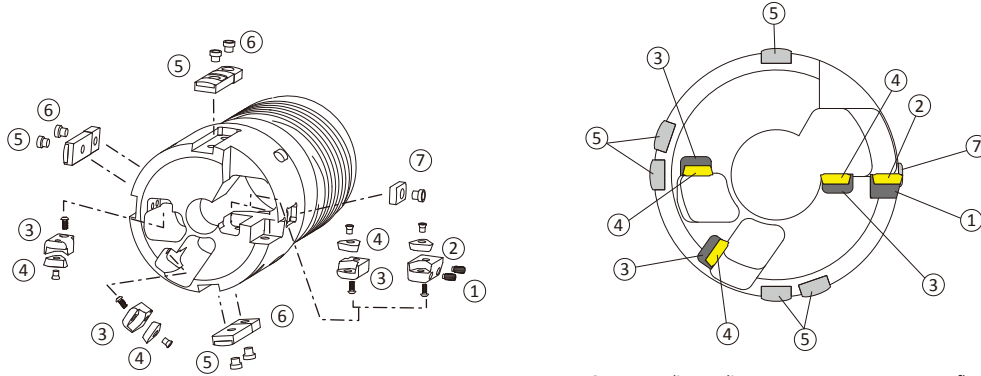


Ordering Code	Diameter øDc (mm)	Drill Tube		DOC (mm)	Dimensions (mm)		
		Ordering Code	Dia. (mm)		L	d ₁	T
UTT19E	100.00 - 111.99	ST19	94	38	174	89	107
UTT20E	112.00 - 123.99	ST20	106	38	204	101	119
UTT21E	124.00 - 135.99	ST21	118	49.5	204	113	131
UTT22E	136.00 - 147.99	ST22	130	49.5	204	125	143
UTT23E	148.00 - 159.99	ST23	142	49.5	229	137	155
UTT24E	160.00 - 171.99	ST24	154	49.5	229	149	167
UTT25E	172.00 - 183.99	ST25	166	49.5	229	161	179
UTT26E	184.00 - 195.99	ST26	178	49.5	249	173	191
UTT27E	196.00 - 207.99	ST27	190	56.5	249	185	203
UTT28E	208.00 - 219.99	ST28	202	56.5	249	197	215
UTT29E	220.00 - 231.99	ST29	214	56.5	284	208	227
UTT30E	232.00 - 243.99	ST30	226	56.5	284	220	239
UTT31E	244.00 - 255.99	ST31	238	56.5	284	232	251
UTT32E	256.00 - 267.99	ST32	250	56.5	304	244	263
UTT33E	268.00 - 279.99	ST33	262	56.5	304	256	275
UTT34E	280.00 - 291.99	ST34	274	56.5	304	268	287
UTT35E	292.00 - 303.99	ST35	286	56.5	324	280	299
UTT36E	304.00 - 315.99	ST36	298	56.5	324	292	311
UTT37E	316.00 - 328.00	ST37	310	56.5	324	304	323

Ordering example for DIA=200.00mm : UTT27E-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 - 328.00	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 - 328.00	IOZ402-43L	3	1123-43L	3	CSTB4M	3	T-15D	LS1206	3	H3L

Guide Pad

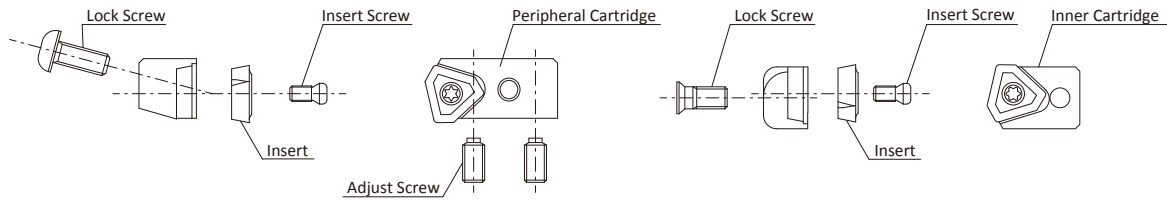
Dia. øDc (mm)	Guide Pad ⑤	Qty	Lock Screw			Protector ⑥	Qty	Lock Screw		Sub Guide ⑦	Qty	Lock Screw					
			Qty	Wrench	Qty			Wrench	Qty			Wrench					
100.00 - 123.99	UG18CD	3	LS1206S	2	LS1206SSS*	1	H3	GPT18-M	3	LS1206S	3	H3	CUG14-M	1	CSTA5S	1	T-15D
124.00 - 135.99	UG18CD	3	LS1206S	3	-	-	H3	GPT18-M	3	LS1206S	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 - 328.00	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 wrenches
- Inner cartridges are supplied with insert screw but without inserts, lock screws and wrenches

Peripheral

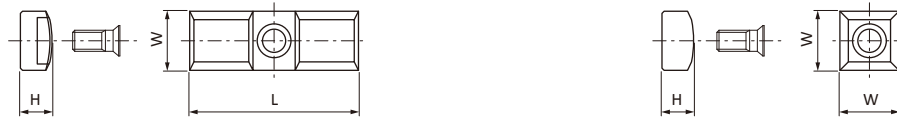
Cartridge	Insert	Insert Screw	Wrench	Adjust Screw	Wrench	Lock Screw	Wrench
OZ402-32	1123-32R	CSTB3.5D	T-9D	AS0005-10	H2.5	LS1805RH	H3
OZ402-43	1123-43R	CSTB4M	T-15D	AS0005-15	H2.5	LS1806RH	H4
OZ402-63	1123-63R	CSTB5	T-20D	AS0006-15	H3	LS1806RH	H4

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

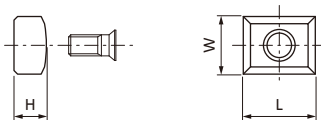


Guide Pad	Dimensions (mm)	Lock Screw	Wrench	Protector	Dimensions (mm)	Lock Screw	Wrench
	W H L				W H		
UG18CD	18 9 40	LS1206S / LS1206SSS **	H3	GPT18-M	18 9	LS1206S	H3
UG22CD	22 15 40	LS1206S	H3	GPT22	22 15	LS1206S	H3

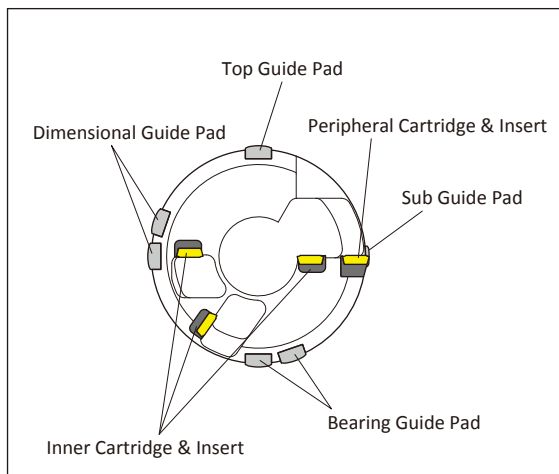
** For dimensional guide pad (for diameter $\phi 100.00 - \phi 123.99$)

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

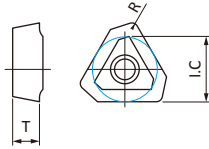
Sub Guide



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.

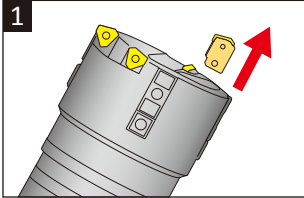
Selection Chart

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)

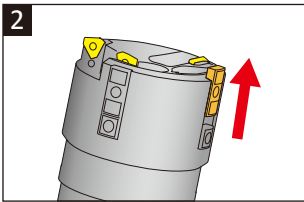
Diameter Setting

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.

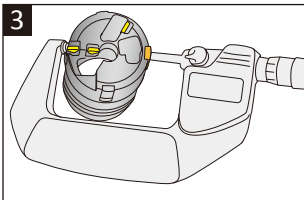
 When a corner change is made on the insert, it must be adjusted to correct size or a damage can be caused to the head body or a work piece material.



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

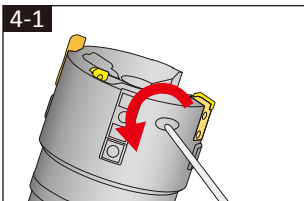


2 The dimensional guide pad must be slid forward to measure the diameter.
2-1 Loosen the lock screw and slide the guide pad forward.
2-2 Retighten the lock screw at the measuring position.

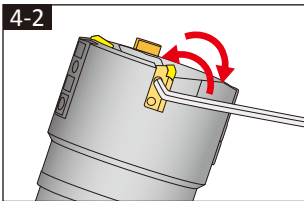


3 Measure the diameter with a micrometer.
 We recommend setting the tool diameter at $h8$ tolerance to the cutting diameter.

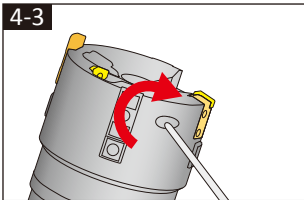
If the diameter is incorrect, go to below step **4**
 If it's correct, go to below step **5**




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

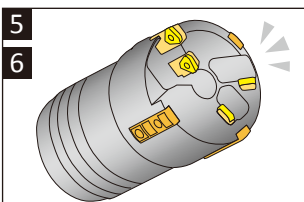


4-2 Proceed to adjust the diameter, using the 2 adjust screws and measure with a micrometer.




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.