

Chase Diamond Tools For Superior results



Chase Diamond Tools International Ltd.
Designers and Manufacturers of Diamond Tooling



CHASE

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CHASE-SCD

Single Crystal Diamond

STANDARD TOOLS FOR THE CONTACT LENS INDUSTRY

Chase manufactures both solid shank and inserts for all the leading contact lens lathes available both today and in the past. Tools are manufactured with either natural or synthetic diamonds. Various geometries are available with specified radii, front clearance, top rake and included angles. The diamond is always oriented so that the tool provides the maximum life, in terms of wear characteristics. Vacuum brazing ensures consistent bonding of the diamond to its support platform. The radius, over its specified arc is controlled in terms of deviation from a true radius, (Controlled Waviness) and as standard is controlled to less than 5µm.

TOOL RANGE FEATURES

De beers grade one dia quality diamonds
Vacuum Brazed
Chip free edge to 800x
High Quality
Cost Effective

TOOL RANGE OPTIONS

Insert or Solid Shank
Natural Diamond
Synthetic Diamond
Specified Geometries



- * CONSISTENT EDGE SHARPNESS
- * UNIFORM DIAMOND HARDNESS
- * EVEN RATIO IN USE
- * LOW CO-EFFICIENT OF FRICTION
- * HIGH THERMAL CONDUCTIVITY
- * LOW CO-EFFICIENT OF EXPANSION
- * LOW COMPRESSIBILITY
- * IDEAL FOR INTERRUPTED CUT MACHINING

SOLID SHANK STANDARD TOOLS - NATURAL DIAMOND

Lathe Type	Shank Type	Chase Product Codes			
		Radius 0.25mm	Radius 0.50mm	Radius 0.75mm	Radius 1.00mm
CHASE	+5 Deg Tool holder	09248b7	09268b7	09288b7	092a8b7
CHASE	Parallel Tool holder	11248b7	11268b7	11288b7	112a8b7
CITY CROWN	6.35mm Square	19248b7	19268b7	19288b7	192a8b7
CITY CROWN	6.35 mm x 19mm step	21248b7	21268b7	21288b7	212a8b7
CITY CROWN	8.0mm x 6.35mm	29248b7	29268b7	29288b7	292a8b7
COBURN 8000	6.35mm Square	31248b7	31268b7	31288b7	312a8b7
DAC	6.35mm Square	39248b7	39268b7	39288b7	392a8b7
DAC	7.5mm x 6.35mm	41248b7	41268b7	41288b7	412a8b7
DAC	Straight	49248b7	49268b7	49288b7	492a8b7
DAC	Left Hand	51248b7	51268b7	51288b7	512a8b7
DAC	Right Hand	59248b7	59268b7	59288b7	592a8b7
DAC	Dog Leg	61248b7	61268b7	61288b7	612a8b7
GFELLER	9.00mm Square	69248b7	69268b7	69288b7	692a8b7
MICROTURN	6.35mm Square	71248b7	71268b7	71288b7	712a8b7
NISSEL	17deg Tool holder	79248b7	79268b7	79288b7	792a8b7
NISSEL	Parallel Tool holder	81248b7	81268b7	81288b7	812a8b7
POLYTECH	6.00mm Square	89248b7	89268b7	89288b7	892a8b7
LEVIN	5.00mm Square	91248b7	91268b7	91288b7	912a8b7
HARDINGE	3/8 th Square	99248b7	99268b7	99288b7	992a8b7

SOLID SHANK STANDARD TOOLS - SYNTHETIC DIAMOND (SUMITOMO)

Lathe Type	Shank Type	Chase Product Codes			
		Radius 0.25mm	Radius 0.50mm	Radius 0.75mm	Radius 1.00mm
CHASE	+5 Deg Tool holder	0a248b7	0a268b7	0a288b7	0a2a8b7
CHASE	Parallel Tool holder	12248b7	12268b7	12288b7	122a8b7
CITY CROWN	6.35mm Square	1a248b7	1a268b7	1a288b7	1a2a8b7
CITY CROWN	6.35 mm x 19mm step	22248b7	22268b7	22288b7	222a8b7
CITY CROWN	8.0mm x 6.35mm	2a248b7	2a268b7	2a288b7	2a2a8b7
COBURN 8000	6.35mm Square	32248b7	32268b7	32288b7	322a8b7
DAC	6.35mm Square	3a248b7	3a268b7	3a288b7	3a2a8b7
DAC	7.5mm x 6.35mm	42248b7	42268b7	42288b7	422a8b7
DAC	Straight	4a248b7	4a268b7	4a288b7	4a2a8b7
DAC	Left Hand	52248b7	52268b7	52288b7	522a8b7
DAC	Right Hand	5a248b7	5a268b7	5a288b7	5a2a8b7
DAC	Dog Leg	62248b7	62268b7	62288b7	622a8b7
GFELLER	9.00mm Square	6a248b7	6a268b7	6a288b7	6a2a8b7
MICROTURN	6.35mm Square	72248b7	72268b7	72288b7	722a8b7
NISSEL	17deg Tool holder	7a248b7	7a268b7	7a288b7	7a2a8b7
NISSEL	Parallel Tool holder	82248b7	82268b7	82288b7	822a8b7
POLYTECH	6.00mm Square	8a248b7	8a268b7	8a288b7	8a2a8b7
LEVIN	5.00mm Square	92248b7	92268b7	92288b7	922a8b7
HARDINGE	3/8 th Square	9a248b7	9a268b7	9a288b7	9a2a8b7

INSERT SYSTEM

The insert system comprises of a tungsten insert which has the diamond vacuum brazed to it. The insert then fits into a toolholder made specifically for the lathe in use. Chase supplies both the inserts and the toolholders.

TOOL RANGE FEATURES

- Vacuum Brazed.
- More Clearance.
- Reduction in tool costs.
- Chip free to 800X.
- High quality.

TOOL RANGE OPTIONS

- Natural Diamond.
- Synthetic Diamond.
- Specified Geometries.
- Controlled Waviness better than 0.5µm.

DAC INSERTS NATURAL DIAMOND

DAC TOOL CODE	Chase Product Codes			
	Radius 0.25mm	Radius 0.50mm	Radius 0.75mm	Radius 1.00mm
DAC LEFT HAND				
15742-x-L10-xxx	0124cb3	0126cb3	0128cb3	012acb3
15742-x-L20-xxx	0144cb3	0146cb3	0148cb3	014acb3
15742-x-L30-xxx	0184cb3	0186cb3	0188cb3	018acb3
DAC RIGHT HAND				
15742-x-R10-xxx	0124cb3	0126cb3	0128cb3	012acb3
15742-x-R20-xxx	0144cb3	0146cb3	0148cb3	014acb3
15742-x-R30-xxx	0184cb3	0186cb3	0188cb3	018acb3
DAC STRAIGHT				
15742-x-S10-xxx	0124cb3	0126cb3	0128cb3	012acb3
15742-x-S20-xxx	0144cb3	0146cb3	0148cb3	014acb3
15742-x-S30-xxx	0184cb3	0186cb3	0188cb3	018acb3

This table refers to standard DAC tools based on the insert system. The tool geometry is as specified from DAC (DAC TOOL CODE).

Radius of Arc = 120 degrees.

Included Angle = 60 degrees.

Top Rake Angle = 2.5 degrees negative.

Front Clearance Angle = Primary 15 degrees.

Controlled Waviness of <5.0µm, <2.0µm and <0.5µm

Insert Type = ISO 55 ISO 35

DAC TOOL CODE	Chase Product Codes			
	Radius 0.25mm	Radius 0.50mm	Radius 0.75mm	Radius 1.00mm
DAC LEFT HAND				
15742-x-L12-xxx	0224cb3	0226cb3	0228cb3	022acb3
15742-x-L22-xxx	0244cb3	0246cb3	0248cb3	024acb3
15742-x-L32-xxx	0284cb3	0286cb3	0288cb3	028acb3
DAC RIGHT HAND				
15742-x-R12-xxx	0224cb3	0226cb3	0228cb3	022acb3
15742-x-R22-xxx	0244cb3	0246cb3	0248cb3	024acb3
15742-x-R32-xxx	0284cb3	0286cb3	0288cb3	028acb3
DAC STRAIGHT				
15742-x-S12-xxx	0224cb3	0226cb3	0228cb3	022acb3
15742-x-S22-xxx	0244cb3	0246cb3	0248cb3	024acb3
15742-x-S32-xxx	0284cb3	0286cb3	0288cb3	028acb3

This table refers to standard DAC tools based on the insert system. The tool geometry is as specified from DAC (DAC TOOL CODE).

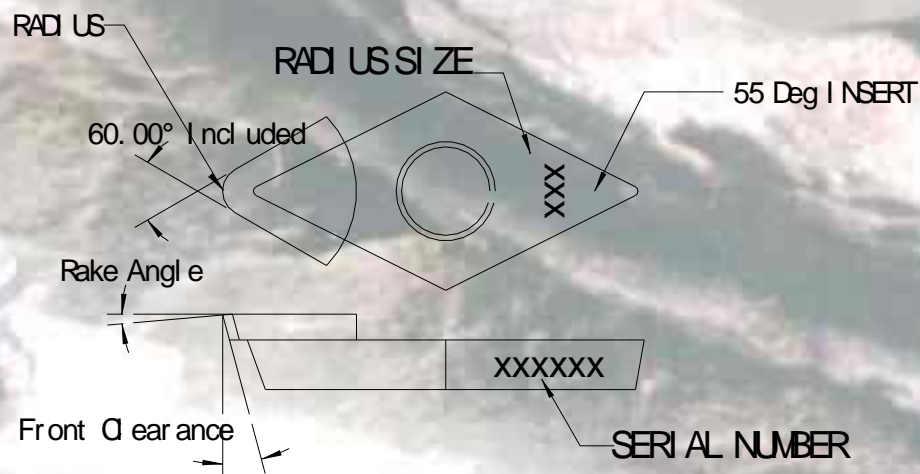
Radius of Arc = 120 degrees.

Included Angle = 60 degrees.

Top Rake Angle = 2.5 degrees negative.

Front Clearance Angle = Primary 15 degrees.

Controlled Waviness of <math><5.0\mu\text{m}</math>, <math><2.0\mu\text{m}</math> and <math><0.5\mu\text{m}</math>



Inserts may be specified with the following parameters;

- Diamond Material
- Radius Size
- Controlled Waviness
- Included Angle
- Top Rake Angle
- Front Clearance Angle
- Front Clearance Type

STANDARD CONTACT LENS TOOLS

Tool Holders are available for the following lathes;

<i>TOOL HOLDER</i>	<i>PRODUCT CODE</i>
CHASE +5 Deg Toolholder	01
CHASE Parallel Toolholder	02
CITY CROWN 6.35mm Sq	03
CITY CROWN 6.35mm x 19mm Step	04
CITY CROWN 8.0mm x 6.35mm	05
COBURN 8000	06
DAC 6.35mm Sq	07
DAC 7.5mm x 6.35mm	08
DAC STRAIGHT	09
DAC LEFT HAND	0a
DAC RIGHT HAND	0b
GFELLER 9.0mm Square	0c
MICROTURN 6.35mm Square	0d
NISSEL 17Deg Toolholder	0e
NISSEL Parallel Toolholder	0f
POLYTECH 6.00mm Square	10
LEVIN 5.00mm Square	11
HARDINGE 3/8th Square	12

