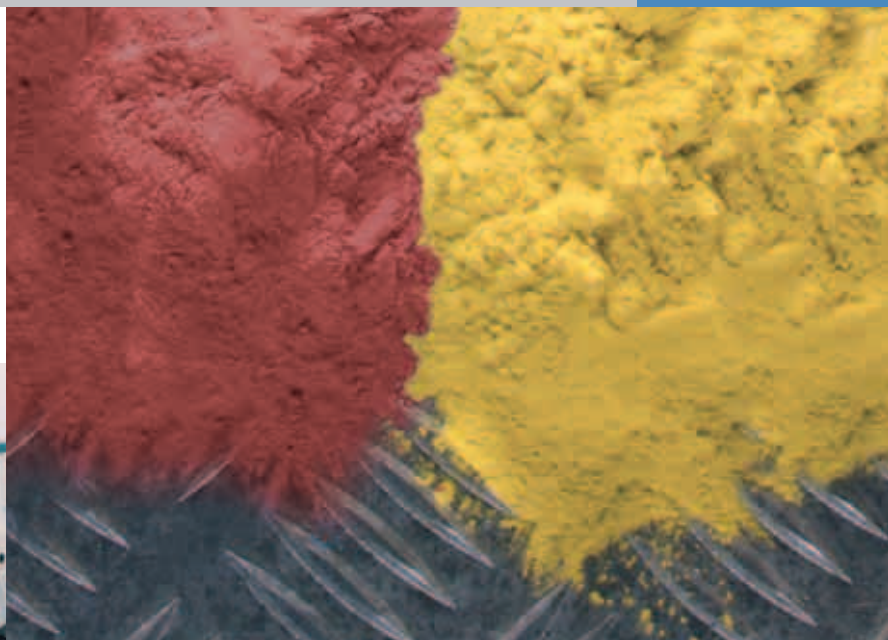


Flexible and reliable powder coating extrusion at outputs up to 350 kg/h. The PRISM TSE 36 Powder Coatings (PC) twin-screw extruder features a segmented screw configuration and modular open barrel design to handle a full range of formulations.

Each barrel segment is heated and cooled separately for precise process control.

## PRISM TSE 36 PC

Production-scale modular twin-screw extruder



### Applications:

- Powder coatings
- Thermosets
- Resin development

### Materials:

- Epoxy resins
- Polyester resins
- Polyurethane resins
- Hybrid formulations

### Production Scale Modular Twin-screw Extruder

The PRISM TSE 36 PC twin-screw extruder is ideal for small-scale production.

A horizontally split barrel, 28:1 L/D, is hinged for easy access to the screws, and the screws themselves have a simple removal device for quick and easy cleaning or configuration changes.

Simple controls may be mounted on the extruder or in a separate free-standing cabinet.

A color touch screen interface can be added for standard data logging with the option to download to a remote computer for archiving and analysis. These controls include recipe storage to pre-set extruder

parameters for repeatable process conditions. Each barrel section has independent temperature control with PID logic to give precise temperatures and save energy.

A low maintenance brushless 22 kW motor drives the screws at 750 rpm. An option for 30 kW at 1000 rpm screw speed is available.

Thermo Electron Corporation is a leading supplier of equipment and instruments to the Polymer, Powder Coatings, and Chemical industry, worldwide.

Thermo Electron (Stone) UK has a fully equipped Technology Centre for customer trials on PRISM equipment, and with worldwide representation, Thermo Electron Corporation supports customers globally.

## PRISM TSE 36 PC

### Ancillary equipment

Thermo Electron offers a range of ancillary equipment to integrate with the PRISM TSE 36 PC twin screw extruder, including pre-mixers, feeders, and chill rolls. Thermo Electron has the ability and experience to design other non-standard ancillaries for special applications.

### Pre-mixers

High speed mixers insure uniform particle size and pre-blending of ingredients, leading to more regular feeding and improved product.



### Chill rolls

For product cooling and flaking, Thermo Electron has designed a chill roll unit for use with the 36 mm extruder. The chill roll is fitted with a belt cartridge to make belt removal simple for cleaning or replacement. Similarly, the kibbler unit can be opened easily and the flaker bar removed quickly for washing.



Specifications		Option 1	Option 2
Barrel length	L/D	28:1	28:1
Barrel bore diameter	mm	36	36
Screw diameter	mm	35.5	35.5
Channel depth	mm	6.7	6.7
Centre-line spacing	mm	29	29
Centre-line to radius ratio		1.61	1.61
Maximum screw speed	rpm	750	1000
Power at maximum screw speed	kW	22	30
Barrel zones		7	7
Heater rating	W	24 x 750	24 x 750
<b>Extruder dimensions</b>			
L x W x H	m	2.2 x 1.2 x 2.1	2.2 x 1.2 x 2.1
<b>Scale-up data</b>			
Internal free volume	cm <sup>3</sup>	837	837
Typical output	kg/h	50 - 300	50 - 350
<b>Services</b>			
Electrical power	Volt/ph/Amp	400V/3ph/150A	400V/3ph/200A
Extruder cooling water 20°C	Liter/min	50	50
Chill rolls cooling water 4 - 10°C	Liter/min	200	250

### Thermo Electron Corporation

#### Material Characterization

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