Complete Powder Coating Lines including **XTS Extruders, Compact Drum Coolers** and Stainless Steel Cooling **Conveyors** engineered with xcellence
Powder coating producers continue to face fresh challenges

Your customers continue to demand products for lower cure and / or thinner film applications, with tighter specifications on faster delivery deadlines and improved service. This leaves you with two main challenges;

Equipment reliability
- Maintenance demands (planned and unplanned)
- Downtime for cleaning between production runs
- Older machines that perform below their original production output

Processing ability
- Xtrutech has incorporated a number of equipment and processing developments to boost output and mixing efficiency by developing new designs of extruder with longer extruder barrels that operate at higher speeds and lower temperatures. This not only increases the output of any given size of extruder but also improves processing performance on newer more demanding formulations.

Xtrutech is facing up to the challenge by offering customised service contracts based around KPI’s with the aim to monitor and improve productivity and to reduce downtime. Please read on to see some of the innovations we have introduced or talk to an Xtrutech Engineer for more details;

Side feeding with Xtrutech’s self-cleaning twin screw side feeder:
- Stable torque
- Higher throughputs
- Minimal clean down between batches

Automatic purging of the extruder:
- Leaving your operator time to clean other equipment or to organise the next batch
- Accurate and repeatable purging, no tipping the torque coupling
- Minimise scrap
- Choice of purge sequences: resin only or full PVC + water

Recipe management system
- Store standard recipes for repeatable production output and quality

Automatic start-ups of the line
- Accurate and repeatable start-up with parameters taken direct from the recipe system
- Repeatable, controlled start-ups with safety shutdown sequences for rapid re-start

Industry 4.0 ready for in-house data collection or built-in data trending
- Remote access via 4 or 5G modem or broadband
- Remote fault-finding diagnostics
- Remote uploading of software or drive updates

Cooling conveyors with
- Assisted belt cleaning
- Continuous chill roll cleaning
- Assisted cleaning system for the kibbler

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Xtrutech specialises in the design, manufacture and process optimisation of twin screw extruders. Established in 2002, Xtrutech has grown to become a leading independent supplier of twin screw equipment, providing cutting edge machinery, quality spare parts and a first-class service across a range of industries worldwide.

Xtrutech is the world leader in twin screw extruder design and innovation

First to include Siemens AC water cooled motors in powder coating machines:
- Highly efficient
- Low maintenance
- Low noise

First and only manufacturer of the independently opening top and bottom clamshell barrel:
- Easy access to screw shafts and wear resistant liners
- You can keep it closed or open it when you need to

First to include water cooling inserts inside the barrel:
- Highly efficient water cooling and temperature control
- 3 times greater cross section of water connections than other OEM extruders

Preventative maintenance agreements:
- Customised to keep you in production
- Continuous monitoring of the extruder line to ensure peak performance

Service
Xtrutech provide a full after sales support service worldwide for:
- Screw elements & shafts
- Barrels & liners
- Process optimisation
- Machine upgrades & refurbishments
- Service engineering

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The future is side feeding.
Xtrutech’s new assisted cleaning twin screw side feeder is taking its customers to a new level of output and stability on all XTS machines.

The highest / most efficient outputs can be achieved with stable torque / running conditions on most formulations using the twin screw side feeder option, particularly when processing low bulk density formulations or recycling of fines.

The self-cleaning side feeder reduces changeover times and allows the operator time to organise the next batch or focus on cleaning other equipment.

Innovation

Machine pre-wired with remote I/O installation time and wiring back to main panel is cut to a minimum by using fibre optics for control signals

Water cooled AC motors
- Highly efficient & Low maintenance
- No cooling fan - no noise
- No dust
- Water cooling from extruder
- Smaller frame size

Auto purge system with several recipe choices
- Resin only allows for quick restarts on high reactive formulations
- PVC + water for end of batch clean downs

Recipe management system stores previously run processing parameters allowing for continuity of production
The Xtrutech clamshell barrel - you can **keep it closed** or you can **open it when you need to**

The XTS twin screw extruder range has the optimum high volume geometry of D/d 1.8 for powder coating processing. Coupled with a high speed and high torque drive system and a 24L/D clamshell barrel we have created the ultimate machine for processing powder coatings in the most efficient and economical way.

- **Features of the Xtrutech XTS twin screw extruder for powder coatings:**
  - High free volume coupled with high power to enhance flexibility in speed, residence time and output
  - Clamshell barrel providing easy access to the screws and shafts for cleaning and maintenance
  - A split stuffing box gives quick access to shafts during removal and refitting
  - High intake screw profiles to optimise feeding of fines and traditionally difficult to feed low bulk density formulations
  - An industry proven gearbox from PIV to ensure reliability of high torque transmission
  - Segmented, insert type liners available in corrosion resistant, premium materials to maximise performance against cost

- **Independently opening top and bottom clamshell barrel offering:**
  - Unlimited access to screw shafts and wear resistant liners
  - Quick access to the screws when cleaning or during maintenance
  - Backing blocks house the highly efficient water cooling circuit in the form of a cooling insert
  - Cooling inserts can be easily replaced ensuring optimum cooling of the barrel is maintained
  - 2.5 times the cooling capacity of any other extruder of the same size
  - 24 L/D long barrel as standard with longer barrels available to give more mixing or residence time

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First to include water cooling inserts inside the barrel

XTS Production Machine

XTS24 R&D/Pilot Line

XTS19 Bench Top Laboratory

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**Model**

<table>
<thead>
<tr>
<th>Model</th>
<th>XTS 19</th>
<th>XTS 24</th>
<th>XTS 35</th>
<th>XTS 44</th>
<th>XTS 56</th>
<th>XTS 65</th>
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<tbody>
<tr>
<td>Diameter</td>
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<td>24</td>
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<tr>
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<td>Screw Speed (RPM)</td>
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<tr>
<td>Maximum Torque</td>
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<td>139</td>
<td>390</td>
<td>684</td>
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<tr>
<td>Typical Max outputs Kg/hr</td>
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<td>800</td>
<td>1600</td>
<td>2400</td>
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<tr>
<td>Average Outputs Kg/hr</td>
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<td>80</td>
<td>220</td>
<td>500</td>
<td>1,000</td>
<td>2,000</td>
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</tbody>
</table>

The Xtrutech clamshell barrel - you can **keep it closed** or you can **open it when you need to**
Seamless integration of cooling conveyors and drum coolers for powder coating

**Drum cooler:**
- Rapid cooling of thermosetting product
- Product spread evenly over drum width to improve product cooling efficiency
- Removable and interlocked access covers for easy cleaning
- Compact design / reduced length
- Mini breaker / flaker unit as standard
- Low cost / easy to change synthetic endless belt
- Removable belt cartridge
- Large diameter chill roll with disruptive water flow to maximise cooling
- All safety interlocks included for a seamless integration with the XTS extruder
- Manufactured in the UK

**Motorised cartridge on larger sizes to aid clean downs and quick change of belt**

**Cooling conveyor:**
- Stainless steel belt from Berndorf
- All stainless steel frame
- Large diameter chill roll with disruptive water flow to maximise cooling
- Adjustable Nip roll with disruptive water flow
- Adjustable air guides to prevent edges of the sheet curling up
- Secondary cooling roll on belt to improve cooling across the width of the extrudate
- Mini breaker / flaker unit as standard
- Designed for easy clean down
- All safety interlocks included for a seamless integration with the XTS extruder
- 800, 1000, 1200, 1500 wide with lengths dependant on outputs and cooling requirements
- Manufactured in the UK
Spare parts

Xtrutech supply a range of spare parts, offering optimum performance against cost:

- Screw elements
- Shafts
- Barrel Housings
- Liners

Our spare parts are fully compatible with most makes and models of twin screw extruders in powder coatings:

- APV / Baker Perkins
- Coperion / W&P
- Theysohn
- OMC
- Century (USA)
- B&P (USA)
- Prism

Xtrutech is not only able to replicate, in-house, any screw elements up to 160mm, we can design new elements to meet specific requirements or adapt an existing element from one manufacture of extruder and design it to fit another.

The standard delivery for screw elements is 6-8 weeks depending on workload. Our in-house stock of more widely used or standard screw elements are constantly being regenerated for a next day delivery service.

Preventative maintenance agreements:

- Identify problems before they stop production
- Reduce costly down time
- Help to keep equipment operating at optimum production levels

Avoid downtime through regular on-site machine inspections and planned maintenance routines. Our special rates make this a real alternative. We can assist you to develop your machine so that it becomes more reliable and less prone to breakdown.

Annual machine inspections include:

- Gearbox Inspection
- End float/backlash on input and output shafts
- Check operation and performance of oil lubrication
- Check for oil leaks
- Agitator shaft coupling and gland packing
- Torque coupling check (where necessary)
- Main motor condition and operation
- Barrel temperature control, heating / cooling
- Machine safety and operating interlocks
- Control panel controls and indicators
- Operation and control of main drive
- Barrel bolts and helicoils condition
- Screw elements measured and liner inspection

Intelligent refurbishments and process optimisation

Xtrutech offer Process Optimisation for most makes and models of powder coating twin screw extruders, including advice on screw profiles, improving intake into the extruder, mixing sections, barrel temperatures, top and side feeding solutions to improve the processing of fines and low bulk density formulations.

Our engineers work with a range of materials for construction, to combat adhesive wear, abrasive wear and corrosion, or more often a combination of all three. Materials are chosen from nitrided steels, through hardened steel and HIP powder metallurgy that maximise performance against cost.

Xtrutech manufacture and supply Barrel Housings, Liners, Screw Elements and Shafts for most makes and sizes of twin screw extruder, from 6mm up to 160mm in diameter, to fit:

- Coperion / W&P
- APV / Baker Perkins
- B&P
- Century
- Prism
- Theysohn
- OMC
- Buhler
- Mats
- Leistritz
- Rondol

The Retrofit Barrel can be manufactured with a full clamshell barrel and will fit almost any APV / Baker Perkins or B&P powder coating extruder, from 40mm up to 160mm. The “half” clamshell design will fit an older W&P or a Century powder coating extruder, should a customer wish to take advantage of the clamshell style barrel.

Preventative Maintenance Contracts are available on request, along with Gearbox Overhauls for Hagate / David Brown, Eisenbeise, PIV and Flender gearboxes. Torque Limiter Coupling Service Kits, Inspections and Testing can be completed either on-site or in our service centres.
So why Xtrutech?

- Comprehensive in-depth knowledge and experience of designing, building and running twin screw extruders
- Company with a strong customer focus; reliable, trustworthy and dedicated to your needs
- Highest quality products built to meet your requirements
- Europe’s leading supplier
- Committed to finding solutions for your powder coating applications

The XTS range of twin screw extruders and bespoke ancillary equipment for lab and R&D for powder coatings has been developed by Xtrutech, based on their intimate knowledge and experience of designing, building and running twin screw extruders for over 40 years. Xtrutech have the in-depth knowledge to provide cutting edge machinery and process solutions for your powder coatings production.