MH Standard Mega Bore 3-Jaw High-Speed Open-Center Chuck

Application

Mega-bore 3-Jaw wedge-style, open-center power chuck

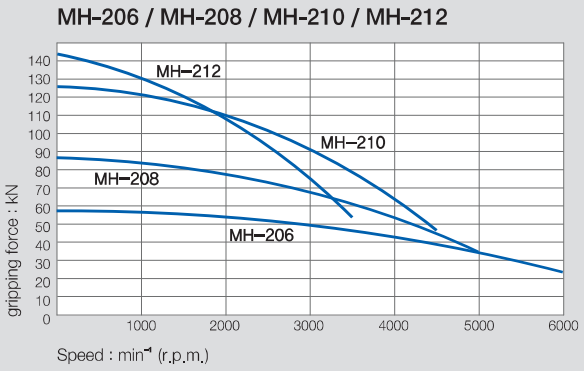
Technical features

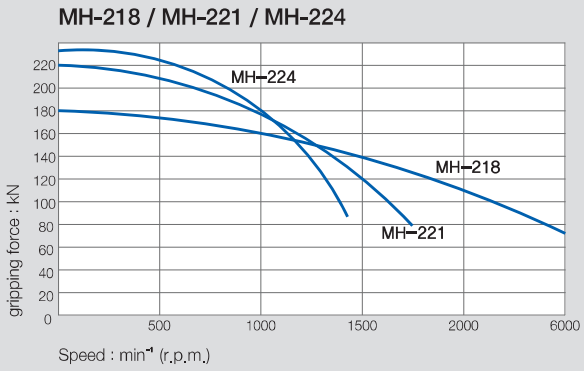
Gripping force transmission by wedge structure
Precision-hardened core components ensure chuck longevity

RELATED PRODUCT

Adaptor 174p
H/S Jaw 168p
Cylinder 56, 58, 66p

Dynamic Grip Force Diagram



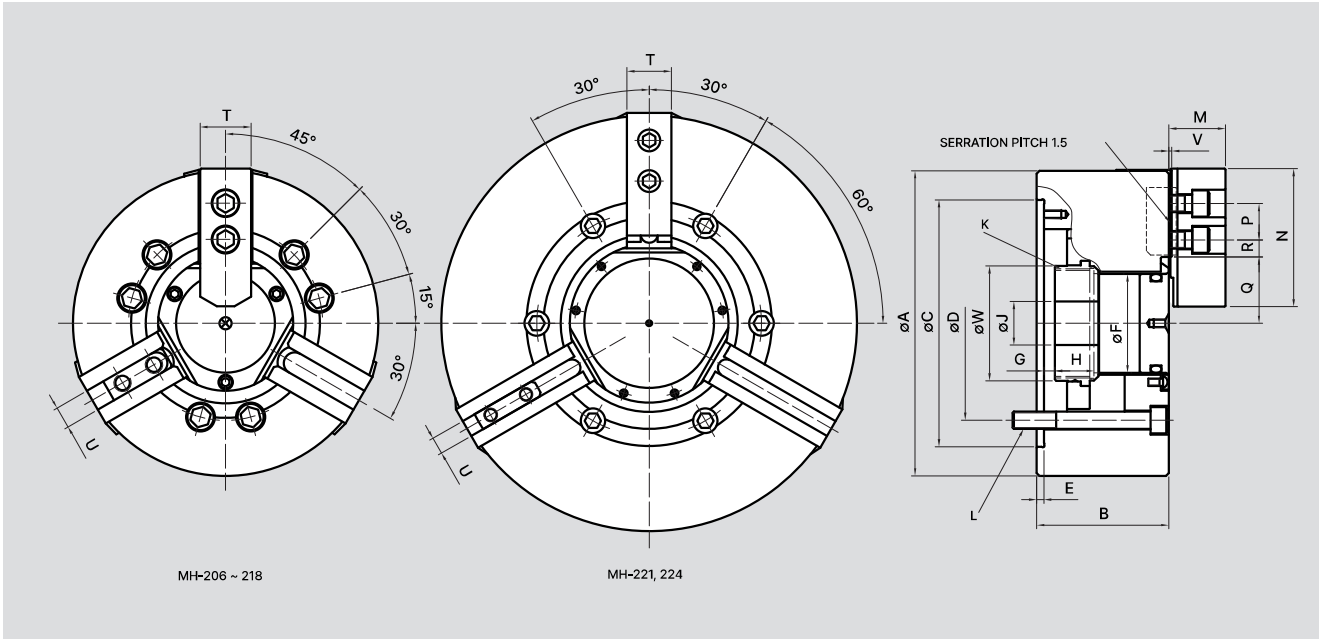


※ When using taller, heavier jaws or clamping on a larger diameter, reduce RPM accordingly

SPECIFICATIONS

	MH-206	MH-208	MH-210	MH-212	MH-218	MH-221	MH-224
Thru Hole Dia. [mm]	52	66	82	103	166.5	166.5	190
Grip Dia. Max [mm]	175	210	254	315	457	530	610
Grip Dia. Min. [mm]	16.5	23	30	54	73	105	120
Jaw Stroke Dia. [mm]	6.4	7.4	8.8	10.6	11.5	10.6	12.8
Plunger Stroke [mm]	14	16	19	23	25	23	28
Max. Permissible Input Force [kN(kgf)]	24.7(2551)	36.4(3596)	49(4976)	55(5608)	71(7240)	90(9177)	90(9177)
Max. Static Gripping Force [kN(kgf)]	57.3(5847)	87(8872)	126.6(12848)	144(14686)	180(18355)	220(22460)	234(23861)
Max. r.p.m. [min^{-1}]	6000	5000	4500	3000	2000	1700	1400
Weight [kg]	11.9	23	32	55.3	170	228	293
Moment of inertia [$kg \cdot m^2$]	0.058	0.14	0.32	0.81	4.75	8.9	15.9
Operating Cylinder	SD-15452	SD-17568	SD-18582	SD-21510	SDL-30516	SDL-30516	SHL-39024
Max. Hydraulic Pressure [MPa(kgf/cm^2)]	1.78(18.1)	2.34(23.9)	2.74(28)	2.65(27.2)	1.81(18.5)	2.21(22.5)	1.57(16.1)
Operating Hard Jaw	HB06A1	HB08A1	HB10A1	HB12N1	HB218A2	HB21B2	HB21B2

※ Maximum turning speed is based upon actual measurment.
※ Specifications are subject to change without notice.
※ Samcully Machinery Co., Ltd. is no longer an OEM manufacturer for Kitagawa® Iron Works Co., Ltd.



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

DIMENSIONS

	MH-206	MH-208	MH-210	MH-212	MH-218	MH-221	MH-224
ΦA	175	210	254	315	457	530	610
B	81	91	100	110	135	140	149
ΦC(H6)	140	170	220	300	380	380	380
ØD	104.8	133.4	171.45	235	300	330.2	330.2
E	5	5	5	6	6	6	6
ØF	52	66	82	103	166.5	166.5	190
G max.	14	7.5	8.5	8	8	11	20
G min.	0	-8.5	-10.5	-15	-17	-12	-3
H	17.5	27	25	28	50	39	40.5
ΦJ	20	30	52	66	107	80	80
K max.	M60x2.0	M75x2.0	M90x2.0	M116x2.0	M175x3.0	M180x3.0	M200x3.0
L	3-M10x95	6-M12x115	6-M16x120	6-M20x130	6-M20x130	6-M22x140	6-M22x150
M	32.5	39	43	50.5	69	73	73
N	72	95	110	111	165	180	180
P	20	25	30	30	50	60	60
Q max.	38	45.7	54.5	67.3	102	111.75	119.5
Q min.	34.8	42	50.1	62	96.25	106.5	114.2
R max.	21.75	23.75	32.25	45.75	58.25	72.5	105.5
R min.	10.25	11.75	14.25	15.75	20.25	21.5	21.5
T	31	35	40	49	69	65	65
U	12	14	16	21	22	25	25
V	2	2	2	2	5	5	5
ΦW	65	80	101	124	186	197	210

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

Soft Jaw Power Chuck Soft Jaw

Application
Works with HC.

Fig. 1

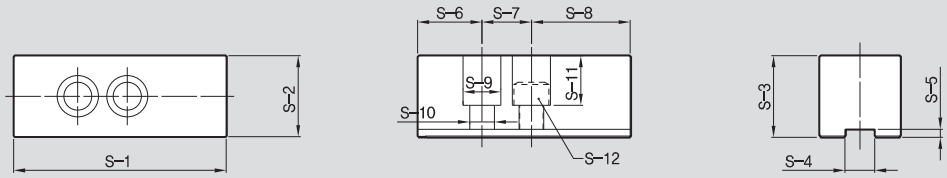


Fig. 2

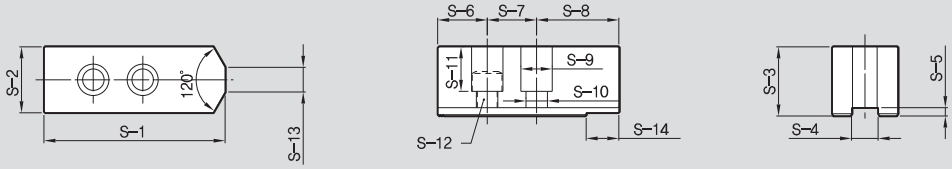


Fig. 3

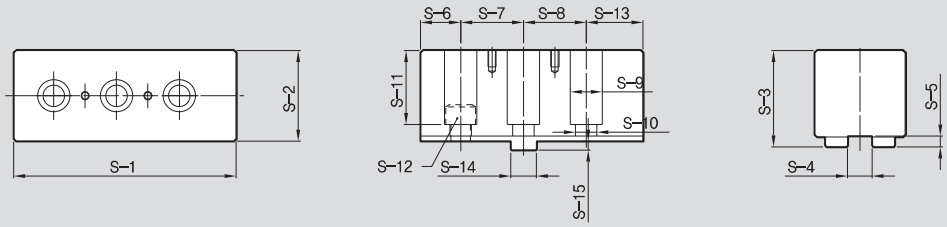


Fig. 4

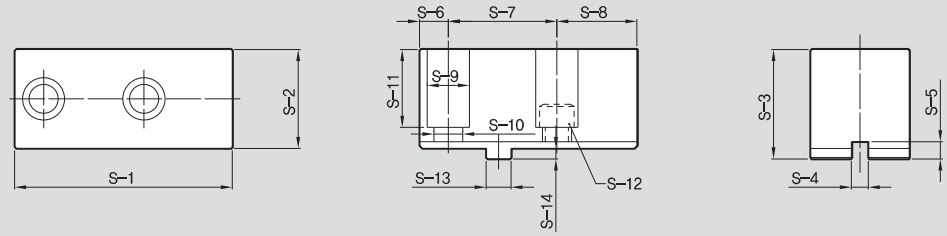
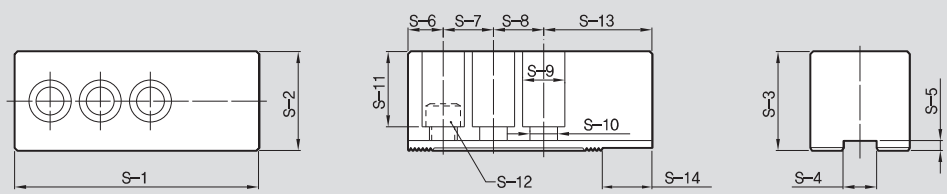


Fig. 5



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

Accessories

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

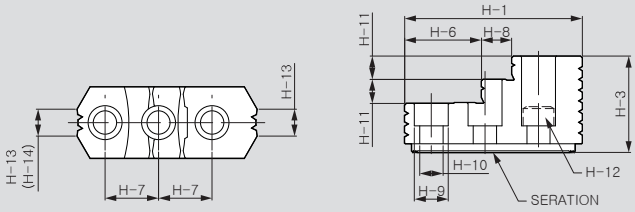


Fig. 2

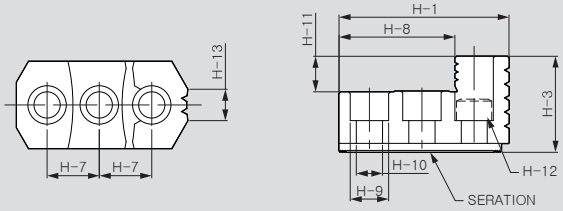


Fig. 3

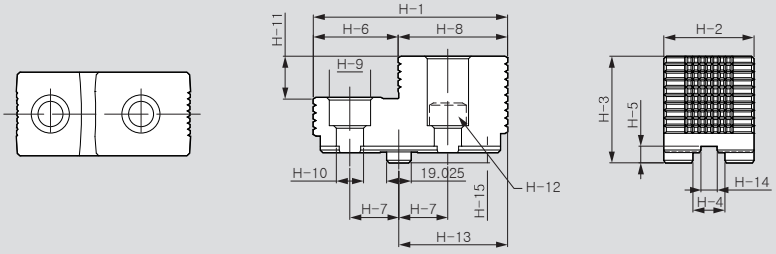


Fig. 4

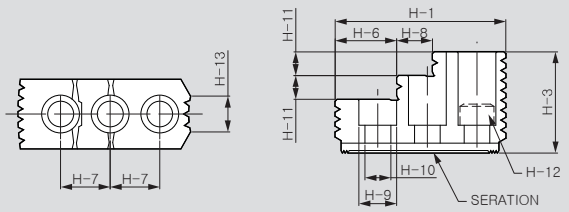
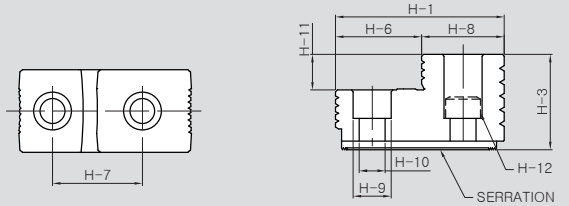


Fig. 5



※ 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

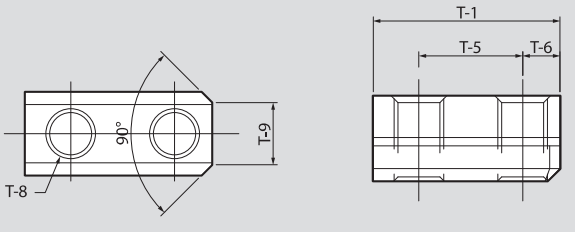


Fig. 2

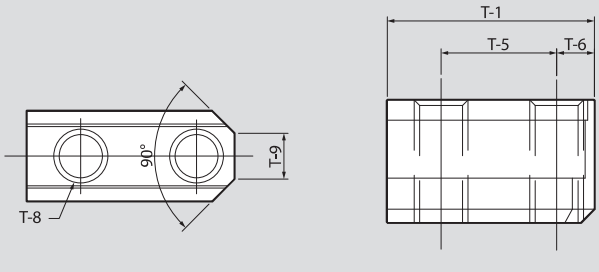
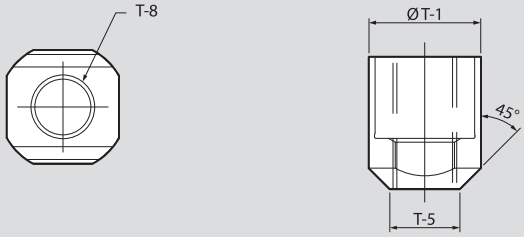


Fig. 3



※ See the product dimension Table on the right.

DIMENSIONS

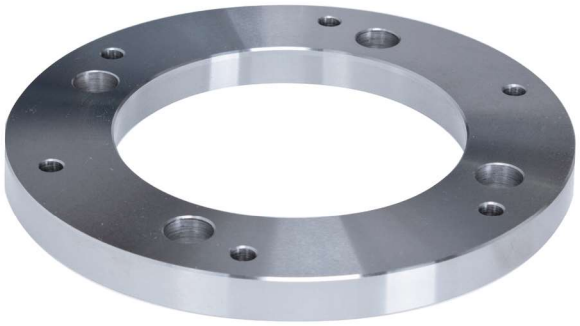
	TN-HCH-04	TN-HC-04	TN-HS-05	TN-HC-05	TN-HS-06	TN-HC-06	TN-HS-08	TN-HC-08	TN-HS-10	TN-HC-10
Fig.	1	1	1	1	1	1	1	1	1	1
T-1	24.5	28	26	32	36	36.5	46.5	48	51	55
T-2	11.5	15	15	15	17.5	17.5	20.5	20.5	22.5	22.5
T-3	13.5	18	15	18	18.5	22.5	20.5	25.5	21.5	25.5
T-4	8	10	10	10	12	12	14	14	16	16
T-5	15	14	14	19	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.

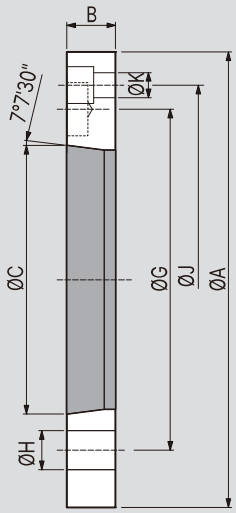
Adaptor Plates

Power Chuck Adaptor Plates



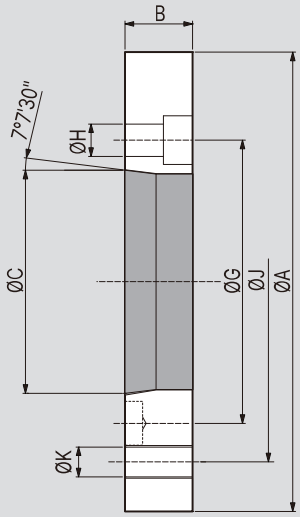
Application
Works with HC.

Fig. 1



Direct Type

Fig. 2



Indirect Type

Fig. 3

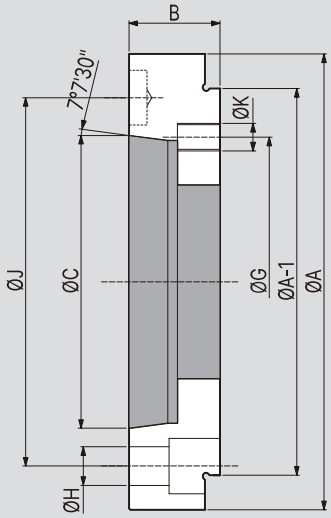


Plate Type

※ See the product dimension Table on the right.

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

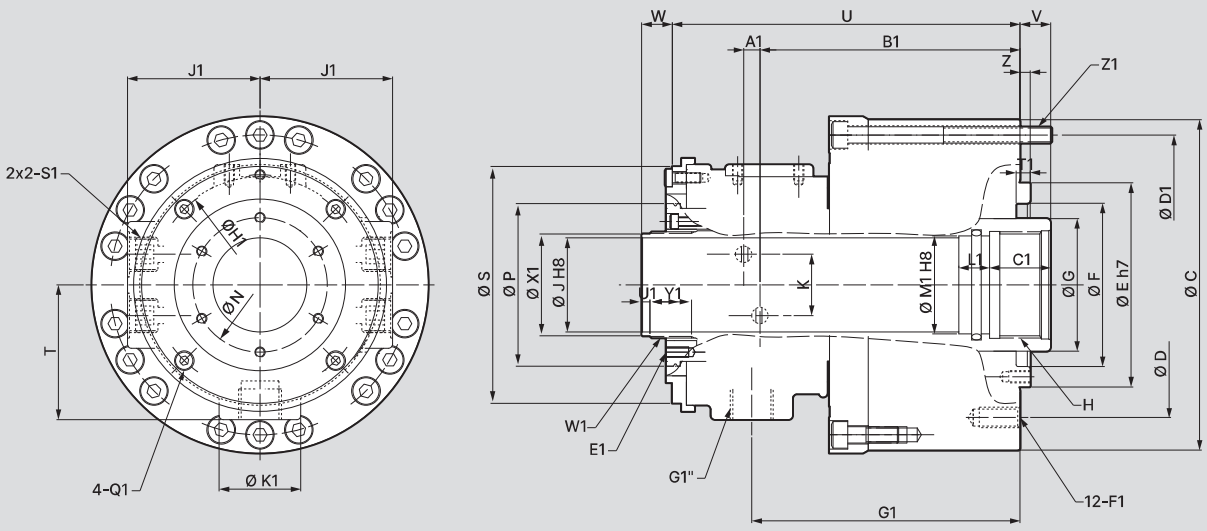
RELATED PRODUCT

CP3 64p
Work Stop 64p

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 Sruface 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 measurment.
※ 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

SDL Mega-Bore Short body Open-Center Hydraulic Cylinder (Long-Stroke)

Application

Large bore work in machines with limited clearance

Technical features

Low drain rate reduces heat generation

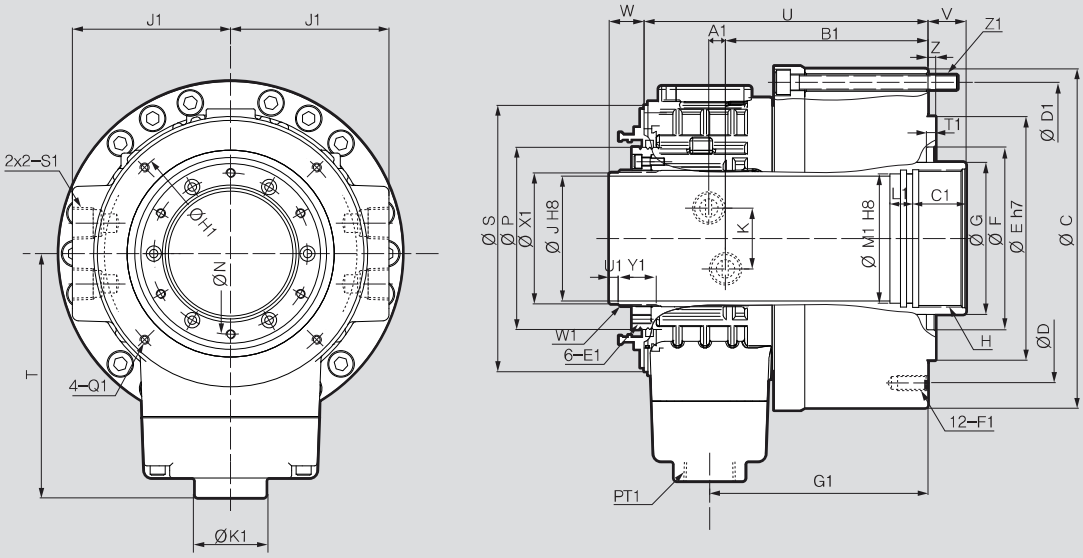
RELATED PRODUCT

CP3 64p
Work Stop 64p

SPECIFICATIONS

	SDL-25411	SDL-30516
Available I.D. [mm]	117.5	166.5
Piston Dia. [mm]	250	305
Piston Stroke [mm]	50	51
Piston Sruface Area (Push) [cm^2]	356	480
Piston Surface Area (Pull) [cm^2]	325	436
Piston Force (Push) [kN(kgf)]	138(14100)	152(15483)
Piston Force (Pull) [kN(kgf)]	126(12900)	138(14060)
Max. Operating Pressure [MPa(kgf/cm^2)]	4.0(40)	3.3(33)
Max. r.p.m. [min^{-1}]	3000	2000
Moment of inertia [$kg \cdot m^2$]	0.5	1.45
Weight [kg]	54	90
Total Leakage [ℓ/min]	6	8.4

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



※ See the product dimension Table on the right.

DIMENSIONS

	SDL-25411	SDL-30516
ΦC	310	370
ΦD	275	290
ΦD1	275	345
ΦE	230	260
ΦF	166	240
ΦG	140	190
H	M130x2.0	M180x3.0
ΦJ	117.5	166.5
K	46	42
N	138	188
ΦP	170	222
ΦS	230	278
T	204	230
U	258	290
V max	46	51
V min	-4	0
W max	75	76
W min	25	25
Z	6	5
A1	18	17.5
B1	178.5	206
C1	45	45
E1	M6	M6
F1	M16 TAP DP'32	M16 TAP DP'32
G1	194.5	221
H1	206	256
J1	135	160
K1	47	47
L1	20	20
M1	123	170
Q1	M6 TAP DP'12	M6 TAP DP'12
S1	G 3/8	G 1/2
T1	6	7
W1	M124x2.0	M173x2.0
ΦX1	121.5	170.5
Y1	29	45
U1	9	8
Z1	8-M12x140	12-M12x160

SHL Mega-Bore Short-Body Long-Stroke Open-Center Hydraulic Cylinder

Application

A high speed, open-center cylinder with a larger bore and lighter than the standard SYH (Long Stroke)

Technical features

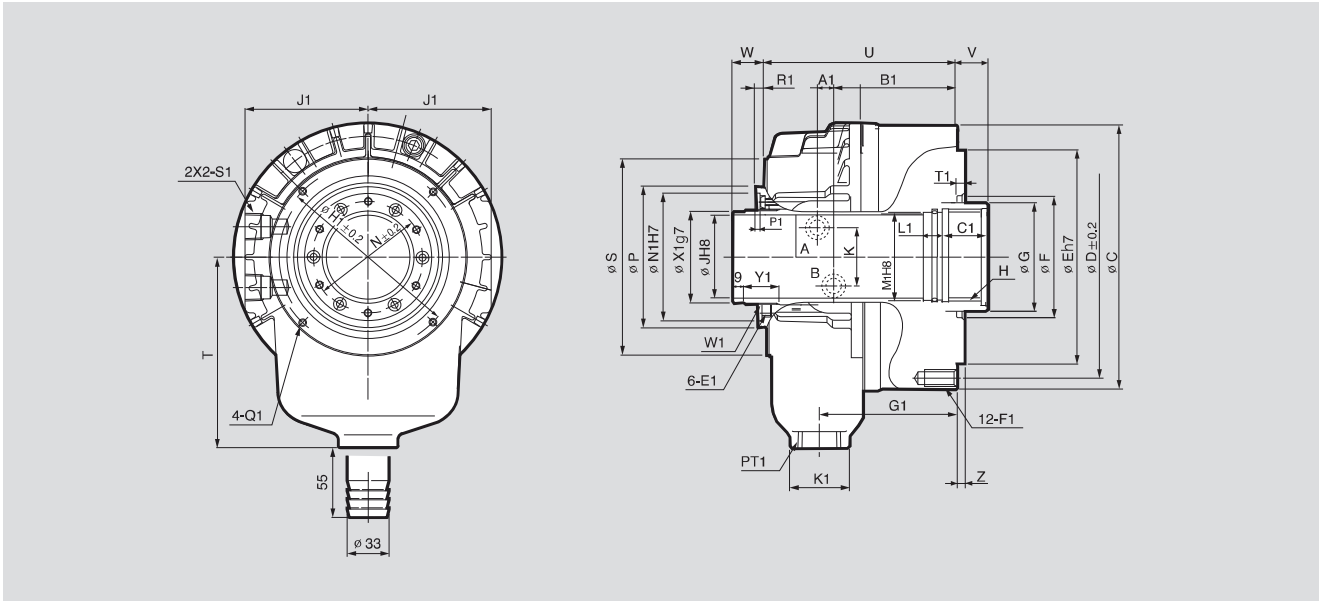
Built-in lock valve to maintain thrust in case of power failure or sudden pressure drop

Built-in relief valve prevents overpressure and cylinder damage

SPECIFICATIONS

	Available I.D. [mm]	Piston Dia. [mm]	Piston Stroke [mm]	Piston Sruface Area (Push) [cm^2]	Piston Surface Area (Pull) [cm^2]	Piston Force (Push) [kN(kgf)]	Piston Force (Pull) [kN(kgf)]	Max. Operating Pressure [MPa(kgf/cm^2)]	Max. r.p.m. [min^{-1}]	Moment of inertia [$kg{\cdot}m^2$]	Weight [kg]	Total Leakage [l/min]
SHL-39024	240	390	51	681.2	632.4	152.5(15570)	138.7(14152)	2.5(25)	1500	4.045	140	14

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



DIMENSIONS

	ΦC	ΦD	ΦE	ΦF	ΦG	Hmax.	ΦJ	K	N	ΦP	ΦS	T
SHL-39024	450	420	320	280	265	M250x3.0	240	30	268	310	370	340

U	V max.	V min.	W max.	W min.	Z	A1	B1	C1	E1	F1DP'	G1	H1
302.5	50	-1	76	25	6	22	199	45	M6	M16 TAP DP'40	215	350

J1	K1	L1	ΦM1	ΦN1	P1	Q1	R1	S1	T1	W1	Y1	ΦX1
215	75	20	243	284	5.5	M6 TAP DP'12	7.5	PT 1/2	8	M253x2.0	249	38