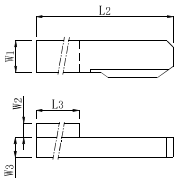
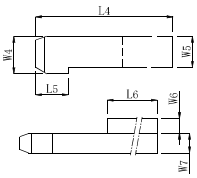
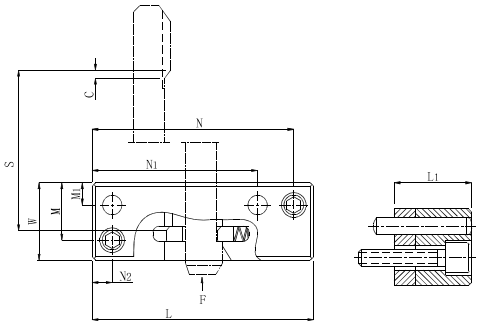
Material SKD61 SKD11 Hardness HRC52±2 HRC56±2

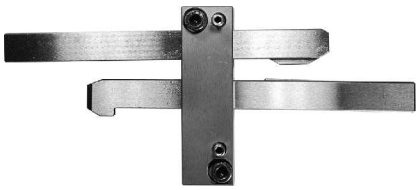
Control bar



Latch bar







Code	S (min.)	S (max.)	Pulling forceF (≤kgf)	
ZZ171/1	5.5	80	650	
ZZ171/2	7	110	1550	
ZZ171/3	9	160	2200	

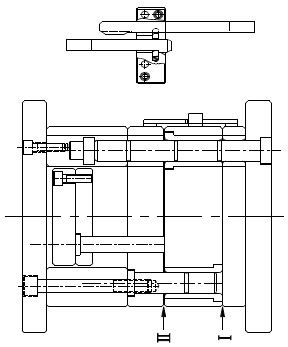
Code	C	L	I1	L2	L3	L4	L5	L6	M	M1	N	N1	N2	W	W1	W2	W3	W4	W5	W6	W7
ZZ171/1	5.2	75	22	140	63	140	12	63	16	6	69	60	6	22	12.5	6.5	6	15.5	12.5	6.5	6
ZZ171/2	6.95	90	32.5	180	100	180	16	100	24	8	83	73	7	31.5	16	8	12.5	20	16	8	12.5
ZZ171/3	8.7	112	43.5	250	125	250	20	125	30	10	103	88	9	40	20	12.5	16	25	20	12.5	16

Code	×	QTY
ZZ171/1	×	10sets

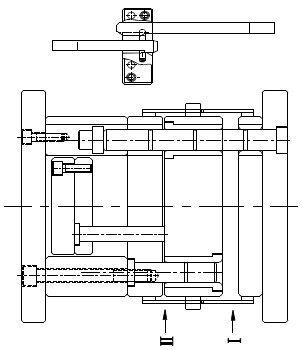
Installation Guidelines:

1.A minimum of two latches must be mounted symmetrically
2.in such a way as to prevent tilting of the plate to be drawn.
3.The reference surfaces of the housing with base plate , the control bar and the latch bar with spacers must be exact at the same height and right-angled to the direction of the mould opening movement
4.this latch lock is the precise standardized item, please do not apply togetherwith other own customer machined parts, we will not be responsible for any anomaly caused by it.
5.If need to maintain, please remove the latch locks first.
After installed, Carry out a functional test, check whether the Individual parts of the latch lock units moves smoothly, the stroke is applicable. Recommend testing on Matched molds machine or Injection machine, NO Lifting Machine.

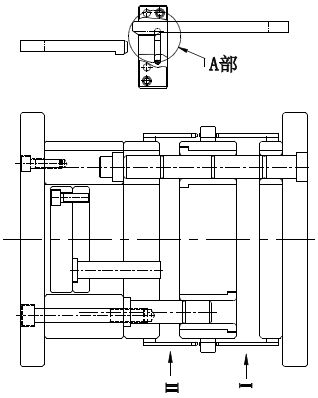
Example:

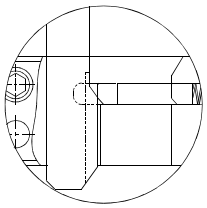


Sequence 1



Sequence 2





A section details

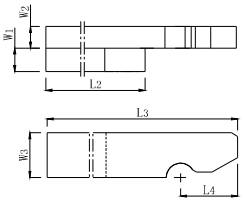
Sequence 3

After finished the first stroke, latch bar with spacer should stay on the top of slide plate, keep the sliding lock depressed complete engagement, to make the control bar move smoothly into the housing.

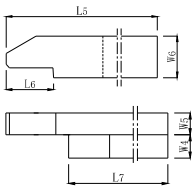
If the control bar didn’t in position accurately, the latch lock units would be damaged because of the uncompleted engagement of sliding lock.

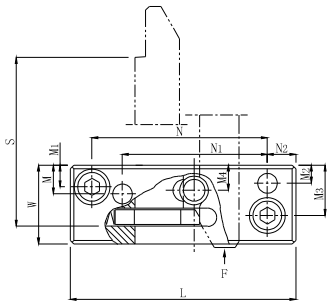
Material SKD61 SKD11 Hardness HRC52±2 HRC56±2

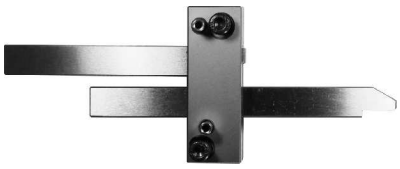
Latch bar

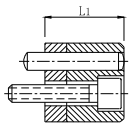


Control bar









Code	S(min.)	S (max.)	Pulling forceF (≤kgf)
ZZ170/1	5.5	80	800
ZZ170/2	9.5	110	1400
ZZ170/3	10.5	190	2400

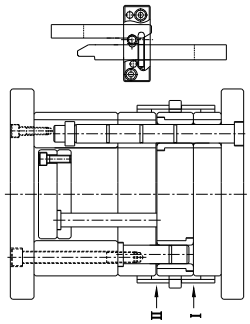
Code	L	L1	L2	L3	L4	L5	L6	L7	M	M1	M2	M3	M4	N	N1	N2	W	W1	W2	W3	W4	W5	W6
ZZ170/1	63	22	63	100	16	125	14	80	8	6	5	14	7	49	41	8	22	6.5	6	13	6.5	6	13
ZZ170/2	90	33	100	140	23	160	18	125	18	8	8	24	16	69	62	13	34	8	13	20	8	13	16
ZZ170/3	110	44	100	200	25	250	18	125	22	9	9	31	20	80	80	15	42	13	16	25	13	16	20

Code	×	QTY
ZZ170/1	×	10sets

Installation Guidelines:

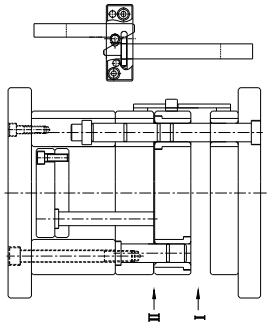
1.A minimum of two latches must be mounted symmetrically
2.in such a way as to prevent tilting of the plate to be drawn.
3.The reference surfaces of the housing with base plate , the control bar and the latch bar with spacers must be exact at the same height and right–angled to the direction of the mould opening movement
4.this latch lock is the precise standardized item, please do not apply together with other own customer machined parts, we will not be responsible for any anomaly caused by it.
5.It should be installed in the precise mould base.
6.If need to maintain, please remove the latch locks first.
After installed, Carry out a functional test, check whether the Individual parts of the latch lock units moves smoothly or the stroke is applicable. Recommend testing on Matched molds machine or Injection machine, NO Lifting Machine.

Example: When mold is opening, PL(parting area) Ⅰ opens first , then PL(parting area) Ⅱ,when mold is closing, PL(parting area) Ⅱ closes first then PL(parting area) Ⅰ, make sure the sequencing/steps of mold closing is correct, otherwise the latch lock unit would be damaged caused by wrong sequencing.

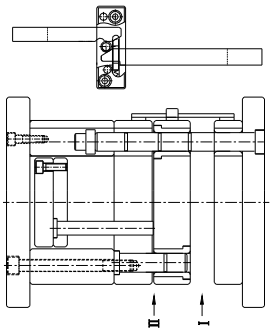


Sequence 1

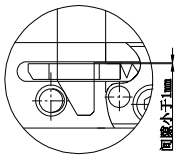
The length of the slanted portion "S" corresponds to the minimum movement of the latch locking unit The position of control bar can be adjusted according to the required stroke, if the first movement S is not long enough, we recommend 2 options: choose the bigger latch lock unit or extend the proper length of control bar.



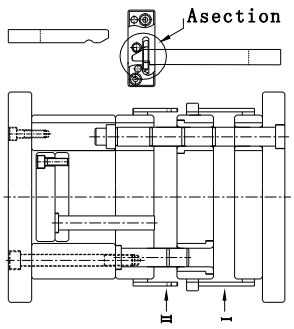
Sequence 2



Sequence 3



A section details

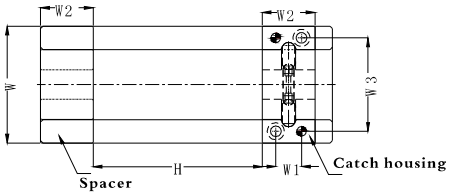


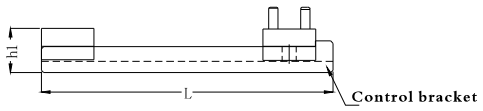
Sequence 4

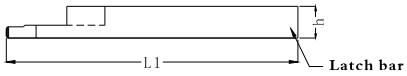
After finished the first stroke, KEEP spacer of control bar against the outside of sliding lock, or keep the clearance less than 1–1.5mm,
If the control bar didn' t in position accurately, the latch lock units would be damaged because of the uncompleted engagement of sliding lock.

Material SKD61 SKD11 Hardness HRC52±2 HRC56±2

The front end of the latch bar and Control bracket are vacuum-treated to HRC58, and the posterior end of the latch bar and Control bracket are high frequency treated Less than HRC38, for the convenience of Follow-up Processing.







Code	W	Hv	H		W1	W2	W3	W4	L	L1	h	h1	Dowel pin	Mounting screw	Pulling force F (≤kgf)
ZZ174	50	0	4	90	10	20	40	15	140	140	16	22.3	6×20	M4×12	1600
		20													
		0		130					180	180					
		50													
	80	0	5.5	117	16	34	60	20	200	200	21	30.3	6×20	M6×16	2700
		32													
		0		167					250	250					
		75													
	100	0	7	145	22	45	80	25	250	250	27	37.5	8×24	M8×18	4800
		50													
		0		195					300	300					
		80													

Code / W / HV × QTY
ZZ174 / 50 / 20 × 10sets

Feature:

1. Due to double-sided locking system, safe and reliable.
2. High-frequency heat-treatment, easy to install and machine.
3. The key parts made of SKD61, with higher wearproof, more durable.
4. With the extended "HV" stroke Latch bar with delay, can be applied in a larger scale
5. At least two latch locking units should be mounted symmetrically. Accurate calculate the stroke, otherwise will cause the damage.
6. Available in three sizes and forces, suitable for various molds.

Checkout emphasis:

1. whether the stroke "H" meet the installation requirement, for extended latch bar with delay, it is important to check the stroke of "HV"
2. refer to the figures to make a simple function test : As soon as opening stroke "H1" has been reached, the catches slide into recess of control bracket, Now latch bar is released. After the latch bar completely slide into the recess, the catch housing can slide smoothly, test qualified.

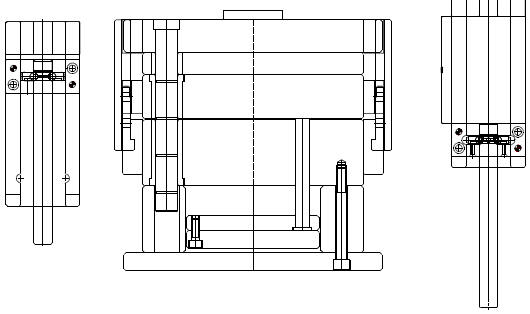
Example: (See illustration on next page)

Installation Guidelines:

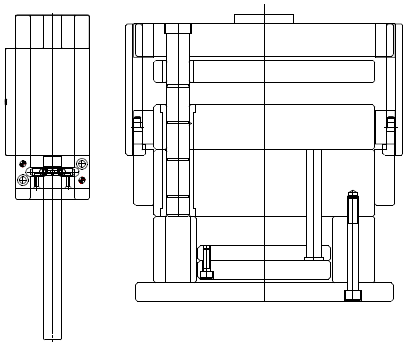
1. Please install the roller lock sets symmetrically when mold closing, at least 2 sets roller lock sets for 1 mold (user can select the quantity according to the actual conditions , available in 3 sizes)
2. The "H"in figure1 is the first stroke of mold opening; adjust the position of control bracket and the plates, Mount control bracket with spacer with screw and dowel pins. Match the catch housing and latch bar, then slide them in to the control bracket, mount the catch housing into A mold plate and fix the latch bar on B mold plate with screw and dowel pin.
3. The mounting faces for control bracket, catch housing and latch bar must be machined parallel to the mould guiding system.
4. in such a way as to prevent tilting of the plate to be drawn.
5. After finished the H1 stroke, the catches of the catch housing stay in the recess of the control bracket, and the catches would be locked so that the latch bar can remove from the control bracket smoothly; but if the H1 stroke is improperly set, and the stroke is finished, so that the catches can not reach the recess of control bracket, when force to open the mold , will cause the latch lock unit be damaged .
6. this latch lock is the precise standardized item, please do not apply together with other own customer machined parts, we will not be responsible for any anomaly caused by it.
7. It should be installed in the precise mould base.
8. If need to maintain, please remove the latch locks first.
   After installed, Carry out a functional test, check whether the Individual parts of the latch lock units moves smoothly or the stroke is applicable.

Example:

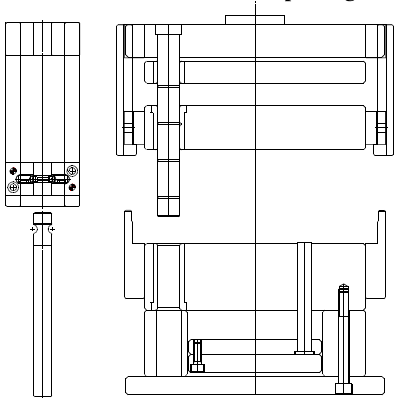
Mold closing

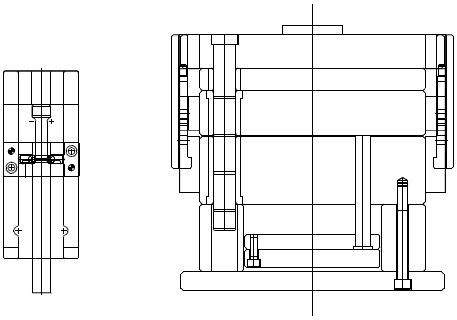


First stroke of mold opening

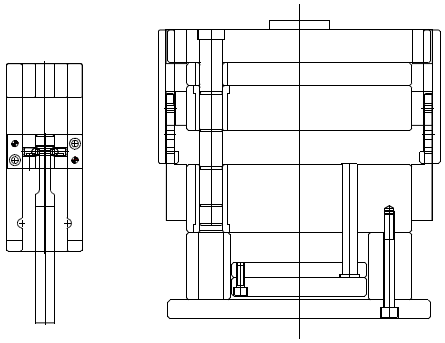


Mold final opening



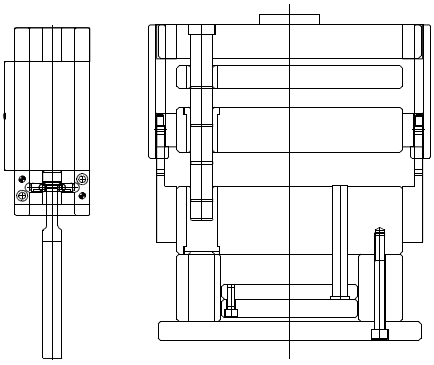


Mold closing

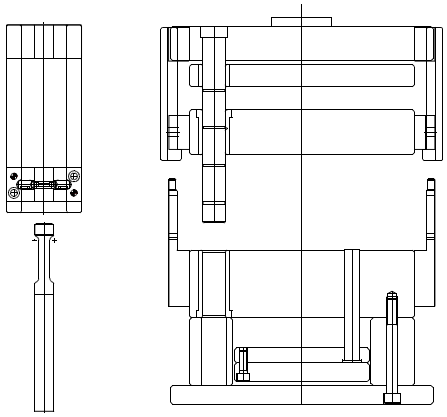


Preset the "HV" stroke if the latch bar with delay, as figure on the right

Finished the HV stroke

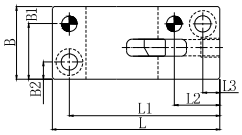


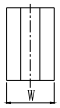
Finished the H stroke



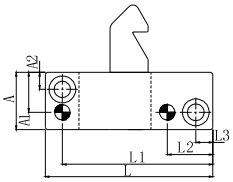
Mold final opening

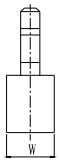
Slide holder



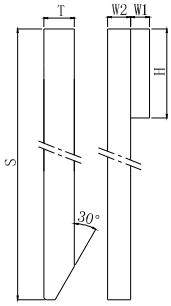


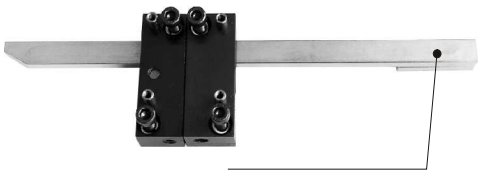
Cam holder





Release bar





The front end of the release bar is vacuum-treated to HRC58, and the posterior end of the release bar is high frequency treated less than HRC38, for the convenience of Follow-up Processing.

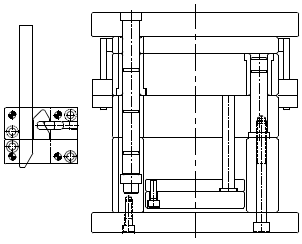
Code	Slide holder. Cam holder												Release bar				
	A	A1	A2	B	B1	B2	L	L1	L2	I3	Mounting screw	W	W1	W2	S	T	H
PPLS	24	17	7	26	19	7	68	61.5	19	7	M6 -30	20	6.5	7	250	13	40
PPLM	30	21	9	38	29	9	88	79	24	9	M8 -30	30	8	10	300	16	50
PPLL	38	27	11	48	37	11	104	93	27	11	M10-50	45	10.2	15.5	350	20	55

Code × QTY
PPLS × 10sets

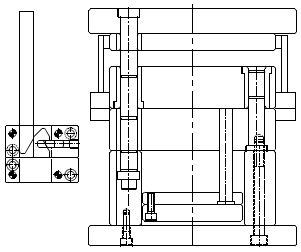
Installation Guidelines:

1. Please install the roller lock sets symmetrically when mold closing, at least 2 sets roller lock sets for 1 mold (user can select the quantity according to the actual conditions , available in 3 sizes)
2. Install according to the installing figures as below
3. Carry out a functional test, check whether the Individual parts of the latch lock units moves smoothly or the stroke is applicable.
4. The mounting faces for cam holder, slide holder, and release bar must be machined parallel to the mould guiding system.
5. Make the overhang length of each release bar the same in order to equalize the timing of the release.
6. If need to maintain, please remove the latch locks first.
   After installed, Carry out a functional test on Matched molds machine or Injection machine, check whether the Individual parts of the latch lock units moves smoothly or the stroke is applicable.

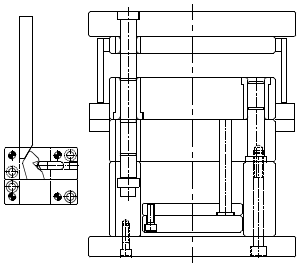
Example:



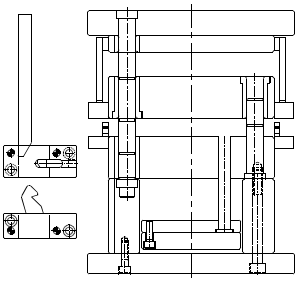
Sequence 1



Sequence 2



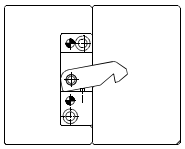
Sequence 3



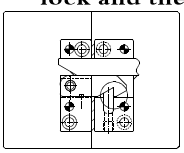
Sequence 4

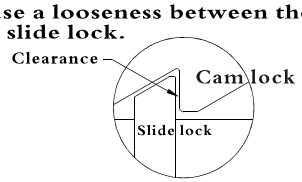
Method of installation:

Step 1: Install the cam holder on the movable mold.

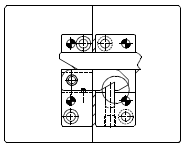


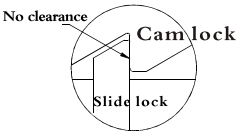
Step 2: Install the slide holder with the cam holder, it might cause a looseness between the cam lock and the slide lock.



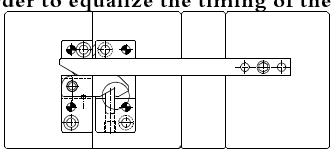


Step 3: In order to eliminate looseness between the cam lock and the slide lock, insert the release bar temporarily fix the slide holder while pulling it parallel to the cam holder, ream the holes and press-fit the dowel pins.
Note: position the parts with concrete objects.

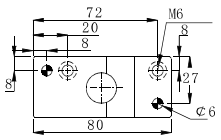




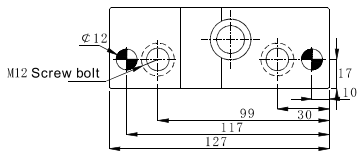
Step 4: Install the die in the molding machine, cut the release bar to the necessary length, form the bolt holes and reamer pilot holes, temporarily fix the release bar, check the sliding operation of the parting lock, and then ream the holes and press-fit the dowel pins.
Note: Make the overhang length of each release bar the same in order to equalize the timing of the release.

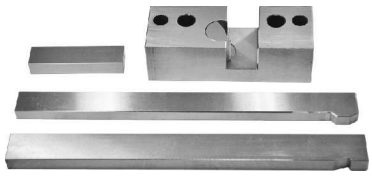


LLL-051E

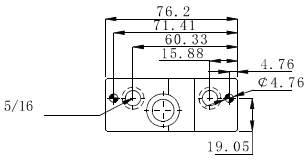


LLL-101E

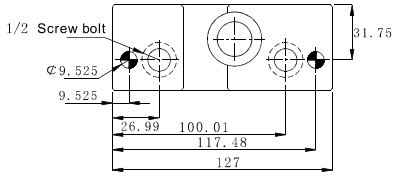


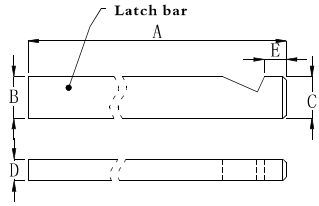


LLL-050

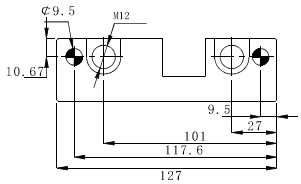


LLL-101

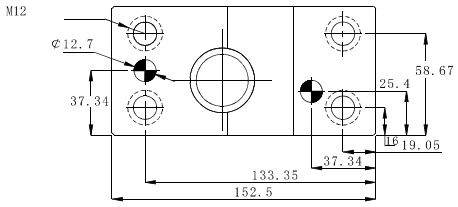


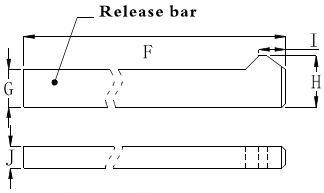


LLL-151E

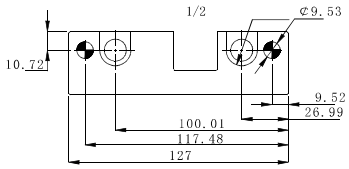


LLL-201E

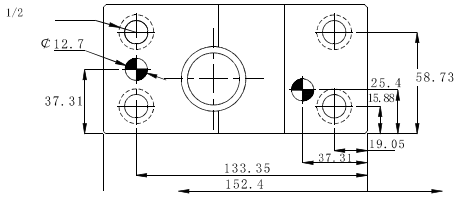


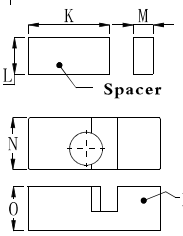


LLL-151



LLL-201





SKD61 HRC52±2

SKD11 HRC56±2

Code		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
(Metric)	LLL-050	180	16	16	7.9	6	180	12.5	16	8.5	7.9	55	12	8	35	25
	LLL-101	254	24	24	11.9	12	254	20	24	16	9.9	75	20	12	47	37
	LLL-151	254	24.81	24.56	12.07	12.7	254	20.95	24.81	15.87	9	76.2	22.22	12.39	49.2	36.5
	LLL-201	406	37.46	37.21	24.77	15.9	406	31.87	37.46	22.22	12.07	114.3	38.1	25.27	74.6	61.9
(Inch)	LLL-050	7	.59	.585	.285	.3	7	1/2	.59	3/8	.23	1-3/4	1/2	.295	1-3/16	15/16
	LLL-101	10	.977	.967	.475	1/2	10	.825	.977	5/8	.355	3	7/8	.488	1-15/16	1-7/16
	LLL-151															
	LLL-201	16	1.475	1.465	.975	5/8	16	1.255	1.475	7/8	.475	4-1/2	1-1/2	.995	2-15/16	2-7/16

Code	×	QTY
LLL-050	×	10sets

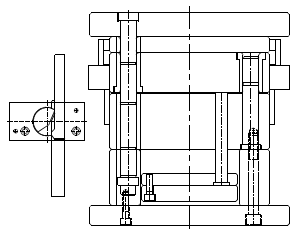
Feature:

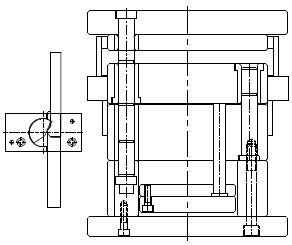
1. Unique Center Rotating Axis design, safe and reliable.
2. Suitable for Control the Action Sequence in proper order, also can be used for control the two-stage ejector.

Installation Guidelines:

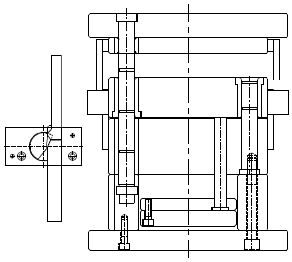
1. When mounting. The release bar can not completely release rocker.
2. Choose the right latch lock according with the size of molds.
3. Make sure preset the first stroke exactly when mounting, for more details please refer to illustration.

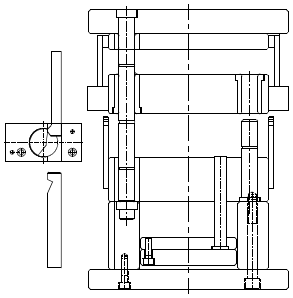
Function:



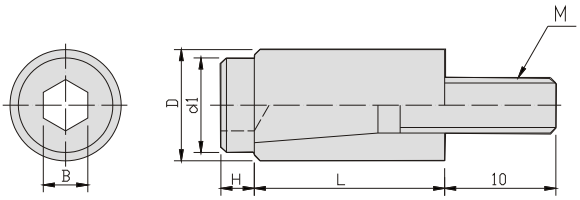


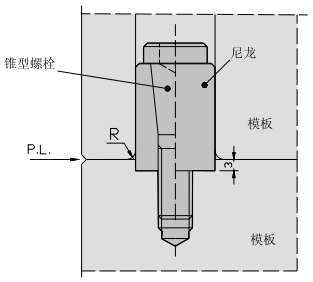
Example:





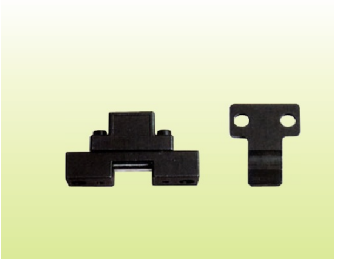
PL...

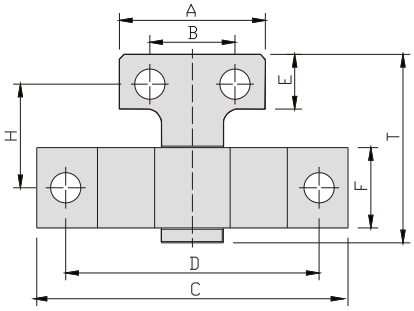




	D	d1	M	B	L	H	
PL 10	10	8.5	M5	4	18	3	
PL 12	12	11	M6	5	20	3.5	
PL 13	13						
PL 16	16	14	M8	6	25	4	
PL 20	20	16	M10	8	30	5	

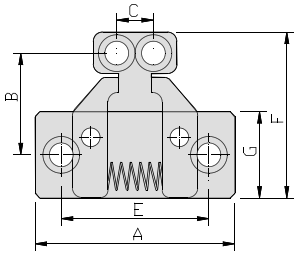
DTP03...



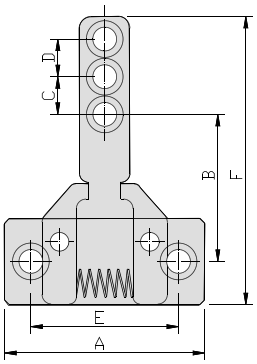


	A	B	C	D	E	F	H	T	⊕	(kgf)	
DTP03A	40	26	72	60	20	20	23	49	M8	**250**	
DTP03B	36	22					66	96			
DTP03C	50	30	113	90	22	30	38	73	M10	**300**	
DTP03D							79	118			
DTP03E							38	73	M12	**400**	
DTP03F					25		103	135			

DTP04…



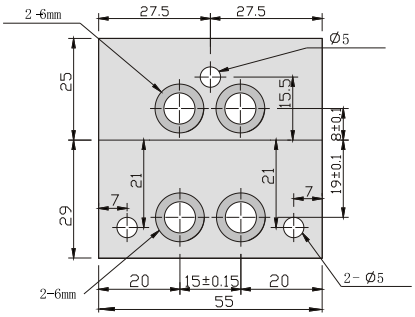
DTP04A



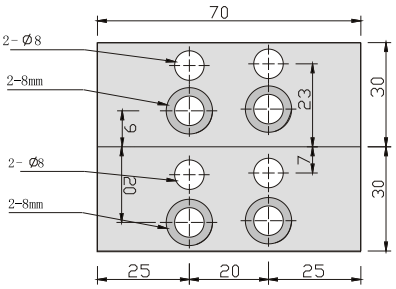
DTP04B

	A	B	C	D	E	F	G		(kgf)	
DTP04A	78	40	15	-	60	68	38	5/16 "	**500**	
DTP04B		58		15		116				

DTP05…



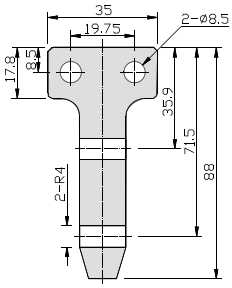
DTP05/100 200 300kgf

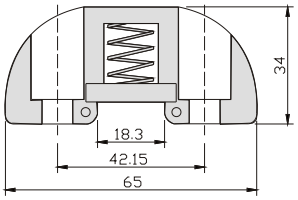


DTP05/600kgf

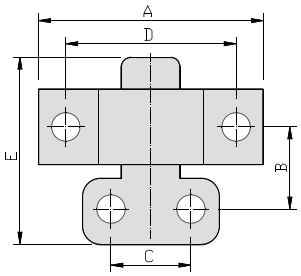
	(Kgf)	
DTP05	**100**	
	200	
	300	
	600	

DTP06…

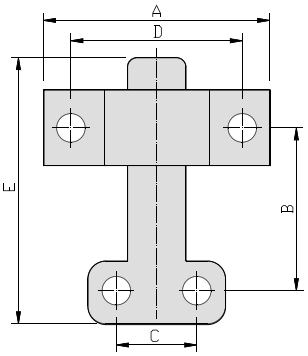




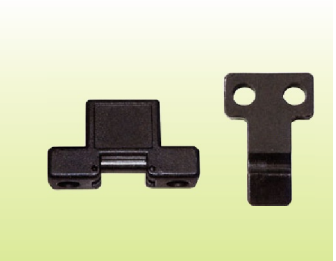
DTP07...



DTP07A

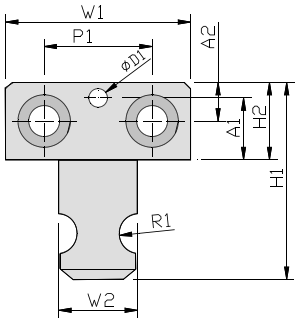


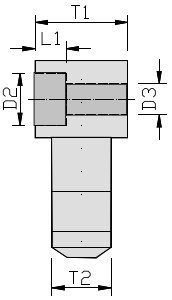
DTP07B

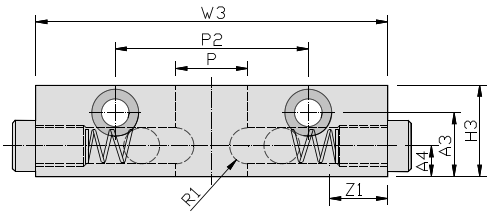


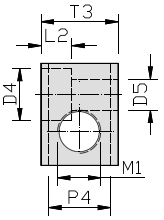
	A	B	C	D	E		(kgf)	
DTP07A	62	28	20	45	54	5/16 "	**400**	
DTP07B		62			88			

DTP08...







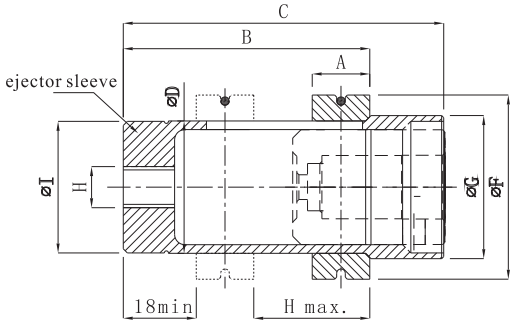


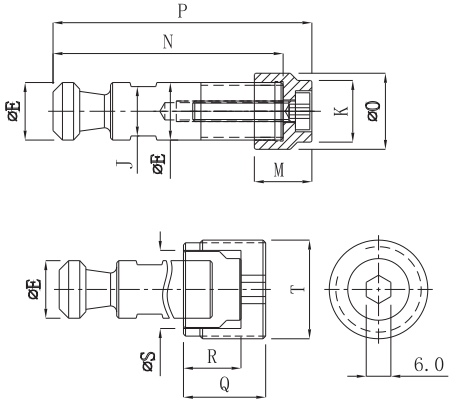
	A1	A2	A3	A4	D1	D2	D3	D4	D5	H1	H2	H3	L1	L2
DTP08A	6	12	21	10	¢5	¢10.5	¢6.5	¢11	¢6.5	48	20	28	6.5	6.5
DTP08B	20	12.5	23	11	¢6	¢17	¢10	¢17	¢10	62.5	25	33	10	10

	P1	P2	P3	P4	R1	T1	T2	T3	W1	W2	W3	Z1	M1	
DTP08A	25	60	18	12.5	R4.25	20.5	12	20.5	40	17.5	86	20	M12×1.75	
DTP08B	35	70	26	20	R6.5	30	19.5	25	60	25.5	127.5	21	M14×2.0	

Round latch locking devices

Material SKD11+SKD61





Code	A	B	C	D	¢E	¢F	¢G	H	¢I	Hmin	Hmax	J	K	M	N	¢O	P	Q	R	¢S	T
ZZ173/32×28×14×63	14	60	78	32	14	45	35	M10	32	6	28	12	15	14	56	19	63	20	14	19	M24×1.0
ZZ173/32×28×14×80															73		80				
ZZ173/32×28×14×100															93		100				
ZZ173/32×28×14×125															118		125				
ZZ173/32×56×14×63		88	106								56				56		63				
ZZ173/32×56×14×80															73		80				
ZZ173/32×56×14×100															93		100				
ZZ173/32×56×14×125															118		125				
ZZ173/38×36×18×80	16	70	90	38	18	52	41	M12	38	8	36	15	19	16	73	24	80	22	16	24	M30×1.5
ZZ173/38×36×18×100															93		100				
ZZ173/38×36×18×125															118		125				
ZZ173/38×36×18×140															133		140				
ZZ173/38×71×18×80		105	125								71				73		80				
ZZ173/38×71×18×100															93		100				
ZZ173/38×71×18×125															118		125				
ZZ173/38×71×18×140															133		140				

Order Code × QTY
ZZ173/32×28×14×63 × 10sets

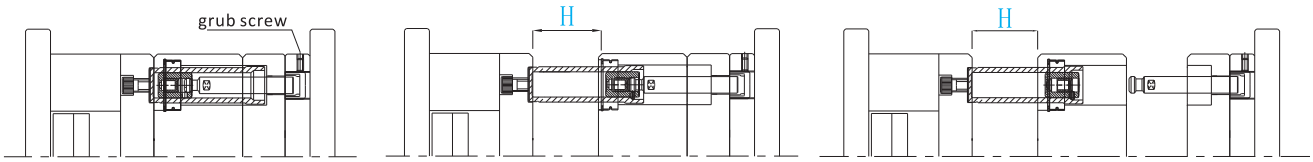
Feature:

1.this round latch locking units should be install inside the mold, Avoid clashing with outside parts or the waterway
2.Can also be used as Inner Latch locks, Two–stage ejectors,
3.Some important parts are made of SKD61, Provide good Lubricating while working, then it will be higher wear resistance and longer service life.

Installation instructions:

1.It is Precision standard elements, A minimum of two Round latch locking units must be mounted symmetrically, quantity and size are subjected to the mold base and the pulling forces.
2.If not mounted symmetrically, the uneven force will caused the parts damaged.
3.Make sure grub screw is screw down tightly when using.
4.If the molds need to be maintained or changed, please remove the Round latch locking units first.
5.After installation, carry out a functional test, check whether the individual parts work well, and the stroke is applicable, recommended testing on Matched molds machine or injection machines, Do not use Lifting Machine.

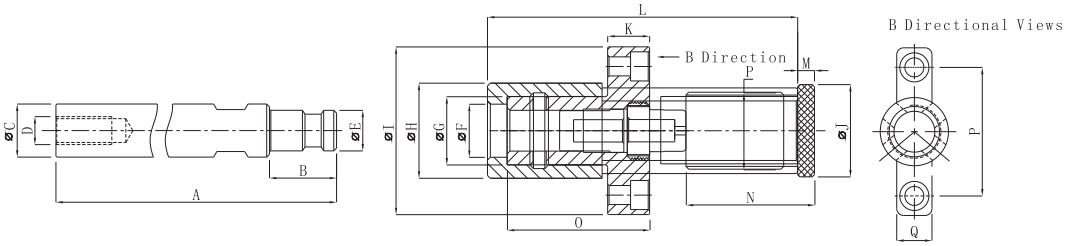
Example:



Mold closed　　mold opening 1st time　　mold opening 2nd time

PLASSTEZE

Material: SKD11+SKD61



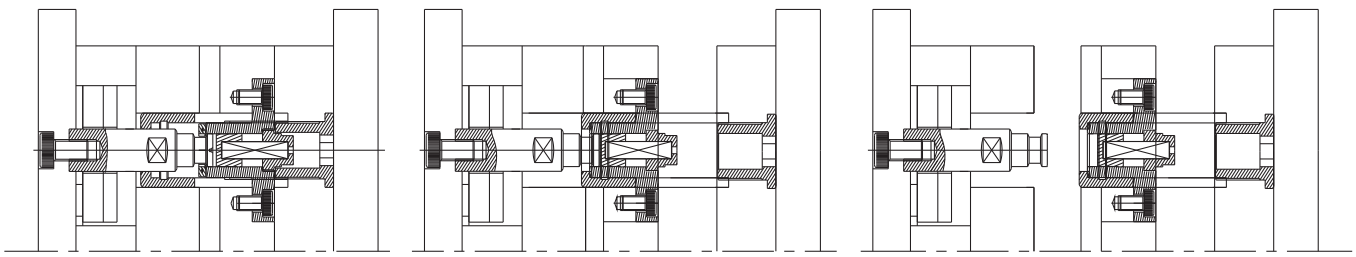
Code	A	B	ØC	D	ØE	ØF	ØG	ØH	ØI	ØJ	K	L	M	N	O	P	Q
DDKL2811	140	21	16	M8 × 1.25	12.4	16	20.6	28	54	28	13	86	5	34	40	40	12.6
DDKL2812																	
DDKL2821	250											111					
DDKL2822																	
DDKL3411	160	24	19	M10 × 1.5	14.5	19	24.4	34	60	33	15	111	6	46	51	46	12.6
DDKL3412																	
DDKL3421	280											146					
DDKL3422																	
DDKL4511	200	31	26	M12 × 1.75	19.5	26	32.4	45	78	42	20	152	10	59	38	60	17
DDKL4512																	
DDKL4521	310											198					
DDKL4522																	

Order Code × QTY
DDKL 2811 × 10sets

Feature:

1. this round latch locking units should be install inside the mold, Avoid clashing with outside parts or the waterway
2. Can also be used as Early return Ejector units.
3. Some important parts are made of SKD61, Provide good Lubricating while working, then it will be higher wear resistance and longer service life.
4. Three diameter sizes to choose from 28 mm, 34 mm, and 45 mm depending on the size of the mold and the application, Two travel ranges and two center puller pin lengths to choose from for each of the three sizes.

Example:



Mold closed | mold opening 1st time | mold opening 2nd time