

DEPEND VISE

Patented

PSS-Series

DUAL-WEDGE CLAMPING MECHANISM

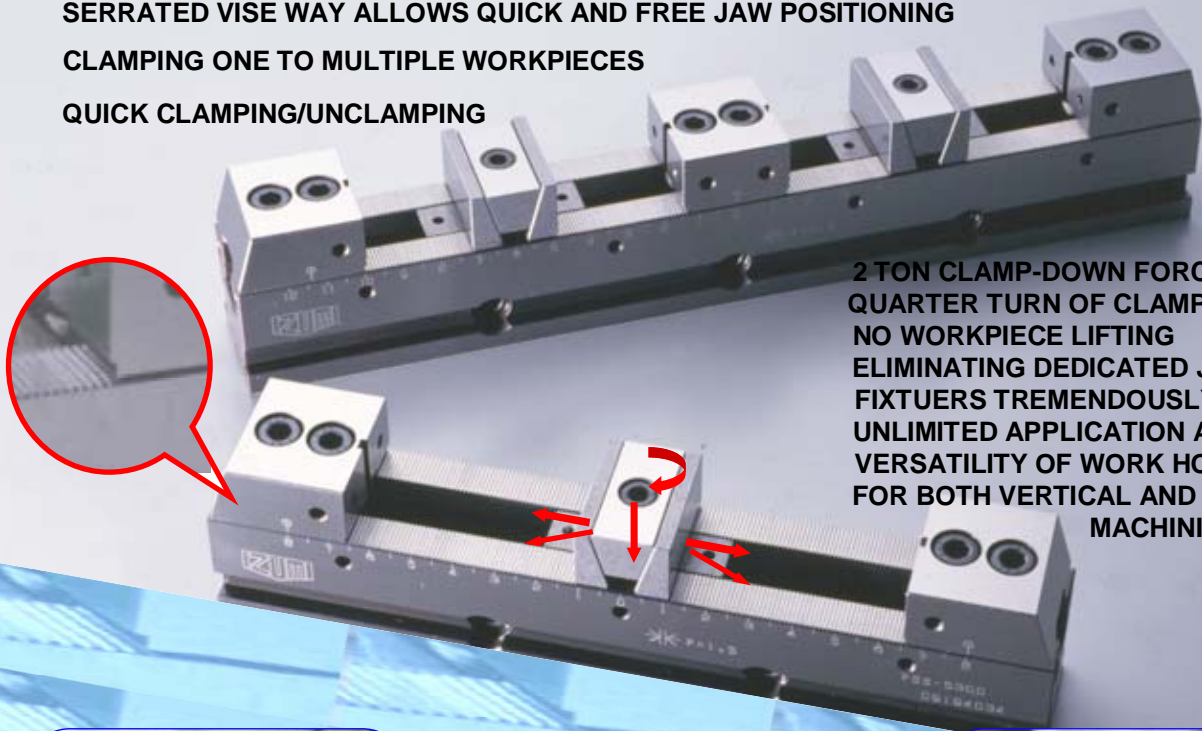
CLAMPING 2 WORKPIECES SIMULTANEOUSLY

SERRATED VISE WAY ALLOWS QUICK AND FREE JAW POSITIONING

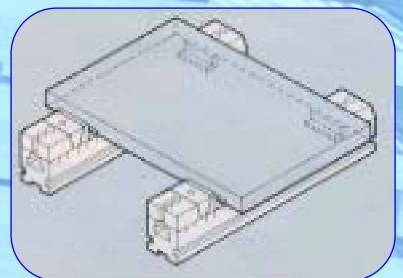
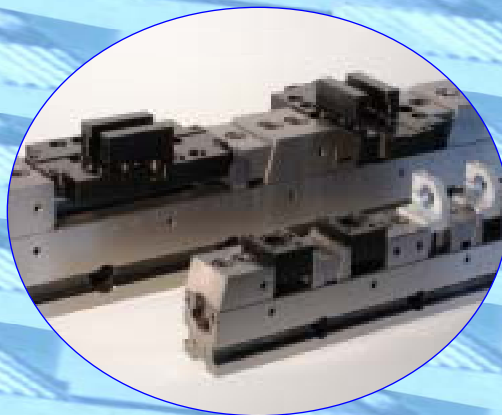
CLAMPING ONE TO MULTIPLE WORKPIECES

QUICK CLAMPING/UNCLAMPING

50/72 TYPE



2 TON CLAMP-DOWN FORCE BY
QUARTER TURN OF CLAMP SCREW
NO WORKPIECE LIFTING
ELIMINATING DEDICATED JIGS AND
FIXTURES TREMENDOUSLY
UNLIMITED APPLICATION AND
VERSATILITY OF WORK HOLDING
FOR BOTH VERTICAL AND HORIZONTAL
MACHINING CENTERS



IZUMI CORPORATION

IZUMI DEPENDVISES

PATENTED DUAL-WEDGE CLAMPING

MECHANISM

- 2 ton clamp-down force
- No workpiece lifting
- No workpiece tapping required
- Clamping 2 workpieces simultaneously

UNRESTRICTED JAW POSITIONING

- Serrated way allows quick and free jaw positioning upon workpiece size.
- Serrated engagement between way and jaw assures maximum rigidity.
- By adding the jaws, one to multiple workpieces can be clamped quickly and precisely.
- Versatility of Dependvise substantially eliminates special jigs and fixtures

MOST COMPACT AND RUGGED DESIGN

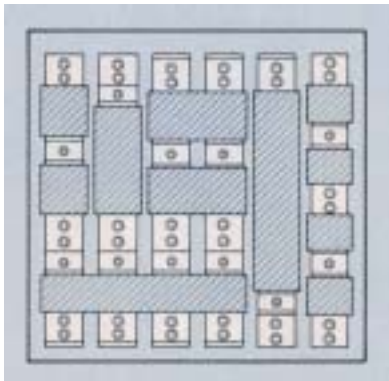
- Maximizes the space for workpieces on the machine table
- The increased number of workpieces per each run means longer unattended machining time.
- Made of quality tool steel, hardened(HRC55°) and precision ground assure extreme heavy milling

WIDE VARIETY OF APPLICATIONS

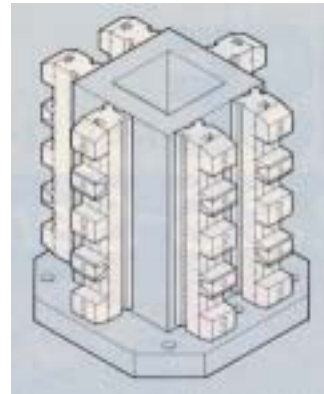
- Direct mouting on the machine table or multiple Dependvises on the subplate.
- Mounting multiple Dependvises on the tombstone for horizontal machining center.
- Variety of optional accessories enables the continuous usage of Dependvises at all times.

TYPICAL APPLICATIONS

For Vertical Machining Center



For Horizontal Machining Center



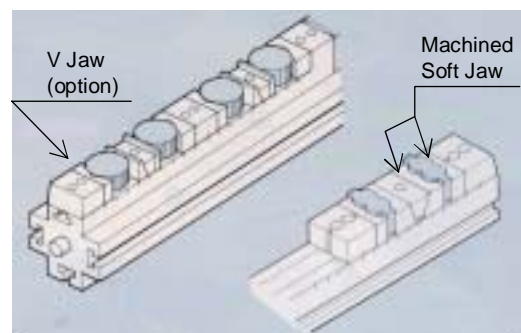
Note: Tombstone upon request

Maximum Number of Workpieces
6 Dependvises on subplate



Note: Subplate available optionally

Multiple Round Workpieces



PSS-Series

APPLICATION GUIDE

TYPE								
ORDER NO	JAW WIDTH	BASE LENGTH	CLAMPING	CLAMPING	CLAMPING	CLAMPING		
			1 WORKPIECE	2 WORKPIECES	3 WORKPIECES	4 WORKPIECES		
							CLAMPING LENGTH	WT(Kg)
PSS-5250-2	50	250	125	56	5.1			-
PSS-5300-2		300	175	82	5.6	-	-	-
PSS-5300-4		300	175	82	-	32	20	6.6
PSS-5400-2		400	275	130	7.1	-	-	-
PSS-5400-4		400	275	130	-	65	46	8.1
PSS-5500-2		500	376	180	8.1	-	-	
PSS-5500-4		500	376	180	-	96	71	9.1
PSS-5600-2		600	476	230	9.1	-	-	-
PSS-5600-4		600	476	230	-	129	96	10.1
PSS-7400-2	72	400	214	100	16.2	-	-	-
PSS-7400-4		400	214	100	-	34		19.4
PSS-7500-2		500	314	150	19.2	-	-	-
PSS-7500-4		500	314	150	-	68	47	22.4
PSS-7600-2		600	414	200	22	-	-	-
PSS-7600-4		600	414	200	-	101	72	25.2
PSS-7700-2		700	514	250	25	-	-	-
PSS-7700-4		700	514	250	-	134	97	28.2

Note: 5 or more workpieces can be clamped upon the workpiece sizes.

STANDARD ACCESSORIES

TYPE	QTY.	DESCRIPTION
	1 pc.	Body
	2 pcs.	Stationary Block
	2 pcs.	Moveable jaw
	2 ea.	Wedge(1 pc.on each)

TYPE	QTY.	DESCRIPTION
	1 pc.	Body
	2 pcs.	Stationary Block
	1 pcs.	Interim Block
	4 pcs.	Moveable jaw
	4 ea.	Wedge(2 pcs.on each)

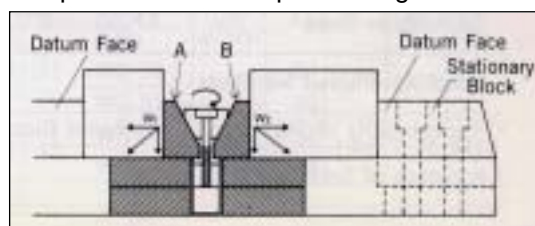
Note:See" WEDGE" in Standard Accessory for details

Note:In clamping odd number of workpiece, reverse the direction of stationary block to accept the wedge.

PRINCIPLE OF CLAMP-DOWN FORCE BY WEDGE

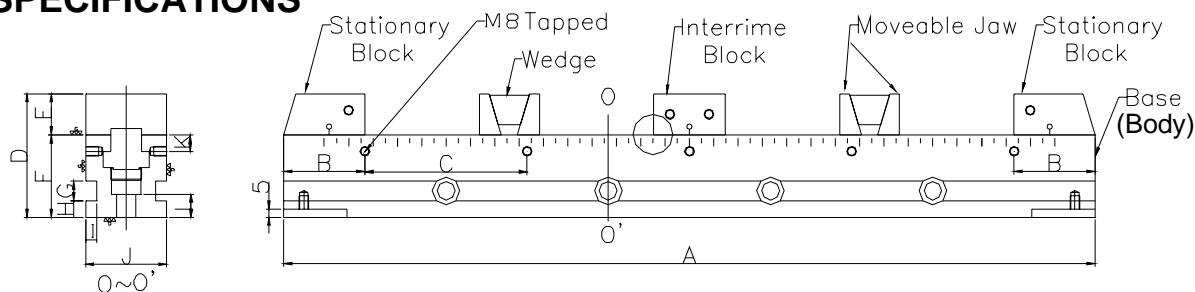
By tightening the cap screw, the wedge slides down between the two tapered jaws while forcing Both jaws (A and B) to open down and forward, thus clamping two workpieces simultaneously. Since the force generated is perpendicular to the tapered faces, it works between the parallel force For rigid workpiece clamping and the straight down force for prevention of workpiece lifting.

After tightening, the jaws (A and B) and the wedge Becomes uni-body and exerts force on each other which enables the clamping members to be very rigid against extremely heavy milling force. The doubling effect of wedge clamping makes the 1/4" hex wrench generate 1.2 to 2.0 ton clamping force

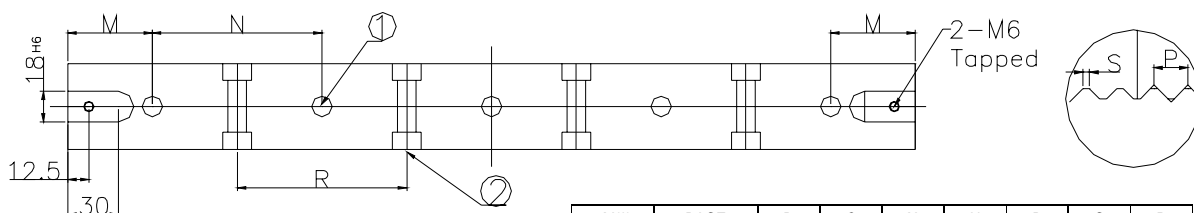


PSS-Series

SPECIFICATIONS



JAW WIDTH	A	D	E	F	G	H	I	J	K	L
				+0.01				+0.01		
50	250~600	75	25	50	12	10	7	50	10	14
72	400~700	109.5	37.5	72	16	14	9	72	15	18



Note: Base Mounting Holes For 50mm Jaw, M10 and for 72mm ,M14.

Note: Counterbored Holes
For 50mm Jaw, 11mm dia. With 17mm dia. and 10mm deep.
For 72mm Jaw, 16.5mm dia. With 22.5mm dia. and 15.5mm deep.

JAW WIDTH	BASE LENGTH	B	C	M	N	R	S	P
50	250	50	75	50	75	75	0.5	1.5
	300	50	100	50	100	100		
	400	50	100	50	100	100		
	500	50	100	50	100	100		
72	400	50	100	50	100	100	0.7	2.0
	500	50	100	50	100	100		
	600	50	125	50	125	125		
	700	100	125	100	125	125		

Range of Jaw Movement



JAW WIDTH	A		B	
	MIN	MAX	MIN	MAX
50	34	38	72	76
72	46	52	105	112

GUARANTEED ACCURACIES

●Workpieces Lifting ----- ± 0.005
Note: Dependvise is required to be fixed with number of bolts.

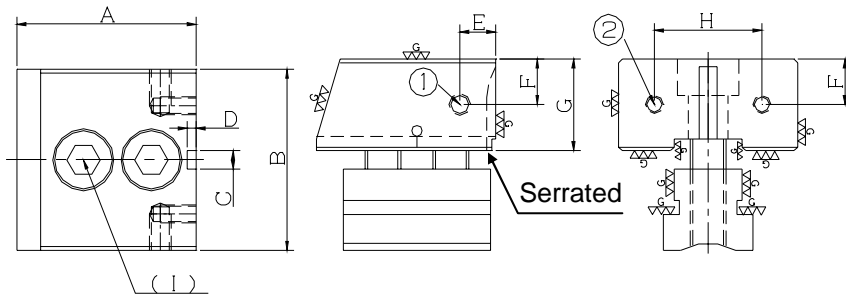
●Dependvise Base ----- 0.01/100

●Other Assembled Members ----- 0.01/100

●Repeatability of Stationaly and Interim Blocks ----- ± 0.005

●Accuracy of Serration Pitches ----- ± 0.01/100(0~250) ± 0.02(250~600)

STATIONARY BLOCKS STANDARD ACCESSORIES

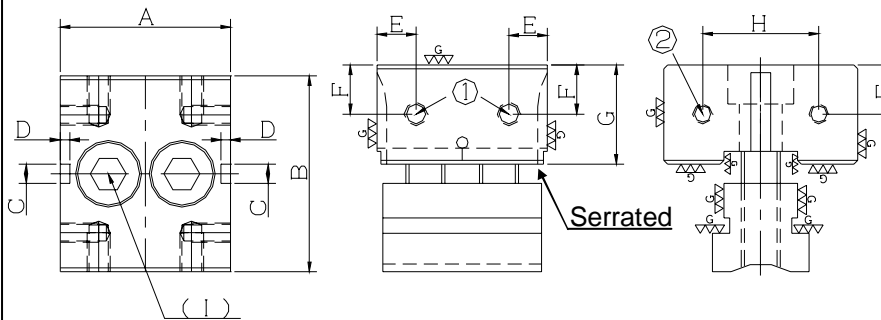


JAW WIDTH		
50	2 Holes M6 × 1,0mm 8mmdeep	2 Holes M5 × 0,8mm 8mmdeep
72	2 Holes M6 × 1,0mm 12mmdeep	2 Holes M6 × 1,0mm 10mmdeep

ORDER NO.	JAW WIDTH	A	B	C	D	E	F	G	H	I	WEIGHT
		± 0,1	- 0,04 - 0,06	+0,05 -0							Kg
SB-5	50	50	50	5,0	2,5	10	12,5	25	30	M10	0,55
SB-7	72	74	72	8,0	4,0	15	18,75	37,5	44	M12	1,8

Note: Cap screws and T Slot Nut are included.

INTERIM BLOCKS

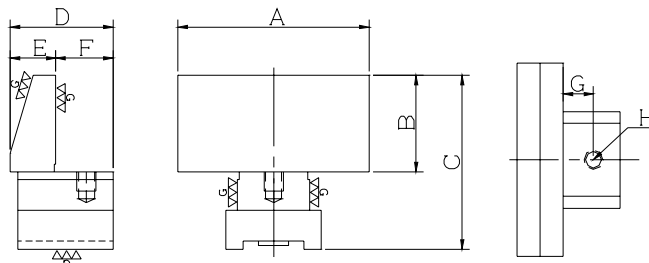


JAW WIDTH		
50	2 Holes × 2 M6 × 1,0mm 8mmdeep	2 Holes × 2 M5 × 0,8mm 8mmdeep
72	2 Holes × 2 M6 × 1,0mm 12mmdeep	2 Holes × 2 M6 × 1,0mm 10mmdeep

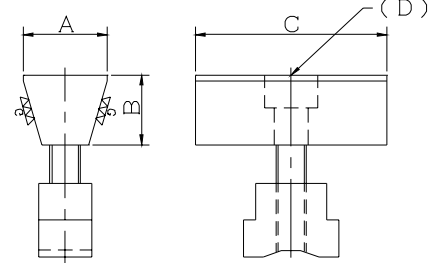
ORDER NO.	JAW WIDTH	A	B	C	D	E	F	G	H	I	WEIGHT
		± 0,01	- 0,04 - 0,06	+0,05 -0							Kg
IB-5	50	44	50	5,0	2,5	10	12,5	25	30	M10	0,52
IB-7	72	65	72	8,0	4,0	15	18,75	37,5	44	M12	1,70

Note: Cap screw and T Slot Nut are included.

MOVEABLE JAWS



WEDGES

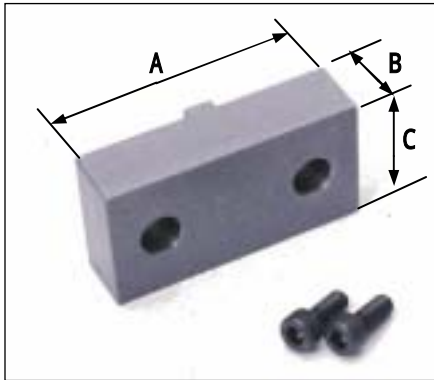


ORDER NO.	JAW WIDTH	A	B	C	D	E	F	G	H	WEIGHT
		-0,3 -1,0	-0,3 -0,5	-0,3 -0,5						
MJ-5	50	50	25	45	27	12	15	8	M5	0,165
MJ-7	72	72	37,5	67,5	36	16	20	11,5	M6	0,470

ORDER NO	JAW WIDTH	A	B	C	D	WEIGHT
WG-50	50	22	18	49	M8	0,15
WG-51		22,75				0,1
WG-70	72	34	27	70	M12	0,5
WG-71		35				0,35

OPTIONAL ACCESSORIES

SOFT JAWS

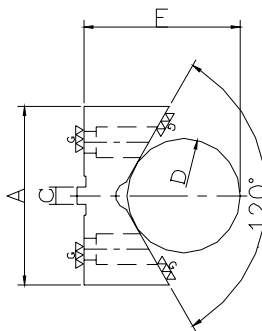
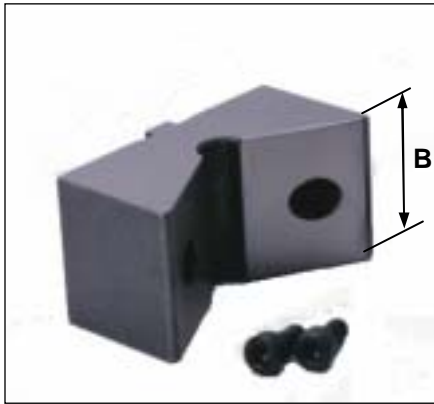


●Attaching Stationary and Interim Block.

ORDER NO	A	B	C
SJ-5	50	17	25
SJ-7	72	19	37,5

Note: Material #1020 and machineable.
Note: 4 pcs. In one set.

V JAWS

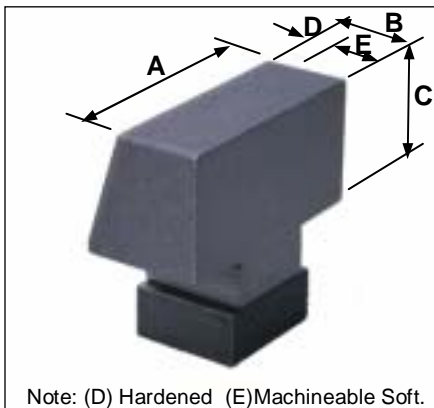


●Attaching Stationary and Interim Block to clamp a round workpiece.

ORDER NO.	A	B	C	D	E	MAX CLAMPING
VJ-5	50	25	5 +0 -0,05	32h7	44.2	70 dia.
VJ-7	72	37,5	8 +0 -0,05	42h7	60.9	110 dia.

Note: Tool Steel, Hardened (HRC 55')
and Plecision Ground

SOFT MOVEABLE JAWS



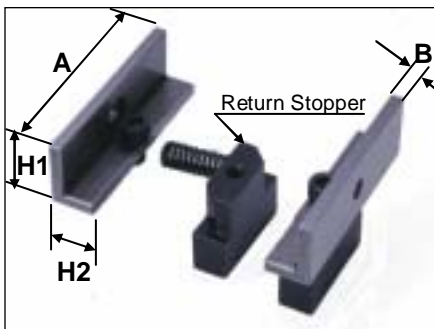
Note: (D) Hardened (E)Machineable Soft.

●Machineable to fit the workpiece.

ORDER NO.	A	B	C	D	E
SM-5	50	20	25	7	13
SM-7	72	26	37,5	7	19

Note: Material #1020
Note: 4 pcs. In one set.

PARALLEL SETS



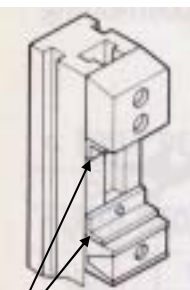
Note: Both dimension H1 and H2 can be used by reversing

●Attaching Stationary or Interim Block and Moveable Jaw; MUST for drilling or milling thru the workpiece.

ORDER NO.	A	B	H1 ± 0,01	H2 ± 0,01
PL-50	48	3,0	10	15
PL-51			20	10
PL-70	70	4,5	15	23
PL-71			30	15

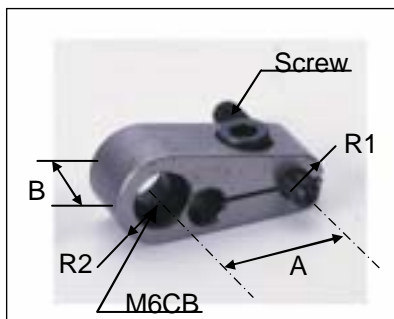
Note: Material #1020, Hardened (HRC 40'),
and Four Face Ground

Note: 2 pcs. Parallel, 1ea. Touch Nut, Washer,
O ring and Return Stopper
with Spring in one set.



OPTIONAL ACCESSORIES

WORKSTOPS



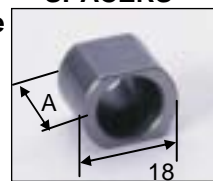
Note: Material #1020, Hardened (HRC40') and Precision Ground

● Easy mounting for accurate repetitive positioning of workpiece

ORDER NO.	JAW WIDTH	A	B ± 0,01	R1	R2
WS-5	50	27	15	6	9
WS-7	72	40,5	15	6	12

Note: Material #1020, Hardened (HRC40') and Precision Ground
Note: 4 pcs. In one set

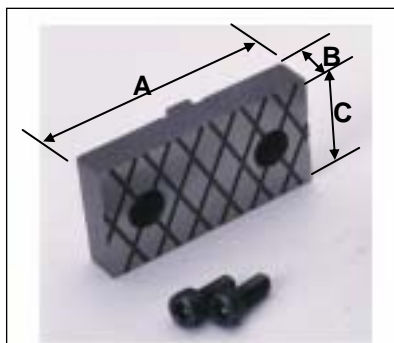
SPACERS



● For Workstop And Sideplate to adjust the height

ORDER NO.	A ± 0,01
SP-10	10
SP-15	15
SP-23	23

HARD JAWS

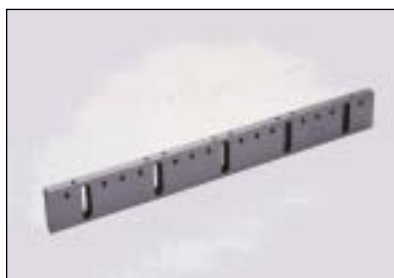


● Attaching Stationary and Interim Block.

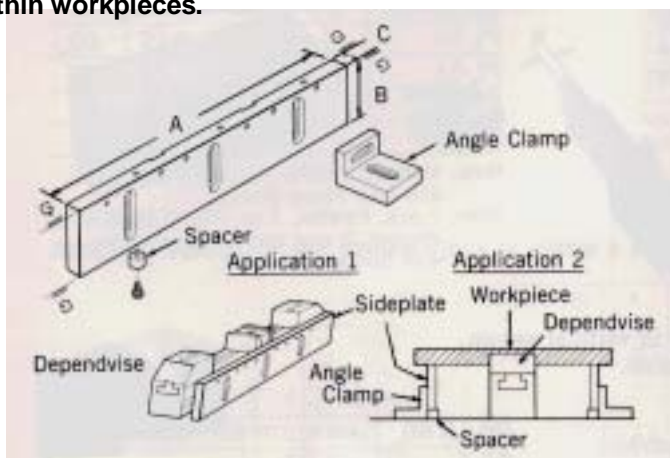
ORDER NO.	A	B	C
HJ-5	50	8	25
HJ-7	72	12	37,5

Note: Tool Steel, Hardened (HRC 55') and Precision Ground

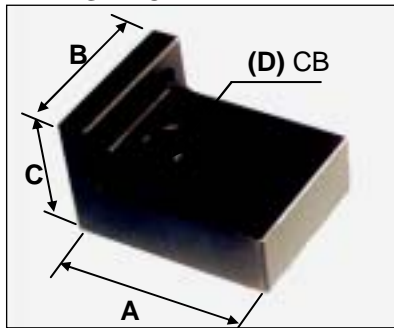
SIDE PLATES



● When setting multiple workpieces on Dependvise, they work as the workstop for positioning and supporting base for thin workpieces.



ANGLE CLAMP



ORDER NO.	JAW WIDTH	A	B	C	D
AC-5	50	65	50	40	M10
AC-7	72	100	75	60	M14

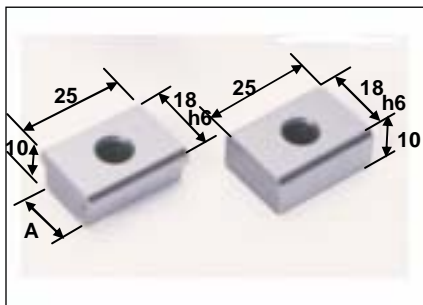
Note: Material #1020

ORDER NO.	JAW WIDTH	A	B ± 0,01	C
SP5-250	50	250	50	15
SP5-300		300		
SP5-400		400		
SP5-500		500		
SP5-600	600			
SP7-400	72	400	72	
SP7-500		500		
SP7-600		600		
SP7-700		700		

Note: Made of quality Tool Steel. Hardened (HRC40') and four faces precision ground.

OPTIONAL ACCESSORIES

GUIDE KEYS

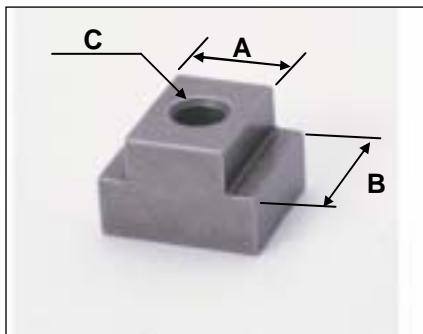


● For positioning Dependvise on the machine table quickly and easily.

ORDER NO.	A(h6)
GK-1810	10
GK-1812	12
GK-1814	14
GK-1816	16
GK-1818	18

Note: Material #1020, Hardened (HRC40°) and Four Faces Precision Ground
 Note: M6 Cap Screw included
 Note: 2 pcs. In one set.

T SLOT NUTS

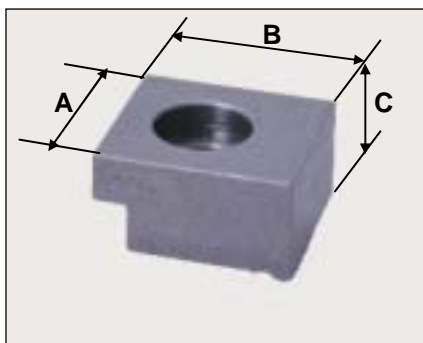


● It is used when Dependvise is fixed to a machine table with T slot.

ORDER NO.	A	B	C
TN-1810	18	25	M10
TN-1814	18		M14
TN-1410	14		M10

Note: Material #1020, Hardened.

CLAMPS



● It is used when Dependvise is fixed to a machine table with T slot.

ORDER NO.	JAW WIDTH	A	B	C	D
CL-5	50	32	35	19	M10
CL-7	72	40	50	28	M14

Note: Material #1020, Hardened.
 Note: 2 pcs. In one set.

JIG PLATES

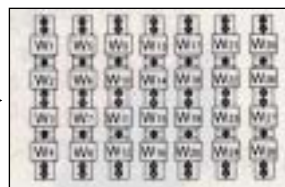


● Designed to mount multiple Dependvise precisely and quickly.

◆ It is order-received production.



3 TIMES MORE WORKPIECES WITH DPENDDVISES ON THE SAME MACHINE TABLE



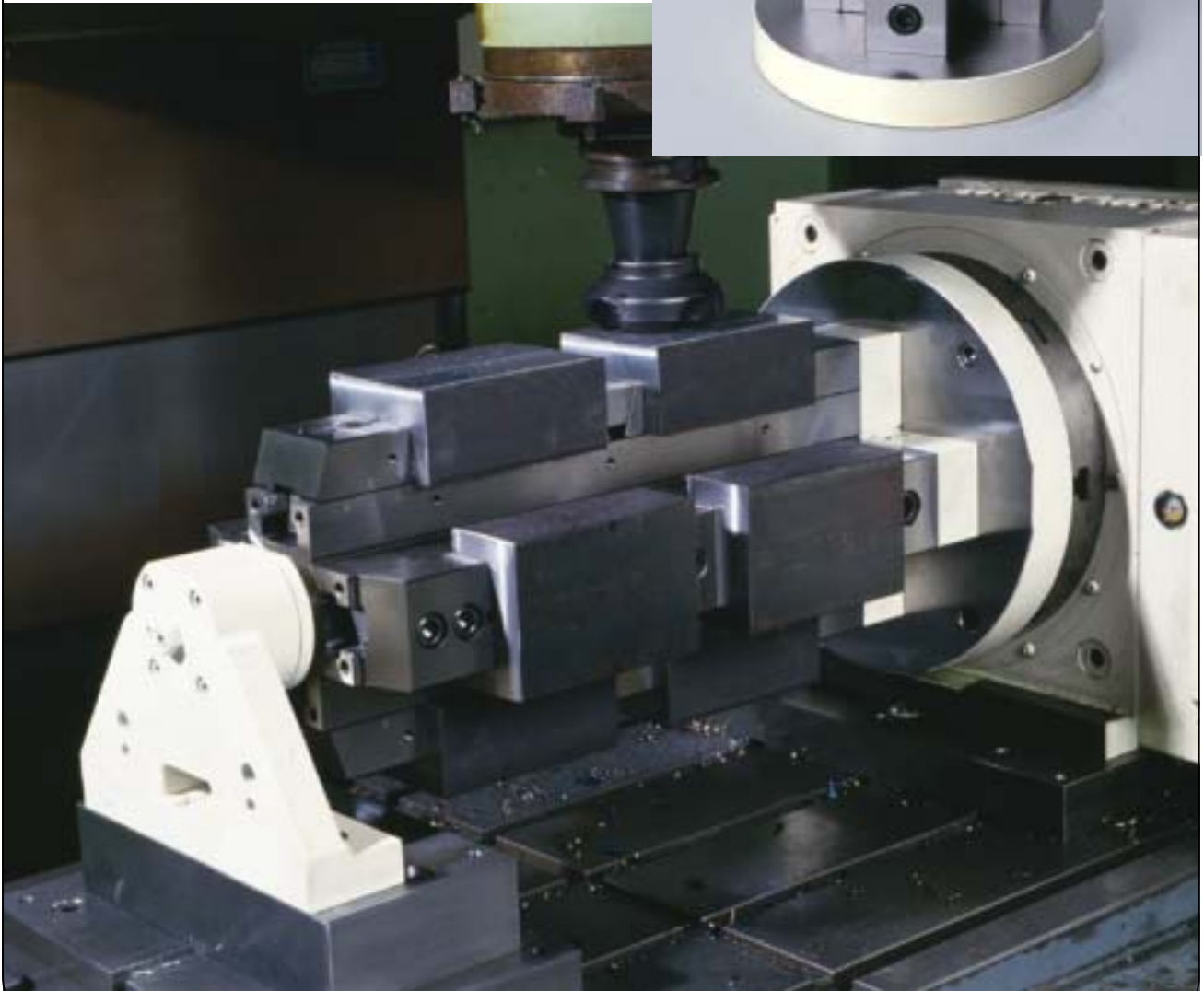
5 TIMES MORE WORKPIECES WITH DEPENDVISES ON THE SAME MACHINE TABLE

PC4-Series

Patented

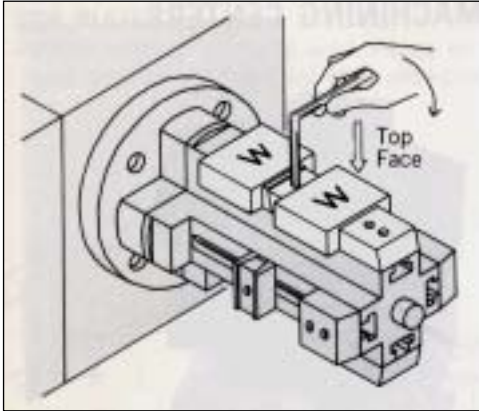
FOR VERTICAL AND HORIZONTAL MACHINING CENTERS

- **FOUR DEPENDVISES BUILT-ONE BODY.**
- **UNI-BODY CONSTRUCTION OF VISE BASE.**
- **DUAL-WEDGE CLAMPING SYSTEM.**
- **2 TON CLAMPING FORCE.**
- **NO PART LIFTING.**
- **QUICK SET-UP OF CLAMPING ONE TO MULTIPLE WORKPIECES.**
- **CLAMPING UNLIMITED VARIETY OF WORK SIZES.**
- **ALL ACCESSORIES ARE INTERCHANGEABLE WITH PSS-SERIES.**



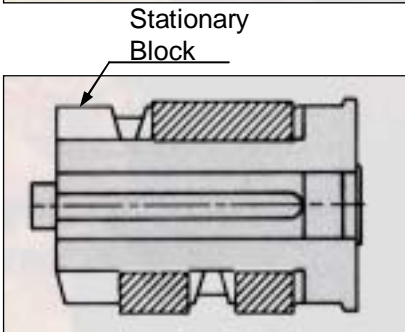
PC4-Series

HIGH RELIABILITY AND ACCURACY



- Uni-body construction for maximum rigidity
- Vise base is milled out of solid square tool steel to provide maximum rigidity.
- Serrated vise way assures $\pm 0,005$ repeatability
- No distortion by wedge clamping.
- M8mm cap screw generates 2 ton clamping force
- Distance between center and each base within ± 0.02

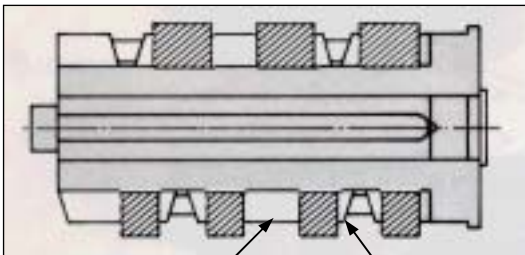
HIGH PRODUCTIVITY IN REDUCED SPACE



- Easy top face work mounting
- Designed for space saving
- Maximize limited space by mounting workpieces in 3 dimension.
- Extend uninterrupted machining time substantially.

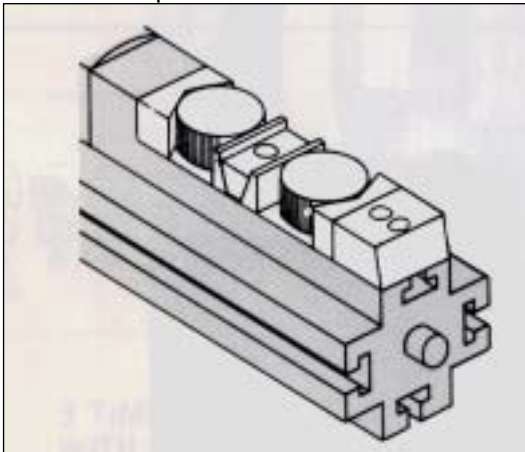
By reversing Stationary Block, 1 workpiece can be clamped.

VERSATILITY MEANS COST REDUCSTION OF JIG AND FIXTURE



- Applicable to small to large workpieces
- Eliminate dedicated jigs and fixtures
- For rotary table on vertical machining center
- Functioning as tombstone when mounted on horizontal machining center.

By adding Interim Block and Moveable Jaws, 3 or 4 workpieces Can be clamped



By machining Soft Jaws, round or irregular Workpieces can be clamped.

DESCRIPTION	MATERIAL	HARDNESS & FINISH	
Main Body	Tool Steel	HRC 55°	Ground
Stationary Block	Tool Steel	HRC 55°	Ground
Interim Block	Tool Steel	HRC 55°	Ground
Wedge	#1020	HRC 35°	Ground
Moveable Jaw	#4140	HRC 35°	Ground

DESCRIPTION	MATERIAL	HARDNESS & FINISH	
T Slot Nut	#1020	HRC 35°	Ground
Guide Key	#1020	HRC 35°	Ground
Flange-Round	#1020	HRC 35°	Ground
Flange-Cross	#1020	HRC 35°	Ground

PC4-Series

APPLICATION GUIDE

TYPE			CLAMPING 1 WORKPIECE	CLAMPING 2 WORKPIECES	CLAMPING 3 WORKPIECES	CLAMPING 4 WORKPIECES
ORDER NO	JAW WIDTH	BASE LENGTH				
			CLAMPING LENGTH		CLAMPING LENGTH	
PC4-5235V01	50	235	117	52		
PC4-5285V01		285	167	77	29	18
PC4-5335V01		335	217	102	45	30
PC4-5400V01		400	282	134	67	47
PC4-7300V01	72	300	126	56	34	
PC4-7400V01		400	226	100	37	24
PC4-7500V01		500	326	150	70	49

STANDARD ACCESSORIES

TYPE	QTY.	DESCRIPTION
	1 pc.	Body
	4 pcs.	Stationary Block
	8 pcs.	Moveable jaw
	8 ea.	Wedge(4 pcs.on each)
	1 pc.	Mounting Flange
	4 pcs.	Centerring Gage

TYPE	QTY.	DESCRIPTION
	1 pc.	Body
	4 pcs.	Stationary Block
	4 pcs.	Interim Block
	16 pcs.	Moveable jaw
	16 ea.	Wedge(8 pcs.on each)
	1 pc.	Mounting Flange
	4 pcs.	Centerring Gage

Note: All of the accessories are interchangeable with Dependvise respectively.

Note: See "WEDGE" in Standard Accessory for details at Dependvise.

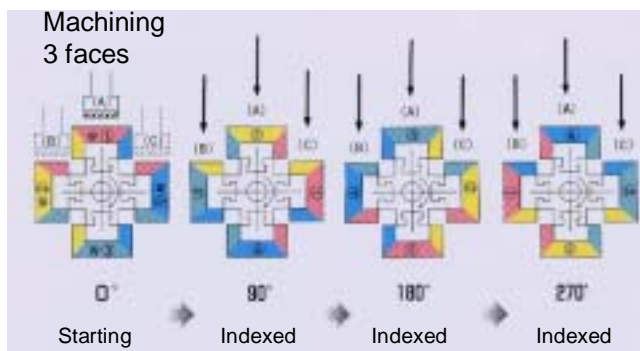
Note: In clamping odd number of workpieces, reverse the direction of stationary block to accept the wedge.

MACHINING 3 FACES SIMULTANEOUSLY

- Machining 3 faces at a time improves both productivity and accuracy.
- Chip free machining due to 360° workpiece rotation.
- Extending running time even small workpiece.
- Only 1/6 of time for clamp/unclamp required to mount 8 workpieces with 24 face to be machined
Also 1/6 of time for clamp/unclamp required.

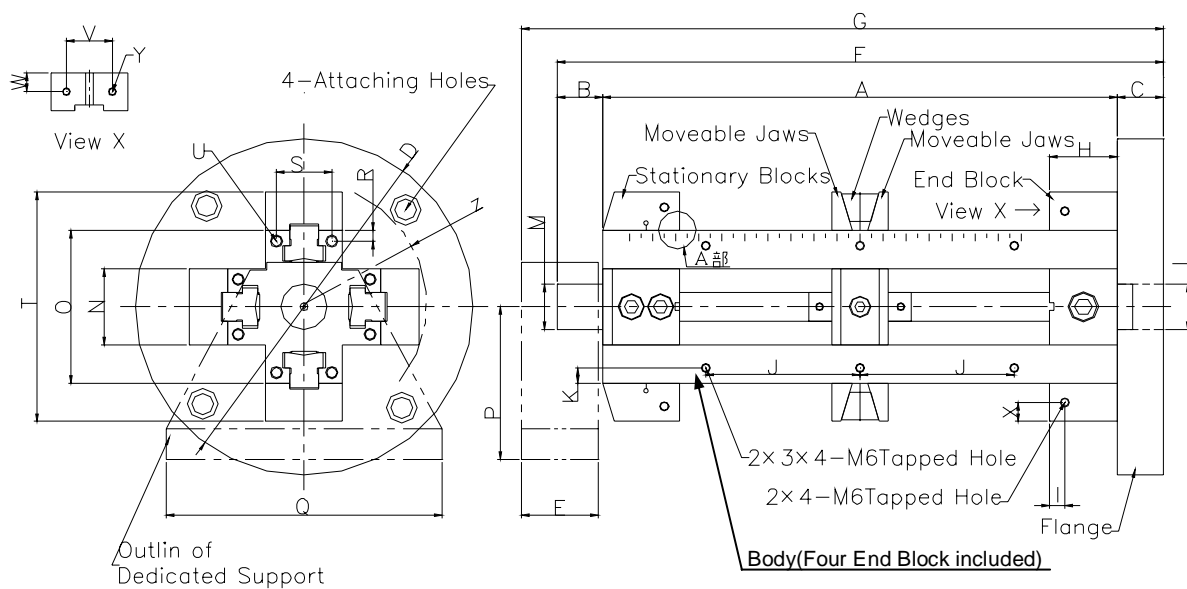


8 workpieces with 24 faces to be machined



PC4-Series

SPECIFICATIONS



MODEL NO	JAW WIDTH	A	B	C ± 0,01	D	E	F	G	H ± 0,01	I	J	K	L H7	M ± 0,005
PC4-5235V	50	235	30	30	220	50	295	315	44	10	70,5	10	30	30
PC4-5285V		285					345	365			85,5			
PC4-5335V		335					395	415			100,5			
PC4-5400V		400					460	480			120			
PC4-7300V	72	300	45	45	330	73	390	418	65	15	90	15	40	40
PC4-7400V		400					490	518			120			
PC4-7500V		500					590	618			150			

MODEL NO	JAW WIDTH	N ± 0,02	O ± 0,02	P	Q	R	S	T	U	V	W	X	Y	Z	WT Kg
PC4-5235V	50	50	100	100	180	7	36	150	8-M8 Tapped	30	12,5	12,5	8-M5 Tapped	80	26
PC4-5285V															28
PC4-5335V															30
PC4-5400V															33
PC4-7300V	72	72	150	140	270	10	52	225	8-M10 Tapped	44	18,75	18,75	8-M6 Tapped	119	78
PC4-7400V															88
PC4-7500V															98

Note: G means the dimension with the dedicated support.

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