Radialok® Wheel - Center of blasting operation

The key component in any airless blast cleaning machine is the abrasive-throwing wheel. The intensity of the radial and tangential forces it develops, the abrasive flow volume and velocity it generates, the accuracy and stability of its blast pattern in the target zone-all are vital to the effectiveness and economy of the blast cleaning operation.

Of the parallel importance is the performance of wheel components. The longer wheel parts and housing liners can function without replacement, the greater the intervals can be between equipment shut-downs for wheel service. This advantage means greater productivity from your blast equipment and substantially reduces parts and maintenance costs.

In all these aspects of centrifugal blast wheel performance, the Indabrator Radialok wheel stands out as superior to any other previous or current wheel design. It throws more abrasive, more accurately, at greater velocity than any wheel ever developed. It does so with less wear on blades, wheel components and housing liners. And it is easier to maintain-gives longer parts wear and permits fast, efficient servicing.

One size Radilok wheel fits all machines

The radialok wheel is furnished as original equipment on almost all new high performance Indabrator blast machines, and it's adaptable for retrofit to most existing equipment; any Indabrator machines using 15" or 19 ½ diameter x 2 ½ " type M Wheels. By replacing the complete wheel guard and wheel, it can also replace older style wheels.

This unique design offers another important saving in equipment standardization for shops operating several machines or types of blast equipment. One size Radilok Wheel serves for both 15" and 19 ½" diameters; the only difference being the length of the blades installed.

The Wheel

The Radialok Wheel itself is of double-wall construction, machined from alloy steel for true balance and hardened for long life. Being only 15" diameter, it is lighter, easier to handle, less affected by ricocheting abrasive. Blades are held securely in position by the simplest method ever devised: they lock against the spacer bars. No pins, springs or set crews, and it's impossible to install a blade incorrectly.

Wheel components

All wheel-assembly parts are made of Indabrator's exclusive Long-Life alloy for maximum wear. Parts are beefed up at the principal wear spots to give longer life. Blades too are heavier and more wear-resistant, offering for the first time service life comparable to other internal wheel components.

The blast pattern

The blast pattern resulting from the Radialok curved blade distributes abrasive more uniformly throughout the blast zone, for more rapid and thorough cleaning. Moreover, the control cage is securely locked into position, to eliminate potential "drifting", and shift of the abrasive coverage area.

The unit bearing

The Unit Bearing consists of a shaft with a roller bearing on the wheel end a ball bearing on the V-belt sheave end. Both bearings are heavy-duty, anti-friction type, mounted in a cylindrical housing which provides proper alignment and excellent sealing against abrasive intrusion. The entire assembly is enclosed in housing, secured by two support castings with caps. It's available either as grease, oil or oil mist lubricated bearing.

Note: The Radialok Wheel unit is also available direct-driven –no bearing- at high RPM for specific blasting applications.

Radialok design gives you improved performance, greater economy.

Extensively proven in thousands of field installations, the Radialok Wheel has amply demonstrated its ability to delivery greater cleaning power and perform more work is lest time.

With its increased abrasive handling capacity, additional cleaning capacity is available. The Radialok Wheel is capable of handling increased horsepower loads over previous blast. Wheels (abrasive handling capacity). For example: previous design 19 ½" wheels were limited to approximately 40 hp. Under controlled conditions of wheels speed and abrasive flow, the Radialok Wheel can handle abrasive loads up to 75 hp. The benefit to the user is that now all of his Indabrator blast equipment may be equipped with the same wheel, greatly reducing parts inventories, as well as providing all the other inherent improvements with the Radialok.

A & B. Both the Radialok conical inlet impeller and its "clockdial" control cage are manufactured to more exacting tolerances than any competitive components known. This results in longer life, increased wheel efficiency and easier installation.
C. Control Cage Adapter, made of Long-Life material, secures and aligns the control cage accurately in relation to the other wheel components. It is independent of the wheel housing for better alignment of wheels parts.
D. Centering Plate facilitates accurate positioning and timing of inner wheel components: an important aid to simplified maintenance and improved wheel performance.
E. The double-wall Radialok wheel, constructed for longest life, greatest resistance to wear, and minimum vibration.
F. Wheel Hubs are individually and dynamically balanced for smooth, true running.
G. Hub seals are made of Long-Life alloy, and securely close around the wheel-housing opening where the hub joins the wheel. The resulting tight seal reduces maintenance and minimizes abrasive loss.
H. The Impeller Bolt fastens the impeller to the Unit Bearing or motor shaft so that the impeller turns with the drive, within the stationary control cage. It is of hardened, special alloy steel.

To keep the blast pattern on target better, the adjustable control cage is solidly locked to the feed spout. This eliminates control cage "drift". The blast pattern stays where you say it.

Radialok design gives you longer service and easier maintenance.

In addition to its greater abrasive-throwing capacity, an important cost-saving, profit-building advantage of the Radialok wheel is in maintenance savings.

For the first time, blade and impeller life approximates that of the control cage. This makes it economical to inspect or replace all the wheel wear components in a single wheel servicing, avoiding repeated machine downtime and lost production.

Blade changing is easier than ever before-alight tap on the end of the blade and it drops to the centre of the wheel for easy withdrawal. Similarly, the easy-to-fasten feed spout clamp and knob is a maintenance time saver, while assuring drift-free positioning of the control cage and a more accurate blast pattern.

To protect the wheel guard housing and avoid abrasive loss, a new alloy liner system has been developed. Labyrinth seal joints make an abrasive-tight closure between top, side and end liners.

For easier servicing, all liners are bolted from outside the wheel housing, with no screw heads, bolts or nuts exposed to the abrasive. The curved top liner minimizes ricochet of abrasive back into the wheel.

The new curved blade used in the Radialok wheel is thicker than previous blades for longer wear. The curvature at the abrasive pick-up end promotes smoother abrasive flow and minimizes “bounce” on the blade, further extending blade life. Since each abrasive particle travels farther on the blade, velocity is increased, which translate into more work accomplished in less time.

Blade replacement in the Radiallok wheel, through the centre opening, is the fastest and simplest method yet developed. It makes inspection of inner-wheel components virtually certain, so all worn parts can be replaced in one servicing.

To assure positive blade retention, no fasteners, no setscrews, pins, or springs are used. The blades slide forward and are held firmly against the wheel spacer bars by centrifugal force.

Components and service aids to improve overall machine performance, cut maintenance costs.

Soundabrator Abrasive Control Valve

To help users comply with OSHA sound level/exposure limits, Wheelbrator offers the SOUNDABRATOR, which effectively muffles noise from the wheel.

The Soundabrator completely seals the abrasives feed opening. Typically, a Soundabrator unit will reduce noise level of a blast wheel by 25 dbA, as measured three inches from the feed inlet. Often this control alone will suppress noise levels enough to meet current standards.

soundabrator Abrasive Control Valves are available in two sizes, for wheels up to 40 hp and for those above 40 hp.

Radialok Wheel Tune-Up Kit
To assure that you have all the parts needed, and the right balance of parts, for routine wheel maintenance, Indabrator offers a convenient Radialok Wheel Tune-Up Kit.

In one handy package you have everything needed to restore wheel efficiency: a full set of Indabrator alloy Radialok blades; a new clockdial control cage and impeller; a properly sized sealing ring, impeller bolt, and all necessary fasteners.

Plus, you get the convenience of handling one package; no wrong parts, no forgotten items, no time-wasting trips back to the stock room. For time-saving, cost-saving wheel service, order parts by the package the Tune-Up kit.