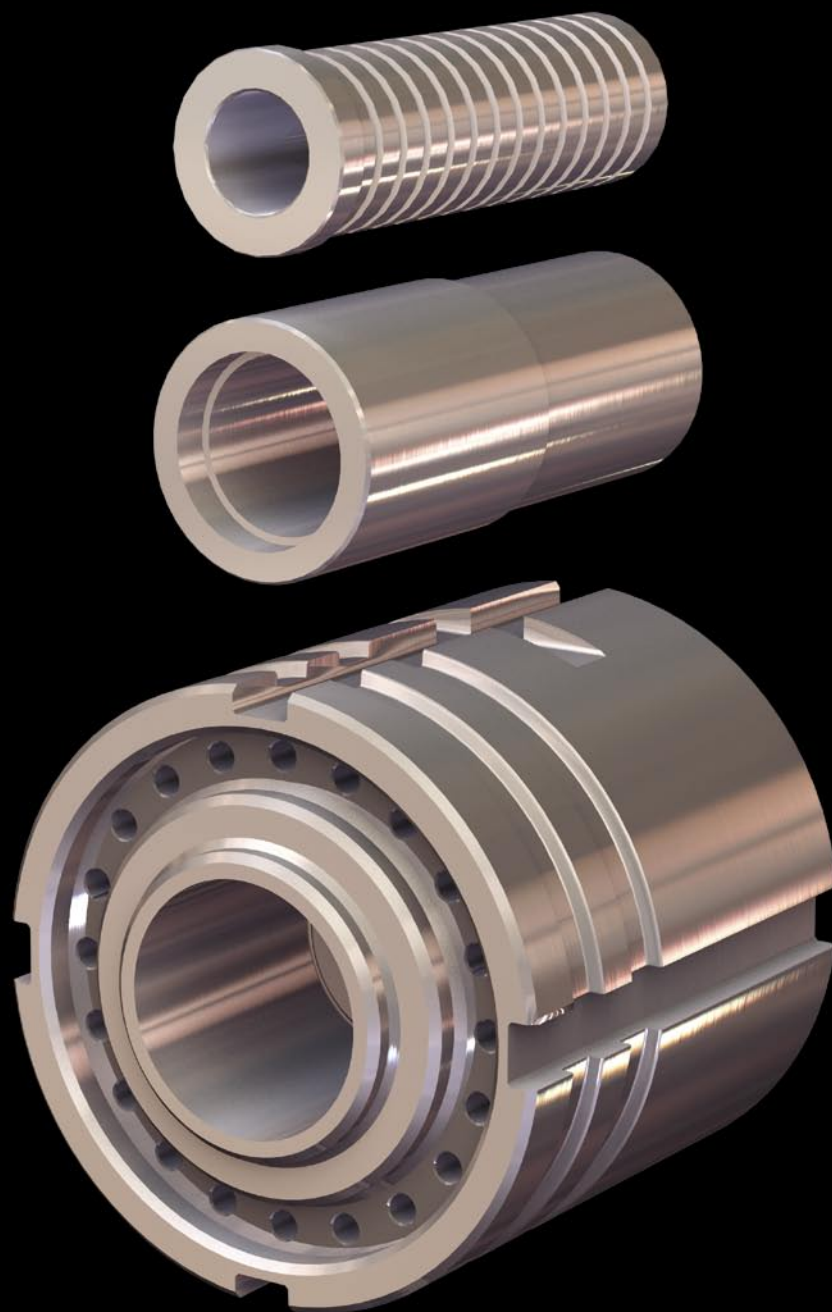


CONTAINER AND RELININGS

Get a new life

EXTRUSION TOOLING



WWW.UDDEHOLM-MACHINING.COM



THE PROBLEM

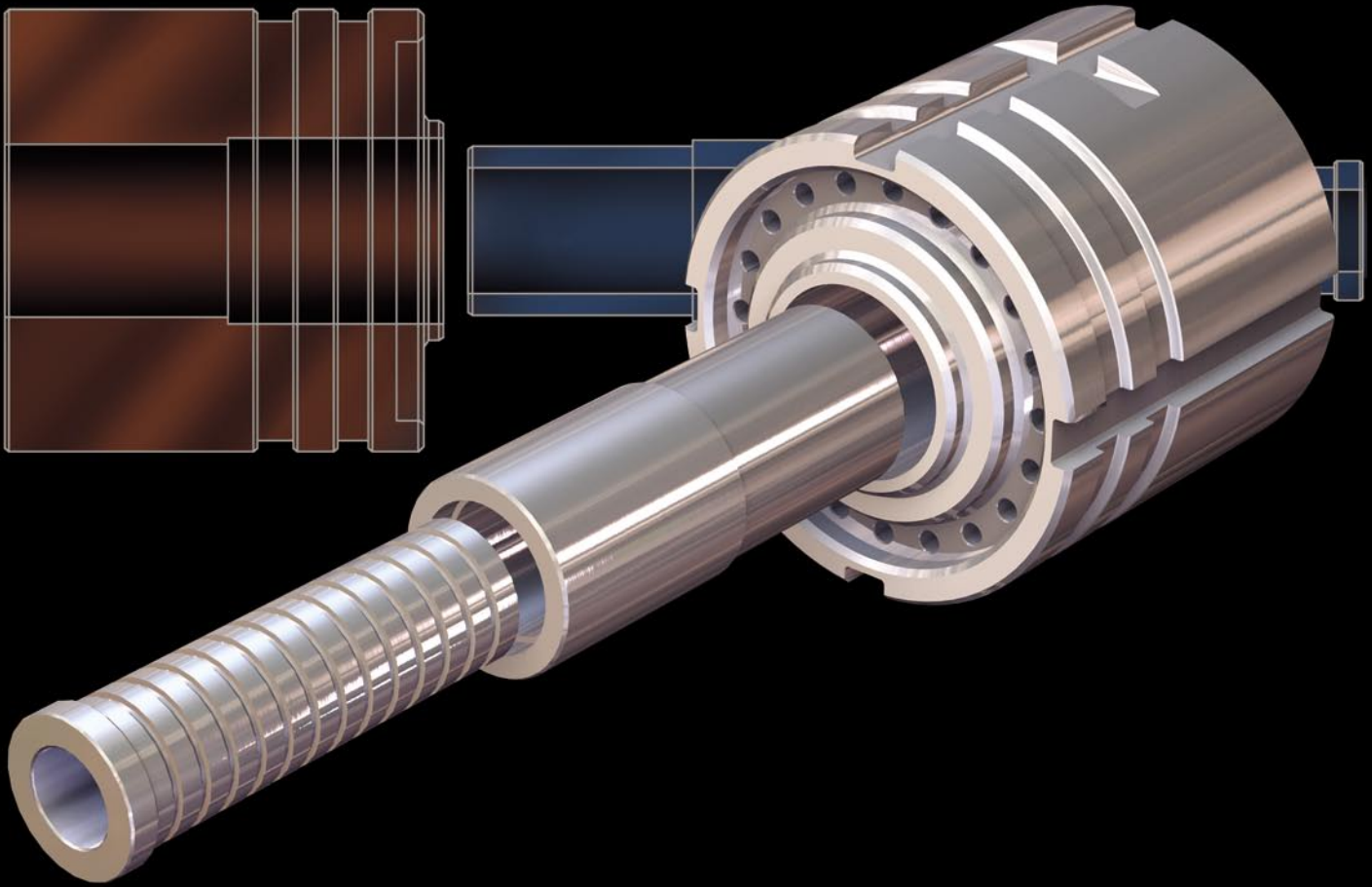
Thousands of billets are passing through the container and liner during their lifetime.

The liner can be replaced when it is worn out, but the container must be changed. It is of economical importance and quality that the container and liner perform all the way through.

Both container and liner are subjected to a number of factors that affect the length of their life:

- Thermally induced stresses from the temperature level itself and the heating and cooling originating from the cyclic nature of production.
- Temperature level gradually affects the steel properties and excessive heat load might cause severe damage.
- The direct wear of the liner at the extrusion of each billet.
- The extrusion forces which are transferred through the liner to the container. If excessive press forces are applied, the liner and the container will be damaged sooner or later.

These factors, lead to premature breakage and unjustifiable production stops, leading to higher production costs.



THE SOLUTION

We take care of everything.

The best way to counteract the problem is to trust the new containers and the relinings to Uddeholm Machining.

Our container production and our relining methods are based on a profound knowledge about the performance of steel, the conditions in metal extrusion and the experience and skill of our people.

- We provide the best steel whatever grade you choose.
- We advise and assist you if changes are going to be made.
- We install modern heating systems.
- We produce and fit the liners according to our long experienced standards.
- We follow and document the status.

When relining, we check the container thoroughly and document its status. This means that at every new relining, we can compare the present status with the status at earlier relinings. We can then forecast the life of the container and advise you on how to counteract.

| Stemside | Mantle. Inside Ø | | | | Intermediate liner. Inside Ø | | | |
|----------|------------------|--------|---------------|--------|------------------------------|--|---------------|--------|
| | Before turning | | After turning | | Before turning | | After turning | |
| + 50 | 449,04 | 449,05 | 450,03 | 450,03 | | | 320,01 | 320,01 |
| | 449,11 | 449,12 | 450,02 | 450,02 | | | 320,01 | 320,01 |
| Center | 449,26 | 449,29 | 450,02 | | | | 320,00 | 320,00 |
| | 449,22 | 449,24 | 450,00 | | | | 320,00 | 320,00 |
| - 50 | 449,25 | 449,24 | 450,00 | | | | 320,01 | 320,01 |

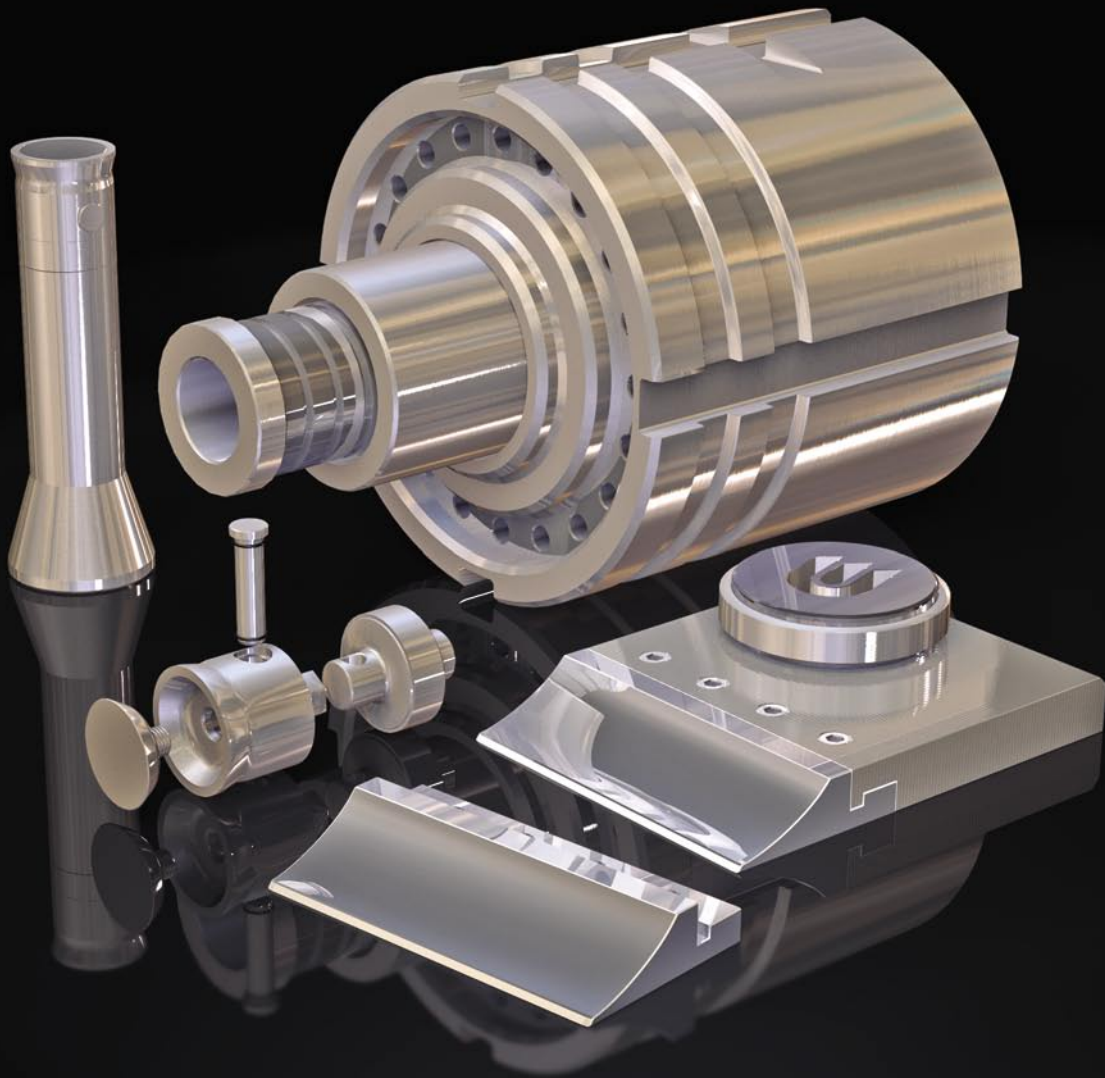
THE RESULTS

Better containers and liners means higher value.

Our containers and liners perform well because they are fitted to each other carefully with thermal load, press forces and present status taken into consideration.

Container status is well documented and evaluated and forms a solid base for preventive actions, planned changes and trouble-free production.

There are no surprises. You achieve better economy through controlled production and controlled purchase process.



UDDEHOLM MACHINING

A Company In The Uddeholm Group

Our job is to create added value for our customers with Uddeholm Tool Steel by bringing it to you ready-to-use components or systems.

We want to be your partner in attaining the highest performance and lowest cost per produced unit.

Uddeholm Machining has been working together with extrusion plants for more than 20 years. During those years we have seen many problems and success stories.

High quality and creative solutions stem out of the combination of our experience and the highly qualified researchers at Uddeholm Tooling. Together, we analyse the problem of any issue and advise you on appropriate countermeasures.

In addition to advice, we also provide drawings, engineering support and components or systems.

We are relining and refurbishing containers for our customers regularly as a part of our long lasting commitment.

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