General Catalog vol.6

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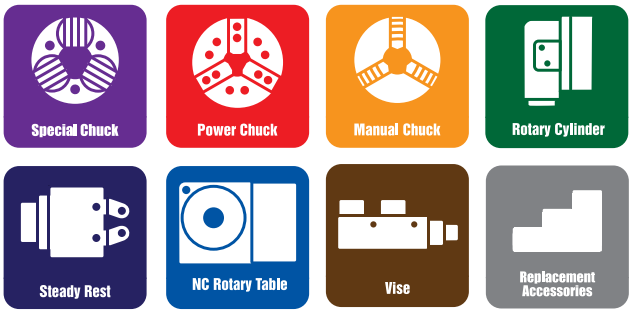
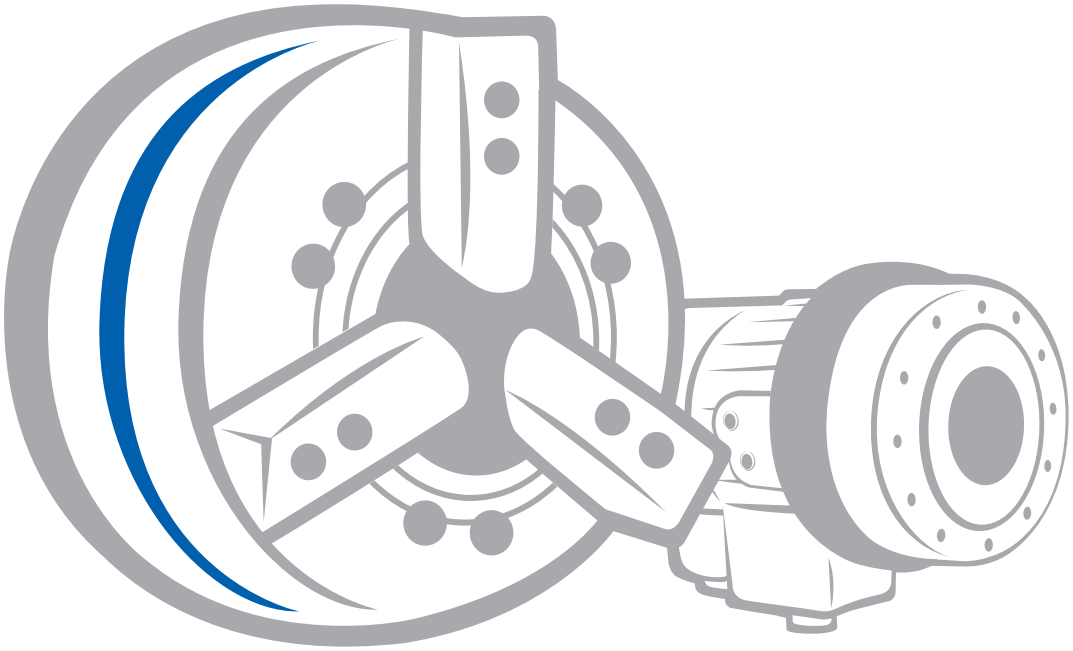
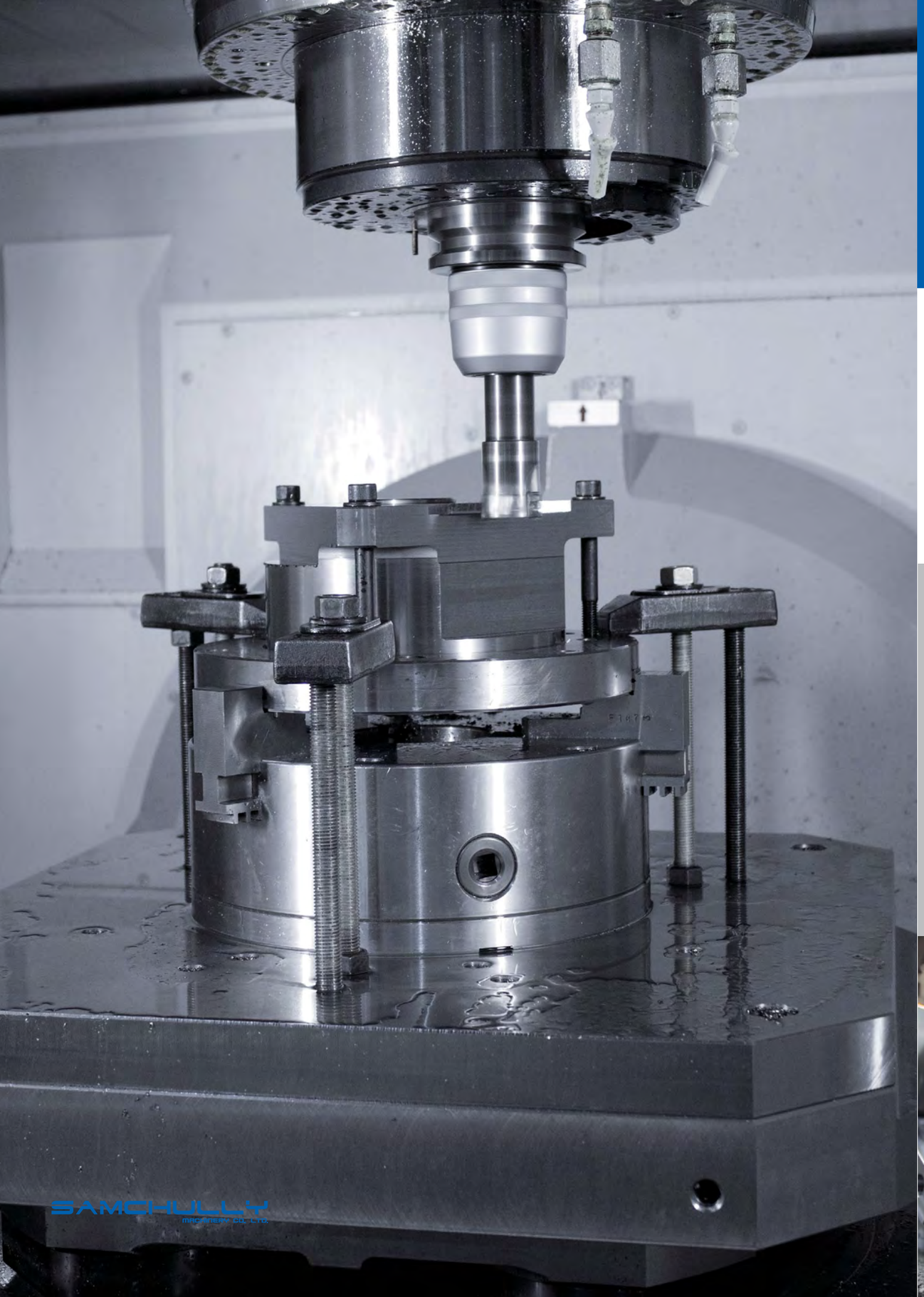


SAMCHULLY
MACHINERY CO., LTD.





You deserve better –
you deserve Samchully !

Global Work-holding Brand

Samchully Machinery Co., Ltd.
Creating value through innovation.

Combination Chuck

Samchully Machinery Co., Ltd. offers 30 years of experience in providing a wide range of premium quality work-holding products such as application, hydraulic, and manual chucks, milling vises, and rotary tables.
In keeping with our tradition of providing quality products, we perennially hold ISO:9001 and TUV certifications. Samchully Machinery Co., Ltd. also received Single Part Per Million certification [Single PPM] in 2007. The Single PPM quality assurance program is specifically adapted to North-East Asian manufacturing which relies heavily on outsourcings to leverage economies of scale. The Single PPM program emphasizes close collaboration with employees and vendors to reduce incoming component defects to a single digit (less than 10) for every million parts received. Samchully is one of the first certified organizations in South Korea.
We proudly supply some of the world's leading machine tool makers, including Doosan (Daewoo), Hyundai-Wia (Kia) and Haas Automation, and provide after-market sales support through an extensive global network of distributors.
At Samchully, we are committed to you, our customer. We pride ourselves in providing the best value product in the world by combining premium quality, affordable pricing, and reliable service. We believe that you deserve better workholding options– you deserve Samchully.

Power Chuck | Special Chuck | Manual Chuck | Rotary Cylinder
NC Rotary Table | Steady Rest | Vise | Replacement Accessories

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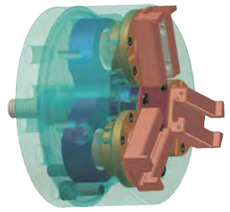
Index

SPECIAL CHUCKS

PBL

Universal Ball-Lock Power Chuck

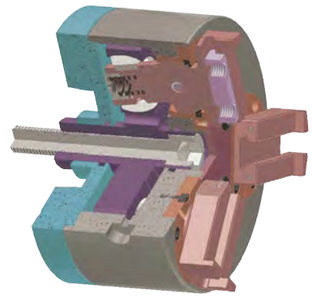
- Castings or forgings can be O.D. or I.D. clamped
- Grips on taper up to 10°
- Jaws pivot up to 5° to grip on uneven surfaces
- Ideal for shaft machining
- Active pull-down for high precision



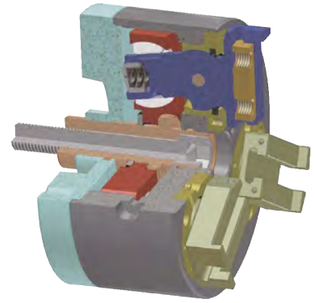
SPECIAL CHUCK

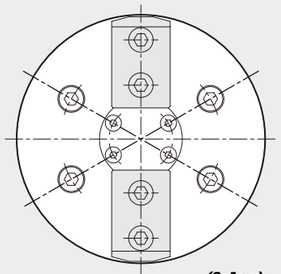
Special Chuck

Centralizing

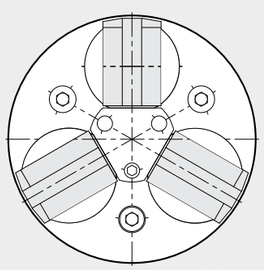


Compensating

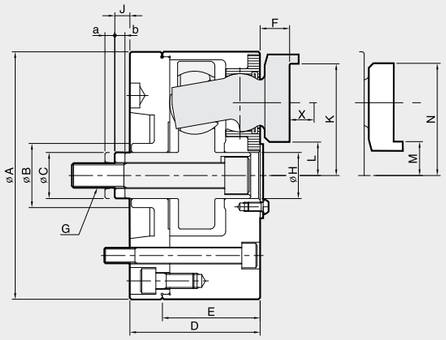


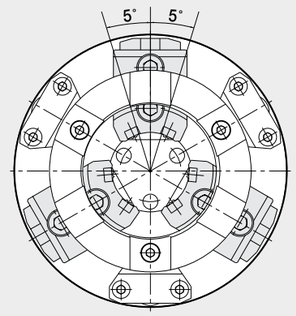


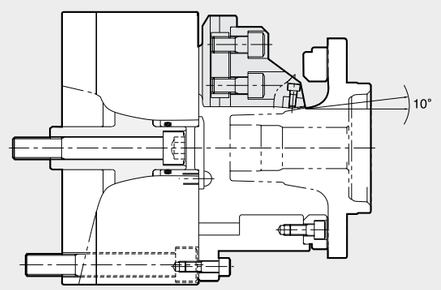
(2-Jaw)



(3-Jaw)







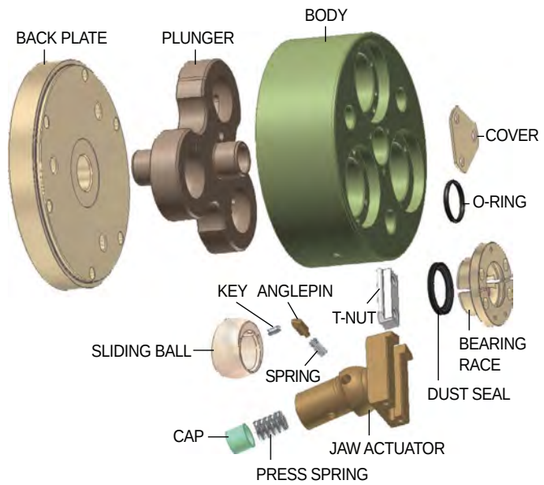
Dimensions

	A	B MIN	C	D	E	F	G	H	J	a	b	K	L	M	N	X
PBL-06	162	40	30.16	85.2	59.2	19.3	M16	Φ30.170	10.6	5.1	6.2	73.15	20.3	22.1	75	24.9
PBL-08	200	45	31.75	100	70	23.3	M16	Φ31.760	10.4	8.0	6.4	88.95	25.3	25.35	89	29.4
PBL-10	254	58	41.27	118	86.6	29.1	M18	Φ41.285	13.5	8.0	9.5	112.7	30.2	30.3	112.8	36.5
PBL-12	300	58	41.27	118	86.6	29.1	M18	Φ41.285	13.5	8.0	9.5	133.27	50.87	50.77	133.37	36.5
PBL-15	381	83	57.16	131	96.1	32.4	M24	Φ57.160	24.7	10.3	12	171.45	65.8	69.8	175.46	41.9
PBL-18	457	120.7	88.90	131	96.1	32.4	M30	Φ88.900	31.7	10.3	12	209.55	103.9	107.9	213.6	41.9
PBL-21	533	120.7	88.90	131	96.1	32.4	M30	Φ88.900	31.7	10.3	12	247.65	142	146	252	41.9

Specifications

	Clamping Force (kgf)	Max. Drawbar Pull (kgf)	Jaw Stroke mm(dia)	Plunger Stroke (mm)	Chucking Diameter		Max. Speed (r.p.m.)	Weight (kg)	GD² (kgf·m²)
					Outside Dia (mm)	Inside Dia (mm)			
PBL-06	7130	2375	7.9	11.3	12.7~120	70~152	4200	18	0.15
PBL-08	9780	3260	9.5	14.3	16~152	76~203	3700	27	0.48
PBL-10	12540	4180	12.7	17.5	50~203	85~235	3400	45	1.23
PBL-12	12540	4180	12.7	17.5	63~241	127~305	2800	67.5	2.42
PBL-15	16800	5600	15.8	22.3	76~317	165~381	2000	84.5	8.49
PBL-18	16800	5600	15.8	22.3	89~394	241~457	1500	120	15.17
PBL-21	16500	5500	15.8	22.3	162~470	317~533	1000	180	25.00

PBL Components



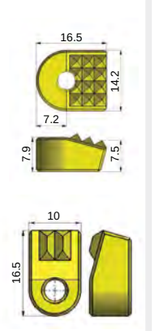
Inserts

Angle Lot Style

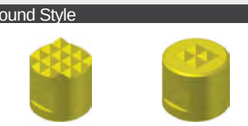
PC127-10SC PC127-4SC PC130-4SC

PC132-4SC PC145-5SC

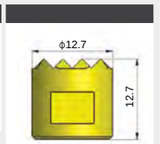
PC127-4SC-S PC130-2SC-S



Round Style



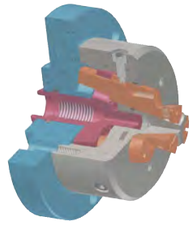
PC070-12SC PC070-4SC



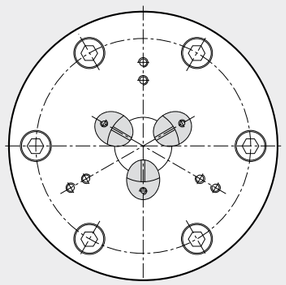
PIL

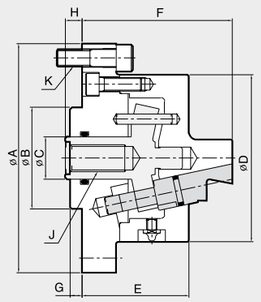
Inside Pin Arbor Chuck

- Ideal for second operation I.D. gripping
- Active pull-down for high precision
- Counter-centrifugal gripping reduces distortion

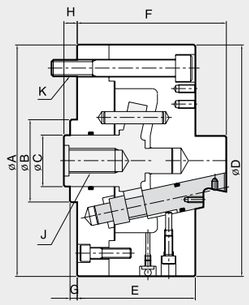


SPECIAL CHUCK





PIL-25,35



PIL-55,75,100

Dimensions

	A	B(h7)	C	D	E	F	G	Hmax.	Hmin.	J	K
PIL-25	135	60	20	85	60	80	7	12	8	M12	3-M10 PCD118
PIL-35	135	60	25	100	63	88.5	7	12	8	M16	3-M10 PCD118
PIL-55	190	80	32	190	93	120	7	18	8	M16	3-M16 PCD150
PIL-75	225	80	50	225	115	145	7	18	8	M24	6-M16 PCD180
PIL-100	270	120	50	270	130	170	7	23	13	M24	6-M16 PCD180

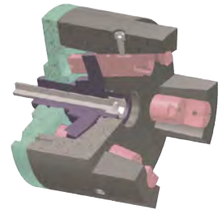
Specifications

	Clamping Force KN(kgf)	Max. Drawbar Pull (kgf)	Jaw Stroke mm(dia)	Plunger Stroke (mm)	Chucking Diameter (mm)		Max. Speed (r.p.m.)	Weight (kg)	GD² (kgf·m²)
					Pin Jaw (mm)	Top Jaw (mm)			
PIL-25	2250	1200	1.7	4	17~25	-	5000	3.5	0.013
PIL-35	3380	1800	1.7	4	25~40	48~60	4500	4.3	0.026
PIL-55	5640	3000	4.2	10	35~55	62~90	3500	18.4	0.33
PIL-75	7150	3800	4.2	10	55~76	85~130	2500	35	0.88
PIL-100	7150	3800	4.2	10	80~110	120~180	2000	55	2.0

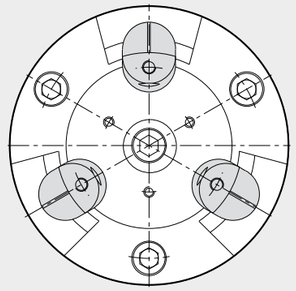
POL

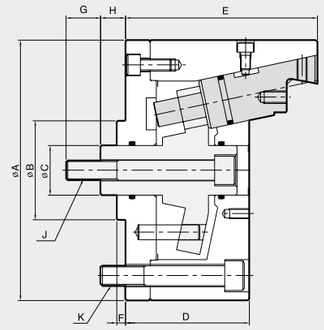
Outside Pin Arbor Chuck

- Ideal for second operation O.D. gripping
- Active pull-down for high precision
- Counter centrifugal gripping reduces distortion



SPECIAL CHUCK





Dimensions

	A	B(h7)	C	D	E	F	G	Hmax.	Hmin.	J	K
POL-80	130	60	24	72	103	5	20	18	10	M12	3-M8 PCD100
POL-100	162	80	30	90	130	7	30	22.5	12.5	M16	3-M12 PCD130
POL-140	210	80	40	100	155	7	30	25	15	M16	3-M16 PCD170
POL-180	250	80	45	110	165	7	30	25	15	M18	3-M16 PCD210
POL-230	320	120	50	130	200	7	40	30	20	M20	6-M16 PCD270

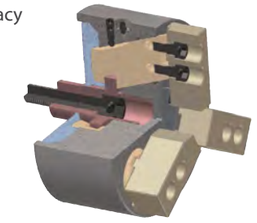
Specifications

	Clamping Force KN(kgf)	Max. Drawbar pull (kgf)	Jaw Stroke mm(dia)	Plunger Stroke (mm)	Chucking Diameter (mm)		Max. Speed (r.p.m.)	Weight (kg)	GD² (kgf·m²)
					Pin Jaw (mm)	Top Jaw (mm)			
POL-80	2250	1200	3.4	8	65~80	15~60	5000	8	0.067
POL-100	3760	2000	4.2	10	86~100	20~80	4500	16	0.2
POL-140	4700	2500	4.2	10	120~140	60~110	3000	27	0.54
POL-180	5640	3000	4.2	10	150~180	100~145	2000	46	1.43
POL-230	7520	4000	4.2	10	-	120~200	2000	70	3.5

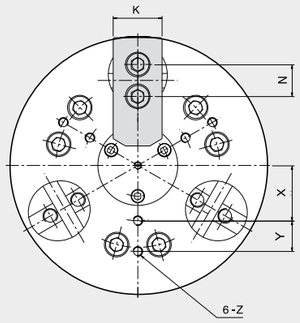
DDL

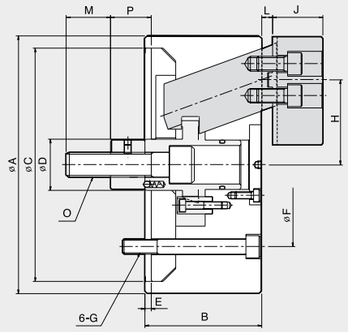
Outside Draw-Down Chuck

- Workpiece pulled down to location for superior accuracy
- Very accurate for parallel and perpendicular surfaces
- Interchangeable top jaws facilitate work on multiple workpieces
- Sealed to prevent chips and coolant from entering the chuck body



SPECIAL CHUCK





Dimensions

	A	B	C(h7)	D	E	F	G	Hmax.	Hmin.	J	K	Lmax.	Lmin.	M	N	O	Pmax.	Pmin.	X	Y	Z
DDL-05	130	70	80	28	5	100	3-M8	44	41.5	24.5	30	10.5	3.5	25	-	M12	24	17	30	-	3-M6
DDL-06	165	85	140	34	5	104.8	M10	58	54.4	31	35	14	4	36	-	M16	33	23	35	20	M6
DDL-08	210	95	190	40	5	133.4	M12	71	67.4	41	40	14	4	36	26	M20	38	28	45	25	M8
DDL-10	254	110	230	50	5	171.4	M16	85	79.6	49	50	19	4	46	32	M24	47	32	55	30	M8
DDL-12	304	125	230	54	5	171.4	M16	102	96.6	51	60	19	4	50	36	M27	47	32	70	35	M10
DDL-15	381	140	300	60	8	230	M20	133.6	126.4	60	70	26	6	47	40	M30	71	51	95	45	M12

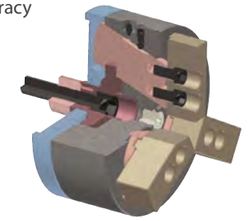
Specifications

	Clamping Force (kgf)	Max. Drawbar Pull (kgf)	Jaw Stroke mm(dia)	Plunger Stroke (mm)	Chucking Diameter (mm)		Max. Speed (r.p.m.)	Weight (kg)	GD² (kgf·m²)
					Standard	Top Jaw Type			
DDL-05	2000	1000	5.0	7	15~65	15~60	3500	7.3	0.07
DDL-06	2500	1500	7.2	10	35~85	35~80	3500	14	0.18
DDL-08	4500	2500	7.2	10	40~200	40~150	3000	27	0.66
DDL-10	6000	3500	10.8	15	50~250	50~200	2500	46	1.50
DDL-12	7500	4500	10.8	15	50~300	50~250	2000	68	3.20
DDL-15	9000	5500	14.5	20	60~380	60~320	1500	110	9.00

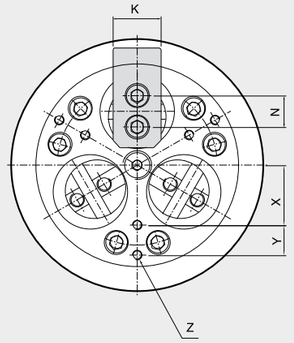
DDO

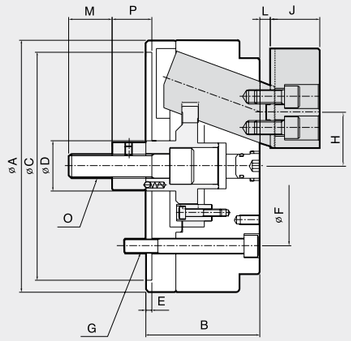
Inside Draw-Down Chuck

- Workpiece pulled down to location for superior accuracy
- Very accurate for parallel and perpendicular surfaces
- Interchangeable top jaws facilitate work on multiple workpieces
- Sealed to prevent chips and coolant from entering the chuck body



SPECIAL CHUCK





Dimensions

	A	B	C(h7)	D	E	F	G	Hmax.	Hmin.	J	K	Lmax.	Lmin.	M	N	O	Pmax.	Pmin.	X	Y	Z
DDO-06	165	80	140	35	5	104.8	M10	37.9	35	30	35	12	4	36	--	M16	31	23	40	20	M6
DDO-08	210	95	190	42	5	133.4	M12	46.6	43	41	40	14	4	36	26	M20	38	28	50	25	M8
DDO-10	254	110	230	52	5	171.4	M16	57.9	52.5	46	50	19	4	46	32	M24	47	32	60	30	M8
DDO-12	304	125	230	80	5	171.4	M16	65.4	60	51	60	19	4	50	36	M27	47	32	70	40	M10

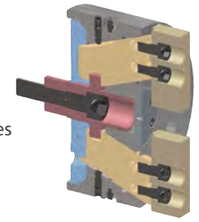
Specifications

	Clamping Force (kgf)	Max. Drawbar Pull (kgf)	Jaw Strokre mm(dia)	Chucking Diameter (mm)		Max. Speed (r.p.m.)	Weight (kg)	GD² (kgf·m²)
				Standard	Top Jaw Type			
DDO-06	2500	1500	5.8	35~140	70~140	5000	13	0.18
DDO-08	4500	2500	7.2	40~180	90~180	4500	26	0.66
DDO-10	6000	3500	10.8	50~220	100~220	4000	44	1.50
DDO-12	7500	4500	10.8	60~270	110~220	3500	68	2.90

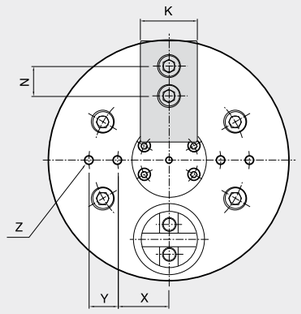
DDT

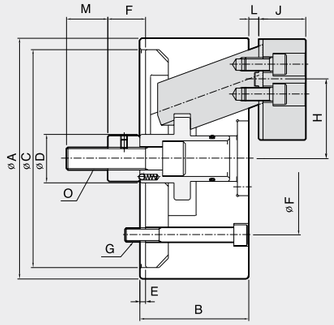
2-Jaw Draw-Down Chuck

- Workpiece pulled down to location for superior accuracy
- Ideal for machning square, rectangular and irregulary-shaped components
- Very accurate for parallel and perpendicular surfaces



SPECIAL CHUCK





Dimensions

	A	B	C(h7)	D	E	F	G	Hmax.	Hmin.	J	K	Lmax.	Lmin.	M	N	O	Pmax.	Pmin.	X	Y	Z
DDT-06	160	85	140	35	5	104.8	M10	58	54.4	31	35	18	8	36	-	M16	34	23	35	20	M6
DDT-08	210	95	190	42	5	133.4	M12	71	67.5	41	40	15	8	38	26	M20	39	28	45	25	M8
DDT-10	254	110	230	52	5	171.4	M16	85	79.9	46	50	23	9	46	32	M24	48	32	55	30	M8

Specifications

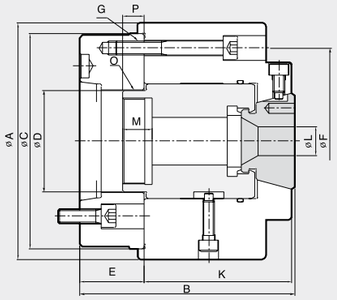
	Clamping Force (kgf)	Max. Drawbar Pull (kgf)	Jaw Stroke mm(dia)	Plunger Stroke (mm)	Chucking Diameter (mm)		Max. Speed (r.p.m.)	Weight (kg)	GD² (kgf·m²)
					Standard	Top Jaw Type			
DDT-06	1600	1000	7.2	11	35~85	35~80	2500	14	0.19
DDT-08	2800	1700	7.2	11	40~200	40~150	2200	26	0.57
DDT-10	4000	2500	10.2	16	50~250	50~200	1800	42	1.50

COR

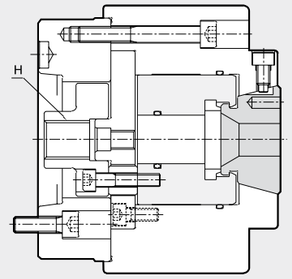
Outside-Collet Chuck

- Quick change rubber -steel segment collet
- Ideal for bar and shaft clamping
- Round, square and hexagonal collets available

SPECIAL CHUCK



Bar Work



Chucking work

Dimensions

	A	B	C(h7)	D	E	F	G	H	K	Lmax.	Lmin.	M	O	Pmax.	Pmin.
COR-32	165	150	150	71	45	130	M10	M24	103	32	5	20.5	M60X2.0	16.5	13.5
COR-50	165	150	150	87	45	130	M10	M24	103	50	12	27.5	M74X1.5	23	20
COR-65	180	170	170	103	49	150	M12	M30	119	65	16	25	M90X2.0	25.5	22.5
COR-90	210	190	170	103	55	150	M12	M30	133	90	30	25	M90X2.0	28.5	22.5

Specifications

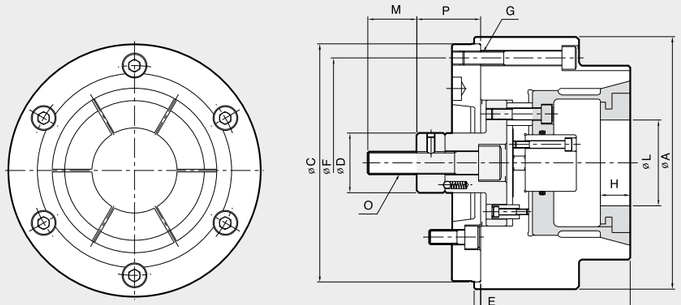
	Clamping Force (kgf)	Max. Drawbar Pull (kgf)	Collet Expansion (mm)	Plunger Stroke (mm)	Chucking Diameter (mm)		Max. Speed (r.p.m.)	Weight (kg)
					Bar Work	Chuck Work		
COR-32	6400	3200	1	3	5~32	7~32	4500	25
COR-50	8200	4100	1	3	12~50	12~50	4500	25
COR-65	9200	4600	1	3	16~65	16~65	4000	32
COR-90	13300	6500	2	6	30~90	30~90	3500	38

CDO

Outside-Collet Chuck

SPECIAL CHUCK

- Interchangeable top jaws grip the workpiece O.D.
- Workpiece is pulled down to location for high accuracy machining
- Air sensing available
- Air / Coolant through the spindle available



Dimensions

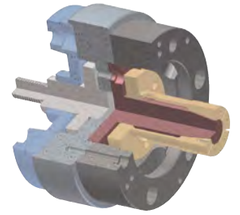
	A	B	C(h⁻)	D	E	F	G	H	Lmax.	Lmin.	M	O	Pmax.	Pmin.
CDO-06	165	115	150	35	5	130	M12	30	50	15	36	M16	26	23
CDO-08	210	125	200	42	5	180	M12	35	90	80	36	M20	32	29
CDO-10	250	145	230	52	5	210	M16	45	130	80	46	M24	35	32
CDO-12	300	170	230	52	5	270	M16	50	180	100	50	M24	36	32

Specifications

	Clamping Force (kgf)	Max. Drawbar Pull (kgf)	Collet Expansion (mm)	Plunger Stroke (mm)	Chucking Diameter (mm)		Max. Speed (r.p.m.)	Weight (kg)	GD² (kgf·m²)
					Max	Min			
CDO-06	2800	1500	1.6	3	50	15	4500	11	0.11
CDO-08	4600	2500	1.6	3	80	40	4000	23	0.44
CDO-10	6500	3500	1.6	3	130	80	3300	49	1.76
CDO-12	7500	4000	2.0	4	180	100	2500	67	3.10

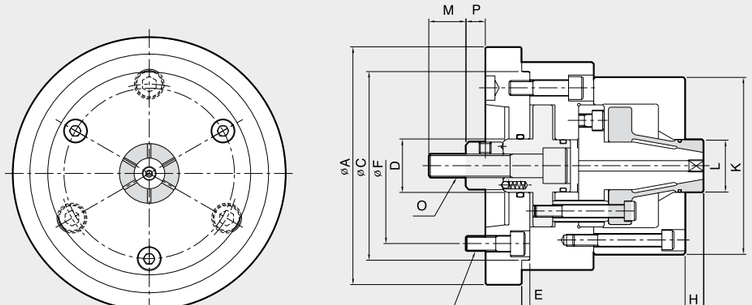
CDI

Inside-Clamping Mandrel



- Pulled down to location for accuracy
- Collet changes quickly for machining a variety of work pieces
- Air sensing can be added for automatic loading

SPECIAL CHUCK



Dimensions

	A	B	C(h⁻)	D	E	F	G	H	K	Lmax.	Lmin.	M	O	Pmax.	Pmin.
CDI-06	165	115	150	35	6	104.8	M10	15	L+25	15	40	40	M16	26	23
CDI-08	200	135	170	42	6	133.4	M12	20	L+35	90	40	45	M20	33	29
CDI-10	250	180	230	52	6	171.4	M16	35	L+40	130	90	55	M24	36	32
CDI-12	300	220	230	52	6	171.4	M16	40	L+50	180	130	55	M24	37	32

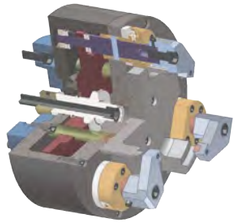
Specifications

	Clamping Force (kgf)	Max. Drawbar Pull (kgf)	Collet Expansion (mm)	Plunger Stroke (mm)	Chucking Diameter (mm)		Max. Speed (r.p.m.)	Weight (kg)	GD² (kgf·m²)
					Max	Min			
CDI-06	4000	1500	0.8	3	40	15	4500	7	0.06
CDI-08	7000	2500	1.0	4	90	40	4000	14	0.19
CDI-10	12000	4000	1.0	4	130	90	3300	34	0.71
CDI-12	15000	4800	1.4	5	180	130	2500	55	2.0

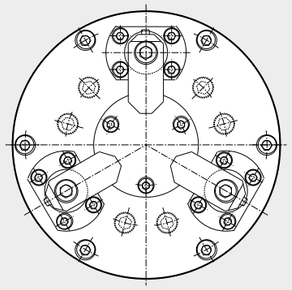
FD

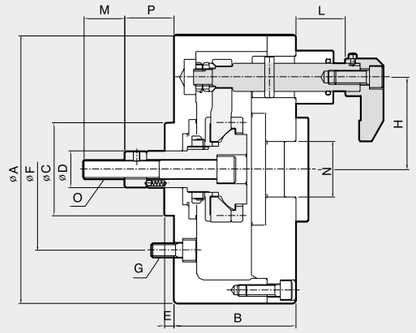
Finger Chuck

- Ideal for clamping thin-wall and fragile workpieces without distortion
- Floating clamping fingers adjust to workpiece shape
- Available in 2-jaw, 3-jaw, and 4-jaw models



SPECIAL CHUCK





Dimensions

	A	B	C(h')	D	E	F	G	H	Lmax.	Lmin.	M	N	O	Pmax.	Pmin.
FD-06	165	75	60	35	7	104.8	M10	55	54	30	36	40	M16	44	30
FD-08	210	85	80	42	7	133.4	M12	75	59	35	36	45	M20	50	35
FD-10	254	95	120	52	7	171.4	M16	95	72	40	46	55	M24	60	40
FD-12	304	110	120	52	7	171.4	M16	120	72	45	46	55	M24	60	40
FD-15	381	125	150	55	7	230	M20	155	84	50	50	60	M27	75	50
FD-18	457	140	150	55	7	230	M20	192	84	50	50	60	M27	75	50

Specifications

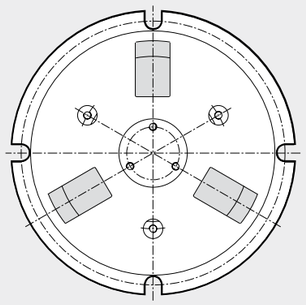
	Clamping Force (kgf)	Max. Drawbar Pull (kgf)	Jaw Compensating mm (dia)	Plunger Stroke (mm)	Chucking Diameter (mm)		Max. Speed (r.p.m.)	Weight (kg)	GD² (kgf·m²)
					Max	Min			
FD-06	1400	1800	2	14	75	30	3500	9	0.12
FD-08	2100	2700	2	15	110	50	2800	18	0.41
FD-10	2800	3600	2	20	145	60	2400	30	1.05
FD-12	2800	3600	2	20	195	110	2100	41	2.17
FD-15	3600	4500	2	20	260	180	1800	73	5.65
FD-18	3600	4500	2	25	330	215	1500	102	11.6

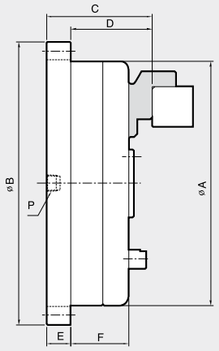
DP

Diaphragm Chuck

- Accuracy to 0.002mm ideal for hard turning gears
- Counter-centrifugal design
- Sealed body eliminates maintenance
- Jaw can be easily changed
- Self-contained cylinder

SPECIAL CHUCK





Dimensions

	A	B	C	D	E	F	P
DP-06	171.4	208	92	72.9	19.1	65	1/4
DP-08	212.9	246	96.8	77.7	19.1	70	1/4
DP-10	251.0	284	96.8	77.7	19.1	85	1/4
DP-13	327.2	360	108	88.9	19.1	85	1/4
DP-17	428.9	476	109.5	90.4	19.1	85	1/4

Specifications

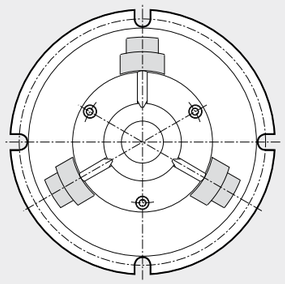
	Clamping Force (kgf) P=3.5Kg/cm²	No. of Jaw	Jaw Stroke (mm)	Chucking Diameter (mm)	Max rpm (r.p.m.)	Pressure (kgf/cm²)	Weight (kg)
DP-06	450	3 (6 JAW)	0.23	44~107	4500	4.5	11
DP-08	720	3 (6 JAW)	0.25	76~143	4000	4.5	20
DP-10	1150	3 (6 JAW)	0.25	114~181	3500	4.5	26.5
DP-13	2000	3 (6 JAW)	0.35	150~248	3000	4.5	43
DP-17	3600	3 (6 JAW)	0.40	203~349	2000	4.5	89

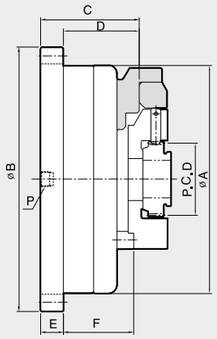
GDP

Gear Chuck

- Diaphragm chuck for hard turning/ grinding gears
- Jaws can be easily changed

SPECIAL CHUCK





Dimensions

	A	B	C	D	E	F	P
GDP-08	212.9	246	96.8	77.7	19.1	70	1/4
GDP-10	251.0	284	96.8	77.7	19.1	85	1/4
GDP-13	327.2	360	108	88.9	19.1	85	1/4
GOP-17	428.9	476	109.5	90.4	19.1	85	1/4

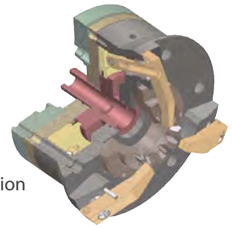
Specifications

	Clamping Force(kgf) P=3.5Kg/cm²	No. of Jaw	Jaw Stroke (mm)	Chucking Diameter (mm)	Max rpm (r.p.m.)	Pressure (kgf/cm²)	Weight (kg)
GDP-08	720	3	0.25	40~70	4000	4.5	20
GDP-10	1150	3	0.25	70~100	3500	4.5	26.5
GDP-13	2000	3	0.35	100~160	3000	4.5	43
GOP-17	3600	3	0.40	160~250	2000	4.5	89

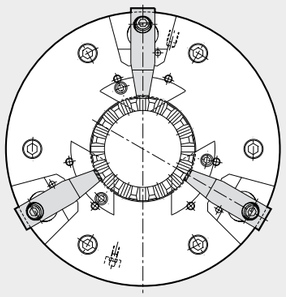
BDG

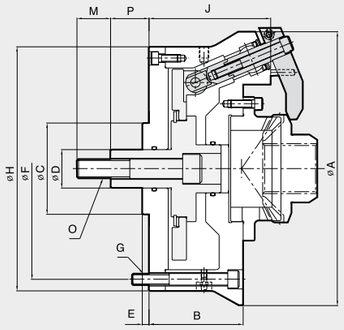
Bevel-Gear Chuck

- Finger chuck for high accuracy clamping of bevel gears
- Floating action ensures equal clamping force on all 3 fingers
- Available with hydraulic and pneumatic actuation



SPECIAL CHUCK





Dimensions

	A	B	C(h⁷)	D	E	F	G	H	J	M	O	Pmax.	Pmin.
BDG-07	215	98	80	30	7	160	M12	185	126.5	27	M16	45	30
BDG-10	285	98	95	40	7	230	M12	254	126.5	35	M20	45	30

Specifications

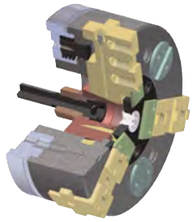
	Max. Drawbar Pull (kgf)	Plunger Stroke (mm)	Chucking Diameter (mm)	Max. Speed (r.p.m.)	Weight (kg)
BDG-07	1500	15	22.2~147.5	2000	30
BDG-10	1500	15	88.9~203.2	1500	45

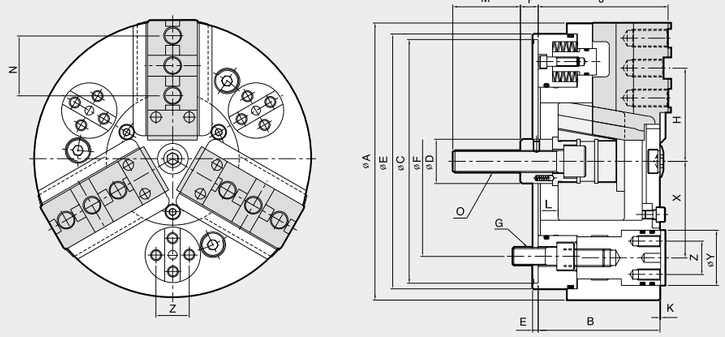
PHD

Outside Pull-Down Chuck

SPECIAL CHUCK

- Ideal for clamping workpieces with small gripping surfaces.
- Sliding jaws clamp the component; then, the entire chuck body pulls down to location for accurate machining.





Dimensions

	A	B	C(h7)	D	E	F	G	Hmax.	Hmin.	J	K	Lmax.	Lmin.	M	N	O	Pmax.	Pmin.	X	Y	Z
PHD-200	200	105	170	40	5	133.4	M12	71.5	67.3	107	1	34	10	52	44.5	M20	25	1	70	42	24
PHD-250	250	115	220	40	5	171.4	M16	87	81.7	117	1	34	4	60	54	M20	31	1	87	50	30
PHD-300	300	123	220	50	5	171.4	M16	105	99	125	1	39	5	60	63.5	M24	30	-4	108	68	40
PHD-380	380	135	300	50	5	235	M20	133.5	127.5	137	1	50	16	60	76.2	M24	19	-15	130	80	54

Specifications

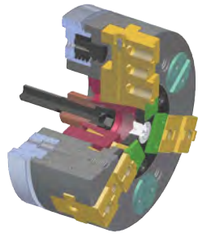
	Clamping Force (kgf)	Max. Drawbar Pull (kgf)	Jaw Strokre mm(dia)	Plunger Stroke (mm)	Stop Traction (kg/f)	Max. Speed (r.p.m.)	Weight (kg)
PHD-200	8100	3000	8.5	24	200	3500	21
PHD-250	11000	4000	10.5	30	300	3000	37
PHD-300	13500	5000	12.0	34	300	2500	54
PHD-380	16500	6000	12.0	34	450	2000	95

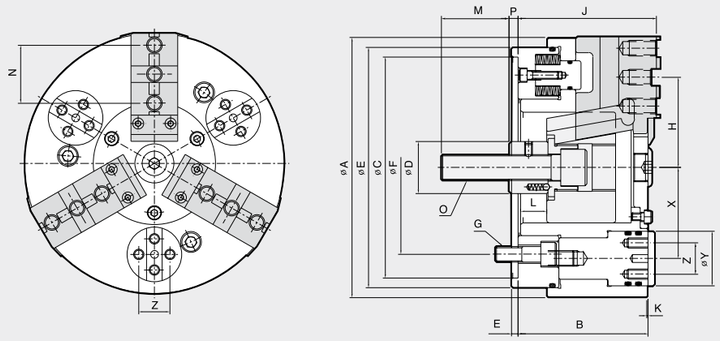
PHDN

Inside Pull-Down Chuck

SPECIAL CHUCK

- Ideal for clamping workpieces with small gripping surfaces.
- Sliding jaws clamp the component; then, the entire chuck body pulls down to location for accurate machining.





Dimensions

	A	B	C(h7)	D	E	F	G	Hmax.	Hmin.	J	K	Lmax.	Lmin.	M	N	O	Pmax.	Pmin.	X	Y	Z
PHDN-200	200	105	170	40	5	133.4	M12	71.5	67.3	107	1	34	10	52	44.5	M20	15	-9	70	42	24
PHDN-250	250	115	220	40	5	171.4	M16	87	81.7	117	1	34	4	60	54	M20	24	-6	87	50	30
PHDN-300	300	123	220	50	5	171.4	M16	105	99	125	1	39	5	60	63.5	M24	23	-11	108	68	40
PHDN-380	380	135	300	50	5	235	M20	133.5	127.5	137	1	50	16	60	76.2	M24	19	-15	130	80	54

Specifications

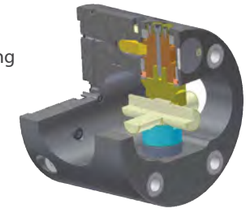
	Clamping Force (kgf)	Max. Drawbar Pull (kgf)	Jaw Strokre mm(dia)	Plunger Stroke (mm)	Stop Traction (kg/f)	Max. Speed (r.p.m.)	Weight (kg)
PHDN-200	8100	3000	8.5	24	200	3500	21
PHDN-250	11000	4000	10.5	30	300	3000	37
PHDN-300	13500	5000	12.0	34	300	2500	54
PHDN-380	16500	6000	12.0	34	450	2000	95

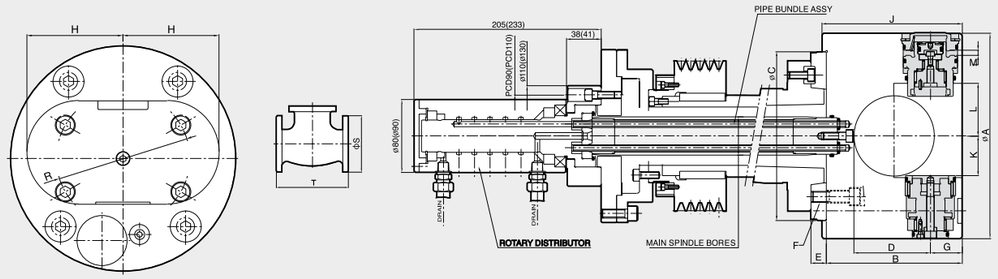
IAH

Auto-Indexing Chuck

SPECIAL CHUCK

- Machine multiple surfaces in a single clamping
- On-the-fly indexing
- Accurate, durable indexing system
- Index positions 4x90° or 8x45°





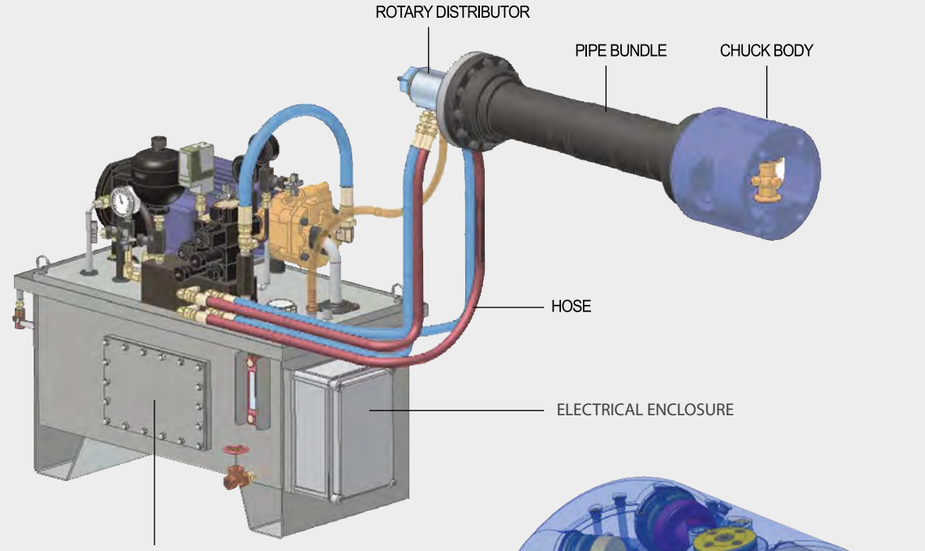
▪ bracketed dimensions refer to models IAH-400 and larger.

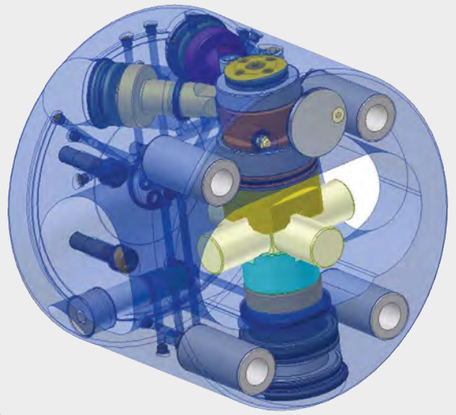
Dimensions

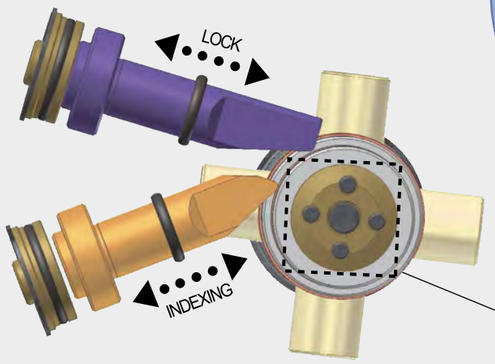
	A	B	C(h⁶)	D	E	F	G	H	J	K	L	M	R
IAH-225	225	149	185	84	25	M12	35	95	154	46	58	11.5	133.4
IAH-250	250	185	210	113	25	M12	40	106	190	46	55	20	133.4
IAH-275	280	208	210	125	25	M16	48	125	213	57	67	20.5	171.4
IAH-315	315	227	235	136	25	M16	50	136	232	70	85	22	171.4
IAH-350	350	235	290	148	30	M20	50	145	240	84	102	23	235
IAH-400	400	253	290	160	30	M20	60	165	259	100	114	30	235
IAH-500	500	301	380	200	35	M20,M24	68	205	308	133	157	35	235
IAH-670	670	465	380	286	40	M24	90	275	470	176	214	40	330.2

Specifications

	Clamping Force (kgf)	Main Spindle Bore (mm)	Max. Speed (r.p.m.)	Weight (kg)	GD² (kgf·m²)	Max. Workpiece Size ΦS(mm)	T(mm)
IAH-225	1270	OVER 45	2800	29	0.9	60	100
IAH-250	1730		2400	44	1.7	65	160
IAH-275	2550		2000	56	2.8	80	220
IAH-315	2550		1800	75	5.0	100	230
IAH-350	2550	OVER 55	1800	100	8.0	135	240
IAH-400	3530		1200	145	15.0	170	260
IAH-500	4670		900	230	25.4	220	310
IAH-670	5890		600	540	32.5	300	400







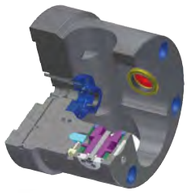
Work Pieces

IAHT

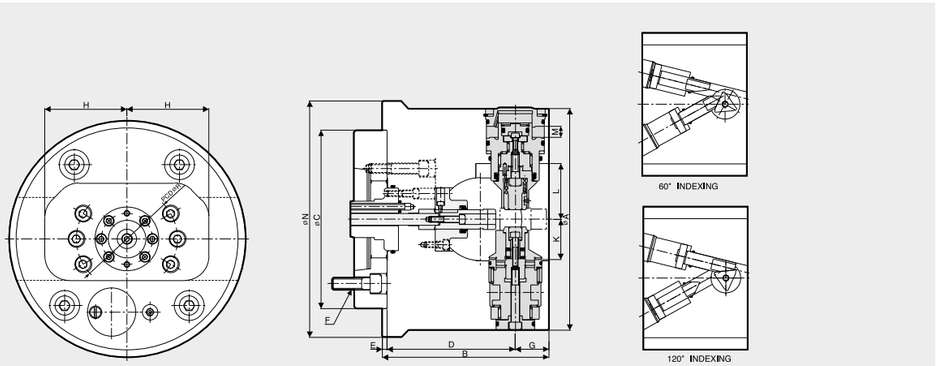
Auto-Indexing Chuck

SPECIAL CHUCK

- Machine multiple surfaces in a single clamping
- On-the-fly indexing
- Index positions 3 x 120° or 6 x 60°
- Accurate, durable indexing system



Work Piece



Dimensions

	A	B	C(h°)	D	E	F	G	H	K	L	M	N	R
IAHT-230	230	158	130	123	15	M10	35	102	40	58	14.5	245	104.8
IAHT-280	280	193.5	170	143.5	11	M16	50	82.5	56	71	21	295	130
IAHT-300	300	200	170	143.5	11	M16	56.5	82.5	56	65	25	295	130

Specifications

	Clamp Piston Area (cm²)	Main Spindle Bore (mm)	Max. Speed (r.p.m.)	Weight (kg)	GD² (kgf·m²)
IAHT-230	1270	OVER 45	2400	35	1.3
IAHT-280	2170		2000	65	3.6
IAHT-300	3500		1800	83	4.2

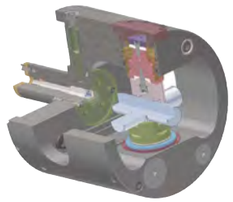
notes

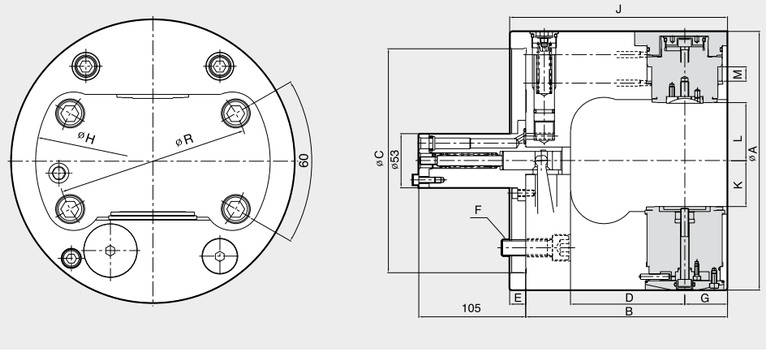
IAN

Auto-Indexing Chuck

SPECIAL CHUCK

- Machine multiple surfaces in a single clamping
- On -the-fly indexing
- Accurate, durable indexing system
- Index positions 3x120˚or 4x90˚





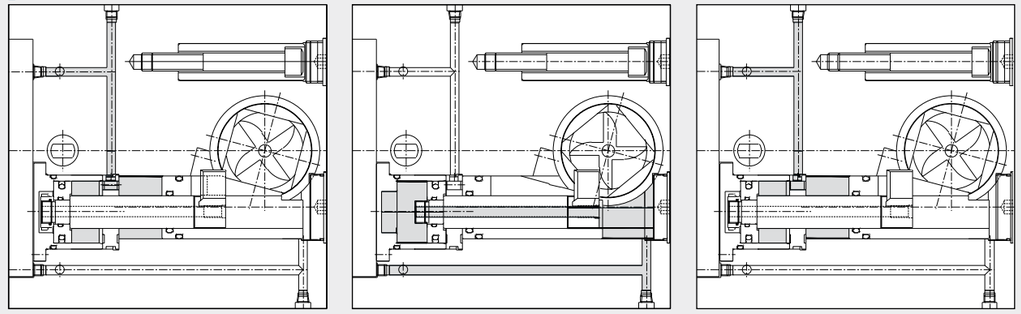
Dimensions

	A	B	C(h7)	D	E	F	G	H	J	K	L	M	R
IAN-235	235	172	170	102	16	M12	30	206	188	42.5	54.5	15	133.4
IAN-254	254	198	220	112	16	M16	42	228	214	45	57	17	171.4
IAN-280	280	211	220	125	16	M16	42	250	227	58	70	17	171.4

Specifications

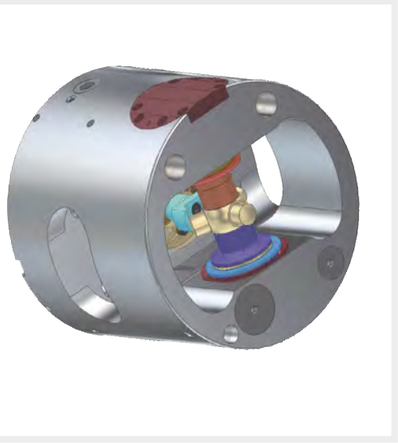
	Clamp Piston Area (cm²)	Max. Pressure (kgf·cm²)	Max. Speed (r.m.p)	Weight (kg)	GD² (kgf·m²)
IAN-235	30	45	3000	32	0.27
IAN-254	43	45	2500	45	0.47
IAN-280	43	45	2300	55	0.88

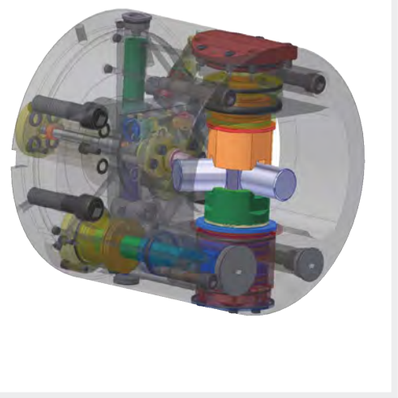
Indexing Position



0˚ 45˚ INDEX 90˚ INDEX

Work Pieces

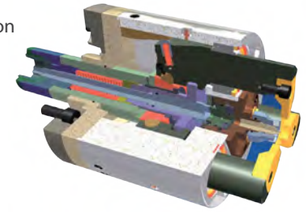




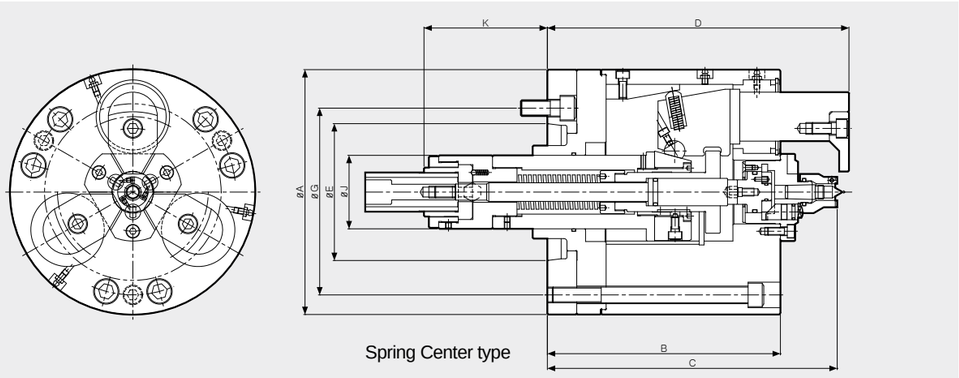
RS

Retractable-Jaw Shaft Chuck

- Machines shafts in one single clamping operation
- Change jaws and face driver to machine different sizes of shafts



SPECIAL CHUCK



Spring Center type

Dimensions

	A	Bmax.	Bmin.	C	Dmax.	Dmin.	E	G	H	J	Kmax.	Kmin.	L	M	Pmax.	Pmin.	Q	R	Smax.	Smin.	T	U	V	W
RS-200	200	164	139	192	205	180	106.375	133.4	3XM12	50	96.5	58.5	M16	30	41.5	3.5	M34X0.5	30	92	82	12.5	10	M12	30
RS-250	250	205	173.5	240	252.5	221	139.719	171.4	3XM16	60	109.5	62.5	M20	45	49.5	2.5	M40X0.5	35	105	95	16.5	10	M16	37
RS-300	300	205	173.5	240	252.5	221	139.719	171.4	3XM16	80	114.5	67.5	M24	50	49.5	2.5	M50X0.5	40	110	100	16.5	10	M16	37

Specifications

	Clamping Force (kgf)	Max. Drawbar Pull (kgf)	Chucking Diameter (mm)		Max. Speed (r.p.m.)	Weight (kg)	GD² (kgf·m²)
			Chuck	Face Driver			
RS-200	4000	3800	18~80	12~70	4000	35	0.19
RS-250	6500	6000	25~110	12~100	3500	60	0.79
RS-300	10000	8000	40~140	30~130	2500	100	1.35

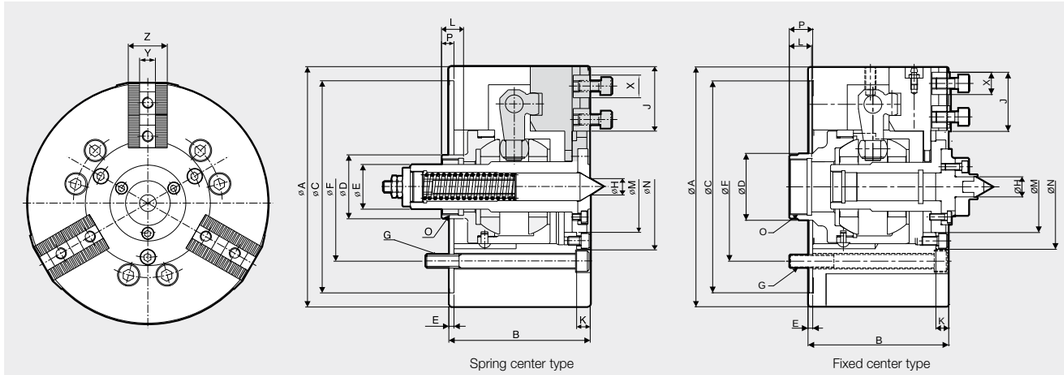
※ Two types of RS Chuck - Spring Center type, Fixed Center type

CSF

Compensating Chuck

- Jaws float on spherical bearing to determined clamping points
- Spring or fixed center available
- All three jaws apply constant gripping force

SPECIAL CHUCK



Dimensions

	A	B	C(h')	D	E	F	G	H	J	K	L	M	N	O	Pmax.	Pmin.	X	Y	Z
CSF-07	170	99	140	42	4	104.8	3-M10	11	45	11	20	65	86	M34 X P1.5	28.2.	8.2	16	11	28
CSF-08	215	126.2	190	57	4.2	133.4	6-M12	15	57.5	13	20	82	112.1	M50 X P1.5	34	9	20	14	35
CSF-12	280	154.7	255	72	5.7	171.4	6-M16	20	72	17	26	110	142.2	M60 X P1.5	44	14	26	20	45

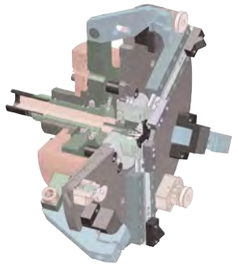
Specifications

	Static Clamping Force (kgf)	Max. Drawbar Pull (kgf)	Jaw Strokre mm(dia)	Plunger Stroke (mm)	Min Chucking Diameter (mm)	Max. Runout Diameter (mm)	Max. Speed (r.p.m.)	Spring Force (kgf)	Weight (kg)	GD² (kgf·m²)
CSF-07	2600	1500	16	20	20	4	4000	45	15	0.25
CSF-08	3200	2100	20	25	25	4	3200	52	28	0.8
CSF-12	4400	2700	25	30	30	6	2000	106	58	3.13

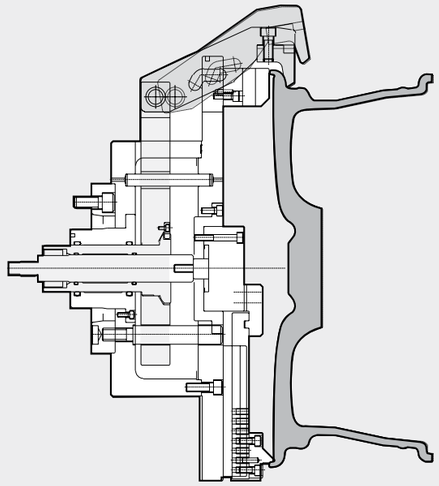
FWC

Aluminum Wheel Chuck

- Ideal for machining aluminum wheels
- Accommodates a variety of wheels by changing jaws and arms
- Lower weight increases efficiency and reduces down time



SPECIAL CHUCK



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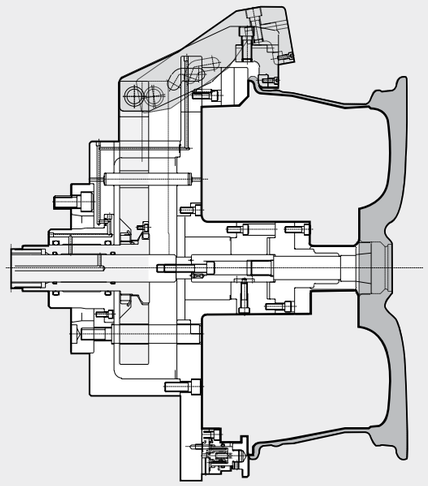

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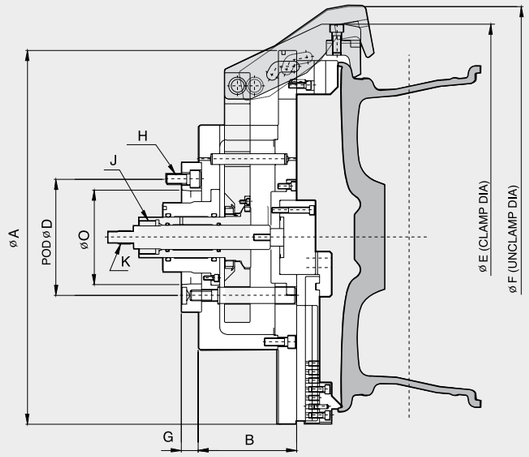
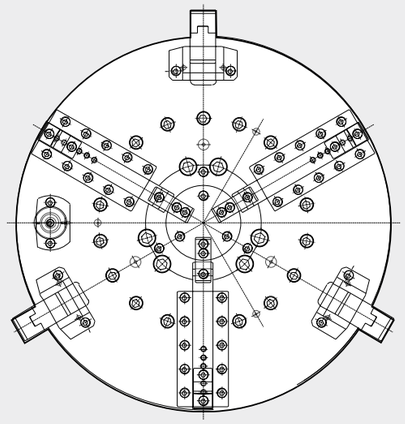




Cam Arm Dimensions

FWC-300

JAW	Cam Arm			
	S	M	L	XL
A	12	13	14	15
B	13	14	15	16
C	14	15	16	17
D	15	16	17	18

FWC-310

JAW	Cam Arm				
	S	M	L	XL	XXL
A	13	14	15	16	17
B	14	15	16	17	18
C	15	16	17	18	19
D	16	17	18	19	20

FWC-320

JAW	Cam Arm		
	S	M	L
A	17	18	19
B	18	19	20
C	19	20	21.5
D	20	21.5	22.5

Dimensions

	A	B	C(h°)	D	E	F	G	H	J	K
FWC-300	495	139.7	139.719	171.45	Flexible		25	M16	M42	M24
FWC-310	550	145	196.87	235			35	M20	M42	M24
FWC-320	660	199.5	196.87	235			35	M20	M42	M24

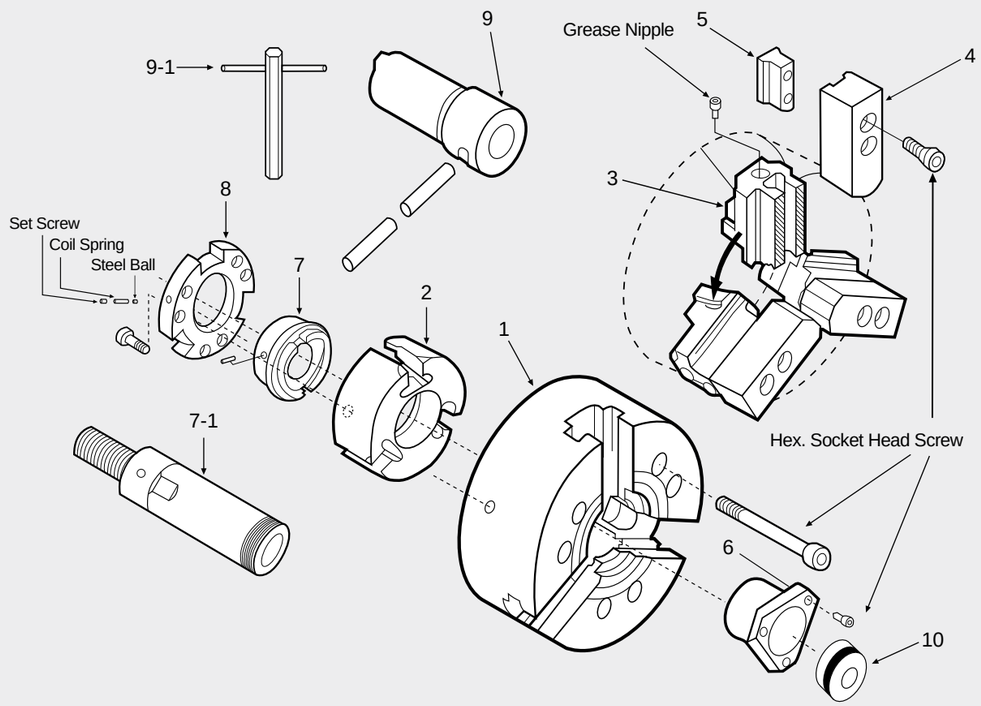
Specifications

	Clamping Force (kgf)	Max. Drawbar Pull (kgf)	Jaw Strokre mm(dia)	Plunger Stroke (mm)	Wheel Size Range (inch)	Max. Speed (r.p.m.)	Weight (kg)	GD² (kgf·m²)
FWC-300	970	3000	27	35	12 ~ 18	2800	120	2.4
FWC-310	970	3000	27	35	13 ~ 20	2200	160	3.5
FWC-320	970	3000	27	35	17.5 ~ 24.5	1800	240	7.5

	Wheel Size										
	12″	13″	14″	15″	16″	17″	18″	19″	20″	21.5″	22.5″
FWC-300	O	O	O	O	O	O	O				
FWC-310		O	O	O	O	O	O	O	O		
FWC-320						O	O	O	O	O	O

Power Chuck

Components



NO.	DESCRIPTION	Q' TY
1	BODY	1
2	WEDGE PLUNGER	1
3	MASTER JAW	3
4	SOFT JAW	3
5	T-NUT	3
6	COVER	1
7	DRAW NUT (Open-Center)	1
7-1	DRAW TUBE (Closed-Center)	1
8	PLUNGER NUT (Open-Center)	1
9	HANDLE (Open-Center)	1
9-1	HANDLE (Closed-Center)	1
10	COVER PLUG	1

POWER CHUCKS

Power Chuck

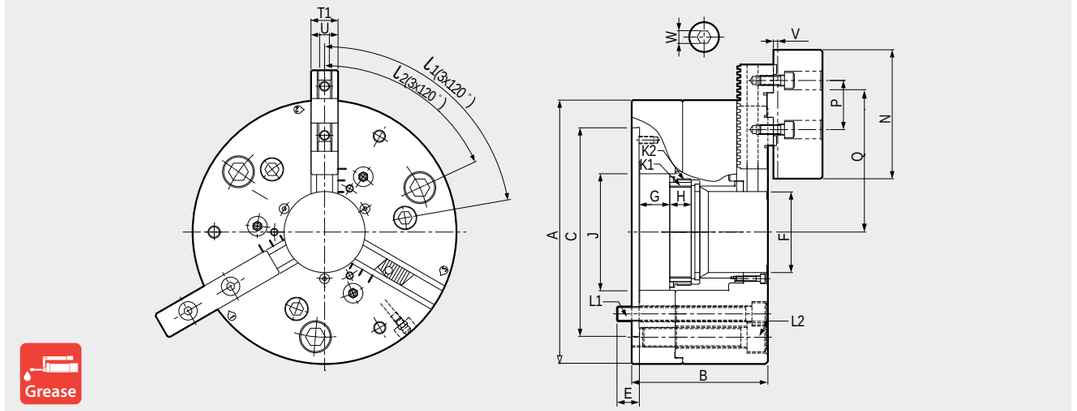
QJC

Quick Jaw Change Chuck

- Reduced set up time; all 3 jaws changed in less than one minute
- Built-in safety mechanism prevents jaw movement to ensure proper jaw engagement
- High alloy steel material and heat treatment increase robustness
- Reboring of machine jaws unnecessary (tolerance within 0.02mm)
- High T.I.R and repeatability

HYDRAULIC CHUCK

See page 58 Gripping Force



Grease

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

Dimensions

	A	B	C	E	F	Gmax.	Gmin.	H	J	K1	K2	L1	L2	∠1	∠2	N	P	Qmax.	Qmin.	T1	T2	U	V	W
QJC-206	165	95	140	14	45	20.2	0	15	68	M50	M60	3-M10	3-M12	80°	20°	85	32	76.8	58	20	20	8	2.5	8
QJC-208	215	111	170	18	66	25	0	17.5	95	M75	M87	3-M12	3-M16	80°	65°	97	40	118.3	71.2	22	22	10	2.5	10
QJC-210	260	129.3	220	23.7	81	28	0	22	114	M90	M105	3-M12	3-M16	80°	65°	125	40	129.7	102.2	30	26	12	3	10
QJC-212	315	138.1	220	24.9	104	28.5	0	23.2	148	M115	M135	3-M16	3-M20	80°	70°	125	40	159.1	106.9	30	32	12	3	10
QJC-215	400	144	300	25	128	32	0	22	180	M138	M160	3-M20	3-M24	70°	60°	145	54	182.4	121.9	35	32	12	3	10

Specifications

	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Permissible Input Force KN (kgf)	Max. Static Gripping Force KN (kgf)	Max. r.p.m min^{-1} (r.p.m.)	Weight kgf	GD^2 $N{\cdot}m^2(kgf{\cdot}m^2)$	Operating Cylinder
QJC-206	11.4	20	30 (3059)	45 (4588)	6000	13	0.11	SH-13046
QJC-208	14.4	25	54 (5404)	100 (10197)	5500	24	0.11	SHL-17068
QJC-210	16	28	65 (6628)	115 (11726)	4000	42	0.41	SHL-19082
QJC-212	16	28	90 (9177)	160 (16315)	3600	66	0.97	SH-21010
QJC-215	17	32	133 (13562)	240 (24473)	3500	109	2.3	SHL-25011

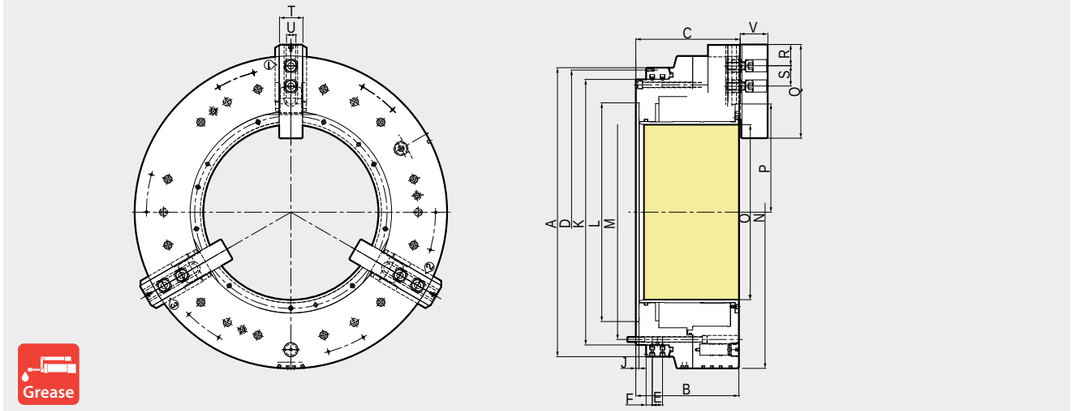
PAC

Pneumatic Self-Contained Chuck

- Ideal for gripping large diameter pipe
- Built-in non-return valves maintain the air pressure during machining
- Self-contained actuation eliminates the need for hydraulics

PNEUMATIC CHUCK

See page 58 Gripping Force



Grease

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

Dimensions

	A	B	C	D	E	F	J	K	L	M	N	O	P Max.	P Min.	Q	R	S	T	U	V
PAC-60275	605	280	284	585	26	17	8	535	450	508	-	275	205.9	180.5	195	37	40	60	25.5	78
PAC-63325	685	305.5	329.5	666	33	19	8	610	510	580	-	325	230.9	205.5	240	42	65	75	30	80
PAC-85375	850	352	356	830	33	19.5	8	775	700	745	-	375	268	268	300	68	65	75	30	90
PAC-100560	925	330	334	910	33	19.5	10	850	700	815	1000	560	346.3	321.1	300	68	65	75	30	88

Specifications

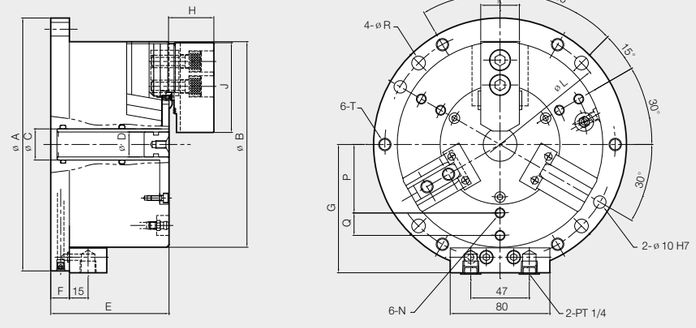
	Thru Hole Diameter (mm)	Plunger Stroke (mm)	Jaw Stroke Diameter (mm) Total (Rapid Stroke / Clamping Stroke)	Clamping force (6bar) (kN)	Max. Speed (r.p.m.)	Moment Of Intertial ($kgf.m^2$)	weight kgf
PAC-60275	275	57	25.4 (16.9 / 8.5)	180	1100	20.6	355
PAC-63325	325	-	25.4 (16.9 / 8.5)	280	900	35.1	505
PAC-85375	375	-	25.47 (13.47 / 12)	200	750	105	970
PAC-100560	560	74	25.4 (15 / 10.4)	280	450	157.6	960

MCA

Stationary Pneumatic Chuck

- Compact design with self contained cylinder allows more clearance
- Suitable for long workpieces
- Compatible with air blowing
- Relief valve ensures safe operation during power loss

PNEUMATIC CHUCK



Dimensions

	ΦA	ΦB	ΦC	ΦD	E	F	G	H	J	K	N	ΦL(P.C.D)	P	Q	ΦR	T
MCA-04	148	110	20	-	90	15	75.5	27	55	23	M8	130	-	-	9	M10
MCA-06	203	165	25	20	95	15	103	36	72	31	M8	185	55	18	11	M10
MCA-08	248	210	36	30	106	15	125.5	42	95	35	M8	230	68	25	11	M10
MCA-10	300	254	50	43	110	16	147.5	46	110	40	M10	280	80	35	13	M12

Specifications

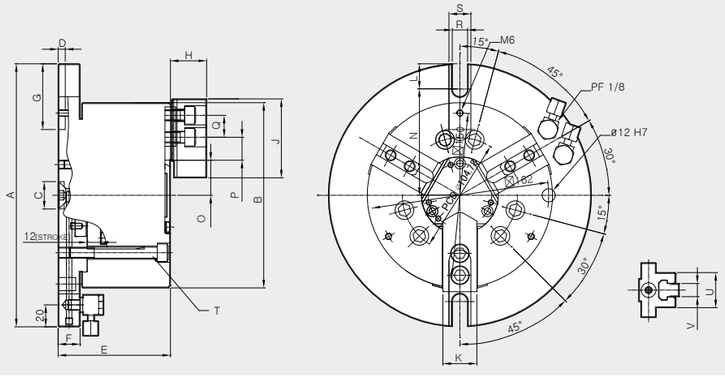
	CLAMPING FORCE (Kgf) Pneumatic 6bar	Jaw stroke mm(dia)	Chucking diameter (mm)		Max. Pneumatic pressure (bar)	Weight (Kg)
			MAX. (mm)	MIN. (mm)		
MCA-04	765	5.2	110	10	7	7.3
MCA-06	2140	5.2	165	23	7	16
MCA-08	3300	6.3	210	30	7	28
MCA-10	4800	6.3	254	50	7	43

MCH

Stationary Hydraulic Chuck

- Compact design with built-in cylinder enables wider workspace
- Compatible with hydraulic chucks

HYDRAULIC CHUCK



Dimensions

	ØA	ØB	ØC	D	E	F	G	H	J	K	L	N	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	U	V
MCH-06	240	169	25	6.5	102.5	20	60	33	72	31	23	97	32	29.25	22.75	9.25	20	14	20	M10	32	12

Specifications

	Clamping Force (Kgf) Hydraulic 6bar	Jaw STROKE Diameter. (mm)	Chucking diameter (mm)		Max. Pneumatic pressure (bar)	Weight kgf
			MAX. (mm)	MIN. (mm)		
MCH-06	5812	5.5	169	15	19.5(198.8)	18

※Maximum turning speed is based on actual measurements.
※Specifications are subject to change without notice.

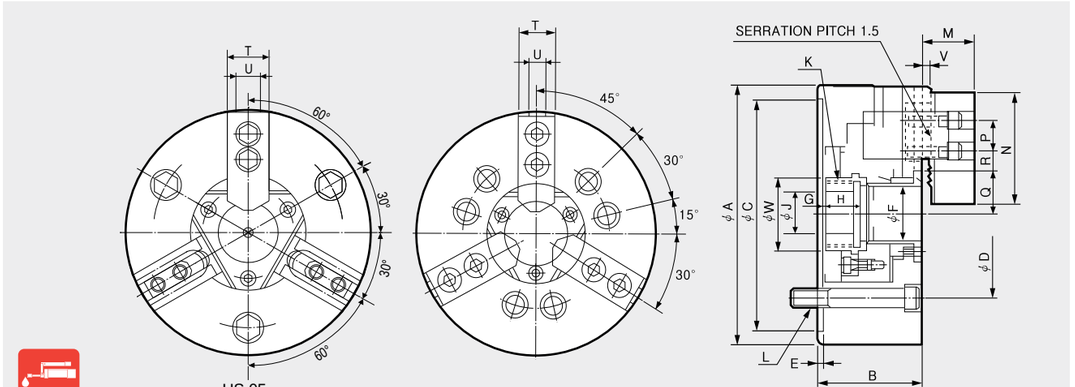
HS

Standard 3-Jaw High-Speed Open-Center Chuck

■ Standard high-speed 3-jaw wedge-style open-center power chuck

HYDRAULIC CHUCK

See page 59 Gripping Force



Grease

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

Dimensions

	A	B	C(H6)	D	E	F	Gmax.	Gmin.	H	J	Kmax.	L	M	N	P	Qmax.	Qmin.	Rmax.	Rmin.	T	U	V	W
HS-05	135	60	110	82.6	4	33	1	-9	20	12	M42×1.5	3-M10×60	26	54	14	26.5	23.8	19.75	7.75	23	10	2	45
HS-06	169	81	140	104.8	5	46	11	-1	19	20	M55×2.0	6-M10×95	32.5	72	20	32	29.25	22.75	9.25	31	12	2	60
HS-08	210	91	170	133.4	5	52	14.5	-1.5	20.5	30	M60×2.0	6-M12×105	39	95	25	38.7	35	29.75	14.75	35	14	2	66
HS-10	254	100	220	171.4	5	77	8.5	-10.5	25	45	M85×2.0	6-M16×120	43	110	30	51	46.6	33.75	14.25	40	16	2	94
HS-12	304	110	220	171.4	6	91	8	-15	28	50	M100×2.0	6-M16×130	50.5	111	30	61.3	56	45.75	15.75	49	21	2	108

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

Specifications

	Thru Hole Diameter. (mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m.)	weight kgf	GD² N·m²(kgf·m²)	Operating Cylinder	Max. Hydraulic Pressure MPa(kgf/cm²)	Operating HARD JAW	KITAGAWA® Model
HS-05	33	135	12	5.4	10	17.5 (1784)	36 (3671)	7000	6.7	0.69 (0.07)	SYH-1036	3.43 (35.0)	HB04N1	B-205
HS-06	46	169	15	5.5	12	22 (2243)	57 (5812)	6000	11.9	2.26 (0.23)	SH-13046 (SYH-1246)	2.8 (28.6)	HB06A1	B-206
HS-08	52	210	13	7.4	16	34.8 (3549)	86 (8769)	5000	22.3	6.67 (0.68)	SH-15052 (SYH-1552)	2.65 (27)	HB08A1	B-208
HS-10	77	254	31	8.8	19	43 (4385)	111 (11319)	4200	34.5	12.36 (1.26)	SH-18077 (SYH-1877)	2.7 (27.5)	HB10A1	B-210
HS-12	91	304	34	10.6	23	55 (5608)	144 (14686)	3300	55.3	28.93 (2.95)	SYH-2091	2.7 (27.5)	HB12N1	B-212

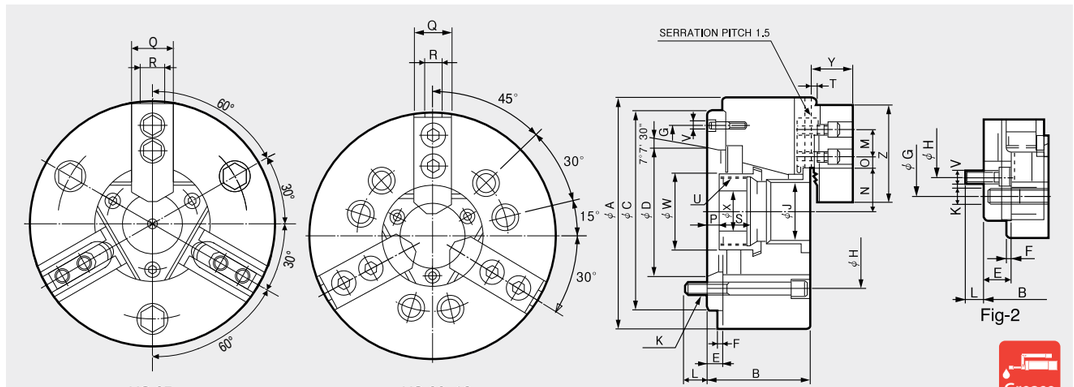
※Maximum turning speed is based on actual measurements.
※Specifications are subject to change without notice.
※Samcully Machinery Co., Ltd. is no longer an OEM manufacturer for Kitagawa© Iron Works Co., Ltd.

HS-A

3-Jaw High-Speed Open-Center Chuck with Adaptor

■ Standard high-speed 3-jaw wedge-style open-center power chuck with adaptor

HYDRAULIC CHUCK



Grease

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

Dimensions

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	Umax.	V	W	X	Y	Z
HS-05A05	135	72	110	82.56	16	4	104.78	104.78	33	3-M10x60L	13	14	26.5	23.8	19.75	7.75	17	7	23	10	20	2	M40×1.5P	3×M6	47	–	26	54
HS-06A05	169	91	140	82.563	15	5	116	104.8	46	6-M10	16	20	32	29.25	22.75	9.25	26	14	31	12	19	2	M55×2	3×M6	60	20	32.5	72
HS-08A06	210	103	170	106.375	17	5	150	133.4	52	6-M12	18	25	38.7	35	29.75	14.75	31.5	15.5	35	14	20.5	2	M60×2	6×M6	66	30	39	95
HS-10A06	254	120	220	106.375	25	5	171.4	133.4	77	6-M16	18.5	30	51	46.6	33.75	14.25	33.5	14.5	40	16	25	2	M75×2	6×M12	94	45	43	110
HS-10A08	254	113	220	139.719	18	5	190	171.4	77	6-M16	24	30	51	46.6	33.75	14.25	26.5	7.5	40	16	25	2	M85×2	6×M8	94	45	43	110
HS-12A06	304	129	220	106.375	25	6	171.4	133.4	91	6-M16	18.5	30	61.3	56	45.75	15.75	33	10	49	21	28	2	M100×2	6×M12	108	50	50.5	111
HS-12A08	304	122	220	139.719	18	6	190	171.4	91	6-M16	25	30	61.3	56	45.75	15.75	26	3	49	21	28	2	M100×2	6×M8	108	50	50.5	111

※Blank and machined draw-nuts are available.
※"U" is Max. Draw nut size.
※Refer to Fig-2 for HS-10A06, HS12A06.

Specifications

	Spindle Nose No.	Thru Hole Diameter. (mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m.)	weight kgf	GD² N·m² (kgf·m²)	Operating Cylinder	Max. Hydraulic Pressure MPa(kgf/cm²)	Operating HARD JAW	KITAGAWA® Model
HS-05A05	A2-5	33	135	12	5.4	10	17.5(1784)	36(3671)	7000	7.5	–	SH-10036 (SYH-1036)	3.43 (35.0)	HB04N1	B-205
HS-06A05	A2-5	46	169	15	5.5	12	22(2243)	57(5812)	6000	13.7	2.45 (0.25)	SH-13046 (SYH-1246)	2.8 (28.6)	HB06A1	B-206A5
HS-08A06	A2-6	52	210	13	7.4	16	34.8(3549)	86(8769)	5000	23.6	6.9 (0.71)	SH-15052 (SYH-1552)	2.65 (27)	HB08A1	B-208A6
HS-10A06	A2-6	77	254	31	8.8	19	43(4385)	111(11319)	4200	41.5	12.75 (1.3)	SH-18077 (SYH-1877)	2.7 (27.5)	HB10A1	B-210A6
HS-10A08	A2-8	77	254	34	8.8	19	43(4385)	111(11319)	4200	40.0	12.65 (1.29)	SH-18077 (SYH-1877)	2.7 (27.5)	HB10A1	B-210A8
HS-12A06	A2-6	91	304	42	10.6	23	55(5608)	144(14684)	3300	67.0	30.6 (3.12)	SYH-2091	2.7 (27.5)	HB12N1	B-212A6
HS-12A08	A2-8	91	304	50	10.6	23	55(5608)	144(14684)	3300	64.0	30.0 (3.06)	SYH-2091	2.7 (27.5)	HB12N1	B-212A8

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

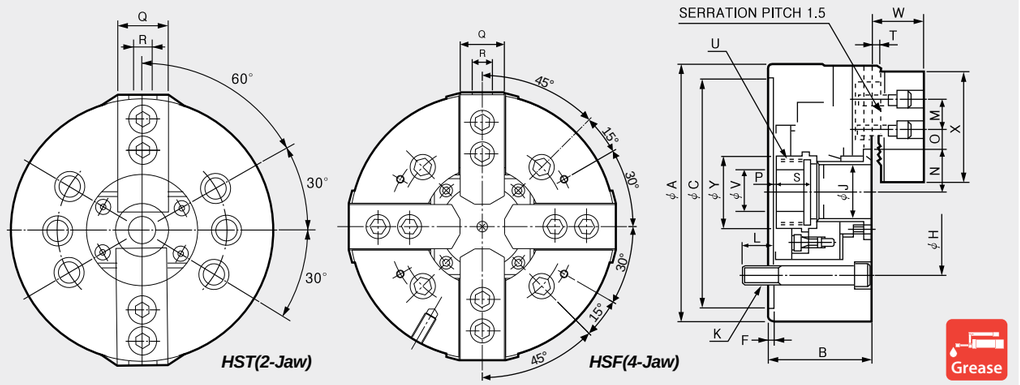
HST / HSF

2-Jaw, 4-Jaw High-Speed Open-Center Chuck

■ 2-jaw, 4-jaw high-speed wedge-style open-center power chuck

HYDRAULIC CHUCK

See page 59-60 Gripping Force



Grease

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

Dimensions

	A	B	C(H6)	F	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmin.	Pmax.	Q	R	S	T	Umax.	V	W	X	Y
HST-06	169	81	140	5	104.8	46	6-M10×95	-	20	32	29.25	22.75	9.25	-1	11	31	12	19	2	M55×2.0	20	32.5	72	60
HST-08	210	91	170	5	133.4	52	6-M12×105	-	25	38.7	35	29.75	14.75	-1.5	14.5	35	14	20.5	2	M60×2.0	30	39	95	66
HST-10	254	100	220	5	171.4	77	6-M16×120	-	30	51	46.6	33.75	14.25	-10.5	8.5	40	16	25	2	M85×2.0	45	43	110	94
HST-12	304	110	220	6	171.4	91	6-M16×130	-	30	61.3	56	45.75	15.75	-15	8	49	21	28	2	M100×2.0	50	50.5	111	108
HSF-08	210	91	170	5	133.4	52	4-M10×105	-	25	38.7	35	29.75	14.75	-1.5	14.5	35	14	20.5	2	M60×2.0	30	39	95	66
HSF-10	254	100	220	5	171.4	77	4-M12×120	-	30	51	46.6	33.75	14.25	-10.5	8.5	40	16	25	2	M85×2.0	45	43	110	94
HSF-12	304	110	220	6	171.4	91	4-M16×130	-	30	61.3	56	45.75	15.75	-15	8	49	21	28	2	M100×2.0	50	50.5	111	108

※Blank and machined draw-nuts are available.
※"U" is Max. Draw nut size.

Specifications

	Thru Hole Diameter. (mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m.)	weight kgf	GD² N · m² (kgf · m²)	Operrating Cylinder	Max. Hydraulic Pressure MPa(kgf/ cm²)	KITAGAWA® Model
HST-06	46	169	15	5.5	12	14.5 (1479)	38 (3875)	6000	11.5	2.21 (0.225)	SH-13046 (SYH-1246)	1.85 (18.9)	BT-206
HST-08	52	210	13	7.4	16	23.2 (2366)	57.3 (5843)	5000	21.3	6.47 (0.66)	SH-15052 (SYH-1552)	1.80 (18.4)	BT-208
HST-10	77	254	31	8.8	19	28.5 (2906)	74 (7546)	4200	33.5	12.06(1.23)	SH-18077 (SYH-1877)	1.80 (18.4)	BT-210
HST-12	91	304	34	10.6	23	36.7 (3742)	96(9789)	3300	52	27.46(2.8)	SYH-2091	1.81 (18.5)	BT-212
HSF-08	52	210	13	7.4	16	23.2(2366)	57.3(5843)	5000	22.5	6.67(0.68)	SH-15052 (SYH-1552)	1.80(18.4)	-
HSF-10	77	254	31	8.8	19	28.5(2906)	74(7546)	4200	34.5	12.08(1.24)	SH-18077 (SYH-1877)	1.80(18.4)	-
HSF-12	91	304	34	10.6	23	36.7(3742)	96(9789)	3300	52	27.47(2.8)	SYH-2091	1.80(28.5)	-

※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.

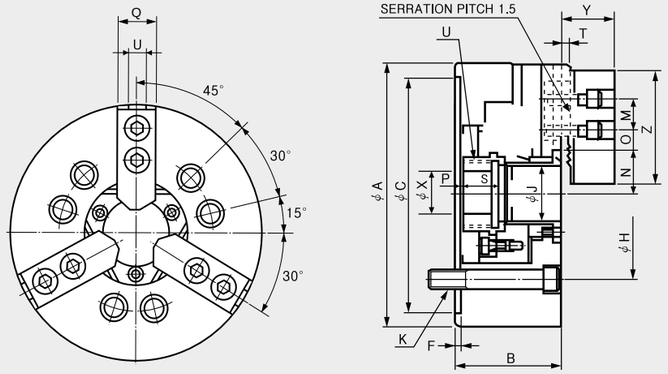
HSL

3-Jaw High-Speed Open-Center Long-Stroke Chuck

■ Long-stroke high-speed 3-jaw wedge-style open-center power chuck

HYDRAULIC CHUCK

See page 60 Gripping Force



Grease

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

Dimensions

	A	B	C(H6)	F	H	J	K	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	Umax.	W	X	Y	Z
HSL-06	169	84	140	5	104.8	33	6-M10	20	39.3	29.2	16.75	9.25	14	-1	31	12	24	2	M42×1.5	47	20	32.5	72
HSL-08	215	99	170	5	133.4	46	6-M12	25	52.3	39.6	20.7	11.5	15.5	-6.5	35	14	22.5	2	M55×2.0	66	30	39	95
HSL-10	254	110	220	5	171.4	53	6-M16	30	62	47	26.2	9.7	14.5	-10.5	40	16	25	2	M65×2.0	80	45	43	110
HSL-12	304	130	220	6	171.4	63	6-M16	30	72.4	54.4	38.2	8.2	15	-15	49	21	28	2	M75×2.0	83	50	50.5	111

※Blank and machined draw-nuts are available.
※"U" is Max. Draw nut size.

Specifications

	Thru Hole Diameter. (mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m.)	weight kgf	GD² N · m² (kgf · m²)	Operrating Cylinder	Max. Hydraulic Pressure MPa(kgf/ cm²)	Operrating HARD JAW	KITAGAWA® Model
HSL-06	33	169	28	20.2	15	27.9 (2845)	31.2 (3182)	4500	14	1.67 (0.17)	SH-13046 (SYH-1246)	3.40 (34.7)	HB06A1	BL-206
HSL-08	46	215	32	25.4	22	41.1 (4191)	49.0 (4997)	3300	25	7.75 (0.79)	SH-15052 (SYH-1552)	2.99 (30.5)	HB08A1	BL-208
HSL-10	53	254	42	30	25	53.8 (5486)	63.0 (6427)	3000	45	12 (1.2)	SH-18077 (SYH-1877)	3.20 (32.6)	HB10A1	BL-210
HSL-12	63	304	43	36	30	69.3 (7067)	80.4 (8199)	2200	78	36 (3.67)	SYH-2091	3.22 (32.8)	HB12N1	BL-212

※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.

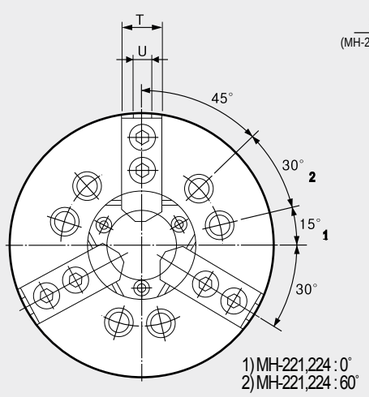
MH

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

■ Mega-bore 3-jaw wedge-style open-center power chuck

HYDRAULIC CHUCK

See page 61 Gripping Force



Grease

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

Dimensions

	A	B	C(H6)	D	E	F	Gmax.	Gmin.	H	J	Kmax.	L	M	N	P	Qmax.	Qmin.	Rmax.	Rmin.	T	U	V	W
MH-206	175	81	140	104.8	5	52	14	-1	17.5	20	M60×2.0	3-M10×95	32.5	72	20	38	34.8	21.75	10.25	31	12	2	65
MH-208	210	91	170	133.4	5	66	7.5	-10	27	30	M75×2.0	6-M12×115	39	95	25	45.7	42	23.75	11.75	35	14	2	80
MH-210	254	100	220	171.4	5	82	8.5	-10.5	25	52	M90×2.0	6-M16×120	43	110	30	54.5	50.1	32.25	14.25	40	16	2	101
MH-212	315	110	300	235	6	103	8	-15	28	82.5	M116×2.0	6-M20×130	51	111	30	67.3	62	45.75	15.75	49	21	2	124
MH-218	457	135	380	300.2	6	166.5	2	-23	50	107	M175×3.0	6-M20-x130	69	165	50	102	96.25	58.25	20.25	62	22	5	186
MH-221	530	140	380	330.2	6	166.5	11	-12	39	80	M180×3.0	6-M22×140	73	180	60	111.75	106.45	72.5	21.5	65	25	5	196.5
MH-224	610	149	380	330.2	6	190	20	-3	40.5	80	M200×3.0	6-M22×150	73	180	60	119.5	114.2	105.5	21.5	65	25	5	210

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

Specifications

	Thru Hole Diameter. (mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Jaw Stroke Diameter. (mm)	Plunger Stroke (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder	Max. Hydraulic Pressure MPa(kgf/ cm²)	Operrating HARD JAW	KITAGAWA® Model
MH-206	52	175	16.5	6.4	15	24.7(2551)	57.3(5812)	6000	11.9	2.26(0.23)	SH-15052 (SYH-1552)	1.78(18.1)	HB06A1	-
MH-208	66	210	23	7.4	17.5	36.4(3596)	87(8872)	5000	23	5.6(0.57)	SH-17068 (SYH-1768)	2.34(23.9)	HB08A1	-
MH-210	82	254	30	8.8	19	49(4976)	126.6(12848)	4500	32	12.37(1.26)	SH-19082	2.74(28)	HB10A1	-
MH-212	103	315	54	10.6	23	55 (5608)	144(14686)	3000	55.3	28.93(2.95)	SH-21010	2.65(27.2)	HB12N1	-
MH-218	166.5	457	73	11.5	25	71(7240)	180(18355)	2000	170	174.6(17.8)	SYHL-2816	3.07(32)	HB15A1	-
MH-221	166.5	530	105	10.6	23	90(9177)	220(22460)	1700	228	342.1(34.7)	SYHL-2816	2.86(29.1)	HB18B2	-
MH-224	190	610	120	10.6	23	90(9177)	234(23861)	1400	293	651(66.4)	SHL-39024	1.57(16.1)	HB18B2	-

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

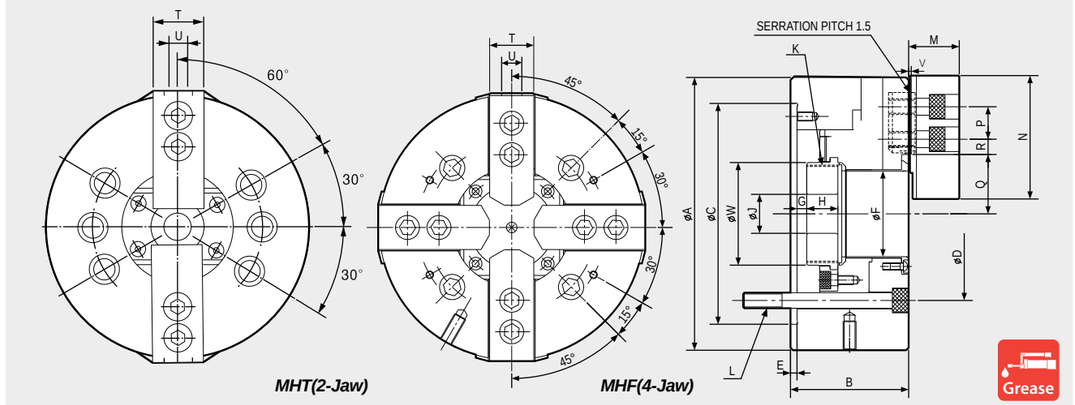
MHT / MHF

Mega Bore 2, 4-Jaw High-Speed Open-Center Chuck

■ Mega Bore 2-jaw, 4-jaw high-speed wedge-style open-center power chuck

HYDRAULIC CHUCK

See page 61 Gripping Force



Grease

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

Dimensions

	A	B	C(H6)	D	E	F	Gmax.	Gmin.	H	J	Kmax.	L	M	N	P	Qmax.	Qmin.	Rmax.	Rmin.	T	U	V	W
MHT-206	175	81	140	104.8	5	52	14	-1	17.5	20	M60×2.0	6-M10×95	32.5	72	20	38	34.8	21.75	10.25	31	12	2	65
MHT-208	210	91	170	133.4	5	66	7.5	-10	27	30	M75×2.0	6-M12×115	39	95	25	45.7	42	23.75	11.75	35	14	2	80
MHF-208	210	91	170	133.4	5	66	7.5	-10	27	30	M75×2.0	4-M12×115	39	95	25	45.7	42	23.75	11.75	35	14	2	80

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

Specifications

	Thru Hole Diameter.(mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder	Max. Hydraulic Pressure MPa(kgf/ cm²)	Operrating HARD JAW	KITAGAWA® Model
MHT-206	52	175	16.5	6.4	15	16.6(1700)	38(3875)	6000	11.5	2.2(0.225)	SH-15052 (SYH-1552)	1.18(12)	HB06A1	-
MHT-208	66	210	23	7.4	17.5	23.5(2397)	57.9(5914)	5000	21.7	6.47(0.66)	SH-17068 (SYH-1768)	1.59(16.3)	HB06A1	-
MHF-208	66	210	23	7.4	17.5	23.5(2397)	57.9(5914)	5000	23.5	5.59(0.57)	SH-17068 (SYH-1768)	1.59(16.3)	HBF08A1	-

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

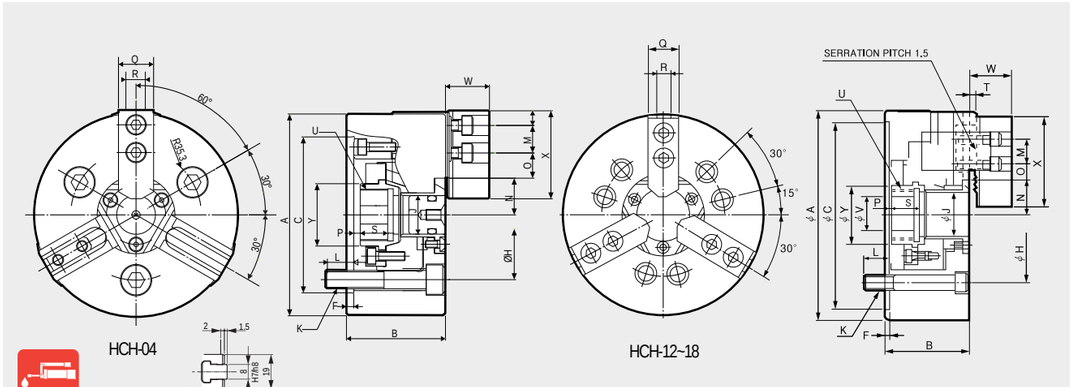
HCH

Standard 3-Jaw Open-Center Chuck (110mm - 304mm)

■ Standard 3-jaw wedge-style open-center chuck

HYDRAULIC CHUCK

See page 62-63 Gripping Force



Grease

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

Dimensions

	A	B	C(H6)	F	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	Umax.	V	W	X	Y
HCH-04	110	54	85	4	70.6	21	3-M10	15.5	15	20.0	17.9	15	6	3.5	-3	19	8	15	2	M28×1.5	10	24	48	34
HCH-12	304	110	220	6	171.4	78	6-M16	23	30	58	52.7	11.25	8.75	8	-15	50	18	38	5	M88×2.0	50	54	129	96
HCH-15	381	133	300	6	235.0	117.5	6-M20	50	43	82	76.7	43.75	18.25	11	-12	62	22	39	5	M130×2.0	60	70	165	139
HCH-18	450	133	380	6	235.0	117.5	6-M20	30	43	82	76.7	78.25	18.25	11	-12	62	22	39	5	M130×2.0	60	70	165	139

※Blank and machined draw-nuts are available.
※"U" is Max. Draw nut size.

Specifications

	Thru Hole Diameter.(mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder	Max. Hydraulic Pressure MPa(kgf/cm²)	Operrating HARD JAW	KITAGAWA® Model
HCH-04	21	110	5	4.2	6.5	8(800)	13(1350)	5500	3.7	0.2 (0.024)	HYH-0933	2.2 (22.4)	HB04A1	B-04
HCH-12	78	304	19	10.6	23	49(4997)	129(13150)	3000	63	29.71 (3.03)	SH-19082	2.3 (23.5)	HB12B1	B-12
HCH-15	117.5	381	30	10.6	23	71(7240)	180(18355)	2500	120	89.14 (9.09)	SH-1250	2.3 (23.5)	HB15A1	B-15
HCH-18	117.5	450	30	10.6	23	71(7240)	180(18355)	2000	164	174.6 (17.8)	SH-1250	2.3 (23.5)	HB15A1	B-18

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

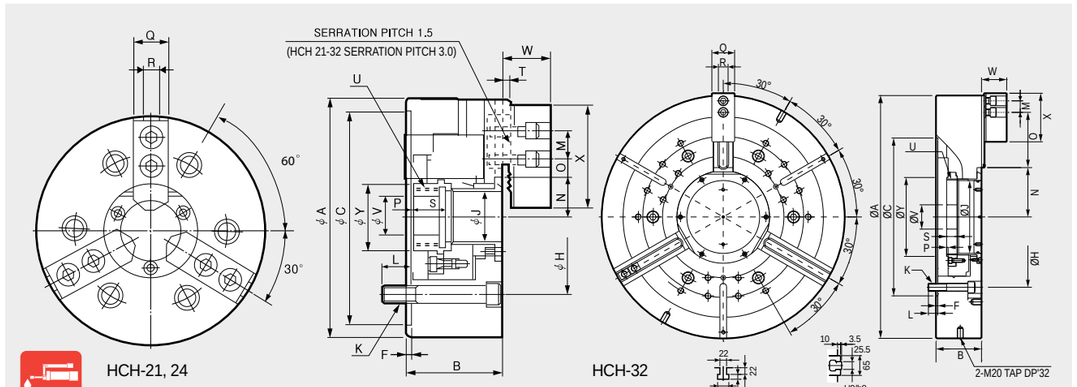
HCH

Standard 3-Jaw Open-Center Chuck (381mm-800mm)

■ Standard 3-jaw wedge-style open-center chuck

HYDRAULIC CHUCK

See page 62-63 Gripping Force



Grease

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

Dimensions

	A	B	C(H6)	F	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	Umax.	V	W	X	Y
HCH-21	530	140	380	6	330.2	140	6-M22	31	60	98.5	93.2	87.5	21.5	11	-12	65	25	39	5	M155×3.0	80	72	180	170
HCH-24	610	149	380	6	330.2	165	6-M22	32	60	108	102.7	117.5	21.5	20	-3	65	25	40	5	M175×3.0	80	72	180	187
HCH-32	800	150	520	6	463.6	240	6-M24	31	38	162.6	153.6	182	20	29	-5	75	25.5	34.5	10	M250×3.0	80	83	160	260

※Blank and machined draw-nuts are available.
※"U" is Max. Draw nut size.

Specifications

	Thru Hole Diameter.(mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder	Max. Hydraulic Pressure MPa(kgf/cm²)	Operrating HARD JAW	KITAGAWA® Model
HCH-21	140	530	87	10.6	23	90(9177)	234(23861)	1700	235	351.1(35.8)	SH-25011	3.0(30.6)	HB18B2	B-21
HCH-24	165	610	110	10.6	23	90(9177)	234(23861)	1400	293	651.2(66.4)	SYHL-2816	3.0(30.6)	HB18B2	B-24
HCH-32	240	800	240	18	34	100(10193)	240(24464)	1200	530	598.4(61)	SYHL-2816	3.2(33.6)	HB32B2	-

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

HCH-A

3-Jaw Open-Center Chuck with adaptor (165mm - 304mm)

■ 3-jaw wedge-style power chuck with adaptor plate

HYDRAULIC CHUCK

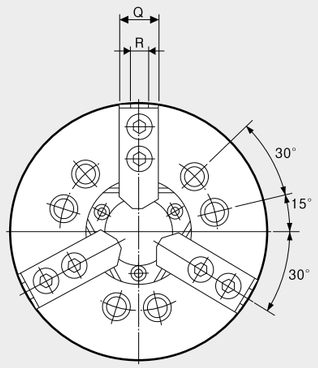


Fig-1

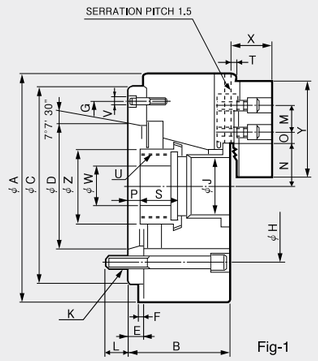
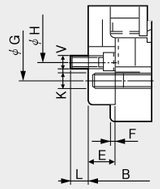


Fig-2



Grease

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

Dimensions

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	Umax.	V	W	X	Y	Z
HCH-12A06	304	129	220	106.375	25	6	171.4	133.4	78	6-M16	18.5	30	58	52.7	48.75	12.75	33	10	49	18	38	5	M88×2.0	6-M12	50	53.5	129	96
HCH-12A08	304	122	220	139.719	18	6	190	171.4	78	6-M16	25	30	58	52.7	48.75	12.75	26	3	49	18	38	5	M88×2.0	3-M8	50	53.5	129	96
HCH-15A08	381	160	300	139.719	33	6	235.0	171.4	117.5	6-M20	24	43	82	76.7	43.75	18.25	44	21	62	22	39	5	M130×2.0	6-M16	60	70	165	139
HCH-15A11	381	149	300	196.869	22	6	260	235.0	117.5	6-M20	28	43	82	76.7	43.75	18.25	33	10	62	22	39	5	M130×2.0	3-M10	60	70	165	139
HCH-18A11	450	149	380	196.869	22	6	320	235.0	117.5	6-M20	28	43	82	76.7	78.25	18.25	33	10	62	22	39	5	M130×2.0	3-M10	60	70	165	139

※Blank and machined draw-nuts are available.
※"U" is Max. Draw nut size.
※ Refer to Fig-2 for HCH-12A06, HCH-15A8.

Specifications

	Spindle Nose No.	Thru Hole Diameter.(mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder	Max. Hydraulic Pressure MPa(kgf/ cm²)	Operrating HARD JAW	KITAGAWA® Model
HCH-12A06	A2-6	78	304	19	10.6	23	49(4997)	129(13150)	3000	69	31.38(3.20)	SYH-2091	2.3(23.5)	HB12B1	B-12A6
HCH-12A08	A2-8	78	304	19	10.6	23	49(4997)	129(13150)	3000	66	30.79(3.14)	SYH-2091	2.3(23.5)	HB12B1	B-12A8
HCH-15A08	A2-8	117.5	381	30	10.6	23	71(7240)	180(18355)	2500	134	96.89(9.88)	SH-25011	2.3(23.5)	HB15A1	B-15A8
HCH-15A11	A2-11	117.5	381	30	10.6	23	71(7240)	180(18355)	2500	127	93.55(9.54)	SH-25011	2.3(23.5)	HB15A1	B-15A11
HCH-18A11	A2-11	117.5	450	30	10.6	23	71(7240)	180(18355)	2000	178	187.30(19.1)	SH-25011	2.3(23.5)	HB15A1	B-18A11

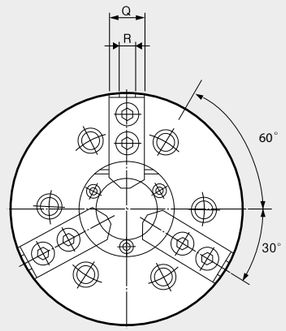
※Maximum turning speed is based on actual measurements.
※Specifications are subject to change without notice.
※Samcully Machinery Co., Ltd. is no longer an OEM manufacturer for Kitagawa® Iron Works Co., Ltd.

HCH-A

3-Jaw Open-Center Chuck with adaptor (381mm - 610mm)

■ 3-jaw wedge-style power chuck with adaptor plate

HYDRAULIC CHUCK



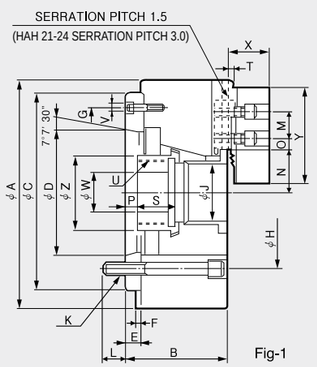


Fig-1

Grease

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

Dimensions

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	Umax.	V	W	X	Y	Z
HCH-21A15	530	161	380	285.775	27	6	330.2	330.2	140	6-M22	34	60	98.5	93.2	87.5	21.5	38	15	65	25	39	5	M155×3.0	3-M12	80	72	180	170
HCH-24A15	610	170	380	285.775	27	6	330.2	330.2	165	6-M22	35	60	108	102.7	117.5	21.5	47	24	65	25	40	5	M175×3.0	3-M12	80	72	180	187

※ Blank and machined draw-nuts are available.
※"U" is Max. Draw nut size.
※HCH-21A15 and HCH-24A15 are available with M22 or M24 mounting bolts.

Specifications

	Spindle Nose No.	Thru Hole Diameter.(mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder	Max. Hydraulic Pressure MPa(kgf/ cm²)	Operrating HARD JAW	KITAGAWA® Model
HCH-21A15	A2-15	140	530	87	10.6	23	90(9177)	234(23861)	1700	246	362.83(37.0)	SH-25011	3.0(30.6)	HB18B2	B-21A15
HCH-24A15	A2-15	165	610	110	10.6	23	90(9177)	234(23861)	1400	304	660.94(67.4)	SYHL-2816	3.0(30.6)	HB18B2	B-24A15

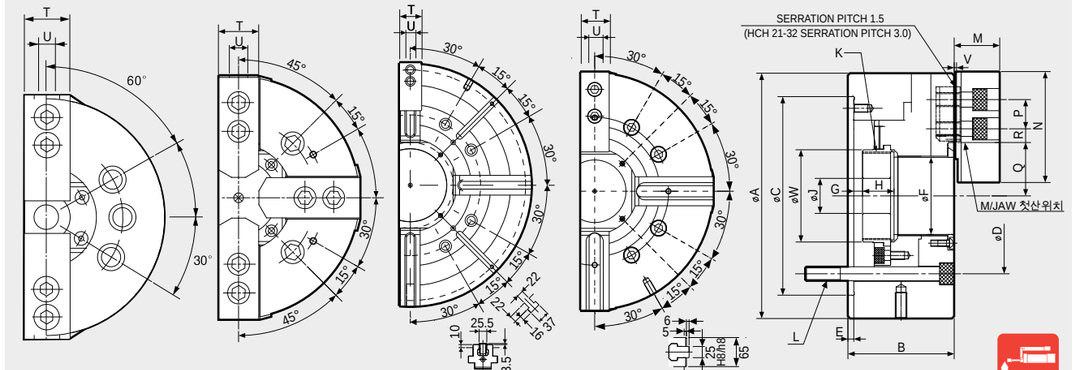
※Maximum turning speed is based on actual measurements.
※Specifications are subject to change without notice.
※ Samcully Machinery Co., Ltd. is no longer an OEM manufacturer for Kitagawa® Iron Works Co., Ltd.

HCHT / HCHF

2-Jaw,4-Jaw Open-Center Chuck

- 2-jaw wedge-style open-center power chuck
- 4-jaw wedge-style open-center power chuck

HYDRAULIC CHUCK



HCHT-15(2-Jaw) HCHF-15, 18(4-Jaw) HCHF-21, 24(4-Jaw) HCHF-32(4-Jaw)

Grease

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

Dimensions

	A	B	C(H6)	D	E	F	Gmax.	Gmin.	H	I	J	Kmax.	L	M	N	P	Qmax.	Qmin.	Rmax.	Rmin.	T	U	V	W
HCHT-15	381	133	300	235	6	117.5	11	-12	39	30	60	M130×2.0	6-M20	70	165	43	82	76.7	43.75	18.25	62	22	5	139
HCHF-15	381	133	300	235	6	118	11	-12	39	-	60	M130×2.0	4-M20×150	70	165	43	82	76.7	43.75	18.25	62	22	5	139
HCHF-18	450	133	380	235	6	118	11	-12	39	-	60	M130×2.0	4-M20×130	70	165	43	82	76.7	78.25	18.25	62	22	5	136
HCHF-21	530	140	380	330.2	6	140	11	-12	39	-	80	M155×3.0	8-M22×140	72	180	60	98.5	93.2	87.5	21.5	65	25	5	170
HCHF-24	610	149	380	330.2	6	165	20	-3	40	-	80	M175×3.0	8-M22×150	72	180	60	102.7	108	117.5	21.5	65	25	5	187
HCHF-32	800	150	520	463.6	6	240	34	0	34.5	-	80	M250×3.0	8-M24×130	83	160	38	162.6	153.6	182	20	75	25.5	3.5	260

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

Specifications

	Thru Hole Diameter.(mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder	Max. Hydraulic Pressure MPa(kgf/ cm²)	Operrating HARD JAW	KITAGAWA® Model
HCHT-15	117.5	381	30	10.6	23	47(4793)	120(12236)	2500	115	87.28(8.90)	SH-25011	1.5(15.3)	-	BT-15
HCHF-15	117.5	381	30	10.6	23	47(4793)	120(12236)	2500	115	87.3(8.90)	SH-25011	1.5(15.3)	HB15A1	-
HCHF-18	117.5	450	30	10.6	23	47(4793)	120(12236)	2000	159	165.8(16.9)	SH-25011	1.5(15.3)	HB15A1	-
HCHF-21	140	530	87	10.6	23	60(6117)	156(15907)	1700	235	351.2(35.8)	SH-25011	1.97(20.1)	HB18B2	-
HCHF-24	165	610	110	10.6	23	60(6117)	156(15907)	1400	293	651.4(66.4)	SYHL-2816	1.97(20.1)	HB18B2	
HCHF-32	240	800	160	18	34	60(6795)	156(15821)	11200	530	601(61)	SYHL-2816	2.2(22.4)	HB32B2	-

※Maximum Turning Speed is based on actual measurments. ※Specifications are subject to change without notice.
※ Samcully Machinery Co., Ltd. is no longer an OEM manufacturer for Kitagawa© Iron Works Co., Ltd.

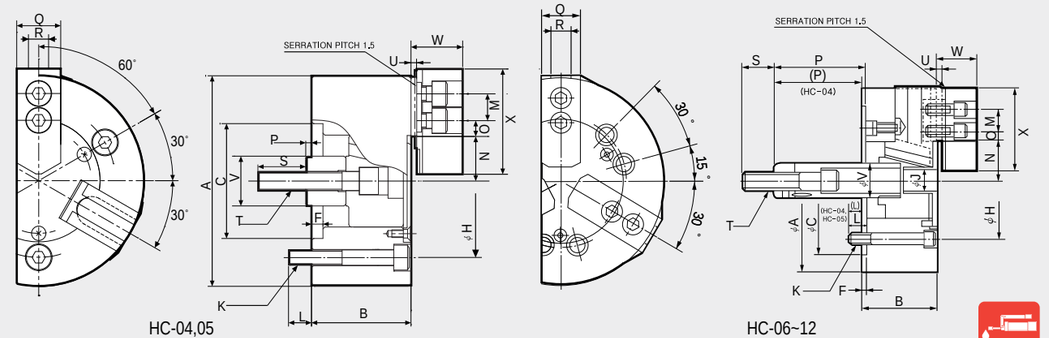
HC

Standard 3-Jaw Closed-Center Chuck (110mm - 304mm)

- Standard 3-jaw wedge-style closed-center power chuck

HYDRAULIC CHUCK

See page 63-64 Gripping Force



Grease

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

Dimensions

	A	B	C(H6)	F	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	U	V	W	X
HC-04	110	52	60	6	80	-	3-M8X55	12	14	23.3	20.1	11.25	8.25	17	3	23	10	25	M10×1.5	3	26	27	55
HC-05	135	55	80	7	100	-	3-M8X60	14	19	30.4	27.2	11.25	6.75	6	-8	23	10	35	M12×1.75	3	28	29	62
HC-06	165	74	140	5	104.8	21	6-M10X90	14	20	37.8	33.5	18	7.5	100	81.5	31	12	36	M16×2.0	4	34	35	72
HC-08	210	85	170	5	133.4	25	6-M12X100	20	25	46.3	41.9	22.25	9	125(109)	106(90)	35	14	36	M20×2.5	5	38	42	95
HC-10	254	89	220	5	171.4	34	6-M16X105	38	30	51.1	46.7	30.75	11.25	158(119)	133(94)	40	16	36	M20×2.5	5	45	46	110
HC-12	304	106	220	6	171.4	34	6-M16X120	38	30	61	55.75	48.75	12.75	163 (142)	133(112)	50	18	36	M20×2.5	5	50	54	129

※The numbers in parentheses in columns P and T are also available upon request.

Specifications

	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder Hydraulic	Operrating Cylinder Pneumatic	Max. Hydraulic Pressure MPa(kgf/ cm²)	Operrating HARD JAW	KITAGAWA® Model
HC-04	6.4	14	110	8	8.2 (836)	22.8 (2325)	6000	4.1	0.29(0.03)	Y-0715R(RE)	AY-1315R	2.4 (24.5)	HB04N1	N-04
HC-05	6.4	14	135	16	8.2 (836)	25.2 (2570)	5500	6.2	0.59(0.06)	Y-0715R(RE)	AY-1315R	2.4 (24.5)	HB04N1	N-05
HC-06	8.5	18.5	165	19	18 (1835)	52.5 (5353)	5270	13	1.77(0.18)	Y-1020R(RE)	AY-1720R	2.6 (26.5)	HB06A1	N-06
HC-08	8.8	19	210	23	25 (2549)	75 (7648)	4760	25	5.39(0.55)	Y-1225R(RE)	AY-2225R	2.5 (25.5)	HB08A1	N-08
HC-10	8.8	25	254	24	29 (2957)	108 (11013)	4010	37	11.77(1.20)	Y-1225R(RE)	AY-2225R	2.8 (28.6)	HB10A1	N-10
HC-12	10.5	30	304	26	41 (4181)	156 (15907)	3380	57.3	28.44(2.90)	Y-1530R(RE)	AY-2730R	2.7 (27.5)	HB12B1	N-12

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

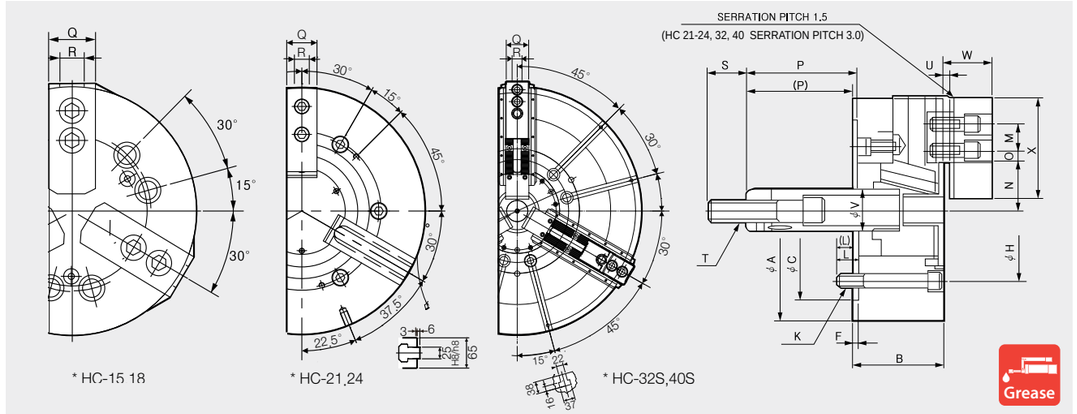
HC

Standard 3-Jaw Closed-Center Chuck (381mm - 1000mm)

■ Standard 3-jaw wedge-style closed-center power chuck

HYDRAULIC CHUCK

See page 63-64 Gripping Force



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

Dimensions

	A	B	C(H6)	F	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	U	V	W	X
HC-15	381	114	300	6	235.0	-	6-M20X150	65	43	77.5	69.5	48.75	23.25	104	69	62	25.5	55	M30×3.5	2	60	61	135
HC-18	450	114	300	6	235.0	-	6-M20X115	30	43	108	100	48.75	23.25	92	57	62	25.5	55	M30×3.5	2	60	61	135
HC-21	530	125	380	6	330.2	-	6-M22X120	31	60	86	78	93.5	27.5	97	62	65	25	55	M30×3.5	3	60	70	180
HC-24	610	125	380	6	330.2	-	6-M22X120	51	60	125	117	93.5	27.5	97	62	65	25	55	M30×3.5	3	60	71	180
HC-32S	800	150	380	6	330.2	65	6-M24X120	39	76.2	117.3	102.3	234.1	36	38	0	75	12.7	70	M30×3.5	8	70	81	165
HC-40S	1000	180	520	8	463.6	50	6-M24X120	32	76.2	212.8	187.8	169.8	17.4	30	-27	110	30	65	M36×4.0	-4	70	106	270

※HC-32 and HC-40 are groove-type chucks with 19.025mm keys.

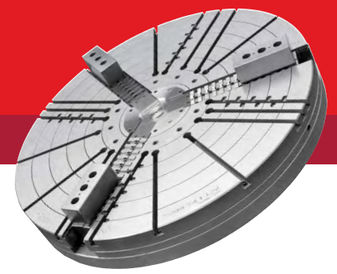
Specifications

	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder Hydraulic	Operrating Cylinder Pneumatic	Max. Hydraulic Pressure MPa(kgf/cm²)	Operrating HARD JAW	KITAGAWA® Model
HC-15	16	35	381	71	82 (8362)	249 (25391)	3040	96	70.61(7.2)	Y-2035R(RE)	-	3.2 (32.6)	HB15N1	N-15
HC-18	16	35	450	133	82 (8362)	249 (25391)	2710	124	92.2 (9.4)	Y-2035R(RE)	-	3.2 (32.6)	HB15N1	N-18
HC-21	16	35	530	62	82 (8362)	273 (27838)	1940	180	188.3 (19.2)	Y-2035R(RE)	-	3.2 (32.6)	HB18B2	N-21
HC-24	16	35	610	152	82 (8362)	273 (27838)	1760	223	271.6 (27.7)	Y-2035R(RE)	-	3.2 (32.6)	HB18B2	N-24
HC-32S	30	38	800	200	120 (12170)	215 (21805)	800	350	609.1 (61)	Y-2050R(RE)	-	40.8	HB32SB2	-
HC-40S	30	23	1000	330	180 (18256)	320 (32454)	630	600	1721.8 (174.5)	Y-2560RE	-	40.8	HB40SB2	-

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

HC (groove type)

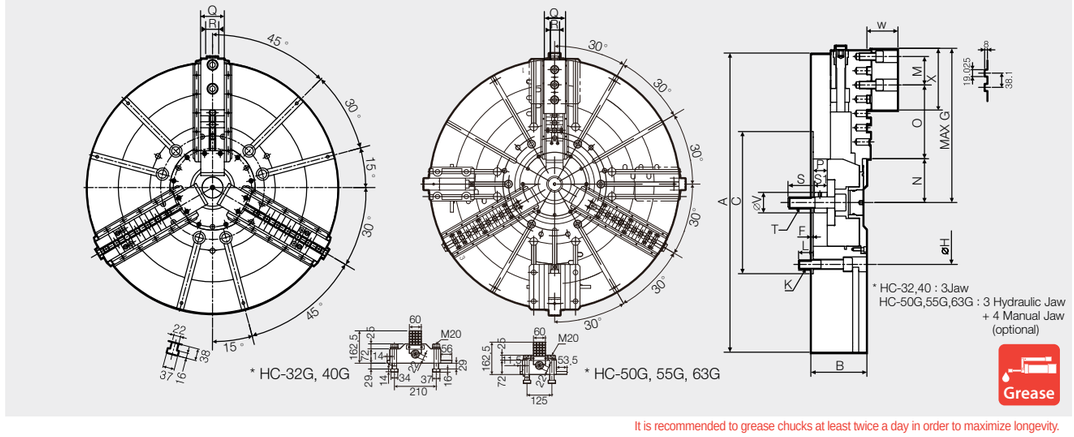
3-Jaw Hydraulic / 4-Jaw Independent Chuck (800mm -1600mm)



■ 3-Jaw hydraulic / 4-jaw independent closed-center power chuck

HYDRAULIC / INDEPENDENT CHUCK

See page 63-64 Gripping Force



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

Dimensions

	A	B	C(H6)	F	G	H	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	S	S1	T	V	W	X	a1	a2	a3	a4
HC-32G	800	150	380	6	442.5	330.2	M24X120L	39	76.2	117.6	102.7	196.9	44.5	38	0	75	70	35	M30×125L	55	83	165	12.7	8	3	75
HC-40G	1000	180	520	8	509.6	463.6	M24X140L	32	76.2	217.3	194.3	91.1	14.9	60	3	110	65	35	M36×130L	70	106	270	30	-4	4	85
HC-50G	1250	180	520	8	623.9	463.6	M24X140L	32	76.2	217.3	194.3	205.4	14.9	60	3	110	65	35	M36×130L	70	106	270	30	-4	4	85
HC-55G	1400	220	720	8	710.6	647.6	M24X160L	36	76.2	250	226	259.4	30.8	82	22	110	65	35	M36×130L	70	104	270	30	-6	4	110
HC-63G	1600	220	720	8	786.8	647.6	M24X160L	36	76.2	250	226	335.6	30.8	13	22	110	65	35	M36×130L	70	104	270	30	-6	4	110

Specifications

	Jaw STROKE Diameter. (mm)	Manual Setting (Radial)	PLUNGER STROKE (mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	Cylinder	Max. Hydraulic Pressure MPa(kgf/cm²)	Operrating HARD JAW
HC-32G	30	30	38	800	200	120 (12170)	215 (21805)	800	350	601.9 (61)	Y-2560	40.8	HB32GB
HC-40G	46	30	23	1000	330	180 (18256)	320 (32454)	630	600	1721.8 (174.5)	Y-2560	40.8	HB40GB
HC-50G	46	30	57	1250	330	180 (18256)	320 (32454)	500	800	2169 (220)	Y-2560	40.8	HB40GB
HC-55G	48	40	60	1400	460	200 (20394)	360 (36710)	450	1350	2760 (280)	Y-2560	46	HB40GB
HC-63G	48	40	60	1600	460	200 (20394)	360 (36710)	400	1850	4930 (500)	Y-2560	46	HB40GB

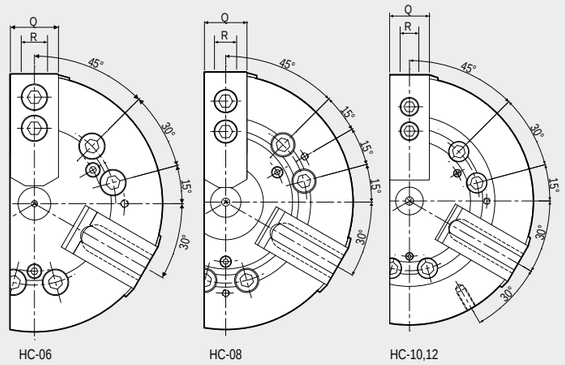
※Maximum turning speed is based on actual measurements.
※Specifications are subject to change without notice.

HC-A

3-Jaw Closed-Center Chuck with Adaptor (165mm - 304mm)

■ 3-jaw wedge-type closed-center power chuck with adaptor

HYDRAULIC CHUCK



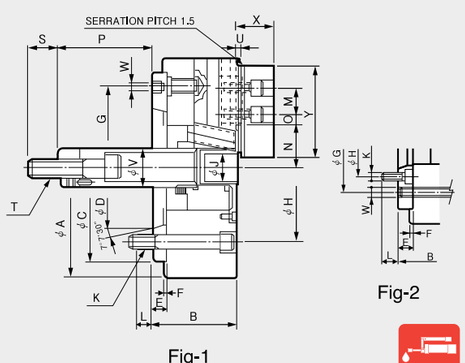


Fig-1

Fig-2

Grease

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

Dimensions

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	U	V	W	X
HC-06A05	165	84	140	82.563	15	5	116	104.8	21	6-M10	14	20	37.8	33.5	13.75	7.75	83	64.5	31	12	36	M16×2.0	4	34	3-M6	35
HC-08A06	210	97	170	106.375	17	5	150	133.4	25	6-M12	18	25	46.3	41.9	22.25	11.75	92(108)	73(89)	35	14	36	M20×2.5	5	38	3-M6	42
HC-10A06	254	109	220	106.375	25	5	171.4	133.4	34	6-M12	18.5	30	51.1	46.7	30.75	11.25	84(128)	74(89)	40	16	36	M20×2.5	5	45	6-M16	46
HC-10A08	254	102	220	139.719	18	5	190	171.4	34	6-M16	25	30	51.1	46.7	30.75	11.25	101(140)	76(115)	40	16	36	M20×2.5	5	45	3-M8	46
HC-12A06	304	125	220	106.375	25	6	171.4	133.4	34	6-M12	18	30	61	55.75	48.75	12.75	117 (138)	87 (108)	49	18	36	M24×3.0 (M20×2.5)	5	50	6-M16	53.5
HC-12A08	304	118	220	139.719	18	6	190	171.4	34	6-M16	25	30	61	55.75	48.75	12.75	124 (145)	94 (115)	49	18	36	M24×3.0 (M20×2.5)	5	50	3-M8	53.5

※ The numbers in parentheses in columns P and T are also available upon request.

Specifications

	Spindle Nose No.	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Grip Dia. (mm)		Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder		Max. Hydraulic Pressure MPa(kgf/ cm²)	Operrating HARD JAW	KITAGAWA® Model
				Max.	Min.						Hydraulic	Pneumatic			
HC-06A05	A2-5	8.5	18.5	165	19	18 (1835)	52.5 (5353)	5270	14	1.96 (0.20)	Y-1020R(RE)	AY-1720R	2.6 (26.5)	HB06A1	N-06A05
HC-08A06	A2-6	8.8	19	210	23	25 (2549)	75 (7648)	4760	27	5.79 (0.59)	Y-1225R(RE)	AY-2225R	2.5 (25.5)	HB08A1	N-08A06
HC-10A06	A2-6	8.8	25	254	24	29 (2957)	108 (11013)	4010	40	13.14 (1.34)	Y-1225R(RE)	AY-2225R	2.8 (28.6)	HB10A1	N-10A06
HC-10A08	A2-8	8.8	25	254	24	29 (2957)	108 (11013)	4010	40	12.84 (1.31)	Y-1225R(RE)	AY-2225R	2.8 (28.6)	HB10A1	N-10A08
HC-12A06	A2-6	10.5	30	304	26	41 (4181)	156 (15907)	3380	67	29.81 (3.04)	Y-1530R(RE)	AY-2730R	2.7 (27.5)	HB12A1	N-12A06
HC-12A08	A2-8	10.5	30	304	26	41 (4181)	156 (15907)	3380	66	29.52 (3.01)	Y-1530R(RE)	AY-2730R	2.7 (27.5)	HB12A1	N-12A08

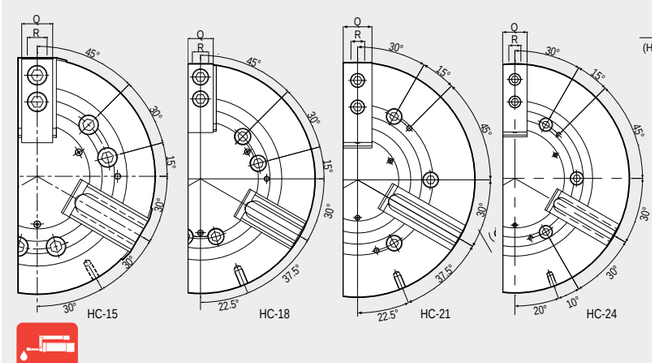
※ Refer to Fig-2 for HC-10A06, HC-12A06.
※ Specifications are subject to change without notice.
※ Maximum turning speed is based upon actual measurements.
※ Samcully Machinery Co., Ltd. is no longer an OEM manufacturer for Kitagawa® Iron Works Co., Ltd.

HC-A

3-Jaw Closed-Center Chuck with Adaptor (381mm - 610mm)

■ 3-jaw wedge-type closed-center power chuck with adaptor

HYDRAULIC CHUCK



Grease

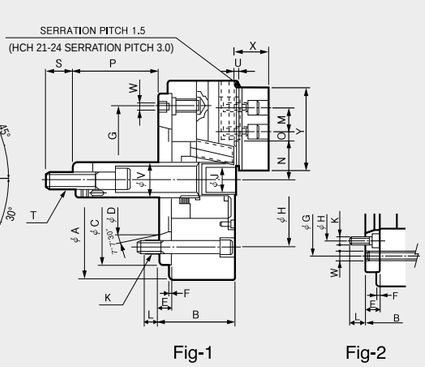


Fig-1

Fig-2

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

Dimensions

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	U	V	W	X
HC-15A08	381	141	300	139.719	33	6	235.0	171.4		6-M16	24	43	77.5	69.5	48.75	23.25	71	36	50	25.5	55	M30×3.5	2	60	6-M20	61
HC-15A11	381	130	300	196.869	22	6	260	235.0	-	6-M20	33	43	77.5	69.5	48.75	23.25	82	47	50	25.5	55	M30×3.5	2	60	3-M10	61
HC-18A08	450	141	300	139.719	33	6	235.0	171.4	-	6-M16	24	43	108	100	48.75	23.25	59	24	50	25.5	55	M30×3.5	2	60	6-M20	61
HC-18A11	450	130	300	196.869	22	6	260	235.0	-	6-M20	33	43	108	100	48.75	23.25	70	35	50	25.5	55	M30×3.5	2	60	3-M10	61
HC-21A11	530	161	380	196.869	42	6	330.2	235.0	-	6-M20	29	60	86	78	93.5	27.5	55	20	65	25	55	M30×3.5	3	60	6-M22	70
HC-21A15	530	146	380	285.775	27	6	330.2	330.2	-	6-M22	34	60	86	78	93.5	27.5	70	35	65	25	55	M30×3.5	3	60	3-M12	70
HC-24A11	610	161	380	196.869	42	6	330.2	235.0	-	6-M20	29	60	125	117	93.5	27.5	55	20	65	25	55	M30×3.5	3	60	6-M22	70
HC-24A15	610	146	380	285.775	27	6	330.2	330.2	-	6-M22	34	60	125	117	93.5	27.5	70	35	65	25	55	M30×3.5	3	60	6-M12	70

Specifications

	Spindle Nose No.	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Grip Dia. (mm)		Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder		Max. Hydraulic Pressure MPa(kgf/ cm²)	Operrating HARD JAW	KITAGAWA® Model
				Max.	Min.						Hydraulic	Pneumatic			
HC-15A08	A2-8	16	35	381	71	82 (8362)	249 (25391)	3040	105	76.49 (7.8)	Y-2035R(RE)	-	3.2 (32.6)	HB15N1	N-15A08
HC-15A11	A2-11	16	35	381	71	82 (8362)	249 (25391)	3040	103	73.55 (7.5)	Y-2035R(RE)	-	3.2 (32.6)	HB15N1	N-15A08
HC-18A08	A2-8	16	35	450	133	82 (8362)	249 (25391)	2710	134	97.08 (9.9)	Y-2035R(RE)	-	3.2 (32.6)	HB15N1	N-18A11
HC-18A11	A2-11	16	35	450	133	82 (8362)	249 (25391)	2710	131	95.12 (9.7)	Y-2035R(RE)	-	3.2 (32.6)	HB15N1	N-18A11
HC-21A11	A2-11	16	35	530	62	82 (8362)	273 (27838)	1940	198	201.03 (20.5)	Y-2035R(RE)	-	3.2 (32.6)	HB18B2	N-21A11
HC-21A15	A2-15	16	35	530	62	82 (8362)	273 (27838)	1940	190	194.15 (19.9)	Y-2035R(RE)	-	3.2 (32.6)	HB18B2	N-21A15
HC-24A11	A2-11	16	35	610	152	82 (8362)	273 (27838)	1760	241	289.28 (29.5)	Y-2035R(RE)	-	3.2 (32.6)	HB18B2	N-24A11
HC-24A15	A2-15	16	35	610	152	82 (8362)	273 (27838)	1760	234	276.54 (28.2)	Y-2035R(RE)	-	3.2 (32.6)	HB18B2	N-24A15

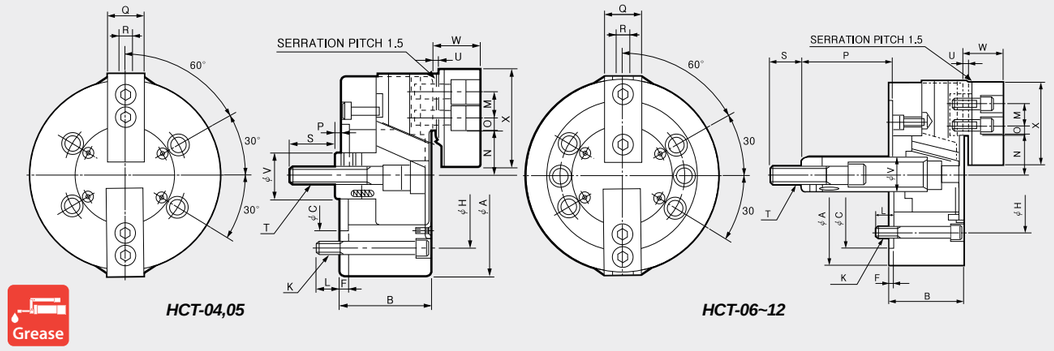
※ Maximum turning speed is based on actual measurements.
※ Specifications are subject to change without notice.
※ Refer to Fig-2 for HC-15A08, HC-18A08, HC-21A08, HC-21A11, and HC-2411.
※ Samcully Machinery Co., Ltd. is no longer an OEM manufacturer for Kitagawa® Iron Works Co., Ltd.

HCT

2-Jaw Closed-Center Chuck

■ 2-jaw wedge-style power chuck

HYDRAULIC CHUCK



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

Dimensions

	A	B	C(H6)	F	H	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	U	V	W	X
HCT-04	110	52	60	6	80	4-M8×55	12	14	23.3	20.1	11.25	8.75	17	3	23	10	25	M10×1.5	3	26	27	55
HCT-05	135	55	80	7	100	4-M8x60	14	19	30.4	27.2	11.25	6.75	6	-8	23	10	35	M12×1.75	3	28	29	62
HCT-06	165	74	140	5	104.8	6-M10×70	14	20	37.8	33.55	13.75	7.75	100	81.5	31	12	36	M16×2.0	4	34	35	72
HCT-08	210	85	170	5	133.4	6-M12×85	20	25	46.3	41.9	22.25	11.75	125	106	.35	14	36	M20×2.5	5	38	42	95
HCT-10	254	89	220	5	171.4	6-M16×85	18	30	51.1	46.7	30.75	11.25	158	133	40	16	36	M20×2.5	5	45	46	110
HCT-12	304	106	220	6	171.4	6-M16×100	18	30	61	55.75	48.75	12.75	163	133	49	18	36	M24×3.0	5	50	53.5	129

Specifications

	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Grip Dia. (mm)		Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m KN(kgf)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder	Max. Hydraulic Pressure MPa(kgf/ cm²)	KITAGAWA® Model
			Max.	Min.								
HCT-04	6.4	14	110	5	5.3 (540)	15.2 (1550)	6000	3.8	0.26 (0.027)	Y-0715R	1.68 (17.1)	NT-04
HCT-05	6.4	14	135	16	5.3 (540)	16.9 (1713)	5500	5.8	0.59 (0.06)	Y-0715R	1.68 (17.1)	NT-05
HCT-06	8.5	18.5	165	14	12 (1224)	35 (3569)	5000	11.4	1.67 (0.17)	Y-1020R	1.7 (17.3)	NT-06
HCT-08	8.8	19	210	17	16.5 (1683)	50 (5099)	4000	22	5.20 (0.53)	Y-1225R	1.6 (16.3)	NT-08
HCT-10	8.8	25	254	22	19.5 (1988)	72 (7342)	3500	31.6	11.5 (1.17)	Y-1225R	1.9 (19.4)	NT-10
HCT-12	10.5	30	310	22	27.5 (2804)	104 (10605)	3000	55	27.8 (2.83)	Y-1530R	1.8 (18.4)	NT-12

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

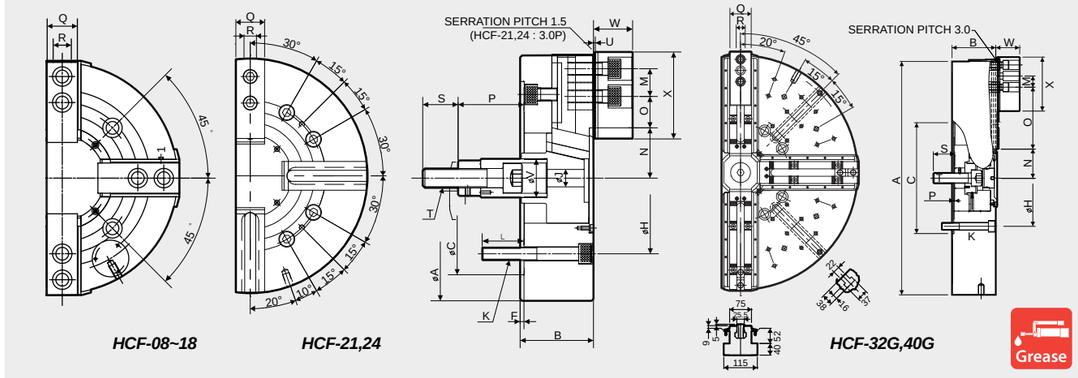
HCF

4-Jaw Closed-Center Chuck

■ 4-jaw wedge-style closed-center power chuck

HYDRAULIC CHUCK

See page 65 Gripping Force



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

Dimensions

	A	B	C(H6)	F	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	U	V	W	X
HCF-08	210	85	170	5	150	25	6-M12	30	25	46.3	41.9	22.25	11.75	125	106	35	14	36	M20×2.5	5	38	42	95
HCF-12	304	106	220	6	171.4	34	4-M16	38	30	61	55.7	48.75	12.75	163	133	49	18	36	M20×2.5	5	50	53.5	129
HCF-15	381	114	300	6	235	27	4-M20	65	43	78	70	48.75	23.25	104	69	50	26	55	M30×3.5	2	60	61	135
HCF-18	450	114	300	6	235	27	4-M20	30	43	108	100	48.75	23.25	92	57	50	26	55	M30×3.5	2	60	60	135
HCF-21	530	125	380	6	330.2	27	8-M22	61	60	86	78	93.5	27.5	97	62	65	25	55	M30×3.5	3	60	70	180
HCF-24	610	125	380	6	330.2	27	8-M22	31	60	125	117	93.5	27.5	97	62	65	25	55	M30×3.5	3	60	70	180
HCF-32G	800	150	380	6	330.2	65	8-M24x160L	41	38.1	99.4	89.4	212.5	32.5	35	-3	75	25.5	73	M36×4.0	5	102	82	185
HCF-40G	1000	180	520	8	463.6	32	8-M24x140L	32	60	187.3	167.3	172	23.7	-25	32	110	30	65	M36×4.0	4	52	106	270

※ Blank and machined draw-nuts are available.
※ HCF-21 and HCF-24 are available with M22 or M24 mounting bolts.
※ Groove type is standard model on HCF-32G and HCF-40G.

Specifications

	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Grip Dia. (mm)		Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder	Max. Hydraulic Pressure MPa(kgf/ cm²)	Operrating HARD JAW
			Max.	Min.								
HCF-08	8.8	19	210	17	16.5(1638)	50(5099)	4000	22	5.20(0.53)	Y-1225R(RE)	1.6 (16.3)	HB08A1
HCF-12	10.5	30	304	26	27.5(2804)	104(10605)	3000	55	27.7(2.83)	Y-1530R(RE)	1.8 (18.4)	HB12B1
HCF-15	16	35	381	71	54.6(5575)	165.8(16927)	3040	98	72.6(7.4)	Y-2035R(RE)	2.13 (21.7)	HB15N1
HCF-18	16	35	450	133	54.6(5575)	165.8(16927)	2710	124	92.2(9.4)	Y-2035R(RE)	2.13 (21.7)	HB15N1
HCF-21	16	35	530	62	54.6(5575)	183(18550)	1700	180	188.3(19.2)	Y-2035R(RE)	2.13 (21.7)	HB18B2
HCF-24	16	35	610	152	54.6(5575)	183(18550)	1500	223	271.7(27.7)	Y-2035R(RE)	2.13 (21.7)	HB18B2
HCF-32G	20	38	800	85	88(8925)	156(15821)	800	350	601(61)	Y-2050	3 (30.6)	HB32SB2
HCF-40G	46	57	1000	150	120(12245)	213(21769)	630	620	1720(174.5)	Y-2560	2.7 (27.2)	HB40SB2

※ Maximum turning speed is based on actual measurements.
※ Specifications are subject to change without notice.
※ HCF-12 is also available with long stroke.

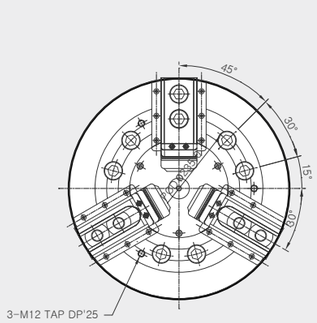
HC-SE

3-Jaw Sealed Closed-center Chuck

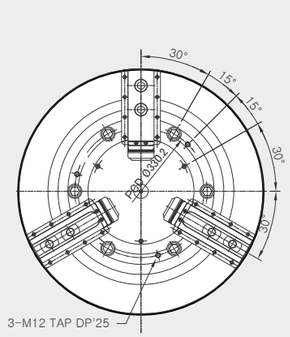
■ Sealed version of the HC chucks ideal for vertical machining and keeping swarf out of the chuck body

HYDRAULIC CHUCK

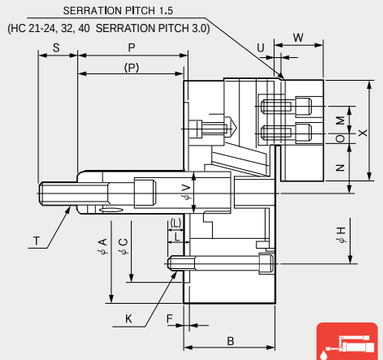
See page 63-64 Gripping Force



HC-15,18SE



HC-21,24SE



Grease

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

Dimensions

	A	B	C(H6)	F	H	J	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	U	V	W	X
HC-15SE	381	114	300	6	235.0	-	6-M20X150	65	43	77.5	69.5	48.75	23.25	104	69	62	25.5	55	M30×3.5	2	60	61	135
HC-18SE	450	114	300	6	235.0	-	6-M20X115	30	43	108	100	48.75	23.25	92	57	62	25.5	55	M30×3.5	2	60	61	135
HC-21SE	530	125	380	6	330.2	-	6-M22X120	31	60	86	78	93.5	27.5	97	62	65	25	55	M30×3.5	3	60	70	180
HC-24SE	610	125	380	6	330.2	-	6-M22X120	31	60	125	117	93.5	27.5	97	62	65	25	55	M30×3.5	3	60	71	180

※HC-32 and HC-40 are groove-type chucks with 19.025mm keys.

Specifications

	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Permissible Input Force kN(kgf)	Max. Static Gripping Force kN(kgf)	Max. r.p.m min⁻¹(r.p.m)	Weight kgf	GD² N·m²(kgf·m²)	Operating Cylinder Hydraulic	Operating Cylinder Pneumatic	Max. Hydraulic Pressure MPa(kgf/ cm²)	Operating HARD JAW	KITAKAWA® Model
HC-15SE	16	35	381	71	82 (8362)	249 (25391)	3040	96	70.61(7.2)	Y-2035R(RE)	-	3.2 (32.6)	HB15N1	N-15
HC-18SE	16	35	450	133	82 (8362)	249 (25391)	2710	124	92.2 (9.4)	Y-2035R(RE)	-	3.2 (32.6)	HB15N1	N-18
HC-21SE	16	35	530	62	82 (8362)	273 (27838)	1940	180	188.3 (19.2)	Y-2035R(RE)	-	3.2 (32.6)	HB18B2	N-21
HC-24SE	16	35	610	152	82(8362)	273 (27838)	1760	223	271.6(27.7)	Y-2035R(RE)	-	3.2 (32.6)	HB18B2	N-24

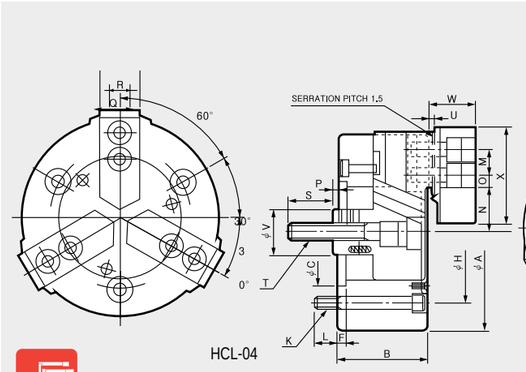
※Maximum turning speed is based on actual measurements.
※Specifications are subject to change without notice.
※Samcully Machinery Co., Ltd. is no longer an OEM manufacturer for Kitagawa Iron Works Co., Ltd.

HCL

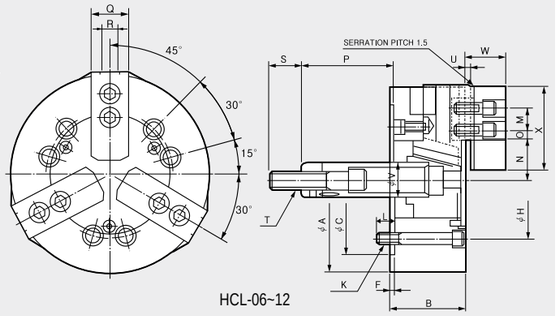
3-Jaw Closed-Center Long-Stroke Chuck

■ 3-jaw wedge-style power chuck

HYDRAULIC CHUCK



HCL-04



HCL-06~12

Grease

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

Dimensions

	A	B	C(H6)	F	H	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	U	V	W	X
HCL-04	110	52	60	6	80	3-M8	12	14	26.5	20.45	9.75	6.75	18	3	23	10	25	M10×1.5	3	26	27	55
HCL-06	165	74	140	5	104.8	6-M10	14	20	40.5	34	13.75	9.25	101.5	81.5	31	12	36	M16×2.0	4	34	35	72
HCL-08	210	85	170	5	133.4	6-M12	20	25	48.1	40	20.75	11.75	131	106	35	14	36	M20×2.5	5	38	42	95
HCL-10	254	89	220	5	171.4	6-M16	18	30	54.4	43.35	29.5	11.5	161	133	40	16	36	M20×2.5	5	45	46	110
HCL-12	304	106	220	6	171.4	6-M16	18	30	65.7	56	42.75	12.75	163	133	50	18	46	M20×2.5	5	50	54	129

Specifications

	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Grip Dia. (mm) Max.	Grip Dia. (mm) Min.	Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m KN(kgf)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder	Max. Hydraulic Pressure MPa(kgf/ cm²)	Operrating HARD JAW	KITAGAWA® Model
HCL-04	12.1	15	110	12	10 (1020)	14.4 (1468)	5000	4.1	0.29 (0.03)	Y-0715R(RE)	2.9 (29.6)	HB04N1	NL-04
HCL-06	13	20	165	22	21 (2141)	39 (3977)	4300	12	1.76 (0.18)	Y-1020R(RE)	3.0 (30.6)	HB06A1	NT-06
HCL-08	16.2	25	210	23	30 (3059)	60 (6118)	3600	22.9	5.39 (0.55)	Y-1225R(RE)	2.9 (29.6)	HB08A1	NT-08
HCL-10	18.1	28	254	27	40 (4079)	81 (8260)	3100	34.6	11.8 (1.20)	Y-1530R(RE)	2.8 (28.6)	HB10A1	NT-10
HCL-12	19.4	30	304	33	54 (5506)	111 (11319)	2500	60	28.4 (2.90)	Y-1530R(RE)	3.6 (36.7)	HB12B1	NT-12

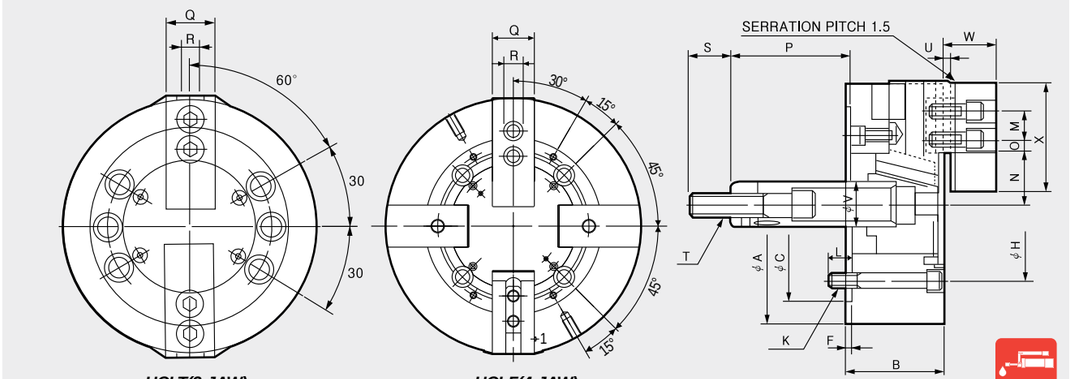
※Specifications are subject to change without notice.
※Maximum turning speed is based upon actual measurements.
※Samcully Machinery Co., Ltd. is no longer an OEM manufacturer for Kitagawa® Iron Works Co., Ltd.

HCLT / HCLF

2-Jaw,4Jaw Closed-Center Long-Stroke Chuck

- 2-jaw wedge-style power chuck
- 4-jaw wedge-style power chuck

HYDRAULIC CHUCK



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

Dimensions

	A	B	C(H6)	F	H	K	L	M	Nmax.	Nmin.	Omax.	Omin.	Pmax.	Pmin.	Q	R	S	T	U	V	W	X
HCLT-06	165	74	140	5	104.8	6-M10×70	14	20	40.5	34	13.75	9.25	101.5	81.5	31	12	36	M16×2.0	4	34	35	72
HCLT-08	210	85	170	5	133.4	6-M12×85	20	25	48.1	40	21	12	131	106	35	14	36	M20×2.5	5	38	42	95
HCLT-10	253	89	220	5	171.4	M16x105L	38	30	54.4	45.35	29.5	11.5	161	133	40	16	36	M20x2.5	5	45	46	110
HCLT-12	304	106	220	6	171.4	M16x120L	38	30	65.7	56	42.75	12.25	163	133	50	18	36	M20x2.5	5	50	54	129
HCLF-08	210	85	170	5	133.4	6-M12×85	20	25	48.1	40	21	12	131	106	35	14	36	M20×2.5	5	38	42	95
HCLF-12	304	106	220	6	171.45	M16x120L	38	30	65.7	56	42.75	12.25	163	133	50	18	36	M20x2.5	5	50	54	129

※Blank and machined draw-nuts are available.

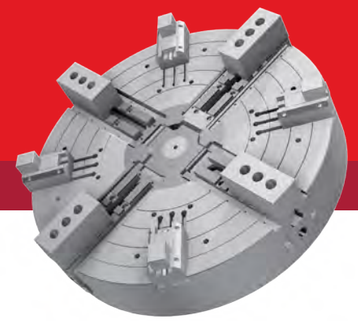
Specifications

	Jaw STROKE Diameter. (mm)	PLUNGER STROKE (mm)	Grip Dia. (mm)		Permissible Input Force KN(kgf)	Max. Static Gripping Force KN(kgf)	Max. r.p.m KN(kgf)	weight kgf	GD² N·m²(kgf·m²)	Operrating Cylinder	Max. Hydraulic Pressure MPa(kgf/ cm²)	KITAGAWA® Model
			Max.	Min.								
HCLT-06	13	20	165	22	14 (1428)	26 (2651)	4300	12.5	1.67 (0.17)	Y-1020R	2.06 (21.0)	NLT-06
HCLT-08	16.2	25	210	24	20 (2039)	40 (4079)	3600	24	5.20 (0.53)	Y-1225R	2.03 (20.7)	NLT-08
HCLT-10	18.1	28	254	27	27(2753)	54(5506)	3100	35.5	11.47(1.17)	Y-1530R	1.93(19.7)	NLT-10
HCLT-12	19.4	30	304	33	36(3671)	74(7546)	2500	60.5	27.75(2.83)	Y-1530R	2.50(25.5)	NLT-12
HCLF-08	16.2	25	210	24	20 (2039)	40 (4079)	3600	24	5.20 (0.53)	Y-1225R	2.03 (20.7)	NLT-08
HCLF-12	19.4	30	304	33	36(3671)	74(7546)	2500	60.5	27.75(2.83)	Y-1530R	2.50(25.5)	NLT-12

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

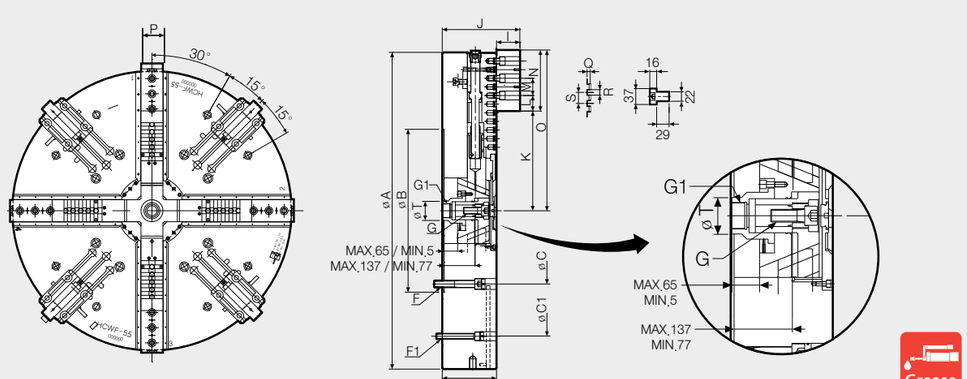
HCWF

Double Wedge Hydraulic Chuck



- Available independently with two jaws which is based on double wedge type
- Ideal for variant workpieces such as rectangle, round type
- 2 JAW+2 JAW (Operated by Hydraulic system), 4 Jaw (Operated by manual system)

HYDRAULIC CHUCK



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

Dimensions

	A	B	C	C1	D	E	F	F1	G	G1	H	I	J
HCWF-55	1400	720	647.6	1110	26	40	M30x180L	M24x170L	M30x80L	M62x2.0p	240	104	343

	K		L1		L2		M	N	O	P	Q	R	S	T
	Max.	Min.	Max.	Min.	Max.	Min.								
	250	226	65	5	137	77	76.2	270	Max. 716	85	11	19.025	38.1	110

Specifications

	2 Step Manual Jaw Function	Maunal setting (Radial chuck Jaw)	Manual Chuck Jaw Stroke	PLUNGER STROKE (mm)	Grip Dia.		Max. Input Force (KN)	Max. Gripping Force (KN)	Max. Speed (r.p.m.)	weight kgf	Moment of Onetia	Operrating Cylinder
					Max.	Min.						
HCWF-55	◎	40+(24)	60	60	1400	-	120(W1,W2)	210(J1,J2)	400	1400	355	DYV-21560

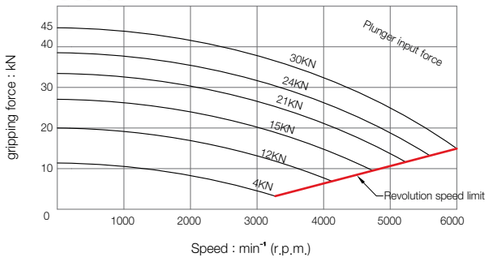
※ ◎ : Option

Gripping Force Chart

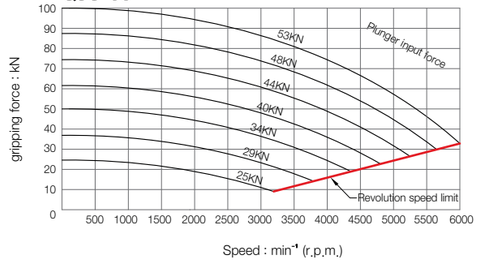
Relationship between Gripping Force and Rotating Speed

QJC - Type

QJC-06



QJC-08



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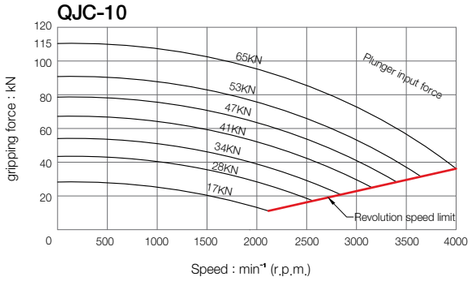
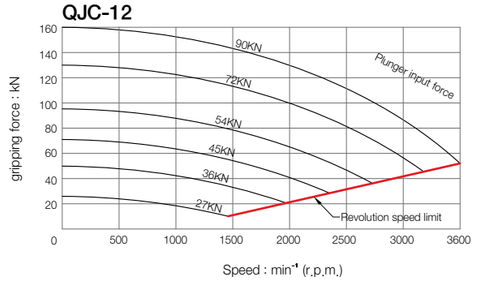
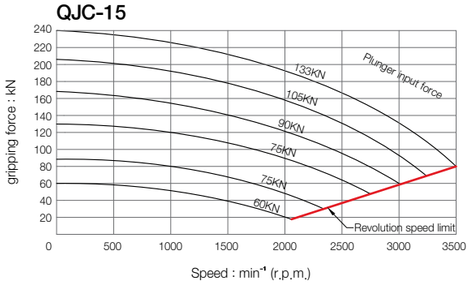


QJC-12

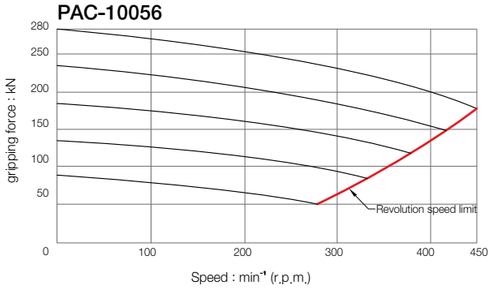


QJC-15



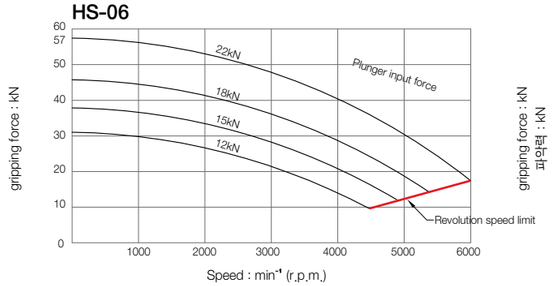
PAC - Type

PAC-10056

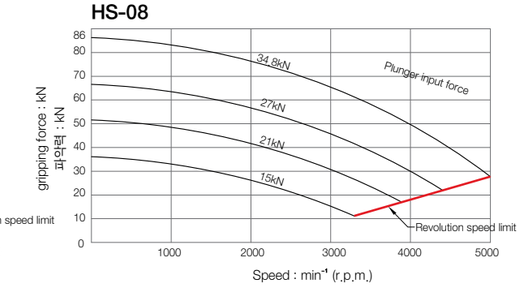


HS - Type

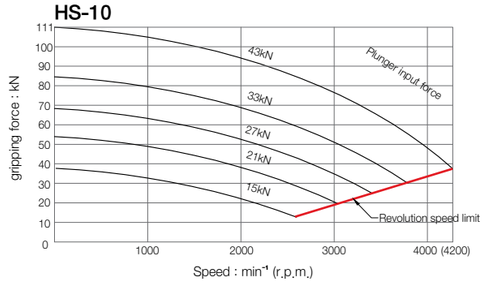
HS-06



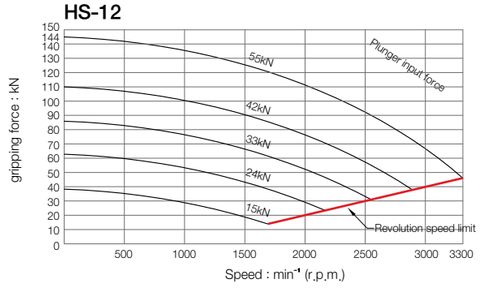
HS-08



HS-10

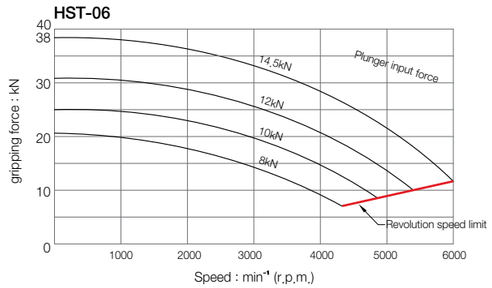


HS-12



HST - Type

HST-06



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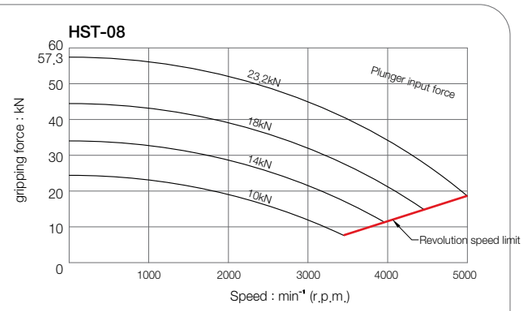
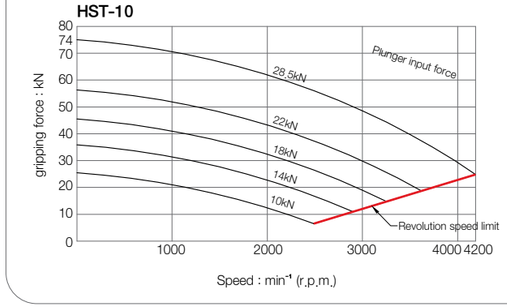


HST-10



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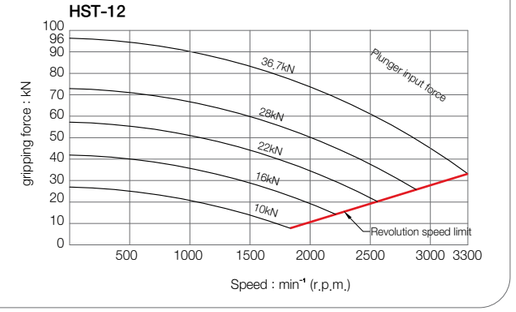
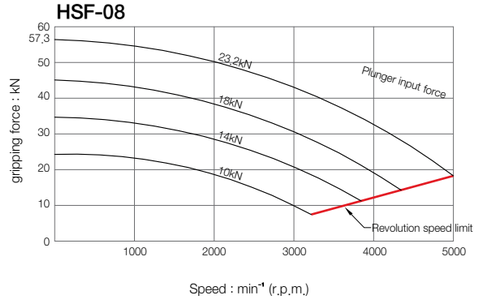
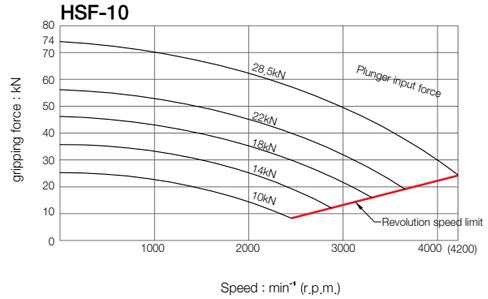


HSF - Type

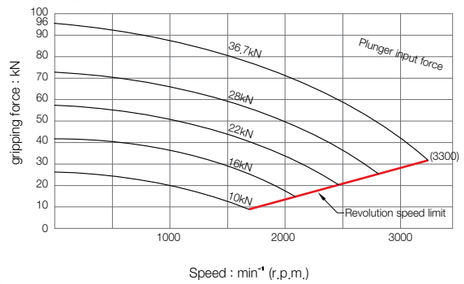
HSF-08



HSF-10

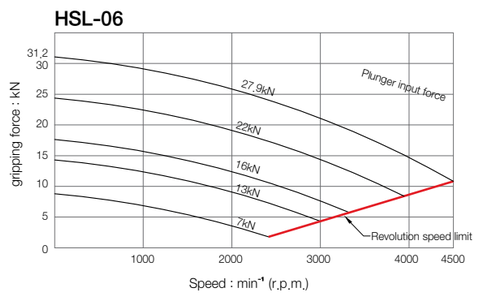


HSF-12

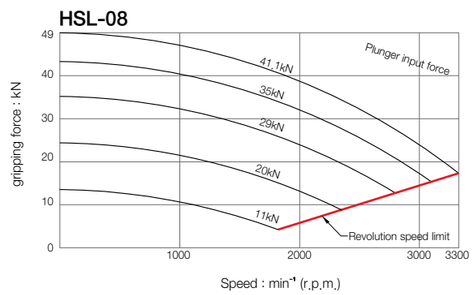


HSL - Type

HSL-06



HSL-08



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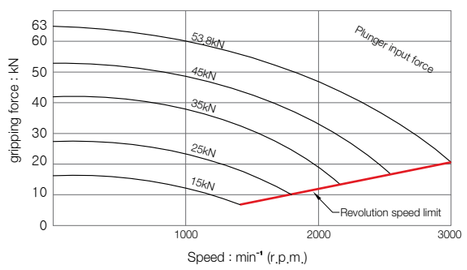

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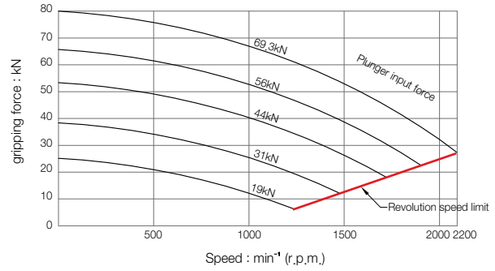
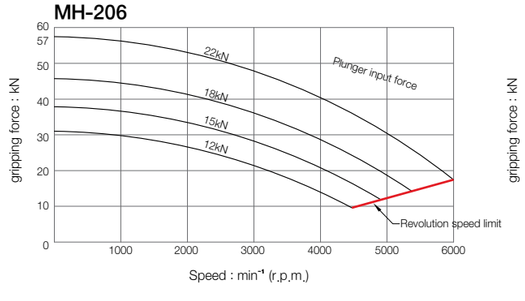


MH - Type

MH-206



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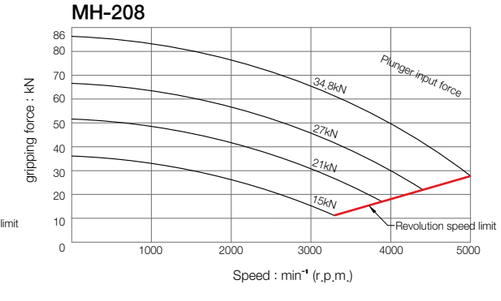
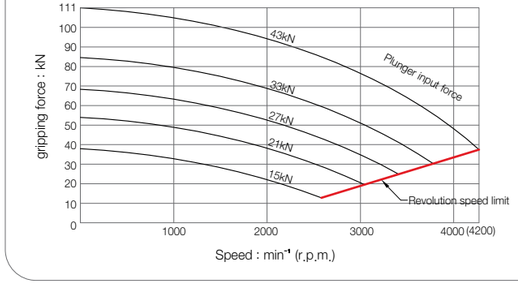
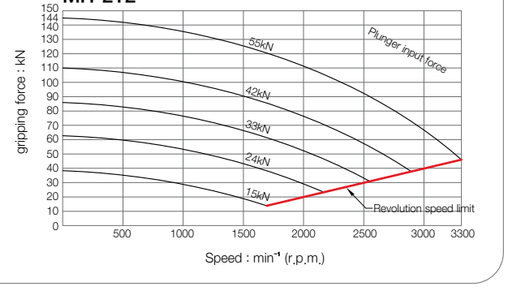


MH-210

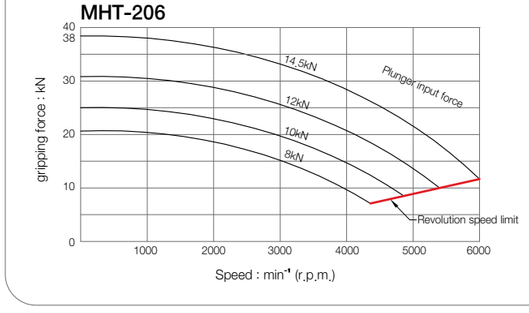


MH-212

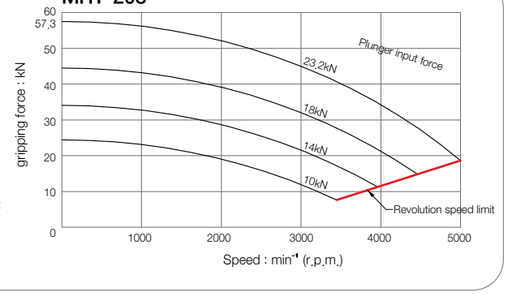


MHT - Type

MHT-206

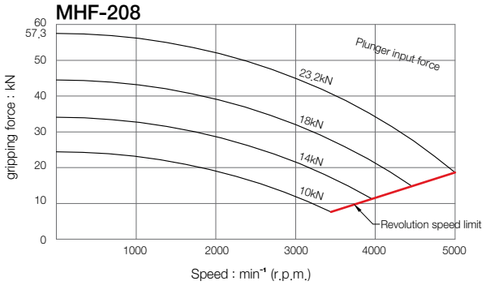


MHT-208



MHF - Type

MHF-208

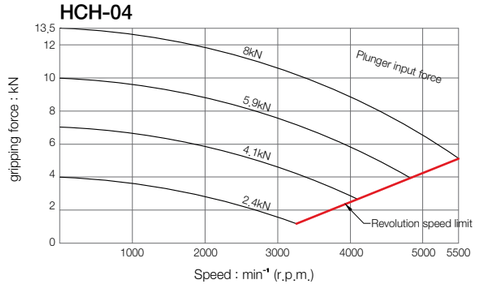


Gripping Force Chart

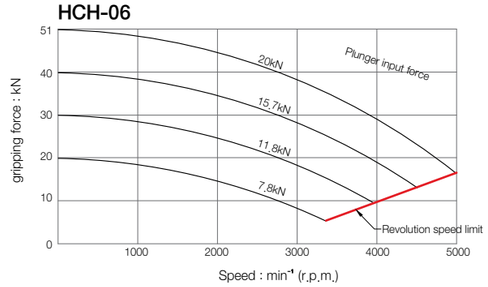
Relationship between Gripping Force and Rotating Speed

HCH- Type

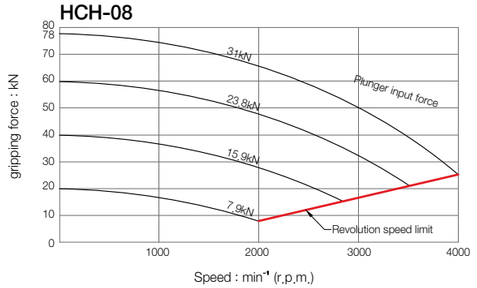
HCH-04



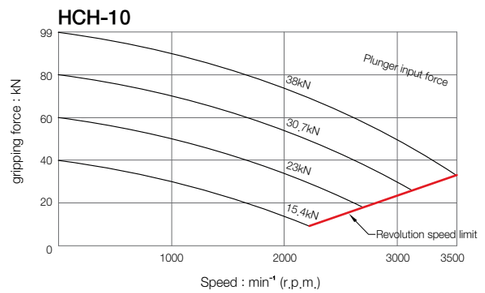
HCH-06



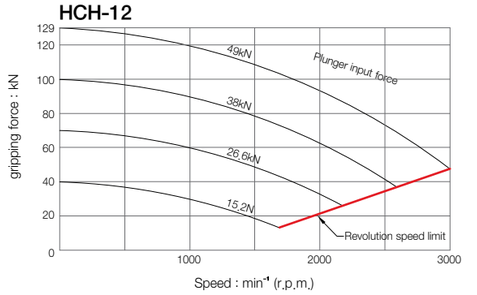
HCH-08



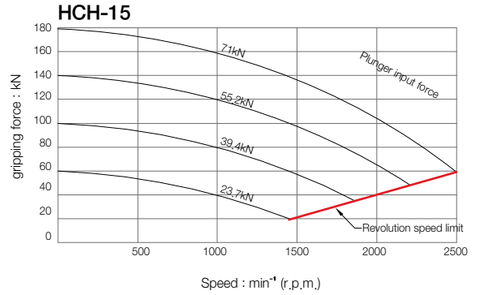
HCH-10



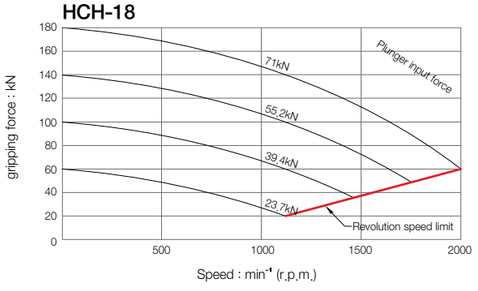
HCH-12



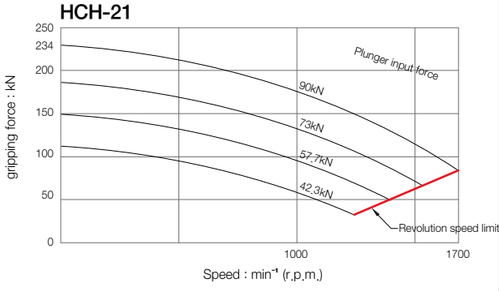
HCH-15



HCH-18

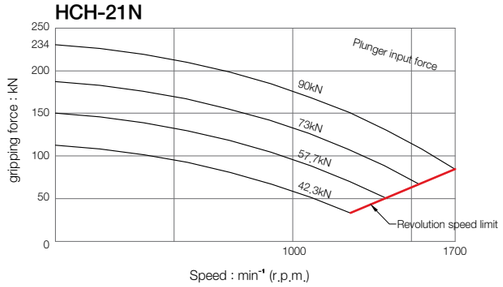


HCH-21

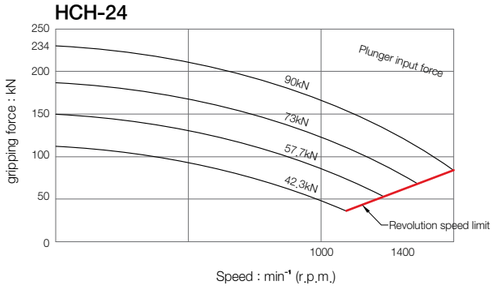


HCH- Type

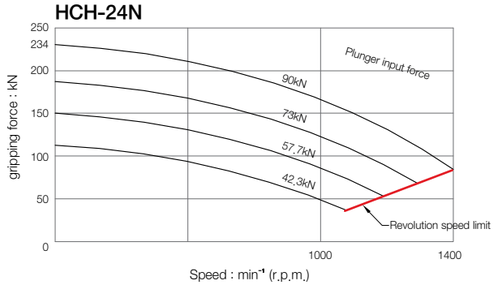
HCH-21N



HCH-24



HCH-24N



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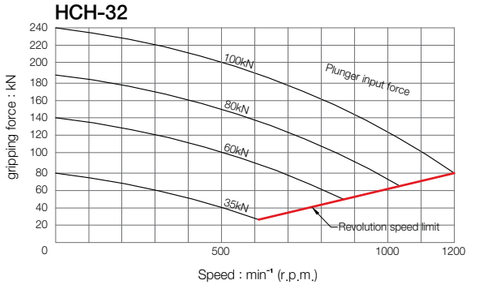
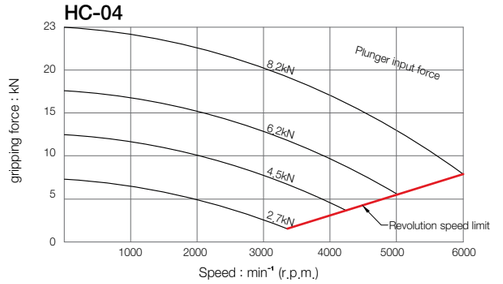
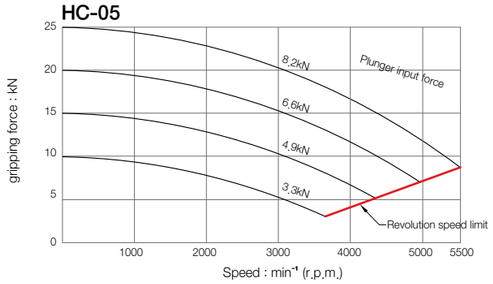


HC - Type

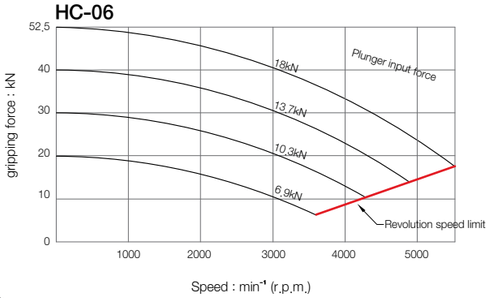
HC-04



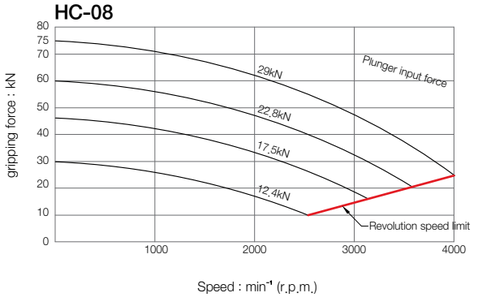
HC-05



HC-06



HC-08



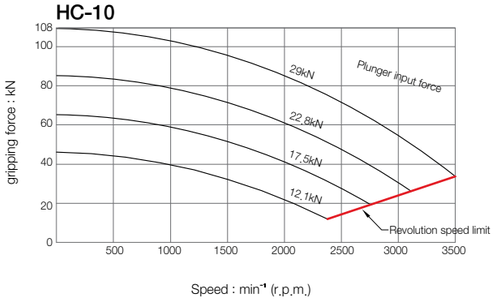
Power Chuck

Gripping Force Chart

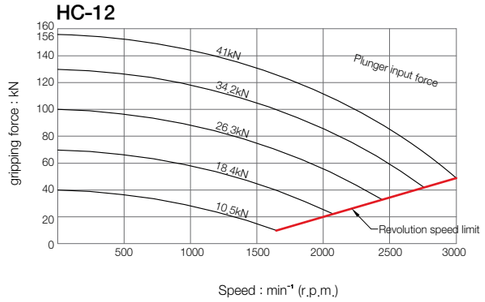
Relationship between Gripping Force and Rotating Speed

HC - Type

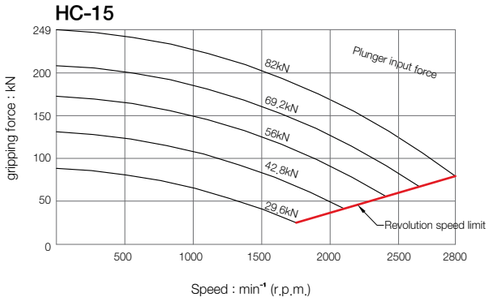
HC-10



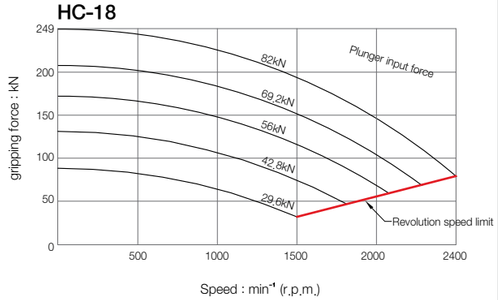
HC-12



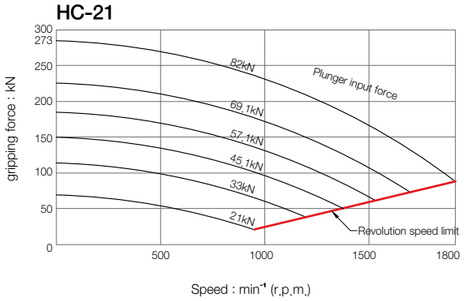
HC-15



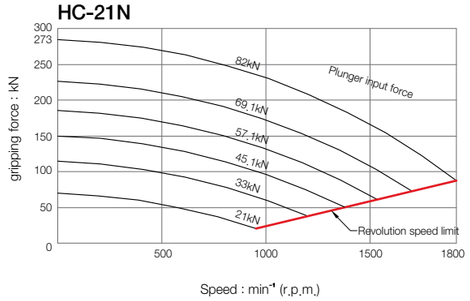
HC-18



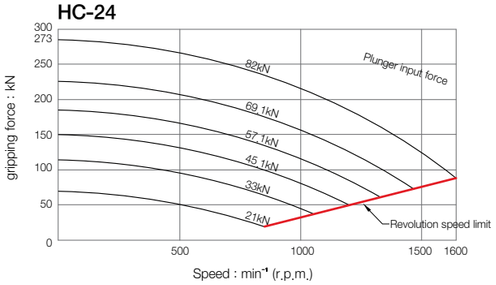
HC-21



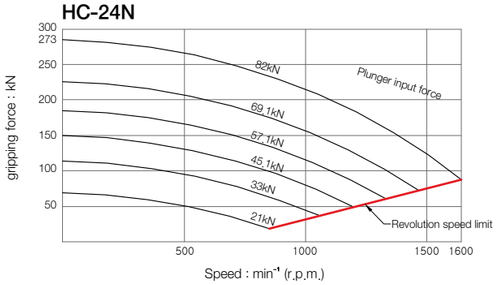
HC-21N



HC-24

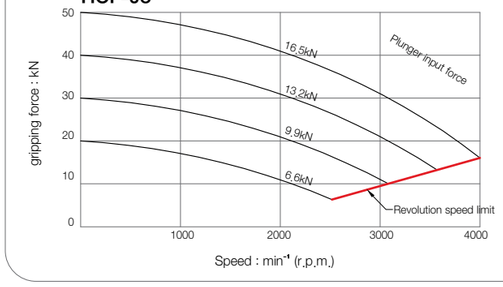


HC-24N

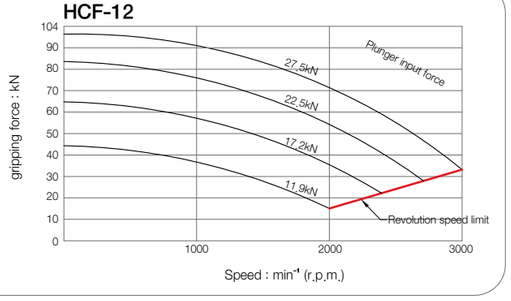


HCF - Type

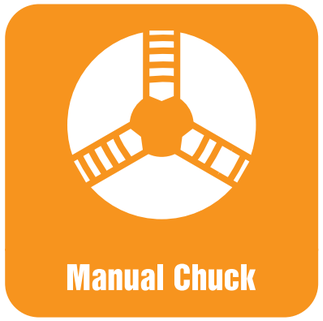
HCF-08



HCF-12



MANUAL CHUCKS

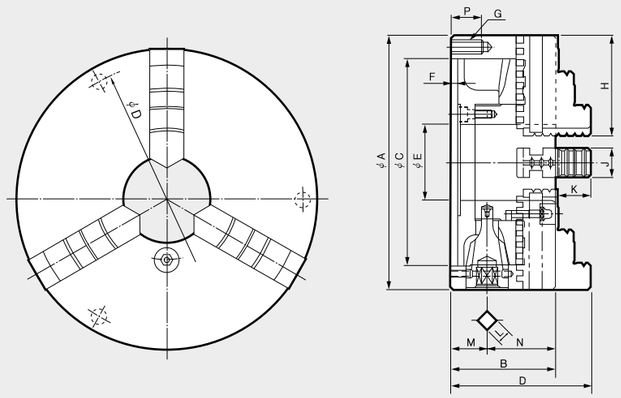


SC

Standard Scroll Chuck (Hard Jaws) (85mm -192mm)

■ Standard solid jaw scroll chuck
(incl. internal and external hard jaws)

SCROLL CHUCK



Dimensions

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	N	P
SC-85(3")	85	45	60	73	16	3.5	3-M6	35	11	15.5	7	17	27.1	13
SC-110(4")	110	58	80	96	24	4.5	3-M8	44	14	20.0	8	24.5	32.35	16
SC-130(5")	130	60	100	115	34	4.5	3-M8	50	16	20.1	8	22.5	37	16
SC-165(6")	167	65	130	147	45	5	3-M10	65	19	25.07	10	24	41	20
SC-190(7")	192	75	155	172	57	5	3-M10	75	22	30.06	11	27.5	47.5	20

Specifications

	Max. Static Gripping dia. KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	(Gripping diameter) (External) φ mm	(Internal) φ mm	Handle Torque N·m(kgf·m)
SC-85(3")	9 (918)	2500	1.5	0.05 (0.005)	2~70	24~64	29.4 (3.0)
SC-110(4")	12 (1224)	2500	3.1	0.17 (0.017)	3~95	29~84	44.1 (4.5)
SC-130(5")	15 (1530)	2500	4.4	0.35 (0.036)	3~110	33~100	63.7 (6.5)
SC-165(6")	31 (3161)	4000	11.4	1.18 (0.12)	3~160	48~150	88.3 (9.0)
SC-190(7")	31 (3161)	3500	12.2	2.35 (0.24)	4~180	56~170	107.9 (11.0)

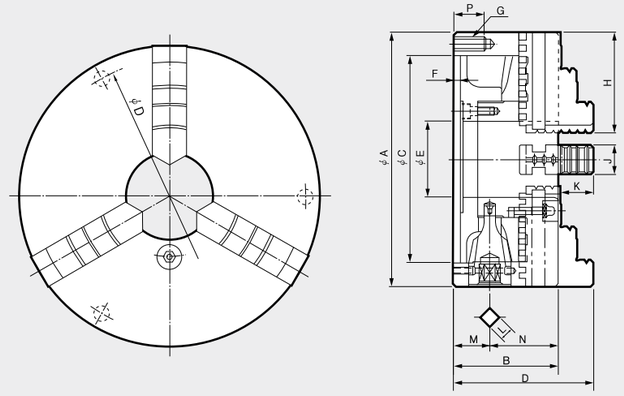
※Specifications are subject to change without notice.

SC

Standard Scroll Chuck (Hard Jaws) (232mm - 405mm)

■ Standard solid jaw scroll chuck
(incl. internal and external hard jaws)

SCROLL CHUCK



Dimensions

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	N	P
SC-230(9")	232	84	190	210	75	6	3-M12	85	24	35.04	12	29.5	54.5	25
SC-273(10")	273	86	230	250	89	6	3-M12	98	28	40.02	12	31.5	54.5	25
SC-310(12")	310	96	260	285	100	7	3-M12	110	30	45.08	14	31.5	64.5	25
SC-355(14")	355	110	300	328	105	8	6-M12	133	35	62.98	14	42.4	67.6	36
SC-405(16")	405	114.5	345	375	130	8	6-M12	133	35	63	15	43	71.5	36

Specifications

	Max. Static Gripping dia. KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	(Gripping diameter) (External) φ mm	(Internal) φ mm	Handle Torque N·m(kgf·m)
SC-230(9")	37 (3773)	2900	21.2	6.27 (0.64)	5~220	62~210	147 (15.0)
SC-273(10")	46 (4691)	2500	28	9.90 (1.01)	5~260	70~250	176.5 (18.0)
SC-310(12")	55 (5608)	2200	41	23.0 (2.35)	10~300	86~290	206 (21.0)
SC-355(14")	40.5 (4130)	1500	54	37.2 (3.8)	25~315	107~290	225.6 (23.0)
SC-405(16")	45 (4589)	1500	74	67.6 (6.9)	25~346	113~324	245 (25.0)

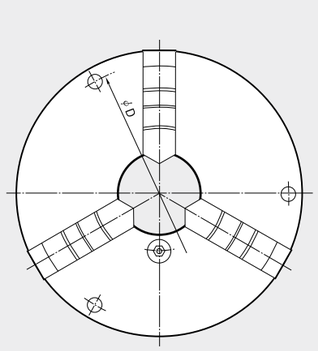
※Specifications are subject to change without notice.

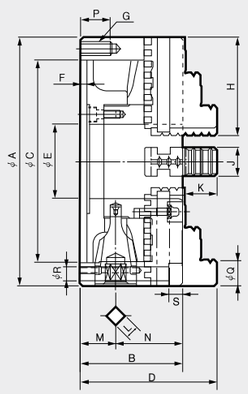
FSC

Standard Front-Mounting Scroll Chuck (Hard Jaws)

- Front-mounting solid jaw scroll chuck (incl. internal and external hard jaws)

SCROLL CHUCK





Dimensions

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	N	P	Mounting Bolt			
															Q	R	S	Bolt
FSC-165(6")	167	65	130	147	45	5	3-M10	65	19	25.07	10	24	41	20	17.5	11	10.5	3-M10
FSC-190(7")	192	75	155	172	57	5	3-M10	75	22	30.06	11	27.5	47.5	20	17.5	11	10.5	3-M10
FSC-230(9")	232	84	190	210	75	6	3-M12	87	24	35.04	12	29.5	54.5	25	20	14	12.5	3-M12
FSC-273(10")	273	86	230	250	89	6	3-M12	98	28	40.02	12	31.5	54.5	25	20	14	12.5	3-M12
FSC-310(12")	310	96	260	285	100	7	3-M12	110	30	45.08	14	31.5	64.5	25	20	14	12.5	3-M12

Specifications

	Max. Static Gripping dia. KN(kgf)	Max. r.p.m min⁻¹(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	(Gripping diameter)		Handle Torque N·m(kgf·m)
					(External) φmm	(Internal) φmm	
FSC-165(6")	31 (3161)	4000	11.4	1.18 (0.12)	3~160	48~150	88.3 (9.0)
FSC-190(7")	31 (3161)	3500	12.2	2.35 (0.24)	4~180	56~170	107.9 (11.0)
FSC-230(9")	37 (3773)	2900	21.2	6.27 (0.64)	5~220	62~210	147 (15.0)
FSC-273(10")	46 (4691)	2500	28	9.90 (1.01)	5~260	70~250	176.5 (18.0)
FSC-310(12")	55 (5608)	2200	41	23.0 (2.35)	10~300	86~290	206 (21.0)

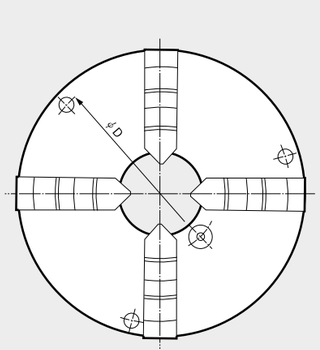
※Specifications are subject to change without notice.

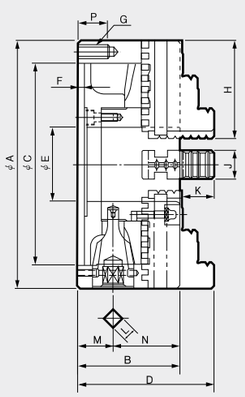
SF

4-Jaw Scroll Chuck (Hard Jaws)

- 4-jaw scroll chuck with solid jaws (incl. internal and external hard jaws)

SCROLL CHUCK





Dimensions

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	N	P
SF-190(7")	192	75	155	172	57	5	3-M10	75	22	30.06	11	27.5	47.5	20
SF-230(9")	232	84	190	210	75	6	3-M12	85	24	35.04	12	29.5	54.5	25
SF-273(10")	273	86	230	250	89	6	3-M12	98	28	40.02	12	31.5	54.5	25
SF-310(12")	310	96	260	285	100	7	3-M12	110	30	45.08	14	31.5	64.5	25

Specifications

	Max. Static Gripping dia. KN(kgf)	Max. r.p.m min⁻¹(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	(Gripping diameter)		Handle Torque N·m(kgf·m)
					(External) φmm	(Internal) φmm	
SF-190(7")	31 (3161)	3500	12.5	2.45 (0.25)	4~180	56~170	107.9 (11.0)
SF-230(9")	37 (3773)	2900	21.5	6.37 (0.65)	5~220	62~210	147 (15.0)
SF-273(10")	46 (4691)	2500	28	9.90 (1.01)	5~260	70~250	176.5 (18.0)
SF-310(12")	55 (5608)	2200	41	23.0 (2.35)	10~300	86~290	206 (21.0)

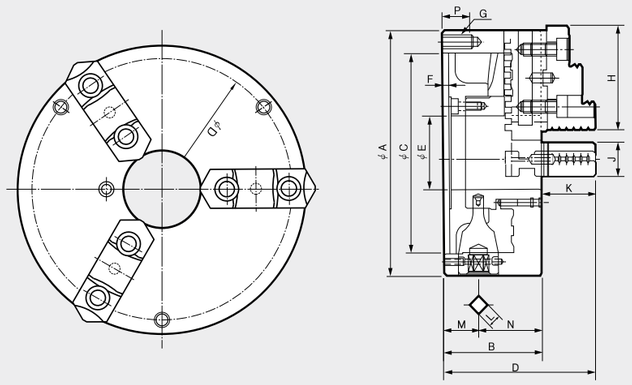
※Specifications are subject to change without notice.

TC

Standard Scroll Chuck (Soft and Hard top Jaws)

- Standard 2-piece jaw scroll chuck (incl. soft and hard top jaws)

SCROLL CHUCK



Dimensions

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Mounting Bolt
TC-190(7")	192	78.7	155	172	57	5	3-M10	80.5	28	42.8	11	27.5	51.2	20	3-M10
TC-230(9")	232	83.7	190	210	75	6	3-M12	90.5	32	53.8	12	29.5	54.2	25	3-M12
TC-273(10")	273	88	230	250	89	6	3-M12	103.5	35	57.82	12	31.5	56.5	25	3-M12
TC-310(12")	310	96	260	285	100	7	3-M12	115.5	40	56.08	14	31.5	64.5	25	3-M12

Specifications

	Max. Static Gripping dia. KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	(Gripping diameter) (External) φmm	(Internal) φmm	Handle Torque N·m(kgf·m)
TC-190(7")	31 (3161)	3500	12.2	2.35 (0.24)	4~180	56~170	107.9 (11.0)
TC-230(9")	37 (3773)	2900	21.2	6.27 (0.64)	5~220	62~210	147 (15.0)
TC-273(10")	46 (4691)	2500	28	9.90 (1.01)	5~260	70~250	176.5 (18.0)
TC-310(12")	55 (5608)	2200	41	23.0 (2.35)	10~300	86~290	206 (21.0)

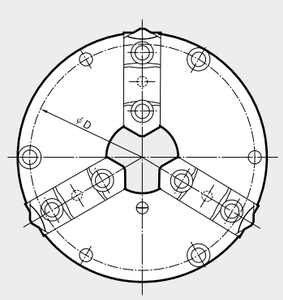
※Specifications are subject to change without notice.

FTC

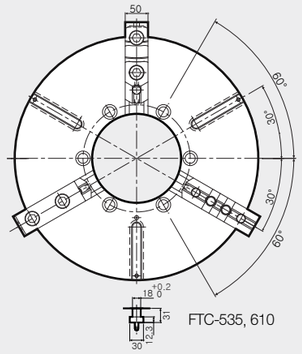
Front-Mounting Scroll Chuck (Soft and Hard top Jaws)

- Front-mounting 2-piece jaw scroll chuck (incl. soft and hard top jaws)

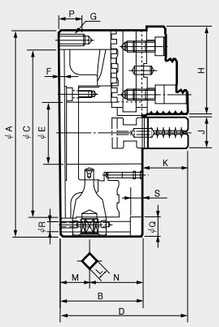
SCROLL CHUCK



FTC-190~460



FTC-535, 610



Dimensions

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	N	P	Mounting Bolt Q	R	S	Bolt
FTC-190(7")	192	78.7	155	172	57	5	3-M10	80.5	28	42.8	11	27.5	51.2	20	16.5	10.5	10.5	M10
FTC-230(9")	232	83.7	190	210	75	6	3-M12	90.5	32	53.8	12	29.5	54.2	25	20	13	12.5	M12
FTC-273(10")	273	88	230	250	89	6	3-M12	103.5	35	57.82	12	31.5	56.5	25	20	13	12.5	M12
FTC-310(12")	310	96	260	285	100	7	3-M12	115.5	40	56.08	14	31.5	64.5	25	20	13	12.5	M12
FTC-460(18")	460	114	400	425	190	8	-	140(130)	50	80	17	38.2	76	-	26	18	18	6-M16X125
FTC-535(21")	535	143	270	235	195	12	-	150(130)	50	82	22	57.5	85.5	-	32	22	22	6-M20X140
FTC-610B(24")	610	143	380	315	275	14	-	130	50	82	22	57.5	85.5	-	32	22	21	6-M20X140

Specifications

	Max. Static Gripping dia. KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	(Gripping diameter) (External) φmm	(Internal) φmm	Handle Torque N·m(kgf·m)
FTC-190(7")	31 (3161)	3500	12.2	2.35 (0.24)	4~180	56~170	107.9 (11.0)
FTC-230(9")	37 (3773)	2900	21.2	6.27 (0.64)	5~220	62~210	147 (15.0)
FTC-273(10")	46 (4691)	2500	28	9.90 (1.01)	5~260	70~250	176.5 (18.0)
FTC-310(12")	55 (5608)	2200	41	23.0 (2.35)	10~300	86~290	206 (21.0)
FTC-460(18")	65 (6650)	870	106	124(12.6)	40~410	152~436	255.0(26)
FTC-535(21")	73 (7400)	950	182	287(29.3)	45~481	155~499	313.9(32)
FTC-610B(24")	80 (8200)	850	238	488(49.8)	130~576	235~592	372.7(38)

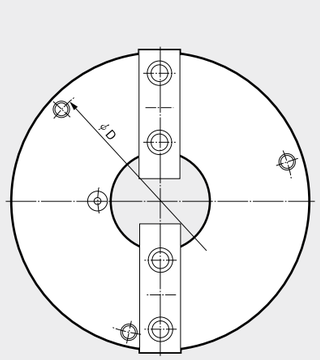
※Specifications are subject to change without notice.

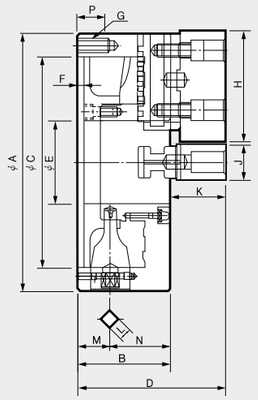
ST

2-Jaw Scroll Chuck (Soft top Jaws)

- 2-jaw scroll chuck with 2-piece jaw (incl. soft top jaws)

SCROLL CHUCK





Dimensions

	A	B	C(H6)	D	E	F	G	H	J	K	L	M	N	P
ST-190(7")	192	78.7	155	172	57	5	3-M10	88	32	44.8	11	27.5	51.2	20
ST-230(9")	232	83.7	190	210	75	6	3-M12	100	32	49.8	12	29.5	54.2	25
ST-273(10")	273	88	230	250	89	6	3-M12	110	35	54.32	12	31.5	56.5	25
ST-310(12")	310	96	260	285	100	7	3-M12	125	40	50.58	14	31.5	64.5	25

Specifications

	Max. Static Gripping dia. KN(kgf)	Max. r.p.m min^{-1}(r.p.m)	weight kgf	GD^2 $N{\cdot}m^2(kgf{\cdot}m^2)$	(Gripping diameter) (External) φmm	(Internal) φmm	Handle Torque N·m(kgf·m)
ST-190(7")	20.7 (2110)	3500	12.6	2.55 (0.26)	4~180	62~170	73.5 (7.5)
ST-230(9")	24.7 (2518)	2900	21.4	6.27 (0.64)	5~220	70~210	98 (10.0)
ST-273(10")	46 (4691)	2500	28	9.90 (1.01)	5~260	70~250	176.5 (18.0)
ST-310(12")	55 (5608)	2200	41	23.0 (2.35)	10~300	86~290	206 (21.0)

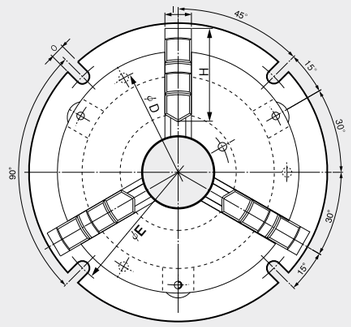
※Specifications are subject to change without notice.

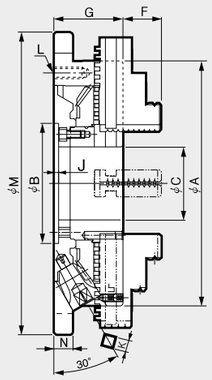
SL

Standard Slotter Chuck (Hard Jaws)

- Standard slotter chuck with solid jaw (incl. internal and external hard jaws)

SLOTTER CHUCK





Dimensions

	A	B(H6)	C	D	E	F	G	H	I	J	K	L	M	N	O
SL-08	215	110	60	190.5	240	35.04	64	85	25	4	11	M10	266	17	13
SL-10	255	125	76	230	286	40.02	72	98	28	4.5	12	M12	315	20	15
SL-12	305	160	100	280	340	45.08	76	110	30	5	14	M12	370	22	17

Specifications

	Max. Static Gripping dia. KN(kgf)	weight kgf	(Gripping diameter) (External) φmm	(Internal) φmm	Handle Torque N·m(kgf·m)
SL-08	37 (3,800)	17.6	58~174	4~182	117.7 (13)
SL-10	46 (4,700)	27.7	68~212	4~220	176.5 (18)
SL-12	55 (5,620)	40.0	80~263	5~266	196.2 (20)

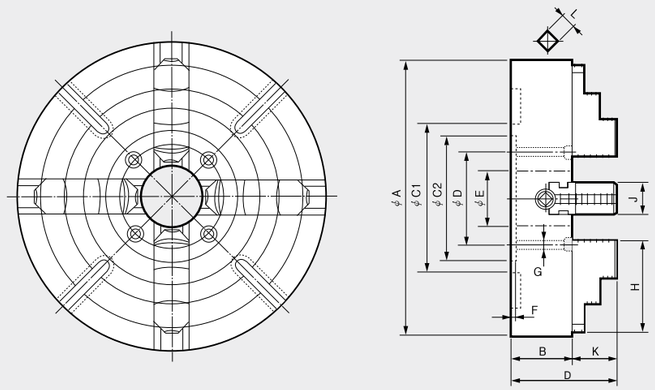
※Specifications are subject to change without notice.

IC

Independent Chuck (Hard Jaws) (200mm - 400mm)

■ 4-jaw Independent chuck
(incl. reversible hard jaws)

INDEPENDENT CHUCK



Dimensions

	A	B	C1	C2	D	E	F	G	H	J	K	L
IC-08	200	75	200	175	155	50	6	M12	75	30	30	10
IC-10	250	80	165	150	125	55	6	M12	90	30	35	10
IC-12	300	90	186	170	140	65	6	M12	100	35	40	12
IC-14	350	90	210	190	160	75	8	M12	110	35	45	12
IC-16	400	100	130	210	180	90	8	M16	120	40	50	14

Specifications

	Max. Static Gripping dia. KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	(Gripping diameter) (External) φ mm	(Internal) φ mm
IC-08	1000	1600	14.8	0.3	75	185
IC-10	1400	1600	21	0.6	95	220
IC-12	1600	1400	29.5	1.4	125	265
IC-14	1700	1400	40	2.9	155	310
IC-16	2000	1200	56.5	4.5	190	360

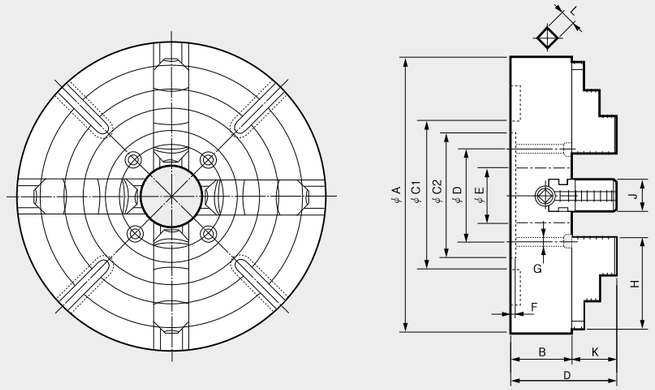
※Specifications are subject to change without notice.

IC

Independent Chuck (Hard Jaws) (450mm - 813mm)

■ 4-jaw Independent chuck
(incl. reversible hard jaws)

INDEPENDENT CHUCK



Dimensions

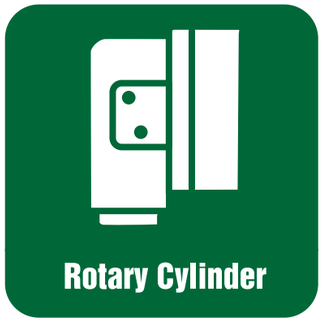
	A	B	C1	C2	D	E	F	G	H	J	K	L
IC-18	450	105	230	230	200	100	8	M16	130	40	55	14
IC-20	500	110	272	250	220	110	8	M16	140	45	60	14
IC-24	600	120	330	300	260	120	10	M20	160	50	70	14
IC-28	710	120	382	350	300	130	12	M20	190	55	85	14
IC-32	813	120	440	400	350	140	12	M20	190	55	85	19

Specifications

	Max. Static Gripping dia. KN(kgf)	Max. r.p.m min-1(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	(Gripping diameter) (External) φ mm	(Internal) φ mm
IC-18	2000	1200	70	7.0	220	405
IC-20	2200	900	90	11.8	250	450
IC-24	2300	900	150	25.3	320	550
IC-28	2396	900	247	58	385	650
IC-32	2447	600	357	103	485	750

※Specifications are subject to change without notice.

ROTARY CYLINDERS

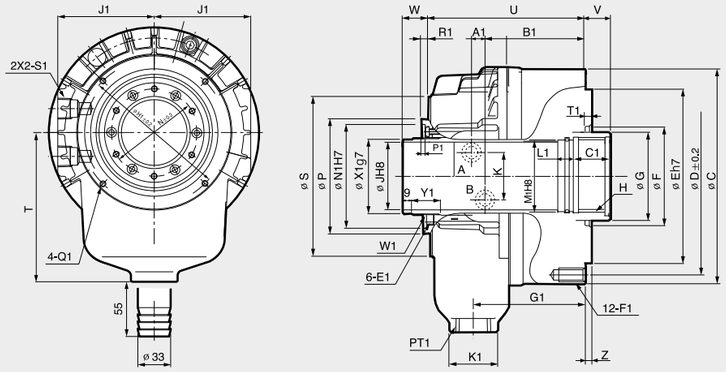


SH

Standard Mega-Bore Short-Body Open-Center Hydraulic Cylinder

- Mega-Bore Short-body high-speed open-centered hydraulic cylinder with built-in lock and relief valves

HYDRAULIC CYLINDER



Dimensions

	C	D	E	F	G	Hmax.	J	K	N	P	S	T	U	Vmax.	Vmin.	Wmax.	Wmin.	Z	A1	B1
SH-10036	165	130	100	80	65	M52×2.0	46	40	64	85	116	120	142	15	0	40	25	5	8.5	103
SH-13046	165	130	100	80	65	M52×2.0	46	40	64	85	116	120	142	15	0	40	25	5	8.5	103
SH-15052	190	170	130	85	70	M60×2.0	52	40	73	96	135	130	138	22	0	47	25	5	9.0	97.5
SH-17068	210	190	160	120	85	M75×2.0	68	48	88	111	154	150	155	25	0	50	25	5	10	108
SH-18077	218	190	160	120	95	M85×2.0	77	48	108	121	164	165	167	25	0	50	25	5	10	119.5
SH-19082	223	190	160	120	100	M90×2.0	82	58	103	126	175	166	174	25	0	44	19	5	11.5	122
SH-21010	310	275	230	166	140	M130×2.0	117.5	46	138	170	230	107.5	231	18	-5	48	25	6	19	150
SH-25011	310	275	230	166	140	M130×2.0	117.5	46	138	170	230	107.5	231	18	-5	48	25	6	19	150

	C1	E1	F1DP'	G1	H1	J1	K1	L1	M1	N1	P1	Q1	R1	S1	T1	W1	X1	Y1
SH-10036	30	M6	M10×20	111	98	82	47	15	48	76	4	M5×6	6	PT 1/2	6	M52×1.5	50	24
SH-13046	30	M6	M10×20	111	98	82	47	15	48	76	4	M5×6	6	PT 1/2	6	M52×1.5	50	24
SH-15052	30	M6	M10×20	101	110	92	47	15	55	85	4	M6×7	7	PT 1/2	5	M58×1.5	56	20
SH-17068	35	M6	M10×20	113	145	97	47	15	70	100	4	M6×10	7	PT 1/2	5	M74×1.5	71.5	26
SH-18077	35	M6	M10×20	125	155	102	47	15	80	108	4	M6×10	7	PT 1/2	5	M84×2.0	81	26
SH-19082	35	M6	M10×20	129.5	160	105	47	15	85	11	4	M6×10	7	PT 1/2	6	M89×2.0	86	26
SH-21010	45	M6	M16×32	163.5	206	140	55	20	123	150	5.5	M6×12	7.5	PT 1/2	6	M124×2.0	122	29
SH-25011	45	M6	M16×32	163.5	206	140	55	20	123	150	5.5	M6×12	7.5	PT 1/2	6	M124×2.0	122	29

Specifications

	Available I.D.	Cyinder Diameter(mm)	PISTON STROKE(mm)	Piston force push KN(kgf)	Piston force pull KN(kgf)	Max. Operating Pressure MPa(kgf/cm²)	Max. r.p.m min⁻¹(r.p.m)	GD² N·m²(kgf·m²)	weight kgf	Total Leakage ℓ(min)
SH-10036	46	135	15	42.3(4285)	38.1(3865)	4.0(40.8)	7000	0.2(0.021)	10	3.0
SH-13046	46	135	15	42.3(4285)	38.1(3865)	4.0(40.8)	7000	0.2(0.021)	10	3.0
SH-15052	52	156	22	60(6118)	56(5710)	4.0(40.8)	6200	0.44(0.045)	14	3.9
SH-17068	68	170	25	63(6531)	59.8(6060)	4.0(40.8)	5600	0.65(0.067)	16.5	4.0
SH-18077	77	185	25	75.3(7632)	69.6(7087)	4.0(40.8)	5000	0.83(0.084)	18	4.2
SH-19082	82	190	25	78.1(7924)	72.5(7350)	4.0(40.8)	4800	0.95(0.097)	25	4.5
SH-21010	117.5	255	23	132(13390)	121(12305)	4.0(40.8)	3000	1.9(0.193)	50	7.0
SH-25011	117.5	255	23	132(13390)	121(12305)	4.0(40.8)	3000	1.9(0.193)	50	7.0

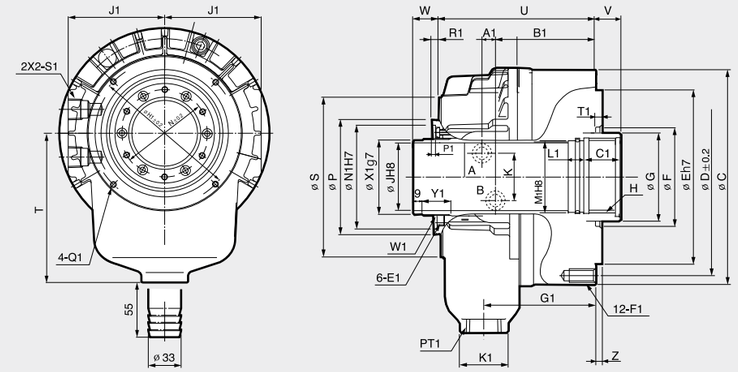
※ Specifications are subject to change without notice.

SHL

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

- Mega-Bore Long-stroke short-body high-speed open-centered hydraulic cylinder with built-in lock and relief valves

HYDRAULIC CYLINDER



Dimensions

	C	D	E	F	G	Hmax.	J	K	N	P	S	T	U	Vmax.	Vmin.	Wmax.	Wmin.	Z	A1	B1
SHL-17068	210	190	160	120	85	M75×2.0	68	48	88	111	154	150	175	35	-5	65	25	5	10	128
SHL-18077	218	190	160	120	95	M85×2.0	77	48	108	121	164	165	182	35	-5	65	25	5	10	134.5
SHL-25011	310	275	230	166	140	M130×2.0	117.5	46	138	170	230	107.5	258	46	-4	87	37	6	19	176.5
SHL-39024	450	420	320	280	265	M250x3.0	240	30	268	310	370	340	302.5	50	-1	76	25	6	22	199

	C1	E1	F1DP'	G1	H1	J1	K1	L1	M1	N1	P1	Q1	R1	S1	T1	W1	X1	Y1
SHL-17068	35	M6	M10×20	133	145	97	47	15	71	100	4	M6×10	7	PT 1/2	5	M74×1.5	71.5	26
SHL-18077	35	M6	M10×20	140	155	102	47	15	80	108	4	M6×10	7	PT 1/2	5	M84×2.0	81	26
SHL-25011	45	M6	M16×32	190.5	206	140	55	120	123	150	5.5	M6×12	7.5	PT 1/2	6	M124×2.0	122	29
SHL-39024	45	M6	M16x40	215	350	215	75	20	243	284	5.5	M6	7.5	PT 1/2	6	M253x2.0	249	38

Specifications

	Available I.D.	Cyinder Diameter (mm)	PISTON STROKE (mm)	Piston force push KN(kgf)	Piston force pull KN(kgf)	Max. Operating Pressure MPa(kgf/cm²)	Max. r.p.m min⁻¹(r.p.m)	GD² N·m²(kgf·m²)	weight kgf	Total Leakage ℓ(min)
SHL-17068	68	170	40	63(6531)	59.8(6060)	4.0(40.8)	5600	0.69(0.070)	17.8	4.0
SHL-18077	77	185	40	75.3(7632)	69.6(7087)	4.0(40.8)	5000	0.86(0.088)	18.5	4.2
SHL-25011	117.5	255	50	32(13390)	121(12305)	4.0(40.8)	3000	1.9(0.193)	54	7.0
SHL-39024	240	390	51	152.5(15570)	138.7(14152)	2.5(25)	1500	39.64(4.02)	140	22

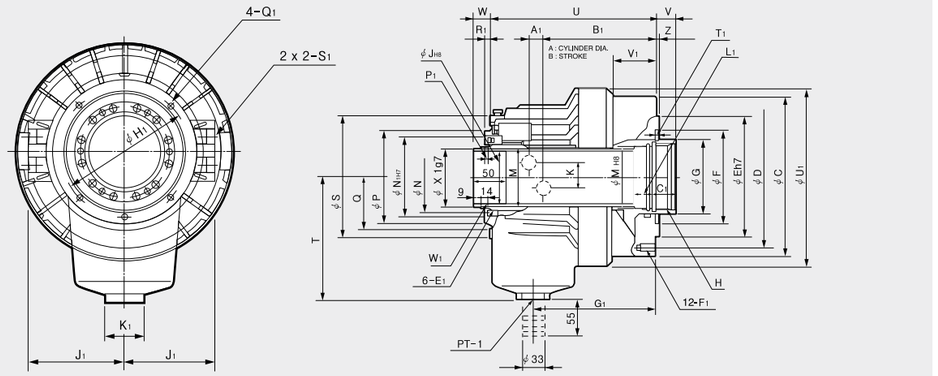
※Specifications are subject to change without notice.

SYH

Standard Open-Center Hydraulic Cylinder

- High-speed open-centered hydraulic cylinder with built in lock and relief valves

HYDRAULIC CYLINDER



Dimensions

	C	D	E	F	G	Hmax.	J	K	M	N	P	Q	S	T	U	Vmax.	Vmin.	Wmax.	Wmin.	Z	A1
SYH-1036	135	115	100	65	48	M42×1.5	36	30	44.6	55	73	45	104	115	156	15	0	40	25	5	11
SYH-1246	155	130	100	80	65	M55×2.0	46	36	52.9	64	85	51.5	118	115	184	15	0	40	25	5	11.5
SYH-1552	190	170	130	85	70	M60×2.0	52	36	59.6	73	96	57	137	130	191	22	0	47	25	5	12
SYH-1877	215	190	160	120	95	M85×2.0	77	36	84.6	98	121	70	166	160	230	25	0	50	25	5	17.5
SYH-2091	240	215	180	140	110	M100×2.0	91	34	99.6	108	138	79	182	185	253	30	0	55	25	5	21

	B_1	C_1	E_1	F_1	G_1	H_1	J_1	K_1	L_1	M_1	N_1	P_1	Q_1	R_1	S_1	T_1	U_1	V_1	W_1	X_1
SYH-1036	102.5	25	M5×11	6-M10×17	98	88	73	47	15	38	64	4	M5×10	5	PT 3/8	6	158	28	M44×1.5	42
SYH-1246	126.5	30	M6×9	12-M10×20	135	98	76	47	15	50	76	4	M5×10	6	PT 1/2	6	200	46	M52×1.5	50
SYH-1552	136	30	M6×9	12-M10×20	145	110	86	47	15	55	85	4	M6×12	7	PT 1/2	6	220	51	M58×1.5	56
SYH-1877	153.5	35	M6×9	12-M10×20	166.5	155	101	47	15	80	108	4	M6×12	7	PT 1/2	6	242	58	M84×2.0	81
SYH-2091	168	35	M6×14	12-M12×24	183	165	110	47	15	95	120	4	M6×12	7	PT 1/2	6	267	66	M99×2.0	96

Specifications

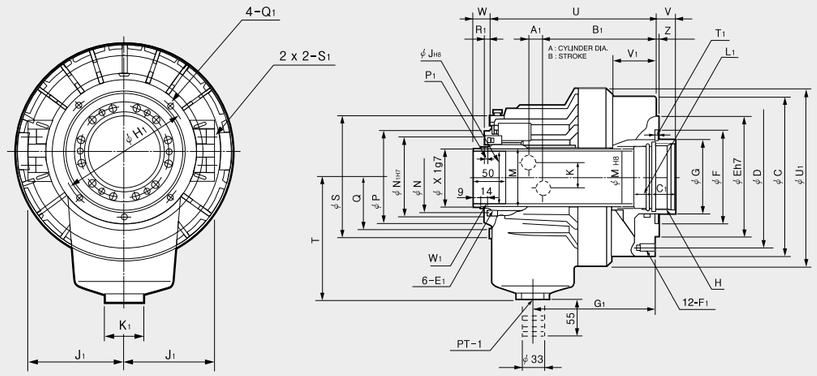
	Available I.D.	Cyinder Diameter (mm)	PISTON STROKE (mm)	Piston Surface Area push cm^2	Piston Surface Area pull cm^2	Piston force push KN(kgf)	Piston force pull KN(kgf)	Max. Operating Pressure MPa(kgf/cm^2)	Max. r.p.m min-1(r.p.m)	GD² N·m²(kgf·m²)	weight kgf	Total Leakage ℓ(min)	KITAGAWA Model
SYH-1036	36	105	15	67	64.5	25(2549)	24(2447)	4.0(40.8)	8000	0.43(0.044)	8.6	3.0	S-1036
SYH-1246	36,39,40,41 43,45,46	125	15	100	89	38(3875)	33(3365)	4.0(40.8)	7000	0.76(0.078)	12.0	3.0	S-1246
SYH-1552	46,52,69	155	22	161	150	60(6118)	56(5710)	4.0(40.8)	6200	2.06(0.21)	16.8	3.9	S-1552
SYH-1877	68,69,75,77	180	25	198	183	74(7546)	69(7036)	4.0(40.8)	4700	3.73(0.83)	26.0	4.2	S-1875
SYH-2091	78,91	205	30	252	234	94(9585)	88(8973)	4.0(40.8)	3800	5.98(0.61)	33.0	4.5	S-2091

SYHL

Open-Center Long-Stroke Hydraulic Cylinder

- Long-stroke high-speed open-centered hydraulic cylinder with built in lock and relief valves

HYDRAULIC CYLINDER



Dimensions

	C	D	E	F	G	Hmax.	J	K	M	N	P	Q	S	T	U	Vmax.	Vmin.	Wmax.	Wmin.	Z	A1
SYHL-1246	155	130	100	80	65	M55x2.0	46	36	52.9	64	85	51.5	118	115	205	27	-5	57	25	5	11.5
SYHL-1552	190	170	130	85	70	M60x2.0	52	36	59.6	73	96	57	137	130	208	29	-5	59	25	5	12
SYHL-1877	215	190	160	120	95	M85x2.0	77	36	84.6	98	121	70	166	160	246	35	-5	65	25	5	17.5
SYHL-2091	240	215	180	140	110	M100x2.0	91	34	99.6	108	138	79	182	185	273	50	0	75	25	5	21
SYHL-2816	325	290	260	240	190	M180x3.0	166.5	30	174.6	188	222	120	282	250	370	51	0	76	25	5	28

	B1	C1	E1	F1	G1	H1	J1	K1	L1	M1	N1	P1	Q1	R1	S1	T1	U1	V1	W1	X1
SYHL-1246	147.5	30	M6x9	M10x20	156	98	76	47	15	50	76	4	M5x10	6	PT 1/2	12	200	67	M52x1.5	50
SYHL-1552	153	30	M6x9	M10x20	162	110	86	47	15	55	85	4	M6x12	7	PT 1/2	12	220	68	M58x1.5	56
SYHL-1877	169.5	35	M6x9	M10x20	182.5	155	101	47	15	80	108	4	M6x12	7	PT 1/2	12	242	74	M84x2.0	81
SYHL-2091	188	35	M6x14	M12x24	203	165	110	47	15	95	120	4	M6x12	7	PT 1/2	12	267	86	M99x2.0	96
SYHL-2816	259	45	M6x12	M16x32	276	256	162	47	20	170	200	4	M6x12	7	PT 1/2	7	352	123	M173x2.0	170.5

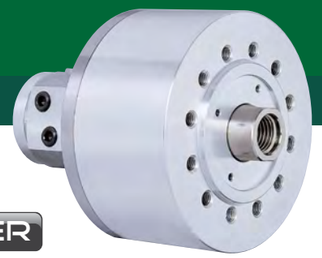
Specifications

	Available I.D.	Cyinder Diameter(mm)	PISTON STROKE(mm)	Piston Surface 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(r.p.m)	GD² N·m²(kgf·m²)	weight kgf	Total Leakage ℓ(min)	KITAGAWA Model
SYHL-1246	46	125	32	100	89	38 (3875)	33 (3365)	4.0(40.8)	7000	0.86 (0.088)	12.8	3.0	S-1246L
SYHL-1552	52	155	34	161	150	60 (6118)	56 (5710)	4.0(40.8)	6200	2.26 (0.23)	17	3.9	S-1552L
SYHL-1877	68,75,77	180	40	198	183	74 (7546)	69 (7036)	4.0(40.8)	4700	3.92 (0.40)	26.8	4.2	S-1875L
SYHL-2091	91	205	50	252	234	94 (9585	88 (8973)	4.0(40.8)	3800	6.28 (0.64)	34.1	4.5	S-2091L
SYHL-2816	166.5	280	51	377	332	113 (11522)	100 (10196)	3.3(33.6)	2000	32.5 (3.31)	101	8.4	S-2816L

※Certain models have several thru-hole sizes available. ※Specifications are subject to change without notice.
※The bore threading varies by model. H max represents the largest possible threading.

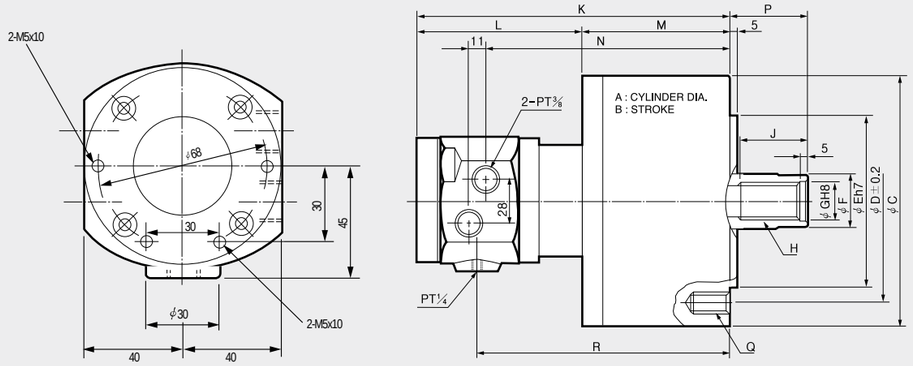
Y-R

Standard Closed-Center Hydraulic Cylinder



■ Closed-centered hydraulic cylinder
with built in lock and relief valves

HYDRAULIC CYLINDER



Dimensions

	A	B	C	D	E	F	G	Hmax.	J	K	L	M	N	Pmax.	Pmin.	Q	R
Y-0715R	75	15	104	90	65	30	21	M20×2.5	35	172	106	66	127	46	31	6-M6×20	133
Y-1020R	105	20	135	100	80	30	21	M20×2.5	35	197	108	89	152	45	25	6-M10×20	158
Y-1225R	125	25	160	130	110	35	25	M24×3.0	44	205	108	97	160	51	26	6-M12×24	166
Y-1530R	150	30	190	130	110	45	31	M30×3.5	45	214	108	106	169	56	26	6-M12×24	175
Y-2035R	200	35	245	145	120	55	37	M36×4.0	60	228	106	122	183	69	34	12-M16×30	189

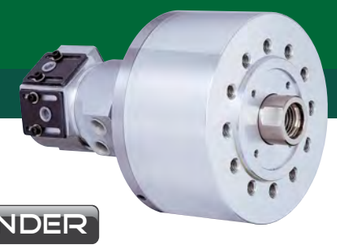
Specifications

	PISTON STROKE (mm)	Piston Surface Area push cm²	Piston Surface Area pull cm²	Piston Force push KN(kgf)	Piston Force pull KN(kgf)	Max. Operating Pressure MPa(kgf/cm²)	Total Leakage ℓ/(min)	Max. r.p.m min-¹(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	KITAGAWA Model
Y-0715R	15	44	37	16.6(1693)	13.9(1417)	4.0(40.8)	0.8	6000	4.0	0.118(0.012)	Y-0715R
Y-1020R	20	86	79	32.0(3264)	29(2957)	4.0(40.8)	0.8	6000	7.1	0.49(0.05)	Y-1020R
Y-1225R	25	122	113	46.0(4692)	42(4283)	4.0(40.8)	0.8	6000	10	0.88(0.09)	Y-1225R
Y-1530R	30	176	160	66.0(6732)	60(6118)	4.0(40.8)	0.8	5500	13.5	1.86(0.19)	Y-1530R
Y-2035R	35	314	290	117.0(11934)	108(11013)	4.0(40.8)	0.8	5500	22	3.82(0.39)	Y-2035R

※ Specifications are subject to change without notice.
※ Total leakage pressure: 3,0 Mpa (30,6 kgf/cm2) at 50 ° C.
※ Samcully Machinery Co., Ltd. is no longer an OEM manufacturer
for Kitagawa® Iron Works Co., Ltd.

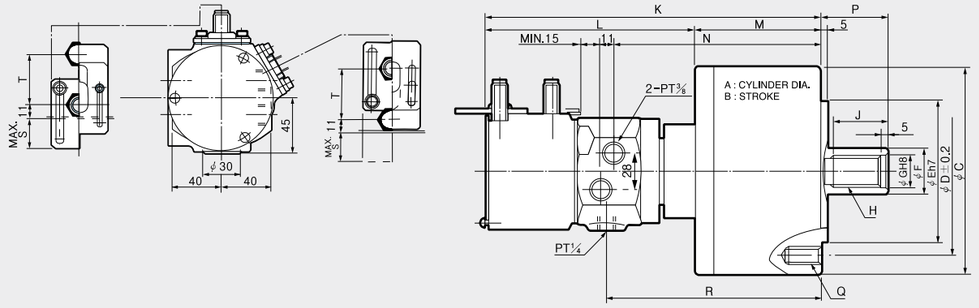
Y-RE

Closed-Center Hydraulic Cylinder with Proximity Bracket (75mm-125mm)



■ Closed-centered hydraulic cylinder
with built in lock and relief valves
and proximity bracket

HYDRAULIC CYLINDER



Dimensions

	A	B	C	D	E	F	G	H	J	K	L	M	N	Pmax.	Pmin.	Q	R	S	T
Y-0715RE	75	15	104	90	65	30	21	M20×2.5	32	227	161	66	127	46	31	6-M6×20	133	23	41
Y-1020RE	105	20	135	100	80	30	21	M20×2.5	35	252	163	89	152	45	25	6-M10×20	158	23	41
Y-1025RE	105	25	135	100	80	30	21	M20×2.5	35	257	163	94	157	45	20	6-M10×20	163	23	41
Y-1225RE	125	25	160	130	110	35	25	M24×3.0	44	260	163	97	160	51	26	6-M12×24	166	23	41
Y-1240RE	125	40	160	130	110	35	25	M24×3.0	44	306	194	112	175	65	25	6-M12×24	181	-	-

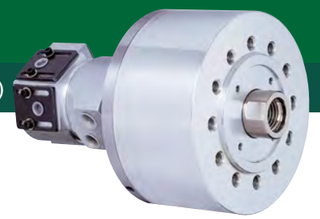
Specifications

	PISTON STROKE (mm)	Piston Surface Area push cm²	Piston Surface Area pull cm²	Piston Force push KN(kgf)	Piston Force pull KN(kgf)	Max. Operating Pressure MPa(kgf/cm²)	Total Leakage ℓ/(min)	Max. r.p.m min-¹(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	KITAGAWA Model
Y-0715RE	15	44	37	16.6(1693)	13.9(1417)	4.0(40.8)	0.8	6000	4.5	0.118(0.012)	Y-0715RE
Y-1020RE	20	84	79	32.0(3264)	29(2957)	4.0(40.8)	0.8	6000	7.6	0.49(0.05)	Y-1020RE
Y-1025RE	25	84	79	32.0(3264)	29(2957)	4.0(40.8)	0.8	6000	7.7	0.49(0.05)	Y-1025RE
Y-1225RE	25	120	113	46.0(4692)	42(4283)	4.0(40.8)	0.8	6000	10.5	0.88(0.09)	Y-1225RE
Y-1240RE	40	120	113	46.0(4692)	42(4283)	4.0(40.8)	0.8	6000	11	0.88(0.09)	Y-1240RE

※ Specifications are subject to change without notice.
※ Total leakage pressure: 3,0 Mpa (30,6 kgf/cm2) at 50 ° C.
※ Samcully Machinery Co., Ltd. is no longer an OEM manufacturer
for Kitagawa® Iron Works Co., Ltd.

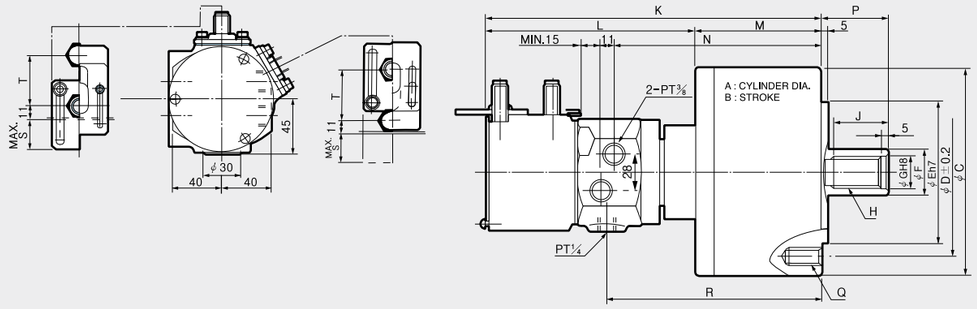
Y-RE

Closed-Center Hydraulic Cylinder with Proximity Bracket (150mm-250mm)



- Closed-centerd hydraulic cylinder with built in lock and relief valves and and proximity bracket

HYDRAULIC CYLINDER



Dimensions

	A	B	C	D	E	F	G	H	J	K	L	M	N	Pmax.	Pmin.	Q	R	S	T
Y-1530RE	150	30	190	130	110	45	31	M30×3.5	45	269	163	106	169	56	26	6-M12×24	175	23	41
Y-1550RE	150	50	190	130	110	45	31	M30×3.5	55	320	194	126	189	80	30	6-M12×24	195	-	-
Y-2035RE	200	35	245	145	120	55	37	M36×4.0	60	288	166	122	183	69	34	12-M16×30	189	28	46
Y-2050RE	200	50	245	145	120	55	37	M36×4.0	60	333	192	141	202	80	30	12-M16×30	208	-	-
Y-2560RE	250	60	305	220	160	65	44	M42×3.0	65	379	207	172	227	85	25	12-M20×35	233	-	-

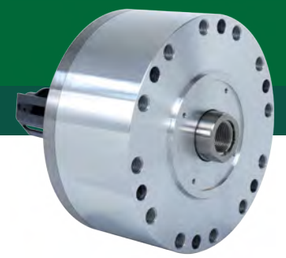
Specifications

	PISTON STROKE (mm)	Piston Surface Area push cm²	Piston Surface Area pull cm²	Piston Force push KN(kgf)	Piston Force pull KN(kgf)	Max. Operating Pressure MPa(kgf/cm²)	Total Leakage ℓ/(min)	Max. r.p.m min-¹(r.p.m)	weight kgf	GD² N·m²(kgf·m²)	KITAGAWA Model
Y-1530RE	30	174	160	66.0(6732)	60(6118)	4.0(40.8)	0.8	5500	14	1.86(0.19)	Y-1530RE
Y-1550RE	50	174	160	66.0(6732)	60(6118)	4.0(40.8)	0.8	5500	14.8	1.96(0.20)	Y-1550RE
Y-2035RE	35	312	290	117.0(11934)	108(11013)	4.0(40.8)	0.8	5500	22.5	3.82(0.39)	Y-2035RE
Y-2050RE	50	312	290	117.0(11934)	108(11013)	4.0(40.8)	0.8	5500	23.5	4.12(0.42)	Y-2050RE
Y-2560RE	60	515	482	193(19541)	180(18289)	4.0(40.8)	0.8	2000	-	-	-

※ Specifications are subject to change without notice.
※ Total leakage pressure: 3.0 Mpa (30.6 kgf/cm2) at 50 ° C.
※ Samcully Machinery Co., Ltd. is no longer an OEM manufacturer for Kitagawa® Iron Works Co., Ltd.

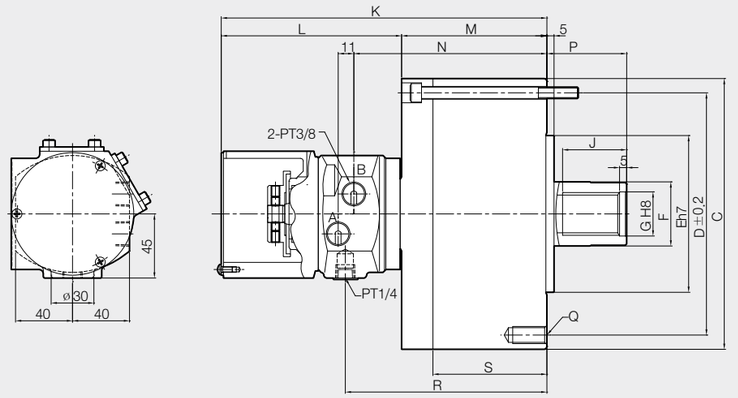
YH-RE

Ultra-Compact Closed-Center Hydraulic Cylinder with Proximity Bracket



- Closed-centerd hydraulic cylinder with built in lock and relief valves and and proximity bracket
- High space efficiency by compact design

HYDRAULIC CYLINDER



Dimensions

	C	D	E	F	G	J	K	L	M	N	P max.	P min.	Q	R	S
YH-10120RE	135	118	80	30	21	35	209.6	126.6	83	116.5	45	25	6-M10x20	122.5	67
YH-10125RE	135	118	80	30	21	35	214.6	126.6	88	121.5	45	20	6-M10x20	127.5	72
YH-12125RE	160	142	110	35	25	44	220.6	126.6	94	127.5	51	26	12-M12x24	133.5	72
YH-12140RE	160	142	110	35	25	44	267.1	156.5	109	142.5	65	25	12-M12x24	148.5	87
YH-15130RE	190	170	110	45	31	45	228.6	126.6	102	135.5	56	26	12-M12x24	141.5	80
YH-15150RE	190	170	110	45	31	55	280.1	158.1	122	155.5	80	30	12-M12x24	161.5	100
YH-20135RE	245	222	120	55	37	60	240.6	133.6	107	140.5	69	34	12-M16x30	146.5	85
YH-20150RE	245	222	120	55	37	60	280.1	158.1	122	155.5	80	30	12-M16x30	161.5	100
YH-25160RE	305	275	160	65	44	65	310	136	142.5	176	85	25	12-M20x35	182	120.5

Specifications

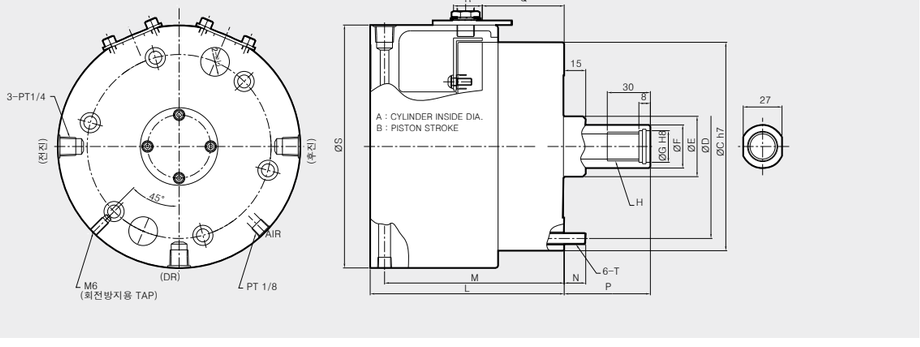
	PISTON STROKE (mm)	Piston Surface Area push cm²	Piston Surface Area pull cm²	Piston Force push KN(kgf)	Piston Force pull KN(kgf)	Max. Operating Pressure MPa(kgf/cm²)	Total Leakage ℓ/(min)	Max. r.p.m min-¹(r.p.m)	weight kgf	GD² N·m²(kgf·m²)
YH-10120RE	20	78	73	29 (2960)	27 (2770)	4.0 (40.8)	0.8	6000	7.6	0.49 (0.05)
YH-10125RE	25	78	73	29 (2960)	27 (2770)	4.0 (40.8)	0.8	6000	7.7	0.49 (0.05)
YH-12125RE	25	114	106	42 (4326)	39 (4022)	4.0 (40.8)	0.8	6000	10.5	0.88 (0.09)
YH-12140RE	40	114	106	42 (4326)	39 (4022)	4.0 (40.8)	0.8	6000	11	0.88 (0.09)
YH-15130RE	30	168	154	63 (6375)	57 (5843)	4.0 (40.8)	0.8	5500	14	1.86 (0.19)
YH-15150RE	50	168	154	63 (6375)	57 (5843)	4.0 (40.8)	0.8	5500	14.5	1.96 (0.2)
YH-20135RE	35	305	283	114 (11573)	105 (10738)	4.0 (40.8)	0.8	5500	22.5	3.82 (0.39)
YH-20150RE	50	305	283	114 (11573)	105 (10738)	4.0 (40.8)	0.8	5500	23.5	4.12 (0.42)
YH-25160RE	60	515	482	193 (19541)	180 (18289)	4.0 (40.8)	0.8	2000	88	9 (0.92)

YS-RA

Ultra-Compact Closed-Center Hydraulic Cylinder with Proximity Bracket and Built-in Rotary Union

- Built-in rotary union saves space and allows air-sensing capabilities
- Includes proximity brackets

HYDRAULIC CYLINDER



Dimensions

	A	B	C	D	E	F	G	H	J	K	L	M	N	Pmax.	Pmin.	Qmax.	Qmin.	R	S	T	U
YS-11020RA	110	20	145	128	42	30	22	M20×2.5	30	15	135	125	14	60	40	77	57	20	169	M8×80	20
YS-12021RA	120	21	168	145	42	30	22	M20×2.5	30	15	135	125	17	60	39	78	57	20	192	M10×80	20

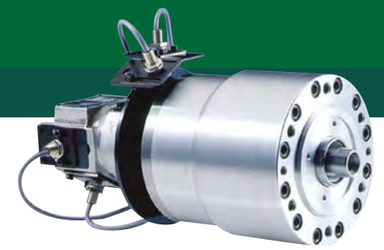
Specifications

	PISTON STROKE (mm)	Piston Surface Area push cm²	Piston Surface Area pull cm²	Piston Force push KN(kgf)	Piston Force pull KN(kgf)	Max. Operating Pressure MPa(kgf/cm²)	Total Leakage Leak ℓ/(min)	Max. r.p.m min⁻¹(r.p.m)	Weight kgf	GD² N·m²(kgf·m²)	KITAGAWA® Model
YS-11020RA	20	87.6	84	28(2855)	27(2753)	3.5(35.7)	1.2	6000	8.2	0.016	-
YS-12021RA	21	105.7	102	39(3977)	38(3875)	4.0(40.8)	1.2	6000	10.2	0.028	-

※ Specifications are subject to change without notice.
※ Total leakage pressure: 3.0 Mpa (30.6 kgf/cm2) at 50˚C.
※ Samcully Machinery Co., Ltd. is no longer an OEM manufacturer for Kitagawa® Iron Works Co., Ltd.

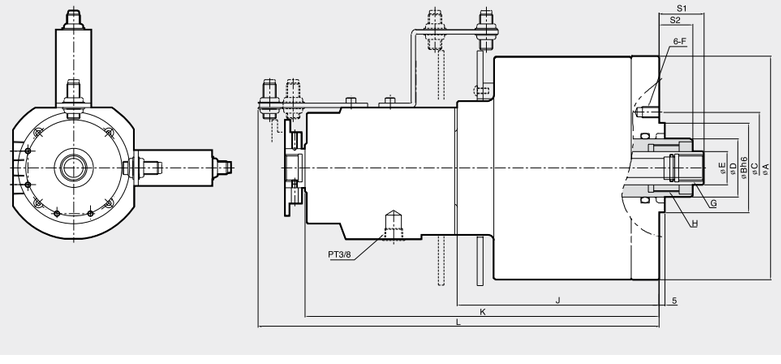
DY

Double-Piston Hydraulic Cylinder



- Double piston Cylinder
- Actuate chucks with face drivers or parts ejectors

HYDRAULIC CYLINDER



Dimensions

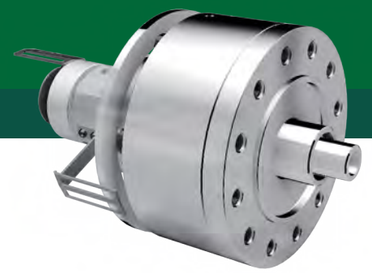
	A	B(h⁶)	C	D	E	F	G	H	J	K	L
DY-12520	160	110	145	50	29	6-M12	M20˚x 1.5P	M42˚x 1.5P	178	299	341
DY-16030	200	80/110	100	52	30	6-M10	M24˚x 1.5P	M42˚x 1.5P	181	371	359

Specifications

	Piston Dia. (mm)	Piston Area (cm²)	Piston Stroke S1(Max/Min)	Piston Stroke S2(Max/Min)	Max. Opeating Pressure (kgf/cm²)	Max. Speed (r.p.m.)	Weight (kg)	GD² (kgf·m²)
DY-12520	125/85	102/46	49/34	38/18	40.8	5000	16.5	0.045
DY-16030	160/85	164/46	60/45	48/18	40.8	3000	24.5	0.30

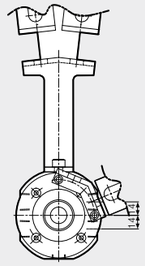
DYV

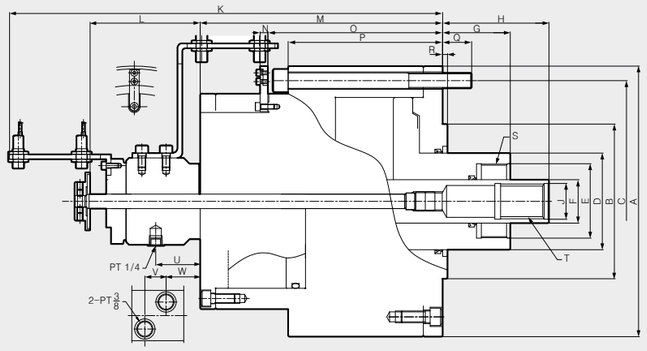
Double-Piston Hydraulic Cylinder with Lock Valve



HYDRAULIC CYLINDER

- Operates independently of two pistons
- Compatible with HCWF Chuck





Dimensions

	A	B	C	D	E	F	G Max.	G Min.	H Max.	H Min.	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
DYV-21560	280	160	250	100	77	45	70	10	110	50	37	448.3	114	251	8	181	160	30	5	M75x2.0	M36x4.0	46	22	35.3

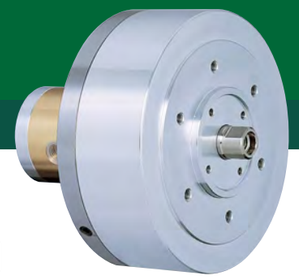
Specifications

	PISTON STROKE (mm)	Piston Surface Area push cm² G / H	Piston Surface Area pull cm² G / H	Piston Force push KN(kgf) G / H	Piston Force pull KN(kgf) G / H	Max. Operating Pressure MPa(kgf/ cm²)	Max. r.p.m min⁻¹(r.p.m)
DYV-21560	60	363 / 254	299 / 238	1724 / 1206	1420 / 1130	5.1(50)	3200

※Specifications are subject to change without notice.
※Total leakage pressure: 3.0 Mpa (30.6 kgf/cm2) at 50˚C.
※ Samcully Machinery Co., Ltd. is no longer an OEM manufacturer for Kitagawa© Iron Works Co., Ltd.

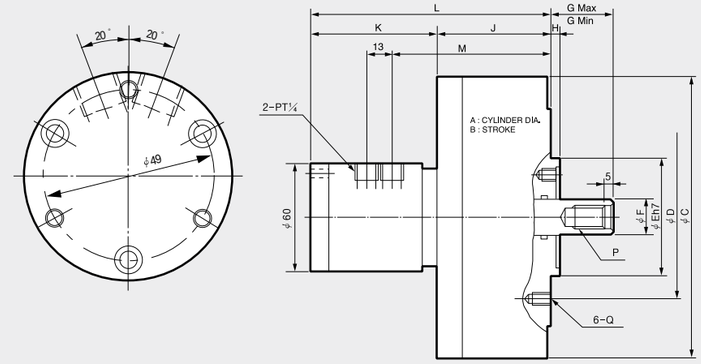
AY-R

Closed-Center Pneumatic Cylinder



- Closed-Centered Pneumatic Cylinder

PNEUMATIC CYLINDER



Dimensions

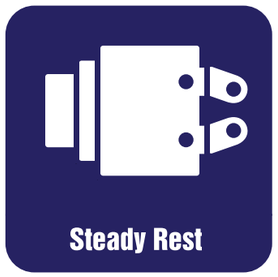
	A	B	C	D	E(h7)	F	G max.	G min.	H	J	K	L	M	N	Q	P
AY-1005R	100	5	128	90	65	20	30	25	5	53	70	123	79	M5	M6×11	M12×22
AY-1315R	130	15	156	90	65	20	35	20	5	63	70	133	89	M5	M6×11	M12×22
AY-1720R	170	20	200	100	80	25	65	45	5	82	70	152	108	M5	M10×16	M16×30
AY-2225R	220	25	255	130	110	30	71	46	5	93	70	163	119	M5	M12×20	M20×35
AY-2730R	270	30	305	130	110	35	76	46	5	103	74.5	177.5	133.5	M5	M12×20	M24×40

Specifications

	PISTON STROKE (mm)	Piston Surface Area push cm²	Piston Surface Area pull cm²	Piston force push kN(kgf)	Piston force pull kN(kgf)	Max. Pneumatic Pressure MPa(kgf/ cm²)	Max. r.p.m min-¹(r.p.m)	weight kgf	GD² N·m²(kgf·m²)
AY-1005R	5	78.5	73.6	552	518	8(0.82)	5000	4.1	0.07
AY-1315R	15	131.0	128.0	786	770	8(0.82)	5000	5.2	0.07
AY-1720R	20	225.0	220.1	1350	1320	8(0.82)	5000	8.3	0.11
AY-2225R	25	378.0	371.1	2268	2226	8(0.82)	4000	13.3	0.25
AY-2730R	30	570.4	560.8	3422	3364	8(0.82)	3000	18.7	0.75

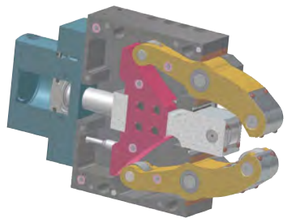
※Total leakage pressure: 3,0 Mpa (30,6 kgf/cm2) at 50° C. ※Specifications are subject to change without notice.

STEADY RESTS

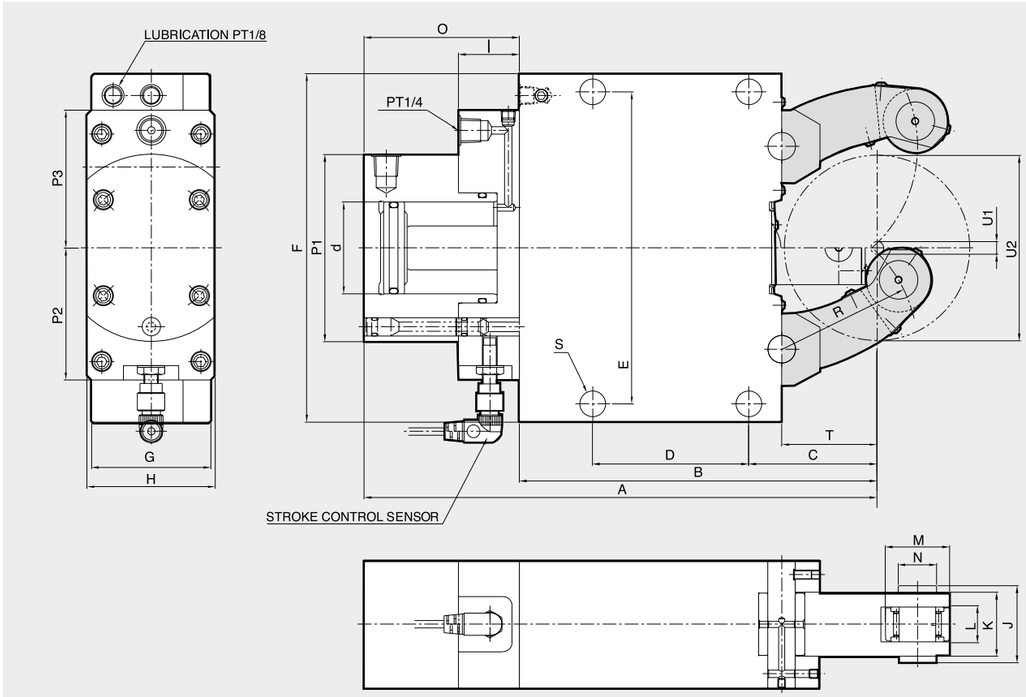


STA

Self-Centering Steady Rest



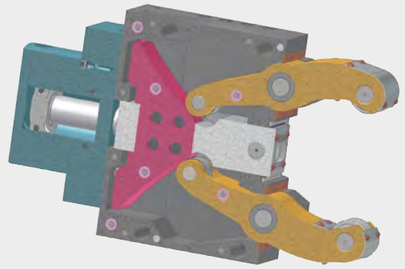
- Improves machining accuracy by supporting unstable, heavy or long workpieces
- The arms and center rollers are interconnected and designed to self-adjust to various size workpieces
- The mechanical design improves durability by eliminating the need for springs

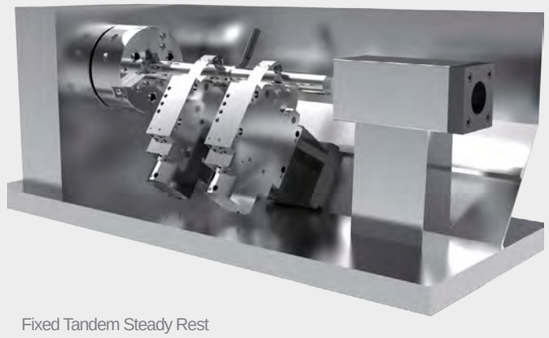


Dimensions

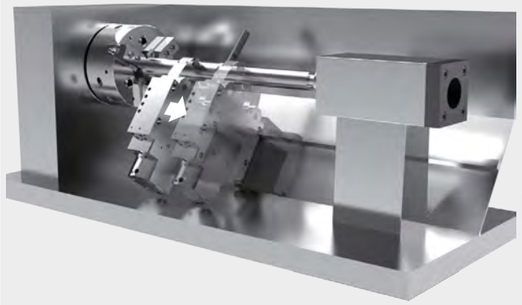
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P1	P2	P3	R	S	T
STA-1	207	137	51	64	118	132	55	70	33	24	20	12	19	6	70	84	66	66	50.5	11	37
STA-2	279.5	195	70	85	170	190	70	70	33	42	35	19	35	21	84.5	102	72	75	74	14	52
STA-3	431	312	115	135	262	290	85	100	37	52	45	25	47	25	120	137	90	100	119	18	85
STA-3.1	440	320	123	135	262	290	85	100	37	52	45	25	47	25	120	137	90	100	124	18	93
STA-3.2	455	335	138	135	262	290	85	100	37	52	45	25	47	25	120	137	90	100	139	18	103
STA-4	608	448	146	240	365	400	110	144	37	67	60	25	52	32	160	165	102	110	172	23	128
STA-5	697.5	510	178	270	400	440	145	144	37	83	75	29	62	36	187.5	165	102	110	209	23	160
STA-5.1	717.5	530	198	270	400	440	145	144	37	83	75	29	62	36	187.5	165	102	110	229	23	180
STA-6	944.5	709	215	330	640	680	145	158	37	83	75	29	80	42	235.5	190	115	130	290	27	175

Fixed or Travelling Applications

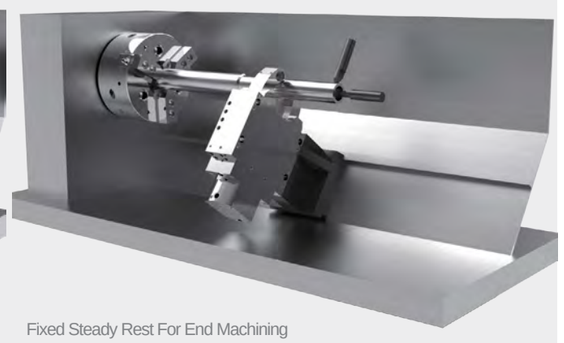




Fixed Tandem Steady Rest



Travelling Steady Rest



Fixed Steady Rest For End Machining

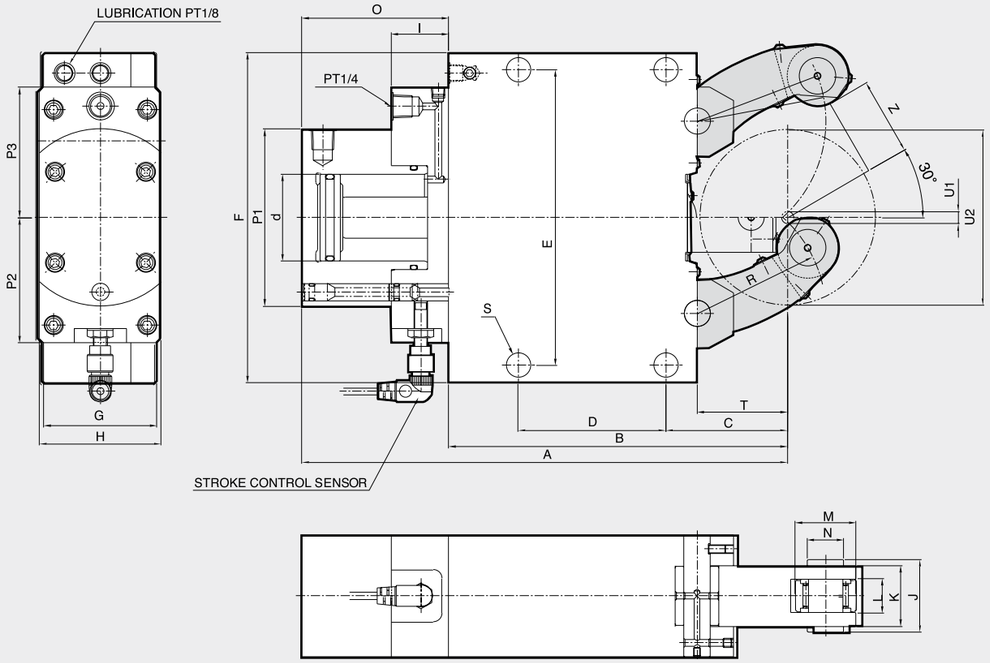
Specifications

	Piston Area (cm^2)	Max. Clamp Force / Roller (kgf)	Operation Pressure Max / Min (bar)	Centering Range (mm)		Max. Roller Surface Speed (m/min)	Centering Accuracy (mm)	Repeatability Accuracy (mm)	Weight (kg)
				Min	Max				
STA-1	7	100	6 / 50	4	64	800	0.02	0.005	6
STA-2	19.6	450	8 / 70	8	101	800	0.02	0.005	14
STA-3	50	1000	8 / 60	12	152	725	0.04	0.007	39
STA-3.1	50	1000	8 / 60	20	165	725	0.04	0.007	40
STA-3.2	50	1000	8 / 60	50	200	725	0.04	0.007	43
STA-4	78	1500	8 / 60	30	245	715	0.05	0.007	92
STA-5	78	2000	8 / 80	45	310	700	0.06	0.01	152
STA-5.1	78	2000	8 / 80	85	350	700	0.06	0.01	155
STA-6	132	3000	8 / 70	125	460	700	0.06	0.01	420

STRA

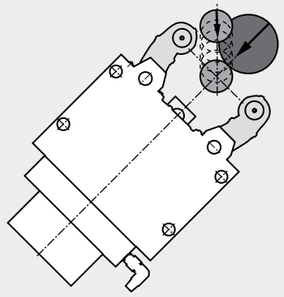
Wide-Opening Self-Centering Steady Rest

- Improves machining accuracy by supporting unstable, heavy or long workpieces
- The arms and center rollers are interconnected and designed to self adjust to various size workpieces
- Improves durability by eliminating the need for springs
- The wide opening arm of the STRA series facilitates the loading and unloading of components and makes automation possible



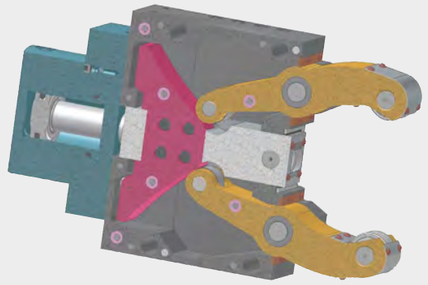
Dimensions

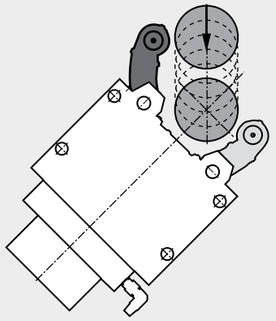
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P1	P2	P3	R	S	T	Z
STRA-1	207	137	51	64	118	132	55	70	33	24	20	12	19	6	70	84	66	66	50.5	11	37	26.5
STRA-2	279.5	195	70	85	170	190	70	70	33	42	35	19	35	21	84.5	102	72	75	74	14	52	41
STRA-3	431	312	115	135	262	290	85	100	37	52	45	25	47	25	120	137	90	100	119	18	85	66
STRA-3.1	440	320	123	135	262	290	85	100	37	52	45	25	47	25	120	137	90	100	124	18	93	76
STRA-4	608	448	146	240	365	400	110	144	37	67	60	25	52	32	160	165	102	110	172	23	128	111
STRA-5	688.5	510	178	270	400	440	145	144	37	83	75	29	62	36	187.5	165	102	110	209	23	160	135
STRA-6	944.5	709	215	330	640	680	145	158	37	83	75	29	80	42	235.5	190	115	130	290	27	175	230



STA

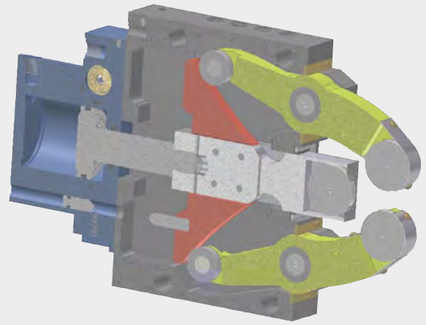
Conventional model





STRA

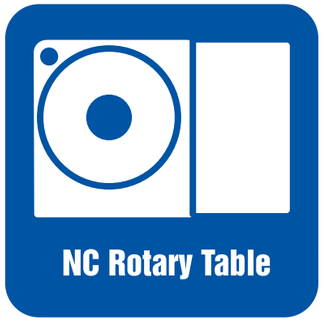
The wide opening arm of the STRA steady rest makes vertical loading and automation convenient



Specifications

	Piston Area (cm^2)	Max. Clamp Force / Roller (kgf)	Operation Pressure Max / Min (bar)	Centering Range (mm)		Max. Roller Roller surface Speed (m/min)	Centering Accuracy (mm)	Repeatability Accuracy (mm)	Weight (kg)
				Min	Max				
STRA-1	7	100	6 / 50	4	64	800	0.02	0.005	6
STRA-2	19.6	450	8 / 70	8	101	800	0.02	0.005	14
STRA-3	50	1000	8 / 60	12	152	725	0.04	0.007	39
STRA-3.1	50	1000	8 / 60	20	165	725	0.04	0.007	40
STRA-4	78	1500	8 / 60	30	245	715	0.05	0.007	92
STRA-5	78	2000	8 / 80	45	310	700	0.06	0.01	152
STRA-6	132	3000	8 / 70	125	460	700	0.06	0.01	420

NC ROTARY TABLES



S-120F2

4th axis NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- High Clamping power

S-SERIES

Model No. S-120 F2

- Servo Motor
- Servo Motor Maker
- Table Diameter
- TYPE : Single Spindle NC Rotary Table(Standard)

*** Servo Motor Brand**

AC Servo Motor is ABSOLUTE Type

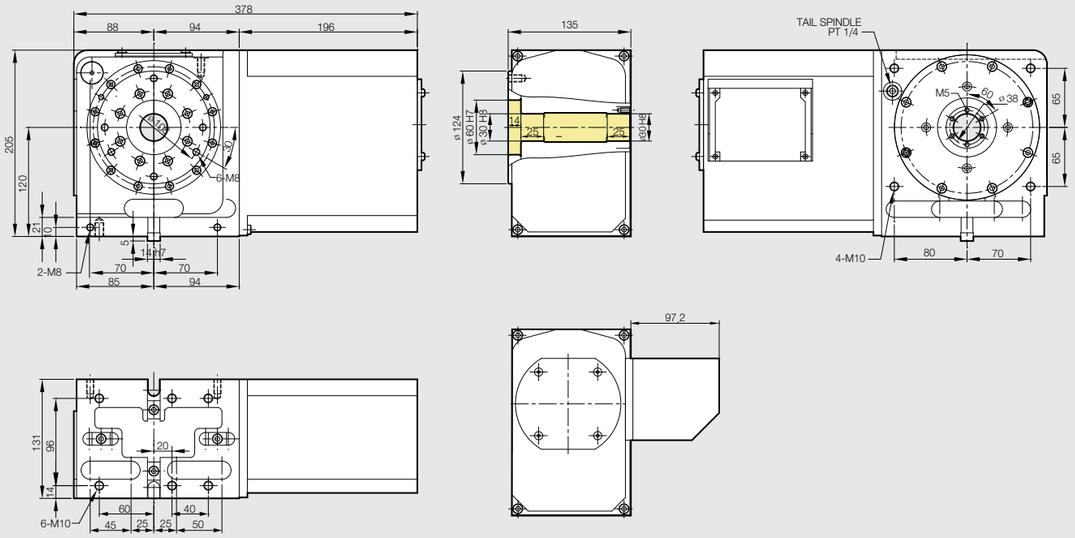
F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Clamp torque (N.m)
(Table : option) Ø124	120	Ø60H7	Ø30H8	Pneumatic	0.22	150

Max.spindle speed (mm⁻¹)	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Net weight (kg)	Servo motor (FANUC)
50	1/60	4	20	35	αi F2/5000

Allowable load (kg)					Allowable cutting torque (N.m)
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)	
120	60	8	350	150	180

S-120F2



S-170F2

4th axis NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

S-SERIES

Model No. S-170 F2

- Servo Motor
- Servo Motor Maker
- Table Diameter
- TYPE : Single Spindle NC Rotary Table(Standard)

*** Servo Motor Brand**

AC Servo Motor is ABSOLUTE Type

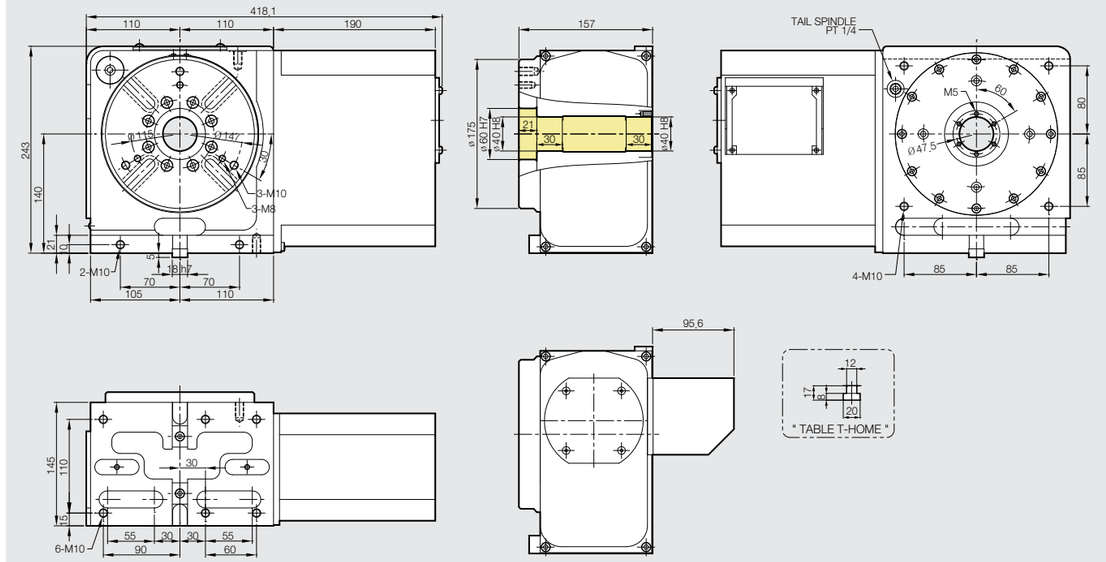
F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Clamp torque (N.m)
Ø175	140	Ø60H7	Ø40H8	Pneumatic	0.51	380

Max.spindle speed (mm⁻¹)	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Net weight (kg)	Servo motor (FANUC)
41.6	1/72	4	20	52	αi F2/5000

Allowable load (kg)					Allowable cutting torque (N.m)
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)	
160	80	10	600	380	220

S-170F2



S-200F4

4th axis NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

S-SERIES

Model No. S-200 F4

- Servo Motor
- Servo Motor Maker
- Table Diameter
- TYPE : Single Spindle NC Rotary Table(Standard)

*** Servo Motor Brand**

AC Servo Motor is ABSOLUTE Type

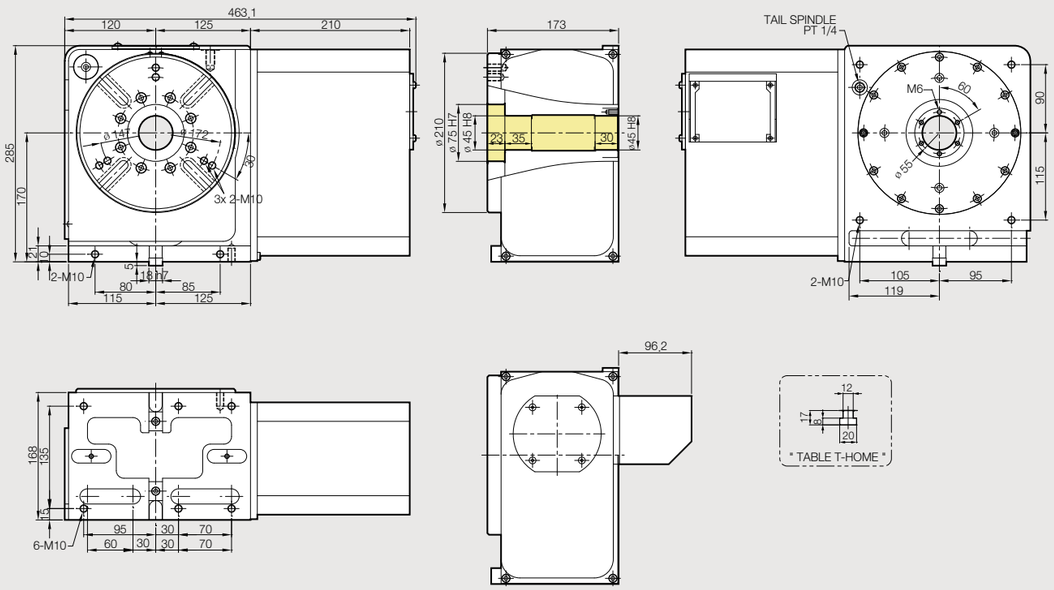
F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Clamp torque (N.m)
Ø210	170	Ø75H7	Ø45H8	Pneumatic	0.8	480

Max.spindle speed (mm⁻¹)	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Net weight (kg)	Servo motor (FANUC)
33.3	1/90	4	20	79	αi F4/4000

Allowable load (kg)					Allowable cutting torque (N.m)
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)	
200	100	17	1100	480	270

S-200F4



S-250F4

4th axis NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

S-SERIES

Model No. S-250 F4

- Servo Motor
- Servo Motor Maker
- Table Diameter
- TYPE : Single Spindle NC Rotary Table(Standard)

*** Servo Motor Brand**

AC Servo Motor is ABSOLUTE Type

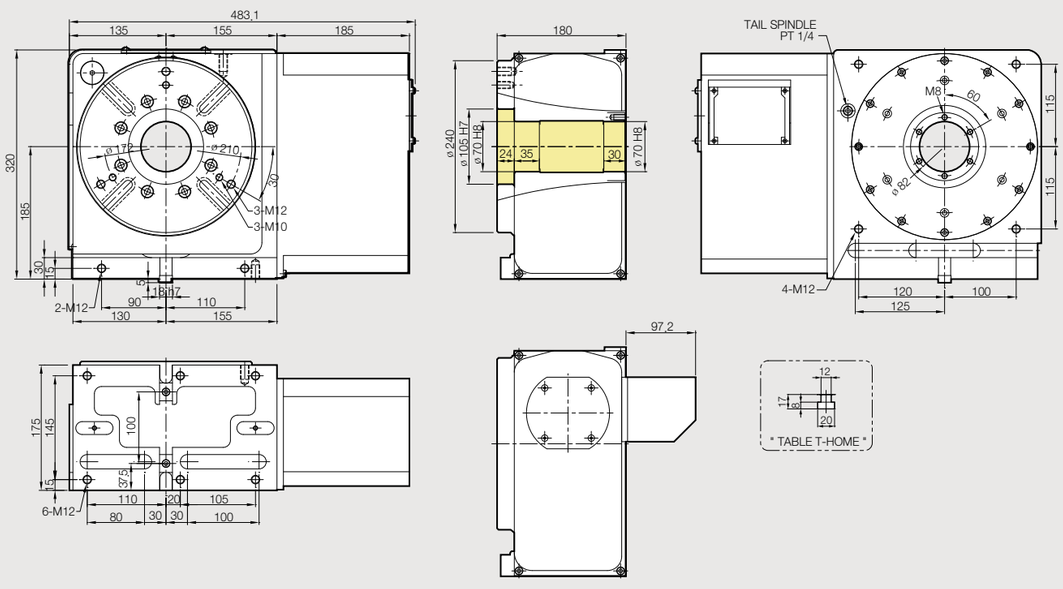
F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Clamp torque (N.m)
Ø240	185	Ø105H7	Ø70H8	Pneumatic	1.95	750

Max.spindle speed (mm⁻¹)	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Net weight (kg)	Servo motor (FANUC)
33.3	1/90	4	20	100	αi F4/4000

Allowable load (kg)					Allowable cutting torque (N.m)
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)	
250	125	21	1600	750	480

S-250F4



S-250F8

4th axis NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

S-SERIES

Model No. S-250 F8

- Servo Motor
- Servo Motor Maker
- Table Diameter
- TYPE : Single Spindle NC Rotary Table (Standard)

*** Servo Motor Brand**

AC Servo Motor is ABSOLUTE Type

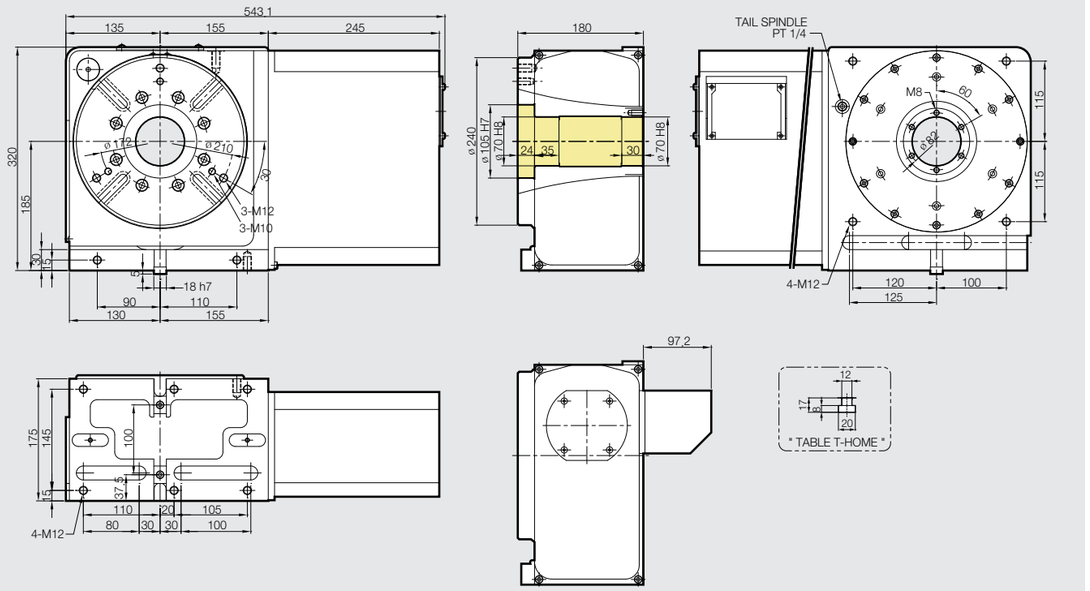
F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Clamp torque (N.m)
Ø240	185	Ø105H7	Ø70H8	Pneumatic	3.12	750

Max.spindle speed (mm⁻¹)	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Net weight (kg)	Servo motor (FANUC)
33.3	1/90	4	20	106	αi F8/3000

Allowable load (kg)					Allowable cutting torque (N.m)
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)	
250	125	21	1600	750	600

S-250F8



S-320F8

4th axis NC Rotary Table

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

S-SERIES

Model No. S-320 F8

- Servo Motor
- Servo Motor Maker
- Table Diameter
- TYPE : Single Spindle NC Rotary Table (Standard)

*** Servo Motor Brand**

AC Servo Motor is ABSOLUTE Type

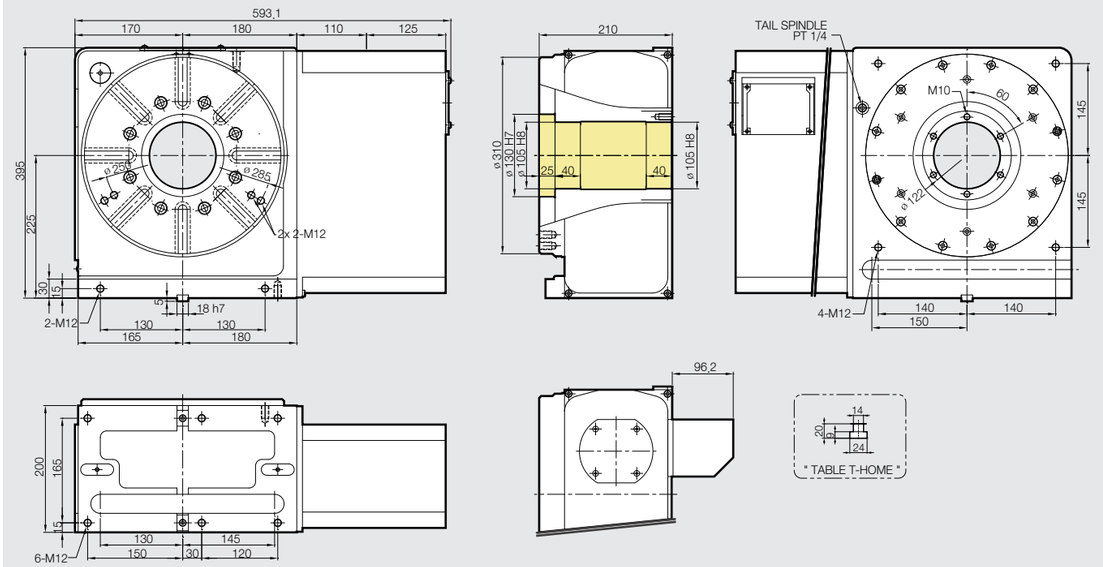
F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Clamp torque (N.m)
Ø310	225	Ø130H7	Ø105H8	Pneumatic	4.49	1440

Max.spindle speed (mm⁻¹)	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Net weight (kg)	Servo motor (FANUC)
25	1/120	4	20	170	αi F8/3000

Allowable load (kg)					Allowable cutting torque (N.m)
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)	
350	180	25	2400	1440	800

S-320F8



S-430F22

4th axis NC Rotary Table (Big Bore Type)

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Large Through Hole
- High Clamping power (Hydraulic)

S-SERIES

Model No. S-430F22

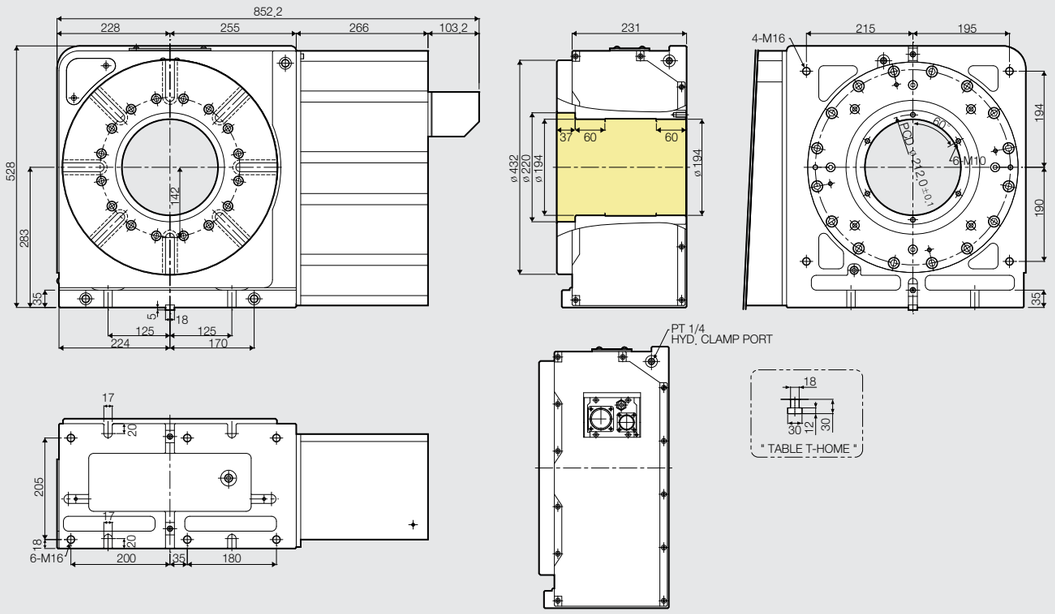
- Servo Motor
- Servo Motor Maker
- Table Diameter
- TYPE : Single Spindle NC Rotary Table (Big Bore Type)

Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Clamp torque (N.m)
Ø432	283	Ø220	Ø194	Hydraulic	10.67	2500

Max.spindle speed (mm⁻¹)	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Net weight (kg)	Servo motor (FANUC)
25	1/120	4	20	350	αi F22/3000

Allowable load (kg)					Allowable cutting torque (N.m)
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)	
500	250	32	5000	2500	1700

S-430F22



S-515F22

4th axis NC Rotary Table (Big Bore Type)

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Solid Body
- Large Through Hole
- High Clamping power (Hydraulic)

S-SERIES

Model No. S-515F22

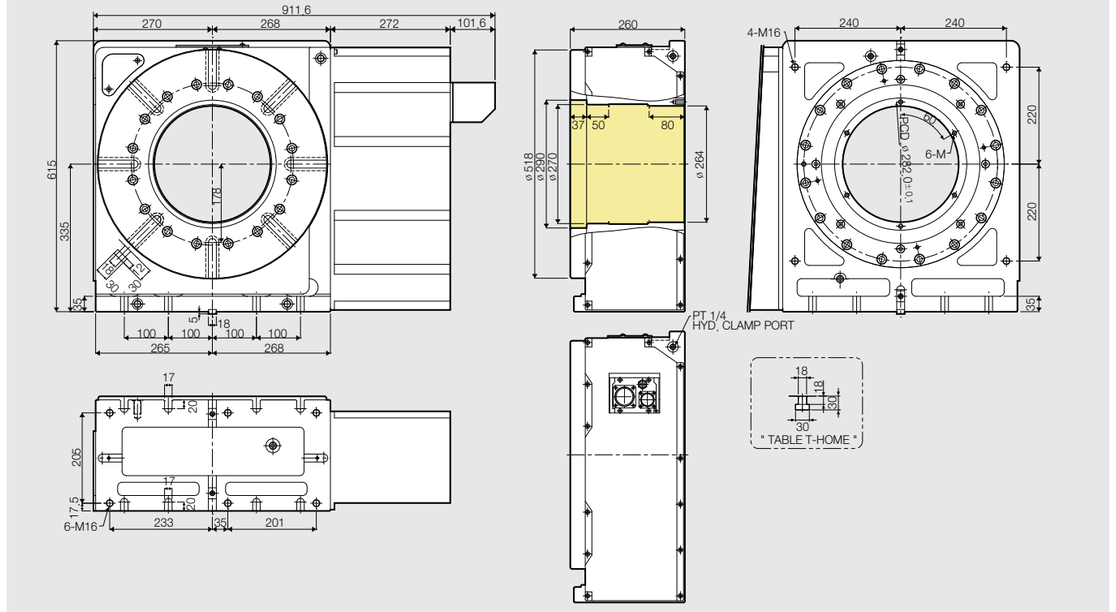
- Servo Motor
- Servo Motor Maker
- Table Diameter
- TYPE : Single Spindle NC Rotary Table (Big Bore Type)

Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Clamp torque (N.m)
Ø518	335	Ø290	Ø264	Hydraulic	19.97	3200

Max.spindle speed (mm⁻¹)	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Net weight (kg)	Servo motor (FANUC)
25	1/120	4	20	430	αi F22/3000

Allowable load (kg)					Allowable cutting torque (N.m)
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)	
600	300	50	8000	3200	2600

S-515F22



S-650F22

4th axis for NC Rotary Table (Big Bore Type)

- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Solid Body
- Large Through Hole
- High Clamping power (Hydraulic)

S-SERIES

Model No. S-650F22

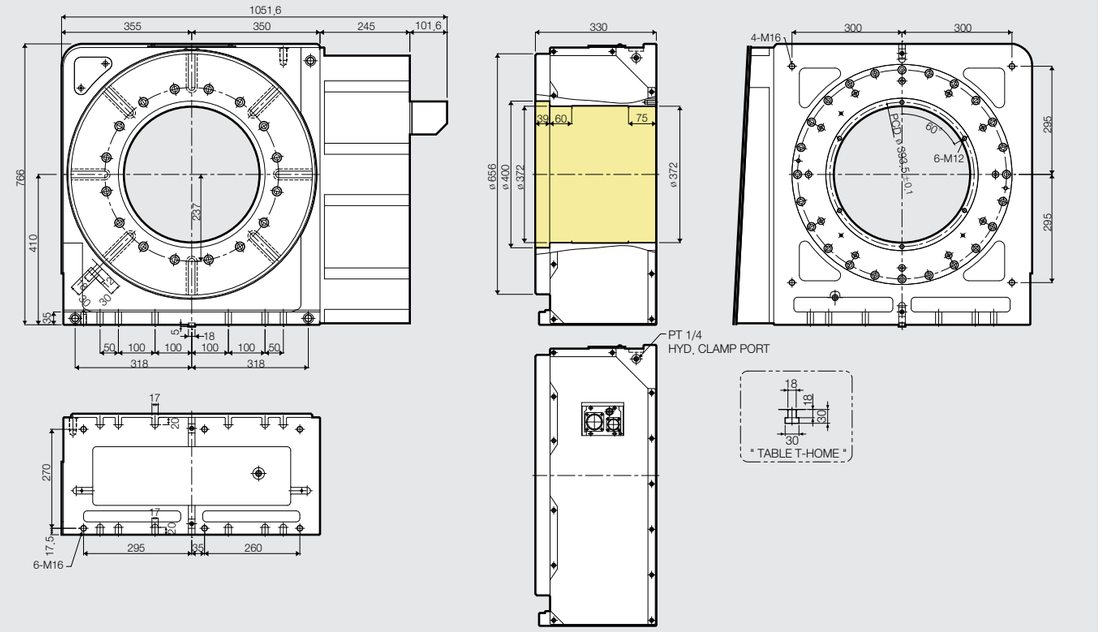
- Servo Motor
- Servo Motor Maker
- Table Diameter
- TYPE : Single Spindle NC Rotary Table (Big Bore Type)

Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Clamp torque (N.m)
Ø656	410	Ø400	Ø372	Hydraulic	33.07	4000

Max.spindle speed (mm⁻¹)	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Net weight (kg)	Servo motor (FANUC)
25	1/120	4	20	750	αi F22/3000

Allowable load (kg)					Allowable cutting torque (N.m)
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)	
1000	400	70	10000	4000	5000

S-650F22



S-120,120L

Controller type for NC Rotary Table

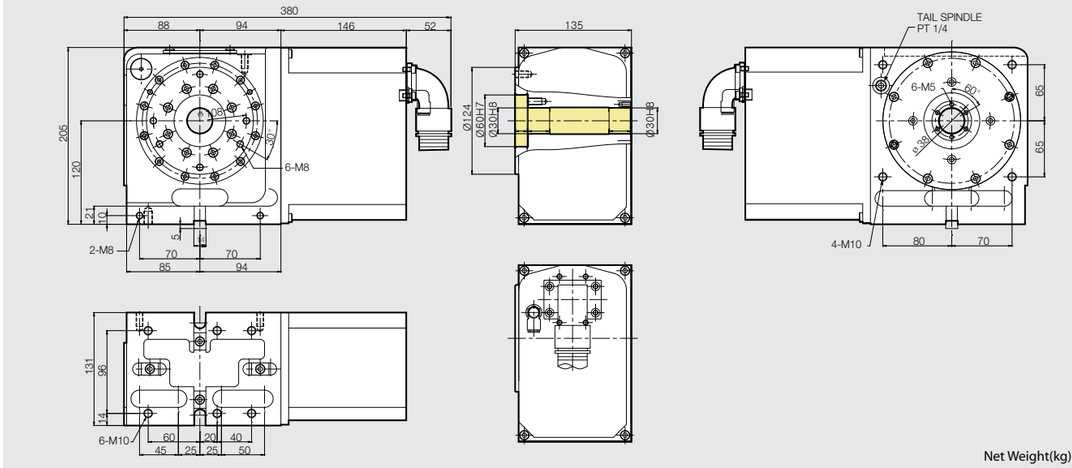
- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Solid Body
- High Clamping power

S-SERIES

Model No. S-120L

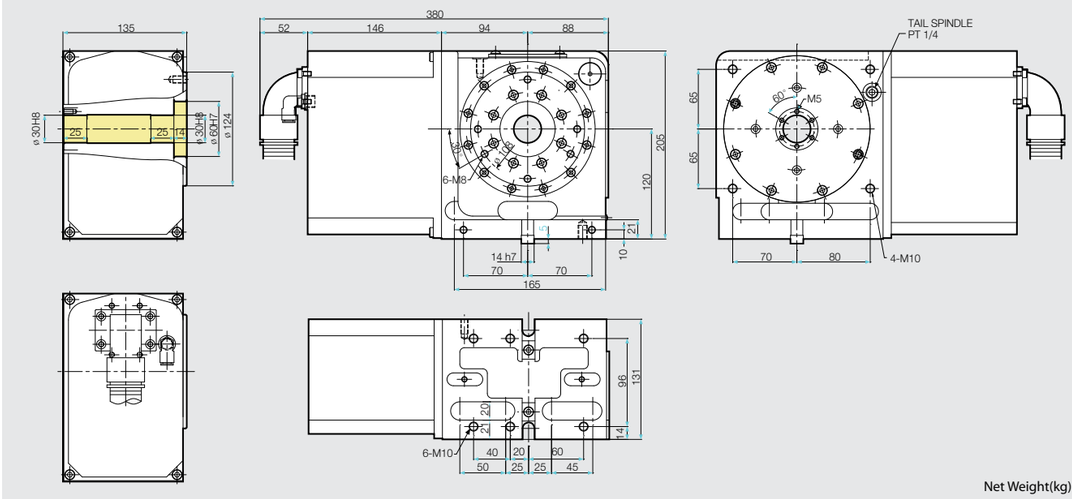
- Motor Side
- Table Diameter
- TYPE : Single Spindle NC Rotary Table(Standard)

S-120



Net Weight(kg) : 33

S-120L



Net Weight(kg) : 33

NC Rotary Table

S-170, 170L

Controller type for NC Rotary Table

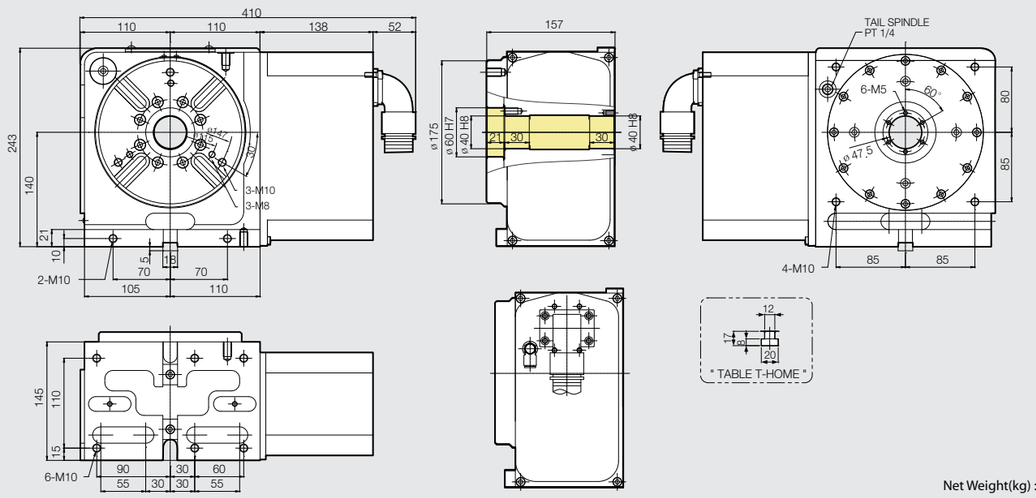
- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

S-SERIES

Model No. S-170L

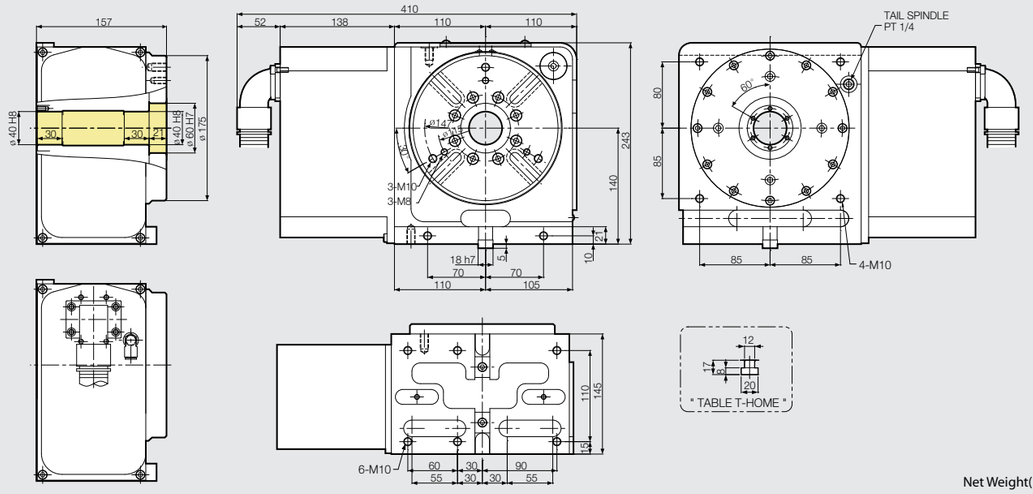
- Motor Side
- Table Diameter
- TYPE : Single Spindle NC Rotary Table(Standard)

S-170



Net Weight(kg) : 50

S-170L



Net Weight(kg) : 50

S-200, 200L

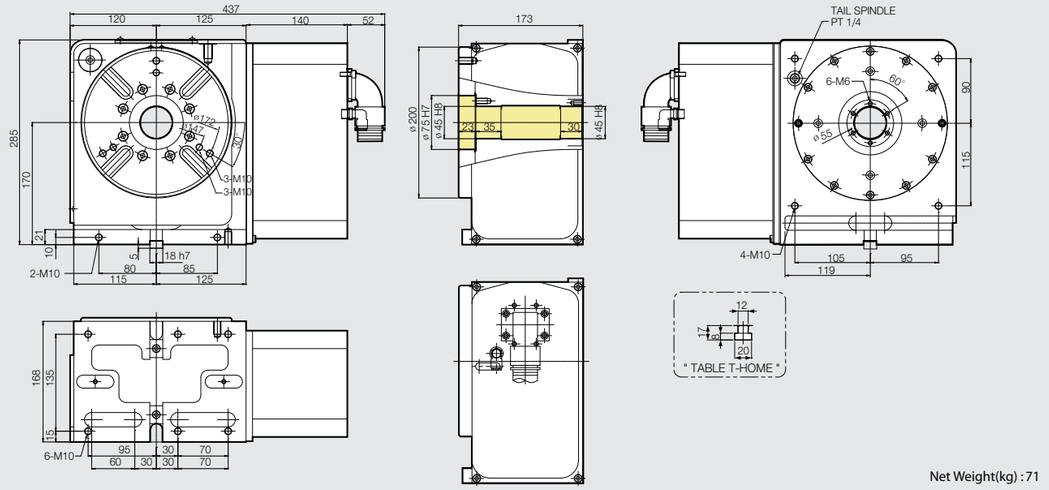
- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

S-SERIES

Model No. S-200L

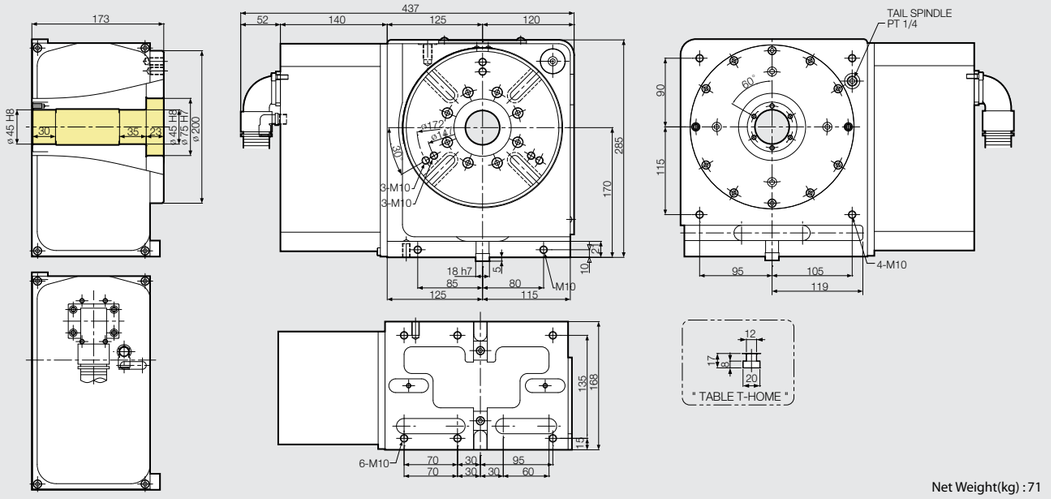
- Motor Side
- Table Diameter
- TYPE : Single Spindle NC Rotary Table(Standard)

S-200



Net Weight(kg) : 71

S-200L



Net Weight(kg) : 71

S-250i, 250Li

Controller type for NC Rotary Table

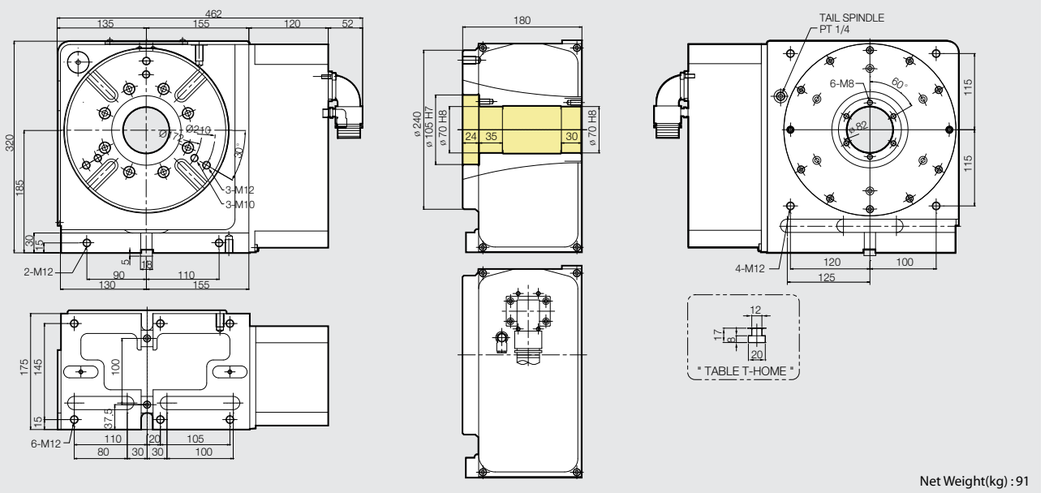
- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

S-SERIES

Model No. S-250L i

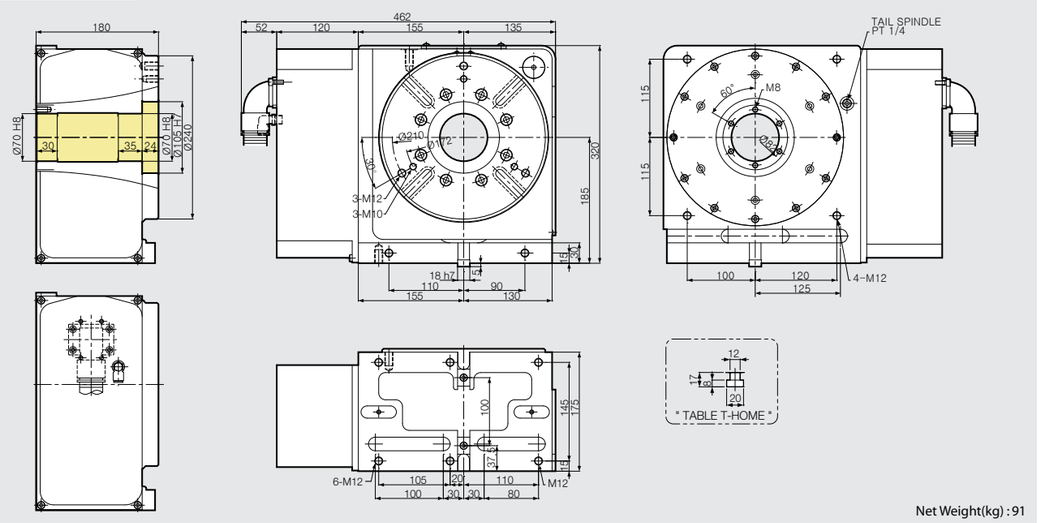
- Motor Spec (None : 1HP, i : 2HP)
- Motor Side (None : Right, L : Left)
- Table Diameter
- TYPE : Single Spindle NC Rotary Table(Standard)

S-250i



Net Weight(kg) : 91

S-250Li



Net Weight(kg) : 91

S-320i, 320Li

Controller type for NC Rotary Table

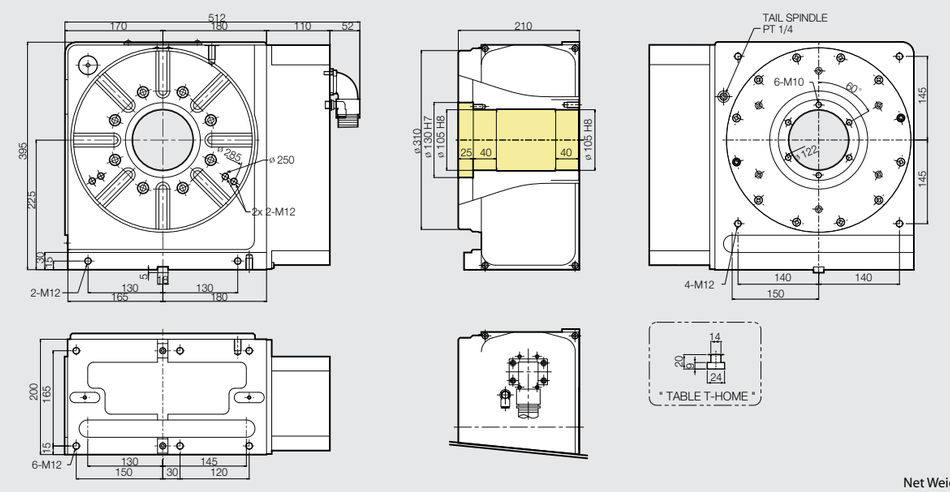
- High Precision, High Speed Systems
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Realize High Clamping Force by applying Double Piston

S-SERIES

Model No. S-320L

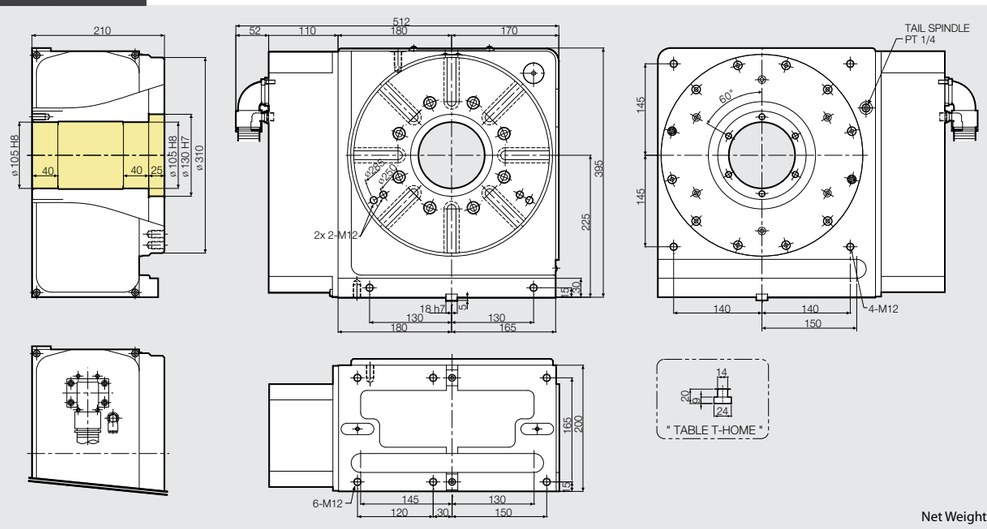
- Motor side
- Table Diameter
- TYPE : Single Spindle NC Rotary Table(Standard)

S-320



Net Weight(kg) : 154

S-320L



Net Weight(kg) : 154

TR-120FF

4th, 5th Axis for Tilting NC Rotary Table

TR-SERIES

- Compact Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Compact Design
- Extremely Rigid Body
- High Clamping power (Hydraulic)

Model No. TR-120FF

- Servo Motor Maker
- Table Diameter
- TYPE : Tilting NC Rotary Table

*Servo Motor Brand

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

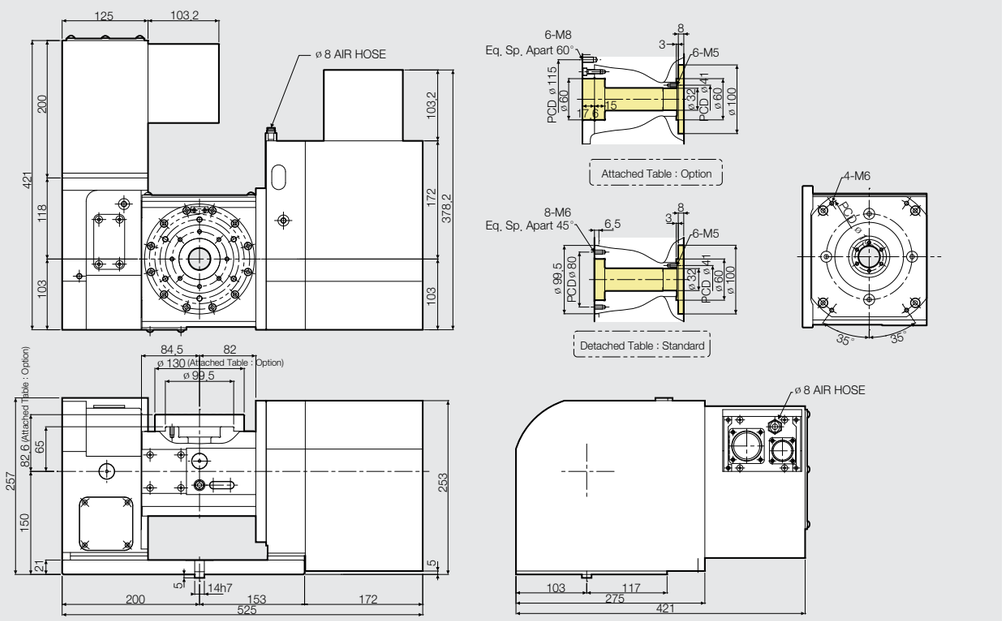
Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Net weight (kg)
(Table : option) Ø130	150	Ø60	Ø32	Hydraulic	0.06	115

	Max.spindle speed (mm⁻¹)	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Clamp Torque (N.m)	Servo motor (FANUC)
Rotating Axis	33.3	1/90	4	30	120	αi F2/5000
Tilting Axis	16.6	1/180	4	60	200	αi F2/5000

Allowable load (kg)					Allowable cutting torque (N.m)	Moment of tilting weight capacity
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)		W x L(kgf.m)
35	20	4	200	120	190	10

* Tilting Range / -20° ~ 110°

TR-120FF



TR-200FF

4th, 5th Axis for Tilting NC Rotary Table

TR-SERIES

- Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Extremely Rigid Body
- High Clamping power (Hydraulic)

Model No. TR-200FF

- Servo Motor Maker
- Table Diameter
- TYPE : Tilting NC Rotary Table

*Servo Motor Brand

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

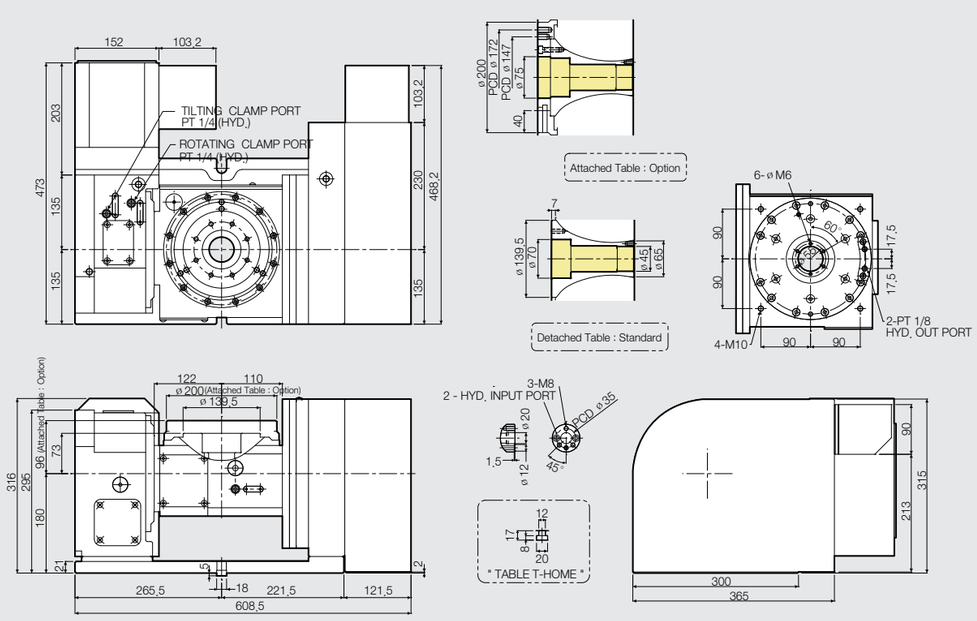
Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Net weight (kg)
(Table : option) Ø200	180	Ø70	Ø45	Hydraulic	0.25	250

	Max.spindle speed (mm⁻¹)	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Clamp Torque (N.m)	Servo motor (FANUC)
Rotating Axis	33.3	1/90	4	30	450	αi F4/4000
Tilting Axis	16.6	1/180	4	60	800	αi F4/4000

Allowable load (kg)					Allowable cutting torque (N.m)	Moment of tilting weight capacity
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)		W x L(kgf.m)
60	40	5	800	450	250	12

* Tilting Range / -20° ~ 110°

TR-200FF



TR-250FF

4th, 5th Axis for Tilting NC Rotary Table

TR-SERIES

- Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Extremely Rigid Body
- High Clamping power (Hydraulic)

Model No. TR-250FF

- Servo Motor Maker
- Table Diameter
- TYPE : Tilting NC Rotary Table

*Servo Motor Brand

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

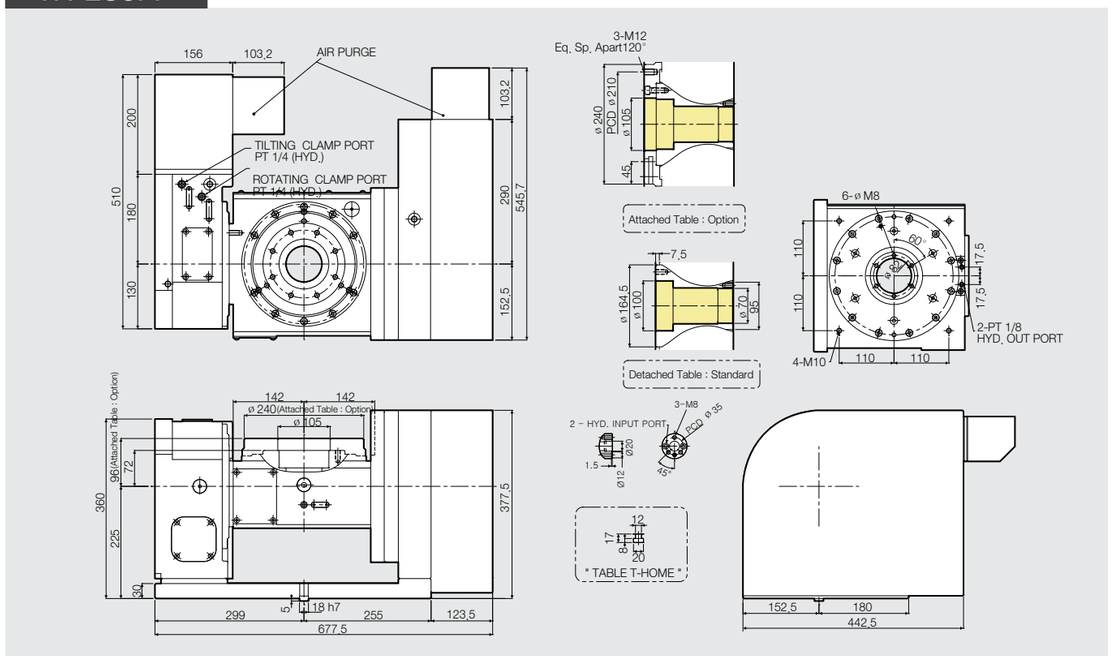
Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Net weight (kg)
(Table : option) Ø240	225	Ø100	Ø70	Hydraulic	0.78	295

	Max.spindle speed (mm⁻¹)	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Clamp Torque (Hyd.3.5MPa)	Servo motor (FANUC)
Rotating Axis	33.3	1/90	4	30	900	α iF 4/4000
Tilting Axis	16.6	1/180	4	60	1200	α iF 4/4000

Allowable load (kg)					Allowable cutting torque (N.m)	Moment of tilting weight capacity
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)		W x L(kgf.m)
100	60	12	1200	900	600	26

* Tilting Range / -20° ~ 110°

TR-250FF



TR-320FF

4th, 5th Axis for Tilting NC Rotary Table

TR-SERIES

- Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Extremely Rigid Body
- High Clamping power (Hydraulic)

Model No. TR-320FF

- Servo Motor Maker
- Table Diameter
- TYPE : Tilting NC Rotary Table

*Servo Motor Brand

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

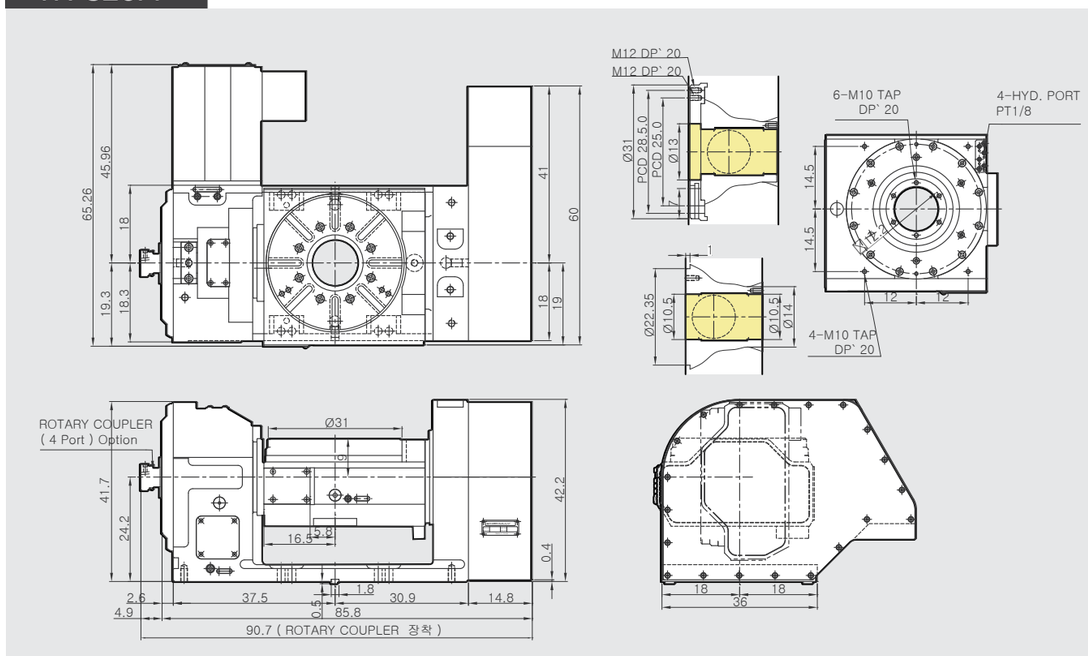
Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Net weight (kg)
(Table : option) Ø320	242	Ø130	Ø105	Hydraulic	-	410

	Max.spindle speed (mm⁻¹)	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Clamp Torque (N.m)	Servo motor (FANUC)
Rotating Axis	25	1/120	4	30	-	α i F8/4000
Tilting Axis	25	1/120	8	60	-	α i F12/3000

Allowable load (kg)					Allowable cutting torque (N.m)	Moment of tilting weight capacity
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)		W x L(kgf.m)
150	100	13.5	-	-	-	-

* Tilting Range / -20° ~ 110°

TR-320FF



TR-120, 200

Controller type for Tilting NC Rotary Table

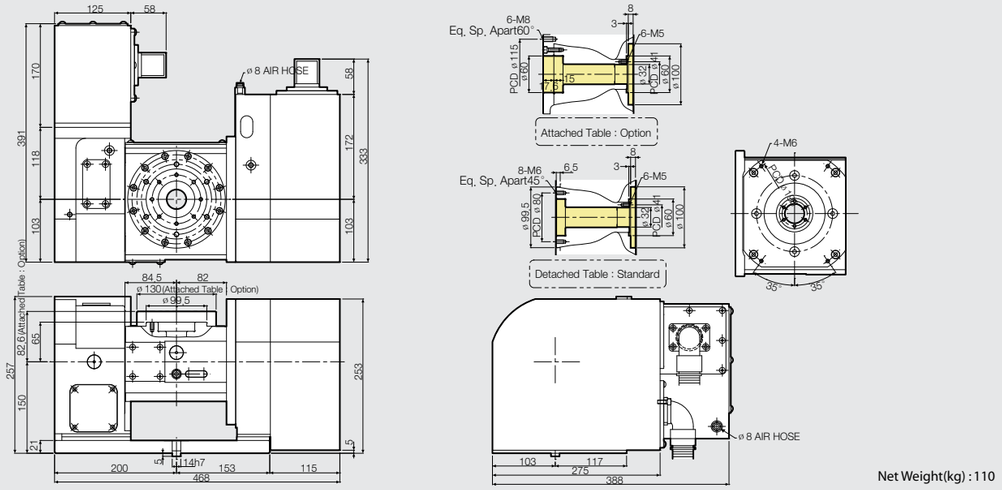
- Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Compact Design
- Extremely Rigid Body

TR-SERIES

Model No. TR-120

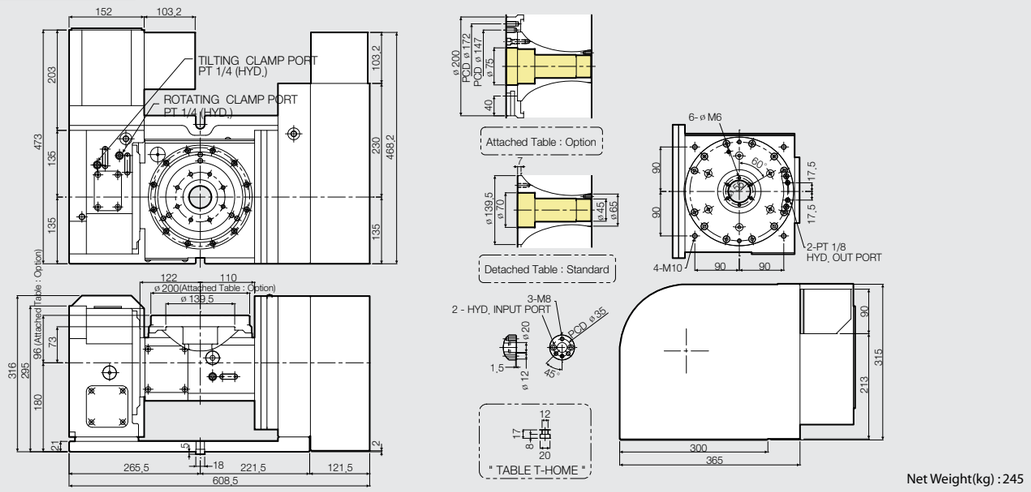
- 120 : Table Diameter
- TR : TYPE : Tilting NC Rotary Table

TR-120



Net Weight(kg) : 110

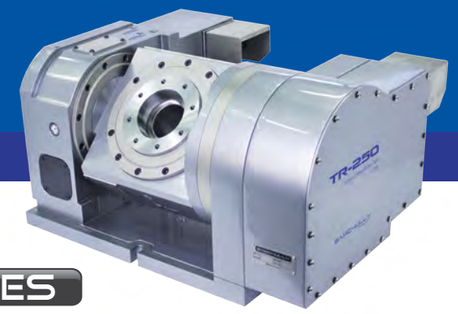
TR-200



Net Weight(kg) : 245

TR-250

Controller type for Tilting NC Rotary Table



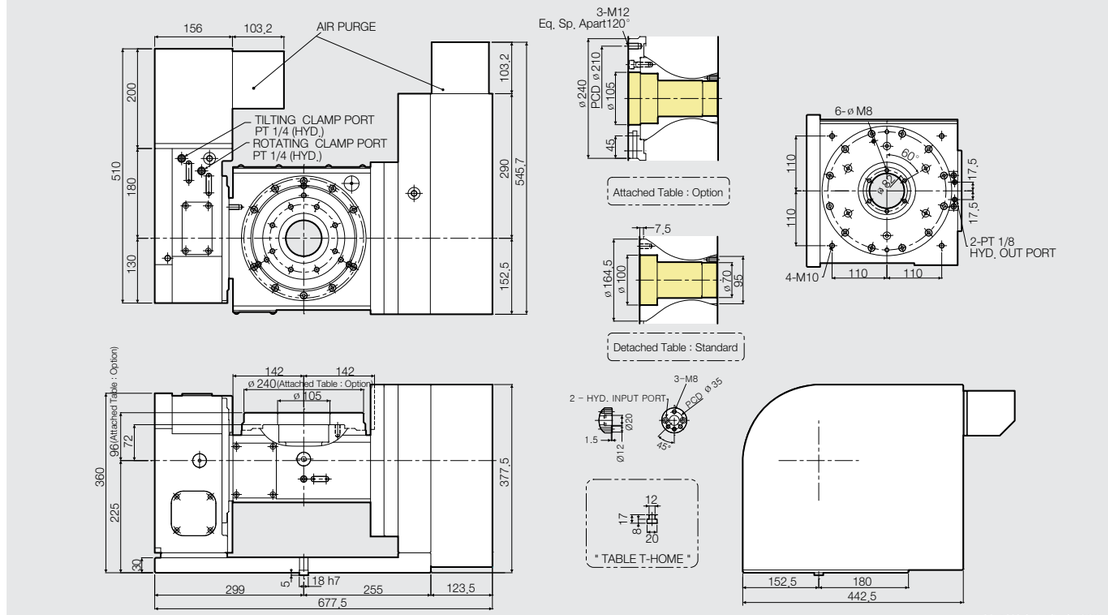
- Tilting Series
- High Precision, High Speed Systems
- Convenient JIG Design
- Compact Design
- Extremely Rigid Body

TR-SERIES

Model No. TR-250

- 250 : Table Diameter
- TR : TYPE : Tilting NC Rotary Table

TR-250



Net Weight(kg) : 290

DM-260

Direct Drive Motor NC Rotary Table

- Max. table speed 200min^{-1}
- High Precision indexing system (With DD Motor)
- Vertical & Horizontal available
- Compact Design
- Extremely Rigid Body
- Yaskawa Direct Drive Motor

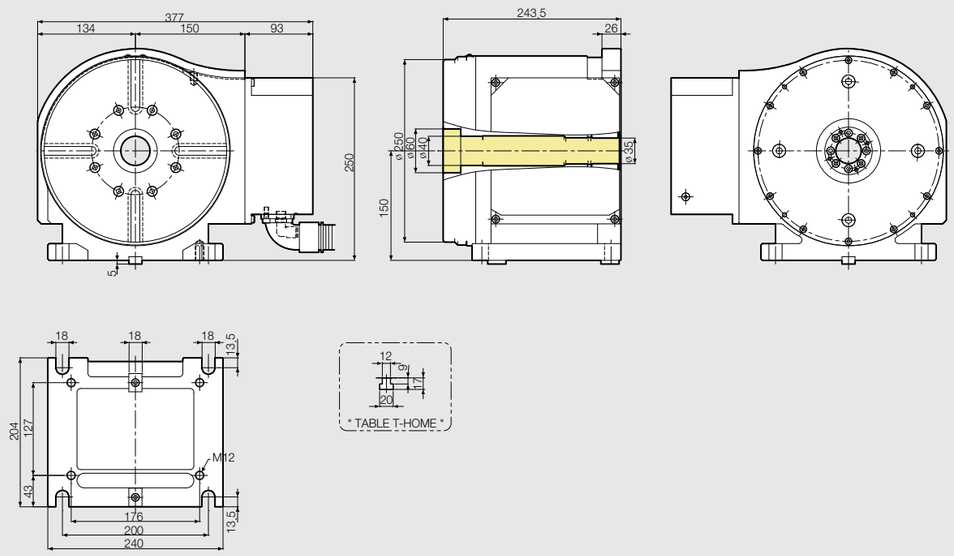
DM-SERIES

Model No. DM-260

- 260 : Table Diameter
- DM : TYPE : Direct Drive Motor Type NC Rotary Table

Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Clamp torque (N.m)
Ø258	150	Ø60	Ø35	Pneumatic	400
Max.spindle speed (mm^{-1})	**Gear ratio**	**Repeatability accuracy (sec)**	**Indexing accuracy (sec)**	**Allowable work inertia (kgm^2)**	**Net weight (kg)**
200	-	3	10	-	89
Allowable load (kg)					**Allowable cutting torque (N.m)**
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)	
70	35	5.5	-	400	51

DM-260



MS2-170F4

4th axis type for Multi Spindle NC Rotary Table

- Identical machining on both spindles
- Doubles production output
- Dual pistons increase clamp force

MS-SERIES

Model No. MS2-170F4

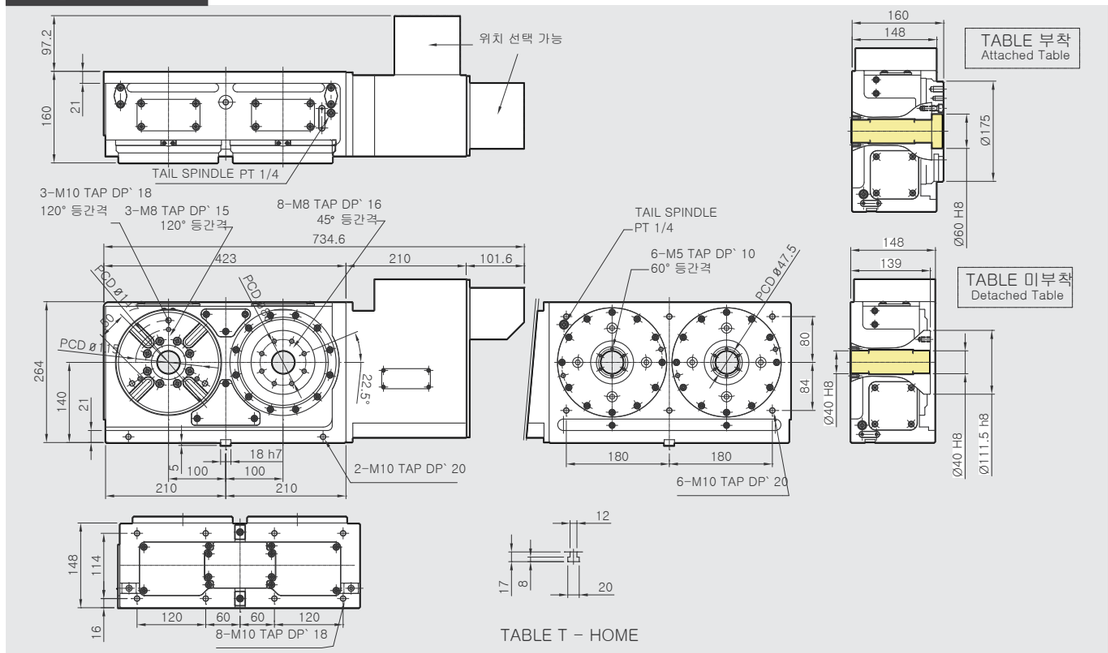
- 4 : Servo Motor
- F : Servo Motor Maker
- 170 : Table Diameter
- 2 : Axis
- MS : TYPE : Multi Spindle NC Rotary Table

*Servo Motor Brand

F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm^2)	Clamp torque (N.m)
Ø175 (Table : option)	140	Ø60H8	Ø40H8	Pneumatic	0.51	380
Max.spindle speed (mm^{-1})	**Gear ratio**	**Repeatability accuracy (sec)**	**Indexing accuracy (sec)**	**Net weight (kg)**	**Servo motor**	
33.3	1/90	4	30	87	α iF 4/4000	
Allowable load (kg)					**Allowable cutting torque (N.m)**	
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)		
160	80	10	600	380	300	

MS2-170F4



NC Rotary Table

MS2-170LF4

4th axis type for Multi Spindle NC Rotary Table

- Identical machining on both spindles
- Doubles production output
- Dual pistons increase clamp force

MS-SERIES

Model No. MS2-170F4

- Servo Motor
- Servo Motor Maker
- Table Diameter
- Axis
- TYPE : Multi Spindle NC Rotary Table

***Servo Motor Brand**

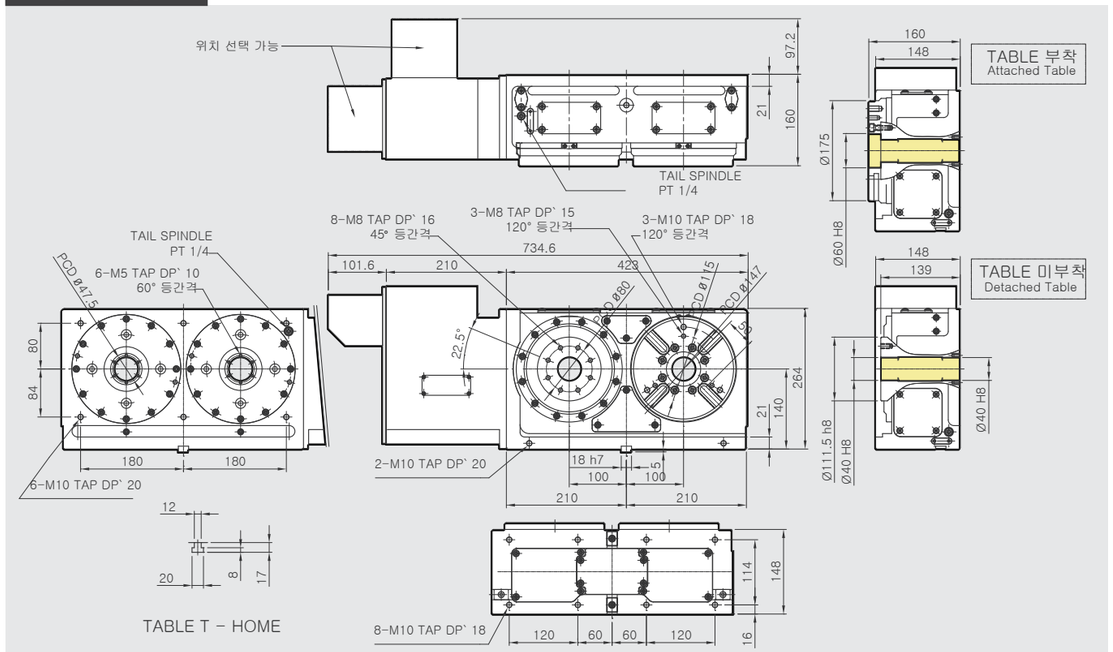
F : FANUC
S : SIEMENS
M : MITSUBISHI
P : PANASONIC
Y : YASKAWA
H : HEIDENHAIN
L : LS MECAPION
SY : SANYO
FA : FAGOR
O : OKUMA

Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Clamp torque (N.m)
Ø175 (Table :option)	140	Ø60H8	Ø40H8	Pneumatic	0.51	380

Max.spindle speed (mm⁻¹)	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Net weight (kg)	Servo motor
33.3	1/90	4	30	87	α iF 4/4000

Allowable load (kg)					Allowable cutting torque (N.m)
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)	
160	80	10	600	380	300

MS2-170LF4



MS2-170i, 170Li

Controller type for Multi Spindle NC Rotary Table

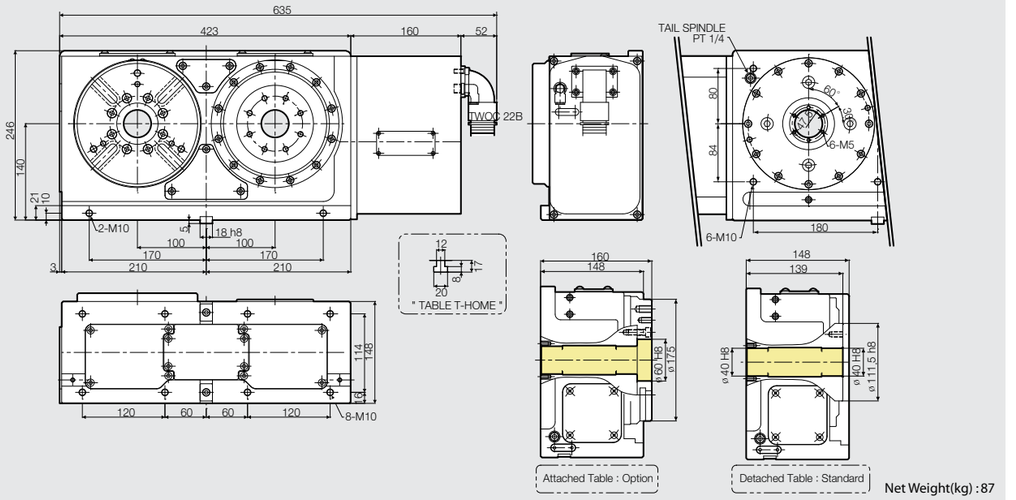
- Identical machining on both spindles
- Doubles production output
- Dual pistons increase clamp force

MS-SERIES

Model No. MS2-170L

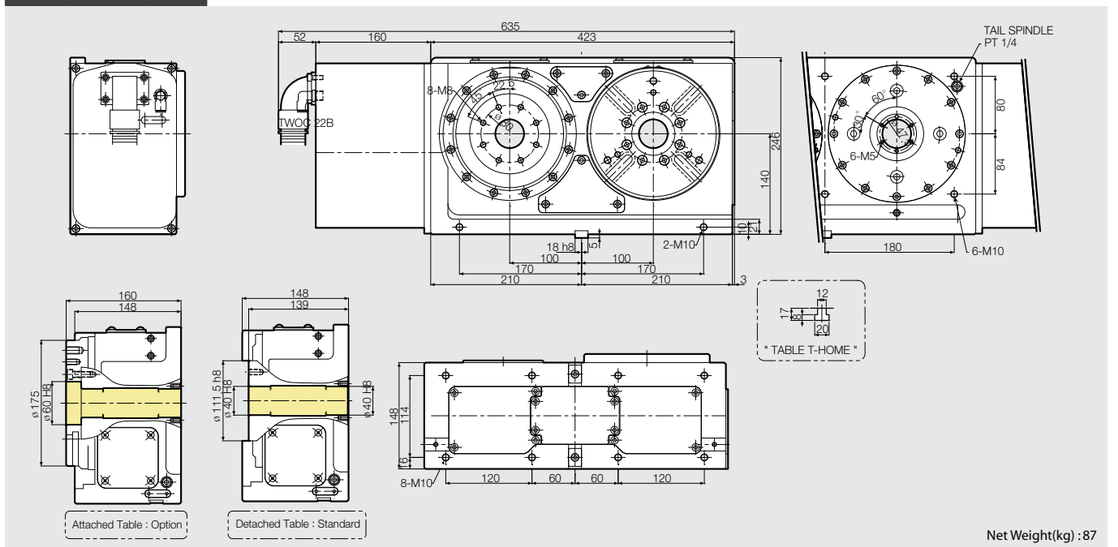
- Motor Side
- Table Diameter
- Axis
- TYPE : Multi Spindle NC Rotary Table

MS2-170i



Net Weight(kg) : 87

MS2-170Li



Net Weight(kg) : 87

NC Rotary Table

SR-200F4

Rear Mounted Motor 4th axis NC Rotary Table

- Maximize space with motor mounted on rear
- Increased clamping force through double piston technology
- Compact Design
- Extremely Rigid Body

SR-SERIES

Model No. SR-200F4

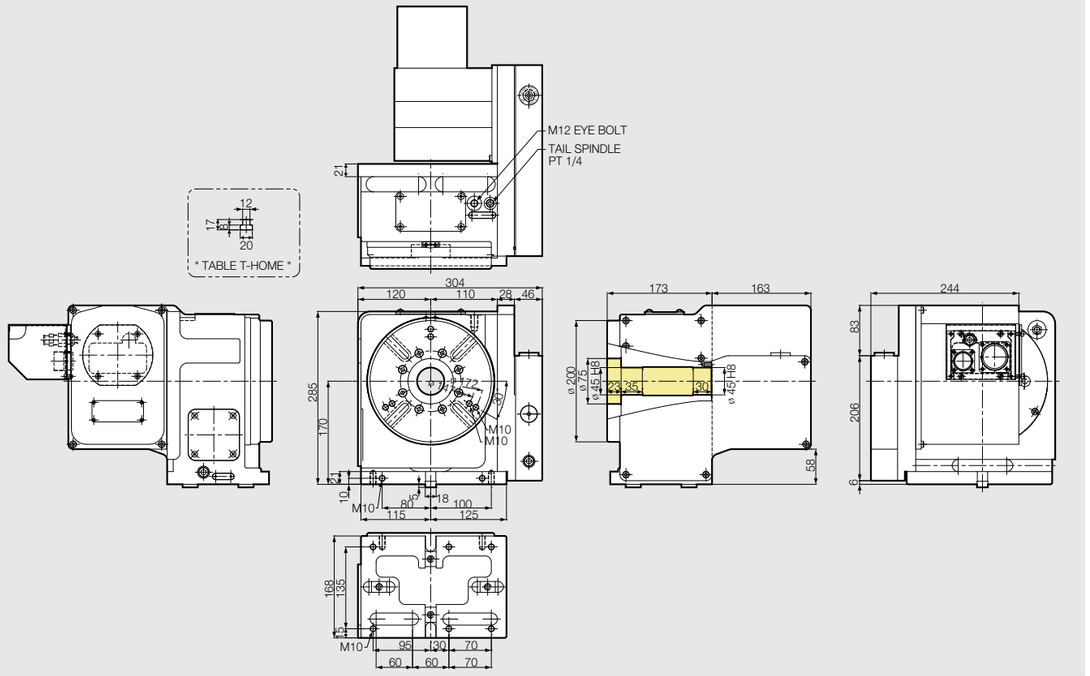
- Servo Motor
- Servo Motor Maker
- Table Diameter
- TYPE : Rear Mounted Motor NC Rotary Table

Table diameter (mm)	Center height (mm)	Resister diameter on face plate	Spindle through hole diameter (mm)	Clamp method	Allowable work inertia (kgm²)	Clamp torque (N.m)
Ø200	170	Ø75	Ø45H8	Pneumatic	0.50	500

Max.spindle speed (mm^{-1})	Gear ratio	Repeatability accuracy (sec)	Indexing accuracy (sec)	Net weight (kg)	Servo motor
33.3	1/90	4	40	78	α iF 4/4000

Allowable load (kg)					Allowable cutting torque (N.m)
Horizontal	Vertical	F(kN)	F x L(N.m)	F x L(N.m)	
-	100	17	1100	500	310

SR-200F4



SR-200i

Rear Mounted Motor Contoller type NC Rotary Table

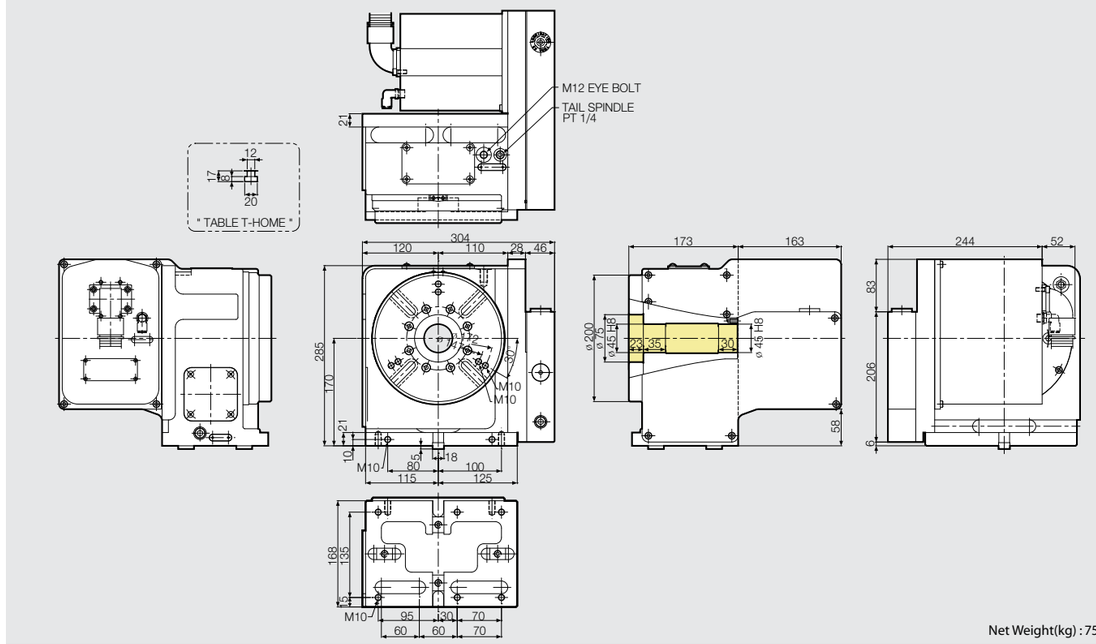
- Maximize space with motor mounted on rear
- Increased clamping force through double piston technology
- Compact Design
- Extremely Rigid Body

SR-SERIES

Model No. SR-200

- Table Diameter
- TYPE : Rear Mounted Motor NC Rotary Table

SR-200i



NeoCon

Samchully NeoCon Controller

- NeoCon Series : 1 axis
- Minimum setting unit: 0.001°
- 100ch 4,000 Block

Ease of use

- Programmable using standard G-codes
- Offers various parameters for convenience
- Zero point adjustment, manual control and various modes including edit(compilation) function

Special Features

- LCD allows display of diverse characters
- Line by line programing is displayed
- Capable of storing 90 channels
- A program may contain up to 10,000 blocks

Interfacing

- May use as an individual unit
- Ability to store part-specific programs; reduces setup time
- Compatible with drilling/tapping machines and horizontal and vertical machining centers

Multi-modal function

- Auto
Executes line by line upon receipt of start signal

- Manual Control
Rotates the table manually

- Edit
Inputs and edits programs

- Parameter
Checks and sets parameters

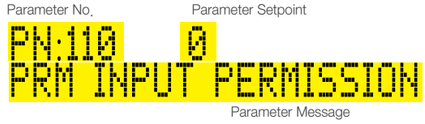
- Single
Operates the controller independently

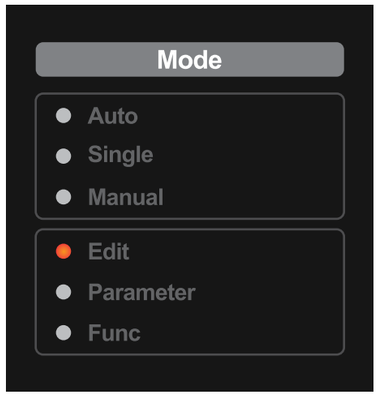
Modes

- **AUTO**
- **MANUAL**
- **SINGLE**

- **EDIT**

- **PARAMATER**





Specifications and Functions

Specifications	Descriptions
Controlled axes	1 axis
Program Capacity	Backup with EEPROM (100,000 input memory)
Servo Motor Specification	AC servo motor with absolute encoder
Setting Unit	0.001°
Max. setting angle	999-rotation + 360° (±999.999°)
Programmable capacity	4000 Block (100 channels)
Command Method	ABSOLUTE/INCREMENTAL methods (Choice between G90/G91)
Zero position return	Zero and zero point return
Manual Feed	Rapid traverse, slow speed feed and step feed
Emergency Stop	Emergency stop button or forced servo stop by external interlock input and master stop
Halt	Halt of rotary table by key input or external SP input
Feedrate override	Settable 1 to 100% (can be notched 1 to 100%)
Preparatory function	DWELL, LEAD CUTTING, BUFFER FUNCTION, CLAMP PRESENCE, DEVIATION CHECK FUNCTION, INTERLOCK START, CONTINUOUS START, MZRN, WZRN, REPEATING FUNCTION, LOOP JUMP FUNCTION, ABSOLUTE/INCREMENTAL, FIN SIGNAL CONTROL COMMAND
Jump to subprogram	Jump to subprogram
Software limit function	Software can be set from machine zero position to prevent interference with the machine by mounting jigs or workpiece
Over travel stop function	Hard limit mode can control the rotary range of rotary table
Pitch error compensation	Pitch error can be compensated per 15° (min. set unit: 0.001°)
Backlash	Backlash compensation is adjustable
Alarm function	When error is detected, alarm number and alarm message are automatically displayed
Self-Diagnosis Function	Machine coordinate, work coordinate (command value, encoder value), remained movement, I/O signal state, position deviation, current %, encoder electric angle
Input Power	Single Phase AC200/230V ± 10% 50/60Hz
Apparent Power	1.0 KVA
Net Weight	7.5 kg
Environment	Controller Temperature: 0-45° Storage Temperature: -10° ~60° C Humidity: below 85% RH Internal Vibration: 0.5 Internal Impact: Below 1G
Display	LCD 20 characters X 2 lines
Optional Port	RS232C (external equipment can I/O program, parameters, etc.)
External Input Signal	START, STOP, external EMG STOP, external channel selection
External Output Signal	Block completed, 360° comp., optional completed signal, MZRN completed, EMG STOP output signal, alarm output signal

NeoCon

Samchully NeoCon Controller

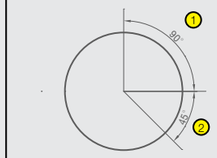
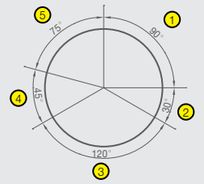
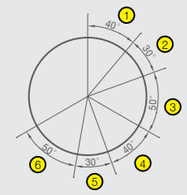
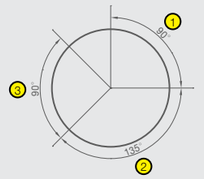
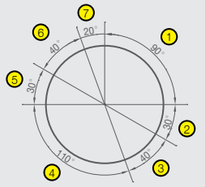
Address Function

Address	Description	Setting Unit	Setting Range	Remark
G	Refer to the G Code function section.			
A	Rotation angle command	degree	±999.999	
	Dwel time command	sec	0.01~999.99	
F	Rotation speed command	0.01min-1	0~4166	
J	Jump command	Block No.	0~99	Jump prior to the command block
	Subroutine command	Block No.	0~99	Jump prior to the command block
	Return command	Return No.	-1	End of 1 turn subroutine
D	Partition command	No.of partitions	0~999	
S	Beginning block NO. command of repetition function (G27)	Block No.	1~99	
E	End block NO. command of repetition function (G27)	Block No.	1~99	
R	Frequency of repetition function (G27) command	No. of repetitions	1~99	
	G99 command of interlinked start function(G21)	G99 command No.	99	G99 command is executed in the same block as the G21 command.

G Code Function

G Code	Function	Description
None	Rotation speed command	Only calculation command is available.
G04	Dwell	No movement, wait for time.
G07	Lead cut	Rotate the table by multiple turns.
G08	Continuous buffer	Executes program block continuously, until the following G09 command.
G09	Continuous buffer cancel	Cancel the continuous befffer of G08, return to the ordinary single block run.
G10	Clamp unused	Set the clamp device at table stop to unused, which is effective until the next G11 command.
G11	Clamp used	Cancel the clamp device of G10 unused state, and apply clamp at table stop.
G15	Emphasizes the interlink	Emphasis the interlink by checking the deviation in the positions of the program blocks when the continuous buffer is effective (G08). The checking of deviation in positioin is effective until the next G16 command.
G16	Position check deviation invalid	Cancel the effectiveness of the position deviation check function. Do not check the deviation in the positions of the programs.
G21	Interlink start	This function outputs block finish signal prior to motion in program running, which is used for the interlinked operation with the machine, etc.
G22	Continuos start	If G22 is commanded, the table rotates continuousy until the next start input.
G23	Machine start point return	Position at the machine origin point of the table.
G24	Process start point return	Position at the origin of the process coordinate system of the table.
G25	Escape loop	Run the program inloop until the process start point is reached. When reached, escape from the loop and execute the next block.
G27	Repetition	Repeat execution of the program by specified number of times, from the designated block to the block.
G90	Absolute	Execute positioning in the absolute coordinates of the process coordinate system.
G91	Incremental	Execute positioning in the relative coordinates.
G92	Process coordinate system setting	Process start point can be set up as desired in the program.
G97	No block finished	Do not output the block finish (BLKFIN).
G98	Block arbitrary finish output	In the program execution, too, provide block finish (BLKFIN) and arbitrary finish (G99 FIN) output.
G99	Arbitrary finish output	Output the arbitrary finish (G99FIN) only, not block finish .

Program

Angle Index		① N000 G91 A90 F1000 Angle Rotation speed ② N001 G91 A45 F1000 J00 Jump function	90° rotation 45° rotation and N000 movement
Equipartition		N000 G91 A360 F1000 D8 J00 Angle Partition	360° angle with 8 partitions and N000 movement
Uneqaul Partition		① N000 G91 A90 F1500 ② N001 G91 A30 F1500 ③ N002 G91 A120 F2000 ④ N003 G91 A45 F2000 ⑤ N004 G91 A75 F2000 J00 Rotation speed	90° rotation 30° rotation 120° rotation 45° rotation 75° rotation, change to rpm 2000 and N000
Repetition		N000 G27 S4 E6 R2 Repetition command Start End Cycle ①④ N008 G91 A40 F2000 ②⑤ N009 G91 A30 F2000 ③⑥ N010 G91 A50 F2000	N004 ~ N006 2 cycles 40° rotation, 30° rotation, 50° rotation (1 time/cycle) 40° rotation, 30° rotation, 50° rotation (2 times/cycles)
Absolute / Incremental		① N000 G90 A90 F1000 Absolute Angle ② N001 G90 A225 F1000 ③ N002 G91 A90 F1000 Incremental Angle	90° rotation from absolute coordinates 225° rotation from absolute coordinates 90° rotation from opposite coordinate
Subprogram		① N000 A90 F1000 J10 Angle Jump ④ N001 G90 A270 J10 Absolute Jump ⑦ N002 A20 J00 Angle ②⑤ N010 G91 A30 ③⑥ N011 A40 J-1 Return Function	90° rotation, N010 movement 30° rotation from opposite coordinate 40° rotation and return N001 movement 270° rotation from absolute coordinate and N010 movement 30° rotation from opposite coordinate 40° rotation and return (N002 movement) 20° rotation and N000 movement

12, 17, 20, 25, 32TS

Tail Stock (Manual Type)

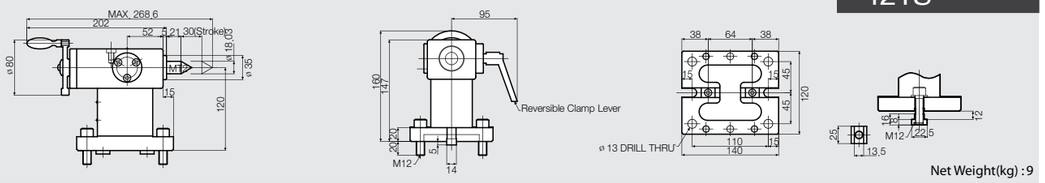
TS-SERIES

- Center of Main Axis support
- Usable Clamp Lever for Both side

Model No. 17 TS

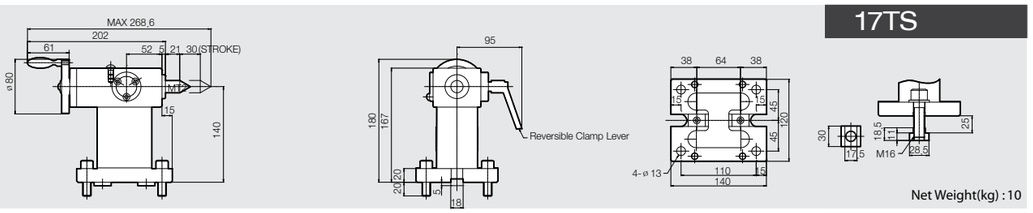
- TYPE : TS -Series / Tail Stock
- Apply Model / S-170

12TS



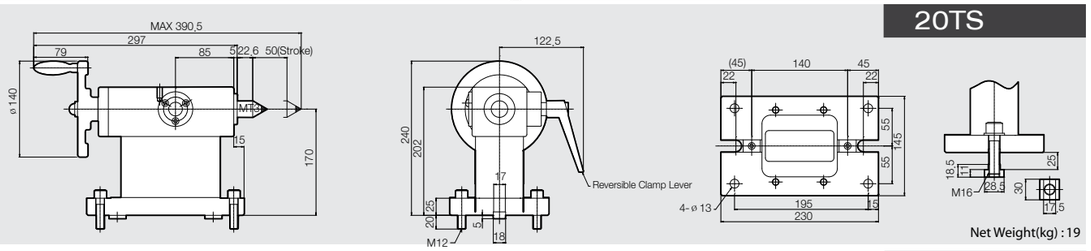
Net Weight(kg) : 9

17TS



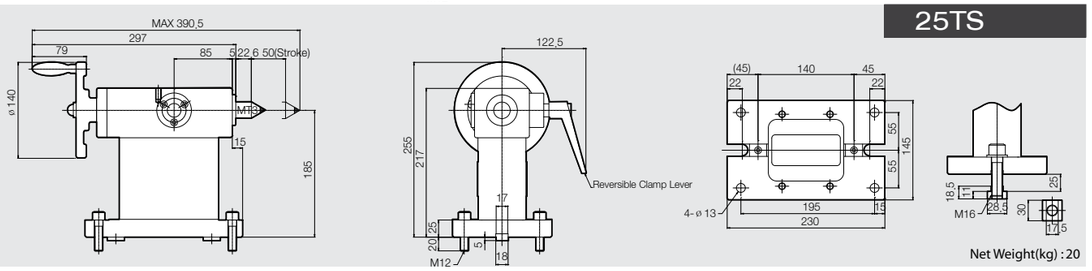
Net Weight(kg) : 10

20TS



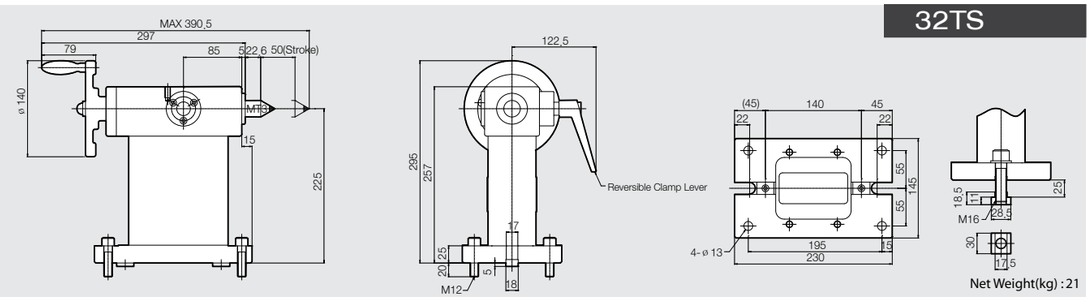
Net Weight(kg) : 19

25TS



Net Weight(kg) : 20

32TS



Net Weight(kg) : 21

43, 51, 65TS

Tail Stock (Manual Type)

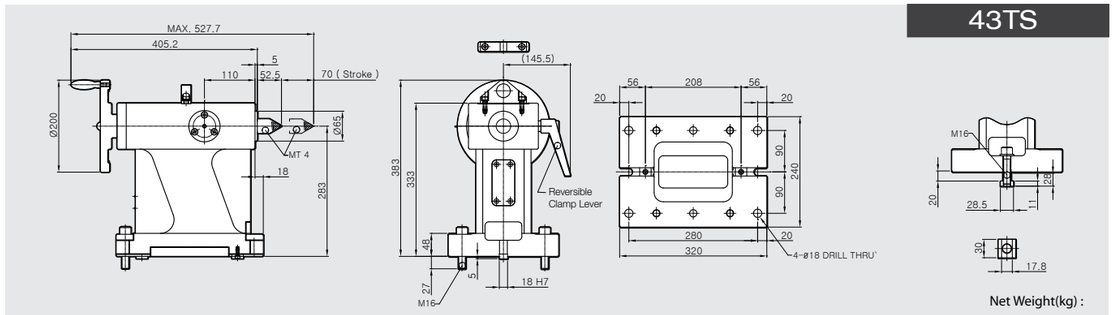
TS-SERIES

- Center of Main Axis support
- Usable Clamp Lever for Both side

Model No. 43 TS

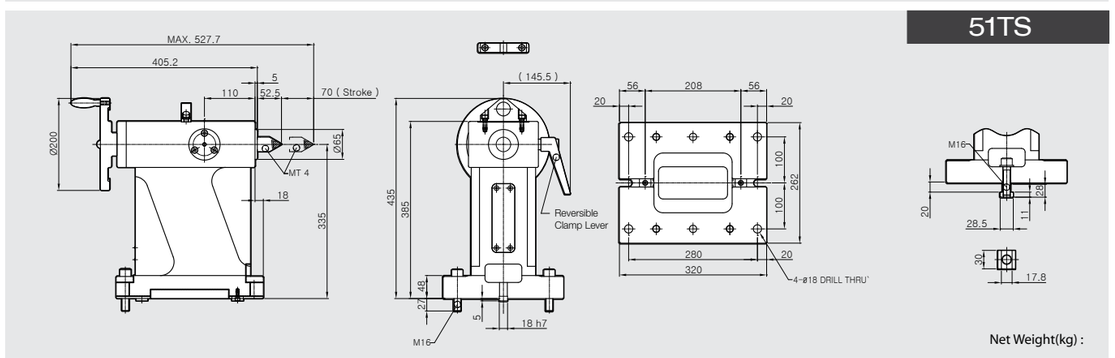
- TYPE : TS -Series / Tail Stock
- Apply Model / S-430

43TS



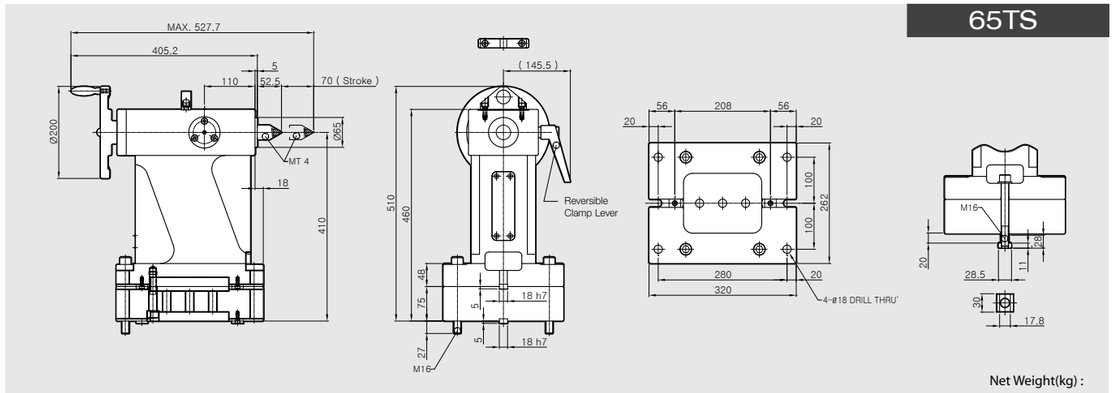
Net Weight(kg) :

51TS



Net Weight(kg) :

65TS



Net Weight(kg) :

17, 20, 25, 32TS-AH

Tail Stock (Air / Hydraulic Type)

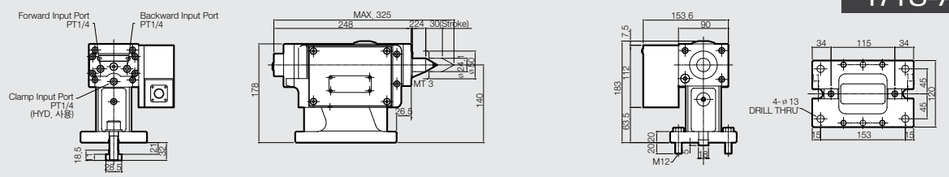
- For both Hydraulic and Pneumatic operation
- It's possible for TS-AH to be installed on automation system.

TS-AH SERIES

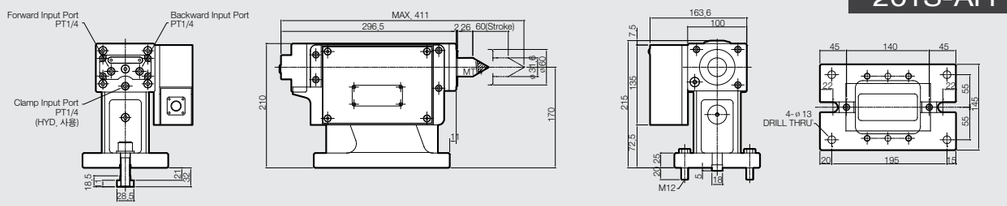
Model No. 17 TS-AH

- 17 — Operation Type
- TS — TYPE : TS - Series / Tail stock
- AH — Apply Model / S-170

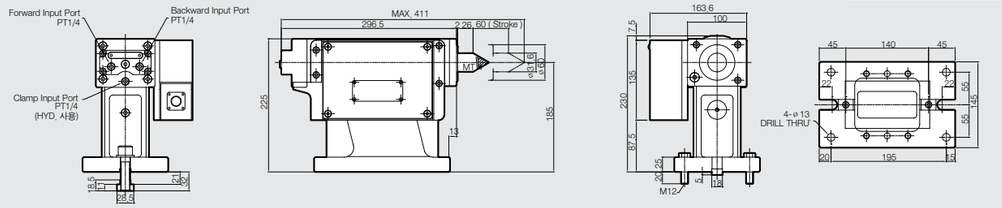
17TS-AH



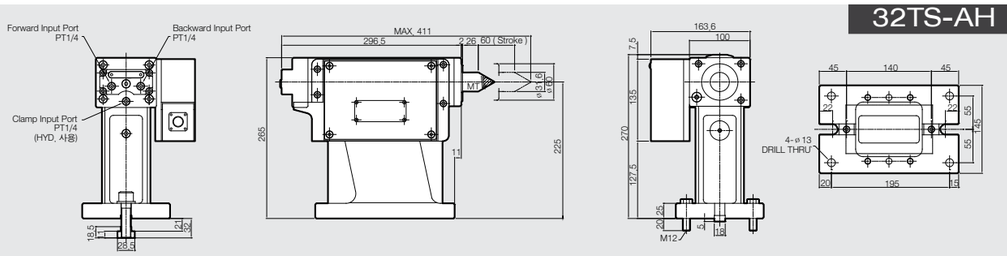
20TS-AH



25TS-AH



32TS-AH



17, 20, 25, 32SP-A

Tail Spindle (Air Clamp Type)

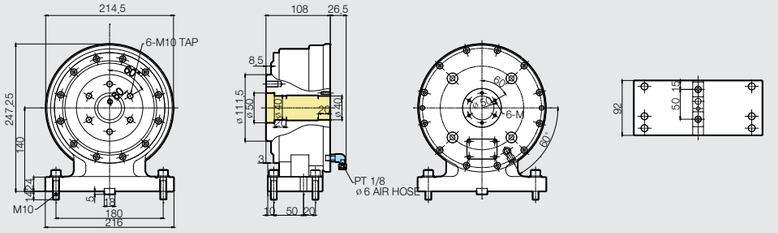
- Strong clamping force by double piston
- Compact and slim design by removing table
- Rigid bearing
- Non-vibration

SP-A SERIES

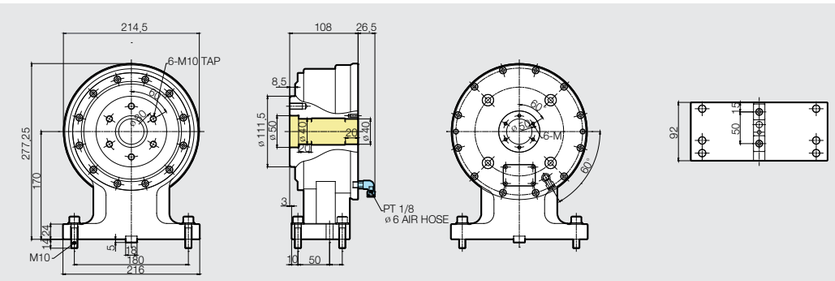
Model No. 17 SP-A

- 17 — Clamp / Air
- SP — TYPE : SP-C Series / Tail Spindle
- A — Apply Model / S-170

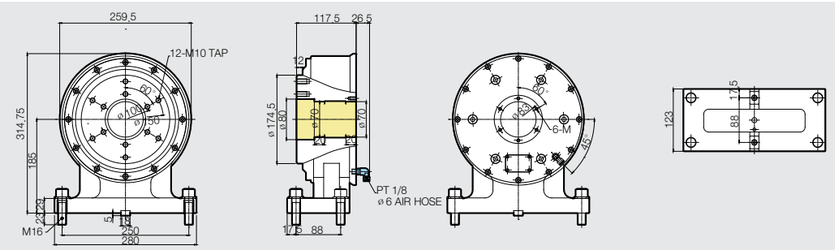
17SP-A



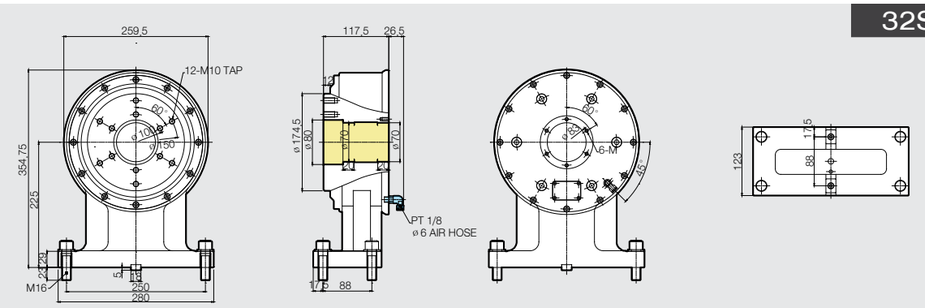
20SP-A



25SP-A



32SP-A



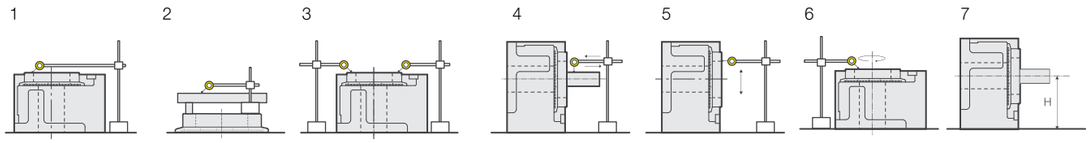
Application

Accuracy

Single Spindle NC Rotary Table / S series

(Unit : ㎜)

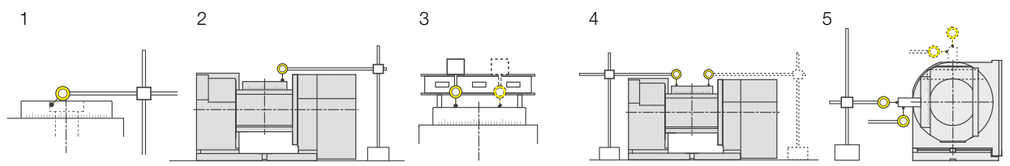
	Inspection Items	Allowable Value
1	Center hole run-out at table	0.010
2	Flatness of table face	0.015
3	Parallelism between table face and base	0.010
4	Parallelism between center of hole and base	0.020
5	Squareness between table face and base	0.020
6	Run-out of table face in rotation	0.020
7	Center Height	±0.025



Tilting NC Rotary Table / TR series

(Unit : ㎜)

	Inspection Items			Allowable Value
1	Center hole run-out at table			0.010
2	Run out of upper face during table rotation			0.015
3	Straightness of upper face of table (Center Low)		Total Length	0.010
4	Parallelism of upper face of table and reference plane (tilting axis direction)		Total Length	0.020
5	Parallellism of tilting axis and reference plane		Total Length	0.020
6	Index accuracy	Rotary axis	Accumulation	30sec
		Tilting axis	Accumulation	60sec
7	Repeatability			4sec



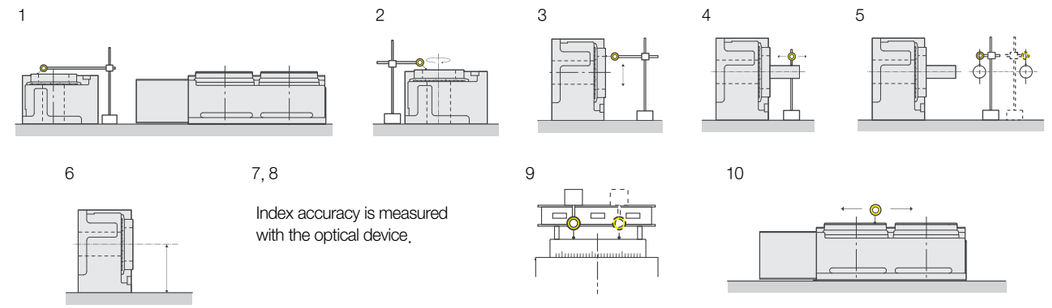
6, 7

Index accuracy is measured with the optical device.

Multi Spindle NC Rotary Table / MS series

(Unit : ㎜)

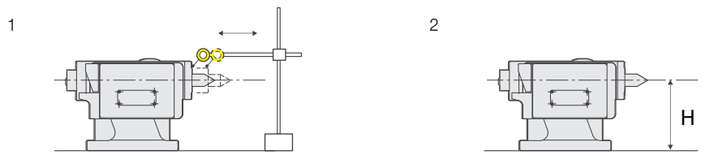
	Inspection Items	Allowable Value
1	Center hole run-out at table	0.020
2	Run out of table face in rotation	0.020
3	Squrareness between table face and base	0.020
4	Parallelism of rotatong axis center line and reference plane for vertical installation	-
5	Mutual error of center height	0.020
6	Center height	±0.020
7	Index accuracy	30sec
8	Repeatability	±5sec
9	Flatness of table face	0.020
10	Parallelism between table face and base	0.020



Tail Stock / TS, TS-AH series

(Unit : ㎜)

	Inspection Items	Allowable Value
1	Parallelism between Table face and Base	0.020
2	Center Height	-



※ Recommend using higher +0.01 ~ +0.02mm than NC Rotary Table

NC Rotary Table

Works with the CNC Controller to allow operation in multiple axes.
A rigid clamping break allows for high cutting force with high precision required for piece work or mass production.

A. Controller type (NeoCon-TYPE)
- Rotational accuracy ensures precise segment and angular accuracy with minimal backlash
- External signal (M Code) controls operation.
- Simple attachment, fast installation, minimal cost.
- Available with G code option.

B. Multi Axes type (4th Axes-type)
- Thread cutting, coutour cutting, CAM, helical operation
- Power and precision with multi axes machining.
- Operates with both rotary table controls and the CNC controller.

Gear Ratio

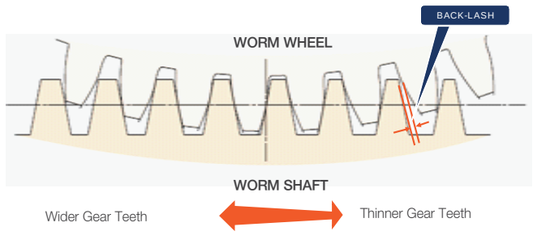
The calculation of the RPM : This is done by calculating the rotation of the motor and the table.

$$\text{Rotary Table Spindle Speed} = \frac{\text{Motor Spindle Rotation speed}}{\text{Gear Ratio}}$$

$$\text{NT-170 Spindle Speed} = \frac{3000}{72} = 41.6 \text{ RPM}$$

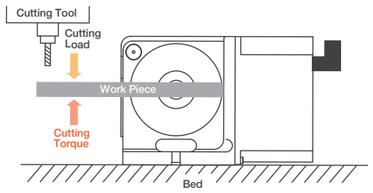
DUAL - LEAD WORM GEAR

The adjustable worm gear allows the operator to remove backlash as the worm wheel and worm shaft ware.



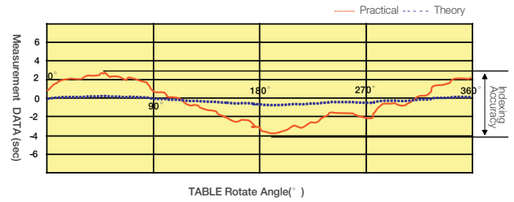
Cutting torque limit (N.m)

Failure to limit the cutting torque can damage the worm wheel and worm shaft.



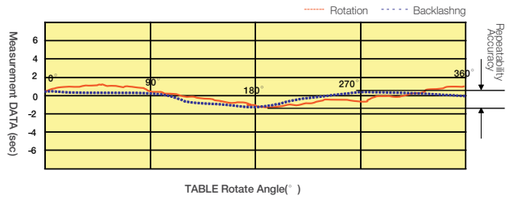
Indexing Accuracy

The variance between the worm wheel and worm shaft when rotated a full 360°

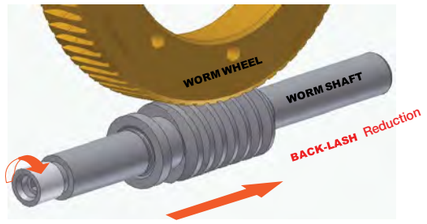


Repeatability Accuracy

Accuracy variance when operated in both directions.

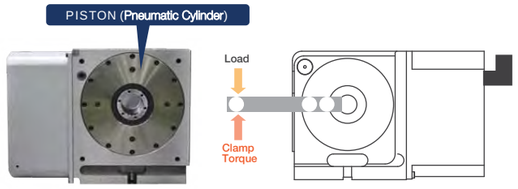


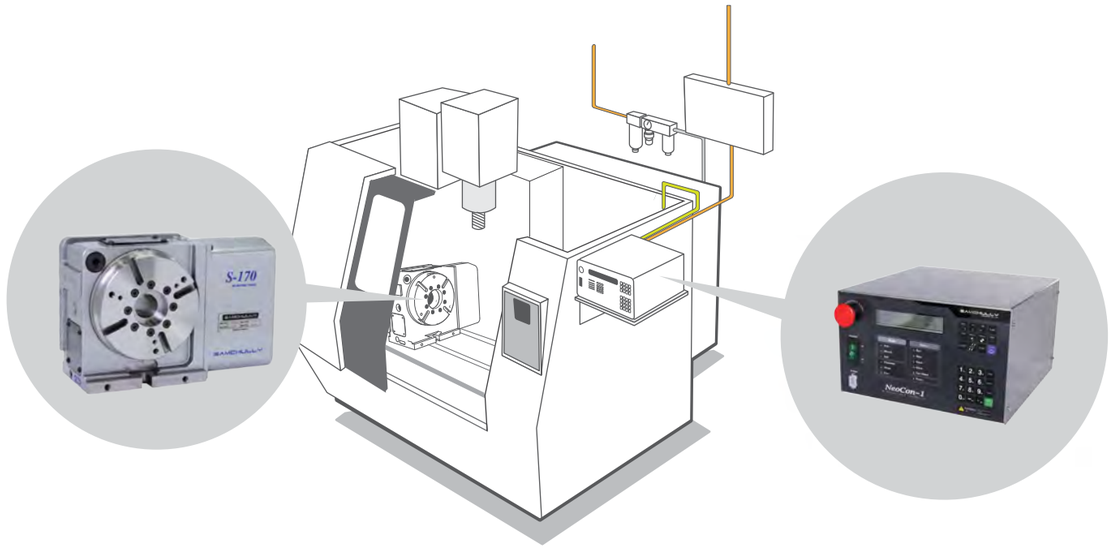
BACK-LASH



Clamp Torque (N.m)

Clamping the Break disk with air pressure

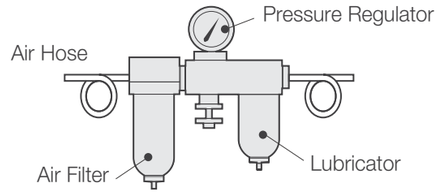




Air Supply Installaton

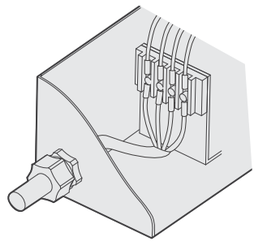
Air clamp system is located inside of the NC Rotary Table.
Air filter regulation is needed to use the clamp functions.
This is an option to the standard supply.

Parts Required:
Air filter & regulator
Air hose



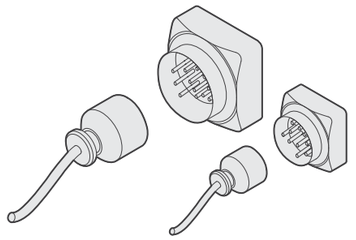
Controller Type

The Samchully NeoCon controller is ideal for simple machining that requires turn and lock functionality. The controller is simple to install and economical.

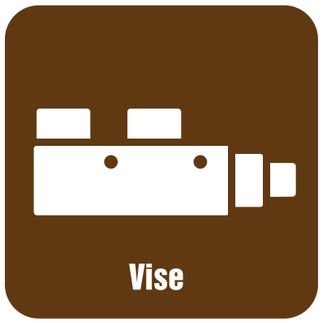


4th Axis Type

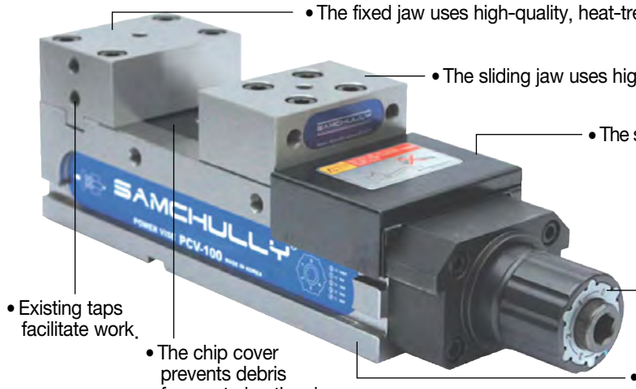
The 4th axes option allows for contour / helical cutting. The rotary table connects directly with the controller for optimal manufacturing flexibility. The Samchully rotary table is compatible with Fanuc, Siemens, Mitsubishi, Panasonic, Yaskawa, Heidenhain, LS mecapian, Sanyo, Fagor, and Okma controllers.



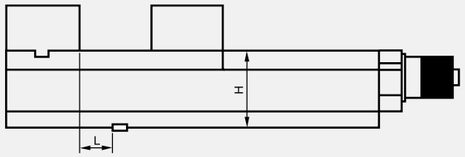
VISES



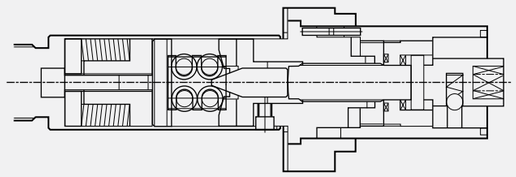
POWER VISE FEATURES



- The fixed jaw uses high-quality, heat-treated materials. (60°)
- The sliding jaw uses high-quality, heat-treated materials. (60°)
- The shield prevents debris from entering the vise.
- Torque setting facilitates work and improves accuracy.
- The body is made of high rigidity steel.
  -Damage to the workpiece is minimized
  -Moving parts are heat treated for durability.
- Existing taps facilitate work.
- The chip cover prevents debris from entering the vise.



- Multiple vises can be used in tandem.
  - Specified measurements are accurate within 0.01mm.
  - Accuracy for long work pieces is consistent.



- Large opening
  - Suitable for work on multiple-size workpieces.
- Maintains strong grip during machining.
  -Mechanical booster allow predetermined torque to be applied.
  -Torque setting is user-friendly, one-touch technology.
- Suitable for work pieces of varying sizes and specifications.
- Minimizes lifting / bowing of the workpiece.
  - Maintains high accuracy.
- Includes a mechanical booster for high-accuracy torque setting.

• How To Set The Torque

1. Push in the adjustable knob.

2. Rotate the adjustable knob to the required torque setting.

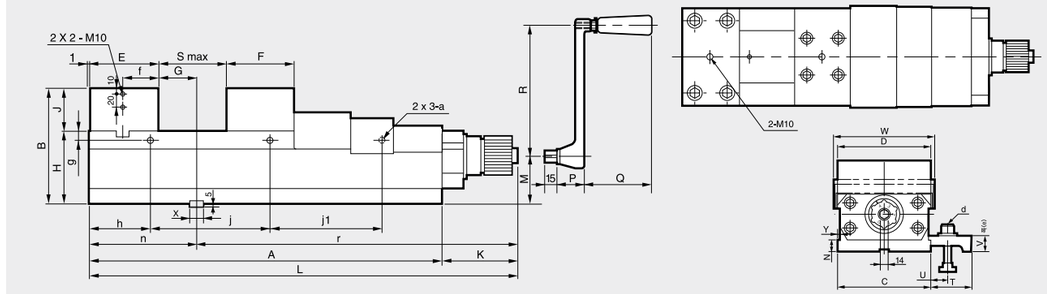
3. Release the adjustable knob to lock in the setting.

PCV

Standard Power Vise

■ Precision power vise with adjustable torque

POWER VISE



Dimensions

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
PCV-100(4")	295	115	101	100	73	64	38.5	75	40	105.5	400.5	43	15	37	95	180	150
PCV-125(5")	400	135	126	125	84	76	60	85	50	105.5	505.5	50	21	37	95	180	230
PCV-160(6")	490	160	161	160	94	86	50	100	60	105.5	595.5	65	21	37	95	180	300
PCV-200(8")	533	180	202	200	102	98	74	110	70	105.5	638.5	75	21	37	95	180	320
PCV-250(10")	705	195	252	250	120	120	100	115	80	105.5	810.5	75	21	37	95	180	450

	T	U	V	W	X	Y	a	b	e	f	g	h	j	j1	j2	n	r
PCV-100(4")	60	14~26	22.5	107	14	6	M10	M12 X 45	35	36.5	12	95	105	-	-	112.5	288.0
PCV-125(5")	72	15~31	30	135	18	6	M10	M16 X 65	45	42	12	95	105	105	-	145	360.5
PCV-160(6")	72	15~31	30	170	18	7	M10	M16 X 65	45	47	12	105	140	140	-	145	450.5
PCV-200(8")	72	15~31	30	214	18	7	M10	M16 X 65	45	51	12	126	141	141	-	177	461.5
PCV-250(10")	72	15~31	30	267	22	7	M10	M20 X 65	45	60	12	140	140	140	140	221	589.5

Specifications

	Jaw Width	Jaw Height	Max. Opening	Total Height	Slider Height	Total Width	Total Length	Max. Gripping Force KN (kgf)	weight kgf
PCV-100(4")	100	40	150	115	75	107	400	25(2551)	25
PCV-125(5")	125	50	230	135	85	135	505	35 (3571)	43
PCV-160(6")	160	60	300	160	100	170	595	60 (6122)	65
PCV-200(8")	200	70	320	180	110	214	638	60 (6122)	100
PCV-250(10")	250	80	450	195	115	267	810	80 (8163)	150

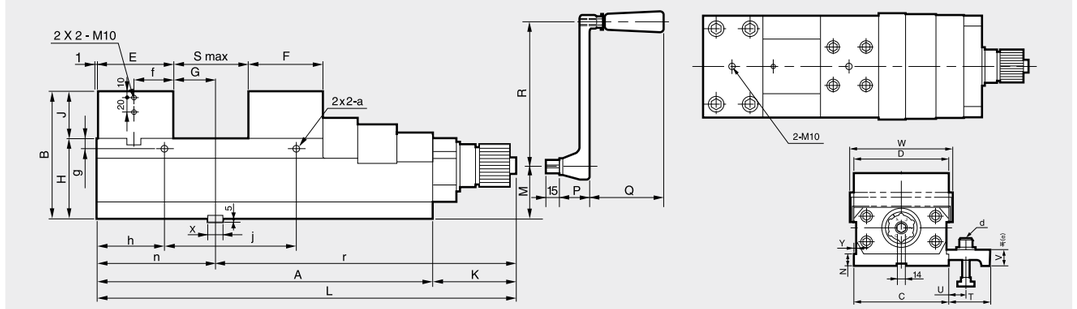
※ Specifications are subject to change without notification.

PSV

Short-Type Power Vise

■ Short-body precision power vise
with adjustable torque

POWER VISE



Dimensions

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
PSV-125(5")	295	135	126	125	84	76	60	85	50	105.5	400.5	50	21	37	95	180	125
PSV-160(6")	350	160	161	160	94	86	50	100	60	105.5	455.5	65	21	37	95	180	160

	T	U	V	W	X	Y	a	b	e	f	g	h	j	j1	j2	n	r
PSV-125(5")	72	15~31	30	135	18	6	M10	M16 X 65	45	42	12	95	105	105	-	145	150
PSV-160(6")	72	15~31	30	170	18	7	M10	M16 X 65	45	47	12	105	140	140	-	145	450.5

Specifications

	Jaw Width	Jaw Height	Max. Opening	Total Height	Slider Height	Total Width	Total Length	Max. Gripping Force KN (kgf)	weight kgf
PSV-125(5")	125	50	125	135	85	135	400.5	35 (3571)	41
PSV-160(6")	160	60	160	160	100	170	455.5	60 (6122)	62

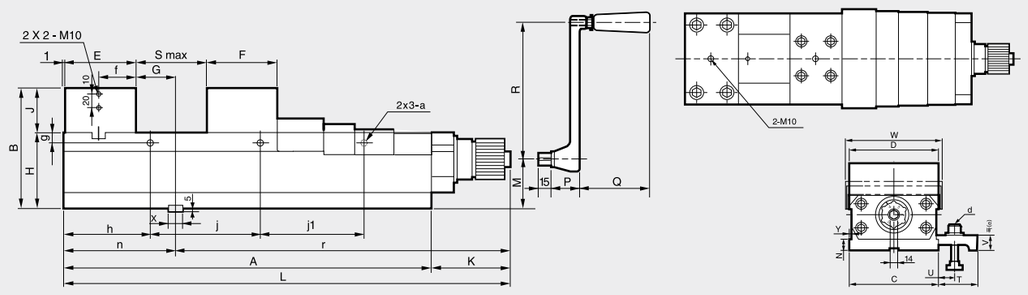
※ Specifications are subject to change without notification.

PLV

Long Stroke Power Vise

■ Long-body precision power vise
with adjustable torque

POWER VISE



Dimensions

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
PLV-125(5")	595	135	126	125	84	76	60	85	50	105.5	700.5	50	21	37	95	180	230
PLV-160(6")	542	160	161	160	94	86	82	100	60	105.5	647.5	65	21	37	95	180	354
PLV-200(8")	618	180	202	200	102	98	74	110	70	105.5	723.5	75	21	37	95	180	405

	T	U	V	W	X	Y	a	b	e	f	g	h	j	j1	n	r
PLV-125(5")	72	15~31	30	135	18	6	M10	M16 X 65	45	42	12	95	202.5	202.5	280	360.5
PLV-160(6")	72	15~31	30	170	18	7	M10	M16 X 65	45	47	12	117	150	150	177	470.5
PLV-200(8")	72	15~31	30	214	18	7	M10	M16 X 65	45	51	12	126	183	183	177	546.5

Specifications

	Jaw Width	Jaw Height	Max. Opening	Total Height	Slider Height	Total Width	Total Length	Max. Gripping Force KN (kgf)	weight kgf
PLV-125(5")	125	50	420	135	85	135	700.5	35 (3571)	47
PLV-160(6")	160	60	354	160	100	170	647.5	60 (6122)	70
PLV-200(8")	200	70	405	180	110	214	723.5	60 (6122)	110

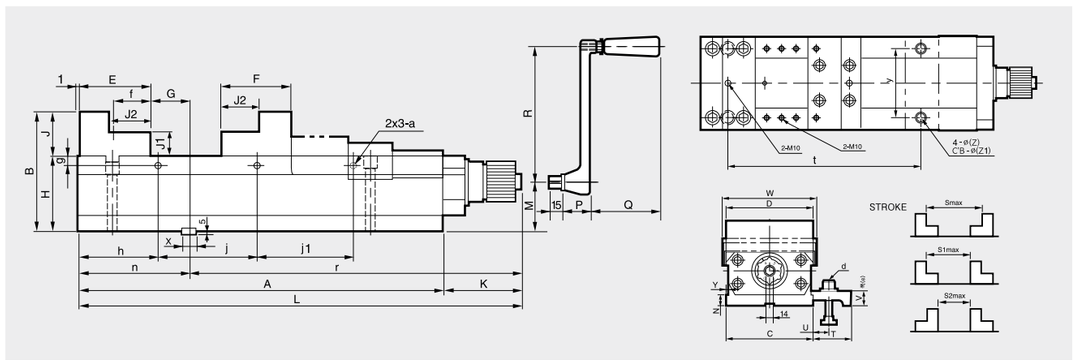
※ Specifications are subject to change without notification.

PDV

Direct Drive Power Vise

- Step-jaw precision power vise with adjustable torque

POWER VISE



Dimensions

	A	B	C	D	E	F	G	H	J	J1	J2	K	L	M	N	P	Q	R	S	S1	S2
PDV-100(4")	295	115	101	100	73	64	38.5	75	40	20	35	105.5	400.5	43	15	37	95	180	220	185	150
PDV-125(5")	400	135	126	125	84	76	60	85	50	25	45	105.5	505.5	50	21	37	95	180	320	275	230
PDV-160(6")	490	160	161	160	94	86	50	100	60	30	50	105.5	595.5	65	21	37	95	180	400	350	300
PDV-200(8")	533	180	202	200	102	98	74	110	70	35	50	105.5	638.5	75	21	37	95	180	420	370	320

	T	U	V	W	X	Y	a	d	e	f	g	h	j	j1	n	r	t	y	z	z1
PDV-100(4")	60	14~26	22.5	107	14	6	M10	M12 X 45	35	36.5	12	95	105	-	112.5	288.0	212	76	11	17
PDV-125(5")	72	15~31	30	135	18	6	M10	M16 X 65	45	42	12	95	105	105	145	360.5	321	92	11	17
PDV-160(6")	72	15~31	30	170	18	7	M10	M16 X 65	45	47	12	105	140	140	145	450.5	255	122	17	25
PDV-200(8")	72	15~31	30	214	18	7	M10	M16 X 65	45	51	12	126	141	141	177	461.5	375	150	17	25

Specifications

	Jaw Width	Jaw Height	Max. Opening	Total Height	Slider Height	Total Width	Total Length	Max. Gripping Force KN (kgf)	weight kgf
PDV-100(4")	100	40	220	115	75	107	400.5	25(2551)	25
PDV-125(5")	125	50	320	135	85	135	505.5	35 (3571)	43
PDV-160(6")	160	60	400	160	100	170	595.5	60 (6122)	65
PDV-200(8")	200	70	420	180	110	214	638.5	60 (6122)	100

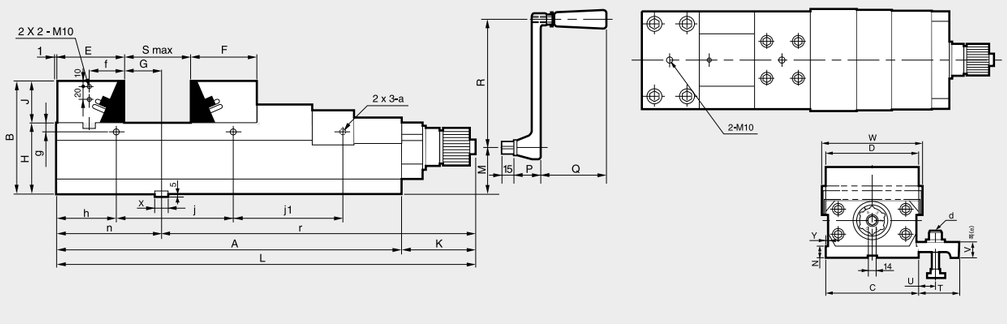
※Specifications are subject to change without notification.

DDV

Draw-Down Type Power Vise

- Draw-down precision power vise with adjustable torque

POWER VISE



Dimensions

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
DDV-160(6")	490	160	161	160	120	112	24	100	60	105.5	595.5	65	21	37	95	180	248

	T	U	V	W	X	Y	a	b	e	f	g	h	j	j1	j2	n	r
DDV-160(6")	72	15~31	30	170	18	7	M10	M16 X 65	45	47	12	105	140	140	-	145	450.5

Specifications

	Jaw Width	Jaw Height	Max. Opening	Total Height	Slider Height	Total Width	Total Length	Max. Gripping Force KN (kgf)	weight kgf
DDV-160(6")	160	60	248	160	100	170	595	60 (6122)	70

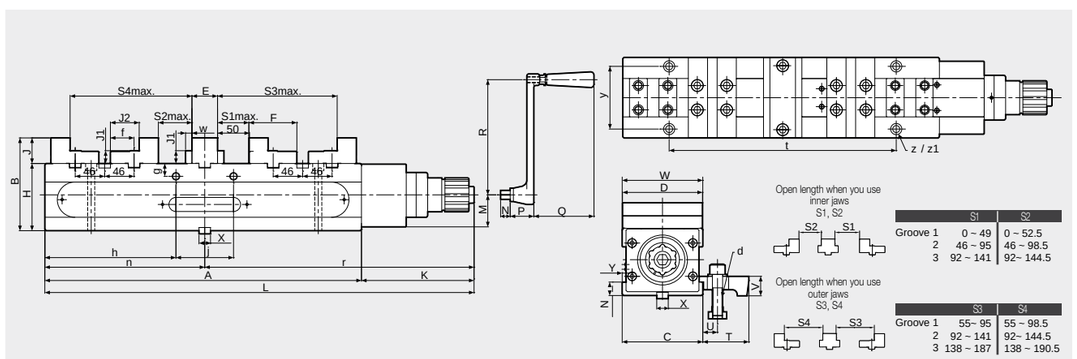
※Specifications are subject to change without notification.

MDV

Double Power Vise

- Consists of Two movable Jaws and One fixed Center Jaw for Double clamping
- Equipped with step Jaw & Middle Jaw suitable for various workpieces
- Seal structure makes preventing the inner body from inflowing dust
- Realize High Clamping Force by Mechanical gravity Device

POWER VISE



	S1	S2
Groove 1	0 ~ 49	0 ~ 52.5
2	46 ~ 95	46 ~ 98.5
3	92 ~ 141	92~ 144.5

	S3	S4
Groove 1	55~ 95	55 ~ 98.5
2	92 ~ 141	92~ 144.5
3	138 ~ 187	138 ~ 190.5

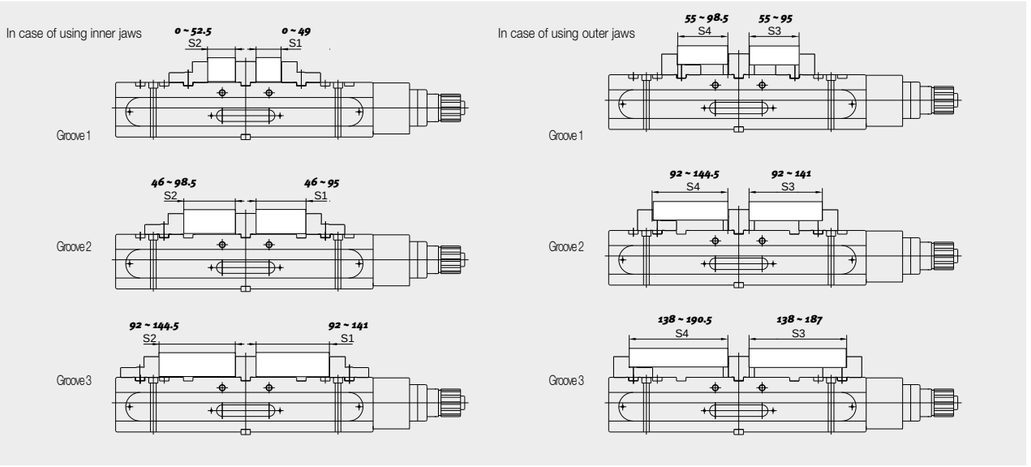
Dimensions

	A	B	C	D	E	F	G	H	J	J1	J2	K	L	M	N	P	Q	R
MDV-125	495	145	126	125	40	75	-	105	40	20	45	176	671	50	15	37	94	180

	T	U	V	W	X	Y	a	d	e	f	g	h	j	n	r	t	y	z	z1	w
MDV-125	72	15~31	30.5	126	18	6	M10	M16x65L	42	37	20	205	90	250	421	355	98	11	17.5	10

Specifications

	Jaw Width	Jaw Height	Max. Opening				Total Height	Slider Height	Total Width	Total Length	Max. Gripping Force KN (kgf)	Weight kgf
			S1	S2	S3	S4						
MDV-125	125	40	141	144.5	187	190.5	145	105	126	671	40 (4355)	52

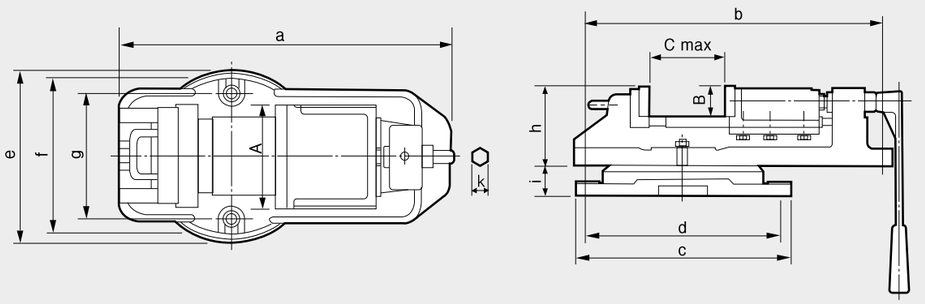


VS

Standard Machine Vise

- Standard machine vise

MACHINE VISE



Dimensions & Specifications

	A	B	C	a	b	c	d	e	f	g	h	i	j	k	WEIGHT(kgf) BODY	WEIGHT(kgf) TABLE	Operating Swivel Base	Mounting Key Size
VS-150(6")	150	45	110	470	440	320	288	245	220	180	115	45	283	18	34.0	10.8	SB-150T	34x16x10
VS-175(7")	175	50	132	547	518	350	318	280	245	198	120	50	340	21	46.7	14.5	SB-175T	34x16x10
VS-200(8")	200	55	160	618	573	400	358	316	280	228	130	55	340	21	57.5	20.5	SB-200T	36x20x12
VS-250(10")	250	75	199	760	716	450	406	370	332	278	168	60	380	22	110.0	36.5	SB-250T	36x20x12

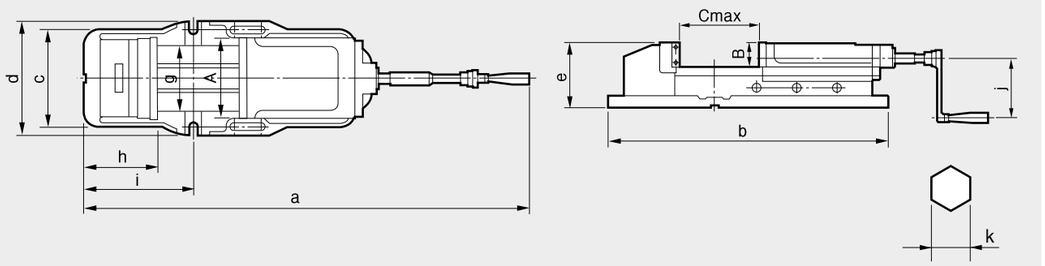
※ Standard accessories include handle (1ea), socket(1ea), T-blocks(2ea), T-bolts(2sets).
※ Swivel-base is optional.
※ Specifications are subject to change without notification.

MMV

Mechanical Machine Quick Vise

■ 3-step mechanical machine quick vise

MACHINE VISE



Dimensions & Specifications

	A	B	C	a	b	c	d	e	g	h	i	j	k	GRIP TORQUE Max.(kg)	WEIGHT(kgf) BODY	WEIGHT(kgf) TABLE	Operating Swivel Base	Mounting Key Size
MMV-150Q(6")	150	51	300	800	620	200	240	133	116	125	210	130	19	4,400	56.0	16.0	VS-175T	34x16x10
MMV-200Q(8")	200	62	300	900	700	240	280	162	160	165	266	130	19	6,500	94.0	23.0	VS-200T	36x20x12

※Specifications are subject to change without notification.

REPLACEMENT ACCESSORIES

Replacement Accessories

Replacement Accessories

Power Chuck Jaws

SOFT JAWS

Fig 1

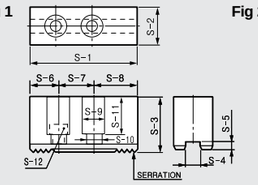


Fig 2

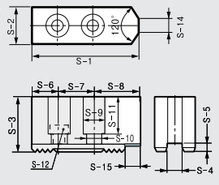
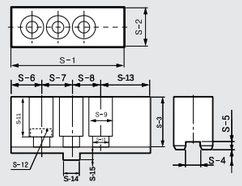


Fig 3



Dimensions

	FIG	Serration Pitch	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	S-15	Corresponding
SB04C1	2	1.5×60°	48	19	23	8	3	8	15	25	11	7	15	M6×16		6	-	HCH-04
SB04B1	2	1.5×60°	55	23	25	10	4	13	14	28	13.5	8.5	16	M8×22	-	3	13	HC-04
SB05B1	2	1.5×60°	62	23	27	10	4	14	19	29	13.5	8.5	18	M8×22	-	12	-	HC-05
SB05N1	2	1.5×60°	54	23	25	10	4	12	14	28	13.5	8.5	16.5	M8×20	-	5	-	HS-05
SB06B1	2	1.5×60°	72	31	32	12	5	15	20	37	17	11	20	M10×30	-	12	-	HS / HCH / HC-06, MH-206
SB08B1	2	1.5×60°	95	35	38	14	5	24	25	46	19	13	23	M12×35	-	12	-	HCH / HC / HS-08, MH-208
SB10B1	2	1.5×60°	110	40	42	16	5	30	30	50	19	13	27	M12×35	-	15	20	HCH / HC / HS-10, MH-210
SB12A1	1	1.5×60°	129	50	50	18	5	39	30	60	23	15	30	M14×45	-	-	-	HC / HCH-12
SB12N1	1	1.5×60°	111	50	50	21	4	21	30	60	25	17	33	M16×40	-	-	-	HS-12, MH-212
SB15C1	1	1.5×60°	165	62	66	22	8	37	43	85	32	21	42	M20×60	-	-	-	HCH-15, HCH-18
SB15N1	1	1.5×60°	135	50	60	25.5	5	26	43	66	32	21	39	M20×55	-	-	-	HC-15, HC-18
SB15A2	1	3.0×60°	165	62	66	22	8	30	50	85	32	21	42	M20x60	-	-	--	MH-218
SB18A2	1	3.0×60°	180	65	70	25	9	40	60	80	32	21	45	M20×60	-	-	-	HC / HCH-21, HC / HCH-24, MH-221, 224
SB32B2	1	3.0×60°	160	75	75	25.5	7	25	38	97	32	22	54	M20	-	-	-	HCH-32 [Serration]
SB32GB	3	-	165	75	83	12.7	13	21.9	76.2	-	32	22	59	M20	-	19.025	-	HC-32 [Groove]
SB32SB2	1	3.0×60°	185	75	75	25.5	7.5	26.8	38.1	82	32	22	57	M20	82	-	-	HC-32 [Serration]
SB40GB	3	-	270	110	117	30	13	48.8	76.2	76.2	39	26	90	M24	68.8	19.025	-	HC-40 [Groove] / 50, 55, 63, 70, 80
SB40SB2	1	3.0×60°	270	110	110	30	7.5	32.5	60	-	39	26	90	M24	117.5	-	85	HC-40 [Serration] / 50, 55, 63, 70, 80

HARD JAWS

Fig 1

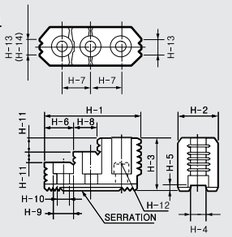


Fig 2

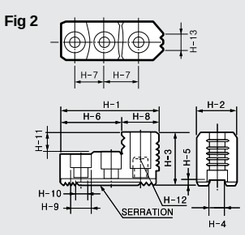
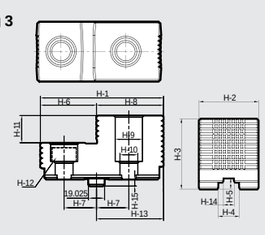


Fig 3



Dimensions

	FIG	Serration Pitch	H-1	H-2	H-3	H-4	H-5	H-6	H-7	H-8	H-9	H-10	H-11	H-12	H-13	H-14	H-15	Corresponding
HB04N1	2	1.5×60°	53	23	27.5	10	4	30.5	14	22.5	13.5	8.5	10	M8	6	-	-	HS-04, HS-05
HB06A1	1	1.5×60°	67	31	41	12	5	18	20	17	17	11	9	M10	10	10	-	HC / HCH / HS-06, MH-206
HB08A1	1	1.5×60°	86	35	51	14	5	31	25	18	19	13	12	M12	12	12	-	HC / HCH / HS-08, MH-208
HB10A1	1	1.5×60°	99.5	40	54	16	5	43	30	17	19	13	13	M12	15	15	-	HC / HCH / HS-10, MH-210
HB12B1	2	1.5×60°	97.5	50	55	18	5	64.5	30	33	22	15	20	M14	18	-	-	HC / HCH-12
HB12N1	2	1.5×60°	103	50	52	21	4	62.5	30	40.5	25	17	17	M16	30	-	-	HS-12, MH-212
HB15A1	1	1.5×60°	149	62	86	22	9	63	43	34	32	21	20	M20	40	40	-	HCH-15, HCH-18
HB15A2	1	3.0×60°	149	62	86	22	9	63	50	34	32	21	20	M20	40	40	-	MH-218
HB15N1	1	1.5×60°	149	62	86	25.5	5	69	43	27	32	21	20	M20	43	38	-	HC-15, HC-18
HB18B2	2	3.0×60°	159.5	80	90	25	9	104.5	50	55	32	21	40	M20	55	-	-	HC / HCH-21, HC / HCH-24, MH-221, 224
HB32B2	2	3.0×60°	145	70	75	25.5	7	66	76.2	79	32	21	32	M20	-	-	-	HCH-32 [Serration]
HB32GB	3	–	145	70	83	25	13	66	38.1	79	32	21	32	M20	79	12.7	8	HC-32 [Groove]
HB32SB2	2	3.0×60°	168	70	75	25.5	7.5	89	38.1	79	32	21	32	M20	-	-	-	HC-32 [Serration]
HB40GB	3	-	223	80	124	30	15	133	38.1	90	39	26	55	M24	83	-	7	HC-40 [Groove] / 50, 55, 63, 70, 80
HB40SB2	2	3.0×60°	223	80	117	30	8	133	114.3	90	39	26	55	M24	-	-	-	HC-40 [Serration] / 50, 55, 63, 70, 80

Power Chuck T-Nuts, Grease

T-NUT

Fig 1

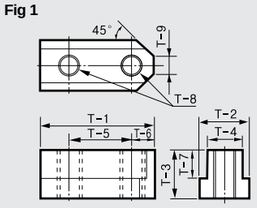


Fig 2

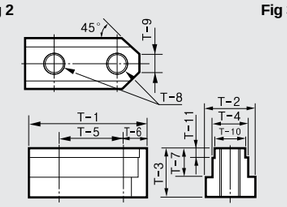
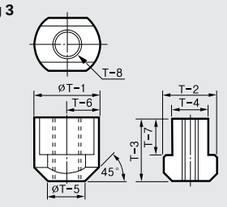


Fig 3



Dimensions

	FIG	T-1	T-2	T-3	T-4	T-5	T-6	T-7	T-8	T-9	T-10	T-11	Corresponding
TN-HCH-04	1	24.5	11.5	13.5	8	15	4.5	9	M6	5	-	-	HCH Type of 4" Chuck
TN-HS-04/05	1	26	15	15	10	14	6	9.5	M8	5	-	-	HS Type of 04", 05" Chuck
TN-HC-04	1	28	15	18	10	14	7	12.5	M8	5	-	-	HC Type of 4" Chuck
TN-HC-05	1	32	15	18	10	19	6	12.5	M8	6	-	-	HC Type of 5" Chuck
TN-HS-06	1	36	17.5	18.5	12	20	8.25	11	M10	8	-	-	HS / MH Type of 06" Chuck
TN-HCH/HC-06	1	36.5	17.5	22.5	12	20	7.5	15	M10	6	-	-	HCH / HC Type of 06" Chuck
TN-HS-08	1	46.5	20.5	20.5	14	25	10.5	12	M12	12	-	-	HS / MH Type of 08" Chuck
TN-HCH/HC-08	1	48	20.5	25.5	14	25	11	16	M12	8	-	-	HCH / HC Type of 08" Chuck
TN-HS-10	1	51	22.5	21.5	16	30	11	13	M12	11	-	-	HS / MH Type of 10" Chuck
TN-HCH/HC-10	1	55	22.5	25.5	16	30	11	16	M12	8	-	-	HCH / HC Type of 10" Chuck
TN-HS-12	1	55.5	29.5	27.75	21	30	12	16.25	M16	13	-	-	HS / MH Type of 12" Chuck
TN-HCH/HC-12	1	55.5	26.5	33.5	18	30	11.5	20	M14	12	-	-	HCH / HC Type of 12" Chuck
TN-HCH-15/18	2	80	33.5	45.5	24	43	17	29	M20	11	22	7.5	HCH Type of 15", 18" Chuck
TN-HC-15/18	1	80	35	49	25.5	43	17	20	M20	11	-	-	HC Type of 15", 18" Chuck
TN-MH-218	2	80	33.5	45.5	24	50	17	29	M20	16	22	-	MH-218
TN-HCH-21/24	1	100	37.5	45	25	60	20	26	M20	11	-	7.5	HCH / HCHF-21, 24 (S), MH-221(S)
TNX-HC-21/24	3	46	37.5	45	25	26.5	23	26	M20	-	-	-	HC / HCF-21, 24, HCH / HCHF-21, 24 (H), MH-221(H)
TN-HCH-32	3	35	35	39.5	25.5	25	-	20.5	M20	-	-	-	HCH-32
TN-HC-32	3	37	37.5	47.5	25.5	-	-	28.5	M20	-	-	-	HC-32
TN-HC-40	3	42	42.5	49.5	30	-	-	30.5	M24	-	-	-	HC-40

※TNX-HC-21-24 require two T-nuts per jaw.

GREASE

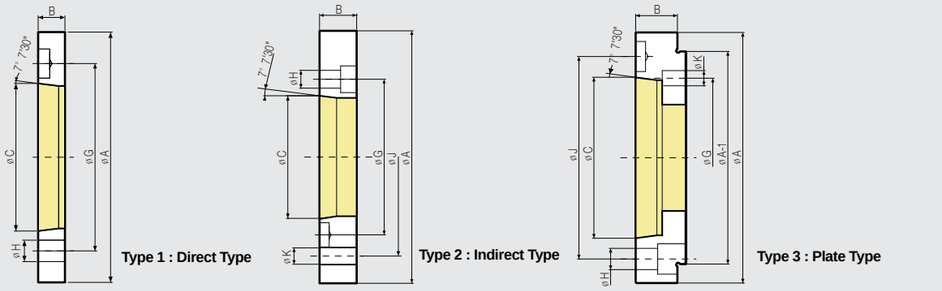
Important for maintenance and safe operation.

SW10
Special grease for manual and power chucks

- Maximum extreme-pressure protection
- Exceptional adhesion & cohesion characteristics
- Superior friction-reduction properties-protects against friction-related heat & wear
- Excellent resistance to water washout & spray off
- Reduces maintenance & downtime
- Reduces operating temperatures
- Extends equipment life.

Replacement Accessories

Power Chuck Adaptor Plates



Fits ASA B5.9 type A (DIN 55026) Spindles

Adaptors Type 1

	Spindle Nose	A	B	C	G	H	Corresponding
AP06A05	A2-5	140	15	82.563	104.78	12	HS/ HSL/ HCH/ HC/ HCL-06, MH-206
APT06A05	A2-5	140	15	82.563	104.78	12	HST/ HCT/ HCLT-06, MHT-206
AP08A06	A2-6	170	17	106.375	133.35	13.5	HS/ HSL/ HCH/ HC/ HCL-08, MH-208
APT08A06	A2-6	170	17	106.375	133.35	13.5	HST/ HCT/ HCLT-08, MHT-208
APF08A06	A2-6	170	17	106.375	133.35	13.5	HSF/ HCF/ HCLF-08, MHF-208
AP10/12A08	A2-8	220	18	139.719	171.45	18	HS/ HSL/ HCH/ HC/ HCL-10/12, MH-210
APT10/12A08	A2-8	220	18	139.719	171.45	17	HST/ HCT/ HCLT-10/12
APF10/12A08	A2-8	220	18	139.719	171.45	18	HSF-10/12, HCF/ HCLF-12
AP212A08	A2-8	300	22	139.719	235	21	MH-212
AP212A11	A2-11	300	22	196.870	235	21	MH-212
AP15A11	A2-11	300	22	196.870	235	21	HCH-15, HC-15/18
APT15A11	A2-11	300	22	196.870	235	21	HCHT-15
APF15A11	A2-11	300	22	196.870	235	21	HCHF-15, HCF-15/18
AP18A11	A2-11	380	22	196.870	235	21	HCH-18
APF18A11	A2-11	380	22	196.870	235	21	HCHF-18
AP21/24A15	A2-15	380	27	285.775	330.2	24	HCH/ HC-21/24, MH-221/224

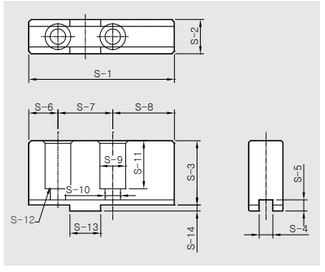
Adaptors Type 2

	Spindle Nose	A	B	C	G	H	J	K	Corresponding
AP08A05	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
AP10/12A06	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
AP15A08	A2-8	300	33	139.719	171.45	18	235	M20	HCH/ HCHT/ HCHF-15, HC/ HCF-15/18
AP218A15	A2-15	380	60	285.775	330.2	24	300	M20	MH-218
AP21/24A11	A2-11	380	27	196.870	235	21	330.2	M22	HCH/HC-21/24, MH-221/224
AP21/24A11	A2-11	380	42	196.870	235	22	330.2	M22	HCH/ HCHF/ HC/ HCF-21/24, MH-221/224
AP21/24A11	A2-11	380	42	196.870	235	22	330.2	M24	HC/ HCF-32, HCH/ HCHF/ HC-21N/24N
AP21/24A15	A2-15	380	42	285.775	330.2	24	330.2	M22	HCH/HC-21/24, MH-221/224
AP32A15	A2-15	380	42	285.775	330.2	26	330.2	M24	HC-32
AP32/40A11	A2-11	520	50	196.870	235	22	463.6	M24	HCH-32, HC-40, HC-50
AP32/40A15	A2-15	520	42	285.775	330.2	26	463.6	M24	HCH-32, HC-40, HC-50

Adaptors Type 3

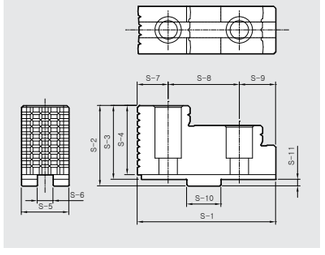
	Spindle Nose	A	A-1	B	C	G	H	J	K	Corresponding
AP06A06	A2-6	165	140	33	106.375	133.35	14	104.78	M10	HS/ HSL/ HCH/ HC/ HCL-06, MH-206
AP08A08	A2-8	210	170	30	139.719	171.45	18	133.35	M12	HS/ HST/ HSF/ HSL/ HCH/ HC/ HCT/ HCF/ HCL/ HCLT/ HCLF-08, MH/ MHT/ MHF-208

Quick Jaw Change Chuck Jaws



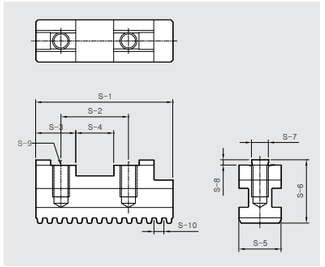
SOFT TOP JAWS

	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	S-12	S-13	S-14	Corresponding
QHB206	85	20	37.5	8	6.5	17	32	36	15	9	28	M8x20	18	3.5	QJC-206
QHB208	105	22	40	10	8.5	25	40	40	15	9	31	M8x20	20	5	QJC-208
QHB210	125	30	50	12	8.5	25	40	60	20	14	39	M12x30	20	5	QJC-210 QJC-212
QHB215	145	35	50	12	8.5	31	54	60	20	14	34	M12x40	26	5	QJC-215



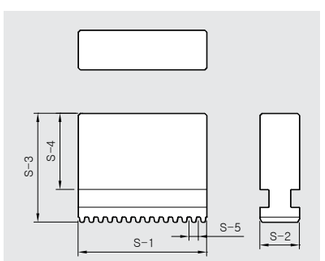
HARD TOP JAWS

	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	S-11	Corresponding
QHB206	63	36	32.5	29.5	20	8	17	32	14	18	3.5	QJC-206
QHB208	72	43	38	34.5	22	10	15	40	17	20	5	QJC-208
QHB210	90	55	50	46.5	30	12	21	40	29	20	5	QJC-210 / QJC-212
QHB215	105	61	56	52.5	36	12	23.5	54	27.5	26	5	QJC-215



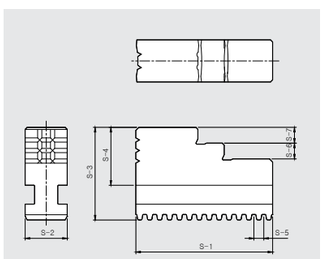
BASE JAWS

	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	S-9	S-10	Corresponding
QHB206	65	32	19	18	20	30	8	2.5	M8	4.712	QJC-206
QHB208	85	40	23	20	22	32	10	2.5	M8	4.712	QJC-208
QHB210	104	40	26	20	26	40	12	3	M12	5.498	QJC-210
QHB212	115	40	26	20	32	45	12	3	M12	5.498	QJC-212
QHB215	125	54	30	26	32	45	12	3	M12	5.498	QJC-215



SOLID SOFT JAWS

	S-1	S-2	S-3	S-4	S-5	Corresponding
QHB206	65	20	55	38.5	4.712	QJC-206
QHB208	85	22	65	48	4.712	QJC-208
QHB210	104	26	84	63	5.498	QJC-210
QHB212	115	32	90	64	5.498	QJC-212
QHB215	125	32	100	74	5.498	QJC-215

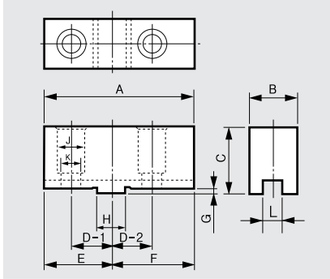


SOLID HARD JAWS

	S-1	S-2	S-3	S-4	S-5	S-6	S-7	Corresponding
QHB206	65	20	55	38.5	4.712	7.5	7.5	QJC-206
QHB208	85	22	65	48	4.712	10	10	QJC-208
QHB210	104	26	84	63	5.498	14	14	QJC-210
QHB212	115	32	90	64	5.498	14	14	QJC-212
QHB215	125	32	100	74	5.498	45	15	QJC-215

Replacement Accessories

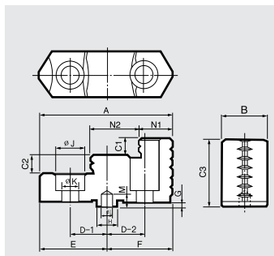
TC / FTC CHUCK SOFT JAWS



	A	B	C	D-1	D-2	E	F	G	H	J	K	L	M
TC-190	88	32	41	22.225	22.225	40	48	3	12.68	17	11	7.94	7
TC-230	100	32	44	26.99	26.99	45	55	3	19.03	19	12.7	12.7	7
TC-273	110	35	48.5	26.99	26.99	51	59	3	19.03	19	12.7	12.7	7
TC-310	125	40	49.5	31.75	31.75	58	67	3	19.03	19	12.7	12.7	7

	A	B	C	D-1	D-2	E	F	G	H	J	K	L
FTC-460	140	50	71.5	38.1	38.1	63.5	76.5	5.8	19.03	32	22	12.7
FTC-535	150	50	76.5	38.1	38.1	67.5	82.5	6	19.03	32	22	12.7
FTC-610	150	50	76.5	38.1	38.1	67.5	82.5	6	19.03	32	22	12.7

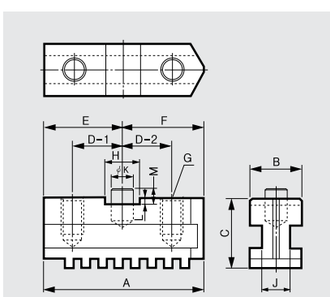
TC / FTC CHUCK HARD JAWS



	A	B	C1	C2	C3	D-1	D-2	E	F	G	H	φJ	φK	φL	N1	N2
TC-190(7")	80.5	28	10	10	41	22.225	22.225	40.5	40	3	12.68	17	11	7.90	21.5	29
TC-230(9")	90.5	32	12	12	48	26.99	26.99	45.5	45	3	19.03	19	13	12.7	23.5	33
TC-273(10")	103.5	35	14	14	52	26.99	26.99	52	51.5	3	19.03	19	13	12.7	31.5	34
TC-310(12")	115.5	40	15	15	54	31.75	31.75	58	57.5	3	19.03	19	13	12.7	30.5	40

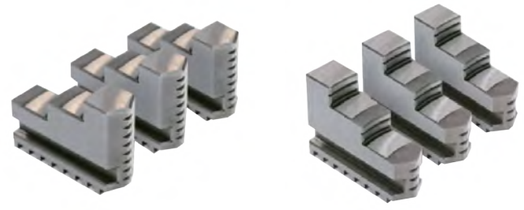
	A	B	C1	C2	C3	D-1	D-2	E	F	G	H	φJ	φK	φL	N1	N2
FTC-460(19")	130	50	17	17	76.8	38.1	38.1	63.5	66.5	5.8	19.025	32	22	-	52	35
FTC-535(21")	130	50	17	17	76.8	38.1	38.1	63.5	66.5	5.8	19.025	32	22	-	52	35
FTC-610(24")	130	50	17	17	76.8	38.1	38.1	63.5	66.5	5.8	19.025	32	22	-	52	35

TC / FTC CHUCK BASE JAWS

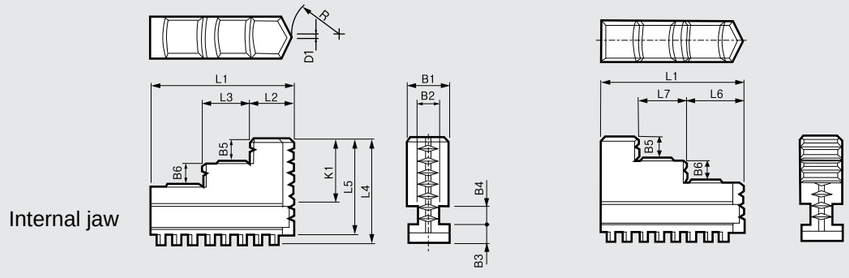


	A	B	C	D-1	D-2	E	F	G	H	J	K	L	M
TC-190	75	28	34	22.225	22.225	35.5	39.5	2-M10	12.68	15	7.95	3.5	6.5
TC-230	87	28	38	26.99	26.99	42.5	44.5	2-M12	19.03	15	12.7	3.5	6.5
TC-273	98	28	40	26.99	26.99	47	51	2-M12	19.03	15	12.7	3.5	6.5
TC-310	111	32	42.5	31.75	31.75	54	57	2-M12	19.03	17.2	12.7	3.5	6.5

	A	B	C	D-1	D-2	F	G	H	J	M
FTC-460	165	45	54	38.1	38.1	66.5	4-M20	2-19.025	27	9.3
FTC-535	177	50	57	38.1	38.1	66.5	4-M20	2-19.025	30	9.3
FTC-610	205	50	60	38.1	38.1	66.5	5-M20	3-19.025	30	9.3

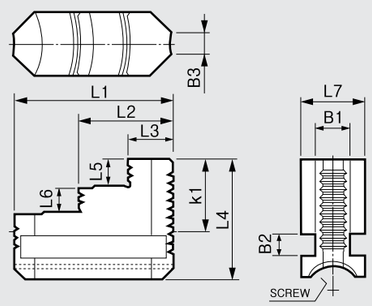


SC JAWS



	L1	L2	L3	L4	L5	L6	L7	B1	B2	B3	B4	B5	B6	K1	R	D1
SC-85(3")	35	11	10	29	26.5	16	10	11	5.7	4.7	6.55	6	6	17.75	7.5	1
SC-110(4")	42	13	13	34.5	31	19	13	14	7.2	6.2	6.55	7	4.3	21.05	11	1.5
SC-130(5")	50	15	15	40	36	21	15	16	7.2	7.7	8.2	8	7.4	23.4	15	1.5
SC-165(6")	65	20	22	46.5	42	27	22	19	9.2	8.2	8.13	10	10	25.07	20	2
SC-190(7")	75	23	25	55.5	50.5	30	25	22	11.2	9.7	9.74	12	12	30.06	25	2
SC-230(9")	85	26	28	64.5	59.5	33	28	24	13.2	11.2	11.38	14	14	35.04	30	3
SC-273(10")	98	30	33	69.5	64	38	33	28	15	11.2	11.38	15	15	40.02	37	3
SC-310(12")	110	35	35	82.5	76	43	35	30	15	13.4	16.12	16	16	45.08	43	4
SC-355(14")	133	44	42	101	94.5	53	42	35	19	14	16.2	21	22	62.98	43	4
SC-405(16")	133	44	42	101	94.5	53	42	35	19	14	16.2	21	22	62.98	43	4

IC JAWS

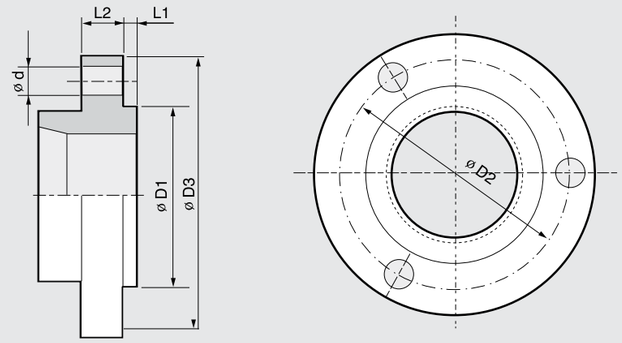


	L1	L2	L3	L4	L5	L6	L7	B1	B2	B3	K1	Threads/ inch
IC-150(6")	55	31	14	47	10	10	25	14.5	8.2	6	25	6 / inch
IC-200(8")	75	44	21	55.5	12	12	30	16	10.3	10	30	5/ inch
IC-250(10")	90	54	26	61.5	14	14	30	16	10.3	10	35	5 / inch
IC-300(12")	100	60	28	70.5	16	16	35	19	11.5	13.6	40	4 / inch
IC-350(14")	110	67	31	75.5	18	18	35	19	11.5	14.6	45	4 / inch
IC-400(16")	120	73.5	33.5	84	20	20	40	22.5	11.5	15	50	4 / inch
IC-450(18")	130	80	37	89	22	22	40	22.5	11.5	15	55	4 / inch
IC-500(20")	140	85	40	106	24	24	45	27.5	16.4	16	60	3.5 / inch
IC-600(24")	160	99	46	116.4	28.2	28.2	50	31	16.4	18	70	3.5 / inch
IC-700(28")	160	100	47	111	28	29	50	30	15.3	20	70	4/ inch
IC-800(32")	200	120	55	138	30	30	60	40	20	34	89	6.0 mm

Replacement Accessories

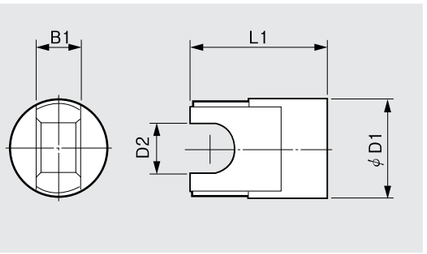
Manual Chuck Adaptor Plates, Etc

SC ADAPTORS



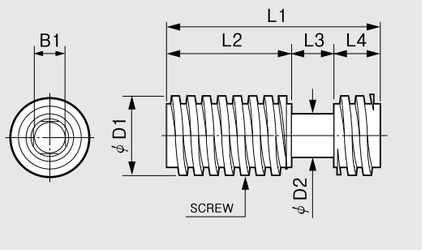
	φ D1			φ D2		φ D3	L1	L2	φ d
	base length	tollerance		base length	tollerance				
SC-85	60	-0.021	-0.002	73	±0.2	88	3	10	6.6
SC-110	80	-0.021	-0.002	95	±0.2	115	4	12	9
SC-130	100	-0.025	-0.003	115	±0.2	135	4	12	11
SC-165	130	-0.028	-0.003	147	±0.2	170	4.5	15	11
SC-190	155	-0.028	-0.003	172	±0.2	195	4.5	18	13
SC-230	190	-0.033	-0.004	210	±0.2	235	5.5	20	13
SC-273	230	-0.033	-0.004	250	±0.2	275	5.5	20	13
SC-310	260	-0.036	-0.004	285	±0.3	310	6.5	22	13
SC-355	300	-0.036	-0.004	328	±0.3	355	6.5	26	13

IC STOPPER



	L1	φ D1	φ D2	B1
IC-150(6")	31.5	22	11.5	10
IC-200(8")	42	26	14.5	14
IC-250(10")	45	26	14.5	14
IC-300(12")	51	30	16.5	16
IC-350(14")	49	30	16.5	16
IC-400(16")	55	34	18.5	18
IC-450(18")	60	34	18.5	18
IC-500(20")	53	35	19.5	20
IC-600(24")	59	38	20.5	20
IC-700(28")	57.5	38	23	18
IC-800(32")	59	44	27.5	24

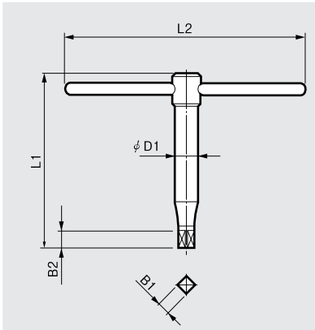
IC SCREW BAR



	L1	L2	L3	L4	φ D1	φ D2	B1	Threads/ inch
IC-150(6")	51.5	21	10	20.5	22	11	8	6 / inch
IC-200(8")	70	41	14	15	26	14	10	5/ inch
IC-250(10")	91.5	58	14	19.5	26	14	10	5 / inch
IC-300(12")	111	73	16	22	30	16	12	4 / inch
IC-350(14")	130	85.5	16	28.5	30	16	12	4 / inch
IC-400(16")	149	108.5	18	22.5	34	18	14	4 / inch
IC-450(18")	169	123.5	18	27.5	34	18	14	4 / inch
IC-500(20")	189	137	20	32	35	19	14	3.5 / inch
IC-600(24")	233	162	20	51	38	20	14	3.5 / inch
IC-700(28")	299	193	18	68	38	22	14	4/ inch
IC-800(32")	330	216	24	90	44	28	19	6.0 mm

Manual Chuck Etc

SC, FTC, IC HANDLES

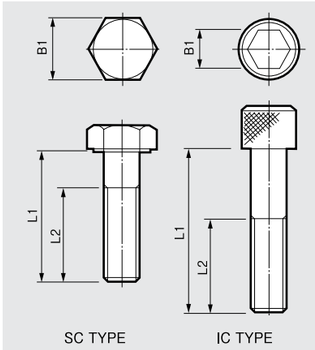


	L1	L2	B1	B2	φ D1
SC-85(3")	65	110	7	10	15
SC-110(4")	70	140	8	11	17
SC-130(5")	75	170	8	11	20
SC-165(6")	120	210	10	13	20
SC-190(7")	160	240	11	14	20
SC-230(9")	160	290	12	15	22
SC-273(10")	160	330	12	15	22
SC-310(12")	200	390	14	18	26
SC-355(14")	200	390	14	18	26
SC-405(16")	170	450	15	20	26
FTC-460(18")	205	500	17	20	25
FTC-535(21")	230	500	*6 - 22	26	30
FTC-610(24")	230	500	*6 - 22	26	30

	L1	L2	B1	B2	φ D1
SL-08	200	240	11	16	20
SL-10	240	270	12	16	22
SL-12	280	320	14	18	26
IC-150(6")	100	150	8	12	13
IC-200(8")	130	200	10	14	15
IC-250(10")	150	250	10	14	18
IC-300(12")	170	300	12	17	19
IC-350(14")	170	350	12	17	19
IC-400(16")	220	400	14	19	22
IC-450(18")	220	400	14	19	22
IC-500(20")	220	450	14	20	22
IC-600(24")	230	500	14	20	25
IC-700(28")	300	500	14	20	28
IC-800(32")	300	500	19	20	35

* 6 : Hexagon

SC, FTC, IC MOUNTING BOLTS



	Bolt size	QTR	L1	L2	φ B1
SC-85(3")	M6×P1.0	3	22	18	10
SC-110(4")	M8×P1.25	3	25	20	13
SC-130(5")	M8×P1.25	3	25	20	13
SC-165(6")	M10×P1.5	3	32	26	17
SC-190(7")	M10×P1.5	3	36	26	17
SC-230(9")	M12×P1.75	3	40	30	19
SC-273(10")	M12×P1.75	3	40	30	19
SC-310(12")	M12×P1.75	3	45	30	19
SC-355(14")	M12×P1.75	6	50	30	19
FTC-460(18")	M16×P125	6	125	38	24
FTC-535(21")	M20×P140	6	140	52	30
FTC-610(24")	M20×P140	6	140	52	30

	Bolt size	QTR	L1	L2	φ B1
IC-150(6")	M10×P1.5	4	65	30	8
IC-200(8")	M12×P1.75	4	60	35	10
IC-250(10")	M12×P1.75	4	85	40	10
IC-300(12")	M12×P1.75	4	100	55	10
IC-350(14")	M12×P1.75	4	100	55	10
IC-400(16")	M16×P2.0	4	110	60	14
IC-450(18")	M16×P2.0	4	110	60	14
IC-500(20")	M16×P2.0	4	120	60	14
IC-600(24")	M20×P2.5	4	135	70	17
IC-700(28")	M20×P2.5	8	120	54	17
IC-800(32")	M20×P2.5	8	130	54	17

Global Network

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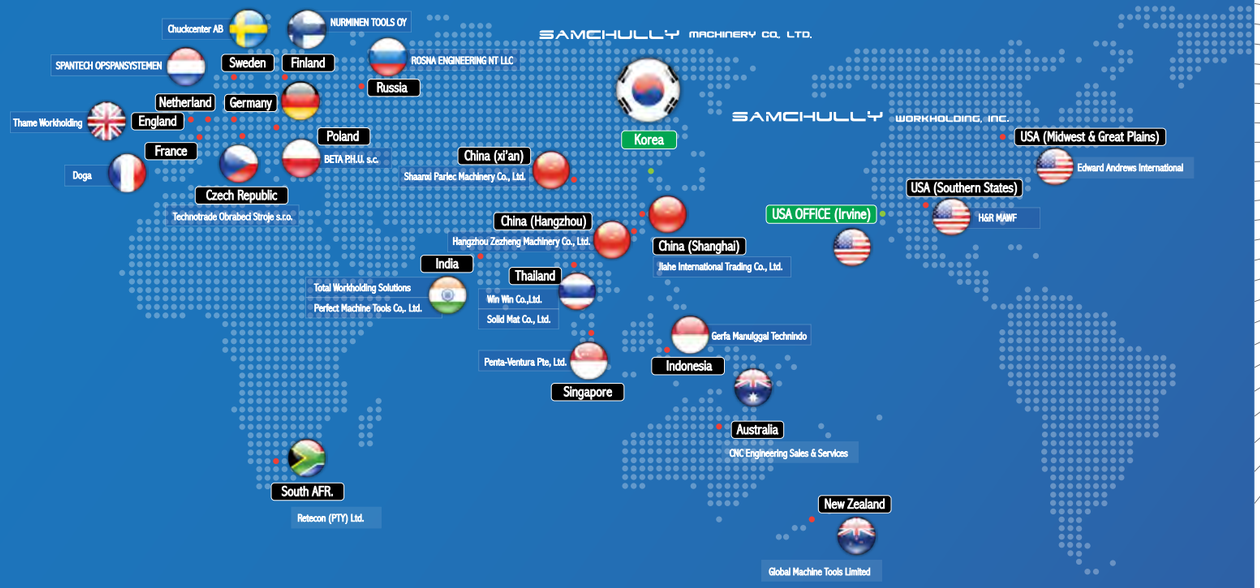

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