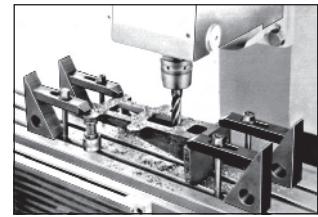
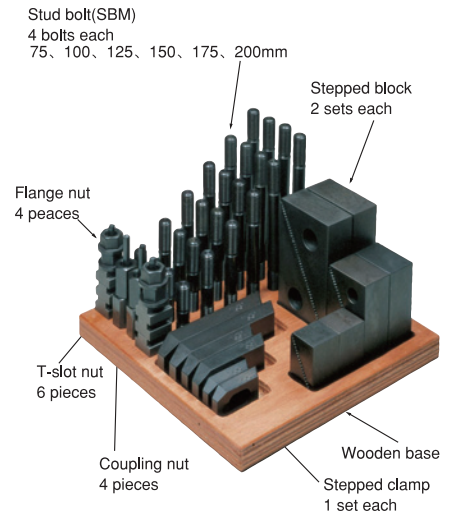


JIG CLAMPING TOOLS

STEP CLAMP KIT

Set Contents

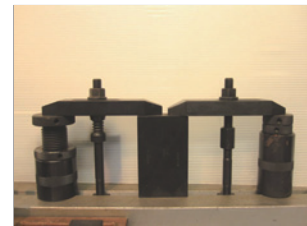
Item No.	T-Slotted	Stud bolt	TS-Set	Stepped clamp 1 set each	Stepped block 2 sets each	Set weight (kg)	(mm)
S1008CK	10	8	1008TS			6.25	
S1210CK	12	10	1210TS	25S38 40S38 60S38		7.05	
S1410CK	14	10	1410TS			7.26	
S1412CK	14	12	1412TS			8.63	
S1612CK	16	12	1612TS	25S12 40S12 60S12	1S 2S 3S	8.7	
S1614CK	16	14	1614TS			9.9	
S1814CK	18	14	1814TS			10.1	
S1816CK	18	16	1816TS	25S58 40S58 60S58		11.75	
1612CK	16	12	1612TS	25S12 40S12 60S12		15.3	
1614CK	16	14	1614TS			15.5	
1814CK	18	14	1814TS			15.5	
1816CK	18	16	1816TS	25S58 40S58 60S58	4S 5S 6S	18.1	
2016CK	20	16	2016TS			18.2	
2018CK	20	18	2018TS			22.35	
2218CK	22	18	2218TS	40S34 60S34 80S34		22.5	
2220CK	22	20	2220TS			24.45	



PLANE CLAMP KIT

Set Contents

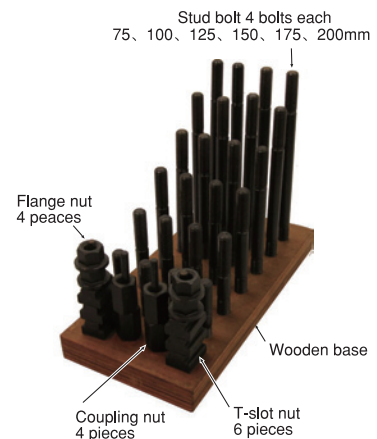
Item No.	T-Slotted	Stud bolt	TS-Set	Plane clamp 1 set each	Screw support 2 Set each	Pin wrench (2pieces)	Set weight (kg)	(mm)
P1210CK	12	10	1210TS	25P38 40P38 60P38	FS 70S	PW355	6.92	
P1412CK	14	12	1412TS	25P12 40P12 60P12			8.58	
P1614CK	16	14	1614TS				11.36	
P1816CK	18	16	1816TS	25P58 40P58 60P58			13.16	
P2016CK	20	16	2016TS		FS100S	PW406	13.25	
P2018CK	20	18	2018TS	40P34 60P34 80P34			18.08	
P2220CK	22	20	2220TS				19.76	



T-NUT.STUD SET

Set Contents

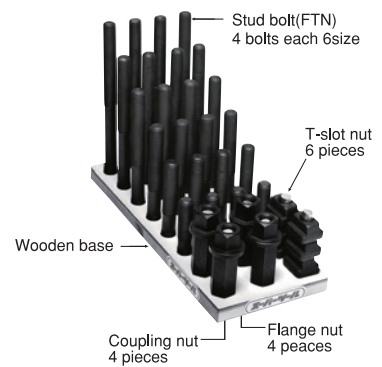
Item No.	T-Slotted	Stud bolt	T-slot nut	Flange nut	Coupling nut	Set weight (kg)	(mm)
1008TS	10	8	1008TN	8MFN	8MCN	2	
1210TS	12	10	1210TN	10MFN	10MCN	2.75	
1410TS	14	10	1410TN	10MFN	10MCN	2.95	
1412TS	14	12	1412TN	12MFN	12MCN	3.9	
1612TS	16	12	1612TN	12MFN	12MCN	3.95	
1614TS	16	14	1614TN	14MFN	14MCN	5	
1814TS	18	14	1814TN	14MFN	14MCN	5.2	
1816TS	18	16	1816TN	16MFN	16MCN	6.9	
2016TS	20	16	2016TN	16MFN	16MCN	6.95	
2018TS	20	18	2018TN	18MFN	18MCN	8.45	
2218TS	22	18	2218TN	18MFN	18MCN	8.6	
2220TS	22	20	2220TN	20MFN	20MCN	10.25	
2420TS	24	20	2420TN	20MFN	20MCN	10.3	



T-NUT.STUD SET

Set Contents

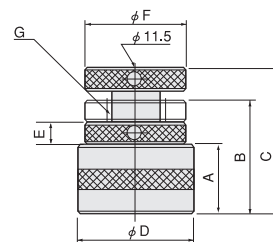
Item No.	T-Slot	Stud bolt						Flange nut	T-slot nut	Coupling nut	Set weight (kg)	(mm)
		FTN128	12100	12125	12150	12175	12200					
FTS12N	14	FTN128	12100	12125	12150	12175	12200	12MFN	FTS1214	FCU12	3.5	
FTS14N	16	FTN1475	14100	14125	14150	14175	14200	14MFN	FTS1416	FCU14	4.8	
FTS16N	18	FTN1675	16100	16125	16150	16175	16200	16MFN	FTS1618	FCU16	6.3	
FTS20N	22	FTN20100	20125	20150	20180	20200	20250	20MFN	FTS2022	FCU20	11	



MAGNETIC SCREW SUPPORT (with Round nut)

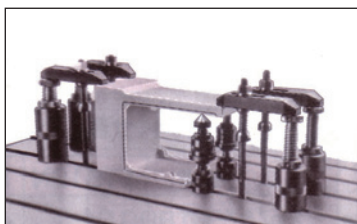
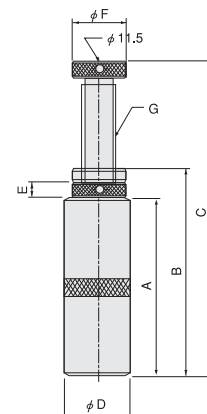
Item No.	A	Stroke B~C	D	E	F	G	Allowable load kN	Applicable Pin Wrench	N.W.(kg) (A pair)	(mm)
MSS 65	34	50~ 65	45	8	35	Tr18×2	80	PW355	0.54	
MSS 85	49	65~ 85	45	8	35	Tr20×3	80	PW355	1.03	
MSS110	63	85~110	45	11	40	Tr25×4	150	PW406	1.75	
MSS165	85	110~165	50	12.5	45	Tr25×4	150	PW457	2.93	
MSS265	135	165~265	60	15	50	Tr32×5	200	PW508	6.23	

- Meet with wide and warp knuring tools.
- Because magnetic power is stayed at the bottom of the body, powder of cutting never attach on there.
- Please use support chip for working of up-down surface and different shaped.



SCREW SUPPORT (with Round nut)

Item No.	A	Stroke B~C	D	E	F	G	Allowable load kN	Applicable Pin Wrench	N.W. (kg) (A pair)	(mm)
FS 70S	32	50~ 70	40	9	35	Tr20×3	80	PW355	0.78	
FS100S	46	70~100	45	12	40	Tr20×3	80	PW406	1.47	
FS150S	70	100~150	50	12	45	Tr25×4	150	PW457	2.65	
FS250S	120	150~250	60	15	50	Tr32×5	200	PW508	5.64	
FS300S	170	200~300	60	15	50	Tr32×5	200	PW508	7.17	



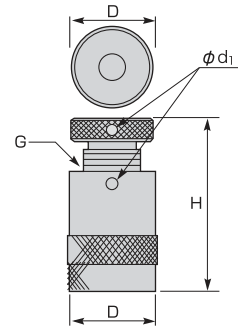
- Please use support chip in working for up-down surface and different shaped.
- In case of using by accumulating support, you must use the joint cap.

SCREW SUPPORT Plain type

(mm)

Item No.	H Stroke	D	d ₁	G	Allowable load kN	N.W. (kg)	
FS 30	30~ 40(10)	40	6.2	TM25 × 3	40	0.25	
FS 40	40~ 50(10)	49		60	0.47		
FS 50	50~ 62(12)	49		TM32 × 3	80	0.65	
FS 60	60~ 78(18)	49		100	0.73		
FS 80	80~105(25)	63	8.2	TM40 × 4	160	1.6	
FS 90	90~125(35)	63			160	1.8	
FS100	100~145(45)	63			160	1.9	
FS130	130~200(70)	63			160	2.6	
FS160	160~260(100)	63			160	3.2	

- The low friction contact face obtained by setting the steel ball on the deck allows for low force smooth adjustment.

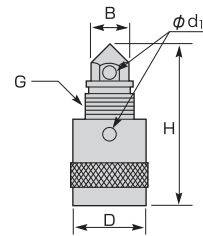


SCREW SUPPORT Centering type

(mm)

Item No.	H Stroke	D	B	d ₁	G	Allowable load kN	N.W. (kg)	
FJ 60	75~ 93(18)	49	24	6.2	TM32×3	100	0.7	
FJ 80	100~125(25)	63	30	8.2	TM40×4	160	1.6	
FJ100	120~165(45)	63	30			160	1.9	

- Convenient for centering operation for unevenly processed object such as rough surfaces.

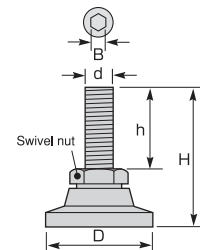


SCREW SUPPORT Screw type

(mm)

Item No.	Applicable main body No.		H	h	D	d	B	Allowable load kN	N.W. (g)	
FR10	—	FPB10B	48	31	35	M10	5	11	80	
FR12	FGB12	FPB12B	60	40	40	M12	6	16	117	
FR16	FGB16	FPB16B	78	53	50	M16	8	28	240	
FR20	FGB20	FPB20B	94	64	60	M20	10	37	445	

- Optimal for using with the body of uni-clamps (TPS · TPU · FGB and FPB-B).
- Spherical bag-shaped surface of swivel nut enables a slant in front, back, left and right directions up to 6 degree.

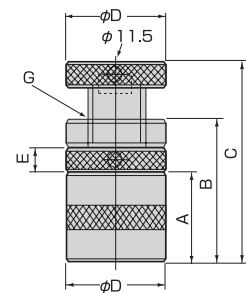


SCREW JACK for Pressing machine

(mm)

Item No.	A	Stroke B~C	D	E	G	Allowable load kN	N.W. (kg)	
FS 70P	40	50~ 70	60	—	Tr40 × 4	400	0.97	
FS100P	46	70~100	60	12	Tr40 × 4	400	1.4	
FS150P	70	100~150	70	15	Tr44 × 4	600	2.75	
FS200P	100	150~200	80	25	Tr52 × 4	800	5.2	

- The receiving flat head (φ D) is made larger for pressing machine. (FS70P is not attached with lock nuts.)



STEPPED BLOCK (Step type)

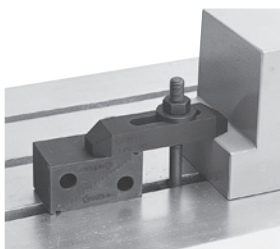
(mm)						
Item No.	A	B	C	D~E	Allowable load kN	N.W. (kg) (A pair)
1S	29	17	25	19~ 46	132	0.11
2S	45	27	25	28~ 68	210	0.27
3S	98	57	25	58~150	462	1.00
4S	59	35	38	36~ 90	417	0.62
5S	98	57	38	58~150	694	1.59
6S	139	81	38	82~210	990	3.09
7S	59	35	50	36~ 90	555	0.82
8S	98	57	50	58~150	926	2.10
9S	139	81	50	82~210	1,325	4.02

*Withstand loads are indicated for Fig. 2, and are reduced by about 50% for Fig. 3.

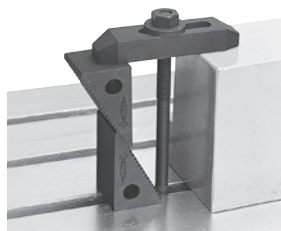


A pair

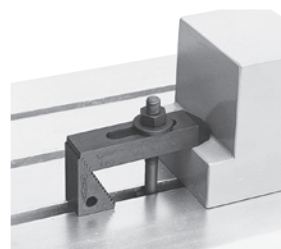
- Optimal for using in combination with a stepped clamp and for adjusting the height with a two piece set.



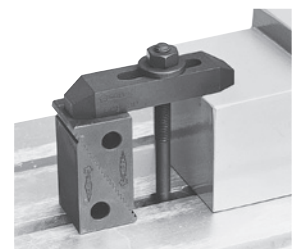
Minimum (Height)



Maximum (Height)



Combination of stepped clamp and stepped block



Combination of plane clamp and stepped block

STEPPED BLOCK with Magnet (Step type)

(mm)						
Item No.	A	B	C	D~E	Allowable load kN	N.W. (kg) (A pair)
M1S	29	18	25	19~46	132	0.1
M4S	59	35	38	36~90	417	0.6
M5S	98	57	38	58~150	694	1.57
M7S	59	35	50	36~90	555	0.83
M8S	98	57	50	58~150	926	2
M9S	139	81	50	82~210	1325	4

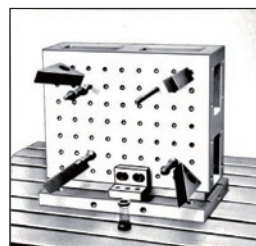
*Withstand loads are indicated for Fig. 2, and are reduced by about 50% for Fig. 3.



A pair

- Optimal for vertical- and horizontal-type jigs
- The Block has a magnet built in the bottom, so it is free from accretion of swarf.

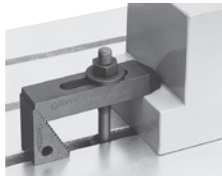
The number of magnets to be built in depends on block weight



STEP CLAMP

Item No.	A	B	C	D	E	F	Applicable bolt	N.W. (kg) (A pair)	(mm)
25S38	12	25	63	10.6	18	19	M10	0.19	
40S38	16	25	100	10.6	25	38		0.44	
60S38	19	30	150	10.6	30	50		0.97	
25S12	12	32	63	14.2	20	14	M12 M14	0.19	
40S12	19	32	100	14.2	28	32		0.65	
60S12	22	32	150	14.2	32	50		1.36	
25S58	16	32	63	17	22	12	M16	0.31	
40S58	19	38	100	17	31	26		0.8	
60S58	22	38	150	17	34	48		1.42	
40S34	19	38	100	21	31	28	M18 M20	0.71	
60S34	25	38	150	21	38	44		1.5	
80S34	25	50	200	21	40	65		2.87	
60S10	30	50	150	25	43	38	M22 M24	2.4	
80S10	32	50	200	25	50	58		3.47	
10S10	38	50	250	25	52	76		5.2	

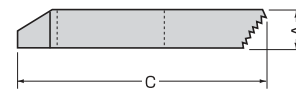
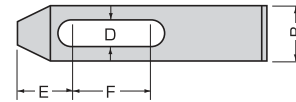
●The combination with a stepped block (Step type) enables easy height adjustment.



Combination of step block and step clamp



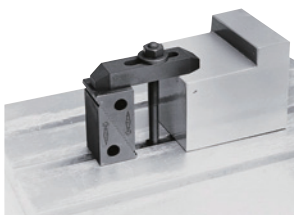
A pair



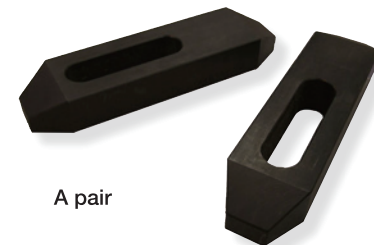
PLANE CLAMP

Item No.	A	B	C	D	E	F	Applicable bolt	N.W. (kg) (A pair)	(mm)
25P38	12	25	63	10.6	18	19	M10	0.19	
40P38	16	25	100	10.6	25	38		0.42	
60P38	19	30	150	10.6	30	50		1.09	
25P12	12	32	63	14.2	20	14	M12 M14	0.25	
40P12	19	32	100	14.2	28	32		0.63	
60P12	22	32	150	14.2	32	50		1.17	
25P58	16	32	63	17	22	12	M16	0.31	
40P58	19	38	100	17	31	26		0.77	
60P58	22	38	150	17	34	48		1.4	
80P58	25	50	200	17	48	58	2.91		
40P34	19	38	100	21	31	28	M18 M20	0.71	
60P34	25	38	150	21	38	44		1.47	
80P34	25	50	200	21	40	65		2.79	
10P34	38	50	250	21	52	76	5.37		
60P10	30	50	150	25	43	38	M22 M24	2.32	
80P10	32	50	200	25	50	58		3.37	
10P10	38	50	250	25	52	76		5.09	

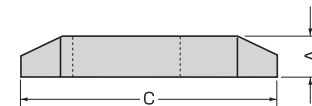
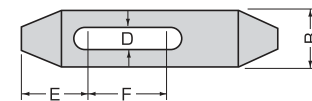
Convenient for the combined use with step block and screw support.



Combination of step block and step clamp



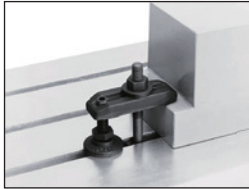
A pair



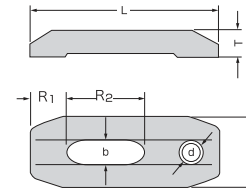
UNI - CLAMP (Plain type)

Item No.	b	d	T	L	ℓ ₁	ℓ ₂	B	Applicable bolt	N.W. (kg)	
FPB10B	10.5	M10	13	80	15	30	30	M10	0.15	
FPB12B	13	M12	15	100	21	40	40	M12	0.34	
FPB16B	17	M16	20	125	26	45	50	M16	0.66	
FPB20B	21	M20	25	160	30	60	60	M20	1.21	

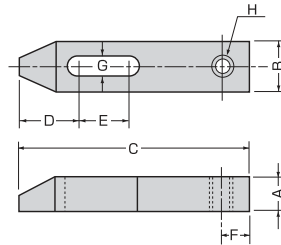
(mm)



●It is combination to use the screw support (FR10~20) with the screw hole on the rear part.



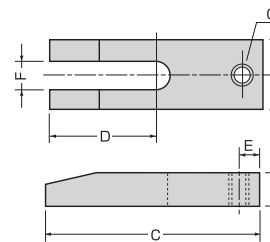
STRAP CLAMP with Thread hole



Item No.	A	B	C	D	E	F	G	H	Applicable bolt	K Applicable swivel bolt	N.W. (kg)	
TPS103	19	38	100	25	22	14	14.2	M14 × 2	M14	CHS-5000	0.43	
TPS104	19	38	150	25	38	14	14.2	M14 × 2		CHS-5000	0.67	
TPS105	25	50	100	30	22	16	17	M16 × 2	M16	CHS-6000	0.81	
TPS106	25	50	150	36.5	32	16	17	M16 × 2		CHS-6000	1.22	
TPS107	25	50	175	36.5	38	16	17	M16 × 2		CHS-6000	1.4	
TPS108	30	50	150	39	25	22	21	M18 × 2.5	M20	CHS-7000	1.36	
TPS109	30	50	175	39	32	22	21	M18 × 2.5		CHS-7000	1.61	
TPS110	30	50	200	39	38	22	21	M18 × 2.5		CHS-7000	1.88	
TPS2420	38	50	200	50	43	25	25	M20 × 2.5	M24	CHS-8000	2.3	
TPS2425	38	50	250	50	70	25	25	M20 × 2.5		CHS-8000	2.85	
TPS2430	38	50	300	50	93	25	25	M20 × 2.5		CHS-8000	3.41	

(mm)

U- CLAMP with Thread hole

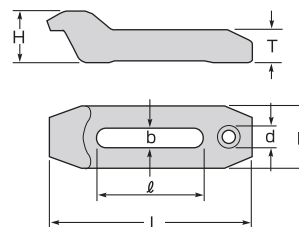
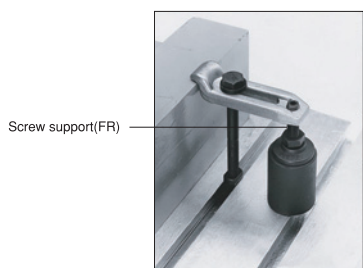


Item No.	A	B	C	D	E	F	G	Applicable bolt	K Applicable swivel bolt	N.W. (kg)	
TPU200	19	38	100	60	14	14.2	M12 × 1.75	M14	CHS-4000	0.4	
TPU202	19	38	150	88	14	14.2	M12 × 1.75		CHS-4000	0.62	
TPU204	25	50	100	60	14	17	M16 × 2	M16	CHS-6000	0.68	
TPU206	25	50	150	87	14	17	M16 × 2		CHS-6000	1.1	
TPU208	30	50	150	88	20	21	M18 × 2.5	M20	CHS-7000	1.2	
TPU210	30	50	200	125	20	21	M18 × 2.5		CHS-7000	1.6	
TPU2420	45	60	200	93	25	25	M20 × 2.5	M24	CHS-8000	3.16	
TPU2425	45	60	250	120	25	25	M20 × 2.5		CHS-8000	3.96	
TPU2430	45	60	300	143	25	25	M20 × 2.5		CHS-8000	4.86	

(mm)

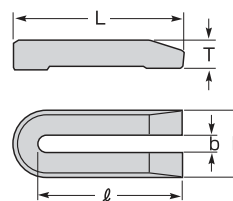
UNI- CLAMP (Duck shaped type)

Item No.	b	b	H	T	L	ℓ	B	Applicable bolt	N.W. (kg)	(mm)
FGB12	13	M12	32	17	125	63	36	M12	0.38	
FGB16	17	M16	40	21	160	80	48	M14 · M16	0.88	
FGB20	21	M20	50	26	200	100	59	M18 · M20	1.65	
FGB24	26	M24	63	33	250	125	70	M22 · M24	2.9	



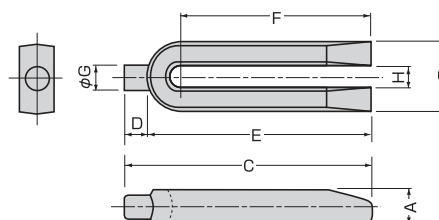
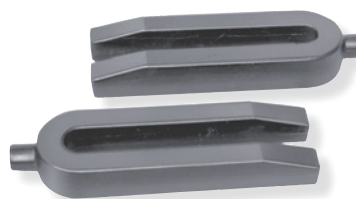
UNI- CLAMP (U- shaped type)

Item No.	b	T	L	R	B	Applicable bolt	N.W. (kg)	(mm)
FUB12B	13	20	100	87	40	M12	0.37	
FUB16B	17	23	150	134	50	M16	0.75	
FUB20B	21	27	200	181	60	M20	1.41	
FUB24B	26	32	250	228	70	M24	2.35	



U- CLAMP

Item No.	A	B	C	D	E	F	G	H	Applicable bolt	N.W.(kg) (A pair)	(mm)
UC4	19	45	114	14	100	77.5	φ14	17	M14·16	0.78	

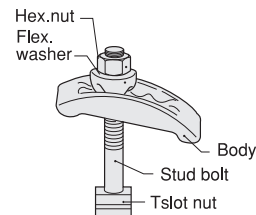


UNI-CLAMP Flexible type

Item No.	Set contents				Set weight (kg)
	Hex.nut	Body and flex.washer	Stud bolt	T-slot nut	
FT 10	FTU 10	FTBZ 10	FTN 10100	FTS 1012	0.27
FT 12	FTU 12	FTBZ 12	FTN 12125	FTS 1214	0.50
FT 14	FTU 14	FTBZ 14	FTN 14150	FTS 1416	0.86
FT 16	FTU 16	FTBZ 16	FTN 16150	FTS 1618	0.93
FT 18	FTU 18	FTBZ 18	FTN 18175	FTS 1820	1.92
FT 20	FTU 20	FTBZ 20	FTN 20180	FTS 2022	2.05
FT 22	FTU 22	FTBZ 22	FTN 22200	FTS 2226	3.62
FT 24	FTU 24	FTBZ 24	FTN 24250	FTS 2428	4.02



●Round shape of the washer and the body face enables firm tightening of products.



UNI-CLAMP Flexible type PARTS

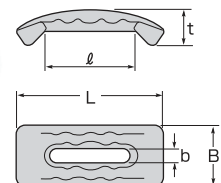
■BODY and FLEX.WASHER SET

Item No.	Applicable bolt	Set weight (kg)
FTBZ10	M10	0.17
FTBZ12	M12	0.34
FTBZ14	M14	0.67
FTBZ16	M14 · M16	0.67
FTBZ18	M18	1.3
FTBZ20	M18 · M20	1.3
FTBZ22	M22	2.8
FTBZ24	M24	2.8



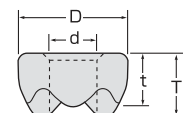
■BODY (mm)

Item No.	Applicable bolt	b	t	ℓ	L	B	N.W. (kg)
FTB10	M10	10.5	19	53	80	36	0.15
FTB12	M12	13	24	68	100	45	0.3
FTB14	M16 · M14	17	31	85	125	56	0.5
FTB16	M16 · M14	17	31	85	125	56	0.5
FTB18	M20 · M18	21	39	106	160	71	1.2
FTB20	M20 · M18	21	39	106	160	71	1.2
FTB22	M24 · M22	26	49	134	200	90	2.3
FTB24	M24 · M22	26	49	134	200	90	2.3



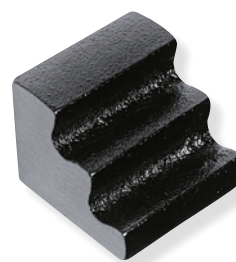
■FLEX. WASHER (mm)

Item No.	Applicable bolt	d	t	T	D	N.W. (g)
FTZ10	M10	10.5	11	13	24	26
FTZ12	M12	13	14	16	30	56
FTZ14	M14	15	18	21	38	113
FTZ16	M16	17	18	21	38	107
FTZ18	M18	19	23	26	49	240
FTZ20	M20	21	23	26	49	230
FTZ22	M22	23.5	28	32	62	480
FTZ24	M24	26	28	32	62	460



STEPPED BLOCK (Tiered type)

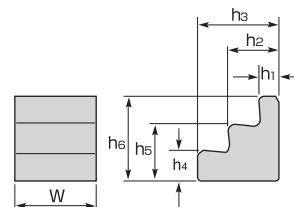
Item No.	W	6-phased changeable high dimensions						N.W. (kg)	
		h ₁	h ₂	h ₃	h ₄	h ₅	h ₆		
FW40	40	10	22	34	16	28	40	0.27	
FW50	50	13	28	43	20	35	50	0.47	



- It is a convenient step to get 6-phased height by altering the vertical and horizontal direction.
- The round face connected to clamping fittings enables good clamping fitness even on slightly slanted bodies.



Combination of step block and uni-clamp



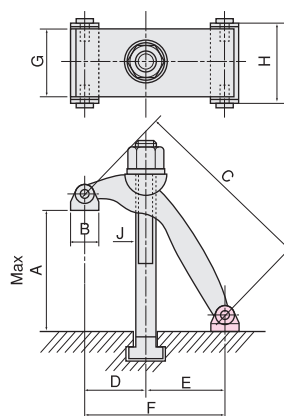
SWIVEL NEW CLAMP



A pair



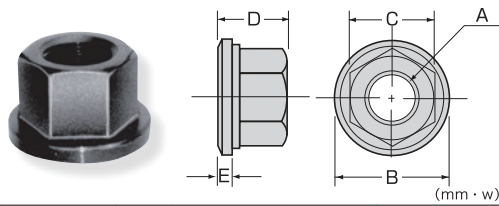
- Free adjustable on the height of clamp.
- Damage of table by machine can be protected by swivel pad on the both edges of clamp.



(mm)

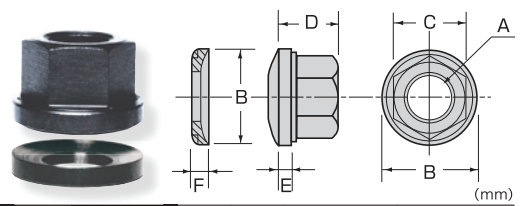
Item No.	A	B	C	D	E	F	G	H	T-slotted bolt J	Flange nut	N.W.(kg) (A pair)	
NC50	75	17	114	36.5	47.5	84	42	46.5	TBM12125	12MFN	1.64	
NC60	85	20	146	32	78	110	49	54.5	TBM16150	16MFN	2.72	
NC80	105	25	189	48	109	157	55	61.5	TBM20175	20MFN	4.96	

FLANGED NUT



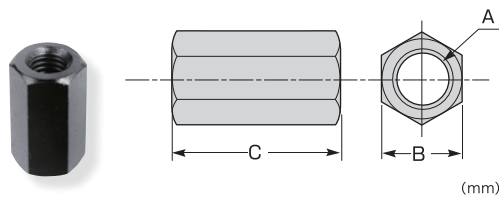
Item No.	A	B	C	D	E	N.W. (g)
8MFN	M 8	19	13	12	3	10
10MFN	M10	22	17	13	3	21
12MFN	M12	28	19	17	4	35
14MFN	M14	28	22	17	4	41
16MFN	M16	33	24	20	5	60
18MFN	M18	35	27	20	5	71
20MFN	M20	40	30	25	6	112
22MFN	M22	45	32	28	6	147
24MFN	M24	47	36	28	6	176

SPHERICAL FLANGED NUT



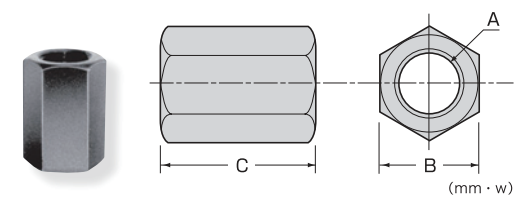
Item No.	A	B	C	D	E	F	N.W. (g)
8MSFN	M 8	19	13	11.5	2	4.5	20
10MSFN	M10	22	17	12	2	5	30
12MSFN	M12	28	19	16	3	6	54
14MSFN	M14	28	22	16	3	6.5	63
16MSFN	M16	35	24	18.5	3.5	7	96
18MSFN	M18	35	27	19	4	7.5	106
20MSFN	M20	40	30	23.5	4.5	8.5	161
22MSFN	M22	45	32	27	5	9	208
24MSFN	M24	48	36	27.5	5.5	9.5	270

COUPLING NUT



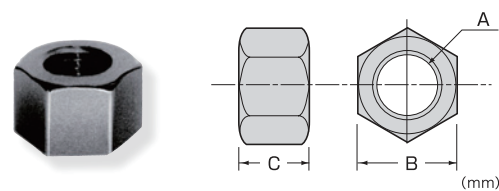
Item No.	A	B	C	N.W. (g)
FCU 8	M 8	13	24	18
FCU 10	M10	17	30	41
FCU 12	M12	19	36	57
FCU 14	M14	22	42	88
FCU 16	M16	24	48	113
FCU 18	M18	27	54	165
FCU 20	M20	30	60	226
FCU 22	M22	32	66	273
FCU 24	M24	36	72	392

COUPLING NUT



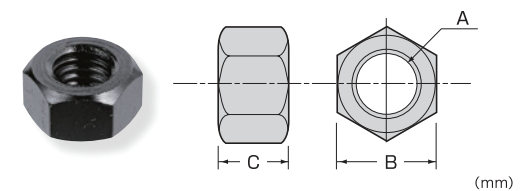
Item No.	A	B	C	N.W. (g)
8MCN	M 8	13	22	17
10MCN	M10	17	25	34
12MCN	M12	19	29	47
14MCN	M14	22	32	68
16MCN	M16	24	36	84
18MCN	M18	27	41	126
20MCN	M20	30	45	172
22MCN	M22	32	48	200
24MCN	M24	36	57	317

HEAVY NUT



Item No.	A	B	C	N.W. (g)
10MHN	M10	17	10	14
12MHN	M12	19	12	19
14MHN	M14	22	14	30
16MHN	M16	24	15	36
18MHN	M18	27	18	55
20MHN	M20	30	20	74
22MHN	M22	32	22	89
24MHN	M24	36	24	131

HEX. NUT

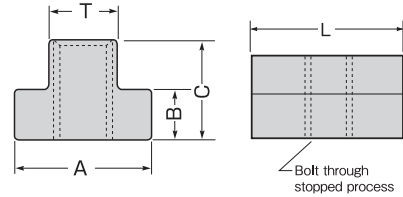
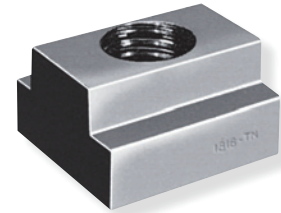


Item No.	A	B	C	N.W. (g)
FTU 8	M 8	13	6.5	5
FTU 10	M10	17	8	10
FTU 12	M12	19	10	16
FTU 14	M14	22	11	23
FTU 16	M16	24	13	30
FTU 18	M18	27	15	46
FTU 20	M20	30	16	58
FTU 22	M22	32	18	74
FTU 24	M24	36	19	100

T-SLOTED NUT

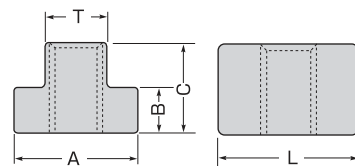
(mm · w)

Item No.	T-Slotted	Screw diameter	A	B	C	T	L	N.W. (g)
1008TN	10	M 8	16	6	12	10	23	22
1210TN	12	M10	18	7	14	12	23	29
1410TN	14	M10	22.3	8.8	15.9	14	28	54
1412TN		M12	22.3	8.8	15.9		28	50
1612TN	16	M12	25.5	8.8	15.9	16	28	61
1614TN		M14	25.5	8.8	15.9		28	57
1814TN	18	M14	28.6	11.1	19.1	18	30	85
1816TN		M16	28.6	11.1	19.1		30	79
2016TN	20	M16	31.8	11.8	19.1	20	30	92
2018TN		M18	31.8	14.1	25.5		38	155
2216TN	22	M16	36.1	14.1	25.5	22	38	187
2218TN		M18	36.1	14.1	25.5		38	179
2220TN	24	M20	36.1	14.1	25.5	24	38	167
2418TN		M18	38.3	14.1	25.1		38	192
2420TN	26	M20	38.3	14.1	25.1	26	38	181
2620TN		M20	41.3	16.1	25.5		44	250
2622TN	28	M22	41.3	16.1	25.5	28	44	237
2822TN		M22	41.3	17.4	28.6		50	318
2824TN		M24	41.3	17.4	28.6		50	305



(mm)

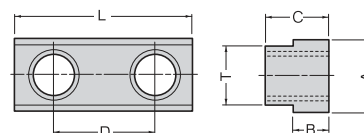
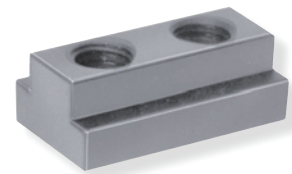
Item No.	T-Slotted	Screw diameter	A	B	C	T	L	N.W. (g)
FTS810	10	M 8	15	6	12	10	19	22
FTS1012	12	M10	18	7	14	12	23	29
FTS1014	14	M10	22	8	16	14	26	48
FTS1214	14	M12	22	8	16	14	26	45
FTS1215	15	M12	25	9	18	15	29	65
FTS1216	16	M12	25	9	18	16	29	67
FTS1416	16	M14	25	9	18	16	29	62
FTS1418	18	M14	28	10	20	18	32	92
FTS1618	18	M16	28	10	20	18	32	84
FTS1619	19	M16	32	12	24	19	36	135
FTS1620	20	M16	32	12	24	20	36	138
FTS1820	20	M18	32	12	24	20	36	130
FTS1822	22	M18	36	14	28	22	40	200
FTS1824	24	M18	40	16	32	24	44	285
FTS2022	22	M20	36	14	28	22	40	189
FTS2023	23	M20	40	16	32	23	44	271
FTS2024	24	M20	40	16	32	24	44	277
FTS2026	26	M20	42	14	25	26	46	255
FTS2226	26	M22	42	14	25	26	46	240
FTS2228	28	M22	45	18	36	28	49	400
FTS2428	28	M24	45	18	36	28	49	385
FTS2432	32	M24	50	20	40	32	54	690



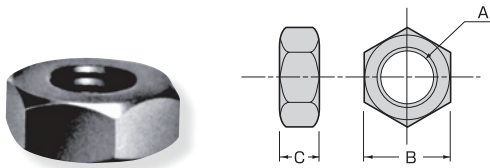
WT-SLOTED NUT

(mm)

Item No.	T-Slotted	Screw diameter	A	B	C	D	T	L	N.W. (g)
1412WTN	14	M12	22.2	8.7	15.8	22	13.8	45	80
1612WTN	16	M12	25.4	8.7	15.8	22	15.8	45	90
1812WTN	18	M12	28.5	11.1	19	22	17.5	45	130
1816WTN	18	M16	28.5	11.1	19	30	17.5	55	140
2016WTN	20	M16	31.7	11.9	19	30	19	55	150
2220WTN	22	M20	36	13.8	25.4	40	21.7	70	290
2420WTN	24	M20	38.2	14	25.4	40	23.5	70	320



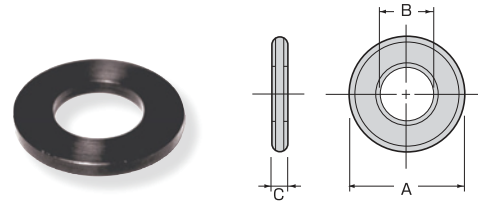
JAM NUT



(mm · w)

Item No.	A Screw diameter	B	C	N.W. (g)
10MJN	M10	17	6	9
12MJN	M12	19	7	10
14MJN	M14	22	8	21
16MJN	M16	24	10	23
18MJN	M18	27	11	34
20MJN	M20	30	12	44

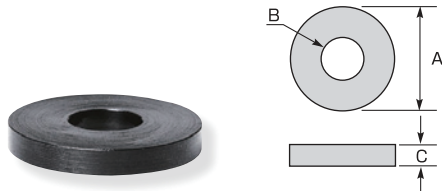
FLAT WASHER



(mm)

Item No.	A	B	C	N.W. (g)
10MFW	22	11	3	7
12MFW	25	13	3	9
14MFW	28	15	3	10
16MFW	35	17	3	16
18MFW	38	19	3.5	23
20MFW	40	21	4	27
22MFW	44	23	4	34
24MFW	50	27	5	53

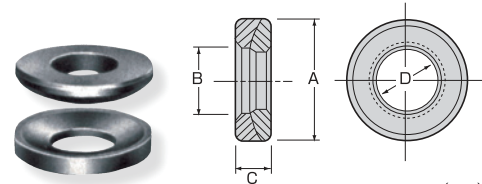
FLAT WASHER



(mm)

Item No.	Applicable bolt	A	B	C	N.W. (g)
FYZ 8	M 8	23	8.4	3.2	8
FYZ10	M10	28	10.5	4	15
FYZ12	M12	35	13	5	30
FYZ14	M14	39	15	6	43
FYZ16	M16	45	17	6	61
FYZ18	M18	45	19	8	77
FYZ20	M20	50	21	8	94
FYZ22	M22	55	23	10	144
FYZ24	M24	60	26	10	163

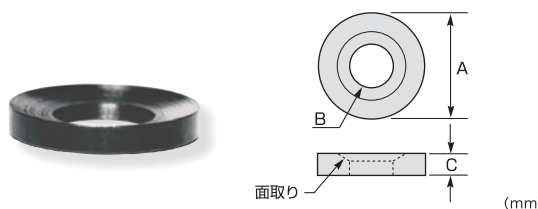
SPHERICAL WASHER



(mm)

Item No.	A	B	C	D	N.W. (g)
10MSW	22	12	7	10.5	16
12MSW	28	15	9	13	33
14MSW	28	17	9.5	15	40
16MSW	35	19	10.5	17	57
18MSW	35	21	11.5	19	70
20MSW	40	24	13	22	90
24MSW	48	28	15	26	135

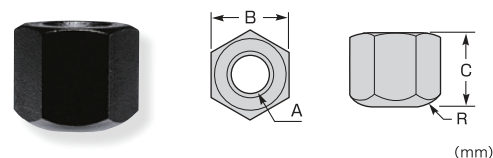
SPHERICAL WASHER



(mm)

Item No.	Applicable bolt	A	B	C	N.W. (g)
FXZ 8	M 8	23	9.5	3.2	7
FXZ10	M10	28	12	4	13
FXZ12	M12	35	14.2	5	28
FXZ14	M14	39	16	6	39
FXZ16	M16	45	19	6	56
FXZ18	M18	45	21	8	70
FXZ20	M20	50	23.2	8	87
FXZ22	M22	55	25.5	10	119
FXZ24	M24	60	28	10	163

SPHERICAL HX. NUT



(mm)

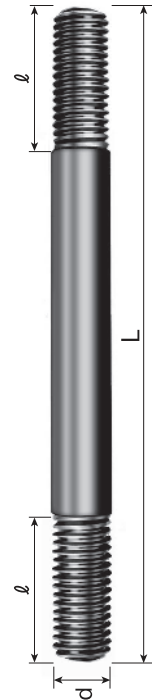
Item No.	A	B	C	R	N.W. (g)
	Screw diameter				
FBU 8	M 8	13	12	12	9
FBU10	M10	17	15	15	19
FBU12	M12	19	18	17	28
FBU14	M14	22	21	20	46
FBU16	M16	24	24	22	55
FBU18	M18	27	27	25	81
FBU20	M20	30	30	27	109
FBU22	M22	32	33	30	132
FBU24	M24	36	36	32	191

STUD BOLT

(mm)

Item No.	d		L	ℓ	N.W. (g)
	Screw diameter				
SBM 850	M8	P=1.25	50	22	18
SBM 860			60	22	22
SBM 870			70	30	23
SBM 875			75	30	24
SBM 8100			100	32	36
SBM 8125			125	32	45
SBM 8150			150	32	54
SBM 8175			175	32	63
SBM 8200			200	32	72
SBM 1050			M10	P=1.5	50
SBM 1060	60	22			32
SBM 1070	70	30			37
SBM 1075	75	30			40
SBM 1090	90	32			48
SBM10100	100	32			53
SBM10120	120	32			63
SBM10125	125	32			66
SBM10150	150	32			80
SBM10175	175	32			93
SBM10200	200	32	106		
SBM 1250	M12	P=1.75	50	22	38
SBM 1260			60	22	46
SBM 1270			70	30	52
SBM 1275			75	30	56
SBM 1280			80	30	60
SBM 1290			90	30	68
SBM12100			100	38	75
SBM12110			110	38	83
SBM12120			120	38	90
SBM12125			125	38	94
SBM12140	140	38	108		
SBM12150	150	38	113		
SBM12160	160	38	121		
SBM12175	175	38	131		
SBM12200	200	38	150		
SBM 1450	M14	P=2.0	50	22	48
SBM 1475			75	30	75
SBM14100			100	38	101
SBM14125			125	38	130
SBM14150			150	38	160
SBM14175			175	38	190
SBM14200			200	38	217
SBM14225			225	50	246
SBM14250			250	50	274
SBM14300			300	50	335
SBM14350	350	50	395		
SBM14400	400	50	455		
SBM14450	450	50	524		
SBM14500	500	50	576		
SBM 1650	M16	P=2.0	50	22	68
SBM 1660			60	22	82
SBM 1670			70	30	94
SBM 1675			75	30	101
SBM 1680			80	30	108
SBM 1690			90	30	122
SBM16100			100	38	135
SBM16110			110	38	149
SBM16120			120	38	162
SBM16125			125	38	169
SBM16130	130	38	176		
SBM16140	140	38	189		
SBM16150	150	38	203		
SBM16160	160	38	217		
SBM16170	170	38	229		
SBM16175	175	38	236		
SBM16180	180	38	243		
SBM16190	190	38	257		
SBM16200	200	38	270		
SBM16225	225	50	304		
SBM16250	250	50	338		
SBM16275	275	50	371		

Item No.	d		L	ℓ	N.W. (g)
	Screw diameter				
SBM16300	M16	P=2.0	300	50	405
SBM16350			350	50	423
SBM16400			400	50	540
SBM16450			450	50	608
SBM16500			500	50	675
SBM1875	M18	P=2.5	75	30	135
SBM18100			100	38	180
SBM18125			125	50	225
SBM18150			150	50	270
SBM18175			175	50	315
SBM18200			200	50	360
SBM18225			225	50	405
SBM18250			250	50	450
SBM18300			300	50	540
SBM18350			350	50	630
SBM18400	400	50	720		
SBM18450	450	50	810		
SBM18500	500	50	900		
SBM2075	M20	P=2.5	75	30	158
SBM20100			100	38	210
SBM20120			120	50	252
SBM20125			125	50	263
SBM20130			130	50	274
SBM20150			150	50	315
SBM20170			170	50	357
SBM20175			175	50	368
SBM20180			180	50	378
SBM20200			200	50	420
SBM20225	225	50	473		
SBM20250	250	50	525		
SBM20275	275	50	578		
SBM20300	300	50	630		
SBM20350	350	50	735		
SBM20400	400	50	840		
SBM20450	450	50	945		
SBM20500	500	50	1,050		
SBM2275	M22	P=2.5	75	30	195
SBM22100			100	38	260
SBM22125			125	50	325
SBM22150			150	50	390
SBM22175			175	50	455
SBM22200			200	50	520
SBM22225			225	50	585
SBM22250			250	63	650
SBM22300			300	63	780
SBM22350			350	63	910
SBM22400	400	63	1,040		
SBM22450	450	63	1,170		
SBM22500	500	63	1,300		
SBM2475	M24	P=3.0	75	30	203
SBM24100			100	38	270
SBM24125			125	50	338
SBM24150			150	50	405
SBM24175			175	50	473
SBM24200			200	50	540
SBM24225			225	50	608
SBM24250			250	63	675
SBM24300			300	63	810
SBM24350			350	63	945
SBM24400	400	63	1,080		
SBM24450	450	63	1,215		
SBM24500	500	63	1,350		



■ Inch size

(w)

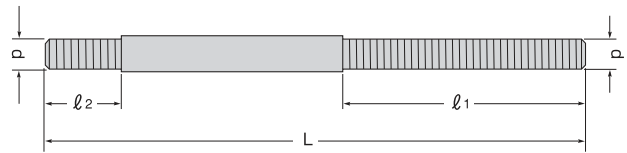
Item No.	d		L	ℓ	N.W. (g)
	Screw diameter				
SBW 450	w ^{1/2}	P=1.25	50	22	38
SBW 475			75	30	56
SBW4100			100	38	75
SBW4125			125	38	94
SBW4150			150	38	113
SBW4175			175	38	131
SBW4200	200	38	150		
SBW 550	w ^{5/8}	P=1.75	50	22	68
SBW 575			75	30	101
SBW5100			100	38	135
SBW5125			125	38	169
SBW5150			150	38	203
SBW5175			175	38	236
SBW5200	200	38	270		
SBW 675	w ^{3/4}	P=2.0	75	30	158
SBW6100			100	38	210
SBW6125			125	50	263
SBW6150			150	50	315
SBW6175			175	50	368
SBW6200			200	50	420

JIG CLAMPING TOOLS

STUD BOLT



●The features are the lengths of screw parts on both ends are different compared with conventional ones; the main body having hooks for spanner makes it easier to use this bolt and to disassemble the fastened T-slot nut and bolt.



Item No.	d Screw diameter	L	l ₁	l ₂	N.W. (g)
FTN850	M8 P=1.25	50	25	10.5	16
FTN875		75	45		24
FTN8100		100	60		33
FTN8125		125	75		42
FTN8150		150	80		51
FTN8175		175	100		59
FTN8200		200	100		69
FTN1050	M10 P=1.5	50	25	12.5	25
FTN1075		75	45		38
FTN1090		90	50		46
●FTN10100		100	60		51
FTN10115		115	60		59
FTN10125		125	75		65
FTN10140		140	75		74
FTN10150		150	80		80
FTN10175		175	100		93
FTN10200		200	100		107
FTN1250	M12 P=1.75	50	22	14.5	36
FTN1265		65	30		48
FTN1275		75	45		54
FTN1280		80	45		59
FTN12100		100	60		75
●FTN12125		125	75		94
FTN12150		150	80		116
FTN12175		175	100		132
FTN12200		200	100		155
FTN1450		M14 P=2.0	50		22
FTN1475	75		45	74	
FTN14100	100		60	100	
FTN14125	125		75	127	
●FTN14150	150		90	153	
FTN14175	175		90	181	
FTN14200	200		100	211	
FTN14225	225		100	242	
FTN14250	250		100	273	
FTN14300	300		100	335	
FTN14350	350	100	398		
FTN14400	400	100	461		
FTN1675	M16 P=2.0	75	45	18	98
FTN16100		100	60		132
FTN16125		125	75		167
●FTN16150		150	90		205
FTN16175		175	90		243
FTN16200		200	100		280
FTN16250		250	100		358
FTN16300		300	100		438
FTN16350		350	100		516
FTN16450		450	145		672
FTN16500	500	145	750		

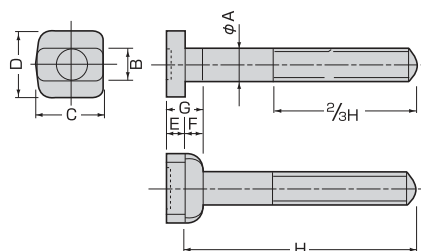
Item No.	d Screw diameter	L	l ₁	l ₂	N.W. (g)
FTN1875	M18 P=2.5	75	35	22	125
FTN18100		100	60		166
FTN18125		125	75		210
FTN18150		150	90		265
●FTN18175		175	90		310
FTN18200		200	100		349
FTN18250		250	100		448
FTN18300		300	120		539
FTN18350		350	120		634
FTN18400		400	120		730
FTN18450	450	145	825		
FTN18500	500	145	924		
FTN2075	M20 P=2.5	75	35	26	154
FTN20100		100	60		208
FTN20125		125	75		261
FTN20150		150	90		318
FTN20175		175	90		378
●FTN20180		180	110		384
FTN20200		200	120		427
FTN20250		250	145		540
FTN20300		300	145		662
FTN20350		350	145		784
FTN2275	M22 P=2.5	75	30	29.5	195
FTN22100		100	55		260
FTN22125		125	75		325
FTN22150		150	100		390
FTN22175		175	100		455
●FTN22200		200	120		520
FTN22250		250	145		650
FTN22300		300	145		780
FTN22350		350	145		910
FTN22400		400	145		1,040
FTN22450	450	145	1,170		
FTN2475	M24 P=3.0	75	30	33.5	218
FTN24100		100	55		294
FTN24125		125	75		370
FTN24150		150	100		450
FTN24175		175	100		533
FTN24200		200	120		610
●FTN24250		250	145		774
FTN24300		300	145		948
FTN24350	350	145	1,120		

JIG CLAMPING TOOLS

T-SLOTED BOLT



● It is special bolt made by forging precisely with the best selected carbon material.

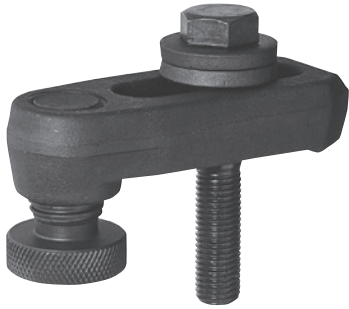


(mm)

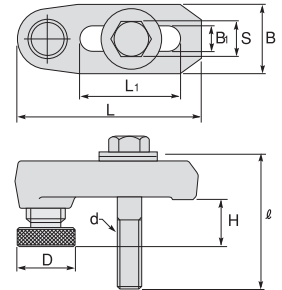
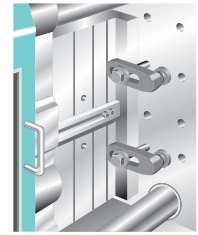
Item No.	T-Slotted	Screw diameter	A	B	C	D	E	F	G	H	N.W. (g)	
TBM1250	12	M12 P=1.75	12	12	26	22	7	6	13	50	72	
TBM1275	12		12	12	26	22	7	6	13	75	90	
TBM12100	12		12	12	26	22	7	6	13	100	100	
TBM12125	12		12	12	26	22	7	6	13	125	126	
TBM12150	12		12	12	26	22	7	6	13	150	142	
TBM12175	12		12	12	26	22	7	6	13	175	160	
TBM12200	12		12	12	26	22	7	6	13	200	180	
TBM1650	16	M16 P=2.0	16	16	32	27	8	8	16	50	128	
TBM1675	16		16	16	32	27	8	8	16	75	160	
TBM16100	16		16	16	32	27	8	8	16	100	192	
TBM16125	16		16	16	32	27	8	8	16	125	226	
TBM16150	16		16	16	32	27	8	8	16	150	260	
TBM16175	16		16	16	32	27	8	8	16	175	294	
TBM16200	16		16	16	32	27	8	8	16	200	328	
TBM1875	18	M18 P=2.5	18	18	40	30	11	11	22	75	248	
TBM18100	18		18	18	40	30	11	11	22	100	294	
TBM18125	18		18	18	40	30	11	11	22	125	332	
TBM18150	18		18	18	40	30	11	11	22	150	374	
TBM18175	18		18	18	40	30	11	11	22	175	412	
TBM18200	18		18	18	40	30	11	11	22	200	458	
TBM2075	20		M20 P=2.5	20	20	40	34	11	11	22	75	278
TBM20100	20	20		20	40	34	11	11	22	100	342	
TBM20125	20	20		20	40	34	11	11	22	125	388	
TBM20150	20	20		20	40	34	11	11	22	150	442	
TBM20175	20	20		20	40	34	11	11	22	175	490	
TBM20200	20	20		20	40	34	11	11	22	200	542	
TBM22100	22	M22 P=2.5		22	22	40	38	14	13	27	100	444
TBM22125	22		22	22	40	38	14	13	27	125	506	
TBM22150	22		22	22	40	38	14	13	27	150	576	
TBM22175	22		22	22	40	38	14	13	27	175	642	
TBM22200	22		22	22	40	38	14	13	27	200	698	
TBM24100	24		M24 P=3.0	24	24	50	44	16	15	31	100	616
TBM24125	24			24	24	50	44	16	15	31	125	688
TBM24150	24	24		24	50	44	16	15	31	150	766	
TBM24175	24	24		24	50	44	16	15	31	175	844	
TBM24200	24	24		24	50	44	16	15	31	200	922	

JIG CLAMPING TOOLS

CLAW CLAMP (for Injection machines)



- This product is manufactured and designed as optimal clamp to specially install the molds for injection machines.
- Also it is possible to use as a clamping fitting for press.



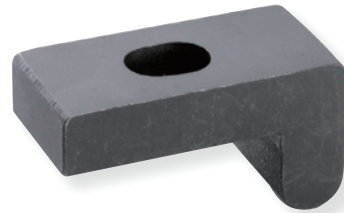
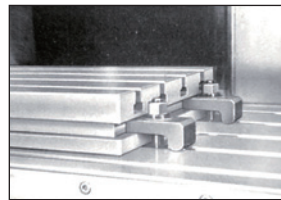
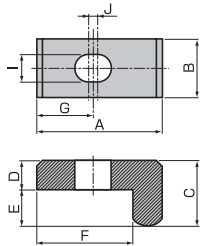
Item No.	d	H	B	B ₁	D	L	L ₁	ℓ	S	N.W. (kg)	
		Stroke									
FL12	M12	15~35	38	13	39	100	48	75	19	0.75	
FL16	M16	18~42	45	17	39	125	69	90	24	1.10	
FL20	M20	22~50	56	21	48	160	90	110	30	2.13	

(mm)

SOLID CLAMP for attaching jig plate

Item No.	Applicable bolt	A	B	C	D	E	F	G	I	J	N.W. (g)	
SC1400	M14	69	32	38	16	20	53	31	15	5	310	
SC1600	M16	80	43	39	17	20	58	35	17	5	530	
SC1800	M18	80	43	39	17	20	58	35	19	5	510	

(mm)



JIG CLAMPING TOOLS

Clamp for vise

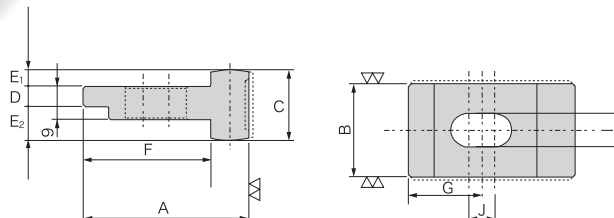
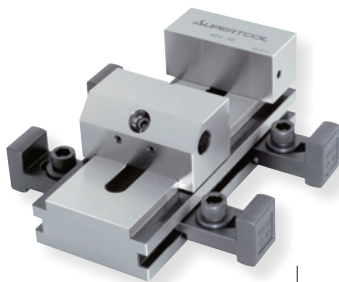
Item No.	Applicable bolt	A	B	C	D	E ₁	E ₂	F	G	I	J	N.W. (g)	
VC10	M8	44	25	19	5.5	4.5	9	34	19.5	9	7	84	
VC20	M12	60	32	38	8	12	18	46	28	13	12	250	

(mm)

● Optimal for fixing precise vise

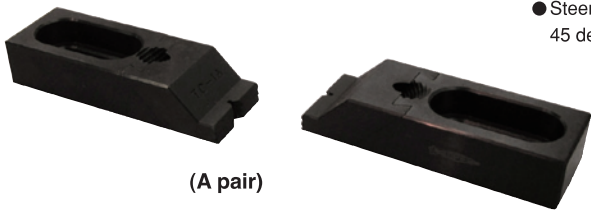
※ Applicable vise VC10 : SPV30H · 80H · 120H · 80

VC20 : SPV115 · 150 · 165H · SHPV165



SLIDE CLAMP (A-type)

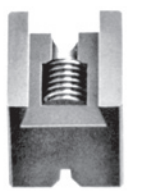
- The clamp body included is finished by heat, so very durable.
- The edge of jaw is cut, and you push down work to clamp.
- Steering way is to push into wrench and screw up, then clamp head is slid by 45 degree to clamp work.



(A pair)

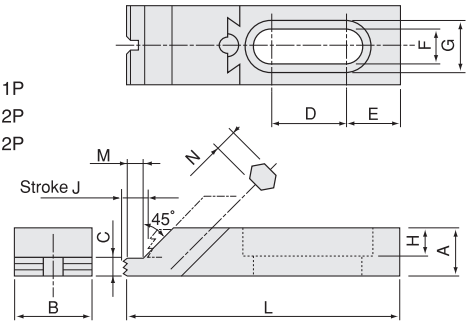
Difference :

Drive and screw in squeezing steers stay inside the jaw of the edge.



Accessories

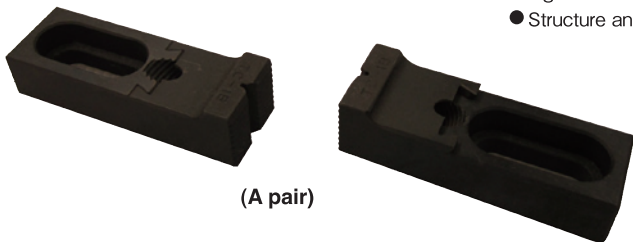
- Hexagonal key wrench..... 1P
- Cap screw 2P
- T-slotted nut..... 2P



Item No.	Squeeze capacity kN	Applicable bolt	A	B	C	D	E	F	G	H	J	L	M	N	N.W. (kg) (A pair)
TC 1A	7	M12	22	36	9	28	16	14.5	22	12	11	103	8	6	1
TC 2A	8	M16	22	36	9	47	28.5	16.5	25	12	11	143	9	6	1.54
TC 3A	10	M20	24	46	12	60	35.5	20.5	31	14	12	180	10	8	2.88

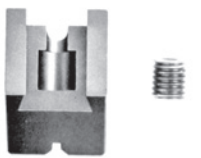
SLIDE CLAMP (B-type)

- Please use in case that the height of work is too low in slide type A and too high in free vise(FV)
- Structure and ability are meeting with slide clamp.(A-Type)



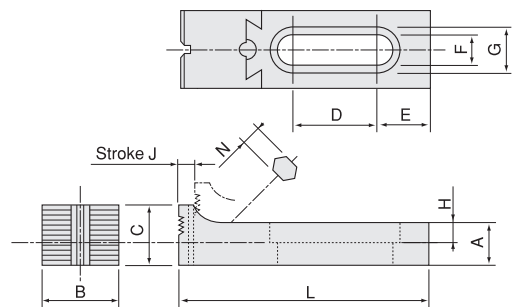
(A pair)

Never broken due to very strong. Capability enough.



Accessories

- Hexagonal key wrench..... 1P
- Cap screw 2P
- T-slotted nut..... 2P



Item No.	Squeeze capacity kN	Applicable bolt	A	B	C	D	E	F	G	H	J	L	M	N	N.W.(kg) (A pair)
TC 1B	7	M12	22	36	27	28	16	14.5	22	12	11	103	8	6	1.18
TC 2B	8	M16	22	36	30	47	28.5	16.5	25	12	11	143	9	6	1.67
TC 3B	10	M20	24	46	36	60	35.5	20.5	31	14	12	180	10	8	3.14

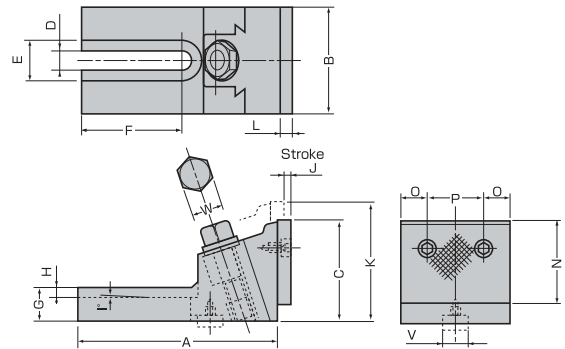
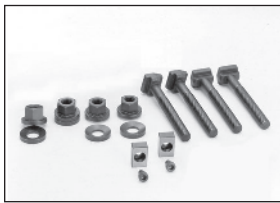
FREE VICE (A pair)

Item No.	Squeeze capacity kN	Accessories				A	B	C	D	E
		Cap screw	Stepped key	T-slotted bolt	Frenge nut					
FV350N	23	CS610	FKY16	TBM1275	12MSFN	142	70	72	14.5	29
FV450N	28	CS610	FKY18	TBM1675	16MSFN	192.5	85	87	17	37
FV550N	38	CS610	FKY20	TBM20100	20MSFN	220	110	105	21	42

Item No.	F	G	H	J	K	L	N	O	P	V	W	N.W. (kg) (A pair)
FV350N	55	25	5.7	5	84	10	60	15	40	16	19	6.8
FV450N	80	30	7.9	5	100	12	70	17.5	50	18	24	13
FV550N	100	36	10.2	7	125	13	85	25	60	20	30	21

- In case that work is too big to fix due to vise, please use the free vise.
- The bottom of body can be used by step key to finish by key pitch.

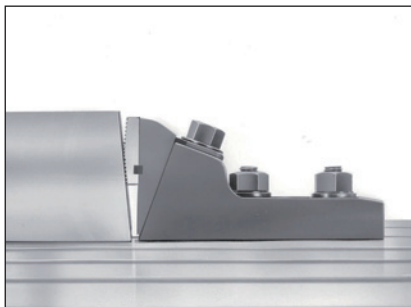
※Accessories Flange nut 4P
T-slotted bolt 4P
Stepped key 2P
Cap screw 2P



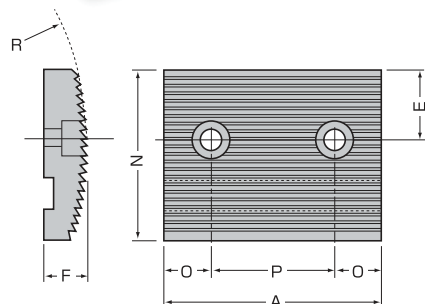
ROUND SPACE MOUTH PIECE (A pair)

Item No.	Applicable VISE	A	N	O	P	E	F	R	N.W.(kg) (A pair)
FVJ100	FV350	70	60	15	40	22.5	13.5	100	0.69
FVJ200	FV450	85	70	18	50	23	15	175	1.1
FVJ300	FV550	110	85	25	60	28	17	220	1.9

- Stable to clamp work by the Mouth Piece with rack
- Work is forced on the bottom and clamped even if the surface of the works is black scale, rough or slant.



Conventional set can be used for the bolt in replacing the mouth piece.



POWER CLAMP

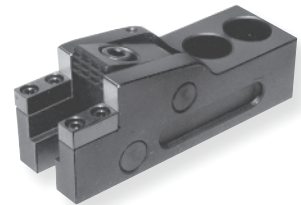
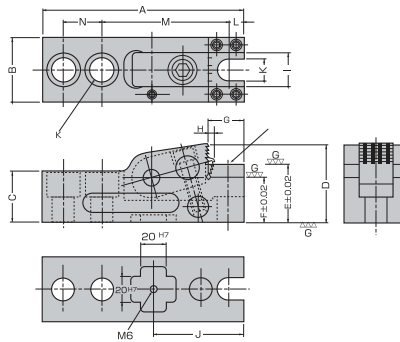
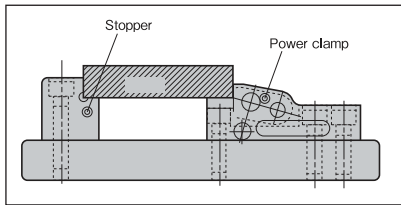
Item No.	A	B	C	D	E	F	G	H	I	J	3-K setting bolt	L	M	N	N.W. (kg)
PC130	130	40	30	50	40	30	21	3	22	53	M12×40L	10	84	22	1.3

● Table for double T-slot for setting into T-shaped groove (sold separately)

Item No.	Width of T-shaped groove		
	14	16	18
PC130	1412WTN	1612WTN	1812WTN

- Applicable for double T-slotted nut for T slot mounting
- Strong clamp on the bottom
- Both of front and back can be processed.
- Both of small or large works can be clamped by removing the pad

■ Example of use

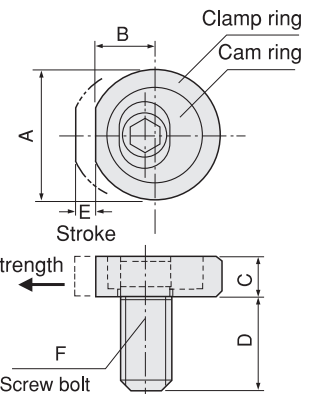
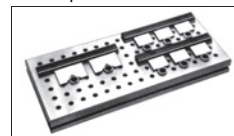


SCREW ROCK



- Optimal for clamping thin work and mass production work.
- Clamping operation is easy and speedy.
- It withstands repeated operations due to its quality of material and hardness, and so its contact surface to the clamp ring is not abraded away.

■ Example of use



Item No.	A	B	C	D	E	Screw bolt F	Squeeze capacity kN	N.W. (g)
SR 8	24	11	6	14	3	M 8-P1.25	4	22
SR10	26	11.8	8	19	4	M10-P1.5	5	36
SR12	30	13.5	9	19	5	M12-P1.75	6	54
SR16	38	16	12	23	6	M16-P2.0	7	120

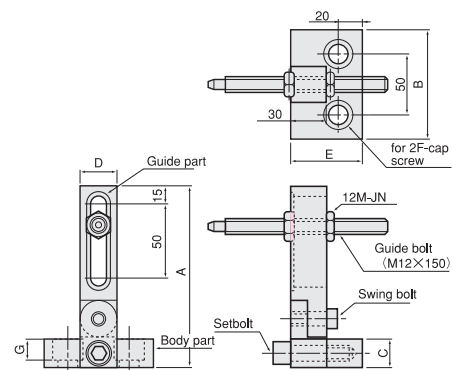
(mm)

MULTIPLE STOPPER



Example of conventional use Example of sidewise use Example of use of swing

- Guide bolt can be adjusted within the range of 50mm.
- The swing bolt of the guide part, when loosened, can be swing by 180 degrees, so it can be fixed at any point arbitrarily.
- By loosening the fixing bolt of the main body, the guide part can be turned sideways by 90 degrees and fixed for use.



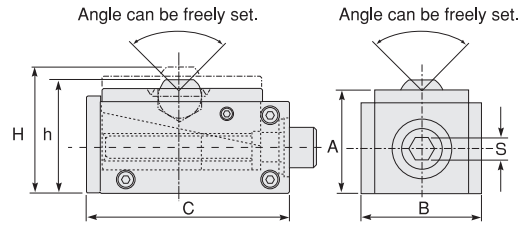
Item No.	A	B	C	D	E	F	G	N.W. (kg)
MS1512	150	90	23	30	60	M12	13	1.60
MS1516	150	90	23	30	60	M16	17	1.57

(mm)

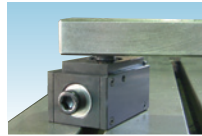
LEVELING BLOCK



- It can be smoothly moved vertically up and down.
- It has a bearing built in, so it requires only small amount of strength for leveling.
- The angle of the ball swivel can be freely set.



The ball on the top can be freely rotated.

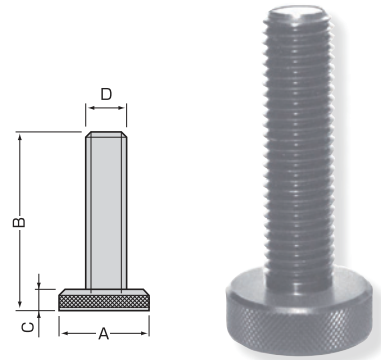
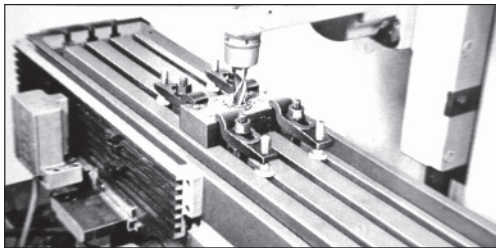


Item No.	A	B	C	S	h~H	Allowable load kN	N.W. (kg)	(mm)
APB50	40	53	88.5	10	50~55	50	1.5	
APB 65	54	70	124	12	65~72	100	3.7	

RECEIVABLE SCREW

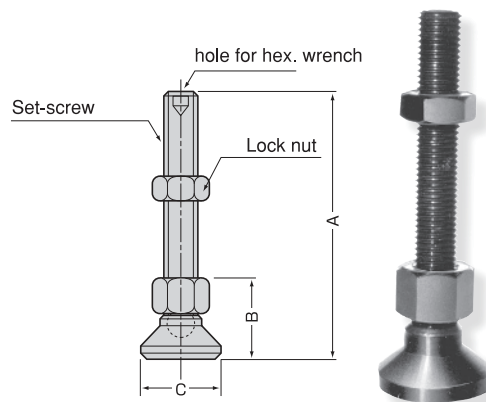
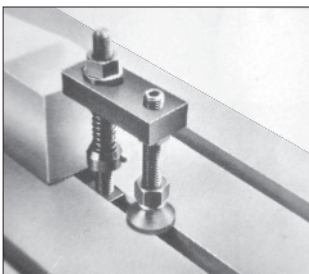
Item No.	A	B	C	D	N.W. (g)	(mm)
CB40	28	60	8	M12-1.75	75	
CB50	30	70	10	M16-2	120	
CB60	36	80	12	M18-2.5	200	
CB70	50	130	15	M20-2.5	460	

- Receivable screw for TPS, TPU, FPB-B, FGB



CLAMP HEEL STUD with swivel

- Set-screw with swivel pad used for TPS (strap clamp), TPU (U-clamp plane type), FPB-B (Uni-clamp Duck shaped type)



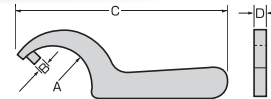
Item No.	Bolt size	Leveling pad	Lock nut	Set screw	A	B	C	Hole hex. width across flats	N.W. (g)	(mm)
CHS3000	10-P1.5	LP-10	10M-JN	M10- 80	95	25	28	5	96	
CHS4000	12-P1.75	LP-12	12M-JN	M12- 80	100	30	32	6	147	
CHS5000	14-P2	LP-14	14M-JN	M14- 80	105	36	36	6	218	
CHS6000	16-P2	LP-16	16M-JN	M16-100	125	40	40	8	324	
CHS7000	18-P2.5	LP-18	18M-JN	M18-100	130	45	50	8	453	
CHS8000	20-P2.5	LP-20	20M-JN	M20-100	142	57	60	10	693	

PIN WRENCH HANDLE

(mm)

Item No.	Applicable support	A	B	C	D	N.W. (g)
PW355	FS50S FS70S MSS50,65,85	17.5R	4.5	100	5	90
PW406	FS100S MSS110	20.0R	5.5	130	6	100
PW457	FS150S MSS165	22.5R	6.5	140	7	120
PW508	FS250S FS300S MSS265	25.0R	7.5	150	8	120

● For screw support

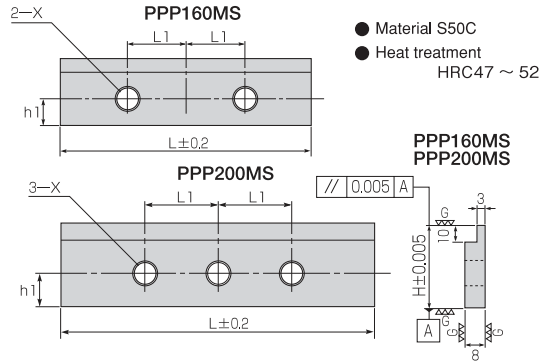
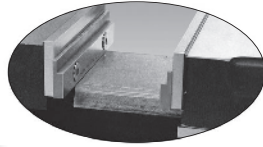


MAGNETIC PRECISION GROUND PARALLEL SET (Step type)

- It enables adjustment of the height of vise collet, determination of a reference point, and precision machining.
- Optimal for the machining of the upper surface of a small-sized work and of a through-hole. (Supplied in a wooden case)



Example of use



- The four surfaces of the parallel are finished with grinding in exclusion of the two surfaces of both ends, and especially the upper and bottom surface are finished with precision grinding (Parallelism: within 0.005 mm).

Magnet holder

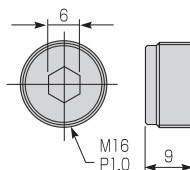


Item No.	Parallel size (mm)					Q'ty	Magnet holder	Hex. wrench	Set weight (kg)
	L	L ₁	H	h ₁	X				
PPP160MSA	160	45	30	10.5	M16 P1	2	4	1	3.93
			35	13		2			
			40	16		2			
			45	18		2			
			48	20		2			
PPP160MSB	160	45	50	21	2	4	1	5.4	
			52	22	2				
			54	23	2				
			56	24	2				
PPP200MSA	200	55	40	16	2	6	1	6.5	
			45	18	2				
			50	21	2				
			55	23	2				
PPP200MSB	200	55	58	25	2	6	1	7.95	
			60	26	2				
			62	27	2				
			64	28	2				

MAGNETIC HOLDER

Item No.	N.W. (g)
PMH16	12

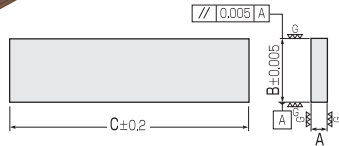
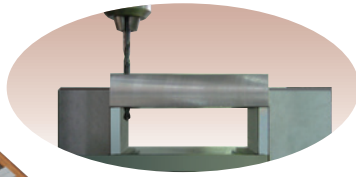
- Material Special alloy steel /neodymium
- Finish Electroless nickel plating



THIN TYPE PRECISION STEEL PARALLEL SET (Flat type)



Quality of material S50C
Hardness 47~52HRC
Finishing : Grinding finish



- The four surfaces of the parallel are finished with grinding in exclusion of the two surfaces of both ends, and especially the upper and bottom surfaces are finished with precision grinding (Parallelism: within 0.005 mm).

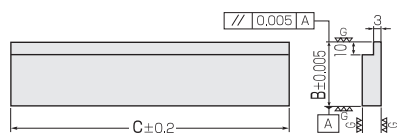
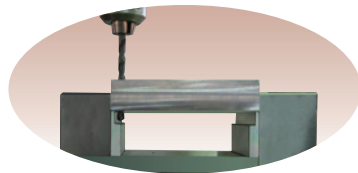
- It enables adjustment of the height of vise collet, determination of a reference point, and precision machining.
- Optimal for the machining of the upper surface of a small-sized work and of a through-hole. (Supplied in a wooden case)

(mm)						
Item No.	A	B	C	Description of set	Quantity	Set weight (kg)
PPP160FA	8	30	160	PPP160F30	2	10 pcs. (5 sets) 4.56
	8	35	160	PPP160F35	2	
	8	40	160	PPP160F40	2	
	8	45	160	PPP160F45	2	
	8	48	160	PPP160F48	2	
PPP160FB	8	50	160	PPP160F50	2	10 pcs. (5 sets) 6.03
	8	52	160	PPP160F52	2	
	8	54	160	PPP160F54	2	
	8	56	160	PPP160F56	2	
	8	58	160	PPP160F58	2	
PPP200FA	8	40	200	PPP200F40	2	10 pcs. (5 sets) 6.95
	8	45	200	PPP200F45	2	
	8	50	200	PPP200F50	2	
	8	55	200	PPP200F55	2	
	8	58	200	PPP200F58	2	
PPP200FB	8	60	200	PPP200F60	2	10 pcs. (5 sets) 8.74
	8	62	200	PPP200F62	2	
	8	64	200	PPP200F64	2	
	8	66	200	PPP200F66	2	
	8	68	200	PPP200F68	2	

THIN TYPE PRECISION STEEL PARALLEL SET (Stepped type)



Quality of material S50C
Hardness 47~52HRC
Finishing : Grinding finish



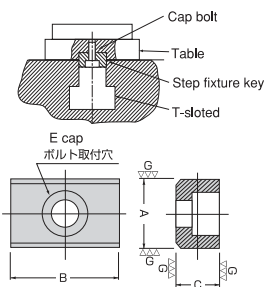
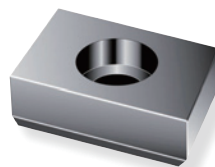
- The four surfaces of the parallel are finished with grinding in exclusion of the two surfaces of both ends, and especially the upper and bottom surfaces are finished with precision grinding (Parallelism: within 0.005 mm).

- It is convenient for adjustment of the height of vise collet, determination of a reference point, and precision machining.
- Optimal for the machining of the upper surface of a small-sized work and of a through-hole close to the end of the work. (Supplied in a wooden case)

(mm)						
Item No.	A	B	C	Description of set	Quantity	Set weight (kg)
PPP125SA	8	21	125	PPP125S21	2	10 pcs. (5 sets) 2.38
	8	25	125	PPP125S25	2	
	8	29	125	PPP125S29	2	
	8	33	125	PPP125S33	2	
	8	37	125	PPP125S37	2	
PPP125SB	8	30	125	PPP125S30	2	10 pcs. (5 sets) 2.78
	8	32	125	PPP125S32	2	
	8	34	125	PPP125S34	2	
	8	36	125	PPP125S36	2	
	8	38	125	PPP125S38	2	
PPP160SA	8	30	160	PPP160S30	2	10 pcs. (5 sets) 3.93
	8	35	160	PPP160S35	2	
	8	40	160	PPP160S40	2	
	8	45	160	PPP160S45	2	
	8	48	160	PPP160S48	2	
PPP160SB	8	50	160	PPP160S50	2	10 pcs. (5 sets) 5.40
	8	52	160	PPP160S52	2	
	8	54	160	PPP160S54	2	
	8	56	160	PPP160S56	2	
	8	58	160	PPP160S58	2	
PPP200SA	8	40	200	PPP200S40	2	10 pcs. (5 sets) 6.50
	8	45	200	PPP200S45	2	
	8	50	200	PPP200S50	2	
	8	55	200	PPP200S55	2	
	8	58	200	PPP200S58	2	
PPP200SB	8	60	200	PPP200S60	2	10 pcs. (5 sets) 7.95
	8	62	200	PPP200S62	2	
	8	64	200	PPP200S64	2	
	8	66	200	PPP200S66	2	
	8	68	200	PPP200S68	2	

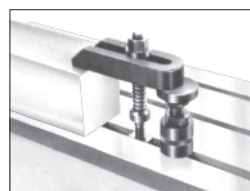
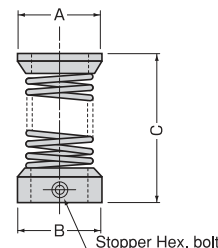
STEP FIXTURE KEY

Item No.	A ^{h7}	B	C	E bolt	N.W. (g)	(mm)
FKY12	12	20	10	M 5	17	
FKY14	14	25	10	M 6	21	
FKY16	16	25	10	M 6	26	
FKY18	18	25	10	M 6	30	
FKY20	20	25	10	M 6	34	
FKY22	22	40	20	M10	126	



CLAMP SUPPORT

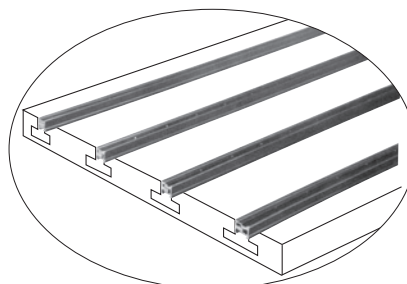
Item No.	Applicable stud bolt	Stopper Hex. bolt	A	B	C	N.W. (g)	(mm)
SPCS 8	M 8	3	22	22	60	51	
SPCS10	M10	3	22	22	60	48	
SPCS12	M12	3	24	24	60	54	
SPCS14	M14	3	26	26	60	64	
SPCS16	M16	3	28	28	60	70	
SPCS18	M18	3	30	30	60	73	
SPCS20	M20	4	32	32	60	78	
SPCS22	M22	4	34	34	60	85	
SPCS24	M24	4	36	36	60	94	



- Clamp comes up as the flange nut is loosened.
- Useful to use along with our various other clamps.

ADJUSTABLE T-SLOT CHIP COVER

- It becomes easier to deal with swarf.
- It becomes easier to change columns.
- It is naturally possible to separate oil and swarf.
- This is the type commonly to be applicable, so it is economical.
- The material is of aluminum, and so it is easy to cut it according to the length of the table.



Sectional drawing of assembly

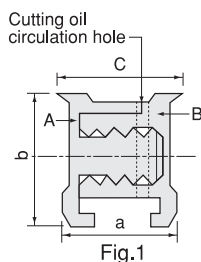
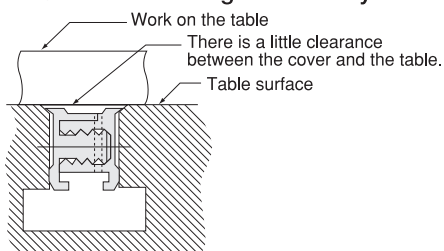


Fig.2

Operational is very simple. As shown in Fig. 2, separate Body A (male) and Body B (female), and follow the pictorial instruction in the figures below and insert them according to an asked-for T-groove width. By switching the positions of Bodies, the range of the groove widths obtained is as shown in the dimensional table.

About cutting off of T-slot cover

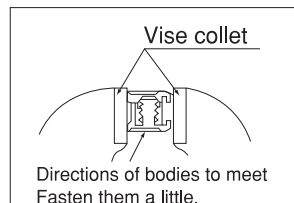


Fig.3

Cautions at time of cutting off

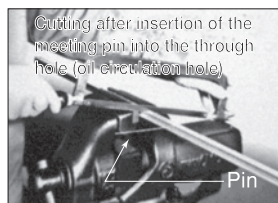


Fig.4

Treatment after cutting off

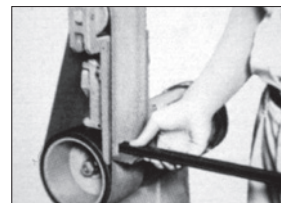


Fig.5

Replacement of columns after use of T-cover



Fig.6

Item No.	Details of dimensions			Available T-slotted	Length	Item No.	Details of dimensions			Available T-slotted	Length
	a	b	c				a	b	c		
TCV1218100	12	14.4	13	12, 14, 16, 18	1000	TCV1824100	18	18	19	18, 20, 22, 24	1000

(mm)