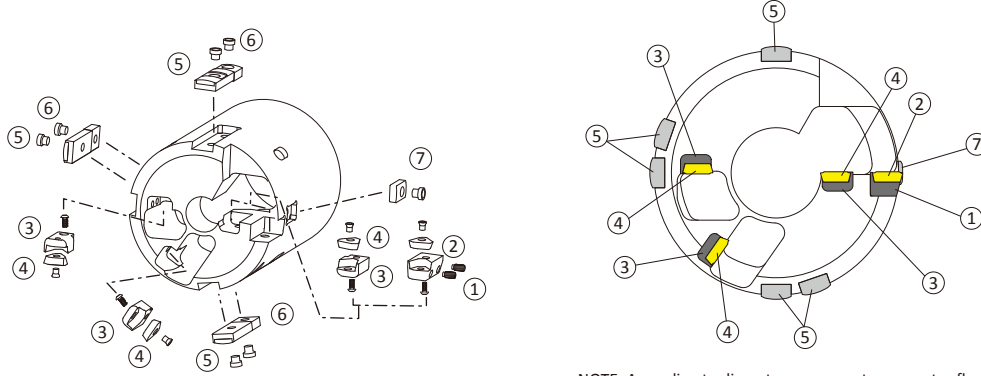


Ordering Code	Diameter øDc (mm)	Drill Tube		DOC (mm)	Dimensions (mm)		
		Ordering Code	Dia. (mm)		L	d1	T
UTT94	100.00 - 110.99	UB94	94	38	139	90	106
UTT106	111.00 - 122.99	UB106	106	38	149	102	118
UTT118	123.00 - 123.99	UB118	118	38	149	114	119
UTT118	124.00 - 134.99	UB118	118	49.5	149	114	130
UTT130	135.00 - 148.99	UB130	130	49.5	149	126	144
UTT142	149.00 - 161.99	UB142	142	49.5	149	139	157
UTT154	162.00 - 173.99	UB154	154	49.5	169	151	169
UTT166	174.00 - 185.99	UB166	166	49.5	169	163	181
UTT178	186.00 - 195.99	UB178	178	49.5	169	175	191
UTT178	196.00 - 197.99	UB178	178	56.5	169	175	193
UTT190	198.00 - 209.99	UB190	190	56.5	169	187	205
UTT202	210.00 - 221.99	UB202	202	56.5	189	199	217
UTT214	222.00 - 233.99	UB214	214	56.5	189	211	229
UTT226	234.00 - 245.99	UB226	226	56.5	189	223	241
UTT238	246.00 - 257.99	UB238	238	56.5	189	235	253
UTT250	258.00 - 266.99	UB250	250	56.5	209	245	262
UTT262	267.00 - 281.99	UB262	262	56.5	209	259	277
UTT274	282.00 - 293.99	UB274	274	56.5	209	271	289
UTT286	294.00 - 305.99	UB286	286	56.5	209	283	301

Ordering example for DIA=200.00mm : UTT190-200.00

- Before drilling operation please adjust tool diameter. For diameter adjustment please see page 10.



NOTE: According to diameter, some parts may not reflect the picture above

Cartridge & Insert

Peripheral

Dia. øDc (mm)	Cartridge ①	Qty	Insert ②	Qty	Insert Screw		Adjust Screw		Lock Screw				
					Qty	Wrench	Qty	Wrench	Qty	Wrench			
100.00 - 123.99	OZ402-32	1	1123-32R	1	CSTB3.5D	1	T-9D	AS0005-10	2	H2.5	LS1805RH	1	H3
124.00 - 135.99	OZ402-43	1	1123-43R	1	CSTB4M	1	T-15D	AS0005-15	2	H2.5	LS1806RH	1	H4
136.00 - 195.99	OZ402-43	1	1123-43R	1	CSTB4M	1	T-15D	AS0005-15	2	H2.5	LS1806RH	1	H4
196.00 - 207.99	OZ402-63	1	1123-63R	1	CSTB5	1	T-20D	AS0006-15	2	H3	LS1806RH	1	H4
208.00 - 305.99	OZ402-63	1	1123-63R	1	CSTB5	1	T-20D	AS0006-15	2	H3	LS1806RH	1	H4

Inner

Dia. øDc (mm)	Cartridge ③	Qty	Insert ④	Qty	Insert Screw		Lock Screw			
					Qty	Wrench	Qty	Wrench		
100.00 - 123.99	IOZ402-32L	3	1123-32L	3	CSTB3.5D	3	T-9D	CSTA5	3	T-15D
124.00 - 135.99	IOZ402-43L	3	1123-43L	3	CSTB4M	3	T-15D	LS1206	3	H3
136.00 - 195.99	IOZ402-43L	3	1123-43L	3	CSTB4M	3	T-15D	LS1206	3	H3L
196.00 - 207.99	IOZ402-43L	3	1123-43L	3	CSTB4M	3	T-15D	LS1206	3	H3L
208.00 - 305.99	IOZ402-43L	3	1123-43L	3	CSTB4M	3	T-15D	LS1206	3	H3L

Guide Pad

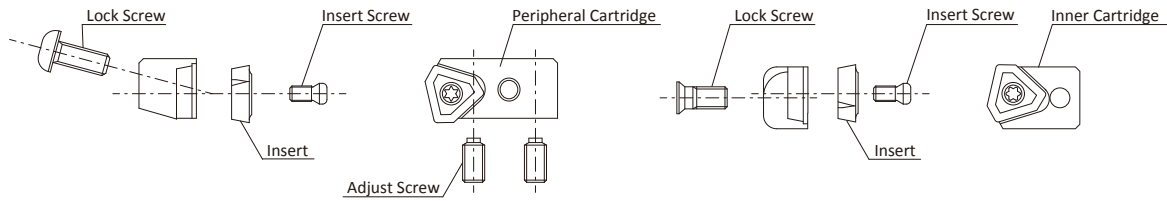
Dia. øDc (mm)	Guide Pad ⑤	Qty	Lock Screw		Protector ⑥	Qty	Lock Screw		Sub Guide ⑦	Qty	Lock Screw						
			Qty	Wrench			Qty	Wrench			Qty	Wrench					
100.00 - 123.99	UG18CD	3	LS1206S	2	LS1206SSS*	1	H3	GPT18-M	3	LS1206S	3	H3	CUG14-M	1	CSTA5S	1	T-15D
124.00 - 135.99	UG18CD	3	LS1206S	3	-	-	H3	GPT18-M	3	LS1206S	3	H3	CUG14-M	1	CSTA5S	1	T-15D
136.00 - 195.99	UG18CD	5	LS1206S	5	-	-	H3	GPT18-M	5	LS1206S	5	H3	CUG14-M	1	CSTA5S	1	T-15D
196.00 - 207.99	UG18CD	5	LS1206S	5	-	-	H3	GPT18-M	5	LS1206S	5	H3	CUG14-M	1	CSTA5S	1	T-15D
208.00 - 305.99	UG22CD	3	LS1206S	3	-	-	H3	GPT22	3	LS1206S	3	H3	CUG14-M	1	CSTA5S	1	T-15D

* Lock screw for dimensional guide pad

- Drill heads come complete with: cartridges, guide pads, protectors, sub guide pad and wrenches - but less inserts.

Parts List

Cartridge & Insert



- Outer cartridges are supplied with adjust screws and insert screw but without inserts, lock screws and wrenchs
- Inner cartridges are supplied with insert screw but without inserts, lock screws and wrenchs

Peripheral

Cartridge	Insert	Insert Screw	Wrench	Adjust Screw	Wrench	Lock Screw	Wrench
OZ402-32	1123-32R	CSTB3.5D	T-9D	AS0005-10	H2.5	LS1805RH	H3
OZ402-43	1123-43R	CSTB4M	T-15D	AS0005-15	H2.5	LS1806RH	H4
OZ402-63	1123-63R	CSTB5	T-20D	AS0006-15	H3	LS1806RH	H4

Inner

Cartridge	Insert	Insert Screw	Wrench	Lock Screw	Wrench
IOZ402-32L	1123-32L	CSTB3.5D	T-9D	CSTA5	T-15D
IOZ402-43L	1123-43L	CSTB4M	T-15D	LS1206	H3 / H3L*

* H3L for diameter $\phi 136.00\text{mm}$ and up

Guide Pad & Protector

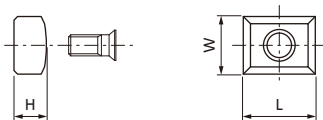


Guide Pad	Dimensions (mm)	Lock Screw	Wrench	Protector	Dimensions (mm)	Lock Screw	Wrench
	W H L				W H		
UG18CD	18 9 40	LS1206S / LS1206SSS **	H3	GPT18-M	18 9	LS1206S	H3
UG22CD	22 15 40	LS1206S	H3	GPT22	22 15	LS1206S	H3

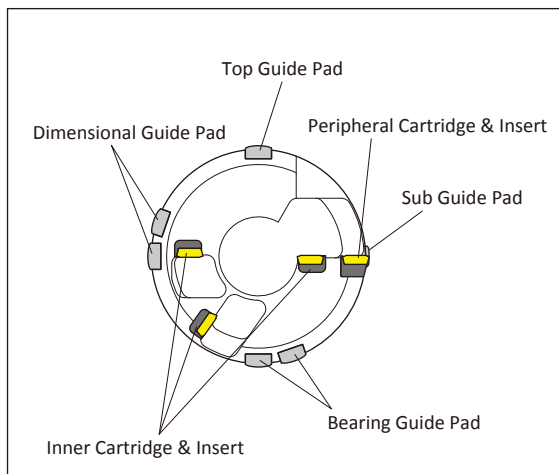
** For dimensional guide pad (for diameter $\phi 100.00 - \phi 123.99$)

• Other carbide grades, coating and ceramic are available upon request.

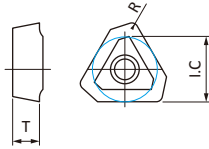
Sub Guide



Guide Pad	Dimensions (mm)	Lock Screw	Wrench
	W H L		
CUG14-M	14 7 20	CSTA5S	T-15D



Insert



(Patent No 2702061)

Chipbreaker	Code	Dimensions (mm)			Grade							
		IC	T	R	CVD coating			PVD coating				
					UC1220 (DLX2)	UC1125 (DLXT)	UC1230 (DLX3)	UC3215 (KLX2)	UC3210 (KLXT3)	UC2220 (NLX)	UC3120 (KLXT)	
G	1123-32R	10.30	4.00	0.8	●		●	●		●		
	1123-43R	14.20	5.50	1.2	●		●	●		●		
	1123-63R	17.00	7.50	1.6	●		●	●		●		
BR1	1123-32RBR1	10.30	4.00	0.4		●			●	●	●	●
	1123-43RBR1	14.20	5.50	0.4		●			●	●	●	●
	1123-63RBR1	17.00	7.50	0.8		●			●	●	●	●
B	1123-32RB	10.30	4.00	0.8				●		●		
	1123-43RB	14.20	5.50	1.2				●		●		
	1123-63RB	17.00	7.50	1.6				●		●		
S	1123-32RS	10.30	4.00	0.8						●		
	1123-43RS	14.20	5.50	1.2						●		
	1123-63RS	17.00	7.50	1.6						●		

Left hand type

G	1123-32L	10.30	4.00	0.8			●			●		
	1123-43L	14.20	5.50	1.2			●			●		
B	1123-32LB	10.30	4.00	0.8						●		
	1123-43LB	14.20	5.50	1.2						●		
S	1123-32LS	10.30	4.00	0.8						●		
	1123-43LS	14.20	5.50	1.2						●		

Ordering example: 1123-32RBR1 UC1125 10 pcs

● : Standard stock item

Chipbreaker

G		BR1		B		S	
	Good chip control with most materials		Good chip control with heat resistant super alloy		Good chip control with long chipping materials		Good for lowering cutting resistance

Grade

	Grade (previous name)	ISO area							
		5	10	15	20	25	30	35	40
P	UC1220 (DLX2)		■	■	■	■	■	■	■
	UC2220 (NLX)			■	■	■	■	■	■
	UC1125 (DLXT)				■	■	■	■	■
	UC1230 (DLX3)					■	■	■	■
	UC3120 (KLXT)						■	■	■
M	UC2220 (NLX)		■	■	■	■	■	■	■
	UC1230 (DLX3)			■	■	■	■	■	■
	UC3120 (KLXT)				■	■	■	■	■
K	UC3215 (KLX2)		■	■	■	■	■	■	■
	UC3120 (KLXT)			■	■	■	■	■	■
N	UC3215 (KLX2)		■	■	■	■	■	■	■
	UC2220 (NLX)			■	■	■	■	■	■
S	UC3210 (KLXT3)	■	■	■	■	■	■	■	■
	UC2220 (NLX)			■	■	■	■	■	■
	UC3120 (KLXT)				■	■	■	■	■


New designation system for insert grades.

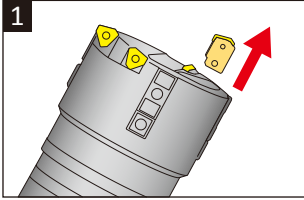
Selection Chart

Workpiece material	First Recommendation	Troubleshooting	
		Chipping	Wear
P • Carbon steels • Alloy steels	G UC2220 (NLX)	G UC1230 (DLX3)	G UC1220 (DLX2)
M • Stainless steels	G UC2220 (NLX)	BR1 UC3120 (KLXT)	BR1 UC3210 (KLXT3)
K • Gray cast irons • Nodular cast irons	G UC2220 (NLX)	G UC1230 (DLX3)	G UC3215 (KLX2)
N • Aluminium alloys	G UC2220 (NLX)	BR1 UC3120 (KLXT)	G UC3215 (KLX2)
S • Heat resistant super alloys • Titanium alloys	BR1 UC2220 (NLX)	BR1 UC3120 (KLXT)	BR1 UC3210 (KLXT3)

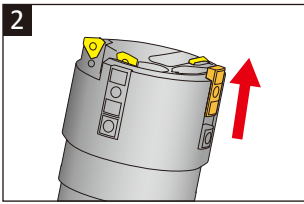
Diameter Setting

The Drill Head diameter is set and inspected with a master insert in our final inspection. However, the inserts in the market have a tolerance fluctuation so each time you change or index the insert, the diameter must be adjusted as per the following method.

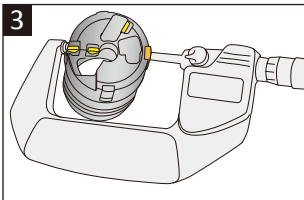
 When a corner change is made on the insert, it must be adjusted to correct size or a damage can be caused to the head body or a work piece material.



1 Remove the inner cartridge next to the dimensional guide pad to avoid interference with the guide screw.

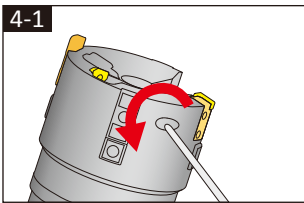


2 The dimensional guide pad must be slid forward to measure the diameter.
2-1 Loosen the lock screw and slide the guide pad forward.
2-2 Retighten the lock screw at the measuring position.

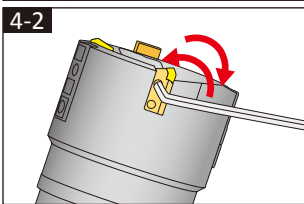


3 Measure the diameter with a micrometer.
 We recommend setting the tool diameter at $h8$ tolerance to the cutting diameter.

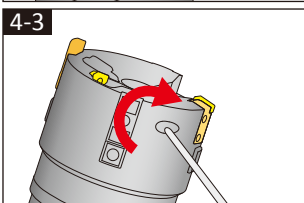
If the diameter is incorrect, go to below step **4**
 If it's correct, go to below step **5**




4 Adjust the peripheral cartridge
4-1 First loosen the lock screw of the peripheral cartridge and then tighten it slightly.

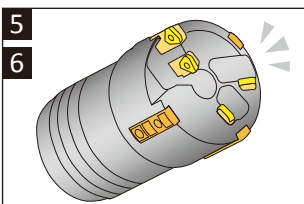


4-2 Proceed to adjust the diameter, using the 2 adjust screws and measure with a micrometer.




4-3 When set to the size, retighten the lock screw.
4-4 Recheck the diameter with a micrometer. If it is still out of tolerance, repeat the procedure from the step **4-1**

 Please make sure to tighten the lock screw firmly before using. If loose, the cartridge may move and cause serious problems during machining.



5 Slide the dimensional guide pad back to the original position and tighten the lock screw.
6 Replace the inner cartridge and tighten the lock screw.

 Please check all the lock screws are firmly tightened as they may come loose if vibration occurs during drilling.