



Quick Die Change Systems

Exclusive and Additional Products

The Best Solutions for Your Needs



KOSMEK Quick Die Change Systems

The Best Solutions for Your Needs

Hydraulic Clamp

T-Slot Automatic Slide

Model GY1090

Hydraulic Clamp that Slides Automatically on the T-slot
Protrusion from the Press Slide is **Less than Half of the Standard Model**



► P.03

Hydraulic Clamp

Without T-Slot Manual Slide

Model GP-Z

The clamp can slide manually between the fixed blocks in order to **avoid interference with the die** when loading/unloading.



► P.05

Hydraulic Clamp

Swing Lever

Model GY1310

Swing the Lever 90° by Hand
No Interference with the Die when Loading/Unloading



► P.07

Hydraulic Hollow Cylinder

Bolt Fastening

Model DY1700

Fasten the Die Mounting Bolts with Hydraulic Force
Suitable for Unreachable or Non-visible Places



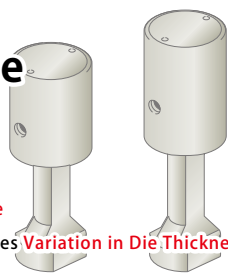
► P.09

Hydraulic Clamp

Long Stroke

Model GA-S

Clamps the U-cut of the Die
Longer Stroke Clamp Enables **Variation in Die Thickness**



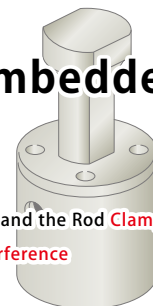
► P.11

Hydraulic Clamp

Cylinder Embedded

Model GA-F1

The Cylinder is Embedded and the Rod **Clamps the U-cut**
Space Saving with No Interference



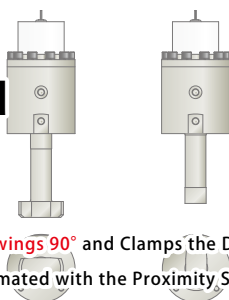
► P.12

Hydraulic Clamp

Swing Rod

Model GY1400

The Rod Automatically Swings 90° and Clamps the Die
The Die Clamps are Automated with the Proximity Switch



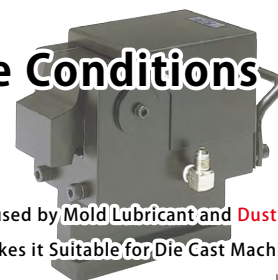
► P.13

Hydraulic Clamp

Extreme Conditions

Model GB-Y

Resists Rusting Caused by **Mold Lubricant and Dust**
High Durability Makes it Suitable for Die Cast Machines



► P.15

<http://www.kosmek.co.jp>

This catalog shows just a small portion of KOSMEK products.
We have various types of hydraulic and pneumatic products.
Please let us know your requirements, and we will make it happen.

Pneumatic Clamp

Model HC/HB/HE

The Same Force as a Hydraulic Clamp, Even with Air Pressure
Suitable for Environments where Low Vibration is Needed

► P.17

Hydraulic Clamp

For Knockout Rod

Model PPK

Fasten the Knockout Rod with Hydraulic Force
Manual Fastening is not Required, Saving Time and Ensuring Safety

► P.19

Multi-Load Model

Overload Protector

Model PV/PW

For Use on Unbalanced Loads of 2-point and 4-point Presses
Instant Response Prevents Damage to Presses or Dies

► P.21

Auto Coupler

Model JY

Automation of Connecting Circuit
Suitable for Fluid Supply to Moving Bolsters

► P.23

Pneumatic Double Action

Robotic Hand Changer

Model SWR

For Changing Workpiece Transfer Arms in the Automatic Press Line
High Accuracy: Within $3\mu\text{m}$, High Rigidity: "0" Backlash,
Long Life: A Million Cycles

► P.25

Screw Locator

High Accuracy Locating Pin

Model VXF

High Accuracy Die Locating with a Simple Manual Setup
Locating Repeatability: Within $3\mu\text{m}$

► P.27

Clamp

T-Slot
Automatic Slide
Clamp

Without T-Slot
Manual Slide
Clamp

Swing Lever
Clamp

Bolt Fastening
Clamp

Long Stroke
Clamp

Cylinder
Embedded
Clamp

Cylinder
Embedded Clamp
with Swing Rod

Extreme
Conditions Clamp

Pneumatic Clamp

Knockout Rod
Clamp

Overload
Protector

Auto Coupler

Robotic Hand
Changer

High Accuracy
Locating Pin

Hydraulic Clamp

T-Slot Automatic-Slide

Model GY1090



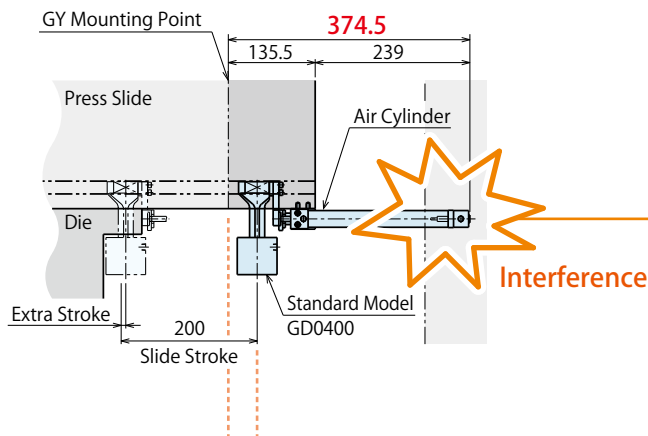
Hydraulic Clamp that Slides Automatically on the T-slot
Protrusion from the Press Slide is **Less than Half of the Standard Model**

Problem

The air cylinder of the automatic-slide clamp **interferes with** surrounding objects due to its length.

Before

Hydraulic clamp slides automatically with an air cylinder.



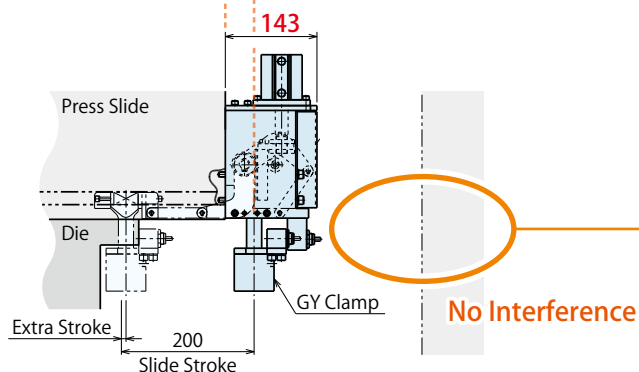
Problem

The air cylinder protrudes excessively from the press slide.

Results in Interference

After

GY Clamp: Hydraulic clamp slides automatically with an air cylinder and link function.



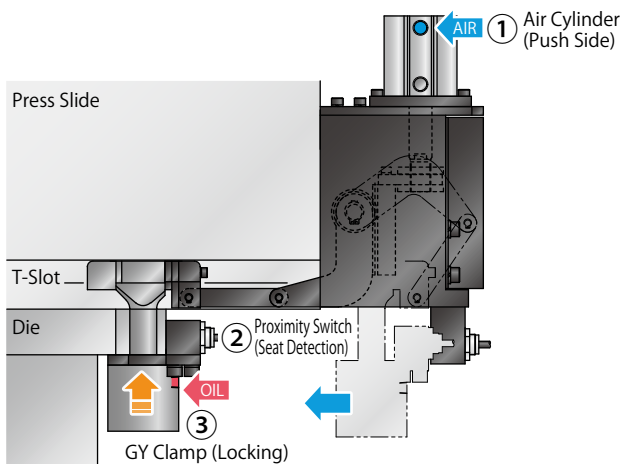
Solution

Protrusion is less than half compared to the standard model.

No Interference

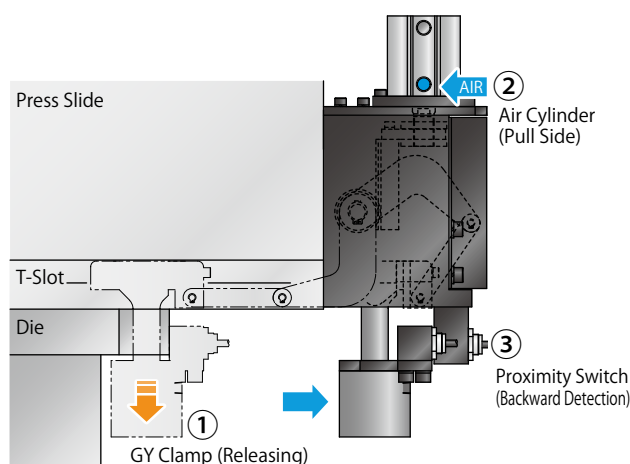
Action Description

Locking Action



- ① Supply air to push side of the air cylinder
⇒ Clamp moves forward until it contacts with the die.
- ② Proximity switch detects the seating of the die.
- ③ Supply hydraulic pressure.
⇒ Clamps the die (U-slot)

Releasing Action



- ① Release hydraulic pressure.
⇒ Clamp releases the die with built-in spring force.
- ② Supply air to pull side
⇒ Clamp moves backward.
- ③ Proximity switch detects that clamp moved backward.

Specifications

Model No.	GY1090
Clamping Force (Hydraulic Pressure at 24.5 MPa) kN	39.2
Full Stroke mm	8
Clamping Stroke mm	5
Extra Stroke mm	3
Slide Stroke mm	200
Cylinder Capacity (at Full Stroke) cm ³	13
Operating Pressure MPa	24.5
Maximum Operating Pressure MPa	27.0
Withstanding Pressure MPa	36.8
Operating Temperature °C	0 ~ 70
Use Frequency ※1	Less than 20 cycles/day

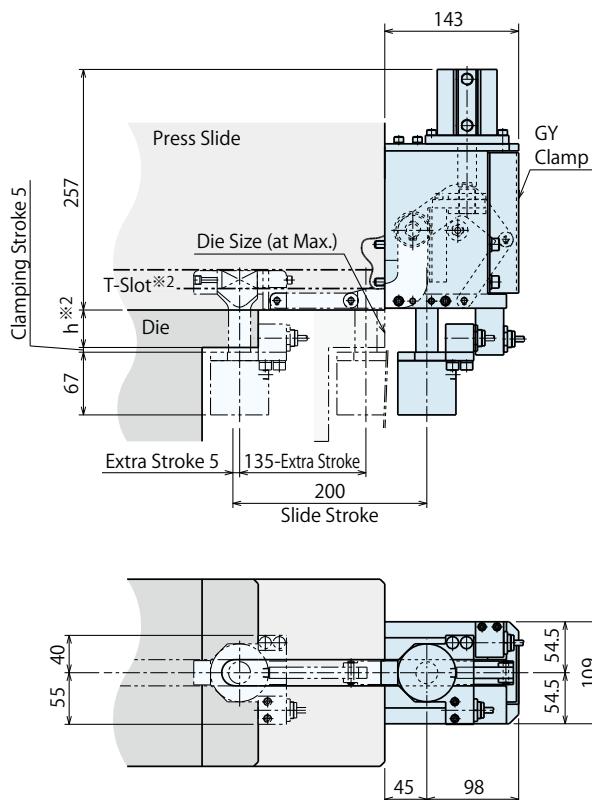
Note

※ 1. Please contact us for more frequent use.

GY1090 is just one example.
Other clamping force and slide strokes
are available upon request. Please
contact us for further information.
www.kosmek.co.jp

External Dimensions

This drawing briefly shows the dimensions of GY1090.
 Please contact us for further information.



※ 2. We produce GY clamps according to the die thickness of the clamping part's 'h' and T-slot dimensions.

Clamp

T-Slot
Automatic Slide
Clamp

Without T-Slot
Manual Slide
Clamp

Swing Lever
Clamp

Bolt Fastening
Clamp

Long Stroke
Clamp

Cylinder
Embedded
Clamp

Cylinder
Embedded Clamp
with Swing Rod

Extreme
Conditions Clamp

Pneumatic Clamp

Knockout Rod
Clamp

Overload
Protector

Auto Coupler

Robotic Hand
Changer

High Accuracy
Locating Pin

Hydraulic Clamp

Without T-Slot • Manual-Slide

Model GP-Z



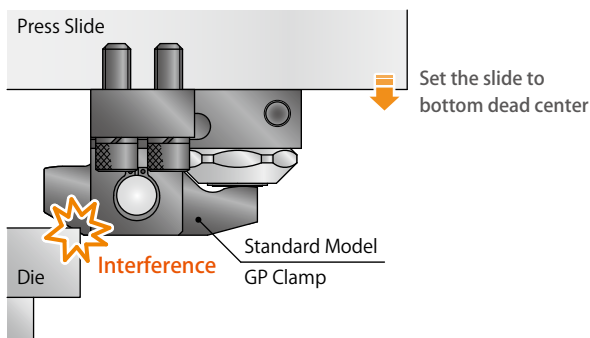
The clamp can slide manually between the fixed blocks in order to **avoid interference** with the die when loading.

Problem

The lever of the fixed clamp **interferes with the die** when loading/unloading.

Before

Using a bolted fixed clamp.



Problem

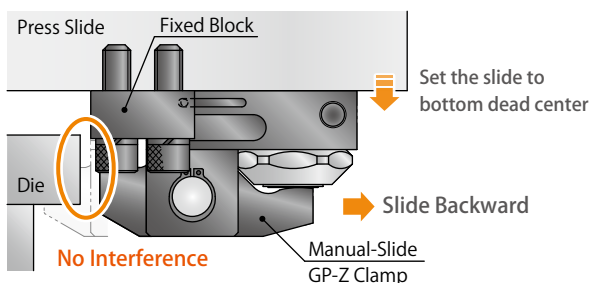
When loading the die and setting the press slide to bottom dead center,

clamp interferes with the die.

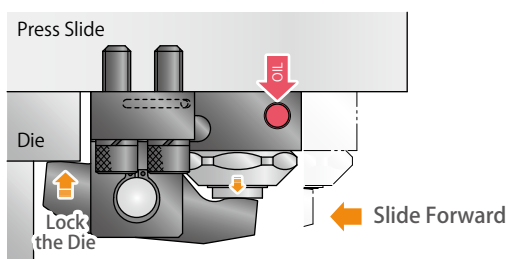
After

Manual-Slide Model: Bolt Fixed + Manual Slide: Clamp can slide between the fixed blocks.

- ① When loading the die, move the hydraulic clamp backward.



- ② After loading the die, move the hydraulic clamp forward.



Solution

When loading/unloading,
move the clamp backward

No Interference

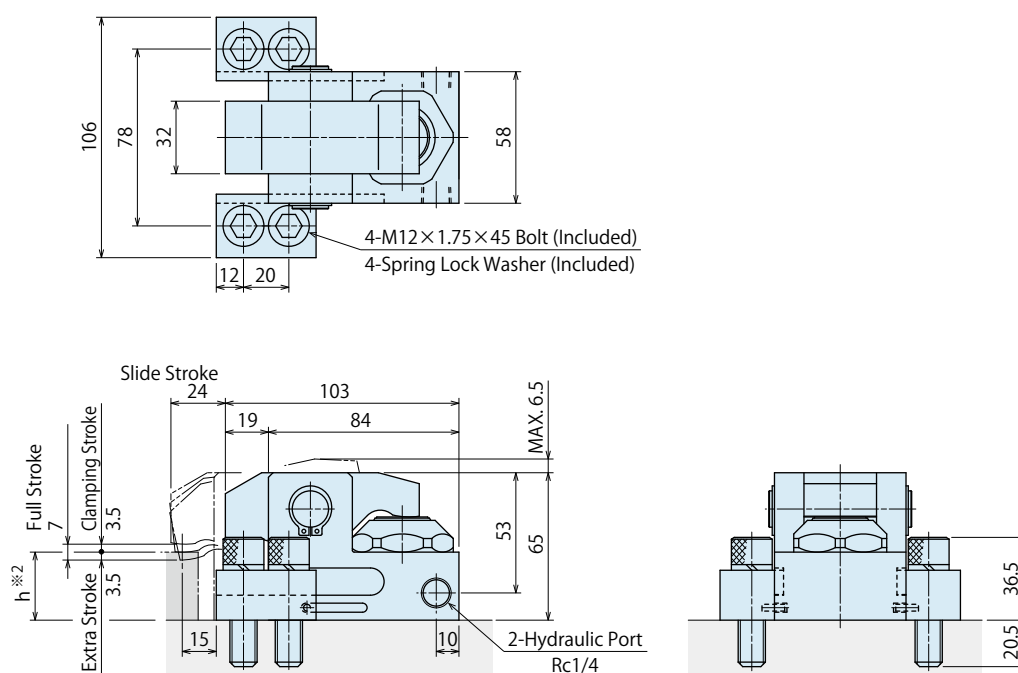
Specifications

Model No.		GP0100-Z	GP0160-Z	GP0250-Z	GP0400-Z	GP0630-Z	GP1000-Z	GP1600-Z
Clamping Force	kN	9.8	15.7	24.5	39.2	61.7	98	157
Operating Pressure	MPa	24.5 (For Rated Clamp Force)						
Maximum Operating Pressure	MPa	27.0						
Withstanding Pressure	MPa	36.8						
Full Stroke	mm	6	7	7	7	8	8	8
Clamp Stroke	mm	3	3.5	3.5	3.5	4	4	4
Extra Stroke	mm	3	3.5	3.5	3.5	4	4	4
Slide Stroke	mm	Please contact us.						
Cylinder Capacity (at Full Stroke)	cm ³	2.5	4.8	7.2	11.9	21.6	34.7	55.2
Operating Temperature	°C	0~70 (V: High temperature option is available for 0~120°C)						
Use Frequency ※1		Less than 20 cycles / day						

Note ※1. Please contact us for more frequent use.

External Dimensions

This drawing briefly shows the dimensions of GP0250-Z with an option of 24mm slide stroke.
 Please contact us for other specifications.



※2. We produce hydraulic clamps according to the die thickness of the clamping part's 'h' and T-slot dimensions.

This is just one example of the exclusive products we produced in the past.
 Other sizes and slide strokes are available upon request.
 We also offer an automatic slide clamp with air cylinder.
 Please contact us for further information. www.kosmek.co.jp

Clamp

T-Slot
Automatic Slide
Clamp

Without T-Slot
Manual Slide
Clamp

Swing Lever
Clamp

Bolt Fastening
Clamp

Long Stroke
Clamp

Cylinder
Embedded
Clamp

Cylinder
Embedded Clamp
with Swing Rod

Extreme
Conditions Clamp

Pneumatic Clamp

Knockout Rod
Clamp

Overload
Protector

Auto Coupler

Robotic Hand
Changer

High Accuracy
Locating Pin

Hydraulic Clamp

Swing Lever

Model GY1310



Swing the Lever 90° by Hand

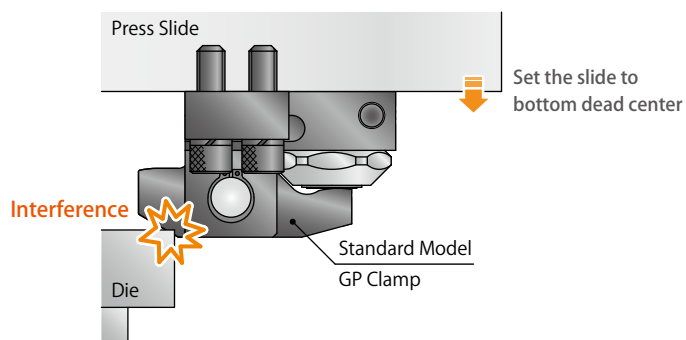
No Interference with the Die when Loading/Unloading

Problem

The lever of the fixed clamp **interferes with** the die when loading/unloading.

Before

Using a bolted fixed clamp.



Problem

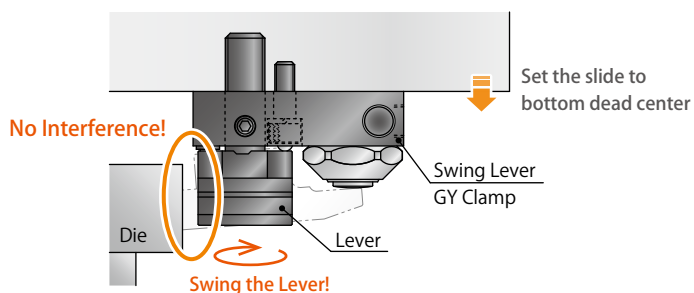
When loading the die and setting the press slide to bottom dead center,

clamp interferes with the die.

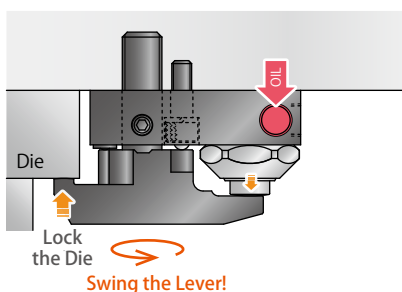
After

Swing Lever Model: Bolt-Fixed + Manual Swing Lever

① When loading the die, swing the clamp lever to avoid interference with the die.



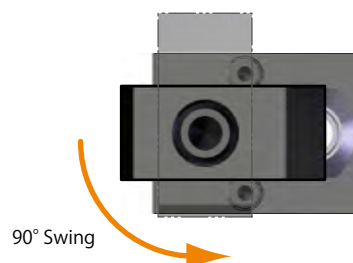
② After loading the die, swing the clamp lever over the die.



Solution

When loading/unloading,
swing the lever 90°

No Interference



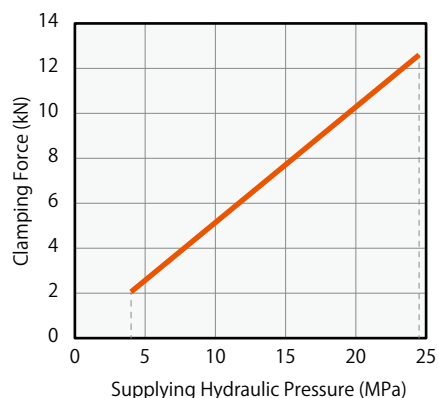
Specifications

Model No.		GY1310-35
Clamping Force (Hydraulic Pressure at 24.5 MPa)	kN	12.6
Full Stroke	mm	5
Clamping Stroke	mm	3
Extra Stroke	mm	2
Cylinder Capacity (at Full Stroke)	cm ³	2.7
Operating Pressure	MPa	24.5
Maximum Operating Pressure	MPa	27.0
Withstanding Pressure	MPa	36.8
Operating Temperature	°C	0 ~ 70

Note

1. Clamping force graph shows the calculated value.

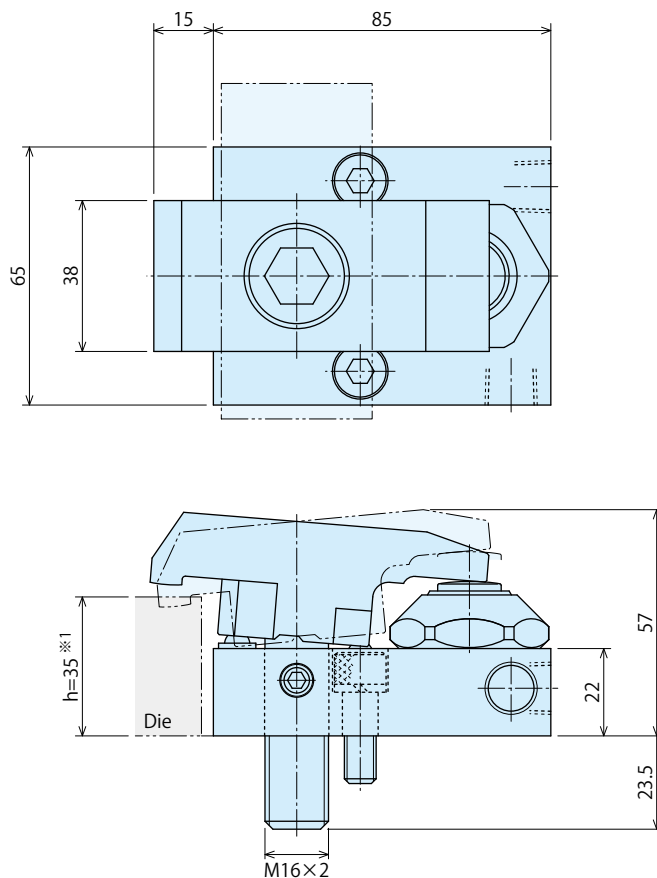
Clamping Force Graph



External Dimensions

Notes

2. This drawing briefly shows the dimensions of GY1310-35. Please contact us for more detailed dimensions.
3. This drawing shows the released position.
4. Lever swings 90° both left and right.



※1. We produce hydraulic clamps according to the die thickness of the clamping part's 'h' and T-slot dimensions.

GY1310 is just one example of the exclusive products we produced in the past.
 Please contact us for other specifications and dimensions. www.kosmek.co.jp

Clamp

T-Slot
Automatic Slide
Clamp

Without T-Slot
Manual Slide
Clamp

Swing Lever
Clamp

Bolt Fastening
Clamp

Long Stroke
Clamp

Cylinder
Embedded
Clamp

Cylinder
Embedded Clamp
with Swing Rod

Extreme
Conditions Clamp

Pneumatic Clamp

Knockout Rod
Clamp

Overload
Protector

Auto Coupler

Robotic Hand
Changer

High Accuracy
Locating Pin

Hydraulic Hollow Cylinder

Bolt Fastening

Model DY1700



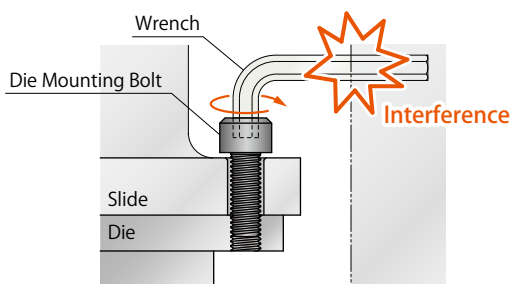
The Solution to **Bad Work Conditions** and **Limited Space**
Refastening of the Die Mounting Bolt is not Required

Problem

Unable to fasten the mounting bolt due to limited work space.

Before

Die mounting method with bolts: Fasten the bolt with a wrench.



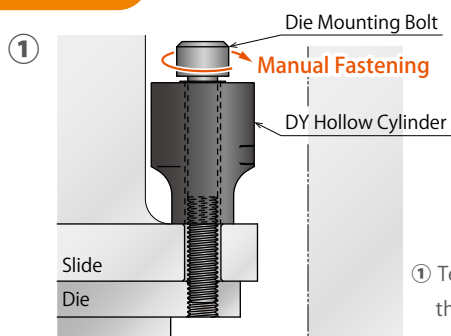
Problem

No space available to fasten the bolt.
Needs to be fastened in bad work conditions.

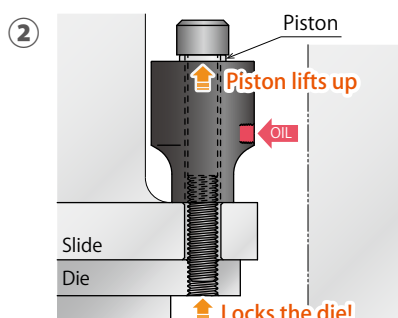
Dangerous and Inefficient

After

Die mounting method with DY Hollow Cylinder: Pull the bolt with hollow cylinder.



① Temporarily fasten the bolt by hand.



② The piston lifts up with hydraulic pressure, pulls the bolt, and locks the die.

Solution

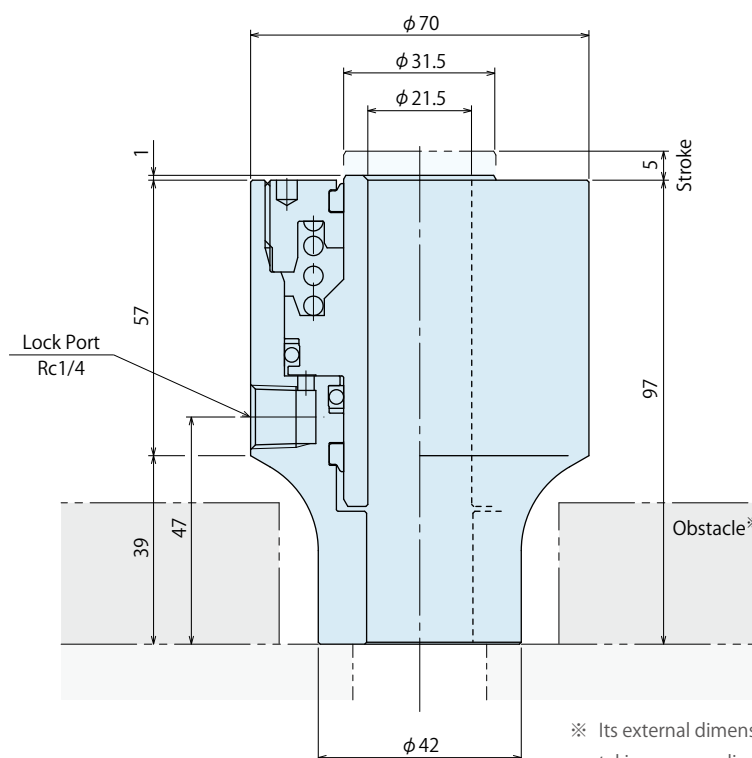
Even if there is no space,
it is easy to lock the die
with constant force.

Safe and Efficient

Specifications

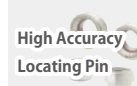
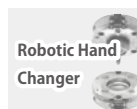
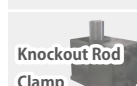
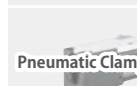
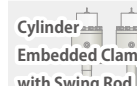
Model No.		DY1700
Cylinder Output Force (Hydraulic Pressure at 25.0MPa) kN		40.0
Stroke	mm	5
Effective Area	cm ²	16.8
Maximum Operating Pressure	MPa	25.0
Withstanding Pressure	MPa	37.5
Cylinder Capacity	cm ³	32.4
Return Spring Force	kN	0.39 ~ 0.45
Operating Temperature	°C	0 ~ 70

External Dimensions



DY1700 is just one example of the exclusive products we produced in the past. Special specifications of the cylinder output force, bolt size and external dimensions are available. **Thinner type** with equivalent force is also available. Please contact us for further information. www.kosmek.co.jp

Clamp



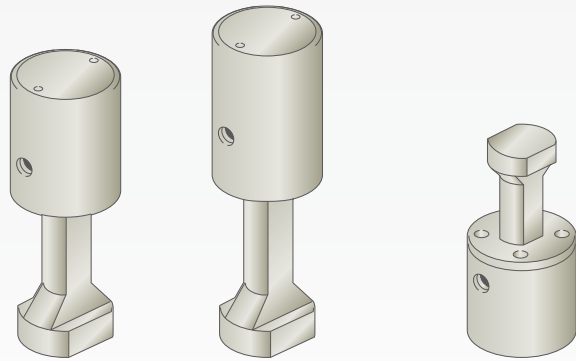
Hydraulic Clamp

Long Stroke

Model GA-S

Cylinder Embedded

Model GA-F1



Clamps the U-cut of the Die

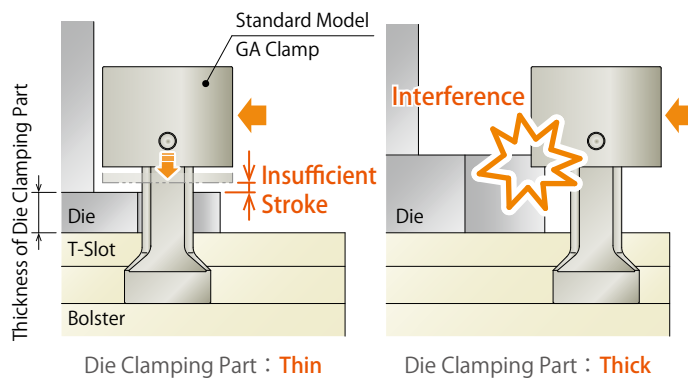
Longer Stroke Clamp Enables **Variation in Die Thickness**

Problem

Using hydraulic clamps for a variety of dies with different thicknesses.

Before

Short Stroke (Full Stroke 8mm), Compact Model



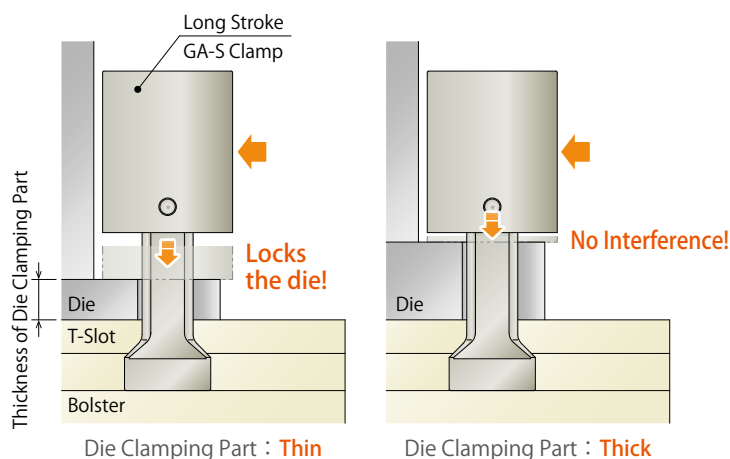
Problem

With standard stroke,

thickness of die clamping part must be standardized.

After

GA Clamp Long Stroke Model (-S1 : Full Stroke 12.5mm, -S2 : Full Stroke 20mm)



Solution

With a longer stroke,

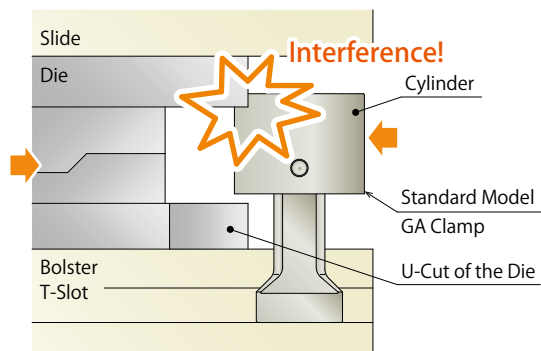
able to clamp a variety of dies with different thicknesses.

Problem

GA clamp **interferes with** the die due to insufficient space around the U-cut of the die.

Before

The cylinder of the clamp locks the die.



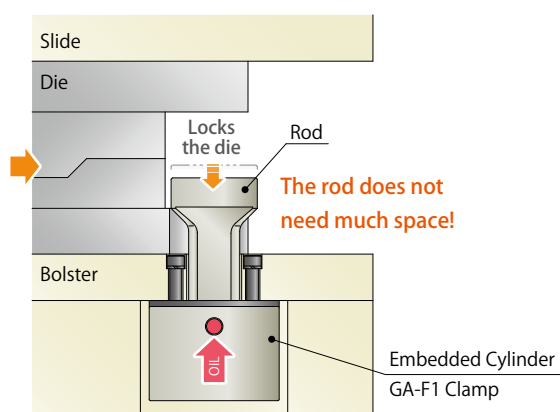
Problem

No space available around the U-cut.
The cylinder of the clamp is large.

Interferes with the Die

Embedded Cylinder

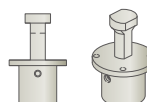
The cylinder of the clamp is embedded and locks the die with the rod.



Improvement

With embedded cylinder,

there is no interference.



Frang model is also available.
Model GA-F2

Specifications

Model No.	Long Stroke (GA□-S1、GA□-S2)								Embedded Cylinder (GA□-F1)			
	GA0100 -S1(-S2)	GA0160 -S1(-S2)	GA0250 -S1(-S2)	GA0400 -S1(-S2)	GA0630 -S1(-S2)	GA1000 -S1(-S2)	GA1600 -S1(-S2)	GA2500 -S1(-S2)	GA0250 -F1	GA0400 -F1	GA0630 -F1	GA1000 -F1
Clamping Force (Hydraulic Pressure at 24.5 MPa) kN	9.8	15.7	24.5	39.2	61.7	98	157	245	24.5	39.2	61.7	98
Full Stroke mm	-S1:12.5 -S2:20								8			
Clamping Stroke mm	-S1:10.5 -S2:18	-S1: 9.5 -S2:17							5			
Extra Stroke mm	2	3							3			
Operating Pressure MPa	24.5											
Maximum Operating Pressure MPa	27.0											
Withstanding Pressure MPa	36.8											
Operating Temperature °C	0 ~ 70											
Use Frequency ※ ¹	Less than 20 cycles/day											

Note ※1. Please contact us for more frequent use.

We offer a wide range of options for the GA clamp.

Please visit our website (www.kosmek.co.jp), view the complete catalog (Catalog No.QDCS20□-□-GB), or contact us for more details on specifications and dimensions.

Clamp

T-Slot
Automatic Slide
Clamp

Without T-Slot
Manual Slide
Clamp

Swing Lever
Clamp

Bolt Fastening
Clamp

Long Stroke
Clamp

Cylinder
Embedded
Clamp

Cylinder
Embedded Clamp
with Swing Rod

Extreme
Conditions Clamp

Pneumatic Clamp

Knockout Rod
Clamp

Overload
Protector

Auto Coupler

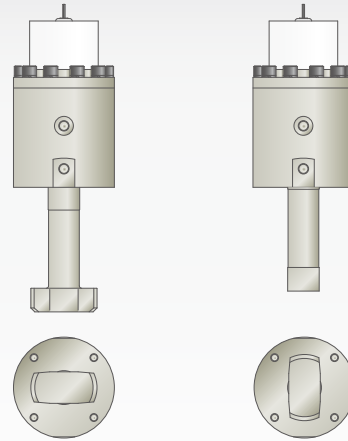
Robotic Hand
Changer

High Accuracy
Locating Pin

Hydraulic Clamp

Swing Rod

Model GY1400



The Rod Automatically Swings 90° and Locks the Die

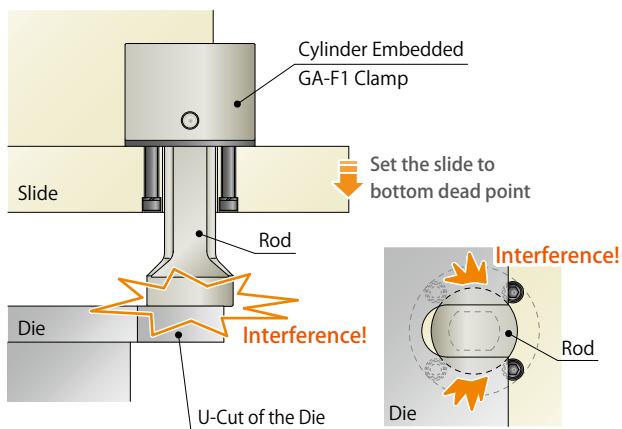
The Die Clamps are Automated with the Proximity Switch

Problem

The rod of the cylinder embedded clamp **interferes with** the die when loading/unloading.

Before

Locking the die with the rod of the cylinder embedded clamp.



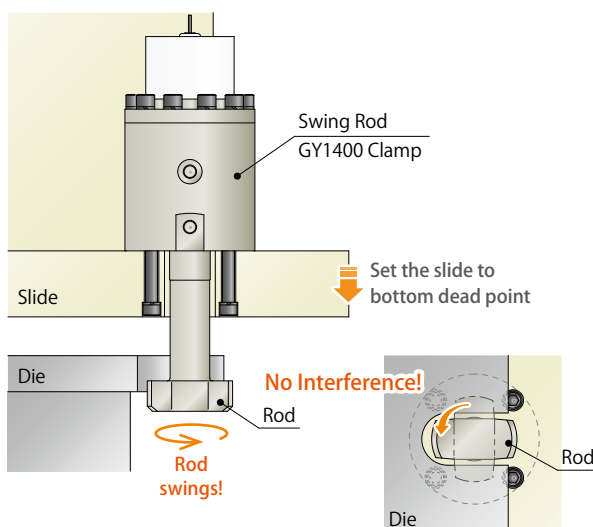
Problem

When loading the die and setting the press slide to bottom dead point,

the rod interferes with the die.

After

Swing Rod Model: The rod automatically swings 90° to avoid interference with the die when loading/unloading.



Solution

When loading/unloading, rod swings 90° automatically.

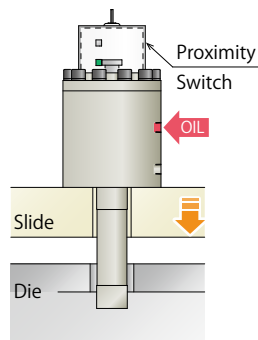
Able to Avoid Interference

Note

If hydraulic supply is shut down when using the swing rod clamp for the upper die, the clamp operates in released action and the die may drop off. Please be sure to prepare safety measures. (Ex. Cross circuit)

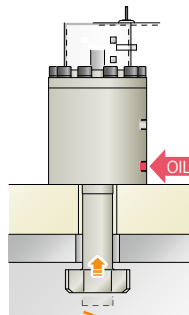
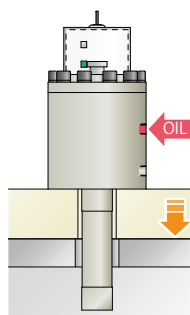
Action Description

Hydraulic Pressure for Locking	OFF	ON (Pressure rising)	ON (Pressurization completed)
Hydraulic Pressure for Releasing	ON	OFF	OFF
Proximity Switch for Locking	OFF	OFF	ON
Proximity Switch for Releasing	ON	OFF	OFF



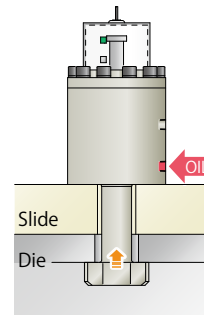
Released Condition

Set the slide to bottom dead center.



Swings 90° as it Strokes

After swing action is completed, it starts locking the die.



Clamped Condition

Die clamping is completed.

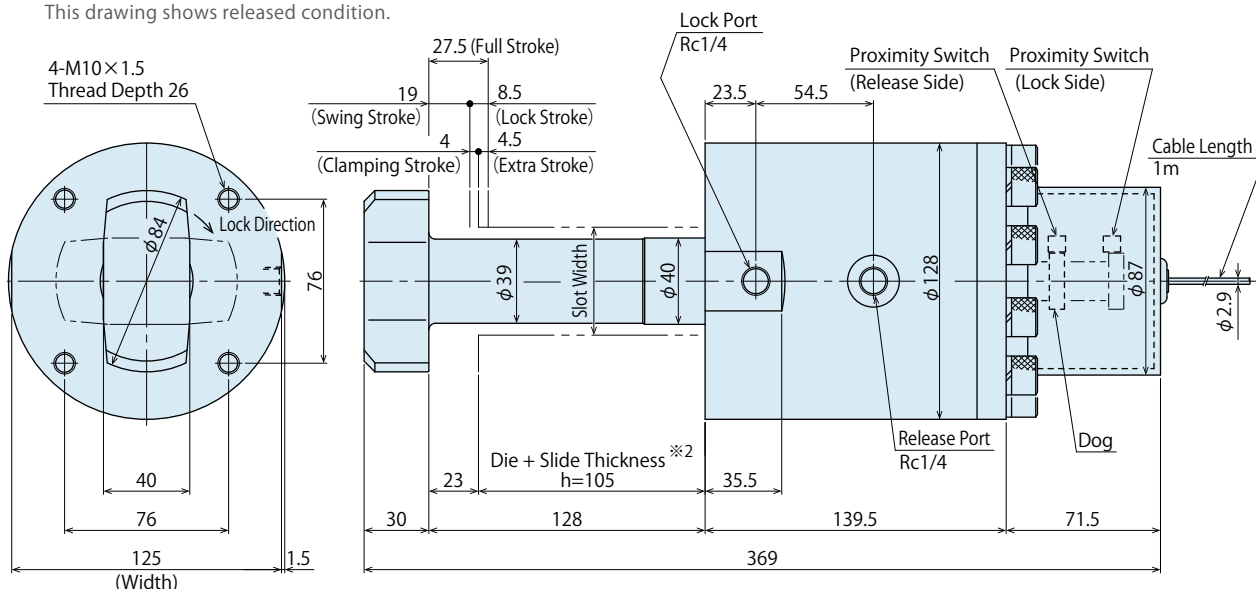
Specifications

Model No.		GY1400
Clamping Force (Hydraulic Pressure at 24.5 MPa) kN		100
Cylinder Area for Locking cm ²		44.2
Full Stroke mm		27.5
Swing Stroke (90°) mm		19
Lock Stroke mm		8.5
Swing Angle Accuracy		90° ± 3°
Cylinder	For Locking cm ³	121.5
Capacity	For Releasing cm ³	149.1
Operating Pressure MPa		24.5
Operating Temperature °C		0 ~ 70
Use Frequency ※ ¹		Less than 20 cycles/day

Note ※1. Please contact us for more frequent use.

External Dimensions

This drawing shows released condition.



※2. We produce the hydraulic clamp based on the thickness of the die clamping part's 'h' and slide dimensions.

GY1400 is just one example of products we have produced in the past.
Please contact us for GY clamps with other specifications and dimensions.
www.kosmek.co.jp

Clamp

T-Slot
Automatic Slide
Clamp

**Without T-Slot
Manual Slide
Clamp**

**Swing Lever
Clamp**

**Bolt Fastening
Clamp**

Long Stroke
Clamp

**Cylinder
Embedded
Clamp**



**Cylinder
Embedded Clamp
with Swing Rod**

**Extreme
Conditions Clamp**

Pneumatic Clamp

Knockout Rod
Clamp



Overload Protector

Auto Coupler

Robotic Hand Changer

**High Accuracy
Locating Pin**

Hydraulic Clamp

Extreme Conditions

Model GB-Y

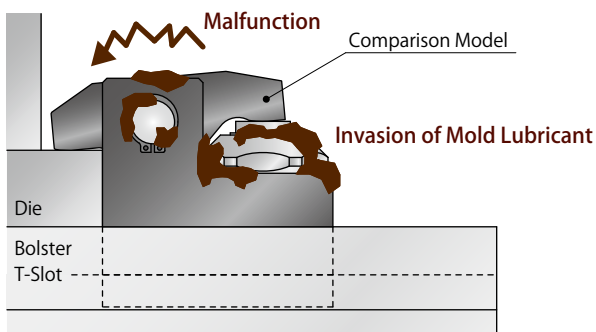


Resists Rusting Caused by Mold Lubricant and **Dust**
High Durability Makes it Suitable for Diecast Machines

Problem

Working under conditions where mold lubricant for the hot forging press machine is used.

Before



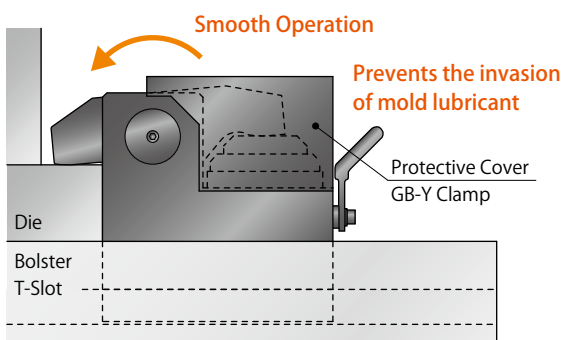
Problem

Mold lubricant and dust.

Malfunctions

After

Extreme Conditions Model: It prevents any foreign substances from entering into the clamp.



Solution

Our exclusive sealing technique
prevents rusting.

No Malfunction

Features

Protective Cover

Keeps out mold lubrication and dust that cause malfunctions.

Anaerobically-Sealed Cylinder

Prevents entry of foreign substances into the cylinder.

Special Coating

Special coating on the lever and body prevents rust caused by mold lubricant.

Rotary Shaft Special Sealing

Two kinds of sealings prevent malfunctions mainly caused by mold lubricant and dust. Special sealings also ensure proper operation by keeping the rotary shaft free of rust.

Specifications

Model No.	GB0400-Y	GB0630-Y	GB1000-Y	GB1600-Y
Clamping Force (Hydraulic Pressure at 24.5 MPa) kN	32.3	50.0	93.1	137
Clamping Capacity (Hydraulic Pressure at 24.5 MPa) ※1 kN	39.2	61.7	98.0	157
Full Stroke mm	7	8	8	8
Clamping Stroke mm	2	2	2	2
Extra Stroke mm	5	6	6	6
Cylinder Capacity (at Full Stroke) cm ³	9.7	17.5	32.5	48.1
Operating Pressure MPa	24.5			
Maximum Operating Pressure MPa	27.0			
Withstanding Pressure MPa	36.8			
Operating Temperature °C	0 ~ 120			
Use Frequency ※2	Less than 20 cycles/day			

Notes ※1. Clamping capacity indicates the force that applies opposite to the mold releasing force.

※2. Please contact us for more frequent use.

We offer a wide range of options for the extreme conditions clamp.
Please visit our website (www.kosmek.co.jp), view our catalog or contact us for detailed specifications and external dimensions.

Clamp

T-Slot
Automatic Slide
Clamp

Without T-Slot
Manual Slide
Clamp

Swing Lever
Clamp

Bolt Fastening
Clamp

Long Stroke
Clamp

Cylinder
Embedded
Clamp

Cylinder
Embedded Clamp
with Swing Rod

Extreme
Conditions Clamp

Pneumatic Clamp

Knockout Rod
Clamp

Overload
Protector

Auto Coupler

Robotic Hand
Changer

High Accuracy
Locating Pin

Pneumatic Clamp

Fixed

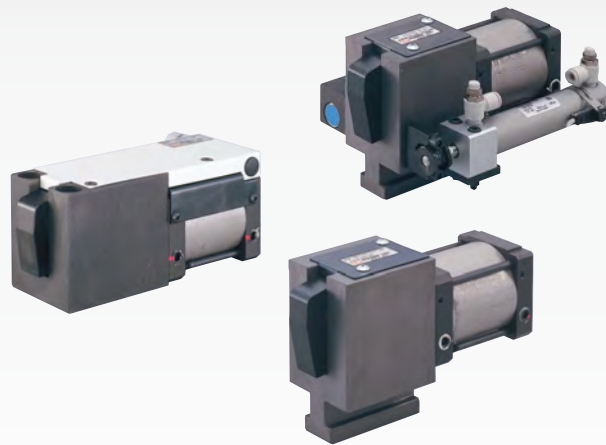
Model **HC**

Manual-Slide

Model **HB**

Automatic-Slide

Model **HE**



The Same Force as a Hydraulic Clamp, Even with Air Pressure
Suitable for Environments where Low Vibration is Needed

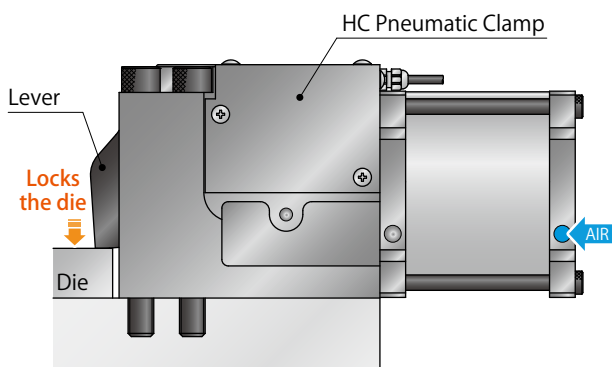
Problem

Using automated clamps **without hydraulic pressure.**

Pneumatic Clamp

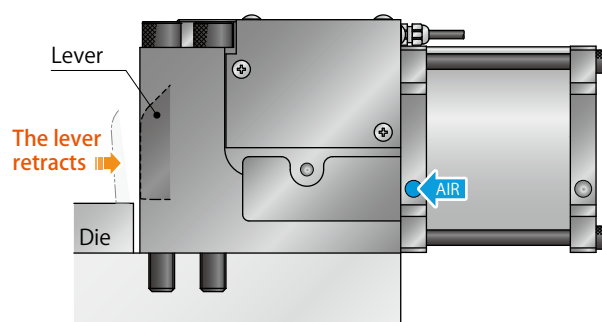
Mechanical locking system allows pneumatic clamps to exert the same clamping force as hydraulic clamps.

Locking Action



The lever clamps the die
by supplying air pressure to lock port.

Releasing Action



The lever retracts into the clamp
by supplying air pressure to release port.

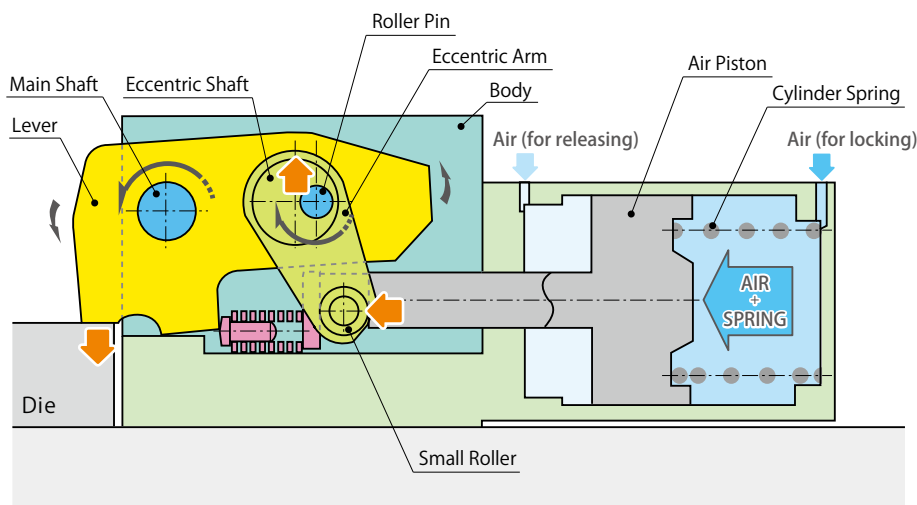
Solution

Pneumatic clamps for conditions where vibration needs to be at a minimum.

No Manual Fastening or Hydraulic Systems Required

Internal Structure

Exert the same clamping force as hydraulic clamps with mechanical lock + air pressure + spring force.



Spring force maintains locking of the die even when air pressure is cut off.

Specifications

Model No.			HC0102	HC0162	HC0253	HC0403	HC0633	HC1003	HC1603	HC2503		
Clamping Force			kN	9.8	15.7	24.5	39.2	61.7	98	157	245	
Retaining Force	Air Pressure at 0.39 MPa	kN	9.8	15.7	24.5	39.2	61.7	98	157	245		
	Air Pressure at 0 MPa	kN	2.9	5.9	7.8	11.8	17.6	26.5	40.9	65		
Clamping Force	Air Pressure at 0.49 MPa	kN	7.8	13.7	19.6	31.4	48	75.5	124	190		
	Air Pressure at 0.39 MPa	kN	6.9	11.8	16.7	26.5	41.2	63.7	104	160		
	Air Pressure at 0 MPa	kN	2	2.9	4.9	6.9	9.8	14.7	23.5	35		
Full Stroke			mm	2	2	2.1	2.3	2.6	2.8	3	3.3	
Clamping Stroke			mm	1	1	1	1.1	1.2	1.2	1.2	1.3	
Extra Stroke			mm	1	1	1.1	1.2	1.4	1.6	1.8	2	
Air Cylinder Capacity	For Locking	cm ³	56	94	144	259	444	773	1334	2468		
	For Releasing	cm ³	52	88	135	244	416	729	1262	2346		
Air Pressure	Normal (Recommended)	MPa	0.49									
	Minimum	MPa	0.39									
Operating Temperature			℃	0 ~ 70								
Use Frequency ※ ¹			Less than 20 cycles/day									

Note ※1. Please contact us for more frequent use.

We also offer pneumatic auto-sliding T-slot clamps.

Please visit our website (www.kosmek.co.jp), view our catalog

or contact us for more detailed specifications and external dimensions.

Clamp

T-Slot
Automatic Slide
Clamp

Without T-Slot
Manual Slide
Clamp

Swing Lever
Clamp

Bolt Fastening
Clamp

Long Stroke
Clamp

Cylinder
Embedded
Clamp

Cylinder
Embedded Clamp
with Swing Rod

Extreme
Conditions Clamp

Pneumatic Clamp

Knockout Rod
Clamp

Overload
Protector

Auto Coupler

Robotic Hand
Changer

High Accuracy
Locating Pin

Hydraulic Clamp

For Knockout Rod

Model PPK



Fasten the Knockout Rod with Hydraulic Force

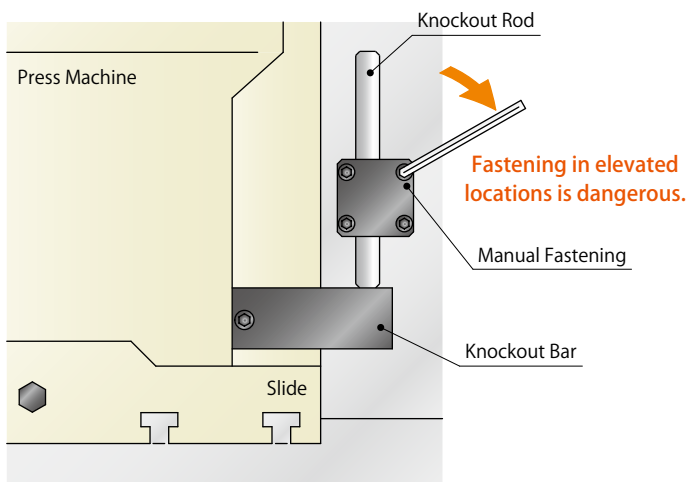
Manual Fastening is Not Required, Saving Time and Ensuring Safety

Problem

When changing the die, **adjusting the knockout rod in elevated locations is dangerous.**

Before

Fastening the knockout rod by hand



Problem

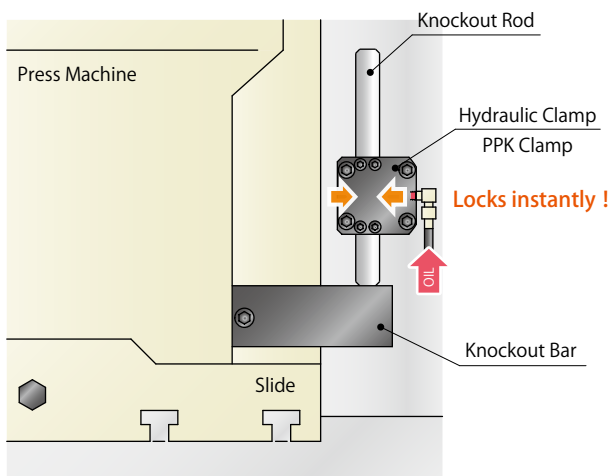
In order to lock the knockout rod, bolts are manually fastened in elevated locations.

Fastening force is not constant.

Working in Elevated Locations

After

PPK Clamp: Fastening the knockout rod with the hydraulic clamp.



Solution

One touch operation to lock the hydraulic clamp.

Fastening force is always constant.

No Working in Elevated Locations

Specifications

Model No.		PPK11A0	PPK15A0	PPK20A0	PPK30A0
Press Machine Capacity	ton	110	150	200	300
Withstanding Knockout Force ^{※1}	ton	2.8	3.8	5.0	7.5
Extra Stroke	mm	1			
Cylinder Capacity (for Locking)	cm ³	2.3	3.3	3.7	5.4
Operating Pressure	MPa	24.5			
Maximum Operating Pressure	MPa	27.0			
Withstanding Pressure	MPa	36.8			
Operating Temperature	°C	0 ~ 70			
Use Frequency ^{※2}		Less than 20 cycles/day			

Notes

1. Please use 2 clamps per press machine.

2. Knockout rod is not included.

※1. Withstanding knockout force is the rated value when using 2 clamps. It varies according to friction coefficient of knockout rod.

(Material of Knockout Rod: S45C, in a dried condition)

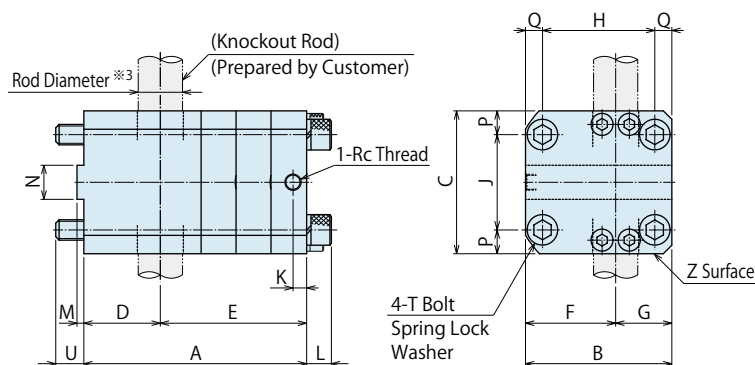
※2. Please contact us for more frequent use.

External Dimensions

Drawings shown are PPK11A0, PPK15A0, and PPK20A0.

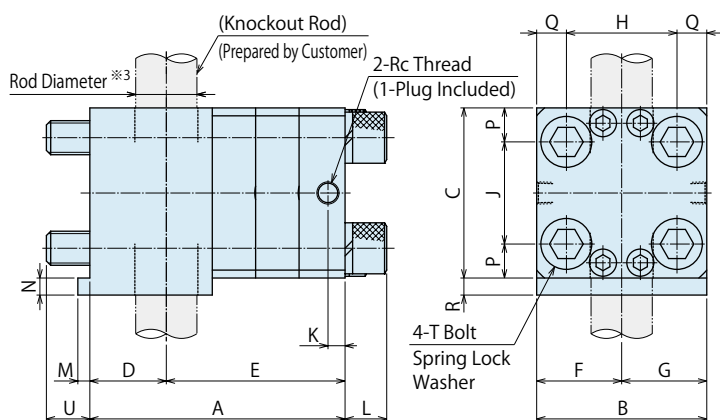
Drawings indicate when the product is set on the left side as seen from the front of press machine.

When setting it on the right side, Z surface should be top side.



Drawing shown is PPK30A0.

There are two hydraulic ports and both of them can be used for supplying hydraulic pressure. Unused port should be covered with an attached plug.

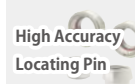
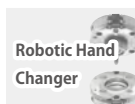
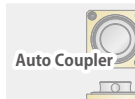
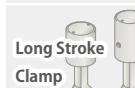


Note

※3. Rod diameter is adjustable to each maker's knockout rod.

Model No.	PPK11A0	PPK15A0	PPK20A0	PPK30A0
A	105	131	124	150
B	81	86	102	100
C	72	84	90	100
D	40	45	45	45
E	65	86	79	105
F	45	53	61	50
G	36	33	41	50
H	61	66	75	65
J	48	56	60	60
K	8	8	10	10
L	14.5	14.5	19.5	24.5
M	4	4	7	7
N	18	20	20	10
P	12	14	15	20
Q	10	10	13.5	17.5
R	-	-	-	10
T	M12×1.75×125	M12×1.75×150	M16×2×150	M20×2.5×180
U	17.5	16.5	22.5	25.5
Rc Thread	Rc1/8	Rc1/8	Rc1/4	Rc1/4

Clamp



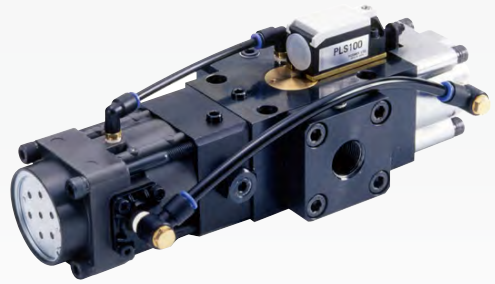
Please contact us for further information. www.kosmek.co.jp

Overload Protector

Multi-Load Model

Model **PV** (Pneumatic)

Model **PW** (Spring)

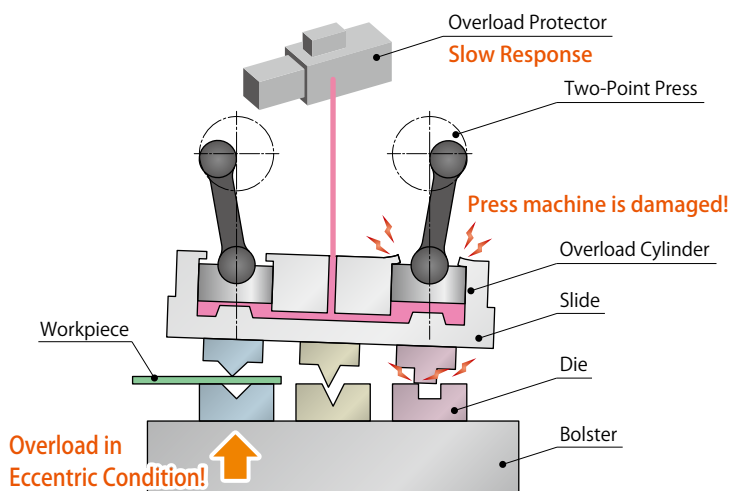


For Use on Unbalanced Loads with 2-point and 4-point Presses
Instant Response Prevents Damage to Presses or Dies

Problem

Standard overload protectors have **slow response times** when a two-point press has an overload.

Before



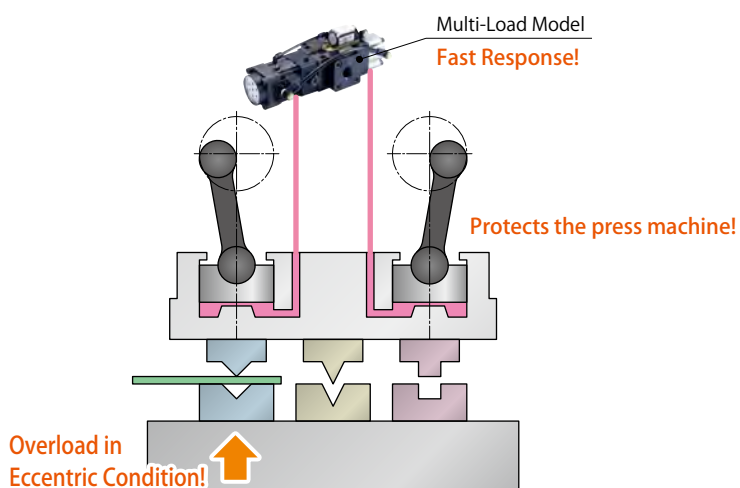
Problem

When an overload occurs in eccentric condition, the overload protector does not start working until hydraulic pressure on both sides of the overloaded cylinder increases.

Slow Response

Not Supported with Eccentric Load

After



Solution

For overload in an eccentric condition, when hydraulic pressure of overload cylinder on one side increases, the overload protector actuates to release cylinders on both side.

Fast Response

Supported with Eccentric Load

Overload Protector

Overload protector detects sudden increases in hydraulic pressure in the overload cylinder within the press slide, releasing hydraulic oil instantly in order to protect the press machine and sends an emergency stop signal to the press machine.

Features

- **Compact • Light Weight**

- **A Wide Variety**

Available for various size presses **from small presses (200kN) to large presses (20000kN).**

- **High Stability**

The accuracy of the press machine is maintained with a high pre-load in **the overload cylinder.**

- **Malfunction Prevention**

Pressure regulating valve **prevents malfunction caused by the rising temperature of hydraulic oil** during press operation.

- **High Accuracy**

Even if the amount of overload increases, **the operating accuracy** of overload protector remains **within 10%** and **repeatability is better than $\pm 3\%$.**

- **Shock Tolerance**

Shock tolerance of the switch is **more than 70G.**

- **Simple Setting**

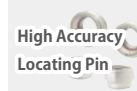
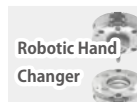
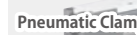
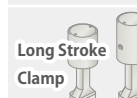
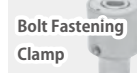
Pressure setting of overload is **simple** and **accurate.**

- **Easy to Recover**

After removing the cause of an overload, hydraulic pressure will be charged in the overload cylinder by supplying air pressure and the overload protector starts again.

Please contact us for further information on specifications and external dimensions.
www.kosmek.co.jp

Clamp



Auto Coupler

Air Supply

Model JY



Automation of the Connecting Circuit

Suitable for Fluid Supply to Moving Bolsters

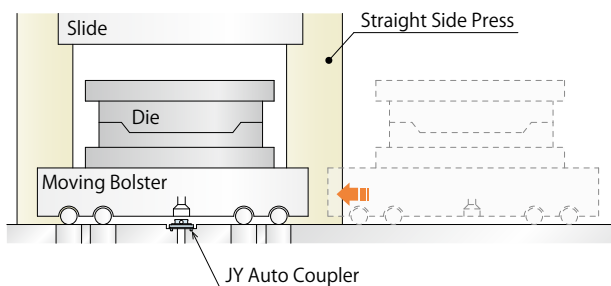
Problem

Automation of fluid (air) supply to a moving bolster.

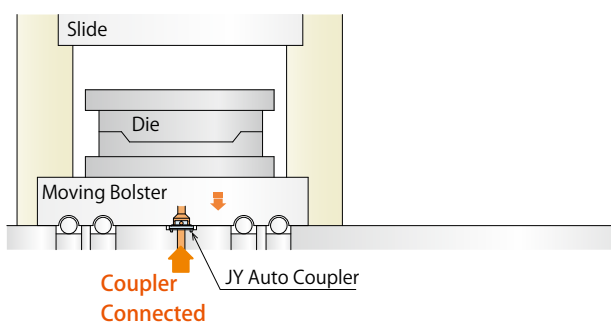
Auto Coupler

Automatically connects the coupler and supplies fluid to a moving bolster.

- ① Load the moving bolster to the straight side press.



- ② After seating of the moving bolster, the auto coupler is connected and fluid can be supplied.

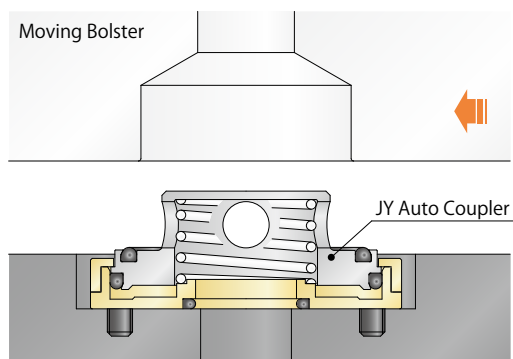


Solution

Auto coupler connects the fluid circuit to the moving bolster.

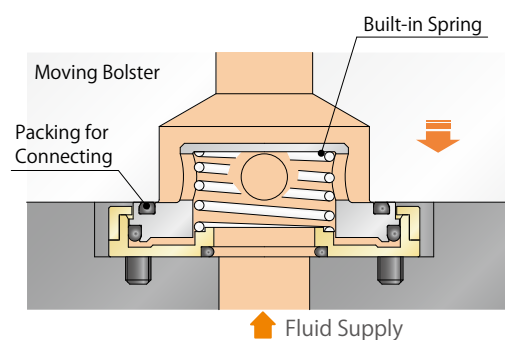
Automated • Safe

Action Description



Disconnected

Loading the moving bolster



Connected

After the moving bolster is seated, fluid can be supplied.
 The seals at the connection point adhere to the bolster and prevent leakage.

Specifications

Model No.		JY	
Operating Pressure	MPa	max.1	
Withstanding Pressure	MPa	1.5	
Minimum Passage Area	mm ²	380	
Allowable Offset	mm	±1	
Allowable Angle		0.3°	
Operating Temperature	°C	0 ~ 70	
Usable Fluid		Air	
Reaction Force kN	Operating Pressure	1 MPa	3.35
		0.7 MPa	2.36
		P MPa	$3.29 \times P + 0.06$

Notes

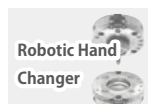
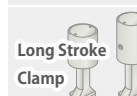
1. Do not connect or disconnect the auto coupler when pressurizing (or when pressure remains).
2. Do not connect the auto coupler when foreign substances such as cutting chips get onto the connecting surface.

The above is just one example of our exclusive products.

External dimensions are determined according to the arrangement of each press machine. We also offer auto couplers for other types of fluids.

Please contact us for further information. www.kosmek.co.jp

Clamp



Robotic Hand Changer

Pneumatic Double Action

Model **SWR**



For **Changing Workpiece Transfer Arms** in the Automatic Press Line

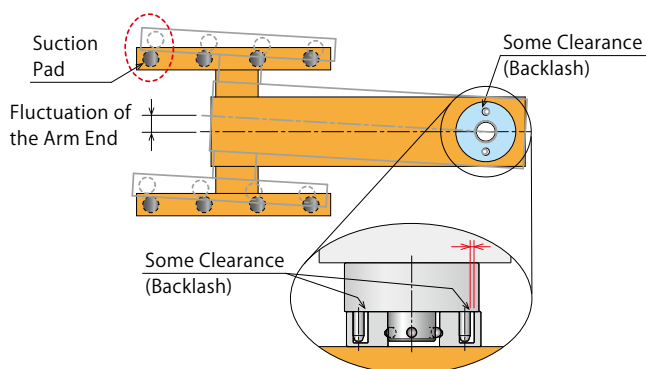
High Accuracy: Within $3\ \mu\text{m}$, High Rigidity: **"0" Backlash**, Long Life: **A Million Cycles**

Problem

With a general hand changer, the backlash of the transfer arm is high.

Before

Changing transfer arms with a general hand changer.



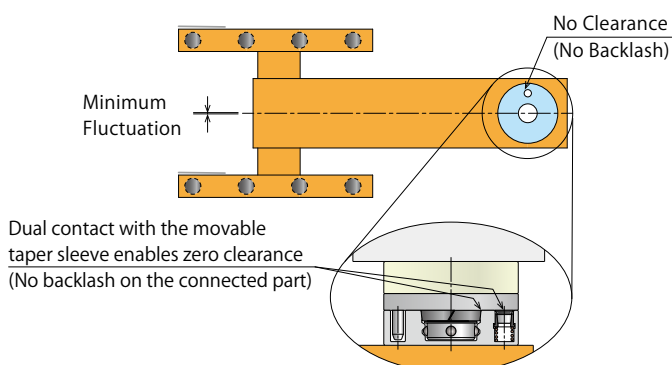
Problem

At connection points of hand changer, there is some clearance (backlash).

Fluctuation of Arm is High

After

SWR Robotic Hand Changer: Changing transfer arms with KOSMEK hand changer.

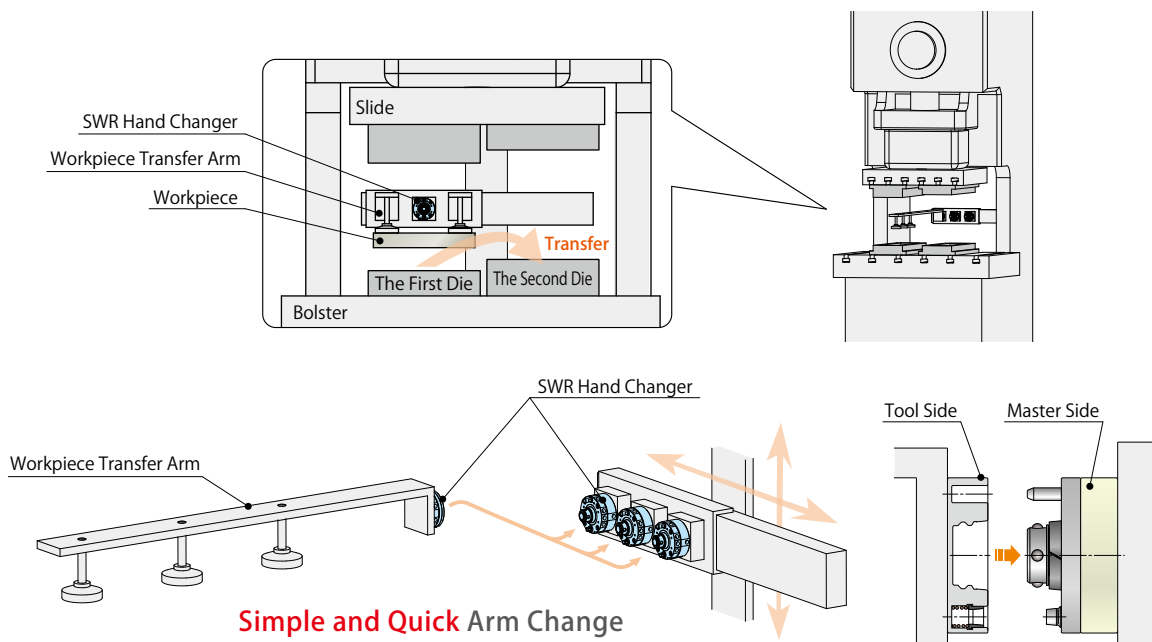


Solution

At connection points of hand changer, there is zero clearance (no backlash).

Fluctuation of Arm is Low

Time Reduction in Changing Transfer Arm



Clamp

 T-Slot
Automatic Slide
Clamp

 Without T-Slot
Manual Slide
Clamp

 Swing Lever
Clamp

 Bolt Fastening
Clamp

 Long Stroke
Clamp

 Cylinder
Embedded
Clamp

 Cylinder
Embedded Clamp
with Swing Rod

 Extreme
Conditions Clamp

Pneumatic Clamp

 Knockout Rod
Clamp

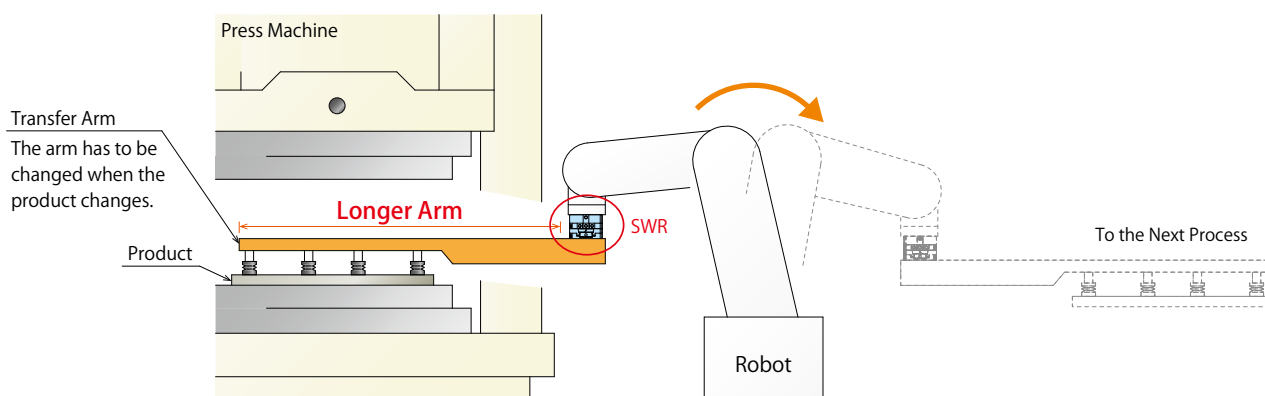
 Overload
Protector

Auto Coupler

 Robotic Hand
Changer

 High Accuracy
Locating Pin

Fluctuation is minimum even with longer arms.



● Productive

Improves Work Efficiency

No backlash on connected part is due to the **dual surface mechanism** with movable taper sleeve.

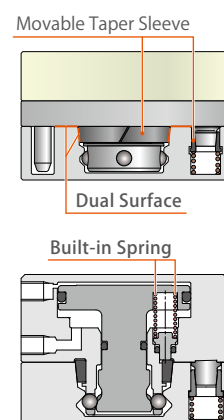
● Safe

Prevents Arms from Falling Off

Mechanical lock system maintains connected condition with built-in spring.

● Space Saving

Compact and Light Weight



Allowable weight is 3~120kg with seven body sizes.
 A variety of electrodes are available as an external option.
 Please visit our website (www.kosmek.co.jp) or view our catalog
 for further information.

Screw Locator

High-Accuracy Locating

Model VXF



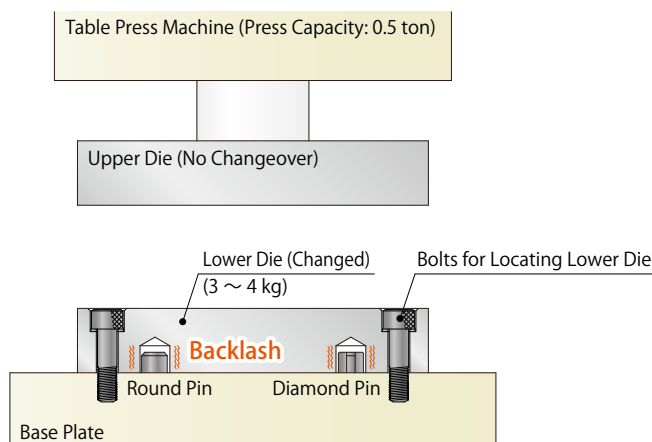
High-Accuracy Die Locating with a Simple Manual Setup
Locating Repeatability: Within **$3\ \mu\text{m}$**

Problem

For the table press machine, the accuracy of die locating with general fixed pins is low.
(In case that only the lower die requires high accuracy locating.)

Before

Die locating with general fixed pins + fastening with bolts



Problem

Pins and bolts are located in different places.

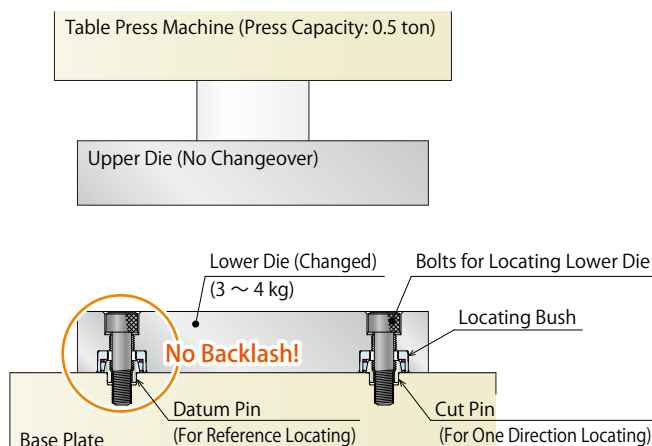
Requires More Space

Locating accuracy is low.

Requires Re-adjusting

After

Screw Locator: High-accuracy die locating with screw locator + fastening with bolts.



Solution

Pins and bolts are located in the same places.

Space Saving

Locating Repeatability: Within $3\ \mu\text{m}$

Re-adjusting is not Required

Specifications

Model No.		VXF0040	VXF0050	VXF0060	VXF0080	VXF0100	VXF0120	VXF0160
Locating Repeatability	mm	0.003						
Stroke	mm	0.2				0.3		
Max. Loading	Horizontal Mounting	100	200	300	400	500	600	800
Weight	kg	20	40	60	80	100	120	160
Min. Required Tightening Force※1	kN	1.2	1.4	1.5	1.8	2.0	2.5	3.0
Tightening Procedure		Datum Pin (VXF-PD) → Cut Pin (VXF-PC)						
Operating Temperature	℃	0~70						
Mass	Locating Pin	2	3	4	5	10	15	25
g	Locating Bush	4	7	10	11	22	36	50

Notes

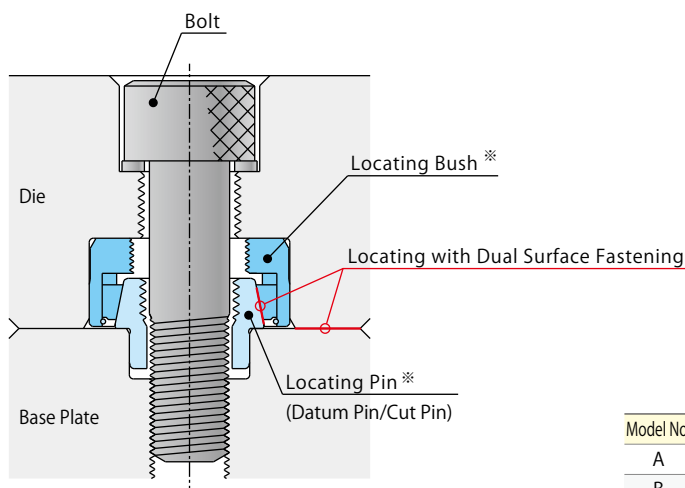
1. This product is used only for locating and does not have a clamping function (Clamping force is the tightening force of bolts).

Tightening force is required for locating with this product.

※1. Indicates the required tightening force (pressing force) per locating nut.

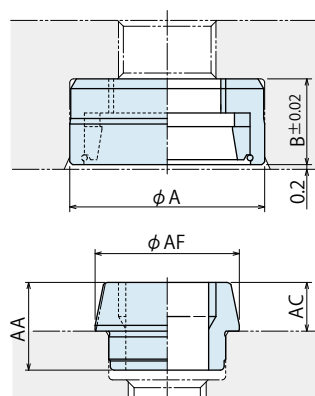
Structure

This figure shows connected condition.



※ Screw locator is composed of locating pin (datum pin/cut pin) and locating bush.

Dimensions



	(mm)						
Model No.	VXF0040	VXF0050	VXF0060	VXF0080	VXF0100	VXF0120	VXF0160
A	13 $^{+0.033}_{+0.020}$	16 $^{+0.033}_{+0.020}$	18 $^{+0.033}_{+0.020}$	20 $^{+0.033}_{+0.020}$	25 $^{+0.033}_{+0.020}$	30 $^{+0.033}_{+0.020}$	35 $^{+0.042}_{+0.026}$
B	6.8	7.8	8.3	8.8	10.8	12.8	13.8
AA	8	8.5	8.5	9	11	13	14
AC	4.5	4.5	4.5	5	6	7	8
AF	9	10.8	12.8	14.8	18.6	22.2	27.3

We also offer all-automated high-power pneumatic products for high-accuracy locating.

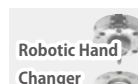
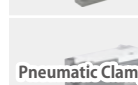
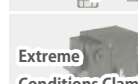
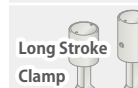
Clamping force is 4~16kN with four available body sizes.

High-Power Pneumatic Pallet Clamp

Please contact us for further information. www.kosmek.co.jp

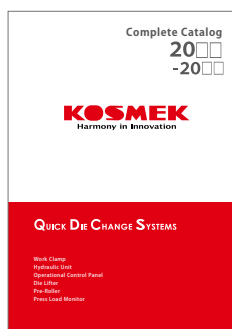


Clamp



■ Product Line-Up

We manufacture a wide range of clamping systems and components. Feel free to contact us.



■ QUICK DIE CHANGE SYSTEMS

Kosmek Quick Die Change Systems are a cost effective way to improve the working environment, allow diversified and small-lot production, and reduce press down time. Available for a wide range of machines from large size transfer-presses to smaller high speed presses.

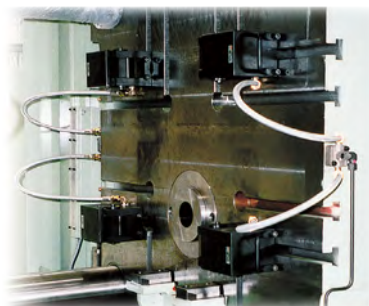
QDCS Complete Catalog

Catalog No.QDCS20□-□-GB



■ QUICK MOLD CHANGE SYSTEMS

Automatic clamping systems have reduced mold change times and increased production efficiency for plastics manufactures in a multitude of industries. We offer a variety of clamping options including hydraulically powered clamps, pneumatic clamps with a force multiplying mechanism, and magnetic clamping systems.



■ DIECAST CLAMPING SYSTEMS

Kosmek Diecast Clamping Systems (KDCCS) enable stable die clamping for die casting and magnesium molding machines that are subjected to severe conditions caused by exposure to mold release agents and high temperature.



■ KOSMEK WORK CLAMPING SYSTEMS

Our clamping system enables boltless automation making loading and unloading workpieces easier. The non-leak valve enables the use of hydraulic source and fixtures in a disconnected condition after locking (clamping action).

KOSMEK
Harmony in Innovation

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- FOR FURTHER INFORMATION ON UNLISTED SPECIFICATIONS AND SIZES, PLEASE CALL US.
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