



innovation · performance · productivity

*We are Twin Screw Extruder Specialists who
design & manufacture complete lines for
Powder Coatings*



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About us



Founded in 2002, Xtrutech specialise in the design & manufacture of XTS Twin-Screw Extruders for Powder Coatings. To create a seamless production or laboratory line, we also manufacture drum coolers, cooling conveyors, feeders, and ancillary equipment.

We deliver comprehensive support for our customers, as a leading independent supplier of spare parts and services for Twin Screw Extrusion. Xtrutech supply screw elements, shafts, barrels, and liners for a wide range of OEM's.

Our highly qualified team can provide a variety of engineering services such as process optimisation, machine inspections, wear measurement and more...

Xtrutech's UK Headquarters are situated in Stoke-on-Trent. This is where our sales, design and engineering team are located. We have sales representatives positioned throughout Europe, Asia & Russia to provide further assistance to our global customers.

Our secondary location is in Philadelphia, USA. Our North American Headquarters operate as Xtrutech Inc. They provide dedicated customer service to our customers in the Americas.

Xtrutech are innovators at the forefront of all new designs and advancements and we continue to focus on the future, to create machines that are highly efficient, low maintenance, and operator friendly.

1977
Launch MPC/V Opening Barrel Extruder
Single piece slab liner
Round keyed shafts
Do/Di = 1.8
Equivalent power on 44mm 13kW

1987
Launch MP2000
Segmented liners
Hex shafts
Do/Di = 1.8
Equivalent power on 44mm 33kW

1997
MP**PC series
Insert liners
Hex Shafts
Do/Di = 1.8
Equivalent power on 44mm 41kW

2001
MP**PC Mk II
Insert liners
Splined shafts
Do/Di = 1.8
Equivalent power on 44mm 41kW

Baker Perkins
APV Chemical Machinery
APV Baker
Baker Perkins



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1970

1980

1990

2000

Werner & Pfleiderer
Coperion



1978
Launch HiPerformance ZSK
Segmented solid liners
Round 6 keyed shafts
Do/Di = 1.44
Equivalent power on 44mm 52kW

1983
Supercompounder
Segmented solid
Splined shafts
Do/Di = 1.55
Equivalent power on 44mm 65kW

1995
Megacompounder
Press-in liners
Splined shafts
Do/Di = 1.55
Equivalent power on 44mm 84kW

2001
Megavolume
Press-in liners
Splined shafts
Do/Di = 1.8
Equivalent power on 44mm 65kW

Innovations

Clamshell barrel

Xtrutech are the one and only manufacturer of the Clamshell barrel, which has many benefits due to its ability to open independently at the top and bottom. It provides easy access to the screws and shafts which simplifies the maintenance process.

Side feeding

We have seen that the highest and most efficient outputs can be achieved with our XTS Side Feeder, which also offers stable torque and running conditions. This is particularly beneficial when processing low bulk density formulations, or the recycling of fines.

CIP system

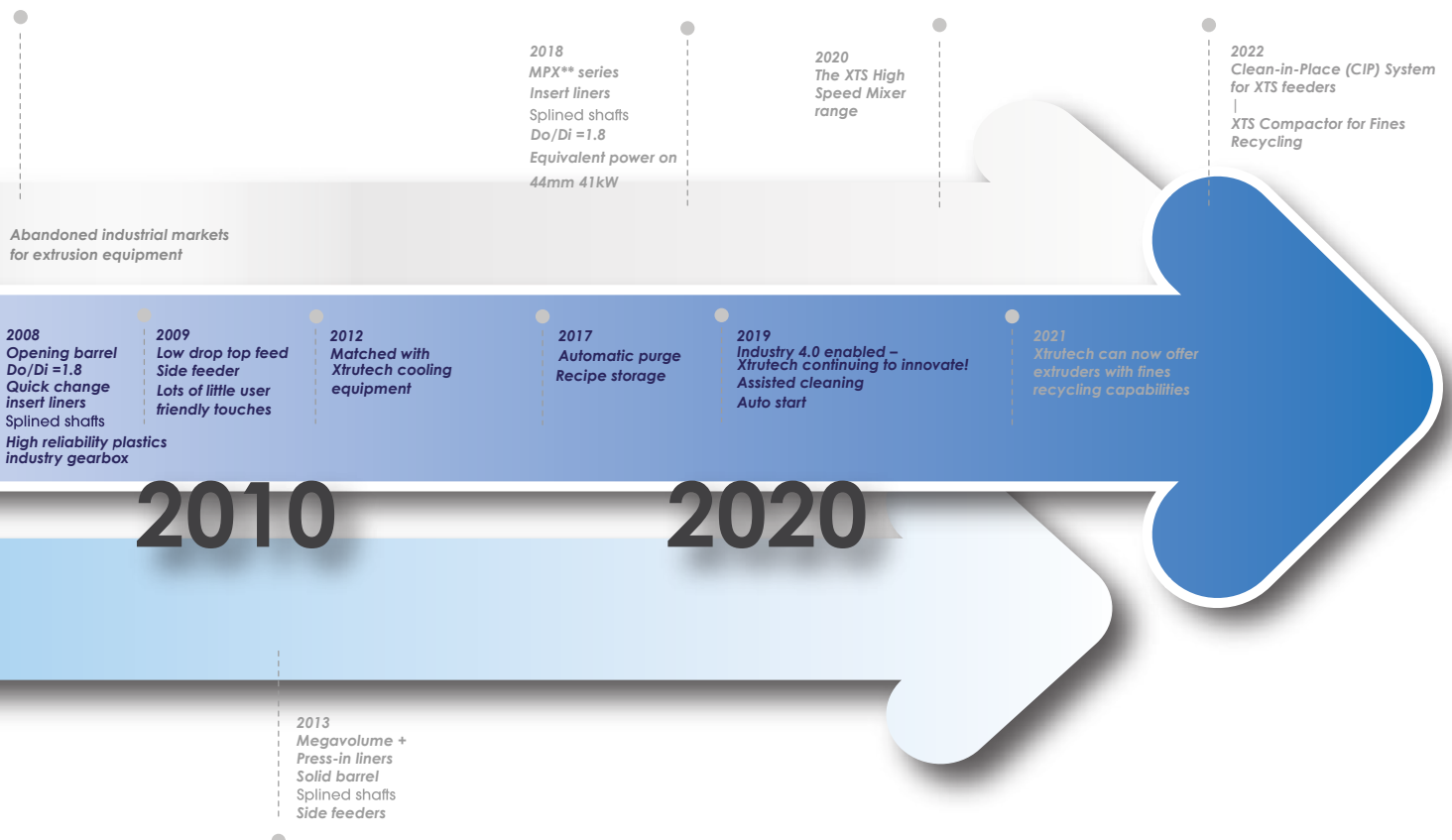
Xtrutech have developed our new clean-in-place (CIP) system to further reduce cleaning times for our customers. We have successfully achieved this by automating part of the cleaning process for our new feeder and hopper, with an automated CIP system suitable for all XTS production extruders.

Fines Recycling

We can now demonstrate 'fines recycling' by using a specialised Xtra volume screw profile, unique barrel layout/temperatures and XTS side feeder. Xtrutech can recycle any percentage of fines blended into a premix formulation.

XTS Fines Compactor

The XTS Compactor is a fines recycling system for the powder coatings industry, our machine has been designed to effectively reduce waste by compacting fines and reintroducing them to the mill as chips. The XTS Fines Compactor provides a discreet and effective solution to fines waste, offering measurable cost savings, increased efficiency, and improved sustainability.



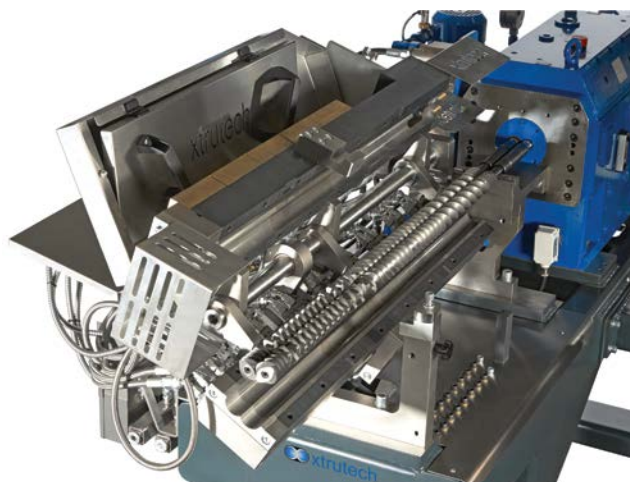
XTS Twin Screw Extruders

Xtrutech design & manufacture the XTS range which includes six Twin Screw Extruders, we have models suitable for laboratory purposes all the way up to full scale production. Every XTS Extruder fits seamlessly with an XTS Drum Cooler or Cooling Conveyor.

XTS barrels come in standard lengths of 18D and 24D and in 6D increments up to 54L/D for more complex applications. This provides optimal mixing times and higher outputs.

Features:

- Auto purge system for accurate and repeatable purging.
- Recipe management system to store standard recipes, barrel temperature profiles and running parameters that can be saved as future targets.
- Segmented screw elements that are made from powder metallurgy, HIP, or tool steel for durability and easy maintenance.
- Robust backing blocks with excellent control over heating and cooling, with individually controlled heating zones (3D or 6D).
- PLC controlled with operator friendly HMI screens.
- High screw 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.
- A split stuffing box gives quick access to shafts during removal and refitting.
- Oil impregnated brass split bushes to stop the material from flowing backwards towards your gearbox.
- High intake Xtra Volume Screws to optimise feeding of fines and 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 tool steels to maximise performance against cost.
- Torque limiter coupling to protect the gearbox, shafts, and screws.
- Siemens AC Water-cooled motor offers highly efficient torque transmission and low maintenance.
- Industry 4.0 ready for in-house data collection.
- Remote access via 4g modem for service support (country dependent).



Model	XTS 19	XTS 24	XTS 35	XTS 44	XTS 56	XTS 65
Diameter (mm)	19	24	35	44	56	65
Motor (kW)	3.4	8.5/11.3	26/35	73.5/98	130/174	194/258
Screw Speed (RPM)	900	900/1200	900/1200	900/1200	900/1200	900/1200
Maximum Torque (nm)	18	45	139	390	684	1030
Typical Max outputs Kg/hr	N/A	120	300	800	1600	2400
Average Outputs Kg/hr	N/A	80	220	500	1,000	2,000

XTS19

The XTS19 Twin Screw Extruder has been designed with a wide range of processing capabilities, from lab scale sampling to research and development work.

The 19mm is one of our smallest extruders available and is classified as a benchtop extruder. Pictured here with a vibratory tray feeder & XTDC1 Drum Cooler also from the XTS range.



XTS24

The XTS24 Twin Screw Extruder is ideal for both sampling and small batch production, with a low maintenance, high performance design.

This line features a single screw Flexwall Feeder, but we can also offer an XTS side feeder as the main feed alternative.



XTS35

The XTS35 is a versatile extruder that can serve both laboratory and production functions. The 35mm is ideally used as a lab machine when higher free volume is necessary. It is also perfect for low scale production and offers a high throughput particularly for speciality products. The XTS35 can be matched with our XTDC3 Drum Cooler.

XTS Twin Screw Extruders for production

Xtrutech manufacture three extruder models specifically for use in the powder coatings industry. The XTS44, XTS56 and XTS65 have been designed with high free volume clamshell geometry, coupled with a robust and reliable high-torque drive.

As a result, Xtrutech have produced the optimal machine for high-output and efficient powder coating production. All of these models are ideally suited to an XTCC Cooling Conveyor (available in three standard sizes).



Feeders

The XTS range includes a variety of feeding options for both powder premixes and liquid formulations including top feeders, side feeders and vibratory tray feeders. All feeders from Xtrutech are made from stainless steel and have been engineered to pair seamlessly with an XTS extruder. All XTS feeders can also be integrated with our new CIP system, which effectively reduces downtime and increases efficiency through automated cleaning.

Drum Coolers

Xtrutech have 5 Drum Cooler models in the XTS range that are suitable for almost all XTS extruders (XTS65's can be paired with a Cooling Conveyor instead).

XTDC1: Bench top for lab samples

XTDC2: R&D and / or small batch production up to 150 KGs/hr

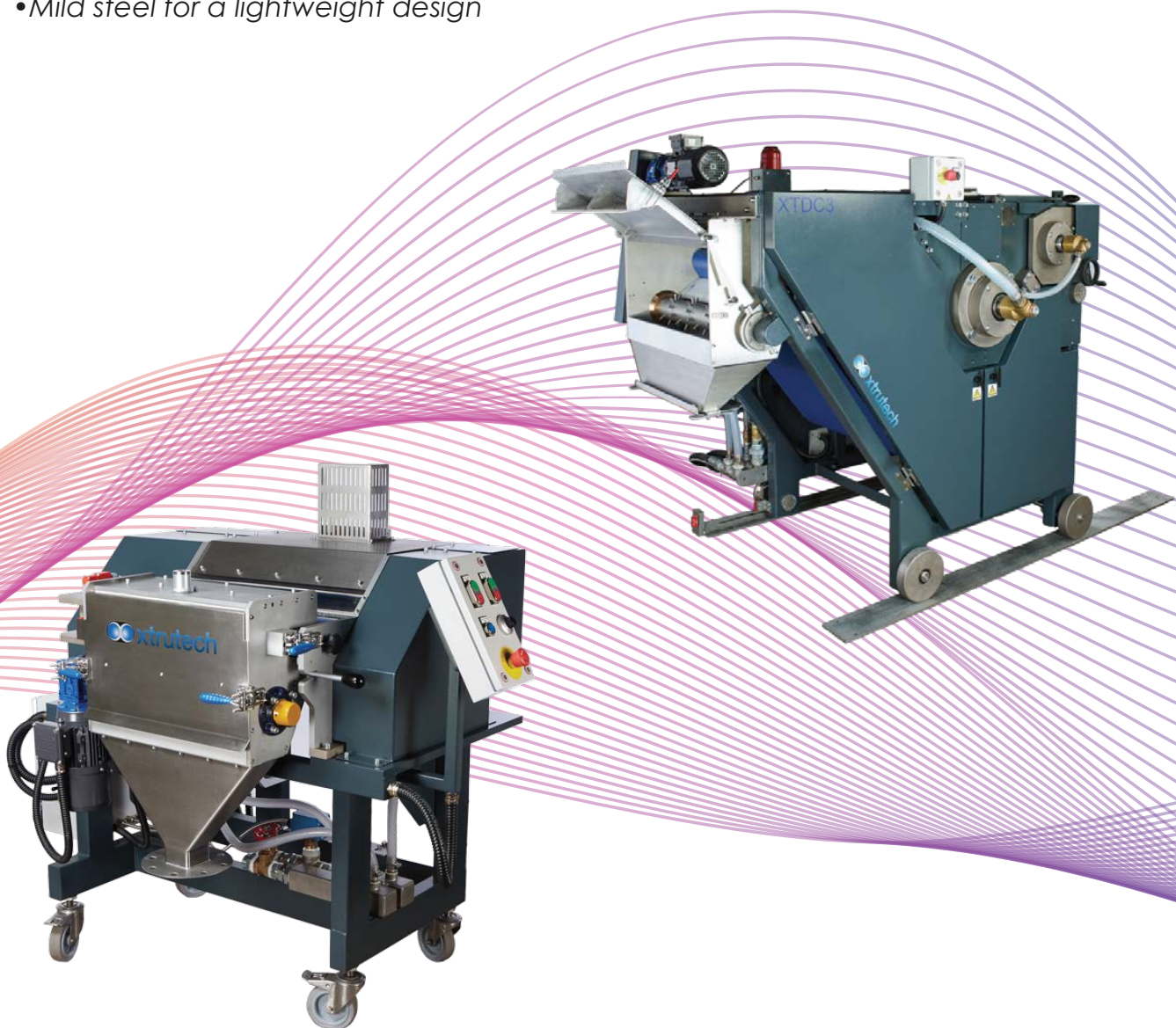
XTDC3: Small batch production up to 350 Kgs/hr

XTDC4: up to 800 Kgs/hr

XTDC5: up to 1,400 Kgs/hr

Features:

- Rapid cooling of thermosetting product
- Product spreads evenly over drum width to improve product cooling efficiency
- All safety interlocks included for a seamless integration with the XTS extruder
- Compact design / reduced length
- Kibbler/ flaker unit as standard with removable kibbler shaft for simplified cleaning
- Large diameter chill roll with disruptive water flow to maximise cooling
- Easier maintenance through side access doors
- Bearings located in a housing to help prevent water damage
- Mild steel for a lightweight design



Cooling Conveyors

Xtrutech offer three standard sizes for our XTCC Cooling Conveyors, which are designed to fit seamlessly with our XTS production extruders. Other sizes are available on request.

XTCC Conveyor's feature a closed-loop water cooling system, which offers improved energy efficiency, as it recycles and reduces the amount of water used for cooling.

All XTCC Conveyors feature a stainless-steel design to protect the efficiency of the conveyor from corrosion and contamination.

Sizes:

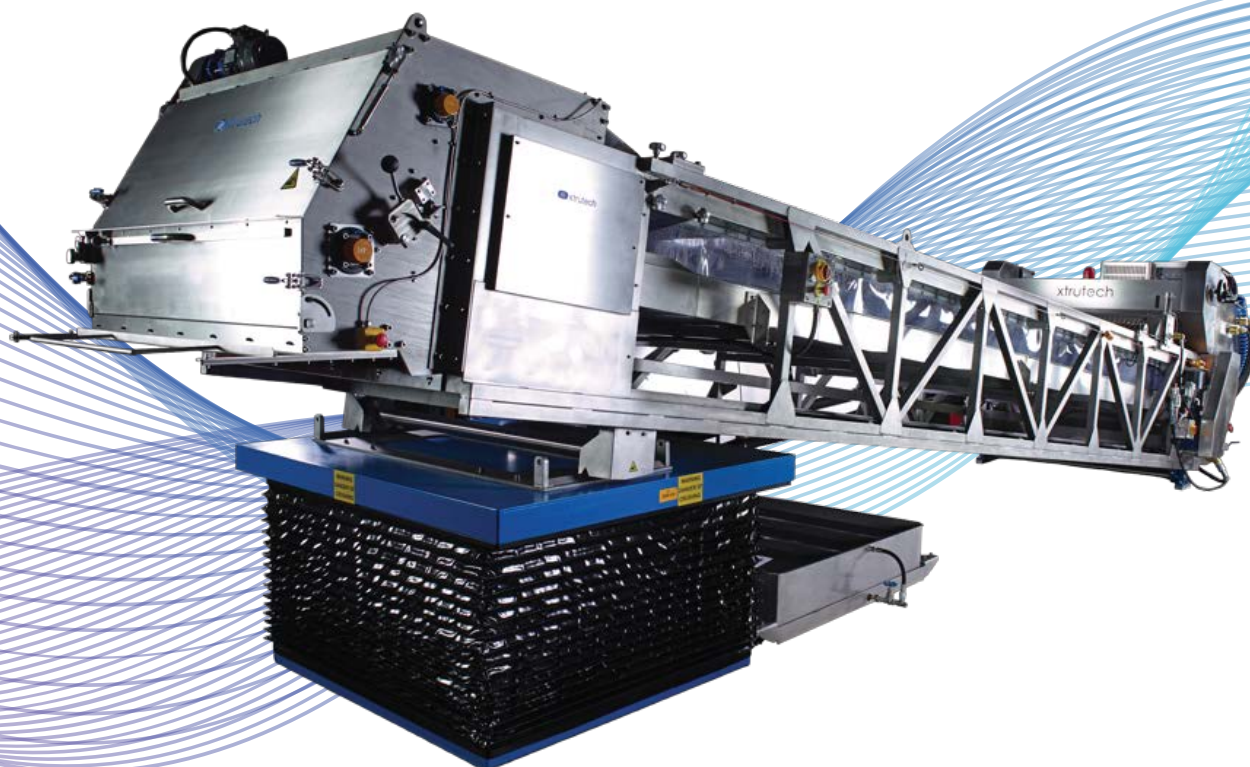
XT CC 1X5: Up to 800 Kgs/hr

XT CC 1.2X6: Up to 1,600 Kgs/hr

XT CC 1.5X10: Up to 2,500 Kgs/hr

Features:

- Stainless Steel frame with partial PVP piping
- Stainless steel belt
- Reverse action rolls in case of emergencies
- Dual safety circuit with emergency stops on both sides of the conveyor and kibbler.
- Large 400mm diameter chill roll designed for turbulent water flow to maximise cooling.
- Smaller 270mm diameter chilled nip roll designed for turbulent water flow, with the ability to pneumatically move to separate the rolls and aid cleaning.
- Secondary cooling roll on belt to improve cooling across the width of the extrudate
- Pre-Breaker for turning large sheet into sizeable pieces ready to enter the kibbler.
- Mini breaker / flaker kibbler unit to reduce product to a flake and to give a tight particle size distribution of $\leq 4\text{mm}$ to improve grinding efficiencies.
- Controls via extruder HMI.
- Scissor lift to lower the conveyor to a safe working height



High Speed Mixers

The XTS range includes three high speed mixer models, starting with the M3 & M5 which are designed for bench-top operation. They feature a change-bowl design, which makes them ideal for use in laboratory and R&D applications. The M10 is a larger fixed-bowl model, which is more appropriate for use in a production setting or where an increased capacity is required.

Features

- Xtrutech offer both single wall and jacketed tanks which can be secured to the mixer base quickly and safely.
- A thermocouple is mounted in the baffle blade to monitor product temperature which is displayed on the HMI.
- Impellor speeds can be adjusted for optimum mixing and the modular impellor can be reconfigured for different materials.
- Mixing cycles can be saved for repeatable batches, with various parameters including RPM, maximum temperature, and mixing time.
- Variable speed motors enable efficient mixing at high speeds, the M10 also allows for reliable discharge at low speeds.
- A HMI panel is standard for all mixers with a dust tight user interface.



M3 & M5 mixers

Xtrutech's smaller mixers have a 'change-bowl' design so that on completion of the mixing cycle, the tank can be removed easily from the mixer to carry the product to downstream processing. This also means that bowls can be placed directly on a scale for weighing, and cleaning can be completed with ease.

Each XTS mixer comes with a toolkit so that the stainless-steel bowl and impellor can be removed quickly and easily. This enables effective cleaning and maintenance, making our mixers suitable for Food and Pharmaceutical applications.

Extra tanks can also be purchased separately.

M10 mixers

Larger units such as the M10 have a fixed-bowl design, with contoured discharge valves for efficient mixing and simple product discharge. The M10 also has a heavy-duty mechanical seal, which ensures a long life in production applications.



XTS Compactors

The XTS Fines Compactor has been designed to improve product efficiency within our customer's powder coating plants. The compactor closes the loop of operation by taking fines from the baghouse and sending them back into the mill as compacted chips.

Compactor Cost Savings

Typically, between 2% and 10% of fines are produced during the milling process either in the bag house or secondary cyclone. This means during a 5000kg batch which produces 3% fines, approximately 150kgs of material is lost. If we estimate the cost of materials at £3.50 per kg this equals a £525 deficit in every batch. Xtrutech's Compactor aims to tackle waste by recycling these fines, offering a product yield of up to 99.5%.

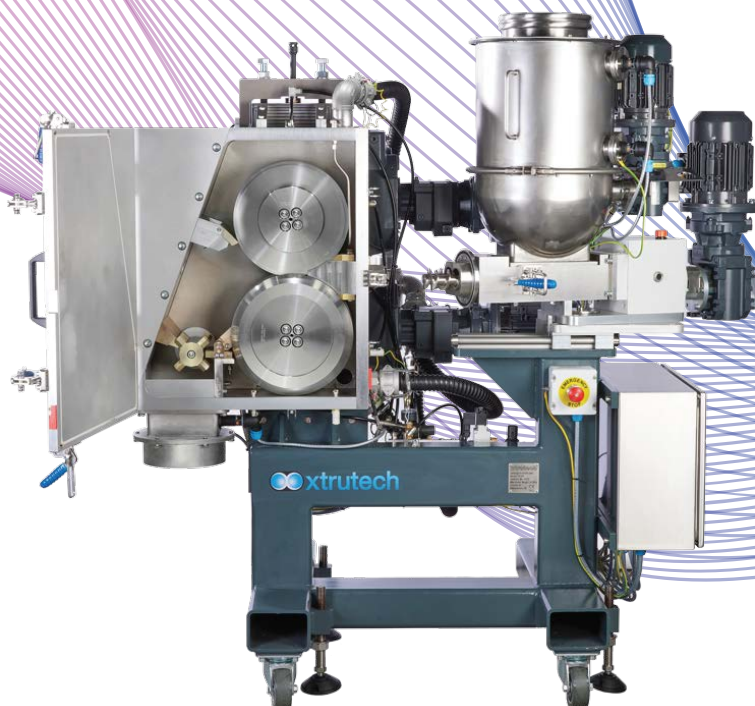
How does this work? The first 1,000 kgs through the mill produce 30kgs of fines which are used to clean the bag house or cyclone, they will be contaminated but can be compacted and used in other products. As a result, approximately *£420 can be saved on every 5000kg batch. *150kg-30kg= 120kg X £3.50 = £420.

Compactor Process

The XTS Fines Compactor is invisible to the plant, it sits in line with the Mill and only compacts when it is given material. It is also possible to have an offline version, which can be fed by a bulk bag. The compactor receives fines via the diverter valve, which are then fed through into the compacting rolls, reaching the kibbler as a compacted sheet which is ready to be broken into chips. The compacted chips are then reintroduced to the mill.

The compactor also features a diverter valve to the scrap bag, so the Mill is not affected if the compactor isn't running. Xtrutech's compactor can now be manufactured and certified, to be used in a dust UKCA/ATEX zone 22 environment.

The XTS Fines Compactor provides a discreet and effective solution to fines waste. Offering measurable cost savings, increased efficiency, and improved sustainability.



Spare Parts

Xtrutech are a leading independent supplier of OEM spare parts for Twin Screw Extruders. As a result, we strive to only use quality materials that ensure compatibility with original parts.

We supply **screw elements, shafts, and barrels** for a variety of extruder manufacturers listed below.

Looking for something else?

Xtrutech supply a range of extrusion spares such as thermocouples, heaters, feeder spares, motors, and gearboxes, some of which are no longer in manufacture with the OEM.

Please contact a member of our team who can advise you on the availability of these parts.



Benefits:

- We can provide screw elements for a range of machine sizes from 10mm to 160mm.
- Xtrutech can provide a new design or a customised element.
- We can provide a range of shaft profiles including Round, Keyed, Hex, Bi-Hex and Splined.
- Shafts are made from high tensile strength steel to improve durability.
- Xtrutech can turn your solid barrel housings into lined barrel housings as a cost-effective alternative. This means that you can simply replace the worn liners and keep your barrel intact.
- We can offer consignment stock to plan future downtime.
- Our OEM parts use powder metallurgy steel, which involves a more refined process for the creation of fatigue resistant materials.
- Our parts are subject to Hot Isostatic Pressing (HIP) to enhance longevity and reduce defects.
- We can offer consignment stock to plan future downtime.
- Quality is our focus, not only as a finished product but throughout the manufacturing process.

Manufacturers list:

- APV / Baker Perkins
- B&P
- Buhler
- Coperion / W&P
- KraussMaffei Berstorff
- Leistritz
- Maris
- OMC
- Thermofisher
- Theysohn and more...



Services

Xtrutech offer a range of engineering services for Twin Screw Extrusion equipment.

Our team includes qualified engineers and technicians, many of which have experience working with a range of OEM manufacturers.

Together we will work towards a better understanding of what you need to realise the potential of your extruder.

Service and Machine Inspections

Xtrutech offer barrel wear inspections, torque coupling services, and gearbox alignments to help reduce potential breakdowns for a variety of Twin Screw Extruders.

Extruder Operation Training

This includes how to use our systems, how components work together, and general control of the machine and operational features.

Remote Servicing and Commissioning

Xtrutech can perform a variety of service tasks, updates, fault diagnostics and emergency assistance using our remote 4G/LAN modules.

Process Training

Share in our industry knowledge as we talk you through our systems and how your materials interact with XTS machines.

Process Optimisation

Our experienced engineers are skilled across a range of industries and have the knowledge to offer advice on screw profiles, barrel temperature profiles, mixing, intake, or feed problems.

Process Trials

Xtrutech can provide process trials for customers interested in purchasing an XTS Extruder, viewing can be arranged via video link or by arranging a visit to our facility in the UK.

Torque Coupling Refurbishments

Xtrutech provide an annual inspection of the Torque coupling, stock all the required XTS parts and can provide TLC service kits.

Wear Measurement

We offer various wear measurement options, to help you calculate when potential repairs and replacements will be needed.

Barrel Retrofitting

Xtrutech can offer a Clamshell barrel retrofit to replace older, worn-out barrels. This is a cost-effective way to upgrade to a more accessible and low maintenance design.

Gearbox repairs

Inspections can be carried out on site, or alternatively the gearbox can be shipped to Xtrutech.





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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.
- A leading supplier of OEM spare parts.
- Committed to finding solutions for your powder coating applications.

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ISO
14001 : 2015
45001 : 2018

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SYSTEM

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