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KAKUTA TOGGLE CLAMPS GENERAL CATALOG

KAKUTA TOGGLE CLAMPS

GENERAL CATALOG



- ◆Are subject to change without prior notice for product improvement.
- ◆Clamping pressure listed in the catalog on the pressing force, attraction has been displayed at the highest numerical value all. Also, because dependent on the operating environment, etc., there is not intended to guarantee the best value.
- ◆Please note that holding position, the adjustment bolt, so the numbers are lowers use bolts (with rubber bolt, etc.) and the like.
- ◆Please use by injecting the oil on the friction part and slide.
- ◆In use the installation and operation, please wear protective gloves for safety.
- ◆Upon recruitment and selection of the toggle clamp, please select

The Kakuta Selection of Toggle Clamps

The Kakuta Company has many technical patents related to the production of 200 standard size clamps. kakuta technology contributes to production efficiency & accuracy for many industries in many way, including design & technique. These clamps will provide many long term benefits.

Now, these clamps can be used for a broad range of applications including; the manufacturing of automobiles, boats, aircraft equipment, airplanes and railroad cars & tracks. Toggle clamps are also used for the production, processing & assembly in the following industries: construction, chemical, rubber, telecommunications, optical instruments, electronic home appliances, power stations, agriculture, generators, heavy construction equipments, textiles related equipments. These industries could not function without the existence of toggle clamps.

These selection of the proper toggle clamp depends on the following :

- Main purpose
- Necessary function (press and pressure, creating pressure)
- The biggest limitation to use in the work place is the height & width of object.
- Weight limitations
- Workers ability (sex of worker & worker's ability)
- How often the clamps will be used.
- Necessary Precision for bond process

Please consider the above mentioned specifications from standard model, and which is issued in this catalog. Otherwise, let us know your situation, we will select the ideal clamp for your purpose.

We will create clamps to your specifications for special orders

We have a large selection of standard size clamps for almost any purpose. Many customers from a vareity of working environments have been satisfied with our clamps. If our standard sizes do not meet your needs, we can create a unique clamp for any purpose. If you have any questions, please do not hesitate to ask.

※ Our Product specifications may change without notice.

◆ Bewere of imitations !

For manually toggle clamp manual

In order to use it correctly and safely, please read before use.

< Confirmation before use >

Clamping pressure, pressure-attraction listed in the catalog, it is displayed in the best all-numeric. Also, because dependent on the operating environment, etc., there is not intended to guarantee the best value.

Please note that tightening so the numbers are falling and use bolts (strength of contact with the work and bolt) by (Bolt with Rubber, etc.) of the adjustment bolt and holding position.

Upon recruitment and selection of the toggle clamp, please recruitment and selection with a margin to the clamping pressure, pressure-attraction

< Precautions on Using >

Mounting method

Please attach it in welded or bolted.

Operating test

Confirm the operation after it is installed, before you install the unit.

Remodeling

Please keep in mind that it will adversely affect the durability of the body if it is used by mounting the extension (extension arm) in the standard arm and attached the extension (extension handle) to the standard handle.

Tightening position

Clamp in the swing slide the middle of the clamp arm clamp shaft clamp bolt clamp hook Because you can not do it, please clamp is operated completely sure.

Lubrication

Please use it and lubricate the oil periodically to the friction part and slide.

Chip removing

Should be operated to remove with an air gun body around, the chips or the like for Fuchaku rivet portion, rotating parts, especially before you unclamp to your use at the point of leaving and chips.

Inspection

Check periodically loosening of the bolts that secure the mounting this unit.

Check periodically loosening of the grip fixing screw bolts, nuts, control lever that had attached to the clamp arm clamp shaft clamp bolt clamp hook. In addition, such as when the slack is expected, should be the treatment of anti-loosening as necessary.

Usage environment

Do not use use in a special environment use and other in water or place, submerged to a high temperature, low temperature, high humidity and vibration, it will be the cause of the falling off of malfunction, deformation, damage parts. please.

Precautions

In use installation and operation, please wear protective gloves for safety.

Be careful not to pinch your hand or the like handle clamp arm clamp shaft clamp bolt clamp hook.

Please do not use the product beyond the (clamping pressure, the pressure, the amount of attraction, scissors, etc.) ability of the clamp, it will be the cause of a serious accident, or injury to the lead malfunction, deformation, damage.

Air pressure toggle clamp manual

In order to use it correctly and safely, please read before use.

< Confirmation before use >

- This unit because it is empty pressure clamp, and can not be used in the hydraulic pressure.
- Use at 0.4MPa ~ 0.6MPa-position range use of air pressure.
- Ensure the safety of the worker to the surroundings and the operator during processing with clamping and unclamping process.
- Clamping pressure and the pressure listed in the catalog are given in the highest numerical value. Also, because dependent on the operating environment, etc., there is not intended to guarantee the best value.
- Please note that tightening so the numbers are falling and use bolts (strength of contact work and bolt) by (Bolt with Rubber, etc.) and supply air pressure, environment and other adjustments and bolts holding position.
- Upon recruitment and selection of the toggle clamp, please recruitment and selection with a margin to tighten pressure and pressure.

< Attention in the use >

Mounting method Please attach it in welded or bolted.

Pipe cleaning Clean the inside blowing compressed air of 0.3MPa or more hose or pipe before connecting the unit.

Use compressed air Use less air moisture with clean compressed air is used to operate the machine.

Operating temperature limit Range of the most desirable ambient temperature is 5~60 °C in order to use this machine.

Usage environment Do not use where a potentially corrosion the unit.

The use of such an environment can cause damage or malfunction.

Plumbing Attach a three-piece set in a pneumatic circuit of the unit.

Lubrication Refueling as a lubricant is required. Use the recommended or equivalent Co., Ltd. Nippon mineral oil Parmalb H1002.

Operating test After connecting the unit, please go to the full working test first.

Tightening position Clamp swing clamp arm (clamp shaft) in (slide) way is not possible. Please clamp is actuated completely.

Chip removing Should be operated in from was removed in such an air gun body around, the chips, etc. adhering to the crimped portion, such as a toggle mechanism especially before you unclamp the use of at the point where out and chips.

Lubricant oil The crimped portion and to toggle mechanism, perform the injection of Lubricant oil on a regular basis.

Precautions Be careful not to pinch your hand or a clamp arm clamp shaft and handle. use installation and operation, please wear protective gloves for safety.

Checking Check periodically loosening of the bolts that secure mounting this unit. Check regularly for loose bolts and nuts for clamp arm clamp shaft clamp bolts and cylinder support bolts and connecting nut, etc., have had installed. In addition, such as when the slack is expected, should be the treatment of anti-loosening as necessary.

<How to use>

If you want to clamp Arm clamp (clamp shaft) is the state of the clamp under direction (forward) swing with (slide) at the same time and to stroke before the piston rod when I put the air from the rear of the clamp port.

If you want to unclamp Turn off the air pressure coming from the clamp port, please put the air pressure from unclamp port on the front. Piston rod is stroked into the cylinder, it will be in the state of unclamp to swing upward to (backward) is (shaft clamp) clamp arm at the same time.

Velocity adjustment Speed adjustment of clamping and unclamping actuation should be fitted with a speed controller on the market.

!!! Do not pledged hand or absolute within the cylinder rod and clamp arm shaft clamp to swing stroke clamping and unclamping during operation because it is dangerous.

The tool which is indispensable to various jigs.
 – TOGGLE CLAMPS –
<PRODUCT INTRODUCTION>

(HOLD DOWN ACTION)



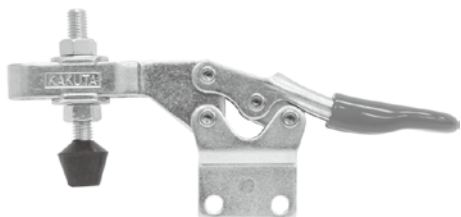
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NO.HH451B CATALOGUE ... Page8



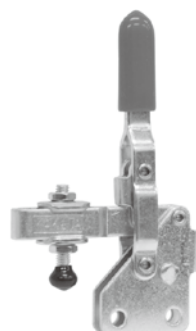
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(STRAIGHT LINE ACTION)



NO.SL-10-2S CATALOGUE
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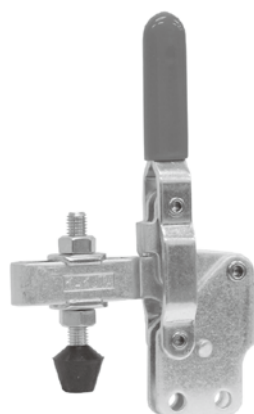


NO.HV151B

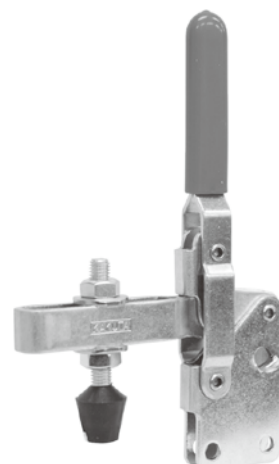


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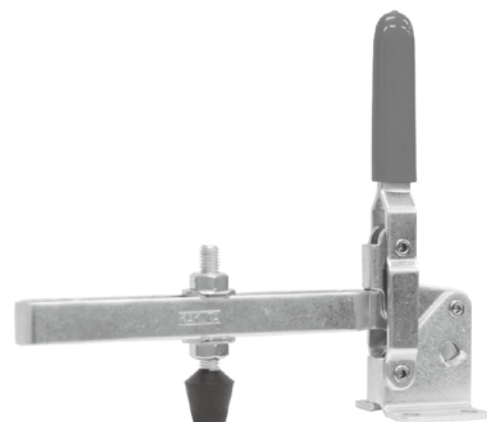
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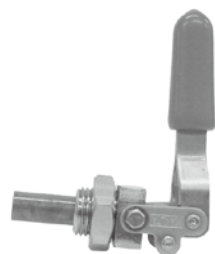


NO.HV651B
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(STRAIGHT LINE ACTION)



NO.FM50-2S
 (Stainless Steel model)
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(HOLD DOWN ACTION)



NO.HV253-UL
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The tool which is indispensable to various jigs.
 – TOGGLE CLAMPS –
<PRODUCT INTRODUCTION>



NO.HH150-2S (Stainless Steel model)



NO.HV150-2S
 (Stainless Steel model)
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NO.HV153-XL
NO.HV150 (Long Arm type)
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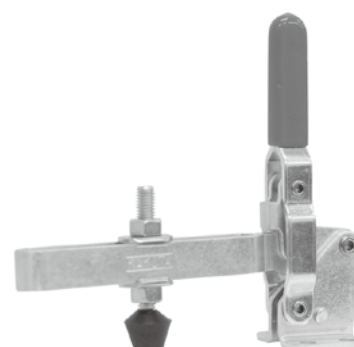
NO.HH250-2S (Stainless Steel model)
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NO.HH350-2S (Stainless Steel model)
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NO.HV450-2S
 (Stainless Steel model)
 CATALOGUE ... Page11



NO.HV453-XL
NO.HV450 (Long Arm type)
 CATALOGUE ... Page11

Add long handle type to the HH150・HH250・HH350.

Be superior to operability in comparison with conventional products and can clamp it easily.
 In addition, it can evade a trouble to pick up a hand with tip bolt.



NO.HH150-H



NO.HH250-H



NO.HH350-H

CATALOGUE ... Page9

The tool which is indispensable to various jigs.
 – TOGGLE CLAMPS –
 <New additional publication product>



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The tool which is indispensable to various jigs.
– TOGGLE CLAMPS –
<New additional publication product>

(PLIER CLAMPS)



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NO.2 Forging CATALOGUE ... Page51

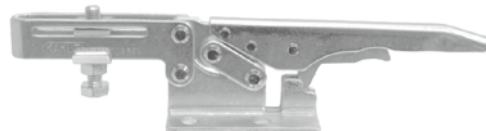


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(HOLD DOWN ACTION • Self Lock included)



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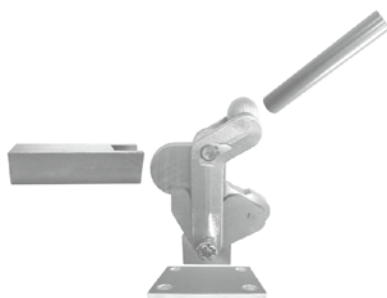
(VARI-CLAMPS made by forging)



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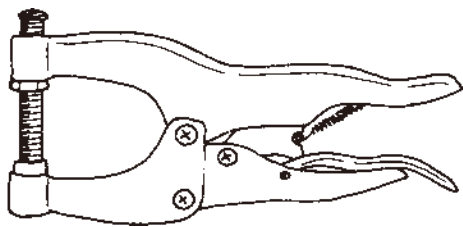
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VARI NO.3 Forging CATALOGUE ... Page34

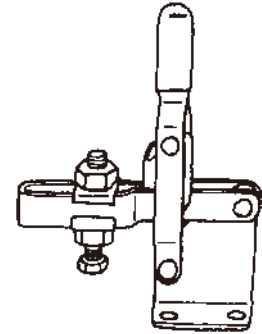
The KAKUTA standard clamp selection includes the following models A-E. Proper clamp selection depends on the purpose and circumstances of the intended use. A variety of styles are detailed in the following pages.

A

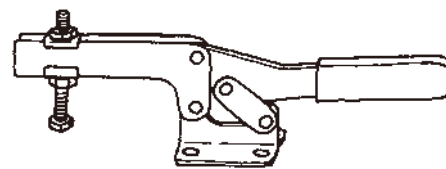


Plier Clamps (Squeeze Action)

B

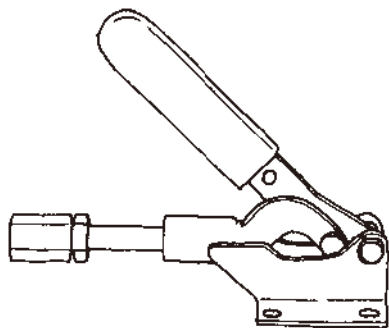


B-II) Vertical Handle Toggle Clamps (Hold Down Action)



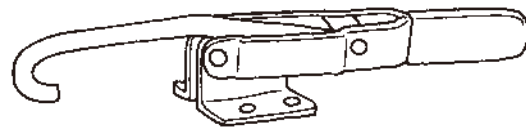
B-I) Horizontal Handle Toggle Clamps (Hold Down Action)

C



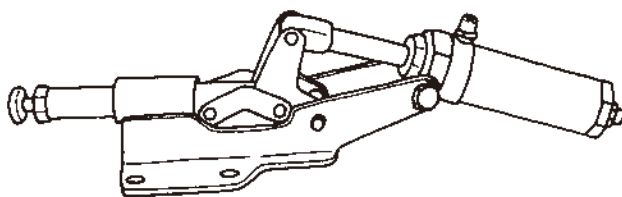
Push/Pull Toggle Clamps (Straight Line Action)

D

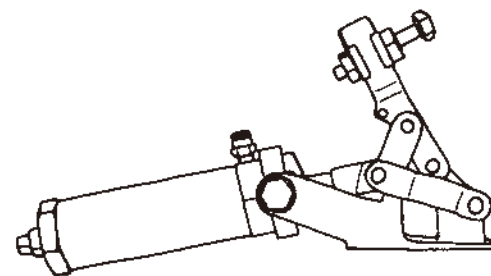


Latch Type Toggle Clamps (Pull Action)

E



Air Powered Clamps
(Straight Line Action)



Air Powered Clamps
(Hold Down Action)

KAKUTA TOGGLE CLAMPS

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A = Plier Clamps
(Squeeze Action)

B-I = Horizontal Handle
Toggle Clamps
(Hold Down Action)

B-II = Vertical Handle
Toggle Clamps
(Hold Down Action)

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C = Push/Pull Toggle Clamps
(Straight Line Action)

D = Latch Type Toggle Clamps
(Hook Action)

E = Air Powered Clamps

B-I

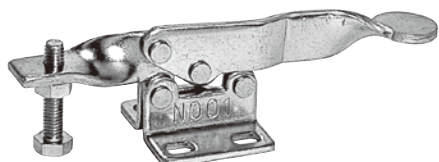
All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

SMALL SIZED HORIZONTAL HANDLE TOGGLE CLAMPS

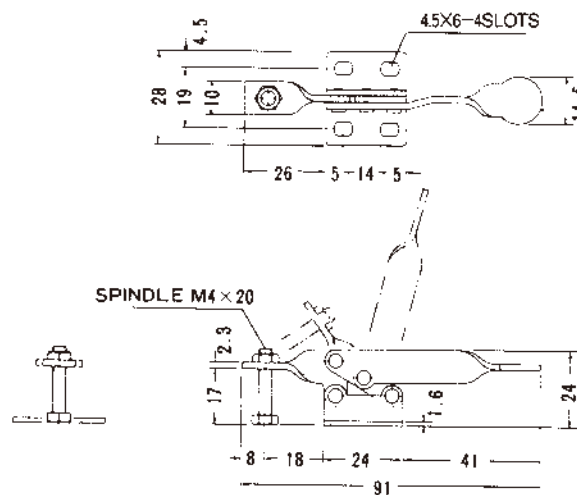
HOLD DOWN ACTION

NO.01

W. 30g Holding capacity 20kg



HANDLE MOVES75°
BAR MOVES70°

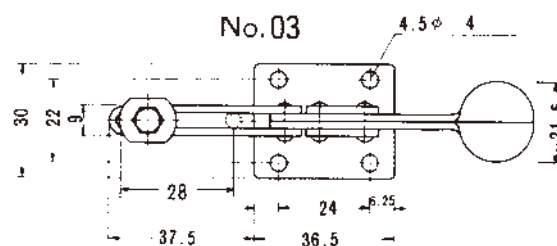


NO.03

W. 100g Holding capacity 30kg

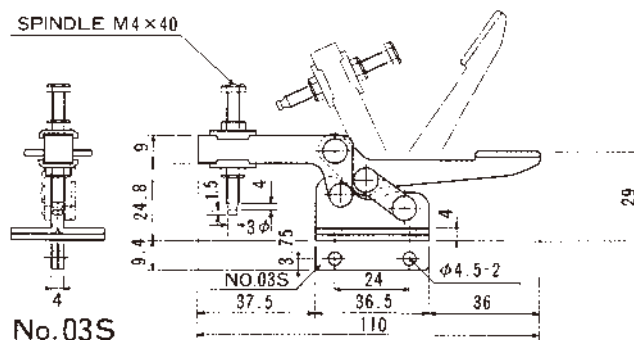


HANDLE MOVES55°
BAR MOVES65°



NO.03S

W. 100g Holding capacity 30kg



B-I

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

SMALL SIZED HORIZONTAL HANDLE TOGGLE CLAMPS

HOLD DOWN ACTION

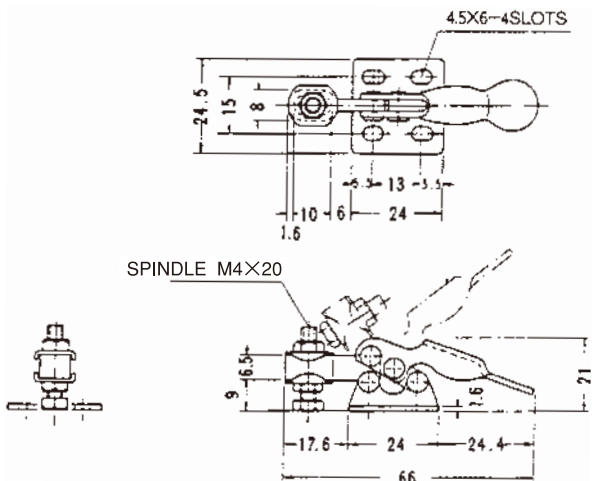
NO.04 NO.04-2S

(Stainless Steel model)

W. 30g Holding capacity 20kg



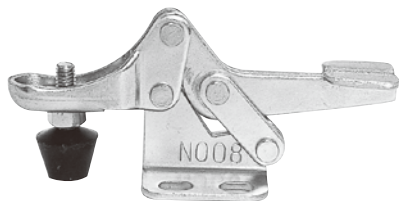
HANDLE MOVES60°
BAR MOVES55°



NO.08 NO.08-2S

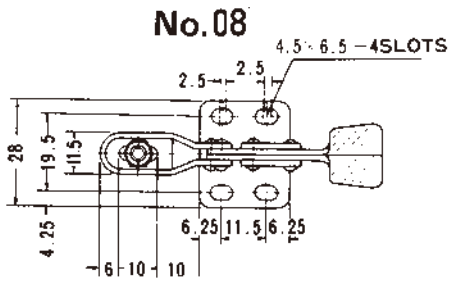
(Stainless Steel model)

W. 40g Holding capacity 30kg



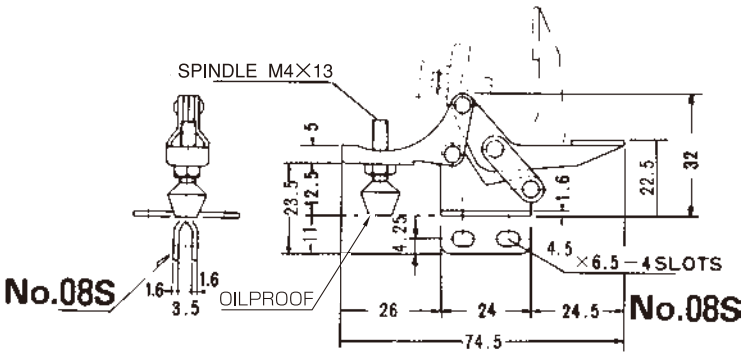
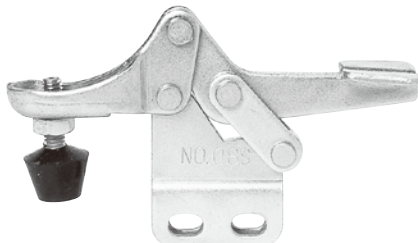
This model has neoprene M4×13 bolt
Full length 23

HANDLE MOVES88°
BAR MOVES80°



NO.08S

W. 40g Holding capacity 30kg



To use a normal bolt for the measurement of the Holding Capacity.

To use a normal bolt for the measurement of the Holding Capacity.

B-I

MEDIUM SIZED HORIZONTAL HANDLE TOGGLE CLAMPS

HOLD DOWN ACTION

NO.38B(S)
NO.38B(S)-2S

(Stainless Steel model)

W. 200g Holding capacity 250kg



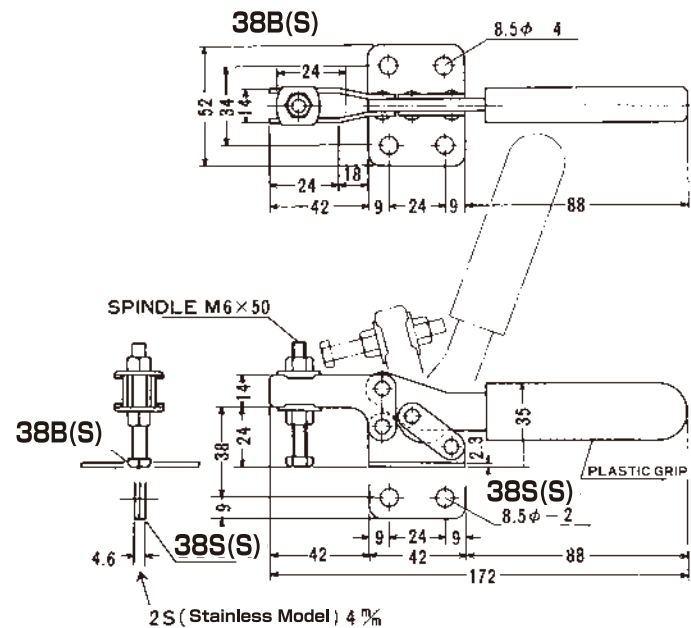
NO.38S(S)
NO.38S(S)-2S

(Stainless Steel model)

W. 200g Holding capacity 250kg



HANDLE MOVES70°
BAR MOVES75°



NO.38B(L)
NO.38B(L)-2S

(Stainless Steel model)

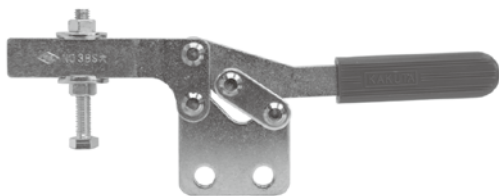
W. 460g Holding capacity 280kg



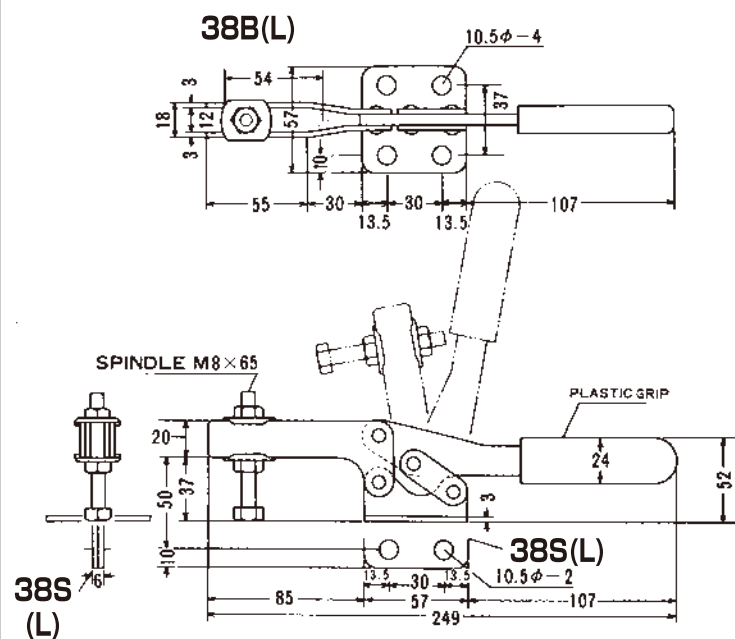
NO.38S(L)
NO.38S(L)-2S

(Stainless Steel model)

W. 460g Holding capacity 280kg



HANDLE MOVES80°
BAR MOVES80°

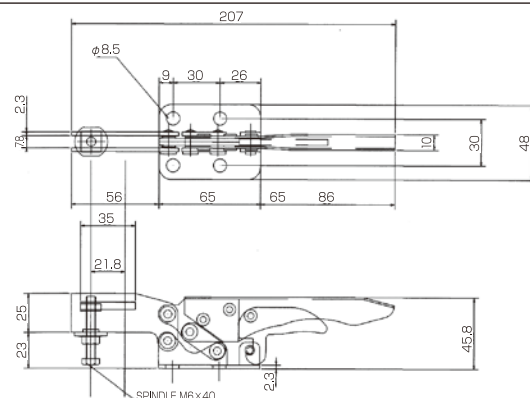


NO.38RK-S

W. 370g Holding capacity 250kg



HANDLE MOVES70°
BAR MOVES72°



B-I

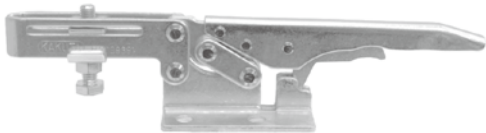
All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

SMALL SIZED HORIZONTAL HANDLE TOGGLE CLAMPS

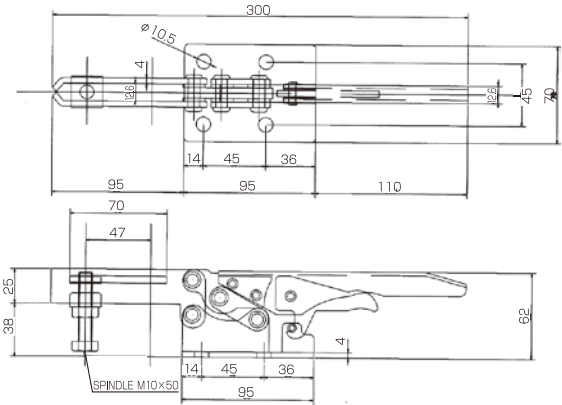
HOLD DOWN ACTION

NO.38RK-L

W. 900g Holding capacity 500kg



HANDLE MOVES85°
BAR MOVES75°



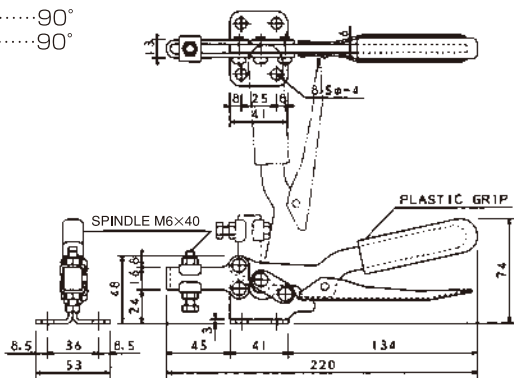
NO.38K(S)

W. 380g Holding capacity 280kg

This model has a special release mechanism. When the lever is raised, the clamping action is released.



HANDLE MOVES90°
BAR MOVES90°



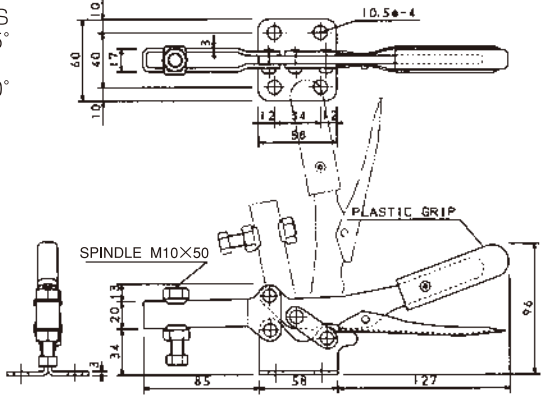
NO.38K(L)

W. 570g Holding capacity 300kg

This model has a special release mechanism. When the lever is raised, the clamping action is released.



HANDLE MOVES85°
BAR MOVES80°



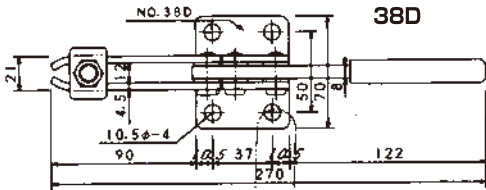
NO.38D

W. 730g Holding capacity 500kg

This model has a stronger holding capacity than No. 38B.



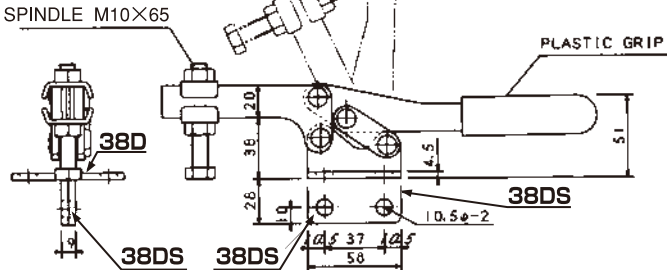
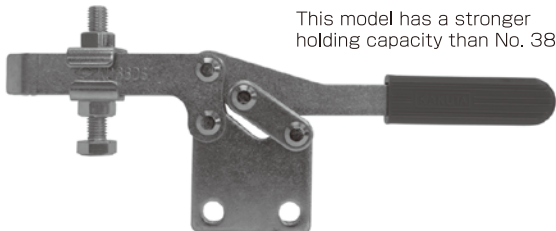
HANDLE MOVES85°
BAR MOVES65°



NO.38DS

W. 730g Holding capacity 500kg

This model has a stronger holding capacity than No. 38S.



B-I

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

MEDIUM SIZED HORIZONTAL HANDLE TOGGLE CLAMPS

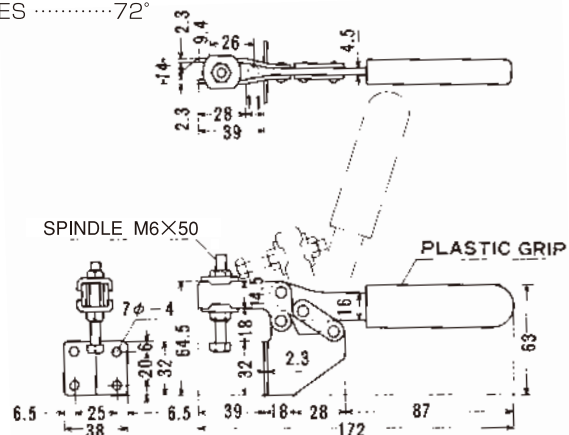
HOLD DOWN ACTION

NO.38C(S)

W. 220g Holding capacity 250kg
This model's base is attached vertically.



HANDLE MOVES72°
BAR MOVES72°

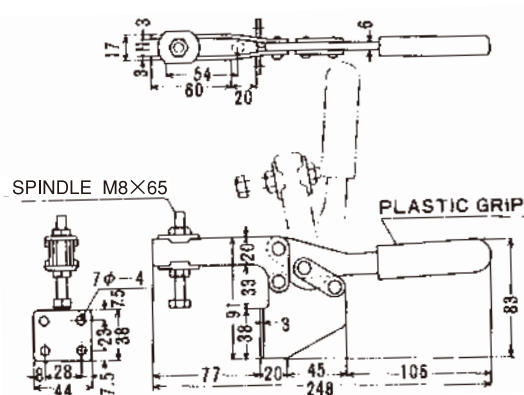


NO.38C(L)

W. 520g Holding capacity 280kg
This model's base is attached vertically.



HANDLE MOVES80°
BAR MOVES80°

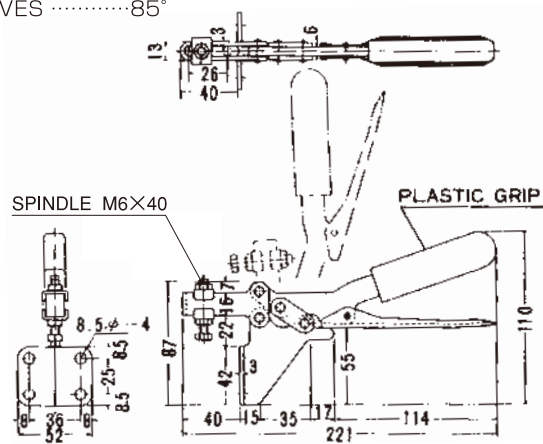


NO.38P(S)

W. 440g Holding capacity 280kg
This model's base is attached vertically and the lower lever releases the clamping action.

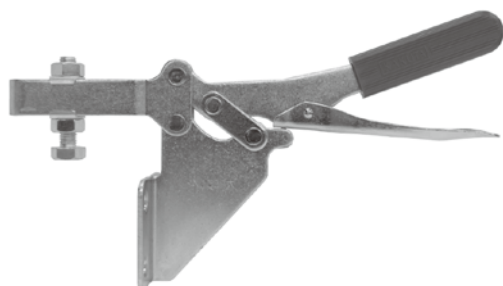


HANDLE MOVES73°
BAR MOVES85°

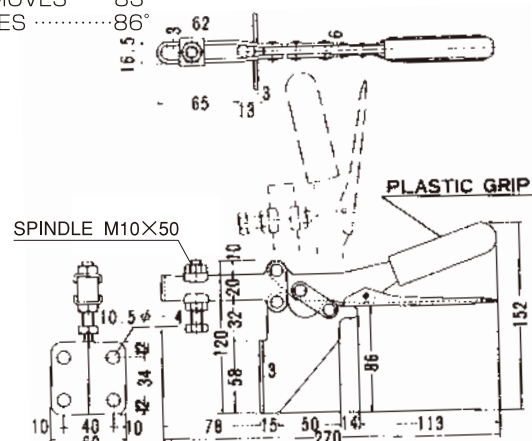


NO.38P(L)

W. 670g Holding capacity 300kg
This model's base is attached vertically and the lower lever releases the clamping action.



HANDLE MOVES83°
BAR MOVES86°



B-I

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

HORIZONTAL HANDLE TOGGLE CLAMPS

HOLD DOWN ACTION

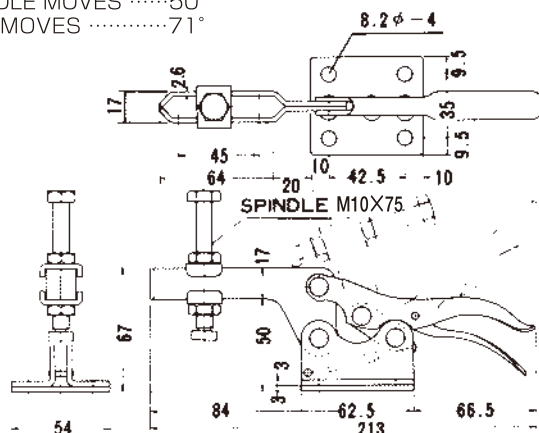
NO.41A

W. 500g Holding capacity 250kg

Convenient release lever and spring provide easy release of clamping action.



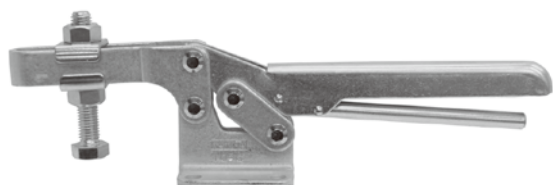
HANDLE MOVES50°
BAR MOVES71°



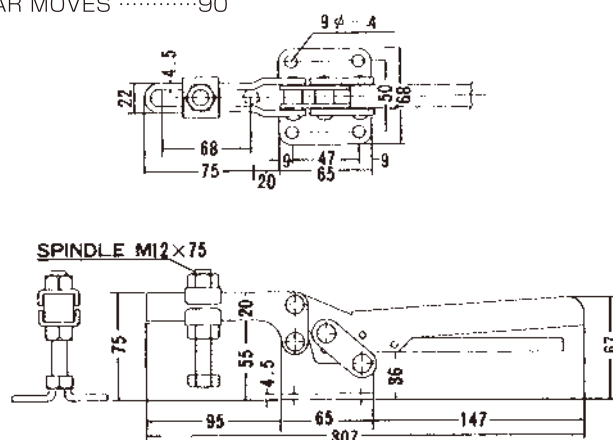
NO.41C

W. 870g Holding capacity 350kg

Model 41 CW has 2 spindles

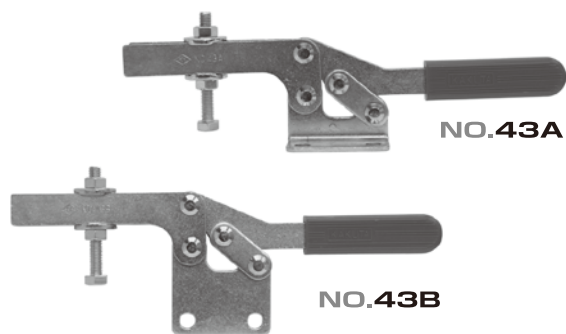


HANDLE MOVES70°
BAR MOVES90°

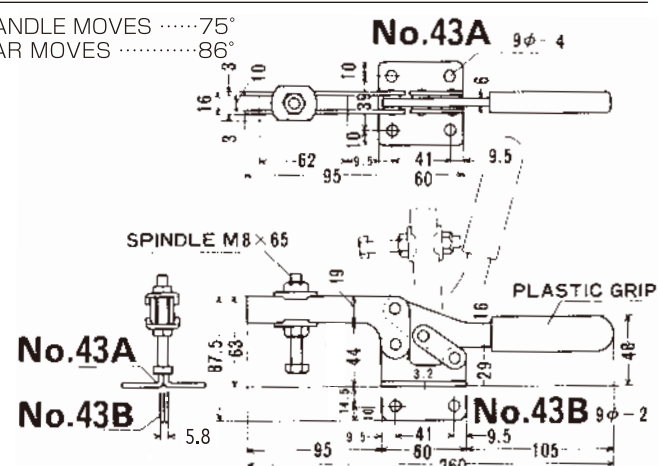


NO.43A NO.43B

W. 520g Holding capacity 280kg

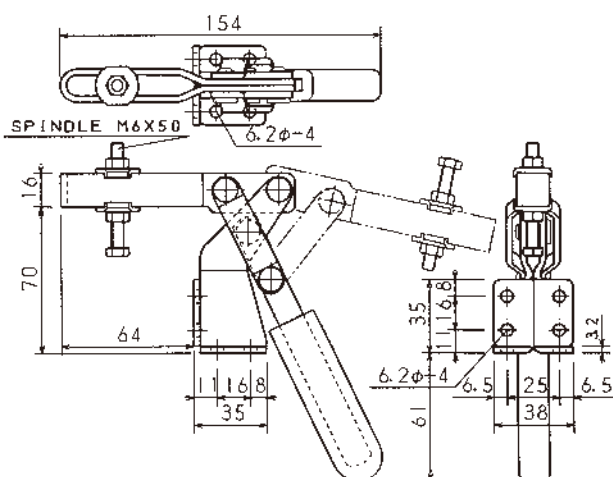


HANDLE MOVES75°
BAR MOVES86°



NO.82

W. 400g Holding capacity 100kg



B-I

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

HORIZONTAL HANDLE TOGGLE CLAMPS

HOLD DOWN ACTION

NO.HH150

All rivets are made of stainless This model has nylon M4×21 bolt

NO.HH150-2S (SUS Model)

This model has SUS M4×20 bolt

NO.HH151-B

All rivets are made of stainless This model has nylon M4×21 bolt



NO.HH150

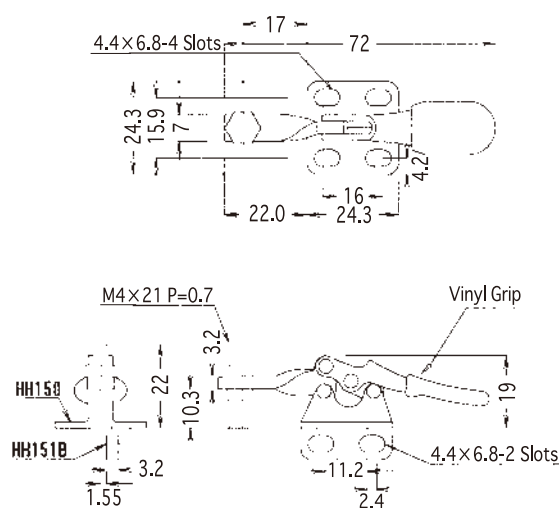


NO.HH151-B

Ideal for lightweight materials and light work.

W. 30g Holding capacity 27kg

HANDLE MOVES70°
BAR MOVES95°



NO.HH250

All rivets are made of stainless This model has nylon M4×21 bolt

NO.HH250-2S (SUS Model)

This model has SUS M4×20 bolt

NO.HH251-B

All rivets are made of stainless This model has nylon M4×21 bolt



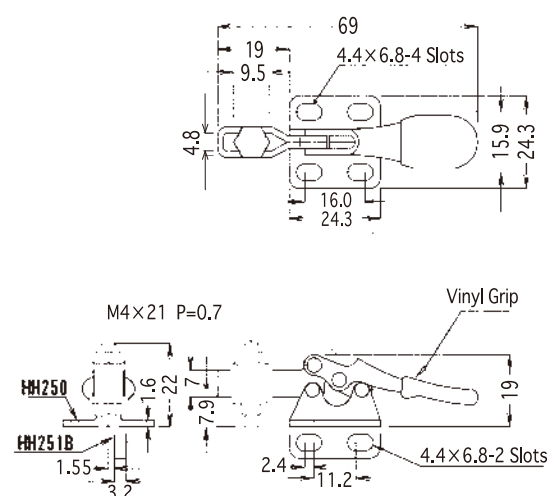
NO.HH250



NO.HH251-B

W. 30g Holding capacity 27kg

HANDLE MOVES70°
BAR MOVES95°



NO.HH350

All rivets are made of stainless This model has neoprene M6×37 bolt

NO.HH350-2S (SUS Model)

This model has SUS M6×37 bolt

NO.HH351-B

All rivets are made of stainless This model has neoprene M6×37 bolt

Full length 51



NO.HH350

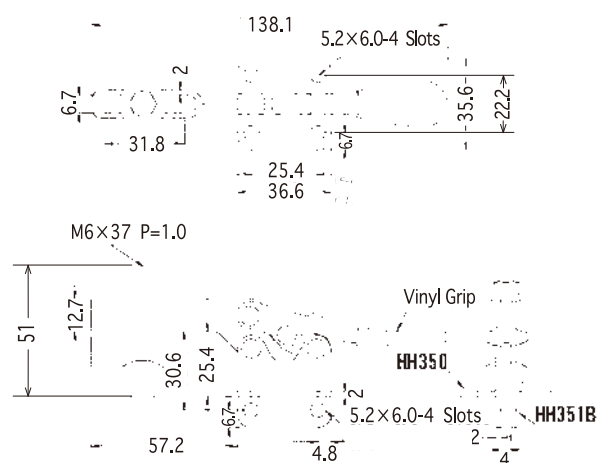


NO.HH351-B

Ideal for lightweight materials and light work.

W. 120g Holding capacity 90kg

HANDLE MOVES60°
BAR MOVES90°



B-I

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

HORIZONTAL HANDLE TOGGLE CLAMPS

HOLD DOWN ACTION

NO.HH450

All rivets are made of stainless This model has neoprene M8×50 bolt

NO.HH450-2S (SUS Model)

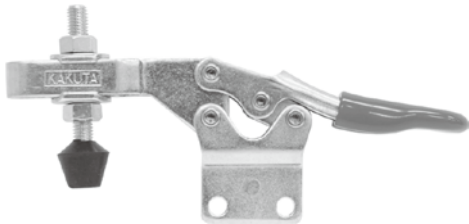
This model has SUS M8×68 bolt

NO.HH451-B

All rivets are made of stainless This model has neoprene M8×50 bolt
Full length 68



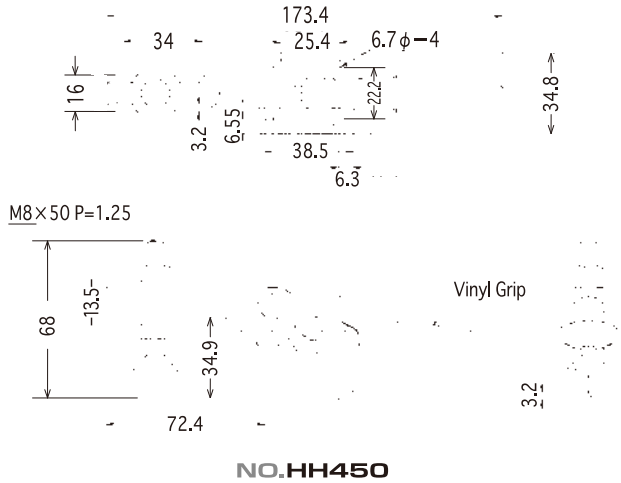
NO.HH450



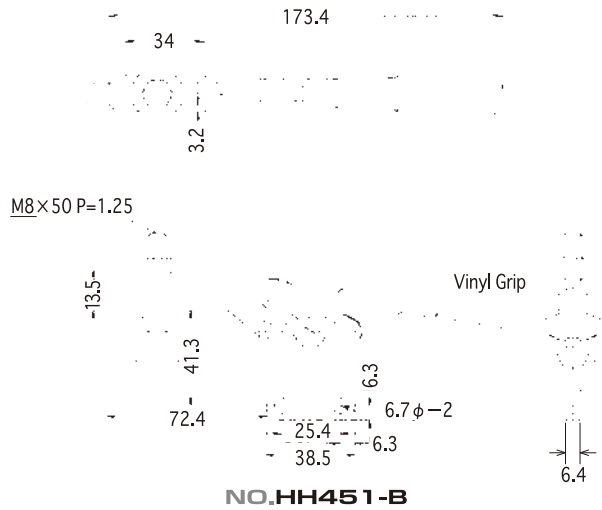
NO.HH451-B

W. 260g Holding capacity 240kg

HANDLE MOVES60°
BAR MOVES90°



NO.HH450



NO.HH451-B

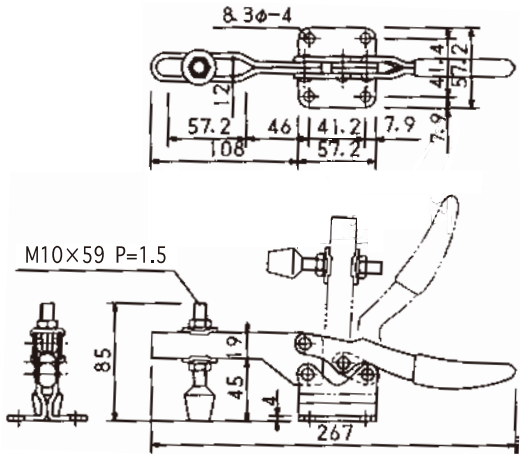
NO.HH550

All rivets are made of stainless
This model has neoprene M10×59 bolt
Full length 85



W. 670g Holding capacity 340kg

HANDLE MOVES65°
BAR MOVES93°



B-II

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

HORIZONTAL HANDLE TOGGLE CLAMPS

HOLD DOWN ACTION

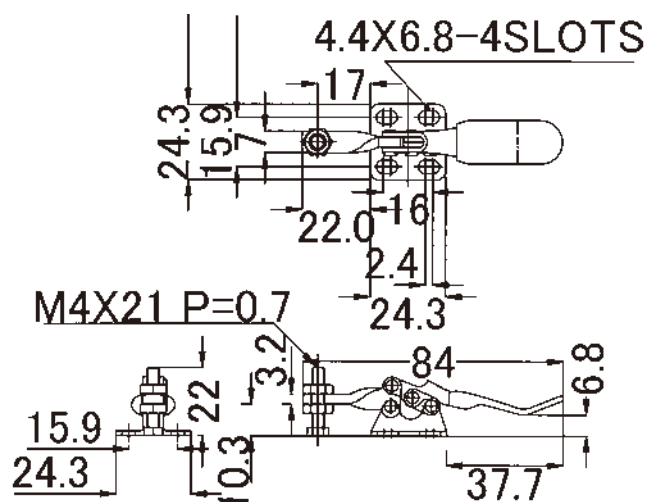
NO.HH150-H

All rivets are made of stainless
This model has nylon M4×21 bolt



W. 33g Holding capacity 27kg

HANDLE MOVES70°
BAR MOVES95°



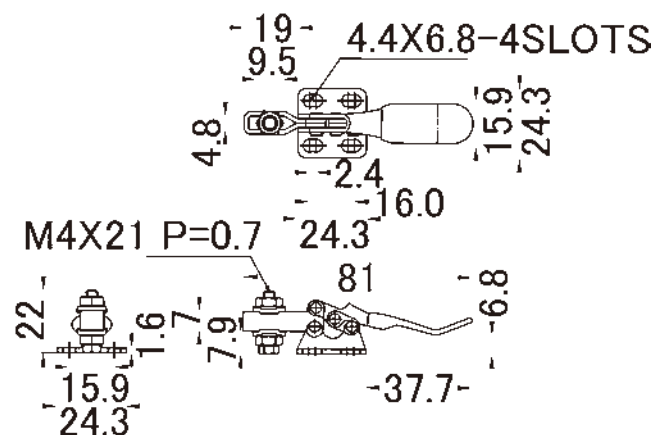
NO.HH250-H

All rivets are made of stainless
This model has nylon M4×21 bolt



W. 33g Holding capacity 27kg

HANDLE MOVES70°
BAR MOVES95°



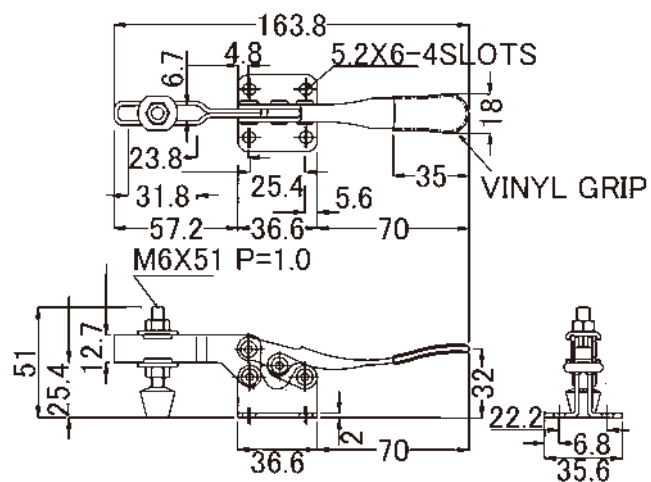
NO.HH350-H

All rivets are made of stainless
This model has neoprene M6×37 bolt



W. 130g Holding capacity 90kg

HANDLE MOVES60°
BAR MOVES90°



B-II

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

VERTICAL HANDLE TOGGLE CLAMPS

HOLD DOWN ACTION

NO.HV150 W. 70g Holding capacity 45kg

All rivets are made of stainless This model has nylon covered bolt

NO.HV150-2S (SUS Model)

This model has SUS M4×25 bolt

NO.HV151B

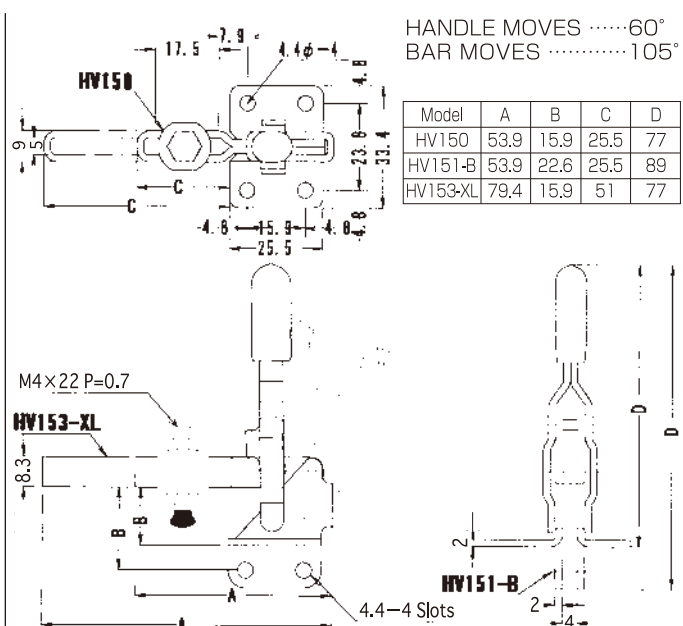
This model has M4×28 P=0.7 bolt

NO.HV153-XL

All rivets are made of stainless This model has nylon covered bolt
W. 75g Holding capacity 45~19kg



Ideal for lightweight
materials and
light work.



NO.HV250 W. 170g Holding capacity 90kg

All rivets are made of stainless This model has neoprene M6×39 bolt

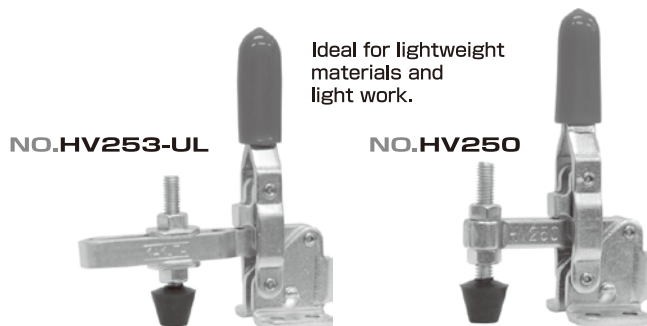
NO.HV250-2S (SUS Model)

This model has SUS M6×40 bolt

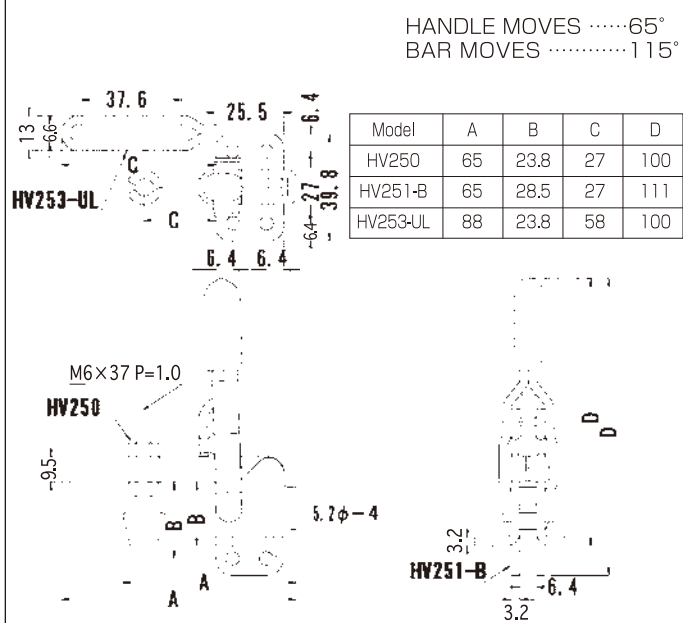
NO.HV251B Holding capacity 90kg

NO.HV253-UL

All rivets are made of stainless This model has neoprene M6×39 bolt
W. 175g Holding capacity 100~40kg Full length 51



Ideal for lightweight
materials and
light work.



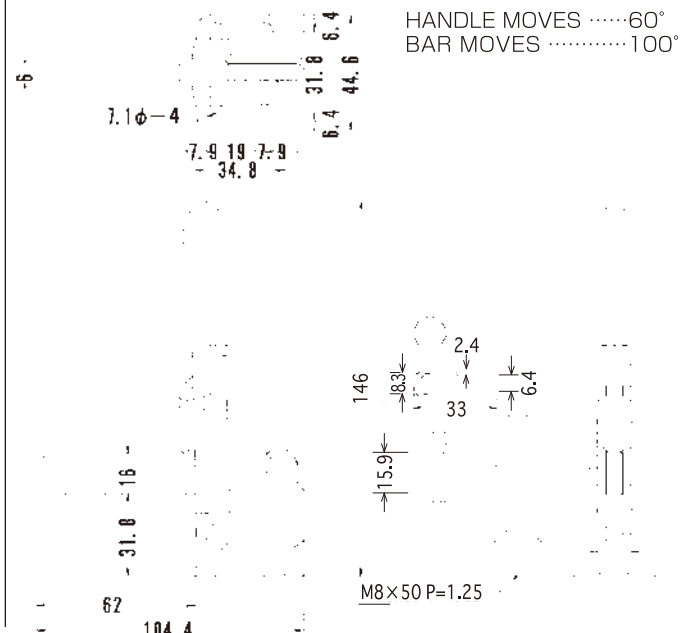
NO.HV350

W. 350g Holding capacity 225kg

This model has neoprene bolt M8×50 P=1.25
Full length 68



The bolt installation is welding.



B-Ⅱ

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

VERTICAL HANDLE TOGGLE CLAMPS

HOLD DOWN ACTION

NO.HV450

W. 310g Holding capacity 225kg

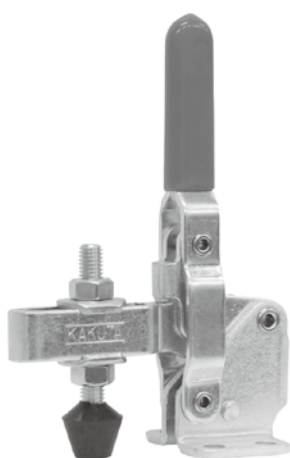
NO.HV450-2S

This model has SUS M8×50 bolt (SUS Model)
Holding capacity 225kg

NO.HV451B NO.HV453-XL

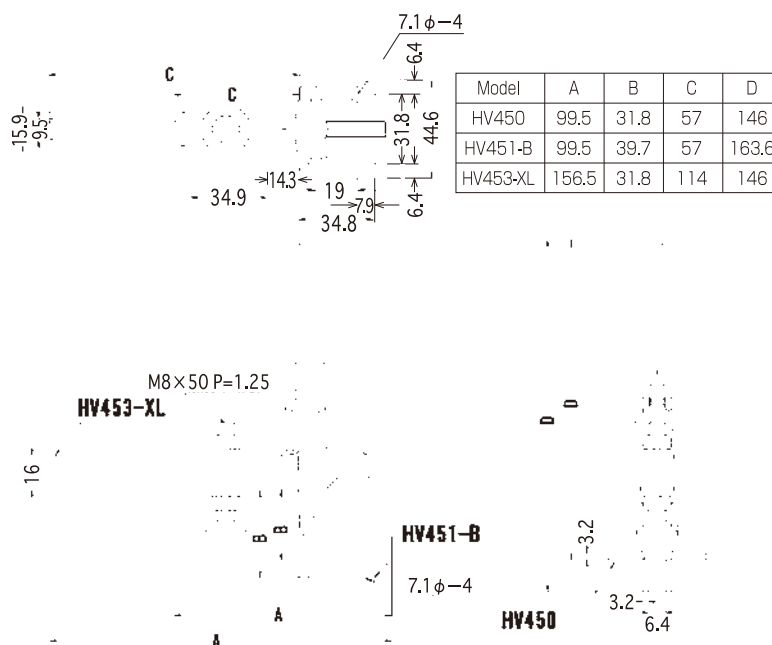
This model has neoprene bolt M8×50 P=1.25
Full length 68

W. 410g Holding capacity 225~80kg



NO.HV450

HANDLE MOVES60°
BAR MOVES100°



NO.HV550

This model has neoprene bolt M10×59 P=1.5
Full length 85

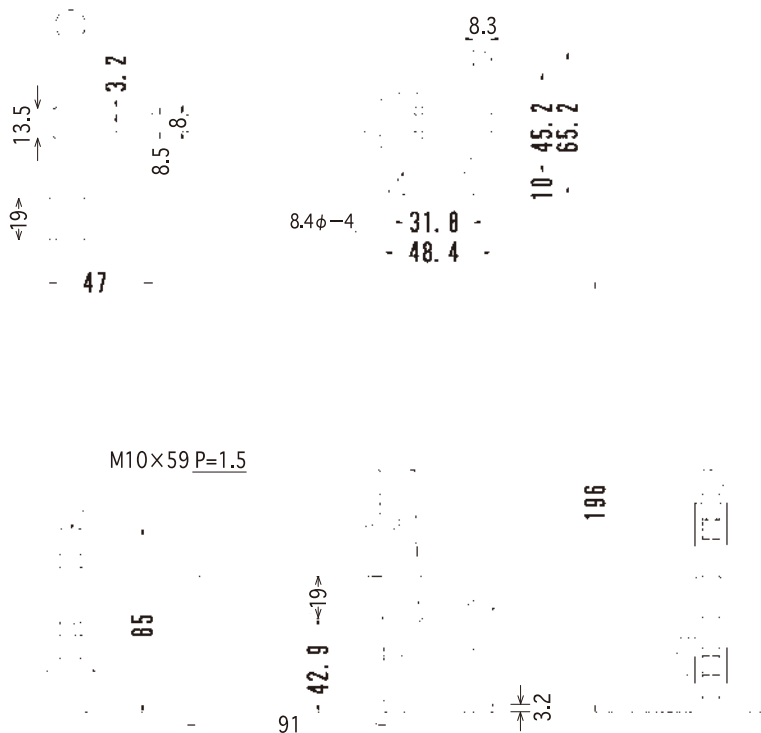
W. 600g Holding capacity 340kg

This models is intended
for standard working conditions.



The bolt installation is welding.

HANDLE MOVES58°
BAR MOVES106°



B-II

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

SMALL SIZED VERTICAL HANDLE TOGGLE CLAMPS

HOLD DOWN ACTION

NO.HV650

W. 600g Holding capacity 340kg

NO.HV651B

NO.HV653-XL

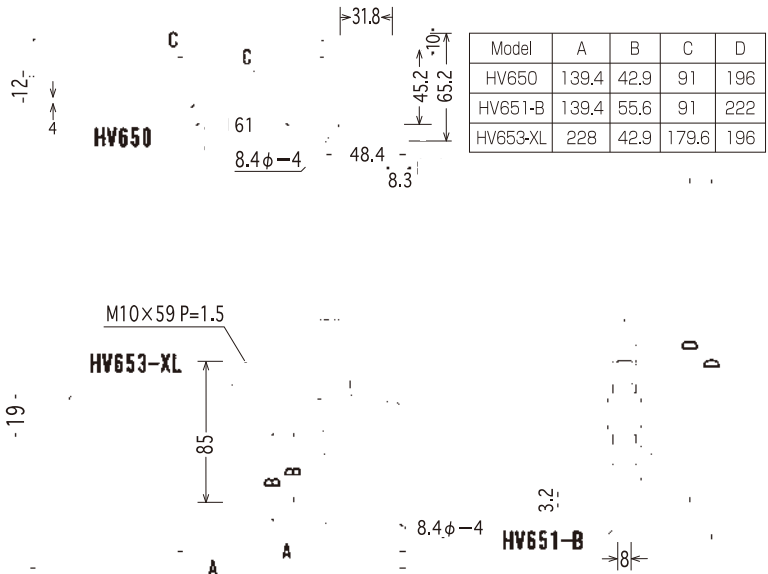
W. 760g Holding capacity 340~110kg



NO.HV650

This model has neoprene bolt M10×59 P=1.5
Full length 68

HANDLE MOVES58°
BAR MOVES106°

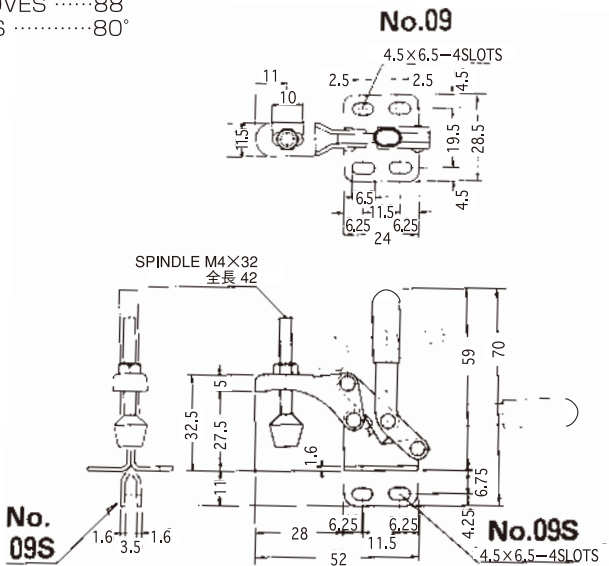


NO.09 NO.09-2S NO.09S (SUS Model)

W. 40g Holding capacity 30kg



HANDLE MOVES88°
BAR MOVES80°

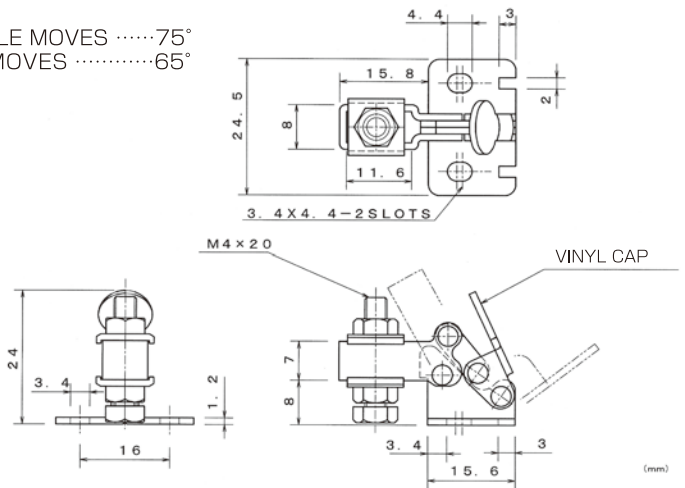


NO.HS-10

W. 15g Holding capacity 20kg



HANDLE MOVES75°
BAR MOVES65°



B-Ⅱ

VERTICAL HANDLE TOGGLE CLAMPS

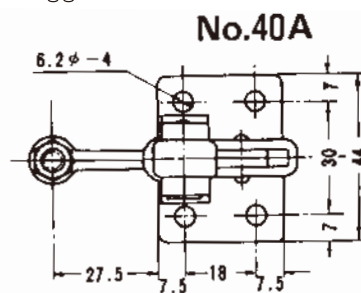
HOLD DOWN ACTION

NO.40A NO.40A-2S

W. 200g Holding capacity 100kg (SUS Model)

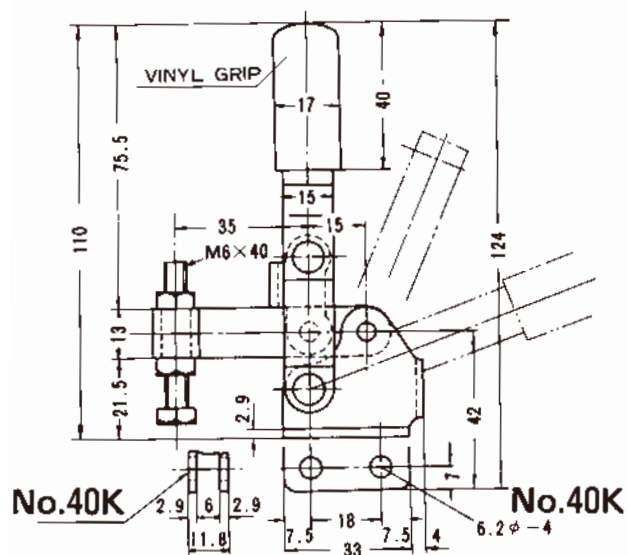
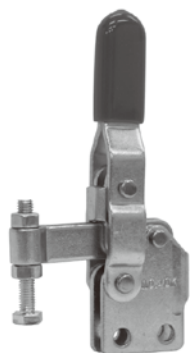


HANDLE MOVES65°
BAR MOVES95°



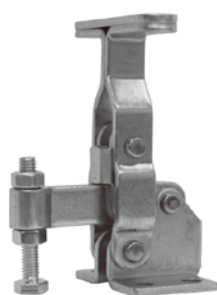
NO.40K NO.40K-2S

W. 200g Holding capacity 100kg (SUS Model)

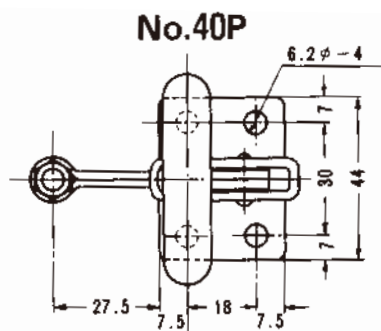


NO.40P NO.40P-2S

W. 210g Holding capacity 100kg (SUS Model)

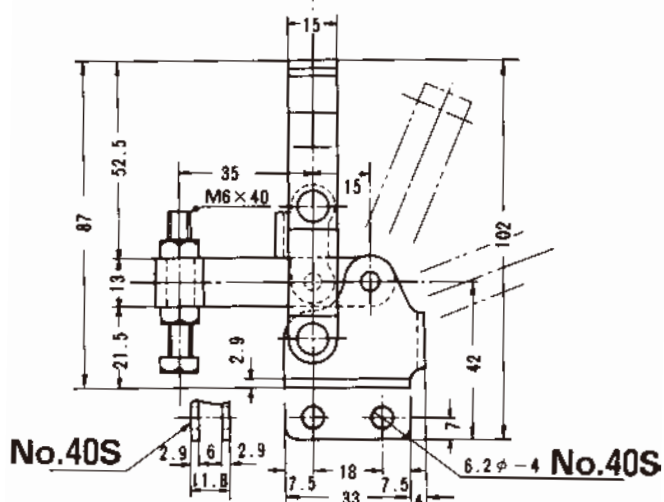


HANDLE MOVES65°
BAR MOVES95°



NO.40S NO.40S-2S

W. 210g Holding capacity 100kg (SUS Model)



B-II

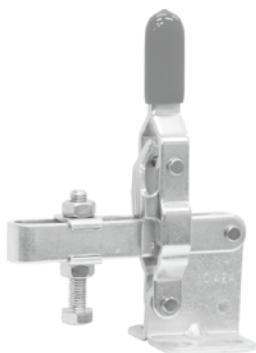
VERTICAL HANDLE TOGGLE CLAMPS

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

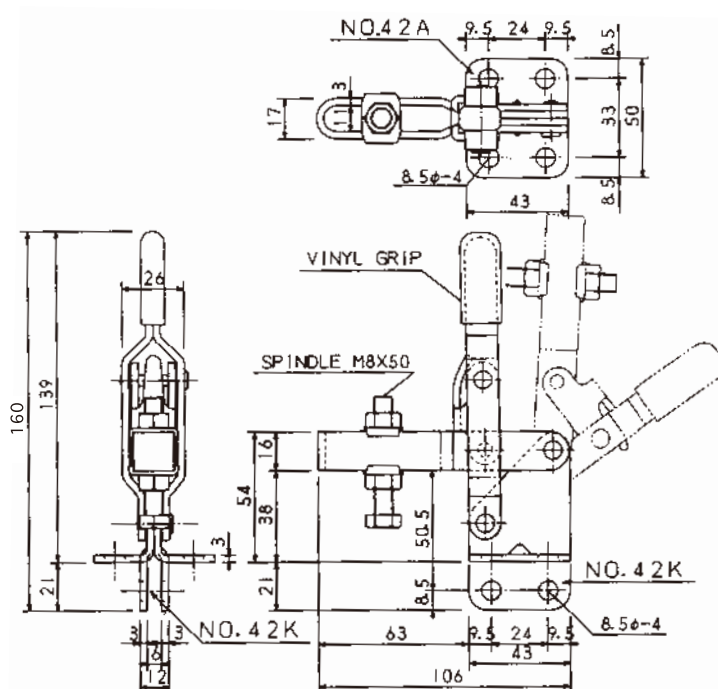
HOLD DOWN ACTION

NO.42A NO.42A-2S

W. 390g Holding capacity 150kg (SUS Model)



HANDLE MOVES54°
BAR MOVES94°



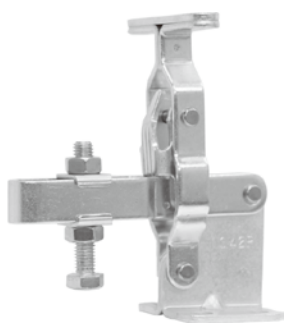
NO.42K NO.42K-2S

W. 390g Holding capacity 150kg (SUS Model)

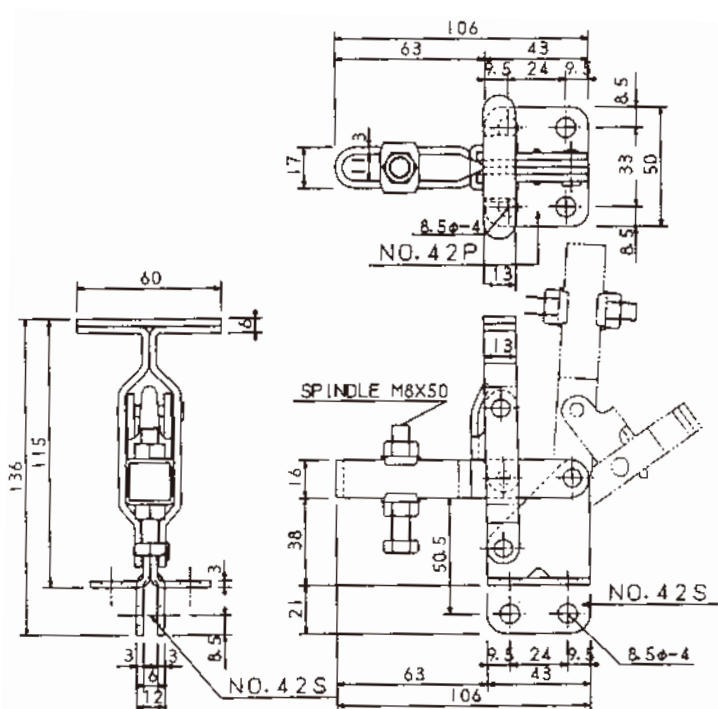


NO.42P

W. 400g Holding capacity 150kg

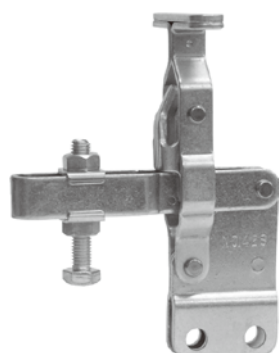


HANDLE MOVES54°
BAR MOVES94°



NO.42S

W. 400g Holding capacity 150kg



All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

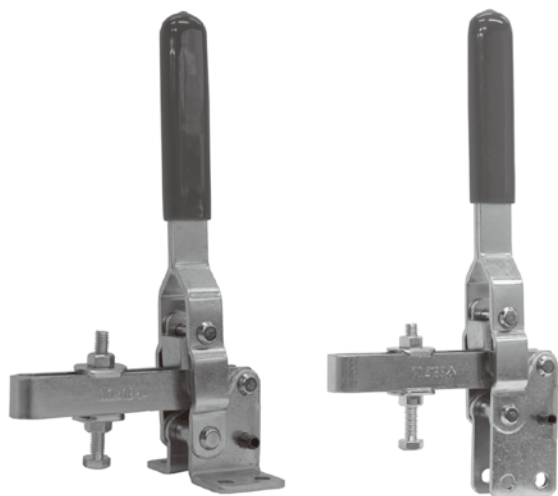
VERTICAL HANDLE TOGGLE CLAMPS

HOLD DOWN ACTION

NO.41 B(S)
NO.41 BS(S)

W. 385g Holding capacity 200kg

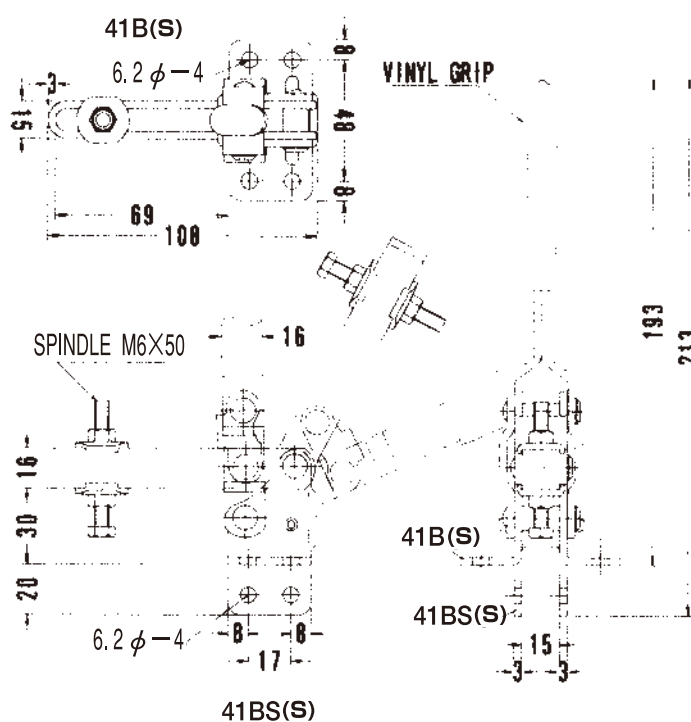
The difference between the two types is variation of fixing base.



NO.41 B(S)

NO.41BS(S)

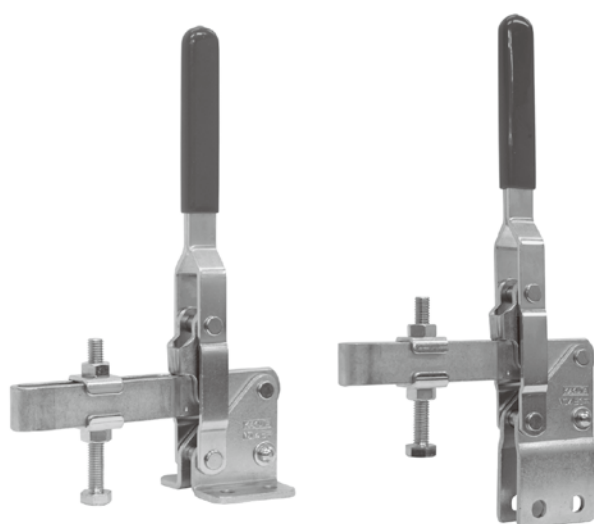
HANDLE MOVES64°
BAR MOVES110°



NO.41 B(M)
NO.41 BS(M)

W. 1,300g Holding capacity 300kg

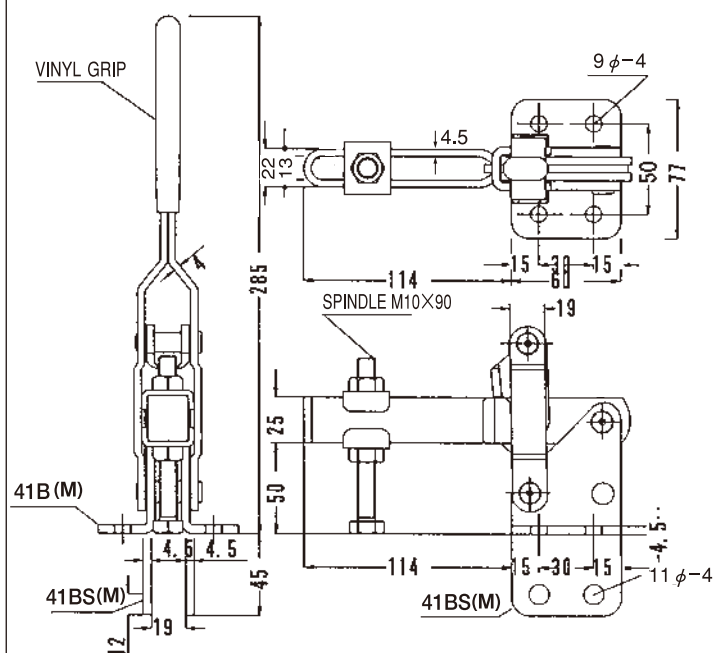
The difference between the two types is variation of fixing base.



NO.41B(M)

NO.41 BS(M)

HANDLE MOVES67°
BAR MOVES140°



To use a normal bolt for the measurement of the Holding Capacity.

To use a normal bolt for the measurement of the Holding Capacity.

B-II

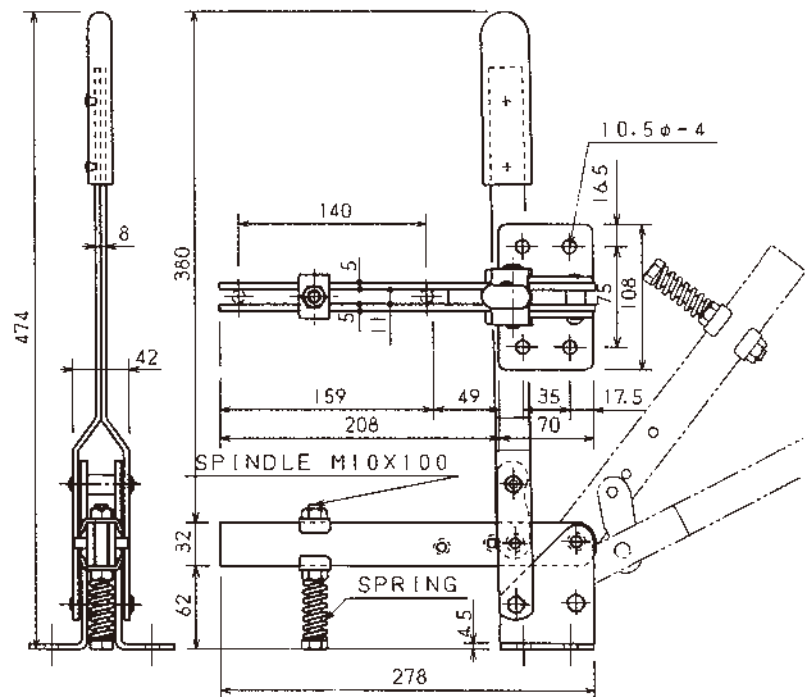
VERTICAL HANDLE TOGGLE CLAMPS

HOLD DOWN ACTION

NO.41B(L)

W. 2,180g Holding capacity 300kg

HANDLE MOVES85°
BAR MOVES125°



B-Ⅱ

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

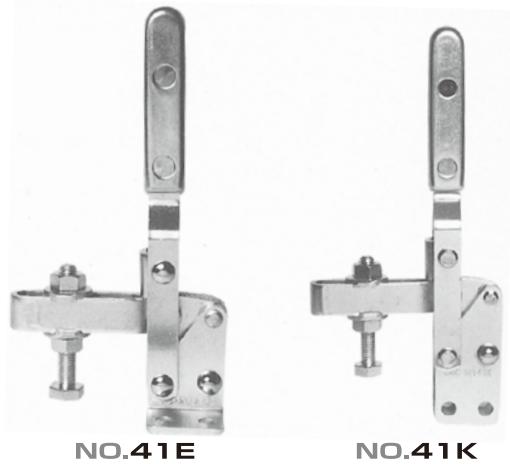
VERTICAL HANDLE TOGGLE CLAMPS

HOLD DOWN ACTION

NO.41E NO.41K

W. 795g Holding capacity 300kg

The difference between the two types is variation of fixing base.

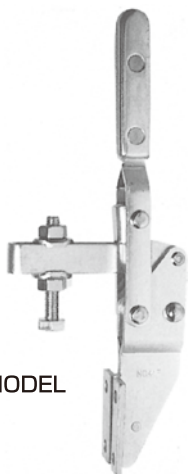


NO.41E

NO.41K

NO.41F

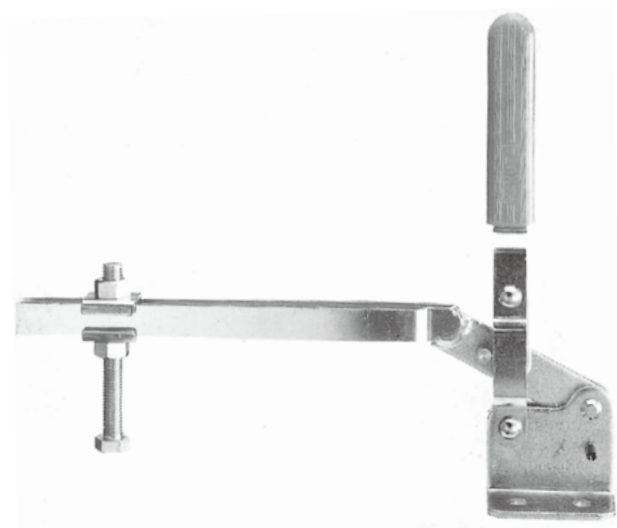
W. 1,000g
Holding capacity 300kg



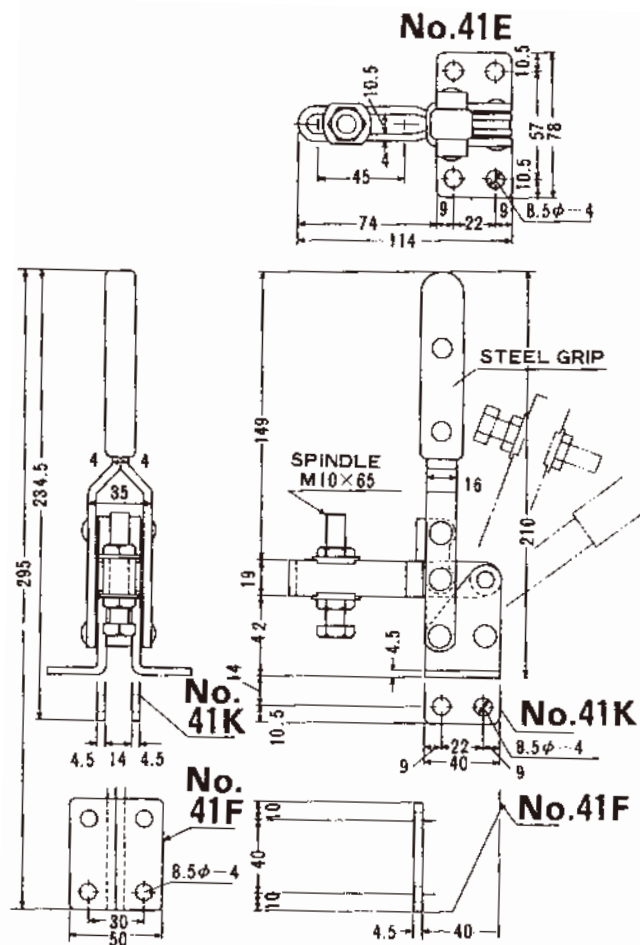
ATTACHED VERTICALLY MODEL

NO.J-2-B

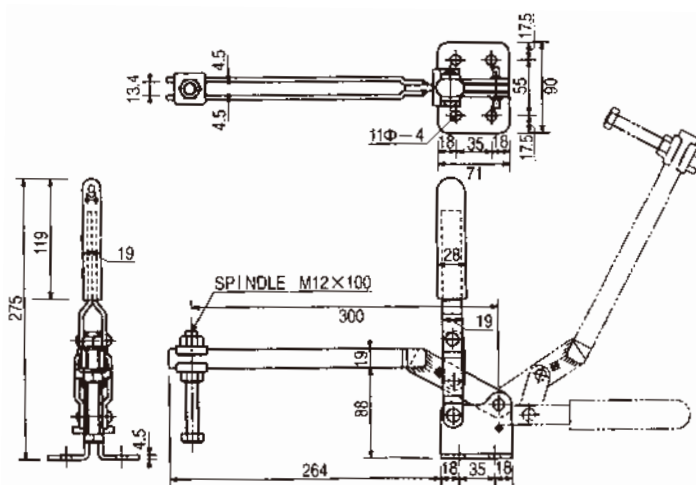
W. 1,500g Holding capacity 100kg~370kg



HANDLE MOVES53°
BAR MOVES110°



HANDLE MOVES90°
BAR MOVES110°



L=300mm/m Adjust dimensions 210mm

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

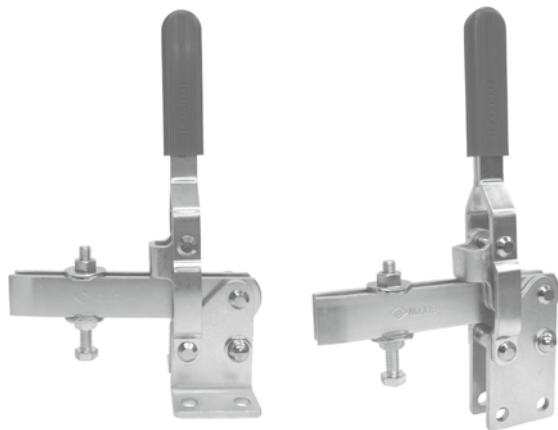
VERTICAL HANDLE
TOGGLE CLAMPS

HOLD DOWN

NO.X12 NO.X15

W. 890g Holding capacity 200kg

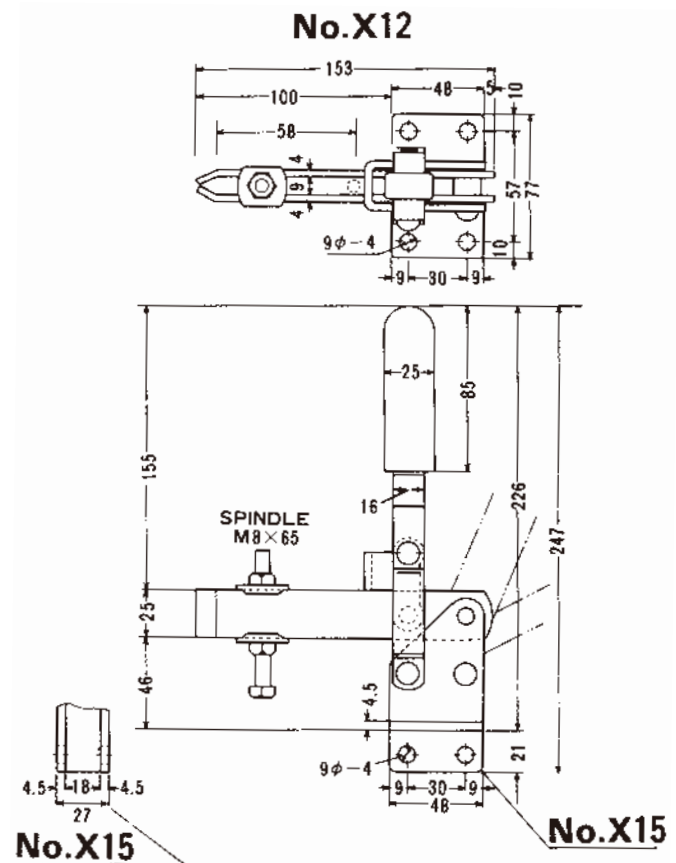
The difference between the two types is variation of fixing base.



NO.X12

NO.X15

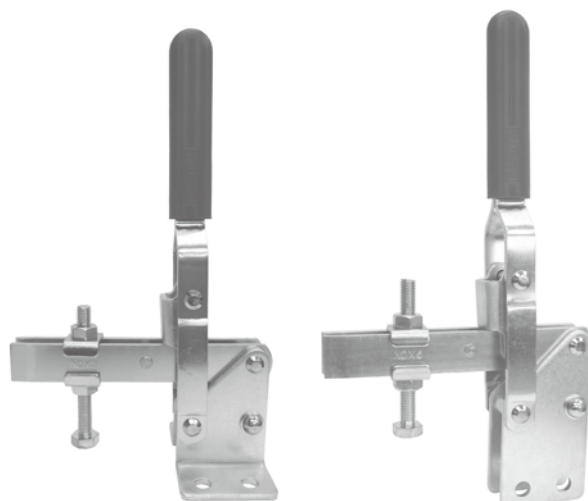
HANDLE MOVES60°
BAR MOVES115°



NO.X13 NO.X16

W. 1,330g Holding capacity 300kg

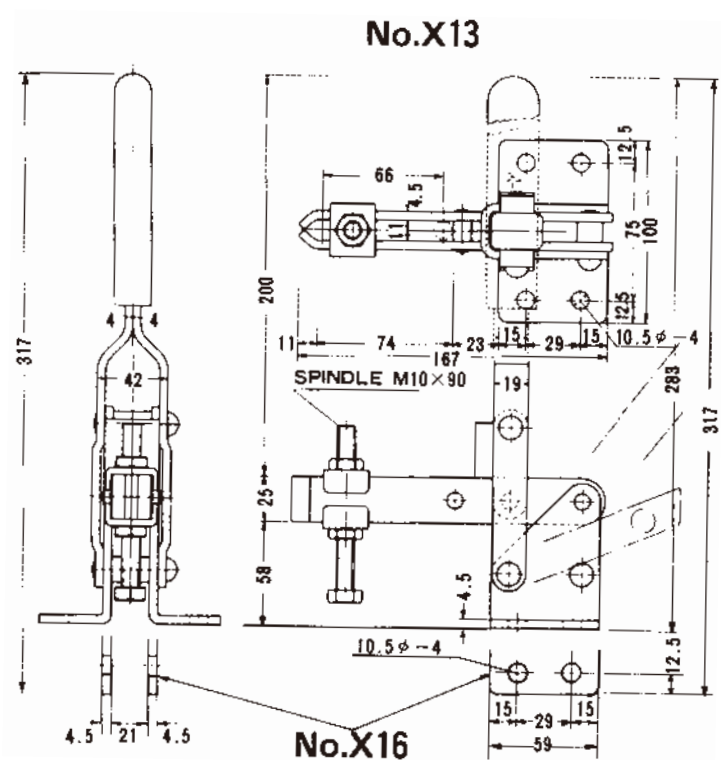
The difference between the two types is variation of fixing base.



NO.X13

NO.X16

HANDLE MOVES68°
BAR MOVES128°



B-Ⅱ

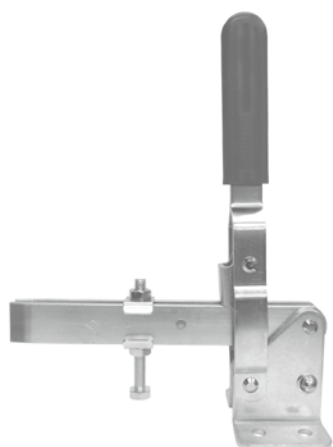
VERTICAL HANDLE TOGGLE CLAMPS

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

HOLD DOWN ACTION

NO.X14 NO.X17

W. 1,960g Holding capacity 350kg

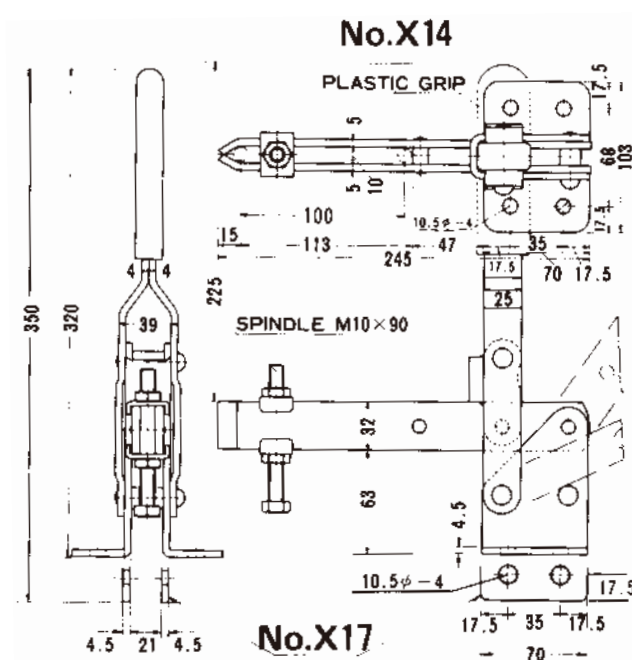


NO.X14



NO.X17

HANDLE MOVES67°
BAR MOVES125°

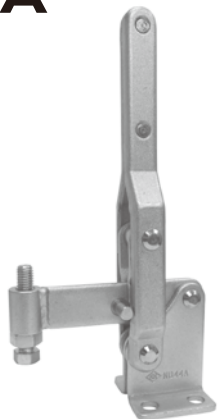


B-II

VERTICAL HANDLE TOGGLE CLAMPS

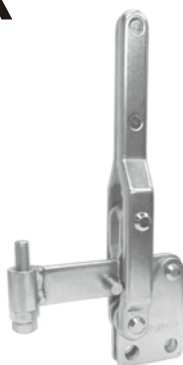
HOLD DOWN ACTION

NO.44A



W. 870g Holding capacity 280kg

NO.46A



W. 815g Holding capacity 280kg

NO.44B



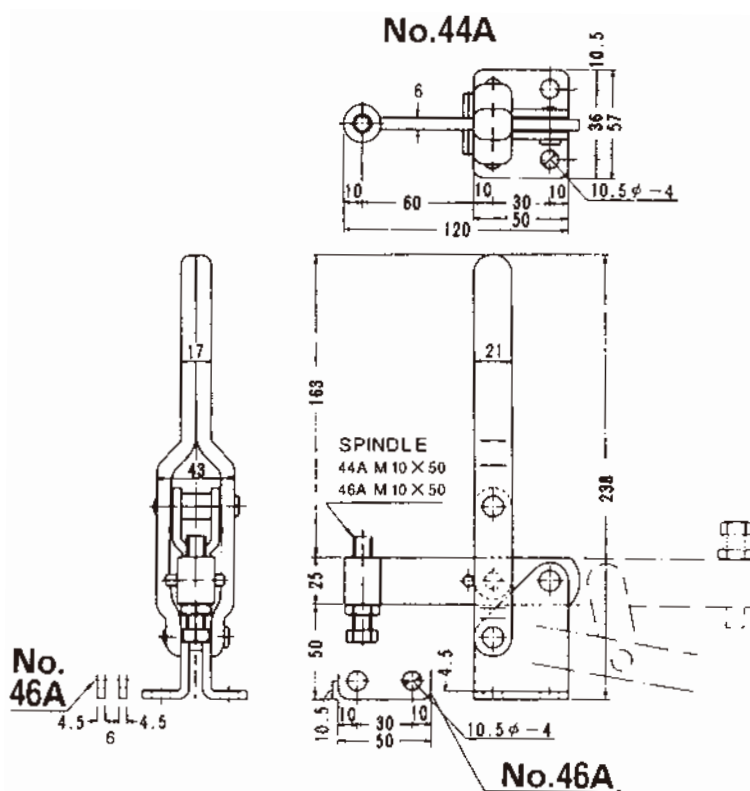
W. 840g Holding capacity 350kg

NO.46B

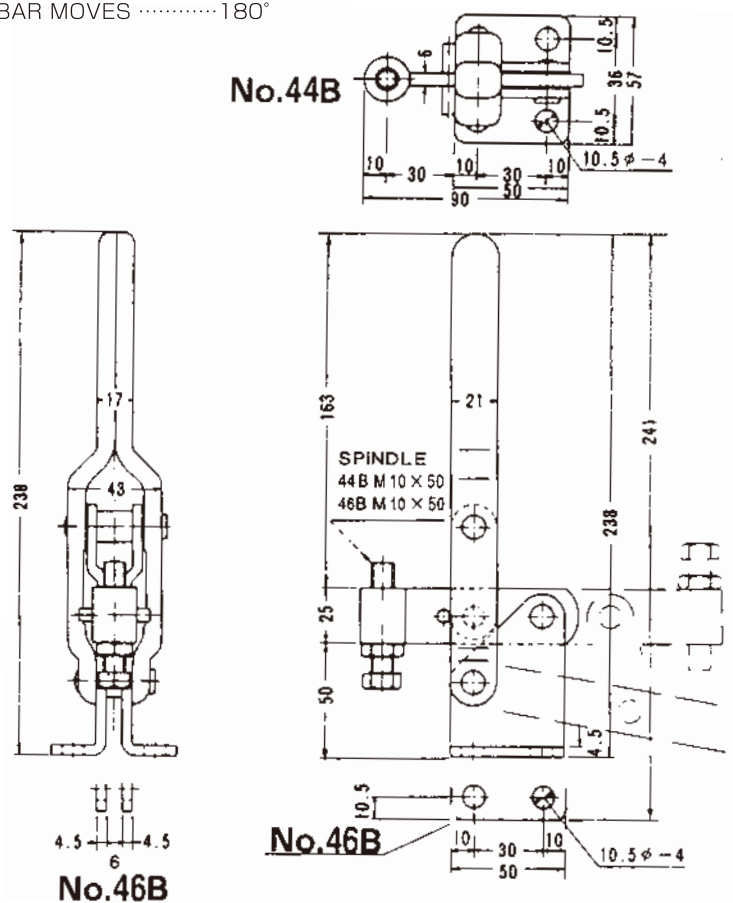


W. 740g Holding capacity 350kg

HANDLE MOVES100°
BAR MOVES180°



HANDLE MOVES100°
BAR MOVES180°



B-Ⅱ

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

VERTICAL HANDLE TOGGLE CLAMPS

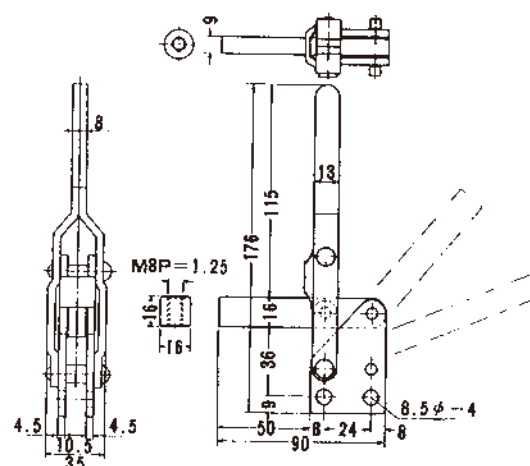
HOLD DOWN ACTION

NO.35

W. 427g Holding capacity 150kg



HANDLE MOVES68°
BAR MOVES130°

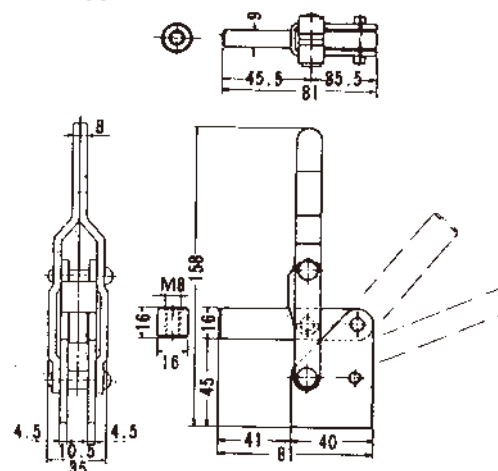


NO.37

W. 400g Holding capacity 150kg

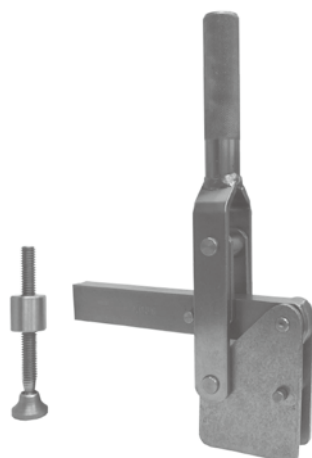


HANDLE MOVES70°
BAR MOVES130°

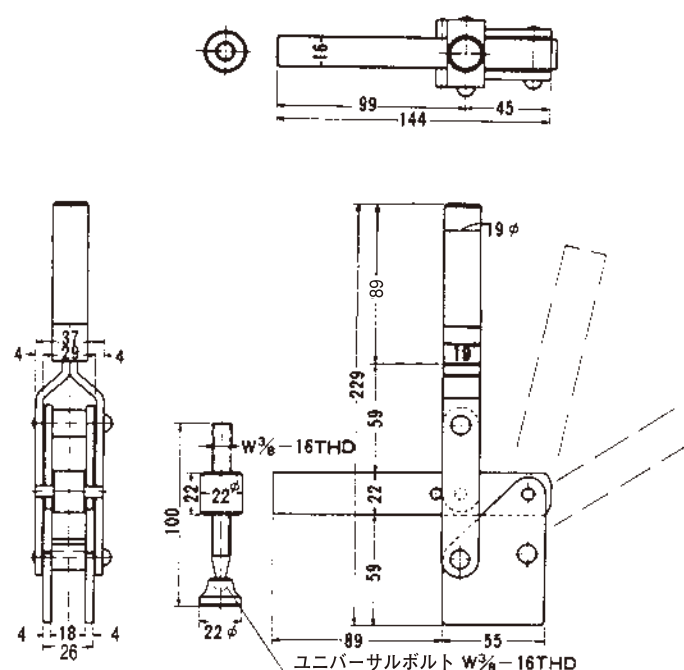


NO.39

W. 1,170g Holding capacity 300kg



HANDLE MOVES65°
BAR MOVES130°



B-II

VERTICAL HANDLE TOGGLE CLAMPS

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

HOLD DOWN ACTION

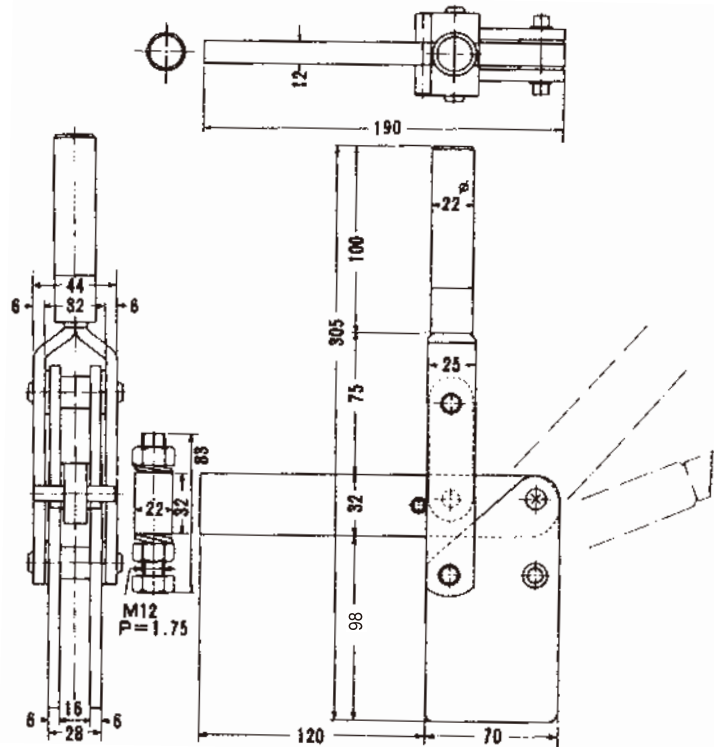
NO.34

W. 2,260g Holding capacity 500kg

A medium size durable clamp with the main rivets made of hardened bush. The holding arm and fixing base is designed to easily fit jigs.



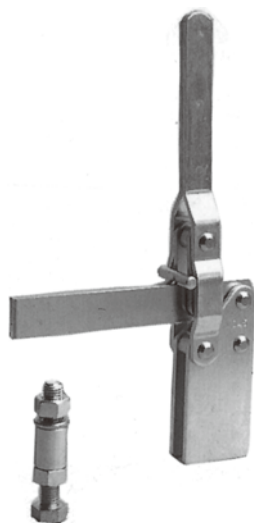
HANDLE MOVES70°
BAR MOVES133°



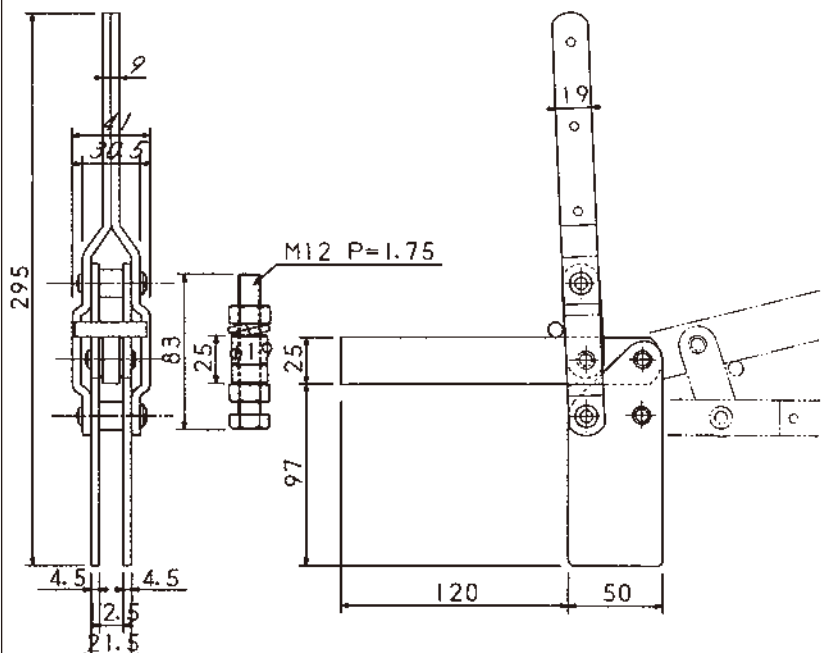
NO.45

W. 1,250g Holding capacity 400kg

A durable clamp with the main rivets made of hardened bush.



HANDLE MOVES93°
BAR MOVES170°



All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

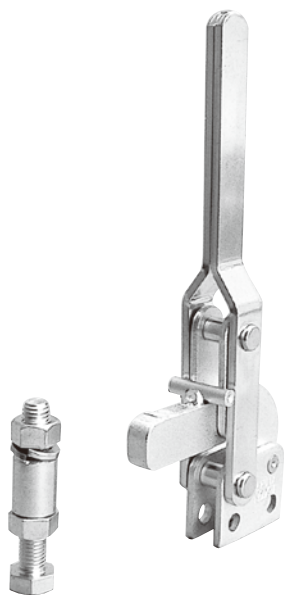
VERTICAL HANDLE TOGGLE CLAMPS

HOLD DOWN ACTION

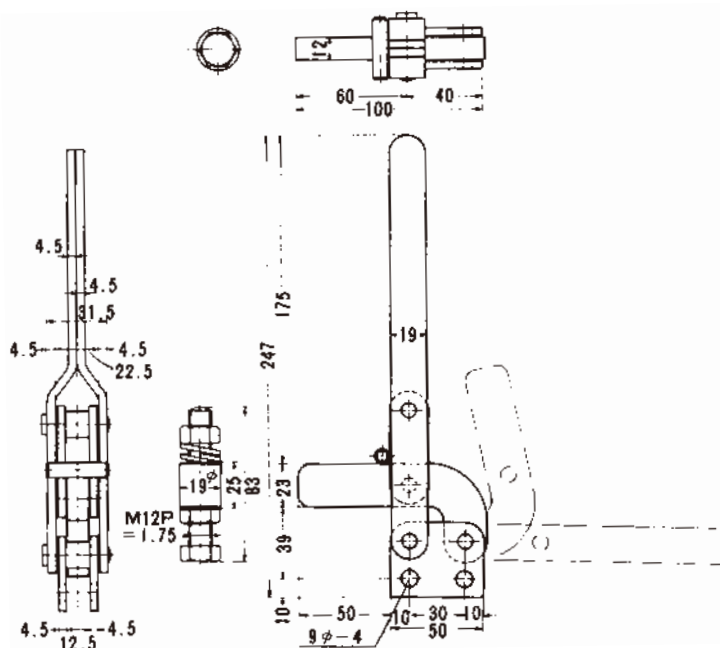
NO.X11

W. 950g Holding capacity 400kg

Among the Hold-down Action Clamps, this type is capable of holding processing goods vertically from the upper part.



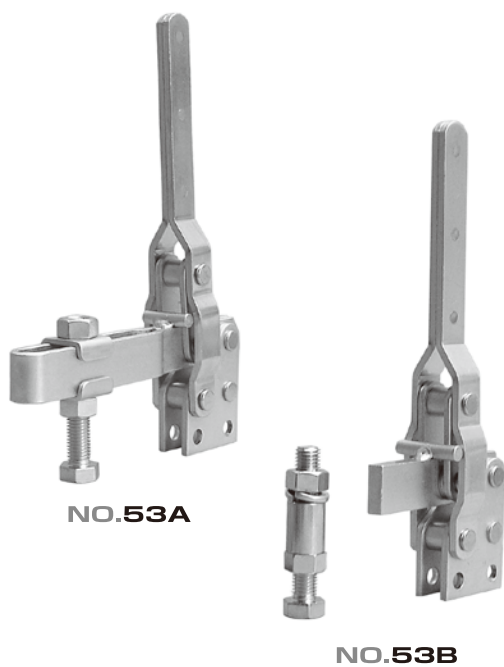
HANDLE MOVES90°
BAR MOVES80°



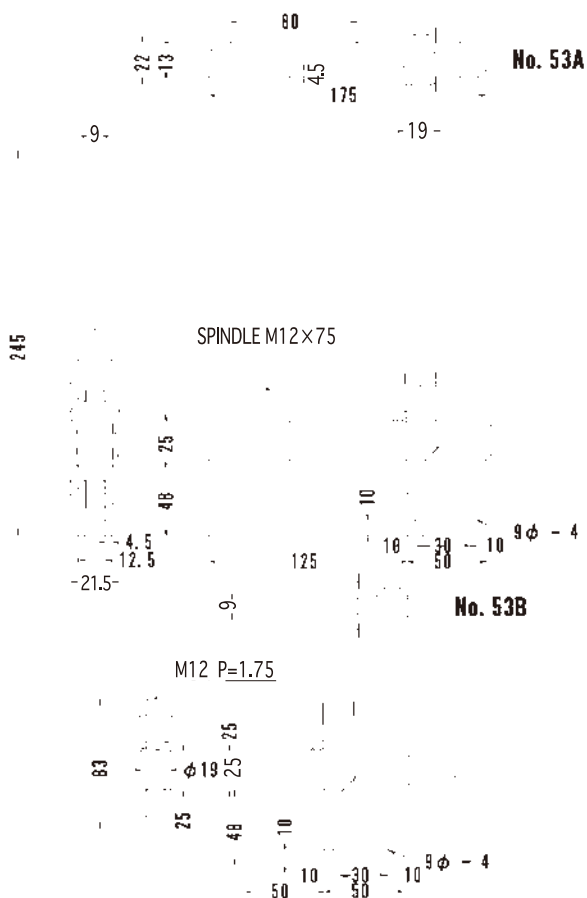
NO.53A NO.53B

No.53A W. 1,130g Holding capacity 400kg
No.53B W. 960g Holding capacity 350kg

Both clamps have the same body. No.53A has a sliding tap bolt at the top of the arm. No.53B can be fixed by welding the tap bolt at the required part of the arm.



HANDLE MOVES93°
BAR MOVES166°

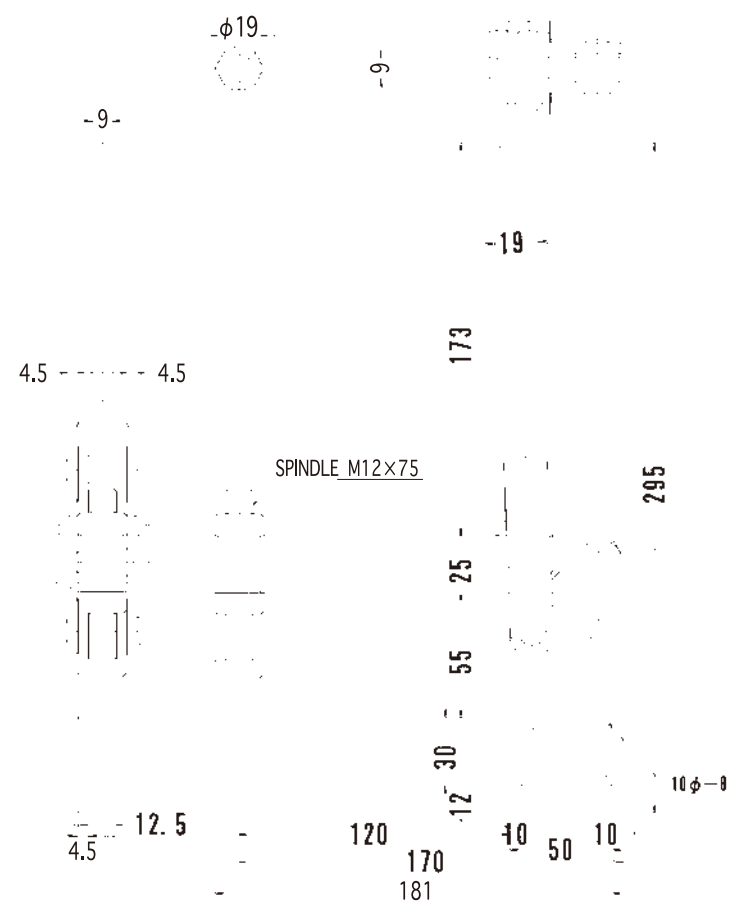
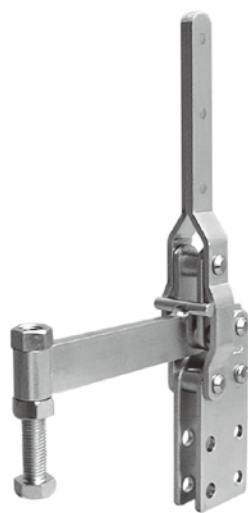


VERTICAL HANDLE
TOGGLE CLAMPS

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

NO.52

HANDLE MOVES93°
BAR MOVES170°



VERTICAL HANDLE
TOGGLE CLAMPS

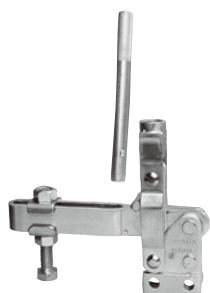
All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

HOLD DOWN ACTION

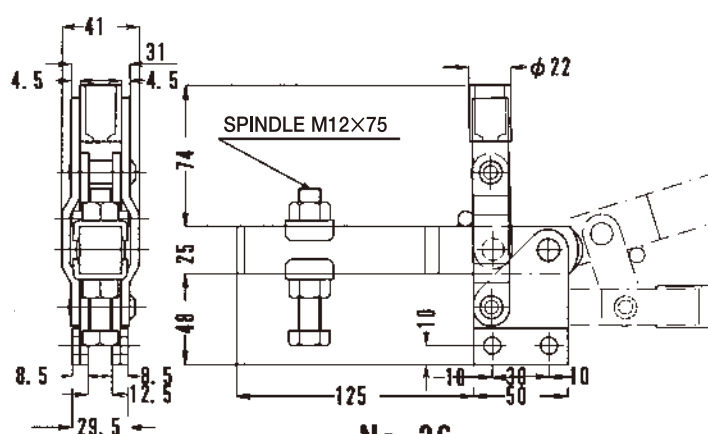
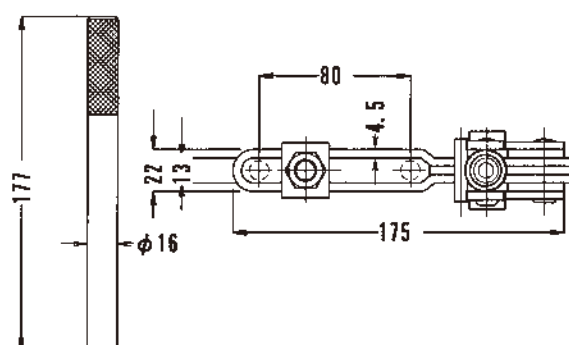
NO.36

W. 1,360g Holding capacity 400kg

HANDLE MOVES	93°
BAR MOVES	166°



Handle portion removably



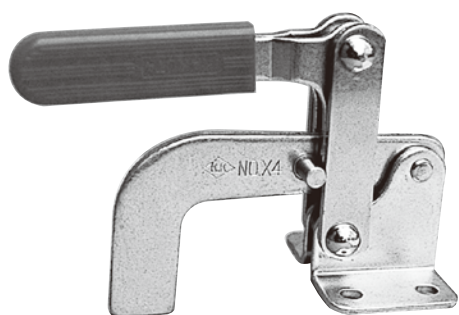
B-II

VERTICAL HANDLE TOGGLE CLAMPS

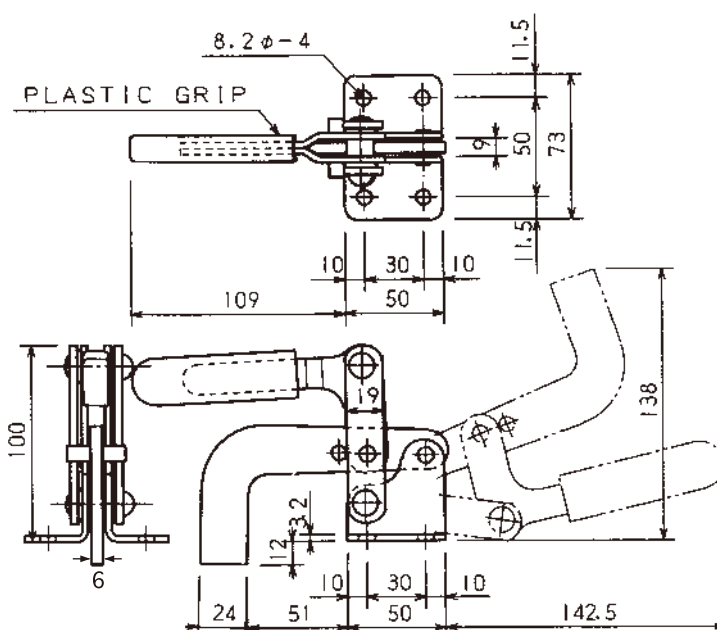
HOLD DOWN ACTION

NO.X4

W. 590g Holding capacity 200kg



HANDLE MOVES75°
BAR MOVES130°



B — II CAM CLAMPS

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

CAM CLAMP

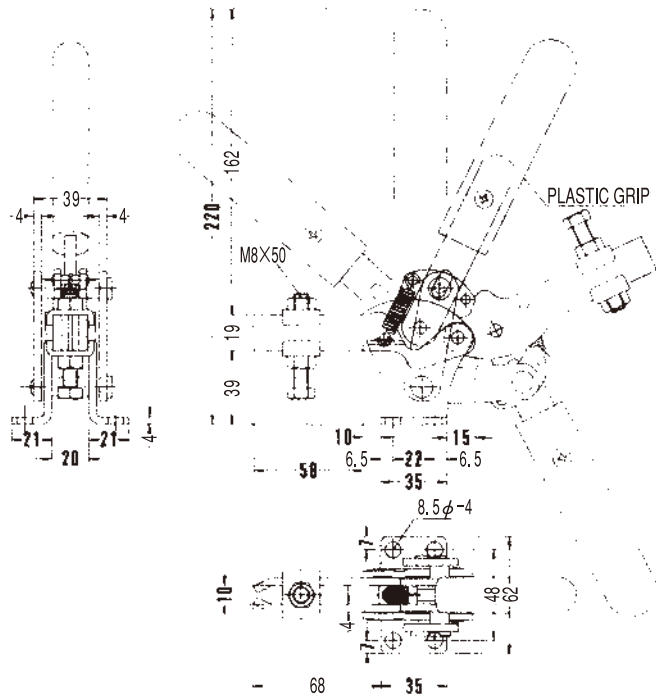
NO. 130

W. 680g Holding capacity 250kg

This clamp can be adjusted to ± 1.5 mm accuracy by one touch. Various processing of goods can be easily corrected with constant pressure without adjusting the tap bolt.



HANDLE MOVES165°
BAR MOVES70°



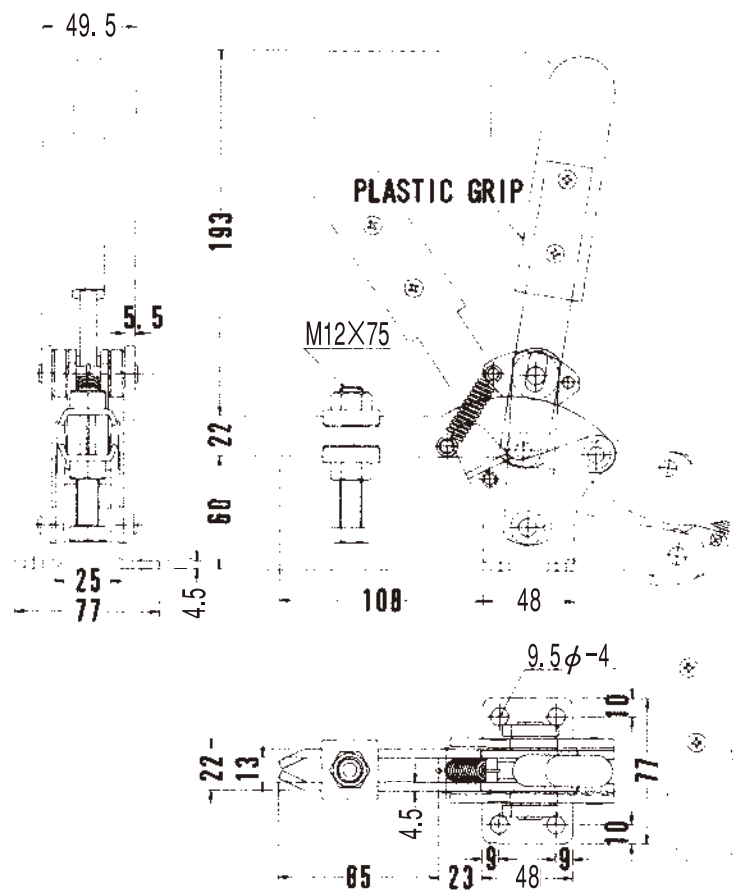
NO. 131

W. 1,590g Holding capacity 350kg

This clamp can be adjusted to ± 1.5 mm accuracy by one touch. Various processing of goods can be easily corrected with constant pressure without adjusting the tap bolt.



HANDLE MOVES170°
BAR MOVES85°



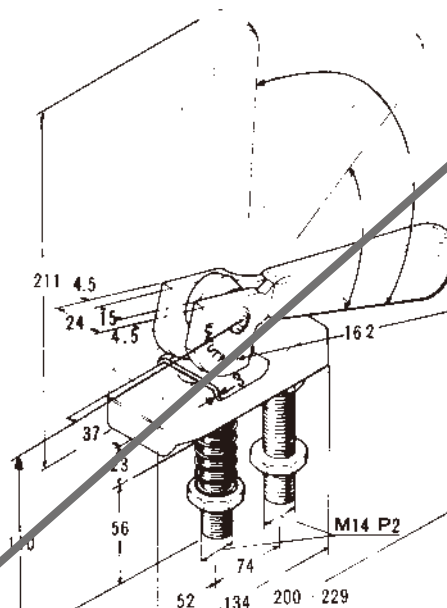
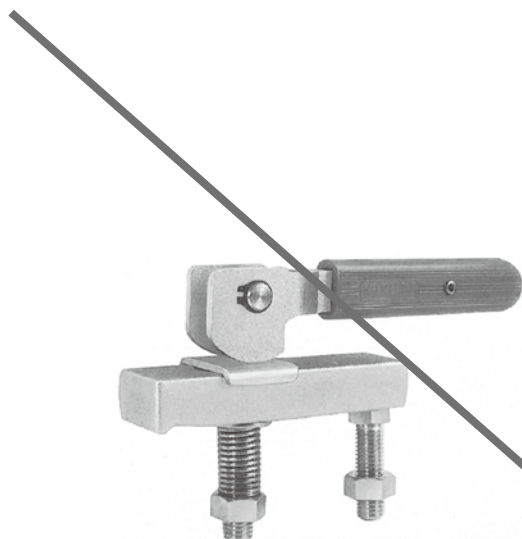
B-Ⅱ CAM CLAMPS

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

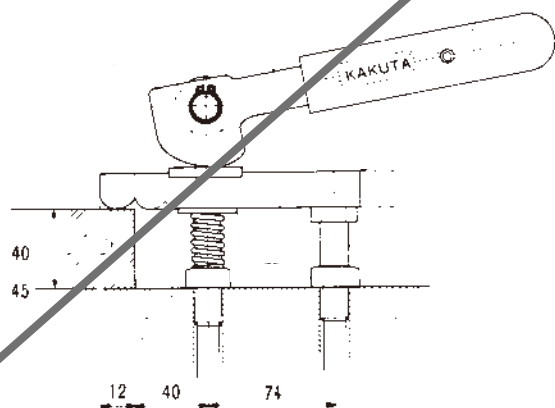
CAM CLAMP

NO.132

W. 1,060g Holding capacity 700kg
Travel : 1.4 mm



Out of list



- The Cam-type Clamp for cutting work is easily fitted and removed. It is also fitted simply into any spot of processing goods.
- Cam handle can cope with change of thickness of processing goods sensitively in the allowance of ± 1 mm and can clamp accurately.
- As the holding part is devised to slide fore-and-art, processing goods are removed easily.

B-^{II} VARI CLAMPS

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

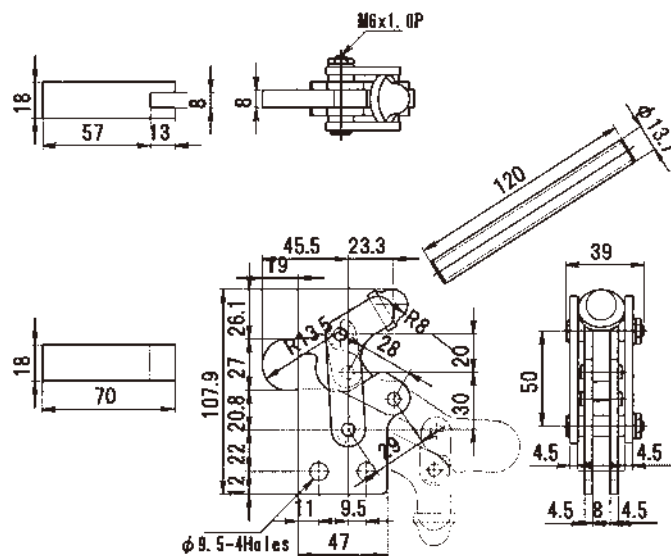
HOLD DOWN ACTION

VARI NO.1SB

W. 745g Holding capacity 200kg
Raw Material : SS400

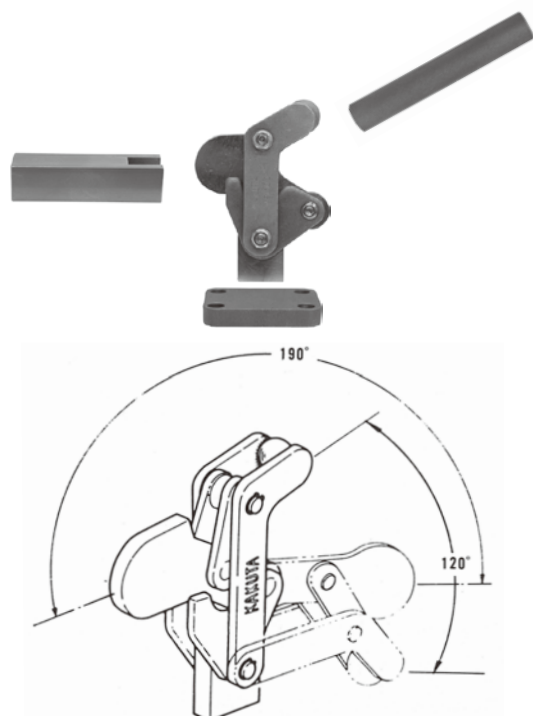


HANDLE MOVES116°
BAR MOVES187°

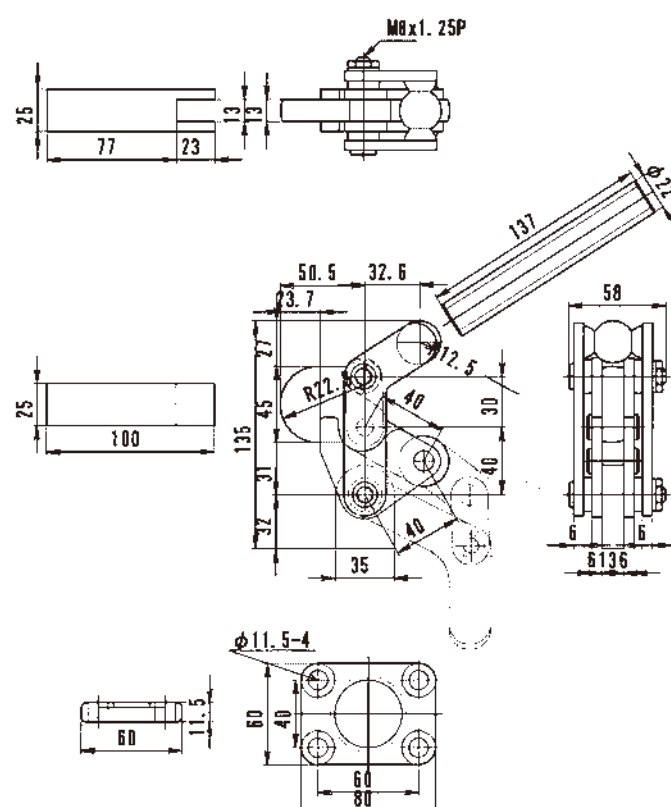


VARI NO.2

W. 2,130g Holding capacity 500kg
Raw Material : SS400 with bush by heat treatment



HANDLE MOVES120°
BAR MOVES190°



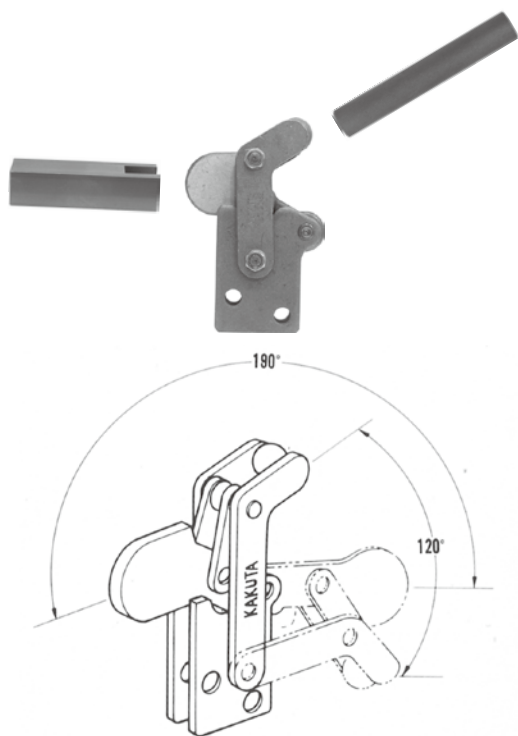
B-Ⅱ VARI CLAMPS

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

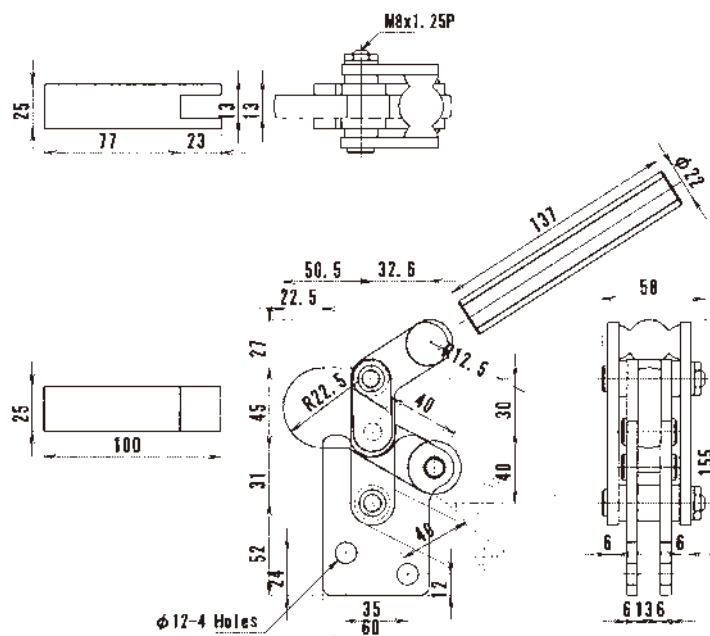
HOLD DOWN ACTION

VARI NO.2SB

W. 1,940g Holding capacity 500kg
Raw Material : SS400 with bush by heat treatment



HANDLE MOVES120°
BAR MOVES190°

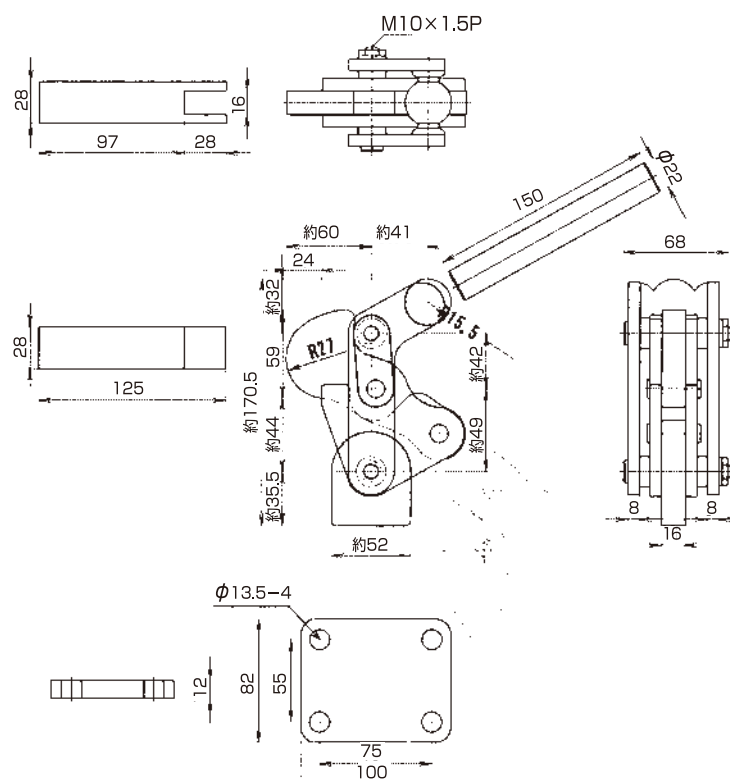


VARI NO.3

W. 4,100g Holding capacity 1,000kg
Raw Material : SS400 with bush by heat treatment



HANDLE MOVES120°
BAR MOVES190°



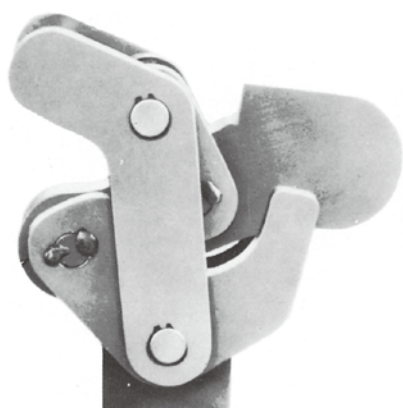
B-Ⅱ VARI CLAMPS

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

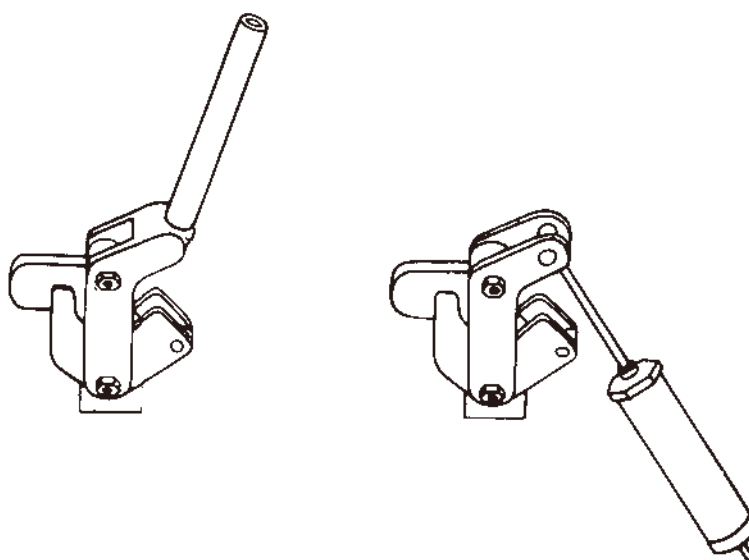
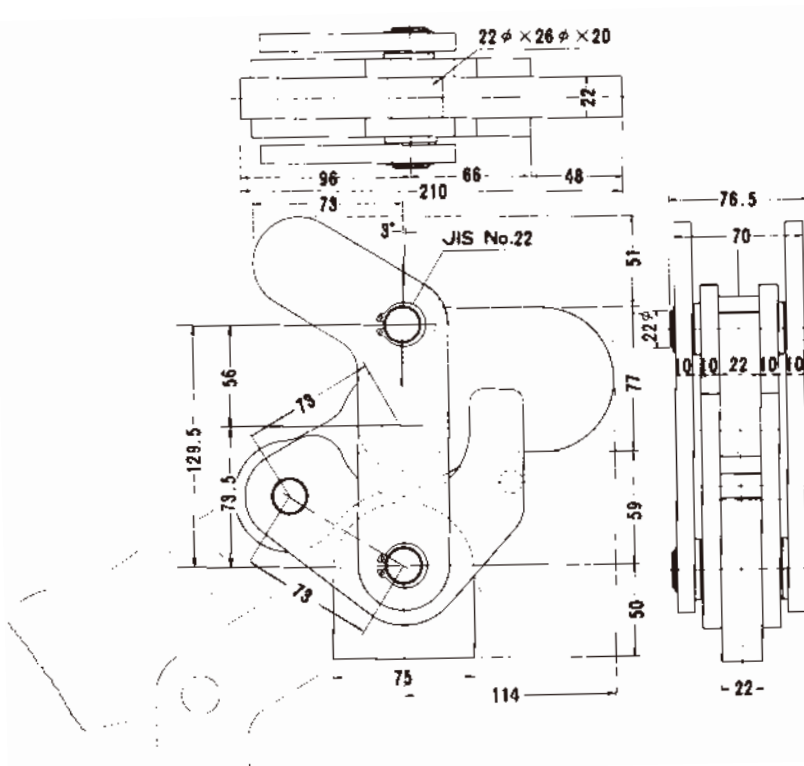
HOLD DOWN ACTION

VARI NO.4

W. 7,700g Holding capacity 3,000kg
Raw Material : SS400 with bush by heat treatment

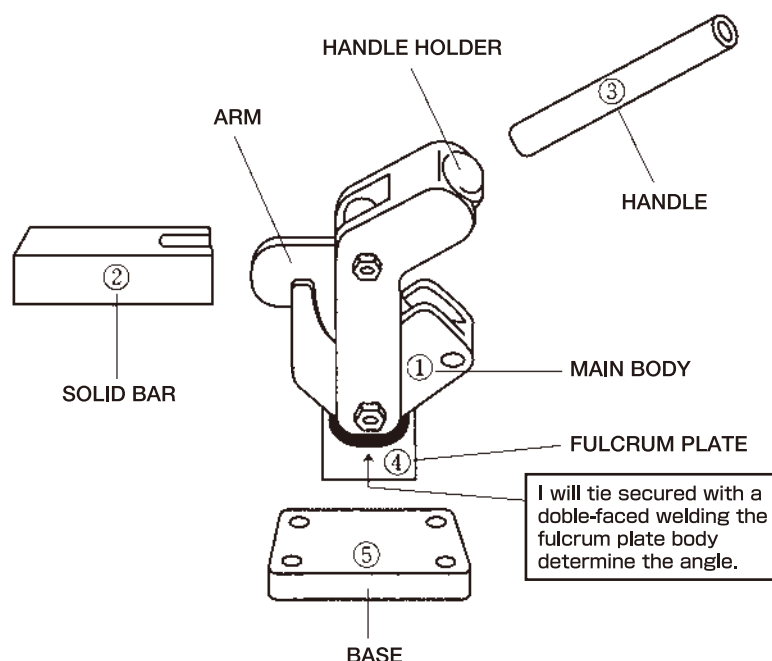


HANDLE MOVES122°
BAR MOVES192°



- Vari-clamp No.4 is used for hand type, air type and oil type. It is available for any type by changing method of assembling.
- As vari-clamp No.4 is devised by laying stress on strength and durability, its maximum holding capacity is available by 3,000 kgs.

HOLD DOWN ACTION



〈APPLICATIONS FOR VARI-CLAMP〉

The left figure shows that vari-clamp consists of handle, main body, base and solid BAR.

- ① Determine the fixing point of main body.
- ② Determine length of solid bar and weld it with arm.
- ③ Considering space between jig and clamp, determine height of handle and weld handle with handle holder.
- ④ Determine angle of main body and fulcrum plate and weld them.
- ⑤ Determine clamp fixing method to jig. In case of using the base, weld the base with fulcrum plate.

After assembling vari-clamp by the above steps, the vari-clamp becomes available.

※ Please use the forging welding rods to forgings type.
Recommended welding rod (LB-46) Kobe Steel inc.

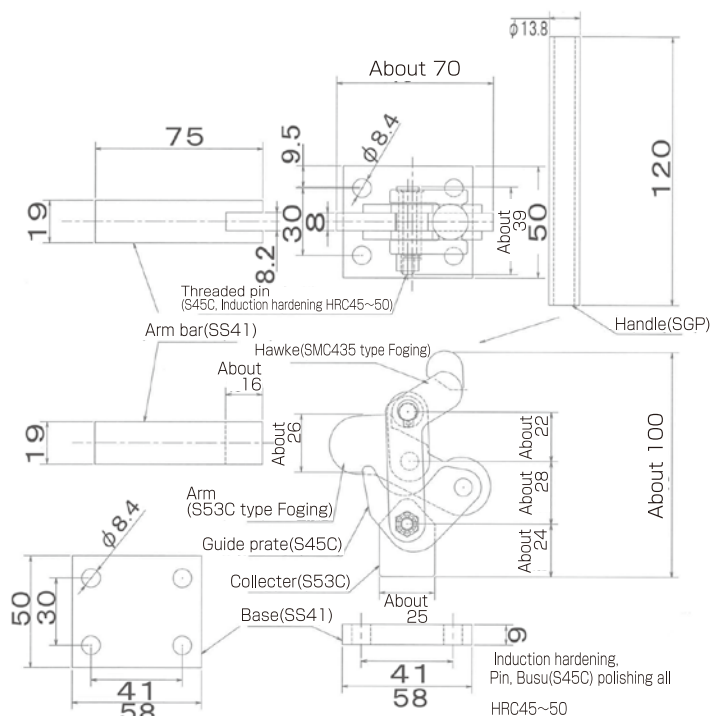
- ◎ As method of assembling vari-clamp can be decided in accordance with working conditions, vari-clamp is applicable widely and used at many working spots.
- ◎ As pin and bush composing fulcrum are finished by heat treatment (Hardness : H.R.C.60), they are assembled so that abrasion is avoidable. Accordingly, vari-clamp is most suitable for jigs that are used frequently and are required accuracy.

VARI NO.1 Forging

W. 845g Holding capacity 200kg
Raw Material : S45C Forging



HANDLE MOVES116°
BAR MOVES187°



B-II

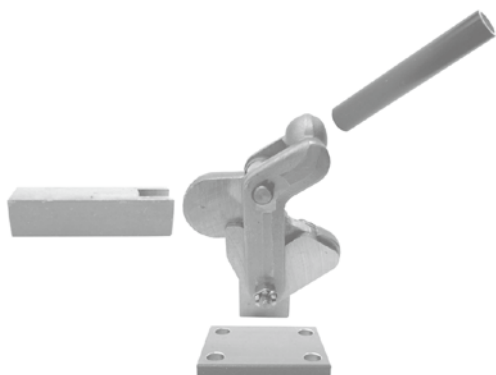
VARI CLAMPS

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

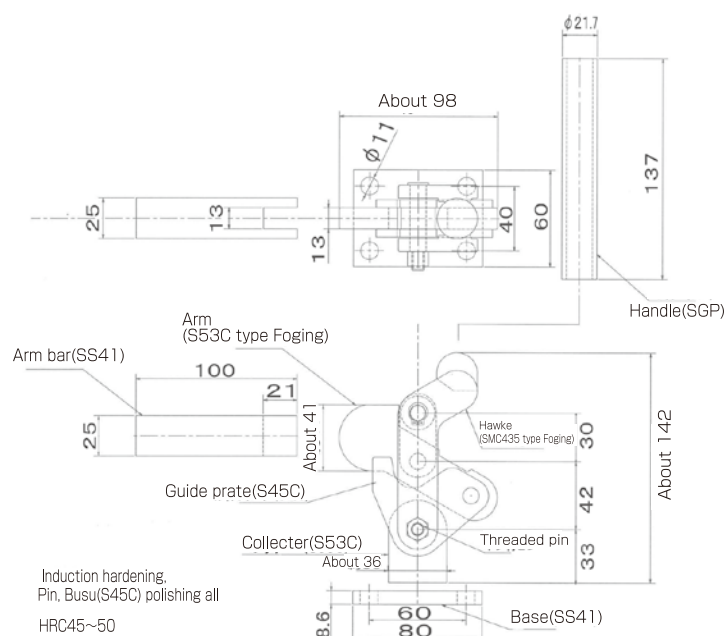
HOLD DOWN ACTION

VARI NO.2 Forging

W. 2,130g Holding capacity 500kg
Raw Material : S45C Forging

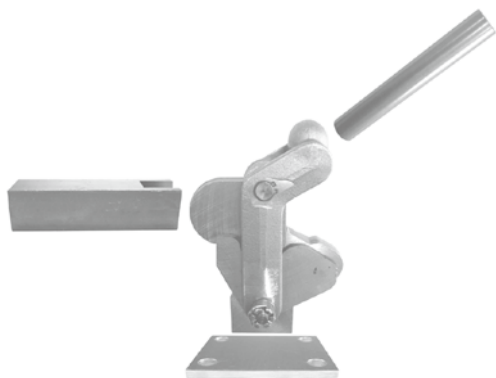


HANDLE MOVES120°
BAR MOVES190°

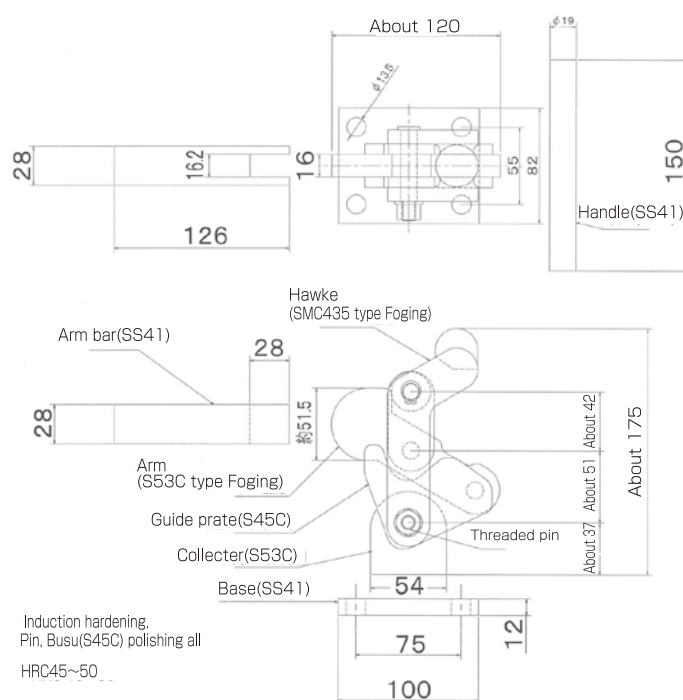


VARI NO.3 Forging

W. 4,100g Holding capacity 1,000kg
Raw Material : S45C Forging



HANDLE MOVES120°
BAR MOVES190°



C

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

STRAIGHT LINE ACTION

PUSH

NO.SL10

All rivets are made of stainless steel

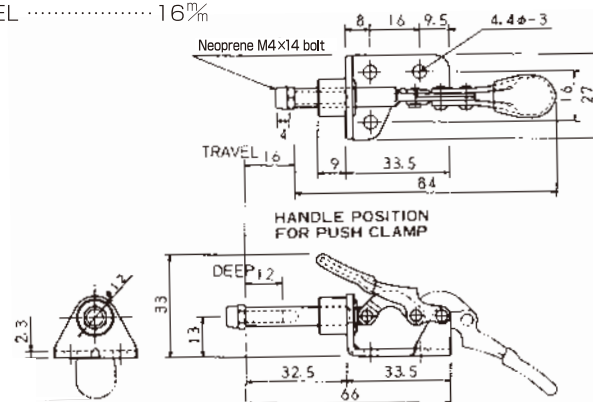
W. 40g
Holding capacity 45kg
Travel : 16mm



NO.SL10

This model has neoprene M4 x 14 bolt

HANDLE MOVES187°
TRAVEL16mm



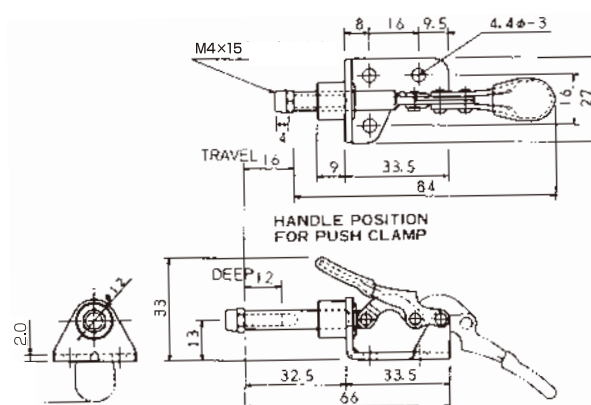
NO.SL10-2S

W. 40g
Holding capacity 45kg
Travel : 16mm



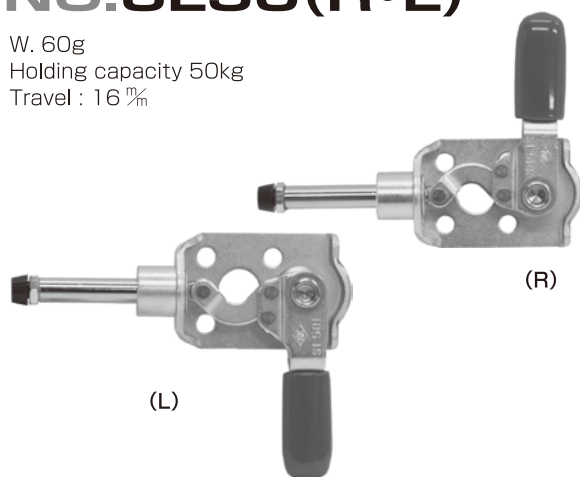
NO.SL10-2S

This model has SUS M4 x 15 bolt



NO.SL50(R·L)

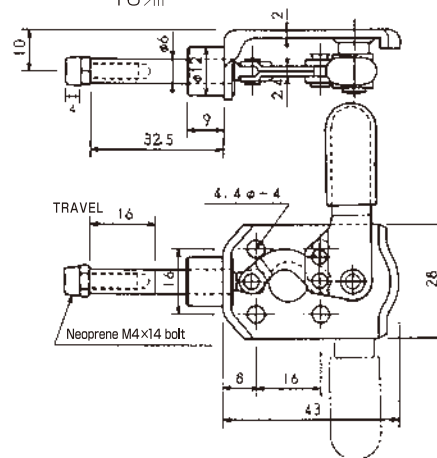
W. 60g
Holding capacity 50kg
Travel : 16mm



(L)

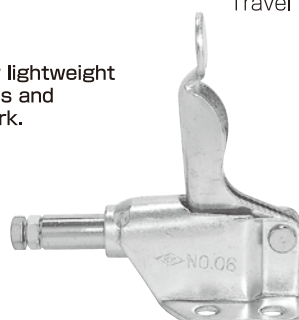
(R)

HANDLE MOVES180°
TRAVEL16mm



NO.06

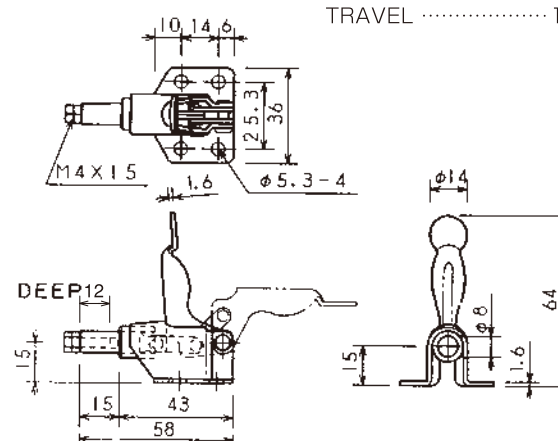
Ideal for lightweight materials and light work.



Clamp by pushing the handle forward.
After clamped, the handle becomes at vertical position.

W. 70g
Holding capacity 50kg
Travel : 13mm

HANDLE MOVES93°
TRAVEL13mm



All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

STRAIGHT LINE ACTION

PUSH

NO.07

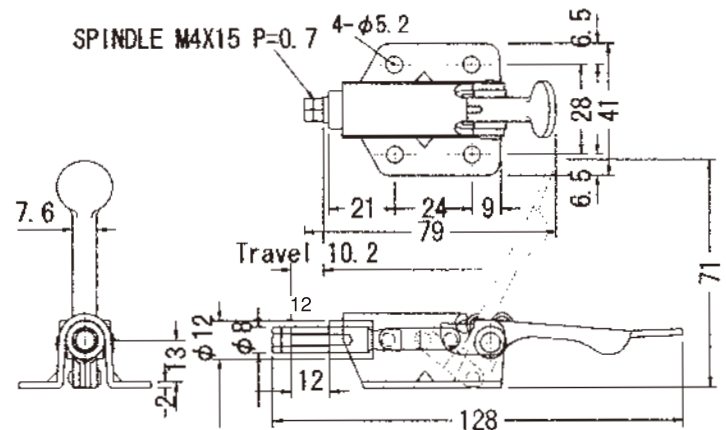
W. 100g
Holding capacity 50kg
Travel : 10 mm

Ideal for lightweight materials and light work.



Clamping starts from the horizontal position of handle.

HANDLE MOVES66°
TRAVEL10^m/_m



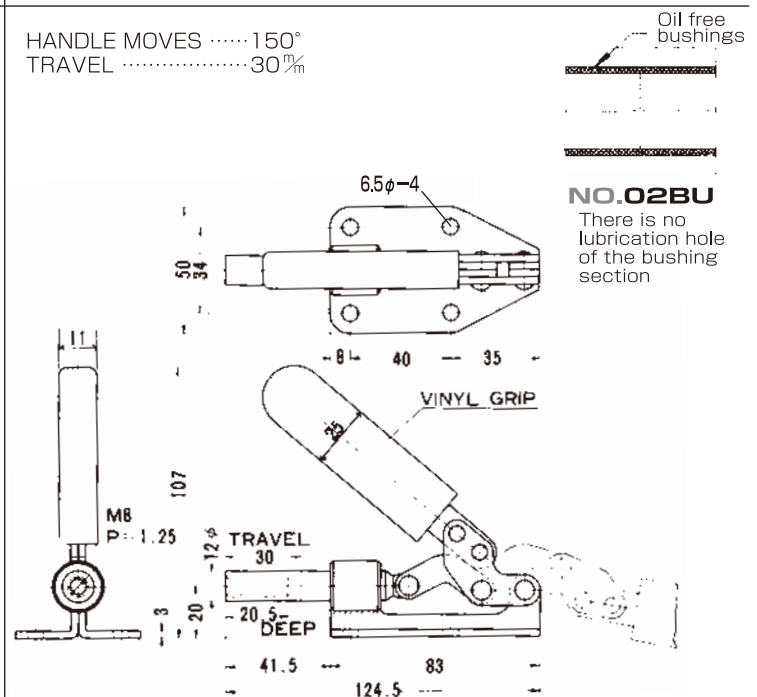
NO.02
NO.02BU

W. 370g
Holding capacity 200kg
Travel : 30 mm



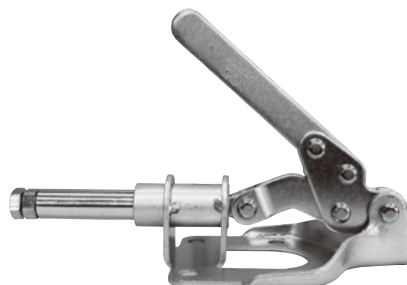
Clamping starts from the position showing in the picture.

HANDLE MOVES	150°
TRAVEL	30 ^m / _m

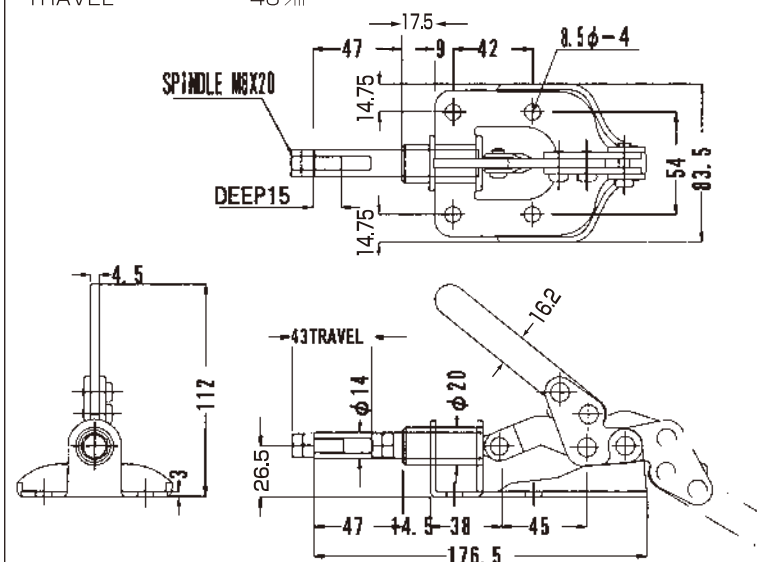


NO.51

W. 500g
Holding capacity 220kg
Travel : 43 mm



HANDLE MOVES 150°
TRAVEL 43^m/_m



C

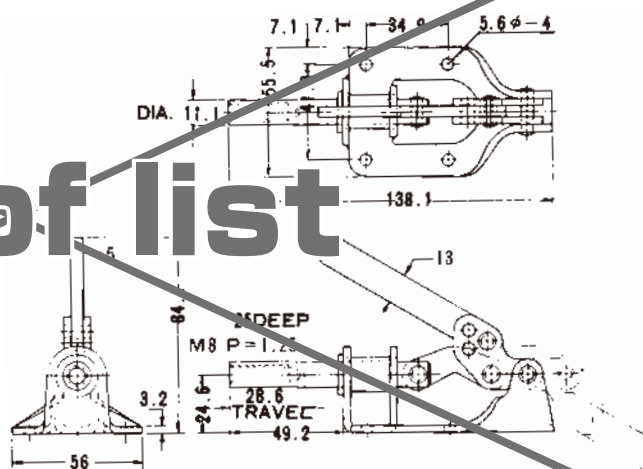
All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

STRAIGHT LINE ACTION

PUSH

NO.SL150 W. 285g
Holding capacity 135kg
Travel : 28.6 %
All rivets are made of stainless steel

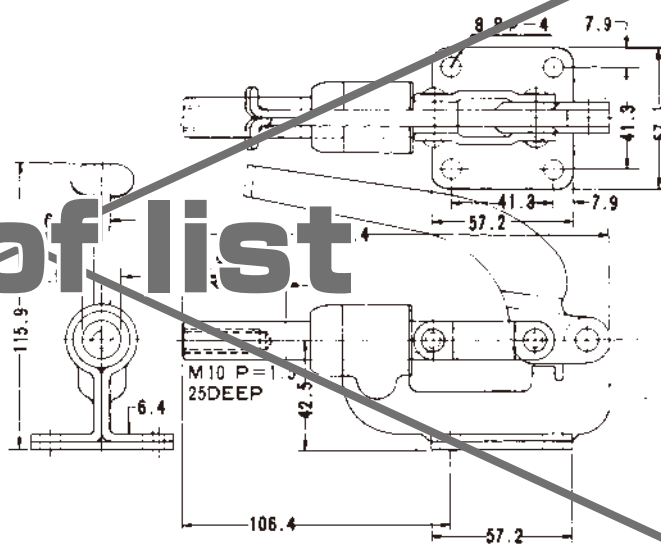
HANDLE MOVES180°
TRAVEL28.6%



Out of list

NO.SL250 W. 800g
Holding capacity 360kg
Travel : 41.3 %
All rivets are made of stainless steel

HANDLE MOVES180°
TRAVEL41.3%

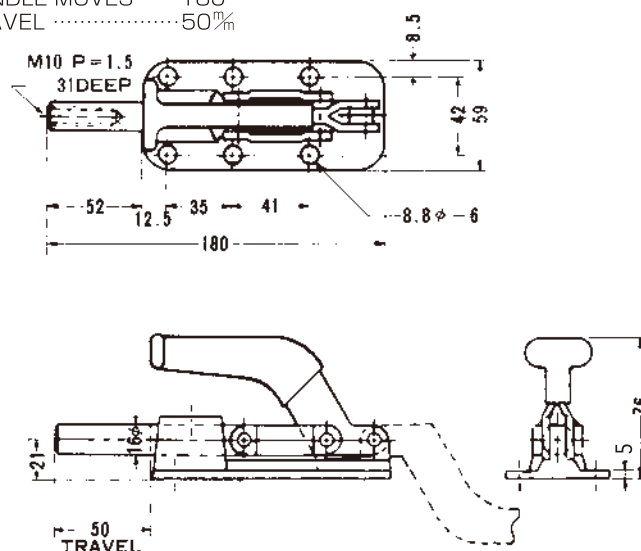


Out of list

NO.SL350
All rivets are made of stainless steel
main body composed of SS41
W. 890g
Holding capacity 1,000kg
Travel : 50 %

HANDLE MOVES180°
TRAVEL50%

Cooperation Clamp



C

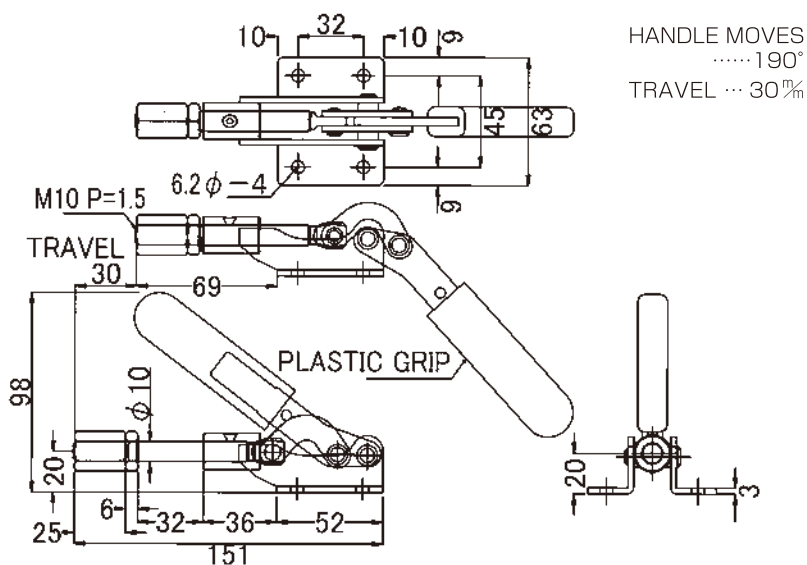
All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

STRAIGHT LINE ACTION

PUSH

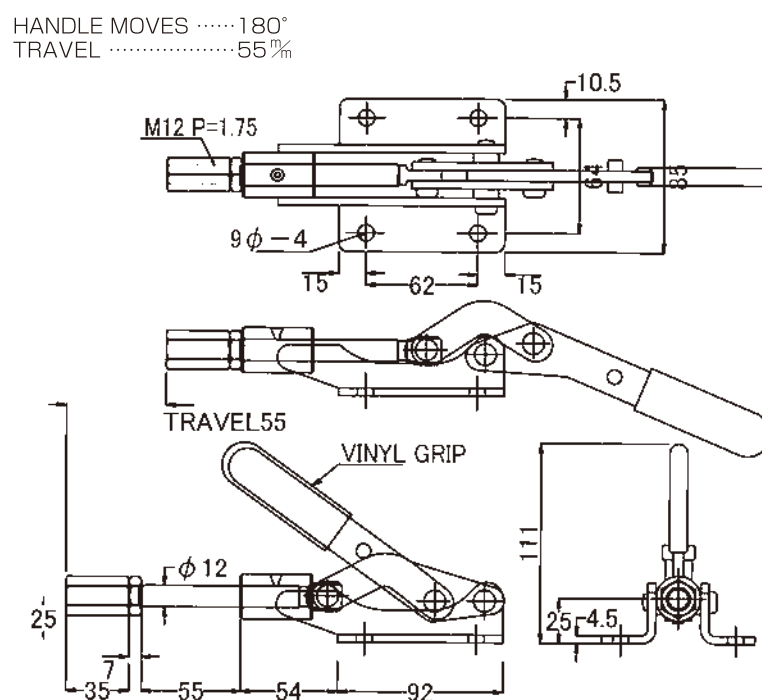
NO.50A

W. 360g
Holding capacity 200kg
Travel : 30%



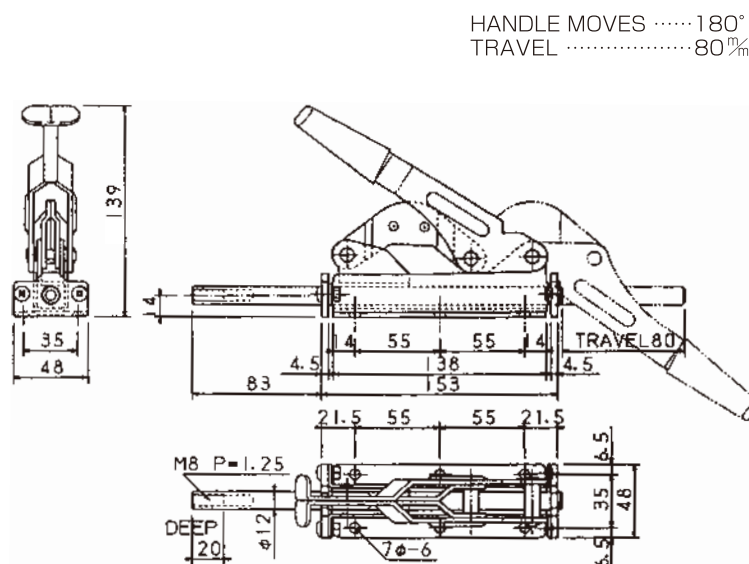
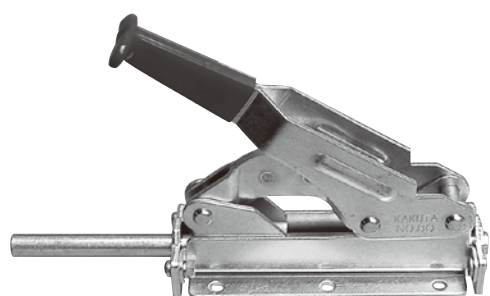
NO.50B

W. 910g
Holding capacity 300kg
Travel : 55%



NO.80

W. 1,000g
Holding capacity 300kg
Travel : 80%



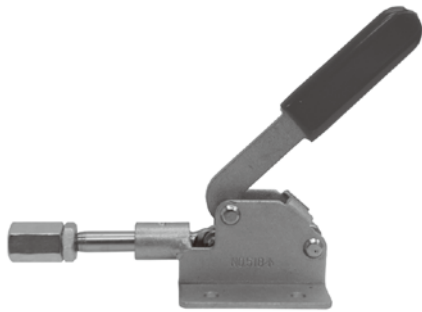
STRAIGHT LINE ACTION

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

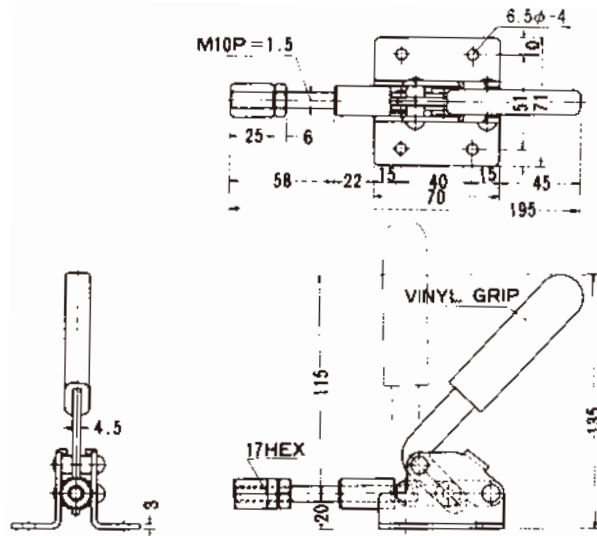
PUSH

NO.51 B(S)

W. 480g
Holding capacity 160kg
Travel : 13 mm

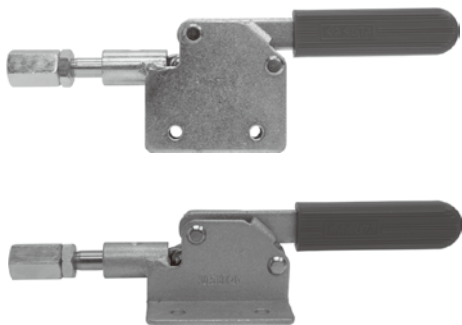


HANDLE MOVES45°
TRAVEL13^m/_m

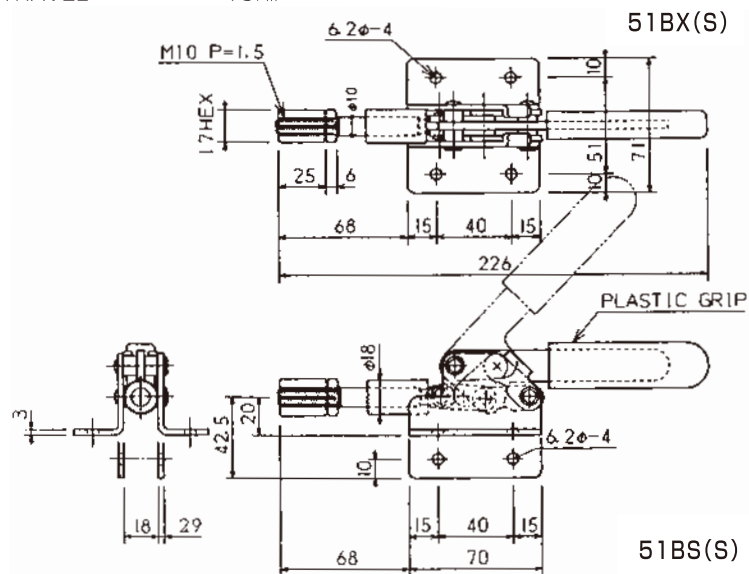


NO.51BS(S)
NO.51BX(S)

W. 450g
Holding capacity 160kg
Travel : 13 mm



HANDLE MOVES	42°
TRAVEL	13 ^m / _m

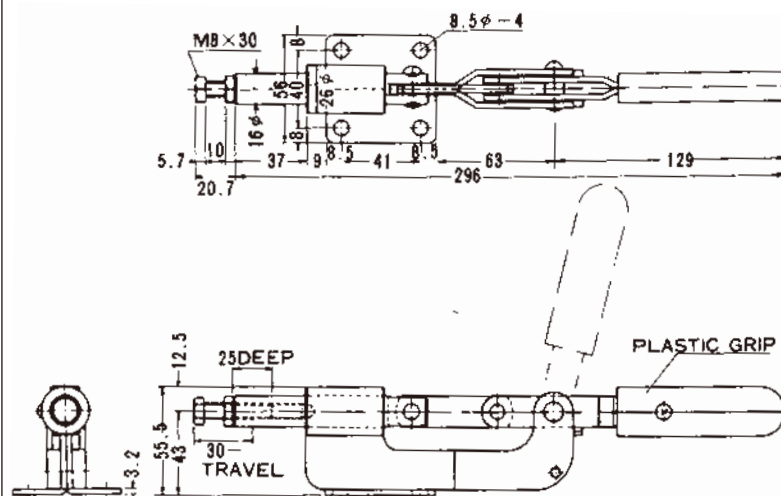


NO.X6

W. 630g
Holding capacity 300kg
Travel : 30 mm



HANDLE MOVES	76°
TRAVEL	30 ^m / _m



All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

PUSH

W. 1,170g
Holding capacity 300kg
Travel : 23 m

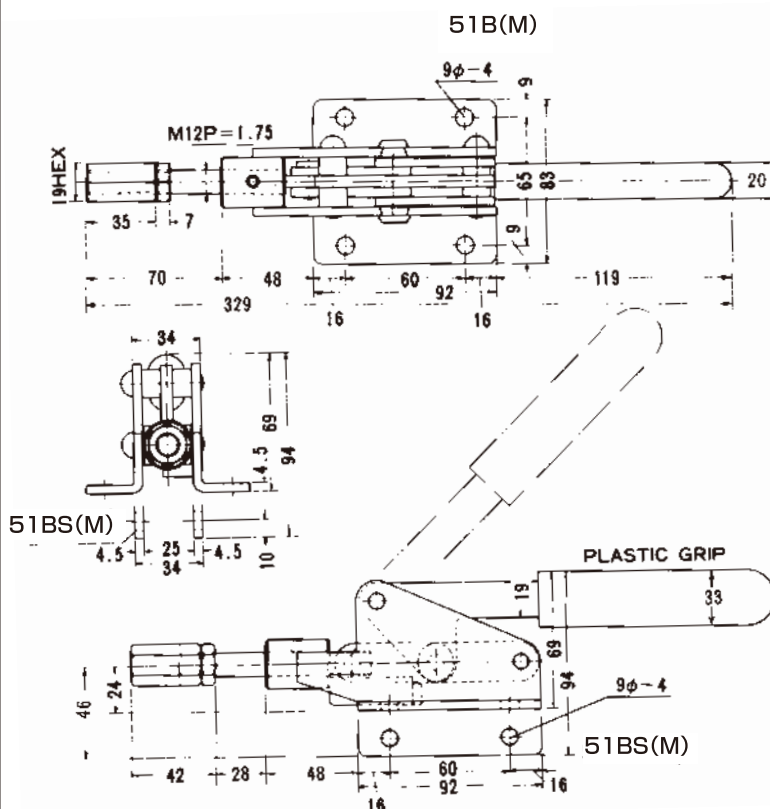


Clamping starts from the position showing in the picture

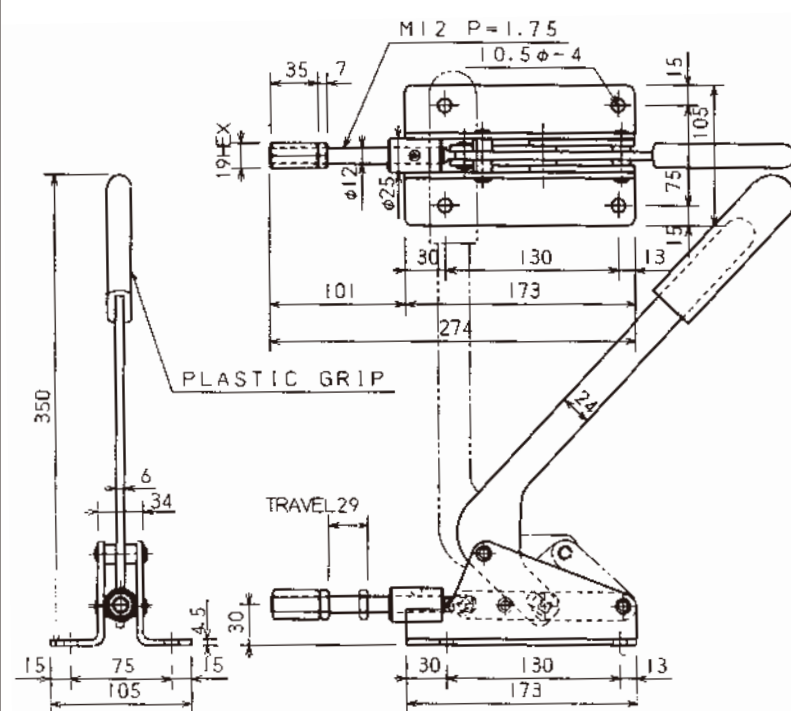
W. 2,130g
Holding capacity 500kg
Travel : 28 m



HANDLE MOVES	45°
TRAVEL	23 $\frac{m}{m}$



HANDLE MOVES	40°
TRAVEL	28 ^m / _m



C

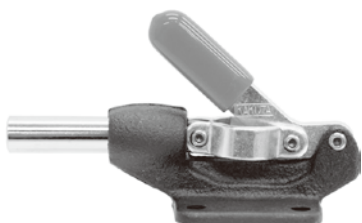
All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

STRAIGHT LINE ACTION

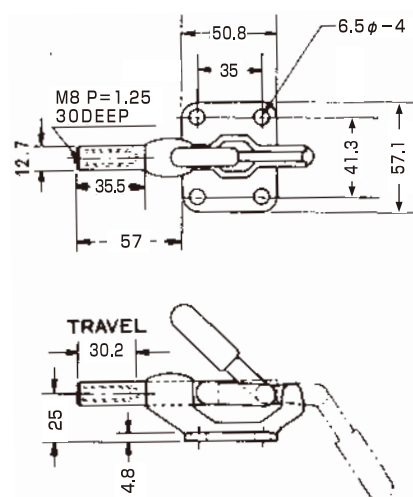
PUSH

NO.SL100

W. 390g
Holding capacity 220kg
Travel : 30.2 %
Main body composed of FCD

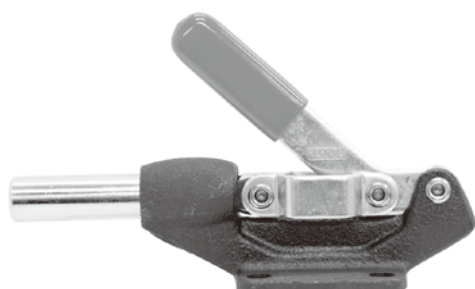


HANDLE MOVES180°
TRAVEL30.2 %

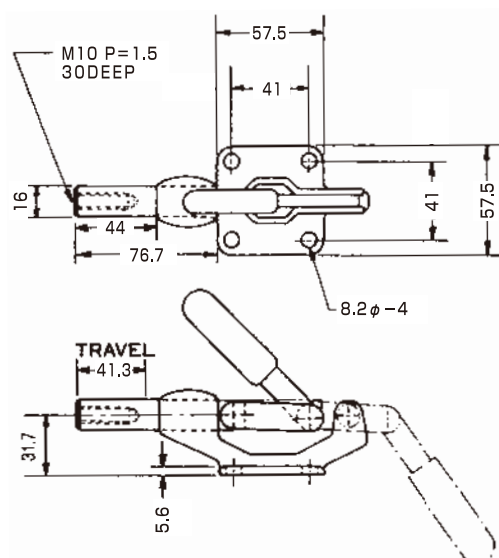


NO.SL200

W. 640g
Holding capacity 380kg
Travel : 41.3 %
Main body composed of FCD

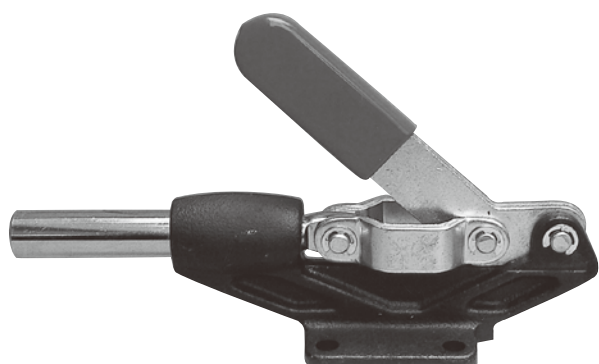


HANDLE MOVES180°
TRAVEL41.3 %

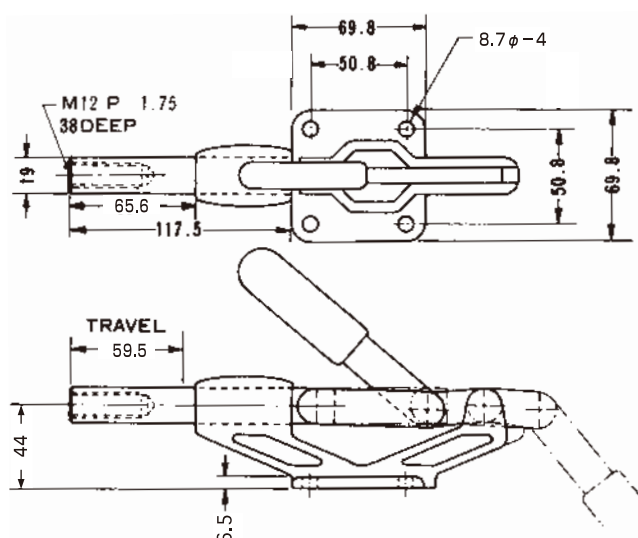


NO.SL300

W. 1,420g
Holding capacity 680kg
Travel : 59.5 %
Main body composed of FCD



HANDLE MOVES180°
TRAVEL59.5 %



C

STRAIGHT LINE ACTION

PUSH

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

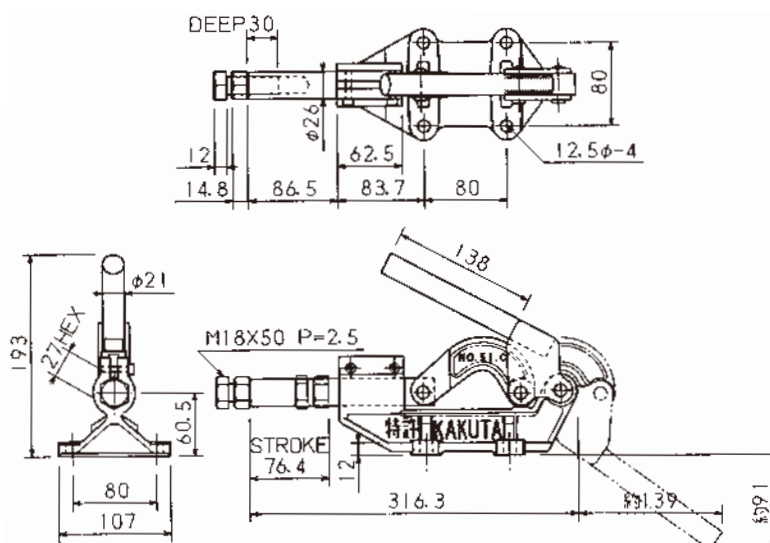
NO.51C

W. 4,060g
Holding capacity 900~1,600kg
Travel : 76 %
Main body, intermediate link composed of FCD

As this clamp is available by covering accessory pipe on the handle of main body, the holding pressure can be increased.
The maximum holding capacity becomes 1,600kgs. by using the accessory pipe.



HANDLE MOVES180°
TRAVEL76 %

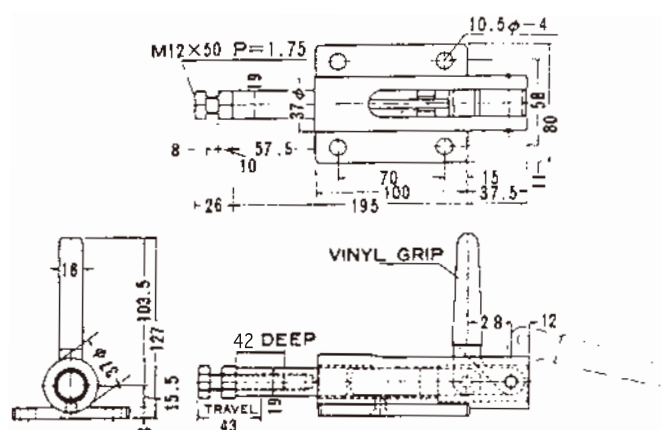


NO.51MB

W. 1,660g
Holding capacity 300kg
Travel : 43 %
Main body composed of S35CL
Corner lott angle composed of S45C



HANDLE MOVES115°
TRAVEL43 %

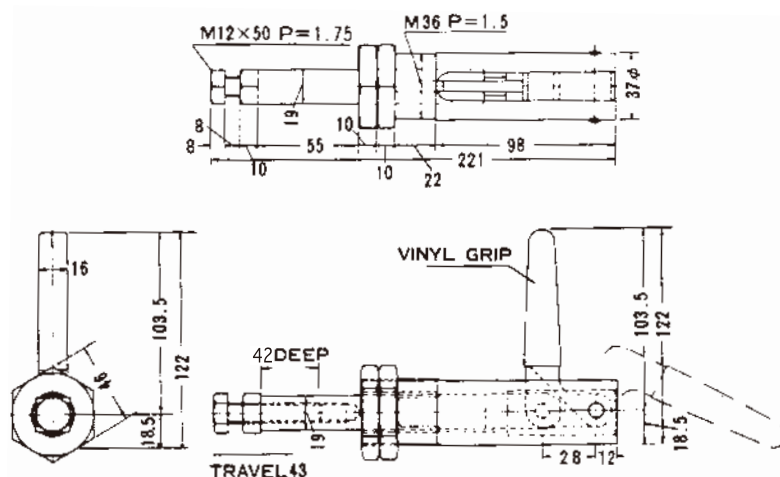


NO.51MD

W. 1,280g
Holding capacity 300kg
Travel : 43 %
Main body composed of S35CL
Corner lott angle composed of S45C



HANDLE MOVES115°
TRAVEL43 %



C

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

STRAIGHT LINE ACTION

PUSH

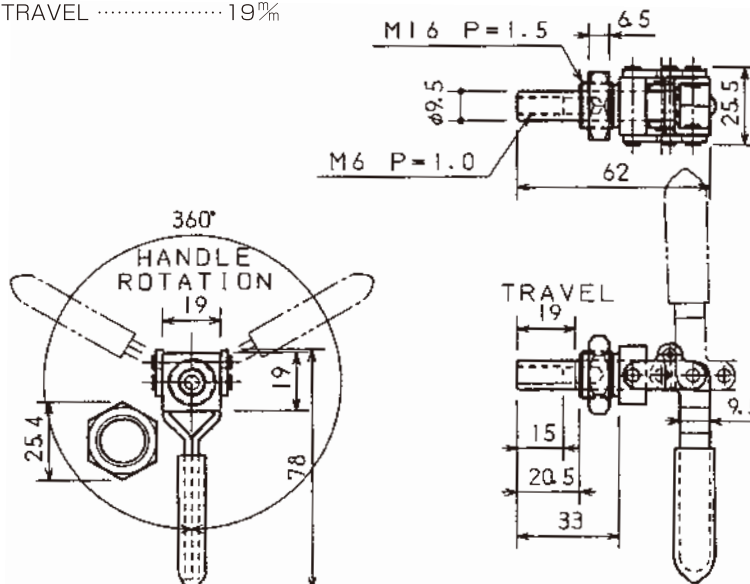
NO.FM50 NO.FM50-2S

W. 110g
Holding capacity 90kg
Travel : 19%

(SUS Model)



HANDLE MOVES180°
TRAVEL19%



NO.FM150

W. 260g
Holding capacity 150kg
Travel : 38.1%

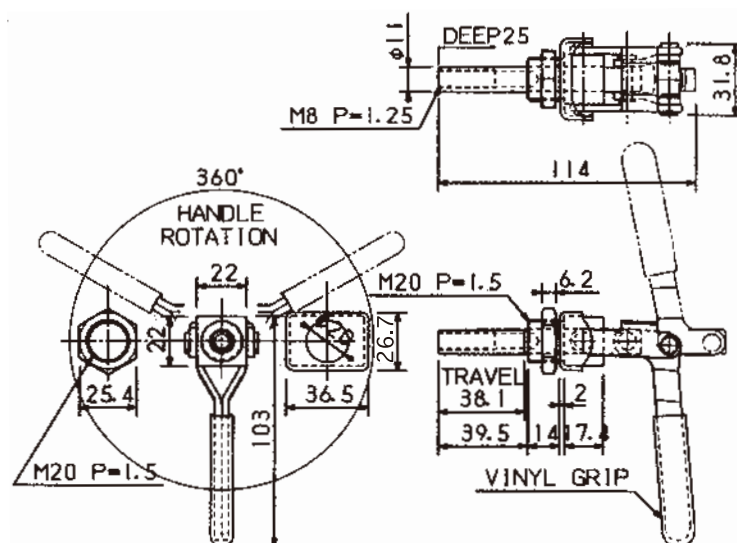
NO.FM150-2S

W. 260g
Holding capacity 150kg
Travel : 38.1%
Main body composed of SUS304

(SUS Model)



HANDLE MOVES180°
TRAVEL38.1%



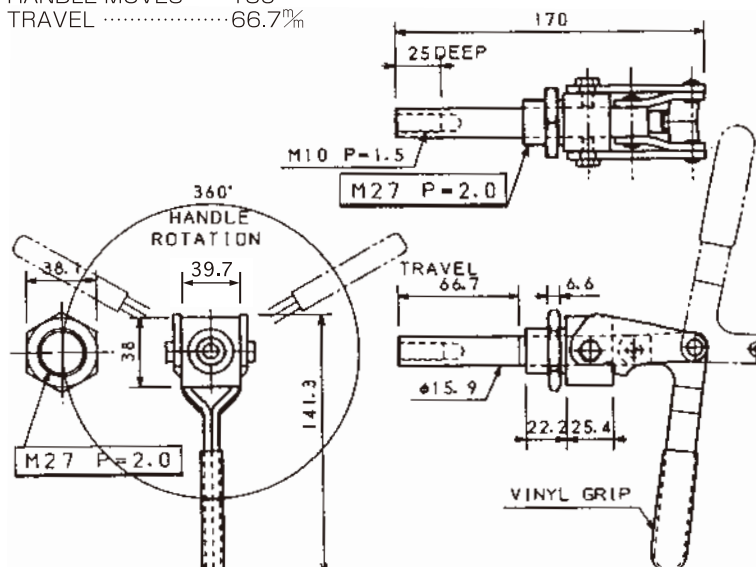
NO.FM250

W. 780g
Holding capacity 320kg
Travel : 66.7%

This is the clamp wide range of applications in the stronger of FM150



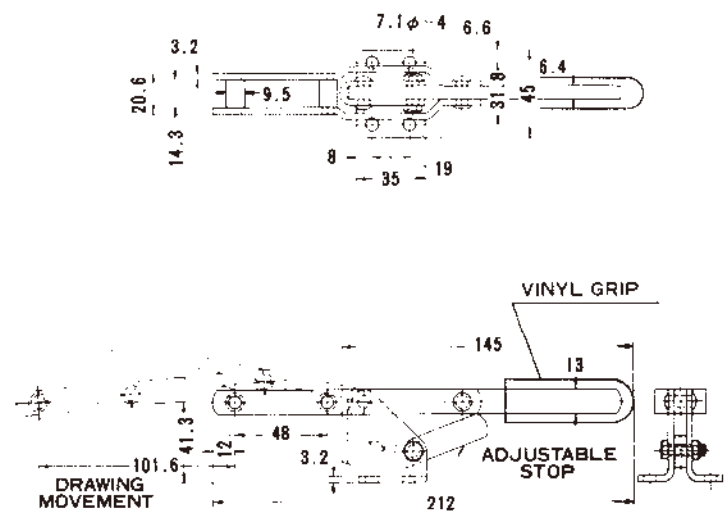
HANDLE MOVES180°
TRAVEL66.7%



PULL ACTION

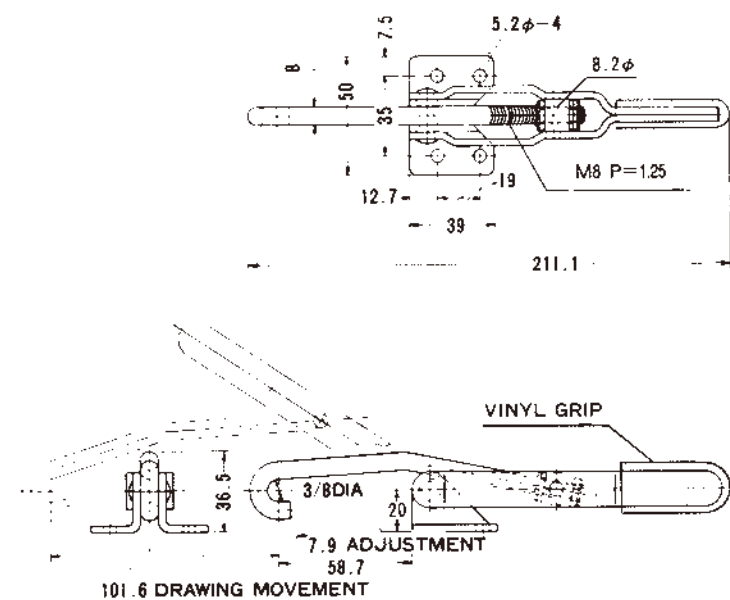
W. 340g
Holding capacity 170kg
Drawing Movement : 101.6 $\frac{m}{m}$

The clamp is latch type and pull action type.



W. 285g
Holding capacity 170kg
Drawing Movement : 101.6 $\frac{m}{m}$

The hook type bar of this clamp hangs a fixture and clamps by pulling. The bar is tapped so that length of the bar can be adjusted.



W. 1,610g
Holding capacity 500kg
Drawing Movement : 17 mm

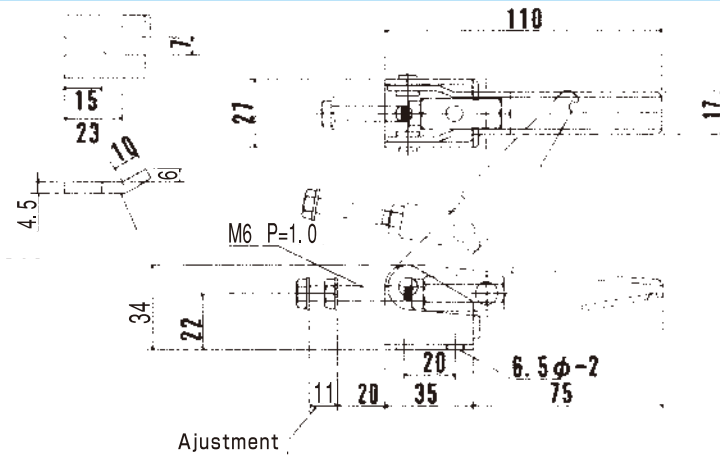
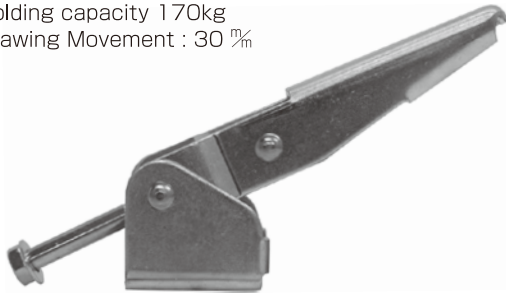


D

PULL ACTION

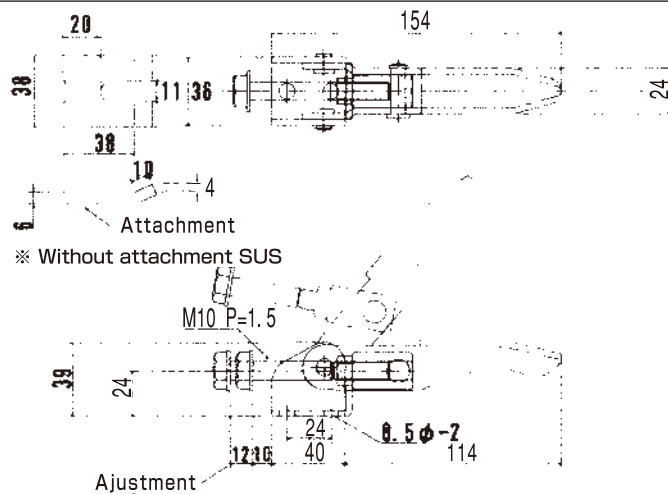
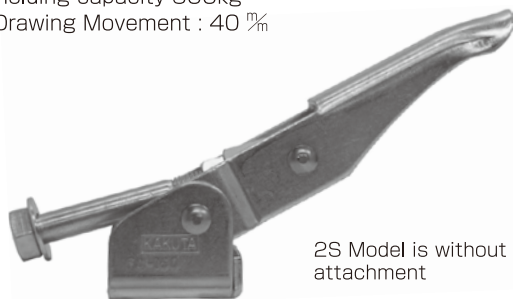
NO.FA-120 NO.FA-120-2S

W. 170g (SUS Model)
Holding capacity 170kg
Drawing Movement : 30 %



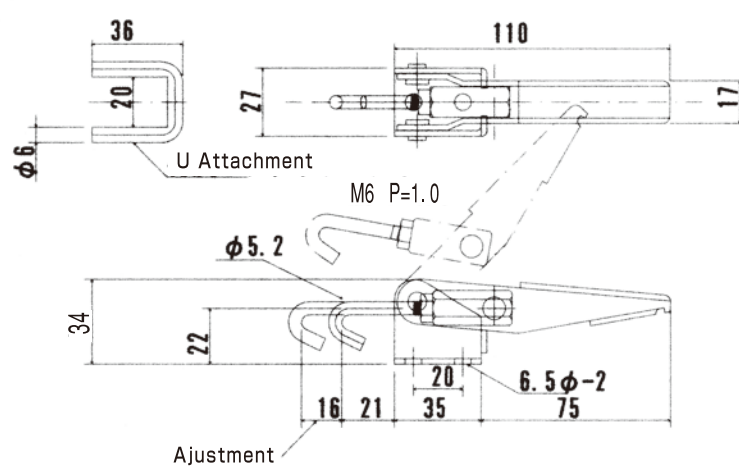
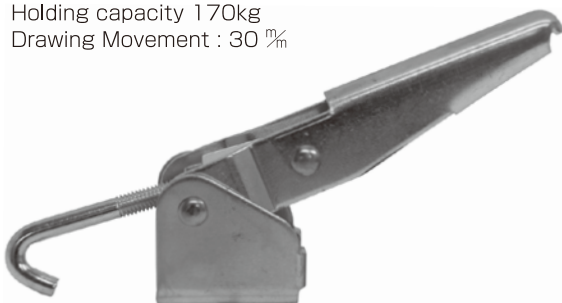
NO.FA-160 NO.FA-160-2S

W. 380g (SUS Model)
Holding capacity 300kg
Drawing Movement : 40 %



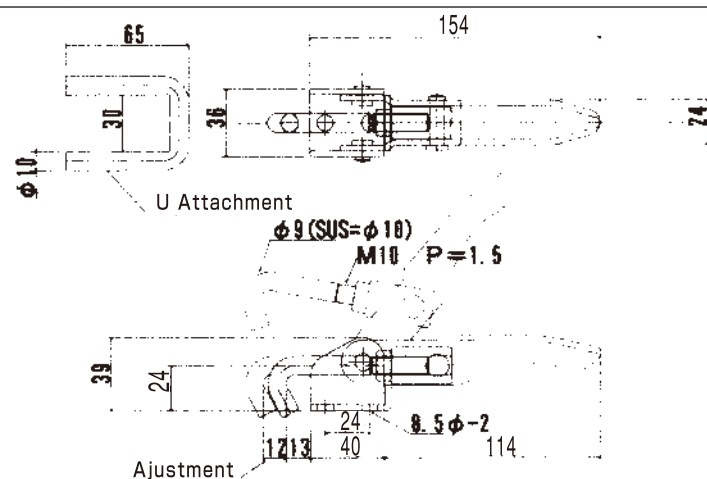
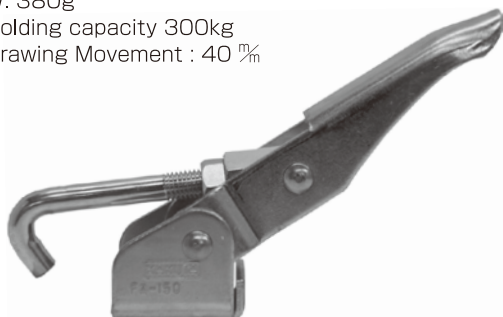
NO.FA-110 NO.FA-110-2S

W. 170g (SUS Model)
Holding capacity 170kg
Drawing Movement : 30 %



NO.FA-150 NO.FA-150-2S

W. 380g (SUS Model)
Holding capacity 300kg
Drawing Movement : 40 %



D

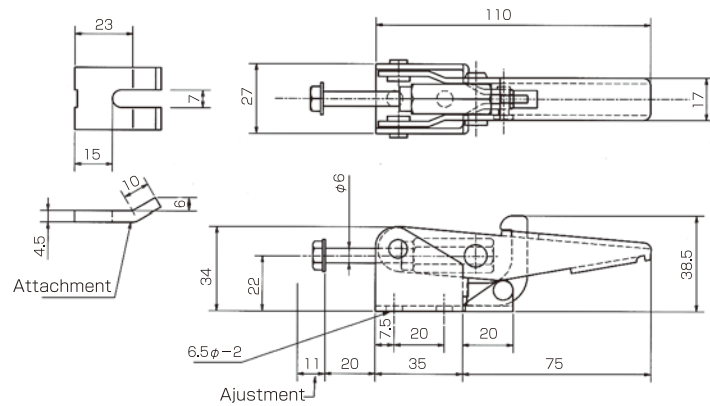
PULL ACTION

PULL ACTION

FA 120RK FA 120RK-2S

(SUS Model)

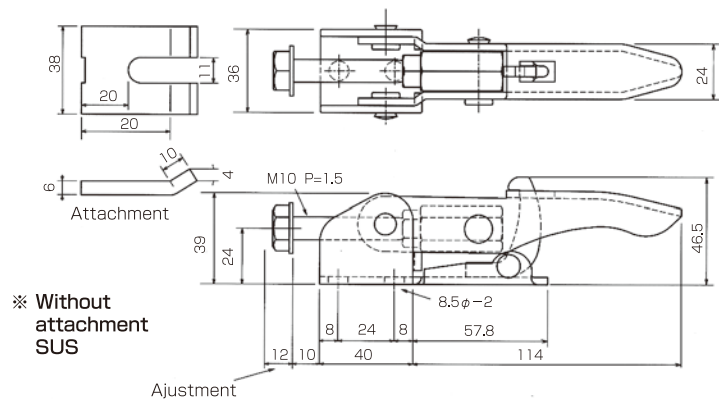
W. 190g
Holding capacity 170kg
Drawing Movement : 30 %



FA 160RK FA 160RK-2S

(SUS Model)

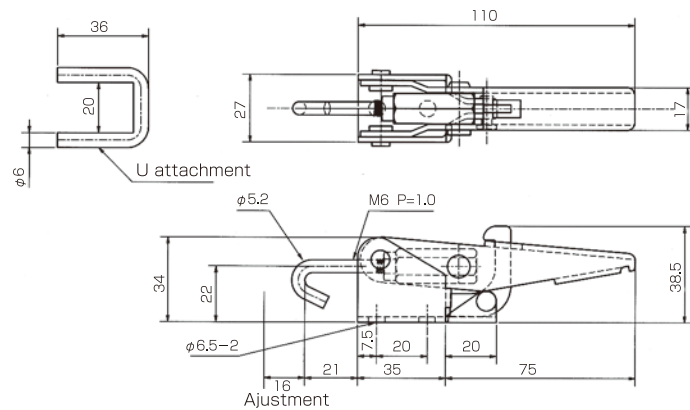
W. 400g
Holding capacity 300kg
Drawing Movement : 40 %



FA 110RK FA 110RK-2S

(SUS Model)

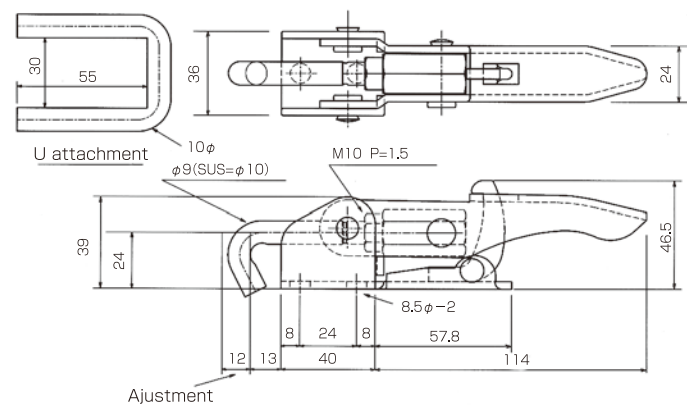
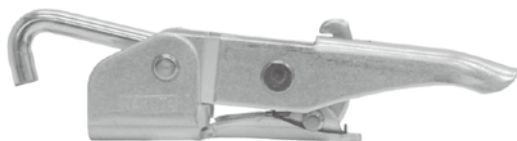
W. 190g
Holding capacity 170kg
Drawing Movement : 30 %



FA 150RK FA 150RK-2S

(SUS Model)

W. 400g
Holding capacity 300kg
Drawing Movement : 40 %



D

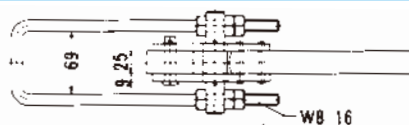
PULL ACTION

NO.FA-500

W. 2,500g
Holding capacity 650kg
Drawing Movement : 100%

Welding type

To plug weld the handle
to handle receiving.
And than welded to the body
to decide the handle angle.

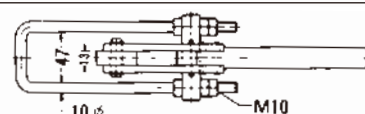
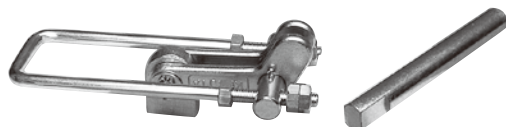


Attachment

NO.FA-400

W. 1,300g
Holding capacity 450kg
Drawing Movement : 140%

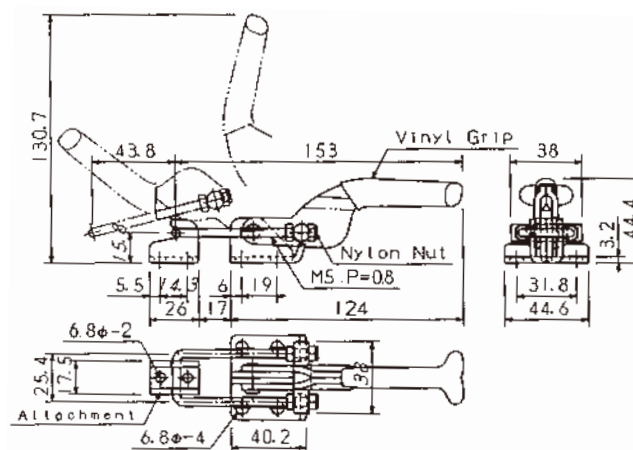
Welding type



Attachment

NO.FA-200

W. 215g
Holding capacity 320kg
Drawing Movement : 48%



NO.86

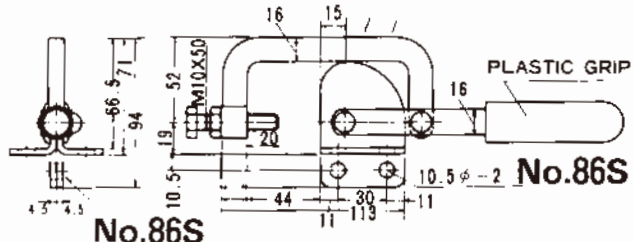
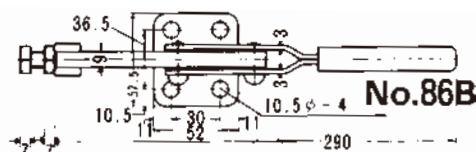
W. 650g
Holding capacity 200kg
Drawing Movement : 48%



NO.86B



NO.86S





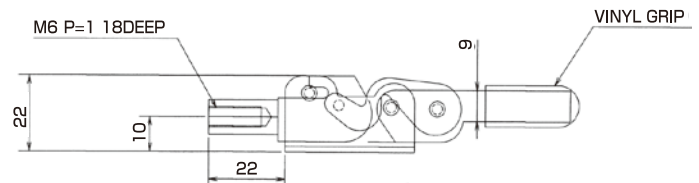
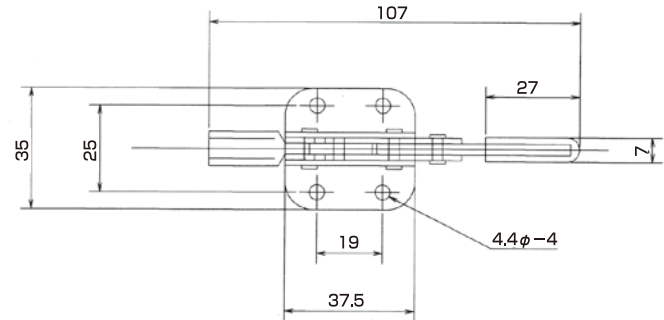
PULL ACTION

NO.FC-100

W. 80g
Holding capacity 100kg
Drawing Movement : 5%
Main body composed of SPC



HANDLE MOVES 105°
BAR MOVES 80°

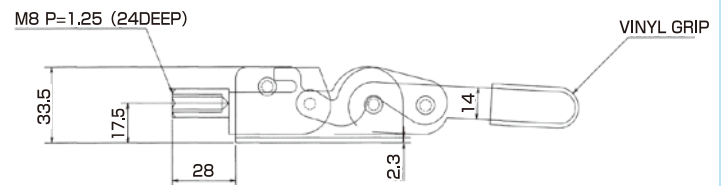
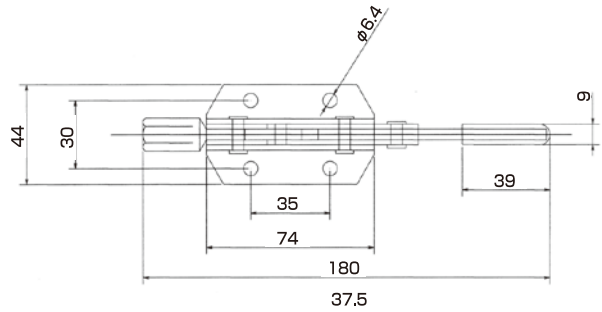


NO.FC-180

W. 270g
Holding capacity 330kg
Drawing Movement : 11%
Main body composed of SPC



HANDLE MOVES 113°
BAR MOVES 82°

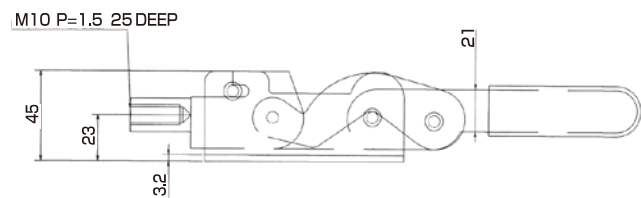
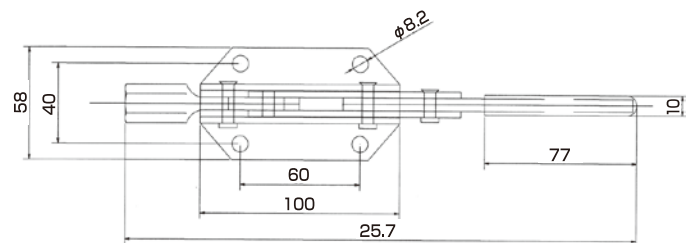


NO.FC-260

W. 710g
Holding capacity 700kg
Drawing Movement : 12%
Main body composed of SPC



HANDLE MOVES 104°
BAR MOVES 90°



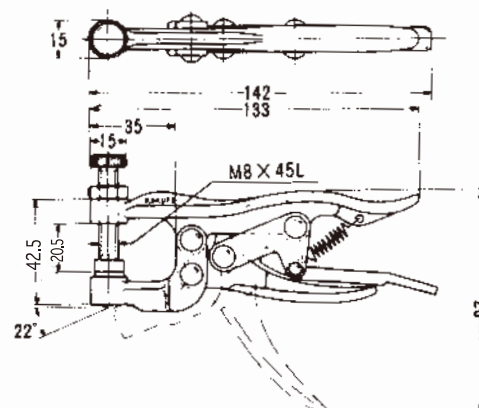
A PLIER

SQUEEZE ACTION

NO.0



W. 260g Holding capacity 200kg/0~12%

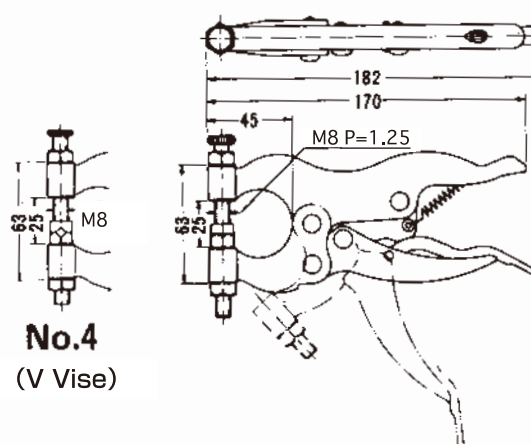


NO.1 NO.4



NO.1

No.1 W. 510g Holding capacity 250kg/0~13%
No.4 W. 510g Holding capacity 250kg/0~11%φ



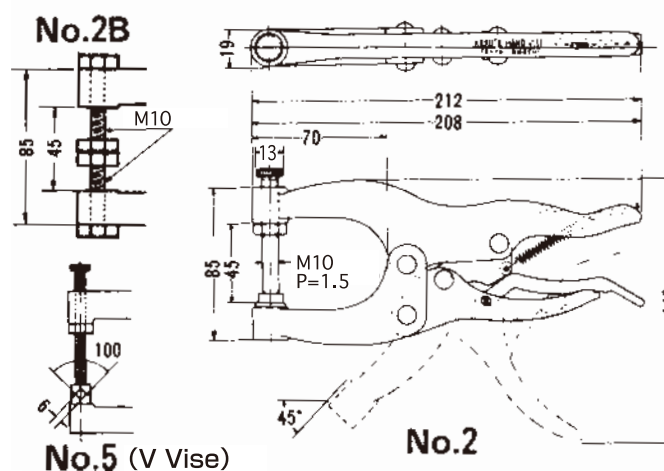
No.4
(V Vise)

NO.2 NO.2B NO.5



NO.2

No.2 W. 610g Holding capacity 300kg/0~30%
No.2B W. 640g Holding capacity 300kg/0~28%
No.5 W. 615g Holding capacity 300kg/0~25%φ



No.2B

No.5 (V Vise)

No.2

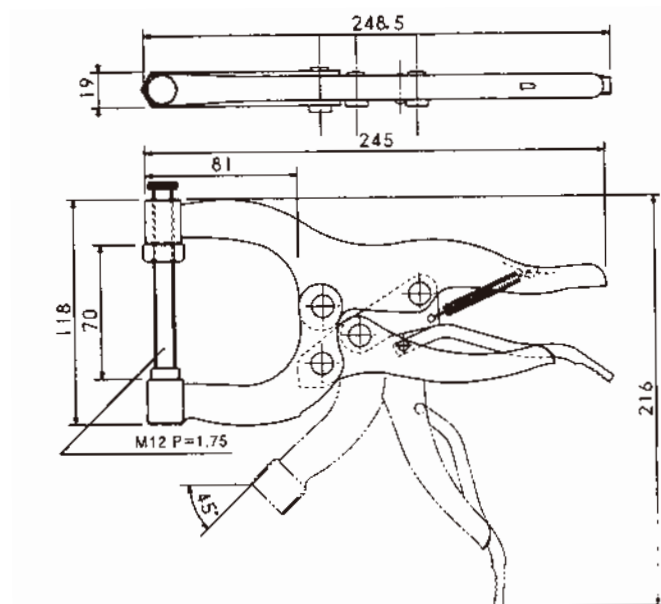
A PLIER

SQUEEZE ACTION

NO.3



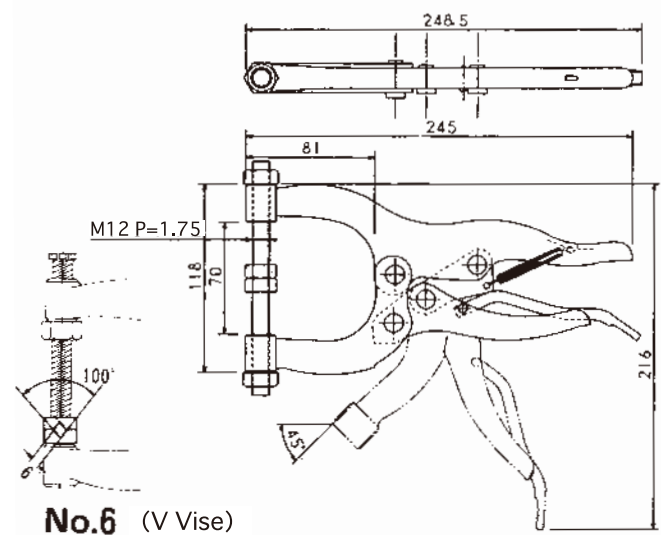
W. 840g Holding capacity 260kg/0~50 %



NO.3B NO.6



No.3B W. 840g Holding capacity 260kg/0~50 %
No.6 W. 840g Holding capacity 260kg/6~48 %φ

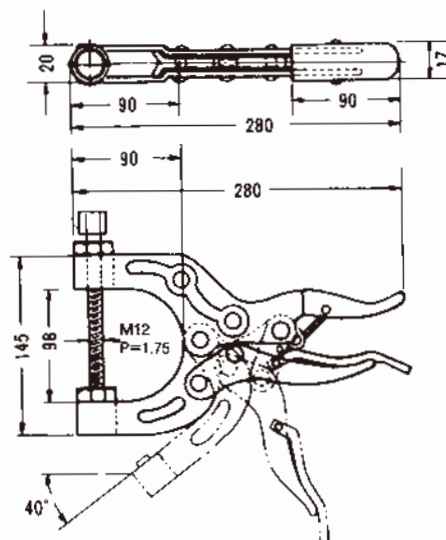


No.6 (V Vise)

NO.3(L)



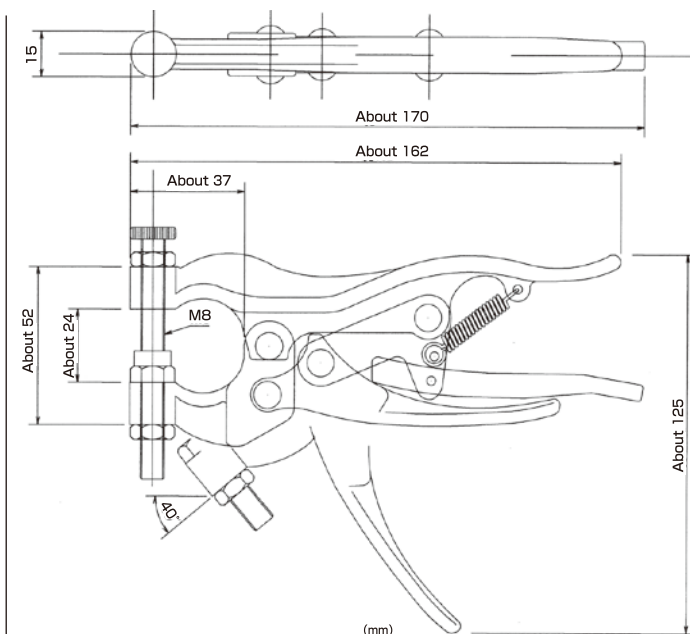
W. 1,000g Holding capacity 200kg/0~90 %



NO.1 Forging



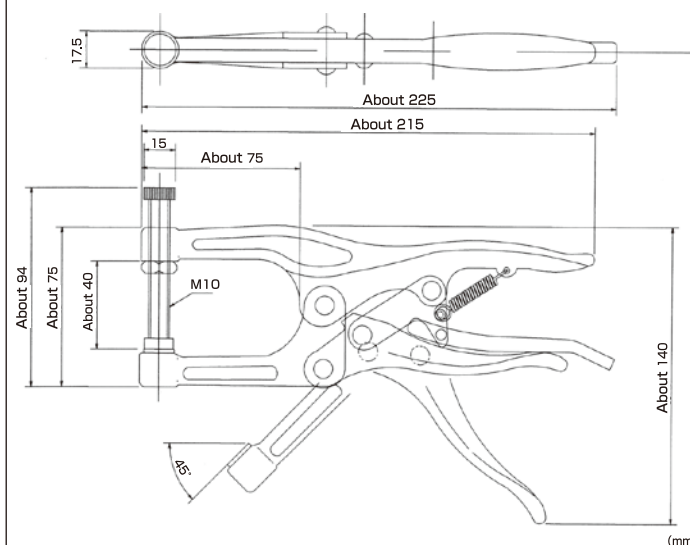
W. 410g Holding capacity 250kg/0~13 %



NO.2 Forging



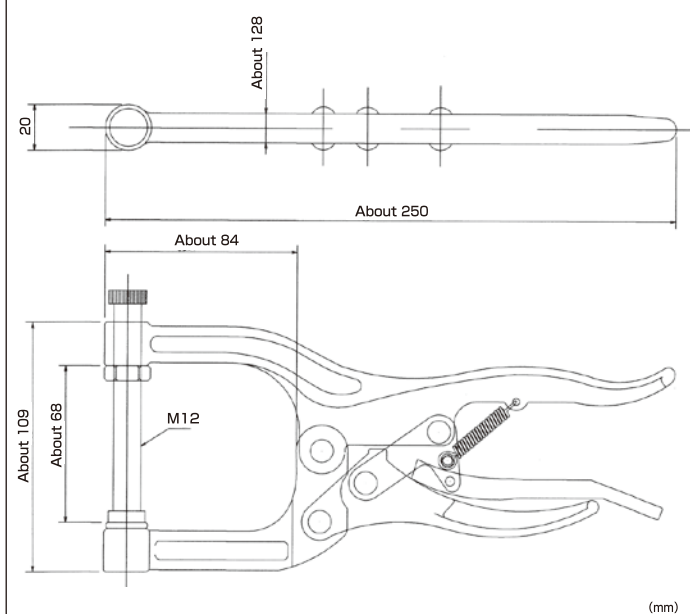
W. 590g Holding capacity 300kg/0~25 %



NO.3 Forging



W. 800g Holding capacity 260kg/0~53 %

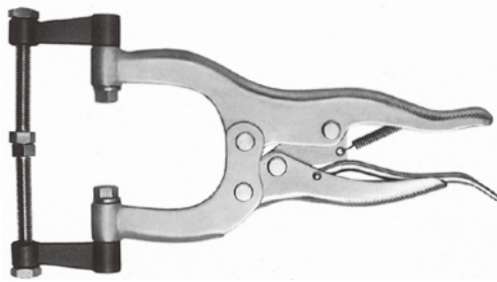


NO.9

NO.9B



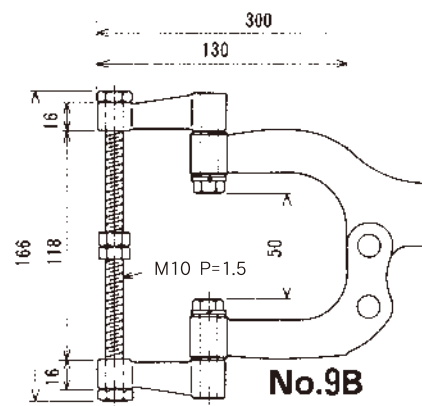
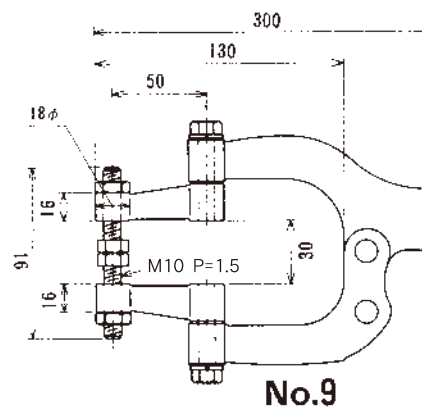
NO.9



NO.9B

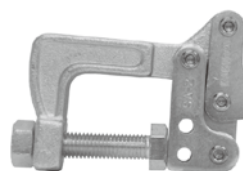
No.9 W. 1.020g Holding capacity 120kg/0~15%

No.9B W. 1.050g Holding capacity 120kg/0~100%

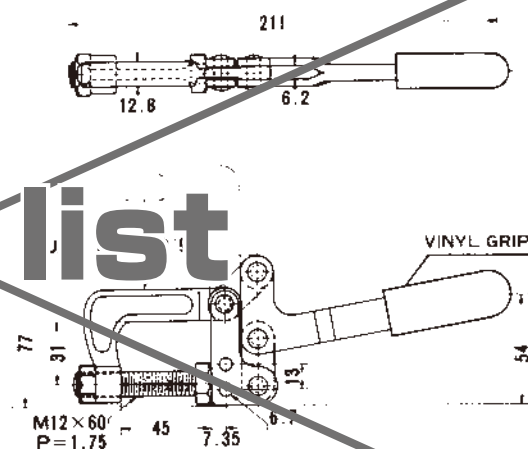


NO. SA-2

W. 400g Holding capacity 400kg/0~35%

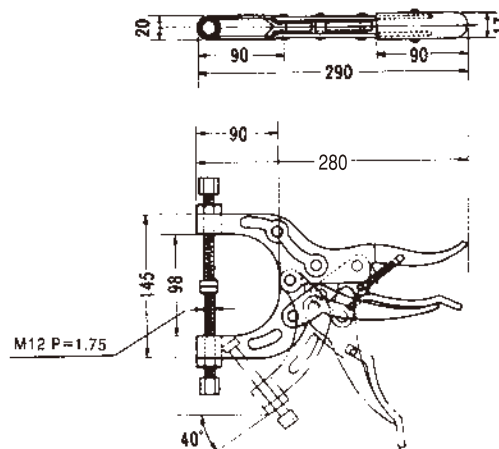


Out of list



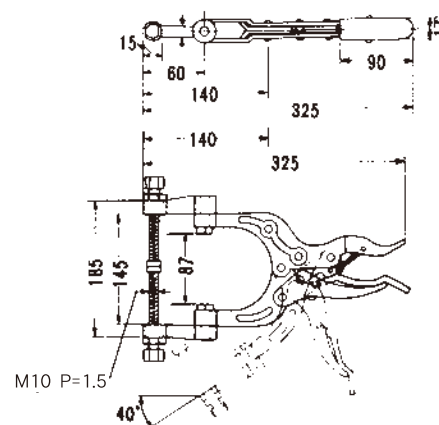
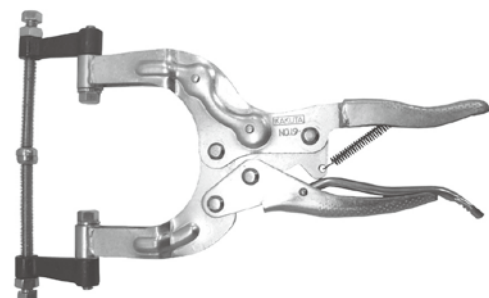
NO.18

W. 1,020g Holding capacity 200kg/0~80%



NO.19

W. 1,190g Holding capacity 100kg/0~130%

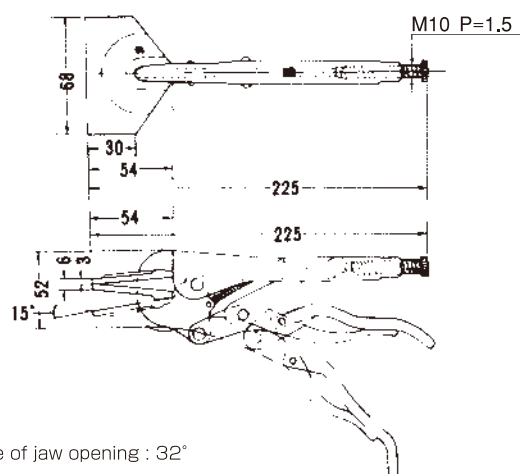
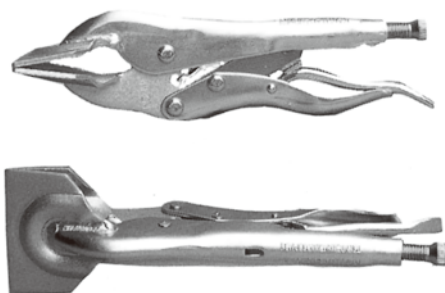


A PLIER

SQUEEZE ACTION

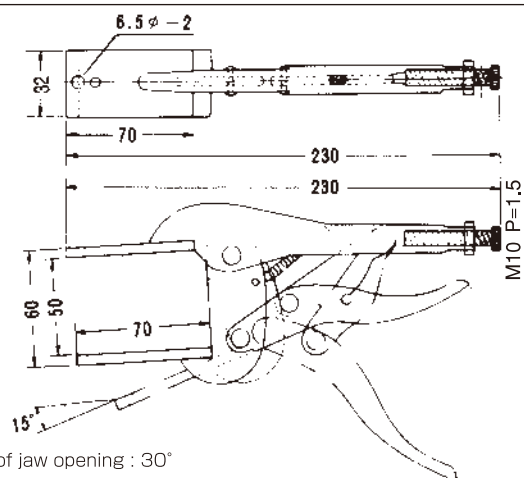
NO.11

W. 590g Holding capacity 220kg/0~22%



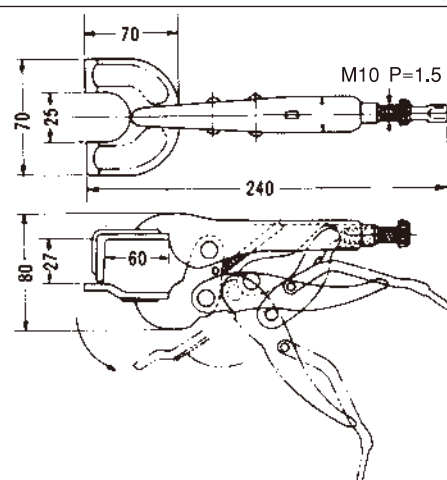
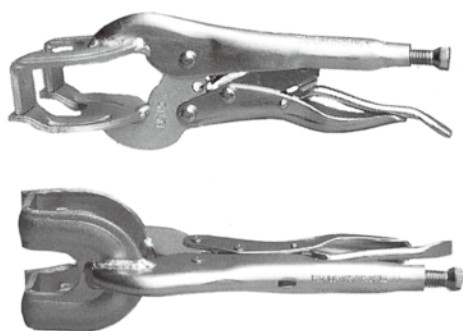
NO.11(S)

W. 670g Holding capacity 200kg/20~48%



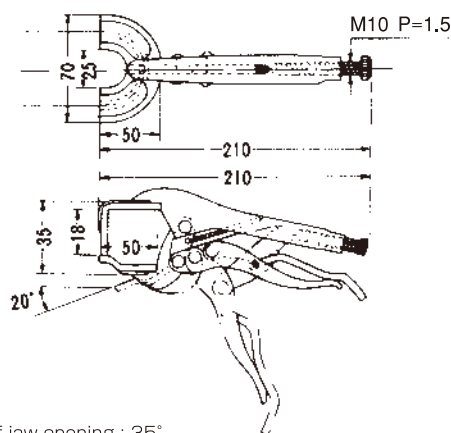
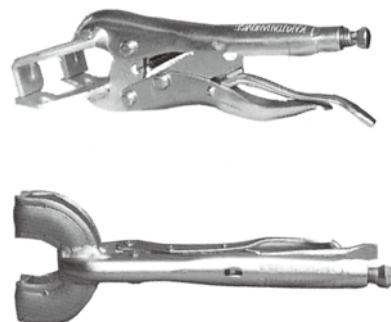
NO.12

W. 740g Holding capacity 200kg/0~30%



NO.12B

W. 560g Holding capacity 220kg/0~35%

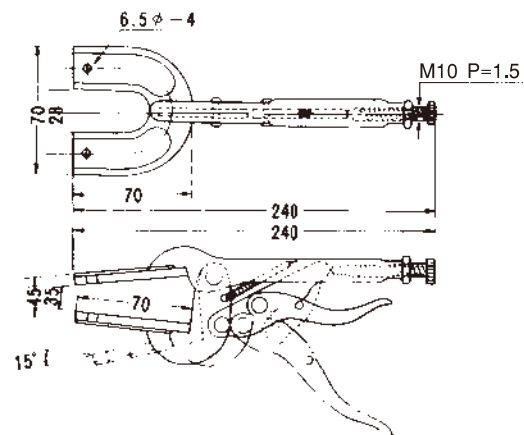
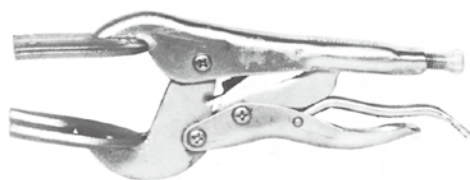


A PLIER

SQUEEZE ACTION

NO.12(S)

W. 560g Holding capacity 200kg/20~35%



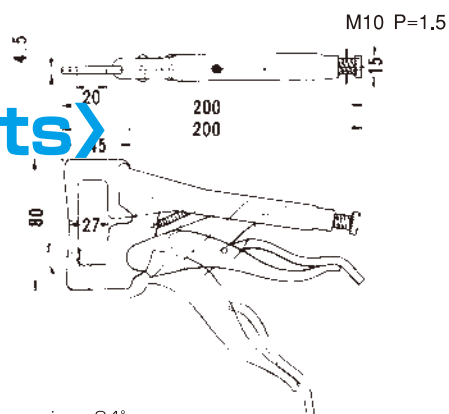
Max. angle of jaw opening : 30°

NO.13

W. 420g Holding capacity 180kg/0~20%



〈Order products〉



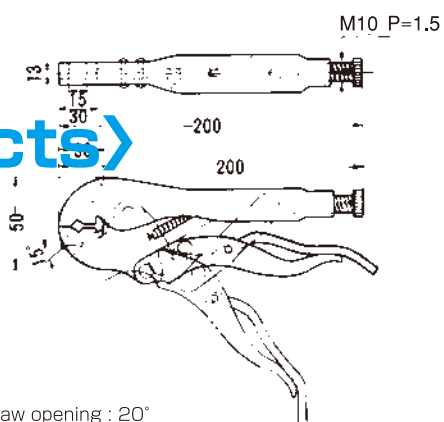
Max. angle of jaw opening : 34°

NO.14

W. 490g Holding capacity 300kg/9~16φ



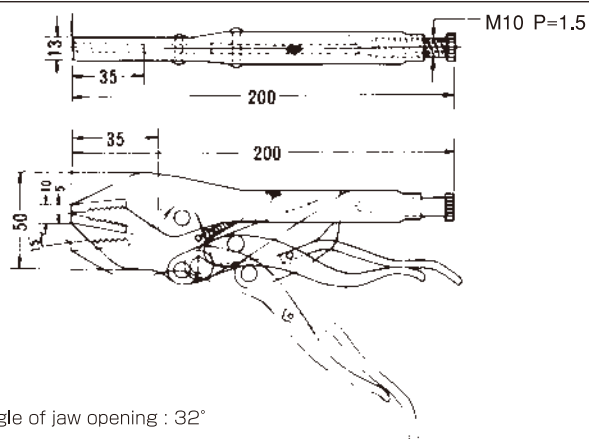
〈Order products〉



Max. angle of jaw opening : 20°

NO.15(M)(200^m)

W. 480g Holding capacity 580kg/0~20%



Max. angle of jaw opening : 32°

A PLIER

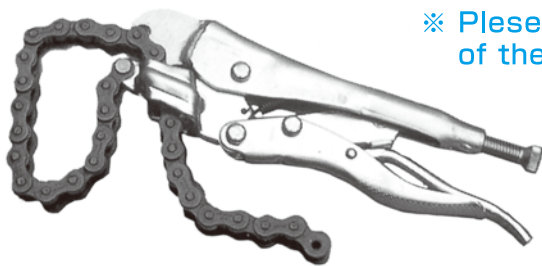
SQUEEZE ACTION

NO.15B

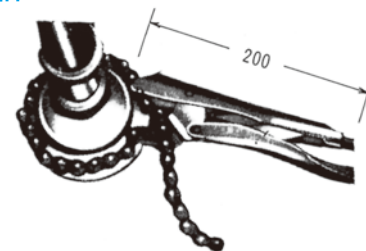
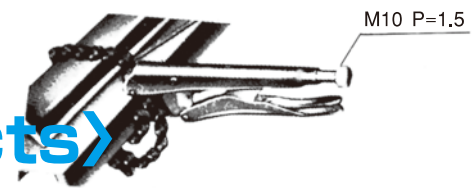
W. 725g Holding capacity 200kg/20~90φ

〈Order products〉

※ Please specify the length of the chain



JIS#40 CHAIN Length : 360 ㎜

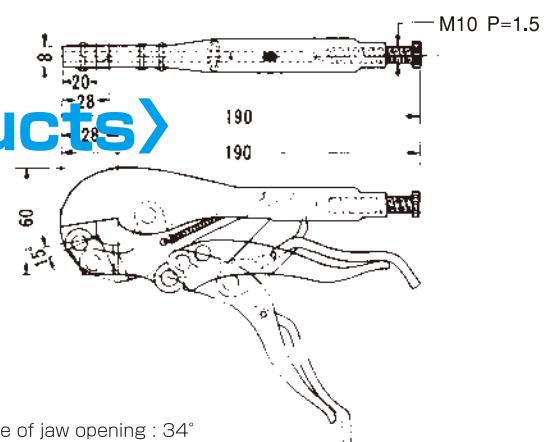
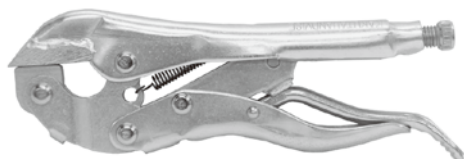


NO.16

W. 420g Holding capacity 400kg/0~9 ㎜

〈Order products〉

The Adjustable Lower Jaw can achieve any angle. Maximum Clamping Action is achieved due to the utilization of total clamp surface, rather than just the point of contact.



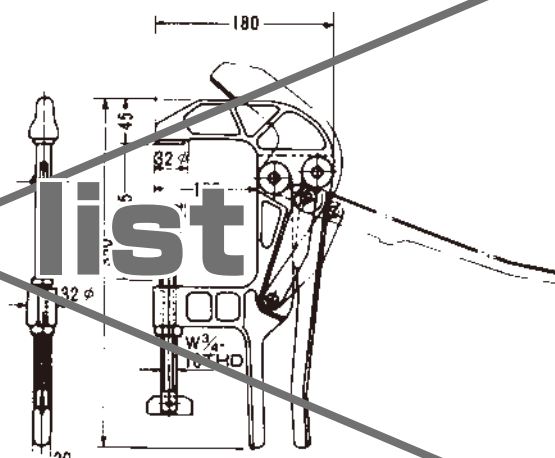
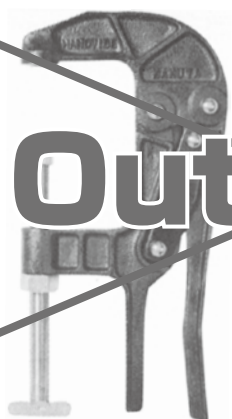
Max. angle of jaw opening : 34°

A PLIER

SQUEEZE ACTION

~~NO.20~~

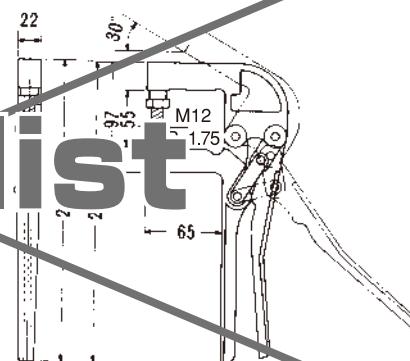
W. 3,300g Holding capacity 600kg



Out of list

~~NO.22~~

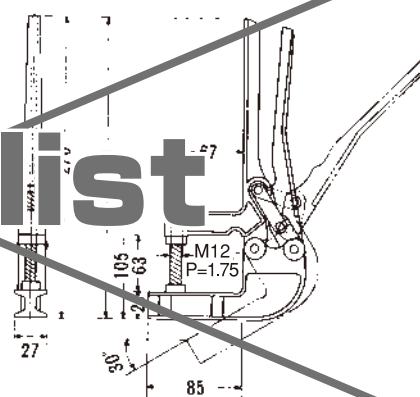
W. 1,345g Holding capacity 360kg



Out of list

~~NO.23~~

W. 1,100g Holding capacity 360kg



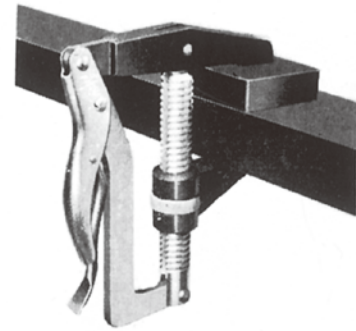
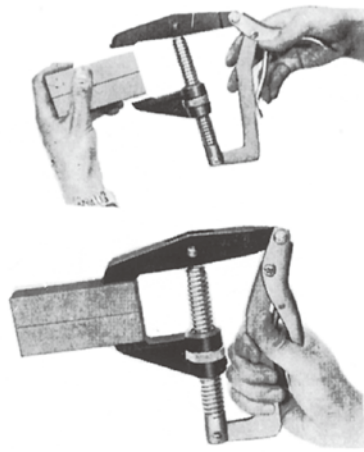
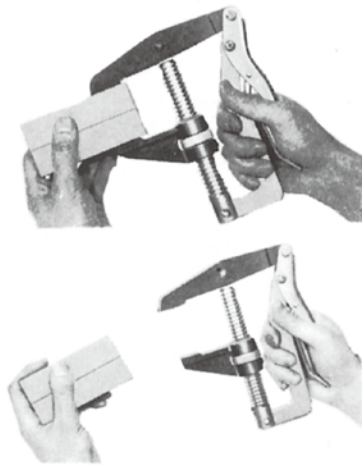
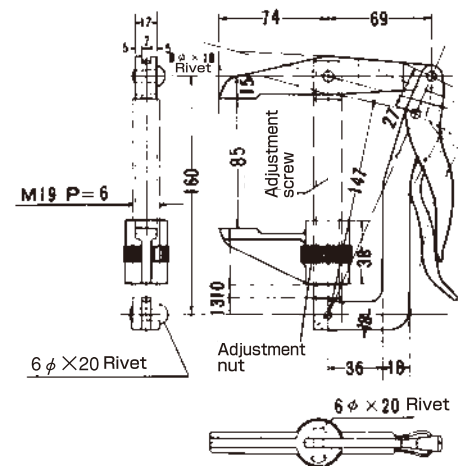
Out of list

A PLIER

SQUEEZE ACTION

NO.70

W. 980g Holding capacity 200kg/0~85%
Movable Lower Jaw composed of S25C



One Touch Clamping Action and Release Mechanism make this Clamp very easy to use.

NO.90

W. 910g Holding capacity 320kg



Out of list

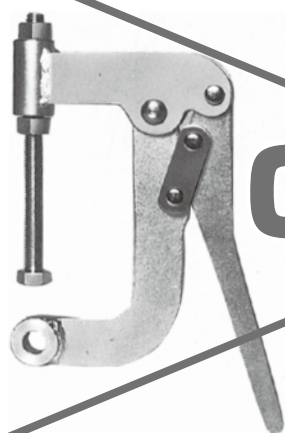
110 17 71 20 40 206
φ19

AB

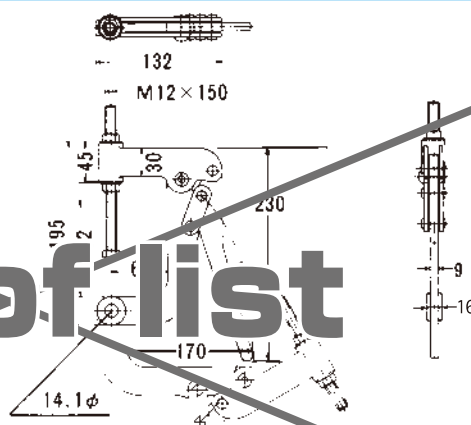
PLIER

SQUEEZE ACTION

NO.157



W. 1,380g Holding capacity 300kg

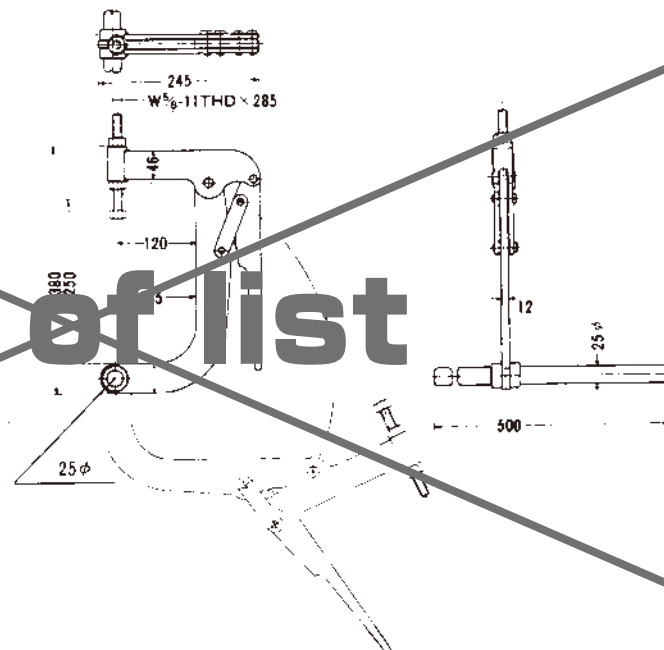


Out of list

NO.158(小)



W. 6,520g Holding capacity 600kg

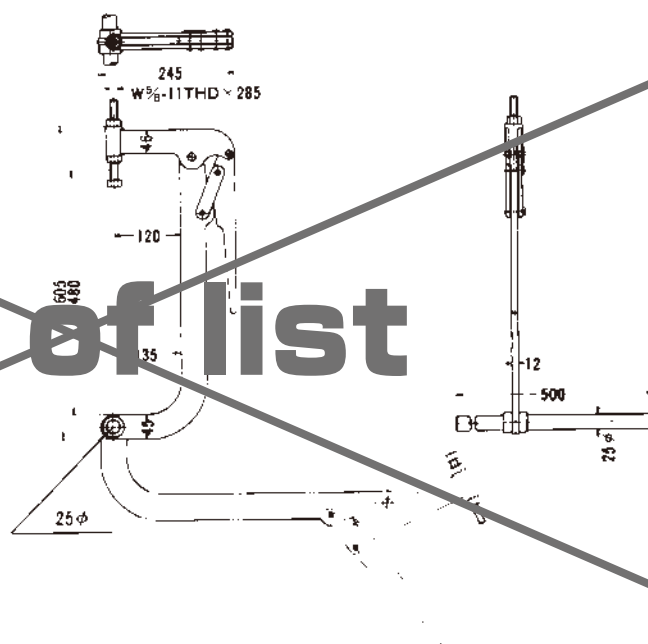


Out of list

NO.158(大)



W. 7,450g
Holding capacity 600kg



Out of list

A PIPE VISES

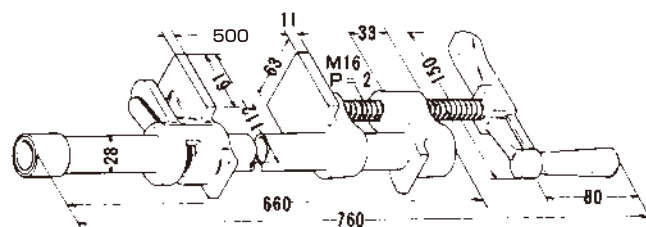
PIPE VISE

NO.62

W. 2,100g Range of Jaw capacity 0~500㎜
Clamping Parts composed of AC2A

This lightweight Vise is made of Aluminum and is therefore easy to carry. Because tightening is achieved by turning a hand screw, precise holding pressure adjustments are easily made. This Vise is not appropriate for large or heavy items, but is ideal for light work and the clamping of lightweight items.

〈Order products〉

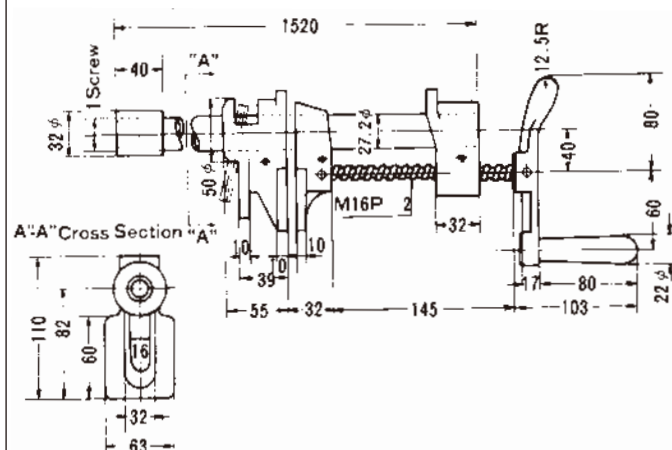


NO.66

W. 5,000g Range of Jaw capacity 0~1,350㎜
Clamping Parts composed of FCD

This Pipe Vise is ideal for the temporary holding of very wide objects. Objects are easily secured by the sliding support attachment, and tightening is achieved by turning the hand screw. The Main Body of this vise is a pipe which can be adjusted at order to be any length desired.

〈Order products〉



E

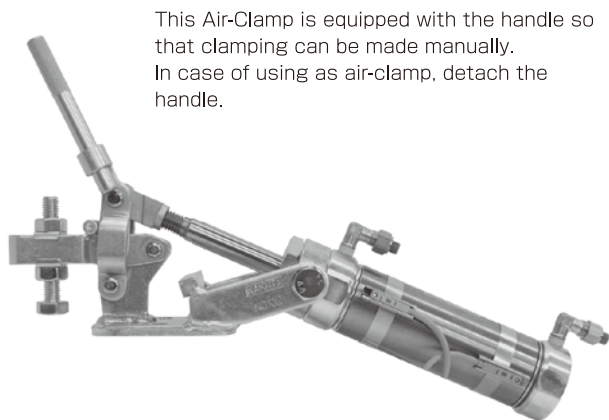
All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

AIR-CLAMP WITH SWITCH (Hold Down Action)

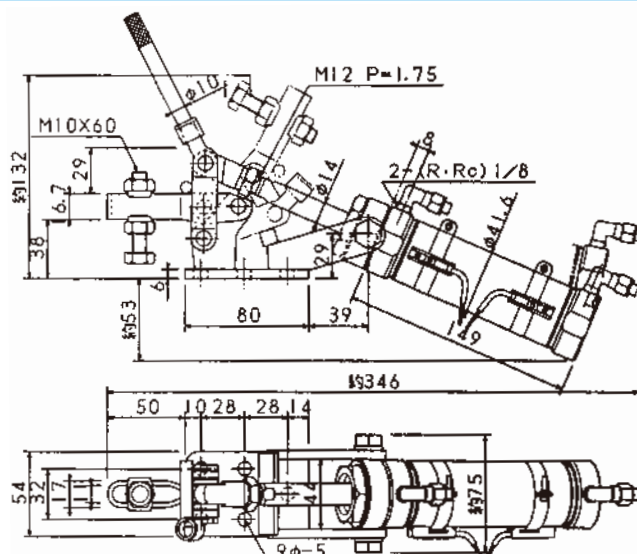
AIR CLAMP

NO.102-S

W. 2,000g
Maximum holding capacity : About 250kg (1MPa)
Normal holding capacity : About 125kg (0.5MPa)



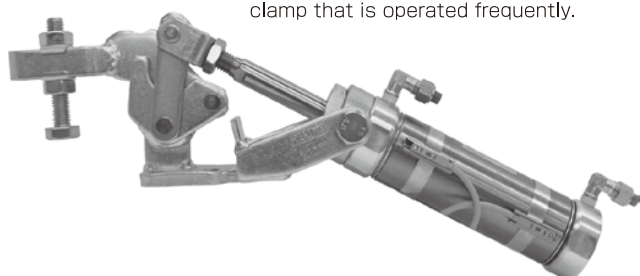
This Air-Clamp is equipped with the handle so that clamping can be made manually. In case of using as air-clamp, detach the handle.



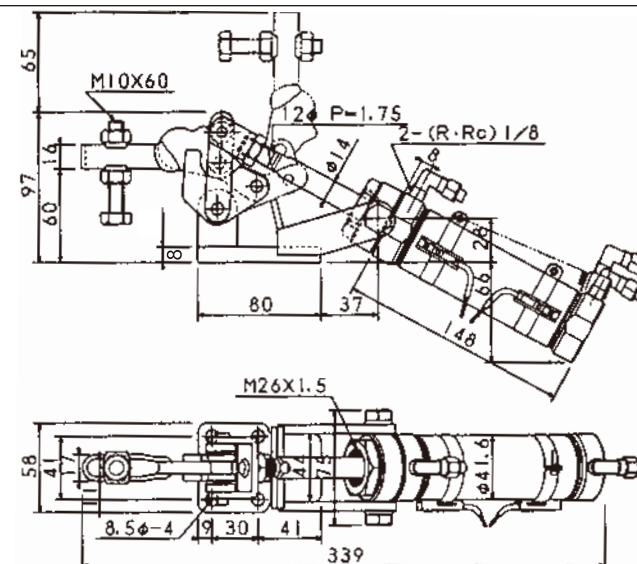
Working pressure 0.4Mpa-1Mpa
Cylinder stroke 75%, 40φ

NO.200-S VARI AIR-CLAMP

W. 2,260g
Maximum holding capacity : About 250kg (1MPa)
Normal holding capacity : About 125kg (0.5MPa)



This clamp is equipped with hand-operated Vari-Clamp No.1 as main body. And as main spindle composing fulcrum is hard faced, it is strong for abrasion. Therefore, it excels in durability as air-clamp that is operated frequently.

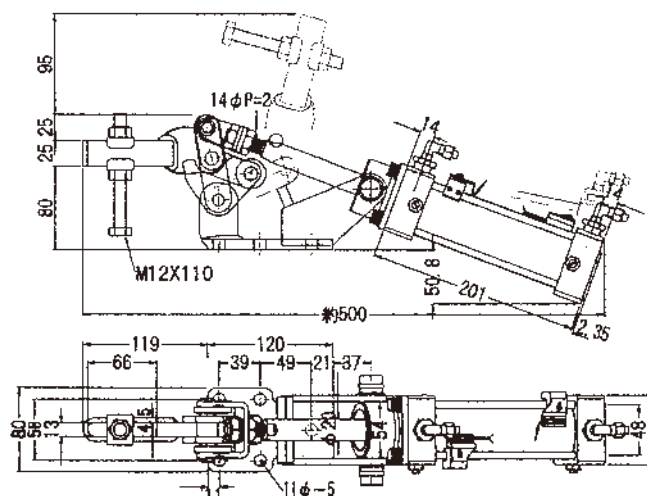
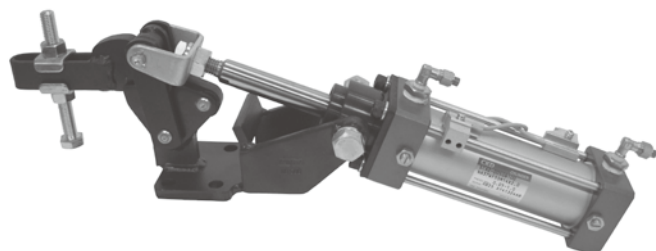


Working pressure 0.4Mpa-1Mpa
Cylinder stroke 75%, 40φ

NO.500-S VARI AIR-CLAMP

W. 4,600g
Maximum holding capacity : About 400kg (1MPa)
Normal holding capacity : About 200kg (0.5MPa)

This clamp is equipped with hand-operated Vari-Clamp No.2 as main body. It is made as air-clamp that is operated frequently and its durability is distinguished.



Working pressure 0.4Mpa-1Mpa
Cylinder stroke 100%, 50φ

E

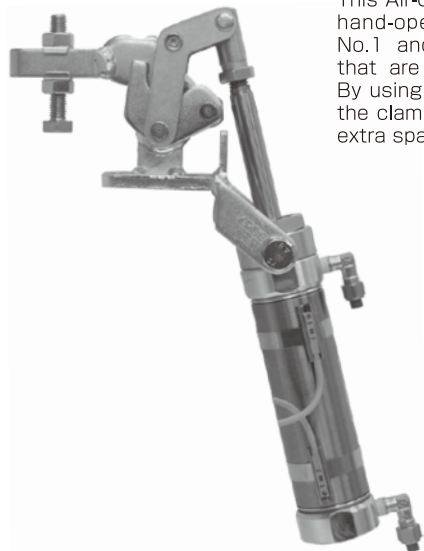
All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

AIR-CLAMP WITH SWITCH
(Hold Down Action)

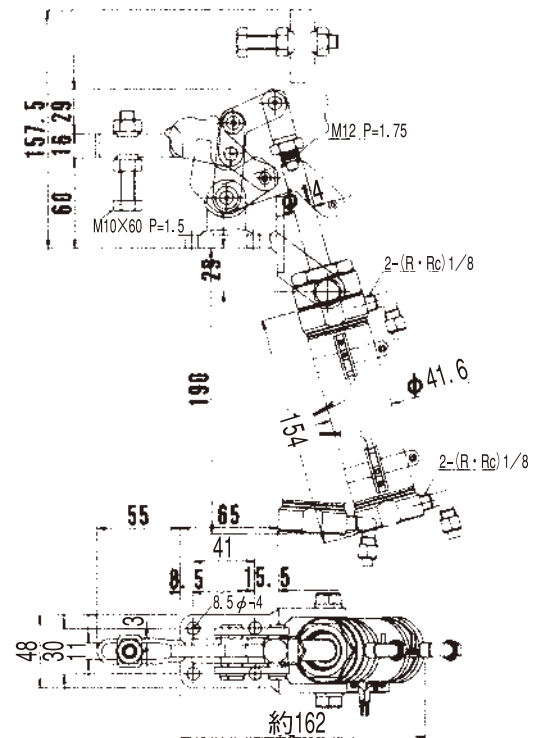
AIR CLAMP

NO.201-S VERTICAL TYPE AIR-CLAMP

W. 2,300g
Maximum holding capacity : About 280kg (1MPa)
Normal holding capacity : About 140kg (0.5MPa)



This Air-Clamp is equipped with hand-operated Vari-Clamp No.1 and is suitable for jigs that are operated frequently. By using the cylinder vertically, the clamp can be fixed without extra space.



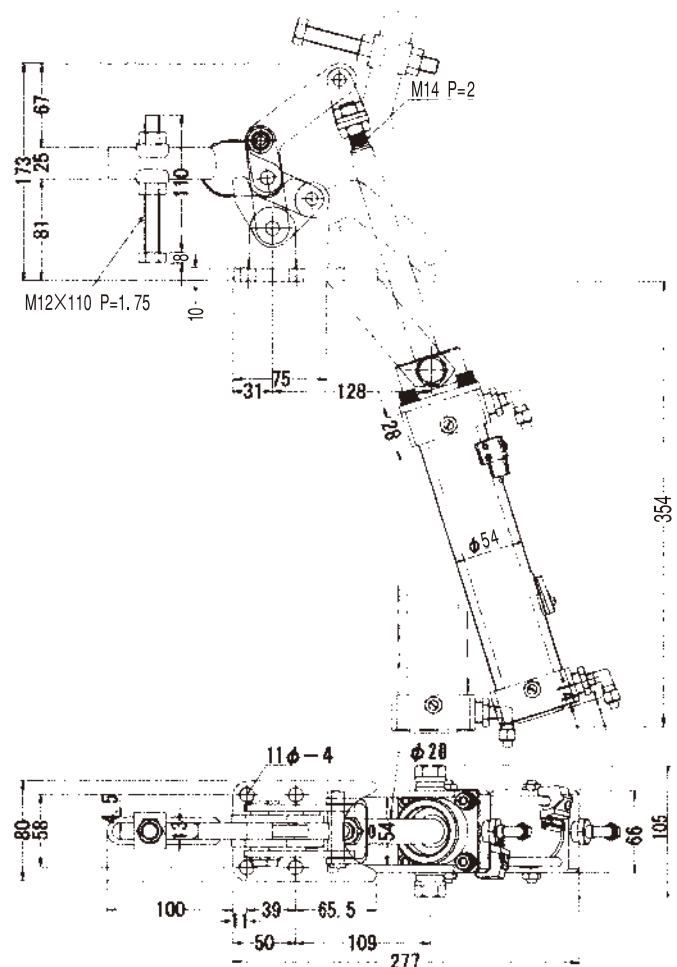
Working pressure 0.4Mpa-1Mpa
Cylinder stroke 80%, 40φ

NO.501-S VERTICAL TYPE AIR-CLAMP

W. 5,600g
Maximum holding capacity : About 500kg (1MPa)
Normal holding capacity : About 250kg (0.5MPa)



This Air-Clamp is also equipped with hand-operated Vari-Clamp No.2 as main body in the same way as No.500. As it is abundant in durability, the clamp can be fixed without extra space by using the cylinder vertically.

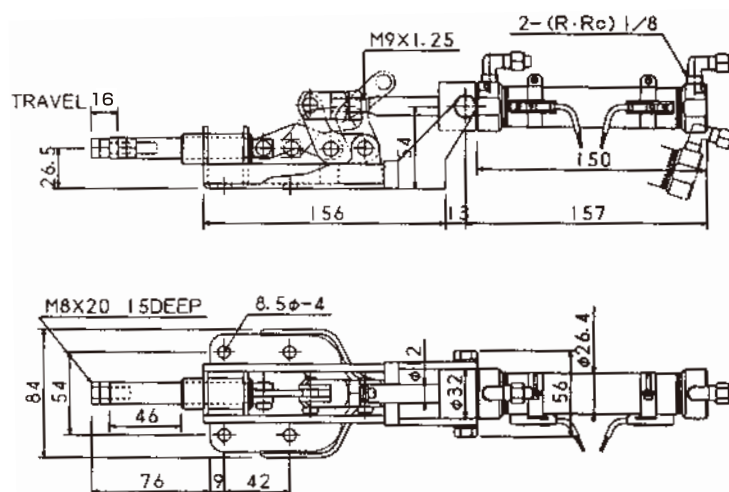
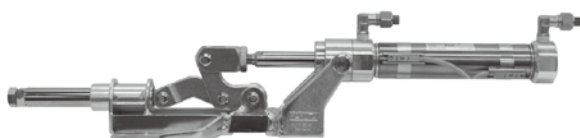


Working pressure 0.4Mpa-1Mpa
Cylinder stroke 160%, 50φ



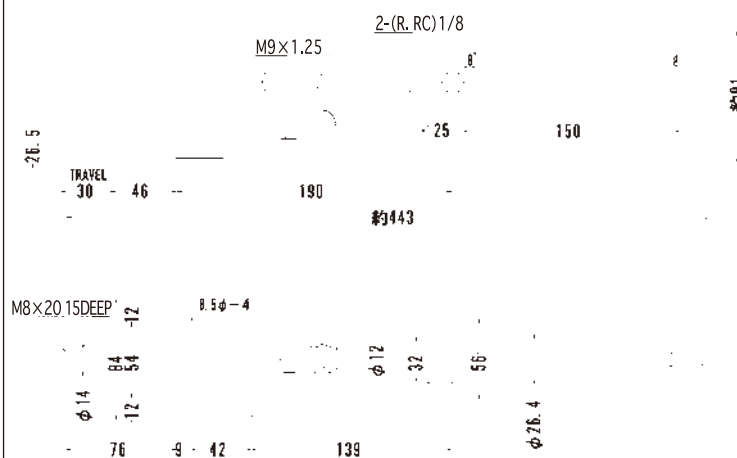
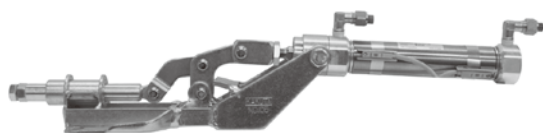
AIR CLAMP (PUSH)

W. 1,500g
Maximum holding capacity : About 150kg (1MPa)
Normal holding capacity : About 75kg (0.5MPa)
Tranel : 16 $\frac{m}{m}$



Working pressure 0.4Mpa-1 Mpa
Cylinder stroke 80^m/_m, 25 ϕ

W. 1,380g
Maximum holding capacity 150kg (1MPa)
Normal holding capacity 75kg (0.5MPa)
Travel : 30 mm



Working pressure 0.4Mpa-1 Mpa
Cylinder stroke 80^m_m, 25 ϕ

E

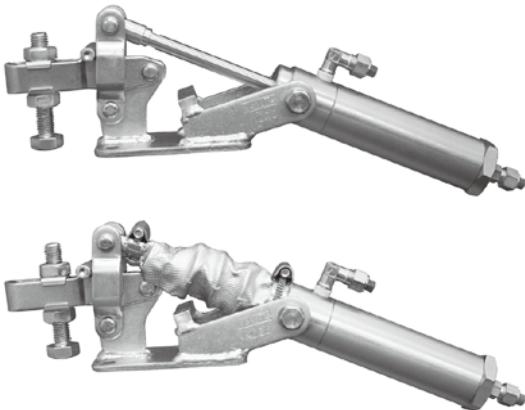
All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

AIR-CLAMP
(Hold Down Action)

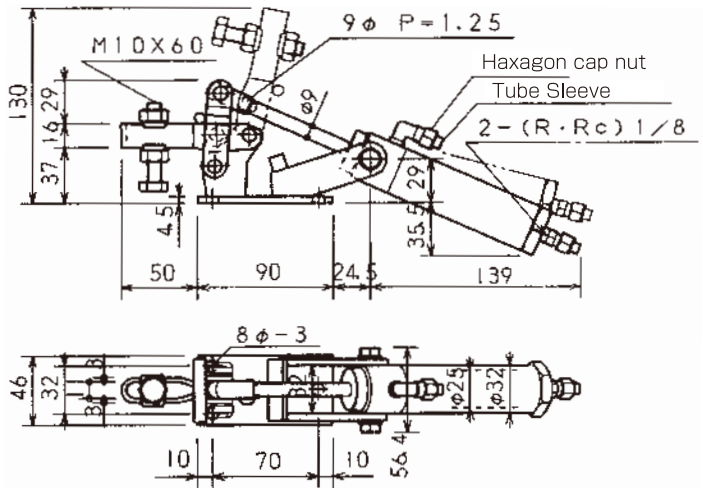
AIR CLAMP

NO.56

W. 1,300g
Maximum holding capacity : About 150kg (1MPa)
Normal holding capacity : About 75kg (0.5MPa)



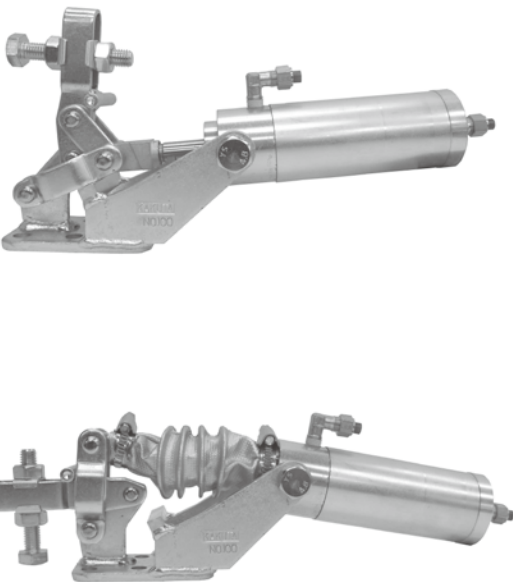
JC TYPE (equipped with rod cover for welding jigs)



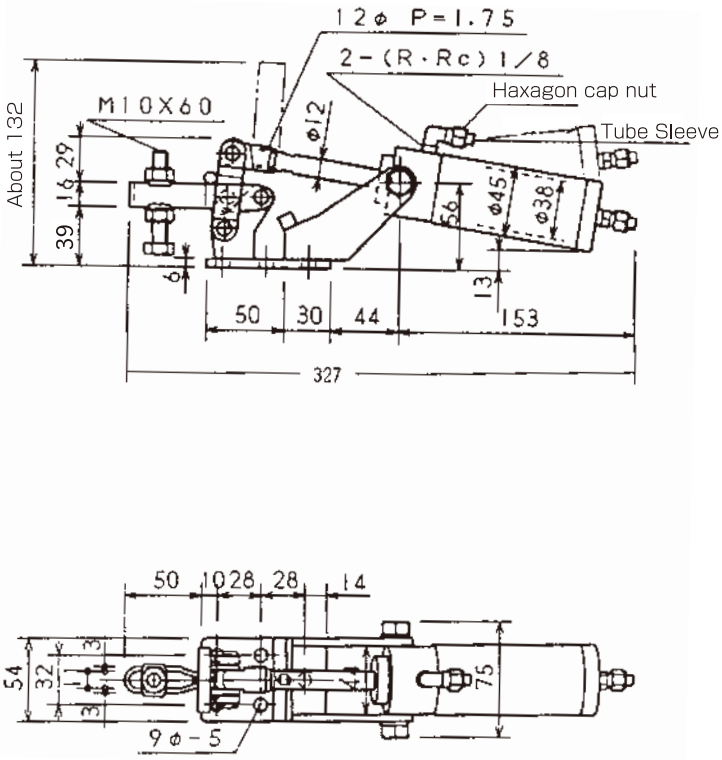
Working pressure 0.4Mpa-1Mpa
Cylinder stroke 64%

NO.100

W. 1,920g
Maximum holding capacity : About 250kg (1MPa)
Normal holding capacity : About 125kg (0.5MPa)



JC TYPE (equipped with rod cover for welding jigs)



Working pressure 0.4Mpa-1Mpa
Cylinder stroke 64%

E

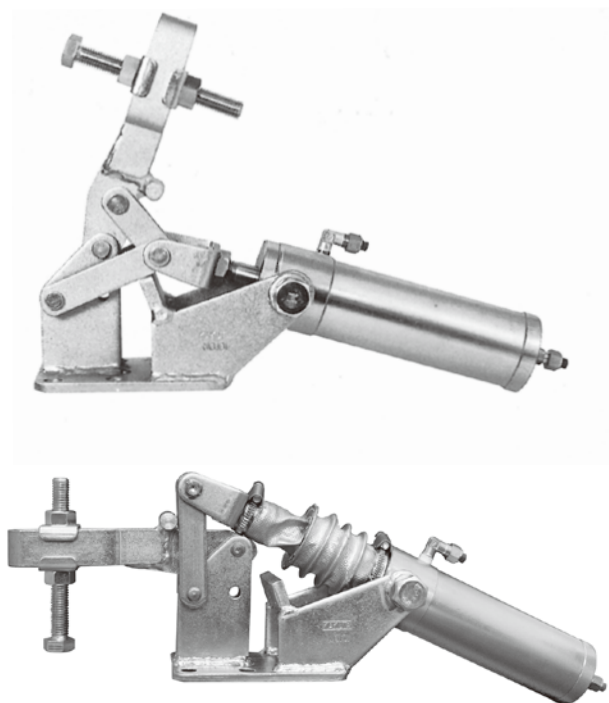
All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

AIR-CLAMP
(Hold Down Action)

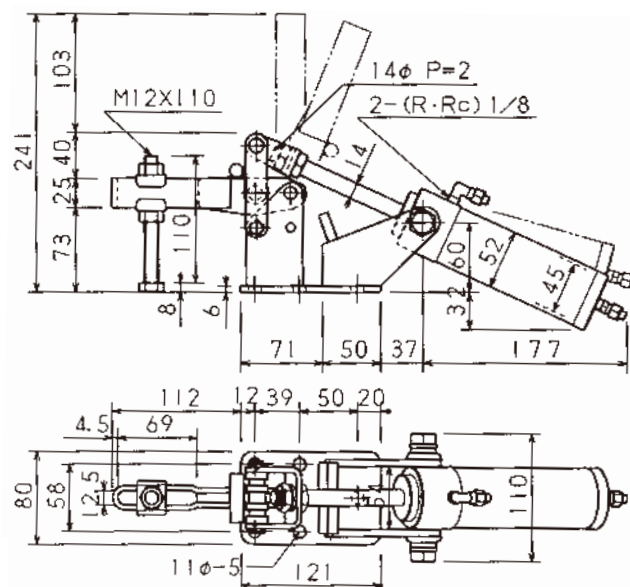
AIR CLAMP

NO.101

W. 4,200g
Maximum holding capacity : About 360kg (1MPa)
Normal holding capacity : About 180kg (0.5MPa)



JC TYPE (equipped with rod cover for welding jigs)

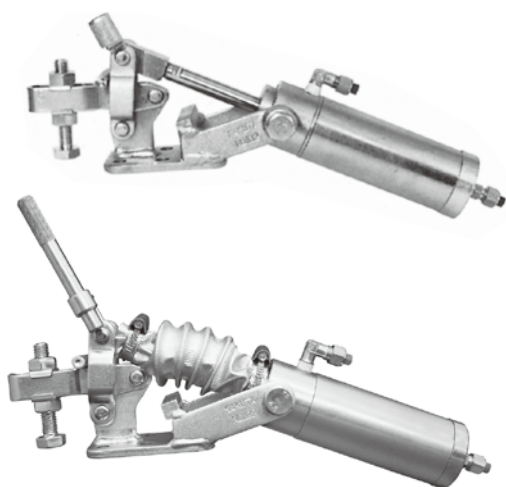


Working pressure 0.4Mpa-1Mpa
Cylinder stroke 91 mm

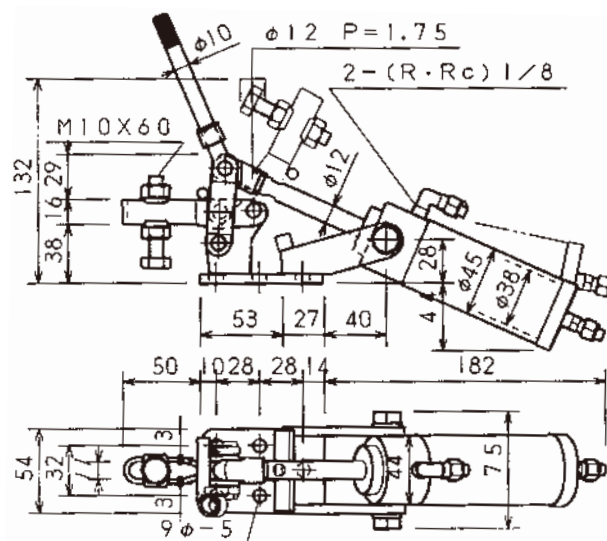
NO.102

W. 2,000g
Maximum holding capacity : About 250kg (1MPa)
Normal holding capacity : About 125kg (0.5MPa)

This Air-Clamp is equipped with the handle so that clamping can be made manually.
In case of using as air-clamp, detach the handle.



JC TYPE (equipped with rod cover for welding jigs)



Working pressure 0.4Mpa-1Mpa
Cylinder stroke 64 mm

E

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

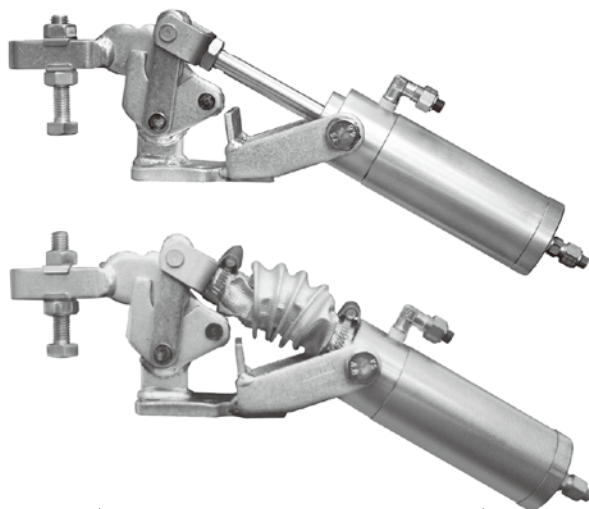
AIR-CLAMP
(Hold Down Action)

AIR CLAMP

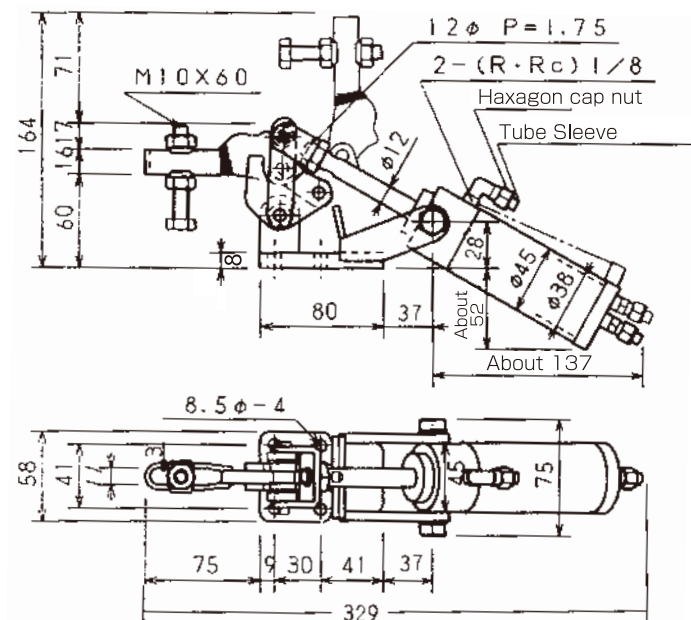
NO.200 VARI AIR-CLAMP

W. 2,260g
Maximum holding capacity : About 250kg (1MPa)
Normal holding capacity : About 125kg (0.5MPa)

This clamp is equipped with hand-operated Vari-Clamp No.1 as main body. And as main spindle composing fulcrum is hard faced, it is strong for abrasion. Therefore, it excels in durability as air-clamp that is operated frequently.



JC TYPE (equipped with rod cover for welding jigs)

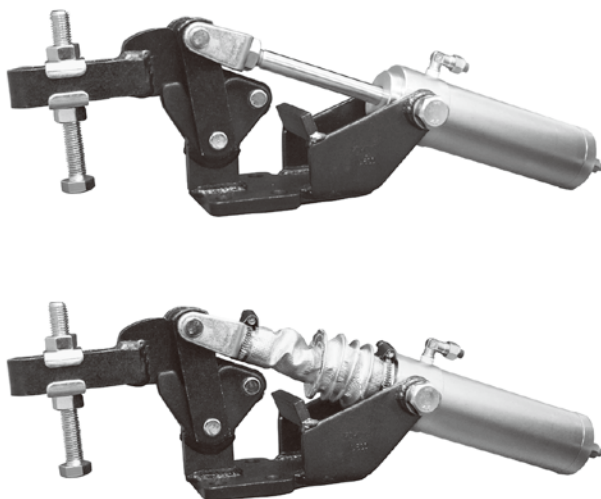


Working pressure 0.4Mpa-1Mpa
Cylinder stroke 64%

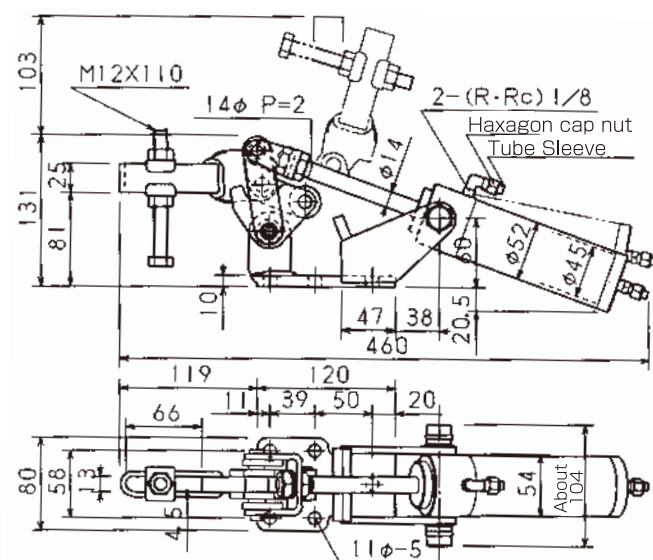
NO.500 VARI AIR-CLAMP

W. 4,600g
Maximum holding capacity : About 400kg (1MPa)
Normal holding capacity : About 200kg (0.5MPa)

This clamp is equipped with hand-operated Vari-Clamp No.2 as main body. It is made as air-clamp that is operated frequently and its durability is distinguished.



JC TYPE (equipped with rod cover for welding jigs)



Working pressure 0.4Mpa-1Mpa
Cylinder stroke 91%

E

All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

AIR-CLAMP
(Hold Down Action)

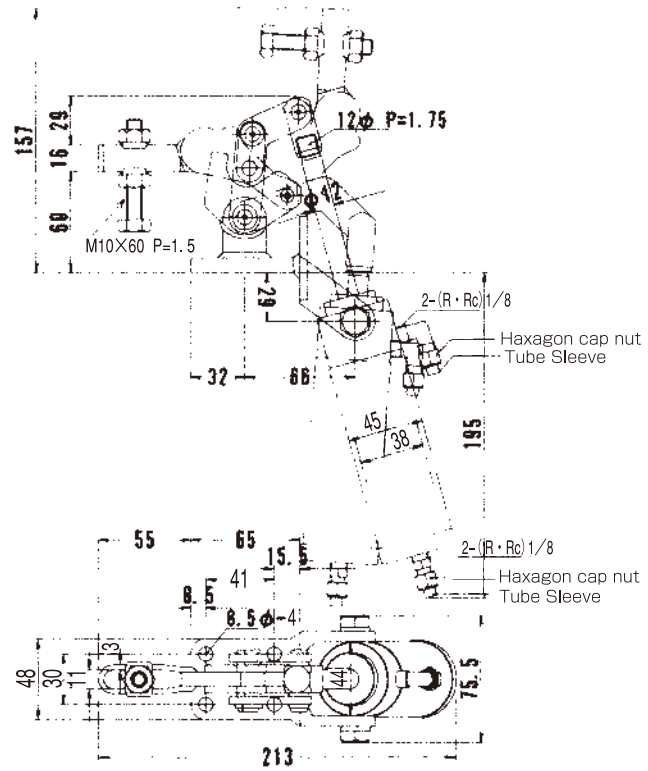
AIR CLAMP

NO.201 VERTICAL TYPE AIR-CLAMP

W. 2,300g
Maximum holding capacity : About 280kg (1MPa)
Normal holding capacity : About 140kg (0.5MPa)



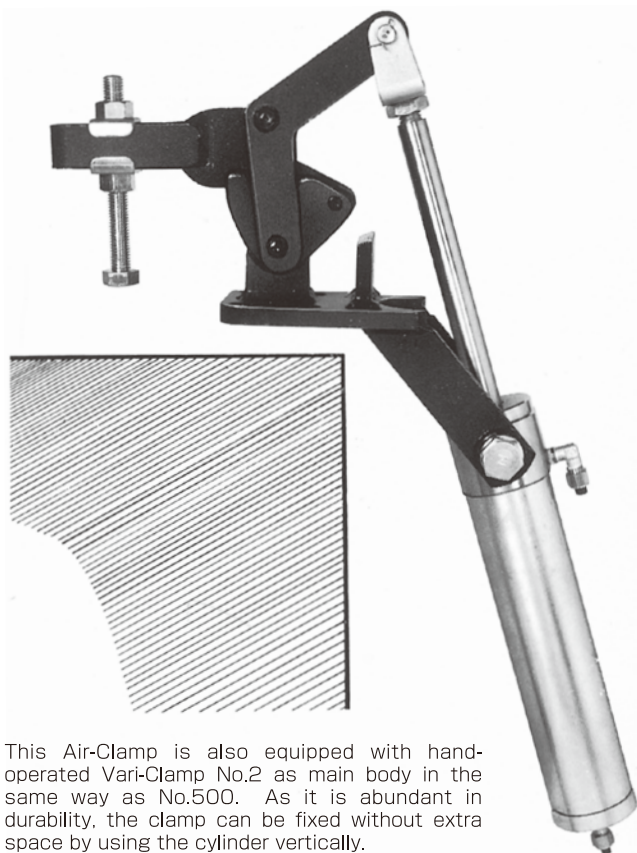
This Air-Clamp is equipped with hand-operated Vari-Clamp No.1 and is suitable for jigs that are operated frequently. By using the cylinder vertically, the clamp can be fixed without extra space.



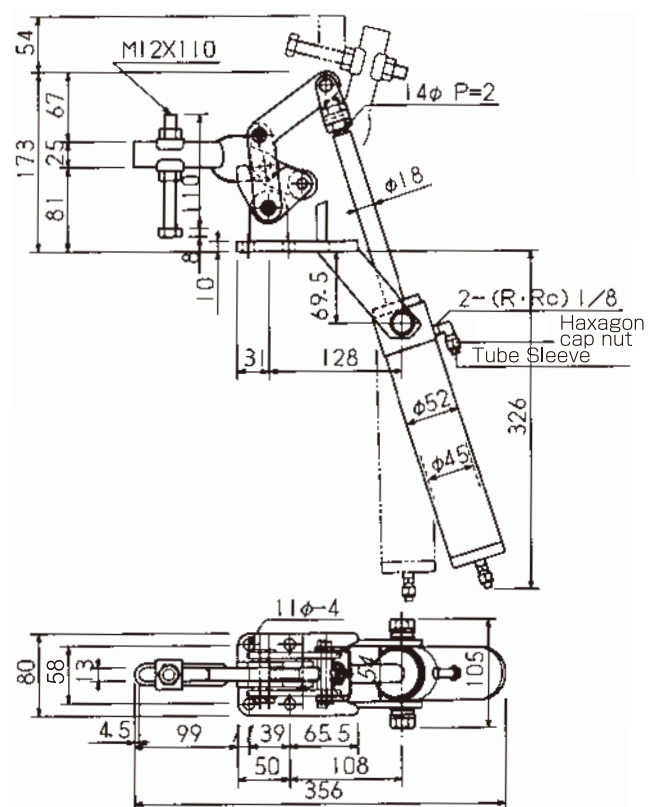
Working pressure 0.4Mpa-1Mpa Cylinder stroke 79mm

NO.501 VERTICAL TYPE AIR-CLAMP

W. 5,600g
Maximum holding capacity : About 500kg (1MPa)
Normal holding capacity : About 250kg (0.5MPa)



This Air-Clamp is also equipped with hand-operated Vari-Clamp No.2 as main body in the same way as No.500. As it is abundant in durability, the clamp can be fixed without extra space by using the cylinder vertically.



Working pressure 0.4Mpa-1Mpa Cylinder stroke 166mm

E

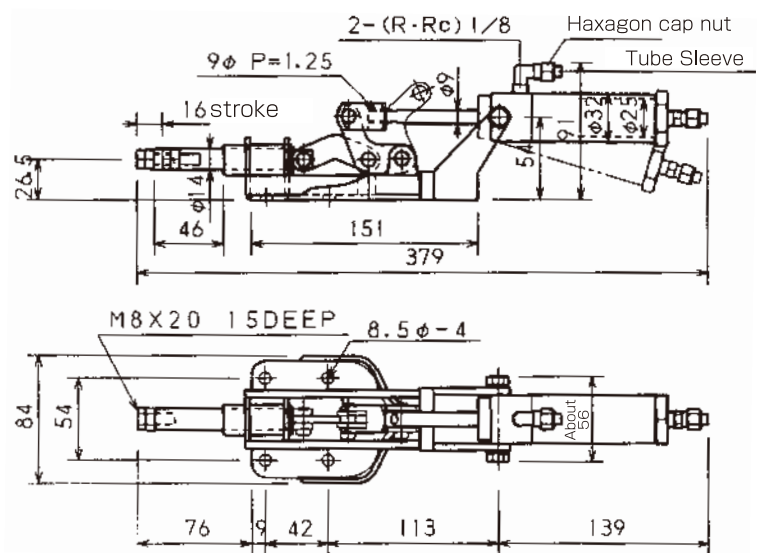
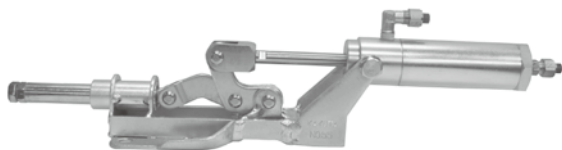
All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

AIR-CLAMP
(Straight Line Action)

AIR CLAMP (PUSH)

NO.55

W. 1,500g
Maximum holding capacity : About 150kg (1MPa)
Normal holding capacity : About 75kg (0.5MPa)
Travel : 16%



Working pressure 0.4Mpa-1 Mpa
Cylinder stroke 48 %

E

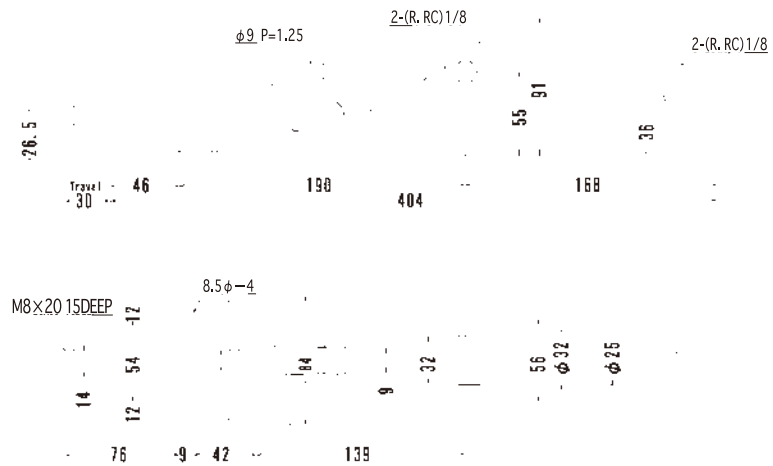
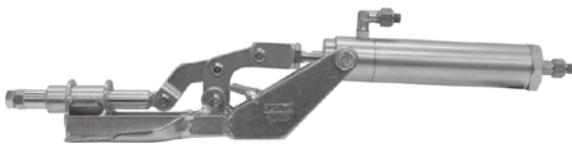
All the Holding Capacity is the maximums.
To use a normal bolt for the measurement of the Holding Capacity.

AIR-CLAMP (Straight Line Action)

AIR CLAMP (PUSH)

NO.105

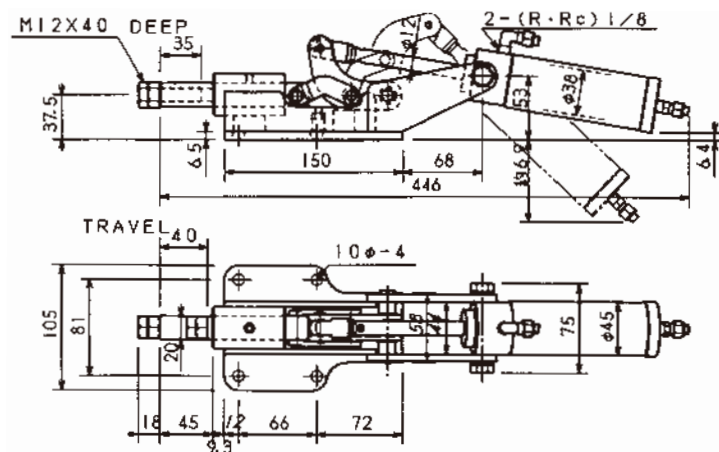
W. 1,380g
Maximum holding capacity : About 150kg (1MPa)
Normal holding capacity : About 75kg (0.5MPa)
Travel : 30%



Working pressure 0.4Mpa-1 Mpa
Cylinder stroke 78 %

NO.106

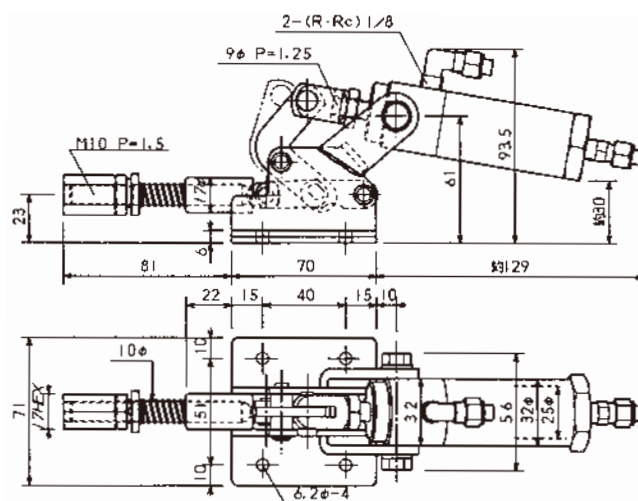
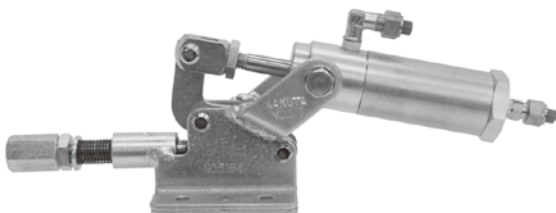
W. 3,600g
Maximum holding capacity : About 250kg (1MPa)
Normal holding capacity : About 125kg (0.5MPa)
Travel : 40%



Working pressure 0.4Mpa-1 Mpa
Cylinder stroke 79 %

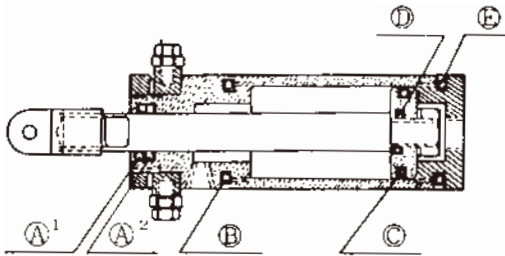
NO.107

W. 8,650g
Maximum holding capacity : About 150kg (1MPa)
Normal holding capacity : About 75kg (0.5MPa)
Travel : 10%



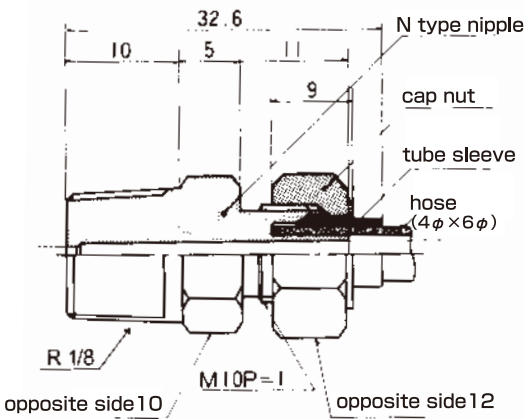
Working pressure 0.4Mpa-1 Mpa
Cylinder stroke 30 %

Specification :
 “O” ring for air clamps
 (However, JIS. B. 2401-P Standard)

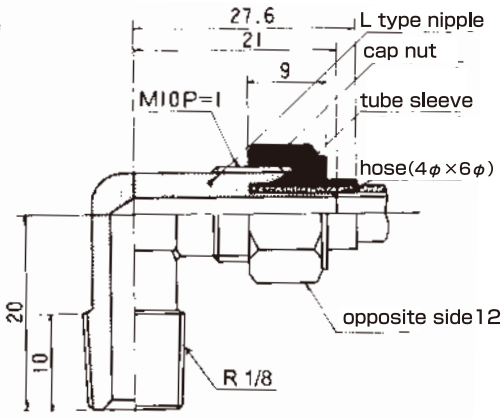


MODEL	No. 55	No.100	No.101	No.501	No.AC650
	No. 56	No.102	VARLAIR-CLAMP		
	No.105	VARLAIR-CLAMP	No.500		
	No.107	No.200			
	No.AC450	No.201			
		No.106			
A ¹	P= 9	P= 12	P= 14	P= 18	P= 14
A ²		P= 12	P= 14	P= 18	P= 14
B	P= 22A	P= 35	P= 42	P= 42	P= 35
C	P= 21	P= 32	P= 39 ×2	P= 39 ×2	P= 32
D	P= 7	P= 10	P= 10	P= 10	P= 10
E	P= 22A	P= 35	P= 42	P= 42	P= 35

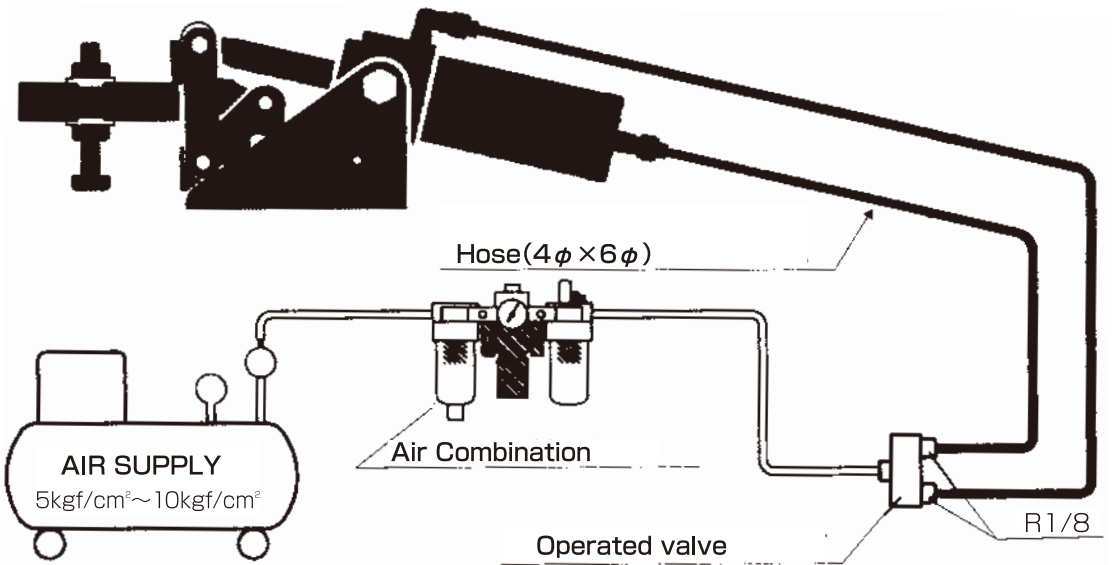
N type nipple



L type nipple



Pneumatic Diagram





**The cylinder cover lot, I have been provided a JC type.
(Welding jig)**

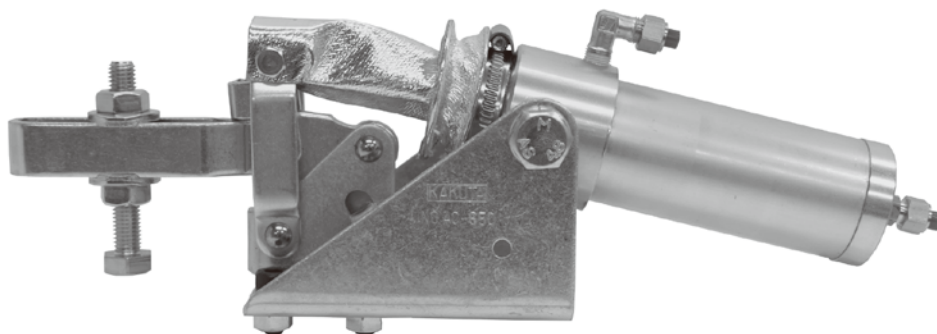
JCTYPE (Welding jig for heat-resistant bellows)

MATERIAL : Surface ... Gentex alminum cross
Upper temperature limit ... 1600℃ (10~25second)

equipped with dust proof bellows for Model.....

**NO.100 NO.101 NO.102 NO.200 NO.201 NO.500
NO.AC450 NO.AC451 NO.AC650 NO.56
NO.100S NO.101S NO.102S NO.200S NO.201S NO.500S
NO.AC450S NO.AC451S NO.AC650S NO.56S**

MOUNTING EXAMPLE



NO.AC650-JC



NO.201-JC

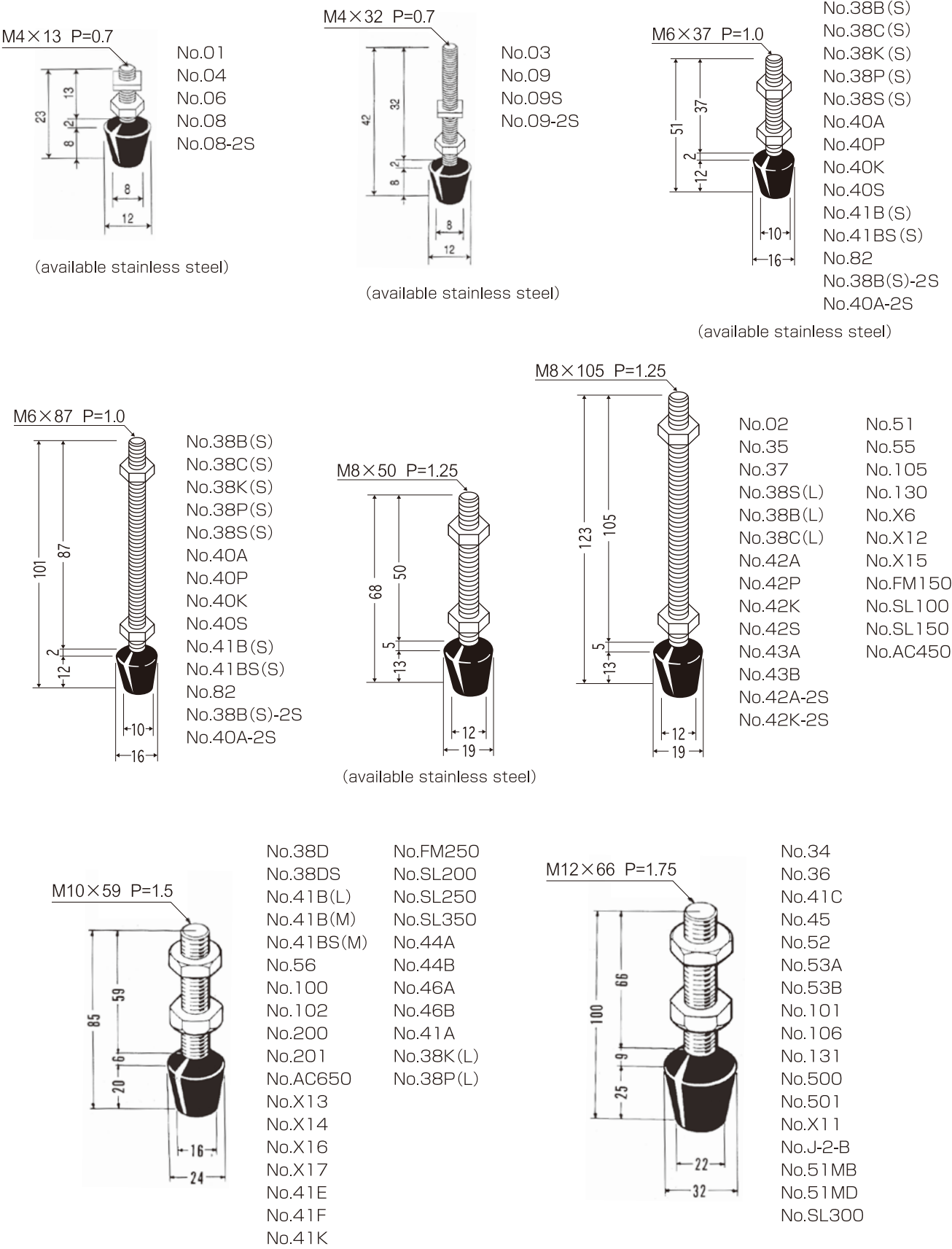
※ The rubber bolt is used, because the clamping pressure is absorbed by the rubber, clamping pressure is reduced compared with the normal bolt.

Neoprene Spindles

ACCESSORY (SPINDLES)

Neoprene Cap-Flat Tipped Ajustable Spindle Assemblies

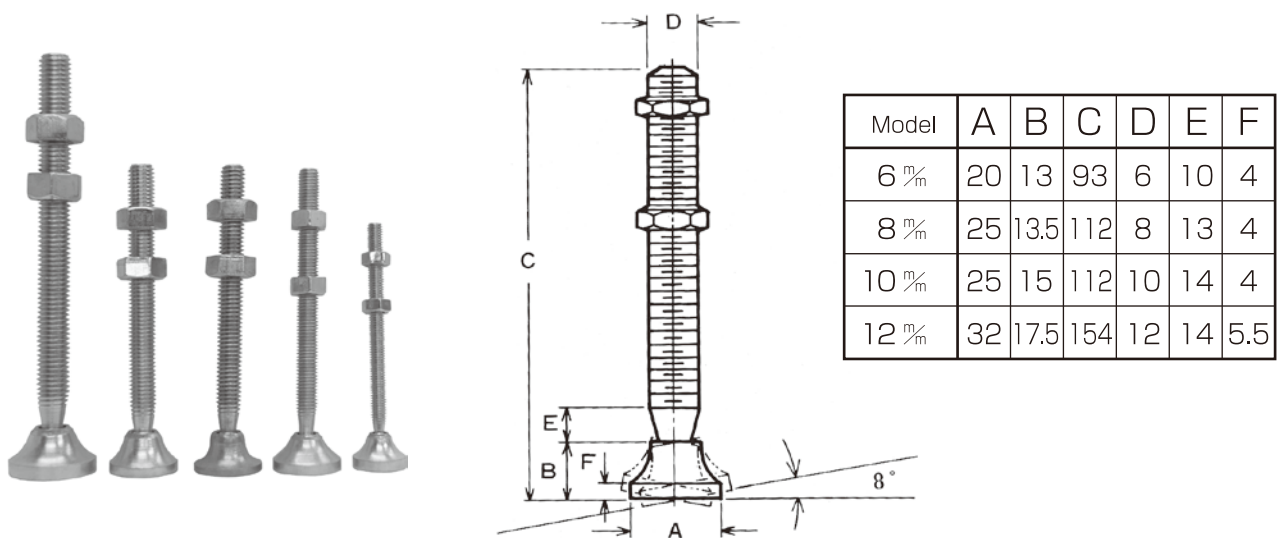
MATERIAL ... NBR
HARDNESS ... 70°
MANUFACTURING TEMPERATURE ... 170°~180°
TEMPERATURE ENDURANCE ... 80° (Usually) High-temperature usw 150°~160° (About use of time 30minute)



UNIVERSAL BOLT & SPRINGS

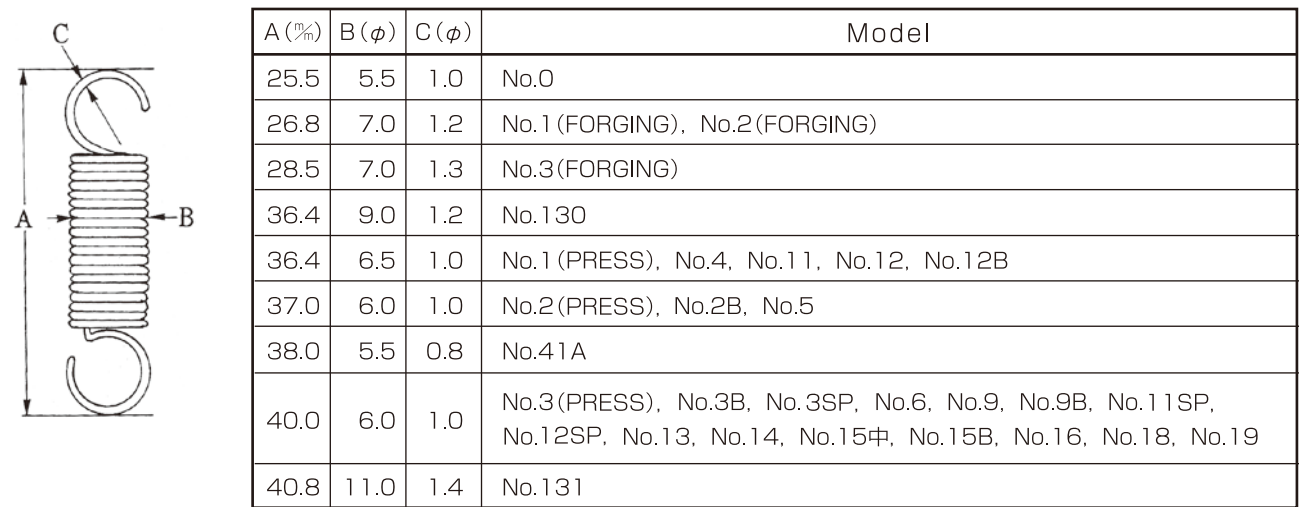
ACCESSORY (SPINDLES)

UNIVERSAL BOLT

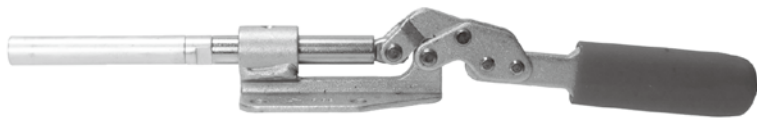


ACCESSORY (SPRINGS)

SPRINGS



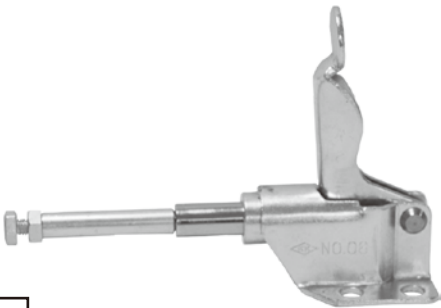
Extension Shaft



MOUNTING EXAMPLE
: NO.02

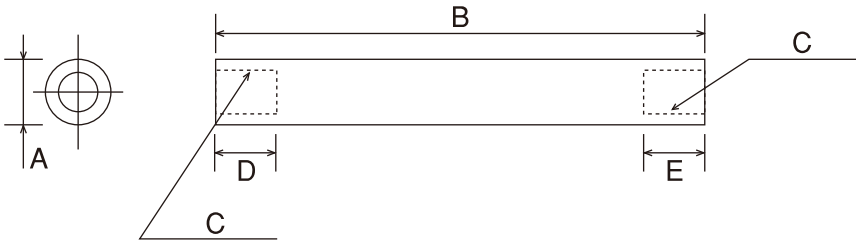
A TYPE (Male screw×Female screw Type)

TYPE	SIZE (OUTER DIAMETER・LENGTH・SCREW)					APPLITED MODEL
	A	B	C	D	E	
A	Φ 8 × 30mm	M 4	15	16		SL10・SL50R・SL50L・06・07
A	Φ 8 × 50mm					
A	Φ 10 × 50mm	M 6	15	16		FM50
A	Φ 10 × 100mm					
A	Φ 12 × 60mm	M 8	15	16		02・51・X6・SL100・FM150・80
A	Φ 12 × 120mm					
A	Φ 16 × 60mm	M10	15	16		SL200・SL300・FM250
A	Φ 16 × 120mm					
A	Φ 16 × 60mm	M12	15	16		SL300・51MB・51MD
A	Φ 16 × 130mm					
A	Φ 26 × 80mm	M18	15	16		51C
A	Φ 26 × 150mm					



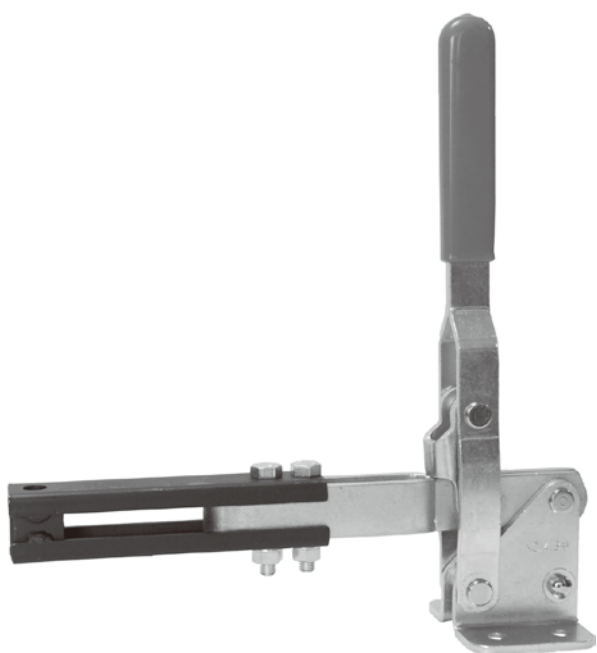
B TYPE (Both Female screw Type)

TYPE	SIZE (OUTER DIAMETER・LENGTH・SCREW)					APPLITED MODEL
	A	B	C	D	E	
B	Φ 8 × 30mm	M 4	9	9		
B	Φ 8 × 50mm					
B	Φ 10 × 50mm	M 6	11	11		
B	Φ 10 × 100mm					
B	Φ 12 × 60mm	M 8	13	13		
B	Φ 12 × 120mm					
B	Φ 16 × 60mm	M10	13	13		50A・51B小・51BS小・51BX小
B	Φ 16 × 120mm					
B	Φ 16 × 60mm	M12	13	13		50B・51B中・51BS中・51B大
B	Φ 16 × 130mm					

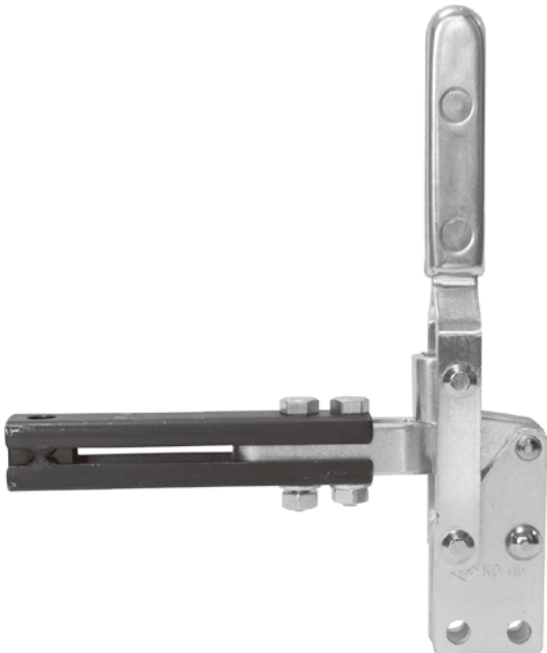


MOUNTING
EXAMPLE
: NO.06

Extension Arm

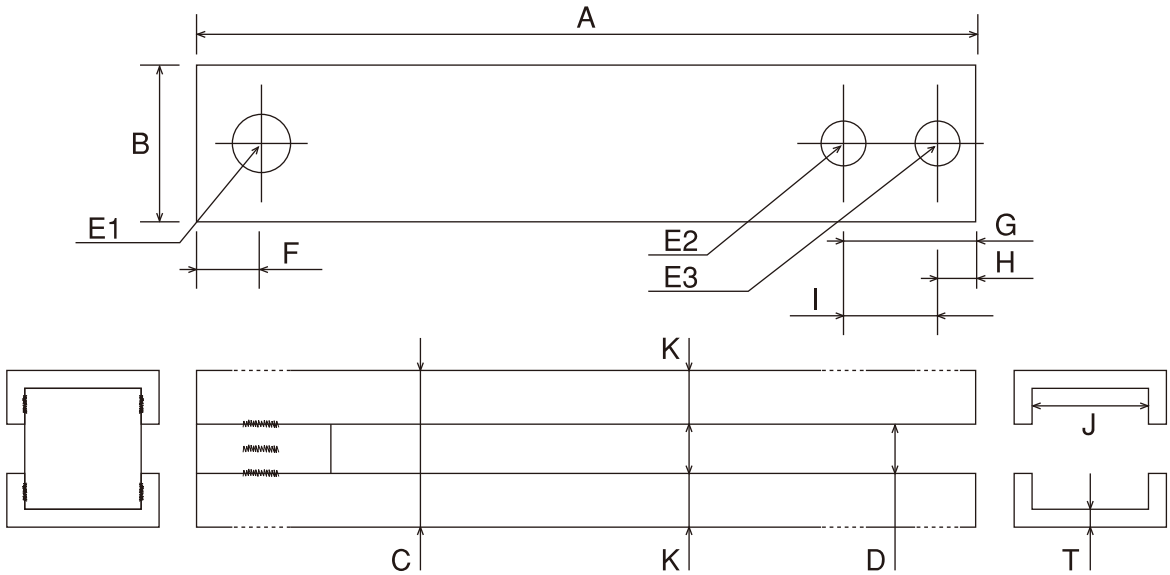


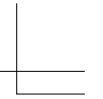
MOUNTING EXAMPLE
: NO.41BM



MOUNTING EXAMPLE
: NO.41K

	A	B	C	D	E1	E2	E3	F	G	H	I	J	K	T
38BS	70	19.1	19.1	5.1	6.5	6.5	6.5	8	22	6	16	14.5	7	2.3
41BS	85	19.8	21.2	3.2	6.5	6.5	6.5	8	22	6	16	15.2	9	2.3
42A	85	21.6	21.1	3.1	6.5	6.5	6.5	10	22	6	16	17	9	2.3
41BM	140	27.8	30.8	11.8	10.5	8.5	8.5	12	26	8	18	22	9.5	2.9
41E・K・F	130	25.8	25.5	5.9	10.5	8.5	8.5	12	26	8	18	20	9.8	2.9





MEMO

[illegible]