

Long-life Multi-option Sm@rt Wheel

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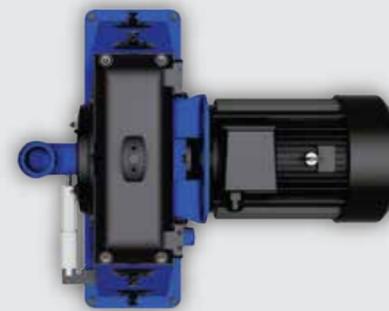
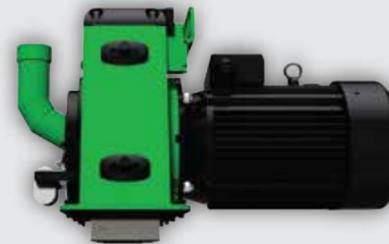
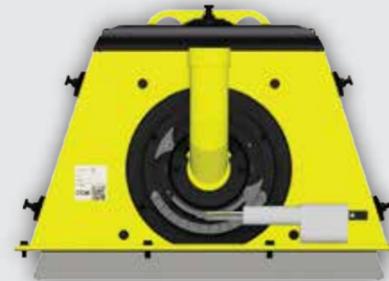
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ir long-life multi-option wheel



ir long-life multi-option wheel



Multi-option characteristics

- 3 quality levels (Basic, Standard, Superior)
- Multi-technology options
- Universality of parts

Customer-defined characteristic

- Increased speed of abrasive
- Improved shot blast/peen results
- Blast pattern is adaptable
- Reversibility

Special applications

- Module with rotating control cage
- Supply filter
- Trolley
- QR code
- Sensors system
- Blast pattern control
- Regulation abrasive flow valve

Operating costs

- Extreme long service life
- Exceptional wear resistance
- Improved lifetime

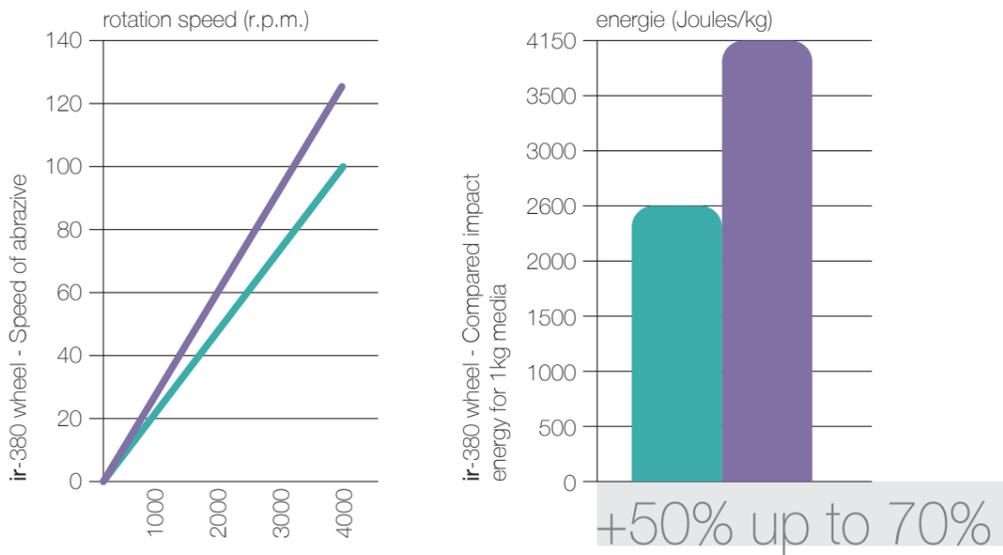
Long-life wear resistance

- Reduced energy consumption
- Reduced shot consumption
- Competitive prices of wheel and spare parts
- Quick change, easy maintenance and access to parts
- Reduced wear, vibrations and noise level
- Reduced processing time

Customer-defined characteristic

Increased speed of abrasive, Improved Shot blast/peen results

By choosing different types of blades you can change the outlet speed of abrasive. Curved **r blades** can provide outlet speed which is 27 to 30 % higher than of straight **i blades**. Shorter straight blades provide lower outlet speed, but higher mass flow at the same of motor power.



Blast pattern is adaptable to customer application's

Blast pattern can be adjusted for different purposes: blasting of work pieces, constructions, shot peening, etc. Desired blast pattern can be achieved by changing the geometry of control cage. Achieved results are significantly better and this also means energy savings.



Special applications



Module with rotating control cage

In machines where wheels blast different types of work pieces that are dimensionally quite different, is possible to equip the wheel with a module with rotating control cage.



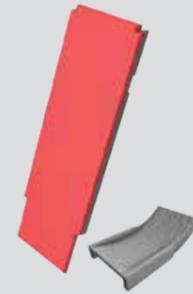
QR code

The wheel is equipped with a QR code, through which you can access to application with different useful information about the wheel / machine (service book, manuals, parts wearing time...). With this application you can easily order wheel spare parts.



Supply filter

Filter has an installed steel mesh protecting the wheel from entering of parts that can damage wheel. Filter is mounted between the supply valve and inlet pipe. Maintenance of the filter is very easy. You just need to remove the front cover and remove larger particles.



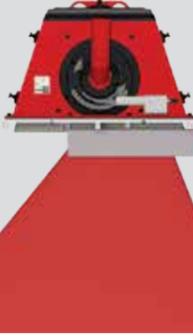
Sensors system

It has been developed to control the wearing state of the wheel, to reduce the amount of spare parts for user, for quality assurance and quality control of the shot blasting process.



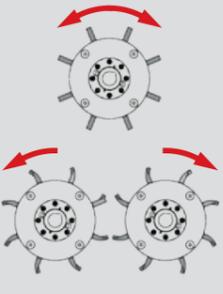
Trolley

For easier installation and maintenance of lower wheels on the machine we developed a special trolley. To service sm@rt wheels on trolley, standard fork lift can be used.



Blast pattern control

Blast pattern control is developed to control blast pattern, to control wear of control cage and to control angle of incidence of particles on the work piece. The sensor checks daily position of blast pattern. In case the sensor detects blast pattern offset from the desired area the control cage is automatically moved. With this system it is easier to control and ensure the same results of blasting / peening.



Reversibility

Rotor is suitable for rotation in both directions, but you need to be especially careful with curved blades, because you need to set them in the right direction.



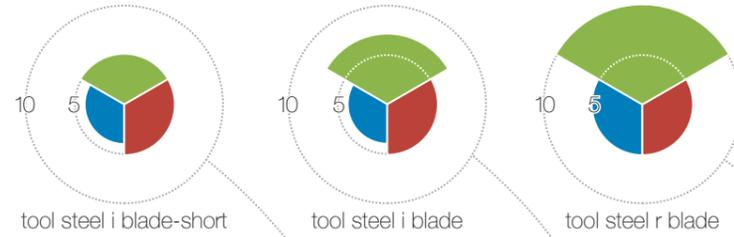
Regulation abrasive flow valve

Modular regulation abrasive flow valve enables controlled constant flow of abrasive (without hysteresis). Base valve has manually set of stroke from 0% to 100%. The valve in case of interruption of electrical power or compressed air closes automatically. The basic version of the valve can be upgraded with an automatic module to control the flow of abrasive.

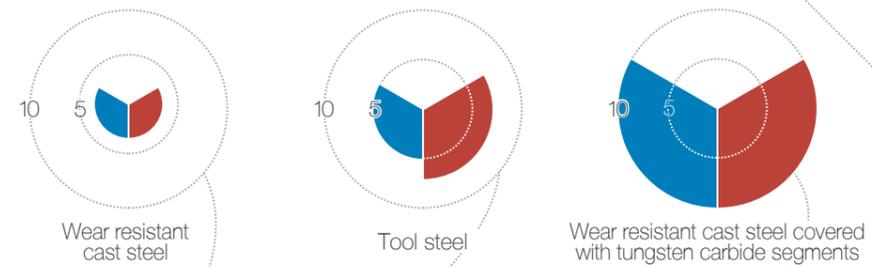
Long-life wear resistance

Extreme long service life, Exceptional wear resistance. Improved lifetime.

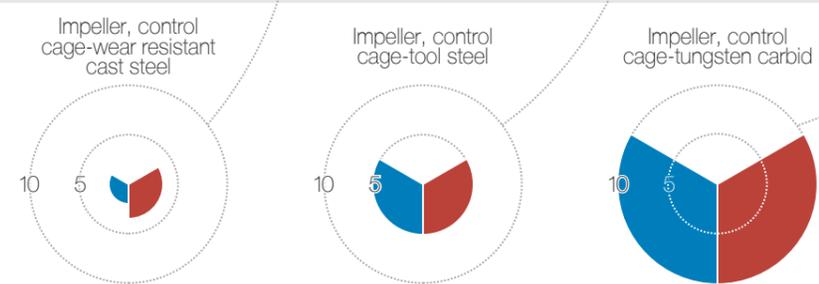
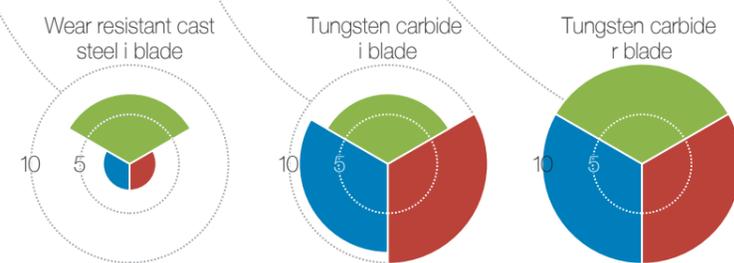
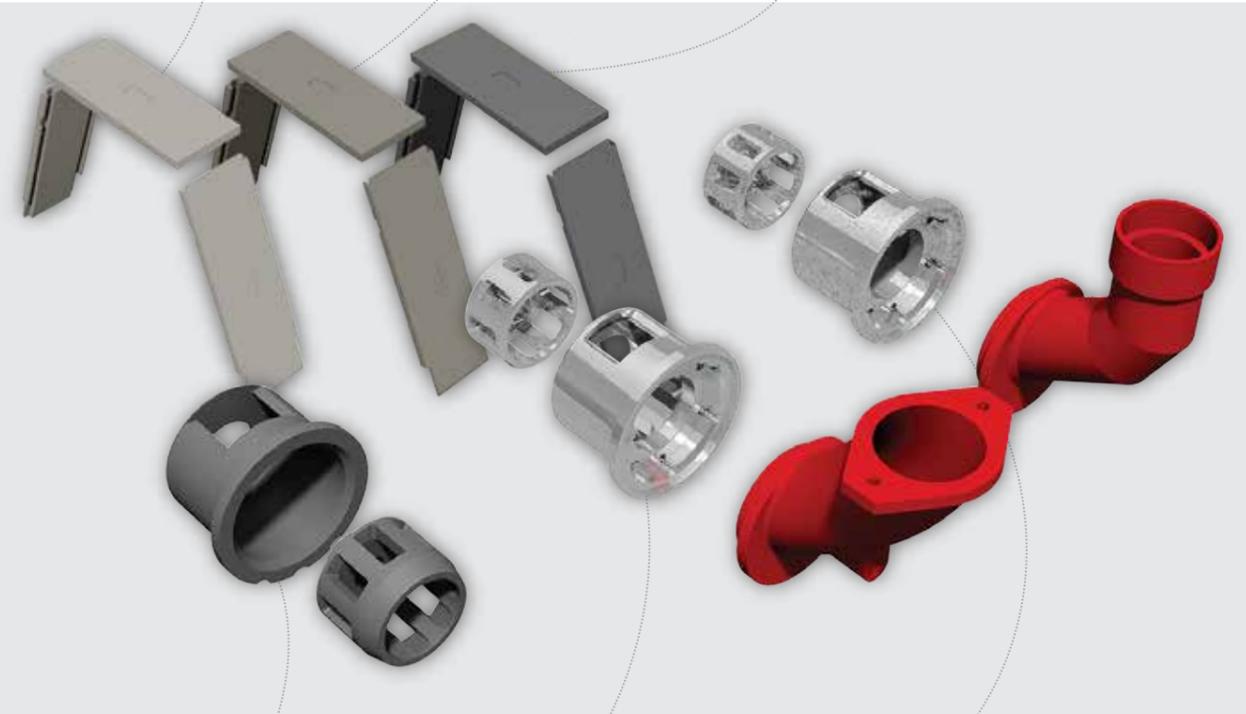
In the **Basic quality level** wearing parts are made of high-quality wear resistant cast steel that provide basic service life.
 In the **Standard quality level** the blades, control cage and impeller are made from tool steel. Service interval is extended for 2 to 3 times.
 In the **Superior quality level** the blades are made from tungsten carbide, while the impeller, control cage and shields are made from segments of tungsten carbide and the base which is high quality tool steel. The inlet pipe is also special having higher hardness. The service interval of wearing parts is extended from 8 to 16 times.



Comparison of wear on the blades at a variety of materials



legenda
● Speed of abrasive
● Service life
● Price of part



Operating costs

➤ Reduced energy consumption

The energy consumption is reduced up to 10%-25%* with optimal design of internal elements, use of quality materials, reduced friction at sealing of rotor using non-contact centrifugal seal as well as electrical motors with high efficiency.

➤ Reduced shot consumption

Reduced shot consumption is achieved by using the high-quality sm@rt wheel materials, consistency of the hot spot zone, and increased speed of the shot allowing flexibility of the blasting, peening process. Cost savings is up to 25% on your media costs!*

➤ Competitive prices of wheel and spare parts

We offer the best ratio between price/quality and efficiency. Our technician can also help you in modernization of your existing shot blast machine with our new ir sm@rt wheel.

➤ Quick change, easy maintenance and access to parts

Wheel design allows a quick change of the most wearing parts such as blades, control cage, impeller and inlet pipe (app. 15 minutes). Front side of the wheel is covered with an additional flange of greater diameter, which serves to facilitate an access to internal parts and to remove the rotor. The change of trapezoid shields and the electric motor is also quick and easy.

➤ Reduced wear, vibrations and noise level

Within the individual quality levels, i.e. Basic, Standard and Superior the service life of all wear parts is uniformed, which means that the servicing of wheel is minimal. In the Superior quality level the service interval of wearing parts is extended from 8 to 16 times.

The defects of screws cause a lot of problems and delays in service. For this reason high-strength studs, screws and a cap nut are used, proving sealing thread against solid particles. That is why the durability of screws is much longer. Screws for screwing side shields are sealed by an additional seal.

The sm@rt wheel housing is protected by the side shields and trapezoid shields. Thus the housing of the wheel is completely protected. Overlaps between the side and trapezoid shields are made with double labyrinths preventing complete breakthrough of the jet in the housing.

By manufacturing of wheel parts in modern CNC machines, use of new materials and modern heat treatment the components are manufactured within narrow tolerances. This is shown in quieter and smooth running and lower vibrations of the wheel.

➤ Reduced processing time

Because of higher impact energy, i.e. up to 70%, the reduction of processing time is significant.

**In comparison to conventional turbines.*

