

Your Extrusion Allies

 **bausano**

PIPES EXTRUSION

Single-Screw Extruder Series

E-GO's strong plus is the geometry of its screw, which features customised design and differentiated pitch, and thus allows optimising the torque by increasing the machine output and making low-temperature processing possible also for materials like polyolefins. Recent developments in screw design have seen the creation of barrier screws with enhanced melting capability through shearing and mixing the material.

- Long effective life of grooved bush and processing unit
- Constant output across the entire speed range
- Lower melt temperature
- Reduction of energy consumption thanks to Induction heating system applied to the barrel
- Digital Extruder Control 4.0 for controlling and analyzing of the production line parameters, including specially energy consumption
- Reduced water cooling of the grooved feed bush and new drive concept

TECHNICAL DATA

Models		E-GO 45 LS	E-GO 45 HS	E-GO 45	E-GO 45	E-GO 60	E-GO 60	E-GO 75	E-GO 75	E-GO 90	E-GO 90
Screw diameters	mm	45	45	45	45	60	60	75	75	90	90
L/D ratio	L/D	30	30	37	40	37	40	37	40	37	40
Production = war. Output PE 100	kg/h	100	200	350	520	600	830	850	1250	1200	1900
Production= war. Output PP-HM	kg/h	80	170	300	370	500	600	700	875	1000	1200
Motor Power	kW	22	44	81	100	145	190	214	300	315	450
Required motor torque	Nm	105	211	386	550	692	920	1023	1400	1504	2300
Cooling areas	no.	4	4	5	5	5	5	5	5	5	5
Heating areas	no.	4	4	5	5	5	5	5	5	5	5
Total installed power	kW	36	55	93	140	165	230	239	340	368	500

Data may vary according to design specifications.

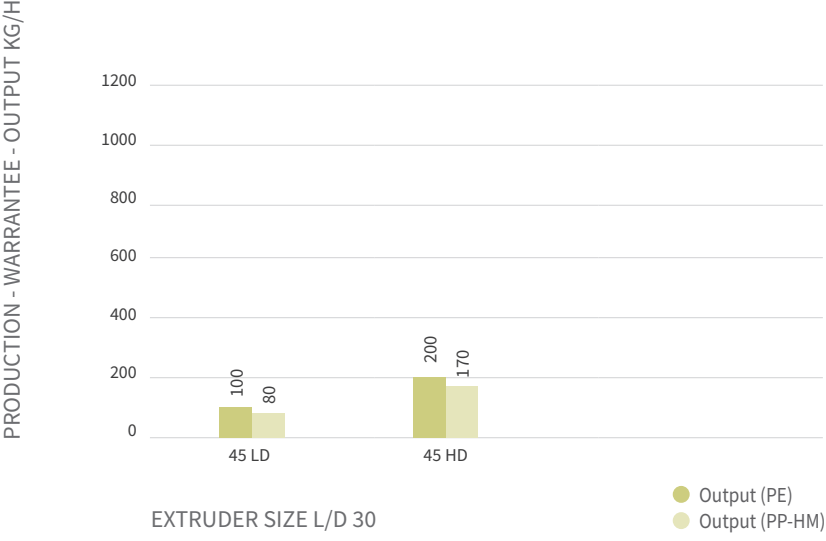


Achieving maximum productivity

GENERAL PURPOSE EXTRUDERS 45, IN L/D 30:

for low output as Co-extruder PE & PP, technical polymers with temperate feed bush for PET, PA, PC, ABS, PS and other polymers.

Single screw extruder production line L/D 30





Die Head features for PO Pipe

The standard head essentially consists of the feed plate, the spiral distributor and external casing. The head size depends on the number of spirals. All heads have the same spiral channel (only the number of channels differs), therefore they have the same distribution behavior during melting. The heads with diameters larger than 90 mm have a through hole for internal pipe cooling. The larger heads, hence requiring a very high flow rate, have internal air cooling directly on the pipe head. The head concept operates –even at high throughput at low backpressure therefore main screws are designed for max. 300 bar which leads to less and smaller screws. The melt feed has very large cross sections to be able to operate at low pressure buildup. The flow channel, after the spiral distributor, is larger in the cross section and has minimal length, in order to avoid unnecessary heat, load a thermal degradation to the material.

OPTIONAL PIPE HEAD FEATURES:

- Co-extrusion unit for thin external layers
- Colour strip ring on the nozzle
- Special adapter for the use of existing die sets
- Internal pipe cooling by air
- Internal head cooling by air, for the larger ones (from 90mm and above)

Special application for product-specific requirements

Polyolefin Pipe head have special features depending on the production required and material being processed

Co-Extrusion Unit

For application of thin layers, a co-extrusion unit is installed between the basic head and the centring unit. The melt connection can be at the top left or right and may even be made with 2 co-extrusion units. These units are designed based on the radial distributor and have the advantage of good extrusion melt distribution and low operating pressure.

Centring Unit

This is the part where the main extrusion set is fitted and where the melt hole is centred, by adjusting appropriate screws.

Internal Pipe Cooling

Called IPC, it is standard on all pipe heads, except for the smaller ones. Internal pipe cooling decreases the cooling section by up to 40%, guaranteeing lower and definite costs in terms of investments in coolant tanks.





PO Pipe Vacuum Tanks

Through vacuum tanks the initial shape of the PO pipe is formed. In this phase, initial cooling is done, and polyolefin pipe will reach a steady shape. The calibration sleeves are of short length.

SHORT LENGTH OF CALIBRATION SLEEVE FEATURES:

- Lower friction and less pulling force
- better handling because of lower weight
- best influence of diameter via vacuum and cooling
- water temperature

THE NUMBER OF CALIBRATIONS SLEEVES ARE REDUCED FOR THE COMPLETE SDR RANGE MAX:

- Dry execution for bigger sizes ensures best surface quality
- Wide diameter range available from 5 to 1600 mm
- Line speed depending on tank version

At Bausano we can adapt our vacuum tanks to individual applications, which means that we have the perfect solution for almost all sizes, requirements, and type of polyolefin.

Two Chamber Option

The tanks are designed in different lengths to cool pipes up to higher diameters, with one or two chambers. The two chambers solution is an optional feature, but for materials like HDPE it is an important, if not essential, feature to be considered.

TWO VACUUM PUMP FEATURES:

- Automatic vacuum control
- Two vacuum pumps
- Two circulation pumps
- Water temperature control
- Water level control
- Motorized movement
- Flow controller
- Filter with bypass

The tanks are manufactured in-house with the highest quality and with a design that facilitates installation, operation and maintenance.

Max. Line speed for Vacuum Tanks

Material	Speed ranges	Execution to reach speed	Front Ring
LDPE & HDPE	Max. 150 m/min for	2 chambers in full immersion water cooling	adjustable waterfront ring with water inlets and water outlets, with water high container
HDPE & LDPE & PEX-b	Max. 35 m/min	2 Chambers tank in water spray cooling	
PP-R	Max. 30 m/min for	2 chambers in full immersion water cooling	
PE-RT	Max. 35 m/min	2 chambers in full immersion water cooling	
EVOH on outside	Max.20m/min	2 chambers in full immersion water cooling	

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PO Pipe Cooling Tanks

Bausano produces in-house stainless steel **cooling tanks for PO pipes**. Bausano Tanks are designed to provide constant pipe cooling and to avoid any deformation throughout **pipe extrusion line**. A ventilation system cleans and dries the pipe as it exits the cooling chamber. The cooling tank is the last step before the exiting of the totally formed and cooled down pipe.

Cooling method	Diameter range (mm)
Full immersion Cooling	5-32
	5-32
Full Immersion cooling & spray cooling	40-63
	40-110
Spray Cooling	20-110
	110-1600
Internal pipe cooling	110-1600

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Option to fit into your process

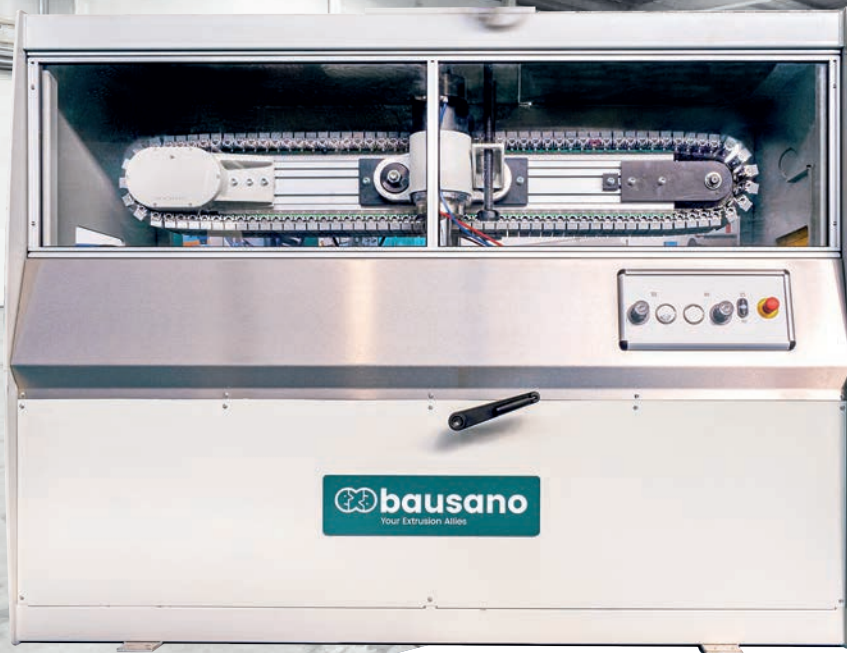
Bausano Cooling tanks are of high quality for a high-quality pipe. The tanks can be equipped with different features depending on the customized customer project.

COOLING OPTIONS AND AUXILIARIES:

- Full immersion water cooling
- Flow filters and by-pass, for water treatment
- Vacuum spray cooling / spray cooling
- Air cooling inside the pipe IPC
- Air cooling outside
- Rounder rollers
- Easy height and cross adjustment
- Water temperature control by thermostatic valve
- Circulation pump
- Water temperature control
- Water level control
- Water filter
- Saddles to maintain the pipe shape during calibration and cooling process

OPTIONAL FEATURES:

- Special length upon customer's request
- Possibility to equip the tanks with wheels and rails longitudinal movement



Haul-off unit

To complete the Extrusion Lines Bausano offers a Pipe Haul-off unit with 2, 3 or 4 tracks, with flat and shaped rubber pads. The Special haul-off units are equipped with useful pick-up devices in length and width able to meet any special needs. Bausano's pipe Haul-off units are driven by dual independent epicyclical gear reducers with variable frequency inverters for smooth continuous speed adjustment over a wide range. The upper tilting track is pneumatically actuated with micrometer adjustment; the lower track is equipped with a mechanical vertical adjustment. The haul offs have been designed for precision and ease of use during production. Whether the pipe is small or whether it's a large pipe, Bausano's haul-off units can manage it without leaving marks or deforming the shape.

Our haul-off are characterized by their strength and robust construction, which eliminates vibration and discontinuity of traction.

TECHNICAL DATA

	TNV-15/150	C/250	C/500	C/800
Ø min/max (mm)	16/160	32/250	63/500	100/800
Pulling speed (m/min)	0,2/6 0,8/24	0,21/10,6	0,15/7,3	0,12/5,8
Installed electrical power (kW)	5	4	5	5

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Caterpillar Haul-off

The Bausano pad haul-offs are characterised by their robustness and versatility. Easy to use, robust, versatile, compact and simple to maintain. The tracks are easily accessible for fast replacement of the cleats:

- Different dowel dimensions guarantee gentle removal of the profiles without influencing the profile geometry or surfaces (cleat marks)
- Special cleats adapted to the profile shape
- Cleat quick-change system
- Both chain carriages are fully accessible at the front for easy pad exchange

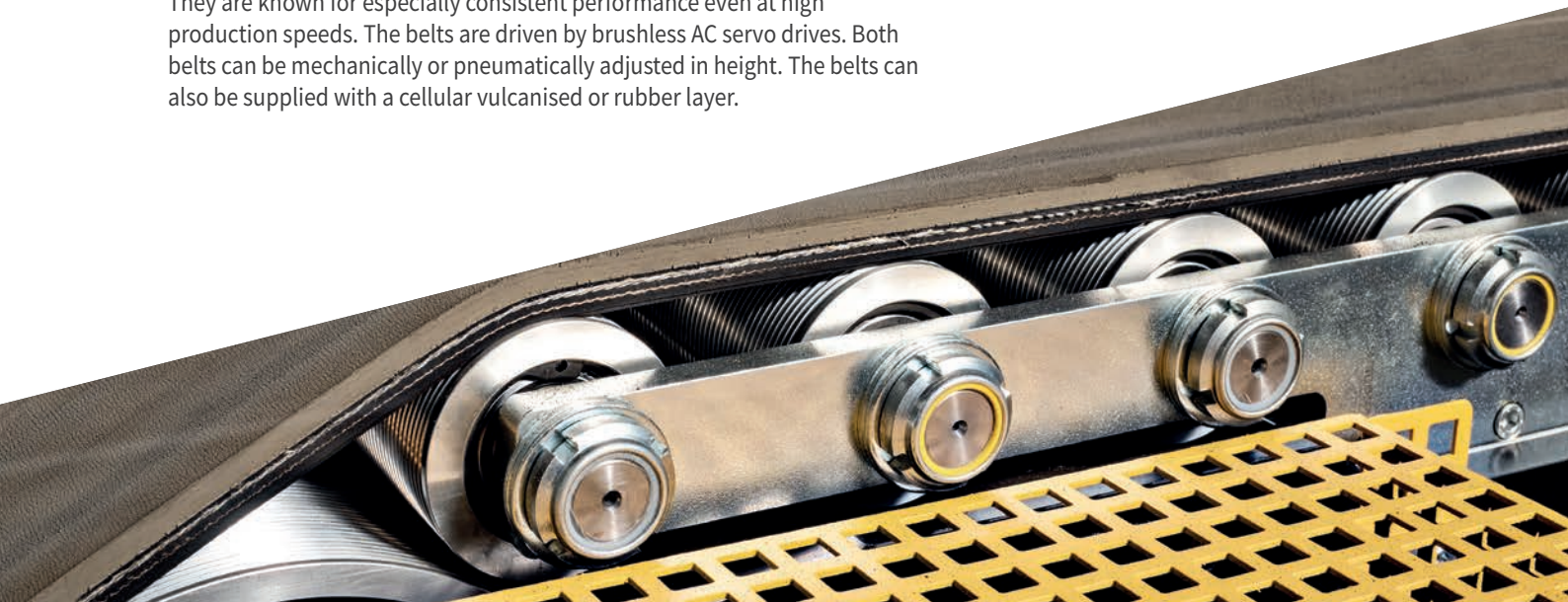
For both versions, we can propose a large range of contact lengths and widths, min. and max. linear speeds as well as haul-off forces with associated torque.

All our chasses are precision-welded in order to guarantee overall stability.

Belt Haul-off

Bausano supplies a wide range of haul-off belts which ensure high resistance to abrasion, excellent grip properties and a precise finishing that guarantee an homogeneous coating, for a perfect adherence to the extruded material.

The Bausano belt haul-offs are used for continuous extrusion of profiles. They are known for especially consistent performance even at high production speeds. The belts are driven by brushless AC servo drives. Both belts can be mechanically or pneumatically adjusted in height. The belts can also be supplied with a cellular vulcanised or rubber layer.





Cutting unit

We offer a wide range of PVC and PO pipe cutting units and planetary cutting devices that can be also controlled with an integrated touch screen. Bausano cutting units are modular and ergonomic and are provided with automatic pneumatic movement that does not require manual operation for adjustments such as cut length, trolley forward and backward speed.

FEATURES:

- Vertical pneumatic cutter
- Longitudinal traverse
- Milling cutter-holder carriage
- Ball-bearings sliding on hardened and chrome-plated guides
- Electronic device for the presetting of cutting length, controlled by encoder

ADVANCED FEATURES:

- In-line automatic planetary cutter with double cutting arm for cutting and chamfering rigid plastic pipes from
- Combined cutting cycle, without leaving cuttings inside the pipe.
- Complete with cuttings and dust suction and collection device, with Jumbo Bag (bigger capacity bag) and automatic dust and cuttings bag change.
- Electrical system with PLC including the function of 3-presetting length measurer for cutting control enabled by an encoder

TECHNICAL DATA

	TAV/90	TAV/160	TRS/250	TRS/400	TRS/180-800
Cut-off length (mm)	90	160	32/250	50/400	180/800
Min cut-off length (mm)	300	500	500	1000	1000
Installed electrical power (kW)	2,6	2,6	5,5	6,5	7,5
Air consumption per cycle (NI)	1,5	1,5	39	55	80

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