

# Pre-Roller

Model **MRC**

Model **MRD**

Model **MRE/MRF**

Model **MRG/MRH**

Model **MRJ/MRK/MRL**

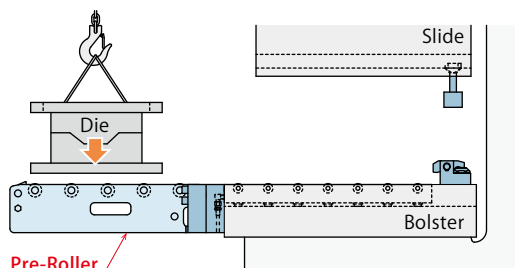


Mounted on the front of the press. Allows the die to roll from the front of the press onto the bolster.

## ● Loading the Die

Load the die with a crane or forklift.

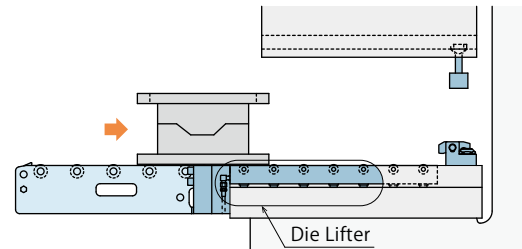
Pre-Rollers set in front of a press machine enable easy transfer of the die.



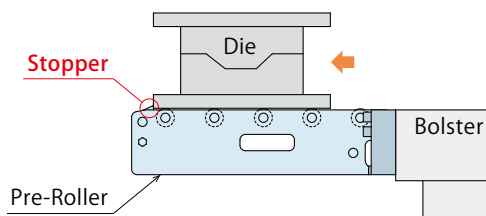
## ● Move the Die to the Bolster

Move the die to the bolster.

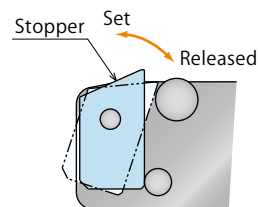
Pre-Roller and Die Lifter allow the die to roll onto the bolster with a minimal force.



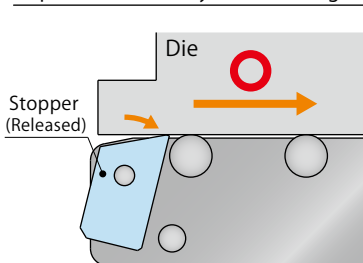
## ● The stopper prevents the die from falling.



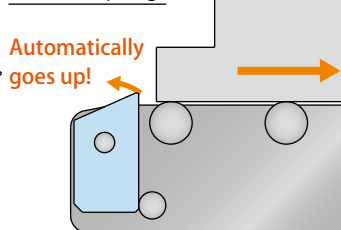
By pushing the stopper until the end, the stopper will be released.



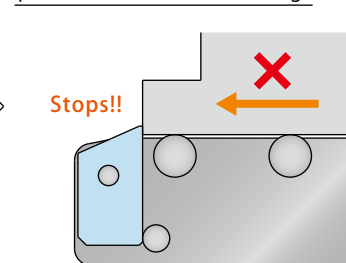
When loading the die, the stopper is pressed down by the die weight.



After the die passes over the stopper, it automatically goes up with the internal spring.



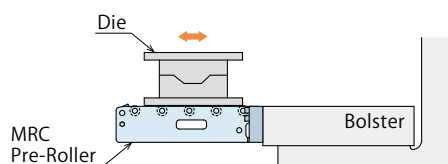
In case of reverse travel, the stopper prevents the die from falling.



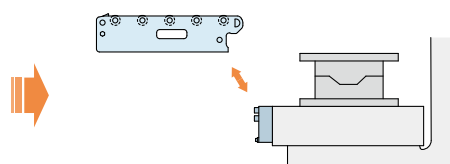
Line-up

## Five Types of Frame Storages

### Removable Model MRC

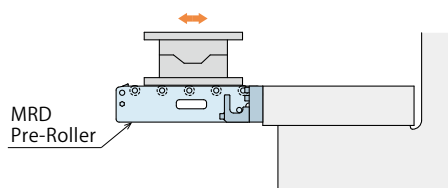


Used when loading / unloading the die.

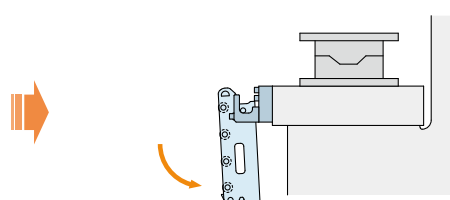


Can be removed when it is not in use.  
※ While the press machine is operating,  
please remove the pre-roller frame.

### Removable / Vertical Folding Model MRD

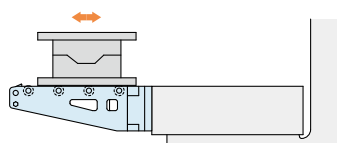


Used when loading / unloading the die.

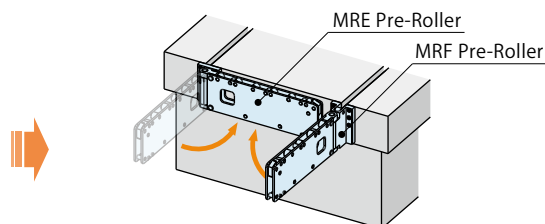


Can be removed or folded when it is not in use.  
※ While the press machine is operating,  
please remove or fold the pre-roller frame.

### Horizontal Folding Model MRE/MRF

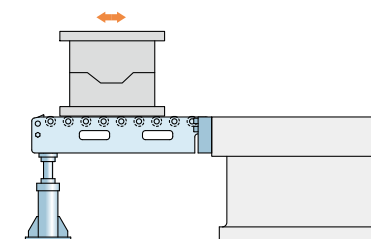


Used when loading / unloading the die.

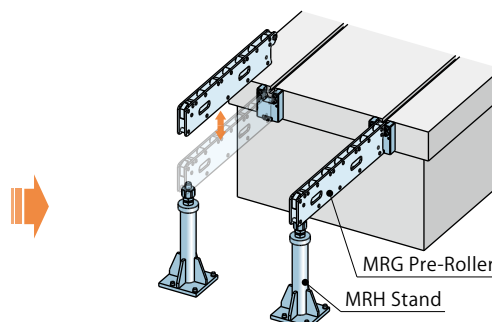


Can be folded horizontally when it is not in use.  
※ While the press machine is operating,  
please fold the pre-roller frame.

### Removable with Stand Model MRG

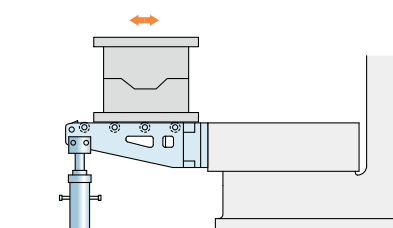


Used when loading / unloading the die.  
With stand it is suitable for heavy dies.

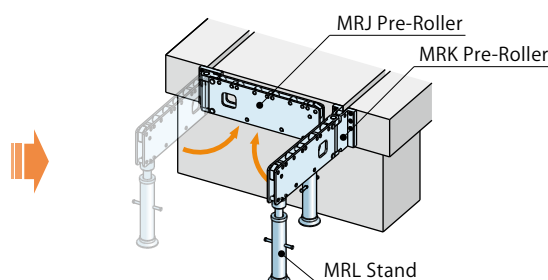


Can be removed when it is not in use.  
※ While the press machine is operating,  
please remove the pre-roller frame.

### Horizontal Folding with Stand Model MRJ/MRK



Used when loading / unloading the die.  
With stand it is suitable for heavy dies.



Can be folded horizontally when it is not in use.  
※ While the press machine is operating, please keep  
the stand off the floor and fold the pre-roller frame.

Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

Pre-Roller

MRC

MRD

MRE/MRF

MRG

MRJ/MRK

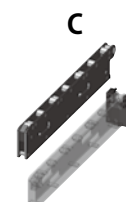
## Model No. Indication

MR **C** **119** **0** - **630**

1 2 3 4

### 1 Frame Storage Method

|                                                          |       |
|----------------------------------------------------------|-------|
| <b>C</b> : Removable                                     | P.153 |
| <b>D</b> : Removable • Vertical Folding                  | P.163 |
| <b>E</b> : Horizontal Folding (Inside Arm)               | P.173 |
| <b>F</b> : Horizontal Folding (Outside Arm)              | P.173 |
| <b>G</b> : Removable (with Stand)                        | P.181 |
| <b>J</b> : Horizontal Folding (with Stand) (Inside Arm)  | P.189 |
| <b>K</b> : Horizontal Folding (with Stand) (Outside Arm) | P.189 |



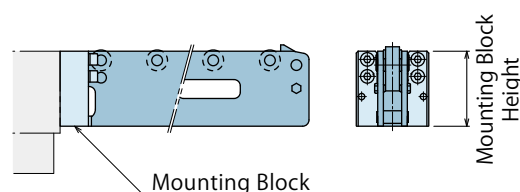
### 2 Mounting Block Height (Pre-Roller Height)

**075** : Mounting Block Height 75 mm

**119** : Mounting Block Height 119 mm

**150** : Mounting Block Height 150 mm

**190** : Mounting Block Height 190 mm



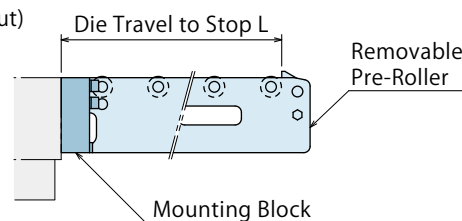
### 3 Design No.

**0** : Revision Number

### 4 Die Travel L • Mounting Block Model No.

**Dimensions** : Die Travel L (Distance that the die can be pulled out)  
(Please refer to the specifications)

**B** : Mounting Block



## Compatible Mounting Blocks

| Pre-Roller Model No. | Mounting Block Model No. | Mounting Block Weight (kg) |
|----------------------|--------------------------|----------------------------|
| <b>MRC0750</b> -□    | MRC0750-B                | 1.2                        |
| <b>MRC1190</b> -□    | MRC1190-B                | 3.4                        |
| <b>MRC1500</b> -□    | MRC1500-B                | 4.6                        |
| <b>MRC1900</b> -□    | MRC1900-B                | 6.9                        |

Note:

- MRC Pre-Roller and MRC-B Mounting Block are sold separately.  
Order by the model number and the quantity of each product.

## Specifications

### MRC0750-□

| Model No.          | Weight (kg) | Number of Rollers | Die Travel to Stop<br>L (mm) | Max. Loading Weight each (kg) <sup>※1</sup> |            |
|--------------------|-------------|-------------------|------------------------------|---------------------------------------------|------------|
|                    |             |                   |                              | at Roller A                                 | at Point B |
| <b>MRC0750-200</b> | 3.0         | 3                 | 200                          | 850                                         | 1020       |
| <b>MRC0750-250</b> | 3.5         | 3                 | 250                          | 650                                         | 800        |
| <b>MRC0750-315</b> | 4.3         | 4                 | 315                          | 500                                         | 620        |
| <b>MRC0750-355</b> | 4.8         | 4                 | 355                          | 450                                         | 560        |
| <b>MRC0750-400</b> | 5.3         | 5                 | 400                          | 400                                         | 500        |
| <b>MRC0750-450</b> | 5.8         | 5                 | 450                          | 350                                         | 440        |
| <b>MRC0750-500</b> | 6.4         | 6                 | 500                          | 300                                         | 380        |
| <b>MRC0750-560</b> | 7.1         | 6                 | 560                          | 270                                         | 340        |
| <b>MRC0750-630</b> | 8.0         | 7                 | 630                          | 240                                         | 310        |

### MRC1190-□

| Model No.           | Weight (kg) | Number of Rollers | Die Travel to Stop<br>L (mm) | Max. Loading Weight each (kg) <sup>※1</sup> |            |
|---------------------|-------------|-------------------|------------------------------|---------------------------------------------|------------|
|                     |             |                   |                              | at Roller A                                 | at Point B |
| <b>MRC1190-315</b>  | 6.7         | 3                 | 315                          | 1500                                        | 1840       |
| <b>MRC1190-355</b>  | 7.6         | 4                 | 355                          | 1300                                        | 1610       |
| <b>MRC1190-400</b>  | 8.4         | 4                 | 400                          | 1100                                        | 1370       |
| <b>MRC1190-450</b>  | 9.4         | 5                 | 450                          | 950                                         | 1190       |
| <b>MRC1190-500</b>  | 10.3        | 5                 | 500                          | 800                                         | 1010       |
| <b>MRC1190-560</b>  | 11.3        | 6                 | 560                          | 700                                         | 890        |
| <b>MRC1190-630</b>  | 12.4        | 6                 | 630                          | 650                                         | 830        |
| <b>MRC1190-710</b>  | 14.0        | 7                 | 710                          | 500                                         | 640        |
| <b>MRC1190-800</b>  | 15.5        | 7                 | 800                          | 450                                         | 580        |
| <b>MRC1190-850</b>  | 16.5        | 8                 | 850                          | 400                                         | 510        |
| <b>MRC1190-900</b>  | 17.5        | 8                 | 900                          | 350                                         | 450        |
| <b>MRC1190-950</b>  | 18.6        | 9                 | 950                          | 300                                         | 380        |
| <b>MRC1190-1000</b> | 19.5        | 9                 | 1000                         | 250                                         | 320        |

### MRC1500-□

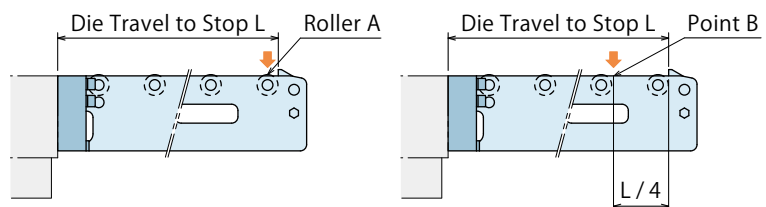
| Model No.           | Weight (kg) | Number of Rollers | Die Travel to Stop<br>L (mm) | Max. Loading Weight each (kg) <sup>※1</sup> |            |
|---------------------|-------------|-------------------|------------------------------|---------------------------------------------|------------|
|                     |             |                   |                              | at Roller A                                 | at Point B |
| <b>MRC1500-400</b>  | 9.9         | 4                 | 400                          | 1500                                        | 1870       |
| <b>MRC1500-450</b>  | 11.2        | 5                 | 450                          | 1350                                        | 1700       |
| <b>MRC1500-500</b>  | 12.3        | 5                 | 500                          | 1200                                        | 1520       |
| <b>MRC1500-560</b>  | 13.4        | 6                 | 560                          | 1050                                        | 1330       |
| <b>MRC1500-630</b>  | 14.8        | 6                 | 630                          | 900                                         | 1150       |
| <b>MRC1500-710</b>  | 16.8        | 7                 | 710                          | 800                                         | 1020       |
| <b>MRC1500-800</b>  | 18.7        | 7                 | 800                          | 700                                         | 900        |
| <b>MRC1500-850</b>  | 20.0        | 8                 | 850                          | 600                                         | 770        |
| <b>MRC1500-900</b>  | 21.1        | 8                 | 900                          | 550                                         | 710        |
| <b>MRC1500-950</b>  | 22.4        | 9                 | 950                          | 500                                         | 640        |
| <b>MRC1500-1000</b> | 23.5        | 9                 | 1000                         | 450                                         | 580        |

### MRC1900-□

| Model No.           | Weight (kg) | Number of Rollers | Die Travel to Stop<br>L (mm) | Max. Loading Weight each (kg) <sup>※1</sup> |            |
|---------------------|-------------|-------------------|------------------------------|---------------------------------------------|------------|
|                     |             |                   |                              | at Roller A                                 | at Point B |
| <b>MRC1900-400</b>  | 11.9        | 4                 | 400                          | 2000                                        | 2500       |
| <b>MRC1900-450</b>  | 13.4        | 5                 | 450                          | 1800                                        | 2260       |
| <b>MRC1900-500</b>  | 14.8        | 5                 | 500                          | 1600                                        | 2020       |
| <b>MRC1900-560</b>  | 15.9        | 6                 | 560                          | 1400                                        | 1780       |
| <b>MRC1900-630</b>  | 17.8        | 6                 | 630                          | 1250                                        | 1600       |
| <b>MRC1900-710</b>  | 20.2        | 7                 | 710                          | 1100                                        | 1410       |
| <b>MRC1900-800</b>  | 22.6        | 7                 | 800                          | 950                                         | 1220       |
| <b>MRC1900-850</b>  | 24.2        | 8                 | 850                          | 850                                         | 1100       |
| <b>MRC1900-900</b>  | 25.6        | 8                 | 900                          | 800                                         | 1030       |
| <b>MRC1900-950</b>  | 27.2        | 9                 | 950                          | 750                                         | 970        |
| <b>MRC1900-1000</b> | 28.6        | 9                 | 1000                         | 700                                         | 910        |

Note:

- ※1. Maximum loading weight per pre-roller.  
 at Roller A : When load extends to Roller A.  
 at Point B : When load extends to distance L/4 from stopper.



Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

Pre-Roller

MRC

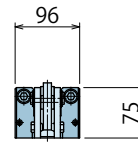
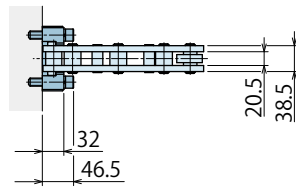
MRD

MRE/MRF

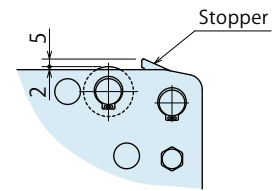
MRG

MRJ/MRK

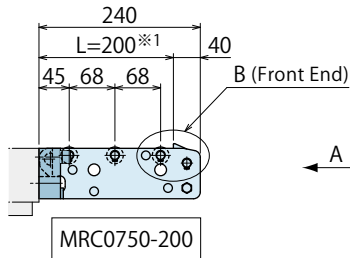
External Dimensions : Removable Pre-Roller (MRC0750-□)



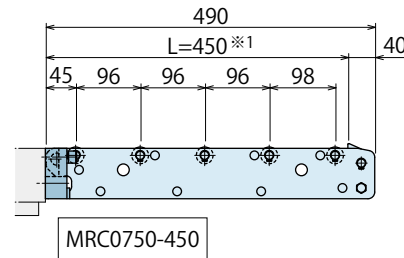
View A



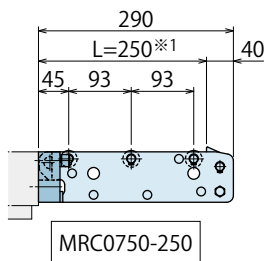
Enlarged View of B (Front End)



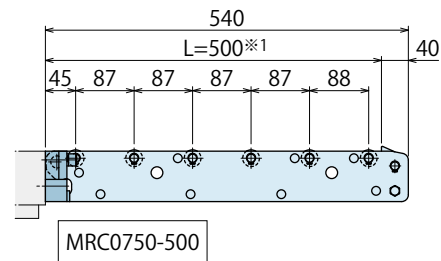
MRC0750-200



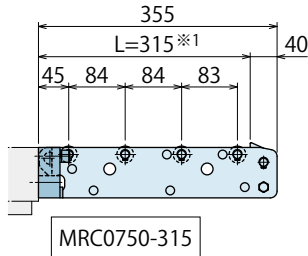
MRC0750-450



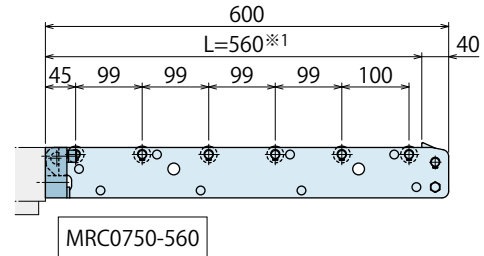
MRC0750-250



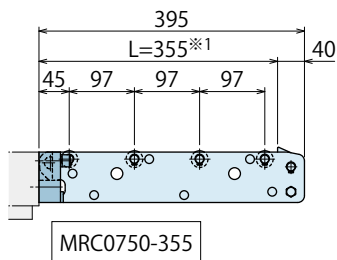
MRC0750-500



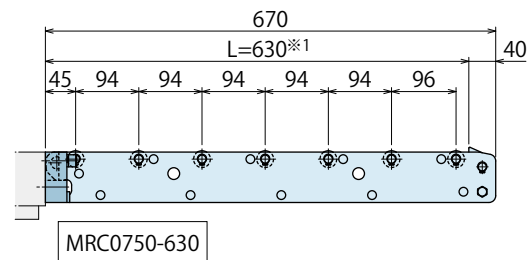
MRC0750-315



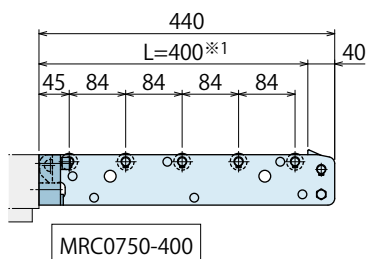
MRC0750-560



MRC0750-355



MRC0750-630

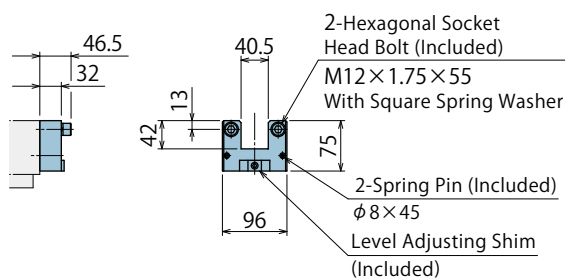


MRC0750-400

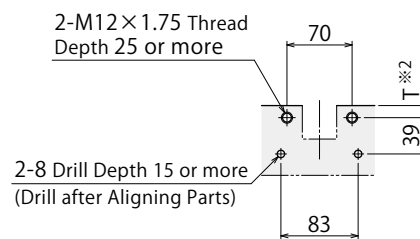
Note:

※1. It shows the die travel L.

## External Dimensions : Mounting Block (MRC0750-B)



## Machining Dimensions : Block Mounting Area



(mm)

| Die Lifter     |                | Dimension T*2 |
|----------------|----------------|---------------|
| Model No.      | Lift-Up Stroke |               |
| RA018/022      | 1.5            | 13.5          |
| RA028/050      | 2              | 13            |
| RQA028/050     |                |               |
| RQC030/040/051 |                |               |

Note:

※2. Dimension T should be processed according to Die Lifter which is used with the block.

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MRC

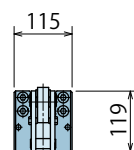
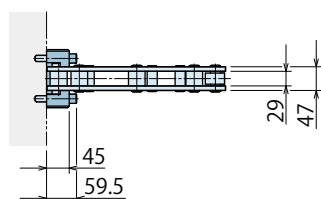
MRD

MRE/MRF

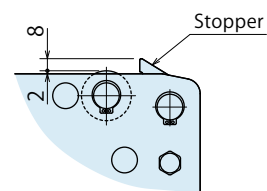
MRG

MRJ/MRK

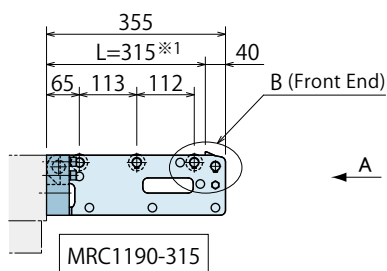
External Dimensions : Removable Pre-Roller (MRC1190-□)



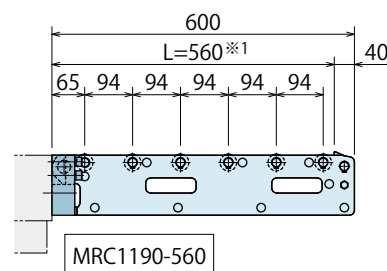
View A



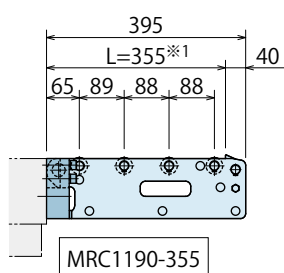
Enlarged View of B (Front End)



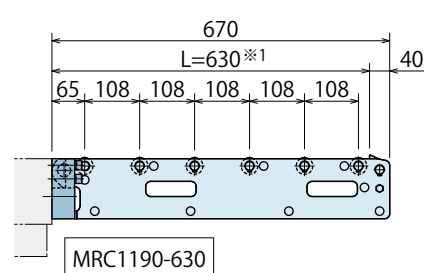
MRC1190-315



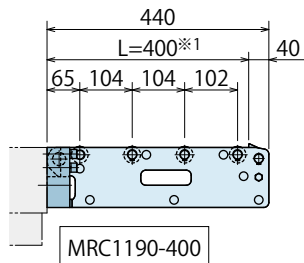
MRC1190-560



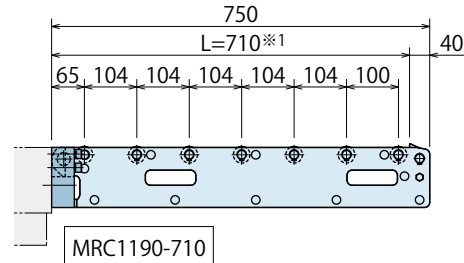
MRC1190-355



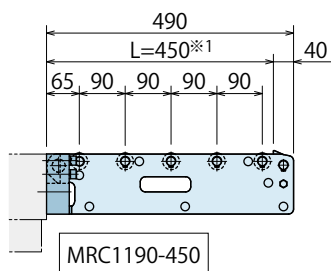
MRC1190-630



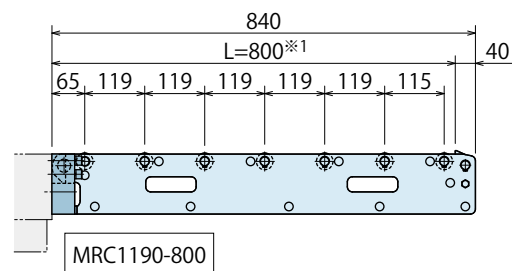
MRC1190-400



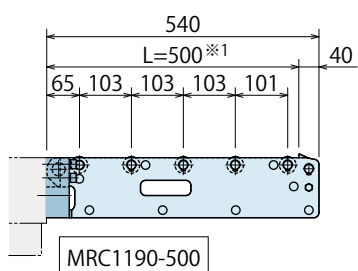
MRC1190-710



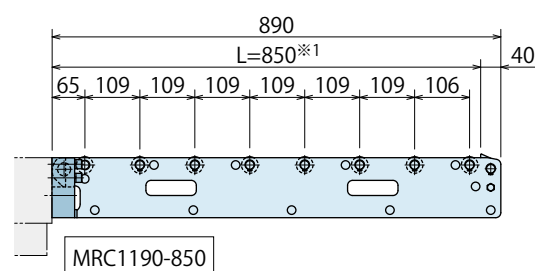
MRC1190-450



MRC1190-800



MRC1190-500



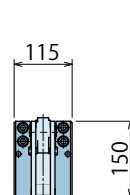
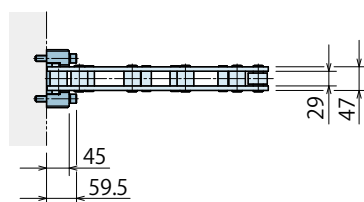
MRC1190-850

Note:

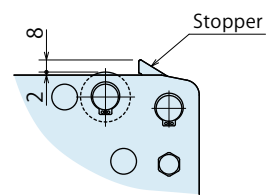
※1. It shows the die travel L.



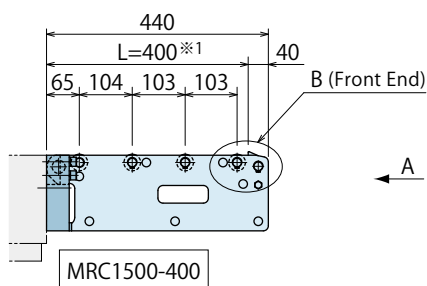
External Dimensions : Removable Pre-Roller (MRC1500-□)



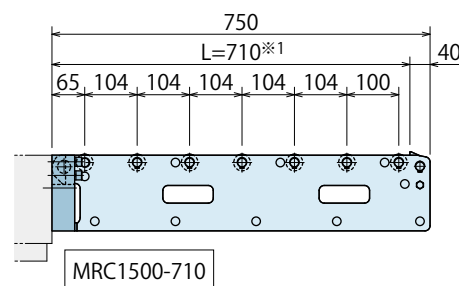
View A



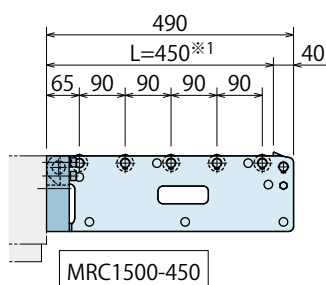
Enlarged View of B (Front End)



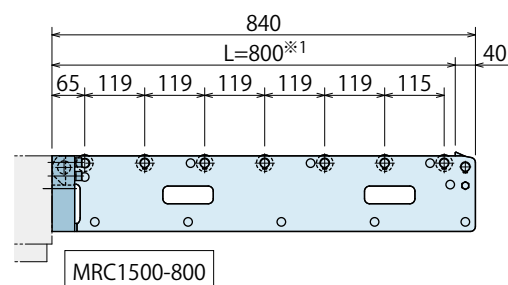
MRC1500-400



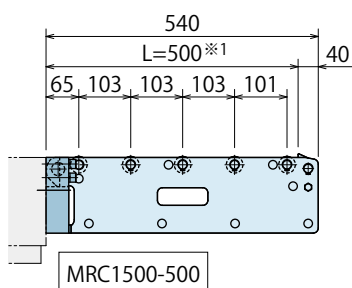
MRC1500-710



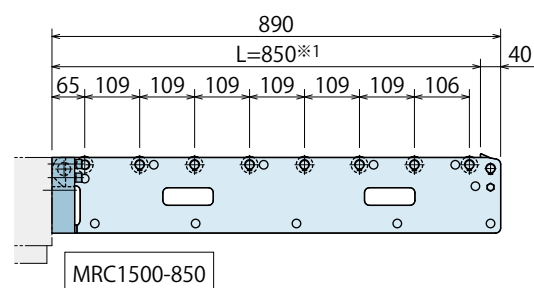
MRC1500-450



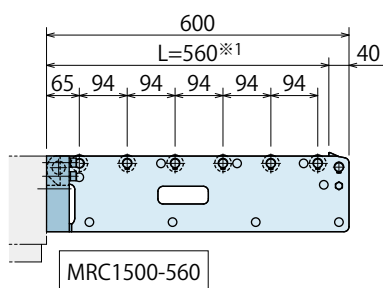
MRC1500-800



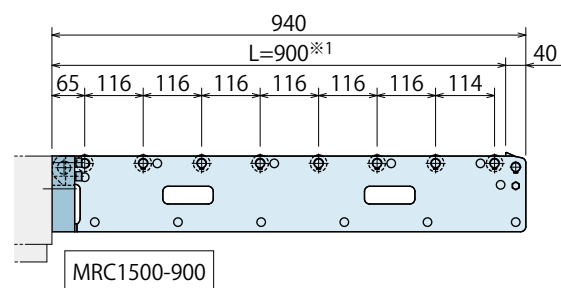
MRC1500-500



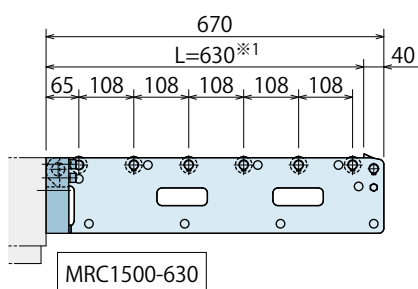
MRC1500-850



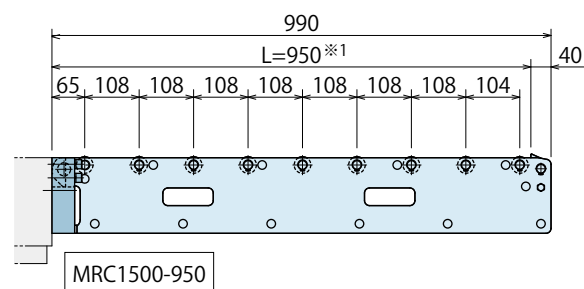
MRC1500-560



MRC1500-900



MRC1500-630



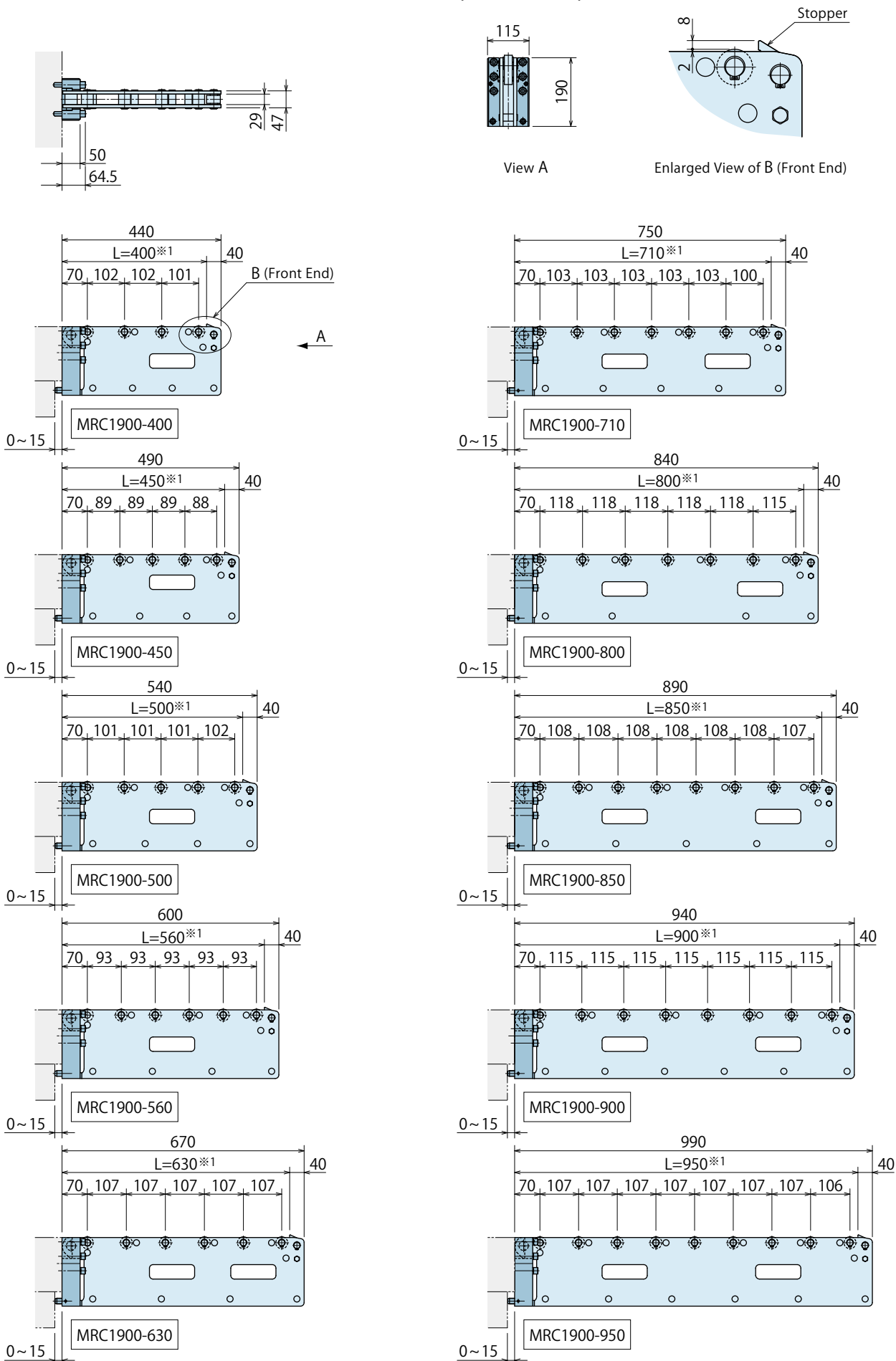
MRC1500-950

Note:

※1. It shows the die travel L.



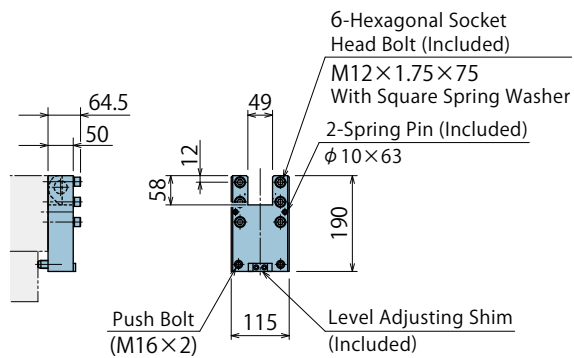
External Dimensions : Removable Pre-Roller (MRC1900-□)



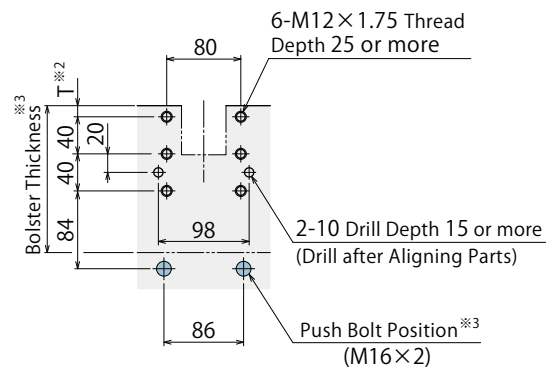
Note:

※1. It shows the die travel L.

## External Dimensions : Mounting Block (MRC1900-B)



## Machining Dimensions : Block Mounting Area

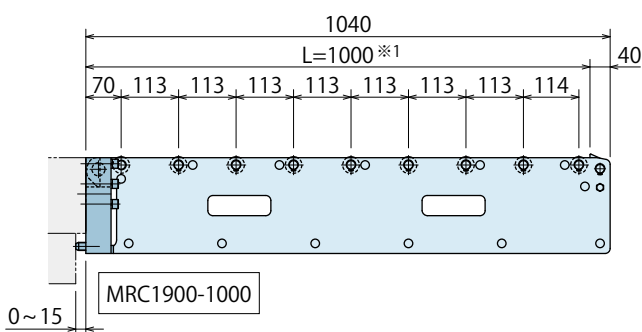


| Die Lifter     |                | (mm)                      |
|----------------|----------------|---------------------------|
| Model No.      | Lift-Up Stroke | Dimension T <sup>※2</sup> |
| RA018/022      | 1.5            | 12.5                      |
| RA028/050      | 2              | 12                        |
| RQA028/050     |                |                           |
| RQC030/040/051 |                |                           |

Notes :

※2. Dimension T should be processed according to Die Lifter which is used with the block.

※3. Use a push bolt when the bolster thickness is 160mm or less.



Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

Pre-Roller

MRC

MRD

MRE/MRF

MRG

MRJ/MRK

## Model No. Indication

MR **D** **119** **0** - **630**

1 2 3 4

### 1 Frame Storage Method

|                                                          |       |
|----------------------------------------------------------|-------|
| <b>C</b> : Removable                                     | P.153 |
| <b>D</b> : Removable • Vertical Folding                  | P.163 |
| <b>E</b> : Horizontal Folding (Inside Arm)               | P.173 |
| <b>F</b> : Horizontal Folding (Outside Arm)              | P.173 |
| <b>G</b> : Removable (with Stand)                        | P.181 |
| <b>J</b> : Horizontal Folding (with Stand) (Inside Arm)  | P.189 |
| <b>K</b> : Horizontal Folding (with Stand) (Outside Arm) | P.189 |



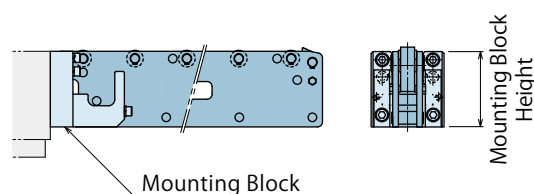
### 2 Mounting Block Height (Pre-Roller Height)

**075** : Mounting Block Height 75 mm

**119** : Mounting Block Height 119 mm

**150** : Mounting Block Height 150 mm

**190** : Mounting Block Height 190 mm



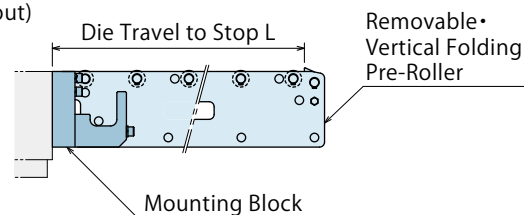
### 3 Design No.

**0** : Revision Number

### 4 Die Travel L • Mounting Block Model No.

**Dimensions** : Die Travel L (Distance that the die can be pulled out)  
(Please refer to the specifications)

**B** : Mounting Block



## Compatible Mounting Blocks

| Pre-Roller Model No. | Mounting Block Model No. | Mounting Block Weight (kg) |
|----------------------|--------------------------|----------------------------|
| <b>MRD0750</b> -□    | MRD0750-B                | 1.7                        |
| <b>MRD1190</b> -□    | MRD1190-B                | 5.0                        |
| <b>MRD1500</b> -□    | MRD1500-B                | 6.0                        |
| <b>MRD1900</b> -□    | MRD1900-B                | 8.3                        |

Note:

- MRD Pre-Roller and MRD-B Mounting Block are sold separately.  
Order by the model number and the quantity of each product.

## Specifications

### MRD0750-□

| Model No.          | Weight (kg) | Number of Rollers | Die Travel to Stop<br>L (mm) | Max. Loading Weight each (kg) <sup>※1</sup> |            |
|--------------------|-------------|-------------------|------------------------------|---------------------------------------------|------------|
|                    |             |                   |                              | at Roller A                                 | at Point B |
| <b>MRD0750-200</b> | 3.0         | 3                 | 200                          | 850                                         | 1020       |
| <b>MRD0750-250</b> | 3.5         | 3                 | 250                          | 650                                         | 800        |
| <b>MRD0750-315</b> | 4.3         | 4                 | 315                          | 500                                         | 620        |
| <b>MRD0750-355</b> | 4.8         | 4                 | 355                          | 450                                         | 560        |
| <b>MRD0750-400</b> | 5.3         | 5                 | 400                          | 400                                         | 500        |
| <b>MRD0750-450</b> | 5.8         | 5                 | 450                          | 350                                         | 440        |
| <b>MRD0750-500</b> | 6.4         | 6                 | 500                          | 300                                         | 380        |
| <b>MRD0750-560</b> | 7.1         | 6                 | 560                          | 270                                         | 340        |
| <b>MRD0750-630</b> | 8.0         | 7                 | 630                          | 240                                         | 310        |

### MRD1190-□

| Model No.           | Weight (kg) | Number of Rollers | Die Travel to Stop<br>L (mm) | Max. Loading Weight each (kg) <sup>※1</sup> |            |
|---------------------|-------------|-------------------|------------------------------|---------------------------------------------|------------|
|                     |             |                   |                              | at Roller A                                 | at Point B |
| <b>MRD1190-315</b>  | 6.7         | 3                 | 315                          | 1500                                        | 1840       |
| <b>MRD1190-355</b>  | 7.6         | 4                 | 355                          | 1300                                        | 1610       |
| <b>MRD1190-400</b>  | 8.4         | 4                 | 400                          | 1100                                        | 1370       |
| <b>MRD1190-450</b>  | 9.4         | 5                 | 450                          | 950                                         | 1190       |
| <b>MRD1190-500</b>  | 10.3        | 5                 | 500                          | 800                                         | 1010       |
| <b>MRD1190-560</b>  | 11.3        | 6                 | 560                          | 700                                         | 890        |
| <b>MRD1190-630</b>  | 12.4        | 6                 | 630                          | 650                                         | 830        |
| <b>MRD1190-710</b>  | 14.0        | 7                 | 710                          | 500                                         | 640        |
| <b>MRD1190-800</b>  | 15.5        | 7                 | 800                          | 450                                         | 580        |
| <b>MRD1190-850</b>  | 16.5        | 8                 | 850                          | 400                                         | 510        |
| <b>MRD1190-900</b>  | 17.5        | 8                 | 900                          | 350                                         | 450        |
| <b>MRD1190-950</b>  | 18.6        | 9                 | 950                          | 300                                         | 380        |
| <b>MRD1190-1000</b> | 19.5        | 9                 | 1000                         | 250                                         | 320        |

### MRD1500-□

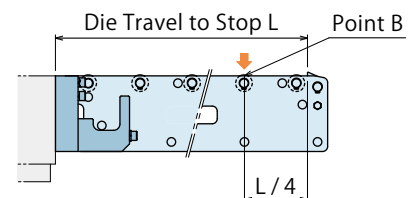
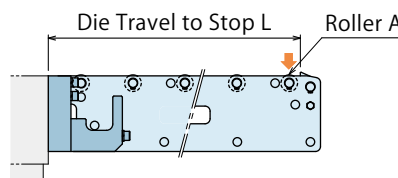
| Model No.           | Weight (kg) | Number of Rollers | Die Travel to Stop<br>L (mm) | Max. Loading Weight each (kg) <sup>※1</sup> |            |
|---------------------|-------------|-------------------|------------------------------|---------------------------------------------|------------|
|                     |             |                   |                              | at Roller A                                 | at Point B |
| <b>MRD1500-400</b>  | 9.9         | 4                 | 400                          | 1500                                        | 1870       |
| <b>MRD1500-450</b>  | 11.2        | 5                 | 450                          | 1350                                        | 1700       |
| <b>MRD1500-500</b>  | 12.3        | 5                 | 500                          | 1200                                        | 1520       |
| <b>MRD1500-560</b>  | 13.4        | 6                 | 560                          | 1050                                        | 1330       |
| <b>MRD1500-630</b>  | 14.8        | 6                 | 630                          | 900                                         | 1150       |
| <b>MRD1500-710</b>  | 16.8        | 7                 | 710                          | 800                                         | 1020       |
| <b>MRD1500-800</b>  | 18.7        | 7                 | 800                          | 700                                         | 900        |
| <b>MRD1500-850</b>  | 20.0        | 8                 | 850                          | 600                                         | 770        |
| <b>MRD1500-900</b>  | 21.1        | 8                 | 900                          | 550                                         | 710        |
| <b>MRD1500-950</b>  | 22.4        | 9                 | 950                          | 500                                         | 640        |
| <b>MRD1500-1000</b> | 23.5        | 9                 | 1000                         | 450                                         | 580        |

### MRD1900-□

| Model No.           | Weight (kg) | Number of Rollers | Die Travel to Stop<br>L (mm) | Max. Loading Weight each (kg) <sup>※1</sup> |            |
|---------------------|-------------|-------------------|------------------------------|---------------------------------------------|------------|
|                     |             |                   |                              | at Roller A                                 | at Point B |
| <b>MRD1900-400</b>  | 11.9        | 4                 | 400                          | 2000                                        | 2500       |
| <b>MRD1900-450</b>  | 13.4        | 5                 | 450                          | 1800                                        | 2260       |
| <b>MRD1900-500</b>  | 14.8        | 5                 | 500                          | 1600                                        | 2020       |
| <b>MRD1900-560</b>  | 15.9        | 6                 | 560                          | 1400                                        | 1780       |
| <b>MRD1900-630</b>  | 17.8        | 6                 | 630                          | 1250                                        | 1600       |
| <b>MRD1900-710</b>  | 20.2        | 7                 | 710                          | 1100                                        | 1410       |
| <b>MRD1900-800</b>  | 22.6        | 7                 | 800                          | 950                                         | 1220       |
| <b>MRD1900-850</b>  | 24.2        | 8                 | 850                          | 850                                         | 1100       |
| <b>MRD1900-900</b>  | 25.6        | 8                 | 900                          | 800                                         | 1030       |
| <b>MRD1900-950</b>  | 27.2        | 9                 | 950                          | 750                                         | 970        |
| <b>MRD1900-1000</b> | 28.6        | 9                 | 1000                         | 700                                         | 910        |

Note:

- ※1. Maximum loading weight per pre-roller.  
 at Roller A : When load extends to Roller A.  
 at Point B : When load extends to distance L/4  
 from stopper.



Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

Pre-Roller

MRC

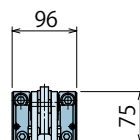
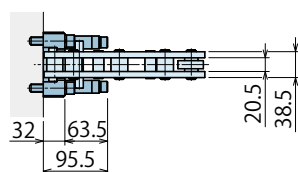
**MRD**

MRE/MRF

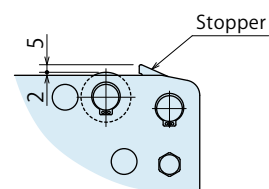
MRG

MRJ/MRK

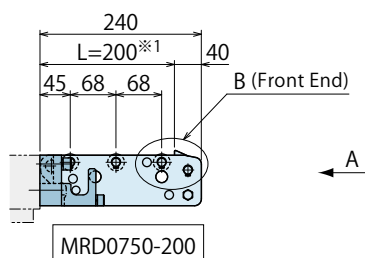
External Dimensions : Removable • Vertical Folding Pre-Roller (MRD0750-□)



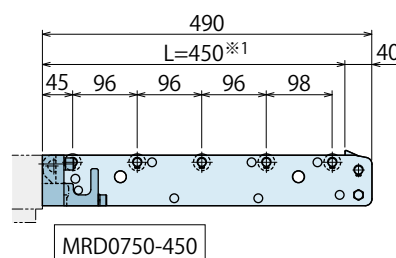
View A



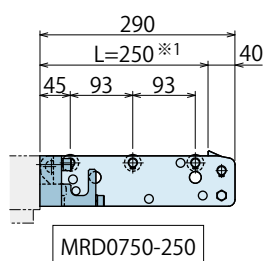
Enlarged View of B (Front End)



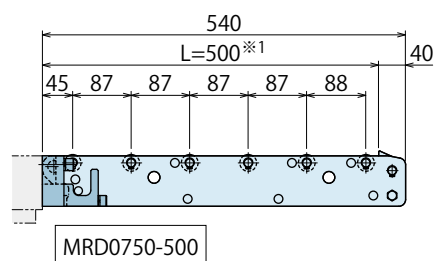
MRD0750-200



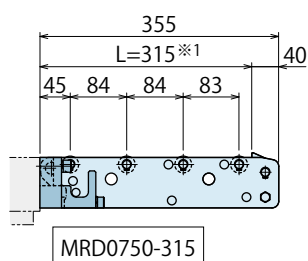
MRD0750-450



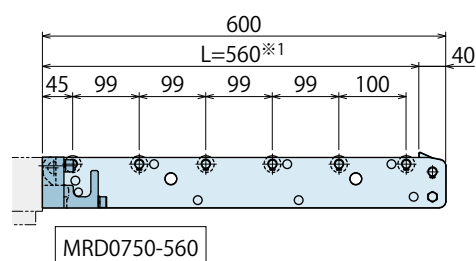
MRD0750-250



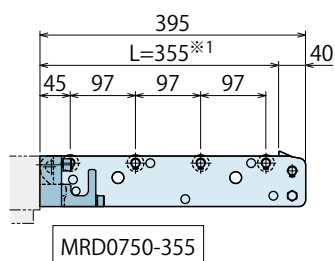
MRD0750-500



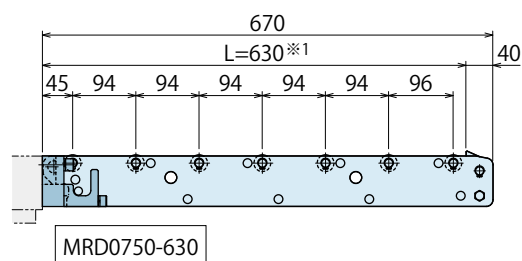
MRD0750-315



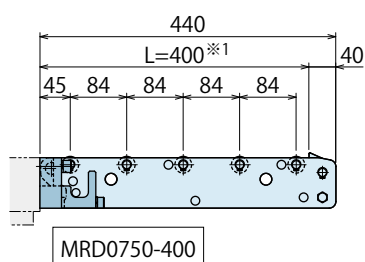
MRD0750-560



MRD0750-355



MRD0750-630

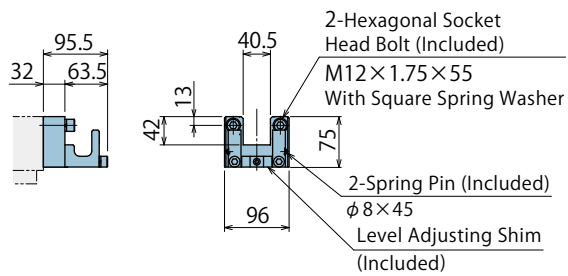


MRD0750-400

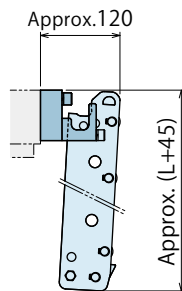
Note:

※1. It shows the die travel L.

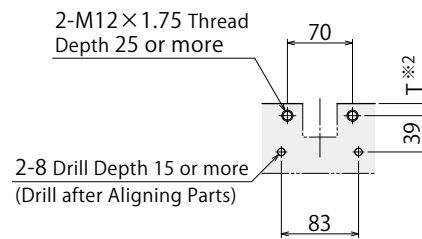
## External Dimensions : Mounting Block (MRD0750-B)



## Dimensions when Folded



## Machining Dimensions : Block Mounting Area



(mm)

| Die Lifter     |                | Dimension T※2 |
|----------------|----------------|---------------|
| Model No.      | Lift-Up Stroke |               |
| RA018/022      | 1.5            | 13.5          |
| RA028/050      | 2              | 13            |
| RQA028/050     |                |               |
| RQC030/040/051 |                |               |

Note:

※2. Dimension T should be processed according to Die Lifter which is used with the block.

Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

Pre-Roller

MRC

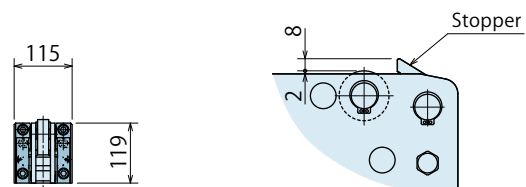
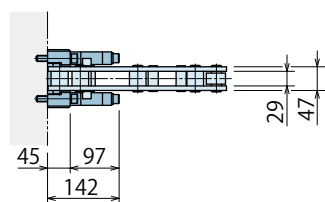
MRD

MRE/MRF

MRG

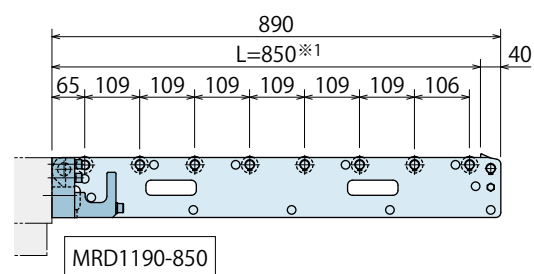
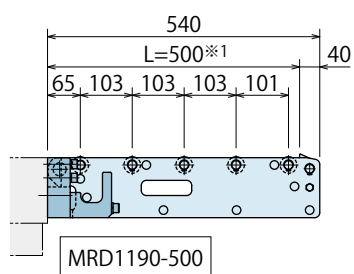
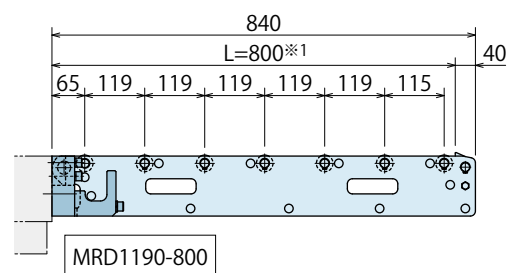
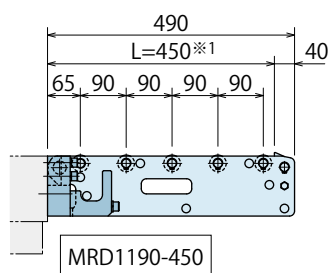
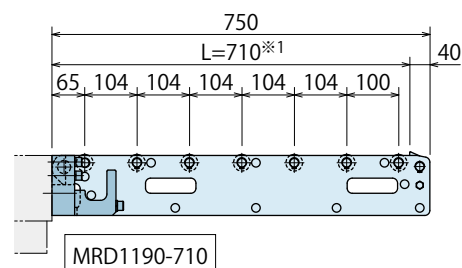
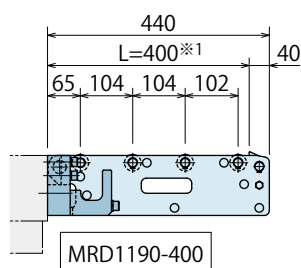
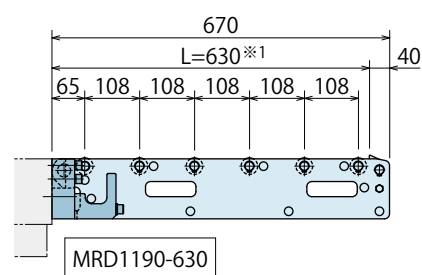
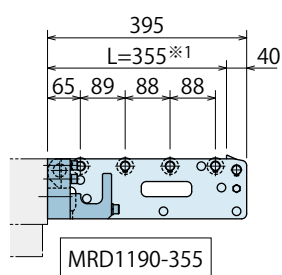
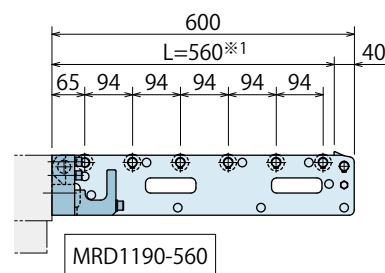
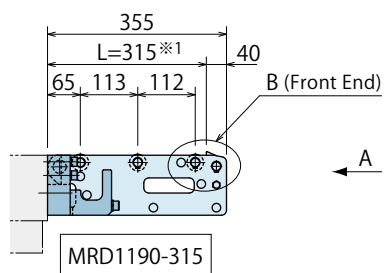
MRJ/MRK

External Dimensions : Removable • Vertical Folding Pre-Roller (MRD1190-□)



View A

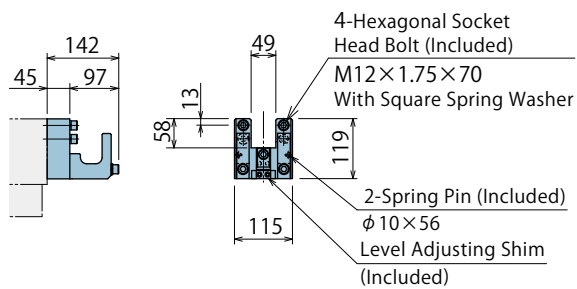
Enlarged View of B (Front End)



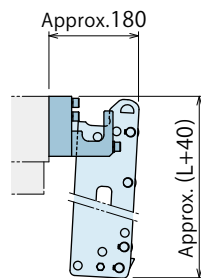
Note:

※1. It shows the die travel L.

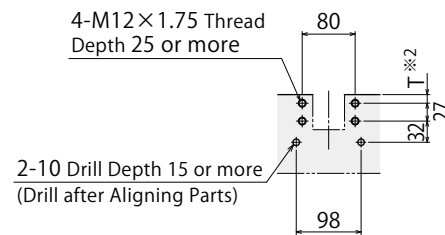
## External Dimensions : Mounting Block (MRD1190-B)



## Dimensions when Folded



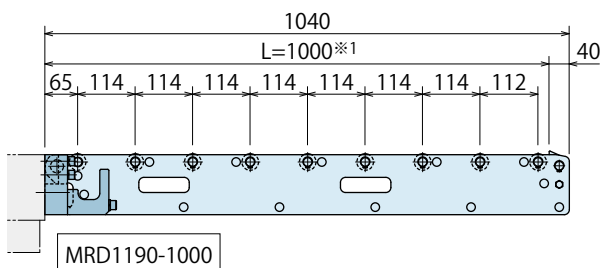
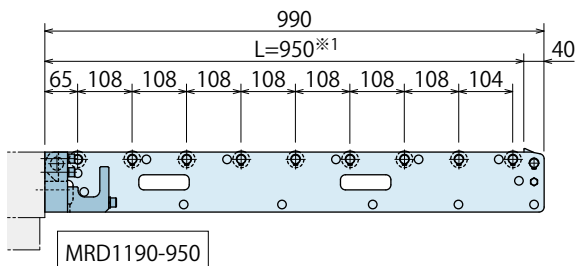
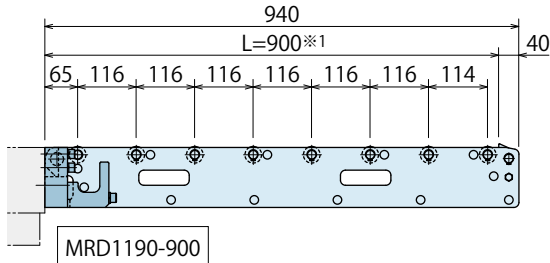
## Machining Dimensions : Block Mounting Area



| Die Lifter     |                | (mm)          |
|----------------|----------------|---------------|
| Model No.      | Lift-Up Stroke | Dimension T※2 |
| RA018/022      | 1.5            | 13.5          |
| RA028/050      | 2              | 13            |
| RQA028/050     |                |               |
| RQC030/040/051 |                |               |

Note:

※2. Dimension T should be processed according to Die Lifter which is used with the block.



Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

Pre-Roller

MRC

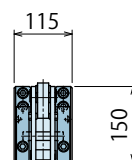
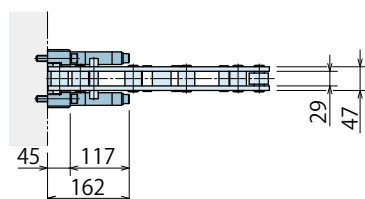
MRD

MRE/MRF

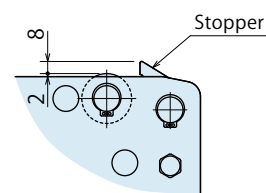
MRG

MRJ/MRK

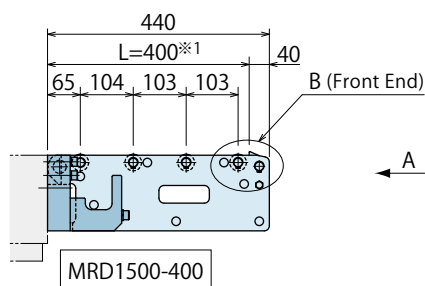
External Dimensions : Removable • Vertical Folding Pre-Roller (MRD1500-□)



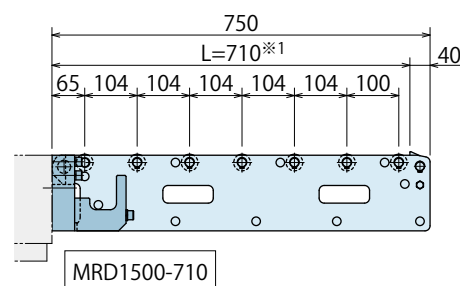
View A



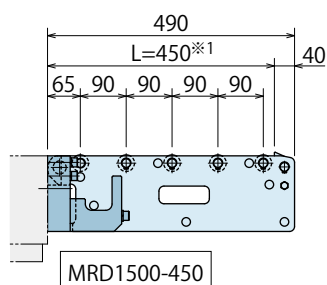
Enlarged View of B (Front End)



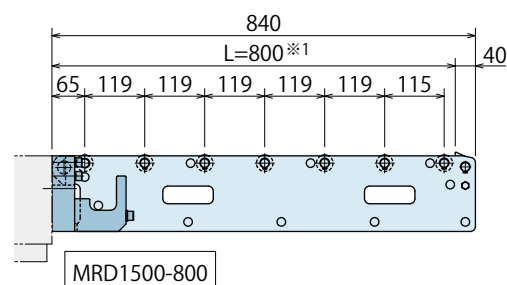
MRD1500-400



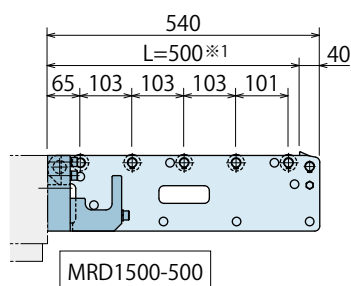
MRD1500-710



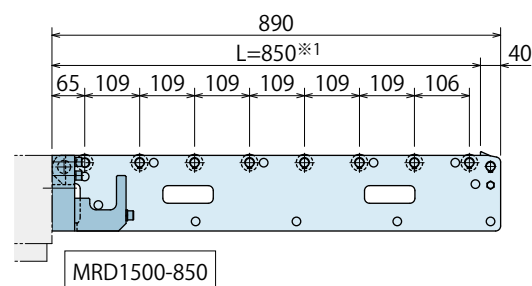
MRD1500-450



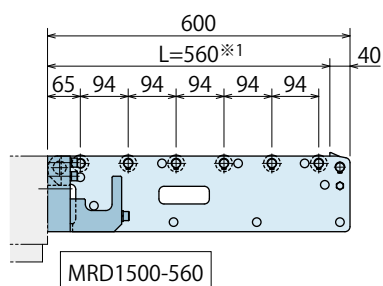
MRD1500-800



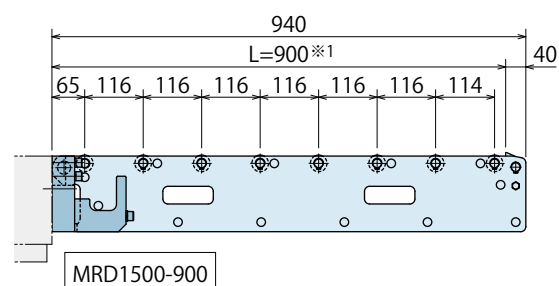
MRD1500-500



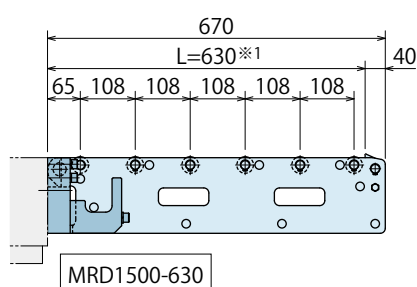
MRD1500-850



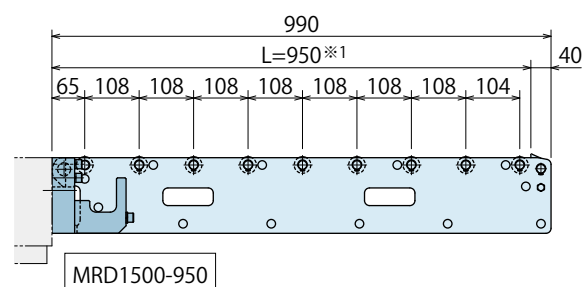
MRD1500-560



MRD1500-900



MRD1500-630

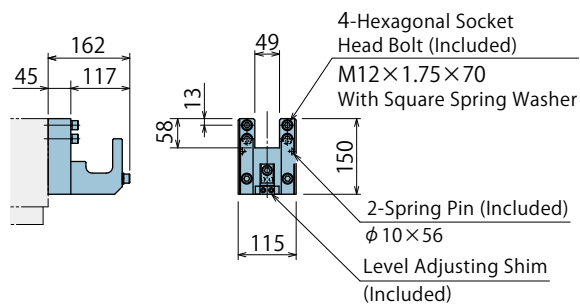


MRD1500-950

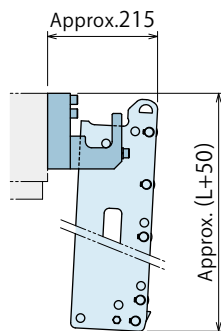
Note:

※1. It shows the die travel L.

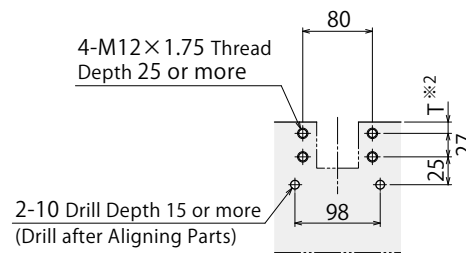
## External Dimensions : Mounting Block (MRD1500-B)



## Dimensions when Folded



## Machining Dimensions : Block Mounting Area



| Die Lifter     |                | (mm)          |
|----------------|----------------|---------------|
| Model No.      | Lift-Up Stroke | Dimension T※2 |
| RA018/022      | 1.5            | 13.5          |
| RA028/050      | 2              | 13            |
| RQA028/050     |                |               |
| RQC030/040/051 |                |               |

Note:

※2. Dimension T should be processed according to Die Lifter which is used with the block.

Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

Pre-Roller

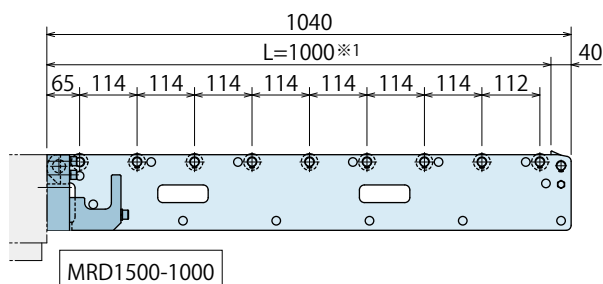
MRC

MRD

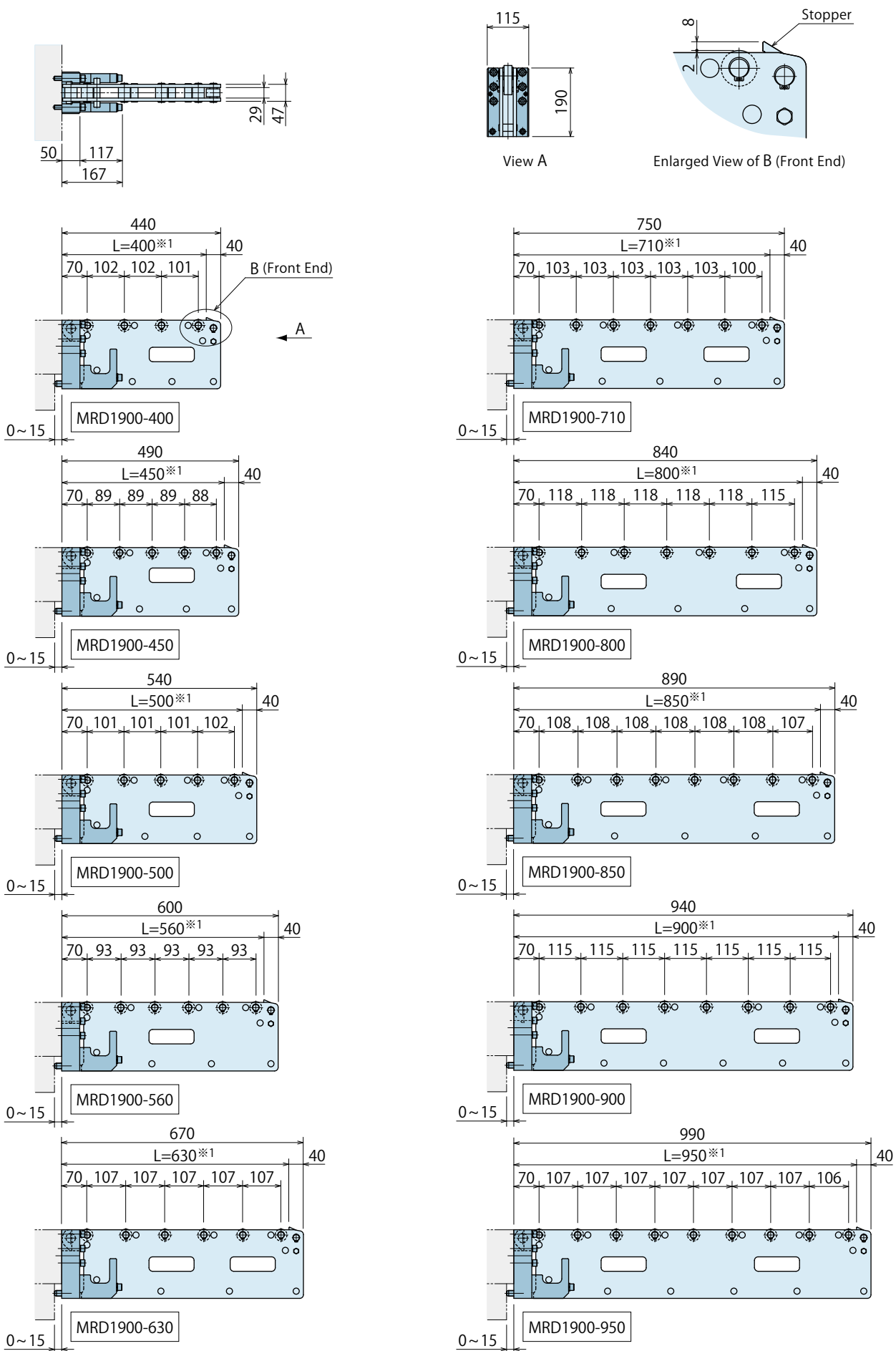
MRE/MRF

MRG

MRJ/MRK



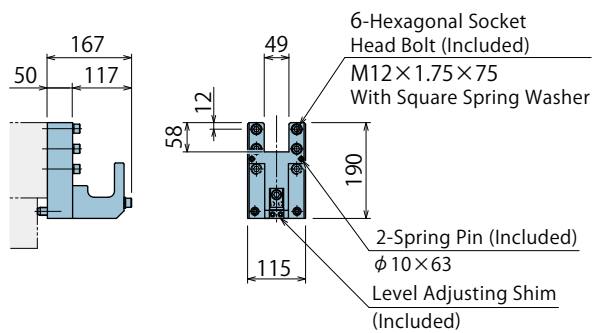
External Dimensions : Removable • Vertical Folding Pre-Roller (MRD1900-□)



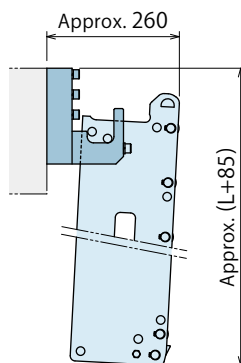
Note:

※1. It shows the die travel L.

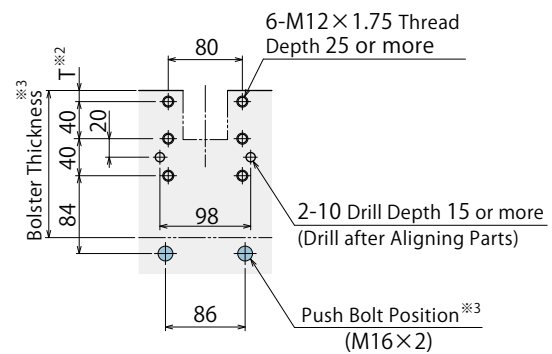
## External Dimensions : Mounting Block (MRD1900-B)



## Dimensions when Folded



## Machining Dimensions : Block Mounting Area



(mm)

| Die Lifter     |                | Dimension T <sup>※2</sup> |
|----------------|----------------|---------------------------|
| Model No.      | Lift-Up Stroke |                           |
| RA018/022      | 1.5            | 12.5                      |
| RA028/050      | 2              | 12                        |
| RQA028/050     |                |                           |
| RQC030/040/051 |                |                           |

Notes :

※2. Dimension T should be processed according to Die Lifter which is used with the block.

※3. Use a push bolt when the bolster thickness is 160mm or less.

Clamp • Unit  
Operation Panel  
Control UnitDie Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

Pre-Roller

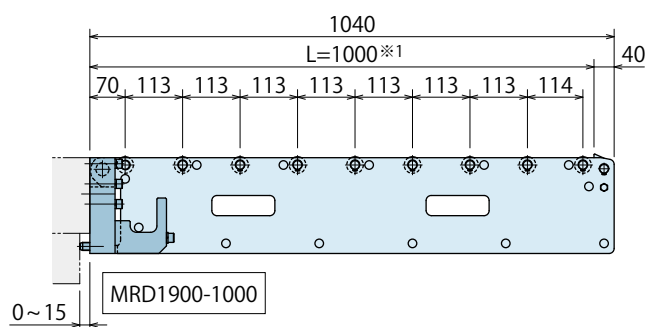
MRC

MRD

MRE/MRF

MRG

MRJ/MRK



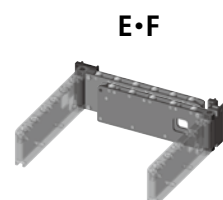
## Model No. Indication

MR **E** **119** **0** - **630**

1 2 3 4

### 1 Frame Storage Method

|                                                          |       |
|----------------------------------------------------------|-------|
| <b>C</b> : Removable                                     | P.163 |
| <b>D</b> : Removable・Vertical Folding                    | P.163 |
| <b>E</b> : Horizontal Folding (Inside Arm)               | P.173 |
| <b>F</b> : Horizontal Folding (Outside Arm)              | P.173 |
| <b>G</b> : Removable (with Stand)                        | P.181 |
| <b>J</b> : Horizontal Folding (with Stand) (Inside Arm)  | P.189 |
| <b>K</b> : Horizontal Folding (with Stand) (Outside Arm) | P.189 |

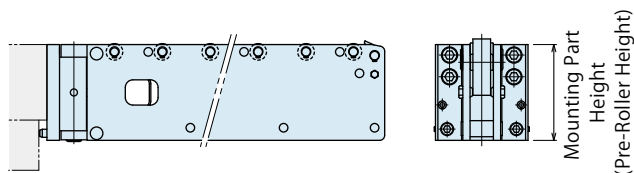


### 2 Mounting Part Height (Pre-Roller Height)

**119** : Mounting Part Height 119 mm

**190** : Mounting Part Height 190 mm

**295** : Mounting Part Height 295 mm



### 3 Design No.

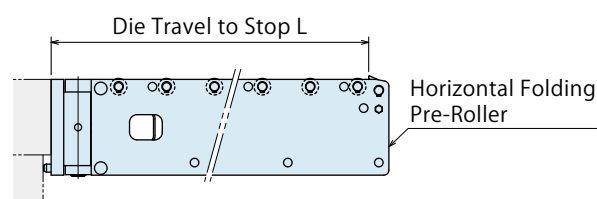
**0** : Revision Number

### 4 Die Travel L

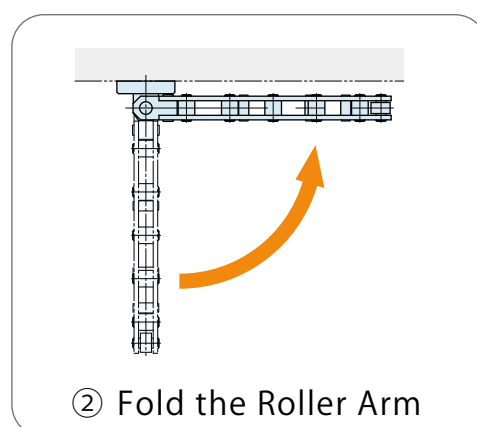
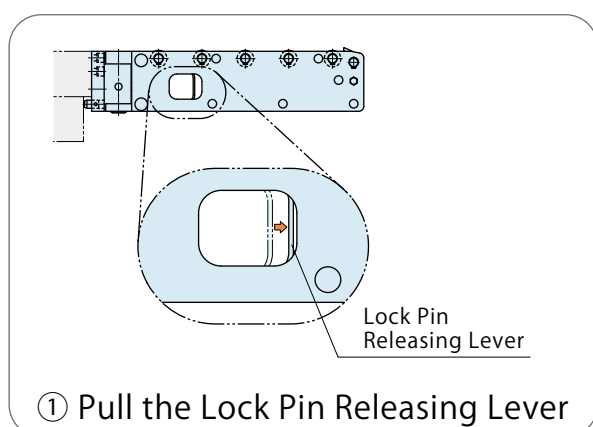
**Dimensions** : Die Travel L

(Distance that the die can be pulled out)

(Please refer to the specifications)



## Folding Method



※ Can be folded to the other side as well.

## Specifications

### MRE/MRF1190-□

| MRE         |             |                | MRF         |             |                | Die Travel to Stop<br>L (mm) | Max. Loading Weight each (kg) <sup>※1</sup> |            |
|-------------|-------------|----------------|-------------|-------------|----------------|------------------------------|---------------------------------------------|------------|
| Model       | Weight (kg) | No. of Rollers | Model       | Weight (kg) | No. of Rollers |                              | at Roller A                                 | at Point B |
| MRE1190-315 | 11.3        | 3              | MRF1190-315 | 12.5        | 3              | 315                          | 1500                                        | 1840       |
| MRE1190-355 | 12.1        | 3              | MRF1190-355 | 13.3        | 4              | 355                          | 1400                                        | 1730       |
| MRE1190-400 | 13.0        | 4              | MRF1190-400 | 14.1        | 4              | 400                          | 1200                                        | 1500       |
| MRE1190-450 | 13.8        | 4              | MRF1190-450 | 15.2        | 5              | 450                          | 1000                                        | 1250       |
| MRE1190-500 | 14.9        | 5              | MRF1190-500 | 16.1        | 5              | 500                          | 850                                         | 1070       |
| MRE1190-560 | 15.5        | 5              | MRF1190-560 | 16.9        | 6              | 560                          | 750                                         | 950        |
| MRE1190-630 | 17.0        | 6              | MRF1190-630 | 18.1        | 6              | 630                          | 650                                         | 830        |
| MRE1190-710 | 18.3        | 6              | MRF1190-710 | 19.6        | 7              | 710                          | 550                                         | 700        |

### MRE/MRF1900-□

| MRE          |             |                | MRF          |             |                | Die Travel to Stop<br>L (mm) | Max. Loading Weight each (kg) <sup>※1</sup> |            |
|--------------|-------------|----------------|--------------|-------------|----------------|------------------------------|---------------------------------------------|------------|
| Model        | Weight (kg) | No. of Rollers | Model        | Weight (kg) | No. of Rollers |                              | at Roller A                                 | at Point B |
| MRE1900-500  | 23.1        | 5              | MRF1900-500  | 25.4        | 5              | 500                          | 1600                                        | 2020       |
| MRE1900-560  | 24.3        | 5              | MRF1900-560  | 26.5        | 6              | 560                          | 1400                                        | 1780       |
| MRE1900-630  | 26.4        | 6              | MRF1900-630  | 28.6        | 6              | 630                          | 1250                                        | 1600       |
| MRE1900-710  | 28.5        | 6              | MRF1900-710  | 30.8        | 7              | 710                          | 1100                                        | 1410       |
| MRE1900-800  | 31.3        | 7              | MRF1900-800  | 33.6        | 8              | 800                          | 950                                         | 1220       |
| MRE1900-850  | 32.8        | 8              | MRF1900-850  | 34.9        | 8              | 850                          | 850                                         | 1100       |
| MRE1900-900  | 34.1        | 8              | MRF1900-900  | 36.4        | 9              | 900                          | 800                                         | 1030       |
| MRE1900-950  | 35.8        | 9              | MRF1900-950  | 37.8        | 9              | 950                          | 750                                         | 970        |
| MRE1900-1000 | 37.1        | 9              | MRF1900-1000 | 39.1        | 9              | 1000                         | 700                                         | 910        |

### MRE/MRF2950-□

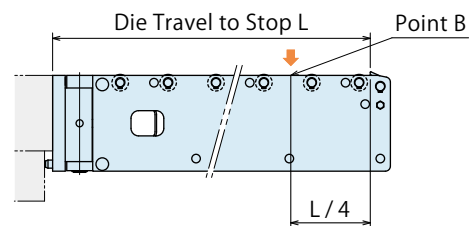
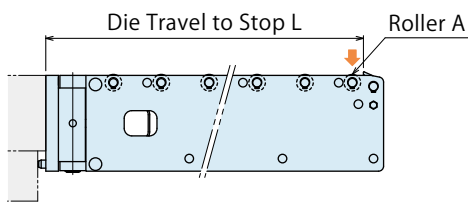
| MRE          |             |                | MRF          |             |                | Die Travel to Stop<br>L (mm) | Max. Loading Weight each (kg) <sup>※1</sup> |            |
|--------------|-------------|----------------|--------------|-------------|----------------|------------------------------|---------------------------------------------|------------|
| Model        | Weight (kg) | No. of Rollers | Model        | Weight (kg) | No. of Rollers |                              | at Roller A                                 | at Point B |
| MRE2950-630  | 34.6        | 6              | MRF2950-630  | 39.6        | 6              | 630                          | 2000                                        | 2560       |
| MRE2950-710  | 36.4        | 6              | MRF2950-710  | 41.3        | 7              | 710                          | 1750                                        | 2250       |
| MRE2950-800  | 38.6        | 7              | MRF2950-800  | 43.5        | 8              | 800                          | 1500                                        | 1930       |
| MRE2950-850  | 40.0        | 8              | MRF2950-850  | 44.8        | 8              | 850                          | 1400                                        | 1810       |
| MRE2950-900  | 41.1        | 8              | MRF2950-900  | 45.9        | 9              | 900                          | 1300                                        | 1680       |
| MRE2950-950  | 42.4        | 9              | MRF2950-950  | 47.2        | 9              | 950                          | 1200                                        | 1550       |
| MRE2950-1000 | 44.4        | 9              | MRF2950-1000 | 48.3        | 9              | 1000                         | 1100                                        | 1430       |

Note:

※1. Maximum loading weight per pre-roller.

at Roller A : When load extends to Roller A.

at Point B : When load extends to distance L/4 from stopper.



Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

Pre-Roller

MRC

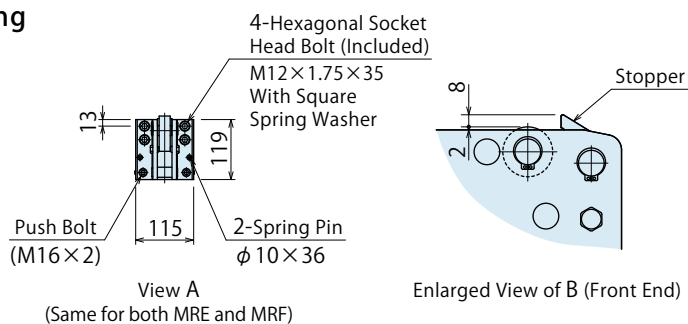
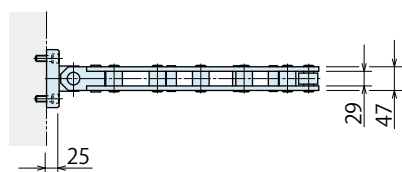
MRD

MRE/MRF

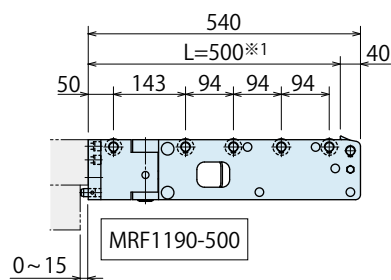
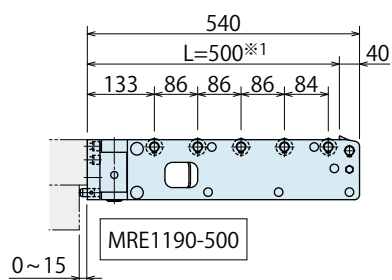
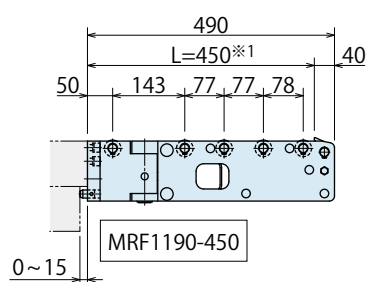
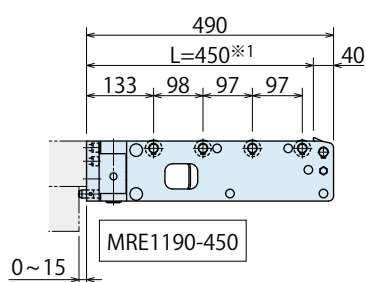
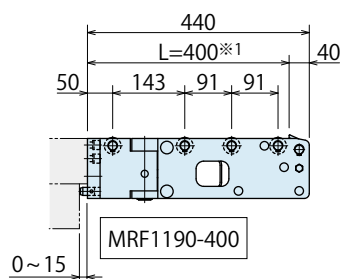
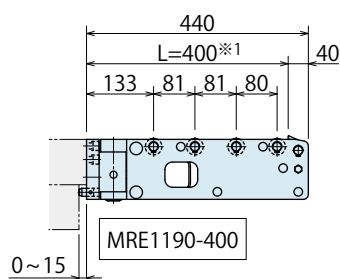
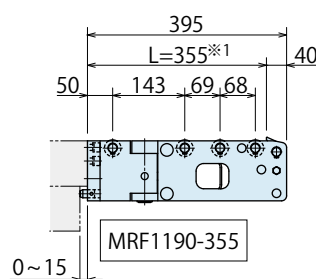
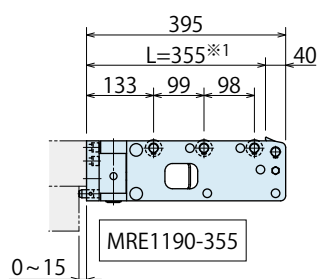
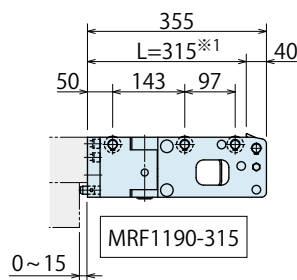
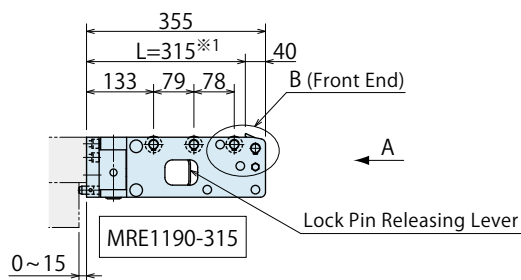
MRG

MRJ/MRK

# External Dimensions : Horizontal Folding Pre-Roller (MRE/MRF1190-□)



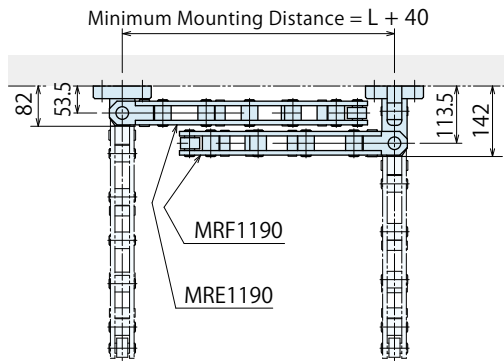
Enlarged View of B (Front End)



Note:

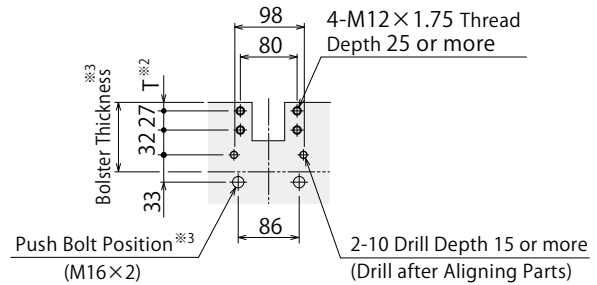
※1. It shows the die travel L.

## Dimensions when Folded



MRE and MRF can swing to both left and right.

## Machining Dimensions of Mounting Area



| Die Lifter            |                | (mm)          |
|-----------------------|----------------|---------------|
| Model No.             | Lift-Up Stroke | Dimension T*2 |
| <b>RA018/022</b>      | 1.5            | 13.5          |
| <b>RA028/050</b>      | 2              | 13            |
| <b>RQA028/050</b>     |                |               |
| <b>RQC030/040/051</b> |                |               |

Notes :

※2. Dimension T should be processed according to Die Lifter which is used with the block.

※3. Use a push bolt when the bolster thickness is 100mm or less.

Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

Pre-Roller

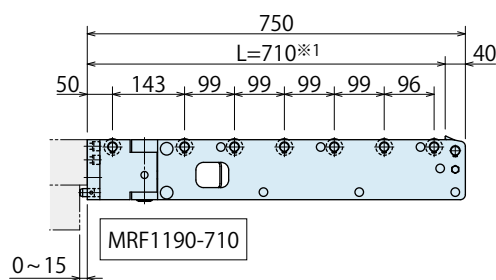
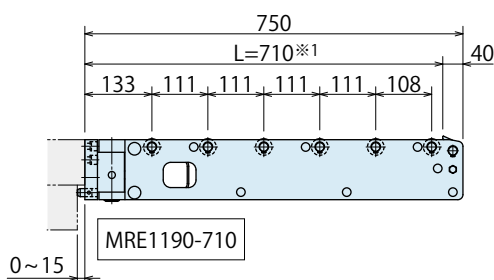
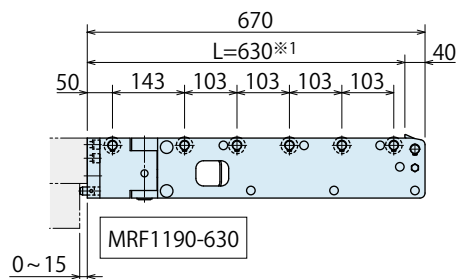
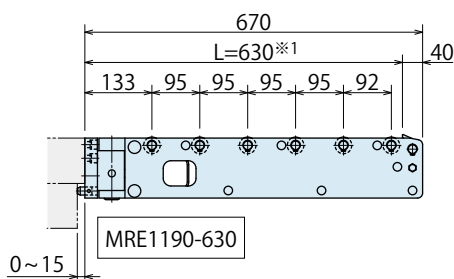
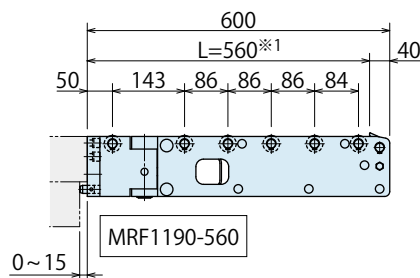
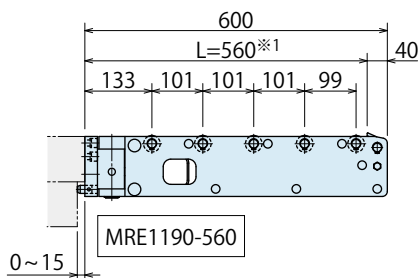
MRC

MRD

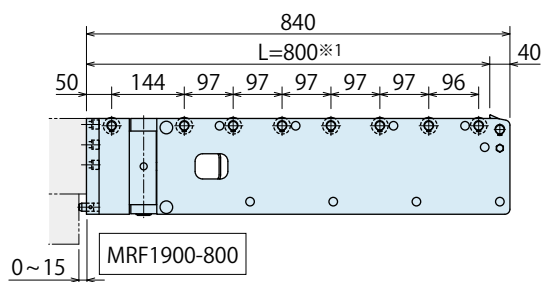
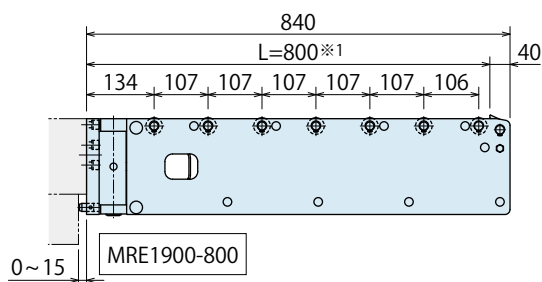
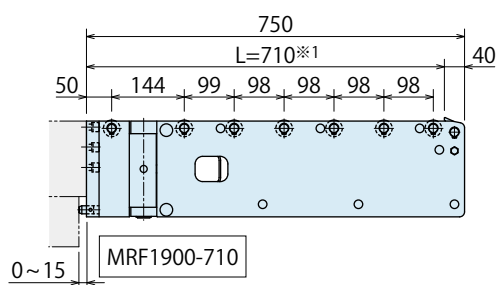
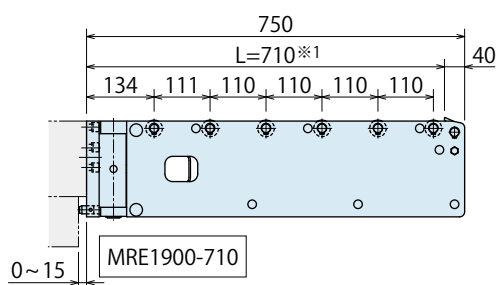
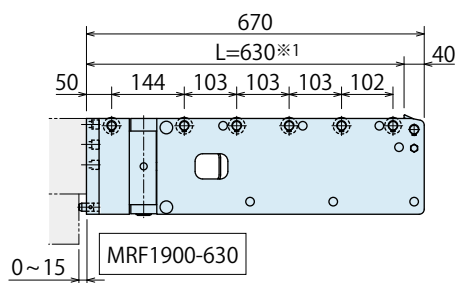
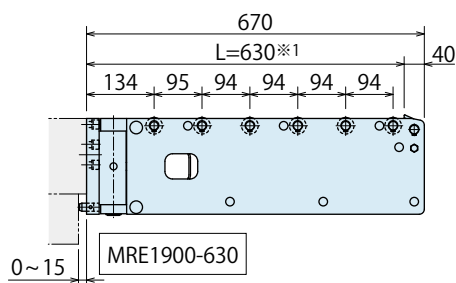
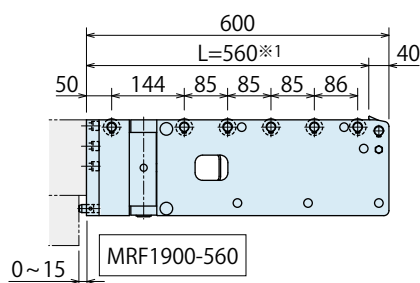
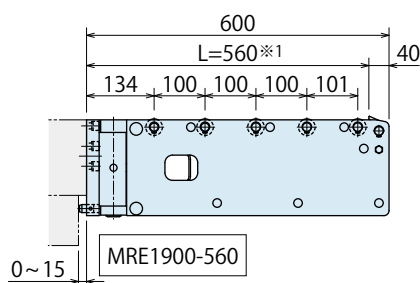
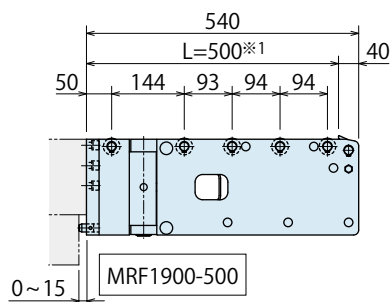
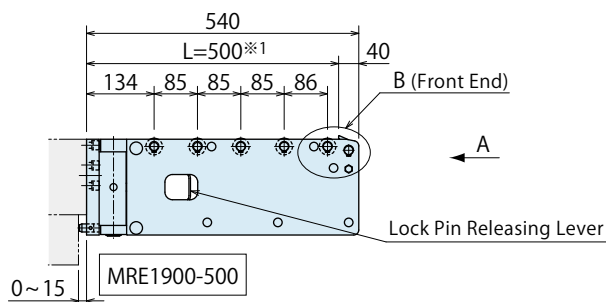
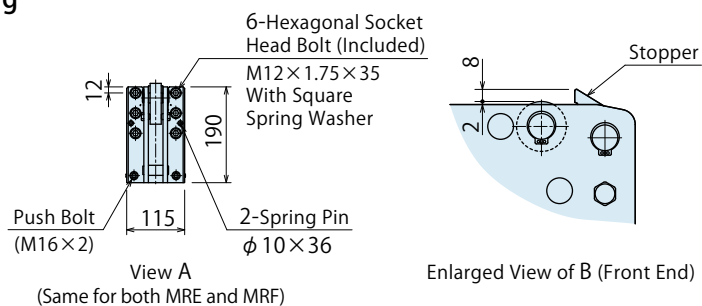
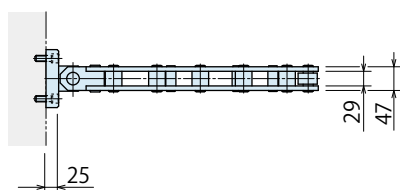
**MRE/MRF**

MRG

MRJ/MRK



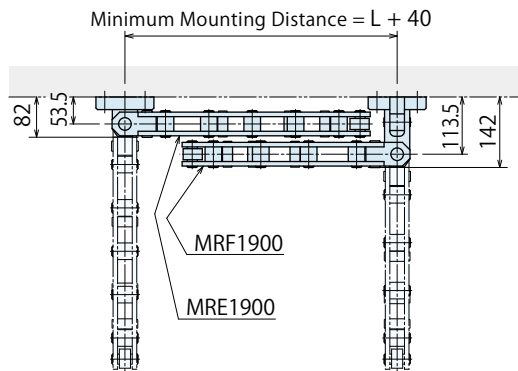
# External Dimensions : Horizontal Folding Pre-Roller (MRE/MRF1900-□)



Note:

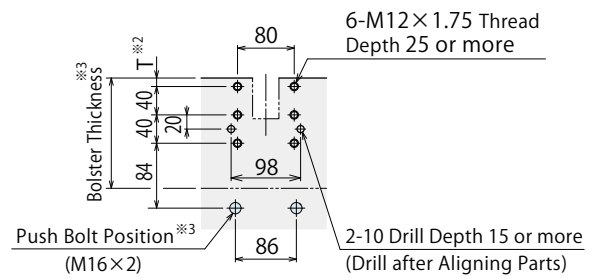
※1. It shows the die travel L.

## Dimensions when Folded



MRE and MRF can swing to both left and right.

## Machining Dimensions of Mounting Area



| Die Lifter     |                | Dimension T <sup>※2</sup> |
|----------------|----------------|---------------------------|
| Model No.      | Lift-Up Stroke |                           |
| RA018/022      | 1.5            | 12.5                      |
| RA028/050      | 2              | 12                        |
| RQA028/050     |                |                           |
| RQC030/040/051 |                |                           |

Notes :

※2. Dimension T should be processed according to Die Lifter which is used with the block.

※3. Use a push bolt when the bolster thickness is 160mm or less.

Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

Pre-Roller

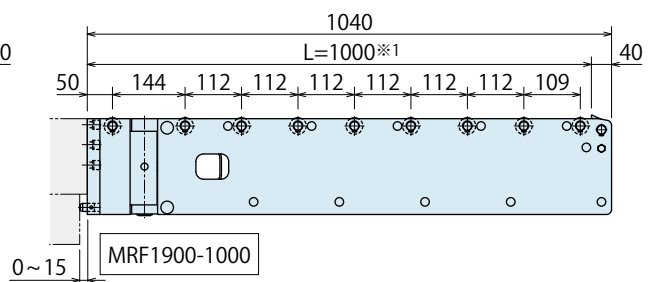
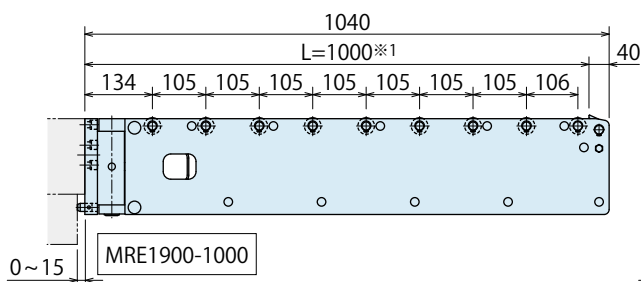
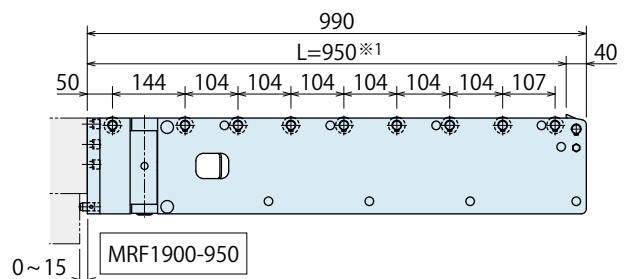
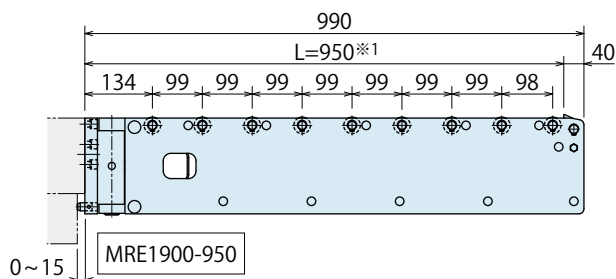
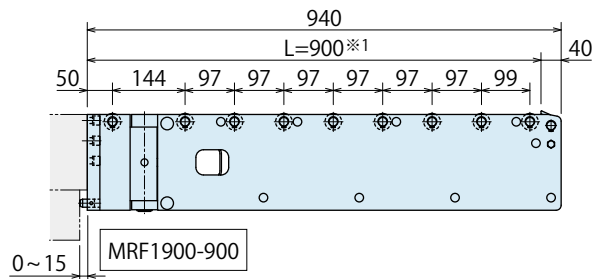
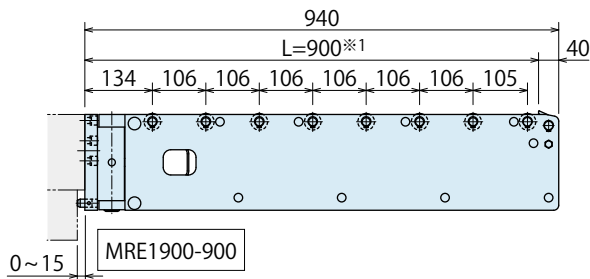
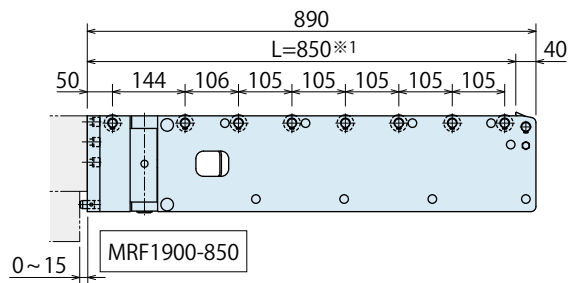
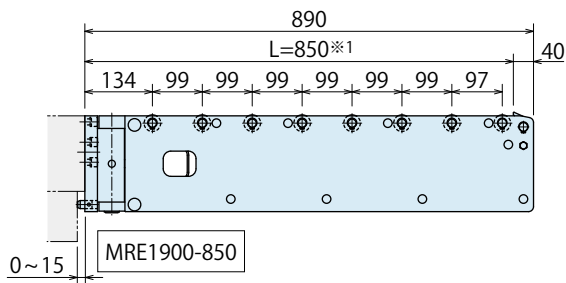
MRC

MRD

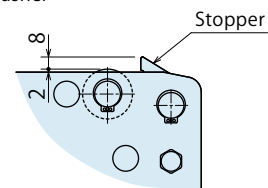
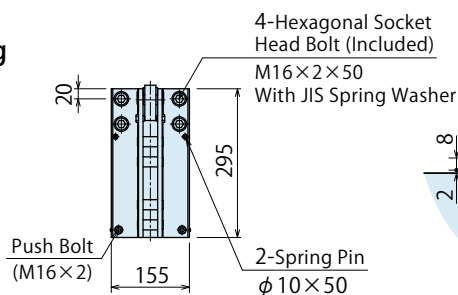
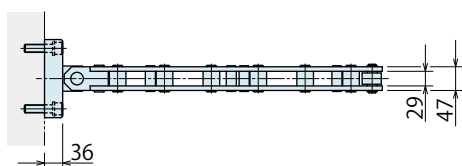
MRE/MRF

MRG

MRJ/MRK

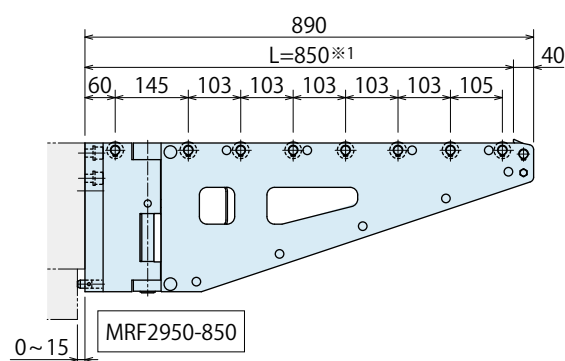
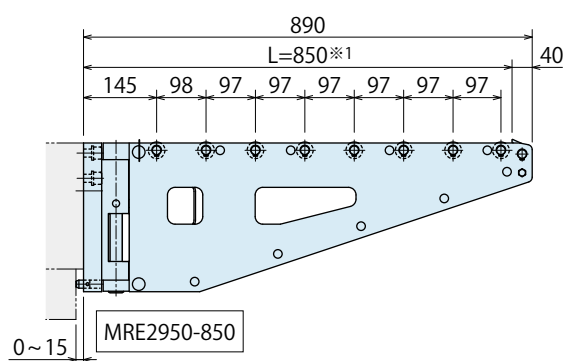
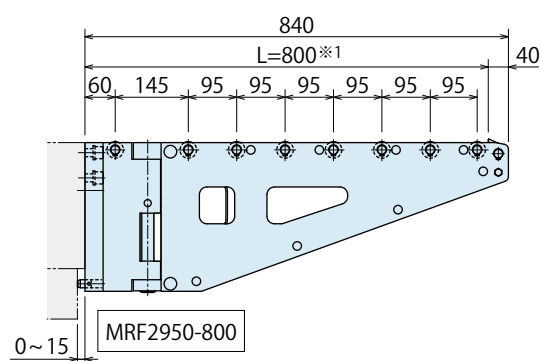
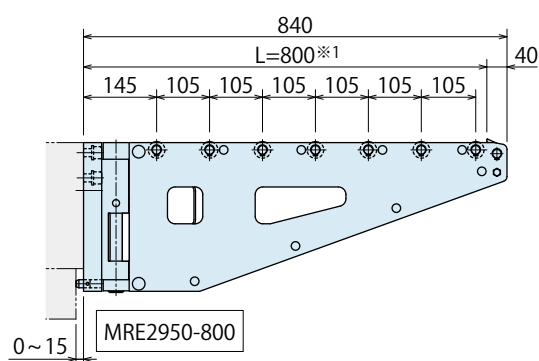
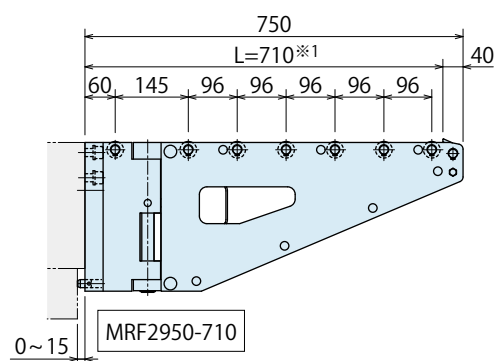
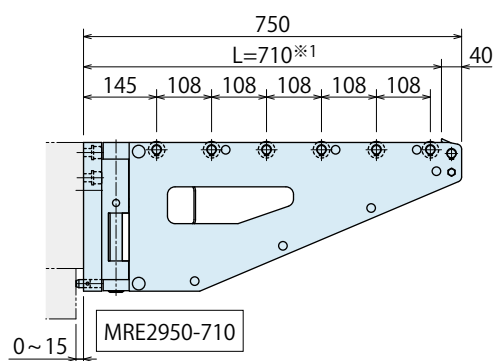
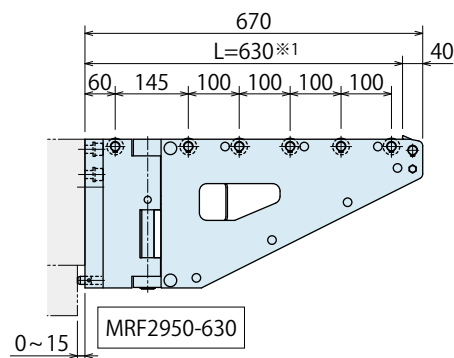
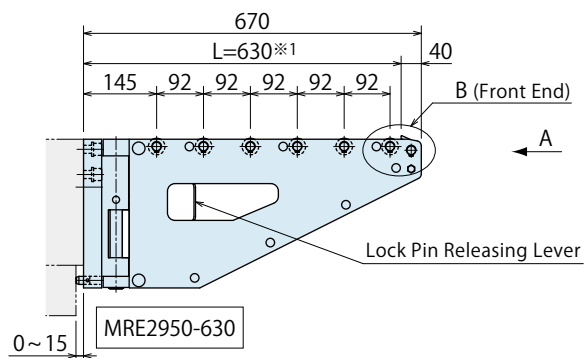


External Dimensions : Horizontal Folding  
Pre-Roller (MRE/MRF2950-□)



View A  
(Same for both MRE and MRF)

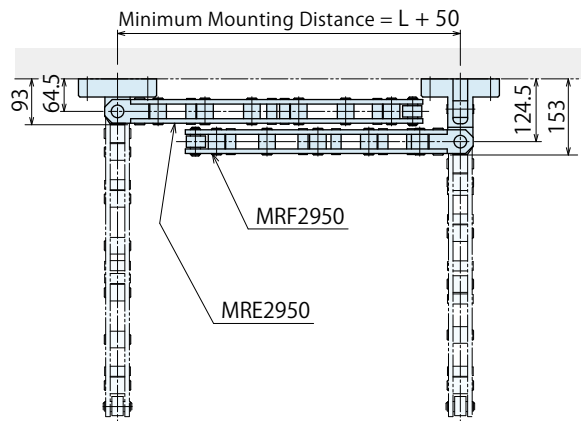
Enlarged View of B (Front End)



Note:

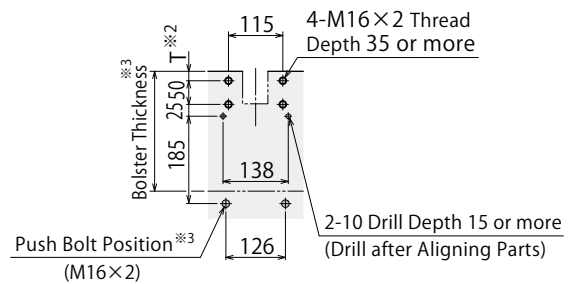
※1. It shows the die travel L.

## Dimensions when Folded



MRE and MRF can swing to both left and right.

## Machining Dimensions of Mounting Area



| Die Lifter     |                | Dimension T <sup>※2</sup> |
|----------------|----------------|---------------------------|
| Model No.      | Lift-Up Stroke |                           |
| RA018/022      | 1.5            | 20.5                      |
| RA028/050      | 2              | 20                        |
| RQA028/050     |                |                           |
| RQC030/040/051 |                |                           |

Notes :

※2. Dimension T should be processed according to Die Lifter which is used with the block.

※3. Use a push bolt when the bolser thickness is 245mm or less.

Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

Pre-Roller

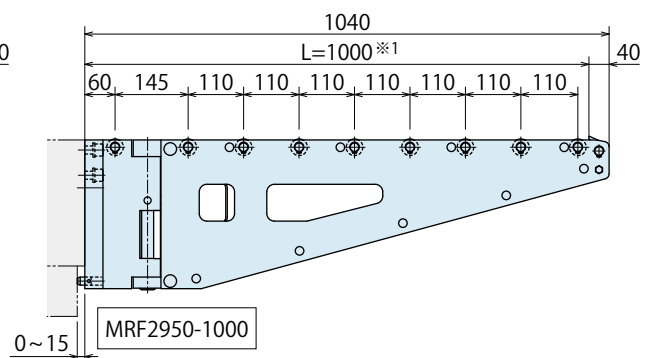
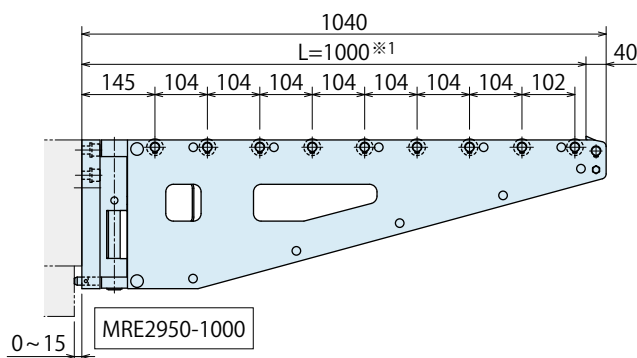
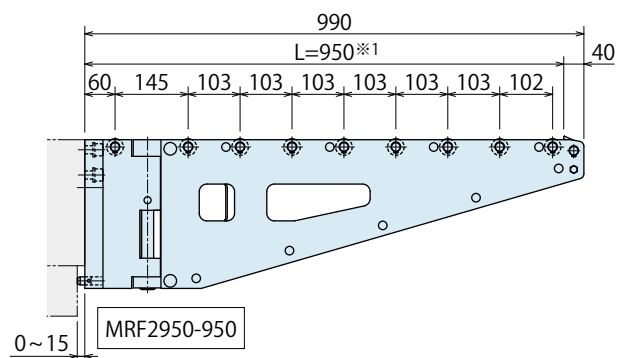
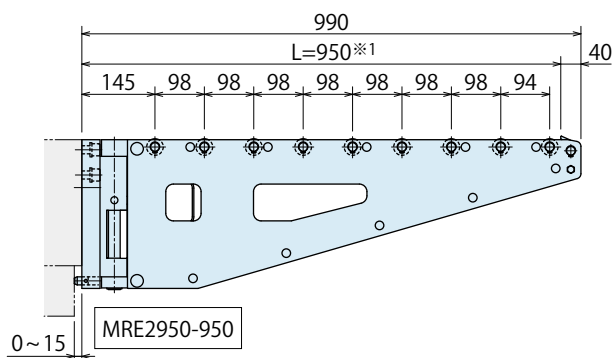
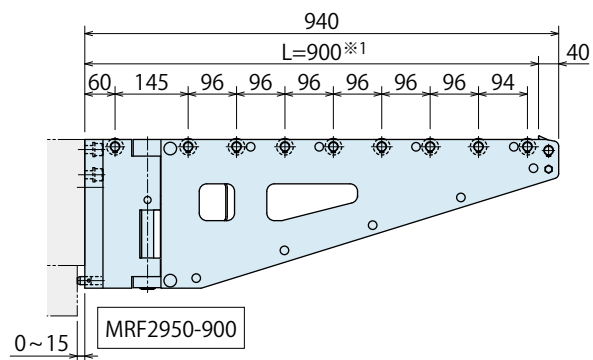
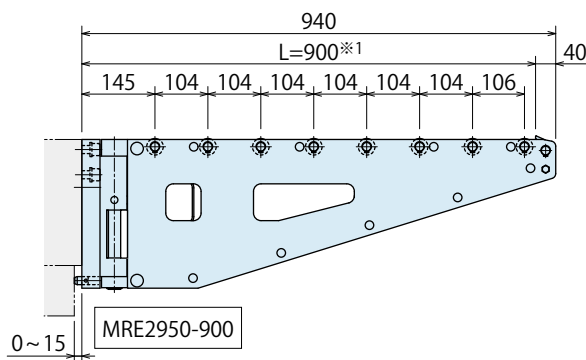
MRC

MRD

MRE/MRF

MRG

MRJ/MRK



Model No. Indication : Removable Pre-Roller (with Stand)

MR **G** **119** **0** - **710**

1 2 3 4

1 Frame Storage Method

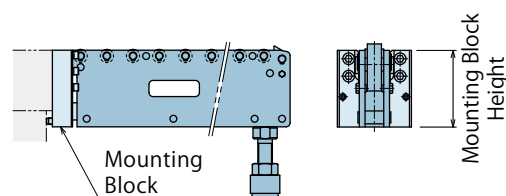
|                                                          |       |
|----------------------------------------------------------|-------|
| <b>C</b> : Removable                                     | P.153 |
| <b>D</b> : Removable•Vertical Folding                    | P.163 |
| <b>E</b> : Horizontal Folding (Inside Arm)               | P.173 |
| <b>F</b> : Horizontal Folding (Outside Arm)              | P.173 |
| <b>G</b> : Removable (with Stand)                        | P.181 |
| <b>J</b> : Horizontal Folding (with Stand) (Inside Arm)  | P.189 |
| <b>K</b> : Horizontal Folding (with Stand) (Outside Arm) | P.189 |



2 Mounting Block Height (Pre-Roller Height)

**119** : Mounting Block Height 119 mm

**190** : Mounting Block Height 190 mm



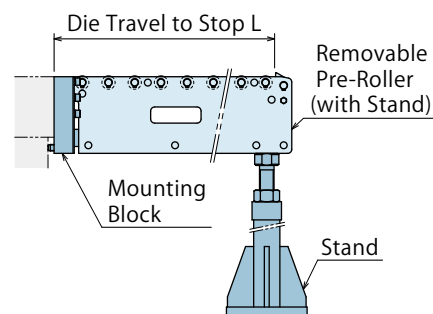
3 Design No.

**0** : Revision Number

4 Die Travel L • Mounting Block Model No.

**Dimensions** : Die Travel L (Distance that the die can be pulled out)  
(Please refer to the specifications)

**B** : Mounting Block



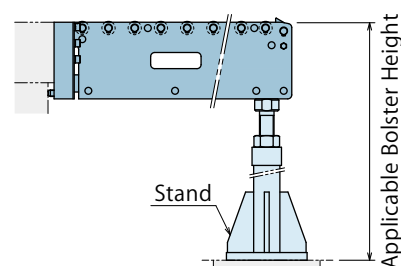
Model No. Indication : Stand

MRH **040** **0** - **A**

1 2

1 Applicable Bolster Height

|                             |                             |
|-----------------------------|-----------------------------|
| • When using MRG1190-□      | • When using MRG1900-□      |
| <b>040</b> : 520 ~ 620 mm   | <b>040</b> : 590 ~ 690 mm   |
| <b>050</b> : 620 ~ 720 mm   | <b>050</b> : 690 ~ 790 mm   |
| <b>060</b> : 720 ~ 820 mm   | <b>060</b> : 790 ~ 890 mm   |
| <b>070</b> : 820 ~ 920 mm   | <b>070</b> : 890 ~ 990 mm   |
| <b>080</b> : 920 ~ 1020 mm  | <b>080</b> : 990 ~ 1090 mm  |
| <b>090</b> : 1020 ~ 1120 mm | <b>090</b> : 1090 ~ 1190 mm |
| <b>100</b> : 1120 ~ 1220 mm | <b>100</b> : 1190 ~ 1290 mm |



2 Design No.

**0** : Revision Number

## Compatible Mounting Blocks

| Pre-Roller Model No. | Mounting Block Model No. | Mounting Block Weight (kg) |
|----------------------|--------------------------|----------------------------|
| <b>MRG1190-□</b>     | MRG1190-B                | 3.7                        |
| <b>MRG1900-□</b>     | MRG1900-B                | 7.1                        |

## Specifications : Removable Pre-Roller (with Stand)

### MRG1190-□

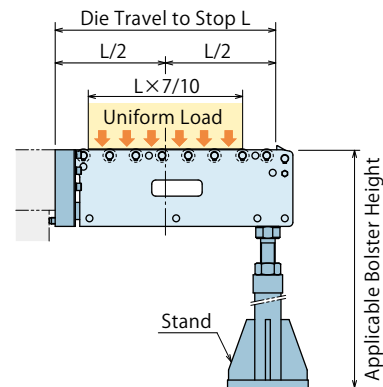
| Model No.           | Weight (kg) | Number of Rollers | Die Travel to Stop L (mm) | Max. Loading Weight each (kg) <sup>※1</sup> |
|---------------------|-------------|-------------------|---------------------------|---------------------------------------------|
| <b>MRG1190-710</b>  | 14.8        | 11                | 710                       | 3575                                        |
| <b>MRG1190-800</b>  | 16.5        | 12                | 800                       | 3150                                        |
| <b>MRG1190-850</b>  | 17.5        | 13                | 850                       | 2975                                        |
| <b>MRG1190-900</b>  | 18.8        | 14                | 900                       | 2800                                        |
| <b>MRG1190-950</b>  | 19.6        | 14                | 950                       | 2650                                        |
| <b>MRG1190-1000</b> | 20.5        | 15                | 1000                      | 2500                                        |
| <b>MRG1190-1250</b> | 25.5        | 19                | 1250                      | 2000                                        |
| <b>MRG1190-1600</b> | 32.6        | 24                | 1600                      | 1550                                        |
| <b>MRG1190-2000</b> | 40.7        | 30                | 2000                      | 1230                                        |

### MRG1900-□

| Model No.           | Weight (kg) | Number of Rollers | Die Travel to Stop L (mm) | Max. Loading Weight each (kg) <sup>※1</sup> |
|---------------------|-------------|-------------------|---------------------------|---------------------------------------------|
| <b>MRG1900-1000</b> | 29.6        | 15                | 1000                      | 4915                                        |
| <b>MRG1900-1250</b> | 37.2        | 18                | 1250                      | 3900                                        |
| <b>MRG1900-1600</b> | 47.7        | 24                | 1600                      | 3050                                        |
| <b>MRG1900-2000</b> | 59.8        | 30                | 2000                      | 2400                                        |

Note:

- ※1. The maximum loading weight per pre-roller with a uniform load at the center of die travel L and 70 % length of the die travel L.



## Specifications : Stand

| Model No.        | Weight (kg) | Applicable Bolster Height (mm) |                      |
|------------------|-------------|--------------------------------|----------------------|
|                  |             | When using MRG1190-□           | When using MRG1900-□ |
| <b>MRH0400-A</b> | 14.1        | 520 ~ 620                      | 590 ~ 690            |
| <b>MRH0500-A</b> | 14.7        | 620 ~ 720                      | 690 ~ 790            |
| <b>MRH0600-A</b> | 15.3        | 720 ~ 820                      | 790 ~ 890            |
| <b>MRH0700-A</b> | 15.9        | 820 ~ 920                      | 890 ~ 990            |
| <b>MRH0800-A</b> | 16.5        | 920 ~ 1020                     | 990 ~ 1090           |
| <b>MRH0900-A</b> | 17.1        | 1020 ~ 1120                    | 1090 ~ 1190          |
| <b>MRH1000-A</b> | 17.7        | 1120 ~ 1220                    | 1190 ~ 1290          |

Note:

- MRG Pre-Roller does not include MRG-B Mounting Block or MRH Stand. They are sold separately.  
Order by the model number and the quantity of each product.

Notes on Handling

- MRH Stand can be used only for MRG Pre-Roller. Do not use it for any other use. (Cannot be used for MRC or MRD Pre-Roller.)
- When setting MRH Stand, make sure it is vertical to the floor.
- Fix MRH Stand to the floor and make sure MRG Pre-Roller is level.
- Do not adjust bolts beyond the maximum adjusting height.

Installation Notes

- The floor should be level.
- The floor should be strong enough to support the maximum die weight (5.25N/mm<sup>2</sup>).  
(1) If the floor is made of concrete or mortar, set a base plate such as an iron plate in order to withstand load.  
(2) When MRH Stand is set on the pit cover, set joists or poles just under the cover to support the stand.
- MRH Stand has to be fixed to the floor.

Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

Pre-Roller

MRC

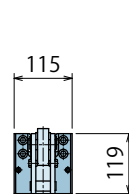
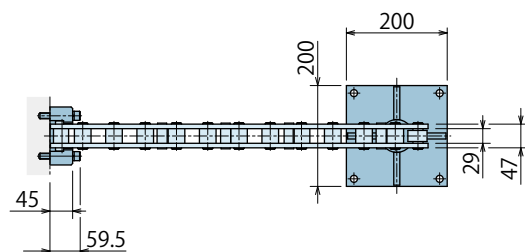
MRD

MRE/MRF

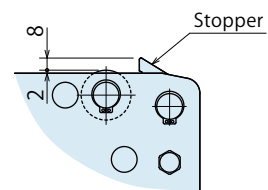
**MRG**

MRJ/MRK

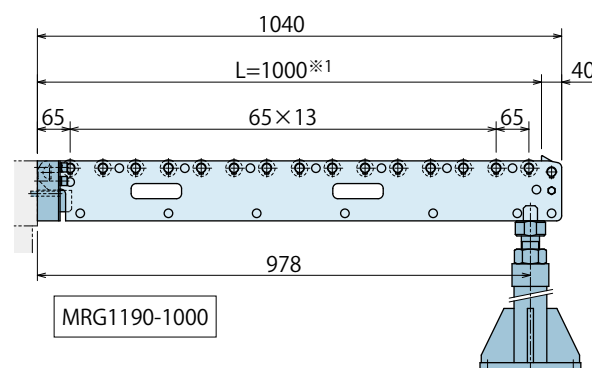
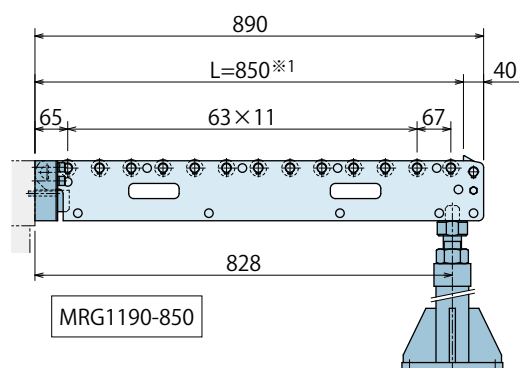
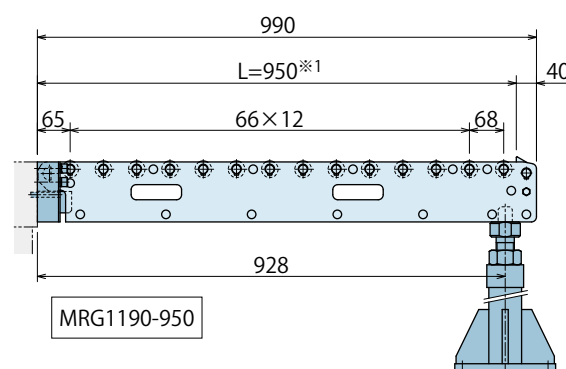
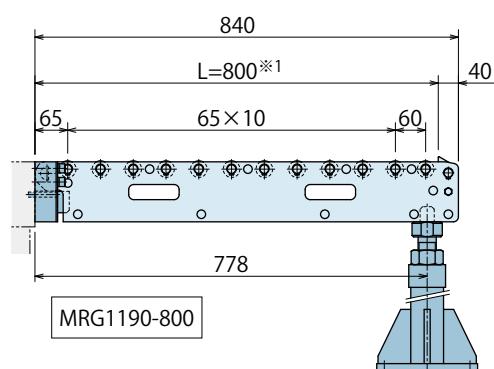
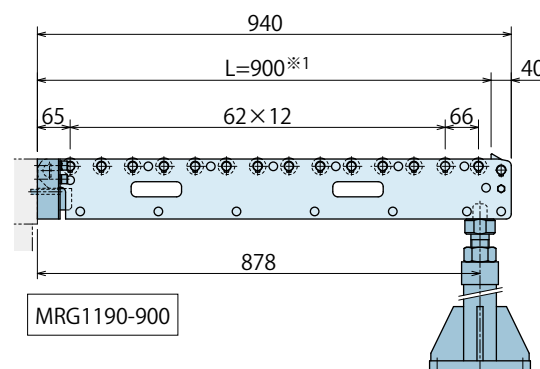
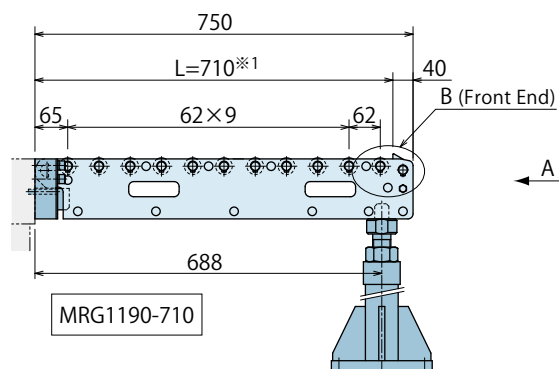
External Dimensions : Removable Pre-Roller (With Stand) (MRG1190-□)



View A



Enlarged View of B (Front End)

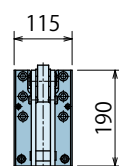


Note:

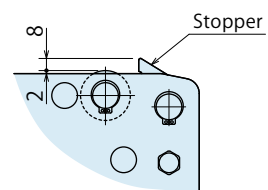
※1. It shows the die travel L.



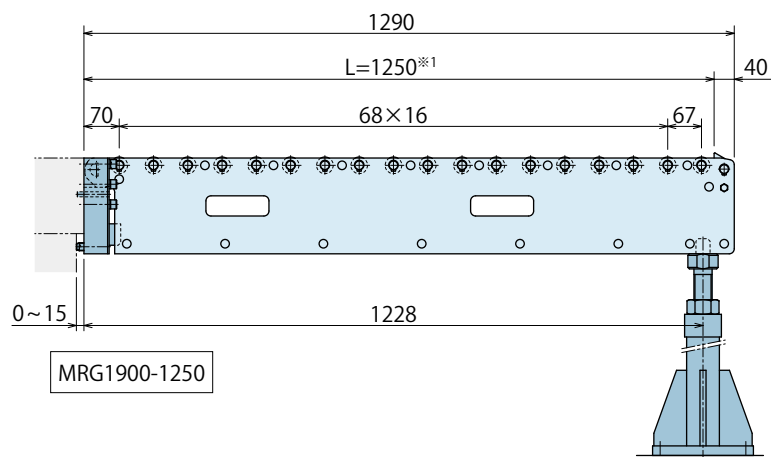
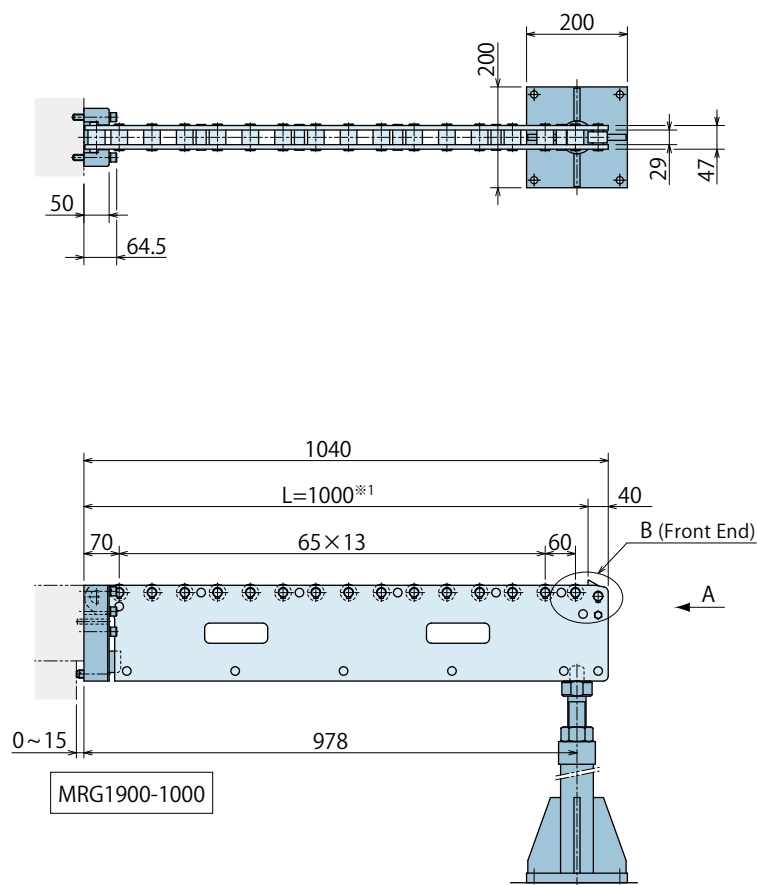
External Dimensions : Removable Pre-Roller (With Stand) (MRG1900-□)



View A



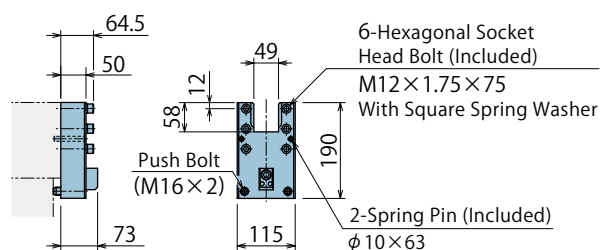
Enlarged View of B (Front End)



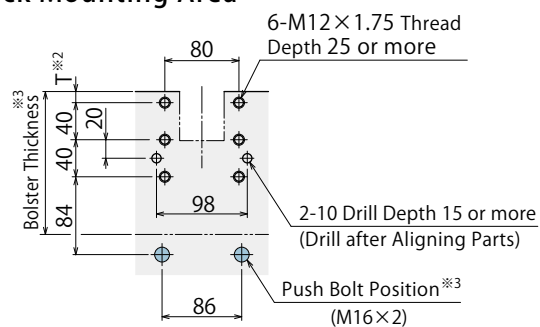
Note:

※1. It shows the die travel L.

## External Dimensions : Mounting Block (MRG1900-B)



## Machining Dimensions : Block Mounting Area

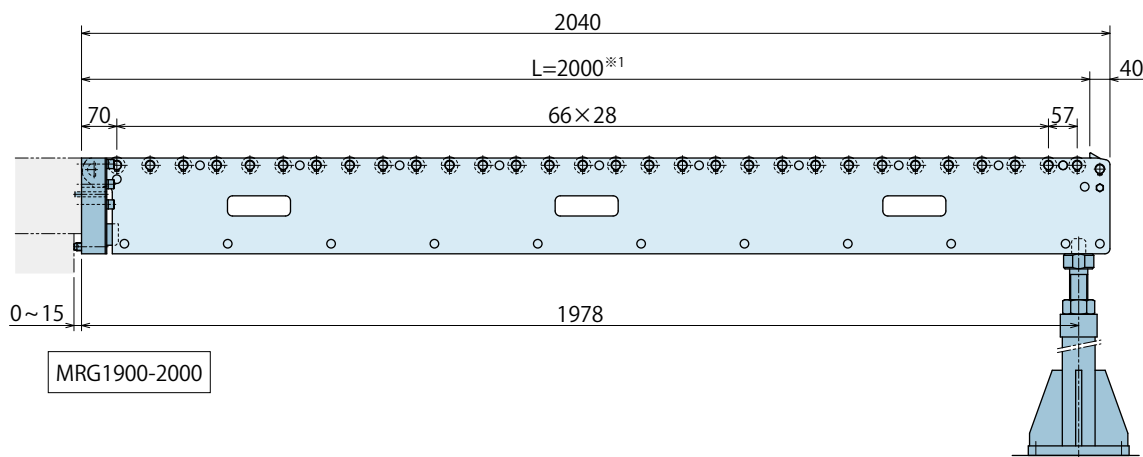
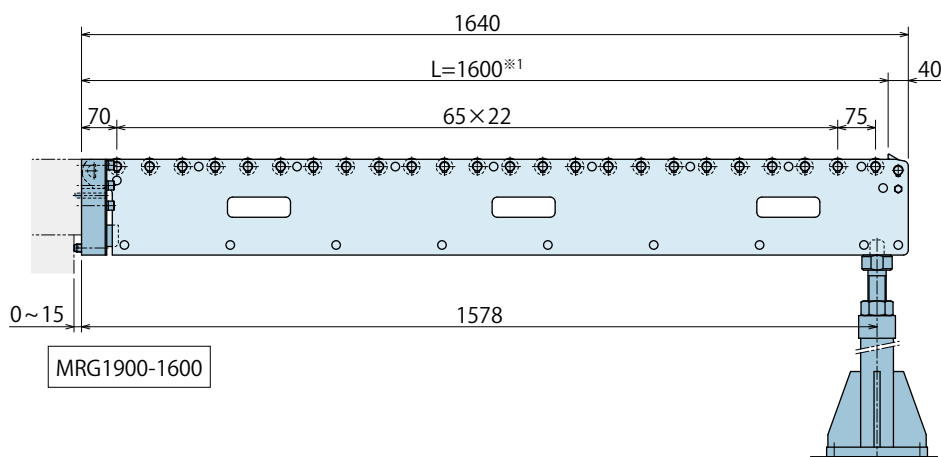


| Die Lifter     |                | (mm)                      |
|----------------|----------------|---------------------------|
| Model No.      | Lift-Up Stroke | Dimension T <sup>※2</sup> |
| RA018/022      | 1.5            | 12.5                      |
| RA028/050      | 2              | 12                        |
| RQA028/050     |                |                           |
| RQC030/040/051 |                |                           |

Notes :

※2. Dimension T should be processed according to Die Lifter which is used with the block.

※3. Use a push bolt when the bolster thickness is 160mm or less.



Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

Pre-Roller

MRC

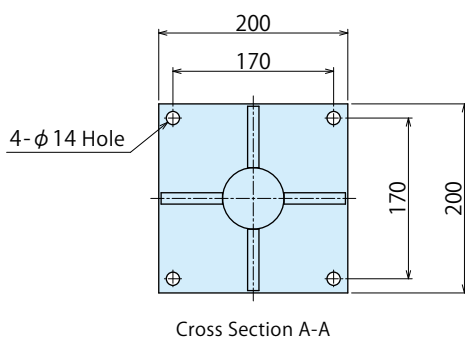
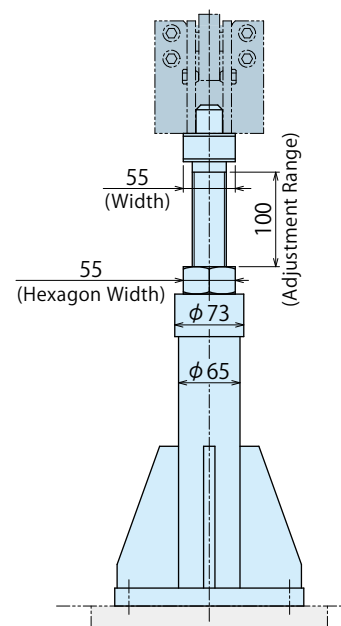
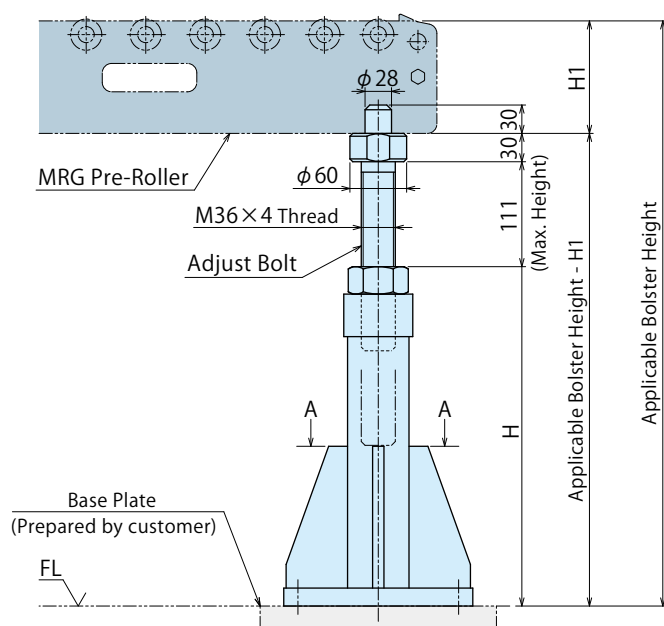
MRD

MRE/MRF

MRG

MRJ/MRK

### External Dimensions : Stand (For MRG Removable Pre-Roller)



### External Dimension List

| Model No.        | Applicable Bolster Height (mm) |                      | H (mm) | H1 (mm)              |                      |
|------------------|--------------------------------|----------------------|--------|----------------------|----------------------|
|                  | When using MRG1190-□           | When using MRG1900-□ |        | When using MRG1190-□ | When using MRG1900-□ |
| <b>MRH0400-A</b> | 520 ~ 620                      | 590 ~ 690            | 359    | 119                  | 190                  |
| <b>MRH0500-A</b> | 620 ~ 720                      | 690 ~ 790            | 459    |                      |                      |
| <b>MRH0600-A</b> | 720 ~ 820                      | 790 ~ 890            | 559    |                      |                      |
| <b>MRH0700-A</b> | 820 ~ 920                      | 890 ~ 990            | 659    |                      |                      |
| <b>MRH0800-A</b> | 920 ~ 1020                     | 990 ~ 1090           | 759    |                      |                      |
| <b>MRH0900-A</b> | 1020 ~ 1120                    | 1090 ~ 1190          | 859    |                      |                      |
| <b>MRH1000-A</b> | 1120 ~ 1220                    | 1190 ~ 1290          | 959    |                      |                      |

 **MEMO**

Clamp • Unit  
Operation Panel  
Control Unit

**Die Lifter  
Pre-Roller**

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

**Pre-Roller**

MRC

MRD

MRE/MRF

**MRG**

MRJ/MRK

● Model No. Indication : Horizontal Folding Pre-Roller (with Stand)

MR **J** **295** **0** - **800**

1 2 3 4

1 Frame Storage Method

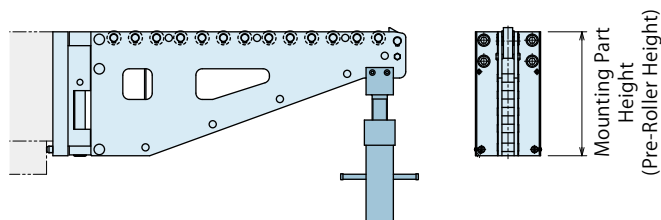
|   |                                                 |       |
|---|-------------------------------------------------|-------|
| C | : Removable                                     | P.153 |
| D | : Removable•Vertical Folding                    | P.163 |
| E | : Horizontal Folding (Inside Arm)               | P.173 |
| F | : Horizontal Folding (Outside Arm)              | P.173 |
| G | : Removable (with Stand)                        | P.181 |
| J | : Horizontal Folding (with Stand) (Inside Arm)  | P.189 |
| K | : Horizontal Folding (with Stand) (Outside Arm) | P.189 |

J•K



2 Mounting Part Height (Pre-Roller Height)

295 : Mounting Part Height 295 mm



3 Design No.

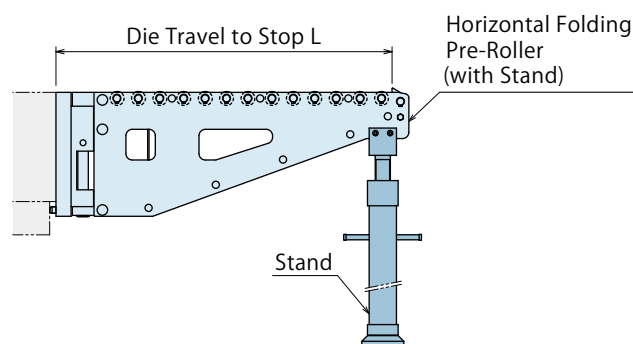
0 : Revision Number

4 Die Travel L

Dimensions : Die Travel L

(Distance that the die can be pulled out)

(Please refer to the specifications)



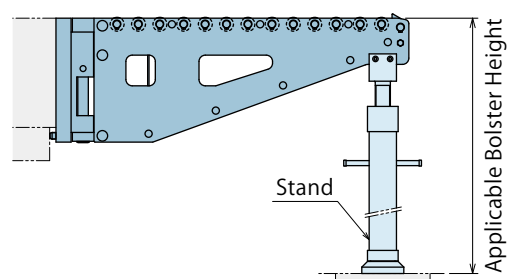
● Model No. Indication : Stand

MRL **060** **0** - **A**

1 2

1 Applicable Bolster Height

|     |                             |                |
|-----|-----------------------------|----------------|
| 060 | : Applicable Bolster Height | 710 ~ 810 mm   |
| 070 | : Applicable Bolster Height | 810 ~ 910 mm   |
| 080 | : Applicable Bolster Height | 910 ~ 1010 mm  |
| 090 | : Applicable Bolster Height | 1010 ~ 1110 mm |
| 100 | : Applicable Bolster Height | 1110 ~ 1210 mm |
| 110 | : Applicable Bolster Height | 1210 ~ 1310 mm |
| 120 | : Applicable Bolster Height | 1310 ~ 1410 mm |



2 Design No.

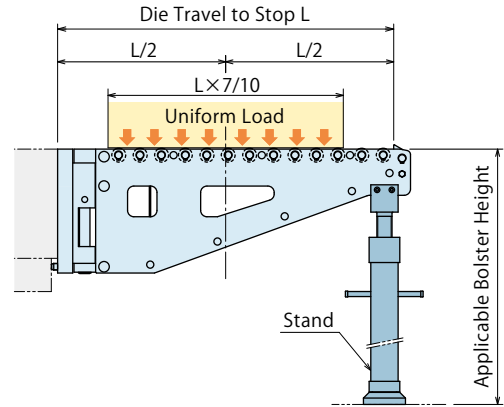
0 : Revision Number

## Specifications : Horizontal Folding Pre-Roller (with Stand)

| MRJ                 |             |                | MRK                 |             |                | Die Travel to Stop L (mm) | Max. Loading Weight each (kg) <sup>※1</sup> |
|---------------------|-------------|----------------|---------------------|-------------|----------------|---------------------------|---------------------------------------------|
| Model No.           | Weight (kg) | No. of Rollers | Model No.           | Weight (kg) | No. of Rollers |                           |                                             |
| <b>MRJ2950-800</b>  | 44.5        | 13             | <b>MRK2950-800</b>  | 47.8        | 13             | 800                       | 4915                                        |
| <b>MRJ2950-900</b>  | 47.6        | 15             | <b>MRK2950-900</b>  | 51.2        | 15             | 900                       | 4100                                        |
| <b>MRJ2950-1000</b> | 50.3        | 17             | <b>MRK2950-1000</b> | 54.0        | 17             | 1000                      | 3550                                        |
| <b>MRJ2950-1250</b> | 56.6        | 22             | <b>MRK2950-1250</b> | 60.5        | 22             | 1250                      | 2675                                        |

Note:

- ※1. The maximum loading weight per pre-roller with a uniform load at the center of die travel L and 70 % length of the die travel L.



## Specifications : Stand

| Model No.        | Weight (kg) | Applicable Bolster Height (mm) |
|------------------|-------------|--------------------------------|
| <b>MRL0600-A</b> | 7.7         | 710 ~ 810                      |
| <b>MRL0700-A</b> | 8.3         | 810 ~ 910                      |
| <b>MRL0800-A</b> | 8.9         | 910 ~ 1010                     |
| <b>MRL0900-A</b> | 9.5         | 1010 ~ 1110                    |
| <b>MRL1000-A</b> | 10.1        | 1110 ~ 1210                    |
| <b>MRL1100-A</b> | 10.7        | 1210 ~ 1310                    |
| <b>MRL1200-A</b> | 11.3        | 1310 ~ 1410                    |

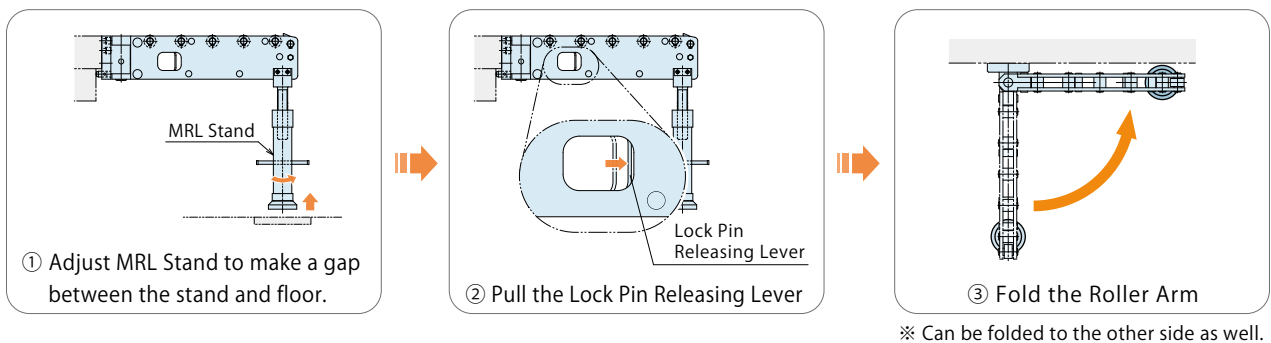
Notes on Handling

- MRL Stand can be used only for MRJ and MRK Pre-Rollers. Do not use it for any other use. (Cannot be used for MRE or MRF Pre-Roller.)
- When setting MRL Stand, make sure it is vertical to the floor.
- Adjust MRL Stand to the floor.
- Do not adjust bolts beyond the maximum adjusting height.
- Do not operate a press machine when MRJ or MRK Pre-Roller is stowed on the floor with MRL Stand.  
The vibration of press machine could damage the pre-roller.

Installation Notes

- The floor should be level.
- The floor should be strong enough to support the maximum die weight (5.25N/mm<sup>2</sup>).  
(1) If the floor is made of concrete or mortar, set a base plate such as an iron plate in order to withstand load.  
(2) When MRL Stand is set on the pit cover, set joists or poles just under the cover to support the stand.

## Folding Method



Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

Cautions  
Company Profile

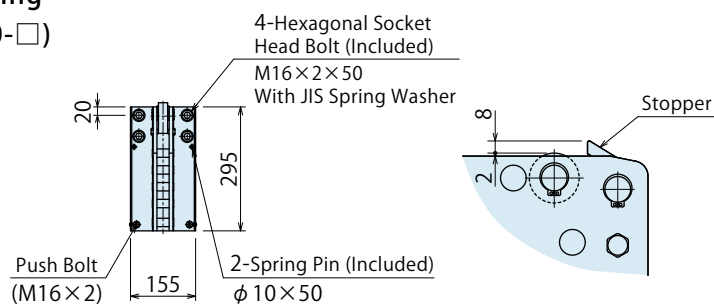
Die Lifter

RQA  
RA  
RB

Pre-Roller

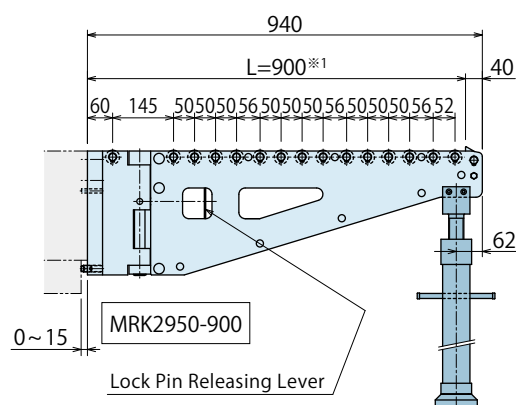
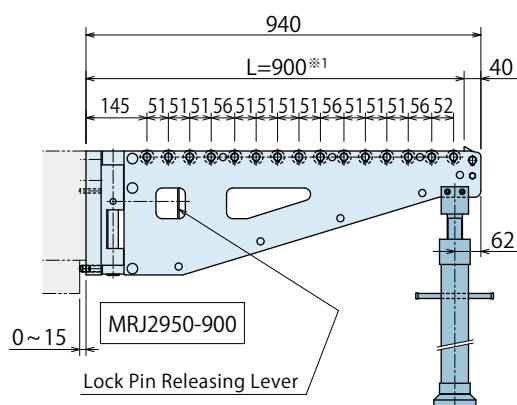
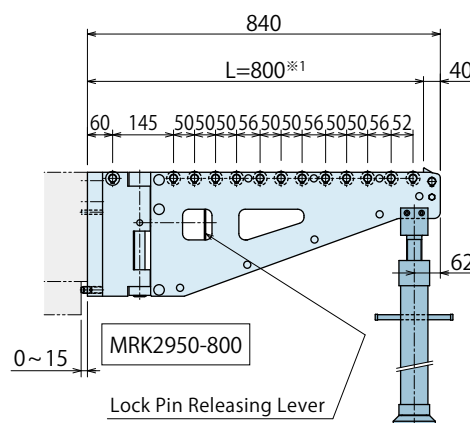
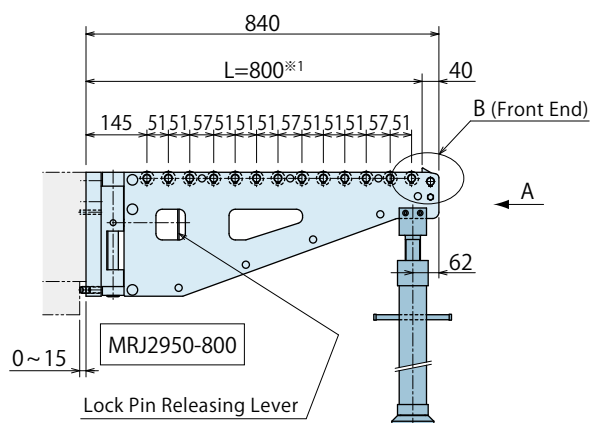
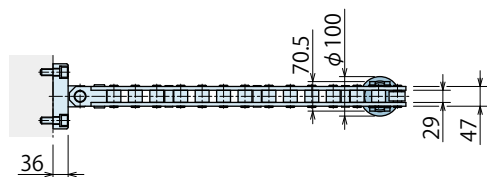
MRC  
MRD  
MRE/MRF  
MRG  
MRJ/MRK

External Dimensions : Horizontal Folding  
Pre-Roller (with Stand) (MRJ/MRK2950-□)



View A  
(Same for both MRJ and MRK)

Enlarged View of B (Front End)

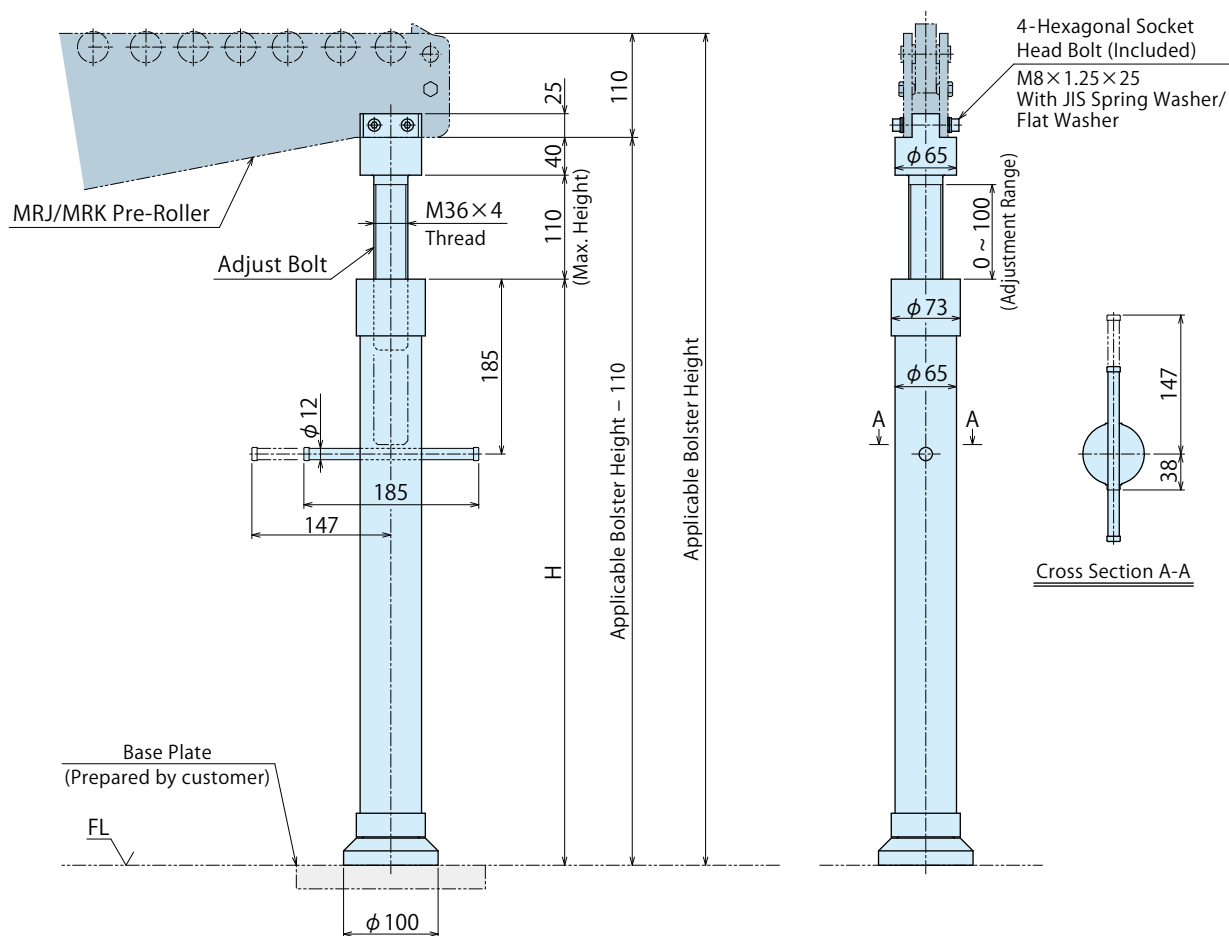


Note:

※1. It shows the die travel L.



External Dimensions : Stand (For MRJ/MRK Horizontal Folding Pre-Roller)



External Dimension List

| Model No.        | Applicable Bolster Height (mm) | H (mm) |
|------------------|--------------------------------|--------|
| <b>MRL0600-A</b> | 710 ~ 810                      | 550    |
| <b>MRL0700-A</b> | 810 ~ 910                      | 650    |
| <b>MRL0800-A</b> | 910 ~ 1010                     | 750    |
| <b>MRL0900-A</b> | 1010 ~ 1110                    | 850    |
| <b>MRL1000-A</b> | 1110 ~ 1210                    | 950    |
| <b>MRL1100-A</b> | 1210 ~ 1310                    | 1050   |
| <b>MRL1200-A</b> | 1310 ~ 1410                    | 1150   |

 **MEMO**

Clamp • Unit  
Operation Panel  
Control Unit

**Die Lifter  
Pre-Roller**

Accessories

Cautions  
Company Profile

Die Lifter

RQA

RA

RB

**Pre-Roller**

MRC

MRD

MRE/MRF

MRG

**MRJ/MRK**

## Accessory : Spacer Block

When using Pre-Roller and Die Lifter together and setting pipe lines of Die Lifter on the Pre-Roller side (die loading side), the spacer block can provide space for pipe lines between the bolster and Pre-Roller.

### Model No. Indication

**MR C 119 0 - S**

1
2
3

#### 1 Compatible Pre-Roller

**C** : For Removable Pre-Roller (MRC/MRD/MRG)

**E** : For Horizontal Folding Pre-Roller (MRE/MRF/MRJ/MRK)

#### 2 Compatible Pre-Roller Height

**075** : Compatible Pre-Roller Height 75 mm

**190** : Compatible Pre-Roller Height 190 mm

**119** : Compatible Pre-Roller Height 119 mm

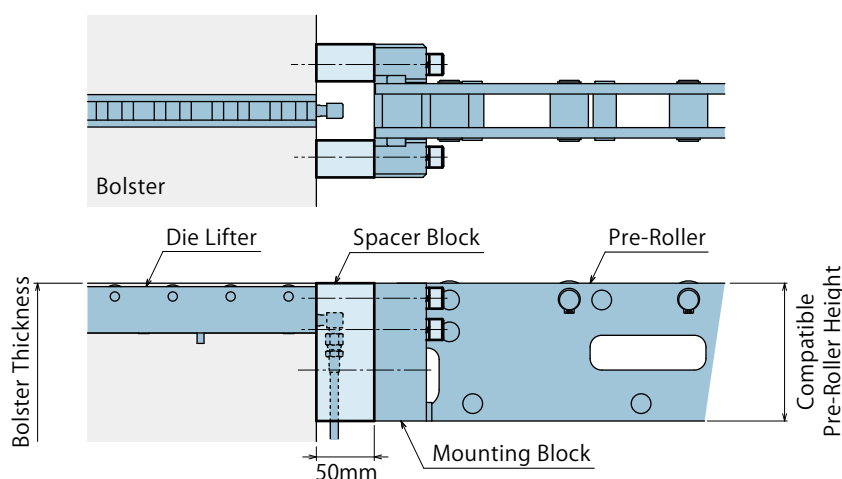
**295** : Compatible Pre-Roller Height 295 mm

**150** : Compatible Pre-Roller Height 150 mm

#### 3 Design No.

**0** : Revision Number

### External Dimensions



| Spacer Block Model No. | Compatible Pre-Roller Model No. | Mounting Block Model No.※ 1 |
|------------------------|---------------------------------|-----------------------------|
| <b>MRC0750-S</b>       | MRC0750-□                       | MRC0750-B                   |
|                        | MRD0750-□                       | MRD0750-B                   |
| <b>MRC1190-S</b>       | MRC1190-□                       | MRC1190-B                   |
|                        | MRD1190-□                       | MRD1190-B                   |
|                        | MRG1190-□                       | MRG1190-B                   |
| <b>MRC1500-S</b>       | MRC1500-□                       | MRC1500-B                   |
|                        | MRD1500-□                       | MRD1500-B                   |
| <b>MRC1900-S</b>       | MRC1900-□                       | MRC1900-B                   |
|                        | MRD1900-□                       | MRD1900-B                   |
|                        | MRG1900-□                       | MRG1900-B                   |
| <b>MRE1190-S</b>       | MRE1190-□                       |                             |
|                        | MRF1190-□                       |                             |
| <b>MRE1900-S</b>       | MRE1900-□                       |                             |
|                        | MRF1900-□                       |                             |
| <b>MRE2950-S</b>       | MRE2950-□                       |                             |
|                        | MRF2950-□                       |                             |
|                        | MRJ2950-□                       |                             |
|                        | MRK2950-□                       |                             |

Notes :

※ 1. Horizontal folding pre-roller (MRE, MRF, MRJ and MRK) is a united type of pre-roller and mounting block, thus mounting block is included.

1. The option of die lifter should be **G** : pin specifications and hose fitting should be mounted directly to die lifter.

When using pipe nipple, be careful with the length of pipe nipple and the mounting point of die lifter.

2. Bolster thickness should be thicker than the spacer block.

## Accessory : End Plate

When using Pre-Roller and Die Lifter together and setting pipe lines of Die Lifter on the opposite side of Pre-Roller (die loading side), the end plate prevents Die Lifter from coming out of the bolster to the pre-roller side.

### Model No. Indication

# MRC 119 0 - E

1

2

## 1 Compatible Pre-Roller Height

**075** : Compatible Pre-Roller Height 75 mm

**119** : Compatible Pre-Roller Height 119 mm

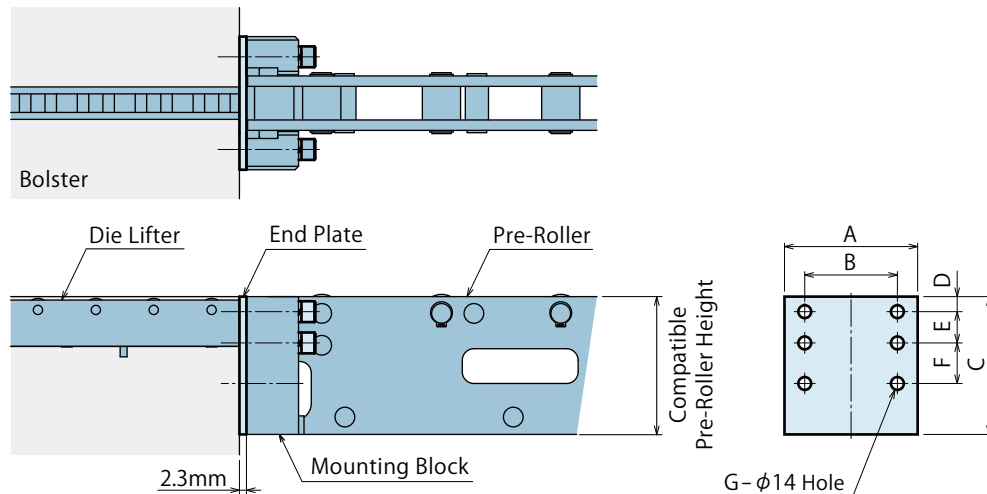
**150** : Compatible Pre-Roller Height 150 mm

**190** : Compatible Pre-Roller Height 190 mm

## 2 Design No.

**0** : Revision Number

### External Dimensions



(mm)

| End Plate Model No. | Pre-Roller Model No.* 2 | Mounting Block Model No.* 2 | A   | B  | C   | D  | E  | F  | G |
|---------------------|-------------------------|-----------------------------|-----|----|-----|----|----|----|---|
| <b>MRC0750-E</b>    | MRC0750-□               | MRC0750-B                   | 96  | 70 | 75  | 13 |    |    | 2 |
|                     | MRD0750-□               | MRD0750-B                   |     |    |     |    |    |    |   |
| <b>MRC1190-E</b>    | MRC1190-□               | MRC1190-B                   | 115 | 80 | 119 | 13 | 27 |    | 4 |
|                     | MRD1190-□               | MRD1190-B                   |     |    |     |    |    |    |   |
|                     | MRG1190-□               | MRG1190-B                   |     |    |     |    |    |    |   |
| <b>MRC1500-E</b>    | MRC1500-□               | MRC1500-B                   | 115 | 80 | 150 | 13 | 27 |    | 4 |
|                     | MRD1500-□               | MRD1500-B                   |     |    |     |    |    |    |   |
| <b>MRC1900-E</b>    | MRC1900-□               | MRC1900-B                   | 115 | 80 | 190 | 12 | 40 | 40 | 6 |
|                     | MRD1900-□               | MRD1900-B                   |     |    |     |    |    |    |   |
|                     | MRG1900-□               | MRG1900-B                   |     |    |     |    |    |    |   |

Note :

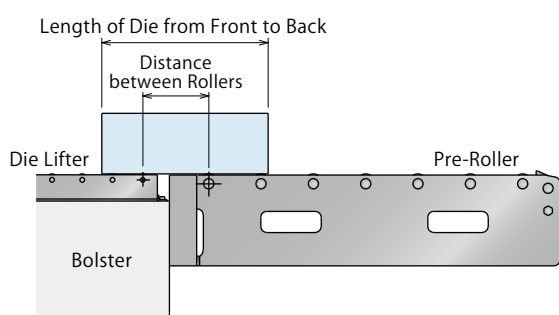
※2. End plate can be used for mounting block of removable pre-roller (MRC/MRD/MRG).

Horizontal folding pre-roller (MRE/MRF/MRJ/MRK) does not require end plate, because the mounting block part works as end plate.

## Cautions

### Notes for Design

- 1) Check Specifications
  - Please use each product according to its specifications.
- 2) Check the Die Weight
  - Make sure the die weight is less than the maximum loading weight.
- 3) Check the Die Dimensions
  - Make sure that the length of the die from front to back is at least twice as long as the distance between the first roller of the die lifter (closest to the pre-roller) and the last roller of the pre-roller (closest to the die lifter).  
If the length of the die is less than double the distance between rollers, die loading will not be smooth, and it could result in damage to the die and the product.



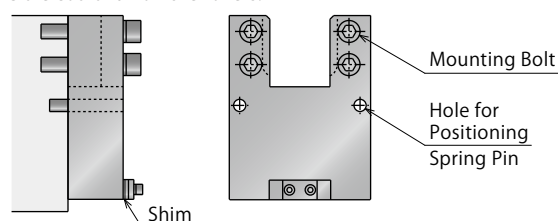
### Installation Notes

- 1) Mounting the Block
  - ① Set the block to the bolster end with attached mounting bolts.
  - ② Mount Pre-Roller and use shims to level the roller surface.
  - ③ With Die Lifter inside the bolster in the lift-up position, adjust the position of the mounting block so that the top of the rollers on Die Lifter and Pre-Roller are level and then perform the final tightening of the mounting bolts.

| Model No. | Mounting Bolt Size | Tightening Torque (N·m) |
|-----------|--------------------|-------------------------|
| MR□0750   | M12×1.75           | 98                      |
| MR□1190   |                    |                         |
| MR□1500   |                    |                         |
| MR□1900   |                    |                         |
| MR□2950   | M16×2              | 200                     |

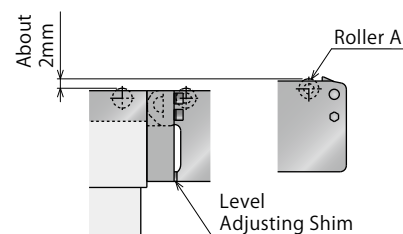
※ If rollers are not set in the bolster, adjust the roller surface of the pre-roller to be level with the bolster surface.

- ④ Be sure to position the block with a spring pin.  
Without a spring pin, the pre-roller could be misaligned, and the die could fall off the rollers.



### 2) Level Adjustment

- Use shims to adjust the front end roller (roller A) of Pre-Roller to be approximately 2mm higher than the bolster surface.

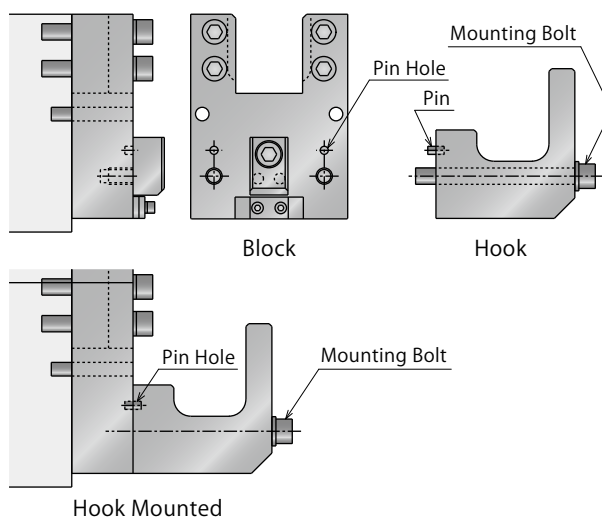


### 3) Mounting the Hook (MRD Roller Only)

- Align the pin of the hook with the pin hole on the block and mount the hook with the attached mounting bolt.

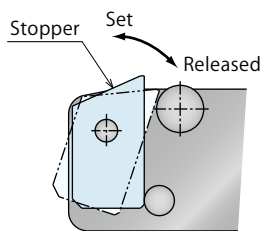
Tightening Torque of Mounting Bolt

| Model No. | Mounting Bolt Size | Tightening Torque (N·m) |
|-----------|--------------------|-------------------------|
| MRD0750   | M10×1.5            | 50                      |
| MRD1190   | M12×1.75           | 98                      |
| MRD1500   |                    |                         |
| MRD1900   |                    |                         |



## ● Notes on Handling

- 1) The product should be operated by qualified personnel.
- 2) Pre-Roller should not be used for purposes other than die changes.
- 3) Only use dies that weigh less than the maximum loading weight.
- 4) Stow Pre-Roller away during press machine operation.
  - Fold or remove Pre-Roller during press machine operation.
 If a press machine is operated with Pre-Roller in place, Pre-Roller could be damaged by vibration.
- 5) Check the Stopper
  - If a die is moved with the stopper released, the die could fall and cause an injury, so always make sure the stopper is set before use.



- 6) Do not exceed the maximum die lowering speed.
  - When placing a die on Pre-Roller, lower it at a speed of 50mm/sec or less. If it is done too fast Pre-Roller may be damaged and cause an injury.
- 7) Do not exceed the maximum die moving speed.
  - When moving a die, do not exceed 100mm/sec in order to prevent damage to the stopper.
- 8) Do not let your hand off from Pre-Roller when folding the frame.
  - Never let your hand off from Pre-Roller when removing or folding it. Otherwise, Pre-Roller may be damaged leading to an injury.
- 9) Check the Lock Pin (In case of MRE/MRF/MRJ/MRK)
  - Make sure the lock pin is engaged during die loading and press machine operation.
- 10) Secure the Stand (In case of MRG/MRJ/MRK)
  - Make sure the stand is fixed to the floor during die loading.
- 11) Do not pour water or oil over the product.
  - Failure to do so causes malfunctions and deterioration of the product leading to an accident.

## ● Maintenance / Inspection

- 1) Removal of Product
  - Before removing the product, make sure that safety devices and preventive devices are in place.
  - Make sure there is no trouble/issue in the bolts and respective parts before restarting.
- 2) Make sure that the rollers move smoothly and do not make noises.
- 3) Please contact us for overhaul and repairs.
- 4) Make sure that the stopper returns to the normal position with the spring force.
- 5) Make sure that when setting the stopper at the release position, the stopper can keep the same position.
- 6) Check the mounting bolts of the block regularly and tighten them as needed.
- 7) Check the mounting bolts of the hook regularly and tighten them as needed. (MRD only)
- 8) When using a push bolt, make sure there is no space between the push bolt and the press machine.

※ Please refer to P.207 for common caution.

• Notes on Handling

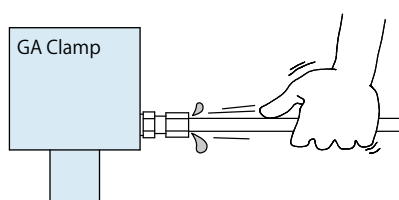
• Maintenance / Inspection

• Warranty

## Cautions

### Installation Notes (Cautions for Hydraulic Series)

- 1) Check the Usable Fluid
  - Please use the appropriate fluid by referring to the Hydraulic Fluid List.
  - If viscosity grade of hydraulic oil is higher than ISO-VG-32, action time becomes longer.
  - If using it at low temperature, action time will be longer because the viscosity of hydraulic oil becomes higher.
- 2) Procedure before Piping
  - Pipelines, piping connectors and others should be cleaned by thorough flushing.
  - Dust and cutting chips in the circuit may lead to fluid leakage and malfunction.
  - Our products except some valves are not equipped with protective function that prevents contamination.
- 3) Applying Sealing Tape
  - Wrap with tape 1 to 2 times following the screw direction.
  - Pieces of the sealing tape can lead to fluid leakage and malfunction.
  - Please implement piping construction in a clear environment to prevent anything getting in products.
- 4) Air Bleeding of the Hydraulic Circuit
  - If the hydraulic circuit has excessive air, the action time may become very long. If air enters the circuit after connecting the hydraulic port or under the condition of no air in the oil tank, please perform the following steps.
    - ① Reduce hydraulic pressure to less than 2MPa.
    - ② Loosen the cap nut of pipe fitting closest to the clamp, RQA/RA Die Lifter by one full turn.
    - ③ Shake the pipeline to loosen the outlet of pipe fitting.  
Hydraulic fluid mixed with air comes out.



- ④ Tighten the cap nut after air bleeding.
  - ⑤ It is more effective to release air at the highest point inside the circuit or at the end of the circuit.
- 5) Checking Looseness and Retightening
    - At the beginning of the machine installation, the bolt and nut may be tightened lightly. Check the looseness and re-tighten as required.

### Hydraulic Fluid List

| Maker                  | ISO Viscosity Grade ISO-VG-32 |                             |
|------------------------|-------------------------------|-----------------------------|
|                        | Anti-Wear Hydraulic Oil       | Multi-Purpose Hydraulic Oil |
| Showa Shell Sekiyu     | Tellus S2 M 32                | Morlina S2 B 32             |
| Idemitsu Kosan         | Daphne Hydraulic Fluid 32     | Daphne Super Multi Oil 32   |
| JX Nippon Oil & Energy | Super Hyrando 32              | Super Mulpus DX 32          |
| Cosmo Oil              | Cosmo Hydro AW32              | Cosmo New Mighty Super 32   |
| ExxonMobil             | Mobil DTE 24                  | Mobil DTE 24 Light          |
| Matsumura Oil          | Hydol AW-32                   |                             |
| Castrol                | Hyspin AWS 32                 |                             |

Note : Please contact manufacturers when customers require products in the list above.

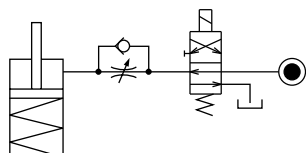
## Notes on Hydraulic Cylinder Speed Control Unit



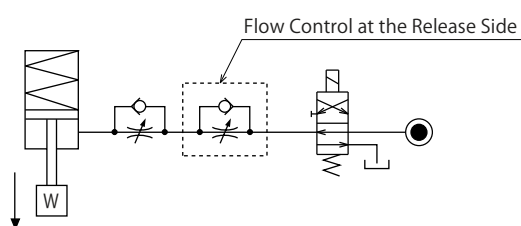
Please pay attention to the cautions below. Design the hydraulic circuit for controlling the action speed of hydraulic cylinder. Improper circuit design may lead to malfunctions and damages. Please review the circuit design in advance.

### Flow Control Circuit for Single Acting Cylinder

For spring return single-acting cylinders, restricting flow during release can extremely slow down or disrupt release action. The preferred method is to control the flow during the lock action using a valve that has free-flow in the release direction. It is also preferred to provide a flow control valve at each actuator.



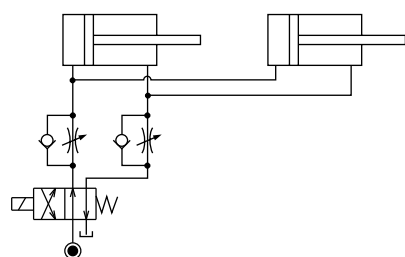
Accelerated clamping speed by excessive hydraulic flow to the cylinder may sustain damage. In this case add flow control to regulate flow.



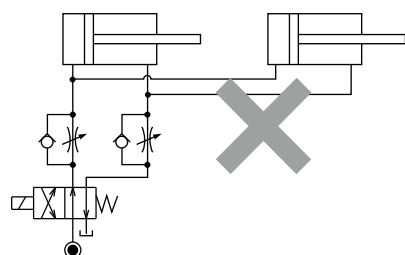
### Flow Control Circuit for Double-Acting Cylinder

Flow control circuit for double-acting cylinder should have meter-out circuits for both the lock and release sides. Meter-in control can have adverse effect by presence of air in the system.

#### 【Meter-out Circuit】

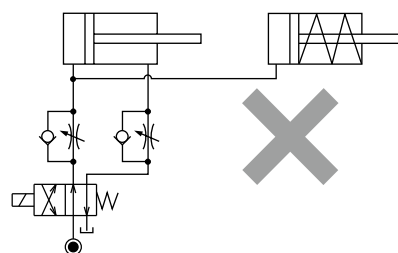


#### 【Meter-in Circuit】



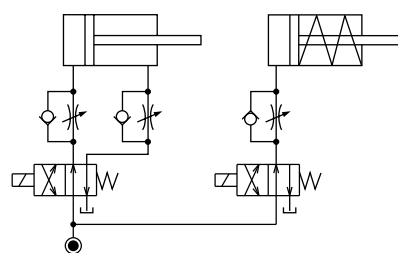
In the case of meter-out circuit, the hydraulic circuit should be designed with the following points.

- ① Single-acting components should not be used in the same flow control circuit as the double acting components. The release action of the single-acting cylinders may become erratic or very slow.

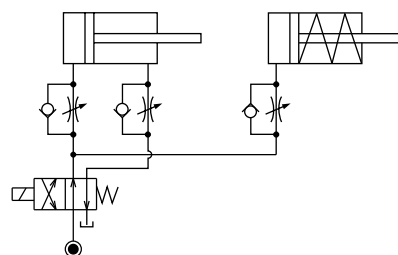


Refer to the following circuit when both the single-acting cylinder and double-acting cylinder are used together.

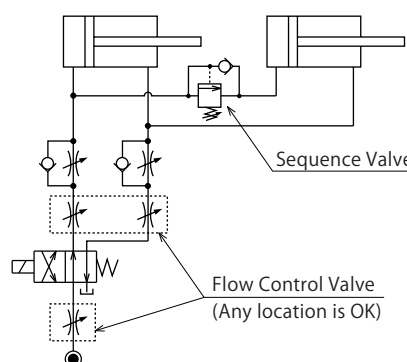
- Separate the control circuit.



- Reduce the influence of double-acting cylinder control unit. However, due to the back pressure in tank line, single-acting cylinder is activated after double-acting cylinder works.



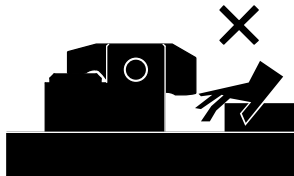
- ② In the case of meter-out circuit, the inner circuit pressure may increase during the cylinder action because of the fluid supply. The increase of the inner circuit pressure can be prevented by reducing the supplied fluid beforehand via the flow control valve. Especially when using sequence valve or pressure switches for clamping detection. If the back pressure is more than the set pressure then the system will not work as it is designed to.



## ● Cautions

### ● Notes on Handling

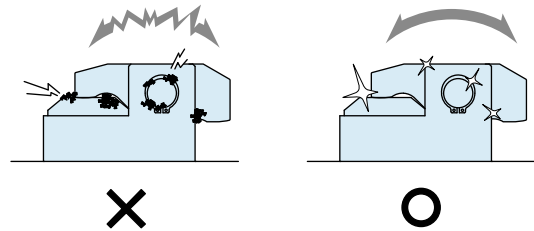
- 1) It should be operated by qualified personnel.
- Hydraulic products, machines and devices should be operated and maintained by qualified personnel.
- 2) Do not operate or remove the product unless the safety protocols are ensured.
  - ① The machine and equipment can only be inspected or prepared when it is confirmed that the safety devices are in place.
  - ② Before the product is removed, make sure that the above-mentioned safety devices are in place. Shut off the pressure and power source, and make sure no pressure exists in the hydraulic and air circuits.
  - ③ After stopping the product, do not remove until the temperature drops.
  - ④ Make sure there is no abnormality in the bolts and respective parts before restarting the machine or equipment.
- 3) Do not touch a clamp (cylinder) while it is working. Otherwise, your hands may be injured.



- 4) Do not disassemble or modify.
- If the product is taken apart or modified, the warranty will be voided even within the warranty period.

### ● Maintenance • Inspection

- 1) Removal of the Product and Shut-off of Pressure Source
  - Before removing the product, make sure that safety devices are in place. Shut off the pressure and power source, and make sure no pressure exists in the air and hydraulic circuits.
  - Make sure there is no abnormality in the bolts and respective parts before restarting.
- 2) Regularly clean the area around the product.
  - If it is used when the surface is contaminated with dirt, it may lead to packing seal damage, malfunctioning and fluid leakage.



- 3) If disconnecting by couplers, air bleeding should be carried out on a regular basis to avoid air mixed in the circuit.
- 4) Regularly tighten bolts, pipe line, mounting bolt, nut, snap ring, cylinder and others to ensure proper use.
- 5) Make sure the hydraulic fluid has not deteriorated.
- 6) Make sure there is a smooth action without an irregular noise.
  - Especially when it is restarted after left unused for a long period, make sure it can be operated correctly.
- 7) The products should be stored in the cool and dark place without direct sunshine or moisture.
- 8) Please contact us for overhaul and repair.

## ● Warranty

### 1) Warranty Period

- The product warranty period is 18 months from shipment from our factory or 12 months from initial use, whichever is earlier.

### 2) Warranty Scope

- If the product is damaged or malfunctions during the warranty period due to faulty design, materials or workmanship, we will replace or repair the defective part at our expense.

Defects or failures caused by the following are not covered.

- ① If the stipulated maintenance and inspection are not carried out.
- ② If the product is used while it is not suitable for use based on the operator's judgment, resulting in defect.
- ③ If it is used or operated in an inappropriate way by the operator. (Including damage caused by the misconduct of the third party.)
- ④ If the defect is caused by reasons other than our responsibility.
- ⑤ If repair or modifications are carried out by anyone other than Kosmek, or without our approval and confirmation, it will void warranty.
- ⑥ Other caused by natural disasters or calamities not attributable to our company.
- ⑦ Parts or replacement expenses due to parts consumption and deterioration. (Such as rubber, plastic, seal material and some electric components.)

Damages excluding from direct result of a product defect shall be excluded from the warranty.

Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

Accessories

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#### Cautions

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(For Hyd. Series)

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Sales Offices



KOSMEK LTD. Head Office

|                 |                                                                                                                                 |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------|
| Company Name    | KOSMEK LTD.                                                                                                                     |
| Established     | May 1986                                                                                                                        |
| Capital         | ¥99,000,000                                                                                                                     |
| Chairman & CEO  | Tsutomu Shirakawa                                                                                                               |
| President & CEO | Koji Kimura                                                                                                                     |
| Employee Count  | 270                                                                                                                             |
| Group Company   | KOSMEK LTD.<br>KOSMEK ENGINEERING LTD.<br>KOSMEK (USA) LTD.<br>KOSMEK EUROPE GmbH<br>KOSMEK (CHINA) LTD.<br>KOSMEK LTD. - INDIA |
| Business Fields | Design, Production and Sales of Precision Products, and Hydraulic and Pneumatic Equipment                                       |
| Customers       | Manufacturers of Automobiles, Industrial Machinery, Semiconductors and Electric Appliances                                      |
| Banks           | Resona Bank and Bank of Tokyo-Mitsubishi UFJ                                                                                    |

## Major Industrial Property Rights

(Including Patent Right and Patent Pending as of March 2022)

- Domestic : 120
- International : 250 (USA, EU, Taiwan, South Korea, China, India, Brazil, Mexico, Thailand, Indonesia)

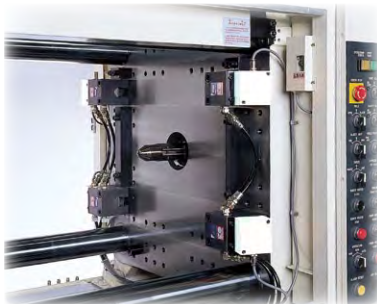
## Product Line-Up



### QUICK DIE CHANGE SYSTEMS

For Press Machines

Kosmek Quick Die Change Systems are a cost effective tool 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.

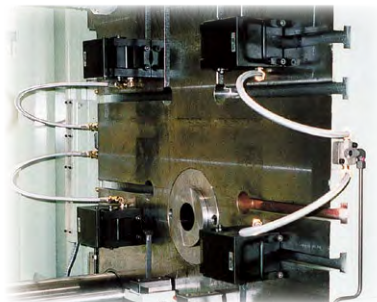


### QUICK MOLD CHANGE SYSTEMS

For Injection Molding Machines

Automatic clamping systems have reduced mold change times and increased production efficiency for plastics manufacturers in a multitude of industries.

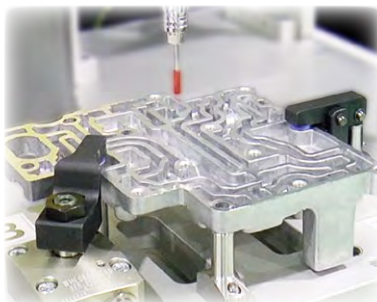
We offer a variety of different clamping options, including hydraulically powered clamps, pneumatic clamps with a force multiplying mechanism, and magnetic clamping systems.



### DIECAST CLAMPING SYSTEMS

For Diecast Machines

Kosmek Diecast Clamping Systems (KDCS) save the time of the changeover of die casting and magnesium molding machines under severe conditions. ex) mold release agents and high temperature.



### KOSMEK WORK CLAMPING SYSTEMS

Machine Tool Related Products

Our clamping system enables boltless automation to load and unload workpieces easier.

Non-leak valve enables the use of hydraulic source and fixtures in a disconnected condition after locking (clamping action).

We offer a wide range of products such as hydraulic/pneumatic actuators, supports, positioning equipment, valves, couplers, etc.



### KOSMEK FACTORY AUTOMATION SYSTEMS

FA • Industrial Robot Related Products

KOSMEK robotic hand changer, robotic hand, positioning equipment and other products improve automation, precision and setup of transfer, assembly, deburring, testing and various other processes.

Clamp • Unit  
Operation Panel  
Control Unit

Die Lifter  
Pre-Roller

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Sales Offices

# Sales Offices

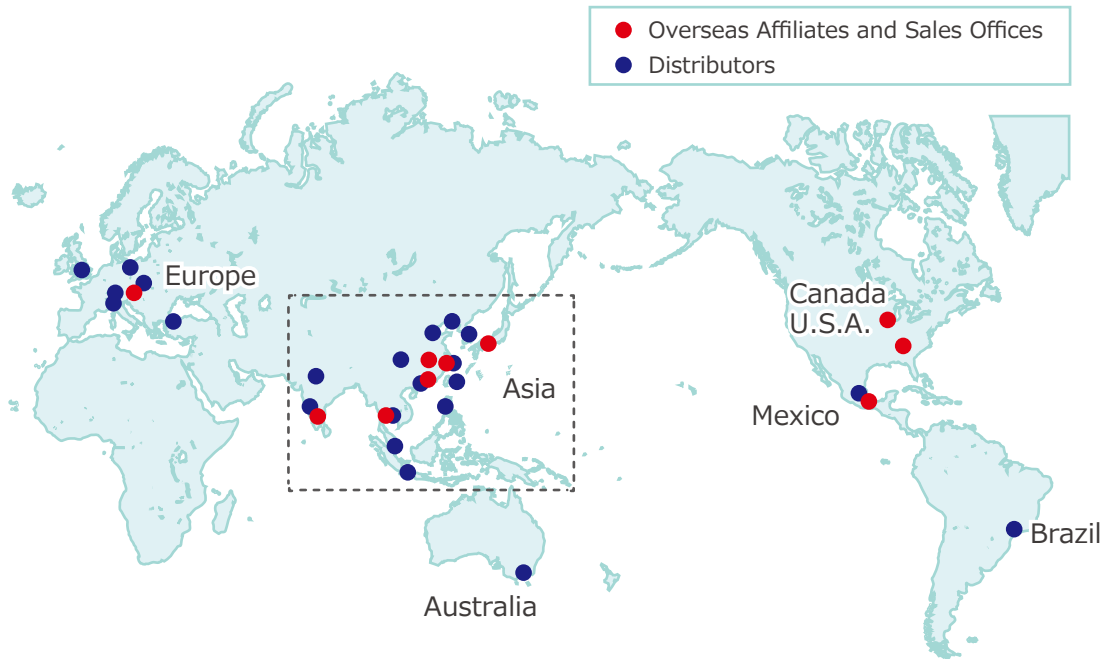
## Sales Offices across the World

|             |                                                                          |                                                                                                                                                                       |
|-------------|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Japan       | KOSMEK LTD.<br>HEAD OFFICE                                               | <b>TEL. +81-78-991-5162</b> FAX. +81-78-991-8787<br>1-5, 2-chome, Murotani, Nishi-ku, Kobe-city, Hyogo, Japan 651-2241                                                |
| USA         | KOSMEK (USA) LTD.<br>Overseas Affiliate                                  | <b>TEL. +1-630-620-7650</b> FAX. +1-630-620-9015<br>650 Springer Drive, Lombard, IL 60148 USA                                                                         |
|             | KOSMEK (USA) LTD. Atlanta Branch Office                                  | <b>TEL. +1-708-577-3275</b><br>303 Perimeter Center North, Suite 300, Atlanta, GA 30346 USA                                                                           |
| Mexico      | KOSMEK (USA) LTD. Mexico Branch Office                                   | <b>TEL. +52-1-55-3044-9983</b><br>Av. Santa Fe 103, Int. 59, col. Santa Fe Juriquilla, Queretaro, QRO, 76230, Mexico                                                  |
| Europe      | KOSMEK EUROPE GmbH<br>Overseas Affiliate                                 | <b>TEL. +43-463-287587</b> FAX. +43-463-287587-20<br>Schleppplatz 2 9020 Klagenfurt am Wörthersee Austria                                                             |
| China       | KOSMEK (CHINA) LTD.<br>Overseas Affiliate                                | <b>TEL.+86-21-54253000</b> FAX. +86-21-54253709<br>Room601, RIVERSIDE PYRAMID No.55, Lane21, Pusan Rd, Pudong Shanghai 200125, China                                  |
|             | KOSMEK (CHINA) LTD. Dongguan Office<br>Overseas Affiliate (Sales Office) | <b>TEL.+86-769-85300880</b><br>Room301, AcerBuilding No.15, Dezheng(W)Road, Changan Town Dongguan Guangdong 523843., P.R.China                                        |
|             | KOSMEK (CHINA) LTD. Wuhan Office<br>Overseas Affiliate (Sales Office)    | <b>TEL.+86-27-59822303</b><br>Room502, Building A, Jingkai Future City, Zhuankou Economic Development Zone, Wuhan City, Hubei Province, 430050 China                  |
| India       | KOSMEK LTD. - INDIA<br>Branch                                            | <b>TEL. +91-9880561695</b><br>4A/Old No:649, Ground Floor, 4th D cross, MM Layout, Kavalbyrasandra, RT Nagar, Bangalore -560032 India                                 |
| Thailand    | KOSMEK Thailand Representative Office<br>Representative Office           | <b>TEL. +66-2-300-5132</b> FAX. +66-2-300-5133<br>67 Soi 58, RAMA 9 Rd., Phatthanakan, Suanluang, Bangkok 10250, Thailand                                             |
| Taiwan      | FULL LIFE TRADING CO., LTD.<br>Taiwan Exclusive Distributor              | <b>TEL. +886-2-82261860</b> FAX. +886-2-82261890<br>16F-4, No.2, Jian Ba Rd., Zhonghe District, New Taipei City Taiwan 23511                                          |
| Philippines | G.E.T. Inc, Phil.<br>Philippines Exclusive Distributor                   | <b>TEL.+63-2-310-7286</b> FAX. +63-2-310-7286<br>Victoria Wave Special Economic Zone Mt. Apo Building, Brgy. 186, North Caloocan City, Metro Manila, Philippines 1427 |
| Indonesia   | PT. Yamata Machinery<br>Indonesia Exclusive Distributor                  | <b>TEL. +62-21-29628607</b> FAX. +62-21-29628608<br>Delta Commercial Park I, Jl. Kenari Raya B-08, Desa Jayamukti Kec. Cikarang Pusat Kab. Bekasi 17530 Indonesia     |

## Sales Offices in Japan

|                                                     |                                                                                                                              |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Head Office<br>Osaka Sales Office<br>Overseas Sales | <b>TEL. 078-991-5162</b> FAX. 078-991-8787<br>1-5, 2-chome, Murotani, Nishi-ku, Kobe-city, Hyogo, 651-2241, Japan            |
| Tokyo Sales Office                                  | <b>TEL. 048-652-8839</b> FAX. 048-652-8828<br>81, 4-chome, Onari-cho, Kita-ku, Saitama City, Saitama, 331-0815, Japan        |
| Nagoya Sales Office                                 | <b>TEL. 0566-74-8778</b> FAX. 0566-74-8808<br>10-1, 2-chome, Misono-cho, Anjo City, Aichi, 446-0076, Japan                   |
| Fukuoka Sales Office                                | <b>TEL. 092-433-0424</b> FAX. 092-433-0426<br>8-10-101, 1-chome, Kamimuta, Hakata-ku, Fukuoka City, Fukuoka, 812-0006, Japan |

# Global Network



Asia Detailed Map



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