

Complete lines for PVC pelletizing

Application: Pellets

Sustainable
Solutions
Worldwide.

battenfeld-cincinnati 

Process engineering for efficient plastics extrusion of tomorrow – From the raw material to the finished product

Based on our modular line concept, we are able to implement cost-optimized and customer-specific solutions. This goes beyond the product specification to the processing of the materials, the infrastructure specified in the general conditions up to the appearance of the plant and the control interface. Our company takes all of these conditions into account when designing your extrusion line. We combine our own products with components from long term partners in order to supply our customers the ideal solution from a single source.

battenfeld-cincinnati extrusion lines – One-stop solutions

- | | | | |
|--|---|---|--|
| 1 | 2 | 3 | 4 |
| <ul style="list-style-type: none">• Customer expectation• Plant specification• Specifications• Resource check | <ul style="list-style-type: none">• Technical clarification• Specification sheet• Production of machines• Selection of suppliers• Supplier coordination | <ul style="list-style-type: none">• Manufacturing• In-house testing• Pre-commissioning• FAT on request | <ul style="list-style-type: none">• Line commissioning• Line handover• Process consulting• Staff training• After Sales Service |

Conservation of resources while maintaining profitability – Sustainability all along the line

Our solutions offer a resource-saving and economical production of your products and our worldwide service network ensures the constant process availability. We focus on highest product quality with high output rates, functionality, machine availability as well as energy saving.

Complete lines for PVC pelletizing extrusion – Pelletizing extruders for customized solutions

We offer you twin screw extruders in conventional design or with EMS function for PVC pelletizing. For higher output and special compounds we have planetary roller extruders in two-stage design in our portfolio. In combination with our pelletizing heads, they form in a perfectly matched system for PVC pelletizing and compounding.

Advantages

- Customized twin screw extruders in sizes of 90, 107 and 130 mm
- Outputs from 320 -1,900 kg/h
- High flexibility for PVC formulas
- Excellent designed downstream components (cutting device, granulate cooler, peripheral equipment)

Our offer

- EMS machine series
- Specially adapted and conventional twin screw extruders
- Machines for regranulation under special conditions

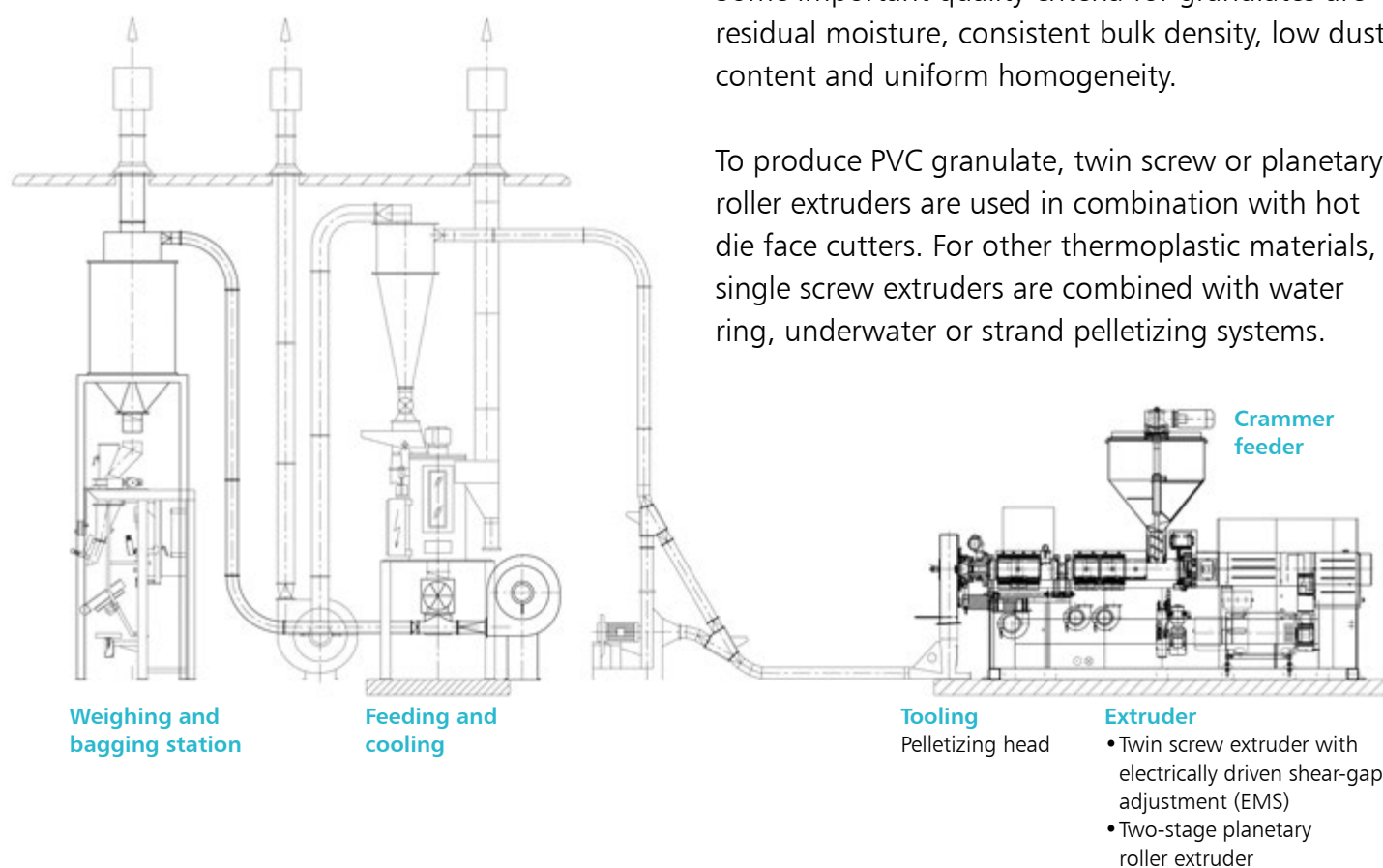


Extruders
BC2-107-22V

Complete lines for PVC pelletizing extrusion – Pelletizing of PVC

battenfeld-cincinnati offers a wide range of technologically mature systems such as twin screw and planetary roller extruders for pelletizing PVC materials.

Schematic overview of a standard pelletizing line



Granulates are based on a variety of raw materials components (virgin, fillers, additives) and are used in blow molding, injection molding and extrusion. Some important quality criteria for granulates are residual moisture, consistent bulk density, low dust content and uniform homogeneity.

To produce PVC granulate, twin screw or planetary roller extruders are used in combination with hot die face cutters. For other thermoplastic materials, single screw extruders are combined with water ring, underwater or strand pelletizing systems.

Pelletizing extruder BC2 with EMS				Output	90-22V	107-22V	130-22V
Rigid PVC	Injection molding applications			kg/h	550 - 600	750 - 850	1,100 - 1,200
	Profiles applications			kg/h	450 - 500	650 - 750	950 - 1,100
	High impact applications			kg/h	350 - 400	550 - 650	850 - 1,000
	PVC transparent applications			kg/h	320 - 380	450 - 550	700 - 800
	PVC formulation (parts)	Plasticizer (parts)	Filler (parts)				
Plasticized PVC	100	25 - 40 Sn stabilized	0	kg/h	450 - 500	800 - 950	1,100 - 1,500
	100	25 - 65	0 - 20	kg/h	480 - 550	900 - 1,050	1,300 - 1,600
	100	25 - 65	20 - 40	kg/h	500 - 600	1,100 - 1,200	1,500 - 1,600
	100	25 - 65	40 - 120	kg/h	600 - 700	1,100 - 1,250	1,700 - 1,900

Outputs are based on the battenfeld-cincinnati material reference list and may vary depending on the material processed as well as up- and downstream equipment.

Technical data for two-stage planetary roller extruders can be found in our planetary roller extruder brochure. Information about pelletizing with counter-rotating twin screw extruders is available on enquiry.

Complete lines for PVC pelletizing extrusion – For energy efficient pelletizing

The lines are well suited for the pelletizing of PVC with output rates up to 1,900 kg/h. The extruders and pelletizing heads are precisely matched to each other and offer exceptionally energy efficient solutions. The unique EMS technology provides a flexibility which is outstanding in the industry.

1 Pelletizing head

- Decentral hot-cut die
- For special applications, a central hot face die is also available

Advantages:

- Precisely adjustable cutting pressure
- Short contact times
- Safety system to prevent operating errors
- Low wear

2 Line control BCtouch UX

- User-friendly interface
- Control and synchronization of all machine components
- Saving of recipes

Advantages:

- Control of complete line from the central terminal

3 Processing unit (for PVC)

- Counter-rotating twin screw extruder
- EMS technology (EMS = electrically driven shear-gap adjustment)

Advantages:

- High specific output
- Excellent dispersion
- High flexibility
- Smooth, undisturbed melt discharge

4 Drive

- Compact AC motor

Advantages:

- Maintenance-free
- Robust
- Energy-efficient

5 Crammer feeder

- Large volume crammer feeder for higher performance and material storage capacity
- Especially suited for blends with bad flow characteristics and plasticized PVC

Advantages:

- Appliance with large cleaning valves
- Stainless steel housing with filling level indicators

6 Mechanism of EMS function

- Electromotive movement of the barrel against the screw
- Adjustment of the melt pressure in the shear gap area to adapt to the formulation

Advantages:

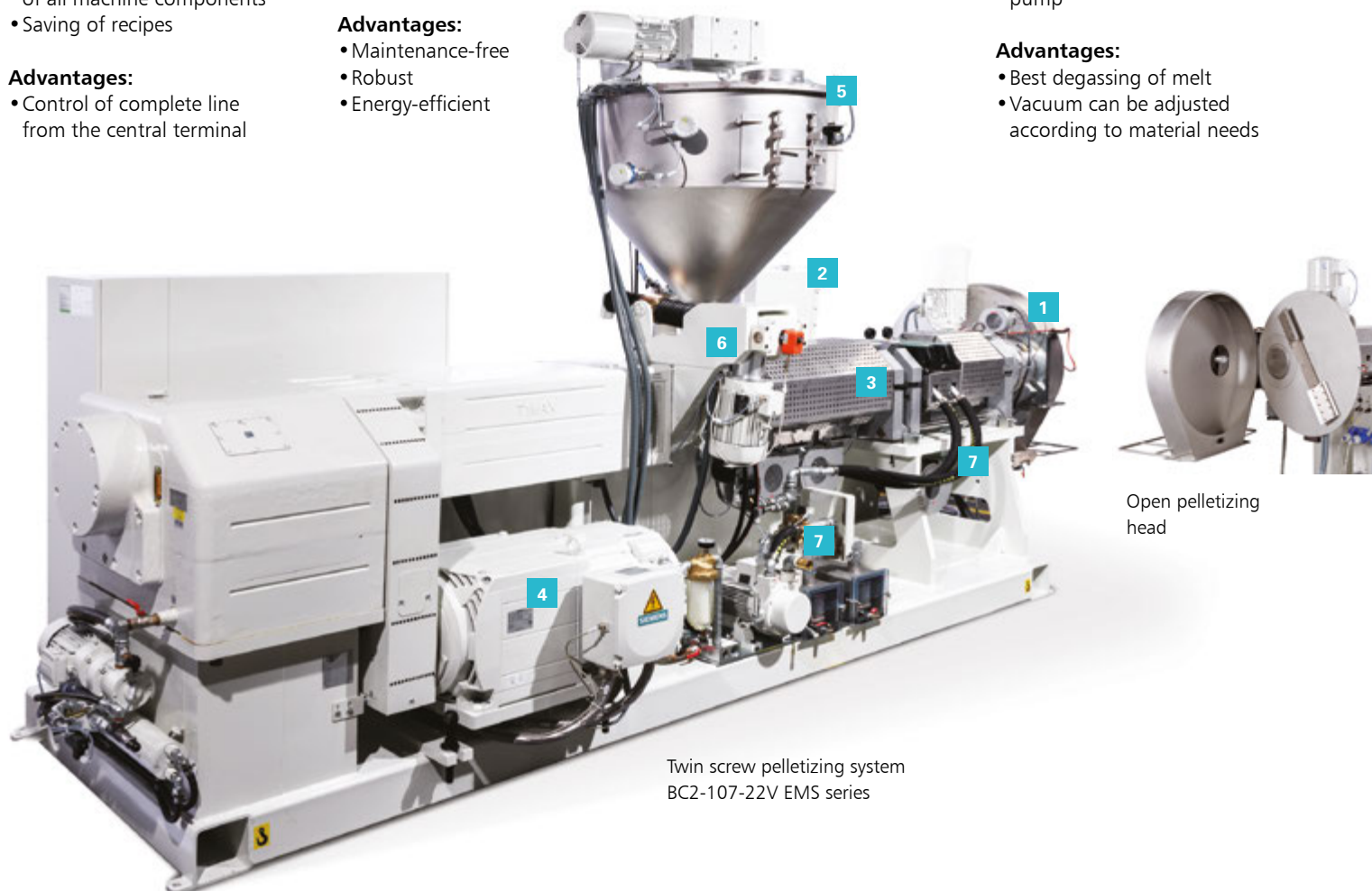
- Exact positioning and reproduction thanks to electric sensors

7 Degassing/double venting

- Double venting at barrel for EMS 107 and EMS 130
- Redundant solids separator system and powerful vacuum pump

Advantages:

- Best degassing of melt
- Vacuum can be adjusted according to material needs



Twin screw pelletizing system
BC2-107-22V EMS series

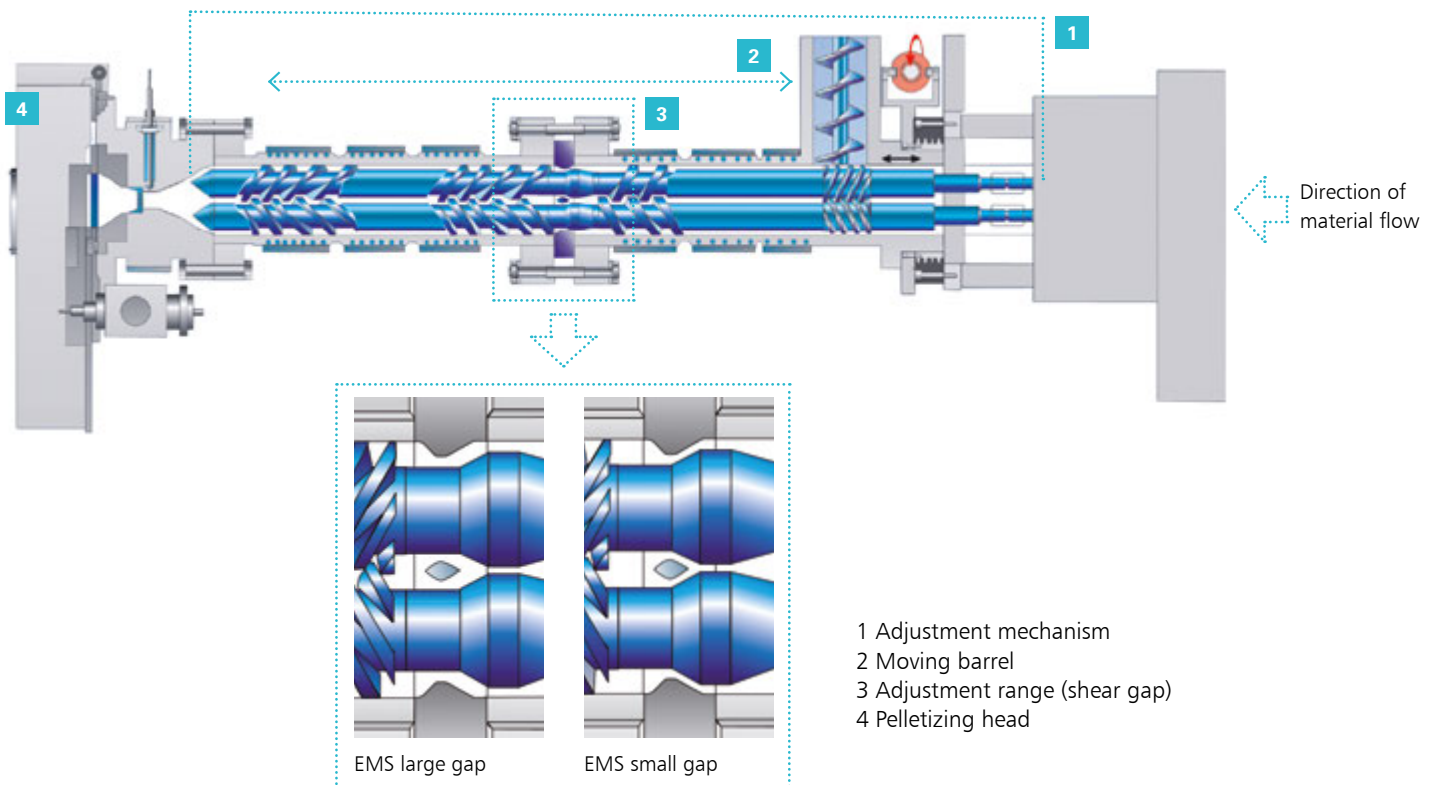
Complete lines for PVC pelletizing extrusion – PVC pelletizing with EMS technology

EMS technology

The preferred system for PVC pelletizing consists of a counter-rotating twin screw extruder with electrically driven shear-gap adjustment (EMS). Through longitudinal movement of the barrel by an electric motor, the shear gap can be steplessly adjusted.

In combination with exact tempering of the barrel it is possible to ensure a wide processing window with optimally reproducible manufacturing conditions. In order to optimize the compound, this stepless adjustment of the shear gap can be made at any time during production.

Schematic diagram of the processing unit
of a pelletizing extruder with EMS technology



battenfeld-cincinnati Services – **Worldwide active for you**

We have an extensive service network at our disposal to support our customers professionally and promptly with technical know-how and spare parts. Our locally available service technicians are regularly trained on the current state of the art and informed about new developments.

Wear Analysis

- Regular wear measurement
- Wear protection consulting

Spare Parts

- Tailor-made spare parts packages
- Innovative screw design

Extruserve

- Completely overhauled extruders
- Screws repair for many external extruders
- Screws & barrels for other brands

Repairs & Upgrades

- Control retrofits
- New drives for extruders & successions
- Repairs of screws, gears, controls & drives

Technical Service

- Commissioning, maintenance, inspection
- Repair-in-the-field-Hotline
- Remote diagnosis system

Support & Training

- Consulting & training
- Inspection & service contracts
- Energy-saving advice
- Forecasting required key parts
- Material analyses & pilot plant



battenfeld-cincinnati Group

BC Extrusion Holding GmbH

Grüner Weg 9
32547 Bad Oeynhausen, Germany

battenfeld-cincinnati Germany GmbH

Grüner Weg 9
32547 Bad Oeynhausen, Germany
P +49 (5731) 242-0
F +49 (5731) 27124
germany@battenfeld-cincinnati.com
www.battenfeld-cincinnati.com

battenfeld-cincinnati USA

823 S. By-Pass, P.O. Box 832
McPherson, KS 67460, United States
P +1 (620) 241-6843
F +1 (620) 241-0207
usa@battenfeld-cincinnati.com
www.battenfeld-cincinnati.com/usa

battenfeld-cincinnati Austria GmbH

Laxenburger Str. 246
1230 Vienna, Austria
P +43 (1) 61006-0
F +43 (1) 61006-8
austria@battenfeld-cincinnati.com
www.battenfeld-cincinnati.com

battenfeld-cincinnati (Foshan) Extrusion Systems Ltd.

2 Jinxiang Road, Daliang, Shunde
Foshan, Guangdong, China
P +86 (757) 2238 0110
F +86 (757) 2221 1801 / 2238 0195
china@battenfeld-cincinnati.com
www.battenfeld-cincinnati.com/china