



Twin Screw Extruder POLYtwin™.

Innovations for a better world.

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Twin-Screw Extruder POLYtwin.

The twin-screw extruder POLYtwin™ completely fulfills process requirements such as high torque, screw speeds and pressure. Thanks to its modular design, it can be used to process breakfast cereals, food ingredients, pet food and fish feed for industrial fish farming optimally.

POLYtwin™ – multi-function twin-screw extruder for a broad range of applications.

- Patented screw ejection unit
- Cutter with lateral movement
- Modular machine design
- Intelligent process control

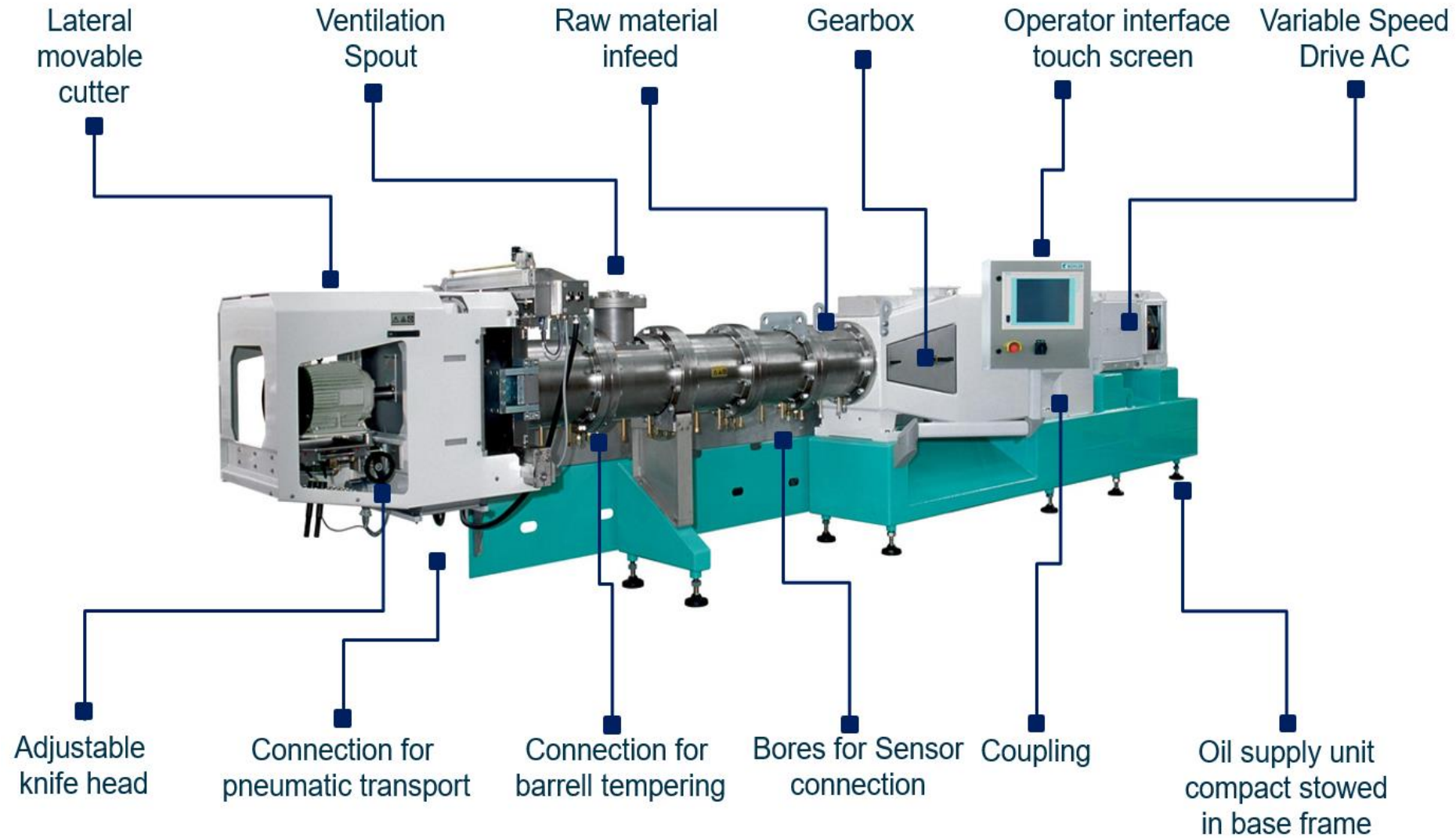


High operational dependability thanks to useful features.

- Thanks to an ejection unit developed and patented by Bühler, even strongly seized screws can be ejected. With a touch of the corresponding touch-screen button, ejection of the pair of screws is carried out within a short time.
- Optimized productivity thanks to a highly flexible cutter. Changing the knife heads can be done quickly and without interrupting production.
- Modular design for variable use. The relation of housing length to screw diameter is four independent of model size. The process can be easily adapted to higher capacities processes.
- State-of-the-art technology for reliable process control



POLYtwin™ setup.



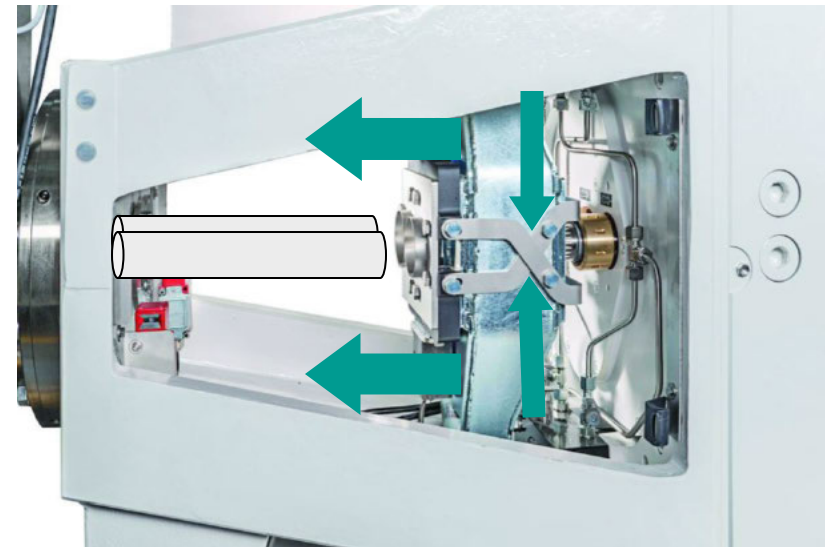
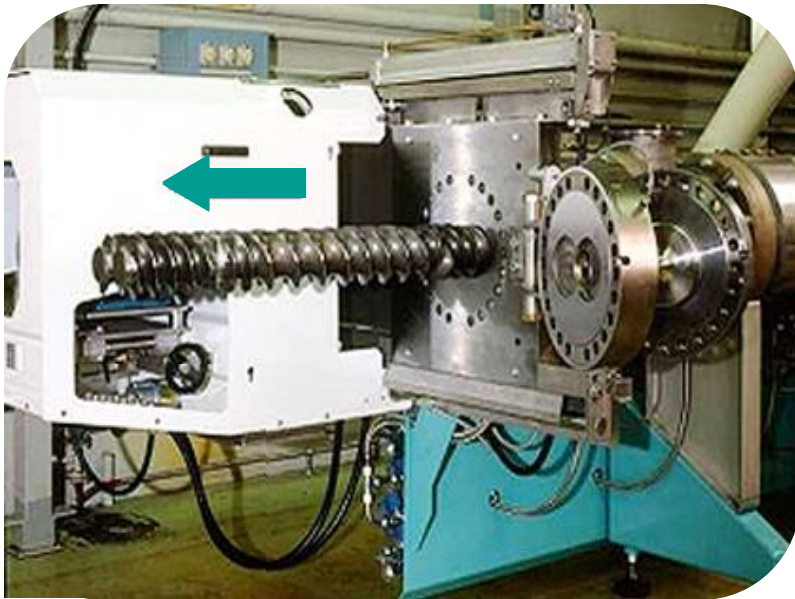
POLYtwin™ – Basics

Technical features.

	POLYtwin™ BCTL	POLYtwin™ BCTG	POLYtwin™ BCTF	POLYtwin™ BCTH
Screw diameter (mm)	42	62	93	125
Throughput range dep. on product (kg/h)	50-450	150-1400	500-4500	1000-8000
Maximum operating pressure (bar)	300	300	300	300
Maximum temperature (°C)	300	300	300	300
Maximum power main drive (kW)	110	220	630	710
Extruder length	8...56 D	8...56 D	8...56 D	8...56 D
Barrel modulus	4 D	4 D	4 D	4 D
Barrel heat exchange - Cooling	Water	Water	Water	Water
Barrel heat exchange - Heating	Oil / Electrical	Oil / Electrical	Oil / Electrical	Oil / Electrical

Fully automatic screw push out.

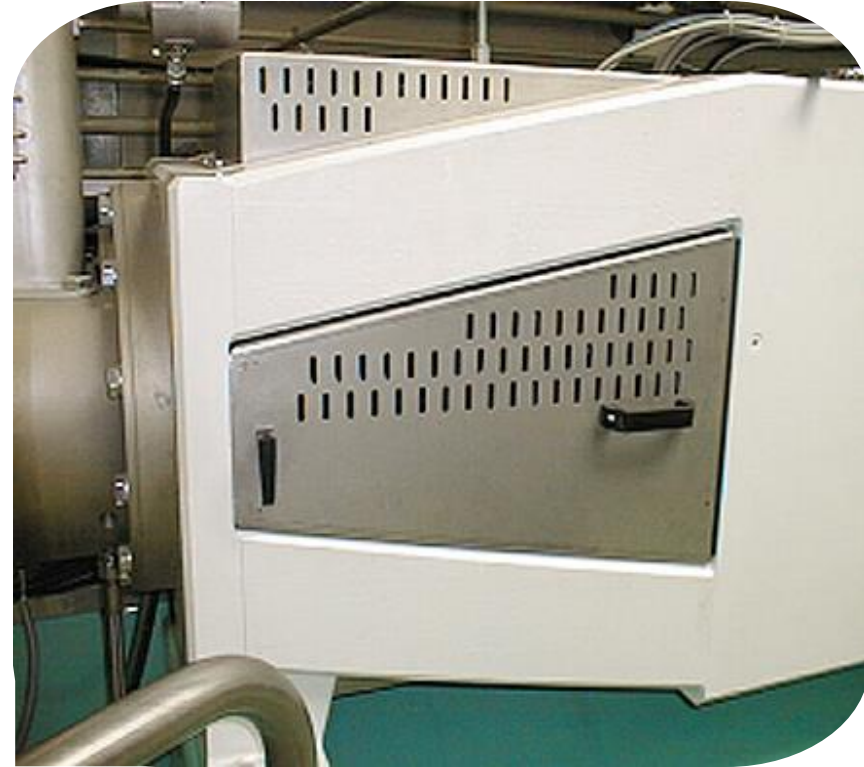
- Integrated high pressure-hydraulic screw extraction unit.
- Patented device operated by push button.
- Easy operation on clean and cool end of screw shaft.
- Movable cutter and hinged extrusion head allow quick screw access.
- Screw push out with tight-tensioned screw elements.



Fully automatic screw push out.



Introducing of distance pieces.



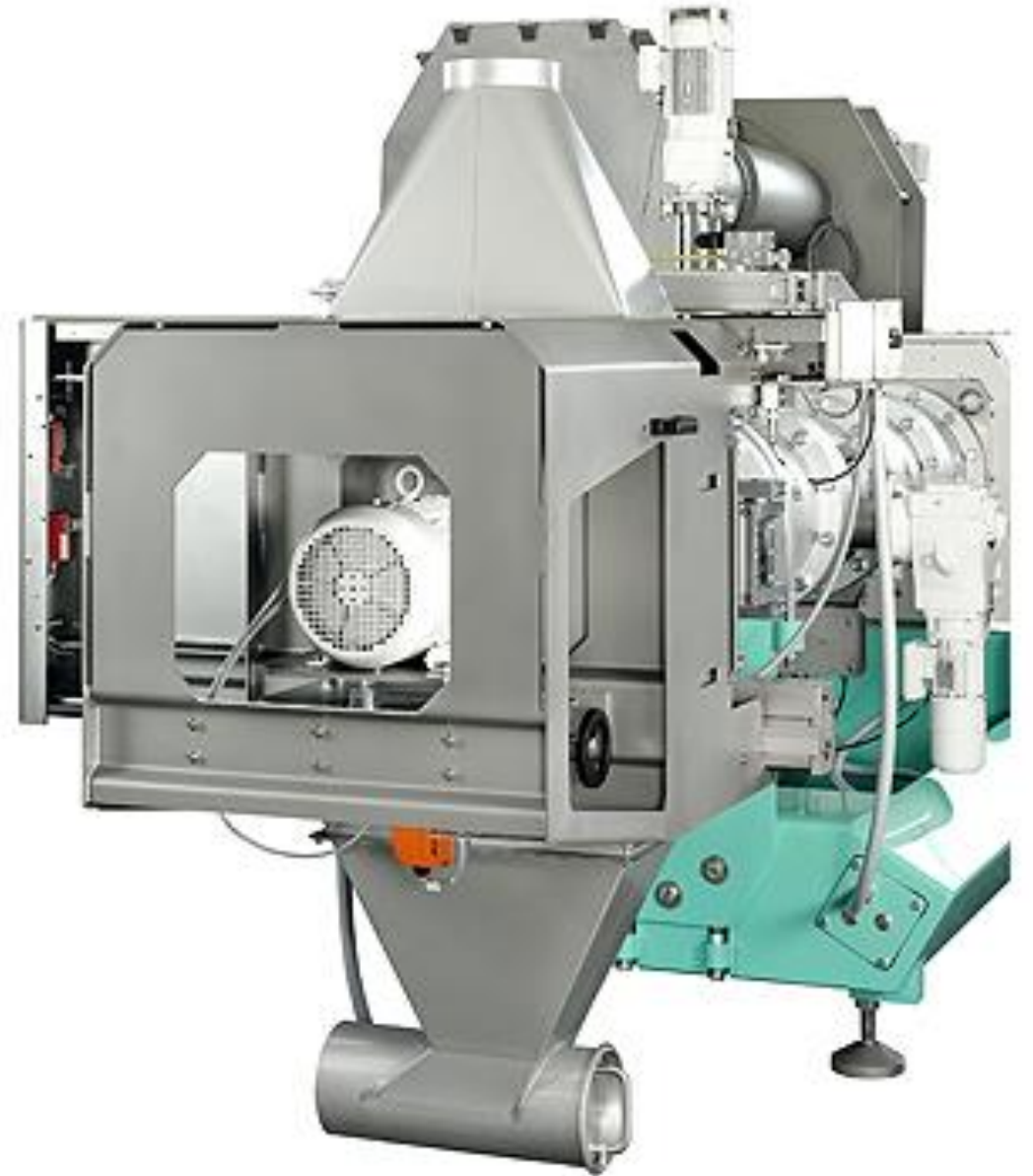
Clean integration into the barrel support.

POLYtwin™

Extrusion head / Cutter.

Extruder Cutter. Features.

- Pneumatic-driven, lateral sliding, precisely aligned
- Knives adjustable during operation to keep constant product quality
- Quick change of knife head during extruder operation
- Quick die change
- International standards CE, GS, VUU
- Optional hot air flow through cutter box to prevent condensation



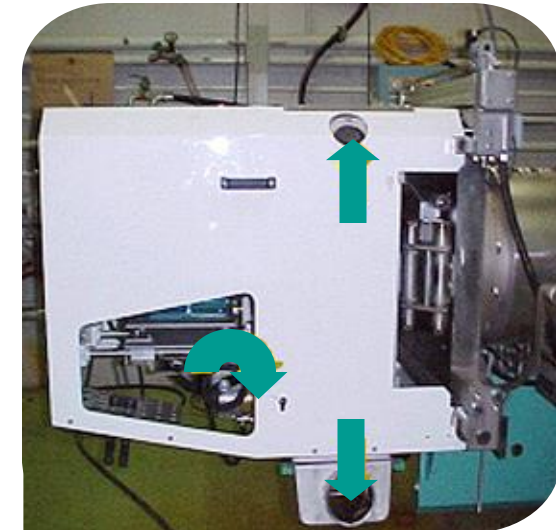
Extruder Cutter.



- Proven Bühler-movable cutter design
- Easy operation and cleaning



- Sturdy and precise design for clean product cut and low wear on knives and die plates
- Cutting housing with hinged door for access to knives and cleaning



- Visual quality control
- Sample opening
- Knife adjustment during protection

Extruder Cutter.

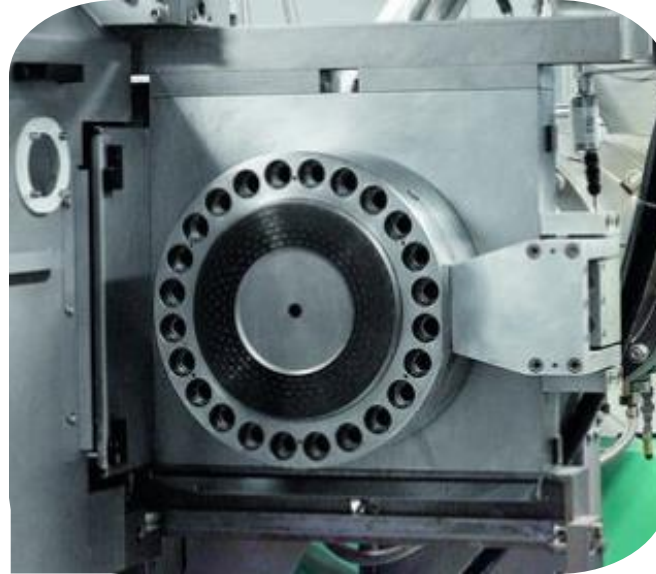
Customer benefits.

- Quick start-up
- Maximal production time, least down time
- Constant high product quality
- Easy to clean to keep sanitation
- Maximal productivity
- Automated operation
- Wide range of finished products
- Safe and secure operation

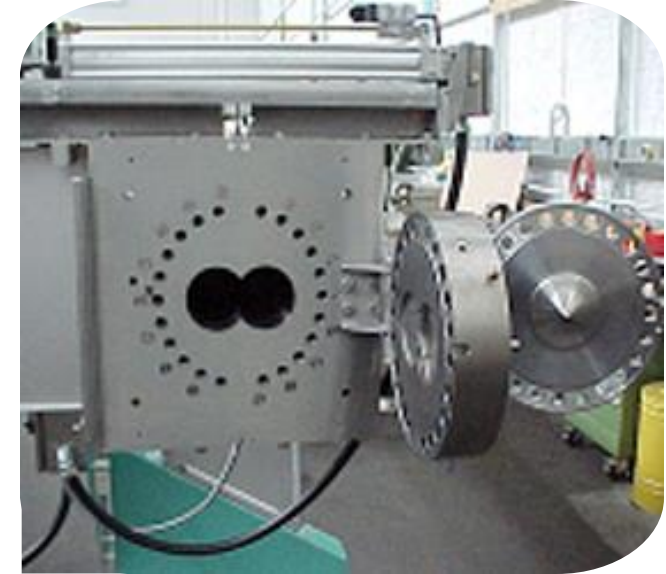
POLYtwin™ – Extrusion head (I).



- Operation with safety hood with the removed cutter.



- Die plate through hardened / abrasion protected.
- Optional 150 / 300 bar.
- Different die design for specific product requirements



- Hinged distribution plate and die.

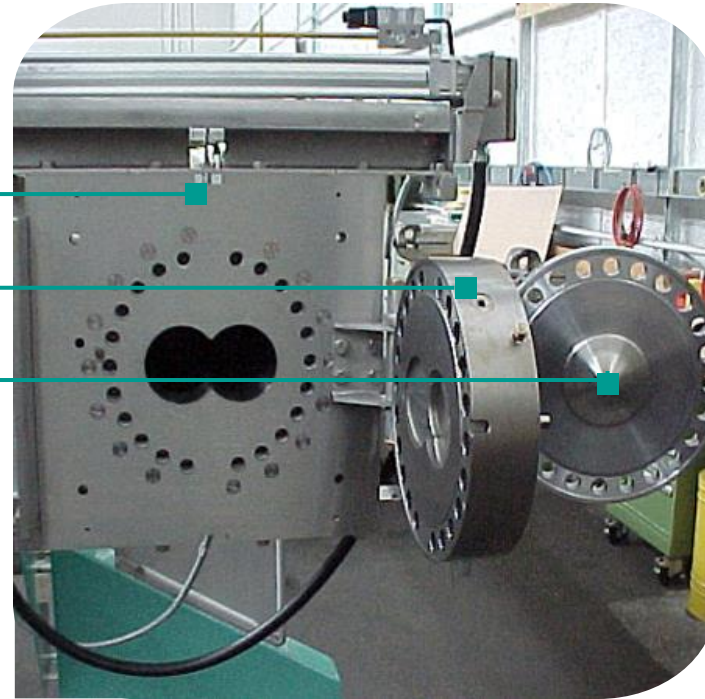
POLYtwin™ – Extrusion head (II).

- End Plate

- Distribution plate

- Die plate

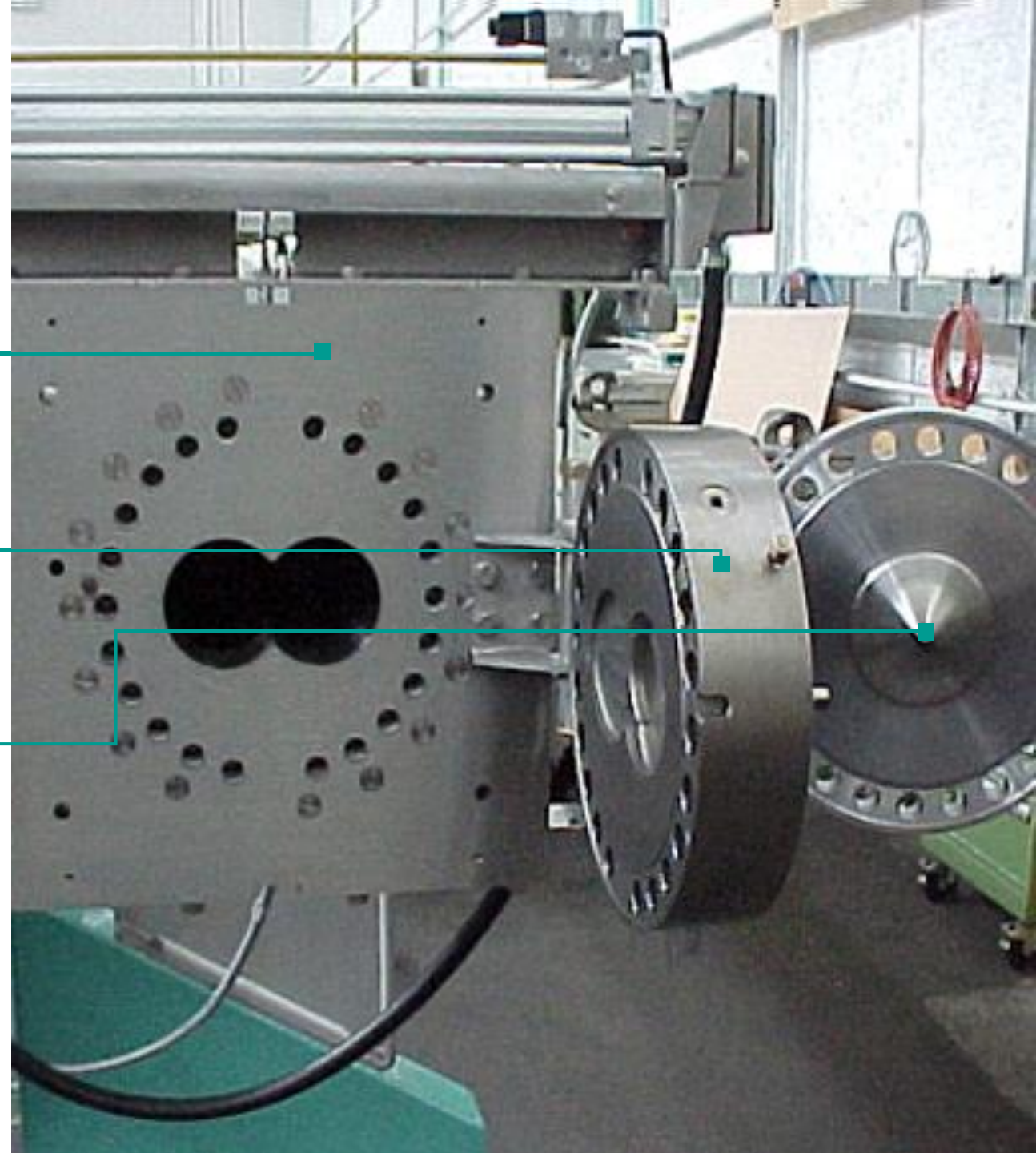
- Optional 150 / 300 bar



POLYtwin™ – Extrusion head (II).

Alternativlayout

- End Plate
- Distribution plate
- Die plate
- Optional 150 / 300 bar



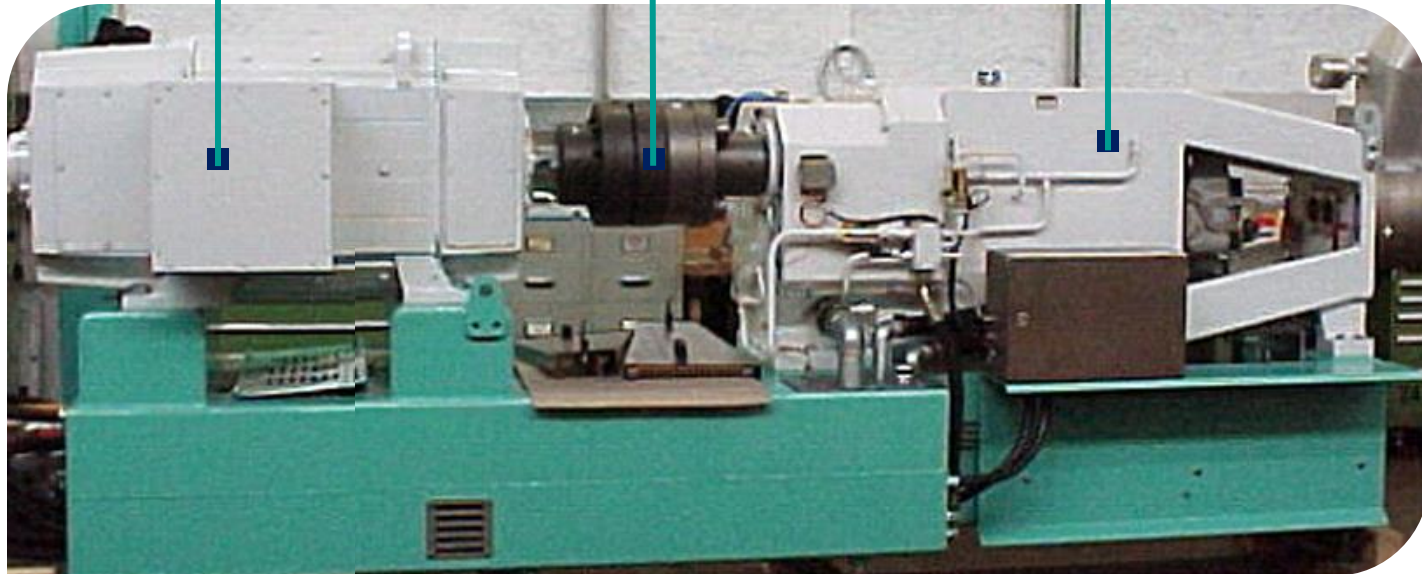
POLYtwin™ – Drive section.

Drive unit.

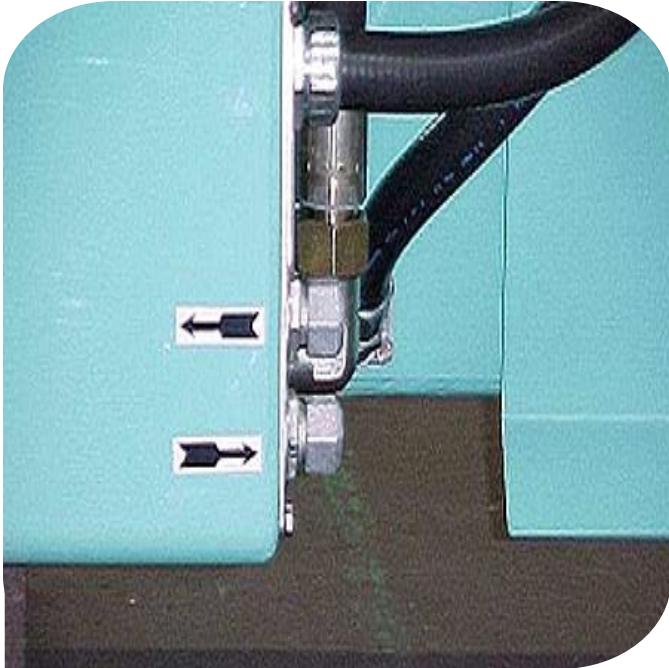
Main motor

Safety clutch

Gear box



POLYtwin™ – Drive section. Base frame.



- Water supply for gear box cooling

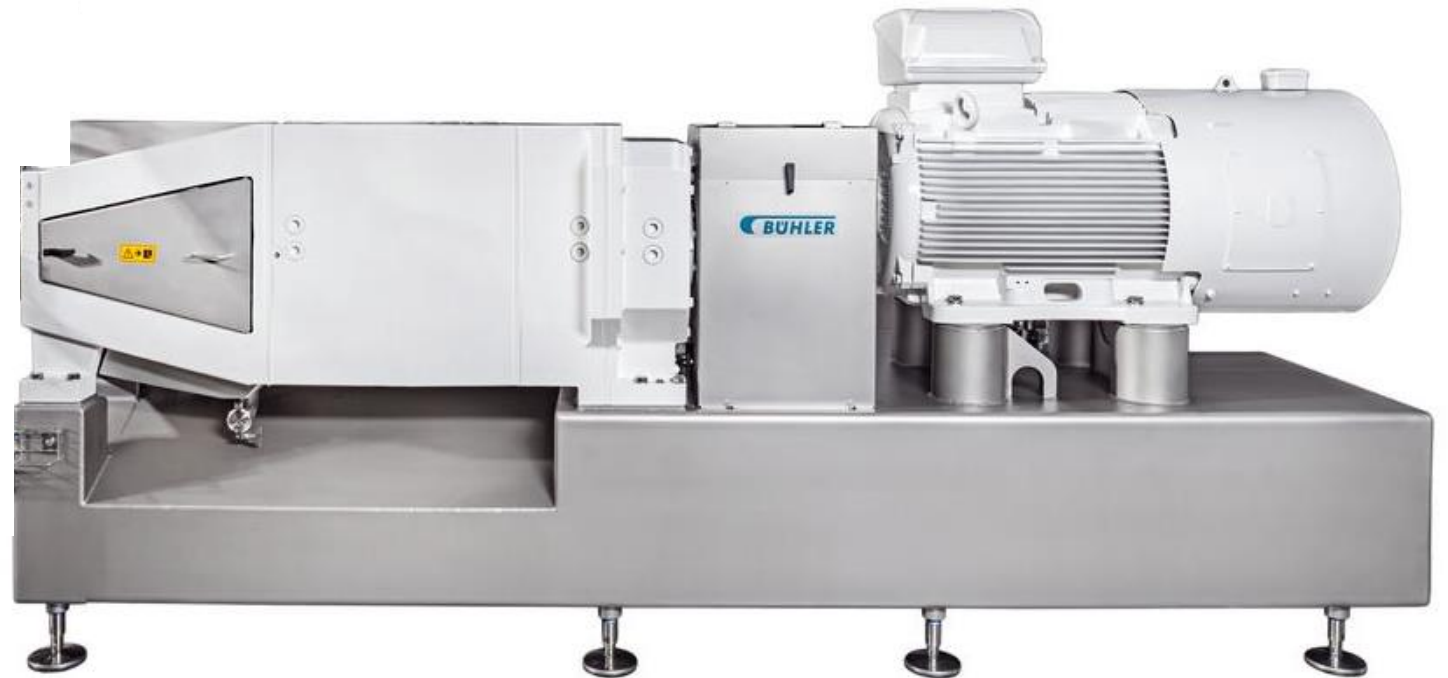


- Indication of oil-level and oil temperature.

POLYtwin™ – Drive section.

Main drive.

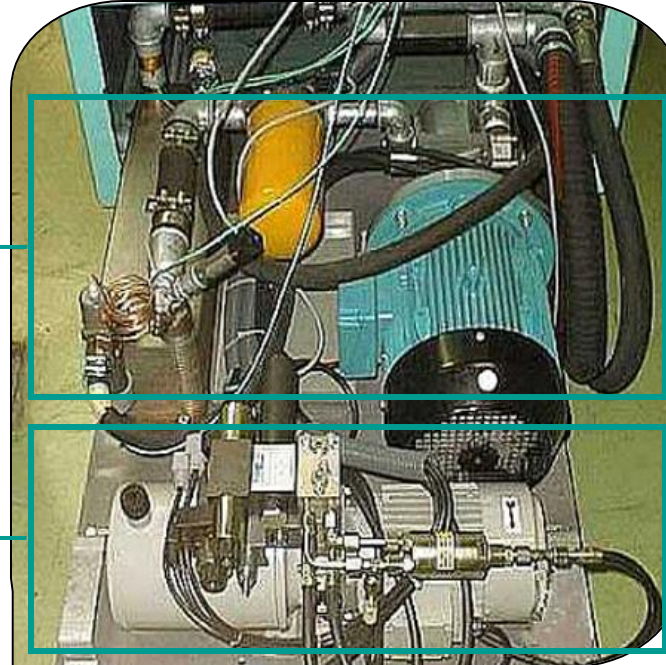
- Higher performance, higher lifetime.
- Modular design for high torque / high pressure, medium torque / medium pressure.
- Wear less safety clutch.
- Oil supply unit integrated in machine base.



POLYtwin™ – Drive section.

Oil supply unit.

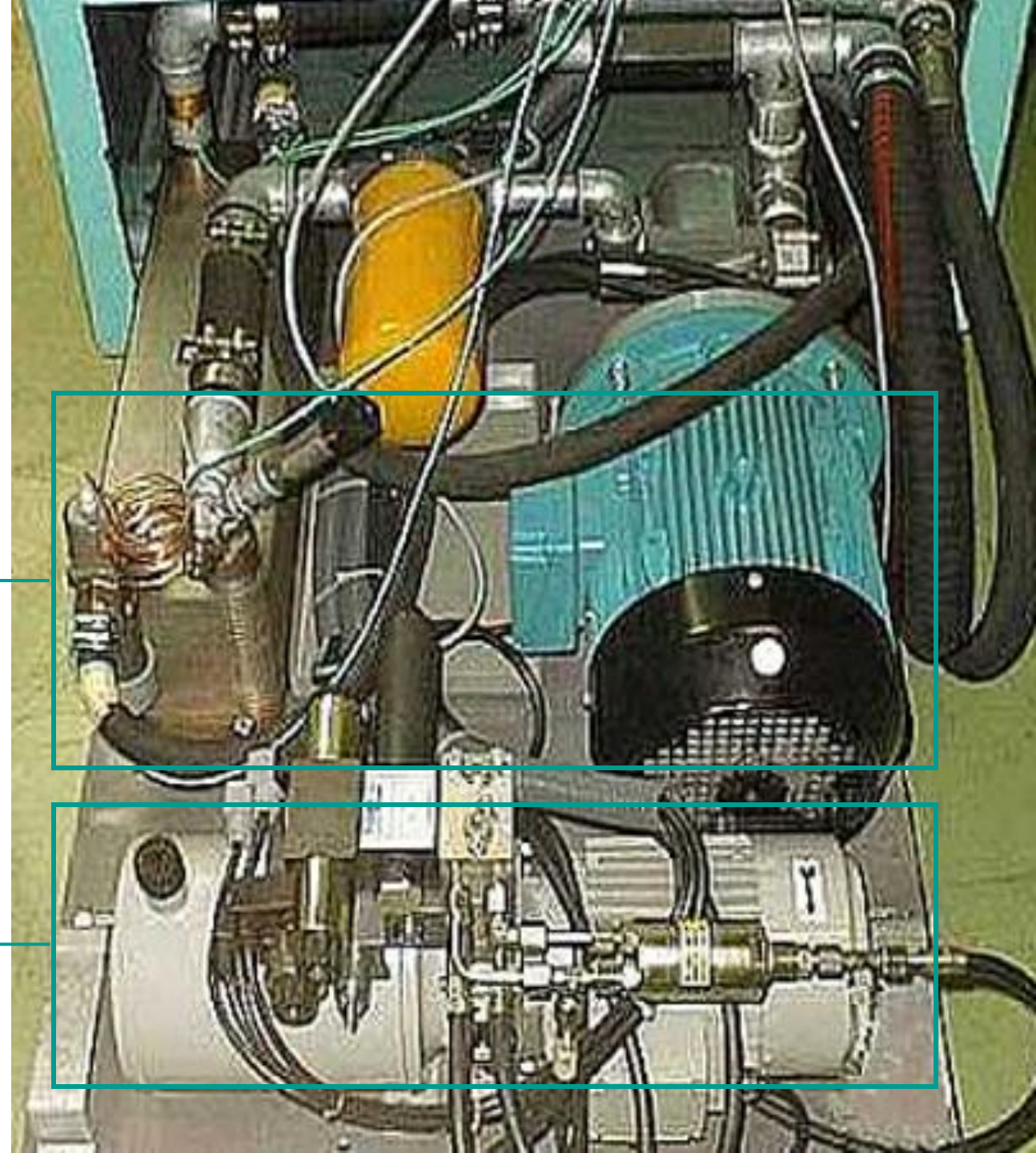
- Oil circulation unit for gear box.
- Oil supply unit for screw extraction.



POLYtwin™ – Drive section.

Oil supply unit. Alternativelayout

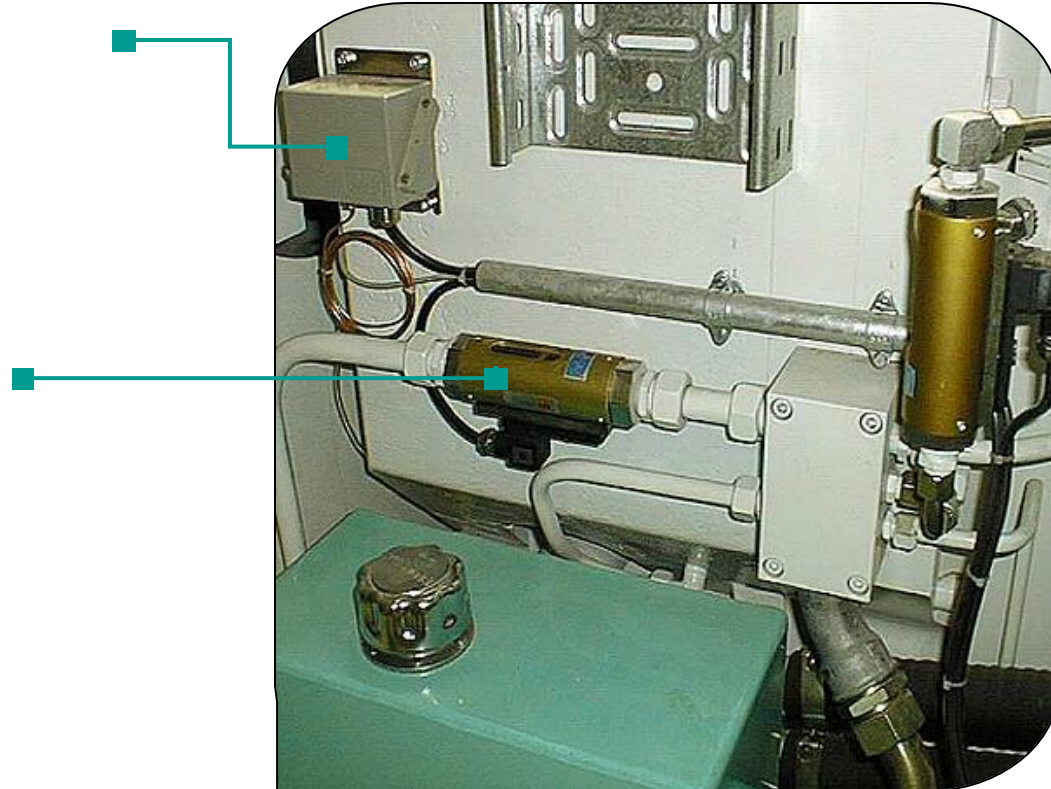
- Oil circulation unit for gear box.
- Oil supply unit for screw extraction.



POLYtwin™ – Drive section.

Gear box safety.

- Temperature detector with alarm switch.
- Oil flow detector with alarm switch.



POLYtwin™ – Drive section.

Gear box safety. Alternativlayout

- Temperature detector with alarm switch.
- Oil flow detector with alarm switch.

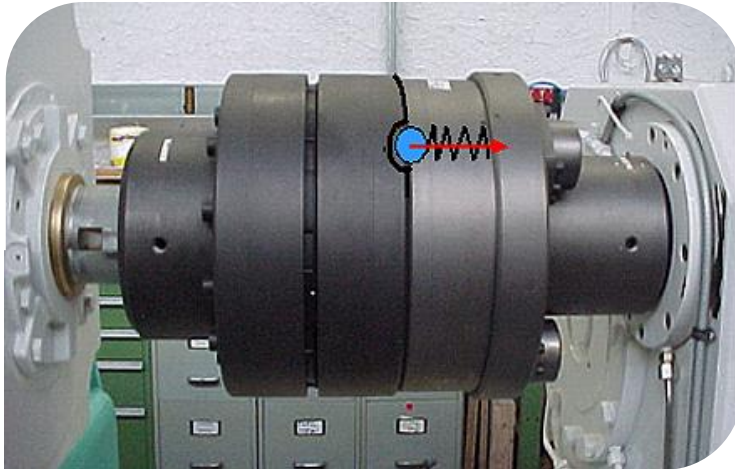


POLYtwin™ – Drive section.

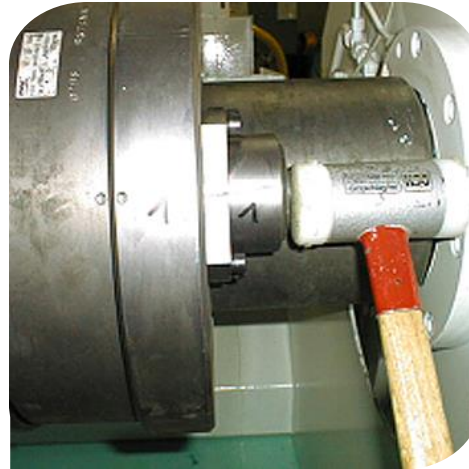
Safety clutch.

- Separation when activated.
 - High accuracy.
 - High reliability.
 - Reproducibility.

POLYtwin™ - Drive section.



Easy re-engagement.

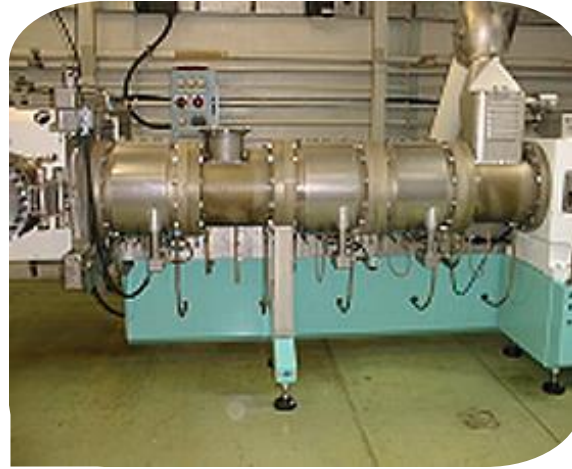


POLYtwin™ – Process section.



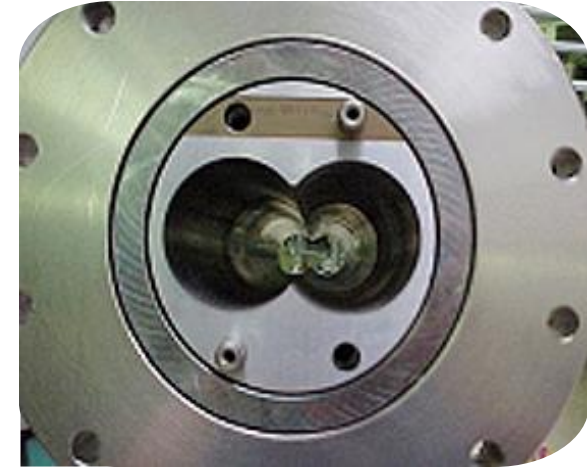
Temperature control sep. for each barrel by steam and water

- Modular design for manual or automatic cooling and/or heating.
- Optional electric heating shells.
- Optional oil- or pressure water units.



Safe barrel design.

- Outer barrel for mechanical strength.
- Intermediate ring for temperature control.
- Liner corrosion or abrasion protected.



Modular 4D-round barrel design
300 bar, 300°C.

- Optimized barrel liners for the different needs and applications.
- Sanitary, corrosion protected design.

POLYtwin™ – Process section.

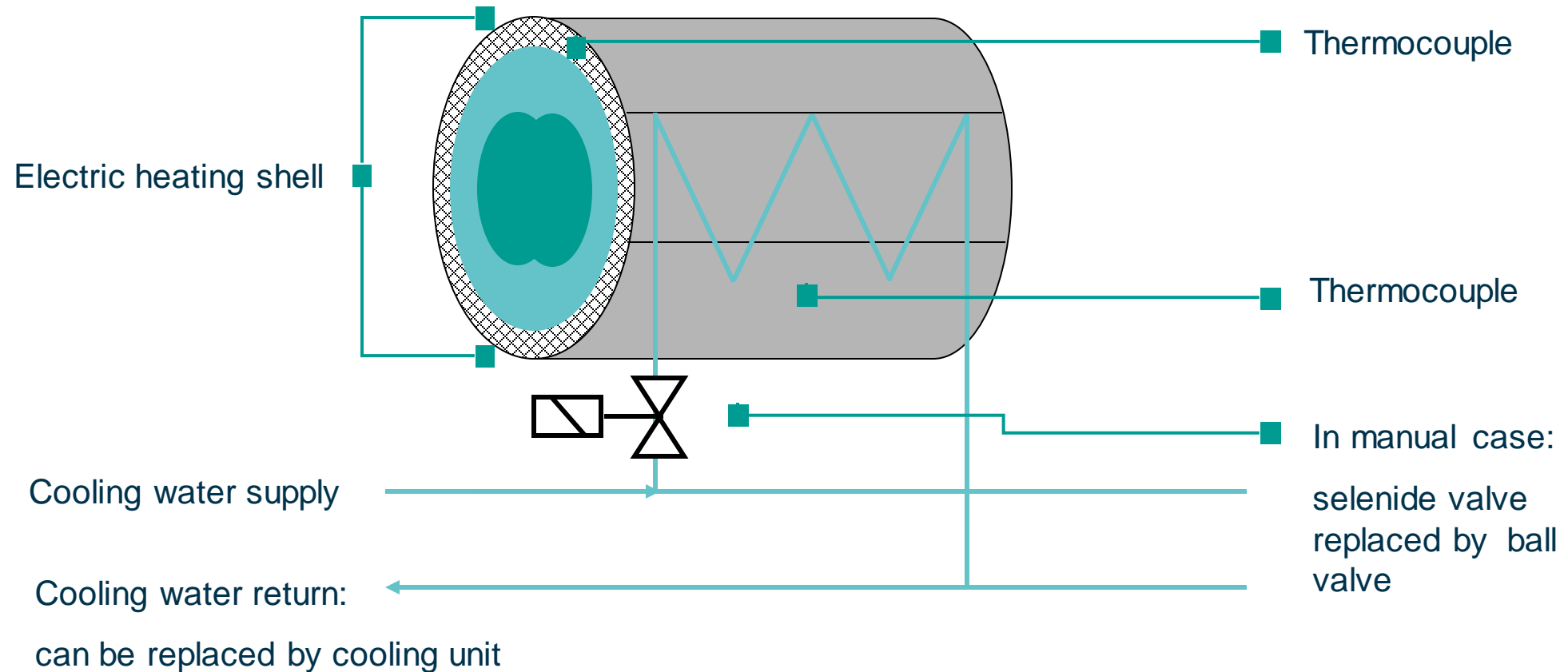
Barrel temperature control.

- Optional: electric heating shells.
- Cable tray.
- Barrel temperature control.



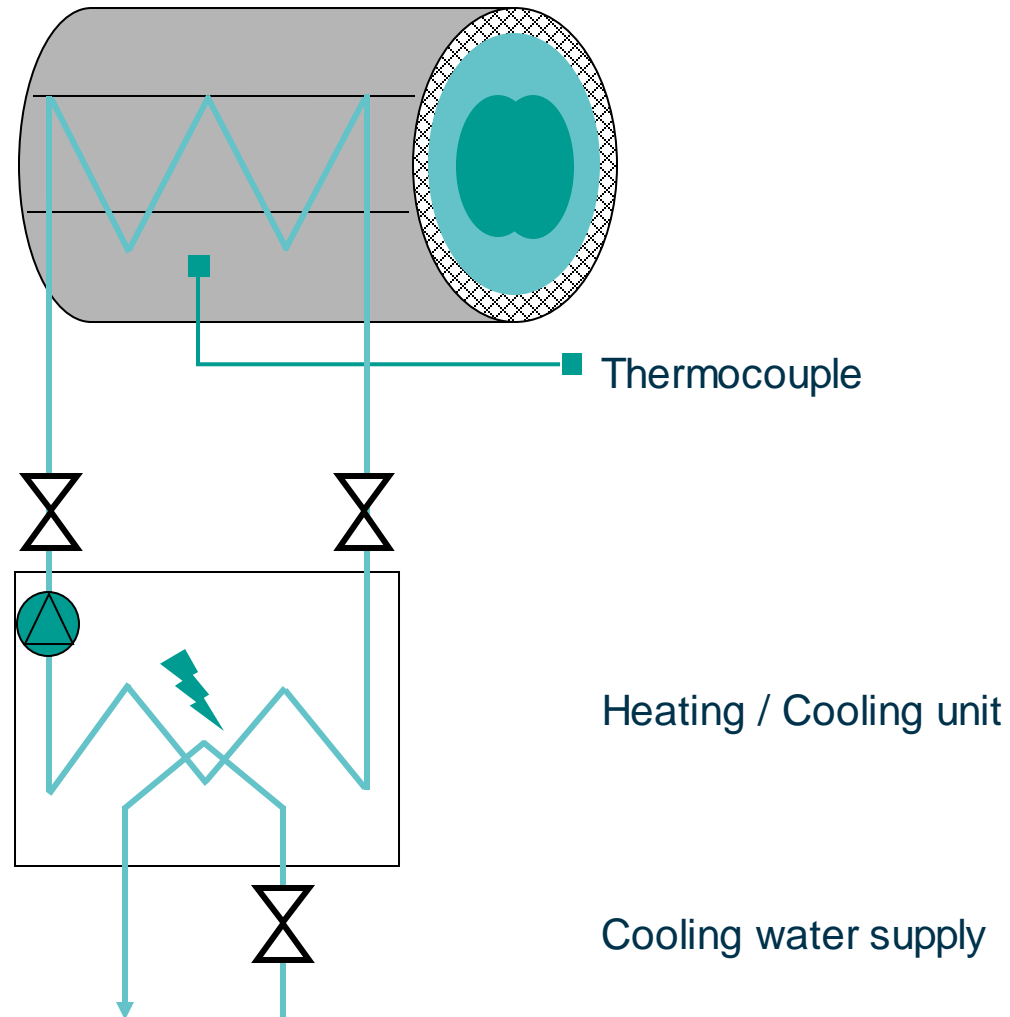
POLYtwin™ – Process section.

Barrel temperature control electrical / cooling water.



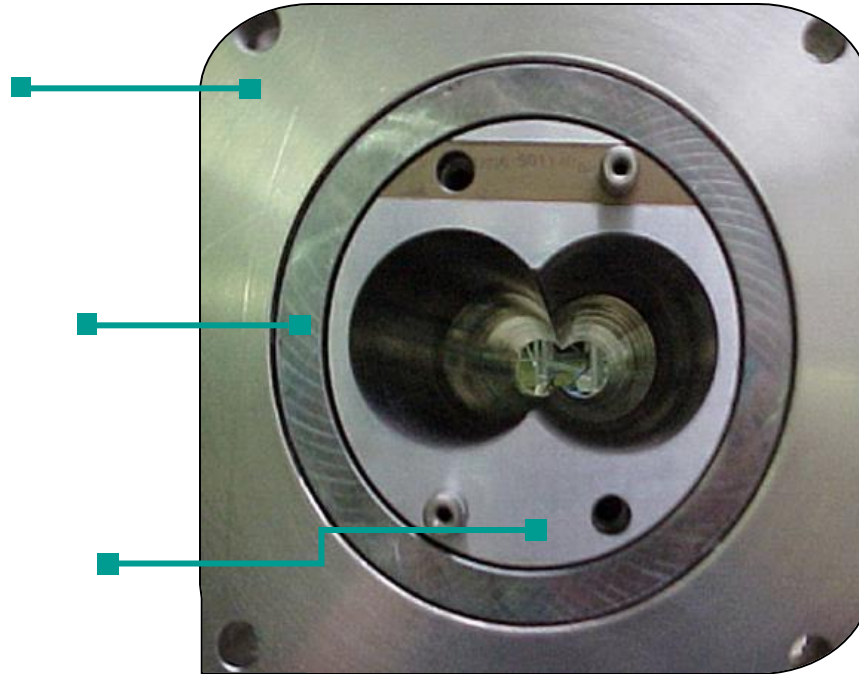
POLYtwin™ – Process section.

Barrel temperature control heating / cooling unit.



POLYtwin™ – Process section. Barrel design.

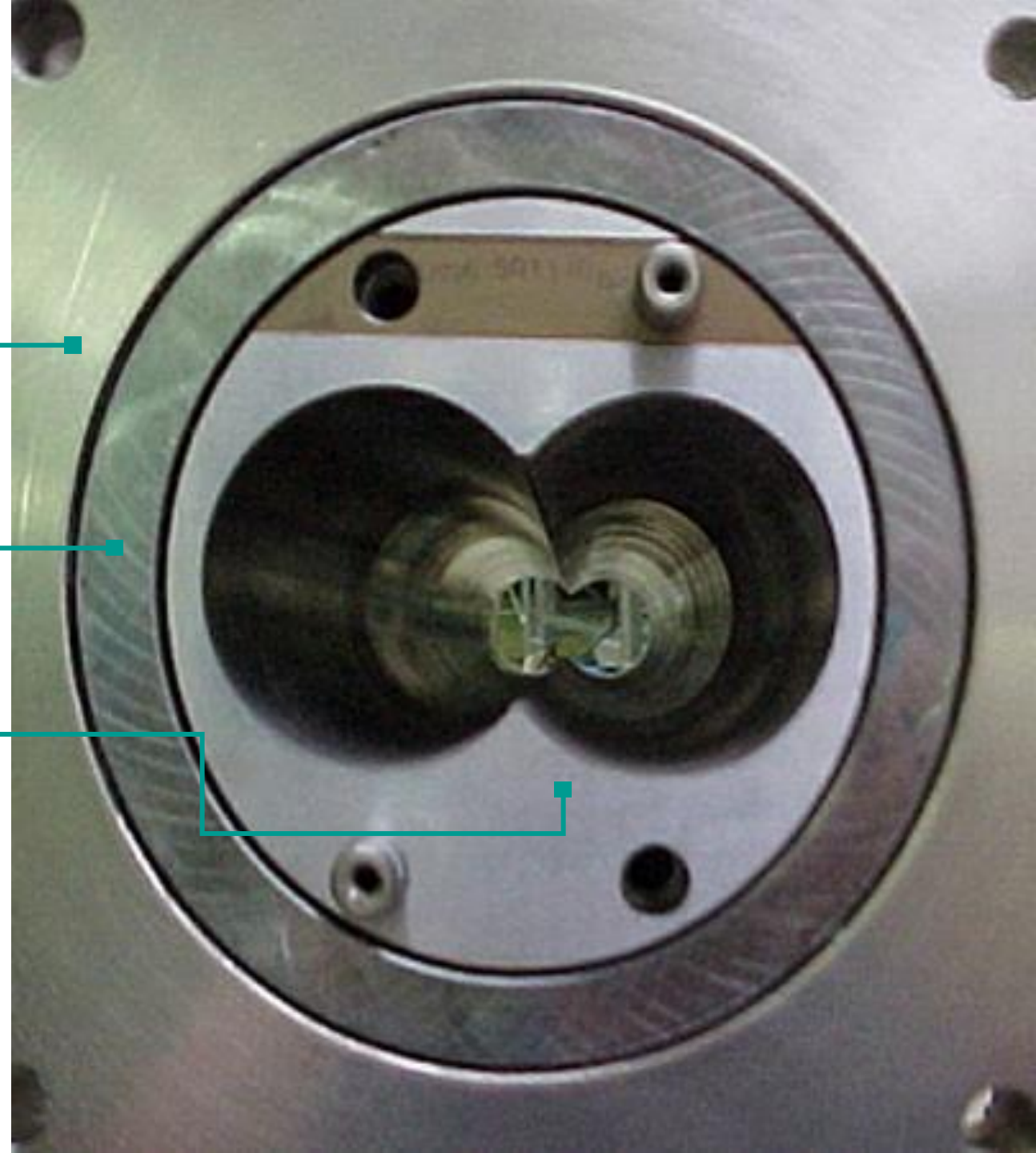
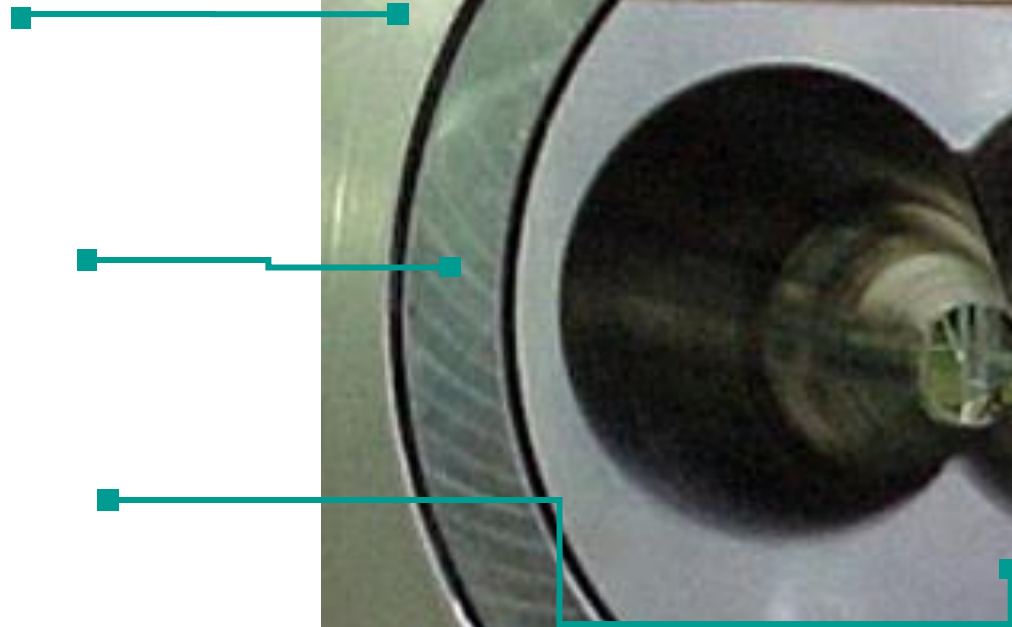
- Outer barrel for mechanical strength.
- Intermediate ring for temperature control
- Liner for corrosion or abrasion protection



POLYtwin™ – Process section.

Barrel design. Alternativlayout

- Outer barrel for mechanical strength.
- Intermediate ring for temperature control
- Liner for corrosion or abrasion protection



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