March 2017











#### **AUTO WELL** Enterprise Company Limited

We reserve the right to modify and improve our products without prior notice.

Agent			

(I	No.537-8, Zhongshan Rd., Qingshui Dist., Taichung City 436, Taiwan (R.O.C.)

+ 886 4 2622 2303

+ 886 4 2622 2313

$\boxtimes$	autowell@ms25.hinet.net
>	autowell.com.tv





### MC Power Vises AVK, AVR, ALD, AVD, AVD, AVL, AND SUSTEM



AVK ••• 6 160, 200





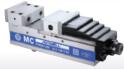


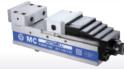


100, 125, 160, 200G/HV











AVM ••• 11 100, 130, 160, 165,

































#### Double Station Vises TLALALT SYSTEM













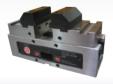




1040, 1250









#### **Aluminum Double Station Vises**

AQS ••• 29

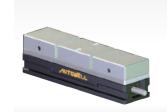




Wellock Vises



•••32









### Hydraulic Power Vises MARKET SYSTEM •••38

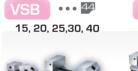






### **Precision Accessories**

GAP ... 42 AGP ... 42 AGP ... 42 GVL ... 43 GVL ... 43 VSU ... 43 GLK ••• 44 25, 30, 46 200, 300 60, 80, 100









**GAA** ••• 45



GAS ••• 46



AVB ... 49 AVS ... 50 SVA ... 50



AVV ··· 47

30, 40, 50, 60









CHM ... 51







•••53









GVC ... 48 AGL ... 48 CSV ... 49

















## MC Mechanical Super Vise



### High Clamping Force & Extra Out-jaw Clamping Capacity

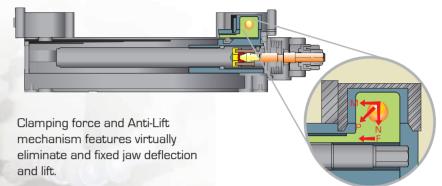
MC Power Vises are all in excellent precision and higher than JIS. Class with largest clamping force 50KN. The main feature of Auto Well Power Vise Series to be better than other brands' due to it has 3 patents: Lockwell Anti-Lift Mechanism, Mechanical Booster and Force Adjustable Function.

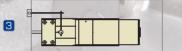
- Unique Out-jaw design increase the clamping capacity.
- Force Adjustable System (patented) makes the force setting easier and steadier. Clamping force can be freely adjusted with the guidance of graduation lines.
- Lockwell Anti-Lift mechanism (patented) ensures the workpiece does not lift.
- Mechanical Booster (patented) provides a steady clamping force and inside Disc-Spring to against shocks and vibrations while operation.
- The improved chip cover mechanism prevents the rust and extends the lifetime.
- Most suitable for VMC & HMC. Tolerance required within 0.01mm.
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°

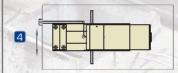


### Static Accuracy Lockwell Anti-Lift Mechanism

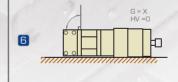
Lift can be controlled within 0.01 mm

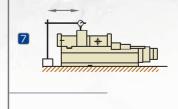


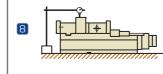








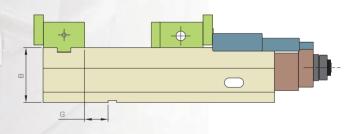




#### Dimensions

B-dimension tolerance ±0.01 mm G-dimension tolerance ±0.01 mm

For guide blocks other than standard, consult our Engineering Dept.



		MC POWER VISE system		
NO	Ins	pection Items (Per 100 mm)	Allowa	nce (mm)
		( a. 122 mm)	Auto Well	JIS. Class
1	Parallelism	running face to bottom of bed	0.01	0.015
2	Squareness	between running face and jaw plate	0.01	0.03
8	Squareness	keyways on bottom of bed to jaw plate	0.015	0.015
4	Parallelism	keyways on bottom of bed to jaw plate	0.01	0.015
5	Squareness	both sides to running face	0.02	0.02
6	Squareness	both sides to fixed jaw plate	0.02	0.02
7	Parallelism	running face of the test block to bottom of bed	0.015	0.02
8	Parallelism	Lift can be controled when clamping test	0.015	0.03

<sup>\*</sup>Basic on global market, our company start producing MC serious type of vise on 1986 and we keep our vise dimensions as same since then. There is no fitment or alignment problem between our old

#### MUTUVELL

# Ultra-low height Mechanical Power Vise

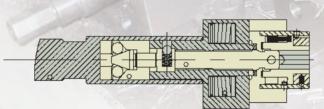
### AVK-160, 200

New design with ultra-low vise body and largest opening, besides, it has 3 patents: Lockwell Anti-Lift Mechanism, Mechanical Booster and Force Adjustable Function. Largest opening, high accuracy and strong rigidity for increase the efficiency and productivity.

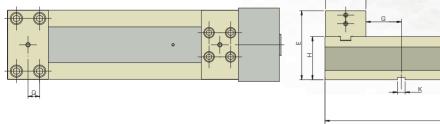


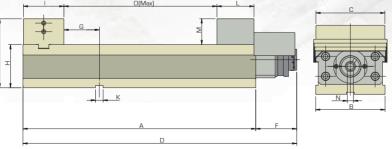
- Vise with ultra-low bed height & largest opening.
- Force Adjustable System (patented) makes the force setting easier & steadier, moreover, it has constant pressure function & over pressure protection.
- Patented Mechanical Booster is fully sealed against dust, chips and cutting fluid for extended life time.
- Lockwell Anti-Lift mechanism (patented) ensures the workpiece does not deflect and lift.
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°.
- Unique design facilitates the evacuation of chips





#### AVK Dimensions





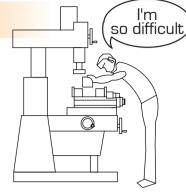
							AVK	DIME	NSION	s							mm/kg
NO	A	B	C		8	<b>6</b>	G		0	K		M	N	0	Q	Clamping Force	Weight
AVK-160	540	161	160	628	160	88	82	100	94	18	86	60	14	355	27	45KN	65kg
AVK-200	615	201	200	703	180	88	74	110	102	18	98	70	14	405	30	45KN	105kg

# MC Mechanical Reversed

Power Vise Workholding

## AVR-125, 160 G/HV

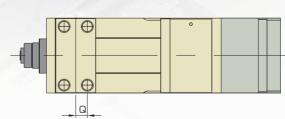


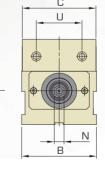


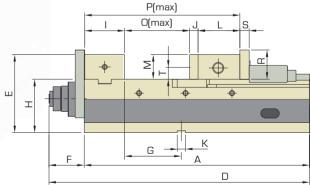


- Most suitable for VMC & HMC and owns 2 patents.
- lacksquare Force Adjustable System (patented) makes the force setting easier & steadier, moreover, it has constant pressure function & over pressure protection.
- Patented Mechanical Booster is fully sealed against dust, chips and cutting fluid for extended life time.
- Unique Out-jaw design increase the clamping capacity.
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°.
- Unique design facilitates the evacuation of chips.

#### AVR Dimensions







									Δ	VRI	DIME	NSIC	ONS									mn	n/kg
NO	A	B	C		8	G	G		0	J	K		M	N	0	P	Q	R	S			Clamping Force	Weight
AVR-125G/HV	390	127	124.7	460	153	70	66	100	78	15	18	87.5	53	19	173	353.5	22.5	63	20	26.5	60	35 KN	46kg
AVR-160G/HV	515	161	159.5	591	168	76	76	115	86	18	18	80	53	19	289	474	25	63	20	26.5	98.4	45 KN	76kg

**AVX** Workholding Series

#### **NUTULELL®**

## MC Mechanical Long Power Vise

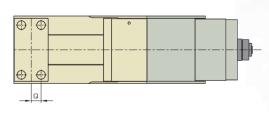
ALQ-160, 200G/HV

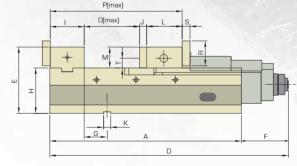
### Workholding



- MC Mechanical Long Power vise with large opening and Lockwell Anti-Lift Mechanism is most suitable for VMC & HMC. This vise owns 3 patents and has the honor to get TAIWAN EXCELLENCE 2010.
- Force Adjustable System (patented) makes the force setting easier & steadier, moreover, it has constant pressure function & over pressure protection.
- Patented Mechanical Booster is fully sealed against dust, chips and cutting fluid for extended life time.
- Cockwell Anti-Lift mechanism (patented) ensures the workpiece does not deflect and lift.
- Unique Out-jaw design increase the clamping capacity.
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°.
- Unique design facilitates the evacuation of chips.

#### ALQ Dimensions





	U _	
•	<u> </u>	<b>a</b>

								Al	.Q D	IME	NSI	ON	s									mn	n/kg
NO	A	B	C		8	<b>3</b>	G		0	J	K		M	N	0	P	Q	B	8			Clamping Force	Weight
ALQ-160G/HV	515	161	159.5	603	168	88	76	115	86	18	18	80	53	19	330	514	25	63	20	26.5	98.4	45 KN	76kg
ALQ-200G/HV	585	202	199.5	673	178	88	93	120	101	18	18	95	58	19	367.5	581.5	31	73	20	29	120	50 KN	108kg

# Ultra Large Opening MC Mechanical Power Vise

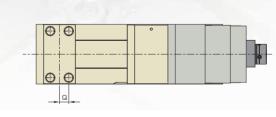
AVX-160G/HV

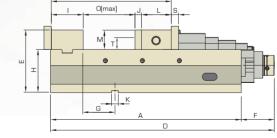
Workholding

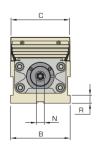


- MC Mechanical Power Vise is most suitable for VMC & HMC and owns 3 patents.
- 2 Patented Force Adjustable System (patented) makes the force setting easier & steadier, moreover, it has constant pressure function & over pressure protection.
- Patented Mechanical Booster is fully sealed against dust, chips and cutting fluid for extended life time.
- Lockwell Anti-Lift mechanism (patented) ensures the workpiece does not deflect and lift.
- Unique Out-jaw design increase the clamping capacity.
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°.
- Unique design facilitates the evacuation of chips.

#### AVX Dimensions







								AV	X DI	MEI	VSIC	ONS										mm	n/kg
NO	A	B	C		8	<b>6</b>	G		0	O	K		M	N	0	P	Q	B	S		0	Clamping Force	Weight
AVX-160G/HV	545	161	159.5	633	168	88	76	115	86	18	18	80	53	19	360	544	25	63	20	26.5	98.4	45KN	80kg

#### **NUTOWELL**

### MC Mechanical Power Vise

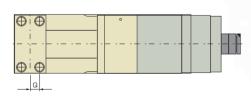
AVQ-100,125,160, 200G/HV

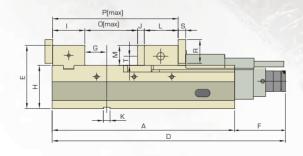
Workholding

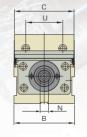


- MC Mechanical Power Vise is most suitable for VMC & HMC and owns 3 patents.
- Patented Force Adjustable System (patented) makes the force setting easier & steadier, moreover, it has constant pressure function & over pressure protection.
- Patented Mechanical Booster is fully sealed against dust, chips and cutting fluid for extended life time.
- Lockwell Anti-Lift mechanism (patented) ensures the workpiece does not deflect and lift.
- Unique Out-jaw design increase the clamping capacity.
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°
- Unique design facilitates the evacuation of chips.

#### AVQ Dimensions







									AVQ	DIN	ΛEΝ	SION	s										n/kg
NO	A	B	C		8	8	G			U	K		M	N	0	<b>P</b>	Q	R	S			Clamping Force	Weight
AVQ-100G/HV	324	104	102	412	130	88	41	85	73	15	18	86.5	45	19	140	314.5	20	55	20	22.5	58	25 KN	30kg
AVQ-125G/HV	390	127	125	478	153	88	66	100	78	15	18	87.5	53	19	201	381.5	22.5	63	20	26.5	60	35 KN	46kg
AVQ-160G/HV	485	161	159.5	573	168	88	58	115	86	18	18	80	53	19	295	479	25	63	20	26.5	98.4	45 KN	71kg
AVQ-200G/HV	535	202	200	623	178	88	75	120	101	18	18	95	58	19	320	534	31	73	20	29	120	50 KN	100kg

### Wellock MC Mechanical Power Vise

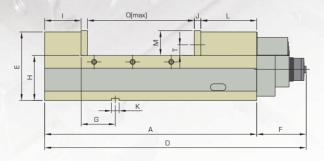
Workholding

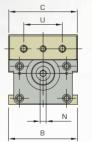
AVM-100, 130, 160, 165, 200,

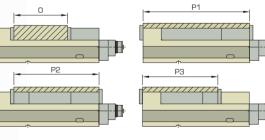


- Wellock MC Mechanical Power Vise is most suitable for VMC & HMC and owns 2 patents.
- Patented Force Adjustable System (patented) makes the force setting easier & steadier, moreover, it has constant pressure function & over pressure protection.
- Patented Mechanical Booster is fully sealed against dust, chips and cutting fluid for extended life time.
- Wellock Semi-spherical segment eliminate deflection and lift.
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°
- 4 different clamping positions.
- Unique design facilitates the evacuation of chips.

#### AVM Dimensions







\* 4 different clamping positions (Outside Jaws is optional accessories)

									А١	/M [	DIMI	NSI	ons									/kg
NO	A	B	C		8	<b>3</b>	G		0	J	K		M	N	0	P1	P2	<b>P3</b>			Clamping Force	Weight
AVM-100G/HV	350	101	100	470	130	110	45	85	65	15	18	105	48	19	150	150-330	150-240	150-200	22	60	25KN	24kg
AVM-130G/HV	415	131	130	525	147	110	65	95	70	15	18	115	55	19	201	201-400	201-300	201-250	25	90	35KN	38kg
AVM-160G/HV	495	161	160	583	160	88	80	105	85	15	18	130	58	19	245	250-480	250-370	250-330	25	90	43KN	55kg
AVM-165G/HV	560	161	160	648	160	88	80	105	85	15	18	130	58	19	310	315-545	315-435	315-395	25	90	43KN	64kg
AVM-200G/HV	580	201	200	708	170	128	100	110	90	18	18	150	63	19	290	290-550	290-430	290-370	28	120	60KN	78kg
APV-160G/HV	560	161	160	648	155	88	80	100	85	15	18	130	58	19	310	315-545	315-435	315-395	25	90	43KN	64kg

#### **NUTULELL®**

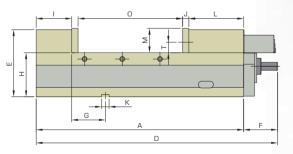
### Wellock MC Machine Vise

AVC-100, 130, 160, 165, 200, APC-160G/HV

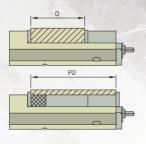


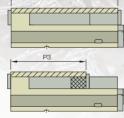
- Wellock MC Machine Vise is most suitable for VMC & HMC.
- Wellock Semi-spherical segment eliminate deflection and lift.
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°.
- 4 different clamping positions.
- Unique design facilitates the evacuation of chips.

#### AVC Dimensions









\* 4 different clamping positions (Outside Jaws is optional accessories)

									AV	C DI	MEI	NSION	IS							mn	m/kg
NO	A	B	C		8	•	G				K		M	N	0	P1	P2	P3			Weight
AVC-100G/HV	350	101	100	430	130	80	45	85	65	15	18	105	48	19	150	150-330	150-240	150-200	22	60	21kg
AVC-130G/HV	415	131	130	495	147	80	65	95	70	15	18	115	55	19	201	201-400	201-300	201-250	25	90	35kg
AVC-160G/HV	495	161	160	576	160	81	80	105	85	15	18	130	58	19	245	250-480	250-370	250-330	25	90	52kg
AVC-165G/HV	560	161	160	641	160	81	80	105	85	15	18	130	58	19	310	315-545	315-435	315-395	25	90	61kg
AVC-200G/HV	580	201	200	670	170	90	100	110	90	18	18	150	63	19	290	290-550	290-430	290-370	28	120	75kg
APC-160G/HV	560	161	160	641	155	81	80	100	85	15	18	130	58	19	310	315-545	315-435	315-395	25	90	61kg

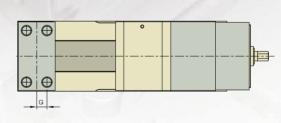
### MC Lockwell Super Vise

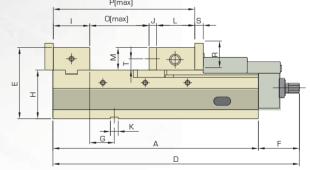
AVL-100, 125, 160, 165 200, 235G/HV Workholding



- MC Lockwell Super Vise is most suitable for VMC & HMC and got patents.
- Cockwell Anti-Lift Mechanism (patented) ensures the workpiece does not deflect and lift.
- Unique Out-jaw design increase the clamping capacity.
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°.
- Unique design facilitates the evacuation of chips.

#### AVL Dimensions





-	- L	<u> </u>	
		_	N_

								А١	/L D	IMI	NS	IONS	5								mr	n/kg
NO	A	B	C		8		G			U	K		M	N		P	Q	R	S			Weight
AVL-100G/HV	324	104	102	437	130	104	41	85	73	15	18	86.5	45	19	140	314.5	20	55	17	22.5	58	27kg
AVL-125G/HV	390	127	124.7	480	153	105	66	100	78	15	18	87.5	53	19	201	381.5	22.5	63	20	26.5	60	43kg
AVL-160G/HV	485	161	159.2	625	168	120	58	115	86	18	18	80	53	21	295	479	25	63	20	26.5	98.4	71kg
AVL-165G/HV	515	161	159.2	655	168	120	76	115	86	18	18	80	53	21	330	514	25	63	20	26.5	98.4	76kg
AVL-200G/HV	535	202	199.5	660	178	128	75	120	101	18	18	95	58	19	320	534	31	73	20	29	120	98kg
AVL-235G/HV	585	202	199.5	710	178	128	93	120	101	18	18	95	58	19	367.5	581.5	31	73	20	29	120	105kg

#### **NUTULELL®**

# Wellock 5 Axis Mechanical Power Vise

**AEX-125G** 

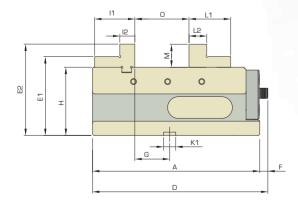
Workholding

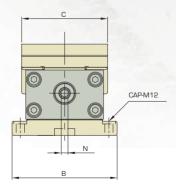


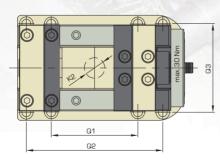
- Steady Clamping Force!
- Built-in mechanical booster, maximum clamping force up to  $40 \, \mathrm{KN}$ , suitable for working on all kinds of hard and soft workpiece.
- Can be used on any machine center!

  Small body size fit well with 5 Axis MC machine center, horizontal and vertical machine center. It can work with rotary machine and related machine.
- Patented Mechanical Booster is fully sealed against dust, chips and cutting fluid for extended life
- Unique Anti-Lift mechanism ensures the workpiece does not deflect and lift.
- Rigid and tensile ductile tool steel SKS3. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°.
- Unique design facilities the evacuation of chips.

#### AEX Dimensions







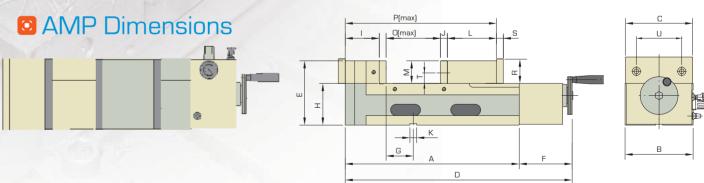
									Α	EX DI	IMEN	ISIOI	VS										mr	m/kg
Modle	A	B	C		8	<b>1</b>	<b>22</b>	<b>6</b>	G		1	12	<b>K1</b>	K2		12	M	N	0	Q1	Q2	Q3	Force Clamping	Weight
AEX-125G	245	154	126	257	34	116	134	12	51	100	59	22	18	ø30	61	26	34	10	102	127	200	130	40KN	20kg

### Wellock Air Hydraulic Power Vise

**AMP** 



- Most suitable for mass production which need quick machining, such as milling HMC & VMC, expert work station.
- This vise is adopting the reciprocating pneumatic motor which R&D by inhouse and that employs an air actuated cylinder. Circuiting progressively to make automation, no need the R.F.L unit to filter the moisture, the sole character is superior than other brand in the market.
- Safety locking mechanism for unexpected termination of air supply. After pneumatic clamping the workpiece will be clamped firmly even without the air supply.
- Humanistic design. Easy ON/OFF switch control for pneumatic operation. The shifting speed is only 1.5 sec. with safety range: 8mm. The optional electric control for automatic and FMS system is available.
- AMP are all match vise, you can set up several of AMP together to operate with only one air source supply. 3 operate positions. Six faces of vise body has been ground and pre-set the holding slot, it can be processed vertically without jig block.
- Even the air source at low pressure  $8 \text{kg/cm}^2$  which can be achieved super hi-clamping force 90 KN, and the  $0 \sim 90 \text{KN}$  clamping force can be adjusted freely by regulator.
- Unique Out-jaw design increase the clamping capacity.
- Wellock Semi-spherical segment eliminate deflection and lift.
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°.



								AIV	ח אוי	IIVIEI	4510	MP										y Ng
NO	A	B	C		8	<b>3</b>	G		0		K		M	N	0	P	R	8		0	Clamping Force	Weight
AMP-100(4")	320	100	98	435	145	140	45	100	85	15	18	105	45	-	100	200-300	55	18	22	60	32KN	32kg
AMP-150(5")	380	130	128	520	157	140	45	105	85	15	18	110	52	-	150	200-380	62	15	25	90	60KN	52kg
AMP-160(6")	400	160	158	540	160	140	45	105	87	15	18	120	55	-	160	210-400	62	15	25	90	60KN	58kg
AMP-165[6")	490	160	158	630	160	140	45	105	87	15	18	120	55	-	250	210-490	65	15	25	90	60KN	65kg
AMP-180(7")	460	180	178	600	170	140	72	110	90	18	18	130	60	-	200	220-460	70	18	28	120	90KN	75kg
AMP-200(8")	470	200	200	610	170	140	72	110	90	18	18	140	60	-	200	230-470	70	18	28	120	90KN	82kg
AMP-300(8")	570	200	200	710	170	140	72	110	90	18	18	140	60	-	300	230-570	70	18	28	120	90KN	93kg



# Extension MC Mechanical Power Vise

### **AOM-200**

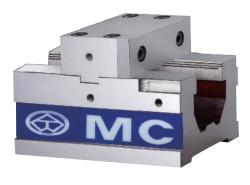
### Workholding

- Extension MC Mechanical Power vise with large opening and Lockwell Anti-Lift Mechanism is most suitable for BMC & VMC & HMC. This vise owns 3 patents.
- Force Adjustable System (patented) makes the force setting easier & steadier, moreover, it has constant pressure function & over pressure protection.
- Mechanical Booster (patented) provides a steady clamping force and inside Disc-Spring to against shocks and vibrations while operation.
- O Lockwell Anti-Lift mechanism (patented) ensures the workpiece does not deflect and lift.
- This vise is suitable for huge or extension workpieces and can be matched.
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°.
- The stationary unit or power unit order is acceptable.





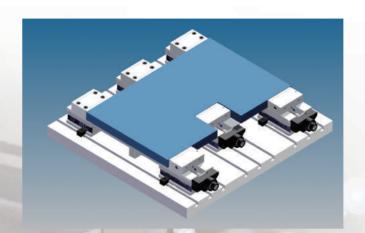


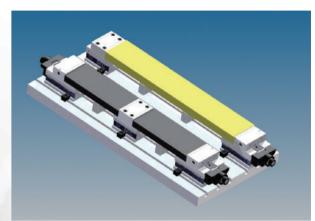






### AOM Clamping Examples

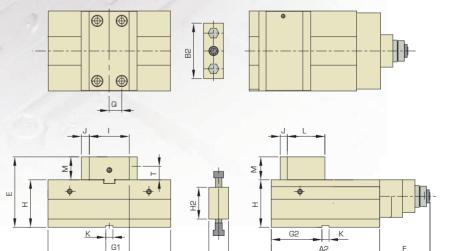




### **OM Dimensions**



Min.Jaw Opening 158 ~ Limit



C	
N B1	

									1	AOM E	IMEN	NSION	IS											
NO	A1	<u>A2</u>	<u>A3</u>	<b>B1</b>	<b>E2</b>	C	D	8	<b>6</b>	<b>G1</b>	<b>E</b>		0	J	K		M	N	Q			Clamping Force	Weight	
AOM-200	210	270	50	202	140	199.5	398	178	128	59.5	126	120	101	18	18	95	58	19	31	29	120	50KN	95kg	

16



## Lockwell Double Station Vise



### Clamping Force Equalization & Automatically Return Mechanism

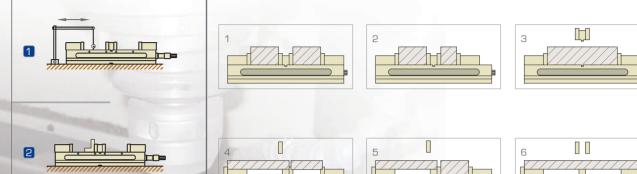
Lockwell Double Station Vise increases the efficiency and productivity of CNC machine. Double station could clamp two dissimilar workpieces with same force at a time. For save time, movable jaw designed to automatically return to correct position. One of the movable jaws opened while the other one opened to the position you set. Moreover, double station could be change to single station to meet your enquiry by fixed one movable jaw. 6 different clamping positions. You could change the standard jaws into soft jaws to make your own vise.

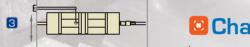
- Double station could clamp two dissimilar workpieces with same force at a time and provides 6 different clamping positions.
- Clamping Force Equalization (patented) ensures same clamping force to clamp two different size/shape workpieces.
- Automatically Return Mechanism (patented) save the work change time.
- O Lockwell Anti-Lift Mechanism (patented) ensures the workpiece does not deflect and lift



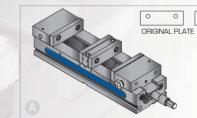
#### Static Accuracy

### **O 6 Different Clamping Positions**





### Change Sample of Station





DOUBLE CLAMP VISE system



0-125mm & 0-90mm.

Parallelism

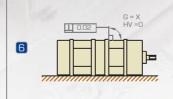
Taking out the fixed jaw and insert a movable plate (tighten by 6pcs screws) when the workpiece dimension is between 125-315mm (4.98"-12.3").

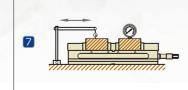
0.015

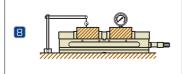
0.015

0.02

0.03







#### Allowance fmm NO Inspection Items (Per 100 mm) Auto Well JIS. Class Parallelism running face to bottom of bed 0.01 0.015 Squareness between running face and jaw plate 0.01 0.03 3 Squareness keyways on bottom of bed to jaw plate 0.015 0.02 0.02 keyways on bottom of bed to jaw plate Squareness both sides to running face 0.02 0.02 6 Squareness both sides to fixed jaw plate 0.02 0.02

running face of the test block to bottom of bed

lift can be controled when clamping test

<sup>\*</sup>Basic on global market, our company start producing MC serious type of vise on 1986 and we keep our vise dimensions as same since then. There is no fitment or alignment problem between our old

TLD Workholding Series

### ALD Workholding Series



### **MUTULELL**

### **NEW Lockwell Double Station Vise**

## TLD-40, 60G/HV workholding

### **Lockwell Double Station Vise**

ALD-60G/HV

Workholding

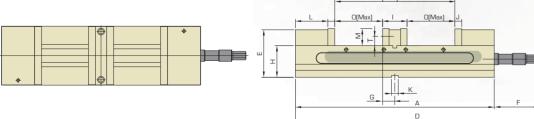


- Double station could clamp two dissimilar workpieces with same force at a time and provides 6 different clamping positions.
- Clamping Force Equalization (patented) ensures same clamping force to clamp two different size/shape workpieces and avoid deflection and lift.
- Lockwell Anti-Lift Mechanism (patented) & Automatically Return Mechanism (patented) ensures the workpiece does not deflect and lift.
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness
- Unique design facilitates the evacuation of chips
- U.S.A. patented.



- Double station could clamp two dissimilar workpieces with same force at a time and provides 6 different clamping positions.
- Clamping Force Equalization (patented) ensures same clamping force to clamp two different size/shape workpieces and avoid deflection and lift
- Lockwell Anti-Lift Mechanism (patented) & Automatically Return Mechanism (patented) ensures the workpiece does not deflect and lift.
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°.

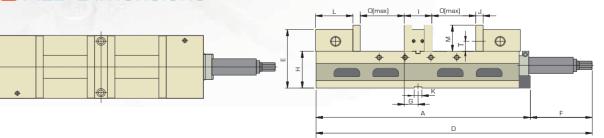
#### TLD Dimensions



P(Max)	<del>-</del> C
O(Max) J	U
<b>T</b>	<b>+</b>
	4
G A	F B
1 1 A	<del>'</del>

							TLD DIN	MENSION	IS										mm/kg
NO	A	B	C	D	8	<b>6</b>	G		0	J	K		M	N	0	P			Weight
TLD-40G/HV	405	104	102	459	96.5	54	27.5	63.5	55	15	18	69	38	14	90	235	17.5	63.5	20kg
TLD-60G/HV	520	154	152	536	124.05	16	33	82.55	66	18	18	86.5	44.5	19	125	316	23.8	98.4	52kg

#### ALD Dimensions



						AL	D DIN	/ENS	IONS									mm/kg
NO	A	B	C		8	•	G		0		K		M	N	0			Weight
ALD-60G/HV	497	154	152	610	143	113	32	90	64	17	18	86.5	58	19	34-102	32	95	63.5kg



### **NUTULELL**

### Lockwell Double Station Tower Vise

TLR Tower Vises is formed with four Double Station Vises. it provides eight stations and feature a cast iron integral vise tower. Towering designed is maximized update utilization and productivity for machining centers.

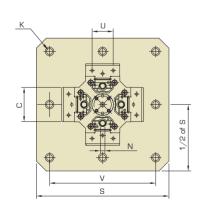


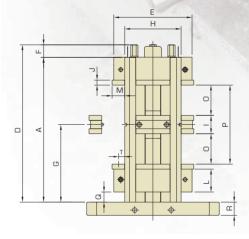
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body
- TLR vise tower incorporate 4 double station vises to clamp 8 dissimilar workpieces. Sub-bases are matched to table with center or edge locators
- No timing problem. Designed to automatically return to the position
- The improved chip cover mechanism prevents the rust and extends the

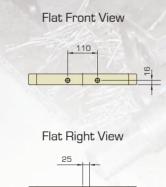
### Workholding

- for quick change.

#### **TLR** Dimensions







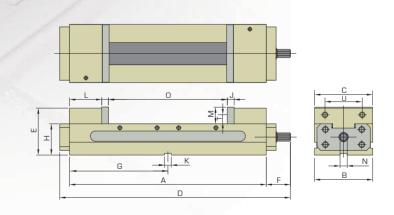
										Т	LR D	MEN	SION	s										r	nm/kg
NO	A	B	C		8	8	G		0	J	K		M	N	0	P	Q	R	S			V	W	X	Weight
TLR4400	425	-	102	479	256	54	222.5	190	55	15	ø18	69	38	14	90	235	20	40	400	17.5	63.5	320	-	-	200kg
TLR4500	425	-	102	479	256	54	222.5	190	55	15	ø18	69	38	14	90	235	20	40	500	17.5	63.5	400	-	-	210kg
TLR6400	540	-	152	556	313	16	280	230	66	18	ø18	86.5	44.5	19	125	326	20	40	400	23.8	98.4	320	-	-	240kg
TLR6500	540	-	152	556	313	16	280	230	66	18	ø18	86.5	44.5	19	125	326	20	40	500	23.8	98.4	400	-	-	250kg

### **Lockwell Self-centering Machine Vise** Workholding



- Tolerance of center of workpiece clamp position and vise body within 0.01mm.
- Lockwell Anti-Lift mechanism (patented) ensures the workpiece does not deflect and lift.
- Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to HS65° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°

#### HLD Dimensions



							HLD	DIMENSI	ONS								mm/kg
NO	A	B	C		8	•	G		U	K		M	N	0			Weight
HLD-60G/HV	520	154	152	610	124.05	64	260	82.55	18	18	86.5	44.5	19	58~314	23.8	98.4	52kg

### **MUTULELL**

### Wellock 5 Axis Machine Vise

### **ALT Series**

ALT is designed for 5 axis machine center. It provides higher structure to dodge interference of spindle. Prevent the workpiece loose from machining vibration. Anti-Lift mechanism ensures workpiece does not lift. Both jaws can move in the same time to

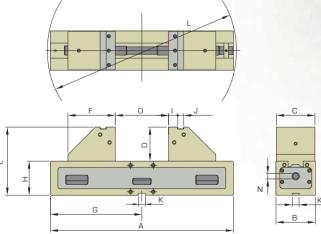


Ductile iron FCD-60 rigid and tensile vise body.

shorten the distance.

- Slide surface flame hardened to maintain the accuracy.
- Tolerance of center of workpiece clamp position and vise body within 0.01mm.

#### ALT-100 Dimensions



ALT-100 DIMENSIONS ALT-100S 90 180 125 140 90 24 16 18 300 14 17kg 90 180 125 162 90 24 16 18 350 14 0-74 ALT-100M 484 104 102 90 180 125 242 90 24 16 18 500 14 10-232 0-200 12-200 10-210 20KN 30kg

### Workholding

\* 3 different clamping positions



### **ALT Series**

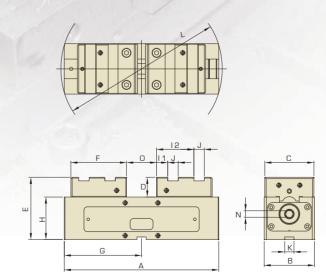
ALT is designed for 5 axis machine center. It provides higher structure to dodge interference of spindle. Prevent the workpiece loose from machining vibration. Anti-Lift mechanism ensures workpiece does not lift. Both jaws can move in the same time to shorten the distance.



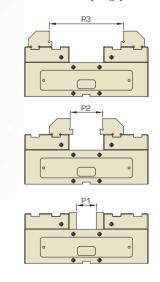
Workholding

- Semi-spherical segment eliminate lifting while machining.
- Ductile iron SKS3 rigid and tensile vise body.
- Slide surface flame hardened to maintain the accuracy.
- Tolerance of center of workpiece clamp position and vise body within 0.01mm.

#### ALT-75 Dimensions



\* 3 different clamping positions



								1	ALT-75	DIME	NSIO	VS								mm/kg
NO	A	B	C		8	<b>(3</b>	G			12	J	K		N	0	P1	P2	P3	Clamping Force	Weight
ALT-75S	196	77	75	30	95	85	98	65	17	57	16	14	210	10	30	-	26	106	20KN	8kg
ALT-75M	236	77	75	30	95	85	118	65	17	57	16	14	250	10	70	40	66	146	20KN	10kg

### ALG Workholding Series

### /UTOVELL®

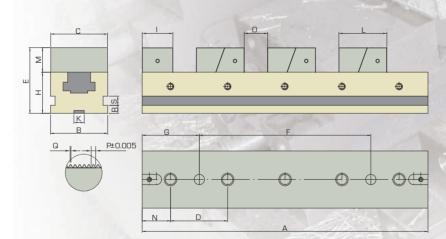
### Flexible Well Vise

### **ALG**





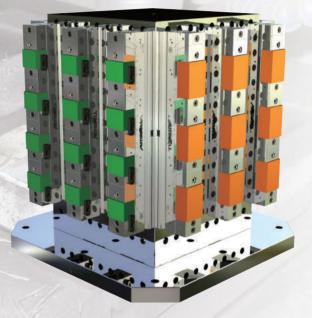
ALG Dimensions



																	7/	
	LG5030       300       50       49       100       75       100       100       50       36       18       60       24.8       50       30       1.5       0.5       10       1         LG5040       400       50       49       100       75       200       100       50       36       18       60       24.8       50       33       1.5       0.5       10       1         LG5050       500       50       49       100       75       300       100       50       36       18       60       24.8       50       35       1.5       0.5       10       1         LG5060       600       50       49       100       75       400       100       50       36       18       60       24.8       50       36       1.5       0.5       10       1         LG5070       700       50       49       100       75       500       100       50       36       18       60       24.8       50       37       1.5       0.5       10       1													/kg				
NO	A	B	C		E	<b>3</b>	G			K		M	N	0	P	Q	R	S
ALG5030	300	50	49	100	75	100	100	50	36	18	60	24.8	50	30	1.5	0.5	10	12
ALG5040	400	50	49	100	75	200	100	50	36	18	60	24.8	50	33	1.5	0.5	10	12
ALG5050	500	50	49	100	75	300	100	50	36	18	60	24.8	50	35	1.5	0.5	10	12
ALG5060	600	50	49	100	75	400	100	50	36	18	60	24.8	50	36	1.5	0.5	10	12
ALG5070	700	50	49	100	75	500	100	50	36	18	60	24.8	50	37	1.5	0.5	10	12
ALG7240	400	72	71	100	110	200	100	72	48	18	82	39.7	50	38	2.0	0.7	14	16
ALG7250	500	72	71	100	110	300	100	72	48	18	82	39.7	50	33	2.0	0.7	14	16
ALG7260	600	72	71	100	110	400	100	72	48	18	82	39.7	50	31	2.0	0.7	14	16
ALG7270	700	72	71	100	110	500	100	72	48	18	82	39.7	50	29	2.0	0.7	14	16
ALG10050	500	100	99	100	120	300	100	72	48	18	93	43.3	50	25	2.5	1	14	16
ALG10060	600	100	99	100	120	400	100	72	48	18	93	43.3	50	34	2.5	1	14	16
ALG10070	700	100	99	100	120	500	100	72	48	18	93	43.3	50	32	2.5	1	14	16









			Max	imum Clamping I	Range		mm/kg
NO	1 Workpiece	2 Workpieces	3 Workpieces	4 Workpieces	5 Workpieces	6 Workpieces	7 Workpieces
ALG5030	206	74	30	-	-	-	-
ALG5040	306	124	63	33	-	-	-
ALG5050	406	174	97	58	35	-	-
ALG5060	506	224	130	83	55	36	-
ALG5070	606	274	163	108	75	53	37
ALG7240	272	96	38	-	-	-	-
ALG7250	372	146	71	33	-	-	-
ALG7260	472	196	104	58	31	-	-
ALG7270	572	246	135	83	51	29	-
ALG10050	364	138	63	25	-	-	-
ALG10060	464	188	96	50	34	-	-
ALG10070	564	238	130	75	54	32	-





### **Aluminum Double Station Vises**

### AQS

### Workholding

### **Lockwell Aluminum Vises**

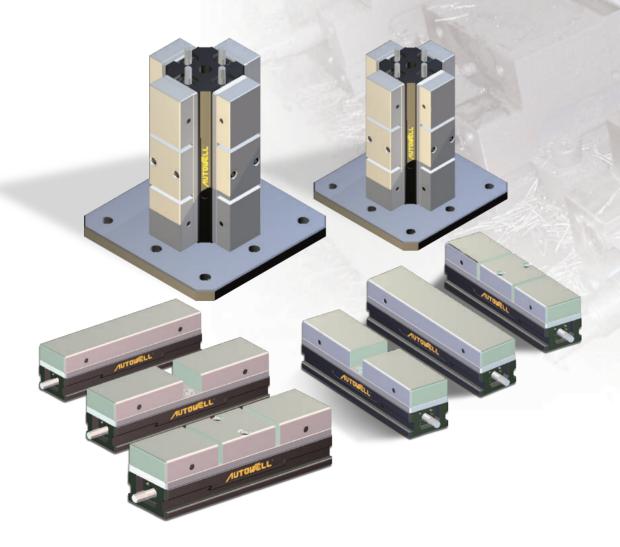
AQS-1040, 1250

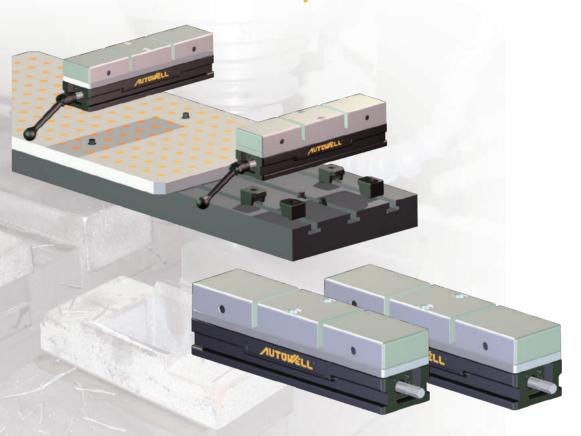
Workholding

### Light, Steady and Flexible

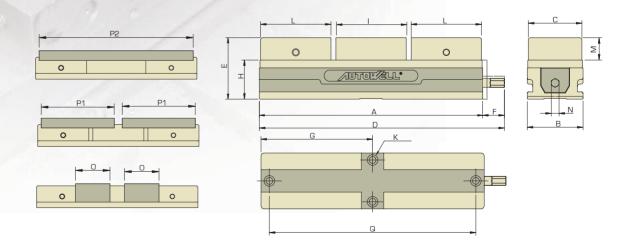
Auto Well has devoted to vises innovation for more efficiency. Aluminum Double Station Vises is made for your vertical or horizontal machining center basic on market requirement. Lighter weight and user friendly compare to other design. The three soft-jaws are shapable to meet your need and takes full advantages.

- [In High-grade aluminum body combines with an alloy steel cover plate enhances base strength and absorbs any machining vibrations.
- Quick changed soft-jaws for multiple machining jobs.
- Clamping force equalization ensures same force while machining two different size workpieces.
- Adjustable Automatically Return Mechanism reduce set-up times through set the off-set distance of movable jaw automatic or manual.





#### AQS Dimensions



							AQS D	IMEN	SIONS	6						mm/l	kg
NO	A	B	C		8	8	G		0	K		M	N	0	P1	P2	Q
AQS-1040	400	100	96	439	110	39	200	70	126	ø20	126	40	14	85	180	380	370
AQS-1250	500	125	121	539	134	39	250	84	157.6	ø20	157.5	50	14	112	225	480	460



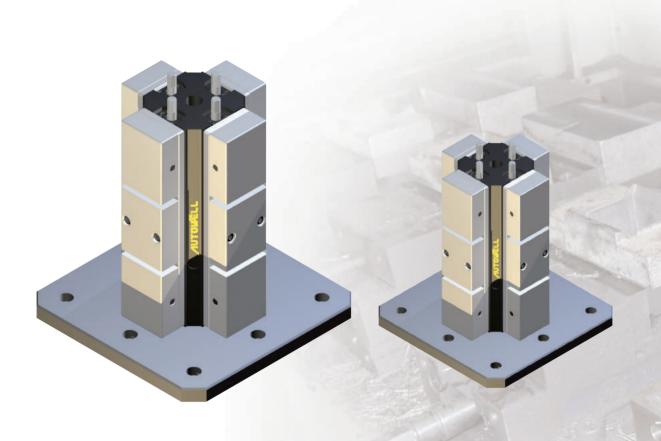
### **Tombstone Aluminum Vises**

# **Clamping Examples**

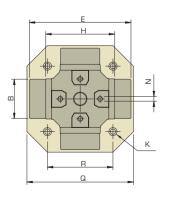
AQS-1040, 1250-4B

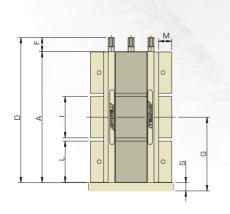
VMC, HMC

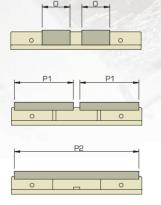
Workholding



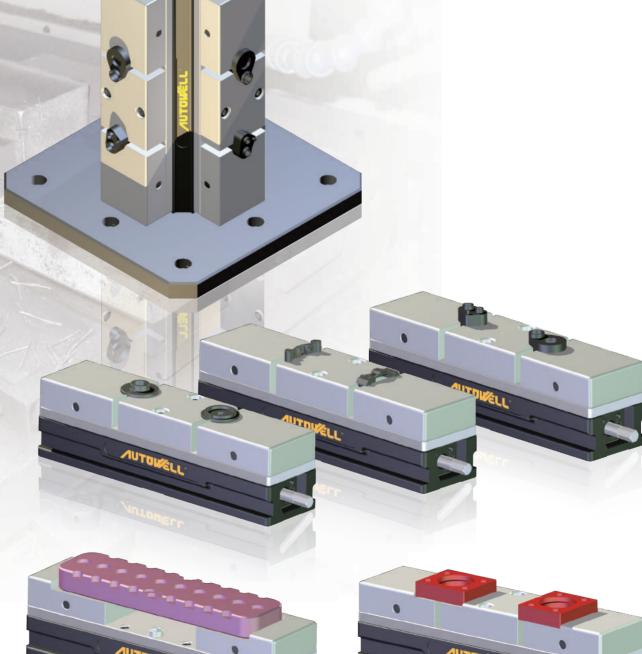








							, i	AQS D	IMEN	SIONS	3								kg
NO	A	B	C		8		G			K		M	N	0	P1	P2	Q	R	8
AQS-1040-4B	400	100	-	439	248	39	225	168	126	ø18	126	40	14	85	180	380	260	160	25
AQS-1250-4B	500	125	-	539	310	39	280	210	157.5	ø18	157.5	50	14	112	225	480	320	240	25







# Wellock Large Opening Vise



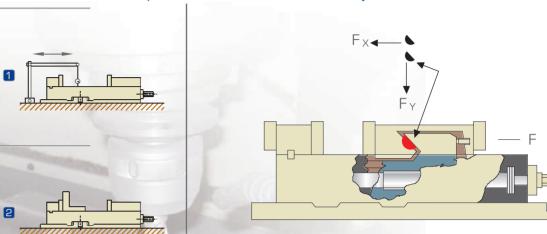
### World Famous & High Accuracy & Best Quality & Large Opening

ATW Vise offers the high quality as same as the world famous brands. Improving on industry standards, the vises are ultra-precision in datum, flatness, parallelism and verticality.

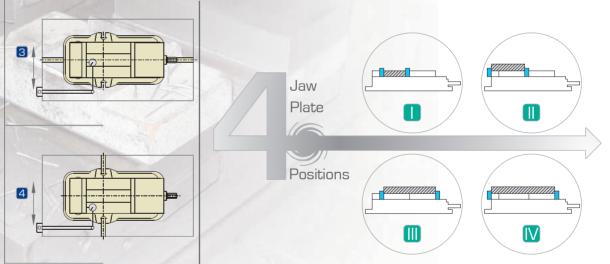
- Wellock Semi-spherical segment eliminate deflection and lift.
- 🖸 Rigid and tensile ductile iron FCD-60 (80,000PSI) vise body. Slide surface flame hardened to  $HS65^{\circ}$  to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to  $HRC54^{\circ}$
- 4 different clamping positions.
- Bearing system has sealed and special treated to reduce damage for extend the lifetime.
- 8,200lbs high clamping force.

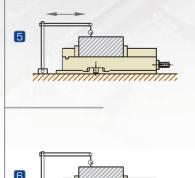


### 



### **2** 4 Jaw-plate Positions





		Wellock VISE system		
NO	Insne	ction Items (Per 100 mm)	Allowar	nce (mm)
140	Шоро	Colon Icomo (1 or 100 mm)	Auto Well	JIS. Class
1	Parallelism	running face to bottom of bed	0.01	0.015
2	Squareness	between running face and jaw plate	0.01	0.03
3	Squareness	keyways on bottom of bed to jaw plate	0.015	0.015
4	Parallelism	keyways on bottom of bed to jaw plate	0.01	0.015
5	Squareness	both sides to running face	0.015	0.02
6	Squareness	both sides to fixed jaw plate	0.015	0.03

<sup>\*</sup>Basic on global market, our company start producing MC serious type of vise on 1986 and we keep our vise dimensions as same since then. There is no fitment or alignment problem between our old

ATW/ATD Workholding Series

### /UTO/ELL®

## Wellock Large Opening Vise

ATW-689/810

Workholding

689

### Wellock Vise

ATW-675 ATD-460/570

Workholding



8.9" large opening.

ATW-689

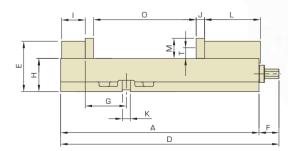
- Spindle nut does not protrude past the end of body.
- Same distance from keyway to stationary jaw with AT-675.
- Bed height  $73.025 \pm 0.012$ mm  $(2.875 \pm 0.001")$ .

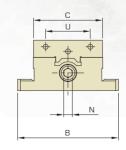


#### ΔT\W-810

- Updated body from AT-80, it provides 10" large opening and steadier vise body.
- Bed height 84.074±0.012mm (3.26±0.001").
- 11,600lbs clamping force.

### ATW-689/810 Dimensions



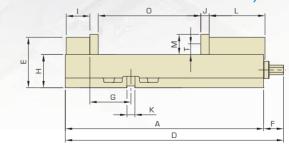


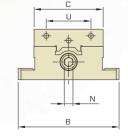
							ATW	DIMENS	IONS	3								
NO	A	B	C		<b>=</b>	8	G			U	K		M	N	0			Weight
ATW-689	437	222	151	481	111.025	44	90.5	73.025	52	18	17.48 / 18	123	44.5	19	226	23.8	98.4	36.3kg
ATW-810	555	295	206	615	134.074	60	125.7	84.074	58	24.2	20.65 / 18	157	56	19	265	32	120	68.2kg





### **O** ATW-675, ATD-460/570 Dimensions





						AT	W/A	LD DIWE	NSIO	NS								
NO	A	B	C		<b>a</b>	8	G			J	K		M	N	0			Weight
ATD-460	321	160	102	361	85.65	40	71	57.15	35.1	15	12	102	35	14	153	17.5	63.5	14kg
ATD-570	368	194	126	415	97	47	85	63.5	40.5	17	16	120	38.1	16	178	20.6	79.4	21kg
ATW-675	432	235	151	476	111.025	44	108	73.025	52	18	17.48 / 18	123	44.5	19	192	23.8	98.4	36kg

34

### /UTO//ELL°

### **Lockwell Machine Vise**

AMC-40, 50, 60,

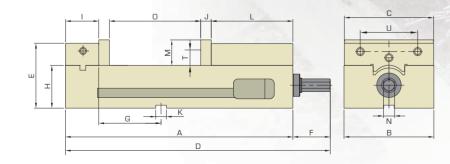
689G/HV

2 operate positions for VMC: Upright and Lay down.

Material of AMC: FCD-60.



#### **O AMC Dimensions**



						Α	MC D	IMENS	IONS	;								mm/kg
NO	A	B	C		<b>3</b>	<b>3</b>	G				K		M	N	0			Weight
AMC-40G/HV	330	105	102	372	100	42	91.6	68	46.8	21	18	106	40	14	125	17.5	63.5	21kg
AMC-50G/HV	360	128	126	410	103.5	50	82	70	45	17	18	117	38	19	158	20.6	79.4	26kg
AMC-60G/HV	390	154	151	455	111	65	106.7	73	57	18	18	140	44.5	19	148	23.8	98.4	36.5kg
AMC-689G/HV	437	154	151	490	134	53	90.5	73.025	52	18	18	123	44.5	19	226	23.8	98.4	36.5kg

### Wellock Versatile Vise

MG, MGR-40, 60G

Vise for basic single station CNC. Features on prevents lift of workpiece and high accuracy.

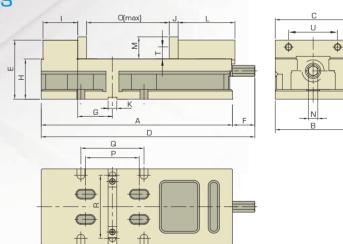
2 operate positions for VMC: Upright and Lay down. 1 operate position for HMC: Horizontal.

Material of MG/MGR: FCD-60.





**MG** Dimensions



									MG	DIN	IENSI	ONS								r	mm/kg
NO	A	B	C		8	<b>6</b>	G				K		M	N	0	P	Q	R			Weight
MG, MGR-40G	316	104	102	344	92	28	63.5	63.5	50.8	15	12.7	100	35	14	130	85	101.6	80	17.5	63.5	20kg
MG, MGR-60G	385	152.45	151	431.8	118.7	46.8	69.85	81	69.9	18	18	114.3	44.5	19	163	107.95	127	127	23.8	98.4	31kg

35

### **Mechanical Power Machine Vise**

MP-50, 60, 80

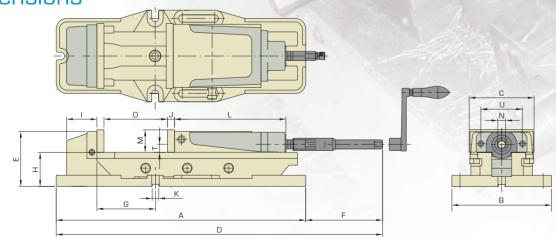
Workholding

Unique Ball design structure provides powerful clamping forces. Inside Disc-Spring to against shocks and vibrations while operation. High accuracy of tolerance ensures reliability and long durability.



- Rigid constructed suitable for machining such as mill, grind, drill and shape
- Easy operation could bring different clamping force.
- Rigid and tensile vise body. Accuracy beyond others in the market.
- Securely grips rectangular and irregularly shaped workpieces, minimizing setup time and lowering production costs.

#### MP Dimensions



							N	1P DIN	/ENSIC	ONS										nm/kg
NO	A	B	C		E	6	G			J	K		M	N	0	P			Clamping force	Weight
MP-50	538	203	130	670	117	132	82	72	82	15	16	175	46	19	220	60	16	85	40KN	37kg
MP-60	608	220	154	800	132	180	140	82	74	17	16	208	54	19	300	80	18	100	50KN	57.5kg
MP-80	700	285	206	900	160	200	118	100	113	21	18	245	62	19	300	100	24.5	120	60KN	104kg

## Hydraulic Power Machine Vise

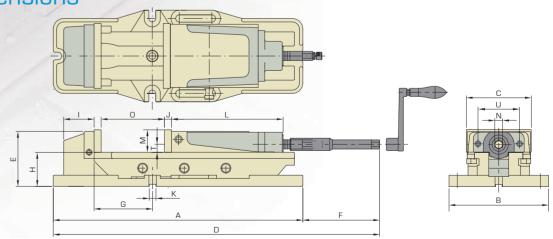
HP-40, 50, 60, 80 Workholding

HP Vise is the first Hydraulic Power Vise in Taiwan. The hydraulic booster provides a steady clamping force against shocks and vibrations during the operations, since it fastens the work-piece securely with the aid of the Disc-spring mounted inside. Clamping force will never loose except to be done manually.



- Suitable for every machine center. Can be change to non-Booster system.
- Special design ensures the workpiece does not deflect and lift.
- Rigid and tensile vise body. Accuracy beyond others in the market.
- Securely grips rectangular and irregularly shaped workpieces, minimizing setup time and lowering production costs.

#### HP Dimensions



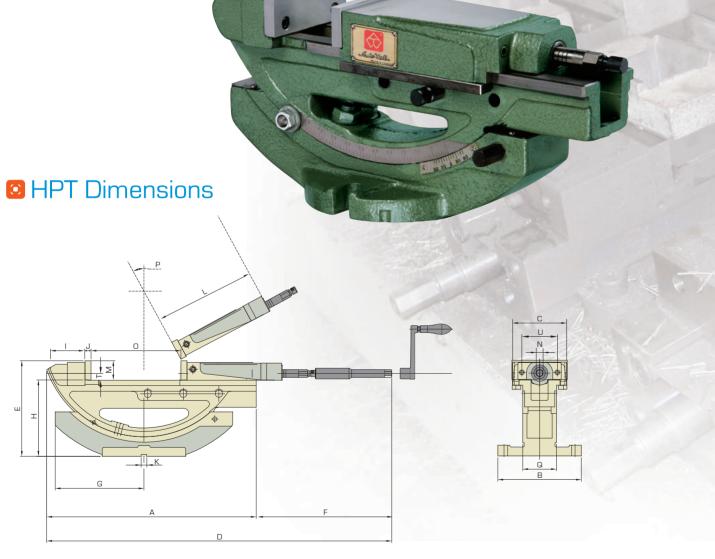
							HP DI	MENS	IONS										nm/kg
NO	A	B	C		<b>6</b>	<b>6</b>	G		0	J	K		M	N	0			Clamping force	Weight
HP-40	435	165	104	525	93	90	63	58	68	11	16	153	36	14	170	10	70	25KN	24kg
HP-50	538	203	130	670	117	132	82	72	82	15	16	175	46	19	220	16	85	35KN	37kg
HP-60	608	220	154	800	132	180	140	82	74	17	16	208	54	19	300	18	100	44KN	57.5kg
HP-80	700	285	206	900	160	200	118	100	113	21	18	245	62	19	300	24.5	120	55KN	104kg

## Hydraulic Power Angle Vise

**HPT-60** 

Workholding

HPT Series is different from other conventional milling vise. It not only follows the functions of HP Series but also makes angular setting in directions possible. The vertical angle can be setting from  $0\text{--}50^\circ$  of your need. Precise angular setting in plane can be read from the mounted scale.







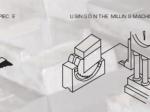
#### **NUTUWELL**

### GAP-25, 30, 46 Adjustable Angle Plates



	C	GAP DIME	NSIONS		mm
NO	L	W	Н	h	N.W.
GAP-25	75	25	36	25	0.5kg
GAP-30	102	30	49	30	1.0kg
GAP-46	102	46	49	30	1.5kg





AGP-85 Precision Parallels Set



AGP-85 DIMENSIONS mm										
Order NO	W	Н	L	PCS	N.W.					
	8.5	14	150	2						
	8.5	16	150	2						
	8.5	20	150	2						
	8.5	24	150	2	5.5kg					
AGP-85	8.5	30	150	2						
	8.5	32	150	2						
	8.5	36	150	2						
	8.5	40	150	2						
	8.5	44	150	2						

### AGP-100 Precision Parallels Set





AGP-100 DIMENSIONS									
Order NO	А	В	L	PCS	N.W.				
	5	16	100	2					
	6	18	100	2					
	8	24	100	2					
	10	30	100	2	11kg				
AGP-100	12	36	150	2					
	14	48	150	2					
	18	60	150	2					
	22	62	150	2					
		1							
Clamp Size	А	В	С	L	PCS				
	15	31	2.5	200	2				

### GVL-100 N.W. 0.3kg

### Tool Maker Vise (Stainless steel)

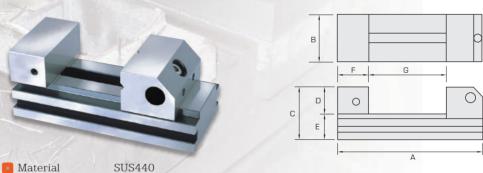
GVL-100 mini tool maker vise can be applied for precise process on bigger vises, and it can be used on EDMS and grinding machines.



### GVL-200, 300

### Tool Maker Vise (Stainless steel)

Super Cold treating the stainless steel material after heat treatment, makes the rustless tools easy to maintain and preserve lasting precision.



GVL-200, 300 DIMENSIONS									
NO	А	В	С	D	Е	F	G	N.W.	
GVL-200	140	50	53	25	28	25	0-75m/m	1.8kg	
GVL-300	180	72	62	30	32	35	0-100m/m	3.8kg	

### **VSU-300** N.W.5kg

Harden treatment up to HRC50°~55°

Parallelism

Squareness

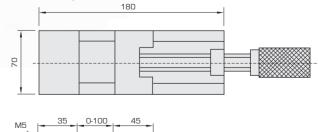
### Tool Maker Vise (Stainless steel)

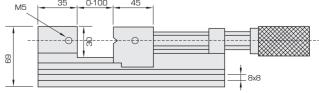
within 0.003mm/100mm

within 0.003mm/100mm



Material	SUS440
Parallelism	within 0.003mm/100mm
Squareness	within 0.005mm/100mm
Harden treatment	up to HRC50°~55°





#### **NUTULELL**

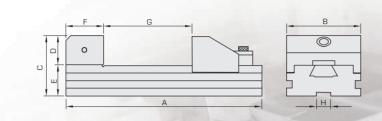
### GLK-60, 80, 100

### GLK Tool Maker Vise

GLK Tool Maker Vise adopts new construct and high strength design, can enable to clamp strong and powerful workpieces.







GLK-60~100 DIMENSIONS									
NO	А	В	С	D	Е	F	G	Н	N.W.
GLK-60	180	60	55	27	28	35	0-80	14	Зkg
GLK-80	205	80	64	32	32	40	0-100	14	5kg
GLK-100	250	96	82	40	42	45	0-125	14	10kg

### VSB-15, 20, 25,30, 40

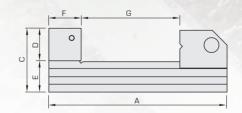
#### VSB Tool Maker Vise

VSB Tool Maker Vise is a mechanics of new type, can enable to easily adjust the size of workpieces being held.



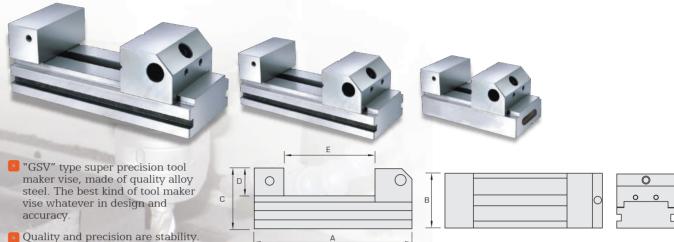


- 7 YK30 material can pledge the
- HardnessHRC56°~60°



VSB-15~40 DIMENSIONS											
NO	А	В	С	D	Е	F	G	N.W.			
VSB-15	105	36	48	20	28	25	0-40	1kg			
VSB-20	150	48	53	25	28	25	0-75	2kg			
VSB-25	176	63	59	30	29	30	0-95	3.3kg			
VSB-30	190	73	68	35	33	35	0-105	4.3kg			
VSB-40	245	98	90	45	45	45	0-135	10kg			

# GSV-34, 45, 70, 90, 120 Super Precision Tool Maker Vise



- Achieving Europe and Japan quality test qualification.
- Single side oblique angle design, can be mended the quantity of essence deformed automatically.

Material	SKS3
Parallelism	within 0.002mm/100mm
Squareness	within 0.003mm/100mm
Cooling treatm	ent: minus 185°C
Harden treatm	ent up to HRC58°~62°

GSV-34~120 DIMENSIONS											
NO	А	В	С	D	Е	N.W.					
GSV-34	75	34	35	15	0-25	0.38kg					
GSV-45	110	45	45	20	0-50	1.0kg					
GSV-70	160	70	62	30	0-80	3.3kg					
GSV-90	210	90	80	40	0-115	6.7kg					
GSV-120	286	120	90	40	0-150	16.8kg					

## GAA-20, 25, 30, 40

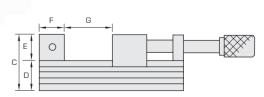
Super Precision Tool Maker Vise

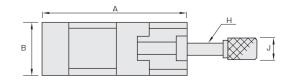


				GAA-20	0~40	DIME	NSIONS			mm
NO	А	В	С	D	Е	F	G	Н	J	N.W.
GAA-20	140	48	55	30	25	25	0-75	M16	30	2.7kg
GAA-25	160	63	69	39	30	30	0-85	M16	30	4.6kg
GAA-30	180	73	78	43	35	35	0-95	M24	40	6.4kg
GAA-40	230	98	92	47	45	40	0-120	M24	40	13kg

- GAA" type super precision tool maker vise, complete size, handle designed, can be arbitrarily rotated the handle to adjust clamping size.
- Inside of the handle is hexagonal hole designed, for hexagonal spanner
- Precision spiral shaft match up with nut, and effective to ensure the lasting. The quality and accurate are guaranteed.
- Single side oblique angle design, can be mended the quantity of essence deformed automatically

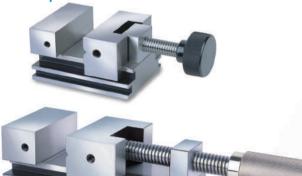
Material	SK2
Parallelism	within 0.003mm/100mm
Squareness	within 0.004mm/100mm
Harden treatm	ent up to HRC56°~58°





#### /UTOWELL

# GAS-60,70,90 Super Precision Tool Maker Vise

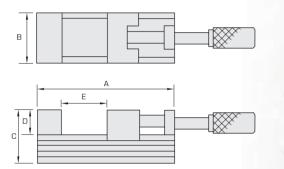


- "GAS" type super precision tool maker vise, made of quality alloy
- Quality and precision are stability. Achieving Europe and Japan quality test qualification.
- Single side oblique angle design, can be mended the quantity of essence deformed automatically.
  Material SKS3
- Material

Parallelism	within 0.002mm/100mm
Squareness	within 0.003mm/100mm

Harden treatment up to HRC56°~58°

Cooling treatment: minus 185°C

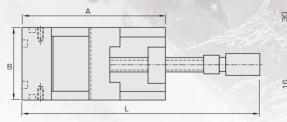


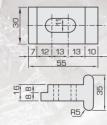
	GAS-60, 70, 90 DIMENSIONS									
NO	А	В	С	D	Е	N.W.				
GAS-60	92	60	50	25	0-32	1.6kg				
GAS-70	165	70	62	30	0-80	4.3kg				
GAS-90	212	90	80	40	0-120	8.4kg				

## PGV-100,125

### Precision Hydraulic Vise



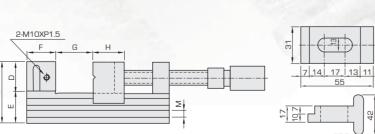




- Precision hydraulic vise, made of quality alloy steel, possesses good accuracy.
- Hand-in hydraulic structure designed, turning the power of light, can to play strong clamping force.
- Quality and precision are stability. Achieving Europe and Japan quality test qualification.

	Material	SKS3					
	Parallelism	within 0.003mm/100mm					
	Squareness	within 0.005mm/100mm					
	Harden treatment up to HRC60°∼62°						
	Cooling treatmen	t: minus 185°C					

Max. Clamping forces: 1500kgf



	PGV DIMENSIONS										mm
NO	А	В	С	D	Е	F	G	Н	L (Mximum)	М	N.W.
PGV-100	220	100	80	40	40	40	110	50	455	9X7	10kg
PGV-125	300	125	90	40	50	60	165	70	590	10X7	19.5kg

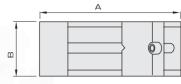
# AVV-30, 40, 50, 60 Super Precision Tool Maker Vise

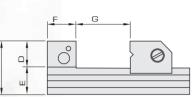
- a "AVV" Tool maker Vise is made of high quality alloy tool steel.
- It has a special feature to prevent disstortion during clamping. As such, it is able to ensure work with good accuracy.
- With a quick adjusting spring action to allow fast and easy size adjustmen of the clamping jaw.

Material	SKS3
Parallelism	within 0.003mm/100mm
Squareness	within 0.004mm/100mm

Harden treatment up to HRC58°~62°

Cooling treatment: minus 185°C



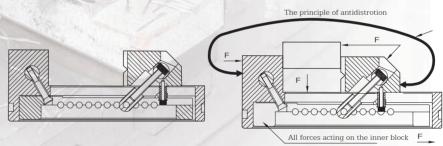






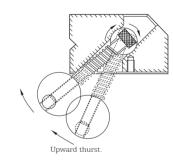
AVV DIMENSIONS									
NO	А	В	С	D	Е	F	G	N.W.	
AVV-30	190	73	70	35	35	38	0-100	4.6kg	
AVV-40	230	98	80	40	40	46	0-125	11.4kg	
AVV-50	300	125	98	48	50	60	0-160	18.5kg	
AVV-60	350	150	100	50	50	60	0-210	24.9kg	

#### SUPER PRECISION TOOL MAKER VISE



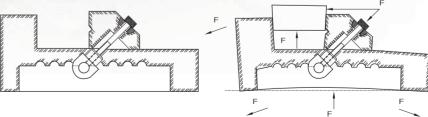
New improved AVV30 Tool Maker Vise before clamping

When the AVV30 Tool Maker Vise is clamping work piece, reaction force will act on the inner block. As such, the vise will not twist or distort, It can maintain a very high

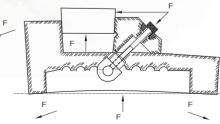


When tightening the moving block of the vise, the spring action will act on the tightening pin. This creates a twisting force which acts on the inner block and counter balance the action force.

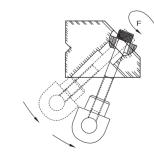
#### GENERAL TOOL MAKER VISE



V30 Tool Maker Vise before clamping



When the V30 Tool Maker Vise clamping work piece, reaction force will act on the body of the vise, As such, the vise may twisted or distorted, It can affect the accuracy of the work.



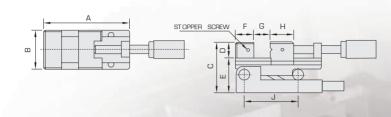
When loosening the V30 Tool Maker Vise, the screw will move downward due to gravity force. Workers need to fix it back to position by hand.

#### **NUTUWELL**

Precision Sine Vise
Work for getting right angle can be done while clamping a workpiece and lay down 90°



Material	SKS
Parallelism	within 0.003mm/100mm
Squareness	within 0.005mm/100mm
Harden treatment	up to HRC58°~62°
Angle tol.	within 15sec within 20sec

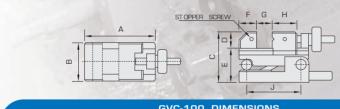


The precision sine vise is developed for processing at various angles. It is used for grinding cuttion making hole marking and measuring.

				Δ	GV-1	00 D	IMEN	ISION	IS			mm
NO	А	В	С	D	Е	F	G	Н	I	J	Max.angle	N.W.
AGV-100	160	73	93	30	63	33	80	45	M5	100	46º	6.8kg

### Precision Sine Vise The clamp handle is placed under workpiece

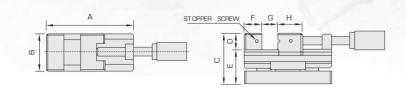




	GVC-100 DIMENSIONS										mm	
NO	А	В	С	D	Е	F	G	Н	-1	J	Max.angle	N.W.
GVC-100	130	73	93	30	63	33	45	45	M5	100	46º	6kg

### Precision Sine Vise It can set horizontal angles

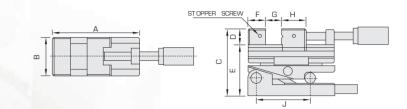




				AG	L-50	DIME	NSIO	VS			mm
NO	А	В	С	D	Е	F	G	Н	-1	Max.angle	N.W.
AGL-50	160	73	93	30	63	33	80	45	M5	46º	6.5kg

### Precision Compound Sine Vise It can process at the second angle without removing a workpiece



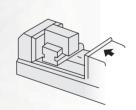


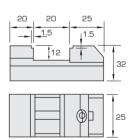
					C	SV-1	00 D	IMEN	ISION	IS			mm
N	NO	А	В	С	D	Е	F	G	Н	1	J	Max.angle	N.W.
C	CSV-100	160	73	124	30	94	33	80	45	M5	100	46º	8.8kg

### Tool Maker Vise(Small)

Tool makers vise of mini type can be put in a bigger vise to process the small and precise workpiece. Also it can be used in an E.D.M. Machine and grinding machine. Squareness and parallelism:within0.003m/m.



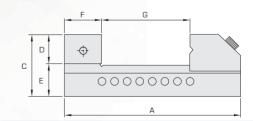


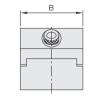


## AVB-15, 20, 25, 30, 35, 40, 50

Tool Maker Vise





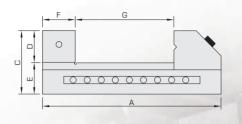


			AVB	DIMEN	SIONS			mm
NO	А	В	С	D	Е	F	G	N.W.
AVB-15	100	36	48	20	28	25	0-40	1kg
AVB-20	150	50	53	25	28	30	0-80	1.8kg
AVB-25	175	63	63	32	31	35	0-90	3.3kg
AVB-30	190	73	70	35	35	35	0-100	4.3kg
AVB-35	235	88	80	40	40	40	0-130	7.5kg
AVB-40	245	100	90	45	45	45	0-130	10kg
AVB-50	285	125	100	50	50	45	0-160	15kg

#### **NUTUWELL**

## AVS-15, 20, 25, 30, 35, 40, 50, 60 Tool Maker Sine Vise









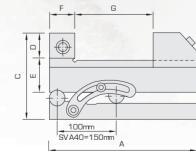
4		
N		

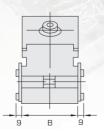
Material	SK2
Parallelism	within 0.003mm/100mm
Squareness	within 0.005mm/100mm
Harden treatment	up to HRC56°~60°

	AVS DIMENSIONS										
NO	А	В	С	D	Е	F	G	N.W.			
AVS-15	105	36	48	20	28	25	0-40	1kg			
AVS-20	150	50	53	25	28	30	0-80	1.8kg			
AVS-25	175	63	63	32	31	35	0-90	3.3kg			
AVS-30	190	73	70	35	35	35	0-100	4.3kg			
AVS-35	235	88	80	40	40	40	0-130	7.5kg			
AVS-40	245	100	90	45	45	45	0-130	10kg			
AVS-50	285	125	100	50	50	45	0-160	15kg			
AVS-60	330	150	100	50	50	50	0-180	20kg			

# SVA-20, 25, 30, 40 Tool Maker Sine Vise



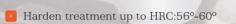


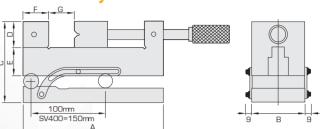


			SVA DII	MENSI	ONS			mm
NO	А	В	С	D	Е	F	G	N.W.
SVA-20	150	48	88.5	25	28	25	0-75	2.6kg
SVA-25	176	63	94.5	30	29	30	0-85	4.8kg
SVA-30	190	73	103.5	35	33	35	0-95	7kg
SVA-40	245	98	126.5	45	45	45	0-125	15.5kg

# ASV-200, 250, 300, 400 Tool Maker Sine Vise





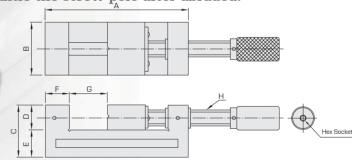


			ASV E	IMENS	IONS			mm
NO	А	В	С	D	Е	F	G	N.W.
ASV-200	156	48	87.5	25	27	25	0-63	4.4kg
ASV-250	176	63	98.5	30	33	30	0-73	7kg
ASV-300	190	73	103.5	35	33	35	0-76	9kg
ASV-400	255	98	120.5	40	42	40	0-120	16kg

## 0, 25, 30, 40 Tool Maker Vise

Tool Maker Vise makes it's clearance smallest. Hand wheel with Hex nut can be tighten by hex spanner. It is simple to dismantle the screw pole after abraded.





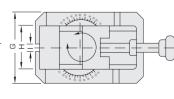
1	Material	SK2
	Parallelism	within 0.003mm/100mm
	Squareness	within 0.005mm/100mm
	Harden treatme	ent up to HRC56°~60°

			VSD E	DIMENS	IONS			mm
NO	А	В	С	D	Е	F	G	N.W.
VSD-20	156	48	52	25	27	25	0-63	2.5kg
VSD-25	176	63	63	30	33	30	0-73	4.5kg
VSD-30	190	73	73	35	38	35	0-76	6kg
VSD-40	255	98	82	40	42	40	0-120	12kg

### CHM-80 Precision Universal Vise

- Precision graduation for accurate
- Horizontal swivel through 360°
- The unit tilts 45° vertically.
- Its swivelling and tilting features make this unit well suited for straight or inclined surface, angular drilling machining on various machine tools as precision grinding machine, boring and milling machine, electrical discharge machine etc.





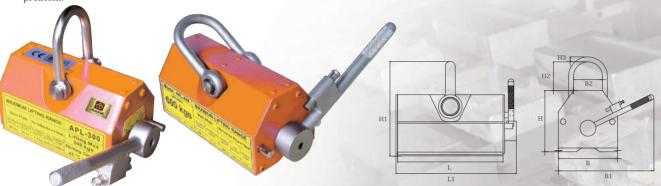
				С	нм-8	O DIN	IENSI	ONS				mm
NO	А	В	С	D	Е	F	G	Н	-1	J	К	N.W.
CHM-80	137	75	32	80	160	178	110	70	16	33	15	14kg

### For Vise

#### **AUTULELL®**

### **ON/OFF Type Permanent Lifting Magnetic Chuck**

- Before lifting a workpiece, please check if any foreign-material or iron chip exists between the lifter and workpiece, please clean up the surface of the lifter and workpiece.
- Checks the switch position to make sure it is set correctly, and also checks the held workpiece if it is being held completed and balanced before lifting.
- Please do not switch the handle "on" if it is not being used to avoid any damage caused.
- Please do not use the product if the working piece surface tepmperature is higher than 80°C degree.
- Suitable for carrying various Iron material workpiece.
- Very easy operation with the special design of ON/OFF switch. Easy-Locked function, provides you switch on and lock the handle at the same time.
- Workingpiece surface will not be damaged during the working.
- High holding magnetic power, this lifter cans be used successive. Electro power is no necessary for the lifter to avoid power failure problem.



										APL	DIMENS	IONS					
NO	Capacity	Chuc					Dimer	nsions			- 0:		lax Lifting	Range ollow Round	ChI	Safety	Weight
	(KG)	fac	ce	<b></b>	670							el Plate	maclifting	max.	maximum	cofficient	(KĞ)
		В			B1			B2	H2	H3		required(mm)		diameter(mm)			
APL-100	100	63	92	71	164	110	122	32	43	8	100	15	45	150	1000	x 3.5	2.5
APL-300	300	93	165	96	210	185	170	45	62	13	300	25	135	250	1500	x 3.5	8
APL-600	600	122	236	120	303	265	227	59	92	15	600	30	270	350	2000	x 3.5	22
APL-1000	1000	171	263	164	413	298	302	95	116	20	1000	40	450	450	2500	x 3.5	51
APL-2000	2000	232	378	215	576	415	390	119	148	28	2000	55	870	550	3000	x 3.5	131
APL-3000	3000	300	454	265	717	490	500	156	213	32	3000	60	1320	650	3500	x 3.5	250

The specifications and dimensions of products in the catalogs are for reference only. Subject to be changed without any notice

### Load of Holding Power

The load of holding power will changes depending on the thickness, attractive face roughness and quality of material and clearance between the workiece with magnet. (See the graphs as below)

			Chart of	diffeerence in	holding powerb	y thickness						
	Thickness		Percentage of lifting capacity									
NO	mm	Inch	APL-3000	APL-2000	APL-1000	APL-600	APL-300	APL-100				
1	UP 60	UP 2.36"	100%									
T2	55	2.16"	95%	100%								
T3	50	1.97"	90%	95%	100%							
T4	45	1.77"	85%	90%		100%						
T5	40	1.57"	75%	85%			100%					
T6	35	1.38"	65%	75%	90%			100%				
T7	30	1.18"	55%	65%	80%							
T8	25	0.98"	45%	55%	70%	90%						
T9	20	0.79"	35%	45%	60%	75%	90%					
T10	15	0.59"	25%	35%	50%	60%	70%					
T11	10	0.39"	15%	25%	35%	45%	50%	70%				
T12	5	0.20"	10%	15%	20%	25%	30%	40%				

- Calculating Formula for "Range of Lifting Capacity" (TxFxMxCapacity of Lifter) Example: Terms of workpice: T8, F1, M2
- 90% X 125% X 85% X 600kg(APL-600)=573KG
- Safety Factor X 3.5 Time (Safety factor is consideration for ensurint the use in safety.)
- The above diagrams is only for reference. The operator should be test and check if it is in safe range before lift away the workpiece of steel. Other wise, it will be not responsibility by producer for any accidents.

### **Accessories**









Workstop





#### Handles



### Special Jaws



### Angle Plate



Angle Plate							
Item No.	L	W	Н	Weight			
AVR-4	75mm	112mm	89mm	2kgs			
AVR-6	115mm	150mm	127mm	3.5kgs			
AVR-8	127mm	198mm	150mm	7kgs			
AVR-10	150mm	254mm	203mm	12kgs			
AVR-12	203mm	304mm	228mm	25kgs			

### Clamp Support Screw Jacks



Clamp Support Screw Jacks								
Item No.	Height	Weight						
AS-65	70-100mm	2kgs						
AS-150	110-150mm	3.5kgs						
AS-250	140-200mm	7kgs						
AS-500	270-250mm	12kgs						

### Clamping Kit



	Clamping Kit								
MODEL	T-SLOT	STUD SIZE	STEP BLOCK WIDTH						
ACK-103A	7/16		1"						
ACK-103B	1/2	3/8-16	(STB14. STB24. STB34)						
ACK-103C	9/16								
ACK-104A	9/16	1/2-16	1" or 11/4 "						
ACK-104B	5/8	or	(STB14. STB24. STB34)						
ACK-104C	11/16	1/2-13	or (STB15. STB25. STB35)						
ACK-105A	11/16		1" or 11/4 "						
ACK-105B	3/4	5/8-11	(STB14. STB24. STB34)						
ACK-105C	13/16		or (STB15. STB25. STB35)						
ACK-08	10	M8×P1.25	1" (STB14. STB24. STB34)						
ACK-10	12	M10×P1.5	1" (STB15. STB24. STB34)						
ACK-12A	14								
ACK-12B	16	M12×P1.75	1" (STB14. STB24. STB34)						
ACK-12C	18								
ACK-14	16	M14×P2.0	1" (STB14. STB24. STB34)						
ACK-16	18	M16×P2.0	1" (STB14. STB24. STB34)						