



Application

Standard high-speed 3-Jaw wedge-style open center power chuck

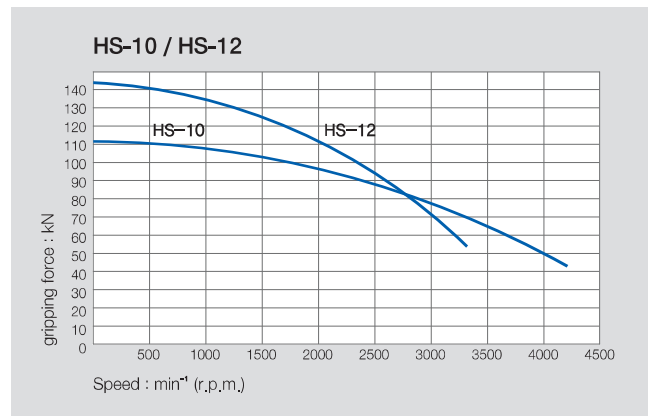
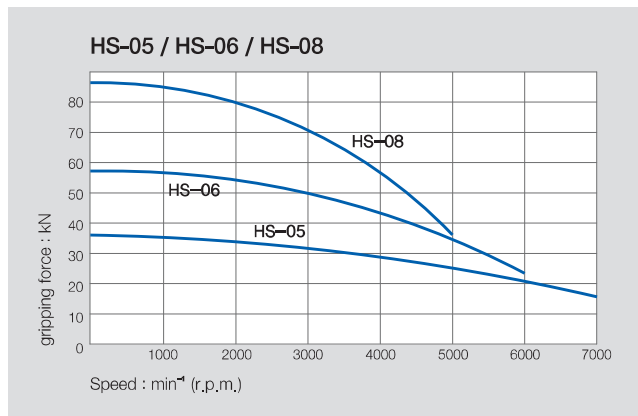
Technical features

Gripping force transmission by wedge structure
Precision-hardened core components ensure chuck longevity

RELATED PRODUCT



Dynamic Grip Force Diagram



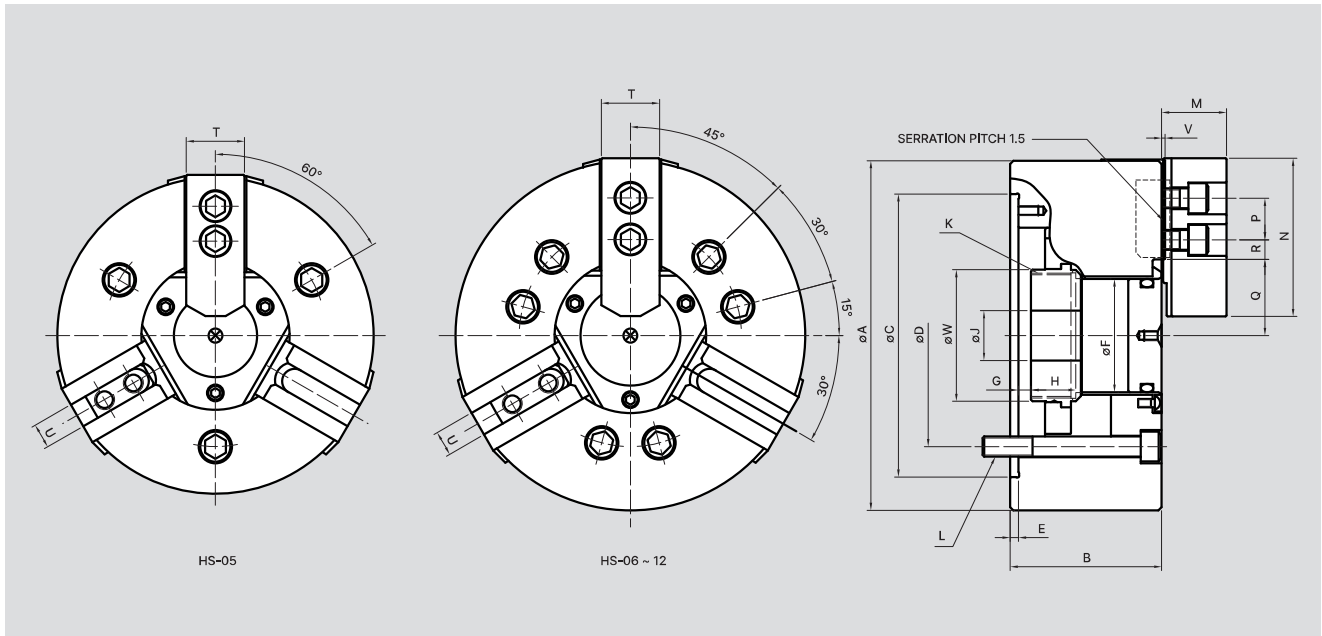
※ When using taller, heavier jaws or clamping on a larger diameter, reduce RPM accordingly

SPECIFICATIONS

	HS-05	HS-06	HS-08	HS-10	HS-12
Thru Hole Dia. [mm]	33	46	52	77	91
Grip Dia. Max [mm]	135	169	210	254	304
Grip Dia. Min [mm]	12	15	13	31	34
Jaw Stroke Dia. [mm]	5.4	5.5	7.4	8.8	10.6
Plunger Stroke [mm]	10	12	16	19	23
Permissible Input Force [kN(kgf)]	17.5(1784)	22(2243)	34.8(3549)	43(4385)	55(5608)
Max. Static Gripping Force [kN(kgf)]	36(3671)	57(5812)	86(8769)	111(11319)	144(14686)
Max. r.p.m. [min ⁻¹]	7000	6000	5000	4200	3300
Weight [kg]	6.7	11.9	22.3	34.5	55.3
Moment of inertia [kg·m ²]	0.016	0.05	0.145	0.33	0.74
Operating Cylinder	SH-10036	SD-13546	SD-15452	SD-18577	SD-20591
Max. Hydraulic Pressure [MPa(kgf/cm ²)]	2.9(30)	2.8(28.6)	2.65(27)	2.7(27.5)	2.7(27.5)
Operating Hard Jawa	HB04N1	HB06A1	HB08A1	HB10A1	HB12N1

※ Maximum turning speed is based upon actual measurement.

※ Specifications are subject to change without notice.



※ It is recommended to grease chucks at least twice a day in order to maximize longevity.

DIMENSIONS

	HS-05	HS-06	HS-08	HS-10	HS-12
ΦA	135	169	210	254	304
B	60	81	91	100	110
ΦC(H6)	110	140	170	220	220
ØD	82.6	104.8	133.4	171.4	171.4
E	4	5	5	5	6
ØF	33	46	52	77	91
G max.	1	11	14.5	8.5	8
G min.	-9	-1	-1.5	-10.5	-15
H	20	19	20.5	25	28
ΦJ	12	20	30	45	50
K max.	M40x1.5	M55x2.0	M60x2.0	M85x2.0	M100x2.0
L	3-M10x60	6-M10x95	6-M12x105	6-M16x120	6-M16x130
M	26	31	38.5	43	50.5
N	54	72	95	110	111
P	14	20	25	30	30
Q max.	26.5	32	38.7	51	61.3
Q min.	23.8	29.25	35	46.6	56
R max.	19.75	22.75	29.75	33.75	45.75
R min.	7.75	9.25	14.75	14.25	15.75
T	23	31	35	40	49
U	10	12	14	16	21
V	2	2	2	2	2
ΦW	47	60	66	94	108

※ Blank and machined draw-nuts are available. 'K' is Max. Draw nut size.

SD Mega-Bore Short body Open-Center Hydraulic Cylinder



Application

Large bore work in machines with limited clearance

Technical features

Low drain rate reduces heat generation

RELATED PRODUCT



64p

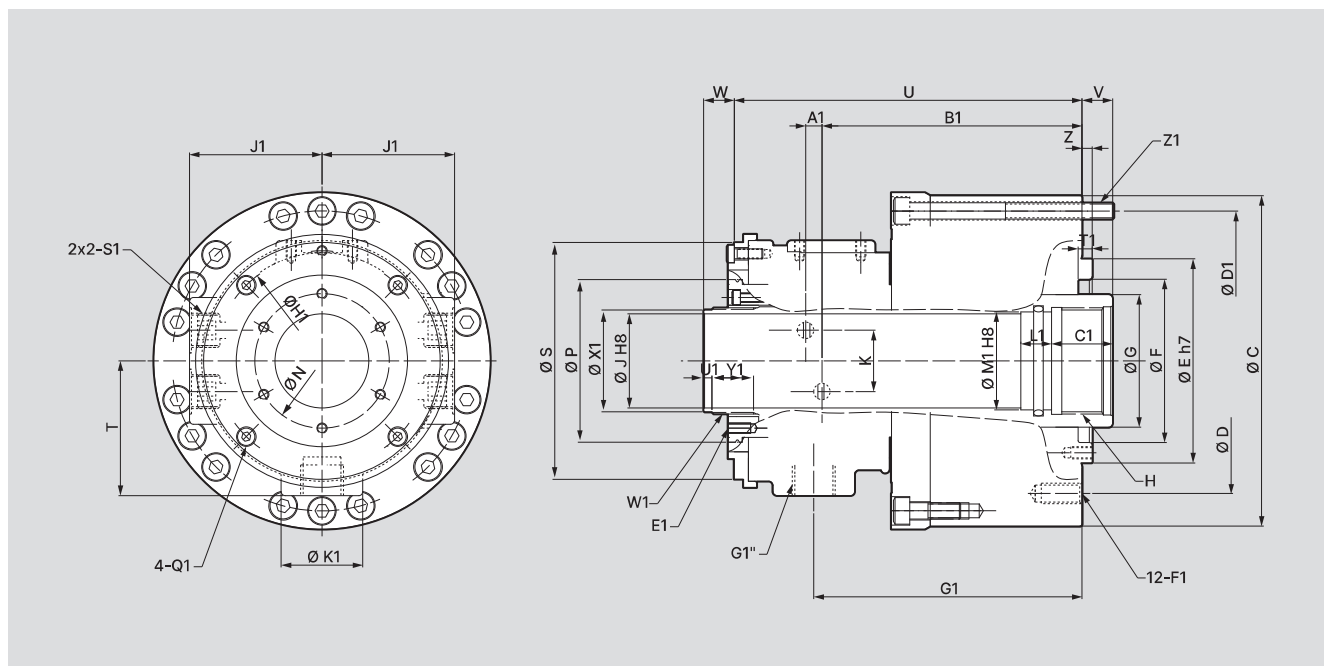


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SPECIFICATIONS

	SD-13546	SD-15452	SD-17568	SD-18577	SD-18582	SD-20591	SD-21510	SD-25411
Available I.D. [mm]	46	52	68	77	82	91	103	117.5
Piston Dia. [mm]	132	156	170	185	185	205	220	250
Piston Stroke [mm]	25	25	29	29	30	34	35	23
Piston Surface Area (Push) [cm ²]	108	151	172	201	195	233	238	356
Piston Surface Area (Pull) [cm ²]	97	142	160	187	180	224	230	325
Piston Force (Push) [kN(kgf)]	47(4800)	67(6800)	75(7656)	89(9000)	85(8700)	105(10700)	105(10700)	138(14100)
Piston Force (Pull) [kN(kgf)]	44(4500)	63(6400)	70(7050)	82(8300)	79(8100)	101(10299)	101(10300)	126(12900)
Max. Operating Pressure [MPa(kgf/cm ²)]	4.5(45)	4.5(45)	4.5(45)	4.5(45)	4.5(45)	4.5(45)	4.5(45)	4.0(40)
Max. r.p.m. [min ⁻¹]	7000	6200	5600	5000	4800	4000	3600	3000
Moment of inertia [kg-m ²]	0.03	0.045	0.07	0.097	0.11	0.17	0.25	0.5
Weight [kg]	10	14	18	23	26	29	37	54
Total Leakage [ℓ/min]	2.5	3	3.2	3.5	3.5	5	4.5	6

※ Maximum turning speed is based upon actual measurement.
 ※ Specifications are subject to change without notice.



※ See the product dimension Table on the right.

DIMENSIONS

	SD-13546	SD-15452	SD-17568	SD-18577	SD-18582	SD-20591	SD-21510	SD-25411
ΦC	165	190	210	218	223	245	266	310
ΦD	130	170	190	190	190	215	225	275
ΦD1	147	170	190	200	205	227	240	275
ΦE	100	130	160	160	160	180	200	230
ΦF	80	85	120	120	120	140	160	166
ΦG	65	70	85	95	100	110	125	140
H	M52x2.0	M60x2.0	M75x2.0	M85x2.0	M90x2.0	M100x2.0	M112x2.0	M130x2.0
ΦJ	46	52	68	77	82	91	103	117.5
K	36	36	40	40	40	40	48	46
N	63	76	92	102	106	124	128	138
ΦP	79.8	89.8	105.8	115.8	119.8	137.8	173.5	170
ΦS	116	135	154	164	175	188	208	230
T	125	134	141	149.5	160.5	153	174.5	204
U	159.5	149.5	173	180.5	186.5	214	216.5	231
V max	15	22	25	25	25	30	35	24
V min	-10	-3	-4	-4	-5	-4	0	1
W max	41.5	51	58.5	57.5	53	59	63	48
W min	16.5	26	29.5	28.5	23	25	28	25
Z	5	5	5	5	5	5	5	6
A1	8.5	8.5	11	11	11	13	14	18
B1	117.5	107.5	122.5	129.5	133	153	153.5	151.5
C1	30	30	30	35	35	35	30	45
E1	M6	M6	M6	M6	M6	M6	M6	M6
F1	M10 TAP DP'20	M10 TAP DP'20	M10 TAP DP'20	M10 TAP DP'20	M10 TAP DP'20	M12 TAP DP'24	M12 TAP DP'20	M16 TAP DP'32
G1	125.5	115.5	132.5	139.5	143.5	161	163	167.5
H1	105	118	145	155	160	168	190	206
J1	75	80	90	95	104	116	120	135
K1	47	47	47	47	47	47	47	47
L1	15	15	21	15	15	15	15	20
M1	48	55	71	80	85	95	106	123
Q1	M5 TAP DP'10	M6 TAP DP'10	M6 TAP DP'10	M6 TAP DP'10	M6 TAP DP'13	M6 TAP DP'8	M6 TAP DP'10	M6 TAP DP'12
S1	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8	G 3/8
T1	7	7	8	5	8	6	6	6
W1	M52x1.5	M58x1.5	M74x1.5	M84x2.0	M89x2.0	M99x2.0	M120x2.0	M124x2.0
ΦX1	50	56	71.5	81	86	96	117	121.5
Y1	21	27	28	26	25	27	34	29
U1	4	9	8	9	6	9	6	9
Z1	6-M8x95	6-M8x85	6-M10x100	8-M8x110	6-M10x110	6-M10x120	6-M12x120	8-M12x110

Soft Jaw

Power Chuck Soft Jaw



Application
Works with HC.

Fig. 1

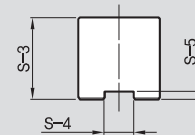
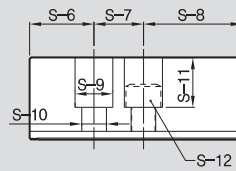
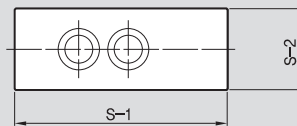


Fig. 2

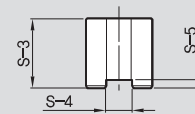
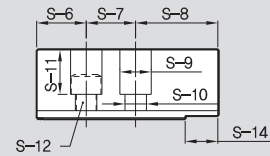
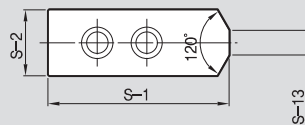


Fig. 3

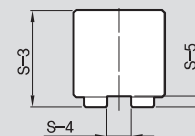
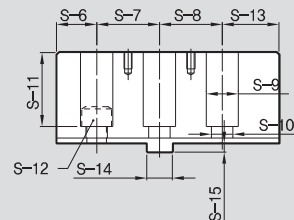
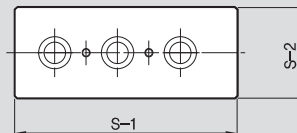


Fig. 4

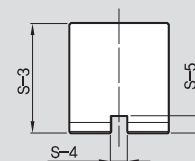
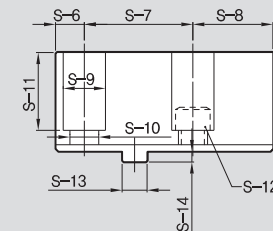
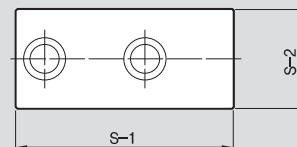
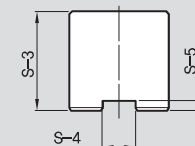
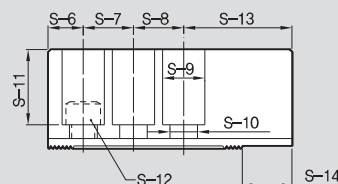
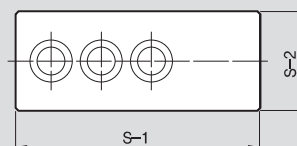


Fig. 5



※ See the product dimension Table on the right.
※ Please inquire separately for the special jaw.

DIMENSIONS

	SB04C1	SB05N1	SB05B1	SB06B1	JB06B1	SB08B1	JB08B1	SB10B1	JB10B1	SB12A1	SB12N1	JB12N1	SB15C1
Fig.	2	2	2	2		2		2		1	1		1
Serration Pitch	1.5x60°	1.5x60°	1.5x60°	1.5x60°		1.5x60°		1.5x60°		1.5x60°	1.5x60°		1.5x60°
S-1	48	54	62	72		95		110		129	111		165
S-2	19	23	23	31	32	35	37	40	42	49	49	52	62
S-3	23	25	27	32 (40/60/80/100/120)		37.5 (60/80/100/120)		42 (60/80/100/120)		49.5 (60/80/100/120)	49.5 (60/80/100/120)		66
S-4	8	10	10	12		14		16		18	21		22
S-5	3	4	4	5		5		5		5	4		8
S-6	8	12	14	15		24		30		39	21		37
S-7	15	14	19	20		25		30		30	30		43
S-8	25	28	29	37		46		50		60	60		85
S-9	11	13.5	13.5	17		19		19		23	25		32
S-10	6.6	8.5	8.5	11		13		13		15	17		21
S-11	15	16.5	18	20		23		27		30	32.5		42
S-12	M6x16	M8x20	M8x20	M10x30		M12x35		M12x35		M14x45	M16x40		M20x60
S-13	6	5	12	5		12		15		-	-		-
S-14	-	-	14	15		20		20		-	-		-
S-15	-	-	-	-		-		-		-	-		-
Corresponding	HCH-04	HC-04, HS-05	HC-05	HS/HCH/ HC-06, MH-206,	JBH/JBM- 306	HCH/HC/ HS-08, MH-208	JBH/JBM- 308	HCH/HC/ HS-10, MH-210	JBH/JBM- 310	HC-12	HS-12, MH-212	JBH/JBM- 312	HCH-15, HCH-18

	SB15N1	SB218A2	SB21A2	SB32B2	SB32GB	SB32SB2	SB40GB	SB40SB2
Fig.	1	1	1	1	4	5	3	5
Serration Pitch	1.5x60°	3.0x60°	3.0x60°	3.0x60°	-	3.0x60°	-	3.0x60°
S-1	135	165	180	160	165	185	270	270
S-2	50	62	65	75	75	75	110	110
S-3	59	66	69	75	82	75	117	110
S-4	25.5	22	25	25.5	12.7	25.5	30	30
S-5	5	8	9	7	13	7.5	13	7.5
S-6	26	30	40	25	21.9	26.8	48.8	32.5
S-7	43	50	60	38	76.2	38.1	76.2	60
S-8	66	85	80	97	66.9	38.1	76.2	60
S-9	36	32	32	32	32	32	39	39
S-10	21	21	21	22	22	21	26	26
S-11	38	42	45	54	59	57	90	90
S-12	M20x55	M20x60	M20x60	M20	M20	M20	M24	M24
S-13	-	-	-	-	19.025	82	68.8	117.5
S-14	-	-	-	-	7	-	19.025	85
S-15	-	-	-	-	-	-	7	-
Corresponding	HC-15, HC-18	MH-218	HC/HCH-21, HC/ HCH-24, MH- 221,224	HCH-32 [Serration]	HC-32 [Groove]	HC-32 [Serration]	HC- 40,50,55,63,70,80 [Groove]	HC- 40,50,55,63,70,80 [Serration]

Hard Jaw

Power Chuck Hard Jaw



Application
Works with HC.

Fig. 1

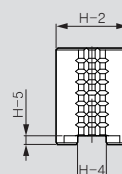
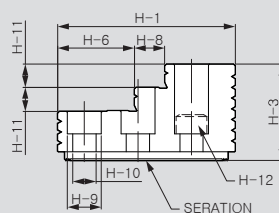
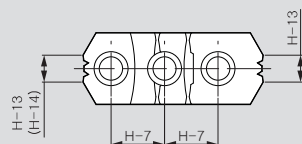


Fig. 2

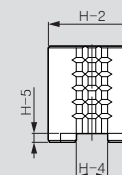
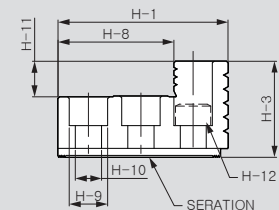
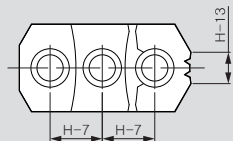


Fig. 3

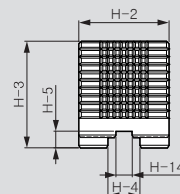
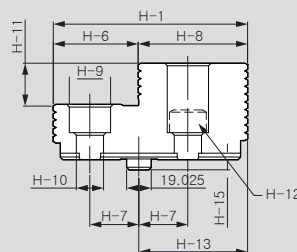
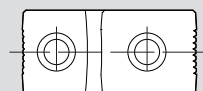


Fig. 4

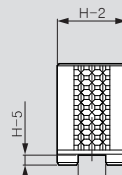
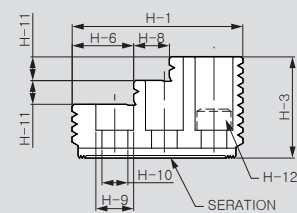
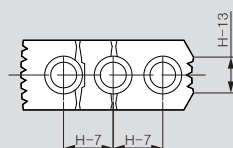
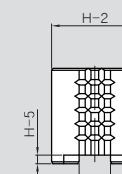
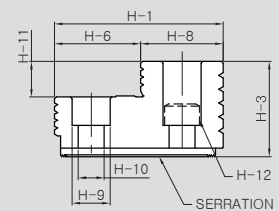
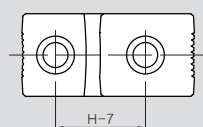


Fig. 5



※ See the product dimension Table on the right.

DIMENSIONS

	HB04N1	HB06A1	HB08A1	HB10A1	HB12B1	HB12N1	HB15A1	HB218A2
Fig.	2	1	4	1	2	2	1	1
Serration Pitch	1.5x60°	1.5x60°	1.5x60°	1.5x60°	1.5x60°	1.5x60°	1.5x60°	3.0x60°
H-1	53	67	86	99.5	97.5	103	149	149
H-2	23	31	35	40	50	50	62	62
H-3	27.5	41	51	54	55	52	86	86
H-4	10	12	14	16	18	21	22	22
H-5	4	5	5	5	5	4	9	9
H-6	30.5	18	31	43	64.5	62.5	63	63
H-7	14	20	25	30	30	30	43	50
H-8	22.5	17	18	17	33	40.5	34	34
H-9	13.5	17	19	19	22	25	32	32
H-10	8.5	11	13	13	15	17	21	21
H-11	10	9	12	13	20	17	20	20
H-12	M8	M10	M12	M12	M14	M16	M20	M20
H-13	6	10	18	15	18	30	40	40
H-14	-	-	18	15	-	-	40	40
H-15	-	-	-	-	-	-	-	-
Corresponding	HC-04, HS-05	HC/HS-06, MH-206, JBH/JBM-306	HC/HCH/HS-08, MH-208, JBH/JBM-308	HC/HCH/HS-10, MH-210, JBH/JBM-310	HC-12	HS-12, MH-212, JBH/JBM-312	HCH-15, HCH-18	MH-218, JBM-318

	HB15N1	HB21B2	HB32B2	HB32GB	HB32SB2	HB40GB	HB40SB2
Fig.	1	2	5	3	2	3	2
Serration Pitch	1.5x60°	3.0x60°	3.0x60°	-	3.0x60°	-	3.0x60°
H-1	149	159.5	145	150	168	223	223
H-2	62	80	70	70	70	80	80
H-3	86	90	75	83	75	124	117
H-4	25.5	25	25.5	25	25.5	30	30
H-5	5	9	7	13	7.5	15	8
H-6	69	104.5	66	66	89	133	133
H-7	43	50	76.2	38.1	38.1	38.1	114.3
H-8	27	55	79	79	79	90	90
H-9	32	32	32	32	32	39	39
H-10	21	21	21	21	21	26	26
H-11	20	40	32	32	32	55	55
H-12	M20	M20	M20	M20	M20	M24	M24
H-13	43	55	-	79	-	83	-
H-14	38	-	-	12.7	-	-	-
H-15	-	-	-	8	-	7	-
Corresponding	HC-15, HC-18	HC/HCH-21, HC/HCH-24, MH-221,224	HCH-32 [Serration]	HC-32 [Groove]	HC-32 [Serration]	HC-40[Groove] 50,55,63,70,80	HC-40[Serration] 50,55,63,70,80

T-NUT

Power Chuck T-Nuts



Application
Works with HC.

Fig. 1

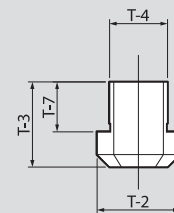
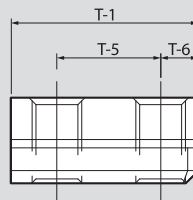
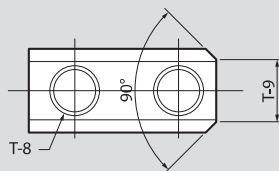


Fig. 2

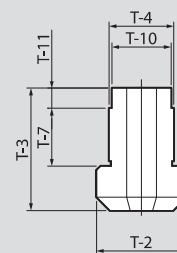
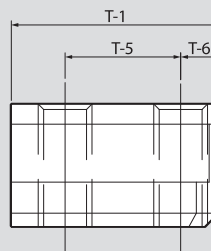
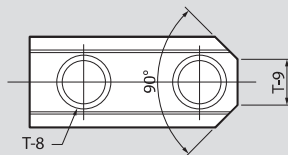
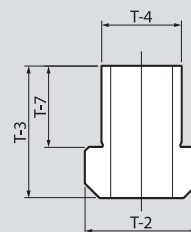
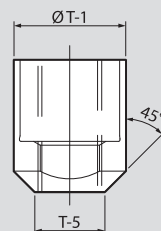
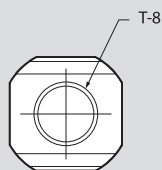


Fig. 3



※ See the product dimension Table on the right.

DIMENSIONS

	TN-HCH-04	TN-HC-04	TN-HS-05	TN-HC-05	TN-HS-06	TN-HC-06	TN-HS-08	TN-HC-08	TN-HS-10	TN-HC-10
Fig.	1	1	1	1	1	1	1	1	1	1
T-1	24.5	28	26	32	36	36.5	46.5	48	51	55
T-2	11.5	15	15	15	17.5	17.5	20.5	20.5	22.5	22.5
T-3	13.5	18	15	18	18.5	22.5	20.5	25.5	21.5	25.5
T-4	8	10	10	10	12	12	14	14	16	16
T-5	15	14	14	19	20	20	25	25	30	30
T-6	4.5	7	6	6	8.25	7.5	10.5	11	11	11
T-7	9	12.5	9.5	12.5	11	15	12	16	13	16
T-8	M6	M8	M8	M8	M10	M10	M12	M12	M12	M12
T-9	5	5	5	6	8	6	12	8	11	8
T-10	-	-	-	-	-	-	-	-	-	-
T-11	-	-	-	-	-	-	-	-	-	-
Corresponding	HCH Type of 4" Chuck	HC Type of 4" Chuck	HS Type of 5" Chuck	HC Type of 5" Chuck	HS/MH/ JBH/JBM Type of 6" Chuck	HC Type of 6" Chuck	HS/MH/ JBH/JBM Type of 8" Chuck	HC Type of 8" Chuck	HS/MH/ JBH/JBM Type of 10" Chuck	HC Type of 10" Chuck

	TN-HS-12	TN-HC-12	TN-HCH-15, TN-HCH-18	TN-HC-15, TN-HC-18	TN-MH-218	TNX-HC-21, TNX-HC-24	TN-HCH-32	TN-HC-32	TN-HC-40
Fig.	1	1	2	1	2	3	3	3	3
T-1	55.5	55.5	80	80	80	46	35	37	42
T-2	29.5	26.5	33.5	35	33.5	37.5	35	37.5	42.5
T-3	27.75	33.5	45.5	39	45.5	45	39.5	47.5	49.5
T-4	21	18	24	25.5	24	25	25.5	25.5	30
T-5	30	30	43	43	50	26.5	25	-	-
T-6	12	11.5	17	17	17	23	-	-	-
T-7	16.25	20	29	20	29	26	20.5	28.5	30.5
T-8	M16	M14	M20	M20	M20	M20	M20	M20	M24
T-9	13	12	11	11	16	-	-	-	-
T-10	-	-	22	-	-	-	-	-	-
T-11	-	-	7.5	-	-	-	-	-	-
Corresponding	HS/MH/ JBH/JBM Type of 12" Chuck	HC Type of 12" Chuck	HCH Type of 15", 18" Chuck	HC Type of 15", 18" Chuck	MH-218	HC/HCF-21,24 HCH/HCHF- 21,24, MH-221	HCH-32 PAC-50205, 50230, 60275	HC-32	HC-40 PAC-63325, 80375, 85375, 100560

※ TNX-HC-21-24, TNX-HC-32 require two T-nuts per Jaw.

※ TNX-HC-40 require three T-nuts per Jaw.

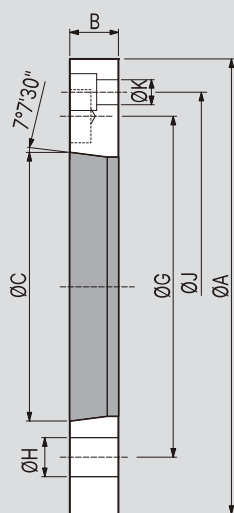
Adaptor Plates

Power Chuck Adaptor Plates



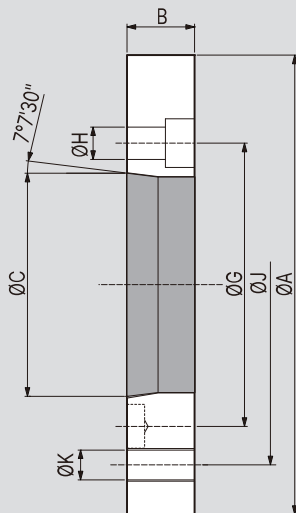
Application
Works with HC.

Fig. 1



Direct Type

Fig. 2



Indirect Type

Fig. 3

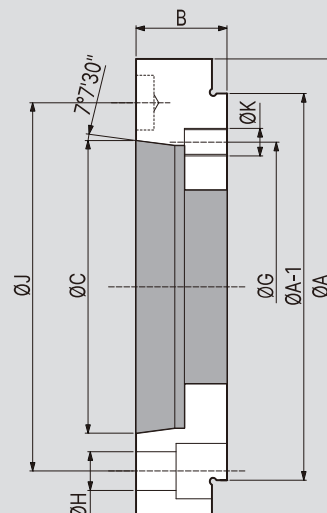


Plate Type

※ See the product dimension Table on the right.

DIMENSIONS

	Fig.	Spindle Nose	A	B	C	G	H	J	K	Corresponding
AP06A05	1	A2-5	140	15	82.563	104.78	12	116	6.6	HS/HSL/HCH/HC/HCL-06, MH-206, UR-175
APT06A05	1	A2-5	140	15	82.563	104.78	12	116	6.6	HST/HCT/HCLT-06, MHT-206
AP08A06	1	A2-6	170	17	106.375	133.35	13.5	150	6.6	HS/HSL/HCH/HC/HCL-08, MH-208, UR-210
APT08A06	1	A2-6	170	17	106.375	133.35	13.5	150	6.6	HST/HCT/HCLT-08, MHT-208
APF08A06	1	A2-6	220	17	106.375	133.35	13.5	150	6.6	HSF/HCF/HCLF-08, MHF-208
AP10/12A08	1	A2-8	220	18	139.719	171.45	18	190	9	HS/HSL/HCH/HC/HCL-10,12, MH-210, UR-250
APT10/12A08	1	A2-8	220	18	139.719	171.45	17	190	9	HST/HCT/HCLT-10,12
APF10/12A08	1	A2-8	220	18	139.719	171.45	18	190	9	HSF-10,12, HCF/HCLF-12
AP212A08	1	A2-8	300	22	139.719	235	21	260	11	MH-212, UR-315
AP15A11	1	A2-11	300	22	196.87	235	21	260	11	HCH-15, HC-15,18, MH-212, JBM-312
APT15A11	1	A2-11	300	22	196.87	235	21	260	11	HCHT-15
APF15A11	1	A2-11	300	22	196.87	235	21	260	11	HCHF-15, HCF-15,18
AP18A11	1	A2-11	380	22	196.87	235	21	260	11	HCH-18
APF18A11	1	A2-11	380	22	196.87	235	21	260	11	HCHF-18
AP21/24A15	1	A2-15	380	27	285.775	330.2	24	330.2	14	HCH/HC-21,24, MH-221,224

	Fig.	Spindle Nose	A	B	C	G	H	J	K	Corresponding
AP08A05	2	A2-5	170	25	82.563	104.78	12	133.35	M12	HS/ HST/ HSF/ HSL/ HCH/ HC/ HCT/ HCF/HCL/ HCLT/ HCLF-08, MH/ MHT/ MHF-208, JBH/JBM-308
AP10/12A06	2	A2-6	220	25	106.375	133.35	13.5	171.45	M16	HS/ HST/ HSF/ HSL/ HCH/ HC/ HCT/ HCL/HCLT-10,12, MH-210, HCF/ HCLF-12, JBH/JBM-310,312
AP15A08	2	A2-8	300	33	139.719	171.45	18	235	M20	HCH/ HCHT/ HCHF-15, HC/HCF-15,18
AP218A15	2	A2-15	380	60	285.775	330.2	24	300	M20	MH-218
AP21/24A11	2	A2-11	380	27	196.87	235	21	330.2	M22	HCH/ HC-21,24,MH-221,224
AP21/24A11	2	A2-11	380	42	196.87	235	22	330.2	M22	HCH/ HCHF/ HC/ HCF-21,24, MH-221,224
AP21/24A11	2	A2-11	380	42	196.87	235	22	330.2	M24	HC/HCF-32, HCH/HCHF/HC-21N,24N
AP21/24A15	2	A2-15	380	42	285.775	330.2	24	330.2	M22	HCH/ HC-21,24, MH-221,224
AP32A15	2	A2-15	380	42	285.775	330.2	26	330.2	M24	HC-32
AP32/40A11	2	A2-11	520	50	196.87	235	22	463.6	M24	HCH-32, HC-40, HC-50
AP32/40A15	2	A2-15	520	42	285.775	330.2	26	463.6	M24	HCH-32, HC-40, HC-50

	Fig.	Spindle Nose	A	A-1	B	C	G	H	J	K	Corresponding
AP06A06	3	A2-6	165	140	33	106.375	133.35	14	104.78	M10	HS/ HSL/ HCH/ HC/ HCL-06, MH-206, JBH/JBM-306
AP08A08	3	A2-8	210	170	30	139.719	171.45	18	133.35	M12	HS/ HST/ HSF/ HSL/ HCH/ HC/ HCT/ HCF/ HCL/ HCLT/ HCLF-08, MH/ MHT/ MHF-208, JBH/JBM-308