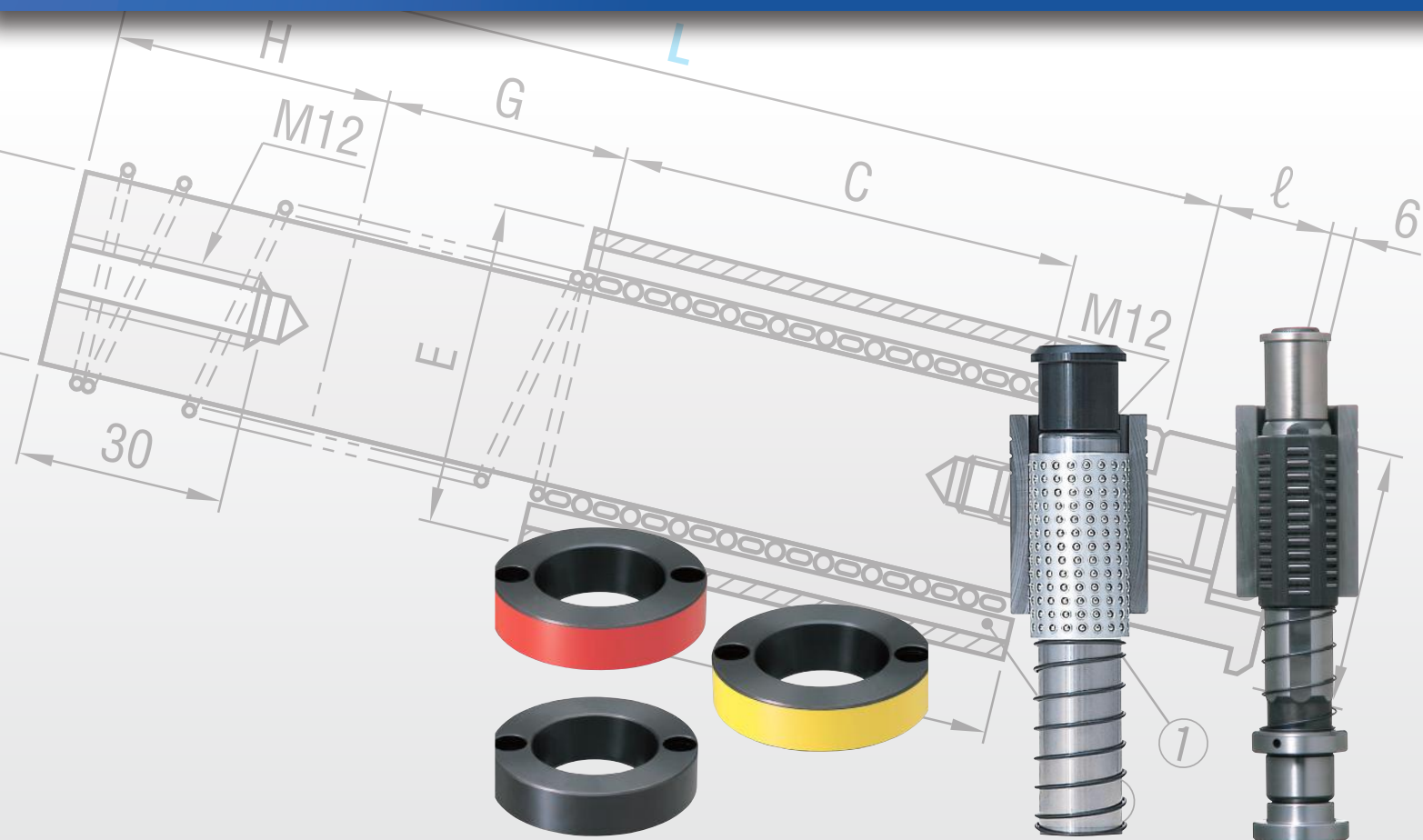




# BALL GUIDE POST SETS AND DISTANCE GUIDE RINGS



Product Range  
Die Sets



a MISUMI Group Company

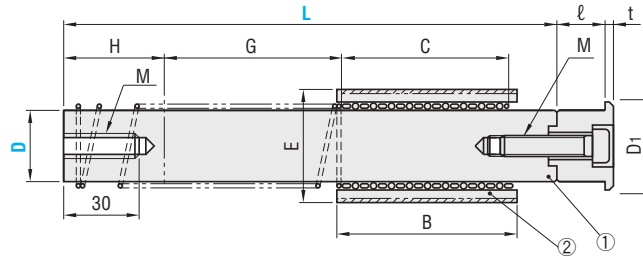
DAYTON PROGRESS  
We care about your time!



## PKHL PKHLU with Urethane



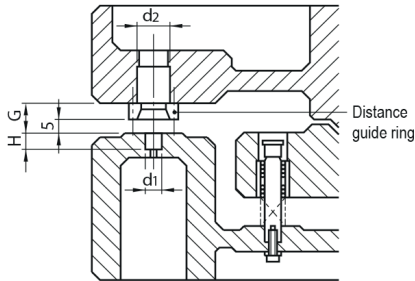
### For die guides



PKHL  
 ① ② **M** SUJ2 (EN 1.3505)  
**H** ~58 HRC

PKHLU  
 ① **M** SUJ2 (EN 1.3505)  
**H** ~58 HRC

② **M** SUJ2 (EN 1.3505)  
**H** ~58 HRC  
 Urethane  
 Shore A95



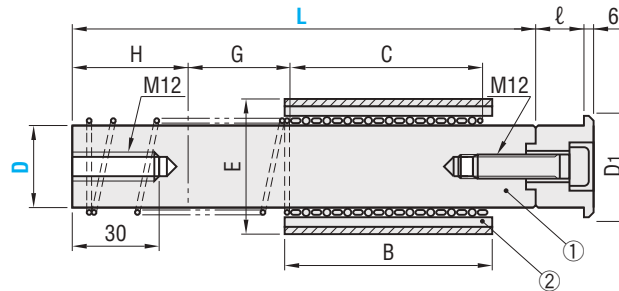
D	d1		E		d2	B	C	l	D1	G min.	H	Catalog No.		L 10mm increments	
	+0.030	+0.060	PKH	PKH-U								Type	D		
38	+0.030	+0.060	0	+0.1	+0.040	80	50	20	46	20	40	<b>PKH</b> <b>PKH-U</b>	38	130 - 160	
	+0.025	+0.040	-0.008				75	30						25	170 - 200
50	+0.035	+0.065	0	0	+0.045	100	60	20	58	30	50			50	150 - 190
			-0.010				90	30							200 - 240
60	+0.030	+0.045	95	0	+0.015	100	70	20	68	30	60			60	170 - 210
	+0.030	+0.045	-0.010				90	30							20
80	+0.035	+0.065	0	0	+0.045	100	90	20	88	20	80	80	260 - 300		
			-0.010				90	30					20	260 - 300	

d1 and d2 are the dimension tolerances for mounting hole machining as shown at the bottom of the page at left.

## PKH PKH-U with Urethane



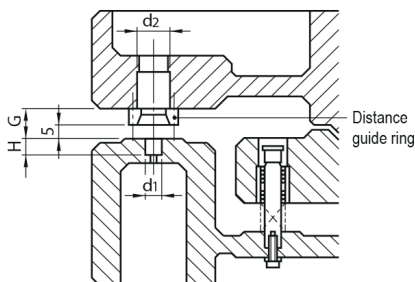
### For pads



PKHL  
 ① ② **M** SUJ2 (EN 1.3505)  
**H** ~58 HRC

PKHLU  
 ① **M** SUJ2 (EN 1.3505)  
**H** ~58 HRC

② **M** SUJ2 (EN 1.3505)  
**H** ~58 HRC  
 Urethane  
 Shore A95



D	d1		E		d2	B	C	l	D1	G min.	H	Catalog No.		L 10mm increments	
	+0.030	+0.060	PKH	PKH-U								Type	D		
38	+0.030	+0.060	0	+0.1	+0.040	80	50	20	46	20	40	<b>PKH</b> <b>PKH-U</b>	38	130 - 160	
	+0.025	+0.040	-0.008				75	30						25	170 - 200
50	+0.035	+0.065	0	0	+0.045	100	60	20	58	30	50			50	150 - 190
			-0.010				90	30							200 - 240
60	+0.030	+0.045	95	0	+0.015	100	70	20	68	30	60			60	170 - 210
	+0.030	+0.045	-0.010				90	30							20
80	+0.035	+0.065	0	0	+0.045	100	90	20	88	20	80	80	260 - 300		
			-0.010				90	30					20	260 - 300	

d1 and d2 are the dimension tolerances for mounting hole machining as shown at the bottom of the page at left.

Accessories see MISUMI main catalog p. 983





## Reduce man-hours (die costs) by using PKH pad guide systems

### Conventional pad guide systems

#### Slide plate system

Slide plates are generally used for the pad guides as shown below in medium and large press dies, including dies for automobile parts. However it is difficult to finish the sliding surfaces of these plates with precision.

Therefore when the die is assembled, the clearance must be measured and the slide plates must be adjusted.

However the use of NC systems for die machining has made high-precision machining of dies possible. When such high-precision dies are used, adjusting the slide plates may cause displacement of the die surfaces.

#### Plain guide post system

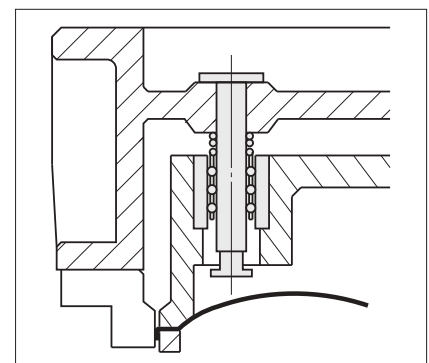
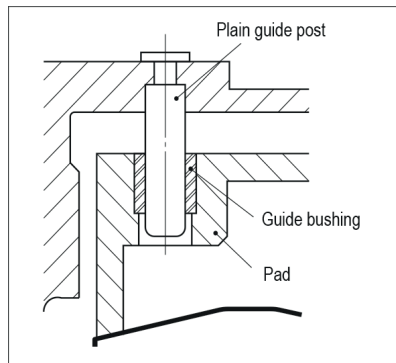
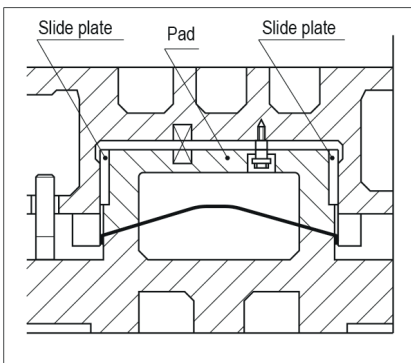
In addition to the slide plate system, plain guide posts are also used as pad guides. However, since most pads are not well-balanced, pad assembly and disassembly are troublesome tasks.

### Pad guide system using ball guide posts

The ball guide post system does not require man-hours for machining like the slide plate system. It also allows frequent die assembly and disassembly to be performed easily. Consequently, this system has significant benefits in terms of reducing machining man-hours and therefore die costs.

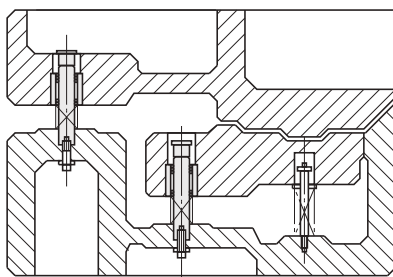
A 50% reduction in total costs (machining cost + part costs) compared with the slide plate system can be expected.

The system is also superior in terms of die setup workability and safety.



## Order examples of uses for ball guide posts

- Use for drawing dies or bending dies

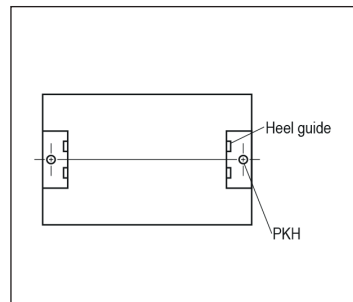


No slide plates are required

Except for the die guides of trimming dies and others which may be exposed to thrust, PKH-U and PKHLU provide greater durability.

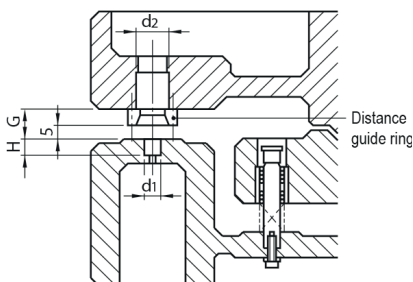
PKHLU is a thrust load absorbing type. It is particularly suitable for bending dies and drawing dies, and can absorb error resulting from machining.

- Use for die centering

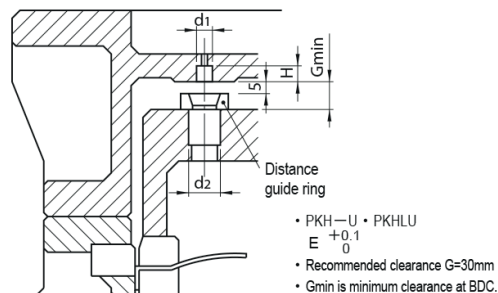


When used to center the upper and lower dies in a die set that uses heel guide plates, the PKH system ensures easy and correct die assembly and disassembly.

### Example of mounting machining - For die guide -



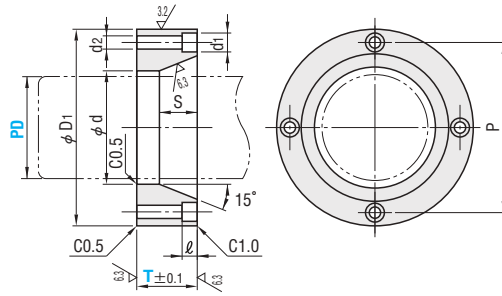
### Example of mounting machining - For pad -





# Distance guide rings

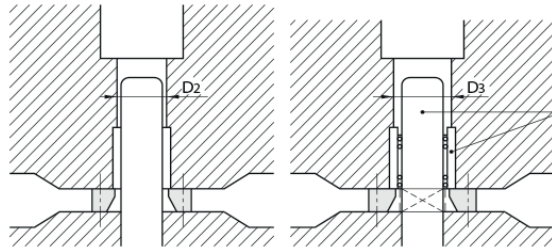
## HKD



Can be used for PKHL, PKHLU, PKH and PKH-U

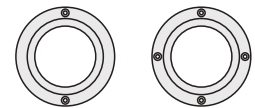
**PD:**  
Outside diameter of application post

**M** SS400  
**S** black oxide ( $Fe_3O_4$ )



Ball guide Post set

PD=38 · 50 · 60 PD=80 · 100



D1	d	P	S		d1	d2	l	D2	D3	Catalog No.		T 5mm increments	Color
			T = 25	T ≥ 30						Type	PD		
108	54	88	23	28	17.5	11	15	38	50	HKD	38	25 - 55	R (Rot) Y (Gelb) N (Normal)
118	64	98						50	60		50		
148	84	126						60	80		60		
168	104	146						80	100		80		
188	124	166						100	-		100		

N (Normal) exterior is black oxide ( $Fe_3O_4$ )

Further version:  
<http://de.misumi-ec.com/>

Roller guide post sets for die sets



Ball guide post sets for high-rigidity die sets



Ball guide post sets for die sets



DAYTON PROGRESS

a MISUMI Group Company



MISUMI

DAYTON PROGRESS GmbH  
Adenauerallee 2  
61440 Oberursel | Germany  
Tel. +49 (0)6171 9242 01  
Fax +49 (0)6171 9242 20  
info@daytonprogress.de

www.daytonprogress.de  
www.misumi-europe.com/de