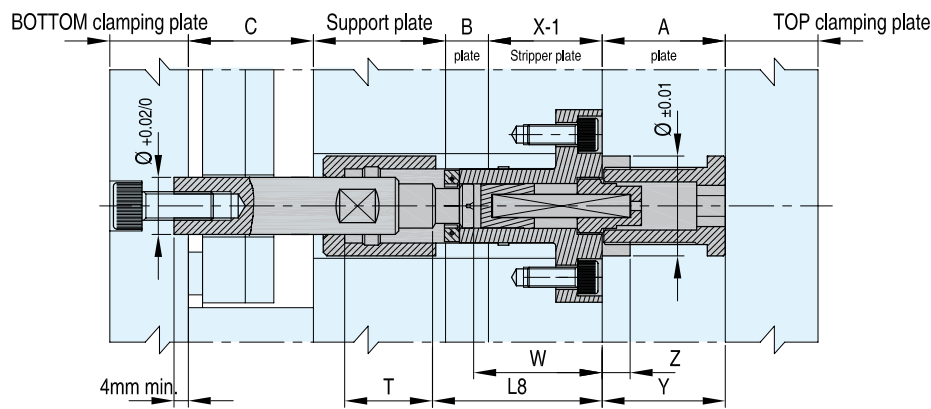
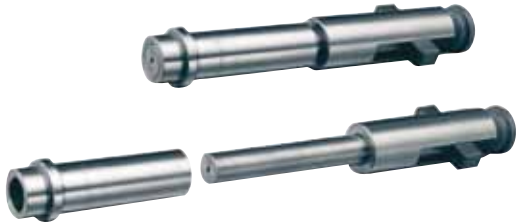




DME's unique internally-mounted latch lock mechanism adapts to a number of mold base sizes and plate thicknesses. It is available in three sizes to accommodate most standard **DME** stripper plate mold bases. Two travel ranges and two center puller pin lengths are available for each of the three latch lock sizes. Once installed, **DME's** internal latch locks control the sequence of one parting line opening after the first parting line has traveled a predetermined distance. After installation there are no adjustments that can be accidentally changed. The internal latch locks are most commonly used on **DME** stripper plate mold bases.



Basic Latch \varnothing	REF	Travel Range (1) Min./Max.	Center Puller Pin Length Options	Recommended max. Standard DME Mold Base Width	Max. Recommended Load Values Static - Dynamic	L8 Body	W(2) Puller Pin	Y(3) Mounting Plate	Z(4) C' Bore Depth
Small	DKL 2811	5 -> 30	140	296	10 kN - 100 kg	40	23 ±0,1	22 -> 35	10 $\begin{smallmatrix} +0,04 \\ 0 \end{smallmatrix}$
	DKL 2812		250						
	DKL 2821	30 -> 55	140						
	DKL 2822		250						
Medium	DKL 3411	6 -> 41	160	396	20 kN - 200 kg	51	32 ±0,1	27 -> 47,6	12 $\begin{smallmatrix} +0,04 \\ 0 \end{smallmatrix}$
	DKL 3412		280						
	DKL 3421	41 -> 76	160						
	DKL 3422		280						
Large	DKL 4511	12 -> 58	200	596	30 kN - 380 kg	68	43 ±0,1	35 -> 60	16 $\begin{smallmatrix} +0,04 \\ 0 \end{smallmatrix}$
	DKL 4512		310						
	DKL 4521	58 -> 104	200						
	DKL 4522		310						

(1) Supplied to provide maximum travel with no cutoff. To reduce travel between maximum and minimum, cut off slotted travel limiting sleeve on threaded end only per installation data. Cut off to no less than minimum travel; maintain close tolerances per installation data.

(2) This set-up dimension is critical and must be maintained as specified to properly locate pin and cam body to latch. Dimension W is from top of X-1 stripper plate to top end of center puller pin. See installation data for additional information.

(3) "Y" mounting plate dimension will be the "A" plate for stripper plate mold bases.

(4) This counterbore depth is critical and must be maintained as specified to locate split sleeve, cam body and pin to latch.



Basic selection and application design guidelines

1. Select the appropriate internal latch lock size – 28 mm diameter (small), 34 mm diameter (medium), or 45 mm diameter (large) based on the width of the mold base. However, large molds, thick plates or heavy load applications may require the next largest size assembly than is specified.

2. Select the appropriate travel range from the two choices for each size. This selection is based on the specific application requirements for the amount of travel that must occur at one parting line prior to the latch being released. The total travel requirements are based on the amount needed for the application as explained above, plus 3 mm minimum additional allowance. This added 3 mm minimum will make sure the full required travel has occurred before the latch lock starts its releasing action.

3. Select the appropriate length for the center puller pin from the two choices for each size. The length of the pin is determined by the specific application including the mold base plate thicknesses, where the pin will be mounted, etc. If possible, the center puller pin should be mounted in the support plate. However, some applications require the center puller pin to be mounted in the bottom clamping plate. This will depend on the travel or the length of the split sleeve component which controls the travel and the plate thicknesses in the mold base.

4. A minimum of four assemblies are recommended per mold. However, for larger molds, thick plates, or an application where loads are near maximum, additional assemblies and/or next largest size assemblies may be required. An application must never exceed the maximum recommended load values. A balanced load must be maintained to avoid cocking and binding which could cause severe overloading. Only one size latch lock assembly should be used in each mold base.

5. The center puller pin should be counterbored into its mounting plate 4 mm minimum for most applications, as shown in the drawings at right. This counterbore aligns the center puller pin with the other components in the assembly.

6. It is important to make sure that the leader pin lengths in all applications are long enough to fully engage the stripper plate through its full travel. The latch lock mechanism latches two plates together but is not intended to provide guidance. Instead it relies on the leader pins in the mold for proper alignment and support of the actuated stripper plates.

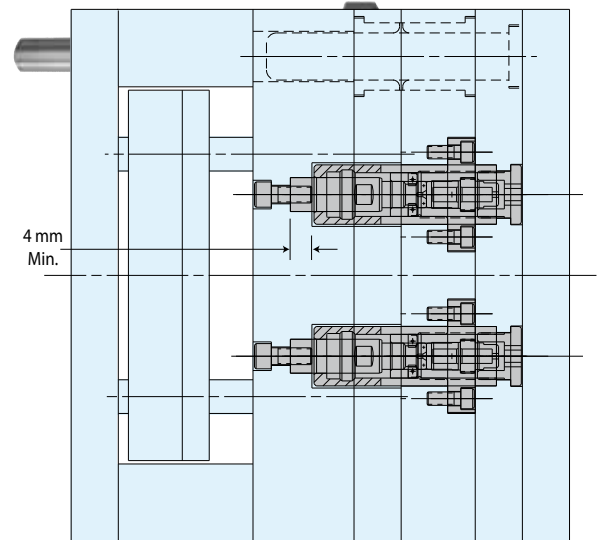
7. In the fully latched position the internal latch lock mechanism will allow movement of approximately 0.4 mm for the 28 mm diameter and 34 mm diameter assemblies and approximately 0.5 mm for the 45 mm diameter assemblies.

8. Injection molding machine mold opening speed may have to be reduced in order to make sure that excessive shock loading does not occur.

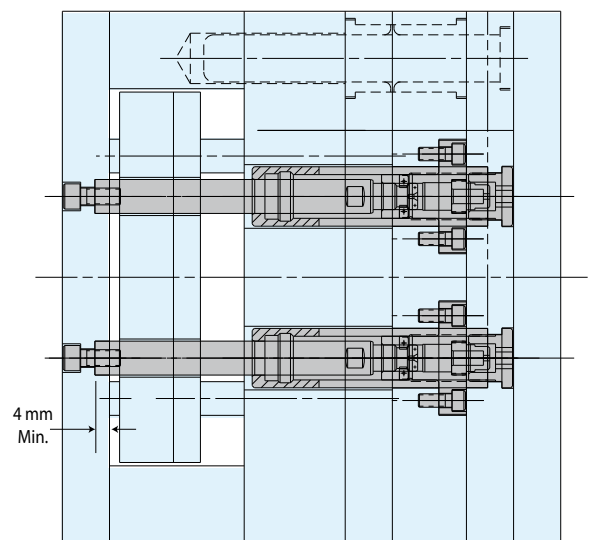
9. The Internal Latch Lock is not recommended for severe load applications.

10. The Internal Latch Lock must not be exposed to temperatures that exceed 150°C at any time.

11. An optional sleeve can be added to the Latch Lock that provides two additional functions. However, this optional sleeve is not required for the Latch Lock function. The optional sleeve can be added to incorporate guided ejection and/or normal ejector assembly return functions in the mold.

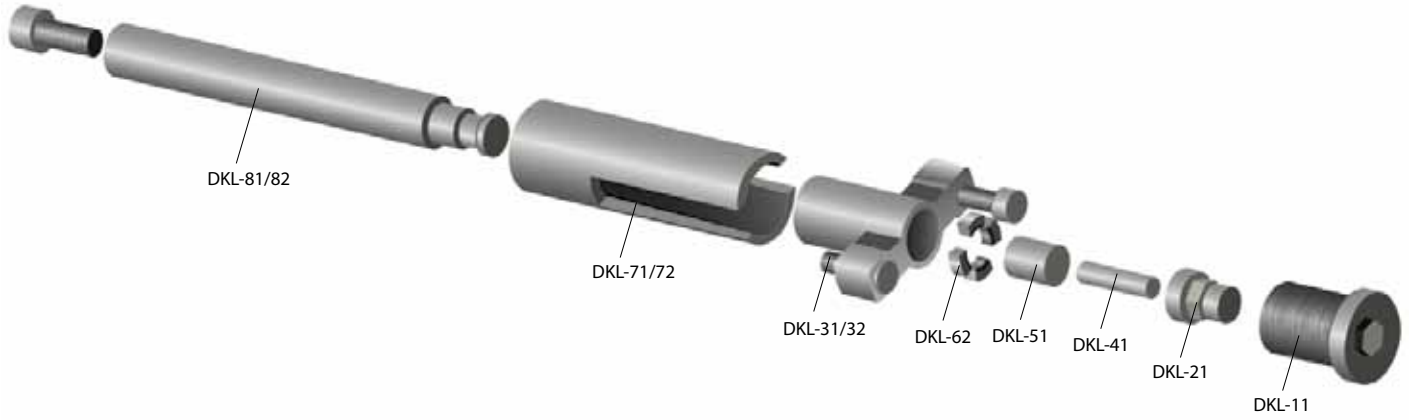


Internal Latch Lock application with center puller pins mounted in the support plate. This is typically done in applications where the travel is shorter and/or when mold plates are thicker.



Internal Latch Lock application with center puller pin mounted in the bottom clamping plate. This is typically done in applications where the travel is longer and/or when mold plates are thinner. (Some applications may require a thicker than standard bottom clamping plate.)



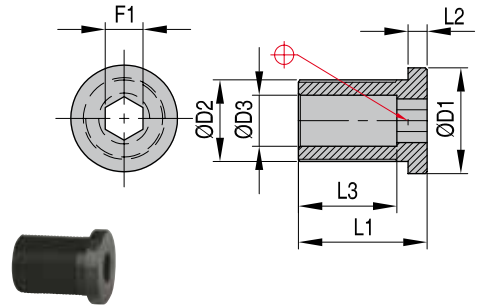


Basic Latch Size Ø	Plate Latching Assembly	Assembly Retaining Screw	Spring Retainer	Body for Cam Fingers without Cam Fingers	Body for Cam Fingers with 4 Cam Fingers*	Cam finger Replacement kit**	Spring for Holding Pin	Holding Pin For Cams	Slotted Travel Limiting Sleeve		Center Puller Pin	
	REF	DKL 11	DKL 21	DKL 31	DKL 32	DKL 62	DKL 41	DKL 51	DKL 71/72	T ravel range	DKL 81/82	Length
28 Small	DKL 2811	DKL-2011	DKL-2021	DKL-2031	DKL-2032	DKL-2062	DKL-2041	DKL-2051	DKL-2071	5 - 30	DKL-2081	140
	DKL 2812									DKL-2082	250	
	DKL 2821								DKL-2072	30 - 55	DKL-2081	140
	DKL 2822									DKL-2082	250	
34 Medium	DKL 3411	DKL-3011	DKL-3021	DKL-3031	DKL-3032	DKL-3062	DKL-3041	DKL-3051	DKL-3071	6 - 41	DKL-3081	160
	DKL 3412									DKL-3082	280	
	DKL 3421								DKL-3072	41 - 76	DKL-3081	160
	DKL 3422									DKL-3082	280	
45 Large	DKL 4511	DKL-4011	DKL-4021	DKL-4031	DKL-4032	DKL-4062	DKL-4041	DKL-4051	DKL-4071	12 - 58	DKL-4081	200
	DKL 4512									DKL-4082	310	
	DKL 4521								DKL-4072	58 - 104	DKL-4081	200
	DKL 4522									DKL-4082	3100	

Assembly retaining screw

REF	Size	D1	D2	D3	L1	L2	L3	F1
DKL-2011	Small	28	M22x1,25	13,5	34	5	26	10
DKL-3011	Medium	33	M26x1,5	16	46	6	35	12
DKL-4011	Large	42	M34x1,5	18,4	59	10	42	14

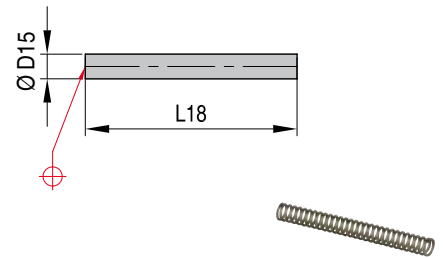
DKL 11



Spring for holding pin

REF	Size	D15	L18
DKL-2041	Small	6,5	56
DKL-3041	Medium	8	70
DKL-4041	Large	9,7	90

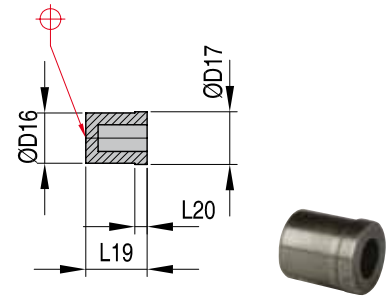
DKL 41



Holding pin for cams

REF	Size	D16	D17	L19	L20
DKL-2051	Small	12,3	12,9	15	3
DKL-3051	Medium	14,4	15,4	23	5
DKL-4051	Large	19,4	20,4	32	7

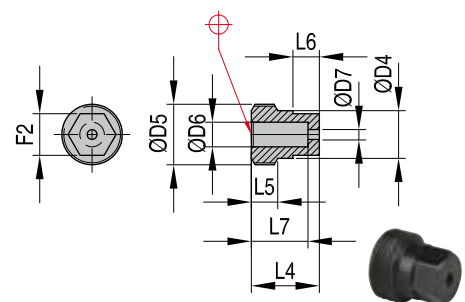
DKL 51



Spring retainer

REF	Size	D4	D5	D6	D7	L4	L5	L6	L7	F2
DKL-2021	Small	12,6	M16x1	6,8	2,6	18	7	7	15	11
DKL-3021	Medium	15,0	M19x1	8,3	3,0	21	8	8	17	13
DKL-4021	Large	17,2	M24x1	10,0	3,5	25	10	9	21	15

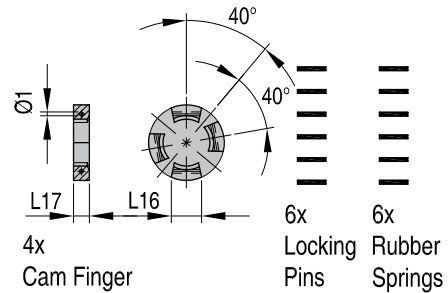
DKL 21



CAD reference point

DKL 62

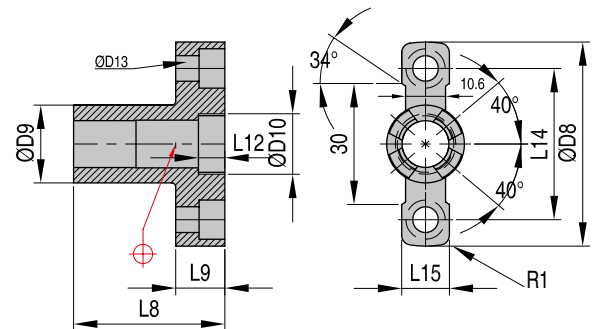
Cam finger replacement kit



REF	Size	L16	L17
DKL-2062	Small	5,8	4,2
DKL-3062	Medium	7,2	4,8
DKL-4062	Large	9	6,0

DKL 32

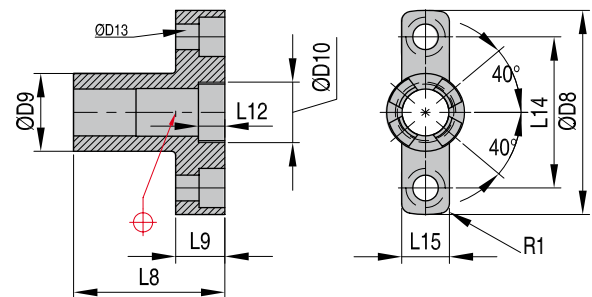
Body for cam fingers - with cam fingers



REF	Size	D8	D9	D10	L8	L9	L12	L14	L15	R1	D13			
											Drill Ø	C'bore Ø	C'bore depth	Metric S.H.C.S.
DKL-2032	Small	54	20,6	M16x1	40	13	7	40	12,6	2,5	6,8	10,4	6,8	M6x1

DKL 32

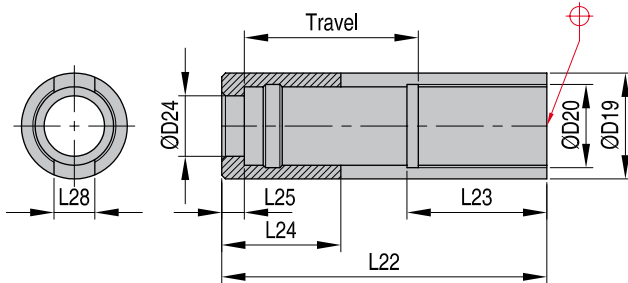
Body for cam fingers - with cam fingers



REF	Size	D8	D9	D10	L8	L9	L12	L14	L15	R1	D13			
											Drill Ø	C'bore Ø	C'bore depth	Metric S.H.C.S.
DKL-3032	Medium	60	24,4	M19x1	51	15	8	46	12,6	2,5	6,8	10,4	6,8	M6x1
DKL-4032	Large	78	32,4	M24x1	68	20	10	60	17	4	8,4	13,7	8,5	M8x1,25

Slotted travel limiting sleeve

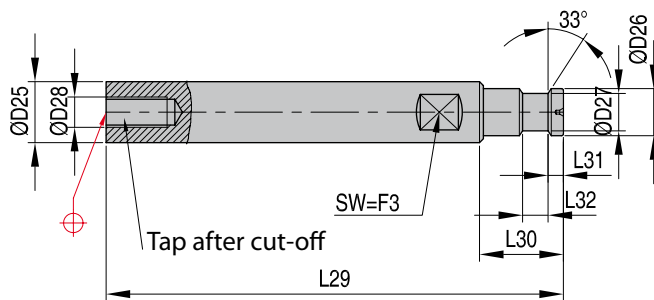
DKL 71/72



REF	Size	Travel Range Min./Max.	L22	D19	D20	D24	L23	L24	L25	L28
DKL-2071	Small	5->30	86	28	M22x1,25	16	37	31,5	6	10,8
DKL-2072	Small	30->55	111	28	M22x1,25	16	37	31,5	6	10,8
DKL-3071	Medium	6->41	111	34	M26x1,5	19	49	41	7	12,8
DKL-3072	Medium	41->76	146	34	M26x1,5	19	49	41	7	12,8
DKL-4071	Large	12->58	152	45	M34x1,5	26	65	56	10	17,3
DKL-4072	Large	58->104	198	45	M34x1,5	26	65	56	10	17,3

Center puller pin

DKL 81/82



REF	Size	L29	D25	D26	D27	L30	L31	L32	F3	D28
										Metric
DKL-2081	Small	140	16	12,4	9,8	21	4	6,7	13	M8x1,25
DKL-2082	Small	250								
DKL-3081	Medium	160	19	14,5	11,7	24	4,6	7,6	15	M10x1,5
DKL-3082	Medium	280								
DKL-4081	Large	200	26	19,5	15,9	31	5,5	9,5	22	M12x1,75
DKL-4082	Large	310								

CAD reference point



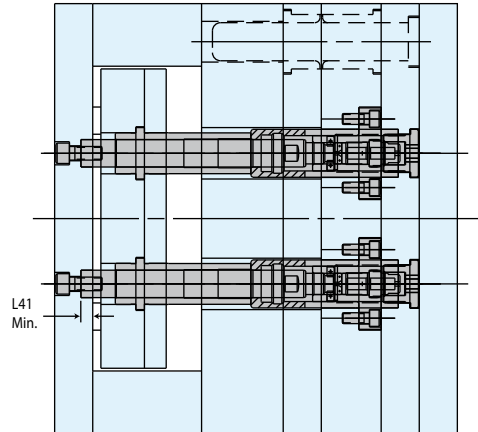
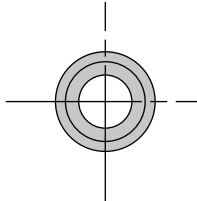
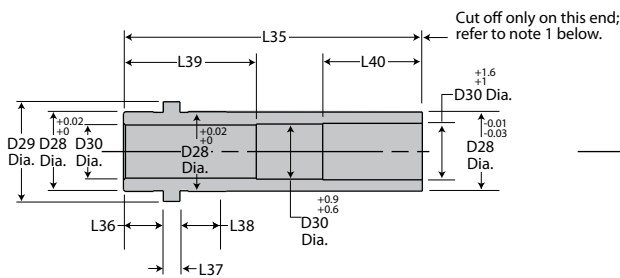
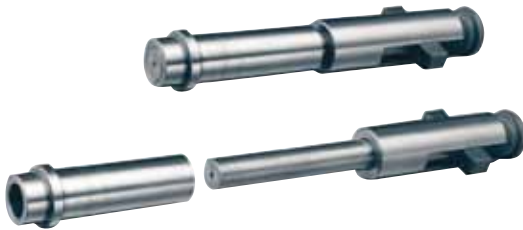
DKL

Guided Ejection Sleeve

Add guided ejection and return pin functions to Internal Latch Lock mechanism with this optional sleeve

The optional Guided Ejection and Return Sleeves, although not required for the Internal Latch Lock, can add two functions to the mold base that are typically required in most molds. These optional sleeves can add guided ejection and ejector assembly return functions to the mold base. Additionally, these added functions fall within the space requirements of the plate latching mechanism. However, these optional sleeves do not create an early ejection return system that is occasionally required in some applications.

- Sleeves can add guided ejection function to mold base along with plate latching mechanism
- Sleeves can replace function of return pins in mold base for most applications using the plate latching mechanism
- Sleeves fit around the center puller pin of the plate latching mechanism and are mounted in the ejector assembly, thus eliminating the need for additional mold space usually required for the guided ejection and return pin functions



Basic Latch Size	REF Latching Assembly	Optional – Guided Ejection and Return Sleeve Features										
		REF Sleeve	L35 Length	D28 Ø	D29 Ø	D30 Ø	L36 Length	L37 Thickness	L38 Length	L39 Length	L40 Length	L41 Min.
28 (Small)	DKL-2811	DKL-2101	90	24	30	16	12	5	14	40	30	12
	DKL-2812	DKL-2101										
	DKL-2821	DKL-2102	140	24	30	16	12	5	14	40	30	12
	DKL-2822	DKL-2102										
34 (Medium)	DKL-3411	DKL-3101	110	28	35	19	14	6	16	50	35	15
	DKL-3412	DKL-3101										
	DKL-3421	DKL-3102	160	28	35	19	14	6	16	50	35	15
	DKL-3422	DKL-3102										
45 (Large)	DKL-4511	DKL-4101	140	38	46	26	18	8	20	70	40	20
	DKL-4512	DKL-4101										
	DKL-4521	DKL-4102	200	38	46	26	18	8	20	70	40	20
	DKL-4522	DKL-4102										

Notes:

1. Choose the appropriate length sleeve so that it can be cut off to a length that will fully return the ejector assembly. See installation data.
2. The center puller pins must support and guide the sleeves, as well as the ejector assembly. The pins must have sufficient bearing surface contact as specified by dimension "L41" minimum.
3. Additional bearing surface contact for the center puller pins may require a thicker bottom clamping plate or the addition of another plate to the bottom of the mold for some applications.
4. A minimum of four assemblies are typically recommended per mold. However, for larger molds, thick plates, or an application where loads are near maximum, additional assemblies and/or next largest size assemblies may be required. An application must never exceed the maximum recommended load values. A balanced load must be maintained to avoid cocking and binding which could cause severe overloading. Only one size Latch Lock assembly should be used in each mold base.