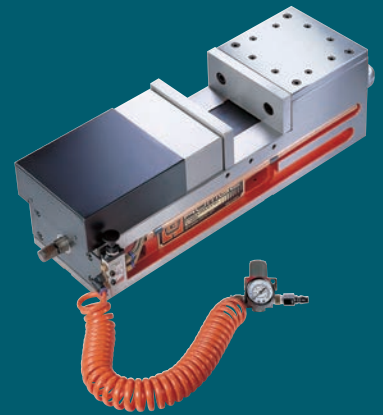
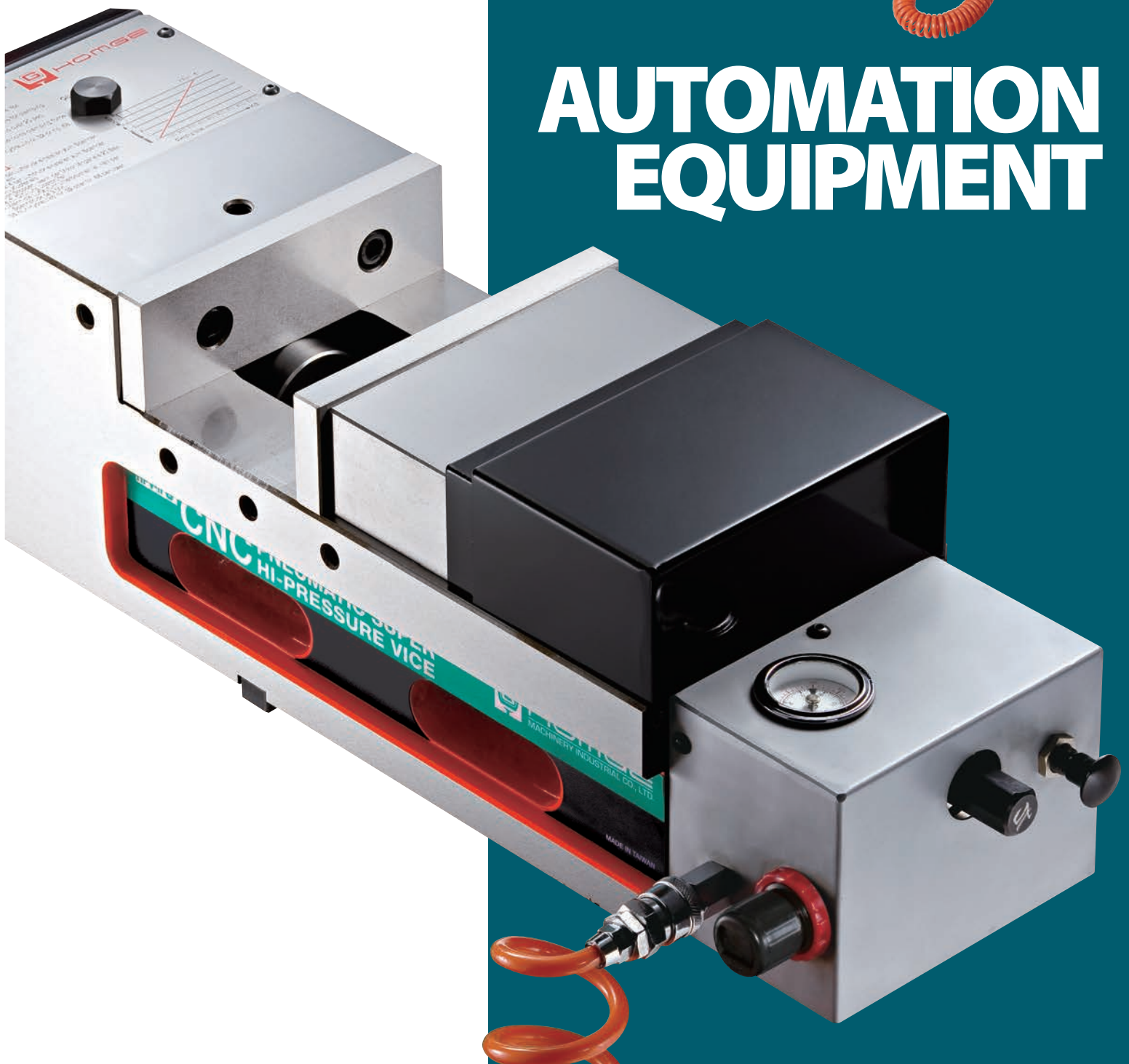




AUTOMATION EQUIPMENT





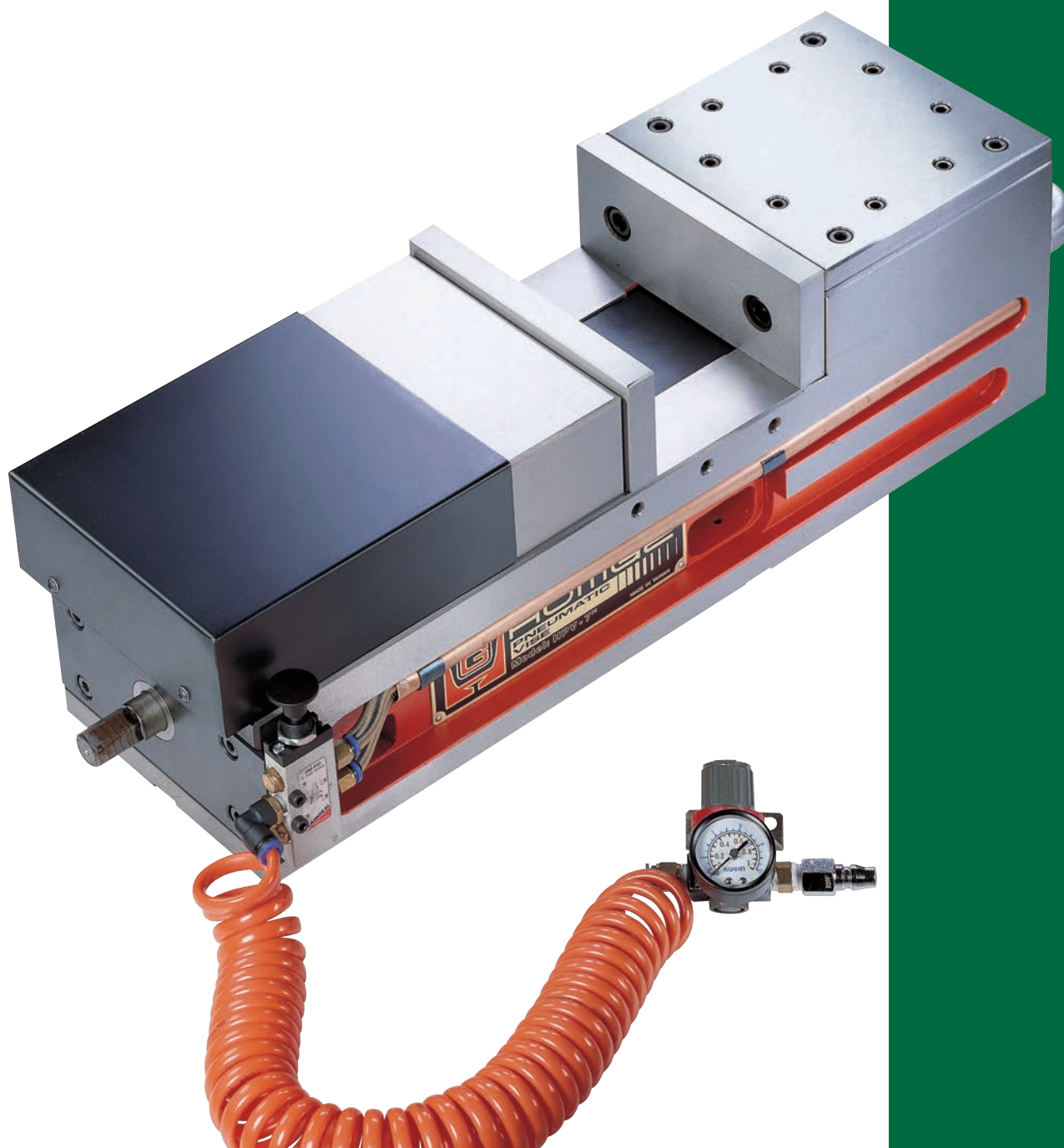
PATENTED
119131
117497

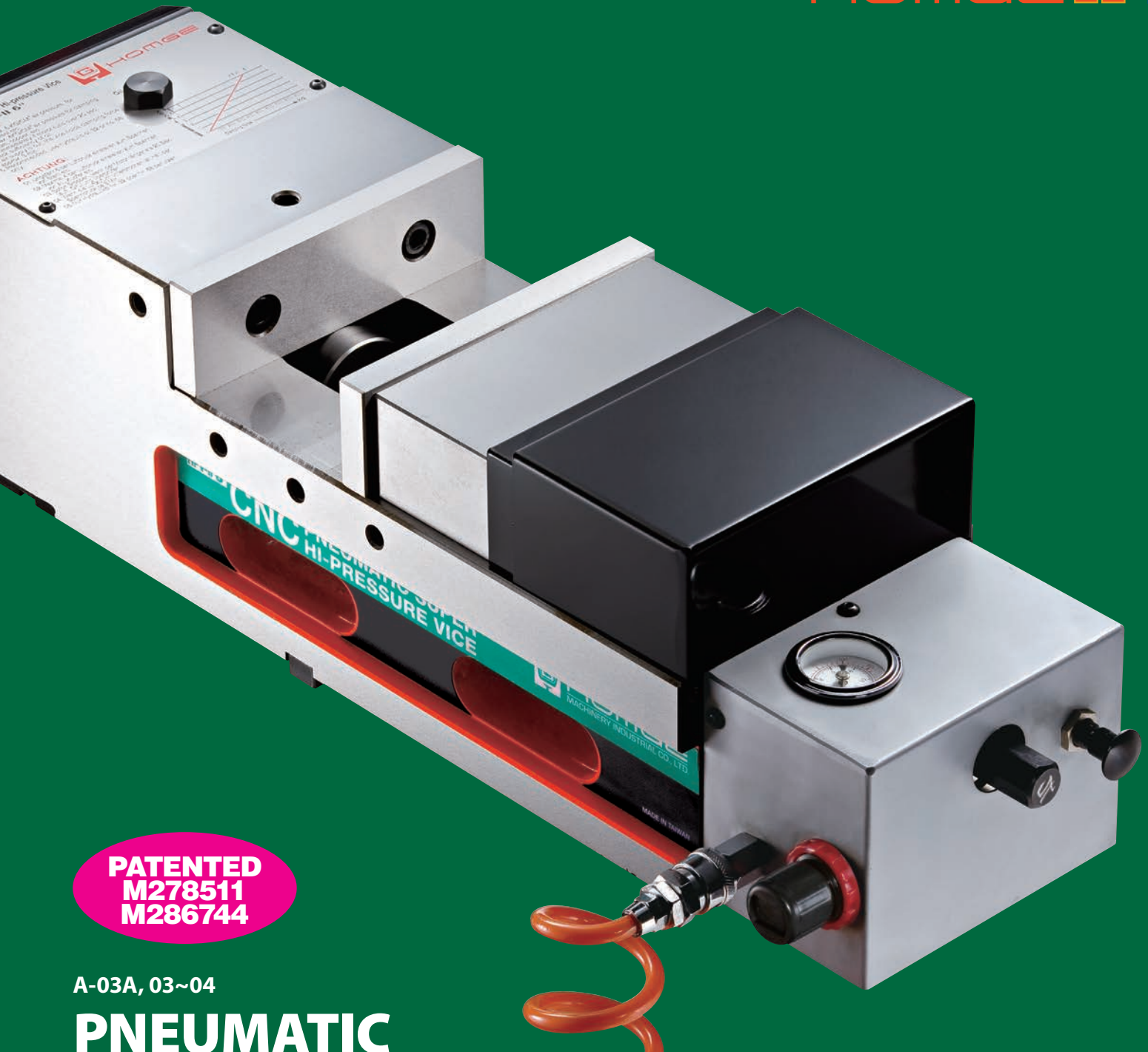
A-01~02

PNEUMATIC VICE

Model: HPV-5", 7"

- Quick operation
- Stable and rigid design
- High accuracy and repeatability
- Reduces production costs





PATENTED
M278511
M286744

A-03A, 03~04

PNEUMATIC SUPER HI-PRESSURE VICE

Model: HPV-II 5", 6", 8"

- Pneumatic power 6kg/cm^2 can extremely reach clamping force of **0-8000KG**.
- Adjustable clamping force of 0-8000kg depends on the material of work-piece.
- Safety range is 6mm.

1. The new **Patented PNEUMATIC SYSTEM** is designed to enhance clamping force of 0-8000kg and can be adjusted depending on the material of work-piece.

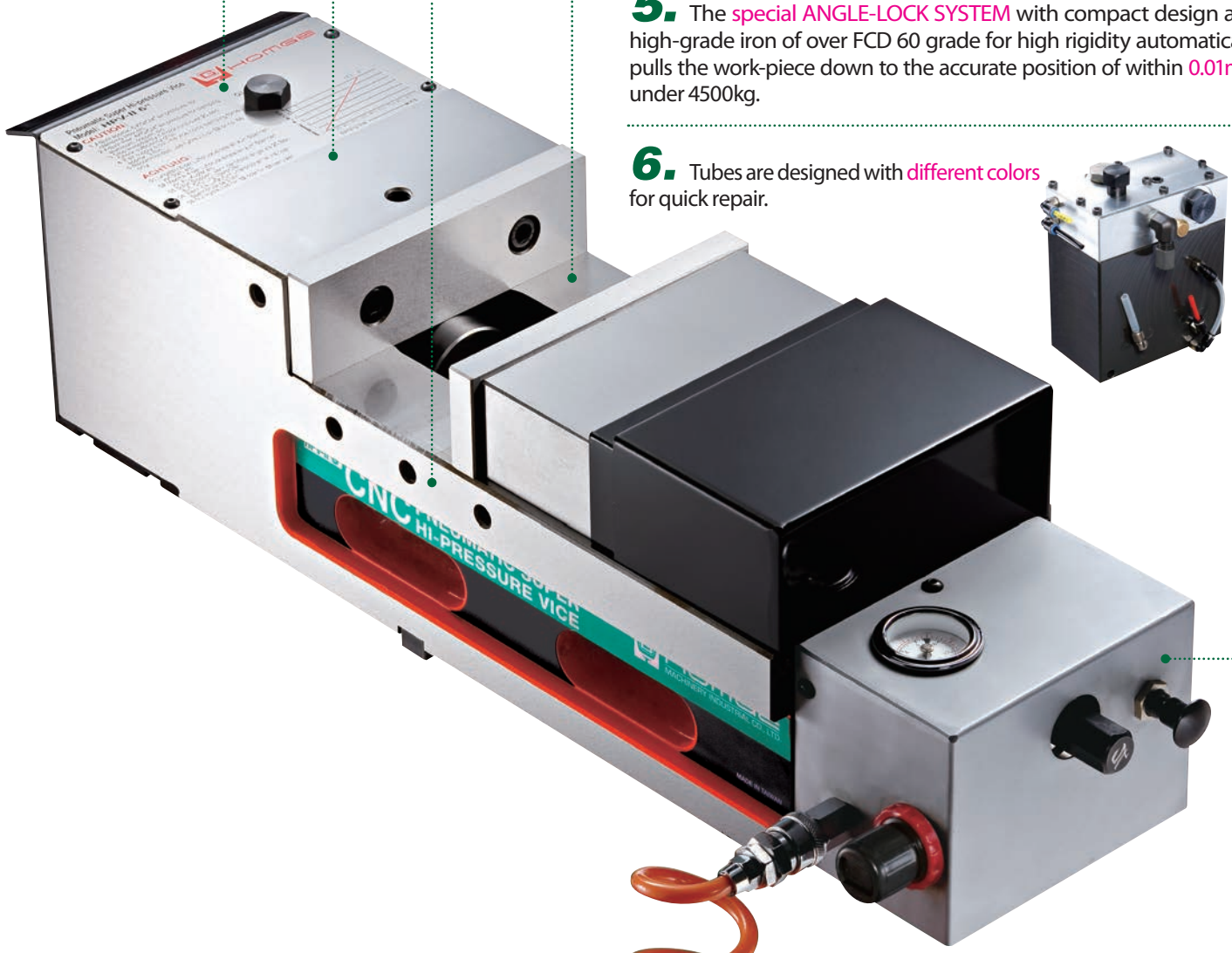
2. Vice body is made of Ductile Iron above FCD 60 grade for high precision and durability. With a force of 4500kg, the shape will deflect less than **0.01mm**.

3. Vice can be mounted horizontally or vertically.

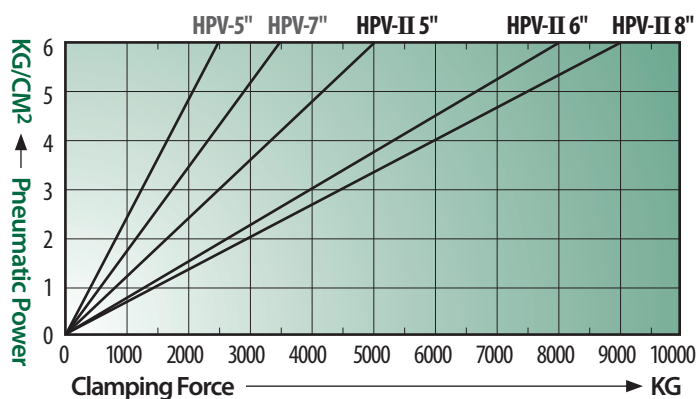
4. Slide ways are **HARDENED** to **HRC 50°** to further increase durability and maintain positioning height over long use.

5. The **special ANGLE-LOCK SYSTEM** with compact design and high-grade iron of over FCD 60 grade for high rigidity automatically pulls the work-piece down to the accurate position of within **0.01mm** under 4500kg.

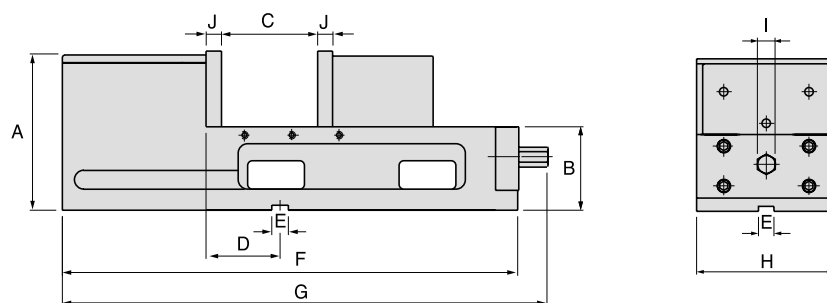
6. Tubes are designed with **different colors** for quick repair.



Fixed height so several vices can be used together.
This vice is highly suitable for precision mould making on machining centers as well as heavy duty machining which require high clamping force with high accuracy.

Pneumatic power source 6kg/cm²

DIMENSIONS

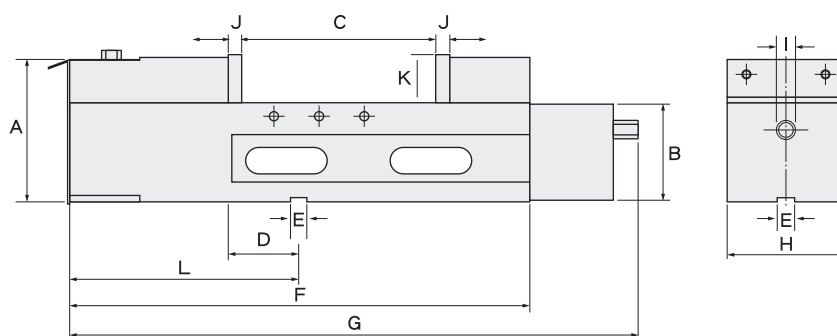


SPECIFICATIONS (Hardness: HRC 45°)

Unit: mm

NO	Model	A	B	C	D	E	F	G	H	I	J	Max. Clamping Force	Safety Range	Weight(kg)
A-01	HPV-5"	165	88±0.01	156	76±0.02	18	480	517	139	19	15	0-2500kg	4mm	42
A-02	HPV-7"	183	115±0.01	185	53±0.02	18	570	610	177	19	18	0-3500kg	4mm	83

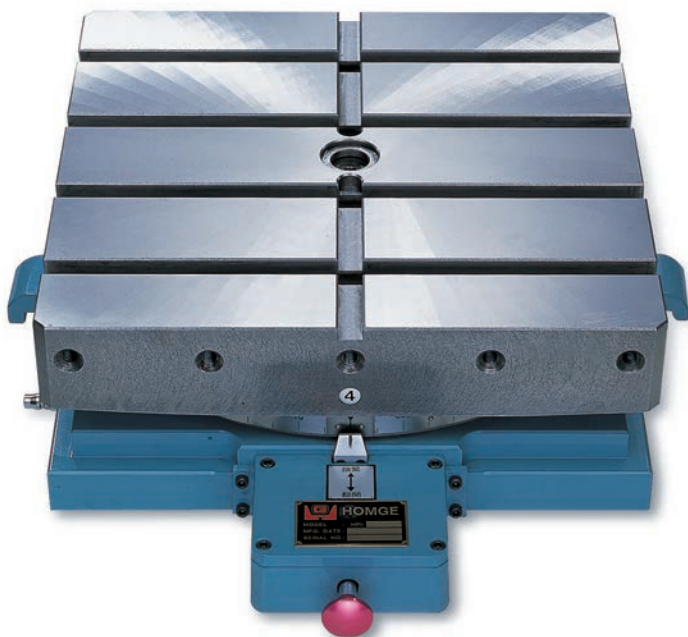
DIMENSIONS



SPECIFICATIONS (Material: FCD 60 Ductile Iron. Hardness: HRC 50°)

Unit: mm

NO	Model	A	B	C	D	E	F	G	H	I
A-03A	HPV-II 5"	158	116±0.01	150	78±0.02	18	456	546	130	19
A-03	HPV-II 6"	163	110±0.01	190	78±0.02	18	497	587	160	19
A-04	HPV II 8"	163	110±0.01	330	107±0.02	18	657	747	200	19
NO	Model	J	K	L	Max. Clamping Force		Safety Range		Weight(kg)	
A-03A	HPV-II 5"	15	45	255	0-5000kg		6mm		42	
A-03	HPV-II 6"	15	53	255	0-8000kg		6mm		55	
A-04	HPV II 8"	18	53	275	0-9000kg		6mm		85	



A-05~09

PRECISION INDEX TABLE**Model: HPI-300, 450, 600, 800, 1000**

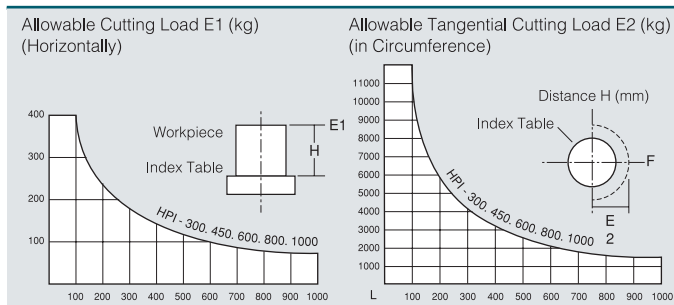
- The "HOMGE" PRECISION INDEXING TABLES are constructed with an AIR CYLINDER between the mating surfaces. This system reduces friction and even when heavy loads are applied to the table. It ensures that manual rotation is almost effortless, and the highest accuracy and repeatability are achieved.
- Rotation is very quick, taking less than 3 seconds to reposition the table.
- HEAVY DUTY CONSTRUCTION is built of (FCD 55) Ductile Iron suitable for heavy cutting.



Curved Coupling Gear is made of **HIGH GRADE BEARING STEEL** which provides rigidity and super high precision.

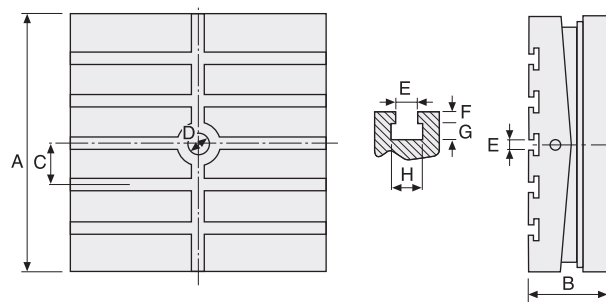
STANDARD ACCESSORIES**Supplied with these tables are:**

- AIR COUPLER for connection to air supply
- 3m RUBBER PIPE
- Set of 4 CLAMPING BLOCKS

PERMISSIBLE CUTTING FORCE**SPECIFICATIONS**

Unit: mm/inch

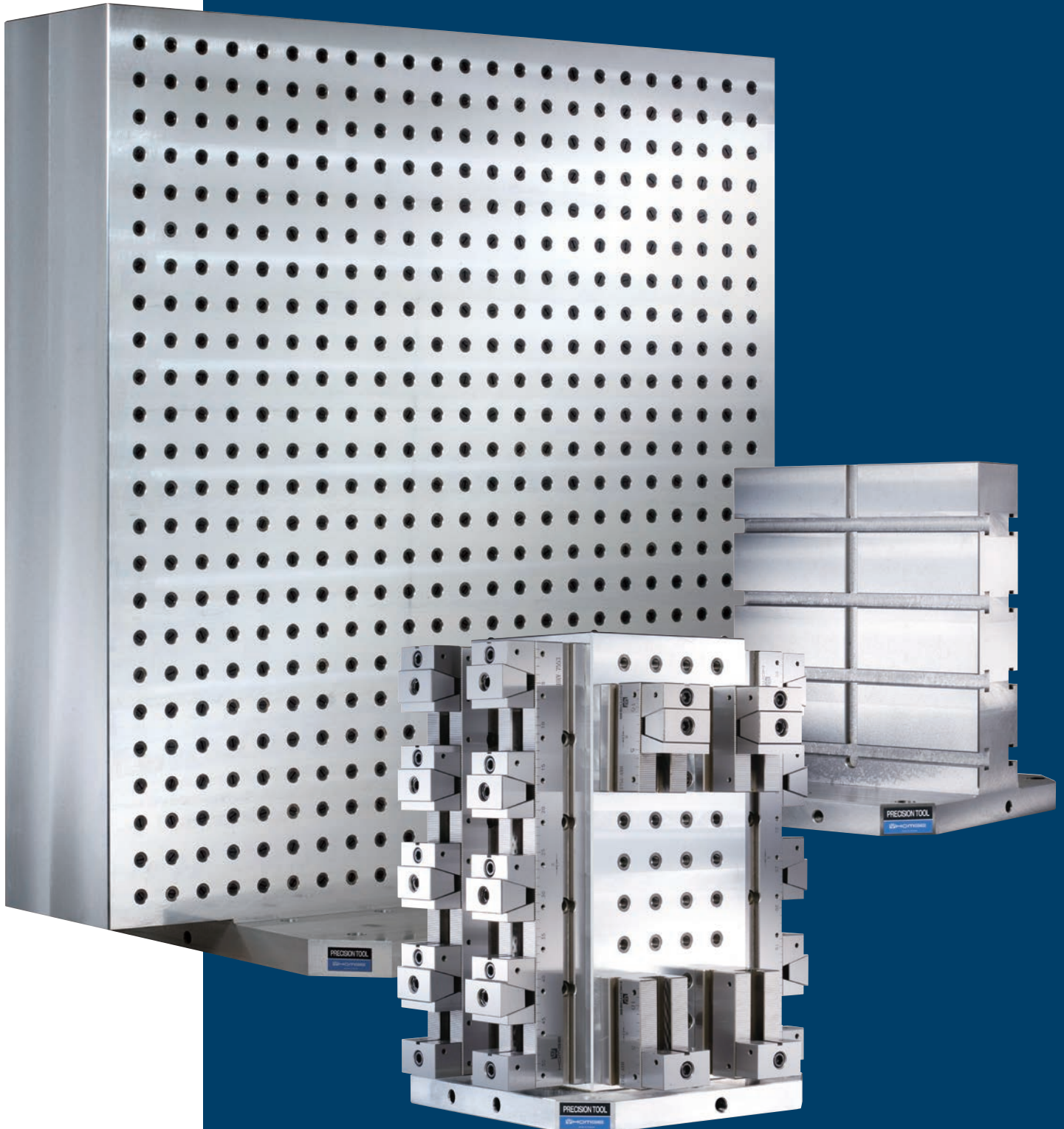
NO	A-05	A-06	A-07	A-08	A-09
Model	HPI-300	HPI-450	HPI-600	HPI-800	HPI-1000
1 LXW	300x300 (12"x12")	450x450 (18"x18")	600x600 (24"x24")	800x800 (32"x32")	1000x1000 (40"x40")
2 Height	130 (5 1/8")	150 (6")	200 (7 7/8")	280 (11")	300 (12")
3 Spindle hole	25 (1")	30 (1 1/4")	40 (1 1/2")	65 (2 3/8")	60 (2 3/8")
4 T-Slot	14 (9/16")	18 (11/16")	20 (3/4")	22 (7/8")	22 (7/8")
5 Driving	Air Pressure 5~8kgs/cm ²				
6 Maximum load weight vertically in theory	1200 (2645 lb)	2400 (5921 lb)	3400 (7496 lb)	4500 (9920 lb)	6000 (13225 lb)
7 Allowable load weight (kg)	500 (1102 lb)	1000 (2205 lb)	2000 (4409 lb)	3000 (6614 lb)	5000 (11021 lb)
8 Number of division	Divisors of 24 (2, 3, 4, 6, 8, 12) Divisors of 72 (2, 3, 4, 6, 8, 12, 18, 24, 36, 72) and divisions by integers of 5° angles, custom-made orders for special dividing integers.				
9 Table rotation	clockwise and anticlockwise				
10 Division (second)	divide into 24 or 72 equal parts ± 3				
11 Weight (kg)	90	200	460	900	1200

**SPECIFICATIONS** (Material: FCD 55 Ductile Iron)

Unit: mm/inch

NO	A-05		A-06		A-07		A-08		A-09	
Model	HPI-300		HPI-450		HPI-600		HPI-800		HPI-1000	
Unit	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A	300	12	450	18	600	24	800	31	1000	40
B	130	5 1⁄8	160	6 15⁄16	200	7 7⁄8	280	11	300	12
C	100	4	100	4	100	4	100	4	125	5
D	25	1	30	1 3⁄16	40	1 1⁄2	65	2 9⁄16	60	2 3⁄8
E	14	9⁄16	18	1 1⁄16	20	3⁄4	22	7⁄8	22	7⁄8
F	14	9⁄16	16	5⁄8	20	3⁄4	23	15⁄16	23	15⁄16
G	12	15⁄32	12	15⁄32	14	9⁄16	15	19⁄32	15	19⁄32
H	25	1	30	1 3⁄16	34	1 3⁄8	38	1 1⁄2	38	1 1⁄2

M/C S Q U A R E DOUBLE SIDED TOOLING COLUMN



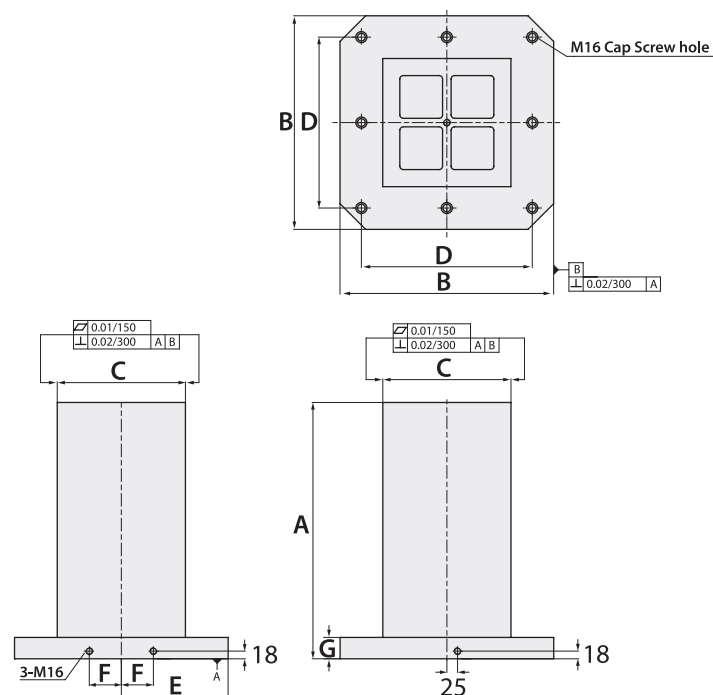


M/C SQUARE TOOLING COLUMN

- Heat treated (Normalized)
- Application: Good for horizontal M/C

FEATURES:

Free to finish an actual required hole pattern or your special jig.



SPECIFICATIONS (Material: FCD 50 / Aluminum A356)

Unit: mm

Model	A	B	C	D	E	F	G	Mounting Holes	Weight (kg)	
									FCD50	A356
HSF-400400-0500	500	400	250	320	200	55	50	4	166	65
HSF-500500-0600	600	500	300	400	250	75	50	8	253	100
HSF-630630-0700	700	630	350	500	315	100	50	8	371	146
HSF-800800-0800	800	800	500	640	400	135	50	8	607	240

We Accept Order for Special Design !!

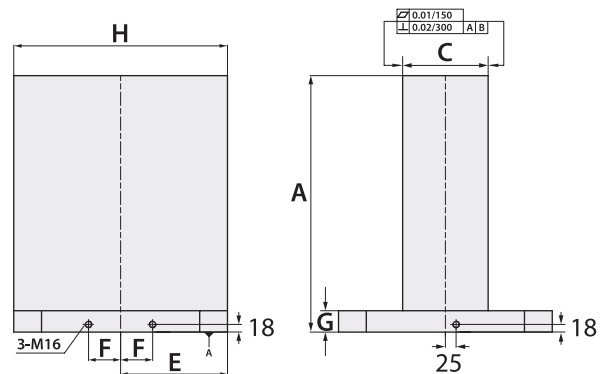
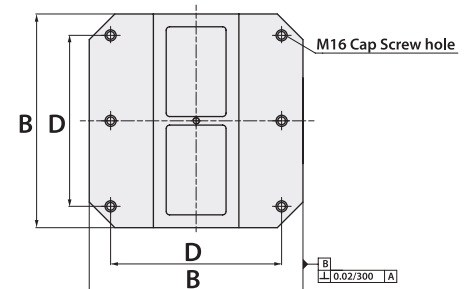


M/C DOUBLE SIDED TOOLING COLUMN

- Heat treated (Normalized)
- Application: Good for horizontal M/C

FEATURES:

Free to finish an actual required hole pattern or your special jig.



SPECIFICATIONS (Material: FCD 50 / Aluminum A356)

Unit: mm

Model	A	B	C	D	E	F	G	H	Mounting Holes	Weight (kg)	
										FCD50	A356
HDF-400400-0500	500	400	150	320	200	55	50	400	4	168	73
HDF-500500-0600	600	500	200	400	250	75	50	500	6	282	108
HDF-630630-0700	700	630	250	500	315	100	50	630	6	444	170
HDF-800800-0800	800	800	300	640	400	135	50	800	6	646	247



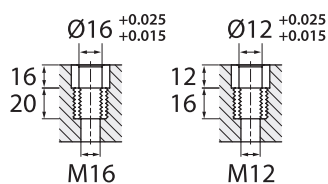
M/C SQUARE TOOLING COLUMN

- Heat treated (Normalized)
- Application: Good for horizontal M/C

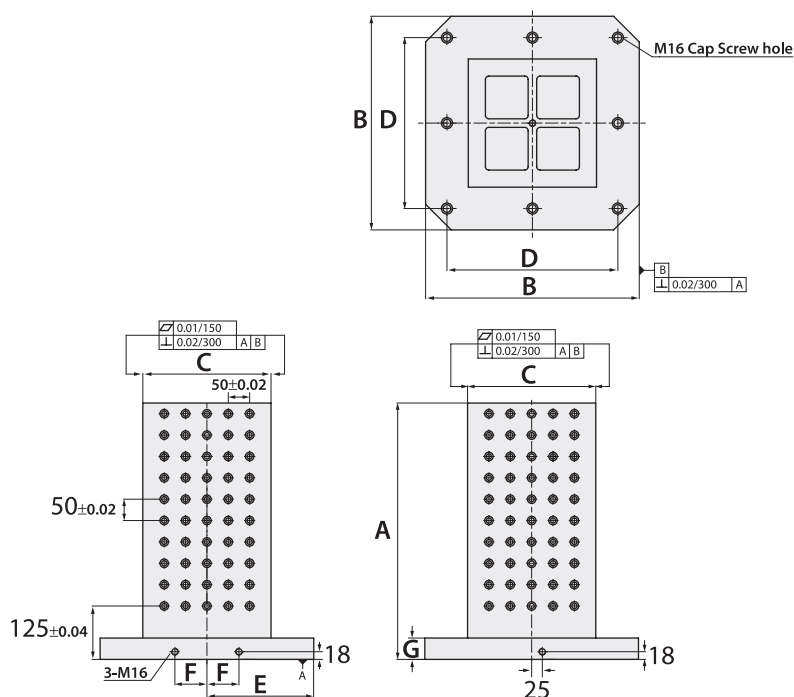
FEATURES:

Locked by MTP locating holes.

Using the assorted, rationalized jig component, you can quickly build up to meet requirement jig.



T MTP SECTION



Unit: mm

SPECIFICATIONS (Material: FCD 50 / Aluminum A356)

Model	A	B	C	D	E	F	G	T	No. of MTP Holes	Mounting Holes	Weight (kg)	
											FCD50	A356
HSH-400400-0500-12	500	400	250	320	200	55	50	Ø12 M12	128	4	161	63
HSH-500500-0600-12	600	500	300	400	250	75	50	Ø12 M12	200	8	246	94
HSH-630630-0700-12	700	630	350	500	315	100	50	Ø12 M12	288	8	361	138
HSH-800800-0800-12	800	800	500	640	400	135	50	Ø12 M12	504	8	589	225
HSH-400400-0500-16	500	400	250	320	200	55	50	Ø16 M16	128	4	158	60
HSH-500500-0600-16	600	500	300	400	250	75	50	Ø16 M16	200	8	241	92
HSH-630630-0700-16	700	630	350	500	315	100	50	Ø16 M16	288	8	353	135
HSH-800800-0800-16	800	800	500	640	400	135	50	Ø16 M16	504	8	576	220

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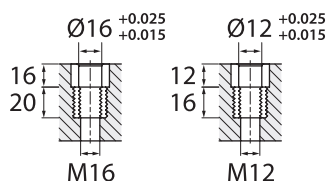


M/C DOUBLE SIDED TOOLING COLUMN

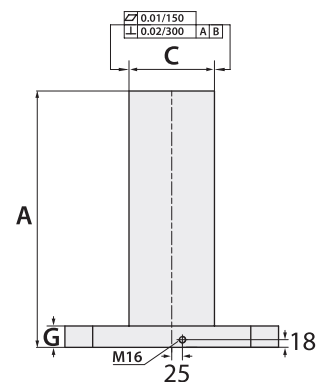
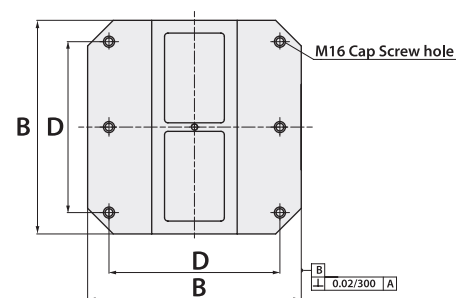
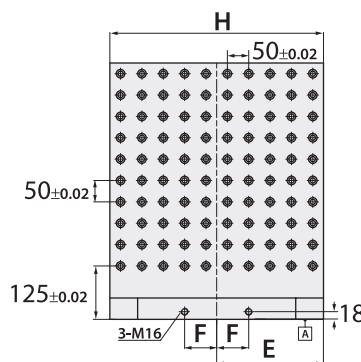
- Heat treated (Normalized)
- Application: Good for horizontal M/C

FEATURES:

Locked by MTP locating holes.
Using the assorted, rationalized jig component,
you can quickly build up to meet
requirement jig.



T MTP SECTION



SPECIFICATIONS (Material: FCD 50 / Aluminum A356)

Unit: mm

Model	A	B	C	D	E	F	G	H	T		No.of MTP Holes	Mounting Holes	Weight (kg)	
													FCD50	A356
HDH-400400-0500-12	500	400	150	320	200	55	50	400	ø12	M12	128	4	163	62
HDH-500500-0600-12	600	500	200	400	250	75	50	500	ø12	M12	200	6	275	105
HDH-630630-0700-12	700	630	250	500	315	100	50	630	ø12	M12	288	6	434	166
HDH-800800-0800-12	800	800	300	640	400	135	50	800	ø12	M12	420	6	631	241
HDH-400400-0500-16	500	400	150	320	200	55	50	400	ø16	M16	128	4	160	61
HDH-500500-0600-16	600	500	200	400	250	75	50	500	ø16	M16	200	6	269	102
HDH-630630-0700-16	700	630	250	500	315	100	50	630	ø16	M16	288	6	426	163
HDH-800800-0800-16	800	800	300	640	400	135	50	800	ø16	M16	420	6	620	237



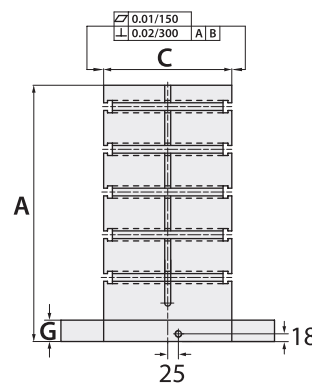
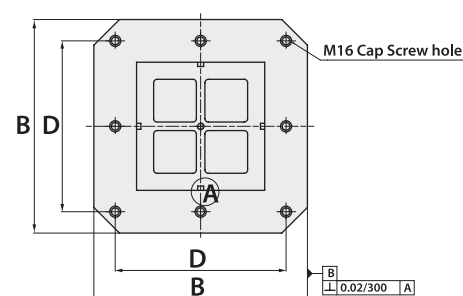
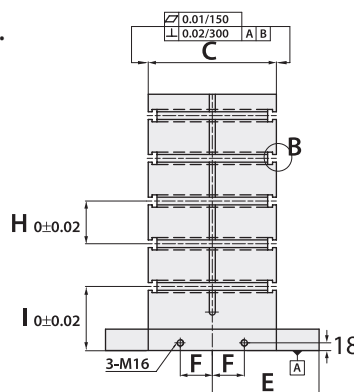
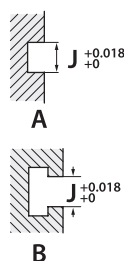
M/C SQUARE TOOLING COLUMN

- Heat treated (Normalized)
- Application: Good for horizontal M/C

FEATURES:

Locked by T-slot.

Using the assorted, rationalized jig component, you can quickly build up to meet requirement jig.



SPECIFICATIONS (Material: FCD 50 / Aluminum A356)

Unit: mm

Model	A	B	C	D	E	F	G	H	I	J	Weight (kg)	
											FCD50	A356
HST-400400-0500-14	500	400	250	320	200	55	50	100	150	14	153	58
HST-500500-0600-14	600	500	300	400	250	75	50	100	150	14	233	89
HST-630630-0700-14	700	630	350	500	315	100	50	125	150	14	348	133
HST-800800-0800-14	800	800	500	640	400	135	50	150	150	14	574	220
HST-400400-0500-18	500	400	250	320	200	55	50	100	150	18	146	56
HST-500500-0600-18	600	500	300	400	250	75	50	100	150	18	224	85
HST-630630-0700-18	700	630	350	500	315	100	50	125	150	18	337	129
HST-800800-0800-18	800	800	500	640	400	135	50	150	150	18	559	214

We Accept Order for Special Design !!



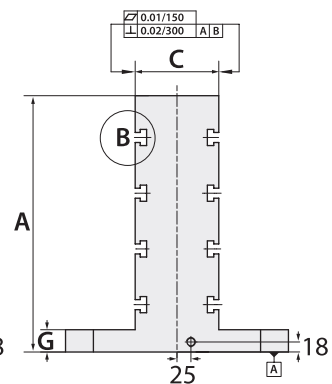
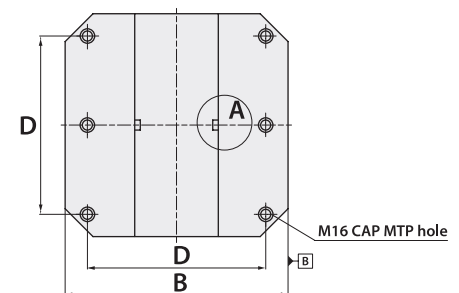
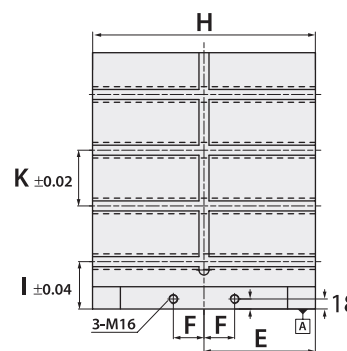
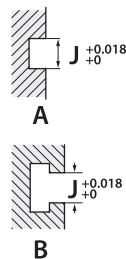
M/C DOUBLE SIDED TOOLING COLUMN

- Heat treated (Normalized)
- Application: Good for horizontal M/C

FEATURES:

Locked by T-slot.

Using the assorted, rationalized jig component, you can quickly build up to meet requirement jig.



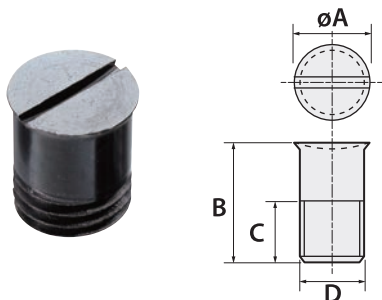
SPECIFICATIONS (Material: FCD 50 / Aluminum A356)

Unit: mm

Model	A	B	C	D	E	F	G	H	I	J	K	Weight (kg)	
												FCD50	A356
HDT-400400-0500-14	500	400	150	320	200	55	50	400	150	14	100	157	60
HDT-500500-0600-14	600	500	200	400	250	75	50	500	150	14	100	265	101
HDT-630630-0700-14	700	630	250	500	315	100	50	630	150	14	125	423	161
HDT-800800-0800-14	800	800	300	640	400	135	50	800	150	14	150	620	237
HDT-400400-0500-18	500	400	150	320	200	55	50	400	150	18	100	152	58
HDT-500500-0600-18	600	500	200	400	250	75	50	500	150	18	100	258	98
HDT-630630-0700-18	700	630	250	500	315	100	50	630	150	18	125	413	158
HDT-800800-0800-18	800	800	300	640	400	135	50	800	150	18	150	607	232

OPTIONAL ACCESSORIES:

PROTECTION PLUG

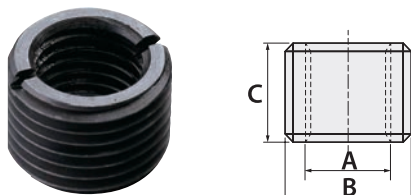


SPECIFICATIONS (Material: S45C)

Unit: mm

Model	A	B	C	D (Thread)
HPP-12-JIS	14	22	11	M12
HPP-16-JIS	18	25	13	M16

THREADED INSERT

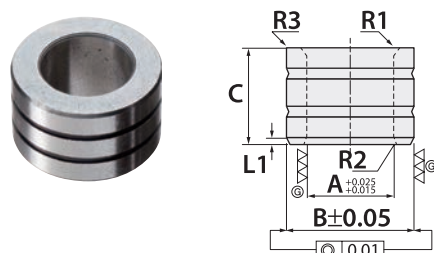


SPECIFICATIONS (Material: S45C. Hardness: HRC 32°~35°)

Unit: mm

Model	A	B	C	Weight (kg)
HTI-0612-10	M6x10	M12x1.5	10	0.005
HTI-0814-12	M8x1.25	M14x1.5	12	0.008
HTI-1016-15	M10x1.5	M16x1.5	15	0.010
HTI-1218-16	M12x1.75	M18x2.0	16	0.015
HTI-1420-18	M14x2.0	M20x2.0	18	0.030
HTI-1622-20	M16x2.0	M22x2.0	20	0.025
HTI-2028-25	M20x2.0	M28x2.0	25	0.050

POSITIONING BUSHING



SPECIFICATIONS (Material: SUJ2. Hardness: HRC 60°)

Unit: mm

Model	A	B	C	R1	R2	R3	L1	Weight (kg)
HPB-0613-10	ø6	ø13	10	1	0.5	0.5	1.25	0.007
HPB-0815-10	ø8	ø15	10	1	0.5	0.5	1.25	0.009
HPB-1018-12	ø10	ø18	12	1.5	1	0.5	1.5	0.015
HPB-1220-12	ø12	ø20	12	1.5	1	0.5	1.5	0.017
HPB-1423-16	ø14	ø23	16	1.5	1	0.5	1.5	0.030
HPB-1523-16	ø15	ø23	16	1.5	1	0.5	1.5	0.028
HPB-1623-16	ø16	ø23	16	1.5	1	0.5	1.5	0.025
HPB-1826-20	ø18	ø26	20	2	1.5	0.5	2.5	0.040
HPB-2030-20	ø20	ø30	20	2	1.5	0.5	2.5	0.060
HPB-2230-20	ø22	ø30	20	2	1.5	0.5	2.5	0.050
HPB-2535-20	ø25	ø35	20	2	1.5	0.5	2.5	0.070
HPB-3042-25	ø30	ø42	25	2	1.5	0.5	2.5	0.130
HPB-4055-30	ø40	ø55	30	3	2	1	3	0.255
HPB-5070-30	ø50	ø70	30	3	2	1	3	0.430