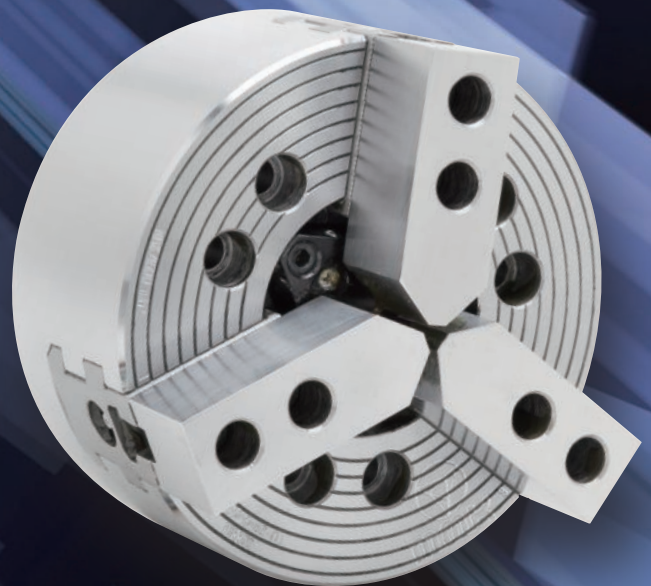


mmk

MATSUMOTO MACHINE KANAZAWA



Power chucks Cylinders



Overview of **mmk** Power chuck

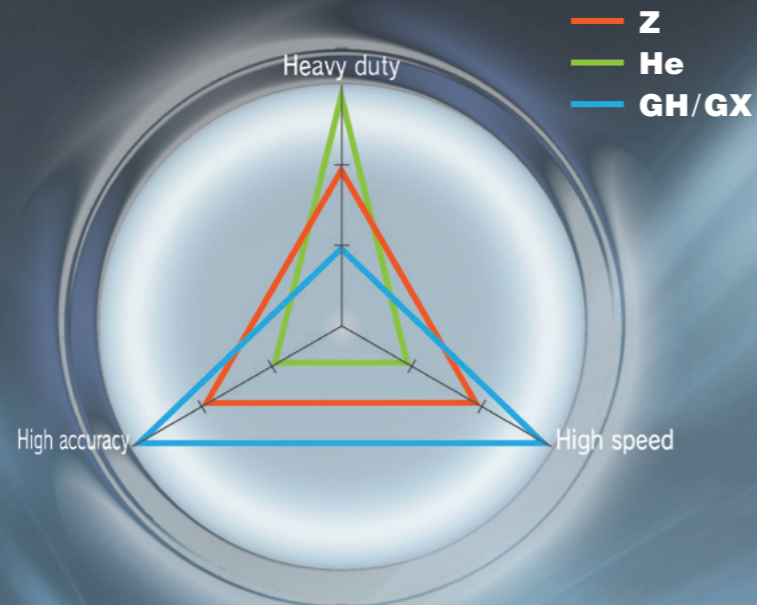


Conventional power chucks

mmk has three model of conventional power chucks.:



Choose it according to your purpose, in reference to the picture on the right.



- Z** Almighty / Serration jaw
- He** Heavy duty / Serration jaw
Master jaw: Double slide
- GH** High speed & High accuracy / Cross key jaw
- GX** Slant down mechanism is added to GH / Cross key jaw

Notes: **Z** & **He** jaws are compatible.



Design Chucks

mmk has much experience and results of design chucks.
mmk copes each workpieces characteristic, various functions, and multiplicity multiplicity of uses.
mmk challenges new problems and provide solutions.

Examples:

- Want to evade chips trouble! Want to shorten maintenance time! → Sealed chuck
- Want to reduce setup time! → QJC, AJC, U, K
- Want to use special chucks for machining center! → Stationary chuck, RS6J
- Looking for small diameter power chuck! → USS
- Want to clamp special shape workpiece under high precision! → Radiant jaw chuck™ (Registered trademark), 2 Jaw chuck

『Want to clamp under stable and high precision!』 『Problems occur to an exist chuck!』
 Please consult special chucks which you want with **mmk**

C O N T E N T

Overview of mmk Power chuck		1	
CONTENT		2	
mmk SMED Chucks	List of mmk SMED -Single Minute Exchange of Device- Chucks		
	QJC	Quick jaw exchange chucks • spec. : P.11 / 12	
	GH & GX	High speed & High accuracy • spec. : P.10	
	AJC	Auto jaw exchange chuck, Automatic set up • spec. : P.18	
	Chucks	Z	Conventional & High speed
		Z	Conventional & Big bore
		He & HeX	High rigidity / Double slide key + Slant down structure
		GH & GX	High speed & High accuracy + Slant pull-down structure
		QJC (I) ROBO-QJC	Quick jaw exchange chuck, Automatic set up
		Through hole 3 Jaw	
		Through hole 2 Jaw	ZJ Square bars / Peculiar shaped workpieces & Swallowing clamp
Closed Center 3 Jaw		Z-0	Conventional model
		ZL-0	Long stroke
Closed Center 6 Jaw		HH	Large diameter workpieces
	HH6J	Large diameter & Thin workpieces	
Closed Center 3 Jaw	AJC	Auto jaw exchange chuck, Automatic set up	
	ACC	Auto chuck exchange, Automatic set up	
	EM	Servo chuck	
	U	Ultra long stroke	
Finger chuck for aluminum wheels	WTi & WTiQ	Passenger car wheel, Truck & bus wheel	
	WWiL	Motorcycle wheel	
Replacing from exist chuck to new chuck		24	
Importance of the grease feed		25	
Cylinders	Through hole	ZKP High speed	
		2R Various rotary joint	
	Closed Center	RNKP Short cylinder	
	Through hole	AVKP Air cylinder	
	Closed Center	RNW Double cylinder	
Parts for Chucks		31	
Soft Jaws		31	
Hard Jaws, T-Nuts & Master Key		32	
Construction Drawings & Parts Lists		33	
Power chuck (Z / He / HH)		33	
Hydraulic & Air Cylinders (RNKP / ZKP / AVKP)		34	
Design chuck sample		35 - 38	

MATSUMOTO has short taper, straight pilot, and the other nose which depend on each machine spindle.
 For the improvement, specifications might be changed without notice.

List of mmk SMED Chucks

- Single Minute Exchange of Device -

GH&GX

High Speed & High Accuracy

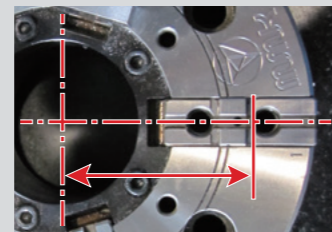
AJC&ACC

Auto Jaw Exchange Chucks

High Repeatability

Accurate jaw positioning

<ul style="list-style-type: none"> • Long life (Twice of MMK standard model) • High-accuracy 	<ul style="list-style-type: none"> • 24 hours operation • Automatic operation and exchange by robot
<ul style="list-style-type: none"> • General workpieces 	<ul style="list-style-type: none"> • General workpieces • Multi-product low-volume manufacturing workpieces
<ul style="list-style-type: none"> • 4" - 12" 	<ul style="list-style-type: none"> • 8" - 18"
<ul style="list-style-type: none"> • Automobile parts • IT related parts • Aero space parts 	<ul style="list-style-type: none"> • Construction machinery parts • General industrial machine parts • Multi-product low-volume manufacturing

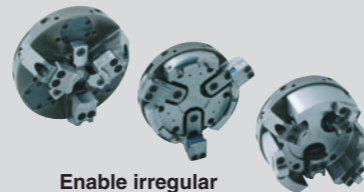


Easy Positioning
Cross-Key Structure

AJC

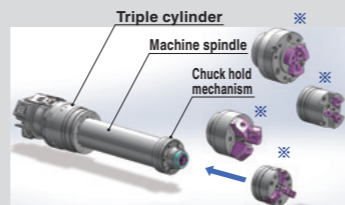


Simultaneous
jaw exchange



Enable irregular
shapeworkpieces

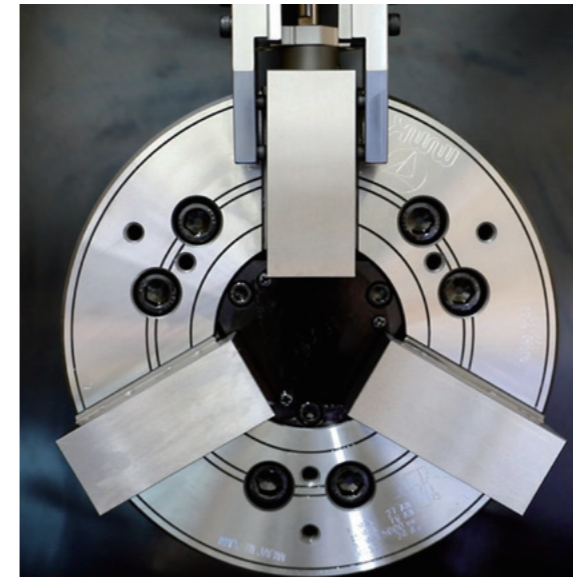
ACC



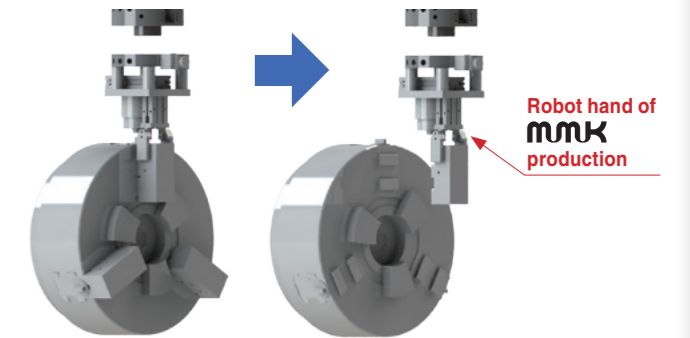
※ Various kind chuck hold

QJC (I) ROBO-QJC

Automatic jaw exchange system with robot



Achieve automation of multi objective
variable quantity production



Note : Refer to page 11 for the specification

GH & GX

High speed & High accuracy

Corresponding to many kinds of various needs by high speed

- 4": Maximum speed (R.P.M.) GH8,400 / GX8,600
- 6": Maximum speed (R.P.M.) GH8,000 / GX8,200
- 8": Maximum speed (R.P.M.) GH7,000 / GX7,200

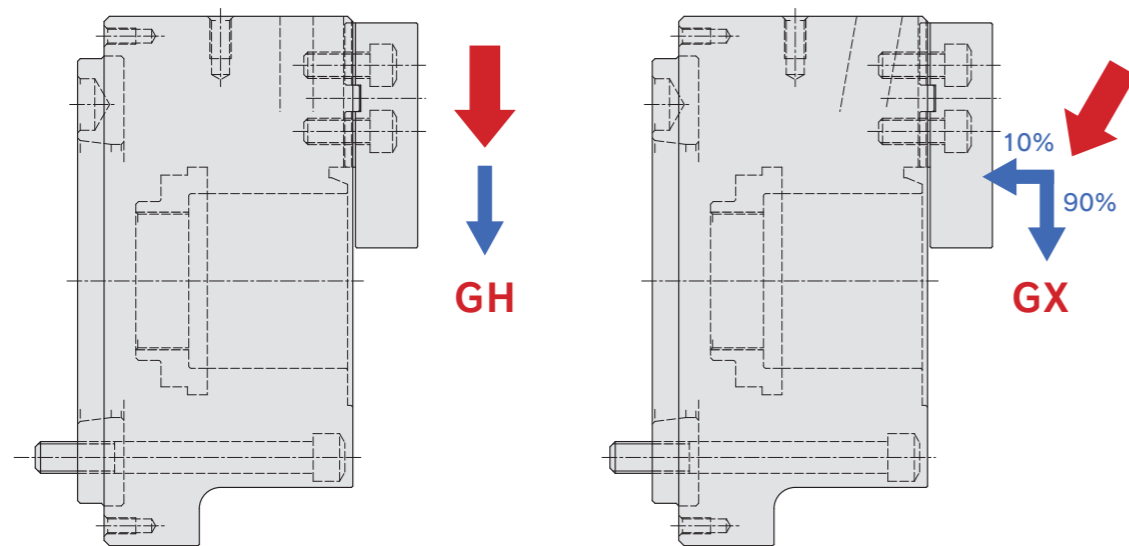


High accuracy & High repeatability

- Repeatability ≤ 10 (μm / Tir) (Tir: Total indicator reading)
- Cross key structure provides high accuracy, easy, and reliable positioning.
- Please consult with **mmk** if you want higher accuracy.

The slant down mechanism of GX model reduce jaw rise up situation.

- 10% slant down force & 90% clamping force
- The slant down mechanism is **mmk** original design



The slant down chuck can be replaced with conventional power chuck

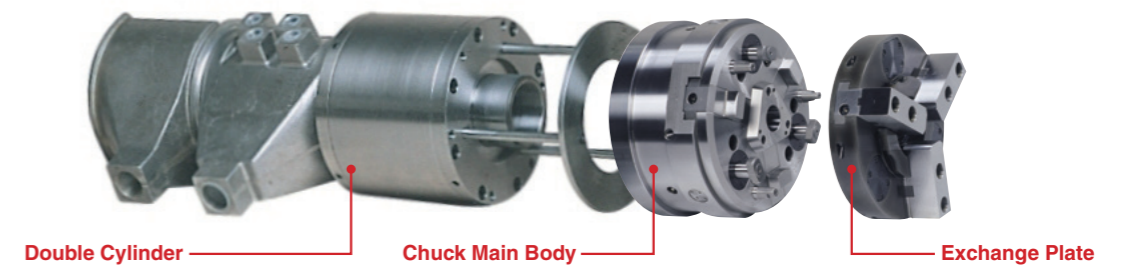
- Special actuator and special hydraulic control aren't necessary.

Note : Refer to page 10 for the specification

AJC

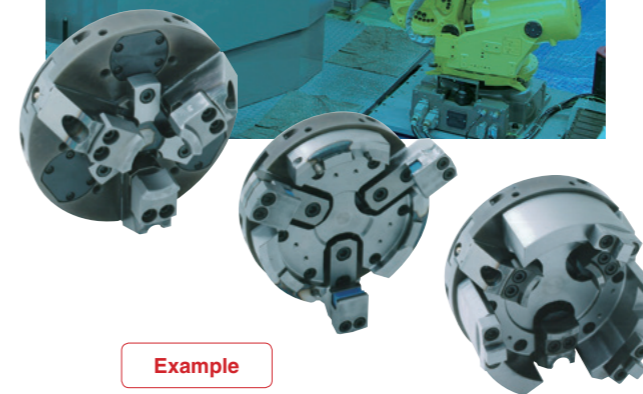
Auto jaw exchange chuck, Automatic set up

Enable irregular shapeworkpieces



Able to exchange instantly

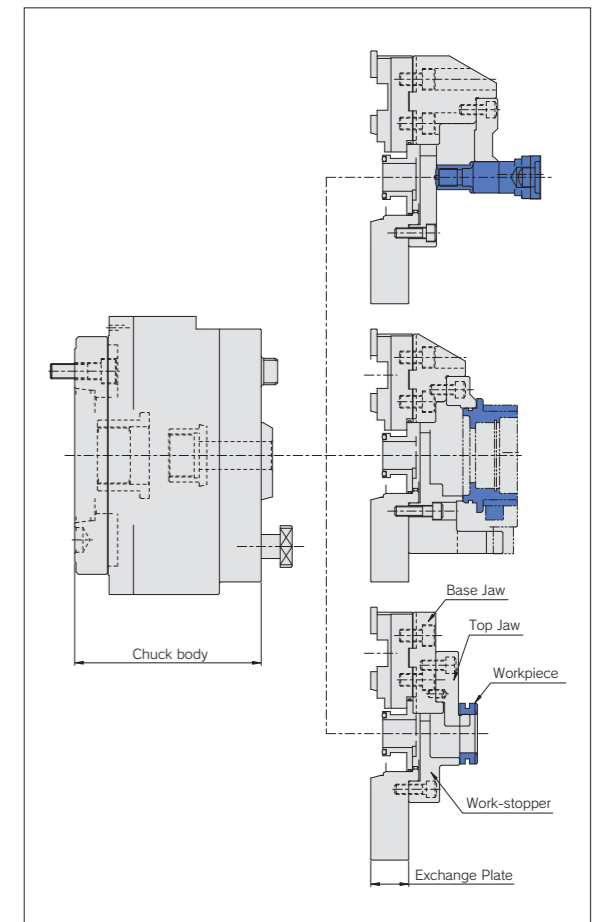
- Simultaneous jaw exchange.
Exchange plate positioning repeatability ≤ 0.01 (mm/Total indicator reading)
- Simultaneous work stopper and balance weight exchange.
- Achieve 24 hours automation with robot system



Example

High-accuracy

- The wedge shape clamping mechanism is adopted.

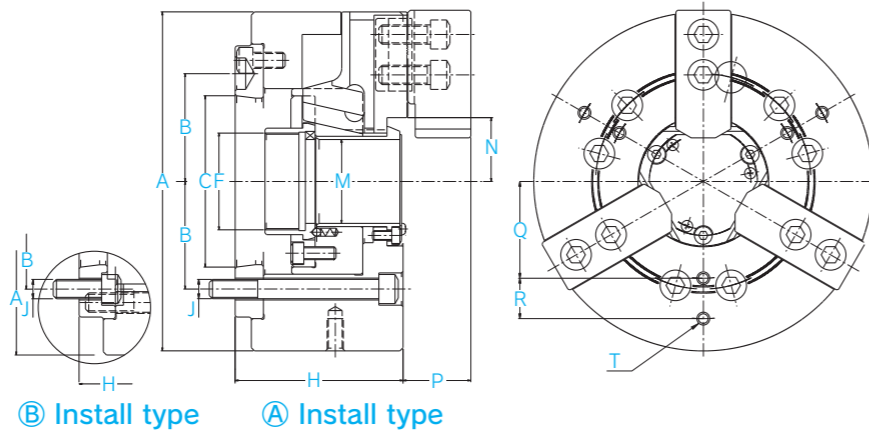
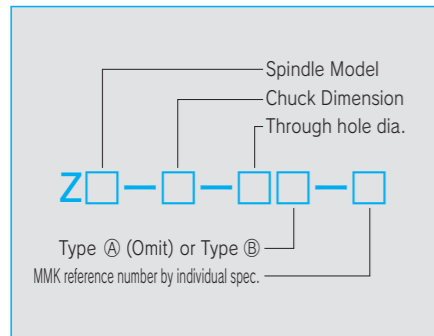


Note : Refer to page 17 for the specification

Z

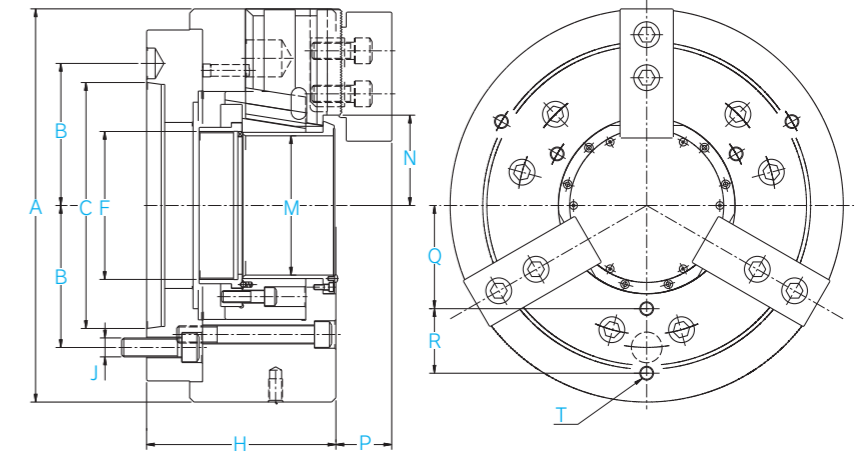
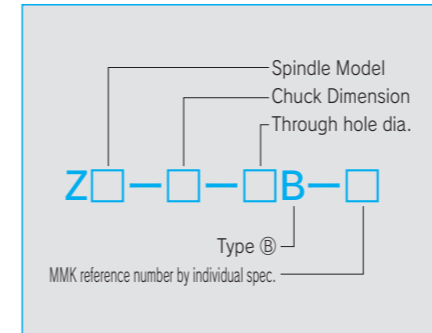
Through hole 3 jaw power operated chuck

The Z chuck, equipped with a large Through hole and high speed capabilities, is extremely versatile for general machining applications. The matching cylinder is ZKP series.



Z

Big bore through hole 3 jaw power operated chuck



Specification		Unit	Z-4-21	ZA5-5-34	ZA5-6-46	ZA6-8-52	ZA6-10-75B	ZA8-10-75	ZA8-12-85B	ZA8-15-120B	ZA11-15-120B
Chuck diameter		in.	4	5	6	8	10	10	12	15	15
Max. speed		min ⁻¹	7,200	7,000	6,000	5,000	4,000	4,000	3,200	2,500	2,500
Jaw stroke		mm	φ 5.4	φ 5.4	φ 5.8	φ 7.6	φ 9	φ 9	φ 9	φ 11.3	φ 11.3
Sifter stroke		mm	10	10	13	17	20	20	20	25	25
Workpiece diameter	Max.	mm	φ 99	φ 121.5	φ 148.5	φ 189	φ 228.6	φ 228.6	φ 274.5	φ 342.9	φ 342.9
	Min.	mm	φ 3	φ 23	φ 12	φ 21	φ 26.5	φ 26.5	φ 50	φ 75	φ 75
Max. clamping force		KN	23.5	29.4	47	78.4	107.8	107.8	137.2	176.4	176.4
Max. draw pull		KN	11.9	14.7	22.1	27	42.6	42.6	50	68.6	68.6
Weight		kg	4.1	6.1	13	23.5	38.5	38.5	70	132	124
Applicable cylinder			ZKP100/24-10	ZKP100/34-10	ZKP125/46-13	ZKP150/52-17	ZKP170/75-20	ZKP170/75-20	ZKP200/85-20	ZKP230/120-30	ZKP230/120-30

Dimension		Unit	Z-4-21	ZA5-5-34	ZA5-6-46	ZA6-8-52	ZA6-10-75B	ZA8-10-75	ZA8-12-85B	ZA8-15-120B	ZA11-15-120B
A		mm	φ 110	φ 135	φ 165	φ 210	φ 254	φ 254	φ 305	φ 381	φ 381
B		mm	R35.3	R52.4	R52.4	R66.7	R66.7	R85.7	R85.7	R85.7	R117.5
C*			φ 85H6	A2-#5	A2-#5	A2-#6	A2-#6	A2-#8	A2-#8	A2-#8	A2-#11
F			M25xP1.5	M40xP1.5	M55xP1.5	M60xP1.5	M85xP2.0	M85xP2.0	M93xP2.0	M130xP2.0	M130xP2.0
H		mm	54	70	90	104	128.5	123	135	190	165
J			3-M10	3-M10	6-M10	6-M12	6-M12	6-M16	6-M16	6-M16	6-M20
M		mm	φ 21	φ 34	φ 46	φ 52	φ 75	φ 75	φ 85	φ 120	φ 120
N	Max.	mm	21.26	28.76	32.5	39.5	52	52	60	79.5	79.5
	Min.	mm	18.56	26.06	29.6	35.7	47.5	47.5	55.5	73.85	73.85
P		mm	32	32	32	42	44	44	54	65	65
Q		mm	-	-	45	60	80	80	85	100	100
R		mm	-	-	25	25	30	30	45	60	60
T			-	-	6-M8Depth12	6-M8Depth15	6-M12Depth18	6-M12Depth18	6-M16Depth20	6-M16Depth25	6-M16Depth25

You can choose sort taper type (JIS B 6109) or straight pilot type by the spindle nose shape of the install machine. The draw screw size is selectable other than the list shown above. Please confirm details to MATSUMOTO. Please consult with MMK for long stroke specification.

Specification		Unit	ZA5-6-53B	ZA6-8-66B	ZA8-10-82B	ZA8-12-93B	ZA11-18-165B	ZA15-18-165B
Chuck diameter		in.	6	8	10	12	18	18
Max. speed		min ⁻¹	6,000	4,400	4,200	3,400	2,000	2,000
Jaw stroke		mm	φ 5.8	φ 7.6	φ 9	φ 9	φ 11.3	φ 11.3
Sifter stroke		mm	13	17	20	20	25	25
Workpiece diameter	Max.	mm	φ 154.8	φ 193.5	φ 228.6	φ 274.5	φ 411.3	φ 411.3
	Min.	mm	φ 20	φ 36	φ 68.5	φ 43	φ 123	φ 123
Max. clamping force		KN	47	78.4	107.8	137.2	176.4	176.4
Max. draw pull		KN	22.1	30.4	42.6	59.8	68.6	68.6
Weight		kg	14	25.3	39	64.7	180	180
Applicable cylinder			ZKP150/52-17	ZKP150/66-17	ZKP170/82-20	ZKP195/93-20	ZKP280/165-30	ZKP280/165-30

Dimension		Unit	ZA5-6-53B	ZA6-8-66B	ZA8-10-82B	ZA8-12-93B	ZA11-18-165B	ZA15-18-165B
A		mm	φ 172	φ 215	φ 254	φ 305	φ 457	φ 457
B		mm	R52.4	R66.7	R85.7	R85.7	R117.5	R165.1
C*			A2-#5	A2-#6	A2-#8	A2-#8	A2-#11	A2-#15
F			M60xP1.5	M72xP1.5	M90xP2.0	M103xP2.0	M175xP3.0	M175xP3.0
H		mm	90	107	125	124	177	190
J			6-M10	6-M12	6-M16	6-M16	6-M20	6-M22
M		mm	φ 53	φ 66	φ 82	φ 93	φ 165	φ 165
N	Max.	mm	37	46.5	54.5	65	102	102
	Min.	mm	34.1	42.7	50	60.5	96.35	96.35
P		mm	32	42	44	54	65	65
Q		mm	45	60	80	85	120	120
R		mm	25	25	30	45	75	75
T			6-M8Depth12	6-M8Depth15	6-M12Depth18	6-M16Depth18	6-M16Depth25	6-M16Depth25

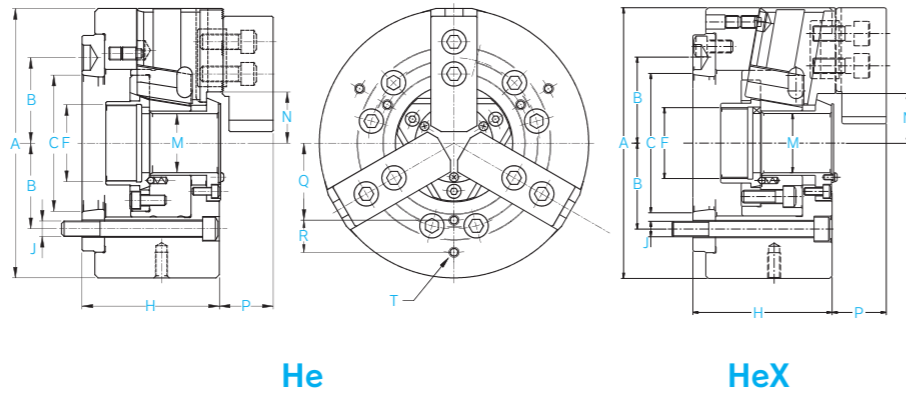
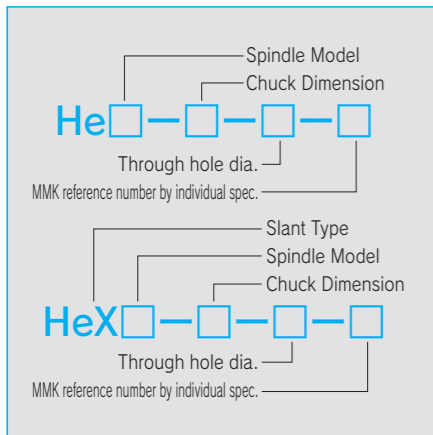
You can choose sort taper type (JIS B 6109) or straight pilot type by the spindle nose shape of the install machine. The draw screw size is selectable other than the list shown above. Please confirm details to MATSUMOTO.

High rigidity / Double slide key + Slant down structure (HeX)

He & HeX

Through hole (through hole slant) 3 jaw power operated chuck

The He model is superior in rigidity, durability, and safety, with the **MMK** double-slide key structure. This unique 'double-slide key' is only at MMK. Also equipped with a Through hole, the He model is suitable for accurate machining of bar materials, etc.

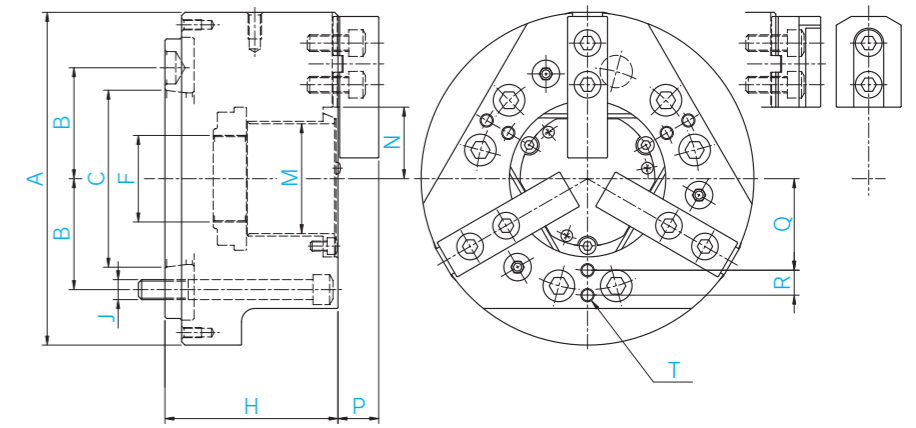
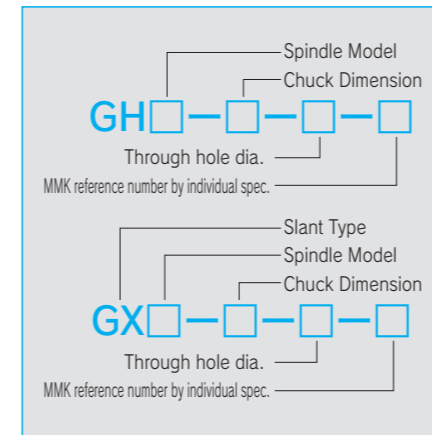
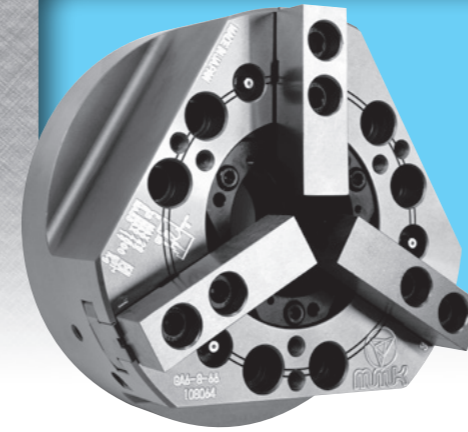


High speed & High accuracy + Slant pull-down structure (GX)

GH & GX

Through hole 3 jaw power operated chuck (High speed & High accuracy)

This model provides high-repeatability, with cross-key structure that does jawpositioning. It's available to use as highspeed rotating specification. GX-model draws workpieces into slantingly with pull-down structure to restrain jaw uplift.



Specification		Unit	HeA5-6-35	HeA6-8-46	HeA8-10-66	HeA8-12-67	HeA11-15-103	HeA15-18-165B	HeA15-21-184B	HeXA6-8-46	HeXA8-10-67	HeXA8-12-78B
Chuck diameter	in.		6	8	10	12	15	18	21	8	10	12
Max. speed	min ⁻¹		4,600	4,100	3,700	2,700	1,800	1,700	1,250	4,500	3,700	2,500
Jaw stroke	mm		φ 4.7	φ 6.4	φ 8	φ 8	φ 9.5	φ 9.5	φ 9.5	φ 6.2	φ 7.8	φ 7.8
Sifter stroke	mm		15	20	25	25	30	30	30	20	25	25
Workpiece diameter	Max.	mm	φ 151.2	φ 189	φ 228.6	φ 274.5	φ 342.9	φ 411.3	φ 479.7	φ 189	φ 228.6	φ 280.8
	Min.	mm	φ 5	φ 18	φ 41.6	φ 27.5	φ 79	φ 149.5	φ 117	φ 18	φ 41.6	φ 35.5
Max. clamping force	KN		46.3	82.3	98.8	114.7	147	186.2	186.2	82.3	98.8	114.7
Max. draw pull	KN		17.2	28.1	36.9	42.9	51.9	71.4	74.4	28.1	36.9	42.9
Weight	kg		16	25	40	75	137	215	295	25	40	75
Applicable cylinder			ZKP125/46-15	ZKP150/52-20	ZKP170/69-25	ZKP200/85-25	ZKP230/120-30	ZKP280/165-30	ZKP295/184-30	ZKP150/46-20	ZKP170/69-25	ZKP200/85-25

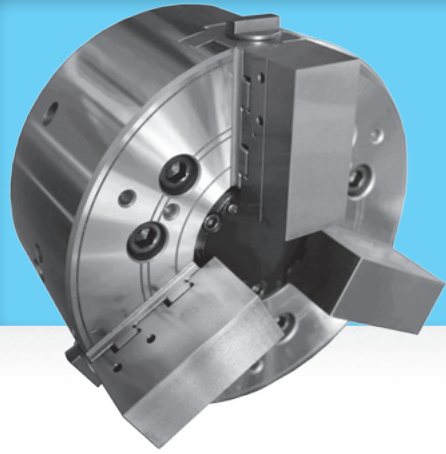
Dimension		Unit	HeA5-6-35	HeA6-8-46	HeA8-10-66	HeA8-12-67	HeA11-15-103	HeA15-18-165B	HeA15-21-184B	HeXA6-8-46	HeXA8-10-67	HeXA8-12-78B
A	mm		φ 168	φ 210	φ 254	φ 305	φ 381	φ 457	φ 533	φ 210	φ 254	φ 312
B	mm		R52.4	R66.7	R85.7	R85.7	R117.5	R165.1	R165.1	R66.7	R85.7	R85.7
C*			A2-#5	A2-#6	A2-#8	A2-#8	A2-#11	A2-#15	A2-#15	A2-#6	A2-#8	A2-#8
F			M52xP1.5	M60xP1.5	M80xP2.0	M100xP2.0	M130xP2.0	M175xP3.0	M195xP3.0	M60xP1.5	M76xP1.5	M100xP2.0
H	mm		92	107	123	140	165	220	210	107	123	149.5
J			6-M10	6-M12	6-M16	6-M16	6-M20	6-M22	6-M22	6-M12	6-M16	6-M16
M	mm		φ 35	φ 46	φ 66	φ 67	φ 103	φ 165	φ 184	φ 46	φ 67	φ 78
N	Max.	mm	31	40	50	54	72	105	114.5	40	50	57.5
	Min.	mm	28.65	36.8	46	50	67.3	100.3	109.75	36.9	46.1	53.6
P	mm		36	42	52	54	65	65	80.5	42	52	54
Q	mm		-	60	80	85	100	120	157	60	80	85
R	mm		-	25	30	45	60	75	75	25	30	45
T			-	6-M8Depth12	6-M12Depth20	6-M16Depth30	6-M16Depth20	6-M16Depth20	6-M16Depth30	6-M8Depth12	6-M12Depth20	6-M16Depth18

You can choose sort taper type (JIS B 6109) or straight pilot type by the spindle nose shape of the install machine. The draw screw size is selectable other than the list shown above. Please confirm details to MATSUMOTO.

Specification		Unit	GH-4	GX-4	GHA5-6-53B	GXA5-6-53B	GHA6-8-66	GXA6-8-66	GXA8-10-75	GXA8-12-75
Chuck diameter	in.		4		6		8		10	12
Max. speed	min ⁻¹		8,600	8,600	8,000	8,200	7,000	7,200	4,500	3,200
Jaw stroke	mm		φ 4.4	φ 4.4	φ 5.8	φ 5.6	φ 5.8	φ 5.6	φ 7.4	φ 7.4
Sifter stroke	mm		10	10	13	13	13	13	17	17
Workpiece diameter	Max.	mm	φ 104.4	φ 104.4	φ 154.8	φ 154.8	φ 180	φ 180	φ 228.6	φ 274.5
	Min.	mm	φ 4	φ 4	φ 25	φ 25	φ 25	φ 25	φ 34	φ 45
Max. clamping force	KN		19.6	19.6	44.1	44.1	71.5	71.5	94.1	114.7
Max. draw pull	KN		10	10	20.6	20.6	27.7	27.7	37.2	45.1
Weight	kg		4.5	4.5	13	13	19	19	35.6	65
Good valance			G16	G16	G10	G10	G10	G10	G10	G10
Applicable cylinder			RNKP73-10, ZKP85/22-10		RNKP105-15, 2R105/21-25		2R120/21-25		ZKP170/75-20	ZKP200/78-20

Dimension		Unit	GH-4	GX-4	GHA5-6-53B	GXA5-6-53B	GHA6-8-66	GXA6-8-66	GXA8-10-75	GXA8-12-75
A	mm		φ 116	φ 116	φ 172	φ 172	φ 200	φ 200	φ 254	φ 305
B	mm		R35.3	R35.3	R52.4	R52.4	R66.7	R66.7	R85.7	R85.7
C*			φ 85H6	φ 85H6	A2-#5	A2-#5	A2-#6	A2-#6	A2-#8	A2-#8
F			M25xP1.5	M25xP1.5	M60xP1.5	M60xP1.5	M72xP1.5	M72xP1.5	M85xP2.0	M80xP1.5
H	mm		54	54	88	88	104	104	123	135
J			3-M10	3-M10	6-M10	6-M10	6-M12	6-M12	6-M16	6-M16
M	mm		φ 21	φ 21	φ 53	φ 53	φ 66	φ 66	φ 75	φ 75
N	Max.	mm	22	22	36	36	43	43	52	52
	Min.	mm	19.8	19.8	33.1	33.2	40.1	40.2	48.3	48.3
P	mm		25	25	26.5 (Max.) 24.5 (Min.)		27 (Max.) 25 (Min.)		34	48
Q	mm		-	-	48	48	55	55	65	65
R	mm		-	-	15	15	15	15	25	25
T			-	-	6-M8Depth15				6-M12Depth18	6-M12Depth24

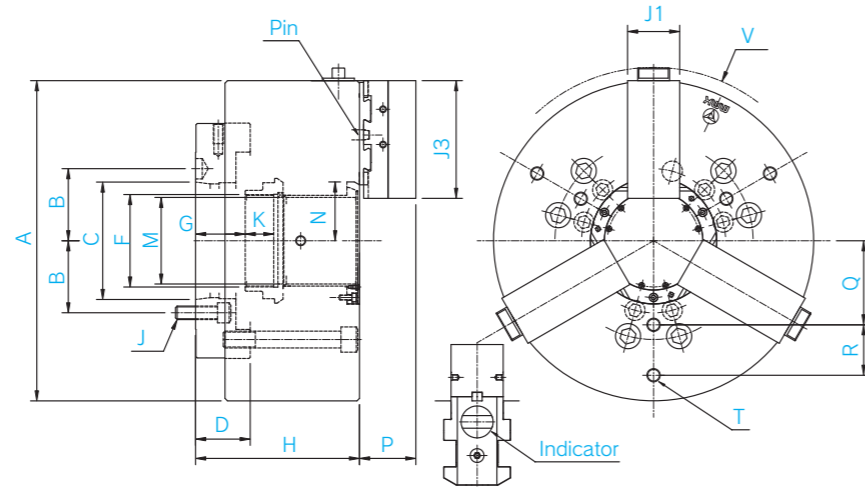
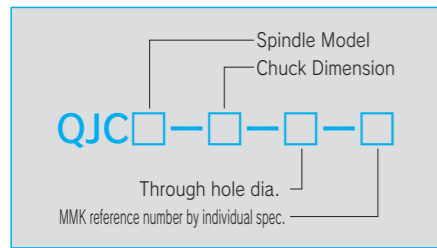
You can choose sort taper type (JIS B 6109) or straight pilot type by the spindle nose shape of the install machine. The draw screw size is selectable other than the list shown above. Please confirm details to MATSUMOTO.



QJC(I) ROBO-QJC

Through hole 3 jaw power operated chuck (quick jaw exchange chuck)

Jaws are possible to exchange without tools and so quickly. The jaw is positioned with high repeatability by taper pin and dovetail structure. Jaws are mounted and dis-mounted on the edge face direction. There is 2 jaws model, too. Please consult with MATSUMOTO.



- QJC chuck uses anti clamping force which are occurred by workpiece or jaw forming ring clamp force, and jaw is fixed.
- There is no anti clamping force under non clamping, the fixation of jaw is incomplete.
- It is in danger that jaw might be scattered away by centrifugal force more than 100 (r.p.m.).
- Please do not rotate more than 100 (r.p.m.) under non clamping.
- In addition, please set up the interlock to installation machine by the situation.

Specification

Unit	QJCA5-6-42	QJCA6-8-52	QJCA8-10-66	QJCA8-12-67	QJCA11-15-103	QJCA15-18-165B		
Chuck diameter	in.	6	8	10	12	15	18	
Max. speed	min ⁻¹	6,000	5,000	3,600	2,500	1,800	1,200	
Jaw stroke	mm	φ 5.8	φ 7.6	φ 8.0	φ 8.0	φ 9.5	11.3	
Sifter stroke	mm	13	17	25	25	30	25	
Workpiece diameter	Max.	mm	φ 148.5	φ 189	φ 228.6	φ 274.5	φ 342.9	φ 411
	Min.	mm	φ 39.5	φ 52	φ 59.6	φ 65	φ 101	φ 178.4
Max. clamping force	KN	47	78.4	94.1	114.7	147	176.4	
Max. draw pull	KN	22.5	27	36.9	42.9	51.9	68.6	
Weight	kg	13.5	23.5	40	75	137	210	
Applicable cylinder		ZKP125/46-13	ZKP150/52-17	ZKP170/66-25	ZKP200/78-25	ZKP230/120-30	ZKP280/165-30	

Dimension

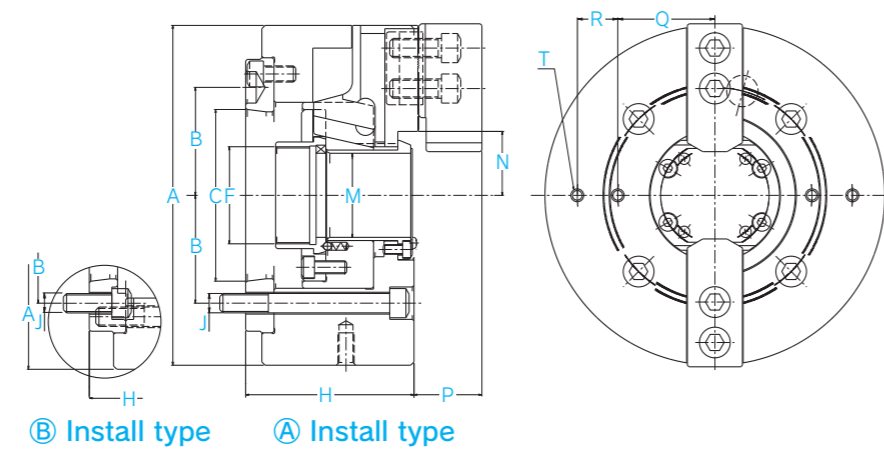
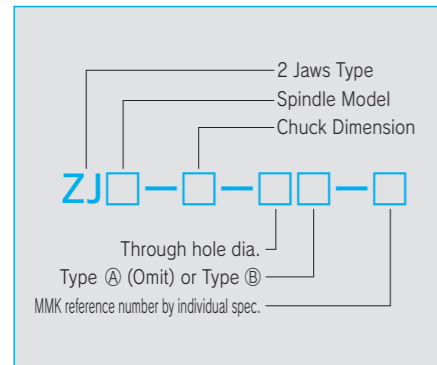
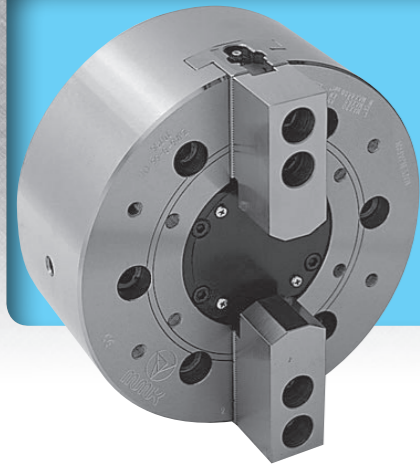
Unit	QJCA5-6-42	QJCA6-8-52	QJCA8-10-66	QJCA8-12-67	QJCA11-15-103	QJCA15-18-165B		
A	mm	φ 165	φ 210	φ 254	φ 305	φ 381	φ 457	
B	mm	52.4	66.7	85.7	85.7	117.5	165.1	
C		A5	A6	A8	A8	A11	A15	
F		M50×P1.5	M58×P1.5	M76×P1.5	M62×P1.5	M112×P2.0 ^外	M175×P3.0	
G	Max.	mm	20	18.5	11	18	8	44.5
	Min.	mm	7	1.5	-14	-7	-22	19.5
H	mm	90	104	123	140	165	195	
J		6-M10	6-M12	6-M16	6-M16	6-M20	6-M22	
K	mm	15	21	32	33.5	36	40	
M	mm	42	52	66	67	103	165	
N	Max.	mm	28.5	35	44.8	48.5	72	108.7
	Min.	mm	25.6	31.15	40.8	44.5	67.15	103.05
P	mm	32	42	52	54	67	67	
Q	mm	45	60	80	85	100	120	
R	mm	25	25	30	45	60	75	
T		6-M8Depth12	6-M8Depth16	6-M2Depth20	6-M16Depth30	6-M16Depth25	6-M16Depth20	
V	mm	φ 184	φ 228	φ 269	φ 338	φ 413	φ 490	
J1	mm	27	34	40	50	62	62	
J3	mm	63	79	96	120	140	140	

You can choose sort taper type (JIS B 6109) or straight pilot type by the spindle nose shape of the install machine.
The draw screw size is selectable other than the list shown above. Please confirm details to MATSUMOTO.

ZJ

Through hole (big bore through hole) 2 jaw power operated chuck

This model is suitable for chucking of square bars and peculiar shaped workpieces that are difficult to chuck with 3 jaws, such as valves etc.



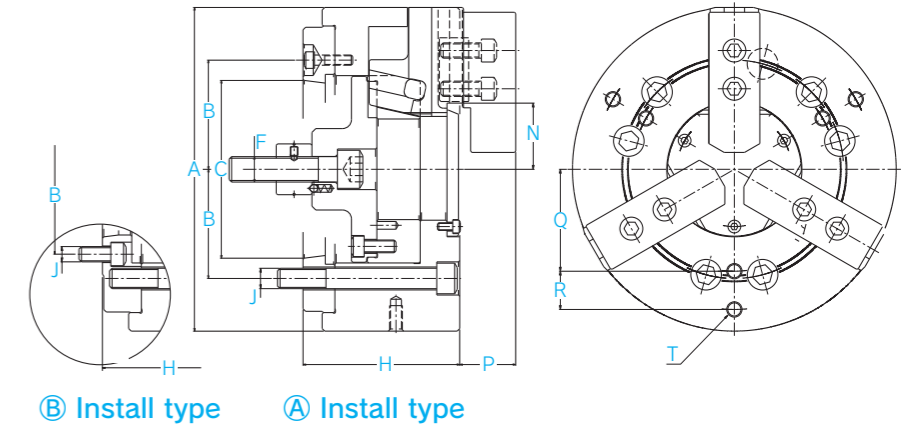
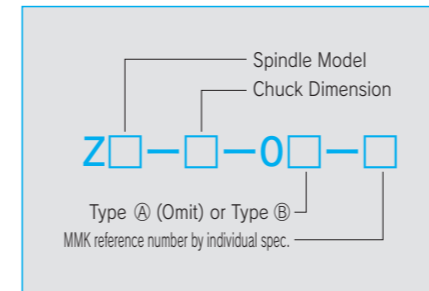
Specification		Unit	ZJA5-6-46	ZJA6-8-52	ZJA6-10-75B	ZJA8-10-75	ZJA8-12-85B	ZJA6-8-66B	ZJA8-10-78B	ZJA8-12-93B
Chuck diameter	in.		6	8	10	10	12	8	10	12
Max. speed	min ⁻¹		6,000	5,000	4,000	4,000	3,200	4,400	4,000	3,400
Jaw stroke	mm		φ 5.8	φ 7.6	φ 9	φ 9	φ 9	φ 7.6	φ 9	φ 9
Sifter stroke	mm		13	17	20	20	20	17	20	20
Workpiece diameter	Max.	mm	φ 148.5	φ 189	φ 228.6	φ 228.6	φ 274.5	φ 193.5	φ 228.6	φ 274.5
	Min.	mm	φ 12	φ 21	φ 26.5	φ 26.5	φ 50	φ 36	φ 29.5	φ 43
Max. clamping force	KN		31.4	52.2	71.5	71.5	91.1	52.2	71.5	91.1
Max. draw pull	KN		14.7	17.9	28.4	28.4	33.3	20.3	28.4	39.9
Weight	kg		13	23.5	38.5	38.5	70	25.3	39	64.7
Applicable cylinder			ZKP125/46-13	ZKP150/52-17	ZKP170/75-20		ZKP195/93-20	ZKP150/66-17	ZKP170/78-20	ZKP195/93-20

Dimension		Unit	ZJA5-6-46	ZJA6-8-52	ZJA6-10-75B	ZJA8-10-75	ZJA8-12-85B	ZJA6-8-66B	ZJA8-10-78B	ZJA8-12-93B
A	mm		φ 165	φ 210	φ 254	φ 254	φ 305	φ 215	φ 254	φ 305
B	mm		R52.4	R66.7	R66.7	R85.7	R85.7	R66.7	R85.7	R85.7
C*			A2-#5	A2-#6	A2-#6	A2-#8	A2-#8	A2-#6	A2-#8	A2-#8
F			M55xP1.5	M60xP1.5	M85xP2.0	M85xP2.0	M93xP2.0	M72xP1.5	M87xP2.0	M103xP2.0
H	mm		90	104	128.5	123	135	107	125	124
J			4-M10	4-M12	6-M12	8-M16	6-M16	4-M12	6-M16	6-M16
M	mm		φ 46	φ 52	φ 75	φ 75	φ 85	φ 66	φ 78	φ 93
N	Max.	mm	32.5	39.5	52	52	60	46.5	53.5	65
	Min.	mm	29.6	35.7	47.5	47.5	55.5	42.7	49	60.5
P	mm		32	42	44	44	54	42	44	54
Q	mm		45	60	80	80	85	60	80	85
R	mm		25	25	30	30	45	25	30	45
T			4-M8Depth12	4-M8Depth15	4-M12Depth18		4-M16Depth20	4-M8Depth15	4-M12Depth18	4-M16Depth18

You can choose sort taper type (JIS B 6109) or straight pilot type by the spindle nose shape of the install machine.
The draw screw size is selectable other than the list shown above. Please confirm details to MATSUMOTO.

Z-0

Closed center 3 jaw power operated chuck



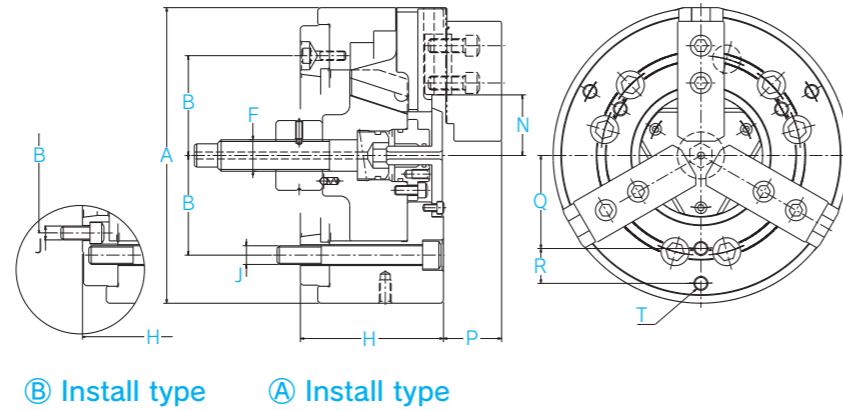
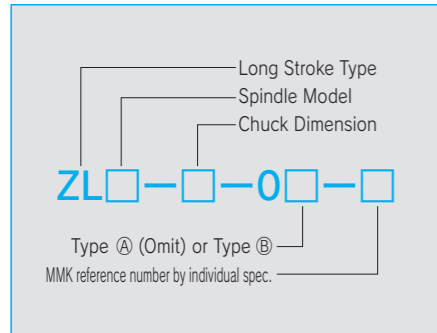
Specification		Unit	ZA5-6-0	ZA6-8-0	ZA6-10-0B	ZA8-10-0	ZA8-12-0B	ZA8-15-0B	ZA11-15-0B	ZA15-18-0B
Chuck diameter	in.		6	8	10	10	12	15	15	18
Max. speed	min ⁻¹		6,000	5,000	4,000	4,000	3,400	2,500	2,500	2,000
Jaw stroke	mm		φ 5.8	φ 7.6	φ 9	φ 9	φ 9	φ 11.3	φ 11.3	φ 11.3
Sifter stroke	mm		13	17	20	20	20	25	25	25
Workpiece diameter	Max.	mm	φ 148.5	φ 189	φ 228.6	φ 228.6	φ 274.5	φ 342.9	φ 342.9	φ 411.3
	Min.	mm	φ 12	φ 21	φ 26.5	φ 26.5	φ 43	φ 75	φ 75	φ 123
Max. clamping force	KN		47	78.4	107.8	107.8	137.2	176.4	176.4	176.4
Max. draw pull	KN		22.1	27	42.6	42.6	59.8	68.6	68.6	68.6
Weight	kg		13	24	38.5	38.5	64.7	132	124	180
Applicable cylinder			RNKP105-15	RNKP120-20	RNKP135-20		RNKP200-35			

Dimension		Unit	ZA5-6-0	ZA6-8-0	ZA6-10-0B	ZA8-10-0	ZA8-12-0B	ZA8-15-0B	ZA11-15-0B	ZA15-18-0B
A	mm		φ 165	φ 210	φ 254	φ 254	φ 305	φ 381	φ 381	φ 457
B	mm		R52.4	R66.7	R66.7	R85.7	R85.7	R85.7	R117.5	R165.1
C*			A2-#5	A2-#6	A2-#6	A2-#8	A2-#8	A2-#8	A2-#11	A2-#15
F			M20xP2.5	M20xP2.5	M20xP2.5	M20xP2.5	M27xP3.0	M27xP3.0	M27xP3.0	M27xP3.0
H	mm		82.5	104	128.5	123	124	190	165	190
J			6-M10	6-M12	6-M12	6-M16	6-M16	6-M16	6-M20	6-M22
N	Max.	mm	32.5	39.5	52	52	65	79.5	79.5	102
	Min.	mm	29.6	35.7	47.5	47.5	60.5	73.85	73.85	96.35
P	mm		32	42	44	44	54	65	65	65
Q	mm		45	60	80	80	85	100	100	120
R	mm		25	25	30	30	45	60	60	75
T			6-M8Depth12	6-M8Depth15	6-M12Depth18		6-M16Depth18	6-M16Depth25		

You can choose sort taper type (JIS B 6109) or straight pilot type by the spindle nose shape of the install machine.
The draw screw size is selectable other than the list shown above. Please confirm details to MATSUMOTO.

ZL-0

Closed center long stroke 3 jaw power operated chuck



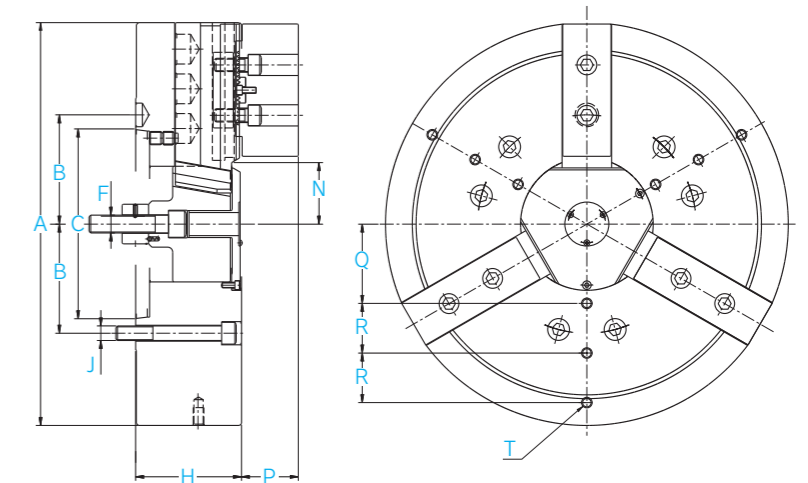
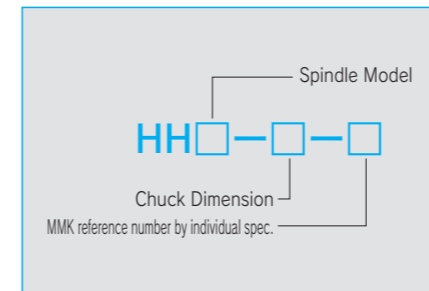
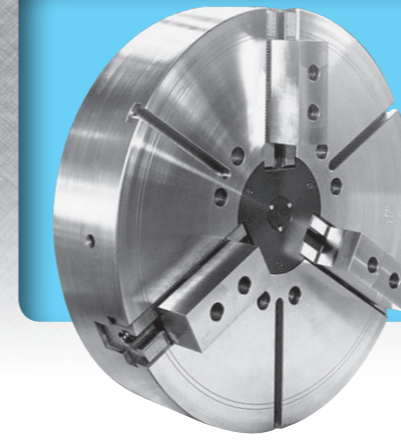
Specification		Unit	ZLA6-8-0	ZLA8-10-0	ZLA8-12-0B	ZLA11-15-0B
Chuck diameter	in.		8	10	12	15
Max. speed	min ⁻¹		3,600	2,800	3,200	2,500
Jaw stroke	mm		φ 16.5	φ 20.5	φ 18.2	φ 23.4
Sifter stroke	mm		27	25	28	36
Workpiece diameter	Max.	mm	φ 189	φ 228.6	φ 274.5	φ 342.9
	Min.	mm	φ 21	φ 24.6	φ 50	φ 75
Max. clamping force	KN		45.1	65.7	137.2	176.4
Max. draw pull	KN		29.4	42.8	74.5	96
Weight	kg		23.5	38.5	70	124
Applicable cylinder			RNKP120-25	RNKP165-25	RNKP200-35	RNKP200-50

Dimension		Unit	ZLA6-8-0	ZLA8-10-0	ZLA8-12-0B	ZLA11-15-0B
A	mm		φ 210	φ 254	φ 305	φ 381
B	mm		R66.7	R85.7	R85.7	R117.5
C*			A2-#6	A2-#8	A2-#8	A2-#11
F			M20xP2.5	M27xP3.0	M27xP3.0	M36xP4.0
H	mm		104	123	135	165
J			6-M12	6-M16	6-M16	6-M20
N	Max.	mm	39.5	52	60	79.5
	Min.	mm	31.25	41.75	50.9	67.8
P	mm		42	44	54	65
Q	mm		60	80	85	100
R	mm		25	30	45	60
T			6-M8Depth15	6-M12Depth18	6-M16Depth20	6-M16Depth25

You can choose sort taper type (JIS B 6109) or straight pilot type by the spindle nose shape of the install machine. The draw screw size is selectable other than the list shown above. Please confirm details to MATSUMOTO.

HH

Closed center 3 jaw power operated chuck



Specification		Unit	HHA11-21	HHA15-21	HHA11-24	HHA15-24	HHA20-24B	HHA11-28	HHA15-28	HHA20-28	HHA11-32	HHA15-32	HHA20-32	HHA15-36	HHA20-36	HHA15-40	HHA20-40	
Chuck diameter	in.		21	21	24	24	24	28	28	28	32	32	32	36	36	40	40	
Max. speed	min ⁻¹		1,250	1,250	1,100	1,100	1,200	1,075	1,075	1,075	940	940	940	830	830	750	750	
Jaw stroke	mm		φ 12	φ 12	φ 12	φ 12	φ 12	φ 17.5	φ 17.5	φ 17.5	φ 17.5	φ 17.5	φ 17.5	φ 17.5	φ 17.5	φ 17.5	φ 17.5	
Sifter stroke	mm		35	35	35	35	35	50	50	50	50	50	50	50	50	50	50	
Workpiece diameter	Max.	mm	φ 479.7	φ 479.7	φ 548.1	φ 548.1	φ 548.1	φ 639.9	φ 639.9	φ 639.9	φ 731.7	φ 731.7	φ 731.7	φ 822.6	φ 822.6	φ 914.4	φ 914.4	
	Min.	mm	φ 133	φ 133	φ 133	φ 133.4	φ 133.4	φ 134.8	φ 134.8	φ 134.8	φ 134.8	φ 134.8	φ 134.8	φ 134.8	φ 134.8	φ 134.8	φ 134.8	
Max. clamping force	KN		196	196	196	196	196	245	245	245	245	245	245	245	245	245	245	
Max. draw pull	KN		71.2	71.2	71.2	71.2	71.2	88.2	88.2	88.2	88.2	88.2	88.2	88.2	88.2	88.2	88.2	
Weight	kg		275	275	350	350	435	443	443	543	440	440	440	650	650	845	845	
Applicable cylinder			RNKP200-35						RNKP200-50									

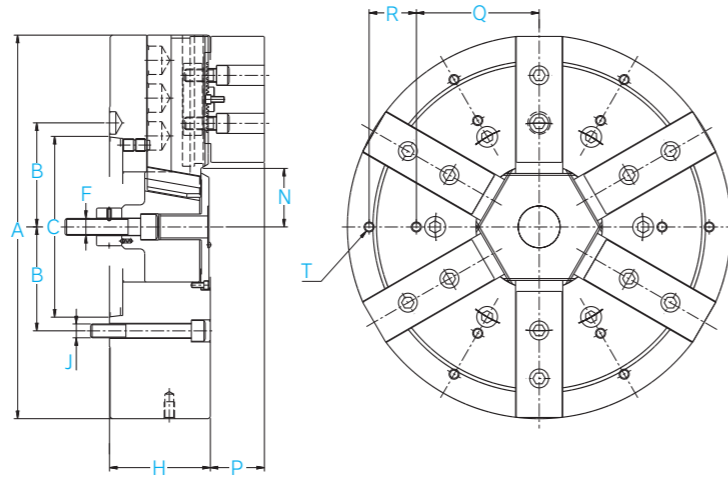
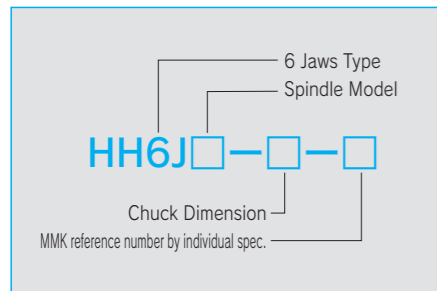
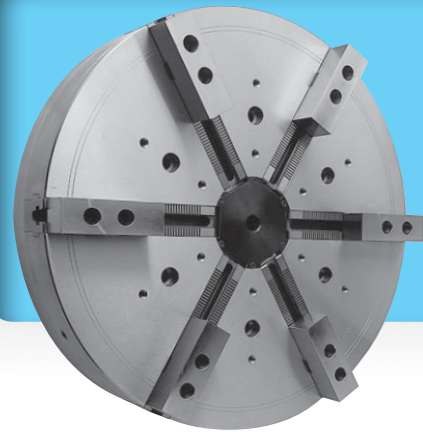
Dimension		Unit	HHA11-21	HHA15-21	HHA11-24	HHA15-24	HHA20-24B	HHA11-28	HHA15-28	HHA20-28	HHA11-32	HHA15-32	HHA20-32	HHA15-36	HHA20-36	HHA15-40	HHA20-40	
A	mm		φ 533	φ 533	φ 609	φ 609	φ 609	φ 711	φ 711	φ 711	φ 813	φ 813	φ 813	φ 914	φ 914	φ 1016	φ 1016	
B	mm		R117.5	R161.5	R117.5	R161.5	R231.8	R117.5	R165.1	R231.8	R117.5	R165.1	R231.8	R165.1	R231.8	R165.1	R231.8	
C*			A2-#11	A2-#15	A2-#11	A2-#15	A2-#20	A2-#11	A2-#15	A2-#20	A2-#11	A2-#15	A2-#20	A2-#15	A2-#20	A2-#15	A2-#20	
F			M27xP3.0						M30xP3.5									
H	mm		160	160	160	160	235.5	200	200	200	200	200	200	200	200	200	200	
J			6-M20	6-M22	6-M20	6-M22	6-M24	6-M20	6-M22	6-M24	6-M20	6-M22	6-M24	6-M22	6-M24	6-M22	6-M24	
N	Max.	mm	93	93	93	93	91.8	97	97	97	97	97	97	97	97	97	97	
	Min.	mm	87	87	87	87	85.8	88.25	88.25	88.25	88.25	88.25	88.25	88.25	88.25	88.25	88.25	
P	mm		85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	
Q	mm		120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	
R	mm		75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	
T			6-M16Depth25				9-M16Depth25				12-M16Depth25				15-M16Depth25			

You can choose sort taper type (JIS B 6109) or straight pilot type by the spindle nose shape of the install machine. The draw screw size is selectable other than the list shown above. Please confirm details to MATSUMOTO.

HH6J

Closed center 6 jaw hydraulic chuck

Radiat jaw chuck™ restrains the chucking distortion of workpiece.



Specification		Unit	HH6JLA8-9	HH6JLA8-11	HH6JA11-24	HH6JA20-24	HH6JA11-32	HH6JA15-36	HH6JA20-50
Chuck diameter	in.		9	11	24	24	32	36	50
Max. speed	min ⁻¹		2,500	2,000	955	955	940	720	450
Jaw stroke	mm		φ 20.7	φ 16	φ 12	φ 12	φ 17.5	φ 17.5	φ 17.6
Sifter stroke	mm		25	25	35	35	50	50	50
Workpiece diameter	Max.	mm	φ 207	φ 252	φ 540	φ 540	φ 731.7	φ 822.6	φ 1143
	Min.	mm	φ 40.6	φ 53	φ 76	φ 76	φ 76	φ 76	φ 214
Max. clamping force	KN		35.3	39.2	147	147	196	196	196
Max. draw pull	KN		33.3	26.1	53.4	53.4	73.5	73.5	73.5
Weight	kg		33	49	355	365	455	710	1,700
Applicable cylinder			RNKP120-25	RNKP120-25	RNKP200-35		RNKP200-50	RNKP200-35	RNKP200-50

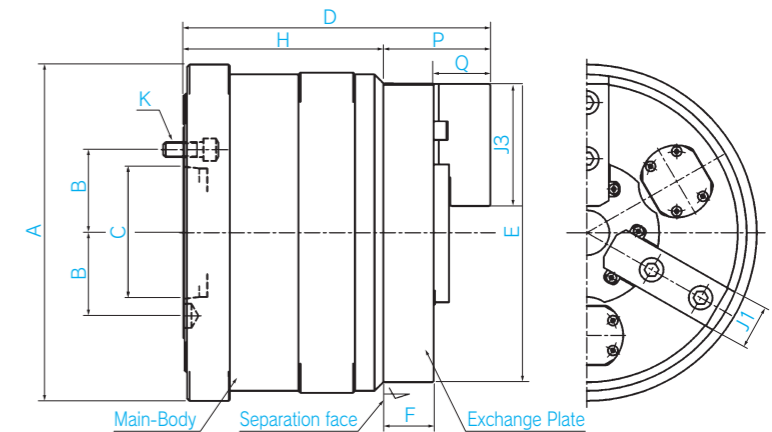
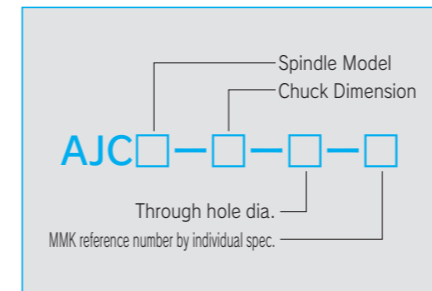
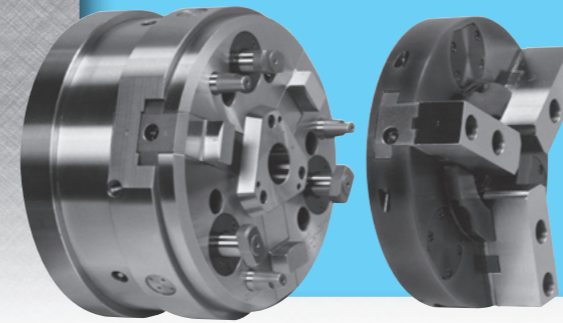
Dimension		Unit	HH6JLA8-9	HH6JLA8-11	HH6JA11-24	HH6JA20-24	HH6JA11-32	HH6JA15-36	HH6JA20-50
A	mm		φ 230	φ 280	φ 600	φ 600	φ 813	φ 914	φ 1,270
B	mm		R85.7	R85.7	R117.5	R231.8	R117.5	R165.1	R231.8
C*			A2-#8	A2-#8	A2-#11	A2-#20	A2-#11	A2-#15	A2-#20
F			M16xP2.0	M16xP2.0	M27xP3.0	M27xP3.0	M27xP3.0	M30xP3.5	M30xP3.5
H	mm		106.5	105	160	160	180	180	200
J			6-M16	6-M16	6-M20	6-M24	6-M20	6-M20	6-M24
N	Max.	mm	50.8	57	95	95	95	95	132
	Min.	mm	40.45	49	89	89	86.25	86.25	123.2
P	mm		36	38	69.5	69.5	69.5	69.5	85.8
Q	mm		-	-	150	150	150	150	195
R	mm		-	-	100	45	150	150	75
T			-	-	12-M16Depth30				18-M16Depth30

You can choose sort taper type (JIS B 6109) or straight pilot type by the spindle nose shape of the install machine. Note : 7 or 9 jaws specifications are also possible. The draw screw size is selectable other than the list shown above. Please confirm details to MATSUMOTO.

AJC

Closed center 3 jaw power operated chuck (auto jaw exchange chuck)

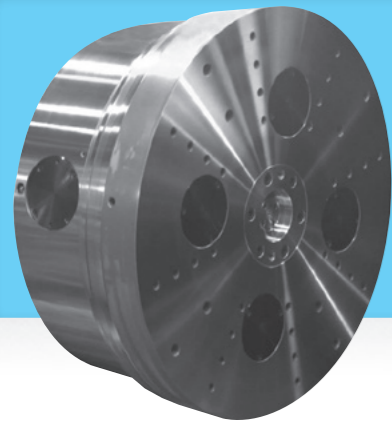
The AJC chuck is designed for automating the exchange of all jaws at once with the use of exchange plates. This chuck is suitable for small to medium volume production & is capable of providing complete automation with robotic integration.



Specification		Unit	AJCA6-8-17	AJCA8-10-35	AJCA8-12-46	AJCA11-15-72	AJCA11-18-72
Chuck diameter	in.		8	10	12	15	18
Max. speed	min ⁻¹		3,600	3,500	2,500	1,250	900
Jaw stroke	mm		φ 10.7	φ 9	φ 9	φ 13.3	φ 13.3
Sifter stroke	mm		20	20	20	30	30
Workpiece diameter	Max.	mm	φ 180	φ 216	φ 261	φ 342.9	φ 411.3
	Min.	mm	φ 27.8	φ 42.9	φ 34	φ 67	φ 126
Max. clamping force	KN		58.8	85.3	94.1	114.7	147
Max. draw pull	KN		31.9	37.2	41.2	47.5	60.8
Chuck weight	kg		32.2	55	100	181	230
Exchange plate weight	kg		7.8	17	27	52	75
Weight	kg		40	72	127	233	305
Exchange plate clamp stroke	mm		30	31	32	37	37
Exchange plate clamping force	KN		29.4	42.6	42.6	52.9	52.9
Applicable cylinder			RNW155-20-02			RNW215-30-01	

Dimension		Unit	AJCA6-8-17	AJCA8-10-35	AJCA8-12-46	AJCA11-15-72	AJCA11-18-72
A	mm		φ 220	φ 254	φ 305	φ 381	φ 457
B	mm		R66.7	R85.7	R85.7	R117.5	R117.5
C			A2-#6	A2-#8	A2-#8	A2-#11	A2-#11
D	mm		210.9	244	275	346	346
E	mm		φ 200	φ 240	φ 290	φ 381	φ 457
F	mm		33	40	46	60	60
H	mm		147.5	159	183	220	220
P	mm		63.4	85	92	126	126
J1	mm		30	35	40	60	60
J3	mm		85	98	125	165	165
K	mm		6-M12	6-M16	6-M16	6-M20	6-M20
Q	mm		30.4	45	46	66	66

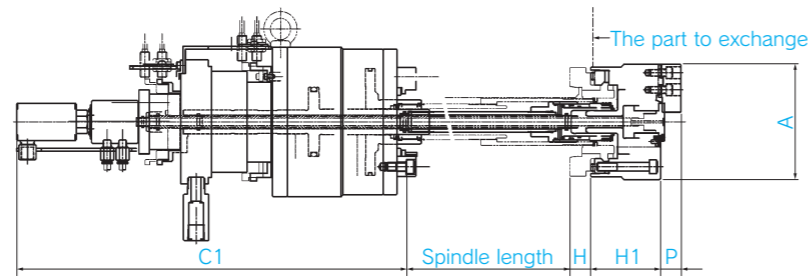
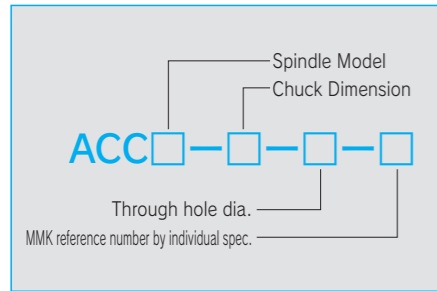
You can choose sort taper type (JIS B 6109) or straight pilot type by the spindle nose shape of the install machine. The draw screw size is selectable other than the list shown above. Please confirm details to MATSUMOTO.



ACC

Closed center power operated chuck

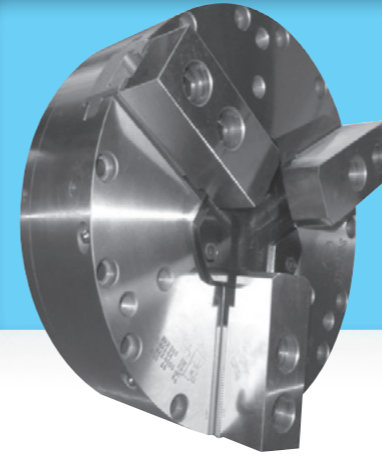
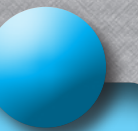
There are power chuck and scroll chuck. This chuck conforms to multi-product low-volume manufacturing, and automatic set up.



Specification	Unit	ACC-5-01	ACCA8-12	ACCA11-15	ACCA11-24
Chuck diameter	in.	5	12	15	24
Max. speed	min ⁻¹	6,000	2,500	1,500	1,300
Jaw stroke	mm	φ 4.4	-	-	-
Max. clamping force	KN	19.6	-	-	-
Weight	kg	6.5	100	166	595
Applicable cylinder		RNW81-16	RNKP200-35	RNKP150-35	RNKP200-50

Dimension	Unit	ACC-5-01	ACCA8-12	ACCA11-15	ACCA11-24
A	mm	135	254	400	609
Nose size		A2-#5	A2-#8	A2-#11	A2-#11
H	mm	26	183	175	235
H1	mm	85.5	129	147	105
P	mm	25	48.5	59.9	-
Chuck mounting bolt		6-M10	6-M16	6-M20	6-M20
C1	mm	430	325	180	340

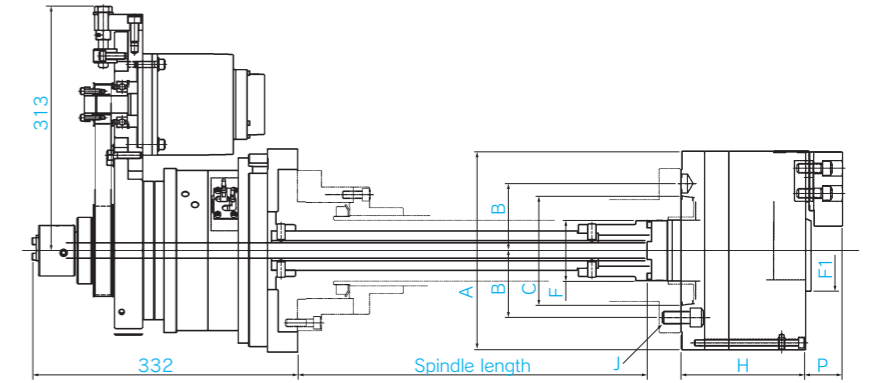
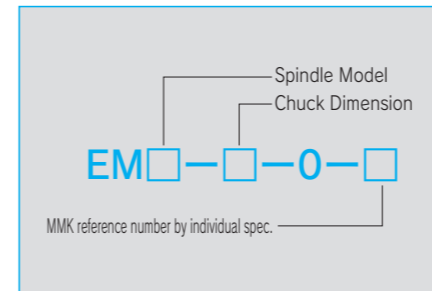
You can choose sort taper type (JIS B 6109) or straight pilot type by the spindle nose shape of the install machine. The draw screw size is selectable other than the list shown above. Please confirm details to MATSUMOTO.



EM

Servo chuck

Chuck is operated by scroll gear and servomotor.



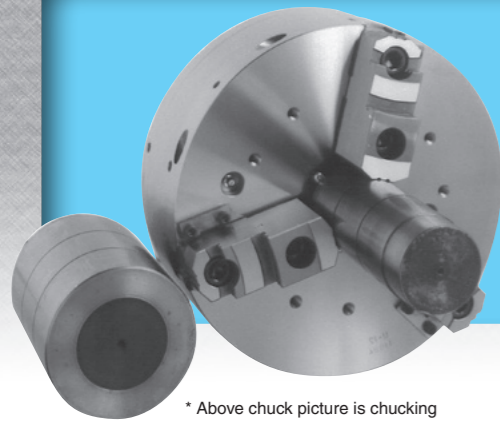
Specification	Unit	EMA6-8-0-01	EMA6-10-0-03	EMA8-12-0-01
Chuck diameter	in.	8	10	12
Max. speed	min ⁻¹	5,000	4,000	2,500
Jaw stroke	mm	φ 35	φ 40	φ 40
Workpiece diameter	Max.	mm	228.6	274.5
	Min.	mm	30.6	81.6
Max. clamping force	KN	68.6	83	94
Weight	kg	39	60	97

Dimension	Unit	EMA6-8-0-01	EMA6-10-0-03	EMA8-12-0-01
A	mm	220	254	(305)
B	mm	66.7	85.7	(85.7)
C		A2-#6	A2-#6	(A2-#8)
F1	mm	95	104	12 inch, under planning
F	mm	62	78	
H	mm	140	165	
P	mm	29.4	46.3	
J	mm	6-M12	6-M12	
Jaw width		35	37	

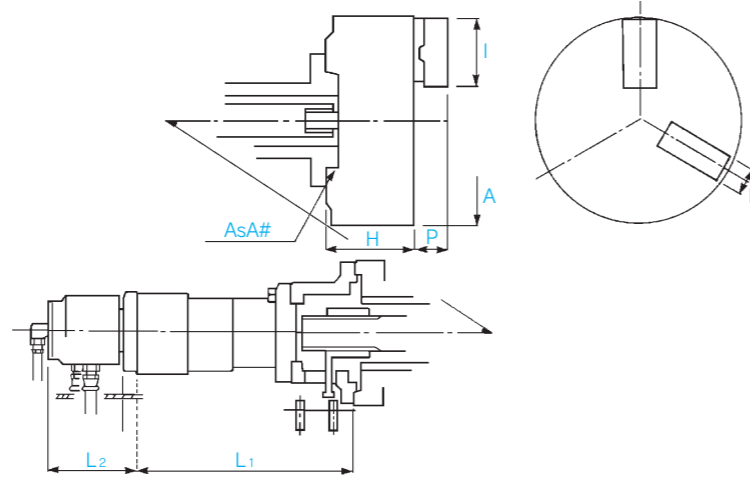
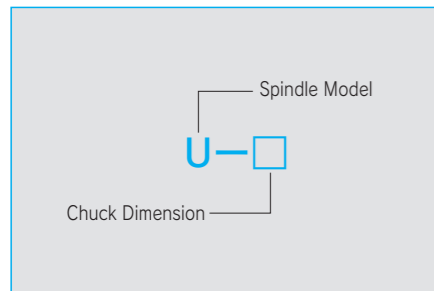
U

Closed center 3 jaw power operated chuck

Chuck is operated by scroll gear and orbit (oil) motor.



* Above chuck picture is chucking workpiece.



Specification		Unit	UA6-8 • UA8-8	UA6-10 • UA8-10	UA6-12 • UA8-12	UA6-15 • UA8-15	UA11-18
Chuck diameter		in.	8	10	12	15	18
Max. speed		min ⁻¹	3,000	2,500	2,000	1,500	1,200
Jaw stroke		mm	φ 50	φ 60	φ 70	φ 100	φ 120
Workpiece diameter	Max.	mm	φ 200	φ 214	φ 280	φ 370	φ 411
	Min.	mm	φ 20	φ 36	φ 70	φ 110	φ 120
Max. clamping force		KN	41.2	49	68.6	68.6	68.6
Oil motor torque		N-m	156.8	156.8	156.8	156.8	156.8
Weight		kg	28	49.5	80	130	186

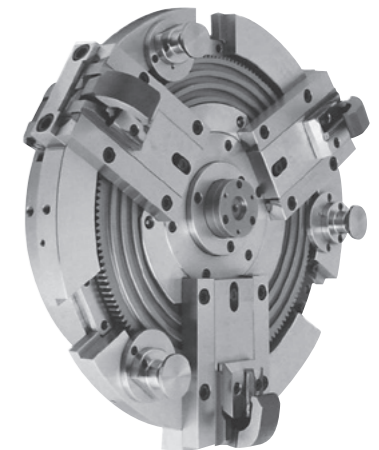
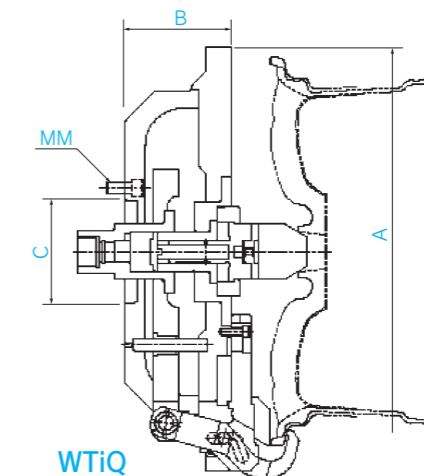
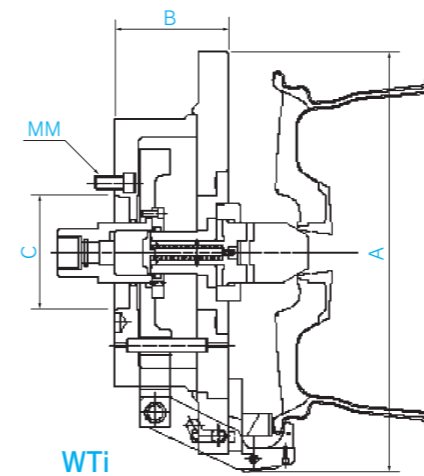
Dimension		Unit	UA6-8 • UA8-8	UA6-10 • UA8-10	UA6-12 • UA8-12	UA6-15 • UA8-15	UA11-18
A		mm	φ 210	φ 254	φ 305	φ 381	φ 457
H	A2-#6	mm	105	140	135	140	-
	A2-#8	mm	115	120	140	140	-
	A2-#11	mm	-	-	-	-	140
P		mm	48.2	57.1	61.9	71.5	71.5
I (in the case of Hard-Jaws)		mm	83.6	96.5	115.2	130	130
b		mm	32	38	44.4	55	55
L1		mm	285	285	285	285	285
L2		mm	122	122	122	122	122

You can choose sort taper type (JIS B 6109) or straight pilot type by the spindle nose shape of the install machine.
The draw screw size is selectable other than the list shown above. Please confirm details to MATSUMOTO.

WTi & WTiQ

Finger chuck for aluminum wheels

It is possible to clamp consecutive position between a minimum diameter and the maximum diameter. Clamping at the best position is given.

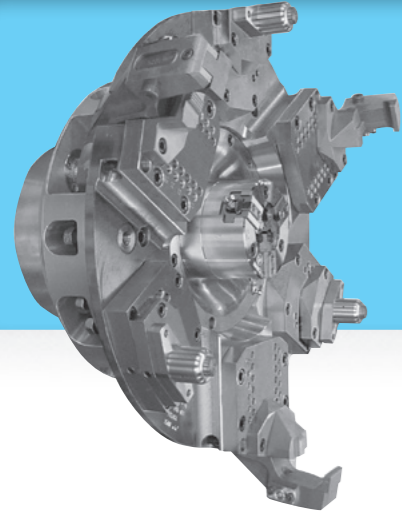


Dimension		Unit	WTi-300	WTi-310	WTi-321	WTi-322	WTi-323	WTiQ-300	WTiQ-323
A		mm	φ 495.3	φ 546.1	φ 640	φ 660.4	φ 685.8	φ 550	φ 677
B		mm	139.7	149.7	159.7	149.7	152.4	145	155
C			A2-#8	A2-#8	A2-#11	A2-#11	A2-#11	A2-#8	A2-#11
MM		mm	6-M16×P2	6-M16×P2	6-M16×P2	6-M20×P2.5	6-M20×P2.5	6-M16×P2	6-M20×P2.5
Weight		kg	100	120	220	230	220	143	270

Passenger car / Motorcycle / Light truck wheel (Quick-change model)

Position	Unit	WTiQ-300 Cam arm			WTiQ-323 Cam arm		
		T	R	V	T	R	V
Min.	in.	13	15	17	18	20	22
Max.	in.	16	18	20	21	23	25

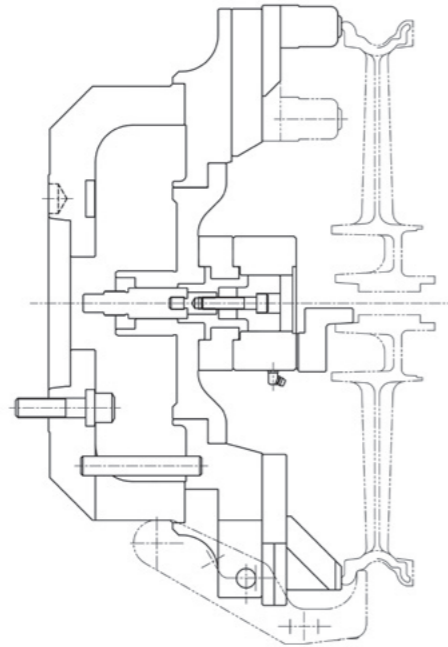
WTiQ can clamp any position by the range of one cam arm.
The clamp diameter can be changed like the scroll chuck.



WWiL

Finger chuck for aluminum wheels

The composit structure chuck of steel and aluminum Super light weight!



Specification (Our conventional model comparison)

	Unit	WWiL-280 (Ultra lightweight model)	WWi-300 (conventional)	Remarks
Work piece		Motorcycle aluminum wheel		
Workpiece diameter	inch	11 - 18	13 - 20	Miniaturized 2 inches
Face plate diameter	mm	φ 482.6 (19")	φ 546.1 (21.5")	Miniaturized 2.5 inches
From spindle to work piece	mm	240	257.5	17.5 (mm) dimension down
Weight	kg	90	116	22 (%) off
GD ² (Moment of inertia)	N·m ²	102.8	147	30 (%) reduction
	Kgf·m ²	10.5	15	
Maximum speed	R.P.M.	2,500	2,200	300 (R.P.M.) speed up
Permissible cylinder input	KN	34.32	24.52	
Clamping force	KN	30.89	22.07	
Unbalance	g	≤30	≤50	At face plate outer
Tools for clamp dia. change	tools	2	5	60 (%) reduction

Replacing from exist chuck to new chuck

When replacing one of your existing chucks with a newer model, please refer to the following table. Even if you are using a product from another OEM, the following information is required, as it may be necessary to make adjustments to your existing setup.

Status	Required informations	Examples & References
① In the case of using MMK power chucks	<ul style="list-style-type: none"> Model name of existing chuck Serial number of existing chuck Adopting machine tool maker name and model name 	⇒ Ex.) HA6-8-46-02 *1 ⇒ Ex.) 60888 (5-digit *2) or 100211 (6-digit *3) ⇒ Ex.) Hitachi Seiki / NK-20 Note : *1 *2 *3 are marking on chuck-surface.
② In the case of using a product from another OEM	<ul style="list-style-type: none"> Model name of existing chuck Drawing of existing chuck Drawing of existing cylinder Adopting machine tool maker name and model name 	⇒ Model name of other maker ⇒ Necessary for adjusting connection screw sizes, installation dimensions, conformity of specification etc.
③ In the case of using a product from another OEM with no required informations.	<ul style="list-style-type: none"> Give us informations according to the sketch below 	⇒ You can't see a section as below, because it's covered with a machine-cover.

- Adopting machine tool maker name and model name
- Nose dimension of adopting machine tool
- Of a draw tube or a draw bar
 - Screw dimension
 - Allowable screw length
 - Port dimension
- Cylinder
 - Maker name and model name
 - Piston area (push / pull)
 - Piston stroke



Always use mmk jaws

For your safety

For your safety, always use **mmk** jaws on any type of **mmk** power chuck. **mmk** cannot guarantee the safety of your power chuck if you are using jaws made by another OEM.

Importance of the grease feed

About Grease for mmk Power Chuck

The biggest factor that reduces the durability of the chuck is due to poor lubrication. To lubricate the chuck, inject 3 to 4 cc of the recommended grease in the table below for each grease nipple from the grease nipple on the outer circumference of each master jaw. Inject more frequently, especially when water-soluble cutting fluid is used.

Recommended grease

Grease manufacturer	Grease type	Lubrication frequency	NLGI.No
Rhenus Lub GmbH	Rhenus CAZ2	Once a week	2
Magna Industrial Co.,Ltd.	Omega 57	Once every 3 days	2
SUMICO LUBRICANT CO., LTD.	LG-S No.1	Once every 8 hours	1

Note : When the numeric of consistency is lower ,the grease is getting thick.
Rhenus CAZ2 is sealed and applied when shipped from our factory.

Grease Guns * Depending on the specifications, different grease maybe used.

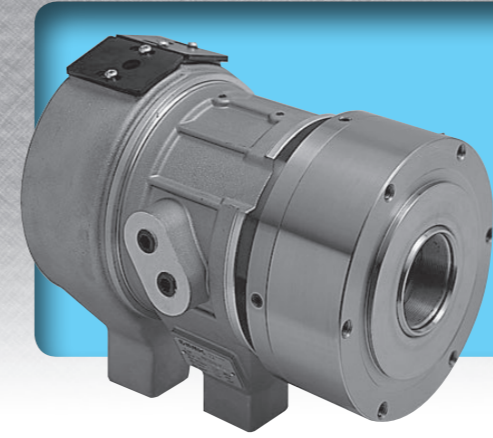
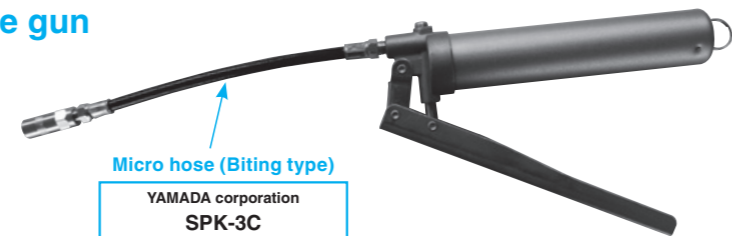
We recommend a lever-style with a chucking structure type. Those clearance gaps of **mmk** power chucks are small because of high-accuracy-structure, so that infusion pressure becomes high. Those grease guns with big-bore type have possibilities to interfere with the spot facings of grease nipples. It's better to use a small-bore type to prevent interference.

Mixing/Changing Grease

We don't recommend using the grease mixing different kinds. Grease includes some kind of additives, but it isn't shown for trade secrets of each grease makers. In the case of using the grease mixing different kinds, the phenomenon such as hardening may occur. When such a phenomenon occurs or when you change it for other kind of grease, disassemble the chuck and clean it, to fill whole quantity with new grease.

Recommended item Grease gun

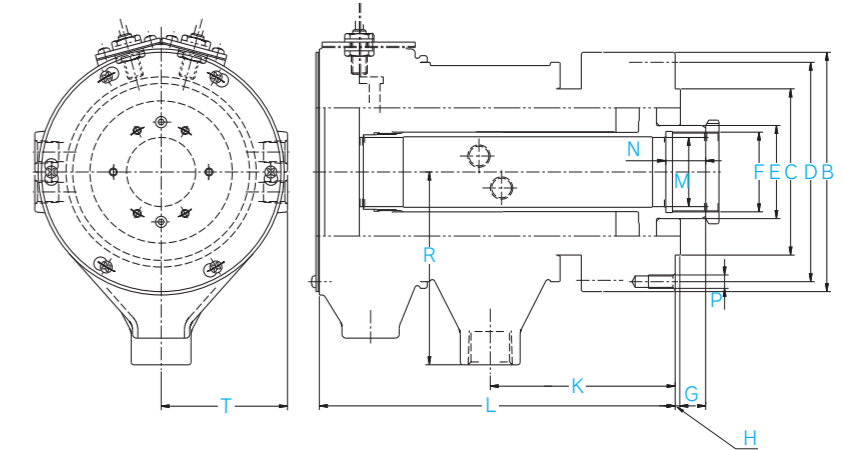
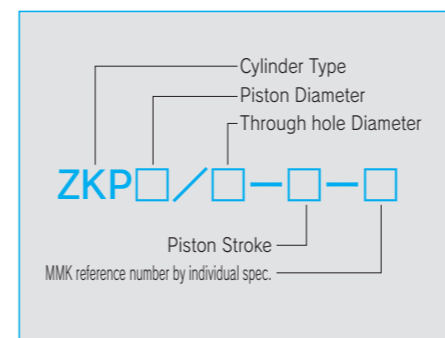
- **Manufacturer**
YAMADA corporation
- **Model**
KH-120



ZKP

Big bore type hydraulic actuator

The ZKP model is equipped with a large Through hole and is best suited for high speed turning. The built-in check valve is standard as a safety precaution.

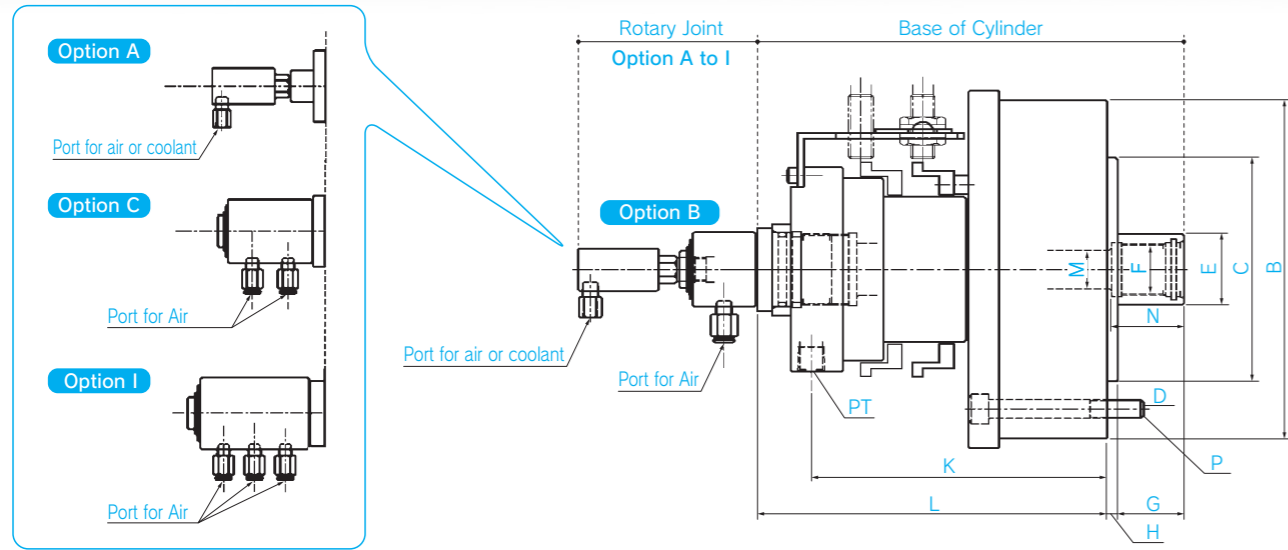
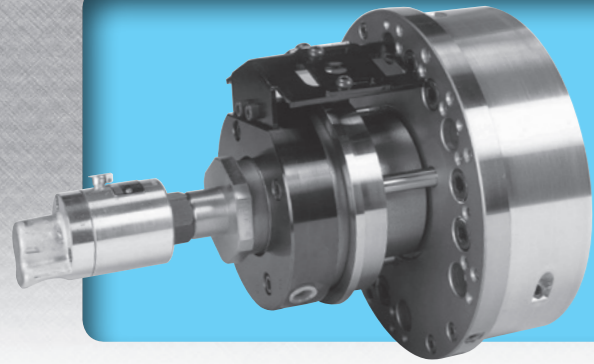


Specification		Unit	ZKP100/34-10	ZKP125/46-13	ZKP150/66-17	ZKP170/82-20	ZKP195/93-20	ZKP230/120-30	ZKP280/175-30	ZKP335/204-30	ZKP400/230-30
Piston area	Push	cm ²	65.97	99.82	126.4	156.1	211.95	282.7	332.2	501	745.9
	Pul	cm ²	60.44	89.53	119.9	145.3	194.68	250.3	317.1	465.7	705
Draw pull	Push	KN	17.45	26.41	33.4	41.3	65.4	87.27	87.9	110.5	230.3
	Pull	KN	15.99	23.69	31.7	38.4	60.1	77.26	83.9	102.7	217.6
Piston stroke		mm	10	13	17	20	20	30	30	30	30
Through hole dia.		mm	34	46	66	82	93	120	175	204	230
Max. rotation speed		min ⁻¹	8,000	7,100	5,300	4,500	4,000	3,400	2,400	1,100	575
Max. pressure		Mpa	2.94	2.94	2.94	2.94	3.43	3.43	2.94	2.45	3.43
Weight		kg	14	18	27	40	46.5	65	155	195	350

Dimension		Unit	ZKP100/34-10	ZKP125/46-13	ZKP150/66-17	ZKP170/82-20	ZKP195/93-20	ZKP230/120-30	ZKP280/175-30	ZKP335/204-30	ZKP400/230-30
B		mm	135	160	183	215	240	270	330	385	470
C		mm	80	80	125	125	180	165	220	280	315
D		mm	115	140	165	185	215	250	298	360	432
E		mm	48	65	85	102	115	145	195	230	265
F			M40xP1.5	M55xP1.5	M72xP1.5	M90xP1.5	M103xP2.0	M130xP2.0	M185xP3.0	M215xP3.0	M245xP3.0
G	Max.	mm	13	15	19	22	21	32	35	35	35
	Min	mm	3	2	2	2	1	2	5	5	5
H		mm	4	4	4	4	7	7	7	7	7
K		mm	121	131.5	150	177.5	187	207.5	228	286	297
L		mm	239	251.5	295.1	350.5	367.5	396.5	469.8	571.6	648
M		mm	34	46	66	82	93	120	175	204	230
N		mm	25	30	35	35	35	40	45	45	45
P			6-M8Depth16	12-M10Depth20	12-M10Depth20	6-M10Depth20	12-M12Depth24	12-M12Depth24	12-M12Depth24	12-M16Depth32	12-M20Depth40
R		mm	110	140	160	185	190	230	305	360	368
T		mm	70	85	105	120	128	140	199	227	250

2R

Air or coolant through hydraulic actuator

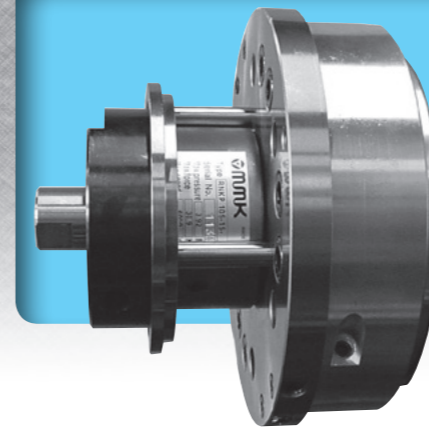


Specification		Unit	2R105/21-25	2R120/21-25	2R120/21-35
Piston area	Push	cm ²	78.1	104.6	104.6
	Pul	cm ²	75.2	101.8	101.8
Draw pull	Push	KN	28.10	37.64	37.64
	Pul	KN	27.06	36.63	36.63
Piston stroke		mm	25	25	35
Through hole dia.		mm	21	21	21
Max. rotation speed		min ⁻¹	6,000	5,000	5,000
Max. pressure		Mpa	4.0	4.0	4.0
Weight		kg	11	11.5	13

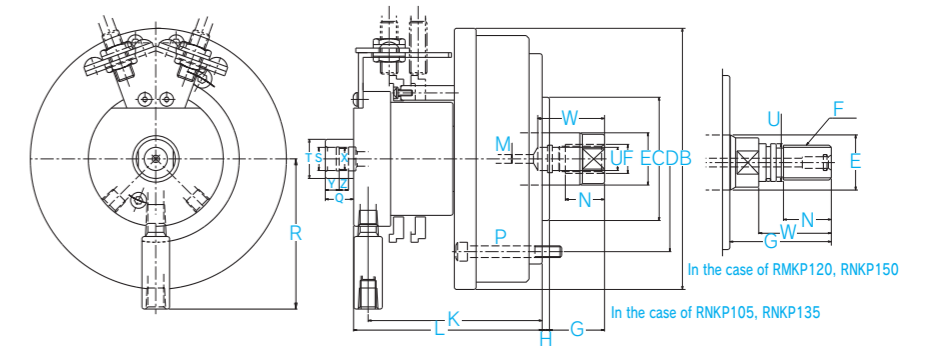
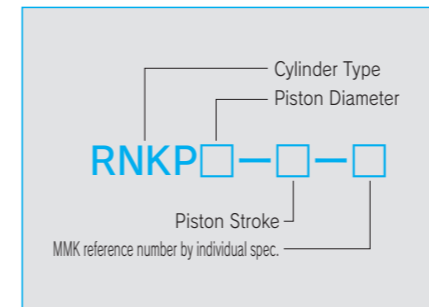
Dimension		Unit	2R105/21-25	2R120/21-25	2R120/21-35
B		mm	180	192	192
C		mm	85	120	120
D		mm	128	150	150
E		mm	38	38	38
F			M28×P1.5	M28×P1.5	M28×P1.5
G	Max.	mm	32	37	37
	Min.	mm	7	7	2
H		mm	5	5	5
K		mm	148.5	143.5	162
L		mm	167.5	162.5	190
M		mm	21	21	21
N		mm	35	35	35
P			6-M8Depth75	6-M10Depth75	6-M10Depth85
R		mm	-	-	-
T		mm	-	-	-

RNKP

Short type closed center hydraulic actuator



The RNKP cylinder has a compact design to save valuable machine space.



Specification		Unit	RNKP105-15-02	RNKP105-15-09	RNKP120-25-07	RNKP120-25-08	RNKP135-25-01	RNKP135-25-02	RNKP150-35-01	RNKP150-35-02
Piston area	Push	cm ²	83	83	109.5	109.5	141.9	141.9	175.5	175.5
	Pull	cm ²	76.4	76.4	101.7	101.7	132.9	132.9	165.4	165.4
Draw pull	Push	KN	29.3	29.3	38.6	38.6	50.1	50.1	61.9	61.9
	Pull	KN	27	27	35.9	35.9	46.9	46.9	58.3	58.3
Piston stroke		mm	15	15	25	25	25	25	35	35
Pouring water			-	○	-	○	-	○	-	○
Max. turning speed		min ⁻¹	6,000	6,000	5,000	5,000	5,000	5,000	4,200	4,200
Max. pressure		Mpa	3.92	3.92	3.92	3.92	3.92	3.92	3.92	3.92
Weight		kg	11.5	11.5	12.7	12.7	16.8	16.8	17.5	17.5

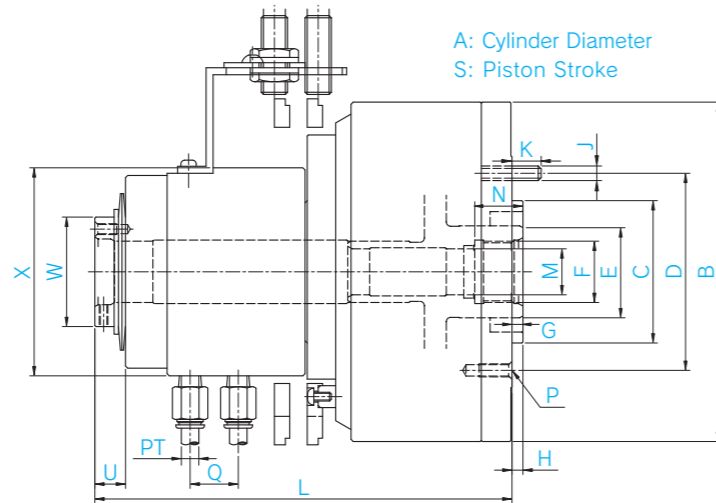
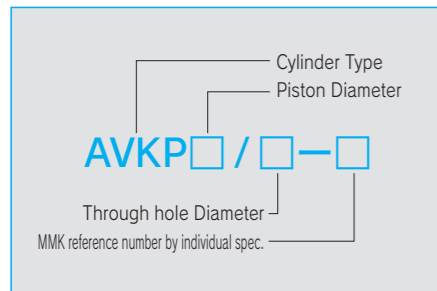
Dimension		Unit	RNKP105-15-02	RNKP105-15-09	RNKP120-25-07	RNKP120-25-08	RNKP135-25-01	RNKP135-25-02	RNKP150-35-01	RNKP150-35-02
B		mm	180	180	192	192	225	225	222	222
C		mm	85	85	120	120	120	120	110	110
D		mm	128	128	150	150	160	160	175	175
E		mm	36	36	38	38	36	36	38	38
F			M20×P2.5	M20×P2.5	M24×P3.0	M24×P3.0	M20×P2.5	M20×P2.5	M24×P3.0	M24×P3.0
G	Max.	mm	53	53	95	95	58	58	105	105
	Min.	mm	38	38	70	70	33	33	70	70
H		mm	5	5	5	5	5	5	5	5
K		mm	120	120	129	129	129	129	167	167
L		mm	130	130	139	139	139	139	180	180
M		mm	6	6	6	6	6	6	6	6
N		mm	27	27	38	38	27	27	38	38
P			6-M8	6-M8	6-M10	6-M10	6-M10	6-M10	6-M12	6-M12
R		mm	103.5	103.5	46.5	46.5	103.5	103.5	103.5	103.5
S		mm	-	16	-	16	-	16	-	16
T		mm	-	27	-	27	-	27	-	27
U		mm	16	16	26	26	16	16	26	26
W		mm	46	46	50	50	46	46	50	50
X			-	M16×P1.5	-	M16×P1.5	-	M16×P1.5	-	M16×P1.5
Y		mm	-	9.5	-	9.5	-	9.5	-	9.5
Z		mm	-	6.5	-	6.5	-	6.5	-	6.5



AVKP

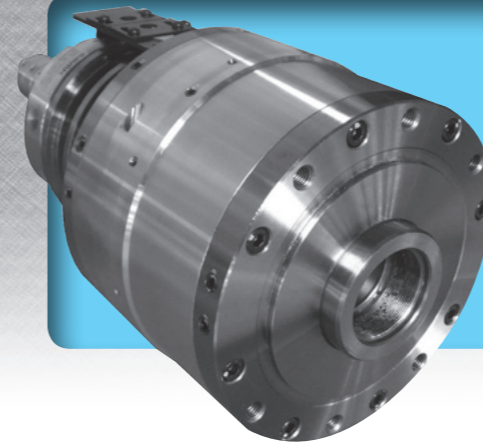
Thru hole high speed pneumatic actuator

AVKP pneumatic actuator is for an NC lathe which does not have a hydraulic unit.



Specification		Unit	AVKP88/8-5	AVKP130/21-15	AVKP165/31-15	AVKP190/31-15
Piston area	Push	cm ²	59.2	124.2	202.4	272.1
	Pull	cm ²	56.9	119	190	259.7
Draw pull	Push	KN	4.6	7.9	13.0	17.4
	Pull	KN	4.5	7.6	12.2	16.6
Max. pressure		MPa	0.98	0.78	0.78	0.78
Min. operation pressure		MPa	0.12	0.08	0.08	0.08
Piston stroke		mm	5	15	15	15
Cylinder diameter		mm	88	130	165	190
Max. rotation speed		min ⁻¹	10,000	8,000	6,000	6,000
Weight		kg	4.8	7.5	9.4	10.4

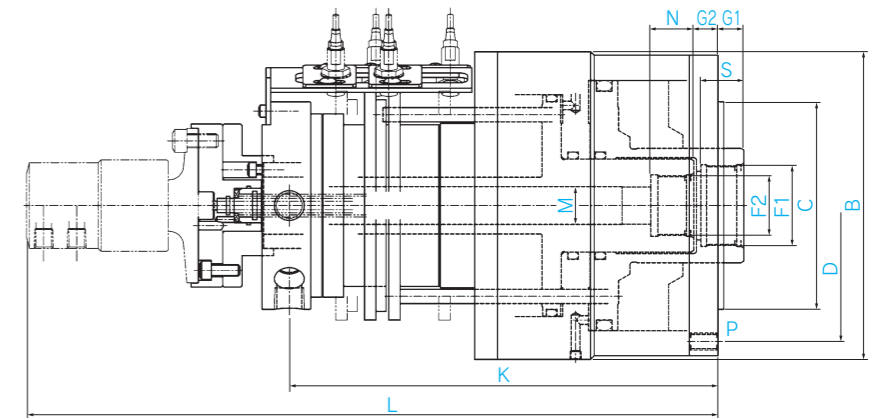
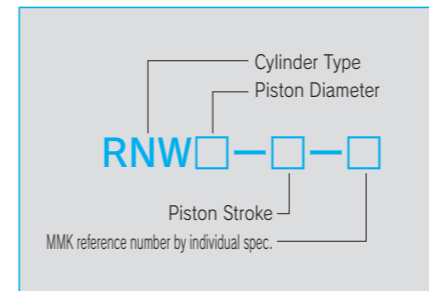
Dimension		Unit	AVKP88/8-5	AVKP130/21-15	AVKP165/31-15	AVKP190/31-15
A		mm	φ 88	φ 130	φ 165	φ 190
B		mm	φ 119	φ 155	φ 190	φ 215
C		mm	φ 80h7	φ 65h7	φ 80h7	φ 80h7
D		mm	P.C.D.105	P.C.D.90	P.C.D.100	P.C.D.100
E		mm	φ 22	φ 42	φ 55	φ 55
F			M15xP1.5	M28xP1.5	M42xP1.5	M42xP1.5
G	Max.	mm	23.5	5	15	15
	Min.	mm	18.5	-10	0	0
H		mm	5	5	5	5
J			M6	-	-	-
K		mm	9	-	-	-
L		mm	144	190.5	207.5	198
M		mm	φ 8	φ 21	φ 31	φ 31
N		mm	25	22	25	25
P			-	6-M6x15	6-M10x18	6-M10x18
Q		mm	-	22	22	22
S		mm	5	15	15	15
U		mm	8	14	31	21.5
W		mm	φ 30	φ 50	φ 50	φ 50
X		mm	φ 81	φ 95	φ 95	φ 95
PT		mm	8	8	8	8



RNW

Short type closed center hydraulic double actuator

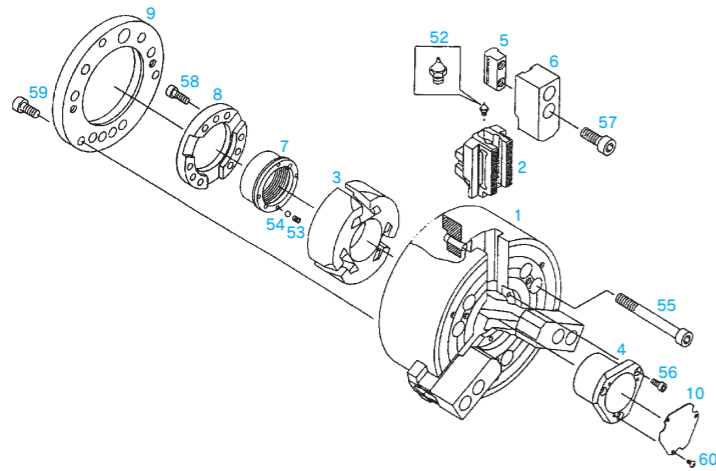
Compact design



Specification		Unit	RNW30-100	RNW40-12	RNW85-12	RNW155-20-02	RNW215-30-01
Primary piston area	Push	cm ²	132.6	125.5	160.2	207.3	311
	Pull	cm ²	120.6	110.7	146.1	190.3	274.9
Secondary piston area	Push	cm ²	4.5	6.4	50.5	176.1	338.8
	Pull	cm ²	3.2	6.4	49.6	155.5	276.5
Primary piston draw pull	Push	KN	46.78	44.28	56.52	54.85	82.29
	Pull	KN	42.55	39.05	51.54	50.35	72.74
Secondary piston draw pull	Push	KN	1.59	2.26	17.82	46.60	89.65
	Pull	KN	1.13	2.26	17.50	41.15	73.16
Piston stroke, primary / secondary		mm	22/100	35/12	35/12	35/20	40/30
Through hole dia.		mm	-	14	14	26	42
Max. turning speed		min ⁻¹	2,000	4,000	4,000	3,600	2,000
Max. pressure		Mpa	3.92	3.92	3.92	2.94	2.94
		kg/cm ²	40	40	40	30	30
GD ² (Moment of inertia)		N-m ²	4.6	5.1	6.3	6.1	21.7
		Kgf-m ²	0.47	0.52	0.64	0.62	2.21
Weight		kg	33	22.5	32	40	85

Dimension		Unit	RNW30-100	RNW40-12	RNW85-12	RNW155-20-02	RNW215-30-01
B		mm	190	215	200	215	275
C		mm	110	145	80	145	180
D		mm	160	190	100	190	243
F1			M50P1.5	M50P1.5	M42P1.5	M56P1.5	M105P2.0
F2			M10	M20P1.5	M24P1.5	M42P1.5	M85P2.0
G1	Max.	mm	45	70	40	53	72
	Min.	mm	23	35	28	18	32
G2	Max.	mm	77	4	30	-17	-7
	Min.	mm	-23	-8	-5	-37	-37
K		mm	217	180	243.5	300	395.5
L		mm	383	256	332.5	483	556
M		mm	-	14	14	26	42
N		mm	20	25	25	25	35
P			6-M12D24	6-M10x95	6-M10D15	6-M12D20	12-M12
S		mm	30	30	28	30	34

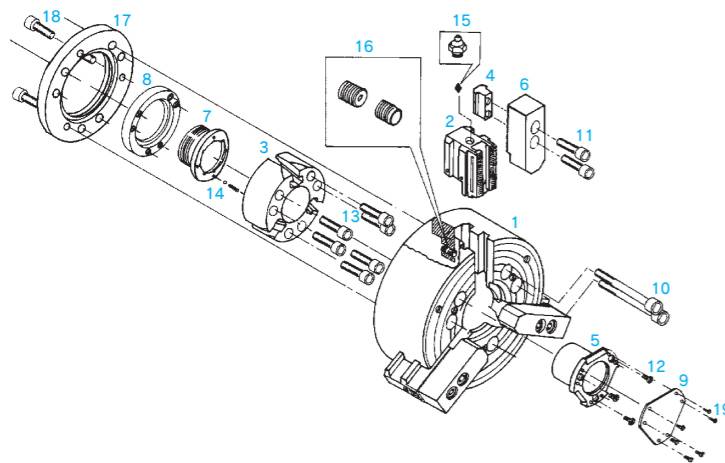
Z model power chuck [Through hole]



Construction Drawings & Parts Lists

1	Chuck Body	52	Grease Nipple
2	Master Jaw	53	Spring
3	Shifter	54	Steel Ball
4	Cap	55	Cap Screw
5	T-nut	56	Cap Screw
6	Soft Jaw	57	Cap Screw
7	Draw Screw	58	Cap Screw
8	Thrust Block	59	Cap Screw
9	Rear Plate	60	Cap Screw
10	Cover Lid		

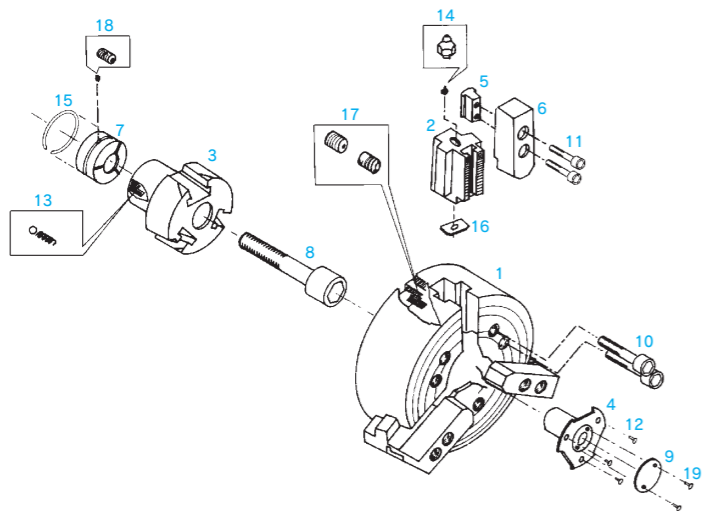
He, HeX model power chuck [Through hole]



Construction Drawings & Parts Lists

1	Chuck Body	11	Cap Screw
2	Master Jaw	12	Cap Screw
3	Shifter	13	Cap Screw
4	T-nut	14	Steel Ball
5	End Plate	15	Grease Nipple
6	Soft Jaw	16	Safety Screw
7	Draw Screw	17	Rear Plate
8	Thrust Block	18	Cap Screw
9	Cover Lid	19	Cap Screw
10	Cap Screw		

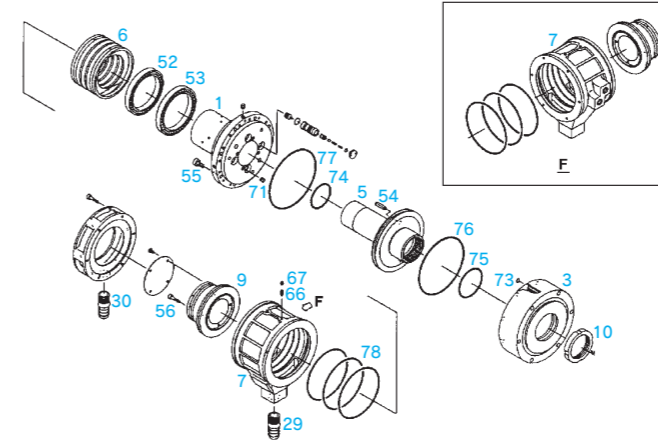
HH model power chuck [Closed center]



Construction Drawings & Parts Lists

1	Chuck Body	11	Cap Screw
2	Master Jaw	12	Cap Screw
3	Shifter	13	Steel Ball
4	End Plate	14	Grease Nipple
5	T-nut	15	Circle Spring
6	Soft Jaw	16	Dust Plate
7	Draw Nut	17	Safety Screw
8	Draw Bolt	18	Set Screw
9	Cover Lid	19	Cap Screw
10	Cap Screw		

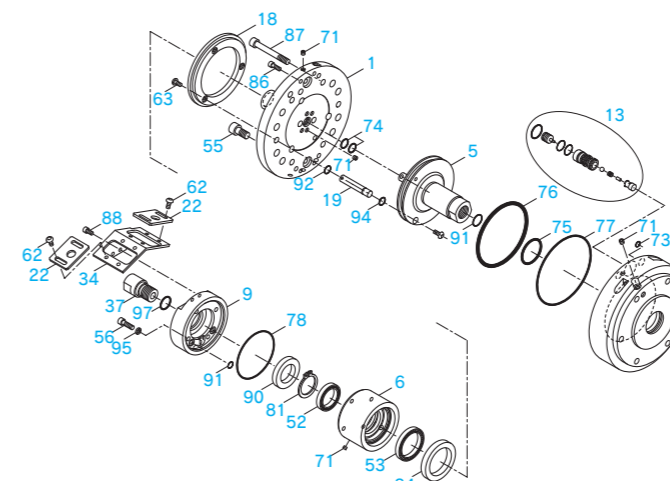
ZKP model hydraulic actuator [Through hole]



Construction Drawings & Parts Lists

1	Cylinder Body (A)	55	Cap Screw
3	Cylinder Body (B)	56	Cap Screw
5	Piston	66	Set Screw
6	Distributor	67	Set Screw
7	Distributor Case	71	Plug
9	End plate	73	O-ring
10	Nut	74	O-ring
29	Drain Joint	75	O-ring
30	drain Joint	76	O-ring
52	Ball Bearing#	77	O-ring
53	Ball Bearing#	78	O-ring
54	Spring Roll Pin		

RNKP model hydraulic actuator [Closed center]

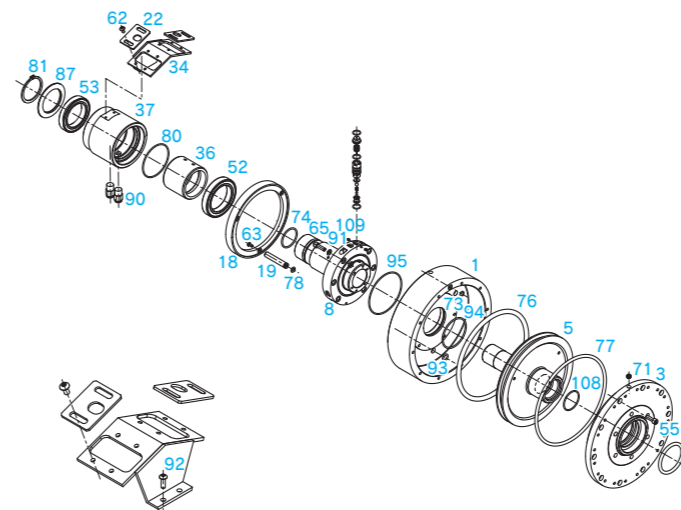


No. 37 and No. 97 are for coolant through type.

Construction Drawings & Parts Lists

1	Cylinder Body (A)	73	O-ring
3	Cylinder Body (B)	74	O-ring
5	Piston	75	O-ring
6	Distributor	76	O-ring
9	End plate	77	O-ring
13	Check Valve Unit	78	O-ring
18	Dog (A)	81	Snap Ring
19	Dog Bar	84	Oil Seal
22	Plate	86	Cap Screw
34	Stay	87	Cap Screw
37	Bushing	88	Cap Screw
52	Bearing	90	Oil Seal
53	Bearing	91	O-ring
55	Cap Screw	92	O-ring
56	Cap Screw	94	O-ring
62	Bolt	95	Seal Washer
63	Bolt	97	O-ring
71	Plug		

AVKP model pneumatic actuator [Through hole]

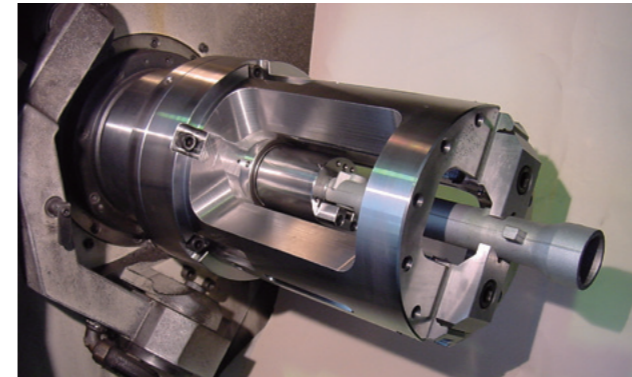


Construction Drawings & Parts Lists

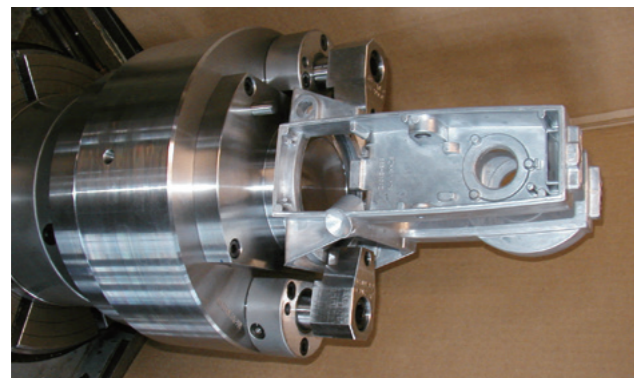
1	Cylinder Body (A)	73	O-ring
3	Cylinder Body (B)	74	O-ring
5	Piston	75	O-ring
8	Shaft	76	O-ring
18	Dog	77	O-ring
19	Dog Bar	78	O-ring
22	Plate	80	O-ring
34	Stay	81	Snap Ring
36	Bushing	87	Spring
37	Sleeve	90	Joint
52	Bearing	91	Seal Washer
53	Bearing	92	Bolt
55	Bolt	93	O-ring
62	Bolt	94	O-ring
63	Bolt	95	O-ring
65	Bolt	108	O-ring
71	Plug	109	Set Screw



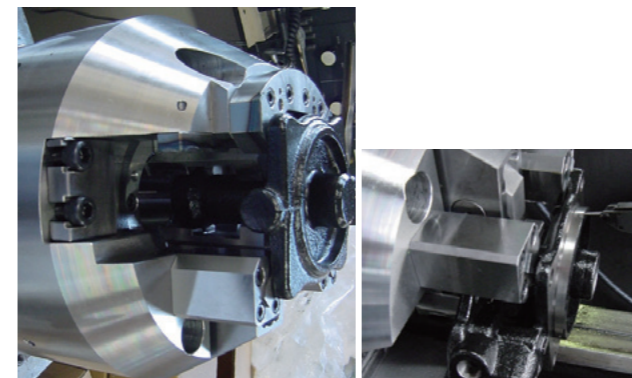
Design chuck	
Model name	HHA11-28-10
Kind of machine	Vertical lathe
Workpiece	Base carrier parts for power shovel
Chuck diameter	28inch (φ 711)
Nose	A2-#11
Reference	Drives only one in 3-jaws, Max. R.P.M.400



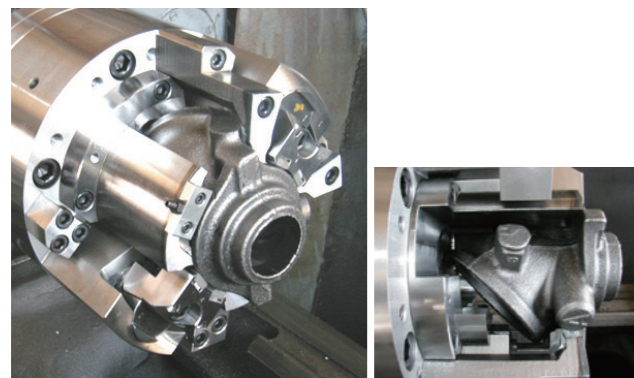
Long stroke 2 jaw chuck	
Model name	PFJA8-10
Kind of machine	Horizontal lathe
Workpiece	front fork for motorcycle
Chuck diameter	10inch (φ 254)
Nose	A2-#8
Reference	wedge-type of 2-jaws, leap-over clamping (long stroke), Max. R.P.M. 2,500



Finger chuck	
Model name	HPCJA8-12
Kind of machine	Combined lathe (second process)
Workpiece	Die-cast aluminum, turning & milling
Chuck diameter	12inch (φ 305)
Nose	A2-#8
Reference	Cam slot type of 2-jaws (Pull-down, Swivel face clamp)



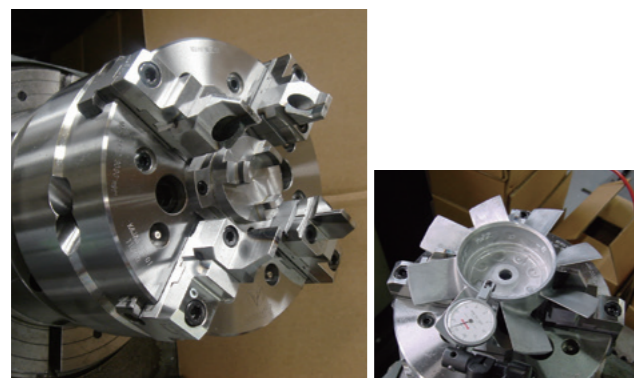
Long stroke 2 jaw chuck	
Model name	ZLJA6-10
Workpiece	hydraulic component
Chuck diameter	10inch (φ 254)
Nose	A2-#6
Reference	wedge-type of 2-jaws, jaw-stroke φ 20, leap-over clamping, Drives only one in two jaws, Max. R.P.M. 1,500



Power bar chuck	
Model name	PBJA6-10-02
Kind of machine	Horizontal lathe
Workpiece	Parts for automobiles
Chuck diameter	10inch (φ 254)
Nose	A2-#6
Reference	Power-bar type of 2-jaws (Pull-down), Max. R.P.M. 2,000



Swivel chuck	
Model name	HPC-7-01
Kind of machine	Horizontal lathe
Workpiece	Thin-ring (thickness : 2mm)
Chuck diameter	7inch (φ 178)
Nose	Strait type
Reference	Combination-chuck, Face clamping of 3inch + 7inch, Built-in air cylinder, Max. R.P.M. 2,000



Cam lever 4 jaw chuck	
Model name	K4JA6-8B-01
Kind of machine	Horizontal lathe
Workpiece	Cooling fans for vehicles (8 pieces of blades, Die-cast aluminum)
Chuck diameter	8inch (φ 203.2)
Nose	A2-#6
Reference	Cam lever type of 4-jaws, Max. R.P.M. 3,000

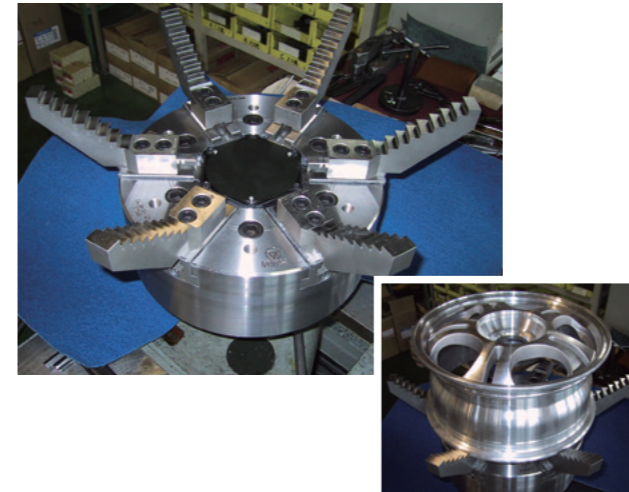


Stationary chuck	
Model name	STC-8-52
Kind of machine	Machining center
Workpiece	Gear-wheel
Chuck diameter	8inch (φ 203.2)
Reference	Wedge-type of stationary chuck (non-rotation), Trimming inner jaws, Workpiece mounting confirmation structure



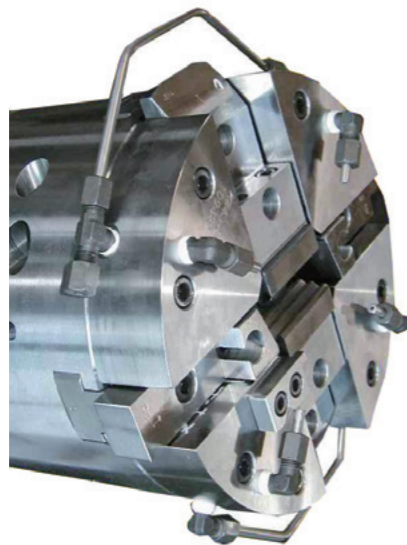
Cam lever chuck

Model name	K5JA8-20-07
Kind of machine	Horizontal lathe
Workpiece	Aluminum wheels for automobiles (14inch to 20inch), Remachining (finishing process after coating)
Chuck diameter	20inch (φ 508)
Nose	A2-#8
Reference	Cam lever type of 5-jaws, Max. R.P.M. 1,800



6 jaw chuck

Model name	Z6JA8-15-120B-03
Kind of machine	Horizontal lathe
Workpiece	Aluminum wheels for automobiles (14inch to 20inch), Remachining (finishing process after coating)
Chuck diameter	15inch (φ 381)
Nose	A2-#8
Reference	Wedge type of 6-jaws



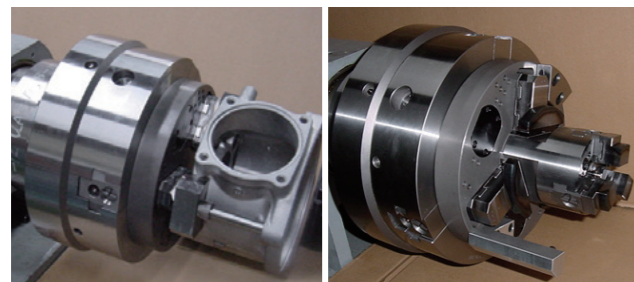
Cam lever chuck

Model name	KW4JA8-12-85
Kind of machine	Combined Machine
Workpiece	Square Timber
Reference	Cam Lever type of 4-jaws, Two sets of jaws facing each other operate independently., Double cylinder



2.5 inch power chuck

Model name	USS2-25
Diameter	63.5mm
Max. speed	7,000min ⁻¹
Jaw stroke	φ 2.2mm
Max. clamping force	6.87KN
Weight	1.8kg

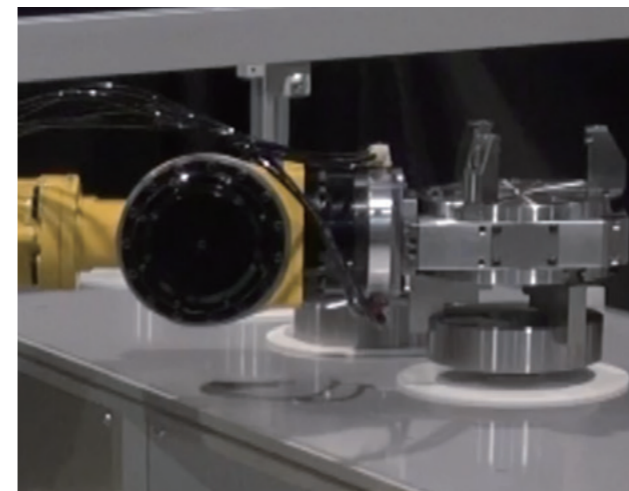


交換プレート例



Automatic jaw exchange chuck

Model name	AJCA8-12-35-07
Kind of machine	Combined machine
Workpiece	motor case, die-cast aluminum
Chuck diameter	12inch (φ 304.8)
Nose	A2-#8
Reference	Work-stopper / positioning to rotation direction / balance weight for exchange plates, Max. R.P.M. 2,500



Loader chuck

Model name	LC-8
Kind of machine	Robot and material handling machine
Workpiece	Round material
Max. clamping force	0.96 (KN) / 0.49 (MPa)
Weight	15kg
Reference	Both sides clamp

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