

Spare and wear parts for grinding equipment



element[®]
Integrity in details

Element® is the manufacturer of high quality spare and wear parts for mining equipment providing the highest service level to its Customers.

Element Company Group does not own or represent any of the brands stipulated here. Spare parts and components are completely interchangeable with parts of pointed equipment. Provided and produced with warranty obligations of the Element® trademark.

Element offers the equipment users access to the alternative spare and wear parts of verified quality.

The range of spare and wear parts manufactured under the own Element® trademark comprises more than 40 thousand items. Instead of limiting on a single brand, Element focuses it's scope on various equipment types from multiple manufacturers.

Element's mission is to help its Customers optimize their expenses related with high costs of authentic replacements, as well as to the unpredictable quality of the off-brand parts and the lack of fast maintenance support with the alternative suppliers.

- Crushing and grinding equipment spare and wear parts
- Slurry pumps spare and wear parts
- Conveyor transport components
- Wear-protection materials
- Mill lining
- Standard components and and a selection of their functional replacements
- Engineering
- Technical maintenance and audit
- Repair works and equipment modernization
- Logistics and warehousing



Materials

Mill lining

Austenitic manganese steel

Mn: 13% Cr: —

Specification: ME01-18

Analogs: A ASTM A128, 110G13L

GOST 21357-87,

GX120Mn13 ISO 13521:2015

Classic Hadfield steel. High structural strength, medium abrasion resistance. Significantly increases hardness by work hardening.

A

Pearlite chromium-molybdenum steel

Cr: 2,0% Mo: <0,3%

Specification: none

Analogs: AS2074

High abrasion resistance state as received along with high strength characteristics. Increases hardness by work hardening.

L2C

C

Austenitic manganese steel

Mn: 13% Cr: 2%

Specification: ME01-18

Analogs: C ASTM A128,

GX120MnCr13-2 ISO 13521:2015

Increased tensile strength and decreased lower impact strength parameters, improved abrasion resistance due to the increase in surface hardness prior to work hardening.

AR22

High-chromium white cast iron

Cr: 22,0% Mo: <3,0%

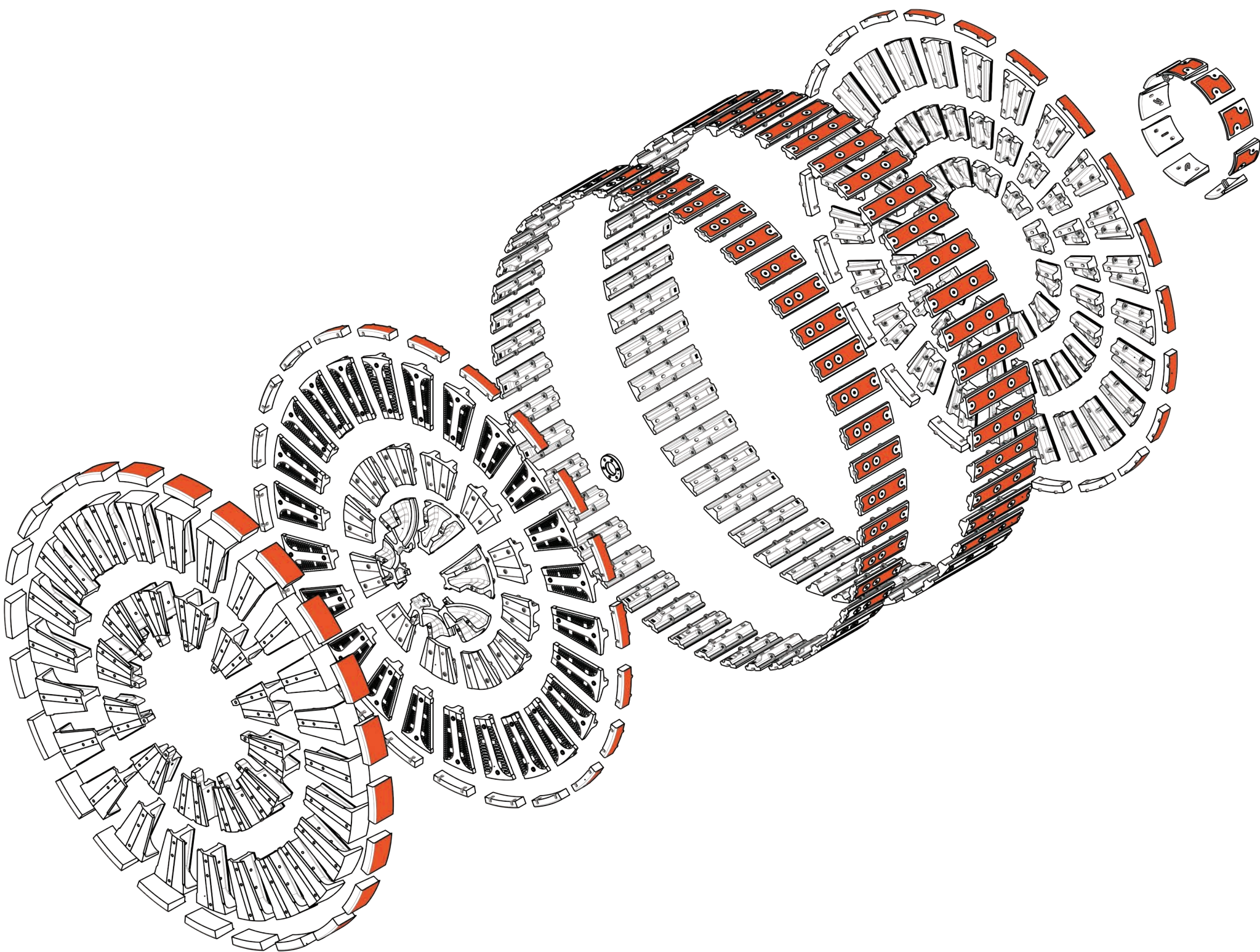
Specification: ME03-18

Analogs: Class IID ASTM A532

Highest abrasion resistance among mill lining materials. Easy lining removal.

Mill lining

Element offers a wide range of technical solutions for the protection of grinding equipment from wear — liners for mills of all types and sizes made of advanced grades of steel, cast iron and rubber.



Element develops design documentation and manufactures liners and fasteners for:

Autogenous grinding mills (AG)


Semi-autogenous grinding mills (SAG)

Ball mills

Rod mills

Exact formula of the lining alloy is selected by the Company's professionals specifically for each project. When selecting the chemical compound and thermal treatment requirements data on the current operation of the equipment is reviewed, as well as data on the component replacement periods, mill size, grinding type, grinding media used, design and thickness of lining components.

Our in-house Design department can rapidly develop 3D models and drawings from a part's sample or drawing. We perform a 3D assembly of mill lining prior to manufacture to avoid mismatching of elements and mill. We provide a full set of documentation for manufacture, inspection and on-site assembly.



Element's quality control system

Design and manufacturing processes are being managed to ensure uncompromised quality of Element parts.

End-to-end quality control is an integral part of Element's production process, allowing to comply with the stated technical requirements.

End-to-end control possibility is one of the certified manufacturing partners selection criteria.

Certified partners-manufacturers

Element reviews manufacturers available and assesses their quality management, production and technology capabilities with complex audit program. We thoroughly inspect our Partner's quality management system to integrate it with our QMS.

Technical documentation

We do reverse engineering and count on design improvements of our parts based on usage data in order to develop a full range of design and inspection documentation. A set of documents provided by Element ensures proper production and inspection of a part. We run a dedicated IT system for reliable storage and handling of documentation.

Quality control plan

Element develops specific quality control plan for every product type, defining important process stages and control methods for designing, manufacturing, delivery from the supplier and stocking acceptance. Control may be conducted for the whole batch of products or randomly.

Mass production orders

Element can execute orders in small and medium series according to its production documents. Prior to production our engineering team verifies manufacturer's technology solutions before purchasing or production of required tooling (patterns, coreboxes, die-molds, etc.)

Warranty

Element supplies spare and wear parts under its own trademark and provides warranty as well as product improvements based on operation experience, and end-customer technical support, product improvements on the grounds of its operational experience implementation and informational support on the operating conditions of the products to the end consumer.

Resources

For execution of quality control plan Element cooperates with the following services: in-house production, design and maintenance departments, our own representative at manufacturing plants, quality engineers as well as 3rd party acceptance inspectors and independent test labs.



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