



NEUMAN & ESSER



recovered Carbon Black

# OPTIMAL USE OF RAW MATERIALS

## Increase in value of rCB through grinding

Worldwide almost 2 billion tires are consumed each year. Via recycling, it is possible to bring the individual tire components back into the value chain. End-of-life tyres offer good usable materials and are a source of oil, gas, steel and carbon black.

The pyrolysis of entire tyres or tire shreds first produces coarse recovered Carbon Black, which must be ground for further use. Typically, the following requirements must be met when grinding rCB:

- Low energy consumption
- Particle size distribution of 4 - 40  $\mu\text{m}$  (d97)
- Good accessibility for maintenance and cleaning
- Pressure shock resistance
- ATEX Compliance

### Make use of rCB

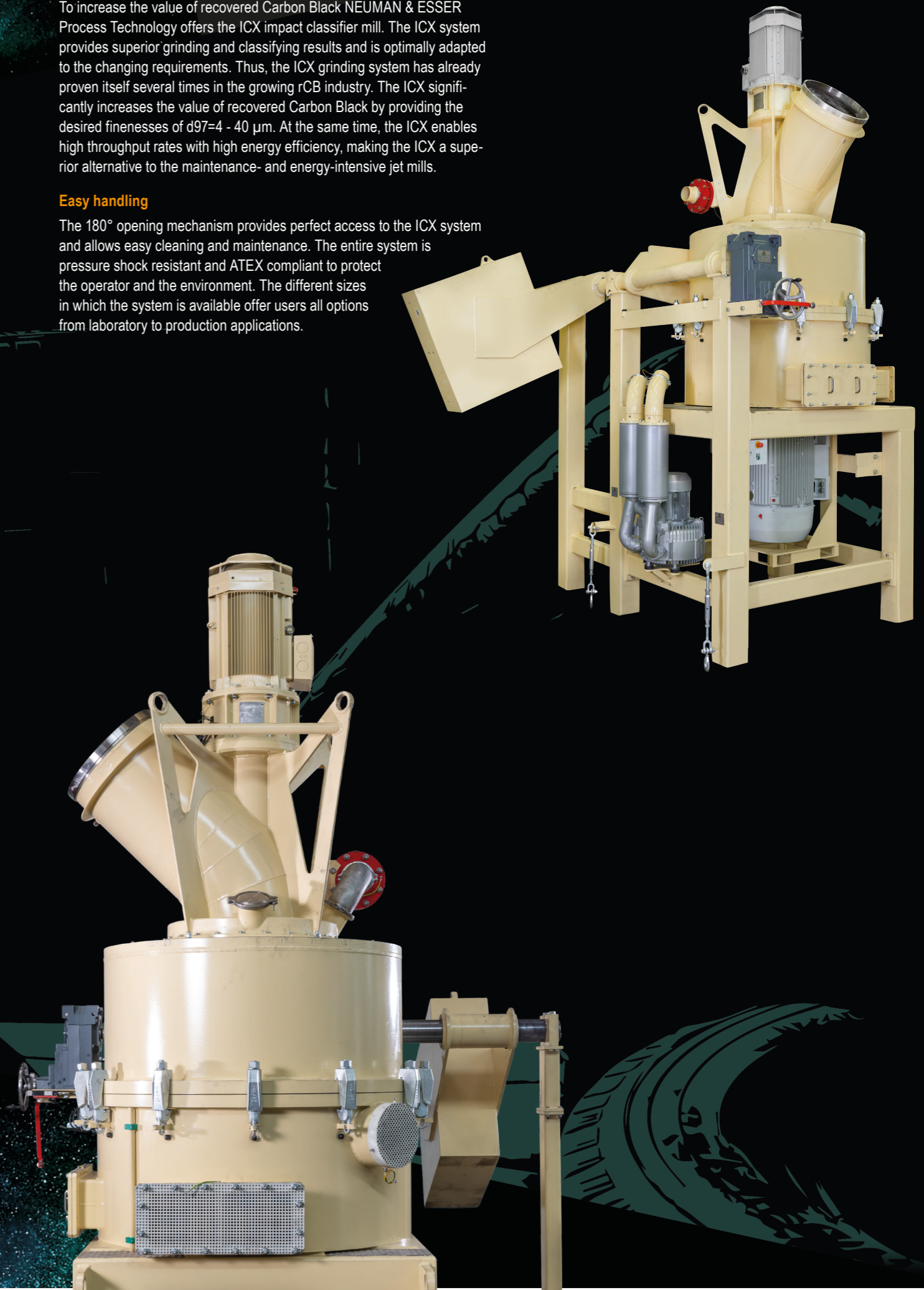
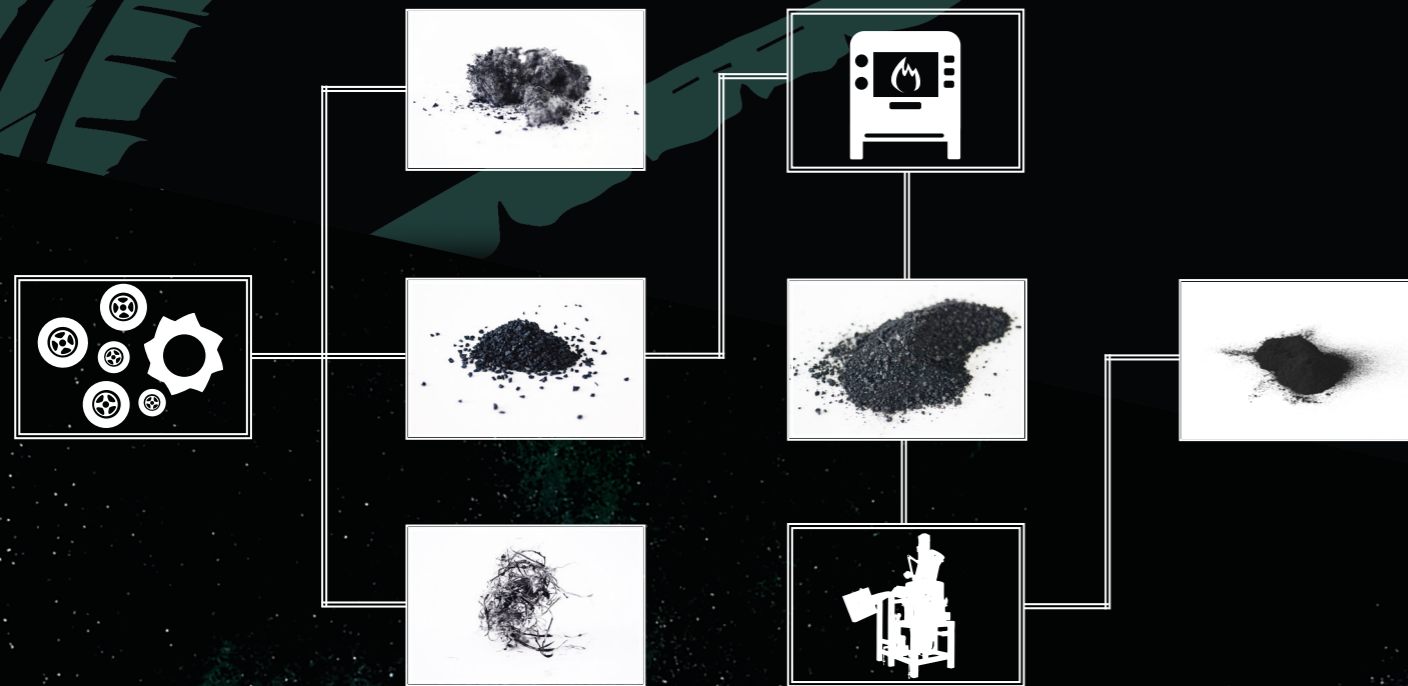
As a composite material, recovered Carbon Black occurs in different compounds, depending on the tire material used and the process conditions. The wide particle size distribution from micrometer to centimeter (inch) range, which the rCB displays after leaving the individual type pyrolysis reactor, requires the use of an efficient milling technology. In contrast to unprocessed rCB with a rather low resale value, processed rCB increases its value by a factor of twenty.

### Grinding rCB with the ICX by NEUMAN & ESSER

To increase the value of recovered Carbon Black NEUMAN & ESSER Process Technology offers the ICX impact classifier mill. The ICX system provides superior grinding and classifying results and is optimally adapted to the changing requirements. Thus, the ICX grinding system has already proven itself several times in the growing rCB industry. The ICX significantly increases the value of recovered Carbon Black by providing the desired finenesses of  $d_{97}=4 - 40 \mu\text{m}$ . At the same time, the ICX enables high throughput rates with high energy efficiency, making the ICX a superior alternative to the maintenance- and energy-intensive jet mills.

### Easy handling

The 180° opening mechanism provides perfect access to the ICX system and allows easy cleaning and maintenance. The entire system is pressure shock resistant and ATEX compliant to protect the operator and the environment. The different sizes in which the system is available offer users all options from laboratory to production applications.



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