

PERFECT COMPONENTS.
PERFECT SYSTEMS.

A MEMBER OF **HTI** GROUP

Replacement Screws and Barrels

Application

Replacement screws and barrels from High Tech Extrusion increase the quality and the output of any extruder. High Tech Extrusion has considerable experience in the design and development of plasticizing units, which is applied to our own range of machines as well as to replacement units (cylindrical or conical) for twin-screw extruders of all types on the market.

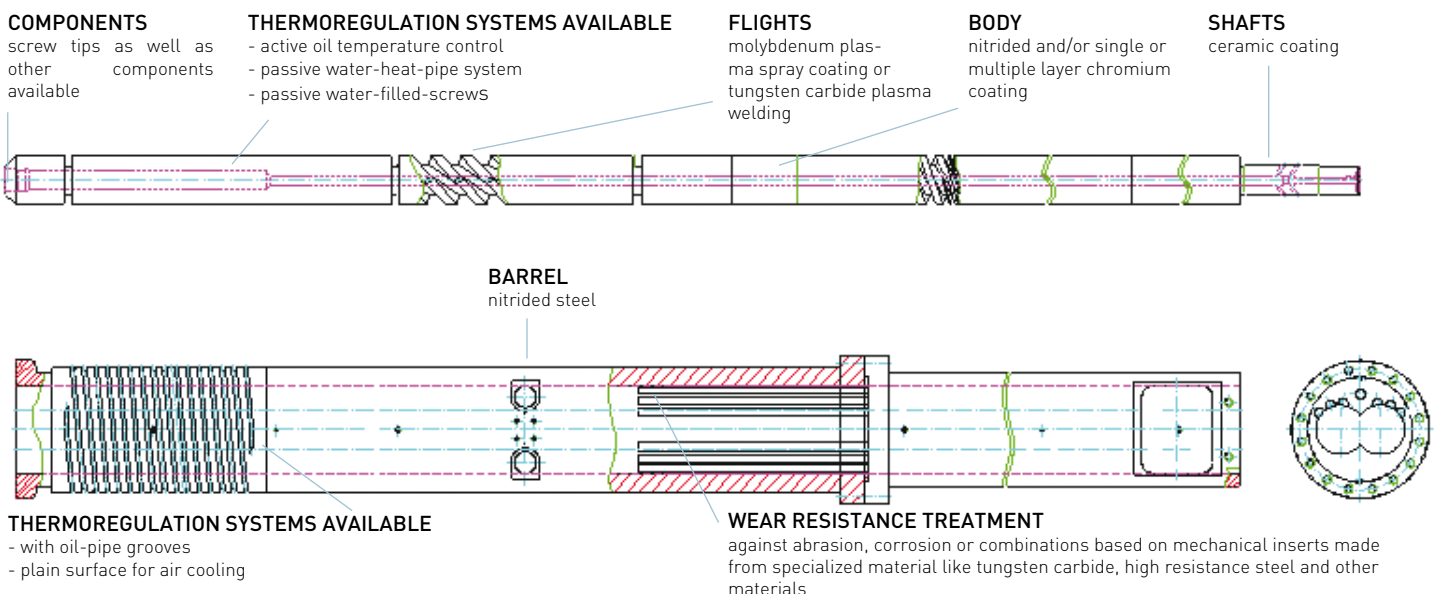
Features

Screws are designed and manufactured by High Tech Extrusion in a variety of designs to suit pipe, profile and sheet extrusion and are tailor made to meet individual application needs, if necessary. Both the „conical” and „parallel” type are molybdenum coated to reduce wear and extend the lifetime of the screws.

All barrels for parallel and conical screws are manufactured from high quality nitrided steel. A very high even hardening depth as well as ground or honed bores guarantee a long lifetime. For difficult processing barrels made of special steel are available.

The experience and capability of High Tech Extrusion are particularly well known for the production of all forms and types of screws.

Nitrided, hardened or coated, cylindrical or conical, with variable pitch or core progression, with shear, mixing or kneading zones - whatever the process technologists come up with, High Tech Extrusion can manufacture it.



	Execution		Coated thickness (mm)	Hardness [Rc]
Screw coatings	Plasma welded flights stellite 1/16/12/colmony 56 etc.		2.5 - 5.0	38 - 58 (dep. upon type)
	Plasma welded flights carbide/oxide/Mo-alloy		0.6 - 1.2	58 - 62
	Plasma sprayed flights with Mo/Wc/Mo-Ni/etc.		0.15 - 0.50	48 - 58 (micro hardness)
Dimensions	Type	max OD (mm)	Bore dia (mm)	max. Lenght (mm)
	Twin-screw barrels	550	30-225	4000
	Twin-screws	225		7000

Twin-Screws

Screw pairs for twin-screw extruders are components that come in a wide variety of designs. The most complex geometries can be directly and quickly produced by means of computerized numerical control programming, an integral part of our production process.

Computer aided fabrication set-up procedures ensure high flexibility. Twin-screws are subject to specific stresses, so that wear necessarily occurs as consequence of the process.

Molybdenum or molybdenum alloy coatings have proved to be particularly suitable as these have good slip properties when considering metal on metal friction. In many cases, especially for parallel machines, nitrided screws are offered as a standard. For highly abrasive stress and especially for conical machines coated screws are preferred. The High Tech Extrusion standard for conical and parallel screws is always molybdenum coating of the screw flights. Our plasma sprayed molybdenum alloy, which offers high corrosion resistance, is recommended for highly adhesive and abrasive stress.

Care must always be taken in the selection of suitable material pairing, i.e. barrel and screws should be considered as a complete unit in a twin-screw extruder.

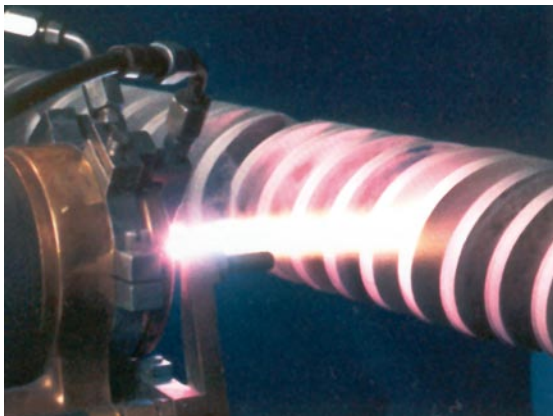


Nitrided barrels

The plant is equipped with state-of-the-art equipment for the production of nitrided twin-screw barrels. All components are manufactured in accordance with our high standards of quality, for the most part on computerized numerically controlled machines. Continuous measurement and inspection reports accompany the components from blank to finished product.

Standard

- many years of experience of the High Tech Extrusion Group in developing and manufacturing guarantee a precise execution
- a proven processing method to apply a molybdenum layer on the screw surface extends the lifetime of the plasticizing unit.
- the economical energy consumption of our units follows a typical industrial development trend
- a balanced screw geometry to suit a wide range of formulations ensures good homogeneity, even at high screw speed
- the screw flight depth design tailored to meet the viscosity and flow characteristics of PVC extends the lifetime of barrel and screws
- special geometries for processing of fibres and food are available



Mo-plasma spraying

