

July. 2013

AUTO WELL Global Network



AUTOWELL®

AUTO WELL Enterprise Company Limited

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

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Auto Well

VARIOUS PRECISION VISES

AUTO WELL ENTER. CO., LTD.



Registered
ISO 9001:2008



AUTO WELL ENTERPRISE COMPANY LIMITED VARIOUS PRECISION VISES

for CNC machining centers and milling machines

Registered
ISO 9001:2008

Auto Well Enter. Co., Ltd was founded in 1980 and started from produce the Hydraulic Power Machine Vise. The promoter, Philip Lin, devotes to develop the Machinery Industry and abides staunchly by the faith: Honor, Quality, Service, and Creation. The most plentiful wealth Auto Well has is the accumulations of many elite and excellent techniques during these 30 years. We have passed the ISO Certification. We satisfy the customers by keep studying creation, develop high quality products, and perfect service. Nowadays, we are the earliest and most professional precise vise manufacturer in Taiwan.

The quality guarantee of Auto

Well is come from the excellent manufacture ability. Inside, we carry through the quality policy: "Do the right thing, do the thing right." We are not like the other vise manufacturers in Taiwan which are just fabricate the vise. Perhaps almost all of their spare parts are buying from outside. The product policy of Auto Well is "primary quality, secondly the cost." There are several CNC and surface grinding machines in our company, so we can control and process the quality of precision by ourselves. We use the ERP and ISO quality security system to be the nuclear of management. Outside, we use "internationalization and liberalization" to lead our marketing and provide the customer the best and fastest service via overseas marketing. The depart-

ments of administrative, financial, sales, R&D and quality which are cooperate closely with each other to become a firm management team. The foregoing is making the precise vise of Auto Well reach the international highest standard.

We are the first precise vise manufacturer that passed the ISO international quality certification in Taiwan. Our products are sold to U.S.A., Canada, UK, Germany, Holland, Italy, Australia, Japan, Korea, China, Singapore, Malaysia, Thailand, South Africa, etc... In the current great environment of the international market, we keep the existing products improving. Furthermore, our R&D department develops new products in order to satisfy different customers and different demands. We have obtained various kinds of domestic and international rewards, authentication and patent registrations. All of these are the duties for Auto Well should to be responsible for the precise vise industry in Taiwan.



全力以赴 追求品質
創新科技 品質至
品質政策：
提供高優質的產品與服務

 autowell.com.tw

workholding

MC Power Vises

AVK, AVR, ALQ, AVQ, AVM, AVC, AVL, AMP *system*

... 4



Double Station Vises

TLD, ALD, TLR, HLD, ALT *system*

... 16



Aluminum Double Station Vises

ADS, ADS-4B *system*

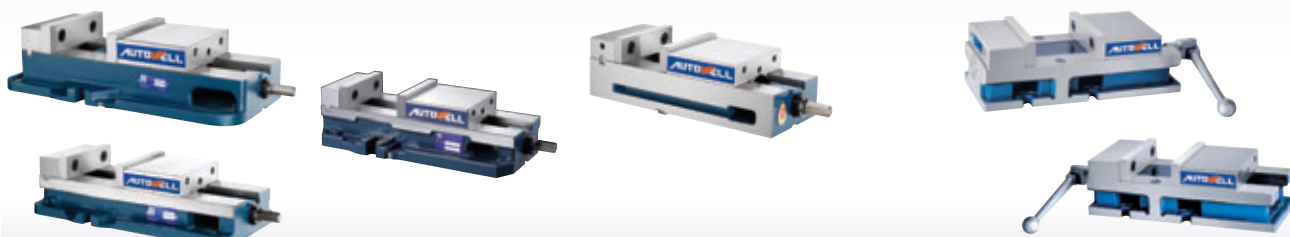
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Wellock Vises

ATW, AMC, MG *system*

... 30



contents

Hydraulic Power Vises

MP, HP, HPT *system*

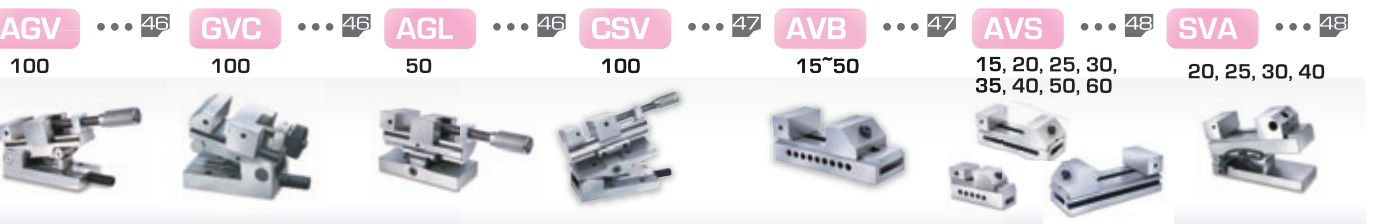
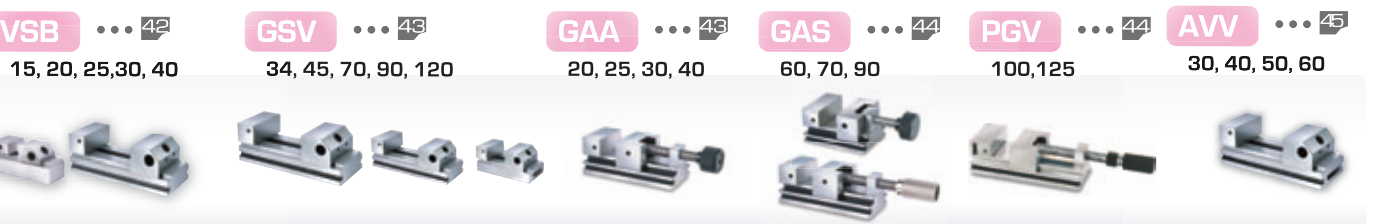
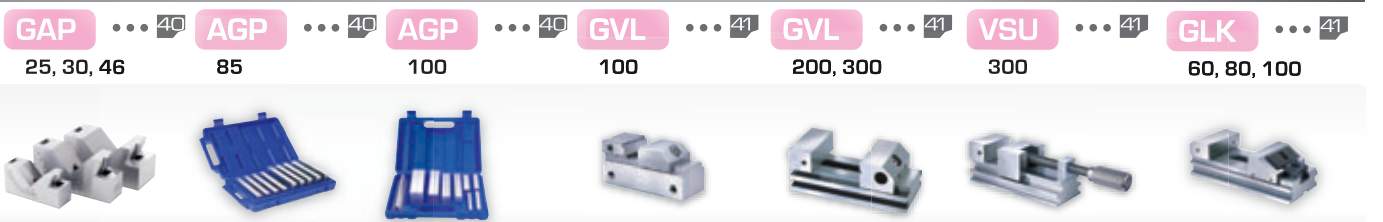
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Precision Accessories

For Grinding Machine

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Accessories

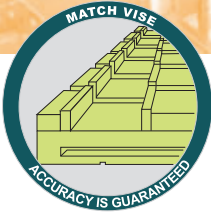
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MC Mechanical Super Vise



台灣精品2010
TAIWAN EXCELLENCE



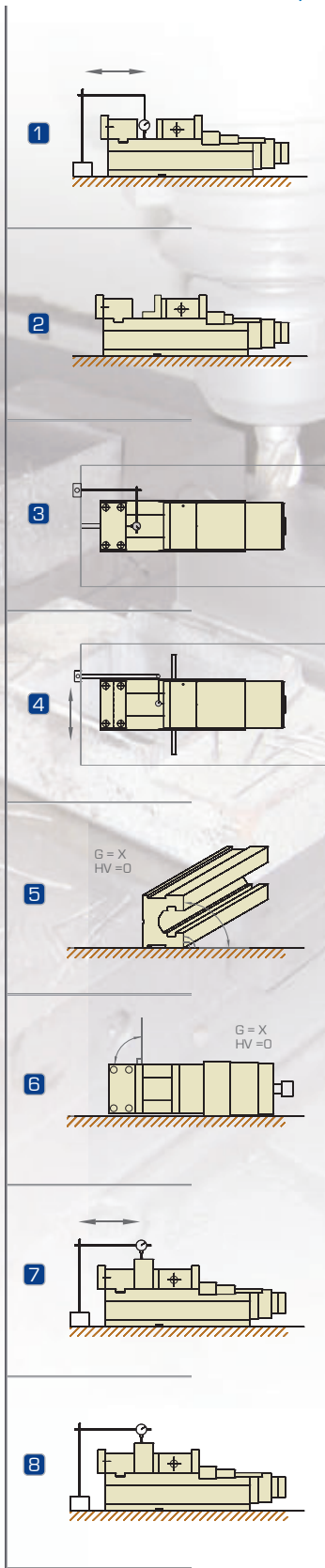
High Clamping Force & Extra Out-jaw Clamping Capacity

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°.

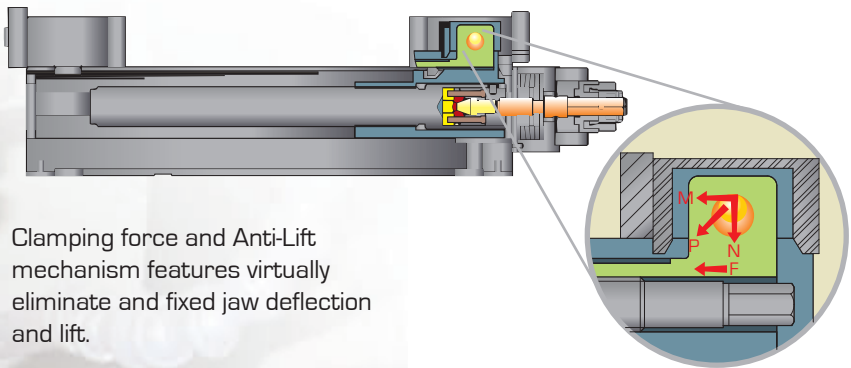


Static Accuracy



Lockwell Anti-Lift Mechanism

Lift can be controlled within **0.01 mm**

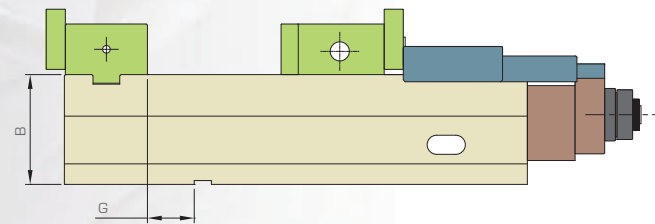


Dimensions

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	Inspection Items (Per 100 mm)		Allowance (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	0.02	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

*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 and new MC vise.

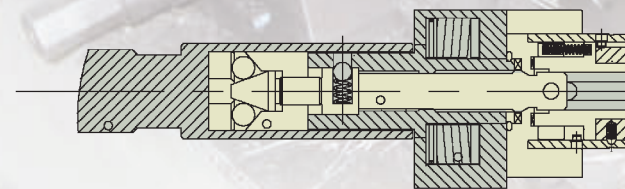
Ultra-low height Mechanical Power Vise

AVK-160, 200

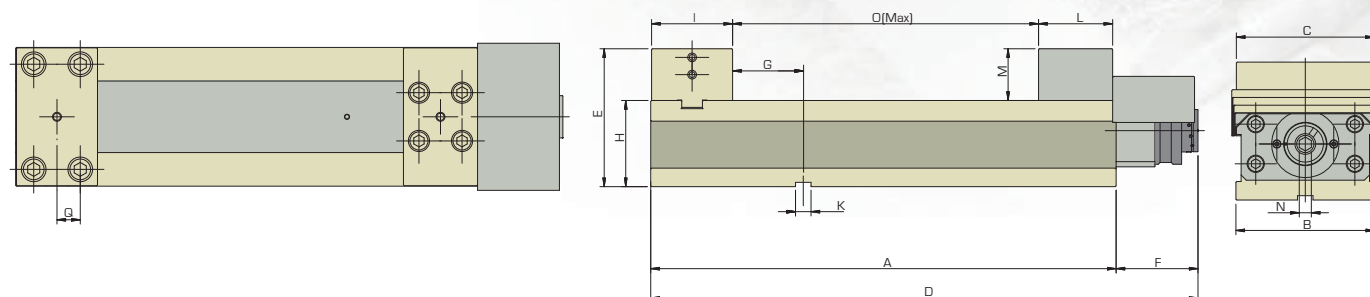
New design with ultra-low vise body and largest opening, besides, it has 3 patents: Lockwell Anti-Lift Mechanism, Mechanical Booster and Force Adjustable Function. Largest opening, high accuracy and strong rigidity for increase the efficiency and productivity.



- 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

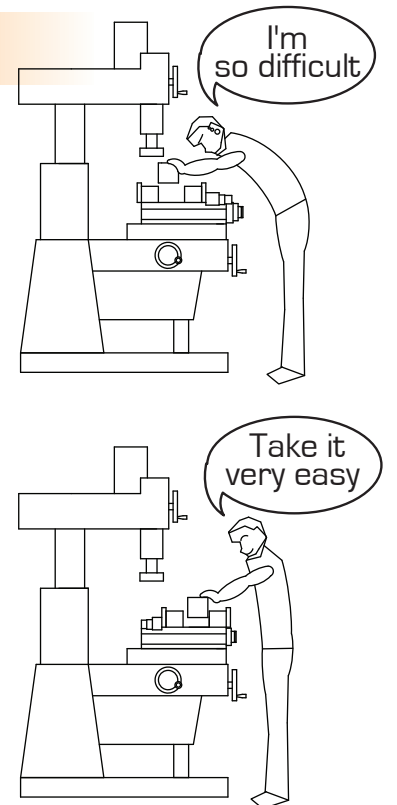


AVK DIMENSIONS																	mm/kg
NO	A	B	C	D	E	F	G	H	I	K	L	M	N	O	Q	Clamping Force	Weight
AVK-160	540	161	160	635	160	95	82	100	94	18	86	60	14	355	27	45KN	65kg
AVK-200	615	201	200	710	180	95	74	110	102	18	98	70	14	405	30	45KN	105kg

MC Mechanical Reversed Power Vise

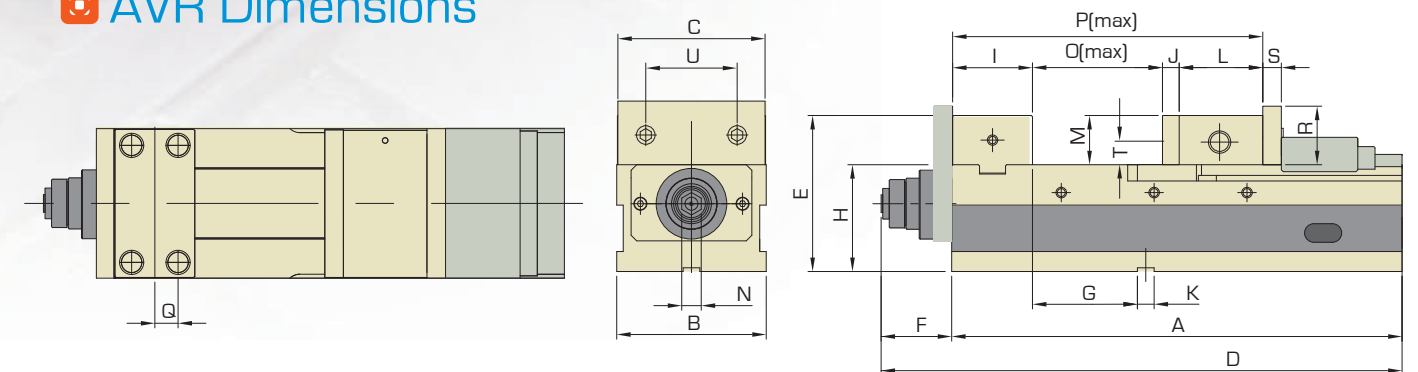
AVR-160 G/HV

Workholding



- Most suitable for VMC & HMC and owns 2 patents.
- 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

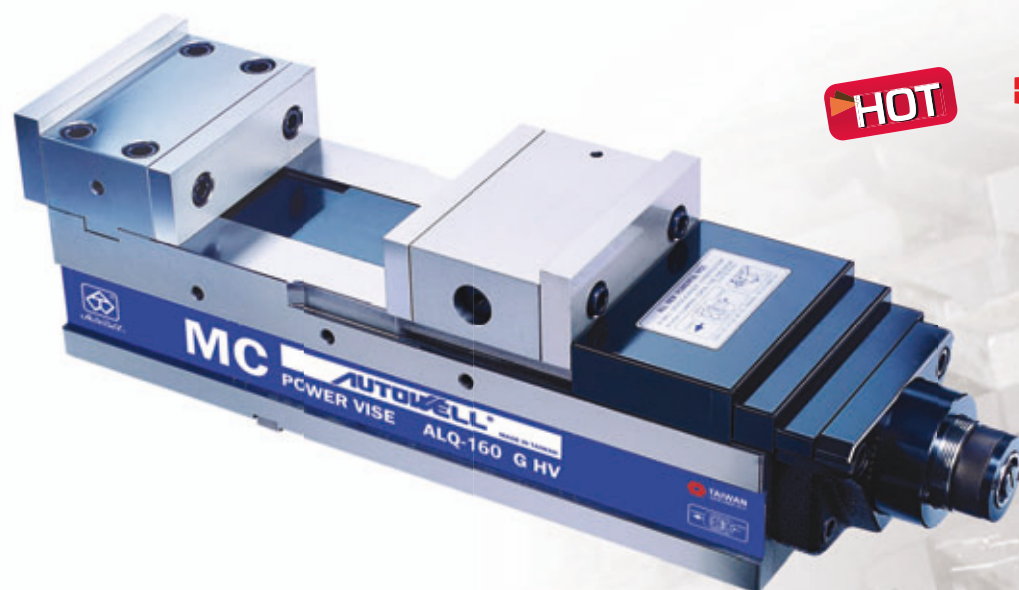


AVR DIMENSIONS																						mm/kg	
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	Clamping Force	Weight
AVR-125G/HV	390	127	124.7	460	153	70	112	100	78	15	18	87.5	53	19	173	353.5	22.5	63	20	26.5	60	35 KN	46kg
AVR-160G/HV	515	161	159.5	591	168	76	113	115	86	18	18	80	53	19	289	474	25	63	20	26.5	98.4	45 KN	76kg

MC Mechanical Long Power Vise

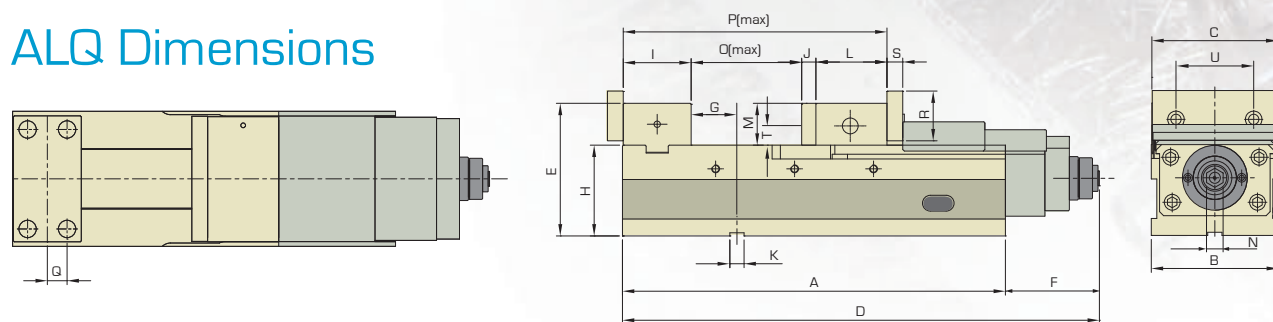
ALQ-160, 200G/HV

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.
- 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.

ALQ Dimensions



ALQ DIMENSIONS																						mm/kg	
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	Clamping Force	Weight
ALQ-160G/HV	515	161	159.2	635	168	120	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	713	178	128	93	120	101	18	18	95	58	19	367.5	581.5	31	73	20	29	120	50 KN	108kg

MC Mechanical Power Vise

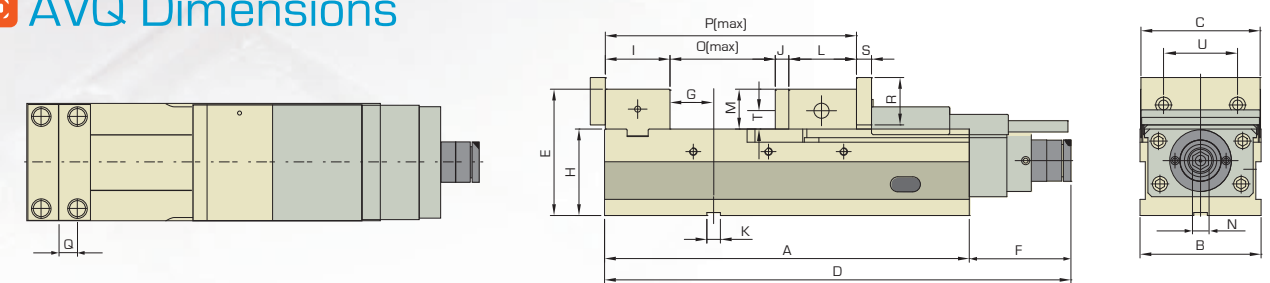
AVQ-100,125,160, 200G/HV

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 DIMENSIONS																							mm/kg	
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	Clamping Force	Weight	
AVQ-100G/HV	324	104	102	428	130	104	41	85	73	15	18	86.5	45	14	140	314.5	20	55	17	22.5	58	25 KN	30kg	
AVQ-125G/HV	390	127	124.7	495	153	105	66	100	78	15	18	87.5	53	14	201	381.5	22.5	63	20	26.5	60	35 KN	46kg	
AVQ-160G/HV	485	161	159.5	605	168	120	58	115	86	18	18	80	53	14	295	479	25	63	20	26.5	98.4	45 KN	71kg	
AVQ-200G/HV	535	202	199.5	655	178	128	75	120	101	18	18	95	58	14	320	534	31	73	20	29	120	50 KN	100kg	

Wellock MC Mechanical Power Vise

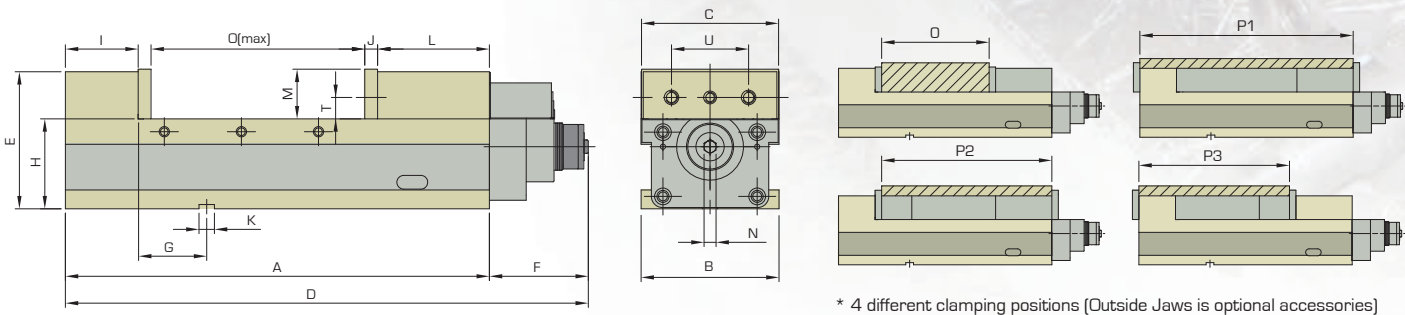
AVM-160, 200G/HV

Workholding



- 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)

AVM DIMENSIONS																					mm/kg	
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P1	P2	P3	T	U	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	25 KN	24kg
AVM-130G/HV	415	131	130	525	147	110	80	95	70	15	18	114	55	19	201	201-400	201-300	201-250	25	90	35 KN	38kg
AVM-160G/HV	495	161	160	610	160	115	80	105	85	15	18	130	58	19	245	250-480	250-370	250-330	25	90	43 KN	55kg
AVM-165G/HV	560	161	160	675	160	115	80	105	85	15	18	130	58	19	310	315-545	315-435	315-395	25	90	43 KN	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	60 KN	78kg

Wellock MC Machine Vise

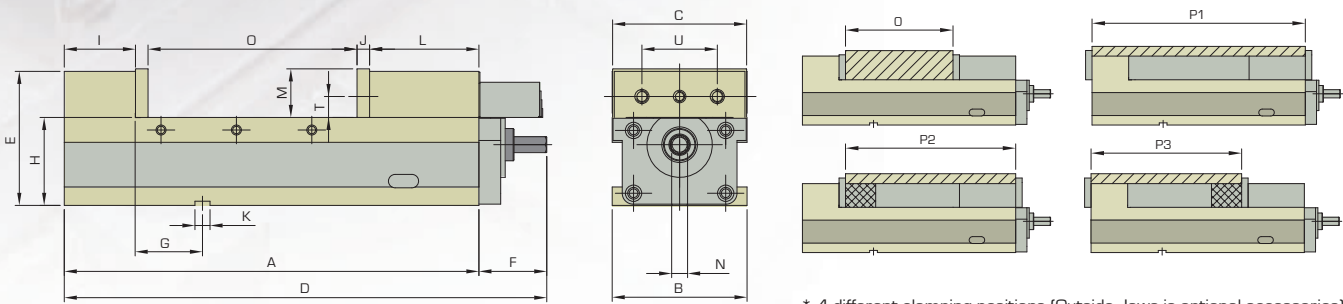
AVC-160, 200G/HV

Workholding



- 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



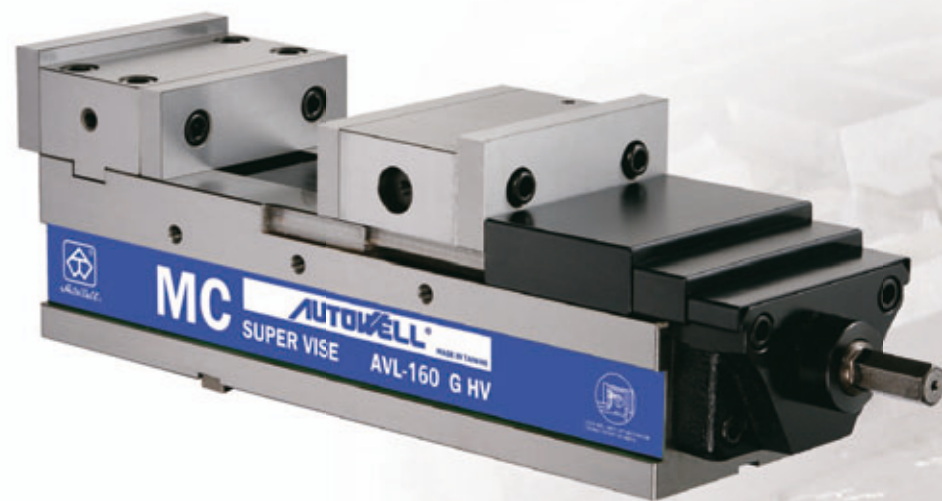
* 4 different clamping positions (Outside Jaws is optional accessories)

AVC DIMENSIONS																				mm/kg	
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P1	P2	P3	T	U	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

MC Lockwell Super Vise

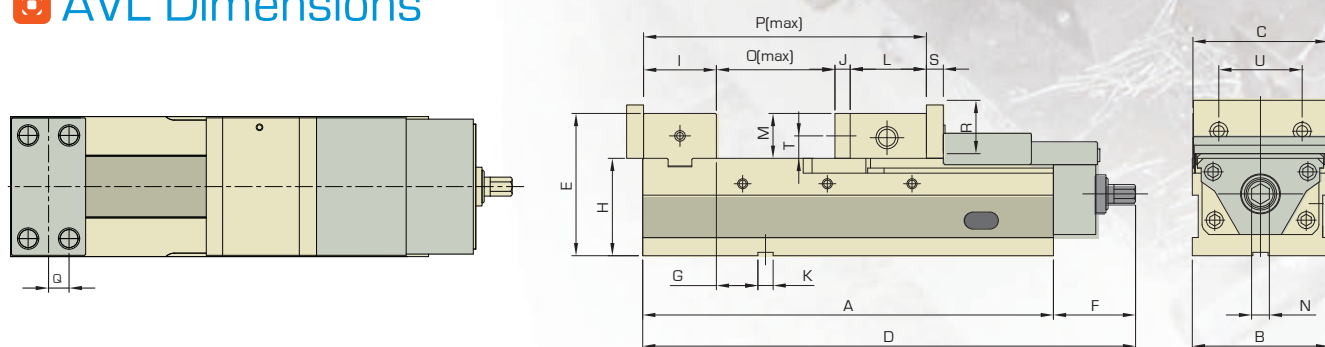
AVL-100, 125, 160, 165 200, 235G/HV

Workholding



- MC Lockwell Super Vise is most suitable for VMC & HMC and got patents.
- 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.

AVL Dimensions

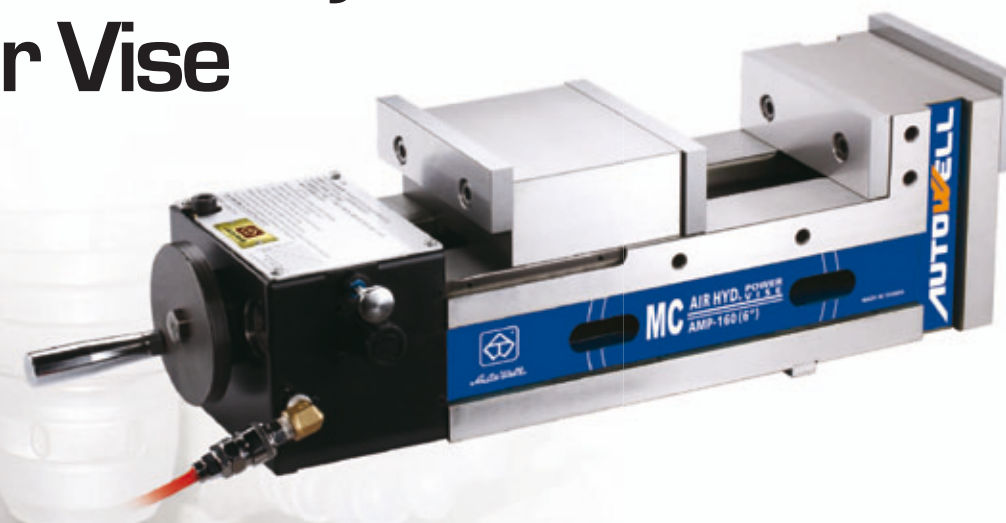


AVL DIMENSIONS																					mm/kg	
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	Weight
AVL-100G/HV	324	104	102	437	130	104	41	85	73	15	18	86.5	45	19	140	314.5	20	55	17	22.5	58	27kg
AVL-125G/HV	390	127	124.7	480	153	105	66	100	78	15	18	87.5	53	19	201	381.5	22.5	63	20	26.5	60	43kg
AVL-160G/HV	485	161	159.2	625	168	120	76	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	93	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

Wellock Air Hydraulic Power Vise

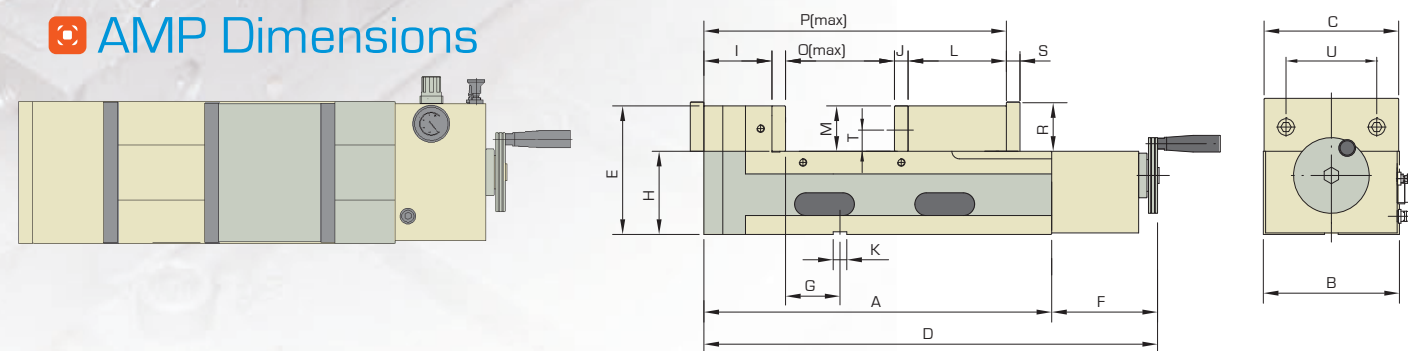
AMP

NEW



- 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 8kg/cm² which can be achieved super hi-clamping force 90KN, and the 0~90KN 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°.

AMP Dimensions



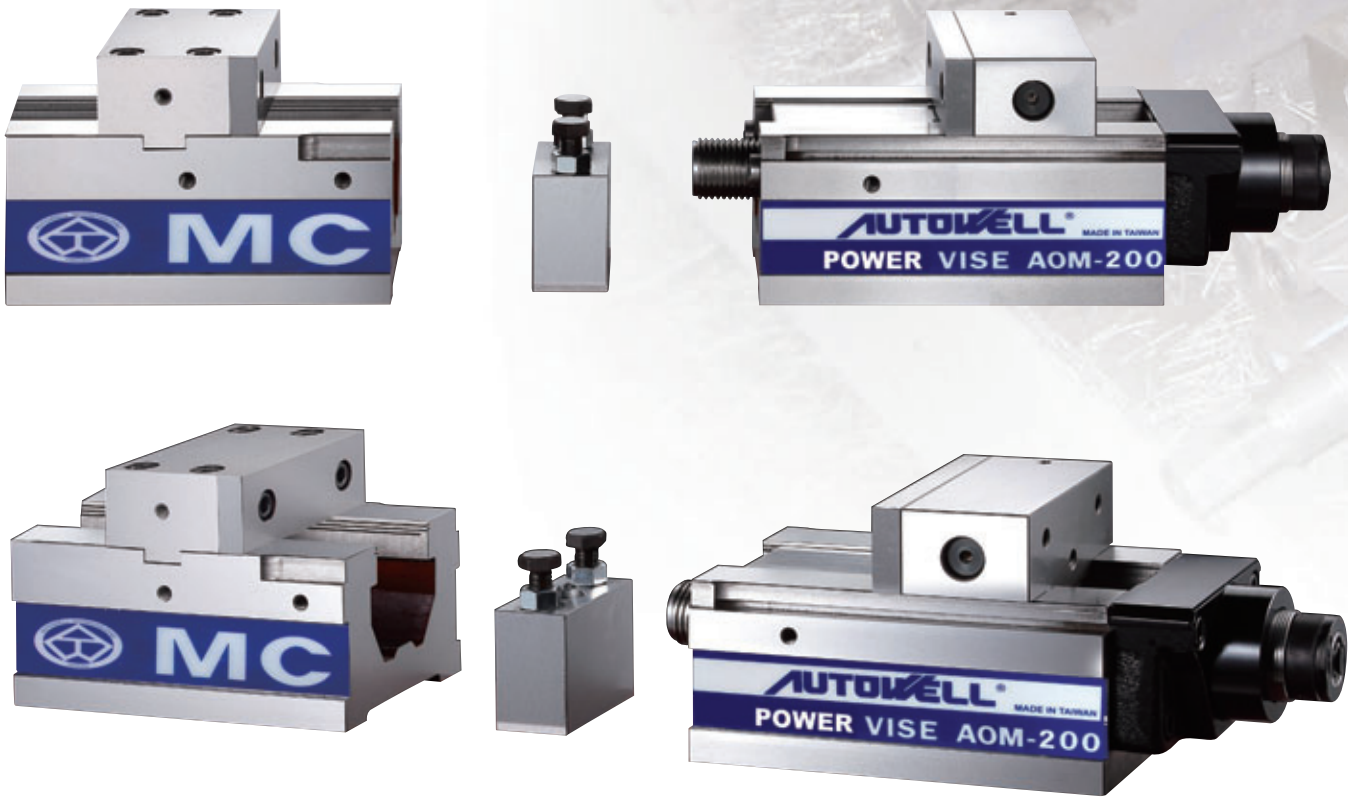
AMP DIMENSIONS																					mm/kg	
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R	S	T	U	Clamping Force	Weight
AMP-100(4")	320	100	98	435	145	140	45	100	85	15	18	110	45	-	100	200-300	55	18	22	60	32KN	32kg
AMP-150(5")	380	130	128	520	157	140	45	105	85	15	18	110	52	-	150	200-380	62	15	25	90	60KN	52kg
AMP-160(6")	400	160	158	540	157	140	45	105	87	15	18	120	52	-	160	210-400	62	15	25	90	60KN	58kg
AMP-165(6")	490	160	158	630	157	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

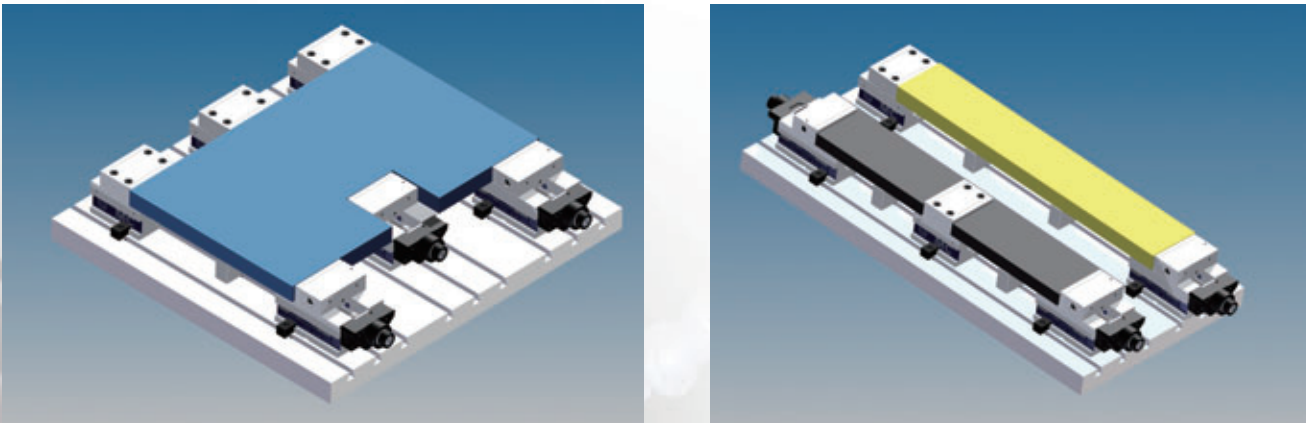
AOM-200

Workholding

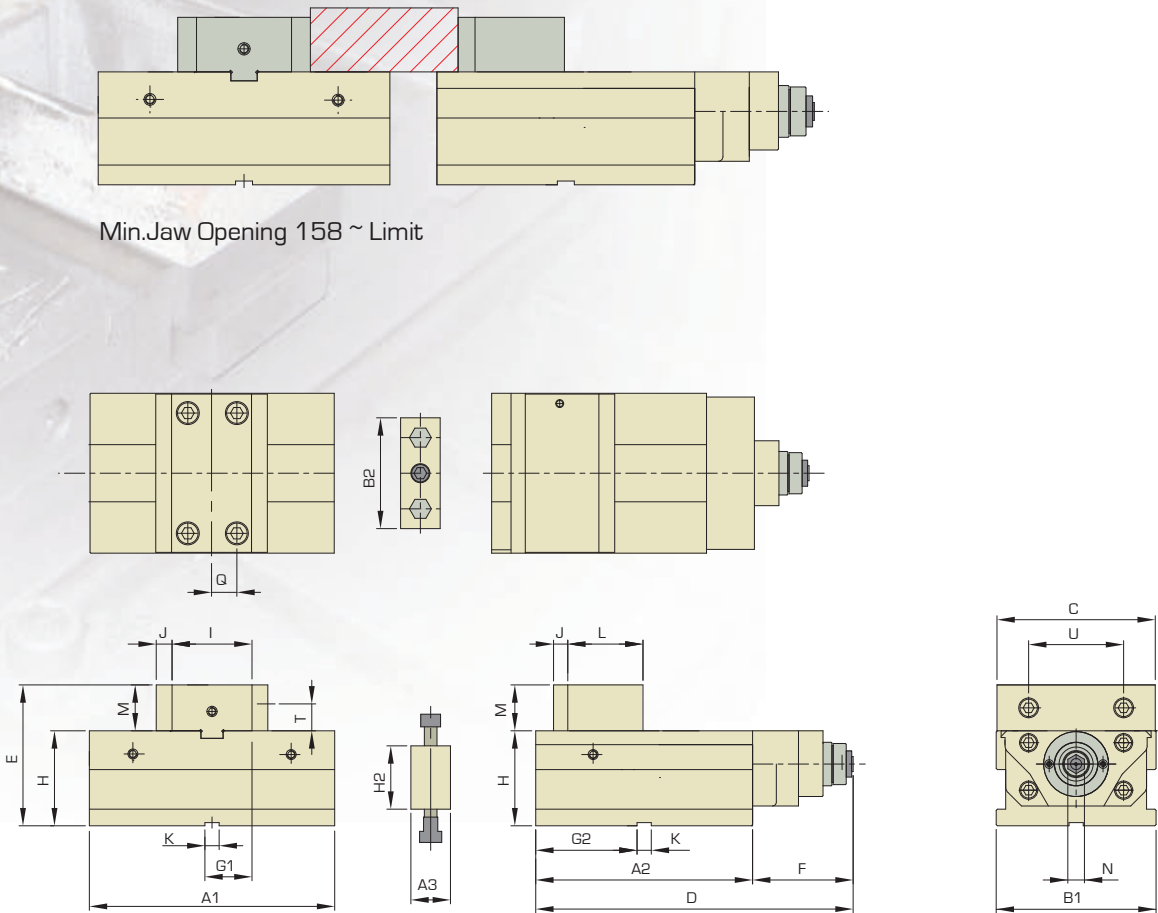
- Extension MC Mechanical Power vise with large opening and Lockwell Anti-Lift Mechanism is most suitable for BMC & VMC & HMC. This vise owns 3 patents.
- Force Adjustable System (patented) makes the force setting easier & steadier, moreover, it has constant pressure function & over pressure protection.
- Mechanical Booster (patented) provides a steady clamping force and inside Disc-Spring to against shocks and vibrations while operation.
- 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



AOM Dimensions



AOM DIMENSIONS																						mm/kg	
NO	A1	A2	A3	B1	B2	C	D	E	F	G1	G2	H	I	J	K	L	M	N	Q	T	U	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

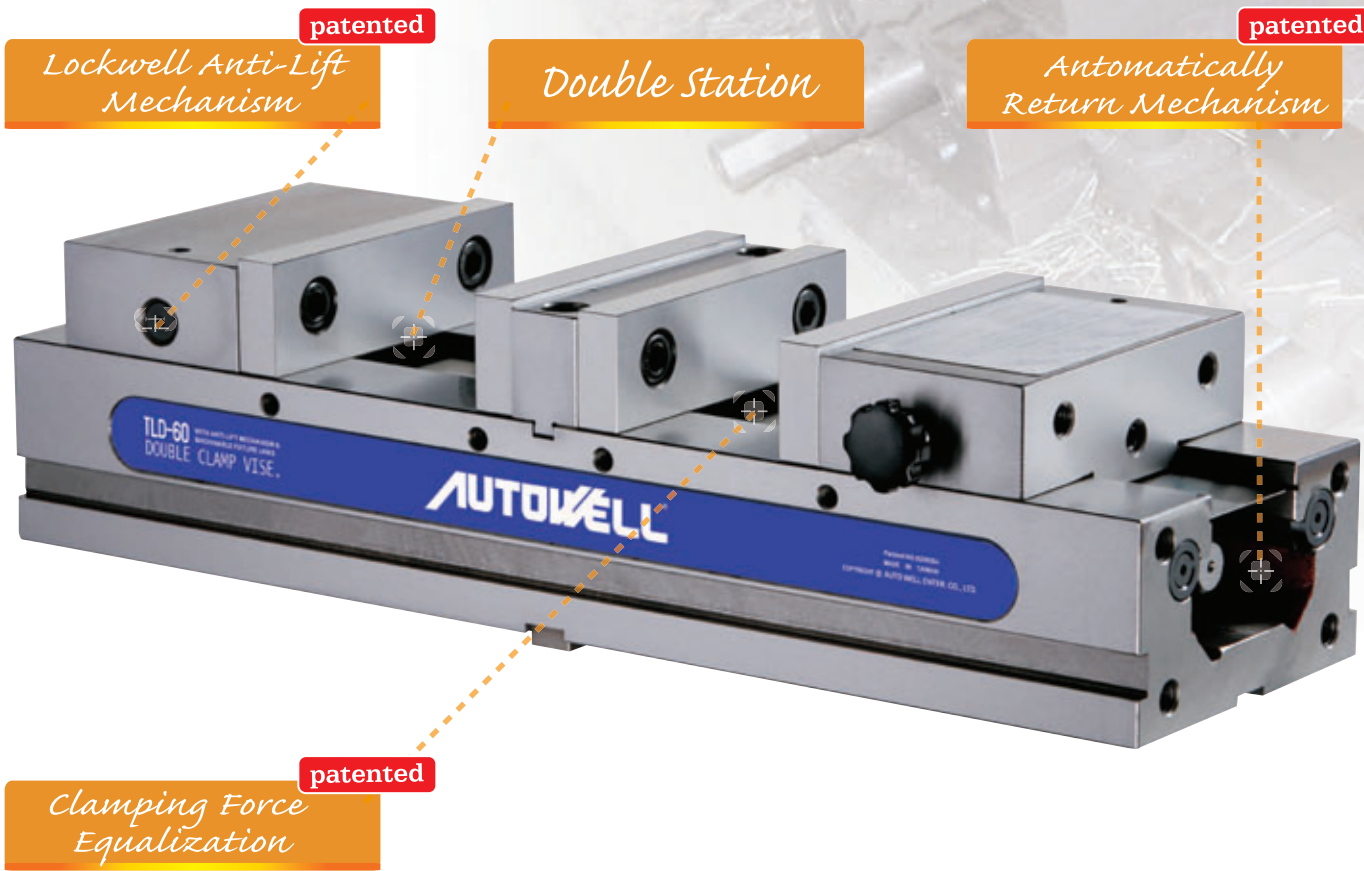
Lockwell Double Station Vise



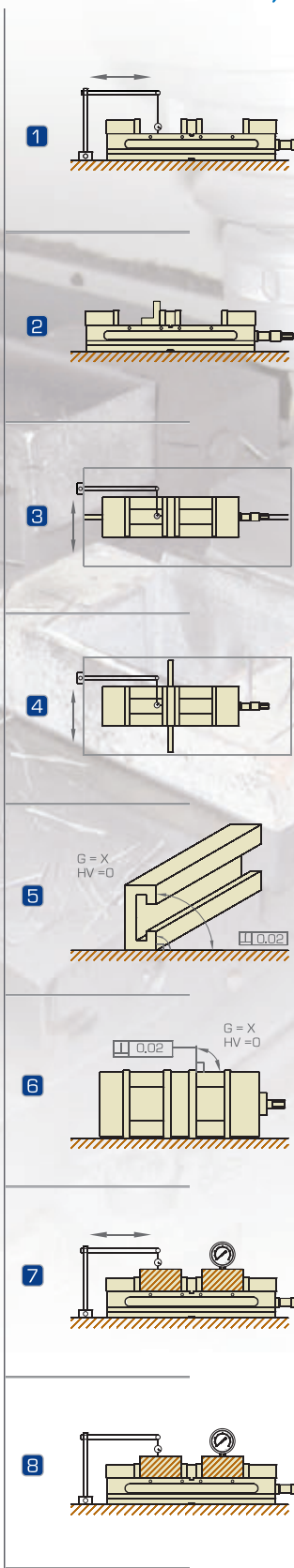
Clamping Force Equalization & Automatically Return Mechanism

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.

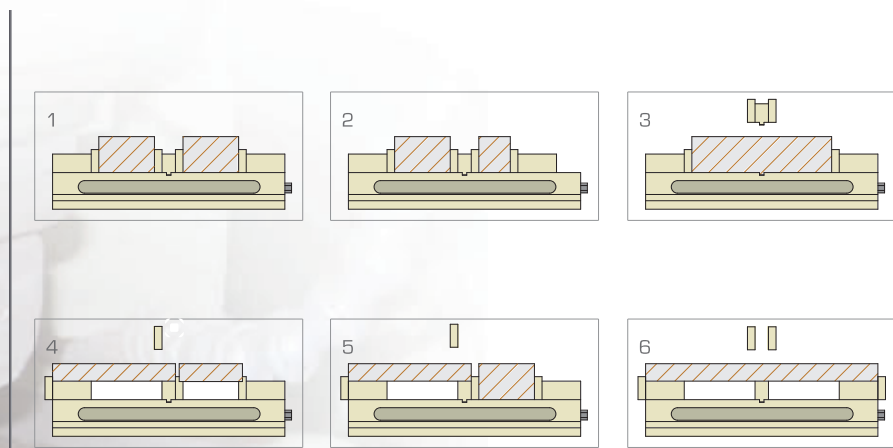
- Double station could clamp two dissimilar workpieces with same force at a time and provides 6 different clamping positions.
- Clamping Force Equalization (patented) ensures same clamping force to clamp two different size/shape workpieces.
- Automatically Return Mechanism (patented) save the work change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



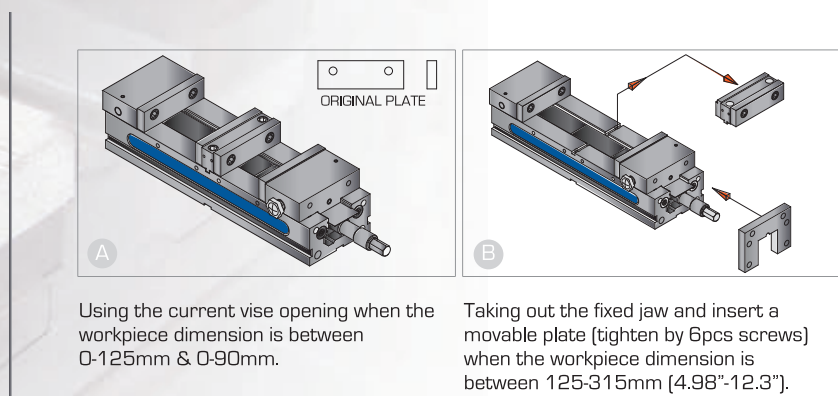
Static Accuracy



6 Different Clamping Positions



Change Sample of Station



DOUBLE CLAMP VISE system				
NO	Inspection Items (Per 100 mm)		Allowance (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	0.02
4	Parallelism	keyways on bottom of bed to jaw plate	0.01 for total jaw height	0.02
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

*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 and new MC vise.

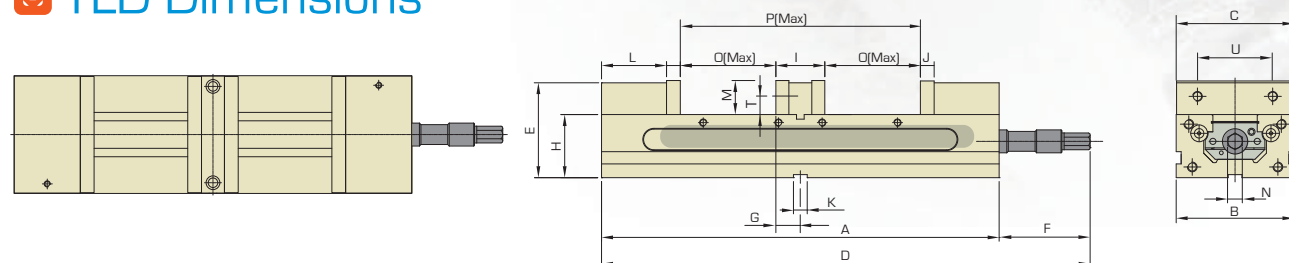
NEW Lockwell Double Station Vise

TLD-40, 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 to HRC54°.
- Unique design facilitates the evacuation of chips.
- U.S.A. patented.

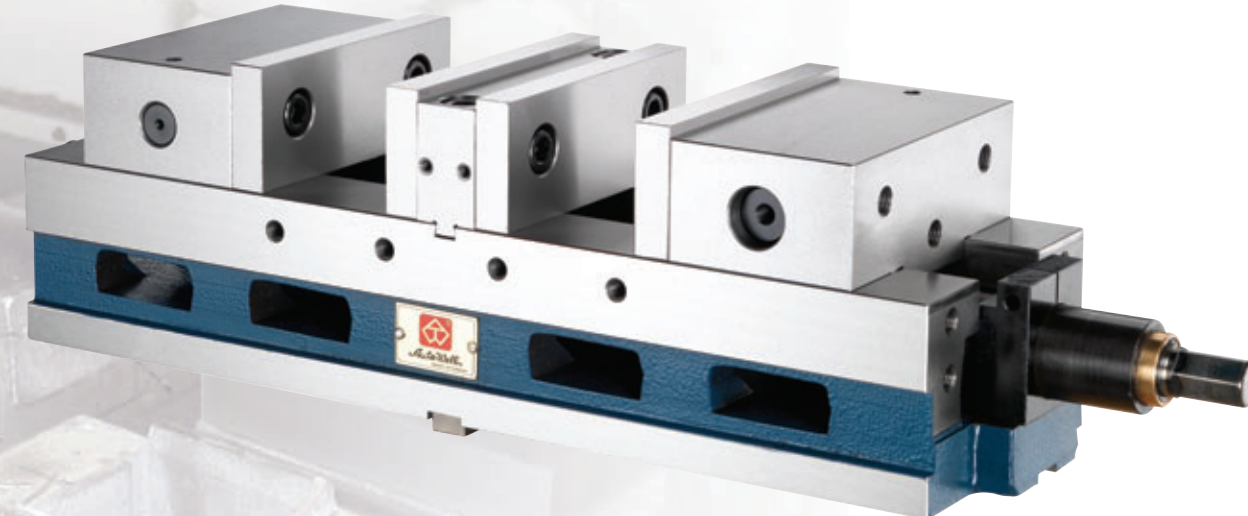
TLD Dimensions



TLD DIMENSIONS																			mm/kg
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	T	U	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

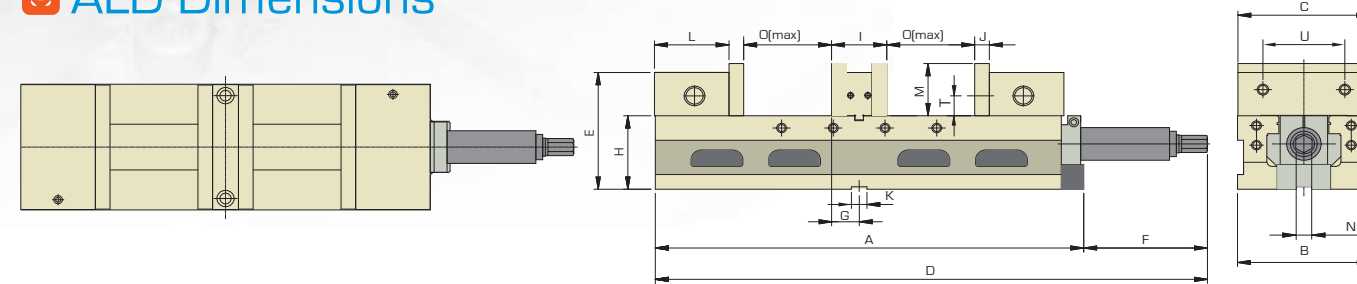
Lockwell Double Station Vise

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 to HRC54°.

ALD Dimensions



ALD-60 DIMENSIONS																		mm/kg
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	T	U	Weight
ALD-60G/HV	497	154	152	610	143	113	32	90	64	17	18	86.5	58	14	34-102	32	95	63.5kg

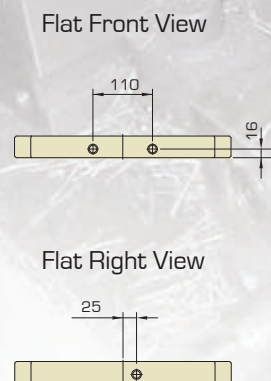
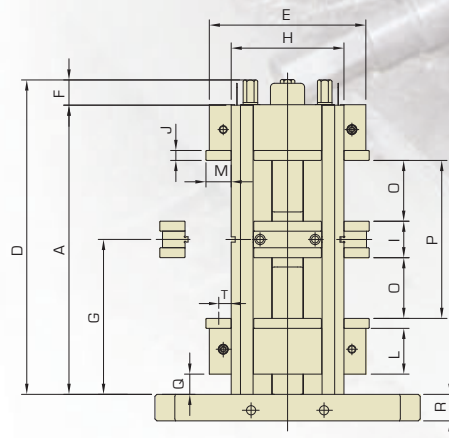
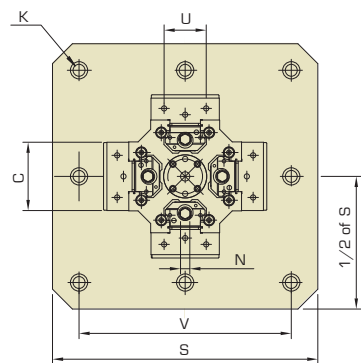
Lockwell Double Station Tower Vise

TLR

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



TLR Dimensions

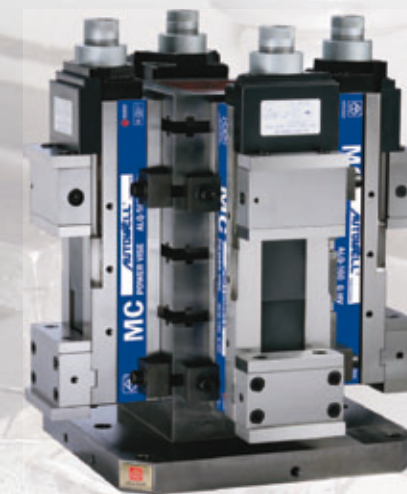


Workholding

- 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 for quick change.
- No timing problem. Designed to automatically return to the position you set.
- The improved chip cover mechanism prevents the rust and extends the lifetime.

Jig Block

Several of our vises could be combining with the **Jig Block** for either HMC or VMC. It is in accordance with overall the dimensions of machining center and the size of workpiece.



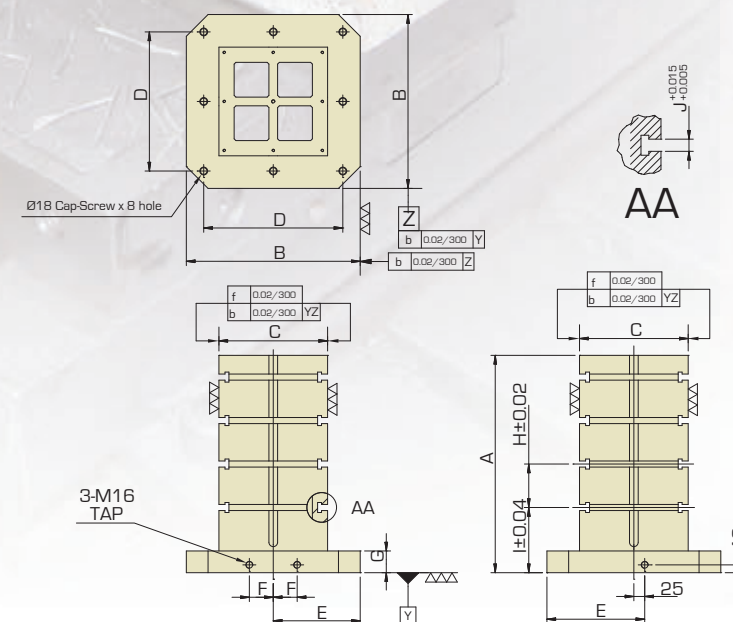
ALQ-160-4B



ABP-09



JIG BLOCK Dimensions



TLR DIMENSIONS																									mm/kg
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	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

JIG BLOCK DIMENSIONS											mm/kg
NO	A	B	C	D	E	F	G	H	I	J	Weight
ABP09-400400-0500-18	500	400	250	320	200	55	50	100	150	18	165kg
ABP09-500500-0600-18	600	500	300	400	250	75	50	100	150	18	233kg
ABP09-630630-0700-18	700	630	350	500	315	100	50	125	150	18	372kg
ABP09-800800-0800-18	800	800	500	640	400	135	50	150	150	18	700kg

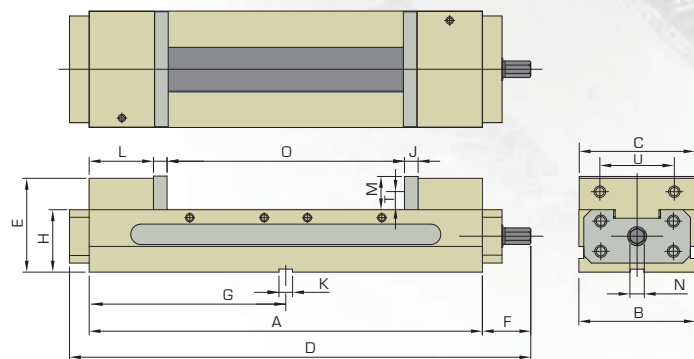
Lockwell Self-centering Machine Vise

HLD-60G/HV



- Lockwell Self-Centering Vise is most suitable for VMC & HMC.
- 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



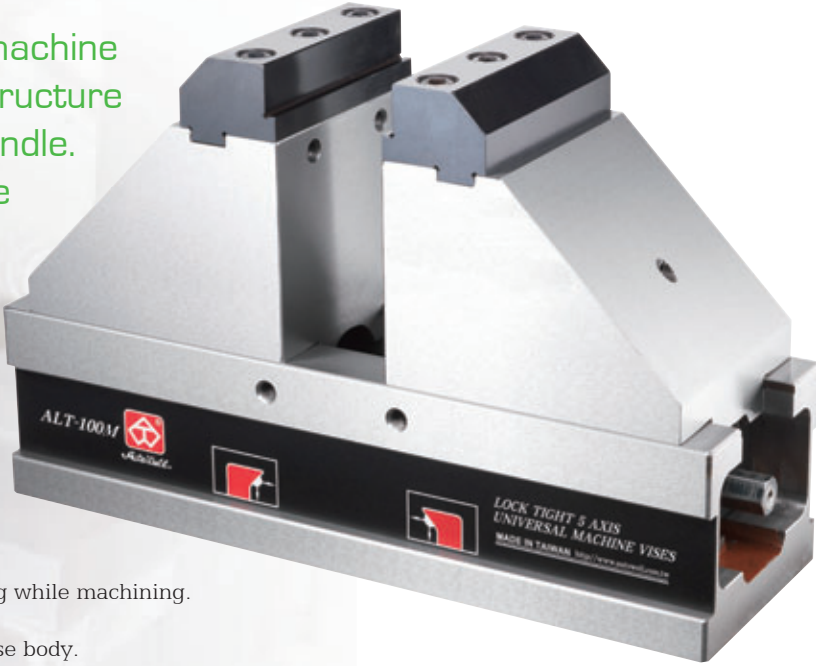
HLD DIMENSIONS																	mm/kg
NO	A	B	C	D	E	F	G	H	J	K	L	M	N	O	T	U	Weight
HLD-60G/HV	520	154	152	610	124.05	64	260	82.55	18	18	85	44.5	19	58~314	23.8	98.4	52kg

Wellock 5 Axis Machine Vise

ALT Series

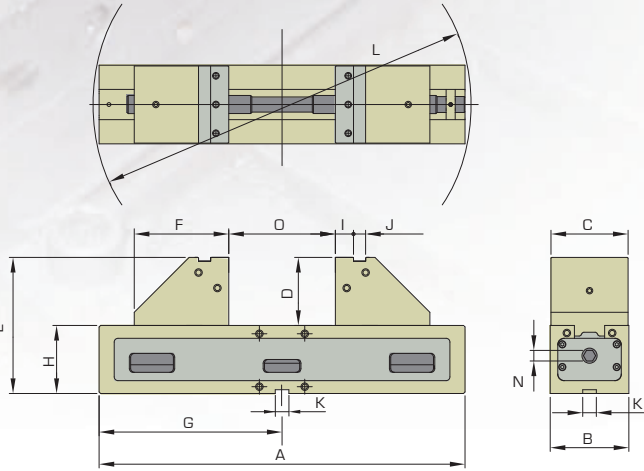
Workholding

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.

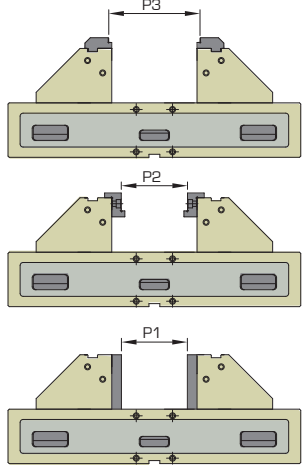


- Semi-spherical segment eliminate lifting while machining.
- Ductile iron FCD-60 rigid and tensile vise body.
- Slide surface flame hardened to maintain the accuracy.
- Tolerance of center of workpiece clamp position and vise body within 0.01mm.

ALT Dimensions



* 3 different clamping positions

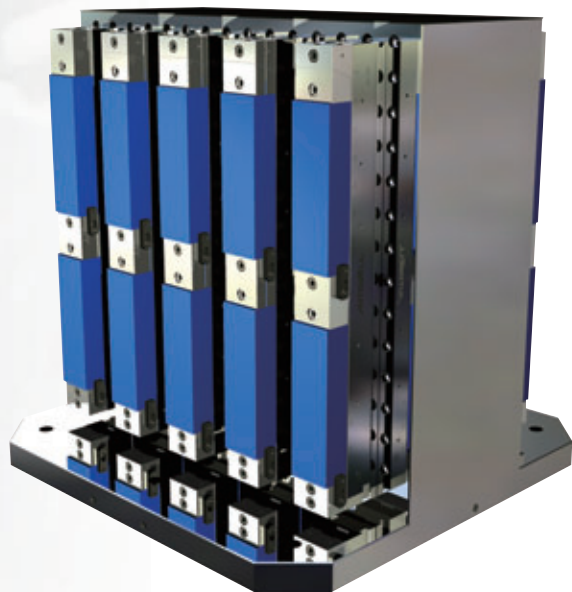
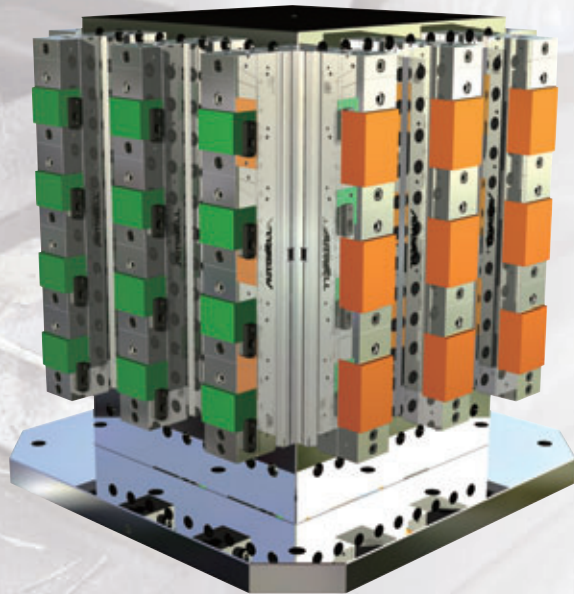
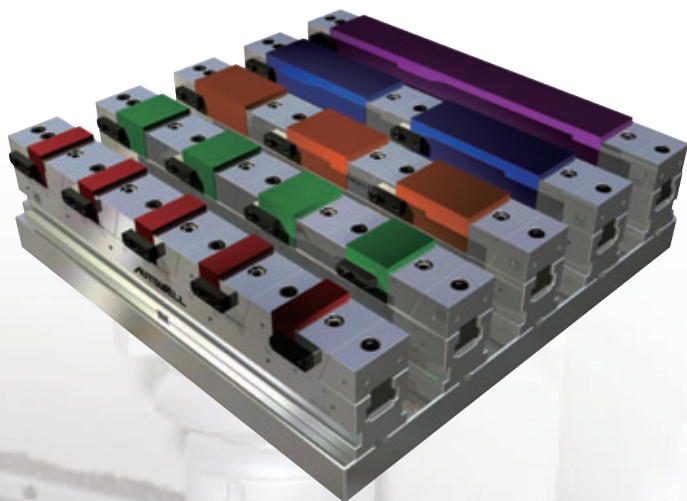
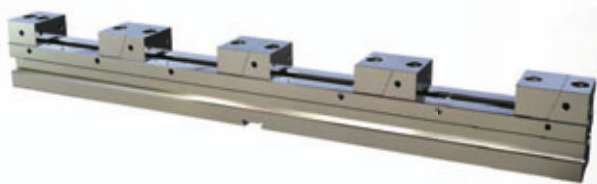
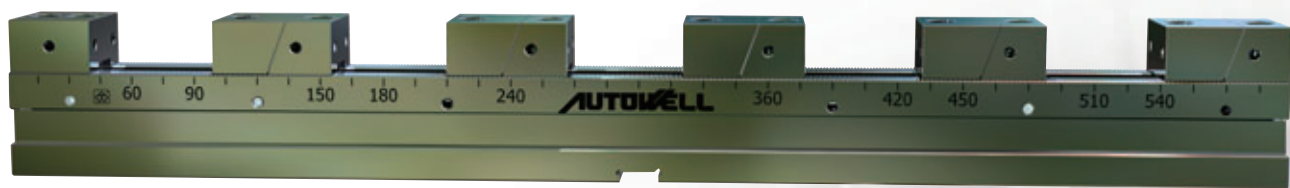


ALT DIMENSIONS																		mm/kg	
NO	A	B	C	D	E	F	G	H	I	J	K	L	N	O	P1	P2	P3	Clamping Force	Weight
ALT-100S	280	104	102	90	180	125	140	90	24	16	18	300	14	30	-	-	40	20KN	17kg
ALT-100M	324	104	102	90	180	125	162	90	24	16	18	350	14	74	44	42	84	20KN	20kg
ALT-100L	484	104	102	90	180	125	242	90	24	16	18	500	14	184	102	200	240	20KN	30kg

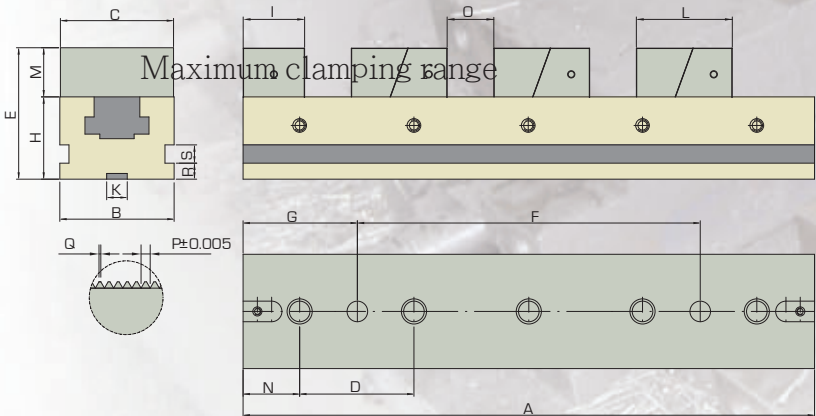
Flexible Well Vise

ALG

Workholding



ALG Dimensions



ALG DIMENSIONS																	mm/kg	
NO	A	B	C	D	E	F	G	H	I	K	L	M	N	O	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

Maximum Clamping Range								mm/kg
NO	1 Workpiece	2 Workpiece	3 Workpiece	4 Workpiece	5 Workpiece	6 Workpiece	7 Workpiece	
ALG5030								206
ALG5040								306
ALG5050								406
ALG5060								506
ALG5070								606
ALG7240								272
ALG7250								372
ALG7260								472
ALG7270								572
ALG10050								364
ALG10060								464
ALG10070								564

Aluminum Double Station Vises

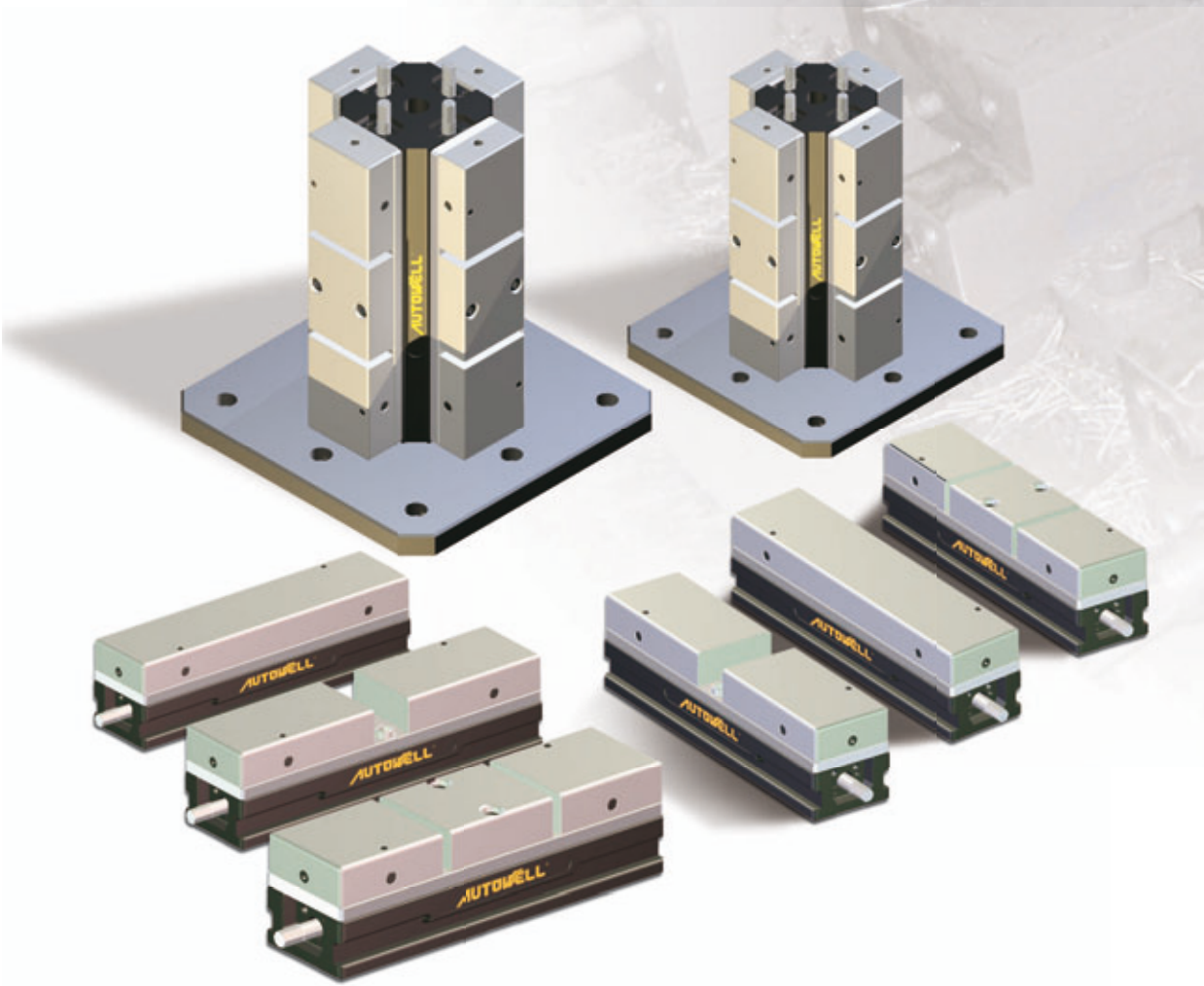
ADS

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.

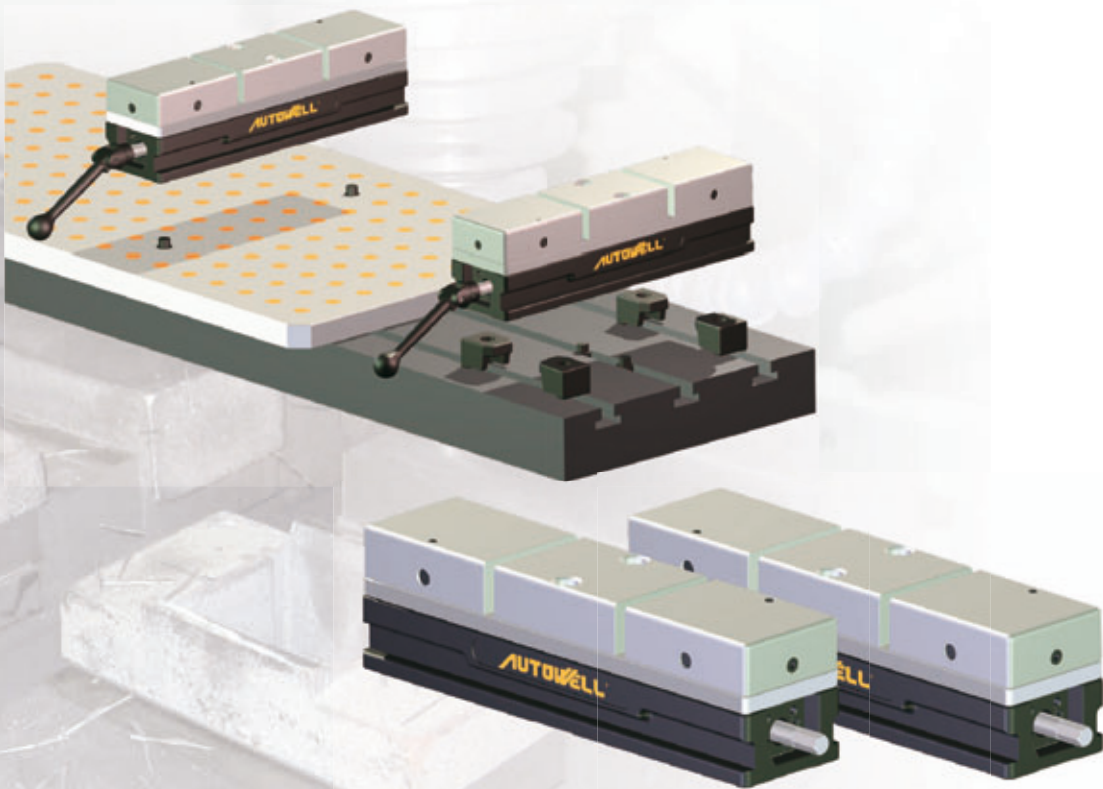
- High-grade aluminum body combines with an alloy steel cover plate enhances base strength and absorbs any machining vibrations.
- Quick changed soft-jaws for multiple machining jobs.
- Clamping force equalization ensures same force while machining two different size workpieces.
- Adjustable Automatically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



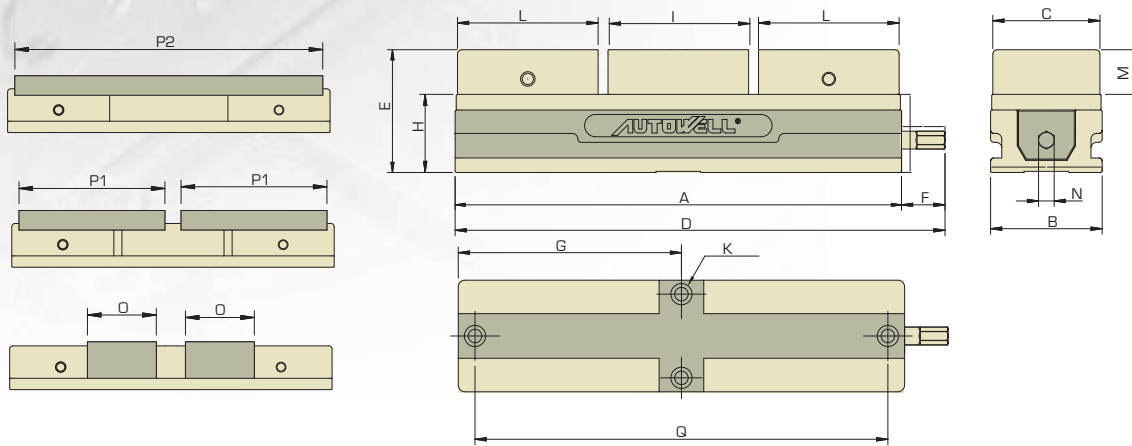
Lockwell Aluminum Vises

ADS-1040, 1250

Workholding



ADS Dimensions



ADS DIMENSIONS																		mm/kg
NO	A	B	C	D	E	F	G	H	I	K	L	M	N	O	P1	P2	Q	
ADS-1040	400	100	96	439	110	39	200	70	126	ø20	126	40	13	85	180	380	370	
ADS-1250	500	125	121	539	134	39	250	84	157.6	ø20	157.5	50	13	112	225	480	460	

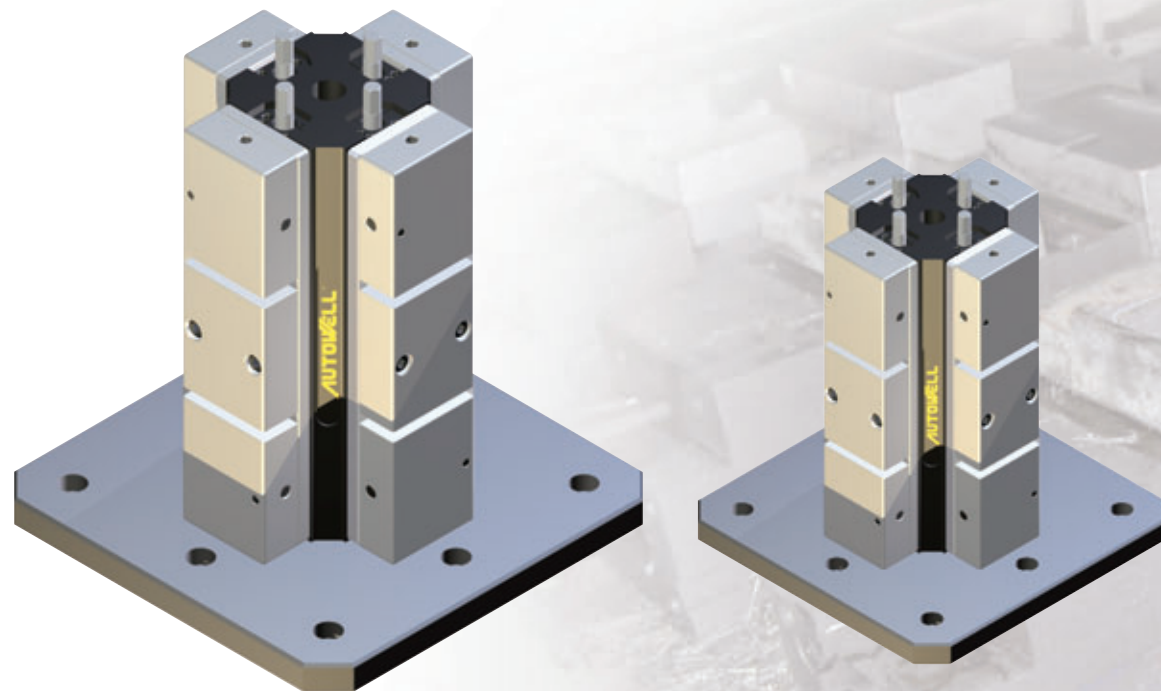
Tombstone Aluminum Vises

ADS-1040, 1250-4B

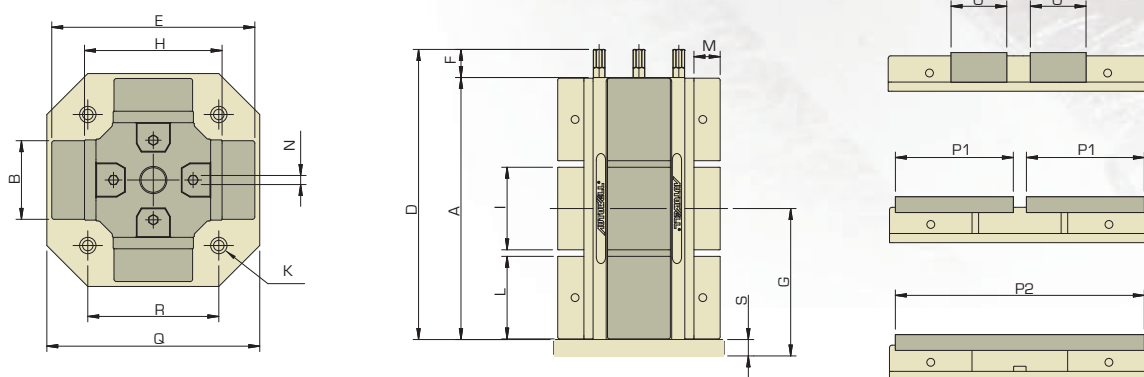
Clamping Examples

VMC, HMC

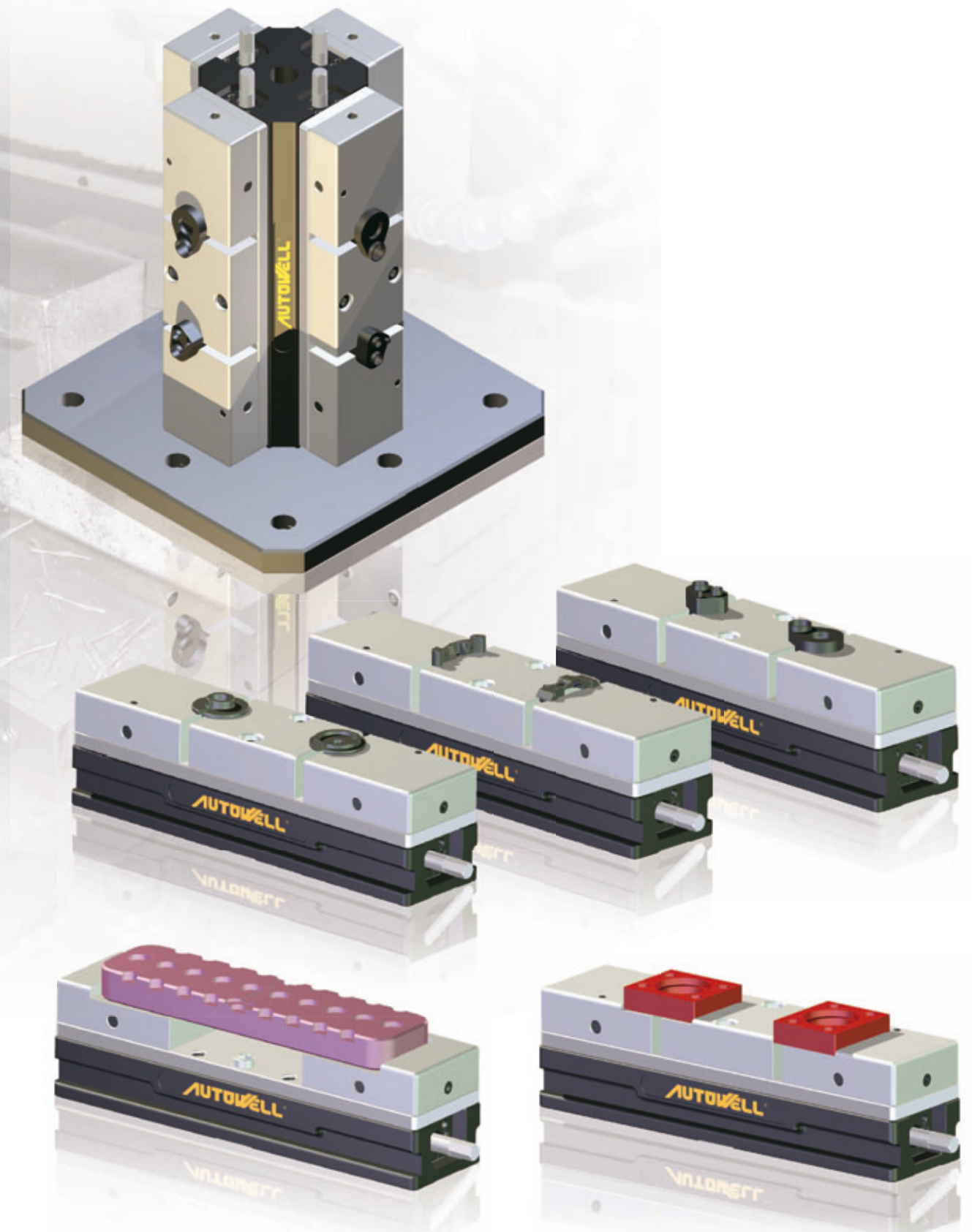
Workholding



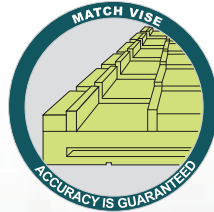
ADS-4B Dimensions



ADS DIMENSIONS																			mm/kg
NO	A	B	C	D	E	F	G	H	I	K	L	M	N	O	P1	P2	Q	R	S
ADS-1040-4B	400	100	-	439	248	39	225	168	126	ø18	126	40	13	85	180	380	260	160	25
ADS-1250-4B	500	125	-	539	310	39	280	210	157.5	ø18	157.5	50	13	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° to maintain the accuracy. S50C jaw-plate has been Carburizing heat treated the hardness to HRC54°.
- 4 different clamping positions.
- Bearing system has sealed and special treated to reduce damage for extend the lifetime.
- 8,200lbs high clamping force.

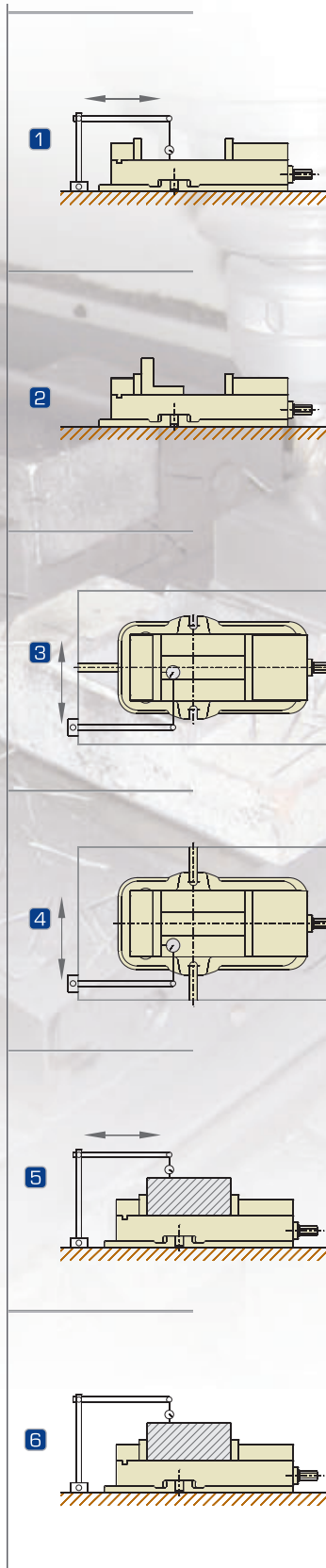
8,200lbs Clamping Force

Wellock Anti-Lift Mechanism

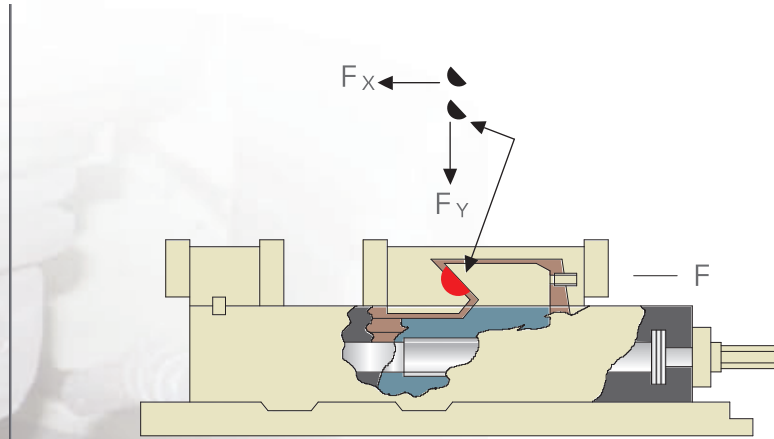
Sealed Bearing System

Ductile Iron Body

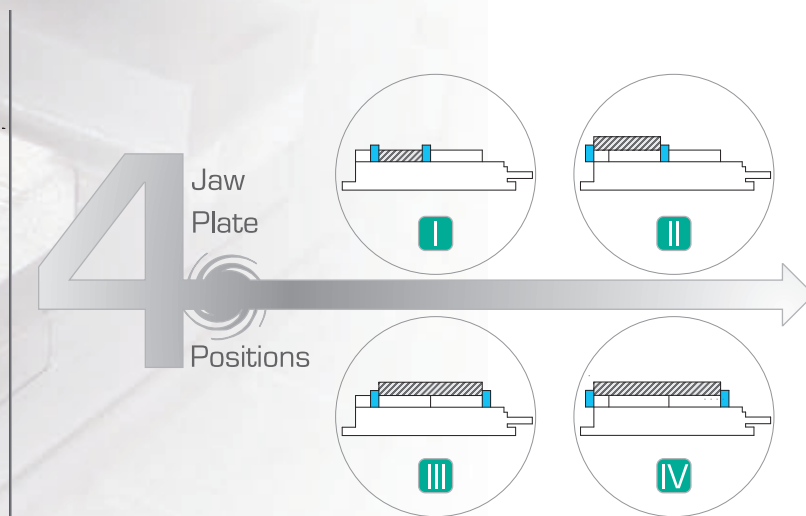
Static Accuracy



Wellock Anti-Lift Mechanism



4 Jaw-plate Positions



Wellock VISE system				
NO	Inspection Items (Per 100 mm)		Allowance [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

*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 and new MC vise.

Wellock Large Opening Vise

ATW-689/810
ATM-689/810

Workholding

ATW-689, ATM-689

- 8.9" large opening.
- Spindle nut does not protrude past the end of body.
- Same distance from keyway to stationary jaw with AT-675.
- Bed height $73.025 \pm 0.012\text{mm}$ ($2.875 \pm 0.001"$).
- Material of ATM: FC-30.



689

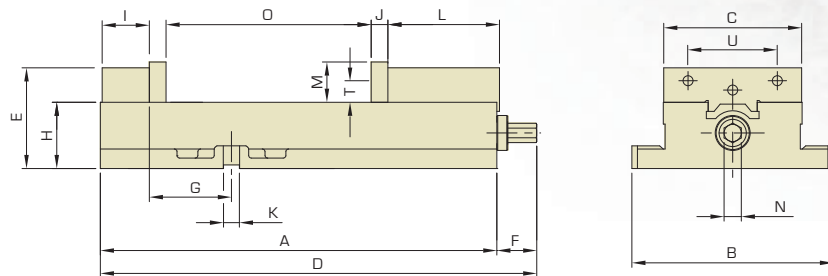


810

ATW-810, ATM-810

- Updated body from AT-80, it provides 10" large opening and steadier vise body.
- Bed height $84.074 \pm 0.012\text{mm}$ ($3.26 \pm 0.001"$).
- 11,600lbs clamping force.
- Material of ATM: FC-30.

ATW-689/ 810, ATM-689/ 810, Dimensions



ATW/ATM DIMENSIONS																		mm/kg
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	T	U	Weight
ATW-689 ATM-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 ATM-810	555	295	206	585	134.074	30	125.7	84.074	58	24.2	20.65 / 18	157	56	19	265	32	120	68.2kg

Wellock Vise

ATW-675/50/40
ATM-675
ATD-460/570

Workholding



ATD-460/570

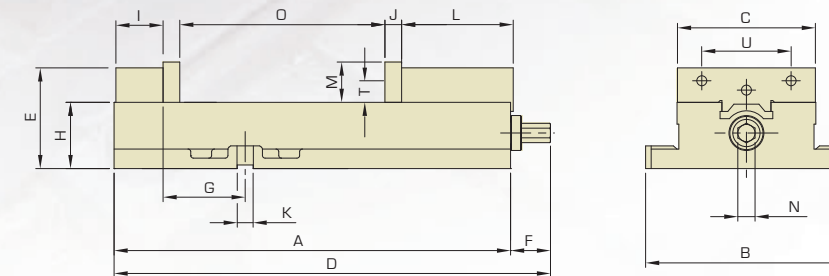
ATW-40/50

675

ATW-675, ATM-675

- 7.5" opening.
- Bed height $73.025 \pm 0.012\text{mm}$ ($2.875 \pm 0.001"$).
- Material of ATM: FC-30.

ATW-675/50/40, ATM-675, ATD-460/570 Dimensions



ATW/ATD DIMENSIONS																	mm/kg	
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	T	U	Weight
ATW-40	312.5	166	106	352.5	85.65	40	71	57.15	35.1	15	12	102	35	14	103.9	17.5	63.5	18kg
ATD-460	321	160	106	361	85.65	40	71	57.15	35.1	15	12	102	35	14	153	17.5	63.5	14kg
ATW-50	368	194	126	415	97	47	85	63.5	40.5	17	16	120	38.1	16	127	20.6	79.4	25kg
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 ATM-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

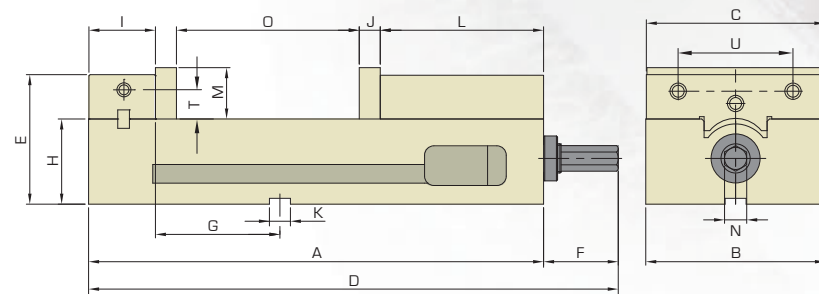
Lockwell Machine Vise AMC-40, 50, 60G/HV

- 2 operate positions for VMC: Upright and Lay down
- Bed height $73 \pm 0.012\text{mm}$ ($2.874 \pm 0.005''$).

Workholding



AMC Dimensions



AMC DIMENSIONS																		mm/kg
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	T	U	Weight
AMC-40G/HV	330	105	102	372	100	42	82.6	68	46.8	21	18	106	40	14	125	17.5	63.5	21kg
AMC-50G/HV	360	128	126	410	103.5	50	73	70	45	17	18	117	38	19	158	20.6	79.4	26kg
AMC-60G/HV	390	154	151	455	111	65	123	73	57	18	18	140	44.5	19	148	23.8	98.4	36.5kg

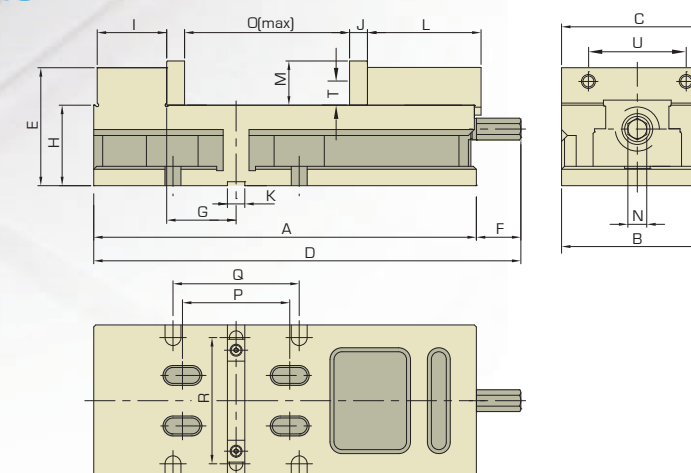
Wellock Versatile Vise MG, MGR-40, 60G/HV

- 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.
- Bed height $81 \pm 0.012\text{mm}$ ($3.189 \pm 0.005''$).

Workholding



MG Dimensions



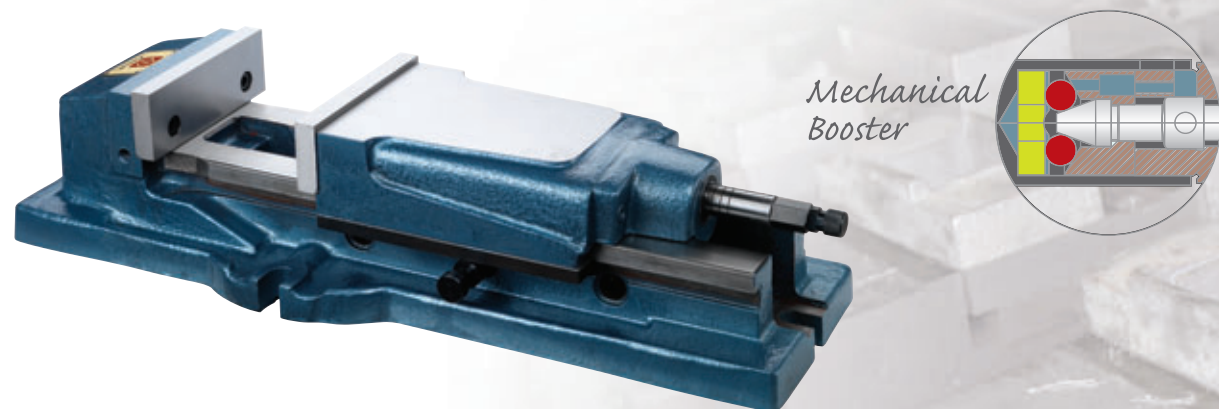
MG DIMENSIONS																					mm/kg
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	T	U	Weight
MG, MGR-40G/HV	316	104	102	344	91.5	28	63.5	63.5	50.8	15	12.7	100	35	14	130	85	101.6	80	17.5	63.5	20kg
MG, MGR-60G/HV	385	152.45	151	431.8	118.7	46.8	69.84	81	69.9	18	18	114.3	44.5	19	163	107.95	127	127	23.8	98.4	31kg

Mechanical Power Machine Vise

MP-50, 60, 80

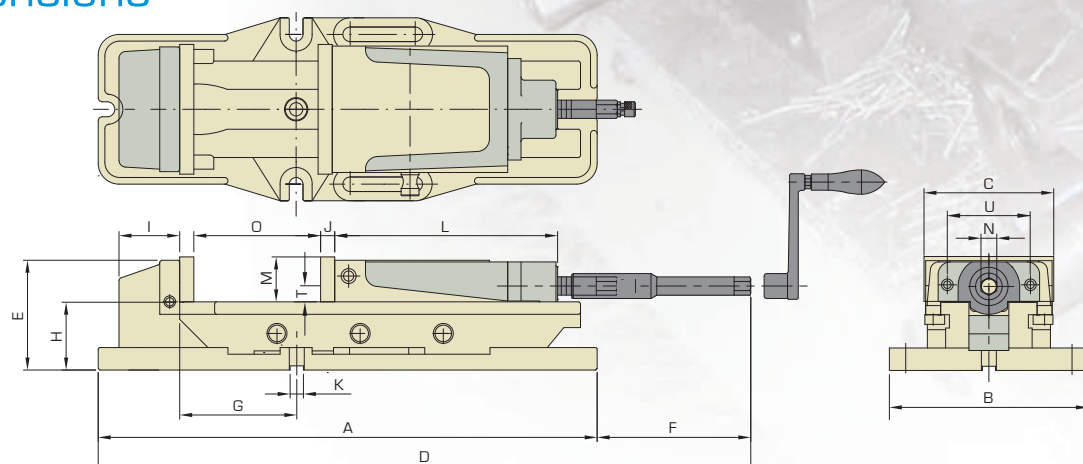
Workholding

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



MP DIMENSIONS																			mm/kg	
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	T	U	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

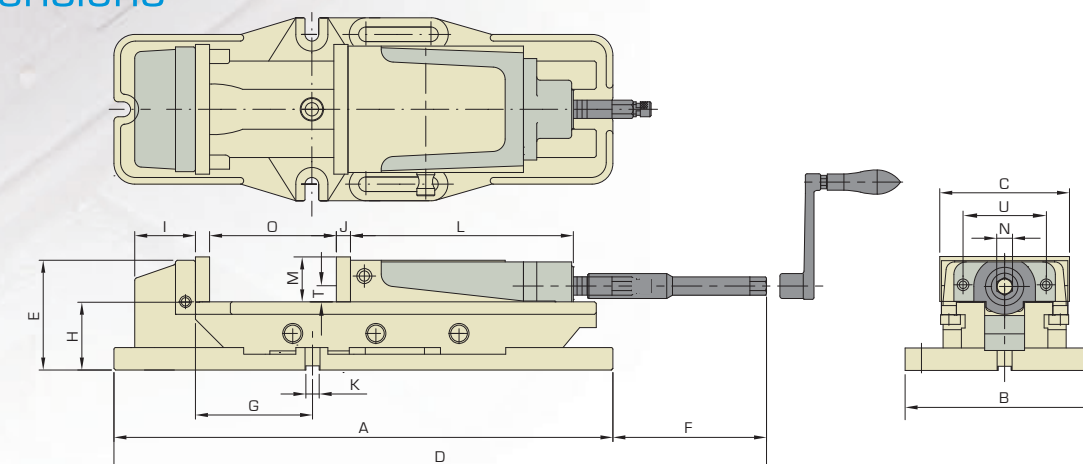
Workholding

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 DIMENSIONS																		mm/kg	
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	T	U	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

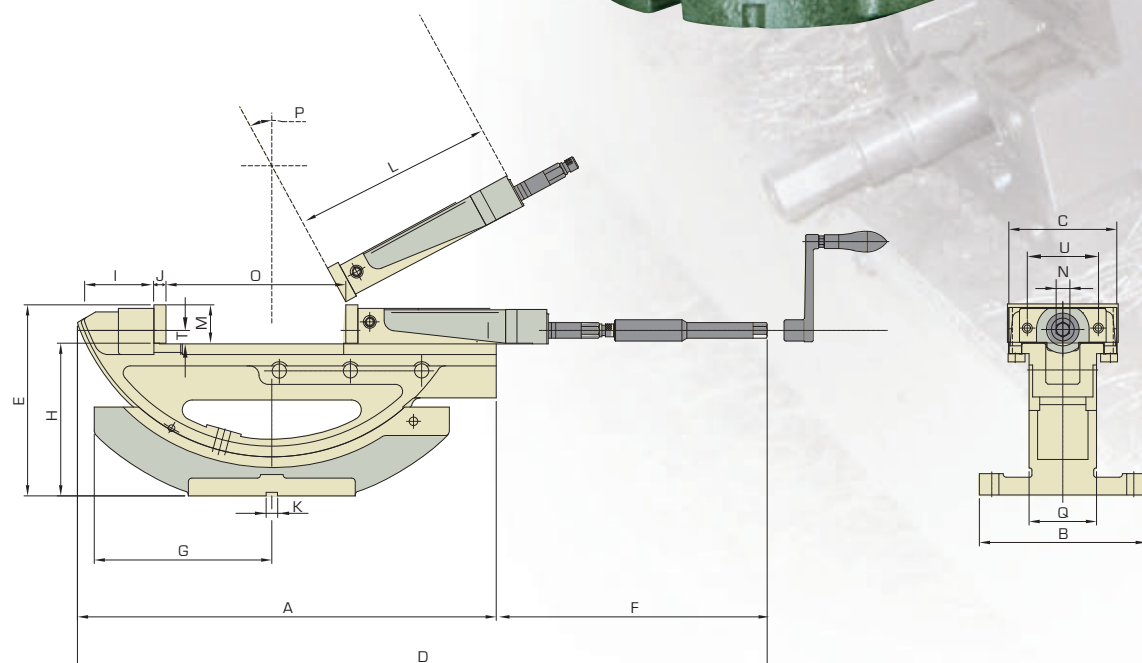
HPT-40, 60

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 0-50° of your need. Precise angular setting in plane can be read from the mounted scale.



HPT Dimensions



HPT DIMENSIONS																				mm/kg	
NO	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	T	U	Clamping force	Weight
HPT-40	330	160	104	525	177	195	172	141	65	11	16	153	36	14	170	50°	65	10	70	25 KN	28kg
HPT-60	590	235	152	812	264	222	250	210	97	15	16	175	54	19	300	50°	94.5	18	100	44 KN	75kg

Auto Vail Enter. Co., Ltd. was founded in 1980 and started from the production of the Hydraulic Power Machine Vise. The premise, Philip Lin, is inspired by developing the Machinery Industry and abides by principles of Honor, Quality, Service, and Creation. The most valuable change is that Auto Vail possesses an accumulation of skills and excellent techniques gathered during these 30 years of operation. We have passed the ISO 9001 Certification. We satisfy our customers by continuous innovation, develop high quality products and flawless service. We are the number one professional precision jig vise manufacturer in Taiwan today.

The quality guarantee of Auto Vail extends from our excellent manufacturing ability. Internally, we practice the quality policy "Do the right thing, do the thing right". The product policy of Auto Vail is "primary quality and secondly cost". There are several CNC and surface grinding machines in our company, so that we can control and process the quality of precision. We utilize ERP and ISO 9001 quality security systems as our core of management. Externally, we adhere to "internationalization and liberalization" in leading our marketing strategy to create new business opportunities and expand market globally. The cooperation of Auto Vail and its customers is a win-win relationship. We cooperate closely with each other to create a better future.

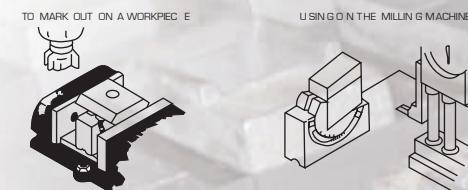
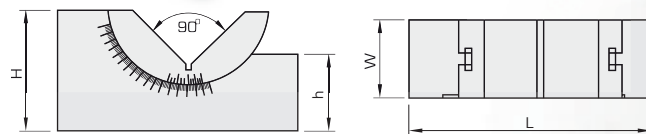
Auto Vail has been awarded ISO 9001 certification and passed the SGS ISO 9001 international quality certification in Taiwan. You can find our products in Canada, UK, Germany, Holland, Italy, Australia, Japan, Korea, China, Singapore, Malaysia, Thailand, South Africa, etc. We believe that good and agree cooperation is the winning plan, therefore, improving the tool module would be our main feature in the future. In the great environment of the international market nowadays, we maintain improvements of existing products. Furthermore, our R&D department develops new products in order to satisfy different customers and different demands. We have obtained various kinds of domestic and international rewards, authentication and patent registrations. All of these are duties of Auto Vail in taking on responsibility for the products we are producing in Taiwan.

Primary Quality & Secondly Cost. for CNC machining centers and milling machines
VARIOUS PRECISION VISES

GAP-25, 30, 46 Adjustable Angle Plates



GAP DIMENSIONS					
NO	L	W	H	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

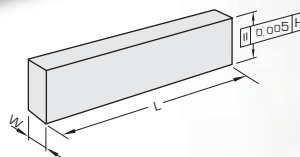


AGP-85 Precision Parallels Set

N.W. 5.5kg



- Hardness: HRC50°-55°
- Accuracy: 0.01mm/m



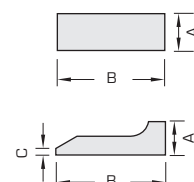
AGP-85 DIMENSIONS					
Order NO	W	H	L	PCS	N.W.
AGP-85	8.5	14	150	2	5.5kg
	8.5	16	150	2	
	8.5	20	150	2	
	8.5	24	150	2	
	8.5	30	150	2	
	8.5	32	150	2	
	8.5	36	150	2	
	8.5	40	150	2	
	8.5	44	150	2	

AGP-100 Precision Parallels Set

N.W. 11kg



- Hardness: HRC50°-55°
- Accuracy: 0.01mm/m
- Process: Four-side grinding
- 1 set includes 18 pcs
- Packed by plastic case



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

GVL-100 Tool Maker Vise (Stainless steel)

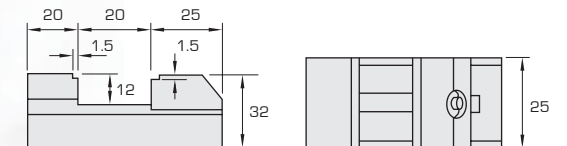
N.W. 0.3kg

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.

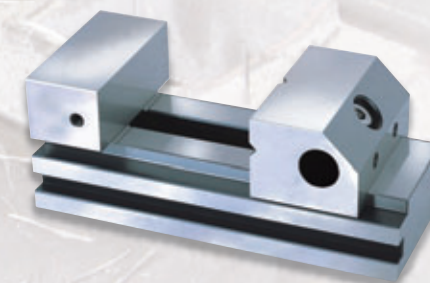


- High Precision Tool Makers Vise
- Hardness: HRC50°-55°
- Squareness: within 0.003mm/m

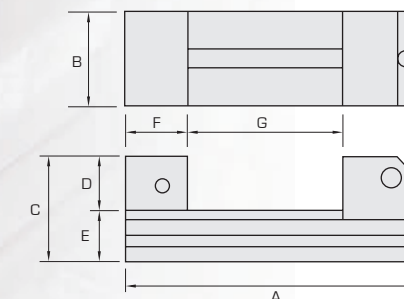


GVL-200, 300 Tool Maker Vise (Stainless steel)

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



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

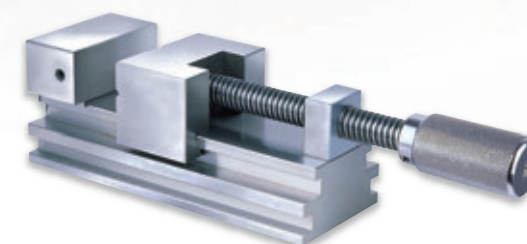


GVL-200, 300 DIMENSIONS								
NO	A	B	C	D	E	F	G	N.W.
GVL-200	140	50	53	25	28	25	0-75mm/m	1.8kg
GVL-300	180	72	62	30	32	35	0-100mm/m	3.8kg

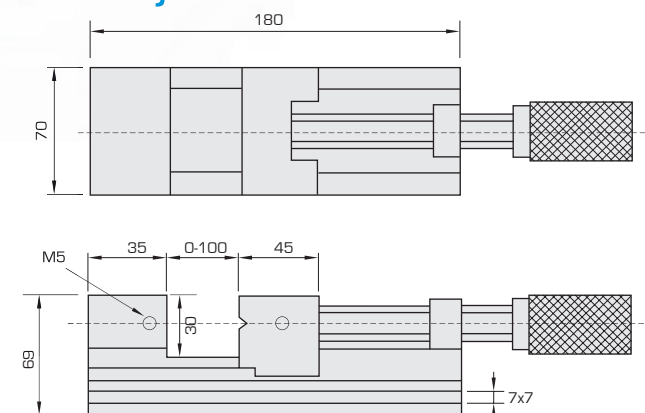
VSU-300 Tool Maker Vise (Stainless steel)

N.W. 5kg

Tool Maker Vise (Stainless steel)



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



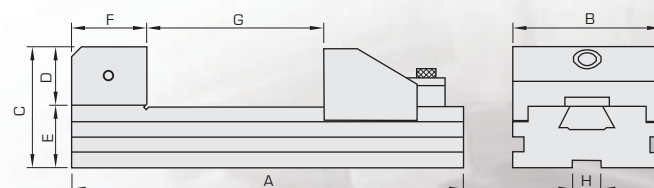
GLK-60, 80, 100

GLK Tool Maker Vise

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



- Material: YK30
- Hardness: HRC56°~60°

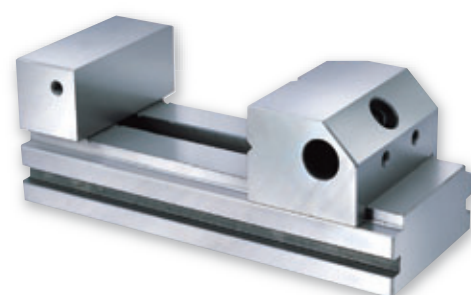
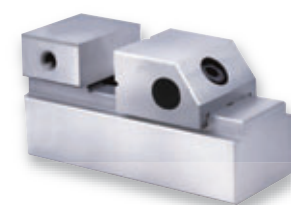


GLK-60~100 DIMENSIONS										mm
NO	A	B	C	D	E	F	G	H	N.W.	
GLK-60	180	60	53	25	28	35	0-80	14	3kg	
GLK-80	205	80	63	30	33	40	0-100	14	5kg	
GLK-100	250	96	80	38	42	45	0-125	14	10kg	

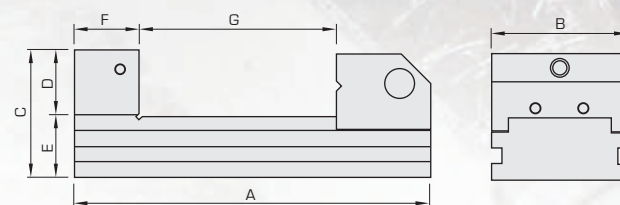
VSB-15, 20, 25, 30, 40

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.



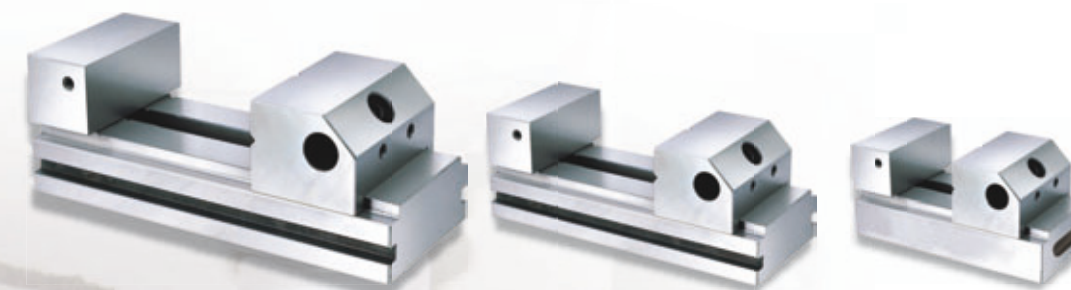
- YK30 material can pledge the rigidity and precision.
- Hardness: HRC56°~60°



VSB-15~40 DIMENSIONS										mm
NO	A	B	C	D	E	F	G	H	N.W.	
VSB-15	105	36	48	20	28	20	0-45	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

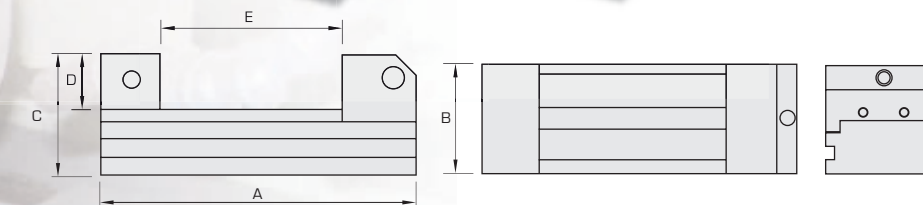


- "GSV" type super precision tool maker vise, made of quality alloy steel. The best kind of tool maker vise whatever in design and accuracy.

- 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.

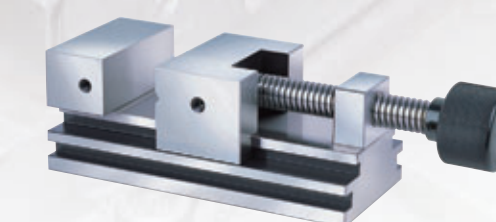
- Material SKS3
- Parallelism within 0.002mm/100mm
- Squareness within 0.003mm/100mm
- Cooling treatment: minus 185°C
- Harden treatment up to HRC58°~62°



GSV-34~120 DIMENSIONS							mm
NO	A	B	C	D	E	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	0-120	6.7kg	
GSV-120	286	120	90	40	0-150	16.8kg	

GAA-20, 25, 30, 40

Super Precision Tool Maker Vise



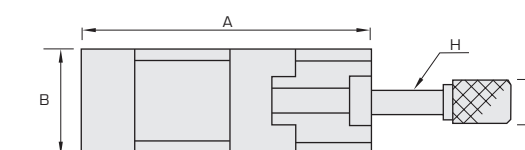
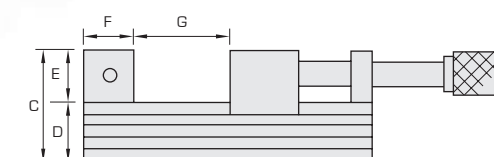
- "GAA" type super precision tool maker vise, complete size, handle designed, can be arbitrarily rotated the handle to adjust clamping size.

- Inside of the handle is hexagonal hole designed, for hexagonal spanner to pressurize and lock.

- Precision spiral shaft match up with nut, and effective to ensure the lasting. The quality and accurate are guaranteed.

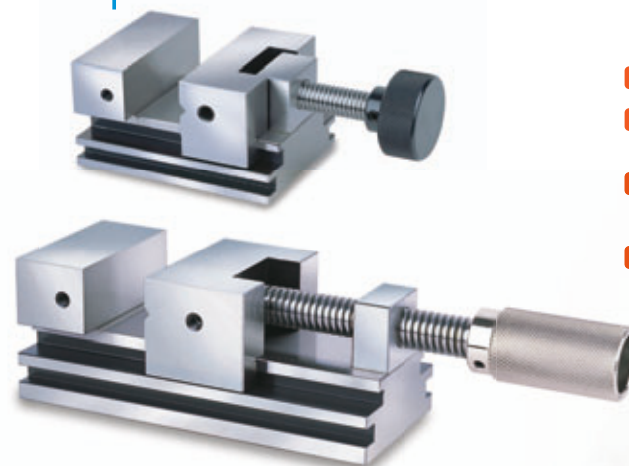
- Single side oblique angle design, can be mended the quantity of essence deformed automatically.

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



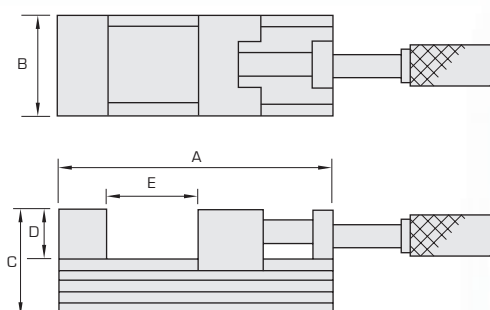
GAS-60,70,90

Super Precision Tool Maker Vise



- “GAS” type super precision tool maker vise, made of quality alloy steel.
- 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

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							mm
NO	A	B	C	D	E	N.W.	
GAS-60	90	60	50	25	0-35	1.6kg	
GAS-70	160	70	62	30	0-80	4.3kg	
GAS-90	210	90	80	40	0-120	8.4kg	

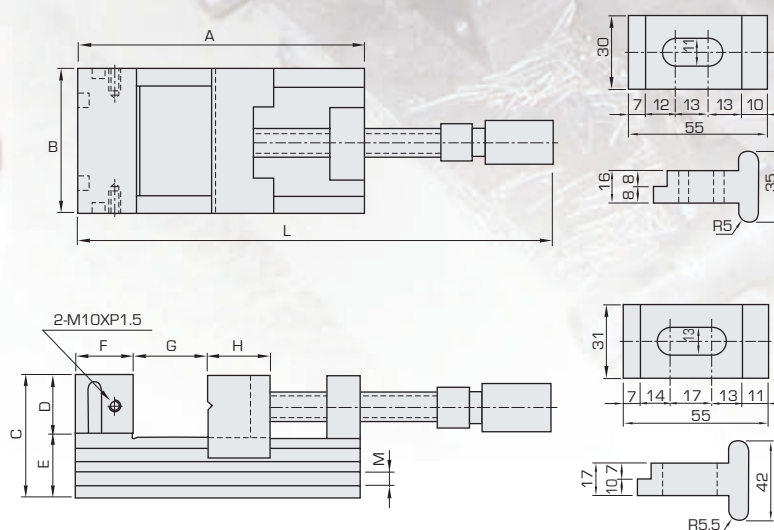
PGV-100,125

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 treatment	minus 185°C
Max. Clamping forces	1500kgf



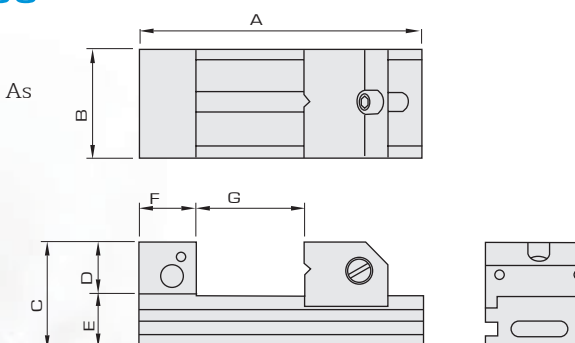
PGV DIMENSIONS												mm
NO	A	B	C	D	E	F	G	H	Minimum	Maximum	M	N.W.
PGV-100	220	100	80	40	40	40	110	50	355	470	9X7	10kg
PGV-125	300	125	90	40	50	60	165	70	420	590	10X7	19.5kg

AVV-30, 40, 50, 60

Super Precision Tool Maker Vise

- “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									mm
NO	A	B	C	D	E	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

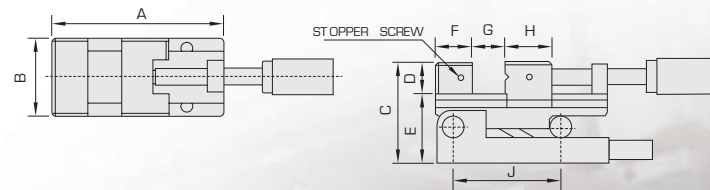
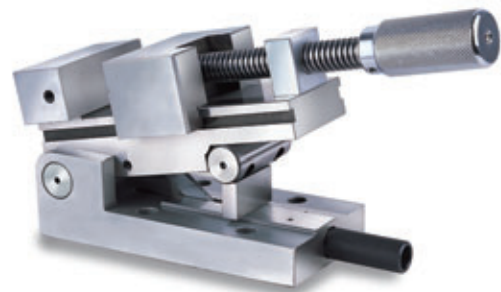
- New improved AVV30 Tool Maker Vise before clamping
- When the AVV30 Tool Maker Vise is clamping work piece, reaction force will act on the inner block. As such, the vise will not twist or distort. It can maintain a very high accuracy.
- When tightening the moving block of the vise, the spring action 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.

AGV-100 Precision Sine Vise

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



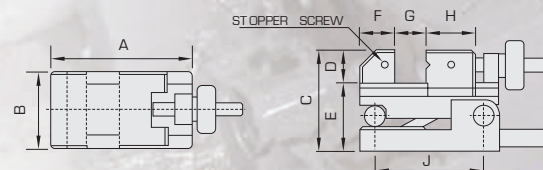
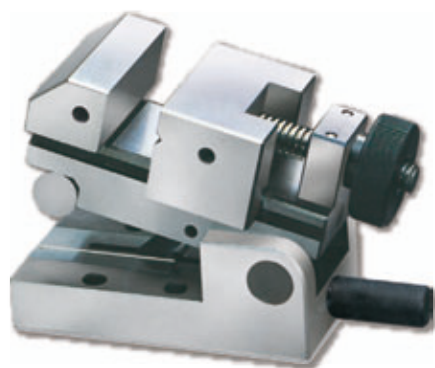
Material	SKS
Parallelism	within 0.003mm/100mm
Squareness	within 0.005mm/100mm
Harden treatment	up to HRC58°~62°
Angle tol.	within 15sec within 20sec

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

AGV-100 DIMENSIONS													mm
NO	A	B	C	D	E	F	G	H	I	J	Max.angle	N.W.	
AGV-100	160	73	93	30	63	33	80	45	M6	100	46°	6.8kg	

GVC-100 Precision Sine Vise

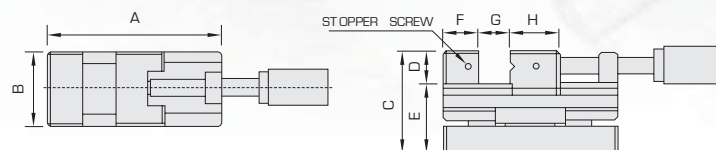
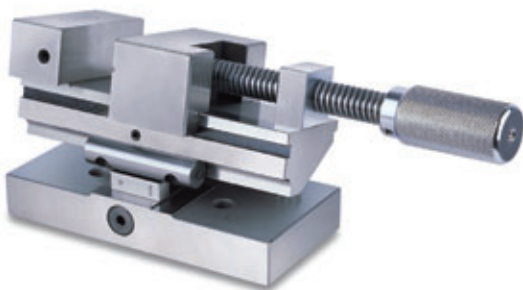
The clamp handle is placed under workpiece



GVC-100 DIMENSIONS													mm
NO	A	B	C	D	E	F	G	H	I	J	Max.angle	N.W.	
GVC-100	130	73	93	30	63	33	45	45	M5	100	46°	6kg	

AGL-50 Precision Sine Vise

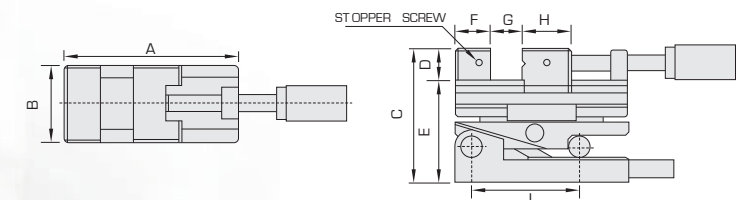
It can set horizontal angles



AGL-50 DIMENSIONS											mm
NO	A	B	C	D	E	F	G	H	I	Max.angle	N.W.
AGL-50	160	73	93	30	63	33	80	45	M5	46°	6.5kg

CSV-100 Precision Compound Sine Vise

It can process at the second angle without removing a workpiece

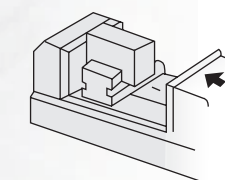


CSV-100 DIMENSIONS													mm
NO	A	B	C	D	E	F	G	H	I	J	Max.angle	N.W.	
CSV-100	160	73	124	30	94	33	80	45	M5	100	46°	8.8kg	

AVS-100 Tool Maker Vise(Small)

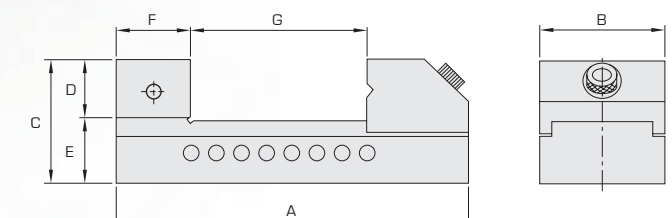
N.W.0.3kg

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.



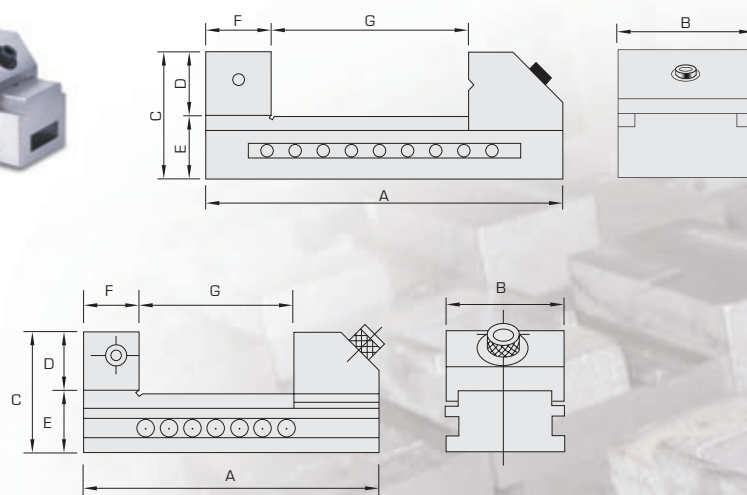
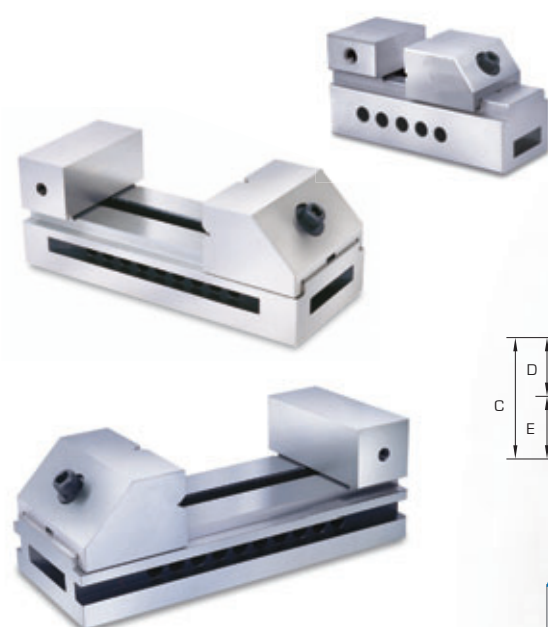
AVB-15, 20, 25, 30, 35, 40, 50 Tool Maker Vise

Tool Maker Vise



AVB DIMENSIONS									mm
NO	A	B	C	D	E	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	

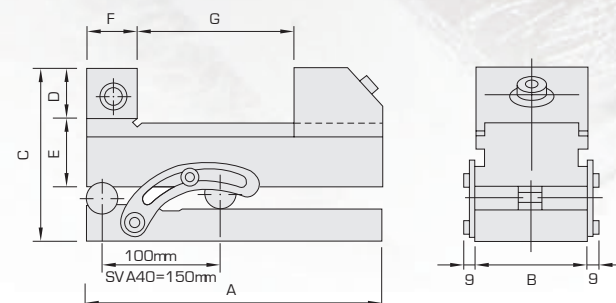
AVS-15, 20, 25, 30, 35, 40, 50, 60 Tool Maker Sine Vise



AVS DIMENSIONS								
NO	A	B	C	D	E	F	G	N.W.
AVS-15	100	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

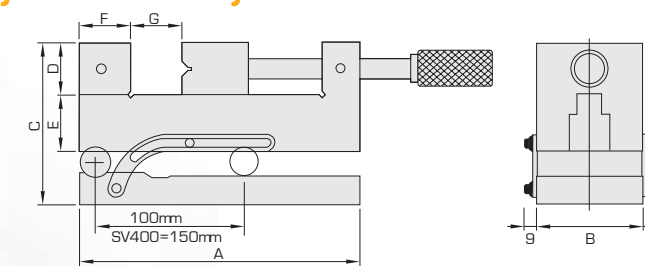
- Material SK2
- Parallelism within 0.003mm/100mm
- Squareness within 0.005mm/100mm
- Harden treatment up to HRC56°~60°

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



SVA DIMENSIONS								
NO	A	B	C	D	E	F	G	N.W.
SVA-20	150	48	90	25	28	25	0-75	2.6kg
SVA-25	176	63	96	30	29	30	0-85	4.8kg
SVA-30	190	73	105	35	33	35	0-95	7kg
SVA-40	245	98	129	45	45	45	0-125	15.5kg

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

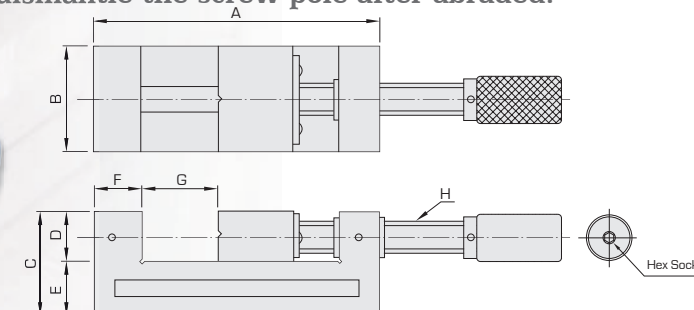


ASV DIMENSIONS								
NO	A	B	C	D	E	F	G	N.W.
ASV-200	156	48	89	25	27	25	0-65	4.4kg
ASV-250	176	63	99	30	33	30	0-75	7kg
ASV-300	190	73	110	35	38	35	0-79	9kg
ASV-400	255	98	121	40	42	40	0-124	16kg

- Harden treatment up to HRC:56°~60°

VSD-20, 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.

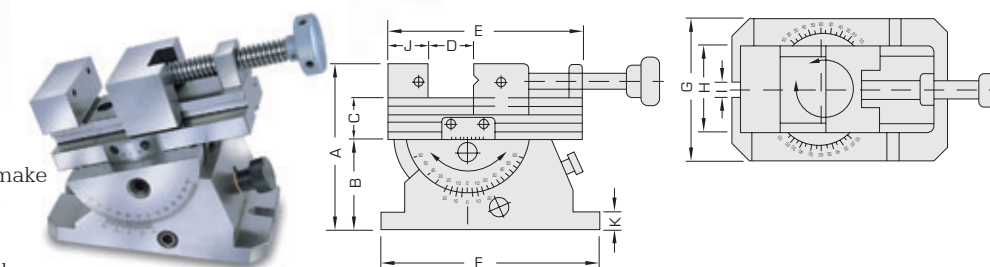


VSD DIMENSIONS								
NO	A	B	C	D	E	F	G	N.W.
VSD-20	156	48	52	25	27	25	0-65	2.5kg
VSD-25	176	63	63	30	33	30	0-75	4.5kg
VSD-30	190	73	73	35	38	35	0-79	6kg
VSD-40	255	98	82	40	42	40	0-124	12kg

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

CHM-80 Precision Universal Vise

- Precision graduation for accurate reading.
- 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.

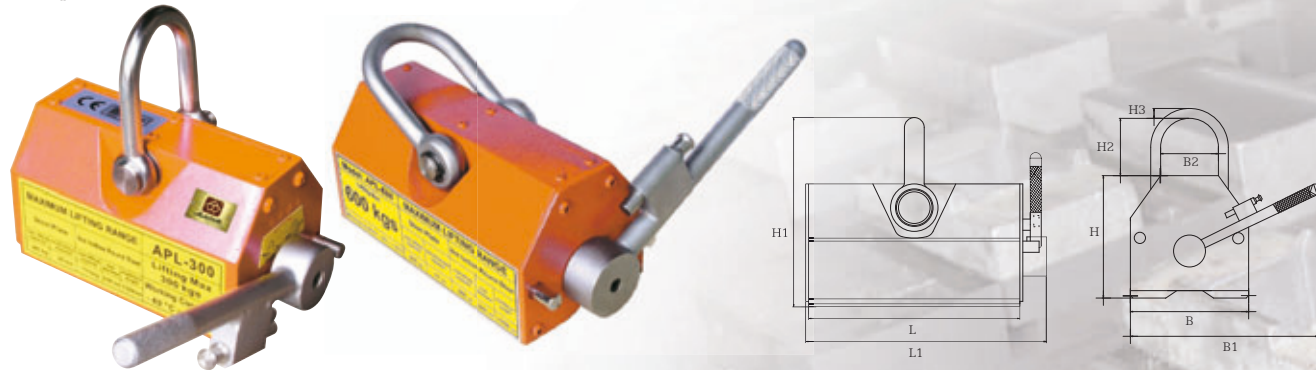


CHM-80 DIMENSIONS											
NO	A	B	C	D	E	F	G	H	I	J	K
CHM-80	137	75	32	80	160	180	110	70	12.5	32	15

APL TYPE

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 temperature 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 can be used successive. Electro power is no necessary for the lifter to avoid power failure problem.



APL DIMENSIONS

NO	Capacity (KG)	Chucking face		Dimensions							Max Lifting Range					Safety coefficient	Weight (KG)
											Steel Plate		Not Hollow Round Steel				
		B	L	H	B1	L1	H1	B2	H2	H3	max.lifting capacity(kg)	minthickness required(mm)	maxlifting capacity(kg)	max. diameter(mm)	maximum Length(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 difference in holding powerby thickness

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

- Calculating Formula for "Range of Lifting Capacity" (TxFxMxCapacity of Lifter)
Example: Terms of workpice: T8, F1, M2
 $90\% \times 125\% \times 85\% \times 600\text{kg(APL-600)} = 573\text{KG}$
- 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.

For Vise

Accessories

Swivel Base



ATW, HP, MP



Workstop



Handles



Special Jaws



Angle Plate



Angle Plate				
Item No.	L	W	H	Weight
AVR-4	75mm	112mm	85mm	2kgs
AVR-6	115mm	150mm	127mm	3.5kgs
AVR-8	127mm	203mm	150mm	7kgs
AVR-10	127mm	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	3/8-16	1"
ACK-103B	1/2		(STB14. STB24. STB34)
ACK-103C	9/16		
ACK-104A	9/16	1/2-16	1" or 1 1/4"
ACK-104B	5/8	or	(STB14. STB24. STB34)
ACK-104C	11/16	1/2-13	or (STB15. STB25. STB35)
ACK-105A	11/16	5/8-11	1" or 1 1/4"
ACK-105B	3/4		(STB14. STB24. STB34)
ACK-105C	13/16		or (STB15. STB25. STB35)
ACK-08	10	M8xP1.25	1" (STB14. STB24. STB34)
ACK-10	12	M10xP1.5	1" (STB15. STB24. STB34)
ACK-12A	14	M12xP1.75	1" (STB14. STB24. STB34)
ACK-12B	16		
ACK-12C	18		
ACK-14	16	M14xP2.0	1" (STB14. STB24. STB34)
ACK-16	18	M16xP2.0	1" (STB14. STB24. STB34)