東栄工業株式会社

Toei Industrial Co., Ltd.

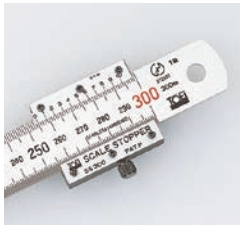
PRODUCT CATALOG

Accurpress
Press brake
Sole distributor in Japan

SHEETMETAL TOOLS
MEASURE INSTRUMENTS

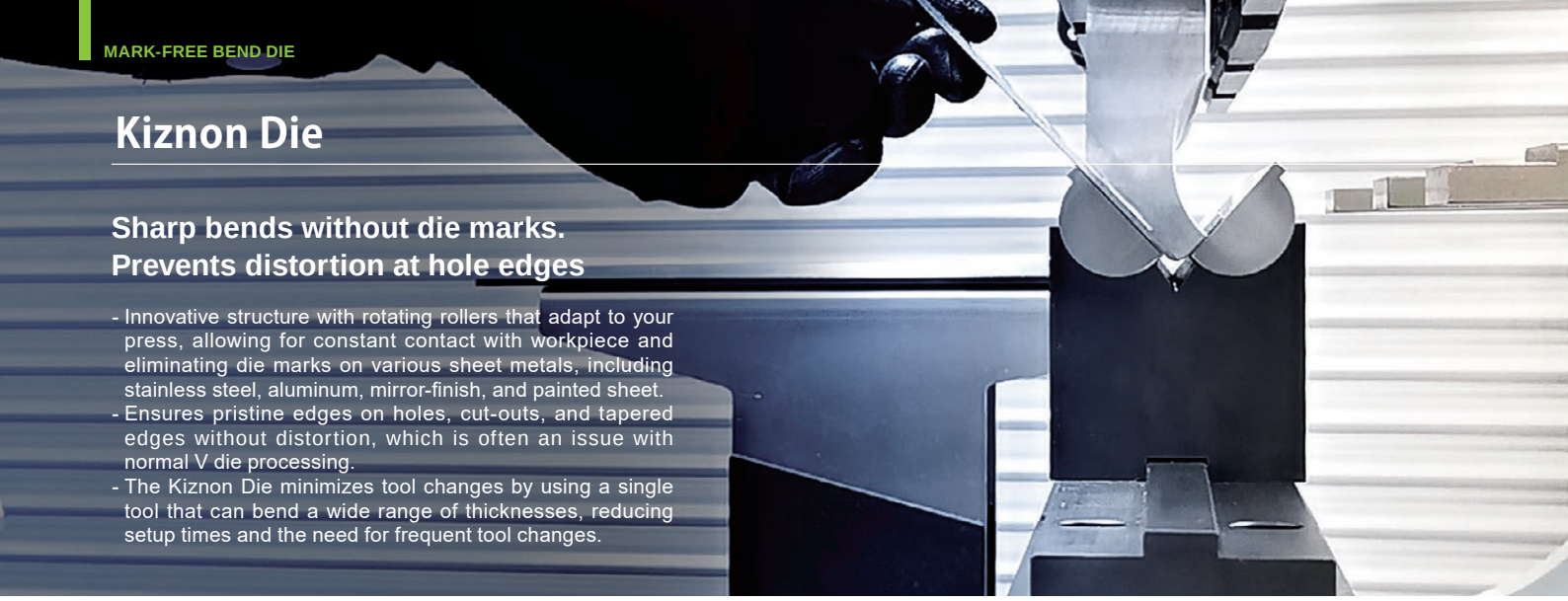
CLINOMETER
CHAMFER MEASURE
RADIUS MEASURE

PRESS BRAKE DIE
PUNCH HOLDER
MARK-PROTECTION
SHEET METAL TOOLS



RULE WITH VERNIER
VERNIER CALIPER

Kiznon Die

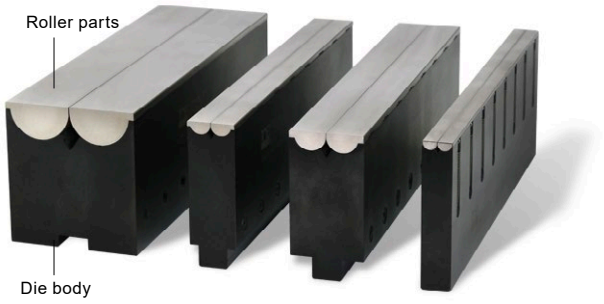


Sharp bends without die marks.
Prevents distortion at hole edges

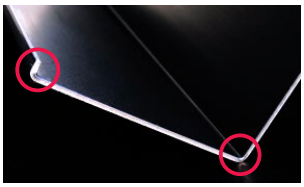
- Innovative structure with rotating rollers that adapt to your press, allowing for constant contact with workpiece and eliminating die marks on various sheet metals, including stainless steel, aluminum, mirror-finish, and painted sheet.
- Ensures pristine edges on holes, cut-outs, and tapered edges without distortion, which is often an issue with normal V die processing.
- The Kiznon Die minimizes tool changes by using a single tool that can bend a wide range of thicknesses, reducing setup times and the need for frequent tool changes.

Improved wear resistance
Roller parts: SCM440, fully surface hardened HRC45-49
Die body: SCM440 + nitriding treatment, tempered to HRC28-32

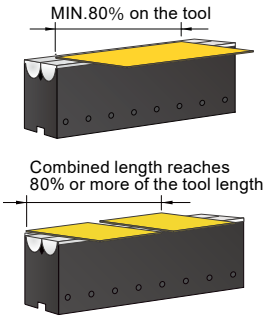
Leaves no pin marks on the workpiece
The tool differs from other products on the market by not having round pins on its roller parts, thus preventing pin marks on the workpiece.



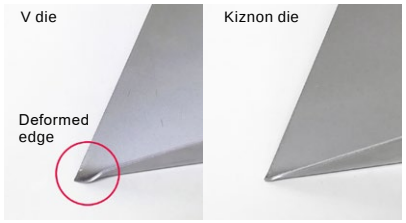
Short flanges & sharp edges
Short flanges are achievable, which are not possible with standard V dies, and sharp bends with small radius can be produced.



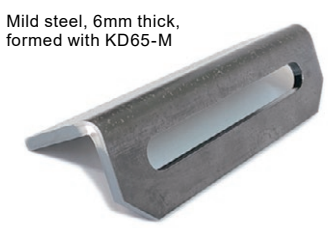
Tool usage conditions
1. Workpiece length should be at least 80% of the tool length.
2. Place the workpiece in the center of the tool.
3. You can process multiple workpieces that are each shorter than 80% of the tool length, as long as their combined length reaches 80% or more.



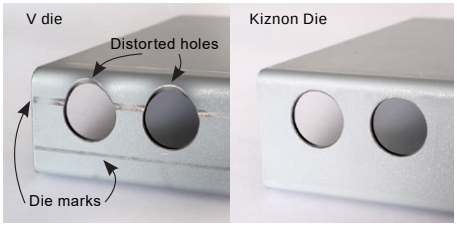
Tapered edge example



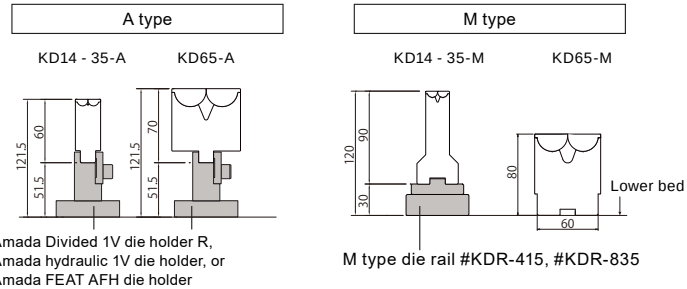
Cut-out example



Hole example



Installation examples



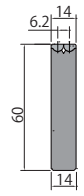
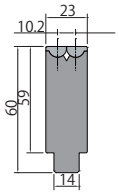
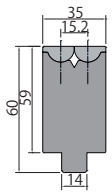
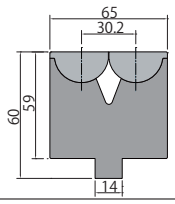
KD protection tape

When bending sheets without surface protection film using the Kiznon die, slight trace marks may occur. These traces can be easily prevented by attaching KD protection tape to the roller surface. The tape is long lasting and does not leave adhesive residue after removal.

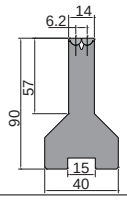
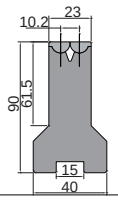
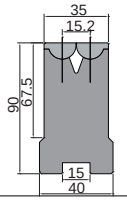
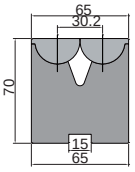
Model No.	Applicable die #	Specifications
D-06	KD14	6mm W, 10M length
D-10	KD23	10mm W, 10M length
D-16	KD35	16mm W, 10M length
D-30	KD65	30mm W, 10M length

Kiznon die specification

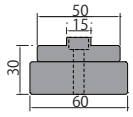
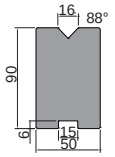
A type (Amada 1V die holder)

Model No.	KD14-A	KD23-A	KD35-A	KD65-A
Dimension				
Equivalent to:	V6	V12	V16	V30
Workpiece thickness(mm)	Mild steel：0.5 - 1.2 Stainless：0.5 - 1.0 Aluminum：0.5 - 1.0	Mild steel：0.5 - 2.0 Stainless：0.5 - 2.0 Aluminum：0.5 - 2.0	Mild steel：1.0 - 3.2 Stainless：1.0 - 3.0 Aluminum：1.0 - 3.0	Mild steel：1.2 - 6.0 Stainless：1.2 - 4.5 Aluminum：1.2 - 6.0
Proof pressure	50Ton/m	70Ton/m	90Ton/m	100Ton/m
Die length(mm)	50, 100, 200	50, 100, 200, 400	50, 100, 200, 400	50, 100, 200, 400
Die holder	Amada's Divided 1V die holder R, hydraulic die holder, FEAT AFH die holder			
Not applicable to:	Amada's former die holder 1V die holder No.080, No.081 Komatsu die base 1VHB-2, 1VHC			

M type (place on the lower bed)

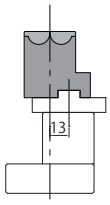
Model No.	KD14-M	KD23-M	KD35-M	KD65-M
Dimension				
Equivalent to:	V6	V12	V16	V30
Workpiece thickness(mm)	Mild steel：0.5 - 1.2 Stainless：0.5 - 1.0 Aluminum：0.5 - 1.0	Mild steel：0.5 - 2.0 Stainless：0.5 - 2.0 Aluminum：0.5 - 2.0	Mild steel：1.0 - 3.2 Stainless：1.0 - 3.0 Aluminum：1.0 - 3.0	Mild steel：1.2 - 6.0 Stainless：1.2 - 4.5 Aluminum：1.2 - 6.0
Proof pressure	50Ton/m	70Ton/m	90Ton/m	100Ton/m
Die length(mm)	50, 100, 200	50, 100, 200, 400	50, 100, 200, 400	50, 100, 200, 400
Die holder	Kiznon rail KDR-415, KDR-835			
Not applicable to:	Amada No.300 rail, Komatsu DHR die base *			

Kiznon rail and centering jig

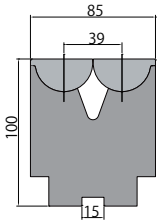
Model No.	Standard rail		Centering jig
Dimension	Place on the lower bed 		
Model No.	KDR-415	KDR-835	KDV-50
length (mm)	415	835	50

Coming soon

D type (2V die holder)

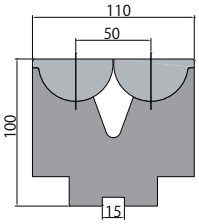


SPCC:0.5t - 3.2t



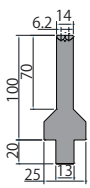
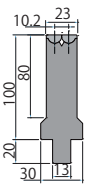
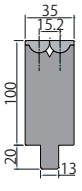
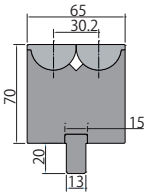
SPCC:6t - 8t

Heavy duty die



SPCC:6t - 10t

T type (Trumpf)

Model No.	KD14-T	KD23-T	KD35-T	KD65-T
Dimension				
Equivalent to:	V6	V12	V16	V30
Workpiece thickness(mm)	Mild steel：0.5 - 1.2 Stainless：0.5 - 1.0 Aluminum：0.5 - 1.0	Mild steel：0.5 - 2.0 Stainless：0.5 - 2.0 Aluminum：0.5 - 2.0	Mild steel：1.0 - 3.2 Stainless：1.0 - 3.0 Aluminum：1.0 - 3.0	Mild steel：1.2 - 6.0 Stainless：1.2 - 4.5 Aluminum：1.2 - 6.0
Proof pressure	50Ton/m	70Ton/m	90Ton/m	100Ton/m
Die length(mm)	50、100、200	50、100、200、400	50、100、200、400	50、100、200、400

TOEI Non-scratch sheet

Prevents die marks with super-strong fiber and urethane material

- Prevents die marks on various materials such as stainless steel, aluminum, and colored steel plates.
- Prevents wear and welding of the tool caused by surface-treated steel plates and other materials.
- No variation in bending accuracy regardless of workpiece length or thickness.
- Can be used with the same tonnage and V-width as usual processing.
- Can be repeatedly used by shifting damaged areas.

Kiznon sheet

Piping color: gray

Pat.

This sheet is knitted from a super fiber, stronger than steel and commonly used in bulletproof vests. It effectively absorbs the stretching force that occurs in the bottom of V-grooves, preventing tearing and ensuring high durability, cost-effectiveness, and workability.

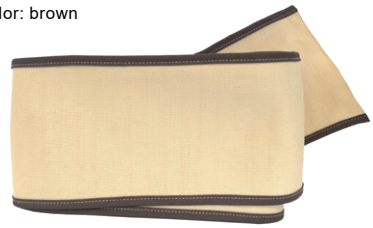
Model No.	Dimensions	Th. under pressure
T-05	100mm W, 1.0 th., 5M length	Approx. 0.1mm
T-10	100mm W, 1.0 th., 10M length	Approx. 0.1mm
Appropriate plate thickness		
Stainless: 0.5 - 1.5mm	Iron: 0.5 - 3.2mm	Aluminum: 0.5 - 6.0mm

Durability test table

Plate	Th.	Angle	V width	Die R	Cycles	Sheet condition
Stainless	1.2	90	8	0.5	538	No damage, still usable
Stainless	1.5	90	10	0.6	200	No damage, still usable
Colored	1.6	90	12	1.0	370	Thinner part on the V side. Still usable
AL	1.2	90	8	0.6	3000	No damage, still usable

Super Kiznon

Piping color: brown



Pat.

This sheet is woven from a high-density super fiber, offering greatly enhanced durability. It exhibits exceptional resistance to cutting and is capable of handling the bending of thick plates, up to 6mm in stainless steel or 9mm in regular steel. This makes it particularly suitable for bending materials with a thickness of 1.5mm in stainless steel or 3.2mm in regular steel, or more.

Model No.	Dimensions	Th. under pressure
S-05	100mm W, 1.2 th., 5M length	Approx. 0.2mm
S-10	100mm W, 1.2 th., 10M length	Approx. 0.2mm
Appropriate plate thickness		
Stainless: 0.8 - 6.0mm	Iron: 0.8 - 9.0mm	Aluminum: 0.8 - 12.0mm

Durability test table

Plate	Th.	Angle	V width	Die R	Cycles	Sheet condition
Stainless	1.5	90	10	0.6	316	No damage, still usable
Stainless	2.0	90	12	2.5	1700	No damage, still usable
Stainless	3.0	90	25	3.0	173	No damage, still usable
Stainless	4.0	90	20	0.5	50	No damage, still usable
Stainless	6.0	90	40	4.0	45	No damage, still usable

Kiznon urethane

Made of a high-quality urethane material known for its outstanding abrasion resistance and elasticity. It is especially well-suited for applications involving mirror surface stainless steel, aluminum, and color steel plates, as it leaves no pressure marks or small waves at the bending corners of the sheet material.

Model No.	Dimensions	Th. under pressure
U-05	100mm W, 0.5 th., 5M length	約 0.05mm
U-10	100mm W, 0.5 th., 10M length	約 0.05mm
Appropriate plate thickness		
Stainless: 0.5 - 1.5mm	Iron: 0.5 - 3.2mm	Aluminum: 0.5 - 6.0mm

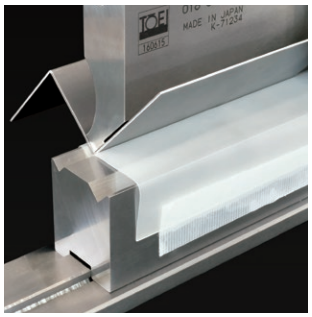
Durability test table

Plate	Th.	Angle	V width	Die R	Cycles	Sheet condition
Stainless	1.5	90	8	0.5	93	No damage, still usable
Stainless	1.5	90	10	1.5	200	No damage, still usable
Stainless	3.0	90	25	0.8	7	Tore on the seventh cycle
CRC	6.0	90	63	5.0	3	No damage, still usable

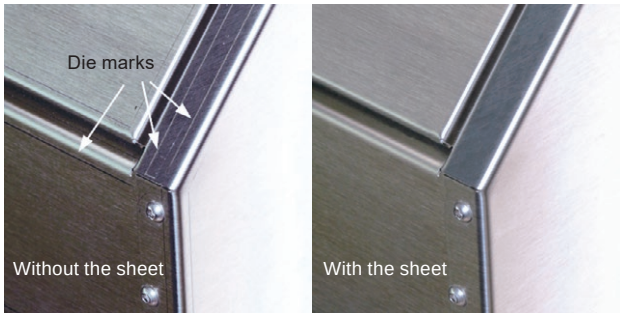
【Notes on each durability data】
All data were obtained using dies with small R of the V under unfavorable conditions. The data were collected with the sheet fixed at one point without being moved. By shifting the damaged areas of the sheet, the sheet can be used for bending up to 4-5 times the number of cycles reported in the data. The number of bending tons used is the same as that in normal bending processes.

Usage

Place the sheet over the V-groove, making sure there are no wrinkles, and fix it in place with tape.
By shifting the damaged areas of the sheet, you can reuse it multiple times.



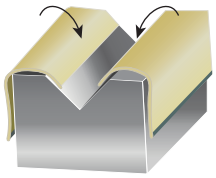
Examples of use



Usage for wide V-grooves

For dies with wide V-grooves, use two sheets on both sides of the groove as illustrated in the diagram. If the sheet becomes damaged, you can extend its lifespan by shifting it to the inside of the V-groove.

Shift the worn areas to the inside of the V-groove

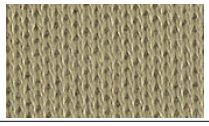
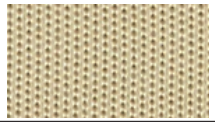


Improving sheet durability

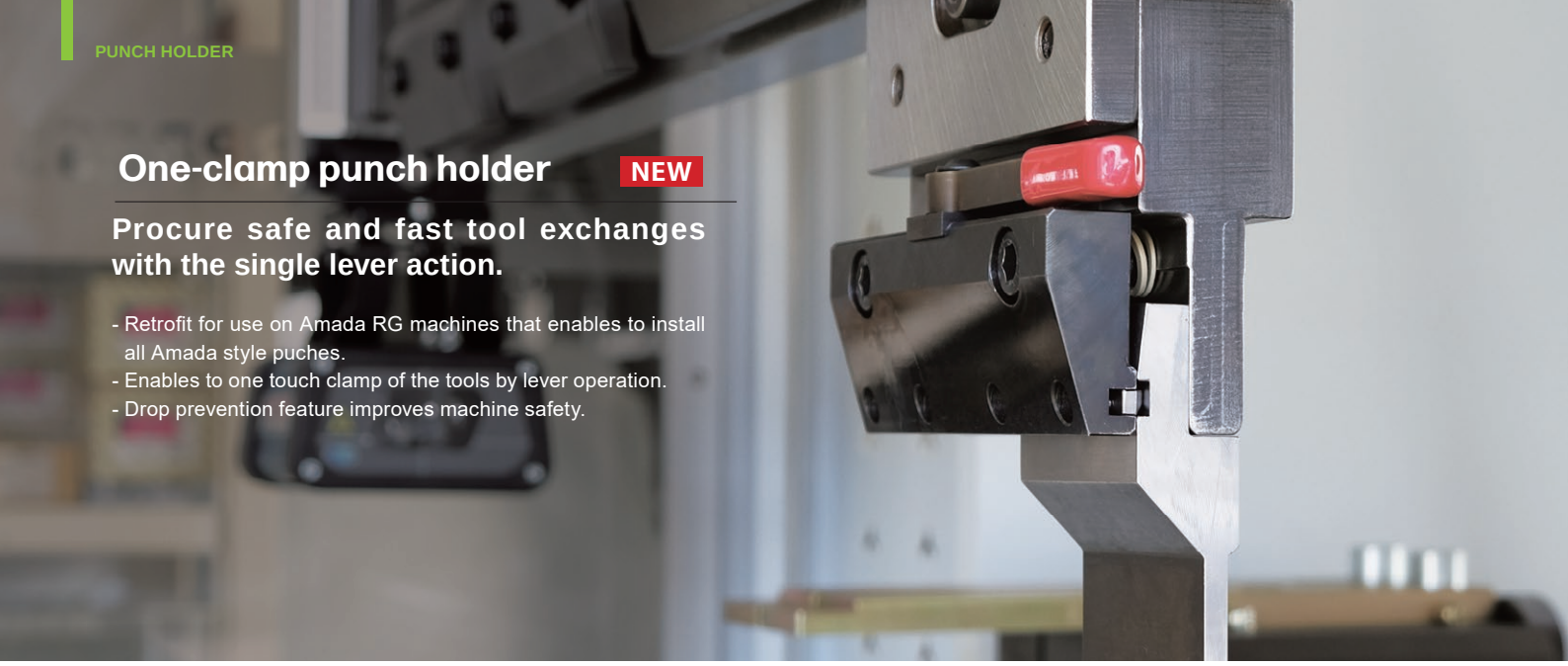
The durability of a sheet is greatly influenced by the conditions of the die used, even when the material and thickness of the sheet are the same. To enhance durability, it is important to remove any burrs or dross from the workpiece and utilize dies with larger V-width and R.

Although Kiznon urethane exhibits good elasticity and wear resistance, it is susceptible to damage from sharp objects. Therefore, using dies with larger R will contribute to increased durability.

Table of Appropriate Sheet Thickness and Evaluation for Each Sheet Material

Type		Kiznon sheet	Super Kiznon	Kiznon urethane
Enlarged photo				
Sheet material		Knitted super fiber	Knitted dense super fiber	Urethane with high abrasion resistant and elasticity
Applopriate sheet Th.	iron	0.5 - 3.2mm	0.8 - 9.0mm	0.5 - 3.2mm
	Stainless	0.5 - 1.5mm	0.8 - 6.0mm	0.5 - 1.5mm
	Aluminum	0.5 - 6.0mm	0.8 - 12.0mm	0.5 - 6.0mm
Evaluation	Iron	★★★★☆	★★★★★	★★★☆☆
	Stainless	★★★★☆	★★★★★	★★★☆☆
	Mirror surface stainless	★★★☆☆	★★★★☆	★★★★★
	Aluminum	★★★☆☆	★★★★★	★★★★☆
	Soft aluminum	★★★☆☆	★★★★☆	★★★★★
	Bending precision	★★★★★	★★★★★	★★★☆☆
	Workability	★★★★★	★★★★★	★☆☆☆☆ (1*)
	Durability	★★★★☆	★★★★★	★★☆☆☆
	Runnning cost	★★★★☆	★★★★★	★★☆☆☆
	Overall evaluation	**37/45**	**43/45**	**28/45**
Comparison of bending precision: precision variation		1.There is consistent precision even for long workpieces, ensuring uniform quality throughout. 2.Connecting the used and unused parts of the sheet has minimal impact on the precision, maintaining accuracy in the final product.		1.For the second bend, it may be necessary to adjust the depth slightly to account for thinning. However, subsequent bends typically do not require such adjustments. 2.Connecting the used area of the sheet with unused area can introduce variations in precision.
Bending for mirror surface stainless steel		There may be slight waviness near bent corners caused by the grain of the sheet material. (Note that these waves are so subtle that they may not be noticed unless carefully examined.		Ensures a smooth and clean finish without any fine waviness around the corner of the bend, which can be caused by the inherent weave of the sheet material.
Bending for soft aluminum		Bending with a very narrow groove width can result in the transfer of weave marks from the sheet material onto the workpiece, affecting its appearance.		Results in a clean finish without any pressure marks left on the sheet material.

(1*) The use of Kiznon urethane may reduce workability due to its non-slip nature, causing workpieces placed on it to catch.



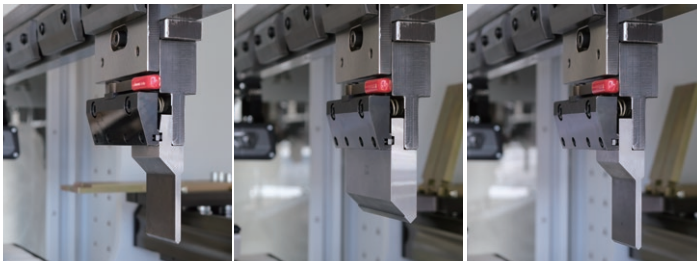
One-clamp punch holder NEW

Procure safe and fast tool exchanges with the single lever action.

- Retrofit for use on Amada RG machines that enables to install all Amada style puches.
- Enables to one touch clamp of the tools by lever operation.
- Drop prevention feature improves machine safety.

Single-lever action for fast tool set up

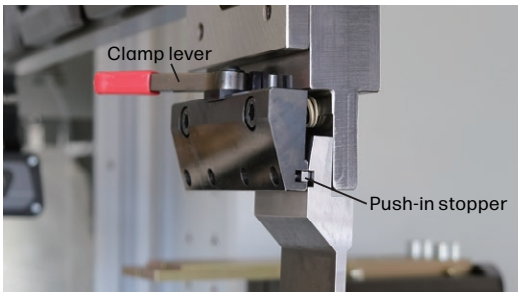
One-clamp punch holder allows for the installation of all Amada style punches onto older Amada machines.



Tapered groove　Straight groove　Non-groove

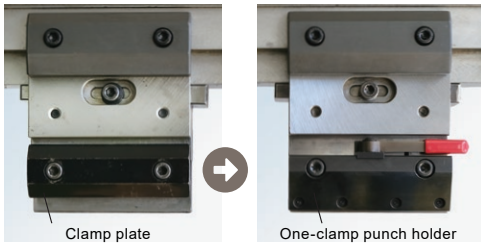
Safer set up

Grooved punches can be safely moved along the length of the press brake without the risk of them falling out.



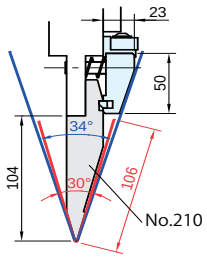
Installation

The clamp plate type ZI and ZII are compatible and can be used interchangeably. change the old model punch holder's clamp plates to One-clamp punch holder.

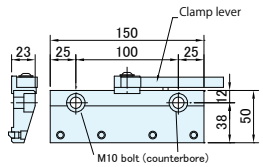
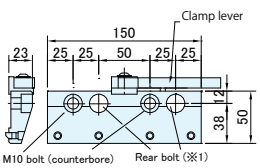


Precaution for 30 degree bending

When bending at a 30-degree acute angle, there is a possibility of interference between the workpiece and the tool. This can cause scratches and affect the precision of the final product. To avoid these issues, make sure to use the tool within a range where there is no interference, ensuring sufficient clearance between the workpiece and the tool during the bending process.



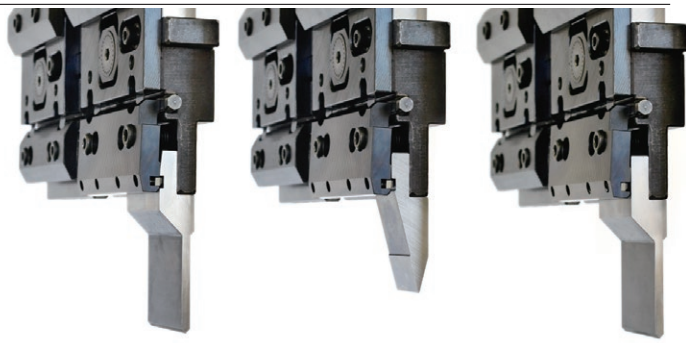
Dimensions and bolt positions

Holder type	Type 1 (standard)		Type 2	
Model No.	MK2-01		MK2-02	
Dimension	Bolt positions	Compatible model	Bolt positions	Compatible model
				

*Not compatible with dial type punch holders.　*Mounting bolts and springs are not included.

Multi-clamp plate

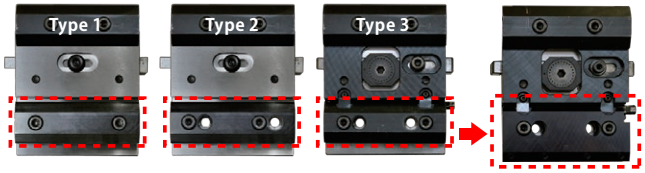
Make RG machines safer and more flexible.



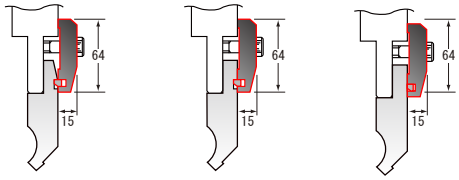
- Enables clamping of all Amada tool styles, including One-Touch, grooved, and non-grooved, by replacing the clamping fixtures on legacy press brakes.
- Features a tool drop prevention mechanism, ensuring safe tool replacement.*
- Compatible with Amada ZI and ZII system press brakes.
- Tools can be installed from the side and bottom of the Milti-clamp plate.
- The Multi-clamp plates available for installation on Toyo Koki press machines, with a length of 200mm, designed for Amada style grip system.

* Tool drop prevention is only effective for One-Touch and grooved punches.

Compatible with Amada ZI and ZII system

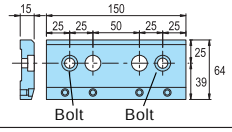
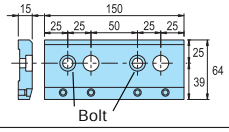
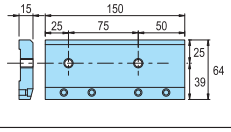
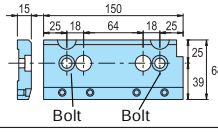
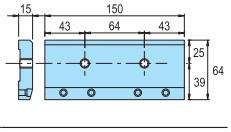


Replace the original clamp fixture to Multi-clamp plate



Amada One-Touch | Grooved punch | Non-grooved punch

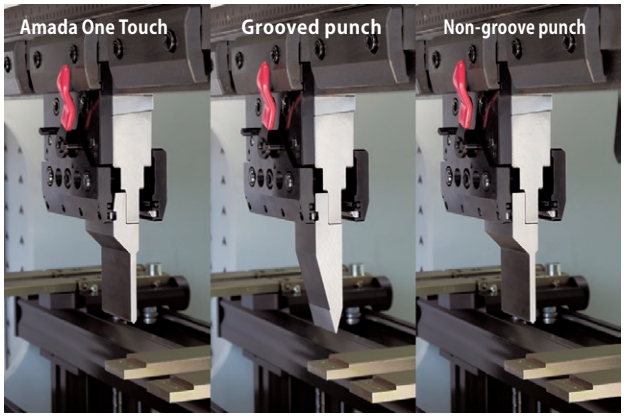
Illustration of bolt locations

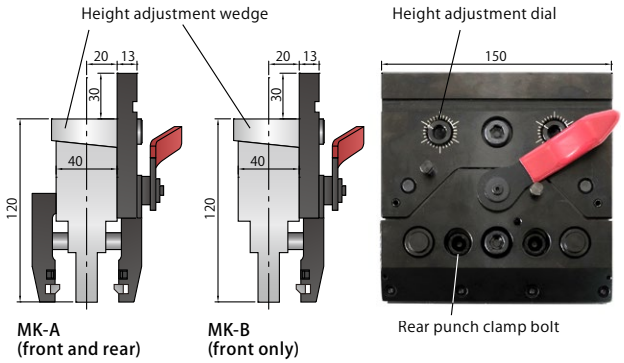
Type	Type 1	Type 2		Type 3	
	Front plate	Front plate	Rear plate	Front plate	Rear plate
Model No.	MK-01A	MK-02A	MK-02B	MK-03A	MK-03B
Dimensions					

Multi-grip punch holder

- The punch holder utilizes the latest internal wedge mechanism for precise and gapless positioning.
- It features a single lever turning action, making it easy to lock the punch securely in place.
- A tool drop prevention mechanism ensures safe and secure tool replacement.
- The punch holder allows for the installation of tools from both the side and bottom, providing flexibility in tool placement.

Compatible to all clamp styles of Amada punches





MK-A (front and rear) | MK-B (front only)

Model No.	MK-A	MK-B
Clamp plate	Front and rear (1*)	Front only
Machine compatibility	Amada Z-II style	Amada Z-II style
Holder length	150mm	150mm
Effective height	120mm	120mm
Ht. adjustment	Front and rear wedge adjustment with dials	
Mfg. compatibility	Amada, Aizawa, and Muratec	
Accessories (2*)	Mounting blacket, A type or C type	

(1*) When installing the punch on the rearside, tighten the bolt from the front using a wrench.
(2*) The mounting bracket accessory is sold as a set with the product and cannot be purchased separately.
(3*) This product cannot be used with use the original grip system or other grip products simultaneously.

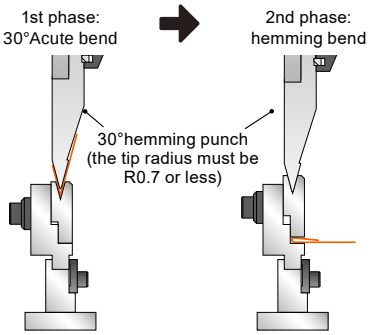
Lightweight hemming die with the acute bend V-opening and flattening jaw

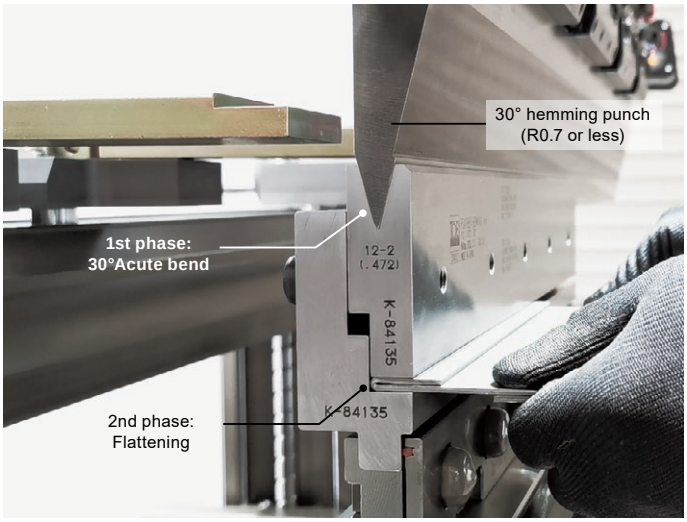
Feather Hemming Die

Patented

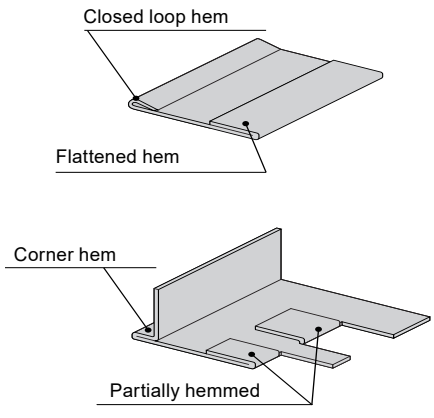
- Lightweight: The 835mm length die weighs 15kg and can be loaded by a single operator.
- Reduced tool set-up time: The die features a set of 30-degree acute V-opening for acute bends and a flattening jaw for hemming bends.
- Safe structure: In the event of tool overload, the likelihood of broken pieces flying apart is minimized.
- High durability: Through hardening and surface hardening treatments, tool wear, galling, and distortion are minimized.
- Slip-resistant: The sheet, including hard steels like stainless steel, does not slip from the flattening jaw during the hemming process.

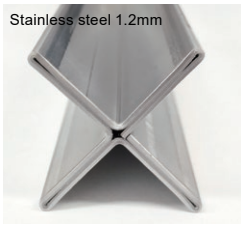
To prevent personal injury accidents, avoid attempting to complete the hemming bend in one single load, as it may cause the workpiece to slip towards the operator. Instead, gradually apply pressure to the workpiece while sliding it back and forth. Begin with a small load and gradually increase it until sufficient pressure is achieved.



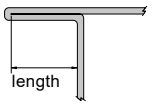


Types of hems





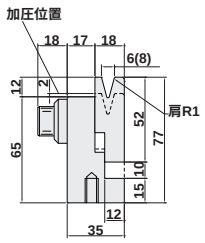
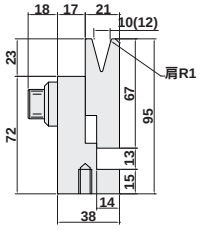
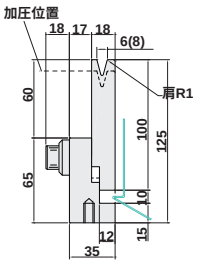
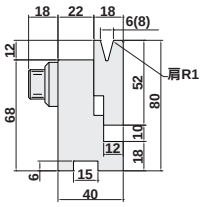
Mininum length of the corner hem

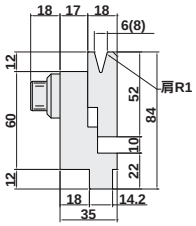
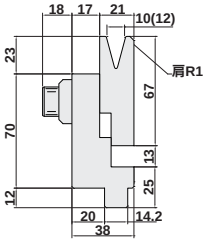
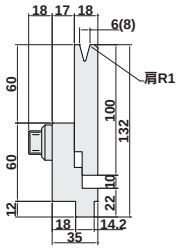


Type of the die	Plate thickness	Min. length
Flat base	1.6mm	10.5mm
High height	1.6mm	8.5mm
Thick plate	2.3mm	16.0mm

Adaptable with: Press brake machines from Amada, Komatsu, TOYO (AMADATOYO), Aizawa, Nisshinbo, Yamazaki Mazac, Muratec
Applicable punch: 30° punch with the tip radius R0.7 or less. The punch tip radius larger than R0.7mm may catch on the V opening and dislodge the tool and die holder, which is dangerous.

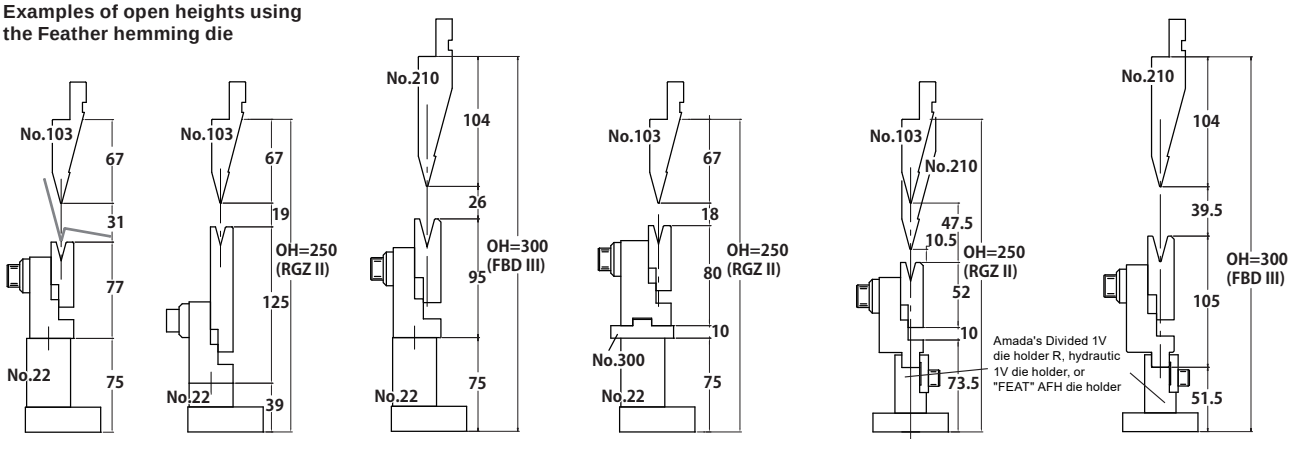
Tool size: L size: 835mm S size: 415mm 8 division: 45, 50, 50, 55, 60, 65, 70,75 (total 470mm)
11 division: 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100 (total 835mm)

Type		Flat base		Flat base for thick plate		High-height Flat base		Rail	
Tool dimension									
Holder		2V die holder		2V die holder		2V die holder		2V die rail	
V Angle		30°		30°		30°		30°	
V width（mm）		V6	V8	V10	V12	V6	V8	V6	V8
Max thickness	Stainless	1.2mm	1.6mm	2.0mm	2.3mm	1.2mm	1.6mm	1.2mm	1.6mm
	SPCC	1.0mm	1.2mm	1.5mm	1.5mm	1.0mm	1.2mm	1.0mm	1.2mm
Allow. Ton.	1st phase	50Ton/M		55Ton/M		50Ton/M		50Ton/M	
	2nd phase	80Ton/M		100Ton/M		80Ton/M		80Ton/M	
Size		L size (835mm) S size (415mm)		L size (835mm) S size (415mm)		L size (835mm) S size (415mm)		L size (835mm) S size (415mm) 8 division、11 division	

Type		Reversible		Reversible for thick plate NEW		High height Reversible NEW	
Tool dimension							
Holder		Amada's Divided 1V die hoder R, AFH die holder, or hydraulic 1V die holder					
V Angle		30°		30°		30°	
V width（mm）		V6	V8	V10	V12	V6	V8
Max thickness	Stainless	1.2mm	1.6mm	2.0mm	2.3mm	1.2mm	1.6mm
	SPCC	1.0mm	1.2mm	1.5mm	1.5mm	1.0mm	1.2mm
Allow. Ton.	1st phase	50Ton/M		55Ton/M		50Ton/M	
	2nd phase	80Ton/M		100Ton/M		80Ton/M	
Size		L size (835mm) S size (415mm) 8 division、11 division		L size (835mm) S size (415mm) 8 division、11 division		L size (835mm) S size (415mm) 8 division、11 division	

*Amada 's former 1V die holder No.080 (plug-in divided 1V die holder, length 1050mm) and No.81 (length 1260mm) can not be used with any dies of the reversible type.

Examples of open heights using the Feather hemming die



Deep bend punch holder

NEW

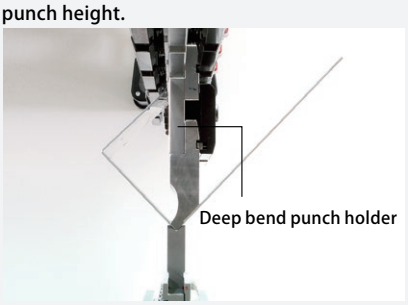
Simply attach to the grip system to increase the bending range of the machine

- The attachment expands bending range, allowing deep bends beyond gooseneck punches.
- Resolves insufficient blade stroke issue.

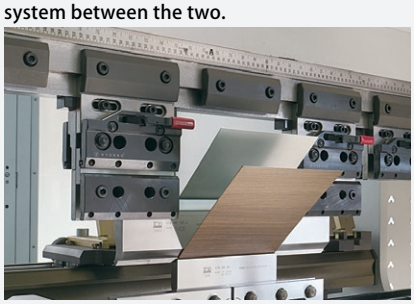
Each Amada type punch clamp can be mounted

Deep box bending with rises on both sides.

Allows deeper bendings by increasing the punch height.

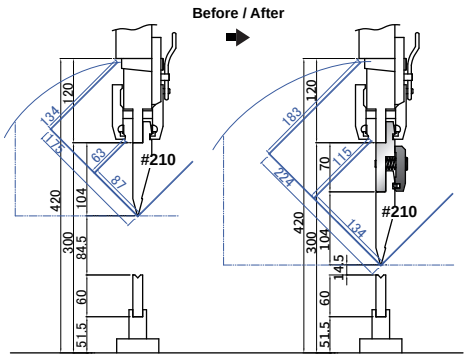


Pass-through bending by removing the grip system between the two.

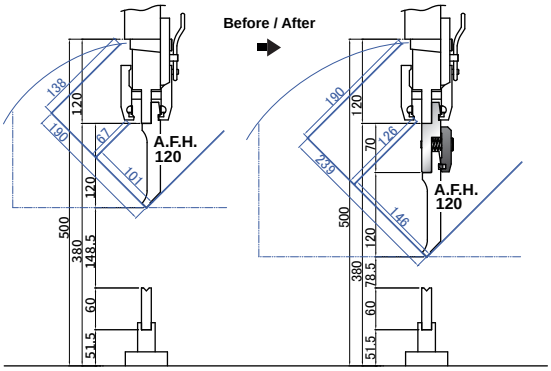


Comparison of bending range befor / after using Deep bend punch holder

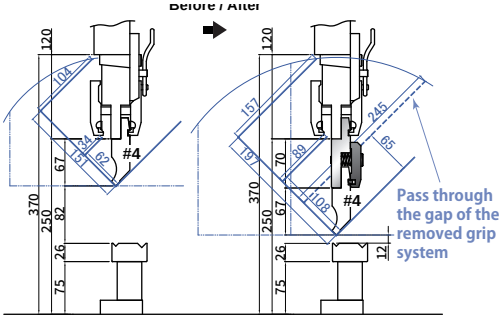
Amada FBDII(Open height 420, stroke 150)



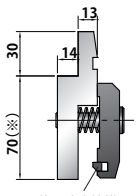
Amada HDS(Open height 500, stroke 200)



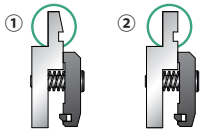
Amada RGZII(Open height 370, stroke 100)



Removing the interfering grip system for pass-through bending may cause slight center bending deviations in the workpiece, depending on the bending length and die type.



Choose the clamp style



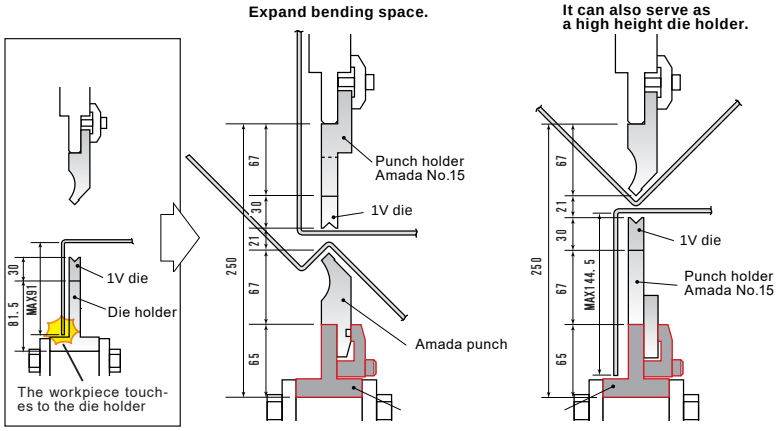
Model No.	FP-70
Holder length	150mm
Holde height	70mm
Allow. Ton.	80Ton/M
Adaptable to:	Amada's grip systems

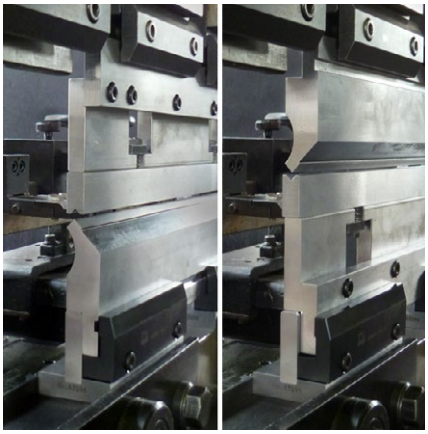
Invertible punch holder

Expand the bending space byinverting a punch and die position

- Increase bending capacity by inverting the position of the punch and die.
- Compatible with all Amada punches.
- Can also serve as a high height die holder.
- Dimensions: W60mm x H65mm x L150mm.

Install it at approximately the same 200mm pitch as the intermediate plate. (If the die length is 835mm, use four of them).
The 1V die can be mounted on the pre-existing punch holder No. 15.

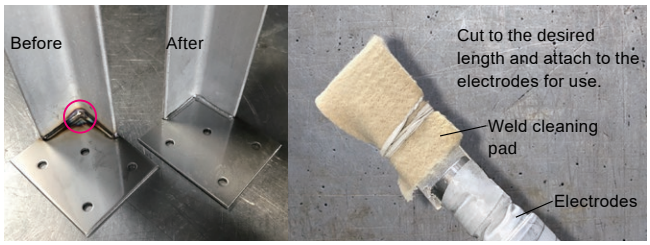


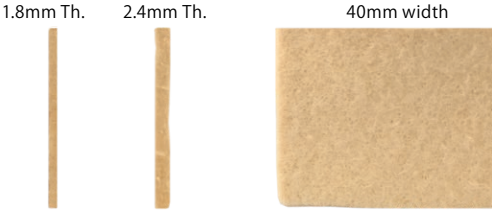


Weld cleaning pad

Effectively remove burns from stainless steel welds at an affordable cost.

- Cloth for stainless steel burn removal device electrodes.
- Durable felt-like super fiber material.
- Offers insulation, acid resistance, heat resistance, and flame retardancy, reducing cloth replacement frequency for increased work efficiency.





User feedback

- This one is more lasting and easier to use than cylindrial types (competitive pads).
- It can handle heat without any issues, allowing to remove all burns with just one pad.
- The cloth absorbs liquid well. No need for frequent soakings.
- Even when using stronger acidic solutions, it maintains high resistance to damage.

Model No.	Dimensions	Details and suage
F-05	40mm W x 2.4t x 5M length	Thick pad
F-10	40mm W x 2.4t x 10M length	For overall burn removal process
FC-05	40mm W x 1.8t x 5M length	Thin pad
FC-10	40mm W x 1.8t x 10M length	For in narrow or confined areas

Angle guide

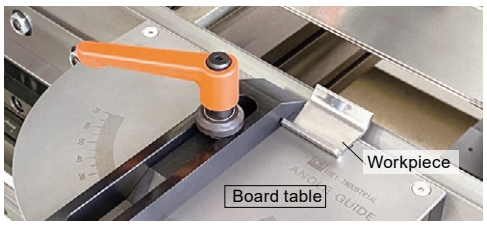
NEW

Angle Gauge & Board Table Combo. Ideal for narrow and small workpieces, and angle bending

- Powerful magnet for easy attachment, compatible with all manufacturers and tool types.
- The 18mm thick guide bar can slide both forward and backward to ensure stability when working with small workpieces or round bars.
- Precise angle adjustments up to 70° left or right.
- Wide Board table for workpiece stability and high-precision bending.
- Clear angle scale lines.
- Adjustable clamp lever for flexible positioning.

Prevent Finger Entrapment Accidents

By placing the workpiece on the board table and processing it without manual support, you can prevent the risk of finger injuries that may occur from getting caught between the workpiece and the punch.



Precision Angle Adjustment for Diagonal Bending

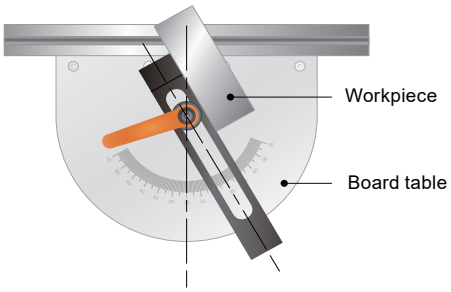
When performing diagonal bending, make sure to place the workpiece on the acute angle side of the board table. This will help ensure accurate angle determination throughout the bending process, as shown in the photo below.

Round Bar Bending

Using a right-angle square on the board table, you can accurately and simultaneously bend two round bars in parallel.

Precaution for diagonal bending

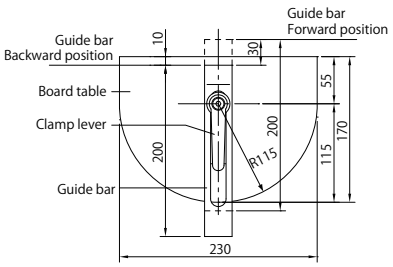
When performing diagonal bending, make sure to position the workpiece on the acute angle side of the board table for processing.

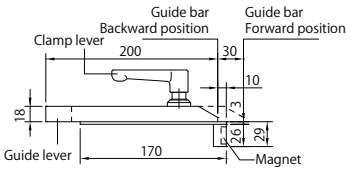


Compatible with Safety Devices: Can be Used Even with Safety Features Engaged

It can be attached to press brakes equipped with safety devices without obstructing the laser beam. This allows for safe operation without the need to disable the safety features.

Use a demagnetizer to demagnetize the die tool if it becomes magnetized by the magnet.





Model No.	AG-1
Board table dimension	230W x 170L
Board table material	Stainless304
Guide bar dimension	32W×200L×18t
Guide bar material	S50C
Guide bar angle / accuracy	70° left and right, accuracy +/- 0.3°
Guide bar moving range	30mm
Clamp lever	M8 bolt, 70mm length, lever angle is adjastable
Magnet	Neodium magnet disk x 4, 20 diameter, 8kg force
Max. Load Capacity / weight	4kg / approx. 2.3kg

Adaptable dies	AFH 1V die Divided 1V Die for sashes Bolt-fastening 1V Die for sashes Bolt-fastening 2V Die 2V Die rail Qucik Change 2V Die 1V Die for thick plates

DPM-2

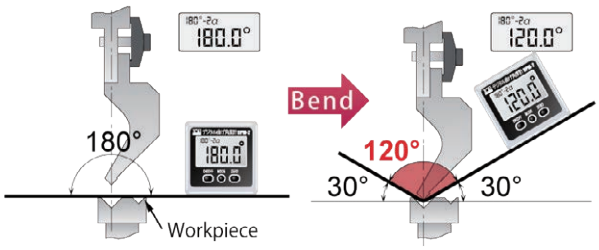
Pat.

Real-time angle measurement for sheet metal bending

- Dual measurement modes: Bending angle mode (real-time display) and general angle mode.
- Set any angle as reference (0°) for comparative measurements.
- Durable aluminum construction resists deformation from impacts.
- Strong neodymium magnet enables hands-free measurements.
- Automatic upright display when flipped.

Bending Angle Mode

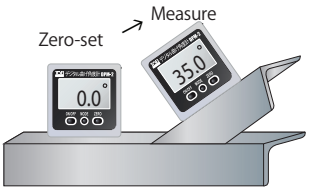
It keeps track of the internal angles of sheet metal in real-time as you bend them. This allows you to check the angles on the go while working.



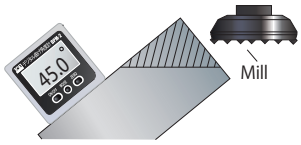
General Angle Mode

It works as a regular angle gauge and lets you set any angle as the reference point (0°) for measuring angles. It's handy for post-bending inspections, structural steelwork, and machine processing.

For product inspection

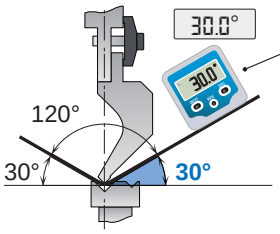


For milling processing



Differences from a regular angle gauge

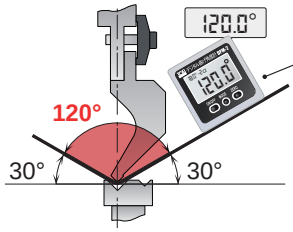
With a regular angle gauge, you have to do extra calculations to figure out the actual bending angle because it only shows the inclination angle from the reference point of 0°



Regular angle gauge

Example:
180°- (30°×2) ＝120°

With DPM-2, you can easily track the bending angle of a sheet directly, without the need for calculations, while working on your machining tasks.



DPM-2

Real-time displayof sheet bending angles.

The world's first compact digital angle gauge designed for sheet metal bending

The DPM-2 is designed to tackle sheet metal and fabrication tasks with precision, convenience, and durability in mind. Its sturdy aluminum build and strong magnet ensure hands-free operation. What sets it apart is the game-changing 'Bending Angle Mode,' making it the ultimate tool for sheet metal bending.

Model No.	DPM-2
Measuring range	
Bend angle	180° -2α(360°)
General angle	90° ×4(360°)
Accuracy	
Bend angle	0-5°, 175-180°= +/- 0.2°(+/-12', +/- 3.5mm/m) 6 -174°= +/- 0.4°(+/-24', +/- 7mm/m)
Relative angle	0-5°, 85-90°= +/- 0.1°(+/-6', +/- 1.75mm/m) 6-84°= +/- 0.2°(+/-12', +/- 3.5mm/m)

Resolution	0.1°
Battery	9V6P Alkaline battery
Dimensions	57L x 29W x 57H mm / 220g
IP rating	IP50
Material	Aluminum alloy
Magnet	Neodium magnet 10 dia. attracting force 2kg x 3 disks
Accessories	Strage box

Level protractor No.2

Measure angles, slopes, and inclines with precision using the liquid sensor

- Self-calibrating for horizontal and vertical alignment.
- Buzzer for audible level and plumb indication.
- Automatic upright display when flipped.
- Hold function for value freezing.
- Custom zero-setting capability.
- Backlight with auto-off feature.
- IP65 dust and water resistance.

Buzzer Alart

Display Invertion

ABS & Zero-set

Dust & Water Proof

Hold Function

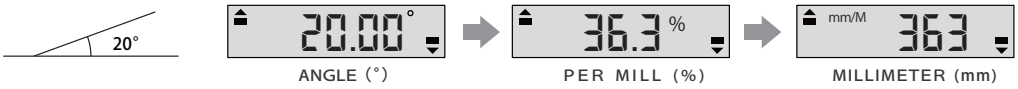
Display Backlight

2 body designs available:

Magnet base design

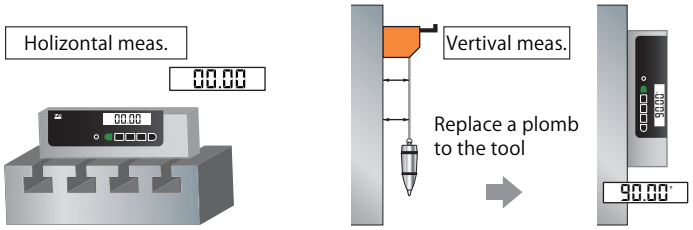
V-groove design for pipe gradients

Switch measurement modes with button operation



Self-level function

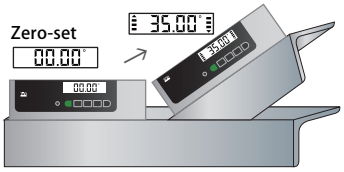
With the self-calibration capability using a liquid sensor, you can calibrate horizontally and vertically without the need for a traditional spirit level.



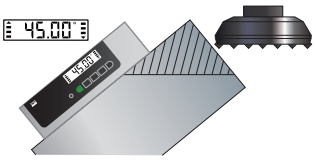
Precision frame achieved through machining processes. Designed for professionals

The main body frame is made of solid aluminum and undergoes precision machining to achieve a highly accurate finish. This sets it apart from imitation products housed in sheet metal or plastic cases that only showcase surface-level precision. The result is a truly high-precision product designed specifically for professionals.

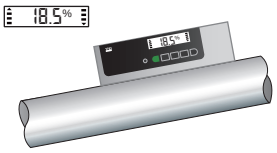
Measure from the zero set angle



For milling processing



For piping and floor level check



Model No.	No.2
Measuring range	90°x4 (360°real-time)
Resolution	Angle = 0.05° Raise= 1mm/M Gradient=0.1%
Dimensions	26L x 66H x 220L mm 550g
Accuracy (angle)	0.00°and 90.00° = +/- 0.05° 0.05° - 89.95° = +/- 0.20°
Accuracy (raise)	0 - 1mm/M = +/-1mm/M 2 - 150mm/M = +/-4mm/M 151 - 725mm/M = +/-6mm/M 726 - 1000mm/M = +/-8mm/M

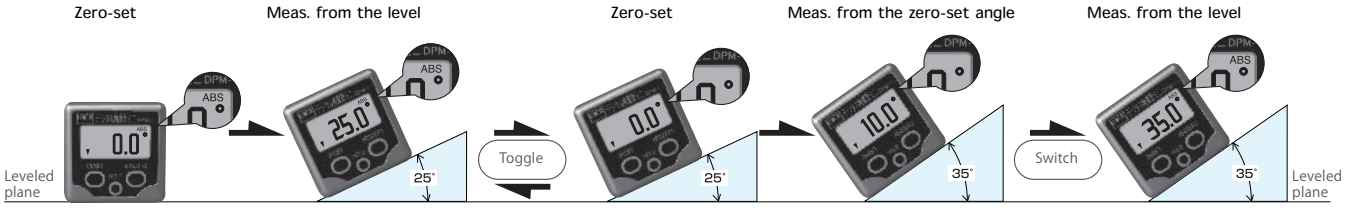
Operating temperature	-5 to 50℃
IP rating	IP54
Battery	9V6P Alkaline battery 120 hours
Auto power-off	6 min.
Material	Body: Aluminum alloy
Body design	Magnet design = magnet force 6kg x2 V-groove design = V wide 10mm no magnet

DPM-1 protractor

Compact protractor for accute measurement

- Set any position as 0° reference and measure angles from there.
- Store the absolute value (ABS) for quick measurement.
- Convenient hold function for secure measurements in inaccessible areas.
- Bottom magnet for secure attachment and polished base for professional use.

Toggle between ABS measurement mode and Comparative (relative) Measurement **mode with a simple button press.**



Model No.	DPM-1
Resolution	0.1°
Measuring range	180° ×2(360°)
Accuracy	0°/90°/180°=+/-0.1°(+/-1.75㎜ /m)
	1-89°/91-179°=+/-0.2°(+/-3.5㎜ /m)
Power	3V CR2032 Lithium battery
Dimensions	50.8L x 32W x 50.8H mm
Weight	175g
IP rating	IP50

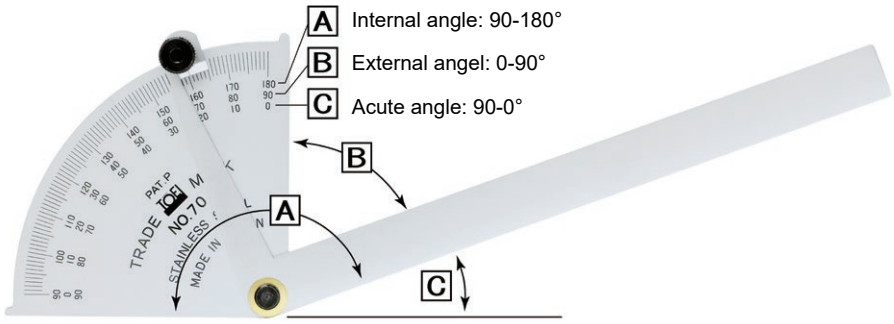
Designed for professional use

DPM-1 features a sturdy aluminum body with a polished measuring base which ensures durability and accurate measurement. Additionally, it's equipped with a built-in magnet on the bottom, allowing for hands-free measurements on gentle inclines.

AT protractor

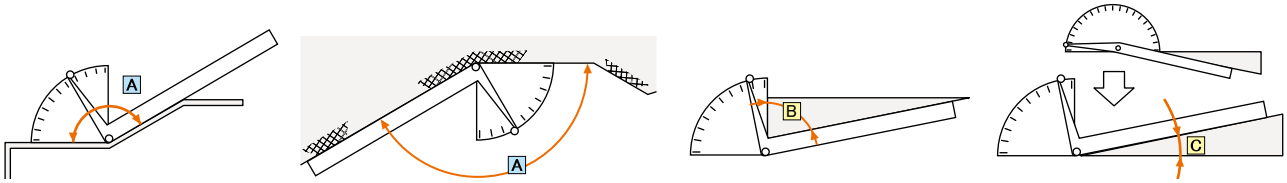
Versatile Angle Measurement Tool for All Angles

It's a versatile tool that measures external, internal, and acute angles.



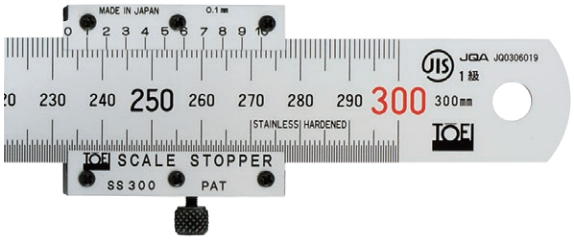
Model No.	No.70
Accuracy	+/- 0.2°
Dimensions	L 255mm, 70mm radius, 1.2mm Th.
Graduation	1°
Material	Stainless steel

Accurate Angle Measurements for Positioning, Sheet Metal Folding, and Inner Corner Angles. Measure even the most challenging acute angles that traditional protractors cannot accurately gauge.

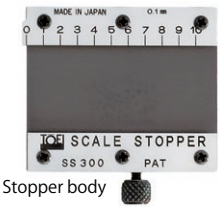


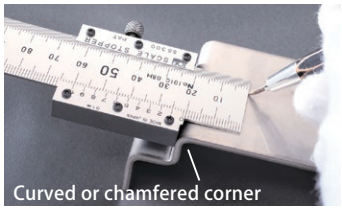
Scale stopper

0.1mm Increment Vernier Scale with Stopper

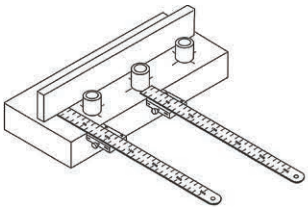


- A stopper with a vernier scale, featuring 0.1mm graduations, designed to meet the standards of JIS Class 1 ruler. Combination with JIS Class 1 rule is also available.
- The thickness of Vernier scale is 0.4mm. It eliminates reading errors caused by parallax.
- Equipped with an internal copper plate spring in the stopper, ensuring a secure and precise fit without any play or shifting.
- When paired with a fine-point scribing needle, it can serve as a substitute for a height gauge.

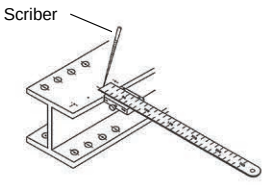




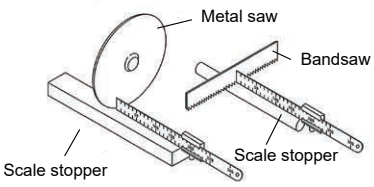
Ideal for parallel attachments and welding with identical dimensions.



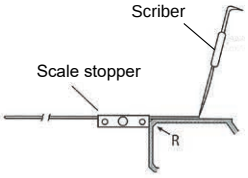
For multi-scribing tasks



For precise cutting in 0.1mm increments.



For chamfered or curved object



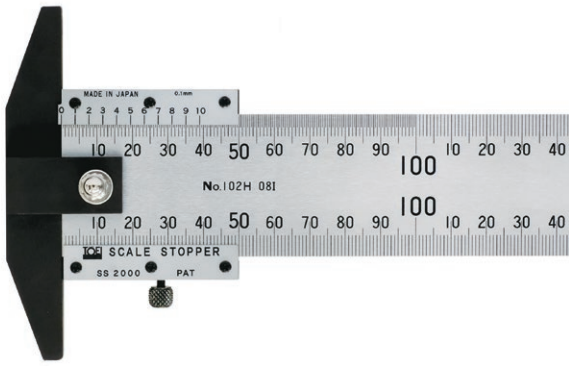
Model No. Stopper w/ rule	Stopper body	Maximan Measurement length*	Resolution	Length x Width x Thickness (mm)	Adaptable rule (JIS standard) width x thickness (mm)
SS300	SS300B	300mm	0.1mm	44 x 38 x 9	25 x 1.0
SS600	SS600B	600mm	0.1mm	50 x 44 x 9	30 x 1.2
SS1000	SS1000B	1000mm	0.1mm	50 x 49 x 9	35 x 1.5
SS1500	SS1500B	1500mm	0.1mm	50 x 54 x 12	40 x 2.0

*The term “maximum measurement length” represents the marking on the scale’s far end according to JIS Class 1 standards. However, it does not guarantee the minimum reading value when using the Vernier scale and stopper.

Scale caliper

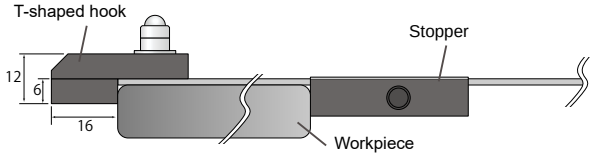
Swift & Precise 0.1mm Measurements: Alternative to Long-Length Calipers

- T-shaped hook and 0.1mm Vernier scale on JIS Class 1 scale.
- 0.4mm thick Vernier scale plate eliminates parallax errors.
- Internal copper plate spring in stopper eliminates play and ensures secure fit.
- Minimal measurement error due to close workpiece contact.



Effortless, accurate measurements with minimal error

・Simply position the hook and stopper against the workpiece.
・Eliminates the need for visual adjustments to align with the workpiece.



Model No.	Max. Meas. Length*	Rule standard	Accuracy	Resolution	T-shaped hook dimensionss
SC600	600mm	JIS standard	+/- 0.15mm	0.1mm	100 x 16 x 6 mm
SC1000	1000mm	JIS standard	+/- 0.20mm	0.1mm	100 x 16 x 6 mm
SC1500	1500mm	JIS standard	+/- 0.25mm	0.1mm	100 x 16 x 6 mm
SC2000	2000mm	JIS standard	+/- 0.30mm	0.1mm	100 x 16 x 6 mm
SC3000	3000mm		+/- 0.50mm	0.1mm	100 x 16 x 6 mm

*The term “maximum measurement length” represents the marking on the scale’s far end according to JIS Class 1 standards. However, it does not guarantee the minimum reading value when using the Vernier scale and stopper.

Digital C&R caliper

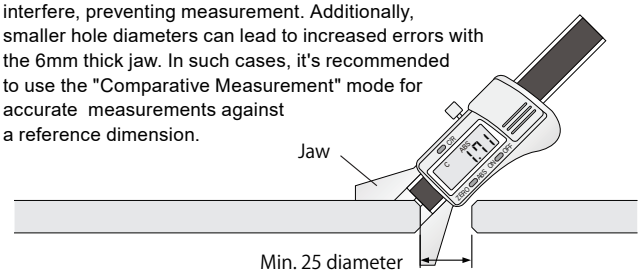
Pat.

Precise measurement of chamfer and R dimensions

- Accurate numerical measurements of chamfer and R dimensions with digital display.
- Stable measurements with 6mm thick jaw.
- Switch modes easily with button operation: ABS Measurement and Comparative (relative) Measurement.
- Convenient toggle between the chamfer measure mode and R measure mode.

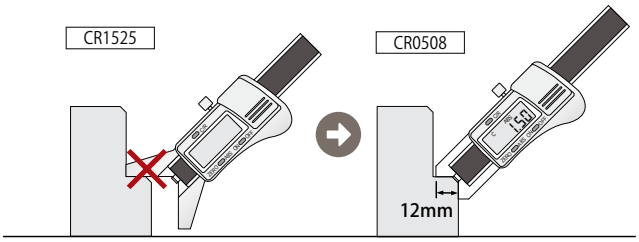
Minimum measurement size for holes: 25 diameter

For holes smaller than 25 in dia., the main body may interfere, preventing measurement. Additionally, smaller hole diameters can lead to increased errors with the 6mm thick jaw. In such cases, it's recommended to use the "Comparative Measurement" mode for accurate measurements against a reference dimension.



CR0508 for measuring stepped surfaces and small objects

It can be used in situations where CR1525 is unable to measure due to interference.

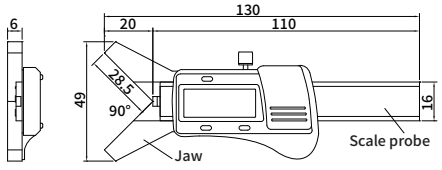


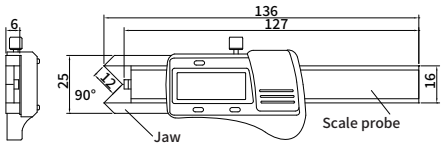
CR1525

CR0508

Model No.	CR1525	CR0508
Measurement	Chamfer for a 90° exterior angle and R	Chamfer for a 90° exterior angle and R
Chamfer meas. range	Chamfer angle of 45 degree: C0.01 - C15.00 (mm)	Chamfer angle of 45 degree: C0.01 - C5.00 (mm)
R meas. range	R for angles up to 90 degrees: R0.01 - 25.00 Circular R : R0.6 - 25.00	R for angles up to 90 degrees: R0.01 - 8.00 Circular R : R0.6 - 8.00
Dimensions	130mmL x 49mmW, jaw = 6mm thick, scale probe = 3mm thick	130mmL x 49mmW, jaw = 6mm thick, scale probe = 3mm thick
Resolution	C = 0.01 R = 0.01 (mm)	C = 0.01 R = 0.01 (mm)
Accuracy	C = ±0.05 R = ±0.08 (mm)	C = ±0.05 R = ±0.08 (mm)
Min. th. of workpiece	0.8mm	0.8mm
Material	Stainless(420J2)	Stainless(420J2)
Battery	3V lithium coin battery (CR2032) 1 piece	3V lithium coin battery (CR2032) 1 piece
Accessories	Setting master pin gauge 20 diameter	Setting master pin gauge 20 diameter

Tool dimensions





Digital chamfer caliper

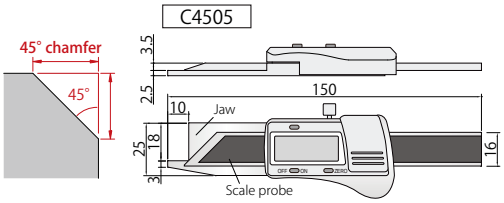
For precise measurement of 45° or 30° chamfers on various surfaces

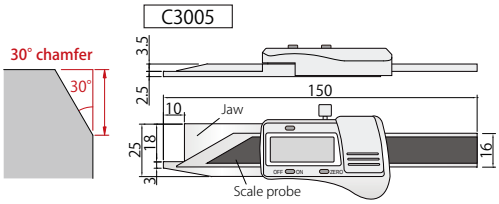
- Attain accurate absolute measurements, eliminating the reliance on unreliable visual estimates
- Precise chamfer measurements for holes and cylinders.
- Effortlessly measure workpieces with small steps without any interference.
- Switch between absolute and comparison measurements.

The tool can measure the chamfer from a diameter as small as 10mm with minimal error (approx. 0.01mm).
Although the minimum measurable hole diameter is 6mm, as the hole size decreases, the gap between the tool and the R surfase of the hole widens, resulting in larger measurement errors (approx. 0.015mm for a 6mm diameter hole).

For the chamfers of holes and chamfers in lathe machining

Model No.	C4505	C3005
Measurement	Chamfering angle of 45° for a 90° exterior angle	Chamfering angle of 30° for a 90° exterior angle
Range	C0.01 - C5.00	C0.01 - C5.00
Resolution / accuracy	C0.01 / +/- C0.05	C0.01 / +/- C0.05
Tool dimensions	150mmL x 25mmW, jaw th. 2.5mm, scale probe th. 3.5mm	150mmL x 25mmW, jaw th. 2.5mm, scale probe th. 3.5mm
Material	Stainless (420J2)	Stainless (420J2)
Battery	3V lithium coin battery (CR2032) 1 piece	3V lithium coin battery (CR2032) 1 piece

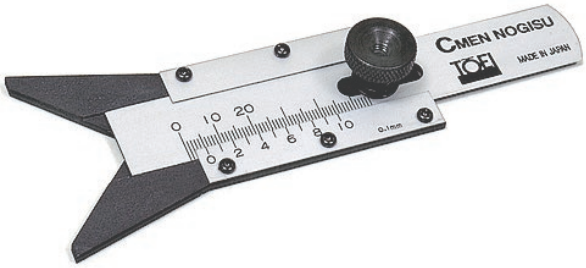




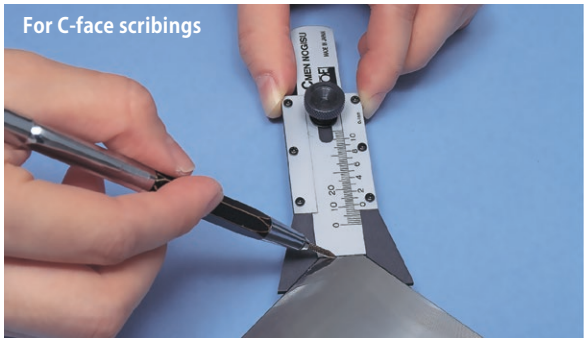
Chamfer caliper gauge

Chamfer measuring & scribing tool

- A versatile caliper for precise Chamfer measurements and scribings. Replaces traditional gauges, simplifying the process.
- Accurate and swift readings with Pythagorean theorem-based scale.
- Enables measurements and chamfering from C0.1 to C15 using the vernier scale.



Model No.	Resolution	Max.measurement range	Accuracy	Scale thickness	Jaw thickness
C-15	C0.1 (mm)	C15.0 (mm)	+/- C0.1	0.5mm	2.3mm

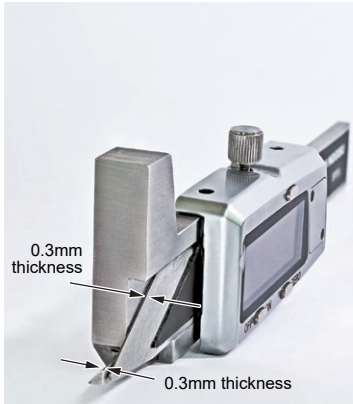


SP chamfer caliper

NEW

Accurate Chamfer measurement with precise numerical management

- Consistent measurements with a spring control that eliminates variations caused by human force.
- Stable measurements with a 10mm fixed jaw.
- Minimal error for chamfering measurements on cylindrical shapes and holes.
- A bsolute and comparison measurement capabilities.
- Suitable for measuring workpieces with steps.
- Precise numerical management of chamfer dimension.



With a thin contact portion thickness of 0.3mm, our device ensures a close and accurate measurement of chamfers, even for small-diameter holes and cylindrical shapes. The smallest size that can be measured with the least amount of error is a diameter of 10mm(with an error of approximately 0.01mm).

Using spring control to reduce measurement fluctuations from manual force

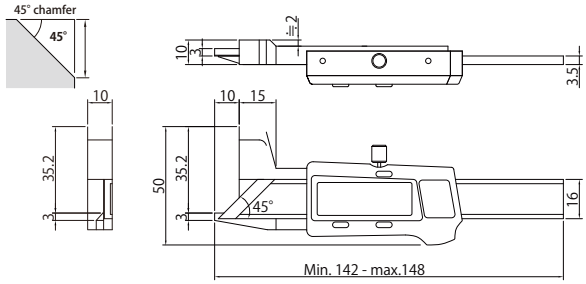
Pull the scale probe

When the scale probe is released, it recoils towards the direction of the workpiece due to the tension of the spring.

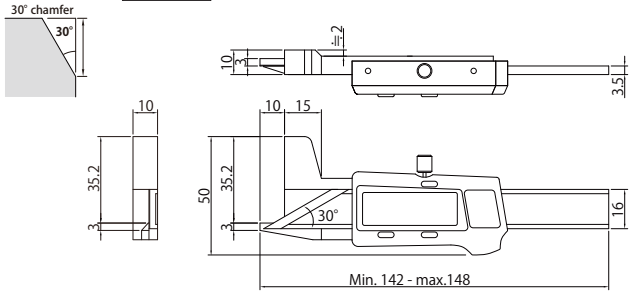
Recoil to the origin

Model No.	SP45	SP30
Measurement face	Chamfering angle of 45° for a 90° exterior angle	Chamfering angle of 30° for a 90° exterior angle
Range	C0.01 - C5.00	C0.01 - C5.00
Resolution / accuracy	C0.01 / +/- C0.05	C0.01 / +/- C0.05
Tool dimensions	142 - 148mmL x 50mmW, jaw th. 10mm, scale probe th. 3.5mm	142 - 148mmL x 50mmW, jaw th. 10mm, scale probe th. 3.5mm
Material	Stainless (420J2)	Stainless (420J2)
Battery	1.5V lithium coin battery (LR44) 1 piece	1.5V lithium coin battery (LR44) 1 piece

SP45



SP30



東栄工業株式会社

Since our establishment in 1980, Toei Industrial Co., Ltd. has been committed to manufacturing sheet metal tools and measuring instruments for the precision sheet metal industry. With over 40 years of experience, we take pride in understanding the industry's needs and developing innovative products for professionals that are truly unique.

Our products are created to address the real challenges faced in daily work, ensuring practical solutions that have gained popularity and established a strong presence in the market.

Moving forward, we will continue to dedicate ourselves to the development of unprecedented products that precisely meet the needs of the industry. We sincerely appreciate your ongoing support.

ACCURPRESS

With over 45 years in the marketplace, Accurpress continues to build on its tested history to manufacture an innovative and complete line of press brakes and shears for every bending and shearing application.

Proudly North American made, Accurpress leads the way with high tonnage machines, revolutionary pole bending technologies, tandem machines, and robot automation. With over 21,000 machines sold to thousands of satisfied customers, Accurpress continues to build press brakes and shears to meet the demands of manufacturing environments.

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