

HIRSCH Technology





Expanding
with
Ideas

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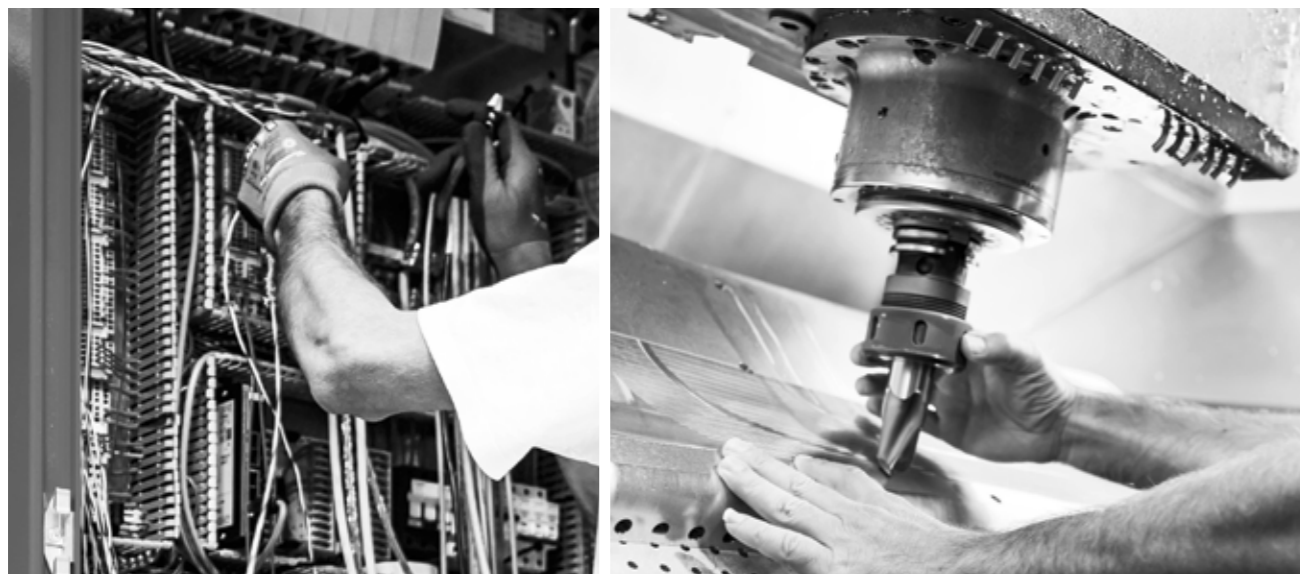
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What do we do and who we are.

The HIRSCH Servo Group started off as a small Carinthian business serving the local market that specialized in manufacturing transport packaging made of EPS. HIRSCH Porozell successively grew to become the core of an innovative and constantly expanding group of companies. When HIRSCH Maschinenbau was formed in 1985 with the aim of developing, producing, and servicing plant and machinery, it marked the beginning of internationalization. Today, the HIRSCH Servo Group with its two business segments, EPS and EPP Processing and Technology, employs over 600 people whose expertise has put the company in an excellent position to play the leading role in the industry and expand in the long-term. HIRSCH Maschinenbau sees itself as the technology leader in the manufacture of high-quality, flexible, and cost-effective plant and machinery for processing EPS and EPP.

Its hallmark is long-lasting, user-friendly machines and systems that produce products of the highest quality primarily for the construction, electrical, food, and packaging industries. HIRSCH

Maschinenbau is the world's only supplier of innovative mechanical engineering and mold making technology for producing shaped-molded parts and insulation that has also gained the necessary expertise from in-house processing. This ensures that all the machines and systems are tailored to each other for reliable processes. An international company, HIRSCH Maschinenbau constitutes a benchmark above all for preexpanders and at the same time stands for the highest possible quality in producing molding machines, molds, and products for the insulation-manufacturing industry.

As an integral part of the HIRSCH Servo Group, HIRSCH Maschinenbau acts both as a strategic partner to global companies that focus on Central, East and South-East Europe and as a solution provider for more than one thousand customers who operate in regional markets and individual countries. The key objective here is to build sustainable business relations with the customers based on trust and to support them by ensuring a high level of technical, economic, ecological, and social standards in the long term.

HIRSCH stands for stability.

A listed company, the HIRSCH Servo Group can look back on over 45 eventful, progressive years, with HIRSCH Maschinenbau producing plant and machinery for international customers for more than 30 years. With the global HERZ Group as its core shareholder, now holding around 89.37% of the stock, the basis was created in 2014 for successfully strengthening the HIRSCH Servo Group's international market position.

The Austrian HERZ Group is a leading manufacturer of products for building services, biomass boilers and heat pumps with 12 production facilities throughout Europe.

Given its extensive network of partners, the HERZ Group's interest in the HIRSCH Servo Group is intended to signal the upward trend even more clearly.

Origin

Stability of a group that has grown for over 45 years – 30 years' experience and passion for plant and machinery.

Profession

Expanding with ideas – working closely together with customers and partners.

Progress

Striving for progressive, reflective innovation – one of the most modern companies in the EPS and EPP industry.

SITES

SITES

The HIRSCH Servo Group with a total of twelve manufacturing locations in Austria, Hungary, Poland, Romania, Italy, and Slovakia is well placed to operate as a global player in the EPS and EPP industry. In addition to these facilities, the company also has a sales office in Taiwan and a service center in the United States in order to provide Asian and American customers with an extremely high level of expertise and the best possible support.



Over 30 years of experience, innovation and passion.

Experience

Back in 1972, the HIRSCH Servo Group set itself the goal of expanding with ideas – and the idea is still the driving force behind every expansion step today. True to the motto of Expanding with Ideas, HIRSCH Maschinenbau also upholds this philosophy, working closely together with customers and partners, while also taking input on board from the company's most valuable asset – the right people in the right place.

Innovation

HIRSCH Maschinenbau develops and manufactures high-technology solutions in close cooperation with international customers, thus frequently advancing into new areas of use – and while fully committed to environmentally friendly production. Long-standing industrial

experience enabled an in-depth understanding of material properties and application engineering to be gained. It is this knowledge that makes all machines and systems from HIRSCH Maschinenbau among the most energy efficient in the world. Regular review of the innovative processes ensures the company's continued existence by generating long-term profits and creating and safeguarding new jobs.

Passion

As a technology leader, the focus in operations is on quality, innovation, efficiency, experience, and reliability. Due to this consistent return to core competencies and fundamental values, HIRSCH Maschinenbau creates sustainable delight among customers and thus aspires to innovative progress.



We know our machines. Better than anyone else.

EPS Processing
Production
Machinery and Plant Engineering
Installation
Commissioning

Service and Maintenance
Aftermarket
Training

People are the key to success. It is the skills, expertise and commitment on the part of all the employees that makes HIRSCH Maschinenbau so successful. The company's top priorities therefore include ensuring job satisfaction, motivation and continuous development for the skilled staff, also because this is essential for the outstanding achievements that each employee makes every day.

Our employees are our most important asset. Only highly trained professional staff guarantee the highest standards and ensure smooth production of the

machines and systems. Regular training courses keep all the employees up to date with the latest technology, enabling them to provide customers with the best possible advice for their projects.

Great importance is attached to responsibility, honesty, and integrity – when competing with other companies, using company property, regarding the environment, and other people's health and safety. To ensure these principles are adhered to, the HIRSCH Servo Group is committed to demonstrating these core values in its day-to-day work, as set out in the Ethics Code.





What we stand for.

Top priority is to maintain consistently high quality in all products, processes, and services at all times – that is what the HIRSCH Servo Group stands for. What plays a major role in achieving this is to constantly implement an economical and effective quality management system to DIN EN ISO 9001:2008. Before being handed over to the customer, each machine and system from HIRSCH Maschinenbau is tested under stringent manufacturing conditions, which is unique in the industry.

It is not only the HIRSCH Servo Group's products that play a sustainable role in environmental and climate protection: sustainability is of major importance to the entire Group in the joint value chain. Its contribution to responsible use of limited resources has been certified with the ISO 14001 environmental management system. Based on this environmental management standard, the HIRSCH Servo Group's services are continuously improved to increase efficiency and promote conservation of all resources.

What we work with.



Insulating against heat and cold and energy saving

Insulation made of polystyrene enables up to 70% of a building's heating and energy costs to be saved. Optimum thermal insulation also helps to minimize costly cooling energy in summer.



Light

Polystyrene consists of 98% air and at the same time has exceptional features as a real light weight.



Food safe

Completely harmless to people, polystyrene keeps basic foodstuffs fresh.



Environmentally sound

As polystyrene makes protective packaging particularly light, it helps to save weight in transit, thus reducing CO₂ emissions in the long term.



Excellent insulating properties

Given its exceptional insulating properties, polystyrene not only protects against cold, but also heat and thus ensures that temperature-sensitive goods, such as drugs, remain effective.

High impact and pressure resistance

Packaging made of polystyrene protects sensitive devices and consumer electronics from damage. In addition, polystyrene also protects people and increases safety on the road (e.g. as liners for crash helmets and child seats).



Resilient

Polystyrene is not only particularly resistant to mechanical, but also to chemical action.



Anti-static

Polystyrene provides safety against electrostatic discharge.



Flame retardant

Due to its composition (98% air), polystyrene has an extremely low fire load when used in construction.



Cost-effective and efficient

Polystyrene makes a contribution to conserving resources and is a cost-effective material with virtually endless applications.



100% recyclable

Polystyrene parts can be reused and are also of great significance as recycled products, e.g. in the construction industry.



It all started with the preexpander.

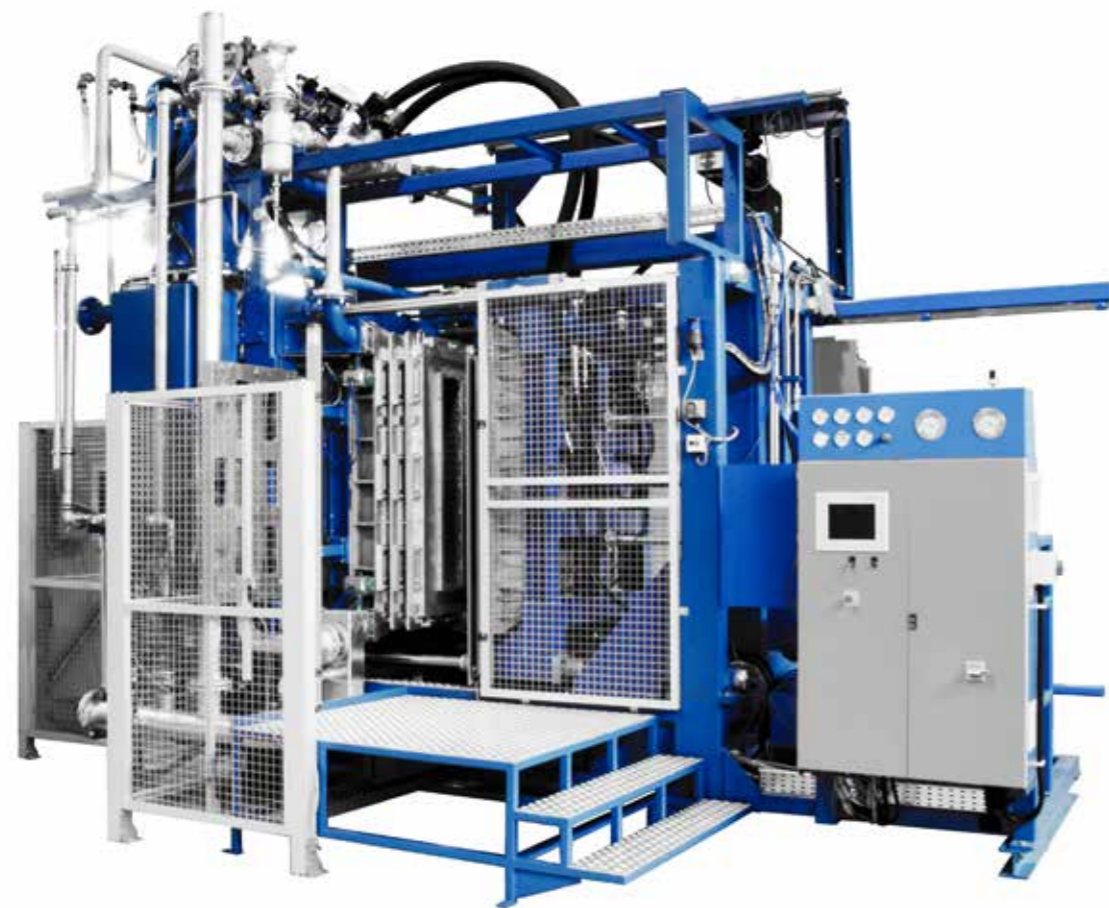
Recognized as the technology leader in vacuum and fluidized bed preexpanders, HIRSCH Maschinenbau manufactures plant and machinery that ranks among the most user friendly in the entire market. The world's only supplier of vacuum preexpander technology, the company guarantees that the material can be processed rapidly and efficiently and at the same time that the quality of the

products is exceptionally high. Continuous development and ongoing improvement of the existing technologies means that operations focus on handling the white beads with the greatest possible care.

The various different preexpander models are particularly suitable for the following applications:

	PREEX 1000	PREEX 2000/EPP	PREEX 5000	PREEX 6000	PREEX 6000 XXL	PREEX 7000	PREEX 8000	PREEX 9000	PREEX 14000	PREEX 18000
EPP		•								
Small batches	•	•								
Lost foam	•	•								
High density	•	•	•							
Cup bead	•	•	•	•						
Helmet material	•	•	•							
Laboratory use	•	•								
Arcel			•	•	•	•				
Stucco bead				•						
State-of-the-art shape molding				•	•					
Shape molding and small volume block molding						•				
High volume shape molding and medium volume block molding							•	•		
Block molding							•	•	•	•
Bean bag beads								•	•	•
Packaging chips								•	•	•
Colored material	•	•	•	•	•	•	•	•	•	•





We mold your products.

It is the years of experience in in-house processing, expertise in application, and the unique combination of mold making and mechanical engineering that have cemented the HIRSCH Maschinenbau shape-molding machines' excellent reputation. Their precision steam consumption metering and the use of an insulated aluminum steam chamber enable the end products to be manufactured highly energy efficiently. As the technology

leader in producing insulating concrete forms (ICFs), HIRSCH Maschinenbau guarantees particularly fast tool changes thanks to the package setup and an extremely high level of safety for the operators – not just in this area.

The shape-molding machines from HIRSCH Maschinenbau for processing EPS and EPP are highly versatile, as the following overview shows:

	Hydraulic						E-Drive				Hydraulic				
	HS 900	HS 1100	HS 1300	HS 1400	HS 1450	HS 1500	HC 907	HC 140	HC 150	HC 270	HC 200	HC 210	HEW	HES	HE
EPS	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
EPP	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Double density	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Packaging parts	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Insulation panels	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Fish boxes	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Floor heating panels with foil/film				•	•								•		
Insert system	•	•	•	•	•	•									•
Helmet/insert	•		•			•									•
Skin molding	•	•	•	•	•	•							•		
Core pull-system	•	•	•	•	•	•	•	•	•	•			•	•	•
Glazing	•	•	•	•	•	•	•	•	•	•			•	•	•
Max. part height 350 mm	•	•	•			•							•	•	•
Max. part depth 620 mm				•	•										
Max. part depth over 620 mm							•	•	•						

Perfectly insulated.

For over 35 years HIRSCH Maschinenbau has been making fully automatic, vertical and horizontal block molds for producing high-quality insulation boards. Developed in house, the innovative, fully automatic process featuring a mold with two adjustable walls to make insulation boards ensures extreme flexibility, efficiency, and effectiveness in production. The benefits of the HIRSCH Maschinenbau block molds include significantly shorter storage times, minimum rejects, and material savings due to optimal shaping of the blocks. Density correction, the greatest possible

flexibility in steaming and consequently lower humidity in the block results in a high-quality end product for the customer.

The fully automatic, vacuum-assisted block molds of a vertical design in the MONOLITH series guarantee high cost effectiveness and low footprint. OYSTER series models display the same features but the design is horizontal.

What machine model is suitable for what application can be seen from the following table:

	Monolith	Monolith Comp	Monolith MS1	Monolith MSC2	Oyster	Oyster Comp	Oyster MS1	Oyster MSC2
Geofoam	●	●	●	●	●	●	●	●
Low % of regrind	●	●	●	●	●	●	●	●
Limited floor space	●	●	●	●	●	●	●	●
High % of regrind (up to 100%)		●		●		●		●
Density correction (up to 50%)		●		●		●		●
Products with different lengths			●	●			●	●
Low ceiling height					●	●	●	●





Cut to perfection with us.

The fully automatic production process on HIRSCH Maschinenbau cutting lines promises a high level of productivity during operation. It uses a special high-end oscillating wire and adjusts the entire system automatically, reflecting the high focus on the user's needs. Working with block heights of 800 mm through 1,450 mm enables the entire volume to be used efficiently and waste material to be minimized.

To make the production process even more effective, an upstream block conveyor, a downstream waste disposal system with dust removal, a broken wire detector, and fully automatic cutting speed adjustment can be incorporated as required to meet customer specifications.

Shape-molding machines



Preexpander

Everything from a single source.

All the technical know-how coupled with experience in applications goes into the production of the turnkey plants. Starting with the planning phase, through fabrication and installation of the plant to daily production operations, the HIRSCH team provides professional, collaborative support for customers. Thanks to the use of machines and systems that are all perfectly compatible, HIRSCH Maschinenbau guarantees end products of a unique quality.

Expertise from in-house production as a manufacturer of both shape-molded parts and insulation and the aspect of innovative technologies make HIRSCH Maschinenbau one of the best one stop shops in the world. In addition to producing state-of-the-art machines and systems, the company's greatest strengths include selecting the appropriate raw material, designing the mold, and reliable processing.

Recycling system

Preexpander with Multi Pass unit

Silo system for black and white EPS

Block mold

Block storage



Cutting line

Mixing unit black/white EPS

Cutting line

We shape the future.

Since 1972, the HIRSCH Servo Group has been supplying molding machines in combination with aluminum molds for making EPS and EPP shape-molded parts. Its experience in product design and manufacturing technology and knowledge of material properties have made HIRSCH Maschinenbau one of the world's best EPS and EPP mold makers. Know-how in this area ranges from making aluminum molds to highly complex, multiple-material molds that are completely designed, planned and produced to customer specifications using CNC machining centers. Innovative solutions for all customer requirements are one of HIRSCH Maschinenbau's great strengths.

In addition to specific solutions for shape-molded parts manufacturers who already use HIRSCH technology, the company also draws on its technological expertise to make molds for other production machinery. Its services include developing the molds and tooling, providing 3D machining drawings for the products and molds, and finally making the mold with test run, supplying sample parts, and machine setting data. Extensive service and maintenance options round off the range of high-performance molds at HIRSCH Maschinenbau.





Our service for your satisfaction.

Right from the very start, HIRSCH Maschinenbau has focused on delivering top performance and efficiency in all its machines and systems – a goal that can only be achieved if all customers are completely satisfied. Well-trained service staff and experienced technicians guarantee customers smooth production and support of the highest level.

In addition to providing extensive and comprehensive customer care, the service team at HIRSCH Maschinenbau makes every effort to procure urgently required spare parts as soon as possible. What makes HIRSCH Maschinenbau stand out in particular is its rapid procurement of parts and ability to deliver quickly. Given its close cooperation with all suppliers, the spare parts distribution facility in Glanegg/Austria ensures customers reliable supplies – round the clock and worldwide.

All HIRSCH Maschinenbau services at a glance:

- Machine installation
- Support during commissioning
- Training, development and workshops on the production steps in EPS and EPP processing and on system operation
- Fault finding and troubleshooting by telephone
- Quick part identification by remote diagnosis and delivery
- Custom spare part sets
- Service agreements
- Machine inspection
- Maintenance visits and custom maintenance programs

VISION



Our values for your success.

HIRSCH

True to the motto of Expanding with Ideas, the HIRSCH Servo Group and HIRSCH Maschinenbau are always open to ideas, which are then often put into practice in collaboration between customers, suppliers and employees.

To secure a leading role in the industry and continue to expand it in the long term, operations are based on reliability and treating one another with honesty, fairness, trust, and respect. Great importance is attached to teamwork with a view to optimizing all the target-oriented processes and thus focusing on the customers' needs in every respect.

HIRSCH Maschinenbau makes use of the HIRSCH Servo Group's 45 years of expertise in the EPS and EPP industry in order to produce high-quality products and services and promote cooperation to satisfy international customers as well as possible. At the same time, the company is dedicated to cost efficiency and respecting the environment. Long-standing industrial experience

enabled HIRSCH Maschinenbau to gain an extensive knowledge of material properties and application engineering, which has made all its plant and machinery among the most energy efficient in the world. Economical use of raw materials in the production of machines and systems is an equally important factor, which shows that the company takes its responsibility of environmentally friendly value added seriously.

HIRSCH Maschinenbau consistently pursues the goals set, is committed to continuous improvement of the quality and environmental management systems, and takes all the applicable legal requirements and compliance regulations into account. The fact that HIRSCH Maschinenbau's views are so innovative and the actions it takes are subject to ongoing evaluation processes ensure the company's continued existence by generating long-term profits and creating and safeguarding new jobs.



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