



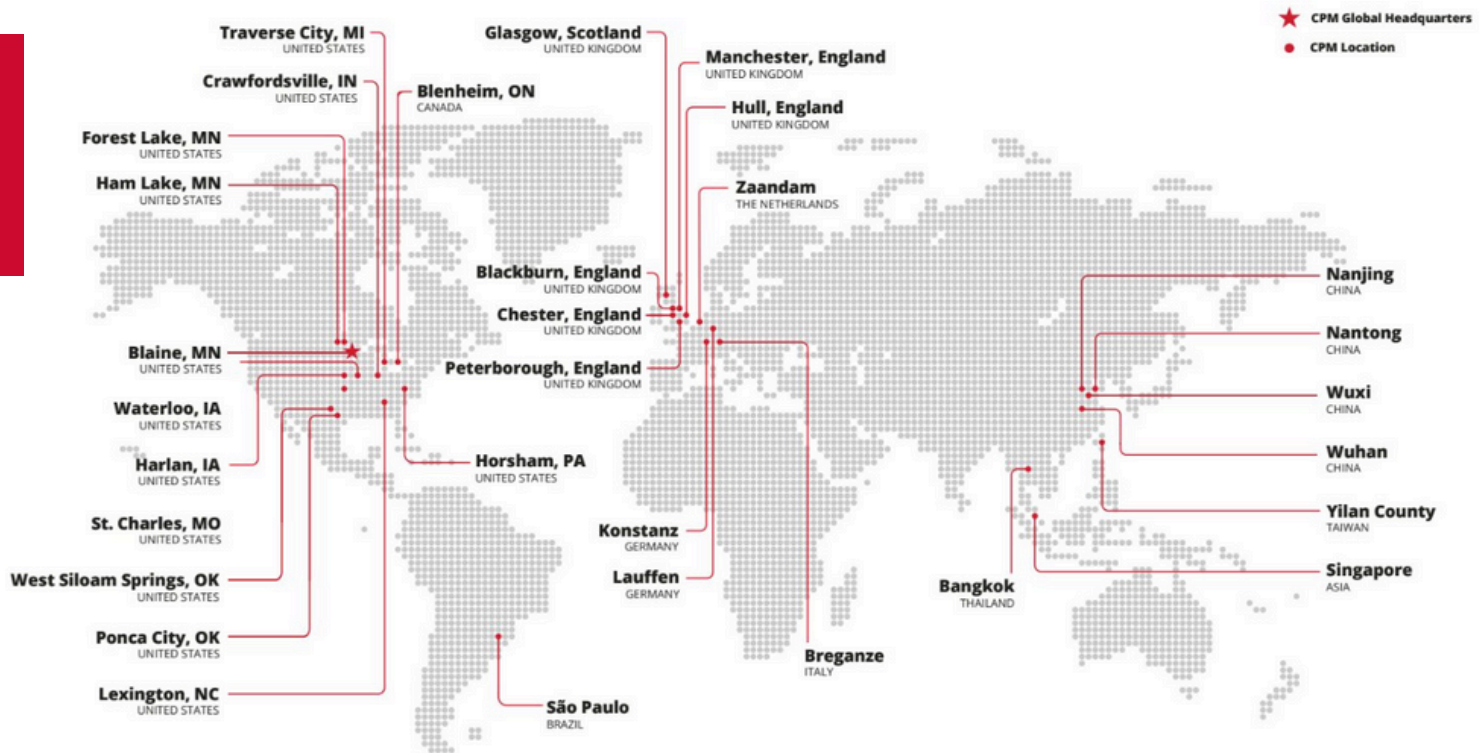
# Extrusion Machines and Services **for Advancing Your Materials**

ONECPM.COM



Extrusion Systems  
And  
Range of Extruders

EXTRUSION.SALES@CPM.NET



## BRINGING SOLUTIONS, NOT JUST PRODUCTS

Driven by a customer-first approach and being solution oriented, CPM is global leading supplier of:

- Extrusion Systems
- Twin Screw Extruders
- *RingExtruder* RE®
- High Performance Elements
- Twin Screw Replacement Parts
- Auxiliary Equipment
- Global Services (training, engineering service, process consultancy, maintenance service and support)

CPM offers a wide range of products to support the global compounding market. For several decades we have been developing a broad range of extrusion machines and components which meet our customer's requirements and demands. Our offering of turn-key extrusion systems is proof that we are capable of supplying our customers at the highest level. As a leading global supplier, we pay close attention to our high-quality standards and our facilities are ISO 9001 certified.

We offer matching wear parts and specific optimizations for all current Twin Screw Extruders and RingExtruders, regardless of the brand. We offer many new possibilities with regards to geometry, material selection and technical design to provide you customized solutions. Our range of Twin Screw Extruders and RingExtruders allows us to meet the needs of every customer.

We use our experience and creativity for continuous improvement of your plant's output, both in terms of quality and throughput. We always focus on a long service life of our machinery and broad range of components resulting in low maintenance and repair costs. In every possible situation we are there for our customer whether it is for engineering support, service, training, parts or a complete extrusion line. We are your partner in your productivity.



Listen



Customize



Solve



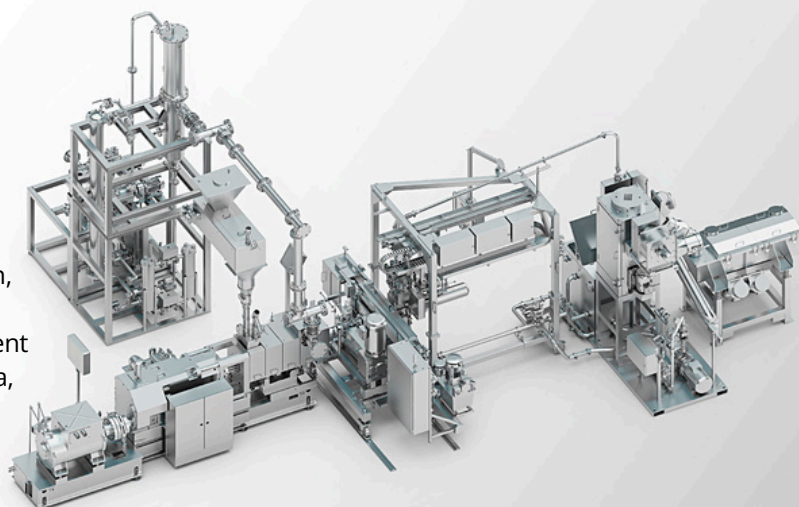
Partner



# EXTRUSION SYSTEMS – HIGHLY ENGINEERED PROCESS SYSTEMS

## ABOUT EXTRUSION SYSTEMS

By leveraging our applications knowledge, manufacturing capabilities, and our premier group of supply partners, CPM has the capability to offer processing systems for numerous applications. With significant design, project engineering, manufacturing and field service resources spread located at our different facilities in Germany, China and North America, CPM is the perfect global system partner for you.



## COMPLETE EXTRUSION SYSTEMS

Complete extrusion systems of CPM have the capability to satisfy customer requirements ranging from basic to very advanced system specification and construction. We work on your request and start a project together with you from the idea until final complete extrusion line in your factory.

## MODULAR EXTRUSION SYSTEMS

Modular extrusion systems by CPM are an alternative for conventional project build with advantages such as an increase in responsiveness in a quickly changing environment.

Modular systems by CPM incorporate key unit machines, ancillary dosing and pelletizing equipment, and controls into a pre-manufactured and pre-tested package.

Modular extrusion systems offer shortened, simplified project installation, minimized field project risk of cost overrun and reduced overall project cost and schedule. This approach is most effective for mid-sized multi-screw extrusion plants through 70 mm range of CPM products.

## THE ADVANTAGES

### Complete Extrusion System:

#### YOUR BENEFITS

Integrated project delivery for ingredient receiving through product packaging

Advanced plant automation to manage and operate one or several extrusion lines

Classified area competency

Concurrent design, sourcing and delivery for improved project schedule

Modular and on-board construction for lean field installation of equipment and infrastructure

Distributed and intelligent control for reduced electrical field labor and materials

### Modular Extrusion System:

#### YOUR BENEFITS

A significant reduction in the total installed project cost (up to 25%)

Single supply relationship

Reduction in performance risk (Ability to mechanically and electrically pre-test system)

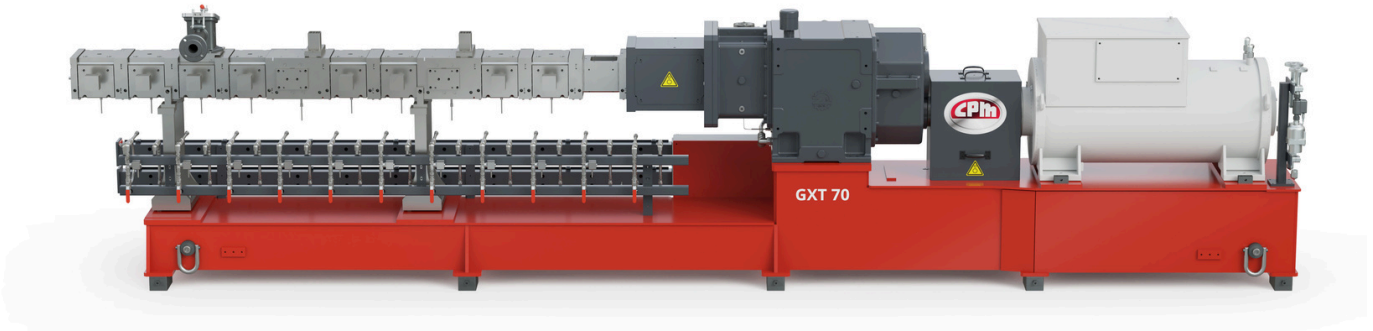
Construction and installation time reduced by 70%

Ability to quickly deploy, re-deploy, or move compounding assets from one location to another



# THE GXT SERIES

THE INDUSTRY BENCHMARK FOR QUALITY & RELIABILITY THROUGH THE LATEST TECHNOLOGY



## GLOBAL EXTRUDER TECHNOLOGY

CPM offers two lines of twin-screw extruders, the GXT and the GXT Plus, providing manufacturers with the right balance of performance, flexibility, and cost efficiency. Whether you need a pre-engineered solution for standard applications or a customized extruder for specialized processing, CPM delivers reliable, high-quality systems backed by global support.

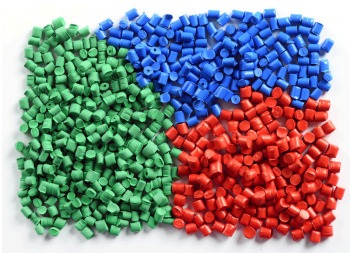
### THE GXT

Combining the know-how and experiences from our locations all over the world, CPM has developed a standardized solution that can be applied worldwide. Introducing the Global eXtruder Technology (GXT). An Extruder that can be manufactured anywhere you are with the same specifications, same design, same support and same goal to advance your materials.

Available in 40 L/D or 48 L/D, it offers reliable performance, easy integration, and minimal process adjustments, making it ideal for both small manufacturers and large-scale operations managing multiple extruders.

#### ADVANTAGES

- Standardized worldwide solution to fit nearly all compounding applications
- Design incorporates the industry standard 1.55 Do/Di ratio
- Plug and Play design
- Main bearing lifetime up to 50,000 hours
- Local support from global CPM locations
- Improved delivery times
- Lower your operational costs
- Standard twin screw modular design



### THE GXT PLUS

For customers requiring enhanced customization, the GXT Plus provides application-specific modifications such as specialized metallurgy for high-wear environments, additional process controls, and extended venting or side-feeding options.

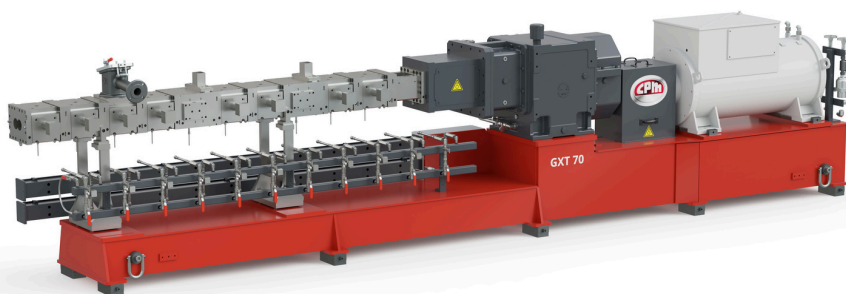
It delivers the same reliability as the GXT but with greater adaptability for complex compounding needs.

#### GXT SERIES FEATURES: HO AND sHO

- **HO (High Output):** Engineered for 24/7 production, the HO series delivers 18 Nm/cm<sup>3</sup> torque density and screw speeds up to 1200 RPM. It features our proprietary cold-formed premium screw shafts and a wide range of wear and corrosion-resistant options for screws and barrels.
- **sHO (smart High Output):** Builds on the HO platform with enhanced smart features for peak performance. This includes independent shaft torque monitoring for real-time protection against imbalanced loads, as well as inline oil quality monitoring, vibration and temperature sensors for gearbox and motor bearings, and comprehensive energy monitoring to track power and cooling efficiency.

Together, these features ensure high reliability, process visibility, and operational efficiency for demanding compounding applications.

# TECHNICAL DATA



## APPLICATION - INDUSTRIES:

- Engineered plastics
- Adhesives
- Direct extrusion
- Masterbatch
- Reactive extrusion
- PVC, XLPE and cable compounds - TPU, PC, ABS
- Lithium-ion batteries
- Recycling

## > GXT

Model Size	Diameter (mm)	Center Distance (cm)	L/D Process Length	Max Screw Speed (RPM)	Specific Torque (N-m/cm <sup>3</sup> )
GXT-26	25	2.11	40/48	1200	approx. 13
GXT-32	32	2.62	40/48	1200	approx. 13
GXT-40	40	3.34	40/48	600-1200	approx. 13
GXT-45	45	3.75	40/48	600-1200	approx. 13
GXT-58	58	4.8	40/48	600-1200	approx. 13
GXT-70	70	5.85	40/48	600-900	approx. 13
GXT-92	92	7.6	40/48	600-900	approx. 13
GXT-103	103	8.4	40/48	600-600	approx. 13
GXT-119	118	9.7	40/48	300-400	approx. 13
GXT-133	133	11	40/48	300-400	approx. 13



# TECHNICAL DATA

## APPLICATION - INDUSTRIES:

- Engineered plastics
- Adhesives
- Direct extrusion
- Powder coatings and toners
- Masterbatch
- Reactive extrusion
- PVC, XLPE and cable compounds - TPU, PC, ABS
- Lithium-ion batteries
- Recycling

## > GXT PLUS

Model Size	Diameter (mm)	Center Distance (cm)	L/D Process Length	Max Screw Speed (RPM)	Specific Torque (N-m/cm <sup>3</sup> )
GXT-26 PLUS	25	2.11	36/60	1200	18> 13
GXT-32 PLUS	32	2.62	36/60	1200	18> 13
GXT-40 PLUS	40	3.34	36/60	600-1200	18> 13
GXT-45 PLUS	45	3.75	36/60	600-1200	18> 13
GXT-58 PLUS	58	4.8	36/60	600-1200	18> 13
GXT-70 PLUS	70	5.85	36/60	600-1200	18> 13
GXT-92 PLUS	92	7.6	36/60	600-900	18> 13
GXT-103 PLUS	103	8.4	36/60	600-900	18> 13
GXT-119 PLUS	118	9.7	36/60	300-600	18> 13
GXT-133 PLUS	133	11	36/60	300-600	18> 13





# THE RINGEXTRUDER RE®

**RINGEXTRUDER RE® FOR CHALLENGING PROCESSES LIKE NEW GENERATION OF BIODEGRADABLE ENGINEERED PLASTICS, CONTINUOUS COMPOUNDING OF RUBBER, POST-CONSUMER PET-RECYCLING, ADHESIVES AND REACTIVE EXTRUSION OR OTHER APPLICATIONS**

## ABOUT MULTI-SCREW EXTRUDERS

It is common knowledge that the advantages of multi screw extruders lie in the intermeshing section – the apex. The apex is the base for the advantageous features of multi-screw extruders:

- Dispersive mixing via elongational flow
- Distributive mixing via stream divisions
- Surface renewal for degassing
- Extraordinary cooling features

Hence, it is quite obvious that increasing the amount of screws in the extruder is an excellent way to boost the capability of the extruder. The RingExtruder RE® with 12 screw shafts is a co-rotating multi-screw extruder which was developed for challenging mixing and degassing applications.

## BASIC DESIGN & TECHNOLOGICAL FEATURES

12 screw shafts arranged symmetrically in a ring rotate in the same direction each on its own axis. The outer barrel and the stationary core enclose the screws with a narrow gap. Transportation of material takes place in a double helix: around the stationary core and around each screw.

The apex is used extensively in the RingExtruder RE® as the central point of the process technology. Material is passed to the adjacent screw with a change in flow direction, resulting in a 3D elongation flow without partial overloading and leads to an excellent dispersion, wetting and homogenization.

In addition, the RE provides a high surface-to-volume ratio which is unmatched by any other multi-screw extruder. The combination of the more frequent passage of the intermeshing section and the high surface-to-volume ratio is enhancing the degassing capability of the machine.

Finally, the arrangement of the screw shafts in a ring largely compensates the spreading forces known in multi-screw extruders and therefore reduces barrel and screw wear.



## THE ADVANTAGES

The optimized design creates competitive advantages in the production of shear-sensitive compounds, challenging mixing and degassing applications.

### YOUR BENEFITS

Superior dispersive and distributive mixing

Excellent degassing

Extraordinary temperature and residence time control

High energy efficiency and lower operating costs

## MACHINE DESIGN AND ENGINEERING

### FEATURES

Consists of electrical drive, safety coupling, reduction and distribution gearbox and processing unit

Single torque measurement for secure processes and quality control

Barrels, screws and core divided into individual segments with modular configuration

Barrels heated electrically and cooled with water, additional core cooling

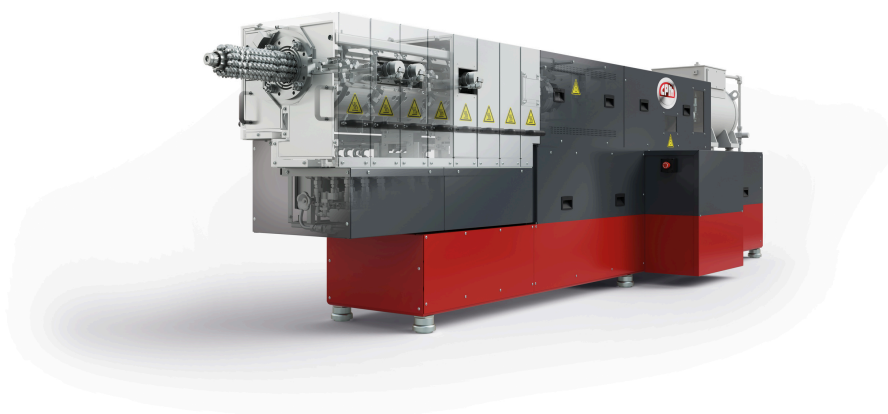
Solids or liquids can be added downstream on combi barrels

Special barrels for multiple sidefeeding or optimized degassing processes

Control concept allows to control and monitor the entire extrusion process

We supply single Extruder or complete turnkey systems

# TECHNICAL DATA



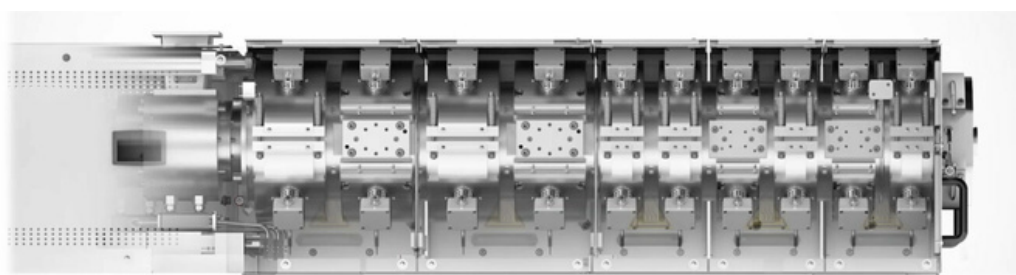
## APPLICATION - INDUSTRIES:

- New generation plastics
- Rubber (compounding, devulcanization, mixing, degassing, salinization)
- rPET Recycling
- Adhesives
- Reactive Extrusion
- High Filling rates
- Food
- Pharmaceutical compounding

## > RINGEXTRUDER RE

RingExtruder		RE1	RE3	RE5	RE7	RE9
<b>XPV-series</b>						
app. Diameter	mm	19	31	52	74	95
channel depth	mm	4	6.7	11.1	15.7	20.1
free crosssectional area	cm <sup>3</sup>	11.7	32.9	90.4	180	297.1
<b>drive specifications</b>						
max screw speed	min-1	1500	1200	1200	900	600
max torque per shaft	Nm	32	150	675	1906	4019
max motor power	kW	69	226	1018	2156	3030
<b>Dimensions at 32 L/D</b>						
app. Machine length	mm	2600	3880	5850	8200	*1
app. Machine width	mm	800	1200	1300	1450	*1
app. Machine height	mm	1450	1450	1650	2100	*1

\*Other dimensions upon request.





# OUR AUXILIARY DEVICES

CPM has developed a wide range of auxiliary devices for multi-screw extruders which are well known in the market.

Our flexible design is based on standard components and our large portfolio of sizes allow for ease of integration into various extrusion systems.

## ADVANTAGES OF OUR SIDEFEEPER AND DEGASSING UNITS

### YOUR BENEFITS

Universal equipment, fast and easy adaption to any machine

Wear protection

Fast change-over time, thanks to quick removable system

Sidfeeder system available with screw diameter from 25mm to 120mm

## DEGASSING UNIT

Degassing units are manufactured to optimize the degassing or venting of an extrusion process.

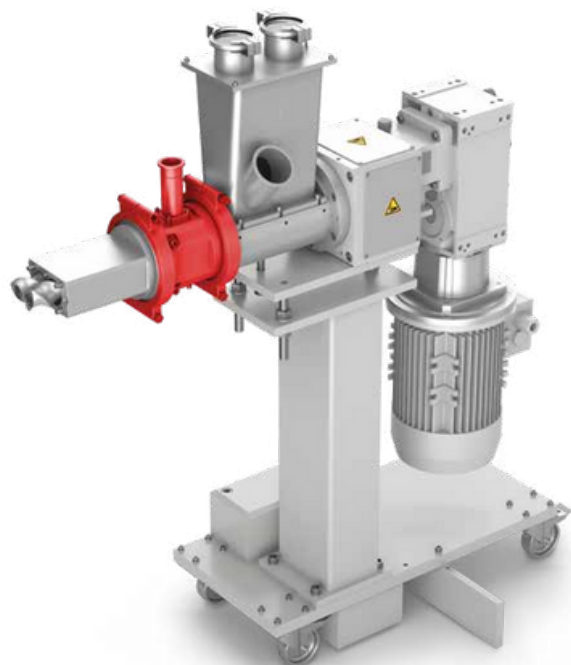
Our degassing units achieve excellent results, even under the most difficult processing conditions. The degassing units can be specified according to individual degassing volume requirements, and provided with adapters for connections.

The CPM degassing unit can be either mounted on top of an open barrel or on the side of a combi-barrel.

## TECHNICAL ASPECTS

The axially open screw profile of the degassing unit allows effective and fail-safe separation of product and volatile components.

Any discharged products are conveyed back into the processing chamber and gaseous components are carried off by the vacuum applied to the degassing unit.



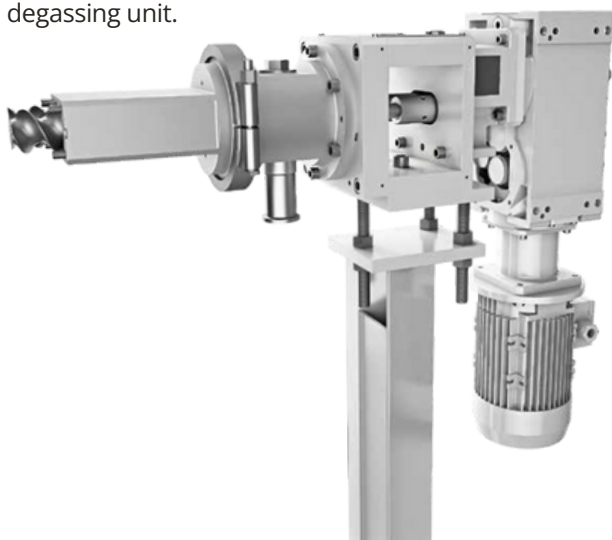
## HIGH OUTPUT SIDEFEEPER

Many extrusion processes add fillers, reinforced agents, pigments, flame retardant and other materials to the existing melt stream at a downstream location from the main feed throat. A flexible, wear-resistant and reliable sidfeeder using intermeshing, co-rotating screws is the preferred solution to provide positive material conveyance into the extruder.

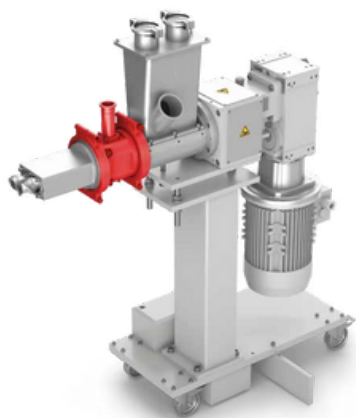
Our High Output Sidfeeder is a customer-specific solution that increases your productivity and product quality. The High Output Sidfeeder easily adapts to all OEM brands and types in many ways. With the new High Output technology, powder can be added to the extruder while simultaneously deaerating.

## TECHNICAL ASPECTS

Typically, the sidfeeder is fed by a gravimetric feeding system. The tightly intermeshing screws of the sidfeeder receive the product and transport the material into the main extruder.



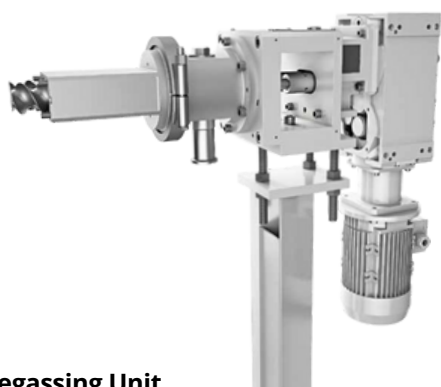
# TECHNICAL DATA



High Output Sidefeeder

## APPLICATION - INDUSTRIES:

- Highly efficient feeding by degassing & compacting
- Downstream feeding of fillers & reinforcing agents or pigments
- Adding of glass or other fibers
- Gentle processing of additives like flame retardants
- Reducing wear costs in the melting section of the main extruder
- Improving productivity and product quality



Degassing Unit

## APPLICATION - INDUSTRIES:

- Back-vent device for combi-barrels
- Devolatilization of monomers
- Removing moisture from hygroscopic products
- Dewatering of rubber
- Dewatering of pigment
- Removal of by-products of reactive extrusion

## > SIDEFEEDER / DEGASSING UNIT

Sidefeeder / Degassing Unit Specifications		25	30	40	55	58	70	80	92	120	133	160
Nominal Diameter		25	30	40	55	58	70	80	92	120	133	160
free cross sectional area	mm	3.4	5.3	9.3	17.5	21.2	31.9	41.6	51.9	96.2	123	173.8
Max Backpressure rating	mm	30	30	30	30	30	30	30	30	30	30	30
Sidefeeder Specifications	cm3	SF025	SF030	SF040	SF055	SG058	SF070	SF080	SF092	SF120	SF133	SF160
Sidefeeder Max Screw Speed		500	500	500	500	500	500	500	500	400	400	400
Power @50Hz	min-1	3	3	4	7.5	7.5	11	11	15	15	22	30
Max volumetric conveying capacity	Nm	80	150	350	920	1.115	2.155	3.12	4.285	8.66	12.55	20.86
Degassing Unit Specifications	kW	DG025	DG030	DG040	DG055	DG058	DG070	DG080	DG092	DG120	DG133	DG160
Degassing Unit Max Screw Speed		250	250	250	250	250	250	250	250	200	200	200
Power @50Hz	mm	1.5	1.5	2.2	4	4	5.5	5.5	7.5	7.5	11	15

## OVERVIEW OF SERVICES

The most expensive item for a company is downtime. CPM has a solution. The aftermarket service team provides customers with a comprehensive assessment of their extruders. Our audit includes full visual inspection, barrel mapping, bore measurements using capacitive sensor technology along with high-resolution imaging and video of the internal barrel bores. The summary report presents measurement data and wear analysis along with our recommendations. Images captured with our borescope are also included as part of the report.



# EXCEPTIONAL SERVICE OFFERINGS

## SERVICE AND MAINTENANCE FOR TWIN- SCREW EXTRUDERS AND EXTRUSION SYSTEMS

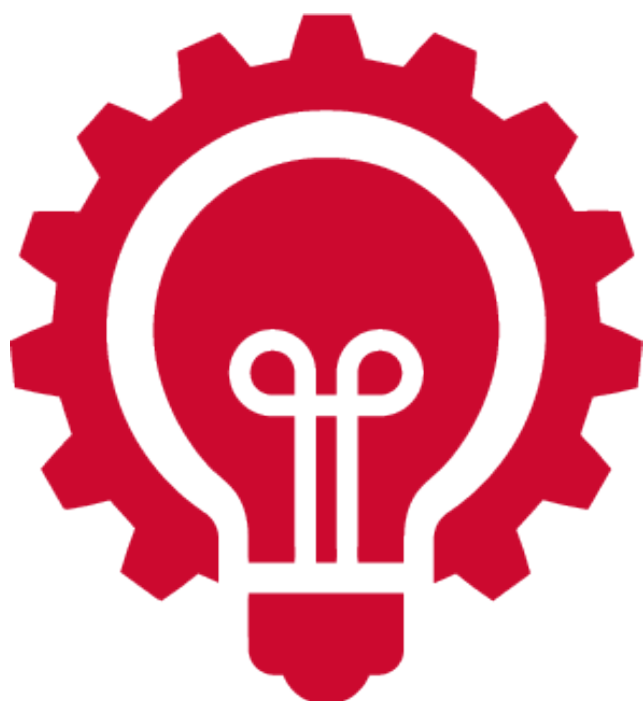
The CPM is the leading supplier of extrusion machines, systems, spare parts and after sales services with locations in the US, Europe and Asia.

Our global service team is your source for all questions regarding machine installation and startup, system operations and maintenance, operator training, as well as process optimization. This service is not only for our own machinery but with a specific focus on other OEMs as well.

Our comprehensive scope of services is the best choice for keeping your machine in optimal condition. We accompany you throughout the entire life cycle of your extruder, starting with commissioning, ordering of spare parts, as well as the modernization of outdated systems.

### SERVICE CONTACT

[extrusion.service@cpm.net](mailto:extrusion.service@cpm.net)



## TRAINING & WEBINARS

CPM is the leader for twin-screw extrusion training offerings. We offer free monthly webinars, process consulting, workshops, and onsite trainings.

Would you like to scale-up, improve your process, or optimize your screw design? Are you in need for a twin-screw training for your new hires? We have multiple types of training on hand for you.

Our Online Knowledge Center is an online library containing more than fifty (50) one-hour training webinars. Take one of our monthly trainings free and online.

Would you prefer a personalized training on a certain topic? Just ask us.

[extrusion.sales@cpm.net](mailto:extrusion.sales@cpm.net)

# SYSTEM COMMISSIONING & REMOTE SERVICES

## PROFESSIONAL SUPPORT

Modern high-performance extruders require trained and confident operators to achieve the most efficient and high-quality results.

Our experience with customized machines and extrusion systems for complex extrusion processes is the perfect foundation for our successful project management and execution. Starting with sketches of ideas to the commissioning of your system, our support team will remain by your side for the entire process.

Twin-screw extruders from the CPM are commissioned on site at our customers' plants. Our service technicians will accompany customers during the first production runs to ensure a smooth and safe start of the new system.

Kick off meetings held

Checklist for the preparation of the start-up

Inspection of the installation

Setting of optimized system processes

Test run

Commissioning protocol

Intensive training of the system supervisors

## PROFESSIONAL CONSULTING

We have over 40 years of know-how and experience in building innovative turnkey extrusion systems, developing customized procedures and complex extrusion process solutions, all the while remaining focused on specific customer requirement. Our team of technicians and engineers are ready to assist with your questions.

Our team of engineers assists with even the most complicated procedures and processes

Diagnosis and consulting

Optimization of extrusion systems from screw to complete process

## REMOTE MAINTENANCE, PROCESS OPTIMIZATION, AND COMMISSIONING

Remote access to machine controls is an indispensable advantage CPM offers.

We offer a hardware-based solution which provides our customers with improved operational reliability, error analysis, correction of configuration deficiencies or technical faults, and the implementation of software updates and functional extensions.

Data security is of utmost importance for us. Therefore, we utilize an encrypted VPN tunnel with additional protection through a separate fire wall. With our customers approval of remote access, a service call can be completed in a quick and cost-effective manner.

Remote inspections and process optimization

Remote commissioning

Smart Glasses



## SMART REMOTE SERVICES

Through using smart glasses our customers can communicate with our service team both easily and bidirectionally via a secure VPN. The glasses contain a camera and a microphone for video and audio recordings as well as a display, allowing you to follow all instructions directly at the worksite. A lot of our services can be done remotely. Commissioning, remote maintenance, problem investigation, ... you name it. Ask about our experience.

## MAINTENANCE AND INSPECTIONS

Wear and corrosion are a natural phenomenon of machine parts which are in daily use. Regular inspections of your equipment can ensure operational efficiency. CPM offers various audit packages as well as additional inspection and maintenance services that ensure long lasting machine life and a reduction in downtime.

Through regular inspections, our customers not only benefit from an efficiently running system, they also gain valuable insights and confidence often leading to system optimizations which result in significant cost savings. Consider playing it safe by entering into a service agreement with CPM. Reach out to us if you want further information on our customized service agreements.

### ASK FOR YOUR PERSONALIZED

Regular inspections

Various audit models

Service agreements

### WEAR INSPECTIONS AND MAINTENANCE SERVICES

You can make sure you are prepared for maintenance by initiating service audits at your site. We recommend that a first full maintenance

inspection is carried out 6-12 months after commissioning and once annually thereafter. Of course, this is based on our experience and can be implemented differently depending on your needs.

Barrel and screw wear inspections can help you identify parts which require replacing as well as data for analyses and predictive maintenance. High resolution videos and photos help identify any bore damage not discovered through measurement (i.e. metal to metal adhesive wear).



### SCREW DISMANTLING

Interested in having somebody else dismantle your screws and shafts? The CPM disassembles the elements, cleans, inspects and reassembles them. Our trained service technicians perform these operations using safe and efficient techniques around your schedule. We ensure fast turnaround to minimize disruption of your production schedule.

## MODERNIZATION AND REPAIR SERVICES

### RETROFITS AND UPGRADES

It is not uncommon for production requirements of an extrusion system to change or for components of older machines to become obsolete. CPM is the ideal partner for your modernization project:

- Replacement of obsolete gearboxes
- Upgrading of your process section
- Replacement or addition of side feeder and degassing units
- Replacement of DC motor
- Updating/Expanding your control systems

### REPAIR SERVICES

Experiencing worsening product quality, unstable processes, or decreasing throughput rates are usually results of wear on the screw elements or barrels. CPM is the expert to further investigate these issues. Consider sending us your used or damaged parts and we will refurbish and return them to you like new. Through this service, you will minimize your downtime and achieve considerable cost savings.

Screw element dismantling services

Repair services for barrels