

Our product range at a glance

- Manufacture of new screws and cylinders.
- Regeneration of screws and cylinders.
- Manufacture of new double screws and double cylinders and regeneration of double screws and double cylinders.
- Non-return valves.
- Process optimisation.



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Your partner for plastics processing

ARENZ GmbH stands for Made in Germany, and has done for over 40 years.

We manufacture screws, cylinders and non-return valves for the extrusion and injection moulding market using the most modern CNC controlled processing machinery. We have a vertical range of manufacture of almost 100%.

To ensure top quality in screws and cylinders ARENZ develops and optimises its own protective alloys and technologies for maximum wear protection against abrasion, adhesion and corrosion.

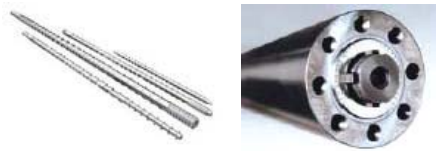
Due to our many years of experience, ARENZ has extensive knowledge about the manufacturing process, plastics (with the addition of fibre glass, pigments, filler materials and flame protection for example), material combinations (screw/cylinder) and special coatings (e.g. nickel, hard chrome or PVD coatings). Furthermore we advise our customers on the design of screw geometries using our software that has been specially developed for the extrusion and injection moulding market.

Manufacture of new screws and cylinders

We manufacture extremely wear-resistant screws and cylinders customised to customer requirements in dimensions from \varnothing 18 - 300 mm and up to a length of 6,000 mm.

We only deploy materials that go together well when selecting materials or combining materials for screws/cylinders.

All screws and cylinders made by ARENZ can be supplied in nitrided steel, pre-hardened steel, bi-metal and HIP alloy material qualities.



Manufacture of new double screws and double cylinders and regenerated double screws and double cylinders.

The manufacturing length for parallel or conical units (screw and cylinder) is up to 5,000 mm and a diameter of 350 mm.

The regeneration of screws takes place using thermal spraying (e.g. flame or plasma spraying, HVOF).

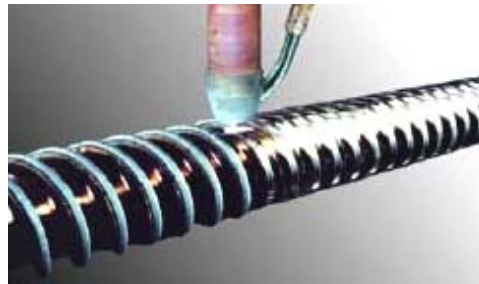


Regeneration of screws and cylinders

The regeneration of screws and cylinders involves more than simply repair. When professionally conducted it represents a refining of the plasticising unit.

The principal advantages of regeneration are as follows:

- cost savings of up to 50%
- considerable extension of the service life of the screw or cylinder
- a very short delivery time to minimise the downtime of machinery.



The regeneration of screws is performed using the extremely wear-resistant welding filler materials that we have developed ourselves on a 7 axis controlled CNC PTA welding plant.

Cylinders are honed and, depending on wear, equipped with a bushing.

ARENZ regenerates plasticising units up to a length of 6,000 mm and a diameter of 500 mm.

Manufacture of new non-return valves and regeneration of non-return valves

Non-return valves should close quickly and reliably and also guarantee a constant melt cushion.

High demands regarding wear on sealing surfaces, temperatures of up to 500° C as well as pressure of up to 2,500 bar require ideal material combinations.



Process optimisation

ARENZ has many years of experience designing screw geometries for customised applications in the extrusion and injection moulding market.

Using the REX and PSI simulation software which was developed jointly with the University of Paderborn, it is possible to quickly detect, evaluate and finally optimise the influencing variables and their impact on the extrusion or injection moulding process.

This enables ARENZ to make statements about the following: pressure history, throughput behaviour, melting progress, homogeneity, performance history shearing effects, mixed variables and wall shear stress.