Ovako develops high-tech steel solutions for, and in co-operation with, its customers in the bearing, transport and manufacturing industries. Our steel makes our customers' end products more resilient and extends their useful life, ultimately resulting in smarter, more energy-efficient and more environmentally-friendly products.

Our production is based on recycled scrap and includes steel in the form of bar, tube, ring and pre-components. Ovako is represented in more than 30 countries, and has sales offices in Europe, North America and Asia. Ovako's sales in 2017 amounted to EUR 921 million, and the company had 3,040 employees at year-end. For more information, please visit us at **www.ovako.com**

Ovako Sweden AB
SE-813 82 Hofors, Sweden
Tel: +46 (0)290 250 00
Fax: +46 (0)290 250 25

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Further processing

A major part of our rings are further processed in different ways to give our customers simplified production and lower costs.

Ovako can offer shot blasted rings of diameters up to 1200 mm and weights up to 500 kg.

Rings can also be heat treated before delivery in a variety of executions such as:

- Normalised
- Soft annealed
- Stress relieved
- Isothermally annealed
- Quenched and tempered

Blasting station for rings.

Furnaces for heat treatment of rings.

Parting of rings

Rings with lower widths than stated in the ringmill technical facts can often be rolled in multiples and parted. Ovako has a capable machine park for this purpose and has in 2011 expanded the parting capacity with additional state of the art parting technology and a packaging robot. Limitations min. 17 mm width and max. 1150 mm OD.

Machined rings

Ovako is well connected with several quality soft machining subcontractors and growing fast in supplying semi-finished and finished machined rings. Single ring types or complete assortments can be supplied in these executions according to individual customer requirements with full raceability and if desired, US-testing.

Profiled rings

We can roll profiled rings with a shape very close to the final product.

Some examples of typical profiles are shown below. Profiled rings offer the customer a total cost that is substantially less than other conventional methods of production.

A profiled ring can be up to 50 percent lighter than a cylindrical equivalent, while at the same time reducing machining time and a significant reduction in waste through lower volume, chip production and handling.

Some surfaces may even require no further machining at all.

They also demonstrate the specialist know-how that Ovako has that few other manufacturers can match.

Leading ring producer

Ovako is a leading producer of rolled rings for demanding applications. The rolling capacity sums up to 60000 tonnes/year.

The production is to a large extent adapted to the demands of the rolling bearing industry, but part of the volume is also supplied to other branches, e.g. gears to the automotive and general engineering industries and wind turbine manufacturers.

The rings are produced as cylindrical or profiled to a geometry very close to the shape of the finished component.

The dimensional programme ranges from 170 mm up to 4000 mm OD with weights from 7 kg to 5000 kg.

PRODUCTION OF ROLLED AND FORGED RINGS

Ring mill 8

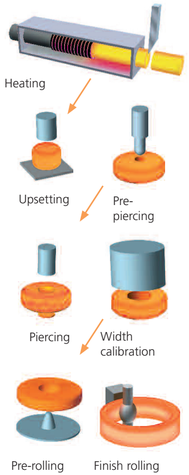
Technical facts
Ring diameter
170–380 mm
Ring width 50–120 mm
Ring weight 7–20 kg

Press 20
Mechanical press with pressing force 1600 ton, closed die.

Pre-rolling mill
Radial rolling force 25 ton.

Finish-rolling mill
Radial rolling force
2 x 40 ton.

Production scheme



Ring mill 4

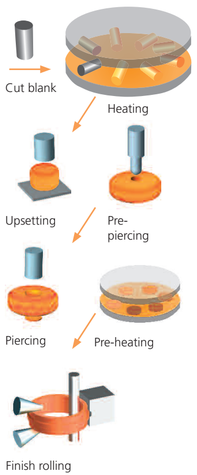
Technical facts
Ring diameter
200–750 mm
Ring width 100–230 mm
Ring weight 20–85 kg

Rolling mill
Axial rolling force 32 ton.
Radial rolling force 40 ton.

Press 13
Pressing force 500 ton.

Press 15
Hydraulic press with pressing force 1000 ton, closed die.

Production scheme



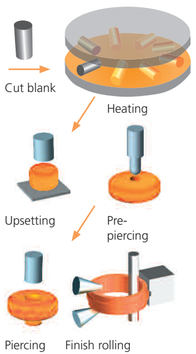
Ring mill 10

Technical facts
Ring diameter
300–1200 mm
Ring width 100–350 mm
Ring weight 55–300 kg

Rolling mill
Axial rolling force 63 ton.
Radial rolling force 80 ton.

Press 22
Hydraulic press with pressing force 2000 ton, closed die.

Production scheme

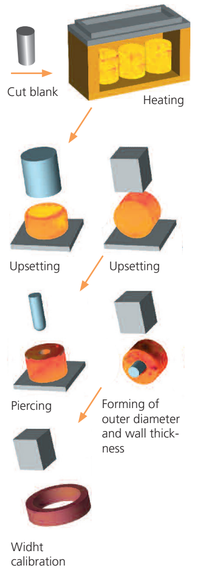


Press 6

Technical facts
Ring diameter
350–2200 mm
Ring width 40–1400 mm
Ring weight
70–3400 kg

Press 6
Hydraulic press with pressing force 1000 ton, open die.

Production scheme



Ring mill 9

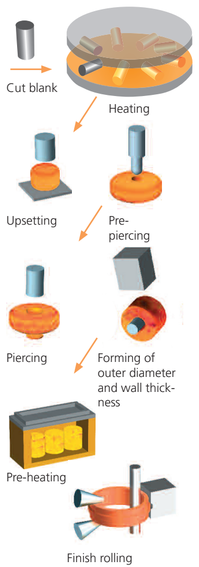
Technical facts
Ring diameter
400–2500 mm
Ring width 50–550 mm
Ring weight
80–2500 kg

Rolling mill
Axial rolling force 125 ton.
Radial rolling force 125 ton.

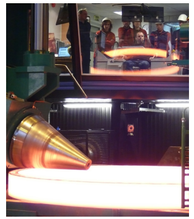
Press 5
Hydraulic press with pressing force 700 ton.

Press 6
Hydraulic press with pressing force 1000 ton, open die.

Production scheme



Ring mill 11



Technical facts
Ring diameter
500–4000 mm
Ring width 80–950 mm
Ring weight
300–5000 kg

Rolling mill
Axial rolling force 160 ton.
Radial rolling force 200 ton.

Press 6
Hydraulic press with pressing force 1000 ton, open die.

Production scheme