The thermodynamics

Convincing tempering solutions

ENTEX

Tempering systems

The right temperature at the right time.

Efficient and precise tempering

Even beyond its key role in extrusion processes, efficient and precise tempering is a decisive factor in determining product quality and economic feasibility.

Energy is used effectively and energy costs are lower. That is not only good for the environment – it also saves money.
Our scope of products and services includes an individual project study that helps the customers to decide in advance which solution would be best for them.

Equipment features

ENTEX temperature control units utilise high-quality materials, fittings and instruments to ensure the best-possible system availability.

It goes without saying that ENTEX complies with the applicable standards and guidelines, including DIN 4754 (for organic heat transfer media / thermal oil), DIN 4752 (for water), the EMC Directive 2014/30/EU, the Machinery Directive 2006/42/EG, the Pressure Equipment Directive DGRL 2014/68/EU and the AD2000 Regulations.

TEMPERING SYSTEMS – MODULAR SERIES

The highest degree of temperature control.

Performance range

Dynamic 140–220	
Temperature range	140–220 °C
Throughput	3–75 m³/h
Heating capacity	6–350 kW
Cooling capacity	10–750 kW

The modular Dynamic 140–220 series uses water (pressurised) as a heat transfer medium.

Dynamic 300–430	
Temperature range	300–430 °C
Throughput	3–75 m³/h
Heating capacity	6–350 kW
Cooling capacity	10–750 kW

The modular Dynamic 300–430 series uses thermal oil (pressurised > 350 °C) as a heat transfer medium.

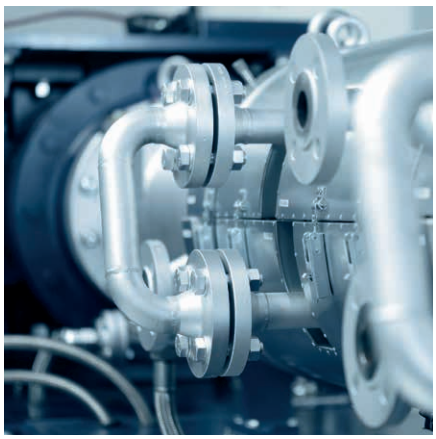
The devices are equipped with electric resistance heaters and mixing circuits that are supplied with primary energy on site.

TEMPERING SYSTEMS – TYPE DYNAMIC

Technical data and equipment.

	TECHNICAL EQUIPMENT	WATER Dynamic 140–160	WATER Dynamic 180–220	THERMALOIL Dynamic 300–430
Controller	Continuous PID controller	●	●	●
	Data logger	●	●	●
	Error memory	●	●	●
	Operating display and trouble indication	●	●	●
	Temperature profile graphical indication	●	●	●
	USB connection	●	●	●
	Working hour meter	●	●	●
	Profinet interface	○	○	○
	Profibus interface	○	○	○
	Modbus interface	○	○	○
	Energy and power measurement	○	●	●
	Memory control parameters	●	●	●
	Ramp function heating/cooling	●	●	●
Safety	Cold start-up bridging	–	–	●
	Dry running protection and level monitoring	●	●	●
	Flowmeasurement and monitoring	○	○	●
	Safety temperature shutdown	●	●	●
	Electrical safety temperature limiter	●	●	●
	Setpoint limitation	●	●	●
	Cold oil template	–	–	●
	Safety valve circulation medium	●	●	–
	Safety valve cooling water	●	●	●
Design	Shut off valves at all connections	●	●	●
	Strainer into circulation medium	●	●	●
	Strainer into cooling water	●	●	●
	Outlet temperature display	●	●	●
	Inlet Temperature display	●	●	●
	Continuous regulation of heating with solid states	●	●	●
	Draining with shut-off valve	●	●	●
	Continous cooling with position feedback	○	●	●
	Cooling in bypass via 3-way-motor-valve	○	●	●
	Manometer pump pressure	●	●	●
	Temperature controlled pressure overlay	–	●	–
	Automatical refeeding and pressure increase	●	●	–
	Automatical venting and pressure relief	●	●	–
	Adjustable bypass between circulation medium out- and inlet	○	○	○
	Direct heating via Mixing-valve	○	○	○
	Indirect heating (f.E. staem) via heat exchanger	○	○	○
	Special voltage	○	○	○
	Ex-protection	○	○	○

● Standard ○ Option



EXTRUDER TEMPERING

“Perfect extrusion technology combined with efficient thermodynamics”

In order to fully use the potential performance of the planetary roller extruder, special attention must be paid to the precise assignment of the temperature control systems to the respective temperature control zones.

Therefore ENTEX has developed its own temperature control units to ensure that its Planetary Roller Extruders enjoy top of the line tempering. In fact, these units are now also being used outside the field of extrusion technology.

Typical uses

- Extruders
- Rollers
- Presses
- Tanks
- Tools
- Mixers

Application areas

- Plastics industry
- Rubber industry
- Chemical industry
- Pharmaceuticals
- Composites
- Electronics
- Wood processing
- Paper industry
- Mechanical engineering (OEM)

State-of-the-art facilities & experienced employees at your service.

From idea to product.

You have an idea for a new product or would like to optimise your production process.

You are tired of batch processes and ready for continuous production.

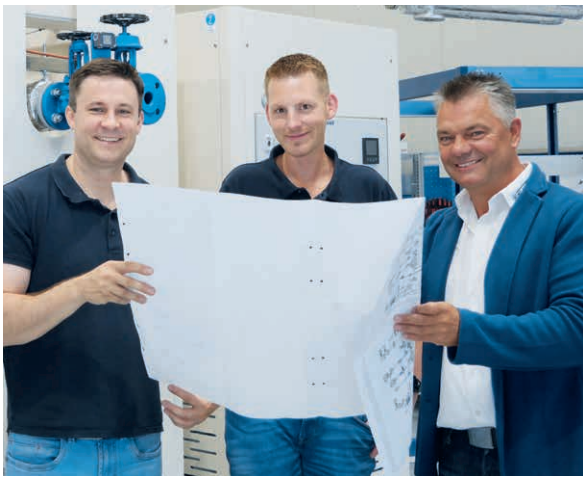
Our testing facilities with ENTEX 30 laboratory scale and ENTEX 70 pilot plant as well as the ENTEX production plant are prepared to help you throughout the process.

The ENTEX 360° Service.

We are your strong partner not only for Planetary Roller Extruders, tempering systems and spare parts but also for plant modifications or modernisations. Together with you, we develop innovative solutions for your requirements.

Contact us for more information!
We would be pleased to advise you.

Phone: + 49 234 89 122 0
E-mail: info@entex.de



ENTEX Rust & Mitschke GmbH
Heinrichstraße 67 a
44805 Bochum | Germany

info@entex.de | www.entex.de
Phone +49 234 891 22 0

Follow us!

09 | 2025