbereich bei konstanten Maschinenparametern.
> für Werkzeuge, die häufig die Spritzgießmaschine wechseln.

EN

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.

Mechanically graduated injection profile

> 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.

IT

Profilo d'iniezione graduato tramite macchina

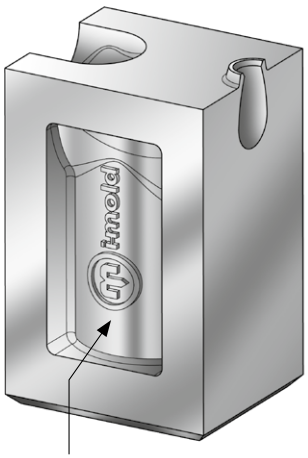
I. Elevata velocità d'iniezione per il riempimento del canale di alimentazione freddo.
II. Ridotta velocità d'iniezione per ottenere un flusso laminare ottimale.
III. Elevata velocità d'iniezione per garantire un rapido riempimento del pezzo da stampare; regolare successivamente la pressione di mantenimento.

Profilo d'iniezione graduato meccanicamente

> Il distributore trasversale riduce la velocità del fronte del flusso nella zona d'iniezione con parametri macchina costanti.
> Per stampi che vengono impiegati spesso su diverse presse ad iniezione.

Wärmeleitpaste · Heat sink paste · Pasta termoconduttiva

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



Wärmeleitpaste
Heat sink paste
Pasta termoconduttiva

DE

Bei der Verarbeitung von temperatur- und scherungsempfindlichen Materialien, sowie von Materialien, die zu „Fadenzug" neigen, empfehlen wir, Wärmeleitpaste in die seitlichen Aussparungen einzubringen.

> verhindert bei kurzen Zykluszeiten die lokale Erwärmung im Angusseinsatz.
> verbessert die Wärmeabfuhr, so dass der Siegelpunkt früher erreicht werden kann.
> verbessert den Abriss (kein Fadenzug; wichtig bei Polyolefinen)

Selbstverständlich können die Angusseinsätze auch ohne Wärmeleitpaste eingesetzt werden. Bei gewissen Anwendungsfällen kann durch das etwas höhere Temperaturniveau der Angusseinsätze eine längere Nachdruckzeit erreicht werden.

EN

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.

IT

Per la lavorazione di materiali sensibili alla temperatura e al taglio, nonché di materiali tendenti allo "sfilacciamento", consigliamo l'applicazione di pasta termoconduttiva nelle nicchie laterali.

> previene il riscaldamento locale nell'inserto d'iniezione durante una produzione con tempi brevi di ciclo;
> migliora la dissipazione e del calore per un più rapido raggiungimento della temperatura di saldatura;
> migliore distacco (nessun sfilacciamento; importante per le poliolefine).

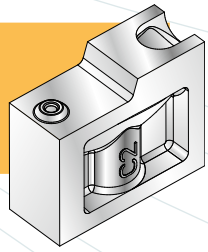
Naturalmente gli inserti d'iniezione possono anche essere impiegati senza pasta termoconduttiva. In determinati casi si può ottenere un tempo di mantenimento più lungo tramite il livello di temperatura leggermente più elevato degli inserti d'iniezione.

Ergänzende Tipps

Supplementary tips · Consigli supplementari

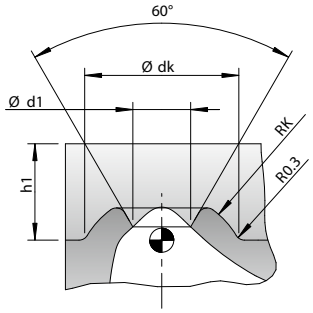
Kalotten · Vestiges · Calotta

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



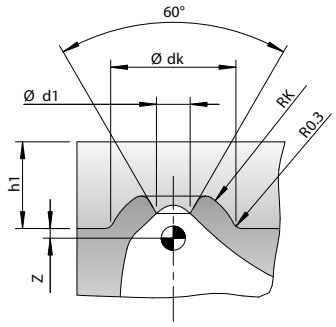
Standard-Kalotte

Standard vestige · Calotta standard



Kleine Kalotte

Small vestige · Calotta piccola



	Kalotte	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	Klein / Small / Piccolo	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	Klein / Small / Piccolo	2.75	1.2	3.5	2.0	0.25
	Standard	3.0	1.8	4.5	2.6	-

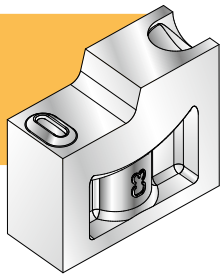
Abstand Z zum CAD-Nullpunkt beachten!

Maintain offset Z from CAD reference point!

Rispettare la distanza Z fino al punto zero CAD!

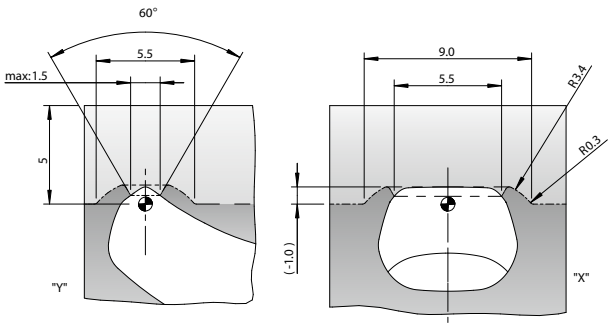
Kalotten · Vestiges · Calotta

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



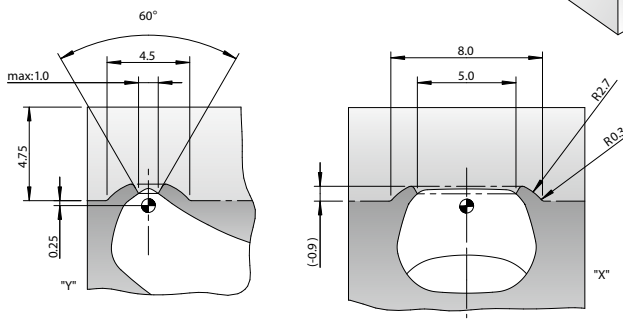
Standard-Kalotte

Standard vestige · Calotta standard

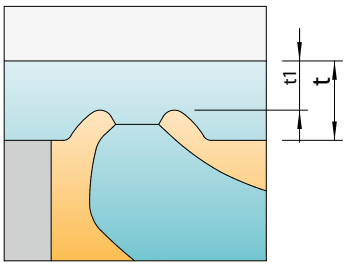


Kleine Kalotte

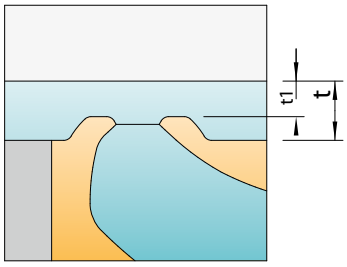
Small vestige · Calotta piccola



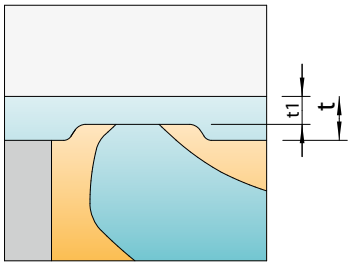
Kalotten-Varianten · Vestige versions · Versioni di calotte



Kugelförmige Kalotte mit Kegel
Spherical vestige with cone
Calotta sferica con cono



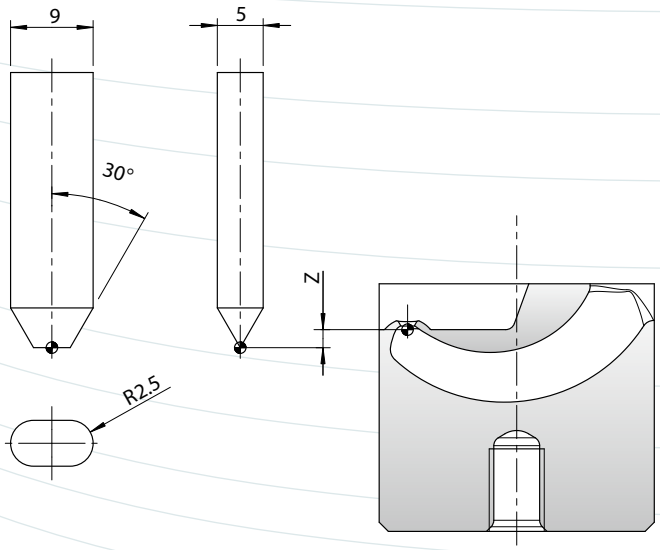
Abgeflachte Kalotte mit Kegel
Flattened vestige with cone
Calotta piatta con cono



Abgeflachte Kalotte ohne Kegel
Flattened vestige without cone
Calotta piatta senza cono

t1 > t/2 **t = Wandstärke des Kunststoffteils** / t = wall thickness of plastic part / t = spessore parete del pezzo in plastica

Anschnitt Erodieren* · Spark erosion of gate area · Elettroerosione del punto d'iniezione

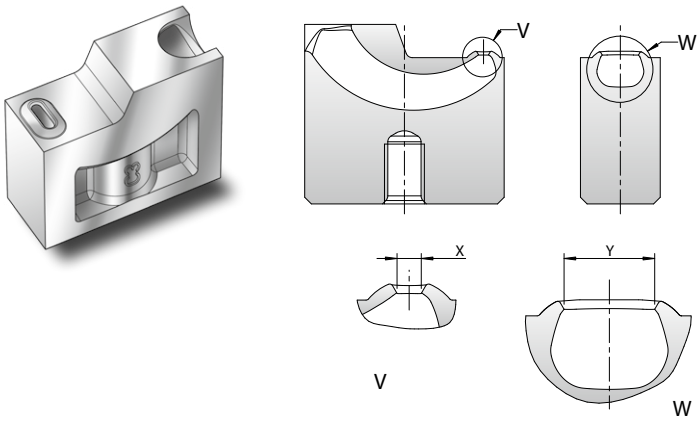


DE **Fertigung des Anschnitts mittels Elektrode**
> einfaches Platzieren der Elektrode über Koordinatensystem
> 2D- und 3D- Geometrie der Elektrode unter www.i-mold.de (Downloadbereich)

EN **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)

IT **Realizzazione del punto d'iniezione tramite elettrodo**
> facile posizionamento dell'elettrodo tramite un sistema di coordinate
> geometria 2D e 3D dell'elettrodo presso www.i-mold.com (area di download)

Anschnitt Fräsen* · Milling of gate area · Fresatura del punto d'iniezione



DE **Fertigung des Anschnitts mittels Fräsen**
> einfaches Fertigen des Anschnitts über Verfahren in Y und Z-Achse

EN **Gate machining by milling**
> Easy milling of gate area via Y and Z-axis travel

IT **Realizzazione del punto d'iniezione tramite fresatura**
> semplice realizzazione del punto d'iniezione tramite traslazione negli assi Y e Z

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

	Anschnitt Erodieren Spark erosion of gate area Elettroerosione del punto di iniezione	**Anschnitt Fräsen** Milling of gate area Fresatura del punto d'iniezione	
Querschnittsfläche [mm²] Cross-sectional area [mm²] Superficie trasversale [mm²]	**Elektrodentiefe Z [mm]** Electrode depth Z [mm] Profondità elettrodo Z [mm]	**Breite X [mm]** Width X [mm] Larghezza X [mm]	**Länge Y [mm]** Length Y [mm] Lunghezza 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

Einbau TGC / TGLL / TGML / TGHL

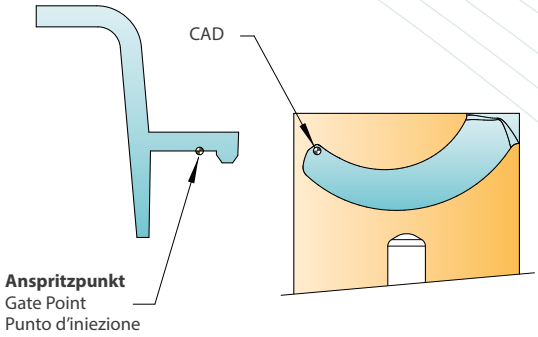
Installation · Montaggio TGC / TGLL / TGML / TGHL

1

CAD-Nullpunkt

CAD reference point

Punto zero CAD

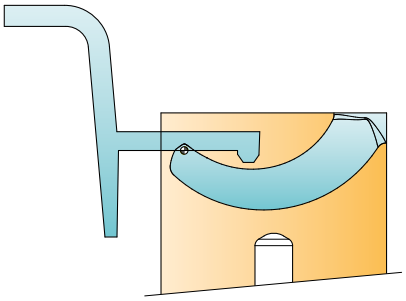


2

Angusseinsatz positionieren

Position the tunnel gate insert

Posizionare l'inserto d'iniezione

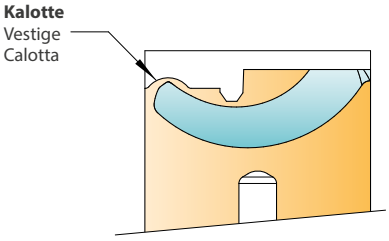


3

Teilekontur und Kalotte abziehen*

Deduct the part's contour and vestige*

Togliere il contorno del pezzo e la calotta*



* **Konturfläche der Kalotte in 3D-Daten enthalten**

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

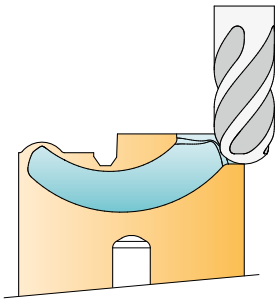
La superficie di contornatura della calotta è inclusa nei dati 3D

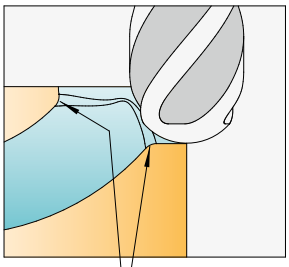
4

Angusskanal anpassen*

Adapt the feed channel*

Adattare il canale d'iniezione*



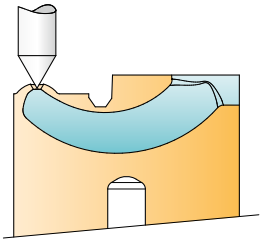


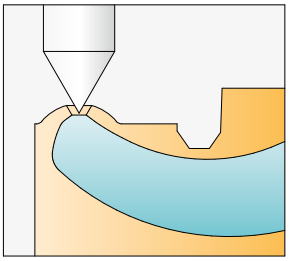
5

Anschnitt bearbeiten

Machine the gate

Lavorare il punto d'iniezione





i-mold
MOLDING INNOVATIONS

i-mold TAE2018 DE-EN-IT V5.1

www.i-mold.de

www.i-mold.com

i-mold GmbH & Co. KG
Gewerbepark Gräsig 72
D-64711 Erbach

Tel.: +49 (0) 6062 80933-0
Fax: +49 (0) 6062 80933-30
info@i-mold.com

MOLDING INNOVATIONS