

The Extrusioneers



# REIFENHÄUSER EXTRUDERS

Reach Your Production Goals and Achieve Greater Profitability

# IT PAYS TO CHOOSE YOUR EXTRUDER WISELY

As a producer or machine manufacturer, you probably face the same questions time and again: How can I increase the profitability of my business? How can I reduce energy costs? How can I develop new markets? How can I meet future requirements without major new investment? The answer to all these questions could be: with the right extruder. We will assist you in finding the right model for your needs and highlight how Reifenhäuser extruders can make your business more successful.

## Reifenhäuser Extrusion Systems

## **TAILOR-MADE** IS OUR STANDARD

No manufacturer should miss out on business success because line components are not optimally matched to production targets. We therefore offer customized components at the price of standard solutions that are compatible with all line manufacturers and quickly pay for themselves. Benefit from our decades of experience, our process know-how from the Reifenhäuser Group, our own production processes, our wear protection know-how, the direct contact between engineers and a modular system that has stood the test of time.

- > 70 years of experience
- > More than 500 extruders per year
- > Best wear **protection** in the industry
- > **Understanding** of the overall process
- > Excellent development expertise





# EXTRUDERS FOR ALL APPLICATIONS & ALL BRANDS

DIRECT EXTRUSION, MONOFILAMENTS, FILM, CABLE, RECYCLING, BLOW MOLDING, COATING, NONWOVEN, SHEET, PIPE, PROFILE







#### Reifenhäuser

# **EXTRUDERS**

To ensure the highest machine availability and best price-performance ratio, we design all of the components in our extruders according to Reifenhäuser standards. Screws and barrels, the heart of the extruder, are always manufactured in-house and offer outstanding wear protection - for all models.







#### **SINGLE SCREW**

Efficiency for a Broad Range of Applications

Reifenhäuser single-screw extruders match most product requirements, they are tailor-made and economically efficient. Owing to its wide range of applications and raw materials, this technology can be used with enormous flexibility.

#### **TWIN SCREW**

Productivity in Compounding & Recycling

The excellent mixing and degassing properties of the co-rotating twin-screw extruder enable the highly productive manufacture of top-quality products and make it the ideal solution for many compounding and recycling processes.

#### **HIGH-SPEED**

Performance for Special Applications

A very high plasticizing capacity is sometimes required when you process PS, PP, or LD-PE. Reifenhäuser high-speed extruders meet this requirement with an extremely small footprint, thanks to their high screw speed.



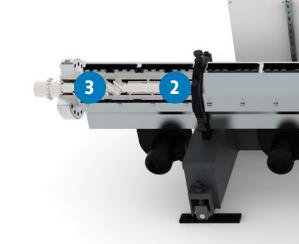




#### **Single-Screw Extruders**

# ENSURING OPTIMAL PROCESS PARAMETERS

Our extruders feature long service life, high productivity and excellent melt quality. They are the result of combining unique wear resistance technologies for screws and barrels, a high quality standard and the optimized design of all extruder components.



#### 1 Maximum **Energy Efficiency**

We match the heating and aircooling zones to your requirements - to ensure efficient heating and cooling.

# Economical and Sustainable

Extend the service life of your lines and ensure high production quality with appropriate wear protection

# High-Quality **Production**

We adapt the geometry and wear protection of screws and barrels to the intended application – to ensure long service life and high product quality.

# User-Friendly Maintenance

Our central water distributor significantly reduces the time required for maintenance.

#### YOUR PATH TO HIGHER **PRODUCTIVITY AND LOWER ENERGY CONSUMPTION**

- Precisely designed extruders
- Energy-efficient components
- Maximum wear protection
- Maintenance-friendly components



Replace your old extruder and save money!

### Flexible **Combinations**

We offer a variety of drive systems, model types and manufacturers - to optimize the performance.

## **Efficient Heating and Cooling**

Our heating and cooling jackets in the feed zone do exactly what they are supposed to do: heat and cool at maximum efficiency.

## Reliable **Production**

We fit only long-life gearboxes - to ensure high availability and minimize maintenance work.

## Variable **Positioning**

Our base frames are available as stationary or mobile versions, in a variety of extrusion heights and model types.

#### **Co-rotating Twin Screw Extruders**

# **COMBINING PERFORMANCE** AND COST-EFFICIENCY

Co-rotating twin-screw extruders are unbeatable when it comes to compounding and direct extrusion. Our twinscrew extruder processes up to 100 percent PET recyclate for instance. This significantly minimizes the costs of energy and raw materials.

#### 1 High **Flexibility**

The design of our screws is based on a modular system that permits us to match them rapidly to various formulations or requirements.

#### Maximum **Cost Efficiency**

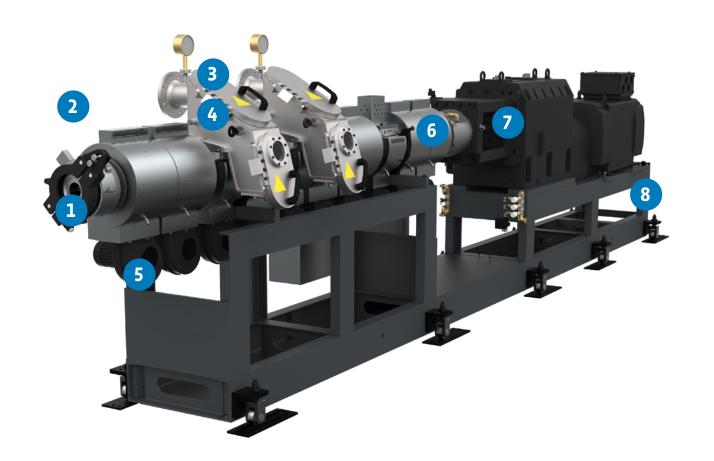
The side-feeding of cost-effective fillers helps reduce raw material costs significantly.

#### Excellent **Energy Efficiency**

The optional inline degassing system permits the processing of hygroscopic polymers, such as PET, without energy-intensive predrying. Fully insulated heater casing with convection flaps reduces heat losses.

### **Ecological Sustainability**

The Reitruder processes up to 100 % recycled material without the need for energy and time-consuming predrying. It also permits the processing of ground production waste, such as edge trim.





High throughput rates with excellent melt quality

Outstanding mixing properties

Excellent degassing properties

## Low Maintenance

Compared to water cooling, special ceramic elements combined with high-performance fans result in much longer maintenance intervals.

## Custom Design

Barrel zones are combinable to achieve high cost efficiency, depending on the application.

## Reliable **Operation**

Sensitive machine components are protected against critical overloads by an overload clutch.

## Well-Designed **Ergonomics**

As an option, the drive unit can be mounted on a mobile carriage. The screw pair can then be extracted to the rear.

#### Reiloy Inside

# BETTER WEAR PROTECTION FOR LONGER EXTRUDER LIFE

Did you know that - to ensure a long service life - our extruders automatically come with screws and barrels with the best wear protection in the industry? Our experts at Reifenhäuser Reiloy manufacture the heart of our extruders themselves, including in-house development and production of proprietary hard alloy powders. So you can look forward to extruder design and wear resistance that perfectly match your application - always.



#### **REILOY INSIDE:** YOUR ADVANTAGES

- Longer wear protection
- Verifiable longer barrel life
- Precise matching of materials and their additives
- Consistent Reiloy quality without fluctuation
- The best cost-benefit ratio in the industry

#### **Advanced**



Screws for plastics with low filler content, greater wear protection against abrasion on outer flight surfaces

#### **Premium**



Screws for plastics with filler content >30 %, maximum wear protection against abrasion, corrosion and adhesion. Complete flight surface protection in armored quality; suitable for use in high-wear applications

## **Armored Screws**



Scan to learn more about **Reiloy screws** 





## **Bimetallic Barrels**



Scan to learn more about **Reiloy barrels** 





Stress is especially high in the feed zone of the extrusion or injection-molding line, i.e. when the solid has not yet fully melted and the abrasive, corrosive or adhesive properties of the additives have a direct impact.

Whether your company is a film producer, injection molder or line manufacturer, processing recyclate involves many challenges because recyclate is a rather complex raw material. After all, the material has already had at least one life.

# Recyclate Is a Bag of Surprises

It's not always clear what additives were used when the product was first manufactured. How carefully was the feedstock sorted? How meticulously was it cleaned? Does it contain any (aggressive) residual substances? Regranulation also changes the properties of the plastic.

All these aspects can affect the quality of the recyclate. So, when recyclate is processed, special additives are added to ensure the polymer becomes a high-quality product again. Otherwise, the only option would be downcycling, i.e. manufacturing a product of lower quality than the original product.

# Additives Act like Sandpaper

Many additives pose a challenge for the plasticizing unit - for example, because they have an abrasive effect. Other additives tend to stick or act aggressively due to inorganic acids. Many dies and fillers also stress the components.

## Recyclate: A Hazard for Production

Damage to the surface of the plasticizing unit during recyclate processing makes it impossible to produce high-quality material. In addition, there must be constant pressure in the system to ensure process stability – and this is not possible with damaged components. The consequence: This results in the process becoming no longer controllable and, in the worst case, the line eventually shutting down.

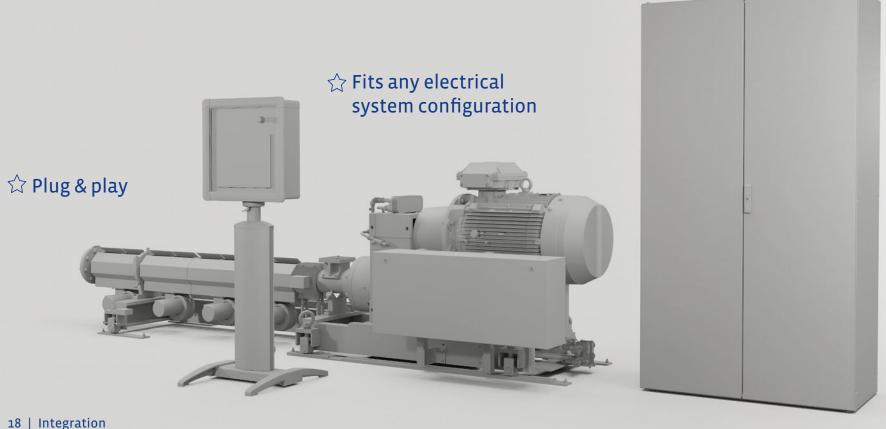


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There are different types of wear: abrasion, corrosion, and adhesion. All of them result in surface damage.

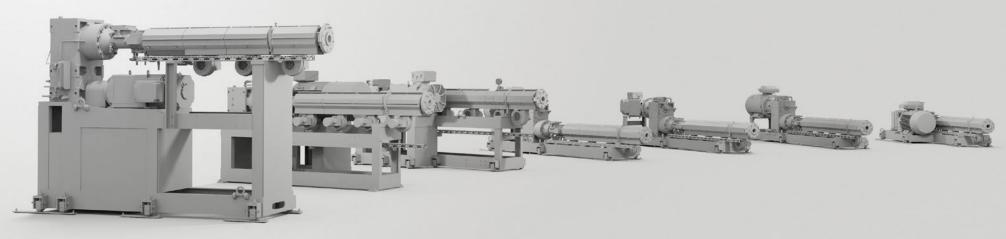


# EASY ELECTRICAL AND **MECHANICAL INTEGRATION** INTO ANY EXTRUSION LINE



# EXTRUDERS IN FLEXIBLE DESIGN

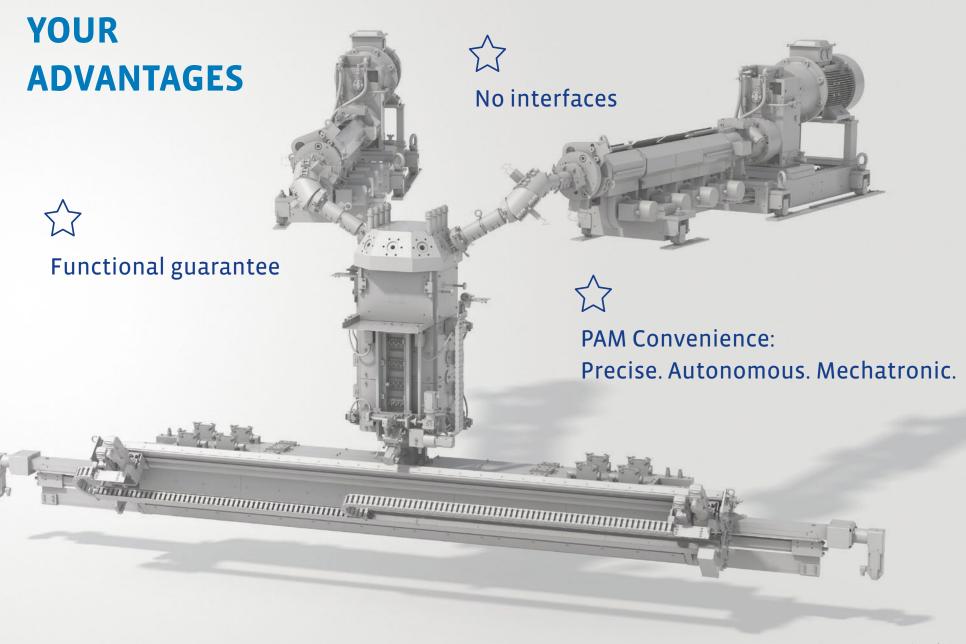
The different designs of our extruders can be easily integrated into any line. We modify the required interfaces to your needs for this purpose and adapt the extruders to the available space.



## Best-In-Class Hot Part from a Single Source

# PERFECT EXTRUDER INTEGRATION INTO THE **OVERALL PROCESS**

Because we have decades of experience in line engineering within the Reifenhäuser Group and are closely networked with our sister companies, we understand the overall process. If required, we can therefore supply you not only with the individual component but also with the complete, perfectly matched hot part!







#### Productive in the Long Term

# **SERVICE**

#### **Extruder Check**

Use our Extruder Check to maintain the efficiency of your production line. We check the wear behavior of extruder screws and barrel segments and, based on the test report, we assist you in determining the necessary service intervals and measures, which may vary depending on the raw materials and operating conditions on your lines.

#### **Screw and Barrel Cleaning**

Screws and barrels have to withstand extreme loads in the extrusion process every day. This results in deposits and impurities. Therefore, regular cleaning should be performed by professionals. This prevents negative impacts on the polymer and reduces the frequency of screen filter changes. Our service also includes a wear diagnosis for the screw and inner wall of the barrel to assist your investment planning.



Scan to discover more services





#### For Future Success

# **RESEARCH & DEVELOPMENT**



If you are wondering why Reifenhäuser is so successful at achieving such a high degree of extruder customization and adaptation to different production requirements look no further than our Research & Development Center and our close cooperation with our sister companies. These are the line experts with an eye for the overall process. Our colleagues mirror to us what works on the line, regularly challenge us with new requirements and like you - are not satisfied until everything is perfect.

Our own metallurgical laboratory, a technology center for dies and extruders, and the world's largest technical center for the production of films and nonwovens provide us with ideal conditions. These facilities allow us to optimize until the technology satisfies our biggest internal critics and delivers competitive benefits to ensure your success.

- ☆ Technology center for dies, extruders, film lines and nonwoven lines
- ☆ Close cooperation with experts for the overall process

# LET'S TALK ABOUT **YOUR GOALS!**

#### **Your Contact**

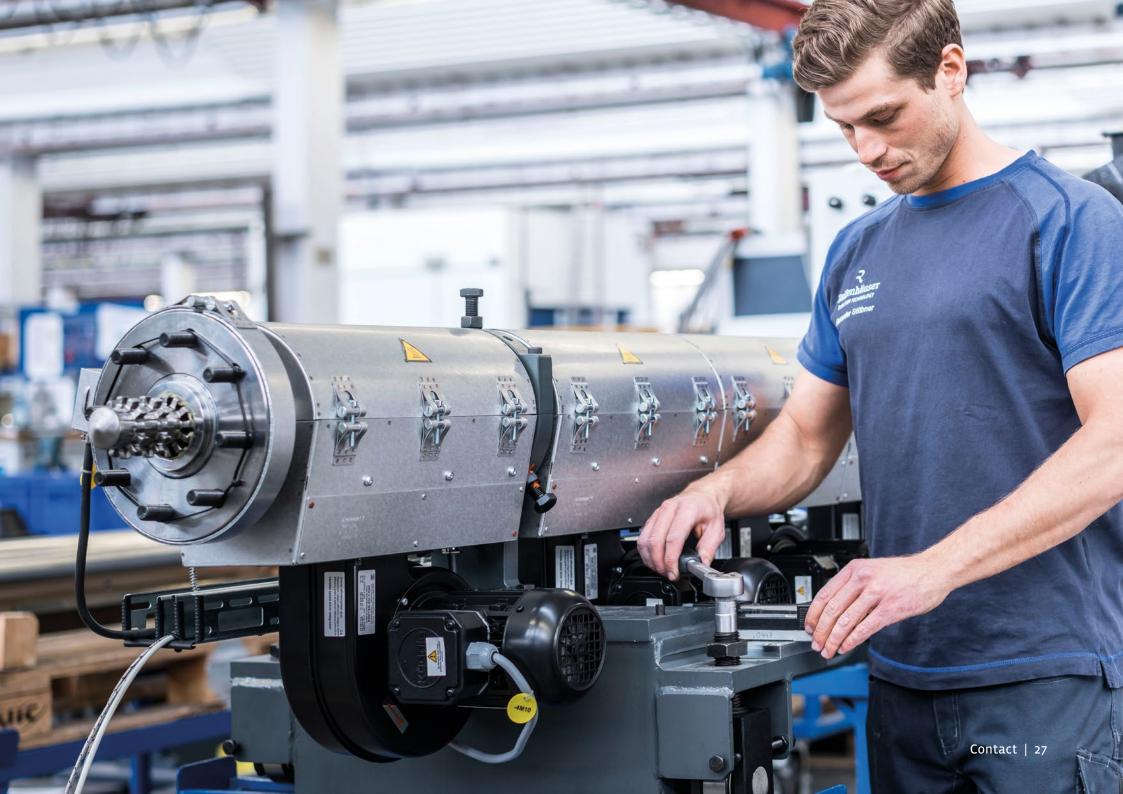
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