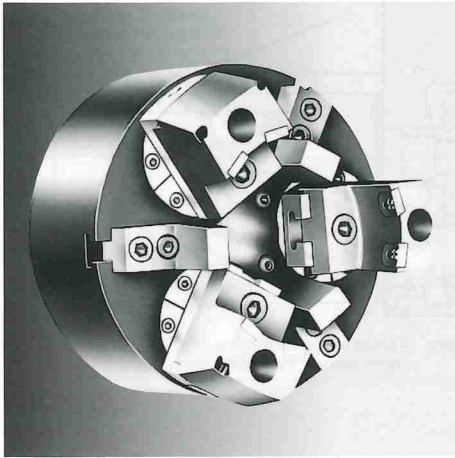
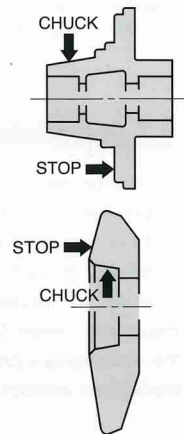
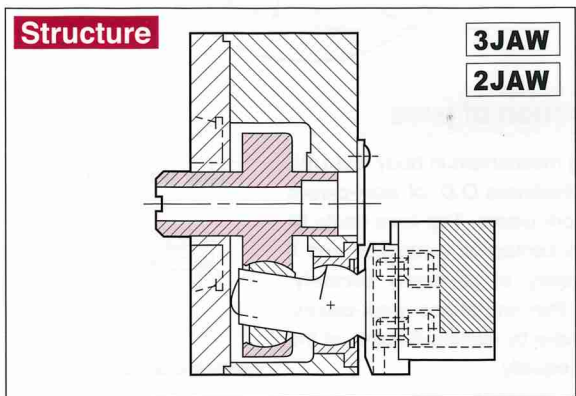


SWING TYPE [Pull-Back Action]

UBL Centralizing type Chuck



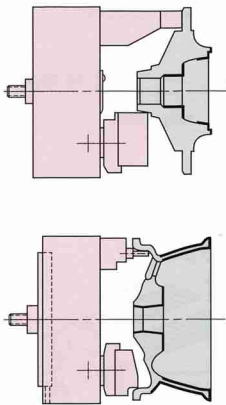
The UBL Centralizing type Chuck employs a common clamping method, using the clamping part as a concentricity reference and the stop face as an end face reference. They are capable of clamping such difficult-to-clamp work-pieces as tapered (20 degree max.) surfaces of casting or forging products, holding them tightly even under heavy cuttings, 2 jaws type and 3 jaws type are available and every UBL Chucks can correspond to both I.D. or O.D. clamping which can be easily converted from each other (see page 3.) We are liable to design and produce chucks according to your request such as troublesome body modification and every top tooling (jaws, stoppers etc...). UBL Chucks include a wide design variety, such as carbide insert jaws and special shaped jaws for material operation (see page 9), wide type jaws for thin-walled work-pieces, high-tension aluminum jaws for high-speed rotation, combination jaws and quick change jaws for small-lot production (see page 9.)



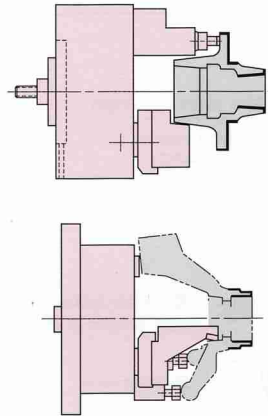
Practical examples

● **Vast variation** 5 inch size power chuck, big size dia. through hole power chuck, long stroke power chuck, combination chuck can be supplied.

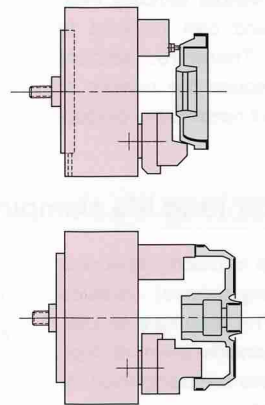
Overhung work-piece



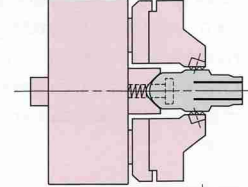
Tapered surface work-piece



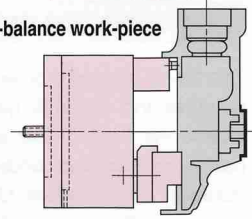
Thin-walled work-piece



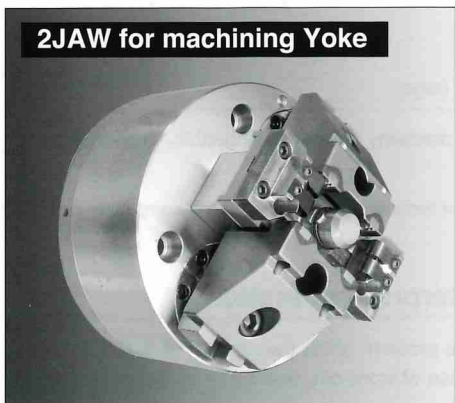
2JAW



Un-balance work-piece



2JAW for machining Yoke



Special type 6JAW centralizing chuck



This UBL 6Jaw Ball-Lok Chuck is designed to enable easy conversion of UBL between O.D. clamping and I.D. clamping. Using quick change jaws at the inside and outside jaws will further reduce your loss time for jaw replacement. For easier maintenance, the smallest 10" model employs the same parts as UBL-6, except for the actuator.

Centralizing type

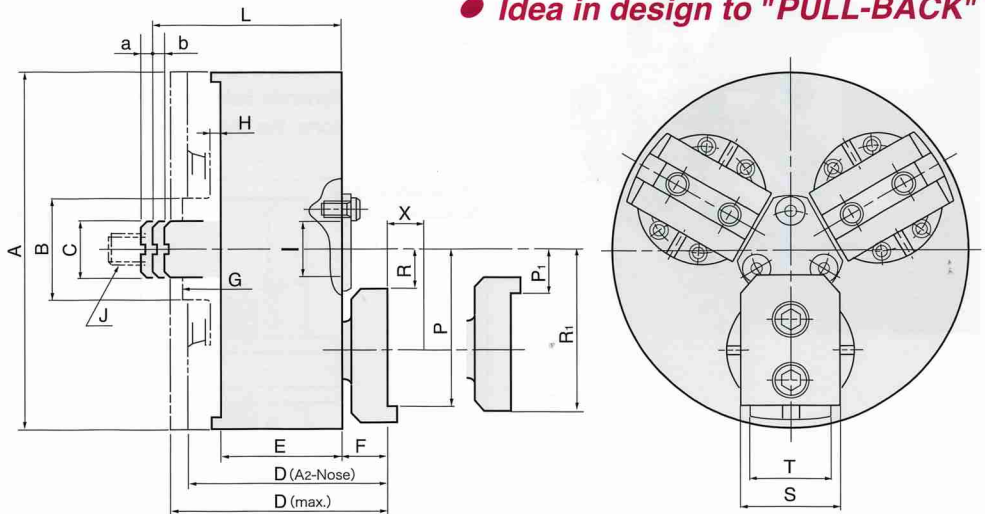
Specification of standard type



O.D. Clamping



I.D. Clamping



● Idea in design to "PULL-BACK"

- Adapters to be fixed to the end of machine spindle and top tools such as jaws, stoppers are available.
- 5 inch size or long stroke type chucks are also standardized.

Standard dimensions

Model No.	A	B min.	C	D (1)		E	F	G min.	H min.	I
				A2-Nose	Max.					
UBL-6	162	41.1	30.16	96.8	104.6	59.2	19.3	19.8	4.8	30.170 ^{+0.005} ₀
UBL-8	200	45.0	31.75	113.6	126.3	70.0	23.3	21.5	6.0	31.760 ^{+0.003} _{-0.002}
UBL-10	254	58.0	41.27	141.2	148.0	86.6	29.1	26.0	7.0	41.285 ^{±0.0025}
UBL-12	300	58.0	41.27	141.2	148.0	86.6	29.1	26.0	7.0	41.285 ^{±0.0025}
UBL-15	381	83.0	57.16	152.4	174.0	96.1	32.4	36.6	7.0	57.160 ^{±0.005}
UBL-18	457	120.7	88.90	152.4	174.0	96.1	32.4	36.6	7.0	88.900 ^{+0.01} ₀
UBL-21	533	120.7	88.90	157.2	174.0	96.1	32.4	36.6	10.0	88.900 ^{+0.01} ₀

Model No.	J	L Clamp position	a		b	P	S	T	(2) R Standard	P ₁	R ₁	X Basic hight
			Stroke									
UBL-6	M16	95.8	5.1	6.2	73.15	50.0	38.1	17.3	22.2	78.0	24.9	
UBL-8	M16	112.0	8.0	6.4	88.95	60.0	44.4	22.1	25.3	92.2	29.4	
UBL-10	M18	131.5	8.0	9.5	112.70	70.0	57.1	30.0	30.1	112.7	36.5	
UBL-12	M18	131.5	8.0	9.5	133.27	70.0	57.1	50.6	50.7	133.0	36.5	
UBL-15	M24	155.4	10.3	12.0	171.45	76.2	66.6	65.8	69.8	176.0	41.9	
UBL-18	M24	155.4	10.3	12.0	209.55	76.2	66.6	103.9	107.9	213.6	41.9	
UBL-21	M24	155.4	10.3	12.0	247.65	76.2	66.6	142.0	146.0	252.0	41.9	

Standard specifications

Model No.	Standard clamping force		Cylinder critical force		Jaw stroke (Dia.) mm	Standard clamping range mm		Basic rotation speed min ⁻¹	Chuck weight kg	Body GD ²	
	kN	(kgf)	kN	(kgf)		O.D.	I.D.			N · m ²	(kgf · m ²)
UBL-6	64.7	(6,600)	21.6	(2,200)	7.9	12.7~120	70~152	3,000	18.0	1.47	(0.15)
UBL-8	85.3	(8,700)	28.4	(2,900)	9.5	16.0~152	76~203	2,800	27.0	4.70	(0.48)
UBL-10	105.8	(10,800)	35.3	(3,600)	12.7	50.0~203	85~235	2,500	45.0	12.05	(1.23)
UBL-12	105.8	(10,800)	35.3	(3,600)	12.7	63.0~241	127~305	2,000	67.5	23.72	(2.42)
UBL-15	161.7	(16,500)	53.9	(5,500)	15.8	76.0~317	165~381	1,600	84.5	83.20	(8.49)
UBL-18	161.7	(16,500)	53.9	(5,500)	15.8	89.0~394	241~457	1,200	120.0	148.67	(15.17)
UBL-21	161.7	(16,500)	53.9	(5,500)	15.8	162.0~470	317~533	900	180.0	245.00	(25.00)

(1) Fitting portion and bolt holes of adapters are to be machined, depending on the machine spindle.

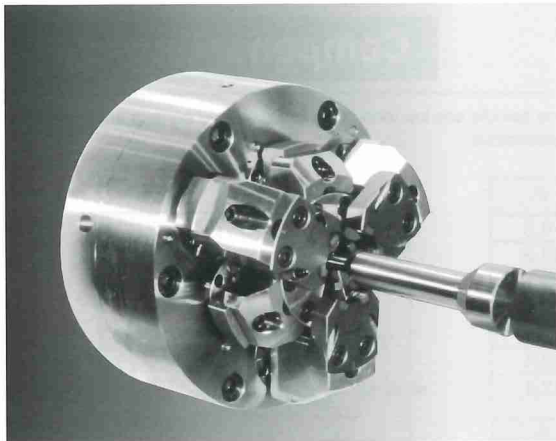
(2) Dimension "R" can be enlarged by cutting of jaw actuator end.

* Dimensions are the same for both 3 jaws and 2 jaws applications. For 2 jaws types, UBL-6 to UBL-15 are readily available.

* In the 2 jaws application, standard clamping force and actuator's critical force tensile are 60%.

* Rotating speed and draw bar thrust are different, depending on the operation conditions.

These speed and propulsive force are shown by us.



Swing-type Combination Design Chuck

UBL 6JAW CENT & COMP

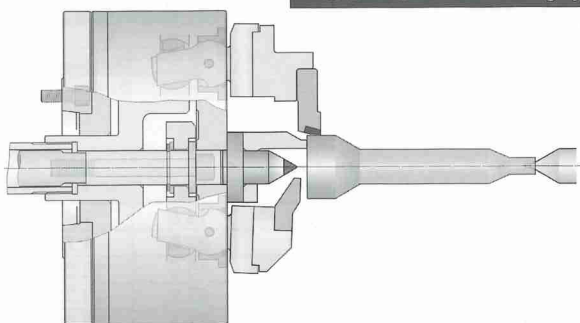
PAT.P

Only 1 unit of chuck can machine various shaft work-pieces without change-over in NC lathe.

The UBL 6JAW CENT & COMP Chuck is a swing type combination chuck which contains CENT Centralizing and COMP Compensating features in 1 unit of chuck.

※ Jaw-Escaping type Chuck & Face Driver is also available for machining of the whole circumstance of shaft work-pieces.

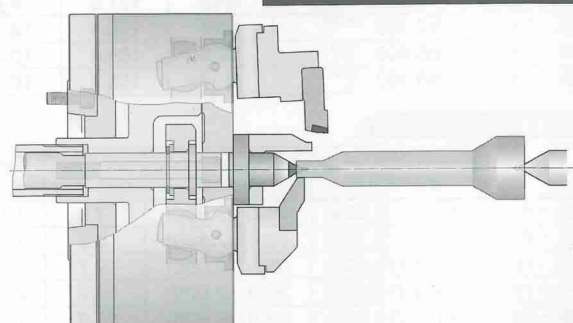
OP-1 Centralizing type



Set the height of the stopper so the shaft work-piece does not interfere to the jaw and the fixed center in next operation. And clamp with reference to the end face of the work-piece and the circumstance of big diameter by UBL 3JAW CENT [Centralizing].

The carbide inserts are attached on the top of the jawpieces to correspond to bigger cutting torque.

OP-2 Compensating type



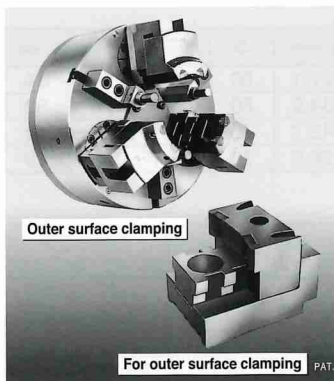
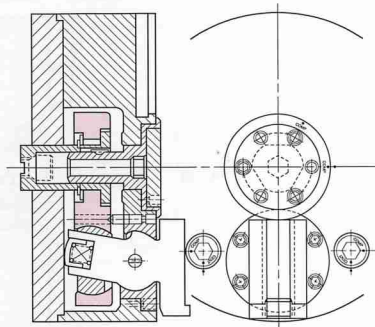
Reverse the shaft work-piece and do finish operation with clamping the small diameter (already finished portion in OP-1) by UBL 3JAW COMP [compensating] with reference to the both center by fixed center and tail center.

The jaw is hardened type not to scratch the finished surface.

UBL ON-OFF type

[Switchable between Centralizing and Compensating]

Generally, work-pieces using the clamping part as a reference and those using a both holes or both centers as a reference requires different chucks. The ON-OFF types are designed as ball-lok chucks to accommodate such varied needs, by enabling easy and quick switching between the "centralizing type / centripetal type" and the "compensating type / center offset type" with an L-wrench. The UBL ON-OFF types are standardized from 10" and 12" types [3-jaws and 2-jaws] ; therefore, dimensions, specifications and major parts, are common in consideration of their interchangeability.



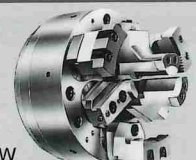
Quick (change) Jaw for UBL Chuck

Time saving to jaw changes has been realized

..... These jaws can be also used for presently using chucks.

- **Suitabilities to many kinds of work-pieces.**
- Stable clamping can be obtained, as back face is supported by base jaws.
- No need of L-wrench, tools, etc...
- These jaws can be used for UBL Chucks which have already delivered.
- Exchange of jaws can be made within only 1 minute.

Suitable for inner surface clamping



Examples : 6JAW inner clamping for special type [inner, outer, common types]

NEW



UBL Serration Jaw type

[Registered Design]

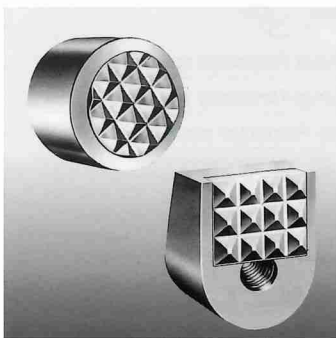
For many kinds of work-pieces and small lot production

- This Serration Jaw type installation way is the same as general power chucks.
- Able to form the jaws by using the Jaw Forming Ring.
- Able to change current UBL Chuck to be Serration Jaw type.
- Able to use commercial soft jaw* (*Need discussions to adjust the T-nut width.)



Attention:

1. Please make notch of jaw bottom corner portion when soft top jaw is made.
2. Please reduce cutting conditions when soft top jaw not only use clamp jaw but also use for stopper. Please prepare stopper (locator) separately if it cannot get parallelism accuracy for work-piece.
3. This UBL Serration model has repeatability accuracy within 0.03 T.I.R. so if need more high precision for your operation, recommend to use our Pin-Arbor series.



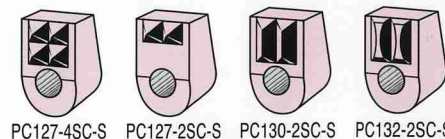
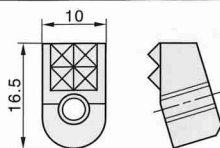
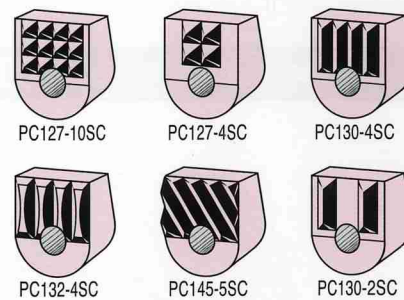
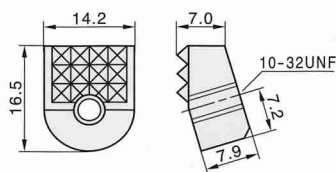
Carbide Insert for UBL Chuck

"High durability" "High clamping torque" "Easy exchange"

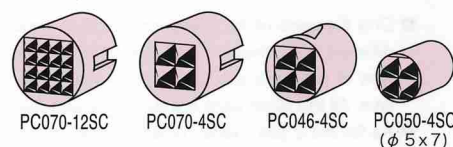
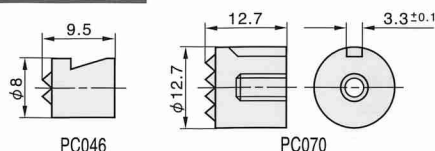
Variety of inserts

* Each carbide insert is chosen according to the requirements of a work-piece.

Angle-Lok style



Round style



Fitting

It is possible to replace top jaw of the UBL Chuck, and therefore top soft jaws shall be shaved into suitable shape for particular work-pieces. Replaceable inserts shall be fitted to these top jaws to increase life of them and reduce their inventory. There are two available types of insert, (Angle-Lok style and Round style) both of them can be easily replaced.

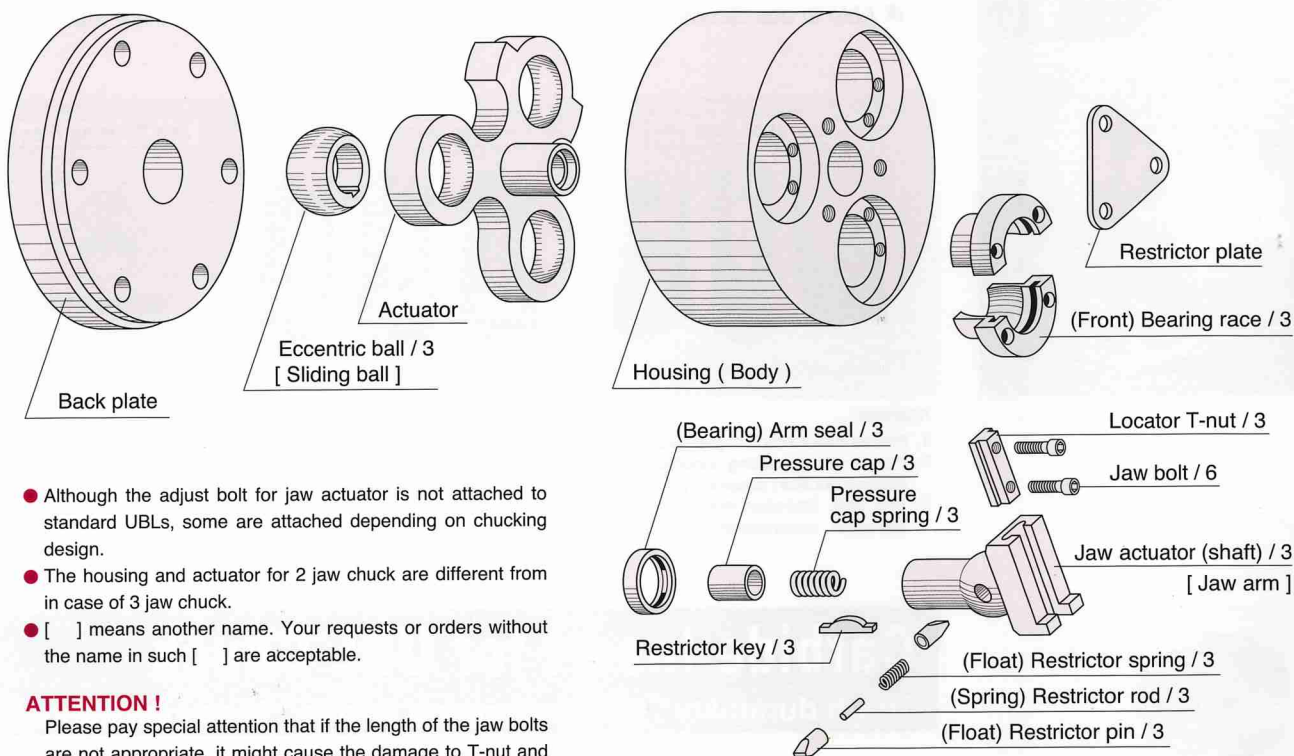
Component parts

ATTENTION

Please note that quality such as part material, heat treatment, dimensions and accuracy of UBL chuck is not standardized with any suppliers except FORKARDT.

Centralizing type

3JAW



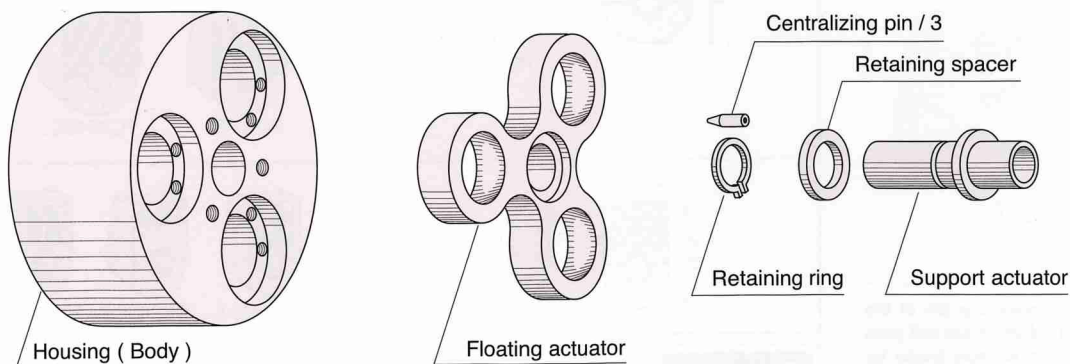
- Although the adjust bolt for jaw actuator is not attached to standard UBLs, some are attached depending on chucking design.
- The housing and actuator for 2 jaw chuck are different from in case of 3 jaw chuck.
- [] means another name. Your requests or orders without the name in such [] are acceptable.

ATTENTION !

Please pay special attention that if the length of the jaw bolts are not appropriate, it might cause the damage to T-nut and the deformation of jaw actuator.

Compensating type

3JAW



- Only the parts of the Compensating type shown in this figure are different from those of the Centralizing type. Also, a different type of pressure cap spring is employed by the Compensating type. All the other parts are the same with the Centralizing type.
- As for the 2 jaw model, different types of housing and actuator are employed.