

THEYSOHN

Competence in plastic technology



THEYSOHN

Partners for the plastic industry

Since more than 60 years, the name **THEYSOHN** is known in conjunction with technically advanced products for the plastics processing industry. The **THEYSOHN** plant in Salzgitter supplies products to many countries worldwide. As essential parts, **THEYSOHN** products are used in machines of many well-known producers and processors.

Already in the beginning of our product development program, we have concentrated on longlasting processing units. We can offer barrels, casings and screws which resist abrasion and corrosion and offer optimum processing for different materials. The production of well over 30,000 barrels and screws in many different sizes and fabrications has led to an extensive development and production know-how.

THEYSOHN - a competent partner for plastic machinery producers, plastic processors as well as for the chemical and food processing industry worldwide

Quality is our objective

The quality of **THEYSOHN** products is subject to internal quality control standards as well as to the quality management system DIN ISO 9001:2000. By controls of the staff, all manufacturing steps are continuously checked. Before products leave the plant, they are subject to final quality control procedures. This is how we can guarantee quality at the highest level.

Quality products from **THEYSOHN** improve the processing of plastics.



Theysohn Salzgitter supplies the following products:

- Screws for extruders and injection molding machines
- Parallel and conical twin screws and barrels
- Single screws and barrels
- Bimetal barrels for single and twin screws
- Casings and screw shafts for compounding extruders
- Rebuilding of screws, barrels and casing
- Precision parts for the machinery industry
- Refinishing: deep boring, honing, turning, abrading, welding of long distances, parallel & conical

Single- and Twin-Screws

In many extrusion applications, nitrided twin screws are used. In demanding applications, coating of the screws is desirable. For the coating, layers of molybdenum have shown excellent sliding and low friction running conditions.

For other applications wear resistant layers with Ni/Co-basic alloys as well as specially developed and modified tungsten carbide alloys are necessary. THEYSOHN's plasma-welding and plasma-spraying technologies make it possible to arm the screws with surface protections against wear.



Single- and Twin-Screw Barrels

For the deep boring and honing, especially for conical bore holes, THEYSOHN has developed special machinery. THEYSOHN's manufacturing techniques, when used with suitable raw materials and applied with the experience of our qualified technicians, lead to precision parts with accurate dimensions.

Deep nitriding of barrels improve the wear behavior. For higher demands the barrels are offered with changeable bimetal liners.



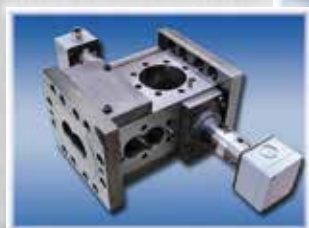
Barrel Sections and Screw Shafts

THEYSOHN Salzgitter supplies barrel sections and screw shafts for compounders. The standard design of the casing is made from nitrided steel,

Barrels with exchangeable sleeves made from completely hardened special steel offer good resistance against abrasive wear which can occur when processing plastics with additives.

When resistance against corrosion is required, sleeves with completely hardened rust and acid proof steels are produced. When extreme wear resistance is necessary, the barrels are made in a hipped fabrication using powdered metallic raw materials.

Screw shafts made from tempering steel assure the reliable transmission of the necessary torques.



Bimetal barrel

THEYSOHN developed special alloys to insert bimetal-liners in all kind of twin screw barrels. This allows a higher resistance for abrasion and chemical corrosion.

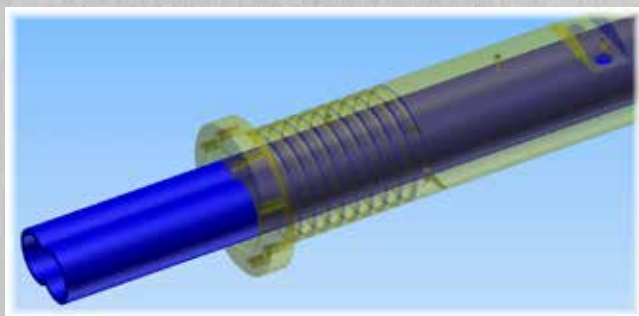
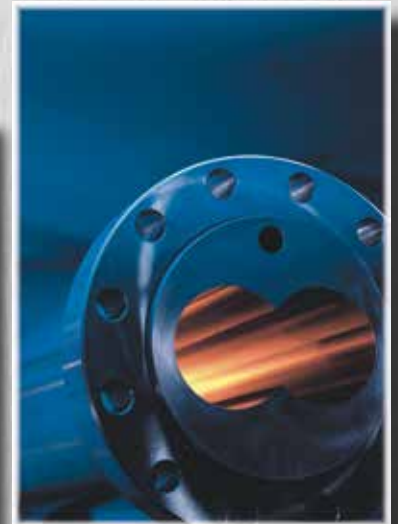
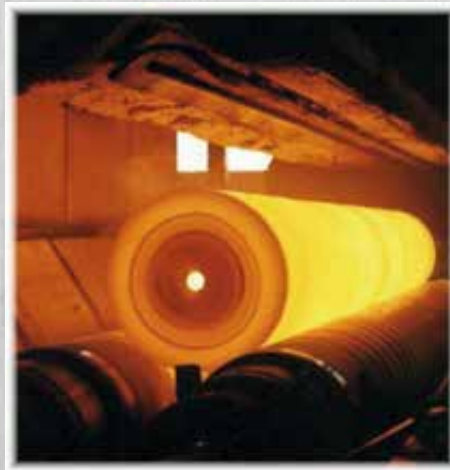


Theysohn Quality

- **T5000** modified steel-chromium-nickel base can be used together with molybdenum-plasma coated THEYSOHN twin screws or alternatively two stage longtime gas nitrided screws.
- **T8000** modified wolfram-carbide-nickel base to use THEYSOHN twin screws with plasma welded hardmetal running surface coating.

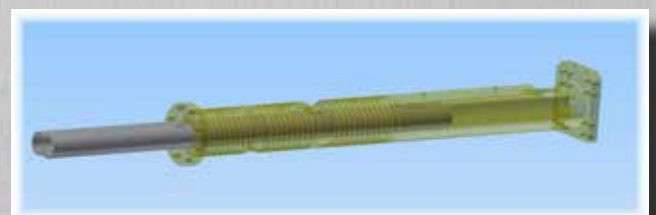
All bimetal-alloys are optimized to THEYSOHN screwcoating systems for our twin screws to guarantee an optimum on life-time and process results.

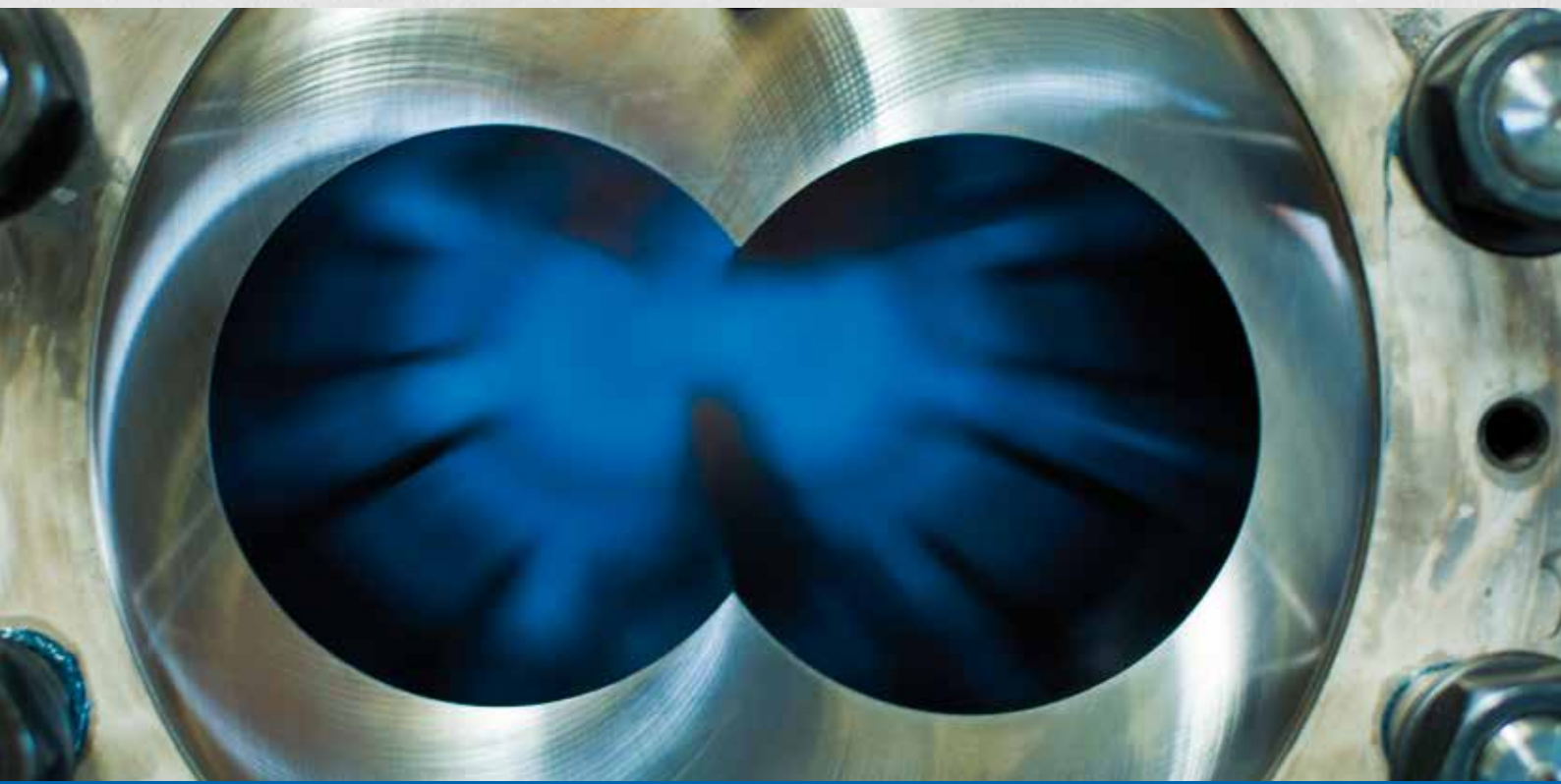
The THEYSOHN system can be offered for all plastification units on the free market and sets new standards in price and efficiency.



The THEYSOHN repair system allows rework of all used and worn out barrels with special spindle technique and guarantees the technical requests to insert high quality alloy liners.

The THEYSOHN system assures the exchange of alloy liners at any time and offers short delivery times with degressive prices.





THEYSOHN Extrusionstechnik

Not only connoisseurs, but masters

Many companies claim they can build perfect components for extrusion lines, but what about the perfect interaction of these components operating as a whole? THEYSOHN understands the entire extrusion process and technology, and aligns the individual components to precisely harmonize with each other.

THEYSOHN provides you with comprehensive support and can also deliver turnkey facilities, whatever your needs involve engineered plastics, masterbatch, thermoplastic elastomers, food extrusion or powder coatings.

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Technical data

Quality products from **THEYSOHN** - reliable products for the plastic industry.

Standard dimensions

Execution	Diameter (mm)	Length (mm)
Single screws	30 - 455	30 - 7500
Single screw barrels	30 - 650	30 - 7500
Twin screws	30 - 455	30 - 7500
Twin screw barrels	30 - 255	30 - 7500
Barrels	20 - 280	20 - 1700
Screw shafts	8 - 175	20 - 7500

Screw coatings

Execution	Single screws	Twin screws	Depth of layer [mm]	Hardness [HRC]
Plasma coated flights Stellit 1/6/12/20/21 Colmonoy 50/56 u.a.	•	•	1,5 - 5,0	38 - 64 upon model
Plasma sprayed flights Mo/WC/MoNi/ and others	•	•	0,15 - 0,50	48-58 micro hardness

Further coatings are possible on request!

Barrel-/Casing-/Sleeves Qualities:

- **Single Screw Barrel:** longtime gasnitrided, bimetal T5000 and T8000, HIP, Hastelloy
- **Twin Screw Barrel:** longtime gasnitrided, bimetal T5000 and T8000
- **Casing :** longtime gasnitrided, duplex
- **Sleeves:** longtime gasnitrided, FSR vdh, HIP, powder metallic raw materials

Further qualities are possible on request