



3A1 Series Superabrasive Wheels

Harry G. Sachsel, C.A.E.
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The 3A1 Series Superabrasive wheels are a modified version of the 1A1-T where there is a molded aluminum hub also on one side. This hub services several purposes. First, to increase the strength and stiffness of thin 1A1R's, 1A1-T's and other thin wheels when steel flanges are not used. Then also on plated and brazed coated wheels it also increases the strength, rigidity, and increases the thickness to be able to fit a grinding wheel adapter properly.

Strength, rigidity, and balance are critical when it comes to precision Superabrasive grinding. To accomplish this hardened, ground, steel flanges are also a real bonus but if none are readily available order the 1A1-T's with a side support hub making it a 3A1 style.

Now when a cut off application is one inch or deeper and it is flood wet grinding use D.I.T. steel slinger style flanges. These are flanges with a milled channel around the outside and then straight holes are drilled from it to the outside diameter. The centrifugal force of the coolant now under rotary pressure gets to the bottom of the cut or slot and keeps the part cool.

Another way to control friction and heat is with a D.I.T. CO₂ Carbon Dioxide coolant nozzle.

3A1 Superabrasive wheels are made in diameters from 4" to 8" and from 1/8" to 1" thick wheels.



D.I.T. CO₂ Carbon
Dioxide coolant nozzle

Bore size is per application. All other specifications are similar to the 1A1-T type wheels, i.e.: hardness, bonds, abrasives, and porosity.

Precision abrasive ground wheel flanges are available from STOCK. They have diameters from 3-1/4", 4-1/4", 5-1/4", AND 6-1/4" x 3/16" thick x 1-1/4" bore. Wheel contact is on the outer inside area 1/2" tapered back x 1/2 degree.

Precision abrasive ground wheel adapters. We stock most of the Wm. Sopko Company line of adapters, arbors, wheel nuts, and accessories.



Get the answers to your grinding applications.

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