Diamond Grinding Pins

1/8” Shank Diamond Grinding Pin

1/4” Shank Diamond Grinding Pin

3/8” Shank Diamond Grinding Pin

Titan Diamond Grinding Pins are offered in 2 grits and 3 shank diameters. Our smaller sizes are available at .010” intervals and with 27 different head sizes ranging from 0.020” to 1.50” in diameter. We can offer the operator a pin size that is very close to the hole diameter being ground. This means a more rigid pin which minimizes chances of whip and run-out of true hole roundness. For true roundness, and to prevent bell-mouthing in internal or jig grinding, it is best to feed the pin all the way through the hole wherever possible. The 2 grits available allow a selection of more efficient grain size, depending on the finish desired, the material being ground, and the amount of stock to be removed.

Electro plating is a method of bonding Diamond particles to a steel blank, using Nickel as bonding material. Electro plated tools can not be dressed. The layer of Nickel and Diamond, follows exactly the given shape of the blank. Therefore, Electro plated tools are the best choice for profile grinding.

Titan Diamond Grinding pins never need dressing! If a diamond mandrel stops cutting prematurely, it may be due to clogging. This condition can quickly be alleviated by running the pin in the grinder and holding against it either a soft type dressing stick such as used for other types of diamond wheels or a piece of hardwood powdered with aluminum oxide or silicon carbide powder.

Recommended Feeds: in internal or jig grinders should not exceed .0002” to .0005” per pass for maximum life of these mandrels. A coolant is not necessary unless grinding is being done on the face and periphery at the same time.

Steel Shanks in Three Diameters: All standard shanks are hardened to 42-55 Hrc and are center-less ground, to ensure a rigid, accurate, concentric and parallel pin blank. Maximum rigidity and safety are thus provided for the work to be preformed. All shanks are centerless ground to .0005” concentricity + .0000” to - .0002”.

Diamond Applications:

Diamond is used for cutting or grinding hard, brittle and abrasive materials, but it is not suitable for grinding high carbon-steel. This is because iron has an affinity for carbon (which is what diamond is) at a high temperature.

Diamond tools are used for grinding hard or very abrasive materials, such as:

- Tungsten Carbide
- Fiberglass
- Stone and marble
- Ferrite
- Composite materials
- Non-ferrous metals
- Industrial ceramics
- Rubber
- Re-inforced plastics
- Glass

Thickness of Layer for Electro Plated Pins:

80/100 Grit	0.0078”
200/240 Grit	0.0039”

Minimum clamping length = Half of total length: Le=0.5xL.

Tolerance:D: <0.079"= +/-0.002", D: ≥0.079"= +/-0.006", T= +/-0.040", L1= +/-0.040", Y= h6" L= +/-0.040".

TITAN
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X = AVAILABLE GRIT SIZES

Order #	Ø D	T	L1	L	Ø Y	200/240 Grit	80/100 Grit
2900	0.020”	0.079”	0.250”	2.156”	1/8”	X	
2900XL	0.020”	0.079”	0.250”	2.156”	1/4”	X	X
2900A	0.029”	0.079”	0.250”	2.156”	1/8”	X	
2900AXL	0.029”	0.079”	0.250”	2.156”	1/4”	X	X
2901	0.039”	0.079”	0.250”	2.156”	1/8”	X	X
2901XL	0.039”	0.079”	0.250”	2.156”	1/4”	X	X
2901B	0.049”	0.079”	0.250”	2.156”	1/8”	X	X
2901BXL	0.049”	0.079”	0.250”	2.156”	1/4”	X	X
2901A	0.059”	0.118”	0.500”	2.156”	1/8”	X	X
2901AXL	0.059”	0.118”	0.500”	2.156”	1/4”	X	X
2901C	0.069”	0.118”	0.500”	2.156”	1/8”	X	X
2901CXL	0.069”	0.118”	0.500”	2.156”	1/4”	X	X
2902	0.079”	0.157”	0.500”	2.156”	1/8”	X	X
2902XL	0.079”	0.157”	0.500”	2.156”	1/4”	X	X
2902A	0.089”	0.157”	0.500”	2.156”	1/8”	X	X
2902AXL	0.089”	0.157”	0.500”	2.156”	1/4”	X	X
2902B	0.099”	0.157”	0.500”	2.156”	1/8”	X	X
2902BXL	0.099”	0.157”	0.500”	2.156”	1/4”	X	X
2902C	0.109”	0.157”	0.500”	2.156”	1/8”	X	X
2902CXL	0.109”	0.157”	0.500”	2.156”	1/4”	X	X
2903	0.118”	0.157”	0.625”	2.156”	1/8”	X	X
2903XL	0.118”	0.157”	0.625”	2.156”	1/4”	X	X
2903A	0.130”	0.197”	N/A	2.156”	1/8”	X	X
2903AXL	0.130”	0.197”	0.625”	2.156”	1/4”	X	X
2903B	0.140”	0.197”	N/A	2.156”	1/8”	X	X
2903BXL	0.140”	0.197”	0.625	2.156”	1/4”	X	X
2904	0.157”	0.197”	N/A	2.156”	1/8”	X	X
2904XL	0.157”	0.197”	0.625”	2.156”	1/4”	X	X
2904A	0.177”	0.236”	N/A	2.156”	1/8”	X	X
2904AXL	0.177”	0.236”	0.625”	2.156”	1/4”	X	X
2905	0.197”	0.236”	N/A	2.156”	1/8”	X	X
2905XL	0.197”	0.236”	0.625”	2.156”	1/4”	X	X
2908	0.236”	0.275”	N/A	2.156”	1/8”	X	X
2908XL	0.236”	0.275”	1.000”	3.000”	1/4”	X	X
2908A	0.256”	0.275”	1.000”	3.000”	1/4”	X	X
2909	0.315”	0.315”	N/A	3.000”	1/4”	X	X
2910F	0.335”	0.315”	N/A	3.000”	1/4”	X	X
2911	0.394”	0.197”	N/A	3.000”	1/4”	X	X
2911XL	0.394”	0.197”	N/A	3.500”	3/8”	X	X
2912	0.394”	0.394”	N/A	3.000”	1/4”	X	X
2912XL	0.394”	0.394”	N/A	3.500”	3/8”	X	X
2913D	0.473”	0.394”	N/A	3.000”	1/4”	X	X
2913DXL	0.473”	0.394”	N/A	3.500”	3/8”	X	X
2914	0.591”	0.197”	N/A	3.000”	1/4”	X	X
2914XL	0.591”	0.197”	N/A	3.500”	3/8”	X	X
2915	0.591”	0.394”	N/A	3.000”	1/4”	X	X
2915XL	0.591”	0.394”	N/A	3.500”	3/8”	X	X
2917	0.730”	0.394”	N/A	3.000”	1/4”	X	X
2917XL	0.730”	0.394”	N/A	3.500”	3/8”	X	X
2919XL	1.000”	0.394”	N/A	3.500”	3/8”	X	X
2920XL	1.250”	0.394”	N/A	3.500”	3/8”	X	X
2921XL	1.500	0.394”	N/A	3.500”	3/8”	X	X

1/8” & 1/4” Shank

3/8” Shank