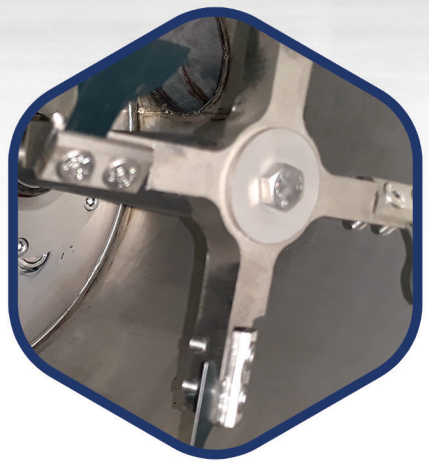




EKO CHEM



Extruders and Recycling Lines



EKO CHEM





Our Products Are Your Success!

Ekochem has been focused on exploring extrusion process with different materials since 1999. We are a leading supplier for extruders and extrusion lines. Our team has wide experience in polymer processing and this expertise can focus on machine/line design and manufacturing.

Ekochem strong technical background, lab center and high class equipment will definitely meet your individual technical requirement.

Learn comprehensive about processing characteristics of our raw material and identify which type of process is suitable for you. Our experts will give you professional advices.

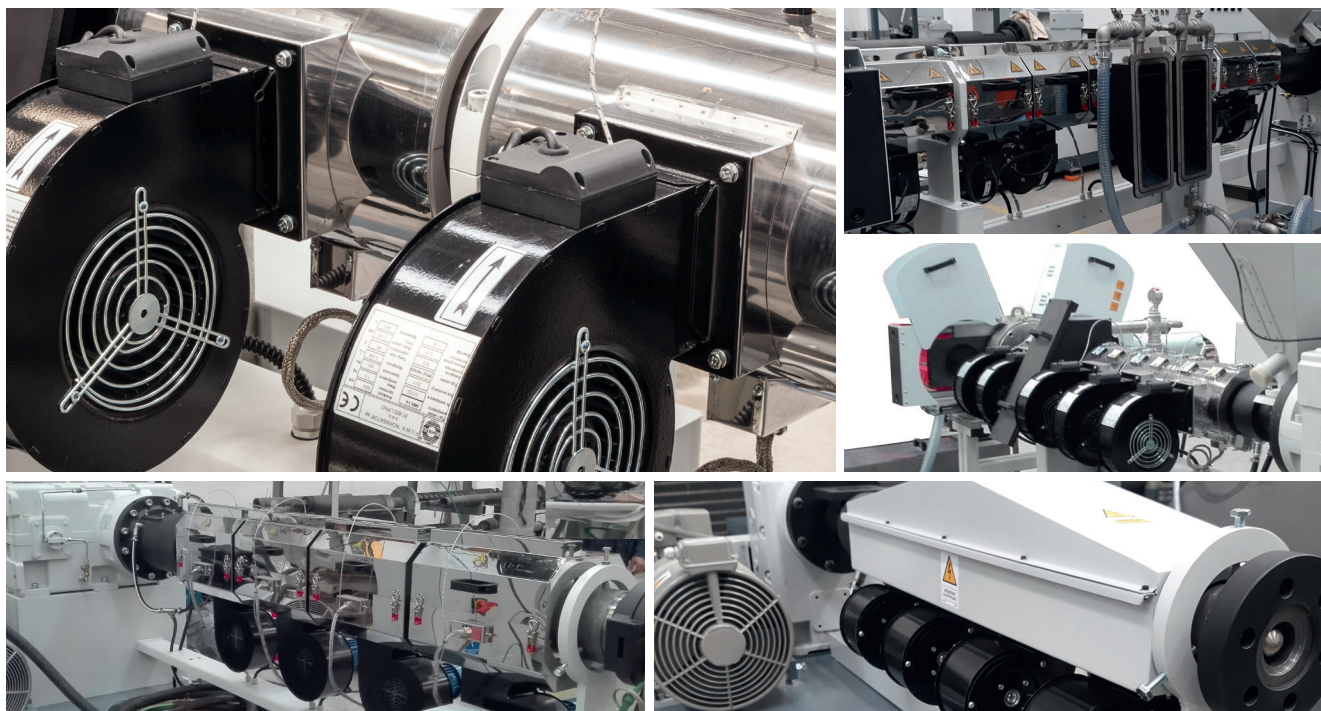
Ekochem keeps its promise „Our Products are Your Success“. This applies to all Ekochem products and services, and for our customers it means choosing Ekochem products is the best decision they can make.



Single screw extruder WJ series

Advantages

- High class equipment with many additional options.
- Plasticizing system made of high-quality steel. Easy disassembly of the plasticizing system
- Customized parameters and functions ensure lower purchase and productions costs
- Reliable and durable design in 100% compliant with CE requirements
- Heating and cooling systems, drive and electrical systems of the best European brands.
- Easy to use and modern Delta or B&R controller and operating system
- General-purpose and intended for more demanding applications at the same time
- Supply of additional zones through the quick couplings
- Three colour beacon for signalling the extruder operation status.
- Melt pressure measurement at selected points of the extruder/line
- General-purpose extruders and also more advanced solutions intended for more demanding applications.
- Torque limiter - the overload protection torque limiter applied for instant protection for gearbox and extrusion unit. It's helpful for sudden mechanical load protection.
- Wi-fi connection with machine, wi-fi service



Description

Ekochem offers single screw extruder made in Europe. Whole production and assambling is in Poland. We are professional manufacturing and more than 30 years experience. We offer technical support in the wide range of machine and extrusion process. All machines made according to CE Standart with CE Certification

Offer of typical and customized extruders according to the customer's requirements

- screw diameter 20 ÷ 250 [mm]
- L/D:20÷48
- output 10 ÷ 2000 [kg/h]

Parameters match according to indyidual customer requirements.

Parametr	WJ25	WJ35	WJ45	WJ60	WJ75	WJ90	WJ105	WJ120	WJ150
Screw diameter [mm]	25	35	45	60	75	90	105	120	150
Ratio L/D	25/30	25/30	25/30	25/30	25/30	25/30	25/30	25/30	25/30
Screw rotation [rpm]	200	175	150	150	120	105	95	95	95
Number of heating zones/ cooling	3/3	3/3	4/4	5/5	6/6	7/7	8/8	8/8	8/8
The installed heating power on cylinder [kW]	3,0	4,5	8,0	12,5	18,0	31,5	38	44,0	50
Electric motor power [kW]	4,0	7,5	15	37,0	55	90	132	160	200
Total installed power [kW]	7,0	15,5	25,5	49,5	76,0	120	160	190	250
Minimum capacity (LDPE) [kg/h]	1,5	3,2	7,0	15	18	22		28	
Maximum capacity [kg/h]	15	30	65	120	160	240	350	400	600
The height of the extrusion axis [mm]	1100	1100	1100	1100	1100	1100	1100	1100	1100
Dimension-length [mm]	1050	1530	1900	2280	2950	3860	4300	4730	5200
Dimension-height [mm]	1560	1730	1840	1900	2100	2300	2380	2450	2500
Dimension-width [mm]	650	700	900	1020	1150	1250	1300	1400	1600
Weight [kg]	210	440	700	1200	1550	2900	3400	3600	4500



PE/PP Film Recycling Lines, TYPE LRA

Advantages

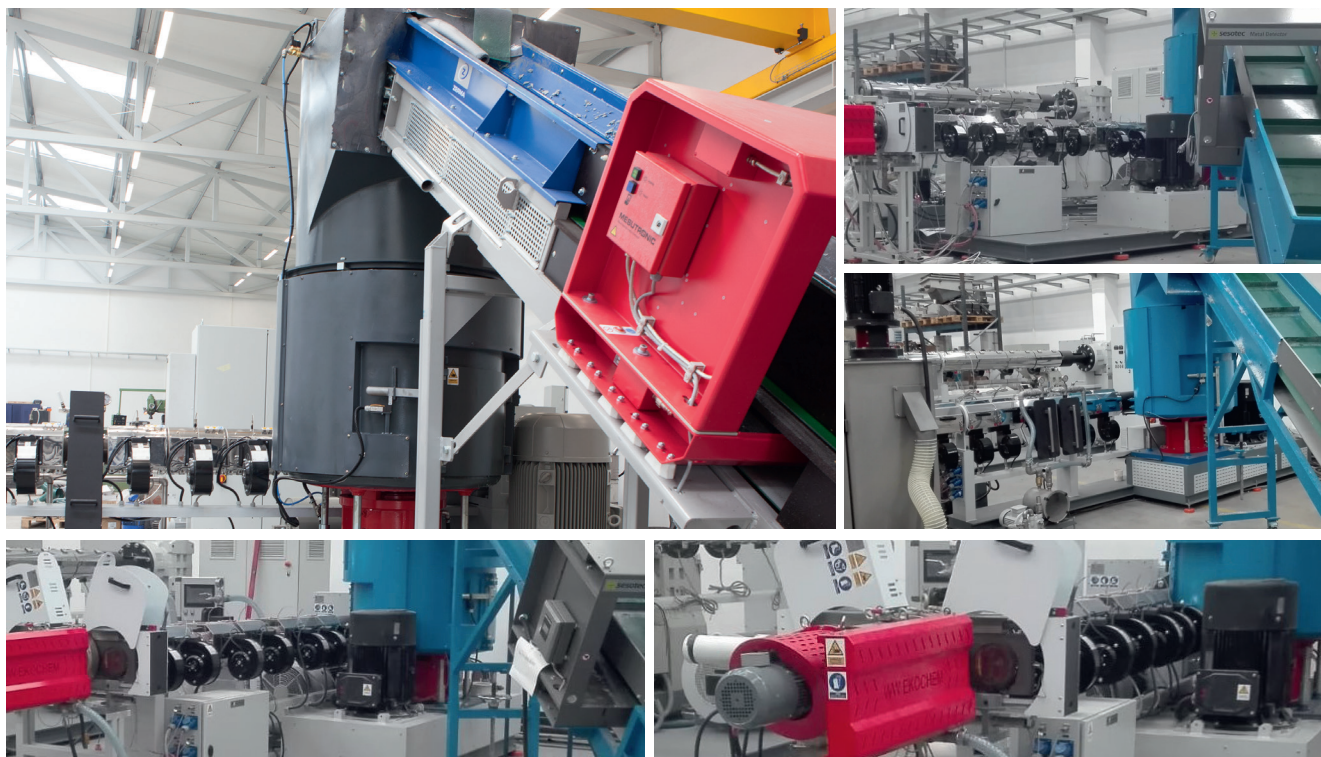
- Produce and assembling in Poland by Ekochem
- Advanced technology with individual customer request
- Advanced solutions intended for more demanding applications.
- Reliable and durable design conform to ISO and CE standard
- New lines are fully warranted and post-warranty service. Our experts can diagnose your machines via internet module, wi-fi service
- We offer technical consulting and support in wide range of the line parameter optimization.

Description

The typical PE/PP film recycling line consists of the belt conveyor that loads material into the compactor. After compacting, the material is fed directly into the plasticizing system. The filtered and degassed plastic melt is fed to the die head in the water ring, where the melt is cut into pellets. After drying in the centrifugal dryer and calibration on the vibrating table, pellets are fed into the silo.

ECO

The lines for customers who expect specific production outputs, but have a limited budget. The line includes all necessary components such as: belt conveyor, agglomerator, extruder with natural degassing, pneumatic clamp head and vibrating and dewatering table. Analogue control.



STANDARD

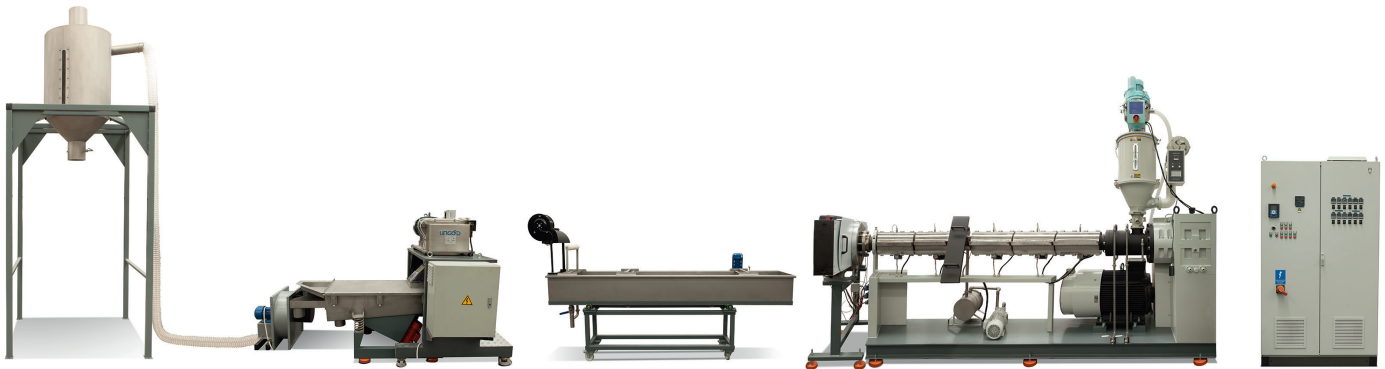
The line is additionally equipped with a metal detector on the belt conveyor, vacuum degassing, high-performance centrifugal dryer for plastic granules and closed recirculating cooling water system. It is provided with analogue control like in the previous option.

PREMIUM

In this option, a customer obtains the technologically advanced film granulation line. The line includes additional elements such as the closed recirculating cooling water system equipped with heat exchanger, high-performance centrifugal dryer and classifying screen to calibrate granules, sensors and warning lights to support the operator work.

Control with digital temperature regulators, process visualisation with the use of PLC controllers to be agreed individually with a customer. Additionally, a customer obtains the remote service support via the Ethernet system and reports on extrusion process parameters.

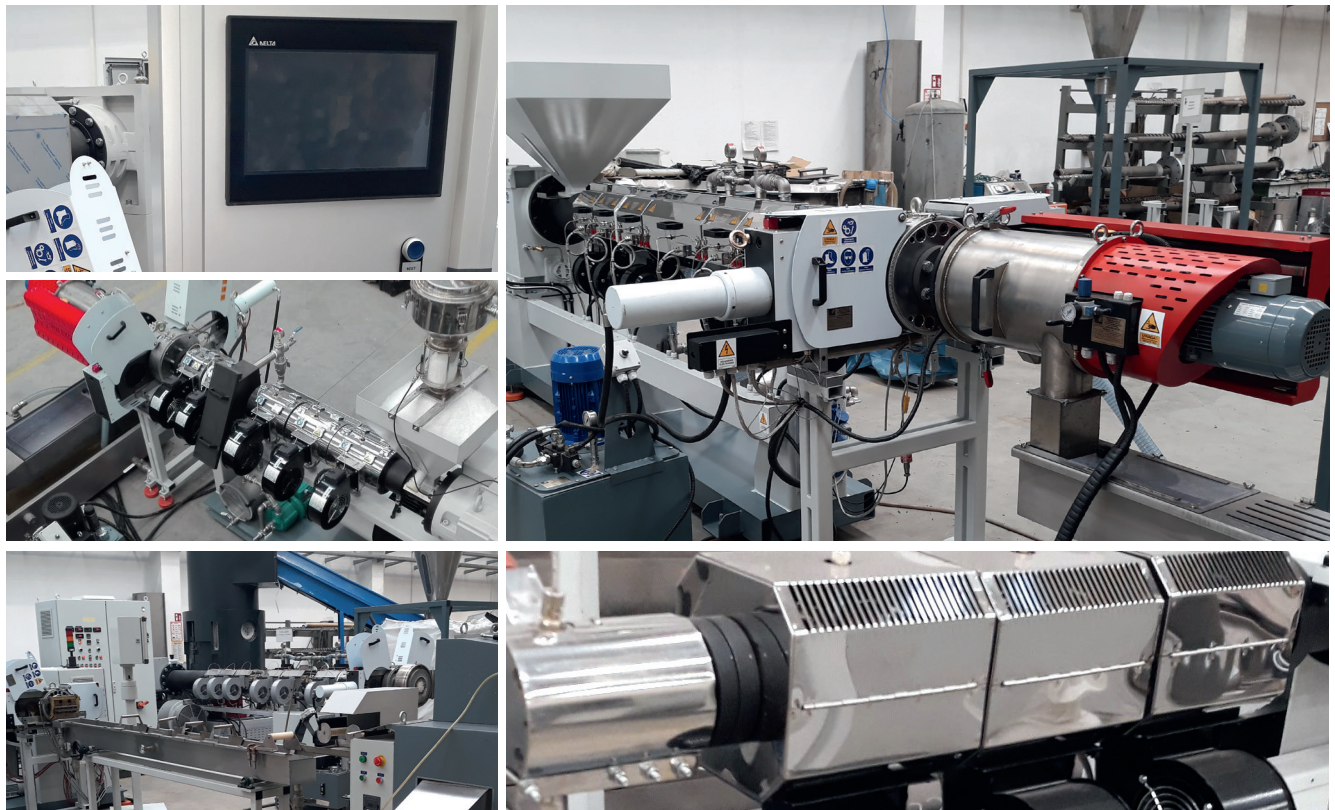
Model	LRA60	LRA75	LRA90	LRA105	LRA120	LRA150
Screw diameter [mm]	60	75	90	105	120	150
L/D ratio	~42	~42	~42	~42	~42	~42
Screw speed [rpm]	150	120	105	95	95	95
Extrusion height [mm]	1100~1200	1100~1200	1100~1200	1100~1200	1100~1200	1100~1200
Compactor diameter [mm]	900	1000	1100	1100	1300	1500
Main motor power [kW]	45	55/75	75/90	110/132	160	250
Compactor motor power [kW]	45	45/55	55/75	75/90	110	132
Screen changer [Ø mm]	Ø100	Ø100	Ø150	Ø200	Ø250	Ø300
Output [kg/h]	~120	~140/180	~200/280	~320/420	450-550	650-800



Recycling lines for hard materials - with hoper

Advantages:

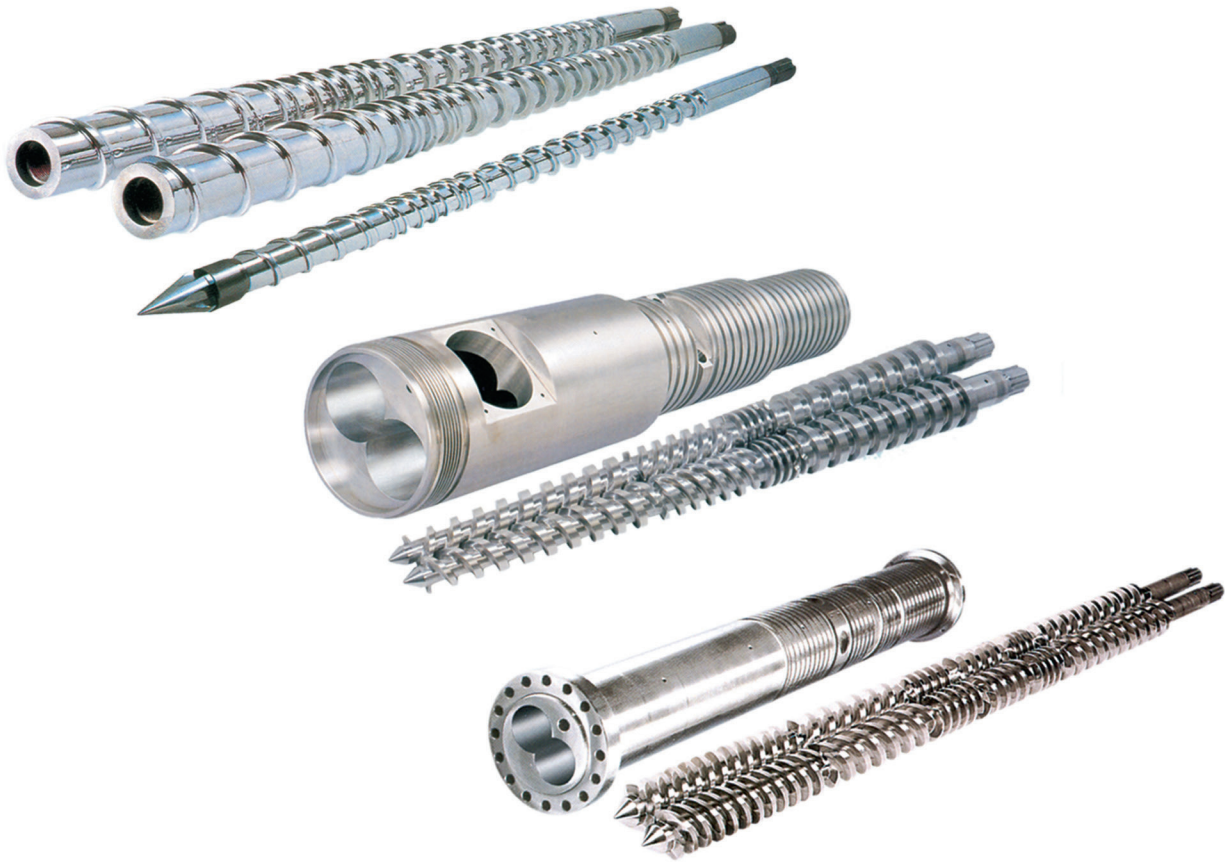
- Extrusion lines Made in Poland!
- Professional manufacturing; more than 30 year experience
- Technical support in the wide range of machine and extrusion process
- Extrusion lines with output 1500 kg/h
- PLC and analog control box, wi-fi connection with machine, wi-fi service
- Pneumatic Water-ring diehead designe and produce by Ekochem
- High efficient centrifuge for drying granules designe and produce by Ekochem
- Main parts made by well-known brands: Siemens, Hoyer, Vacocon, Parker, B&R
- Typical line or designe according to customer`s inquiry with many additinal options
- A lot of indywidual options made according to application: optical diameter measuring, pressure controller in different points of line, material level sensor etc.



Our customer can find in our offer complete technological line and also granulation system which can be connect othe extruders/lines:

- ♦ Pnaumatic water-ring diehead desing and manufacture by Ekochem
- ♦ strand pelletizing
- ♦ strand pelletizing for PET - special water bath design, output from 500 kg/h
- ♦ air - cooling pelletizing system
- ♦ underwater pelletizing system [for all types of polymers]

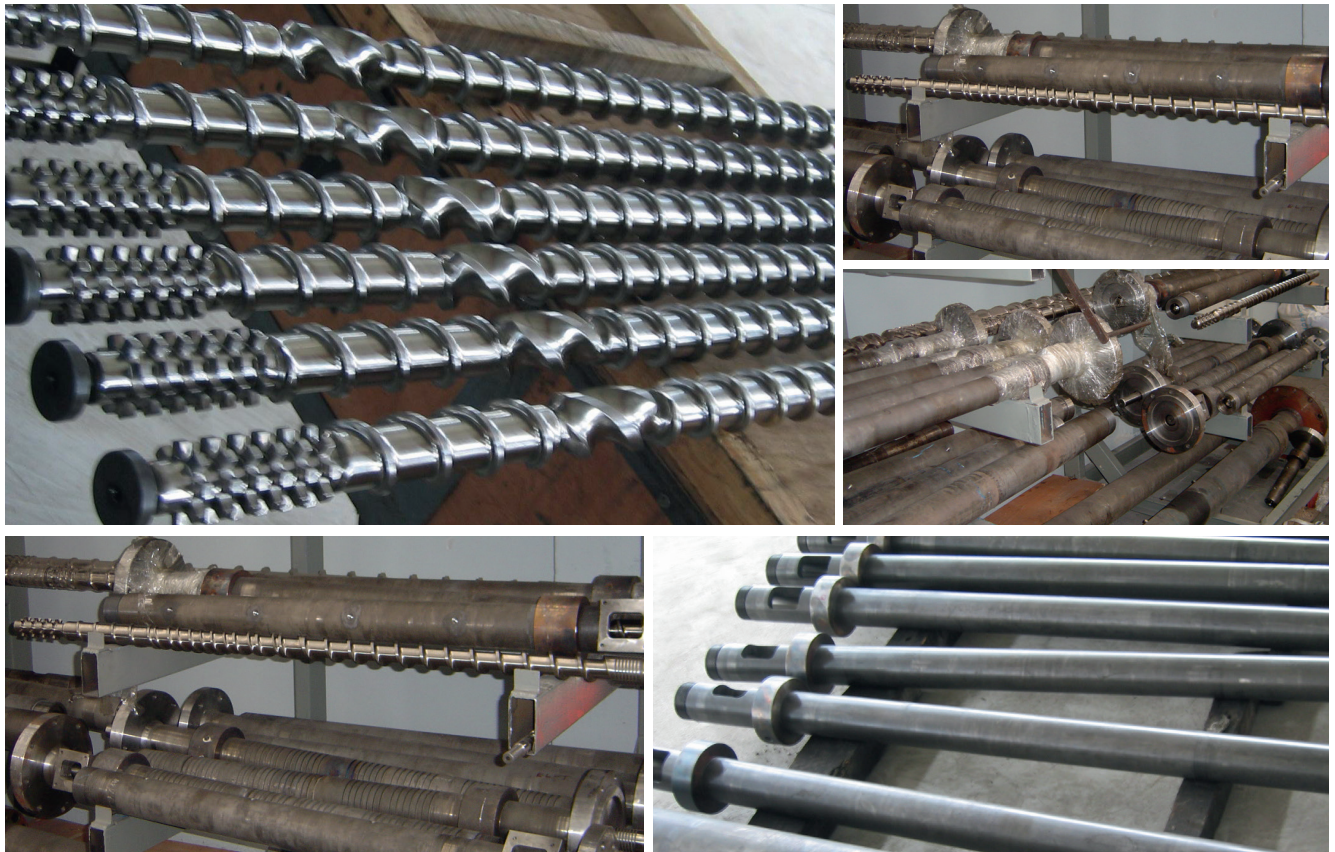
Model	LR-45	LR-60	LR-75	LR-90	LR-105	LR-120	LR-150
Screw diameter [mm]	45	60	75	90	105	120	150
L/D ratio	30:1	30:1	35:1	35:1	40:1	40:1	40:1
Screw speed [rpm]	150	150	120	105	95	95	95
Main motor power [KW]	17/22	37/45	55/75	75/90	110/132	160	250
Heating power on barrel [kW]	8,0	12,5	18,0	32,0	38,0	44,0	50,0
Degassing [pcs.]	brak/1	1	2	2	2	2	2
Extrusion height [mm]	1100	1100	1100	1100	1100	1100	1100
Screen changer diameter [mm]	Ø70	Ø100	Ø150	Ø200	Ø250	Ø250	Ø300
Output [kg/h]	75	130	180	250	350	450	800



Screws and barrels

Advantages:

- screw design configuration according to the properties of the material
- appropriate transport and flowing characteristics, good melt homogenization and low power consumption.
- Designing new geometries for all types of plasticizing systems
- Assessment of wear degree of the system at the customer
- Wide range of technical consulting service
- Modular design of screw and barrel allows sequence can be optimized with different material as per the characteristic of processing tasks.



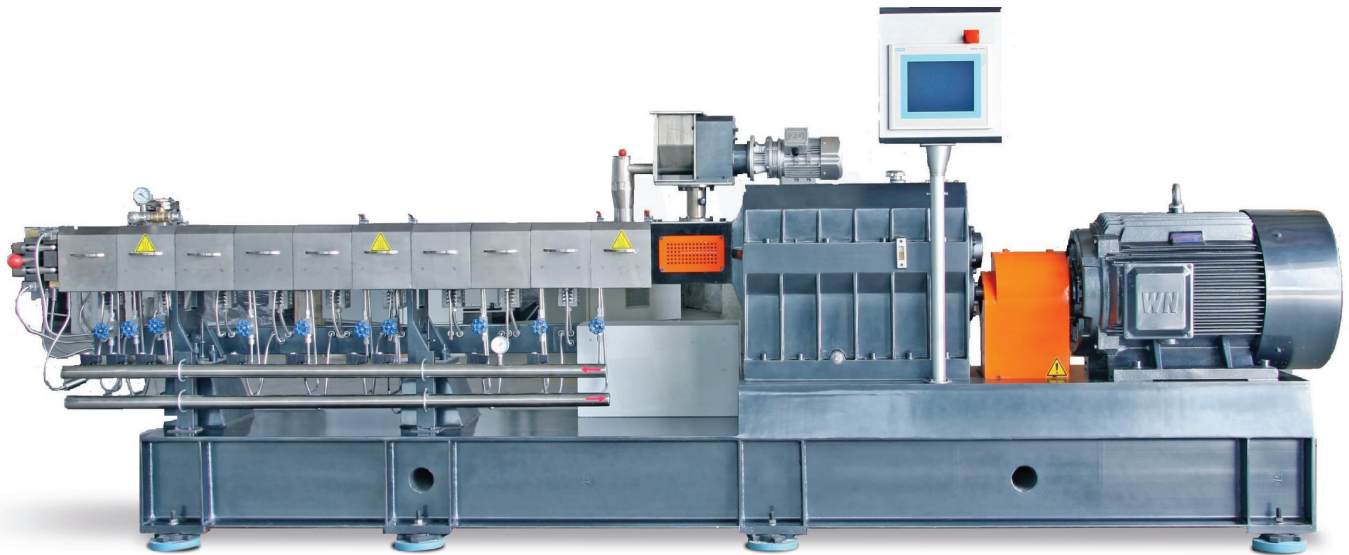
Description

We are professional company for design and supply screw and barrel.

We offer:

- Single screw and barrel
- Double screw and barrel: conical and parallel: co and counterrotating
- Blocked screw and barrel for parallel extruders
- Injection screw and barrel
- Screw tips
- Screw elements and mixing valves
- Extrusion diehead parts
- Blow moulding nozzles and die heads

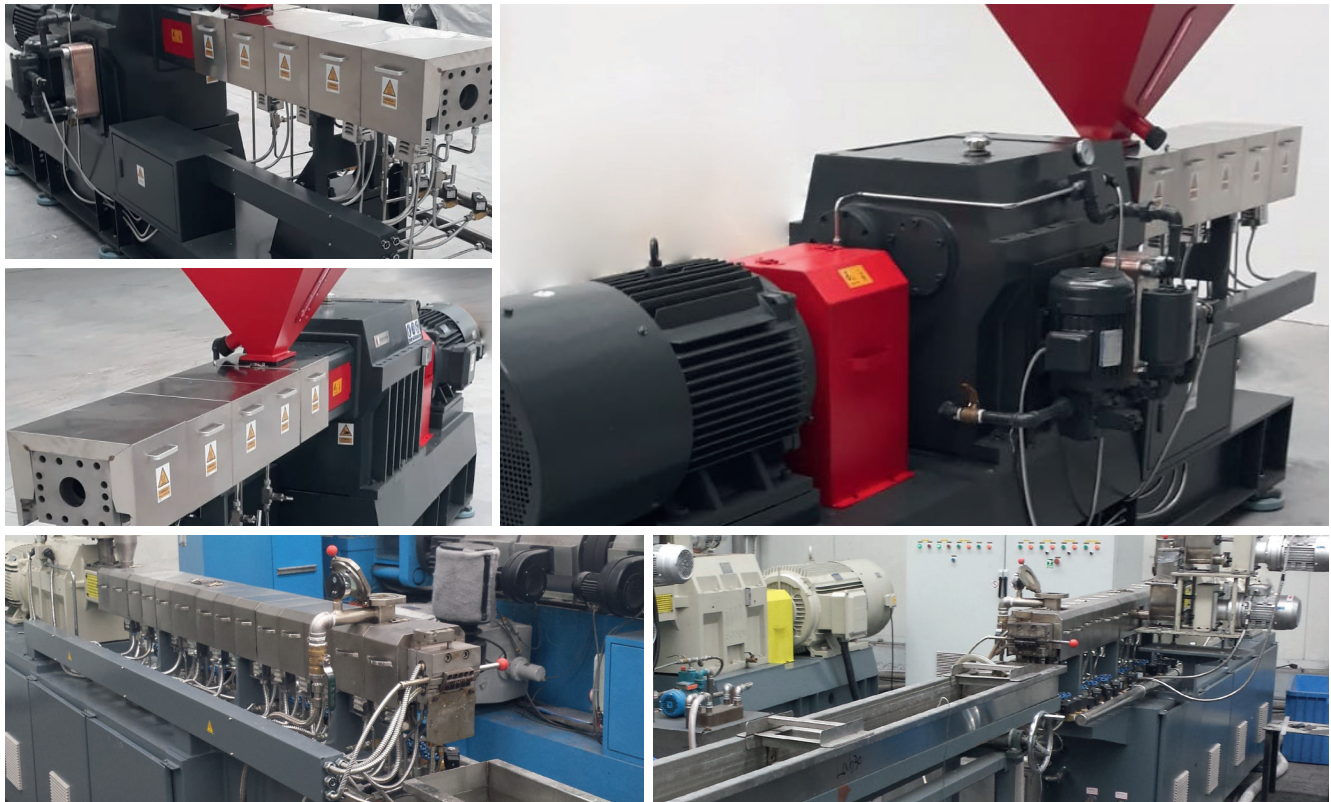
Type of technology	Nitrided	Bimetallic
Diameter [mm]	20÷750	20÷750
Length [mm]	8000	8000
Layer thickness [mm]	0,3÷0,5	1,5÷2,5
Hardness [HRC]	56÷62	48÷52



Compounders

Advantages:

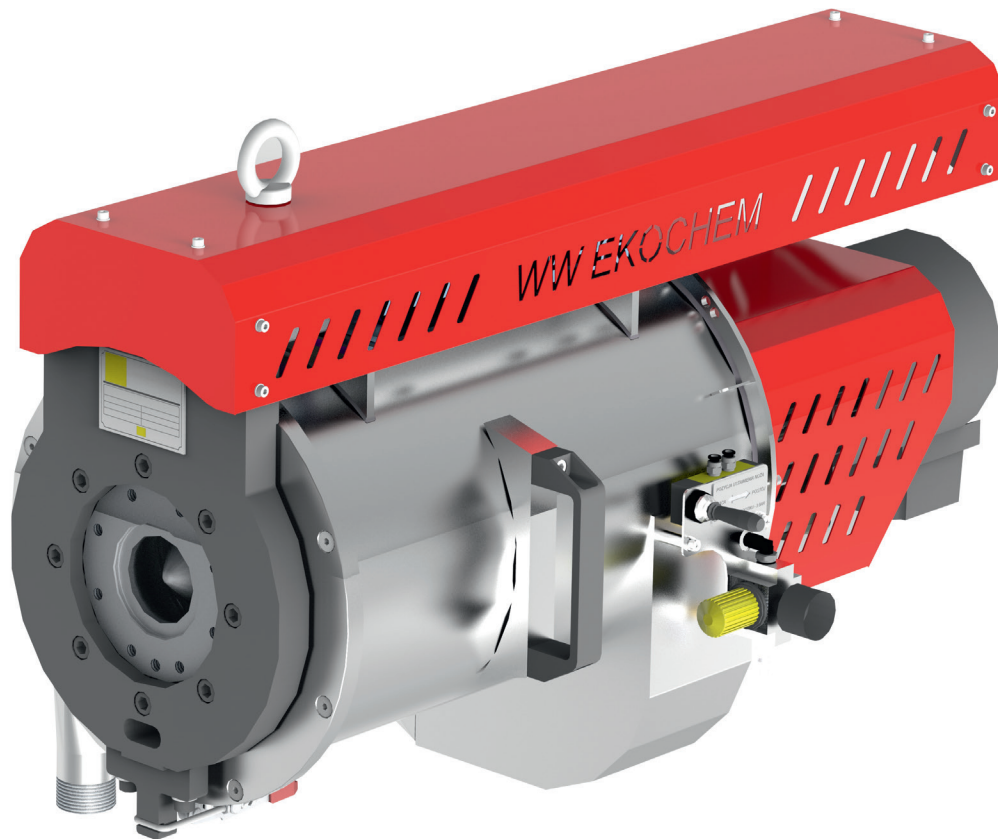
- Closely intermeshing screw profile with screws that are self-wiping at narrow clearance for easy product and color changing.
- Special mixing and shearing elements is with varying effects for high process flexibility.
- Modular building-block system for barrel;
- Each barrel is with one temperature zone for optimal processing.
- High reliable safety clutch and interlocking system for optimal protection against overload
- High torque gear box ensure high output and long life time.
- Variable screw speed from 100 to 800 rpm allows wide range of process technologies.
- Large free volume due to outer/inner screw diameter ratio ~ 1.75 for optimum processing.
- Water manifold completely made out of stainless steel.



Description

Our parallel co- and counter-rotating extruders are able to achieve different processing tasks, precise control process can meet complicate and sophisticate processing purpose. Better dispersion, more accurate temperatur control and higher throughput have been integrated and optimized furhter. Our extruders authentically explains one for multiple: more powerful gearbox, more precise screw elements and more flexible processing range, variety of modular screw elements will get the most out of your investment.

Model	LAB20	LAB30	SAT40	SAT52	SAT65	SAT75	SAT95	SAT110	SAT130
Screw diameter [mm]	20	31	41	51,4	62	71	93	110	130
L/D ratio	32-64	32-64	32-64	32-64	32-64	32-64	32-64	32-64	32-64
Main motor [kW]	7,5	18	90	132	220	280	500	750	1200
Screw speed [rpm]	750	600	800	800	800	600	600	400	400
Output [kg/h]	2-20	5-40	150-300	350-500	500-1100	700-1500	1500-2600	2000-4500	3000-6000



Ring water pelletizing diehead

The water jacket pelletizing system with the pneumatic clamping is the system widely used in the plastics processing industry for pelletizing different polymer materials. The RW pelletizing system model and WP spin dryer are entirely designed and manufactured by Ekochem.

Advantages:

- Alignment of the tank and cutting assembly
- Parallelism between the linear bearing housing axis and guide shaft axis
- Reliable operation of the pneumatic clamping [outside the area where there is water]
- Short time of the system setting
- Compact structure
- High capacity
- Pneumatic clamping of the knife holder
- Easy replacement of knives



General description

GPlasticized material from the extruder is transported to the flow block. From there the polymer flows through the abaxial channels to the die plate, where it is pushed through the holes, distributing the material into single strands. The material is then cut with the rotating cutting knife. The cutting knife is pushed to the die plate by the pneumatic system, whose two pneumatic cylinders are actuators. Air to the cylinders is distributed by the diverter valves from the pressure regulator.

The palletizing system includes also the Spin Dryer manufactured in two sizes i.e. **WP-200** and **WP-300**, depending on the required capacity. The high capacity spin dryer with high drying capacity and the RW palletizer work in a closed water circulation system. They are characterised by low power consumption, easy use and easy replacement of components.

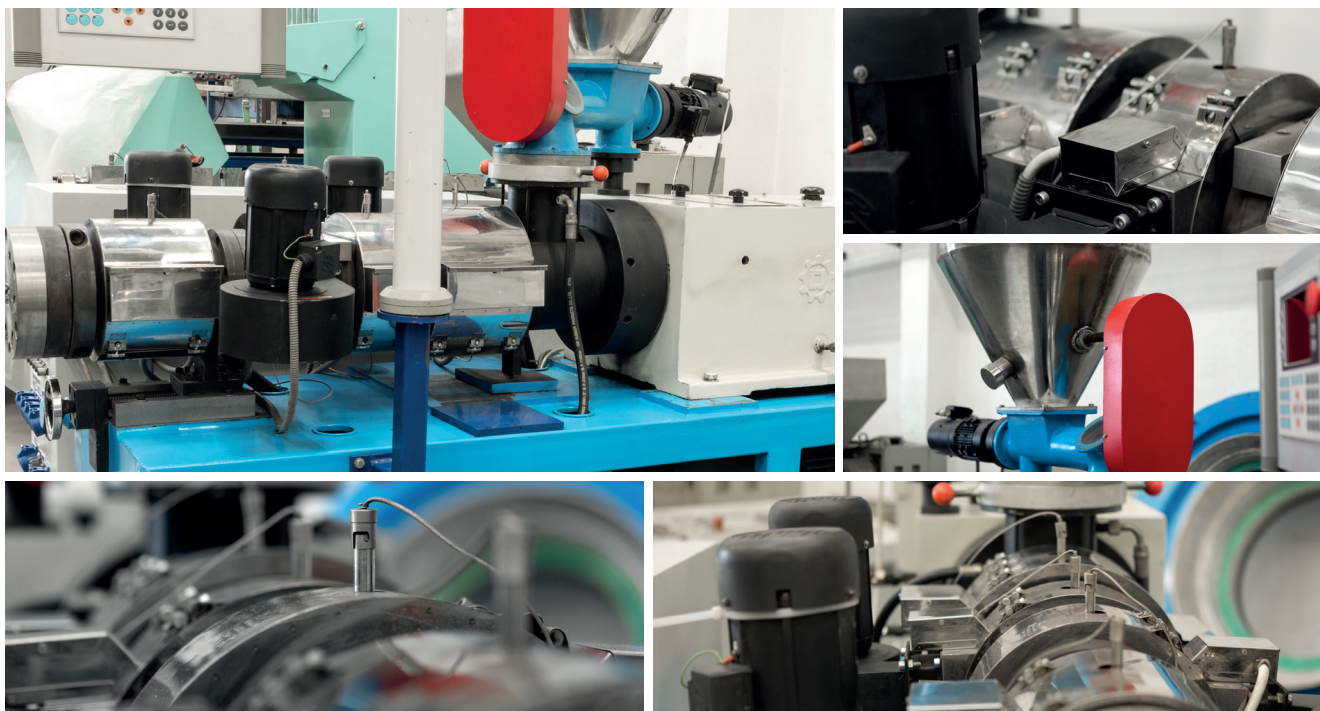
Model	RW-320-II	RW-440-II
Capacity [kg/h]	60 - 550	600 - 1500
Number of cutting knives	3/4/6	4/6
Cutting knife speed [rpm]	2910	2910
Cutting knife motor power [kW]	1.5/2.2	3
Power of heating zones [kW]	2	3,8
Max. operating temperature [°C]	280	280
Max. permissible melt pressure [bar]	120	120
Total weight [kg]	160	320



Conical extruders

Advantages:

- Screws fulfill the individual processing task
- Efficient cooling system of screw
- Barrel is cooled by air cooling system.
- Precise process control can meet complicate and sophisticate processing purpose
- Most reasonable screw can be made so as to achieve best plasticity state and material quality.
- The screw is made by high precision special digital screw miller; extruding property can be highly harmonized.
- It has firstly introduced advanced technique of producing screw with variable pitch and depth, so that the material can be more softly sheared and cut.
- The distribution box is specially designed, SKF or NSK bearings, and the drive life span can be prolonged.
- The cooling system has applied special design, heat emission area is enlarged, the cooling is rapid, temperature control tolerance can be $\pm 1^{\circ}\text{C}$.
- Easily maintained, simple operation concept, user friendly and cost effective
- Overloading protection from the main motor power unit



Description

Model WS series twin conical screw extruder is a kind of special equipment for extruding PVC powder. With different sorts of molds and auxiliary machines, it can produce all sorts of PVC plastic pipe material, profiled material, board material, sheet material, bar material and granulation. It can bear larger extruding pressure. The electrical system is made in Europe using well-known European brands. It has multiple alarm system, and there are few problems which can be easily eliminated.

Model	WS-45/90	WS-51/105	WS-55/110	WS-65/132	WS-80/156	WS-92/188	WS-110/220
Screw diameter [mm]	45/90	51/105	55/110	65/132	80/156	92/188	110/220
Main motor [kW]	15	18.5	22	30/37	55	110	160
Capacity [Kgs/h]	80	110	130	220	350	650	950
Center height [mm]	1000	1000	1000	1000	1000	1150	1200
Net weight[kg]	3000	3000	3500	4000	5500	8000	12000
Dimensions [m]	3.3×1.2×2.1	3.6×1.1×2.1	3.6×1.1×2.1	4.2×1.5×2.4	4.7×1.5×2.4	6×1.6×2.5	5.4×1.8×3.0



LAB Extruder

Advantages:

- Laboratory extruders and lines are specially designed for the trial-level
- Small and a lot of options makes it flexible against different application
- design concept of LAB machine is plug-and-play- compact design with height regulation
- All the controlling module, electric parts and other elements are integrated into the machine frame
- All you need to do is just to plug into the electricity

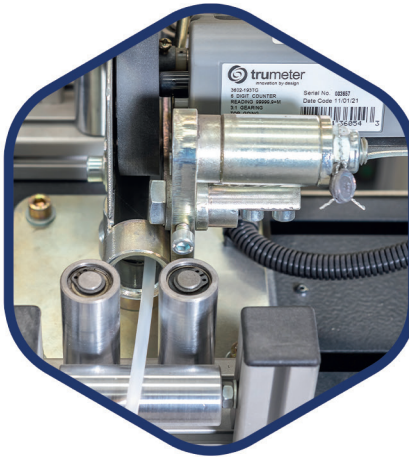
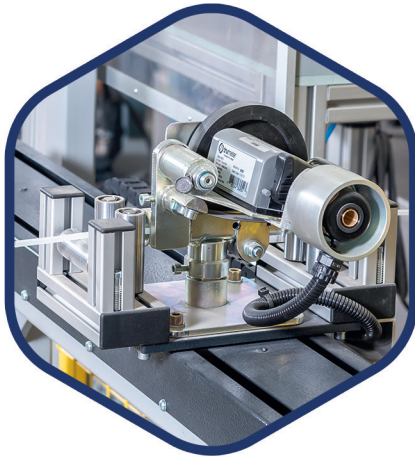
Description

Lab machines are specially designed for those users who wish to make small size quantities. The lab extruders have the feature to easily maintained, simply operation concept, user friendly and cos efficient. We carry out your idea with our optional equipment , we can discuss further to determine the final solution.

Our well-equipped lab lab center is open for every customer. We welcome you to test your new material, new receipe and new process before you make decision.

Parameters match according to indywidual customer requirements.

Model	LAB20	LAB30	WJ25	WJ32
Screw diameter [mm]	20	30	25	32
L/D ratio	32-64	32-64	28	28
Output [kg/h]	2-20	5-40	15	32
Main motor [kW]	7,5	18	4	11
Screw speed [rpm]	750	600	300	280



SERVICE

Ekochem service available 24 hours a day, 7 days a week.

We provide:

- Quick response time
- More than ten qualified workers specialised in machine servicing, automation and plastic processing solutions
- Comprehensive operations: from diagnosis to repair, spare parts and training

Products:

We offer wide range of components for extruders and extrusion lines such as: plasticizing systems, gear units, geared motors, heating and cooling systems, servo drives, components for control cabinets and other components and parts making up extruders and extrusion lines.

Services:

• Loading/Transport/Unloading

We ensure comprehensive deliveries of our machines and relocation of lines at the customer.

• Machine inspections:

During the warranty period we ensure a full machine inspection via remote access to machines with the Ethernet system [an additional purchase option]. We carry out routine inspections of machines and lines to maintain a line in the best condition, rectify current failures and ensure failure-free machine operation.

• Machine installation:

We provide free installation for customers who buy our machines or lines. We also start any other extrusion line of European or Asian manufacturers.

• Machine and equipment repairs:

We perform repairs during both warranty and post-warranty periods. Our service personnel is fully qualified and trained in the inspections and repairs of not only our machines but also of European and Asian manufacturers.

• Technical support:

Comprehensive industry knowledge and many years of experience allow us to offer technical and technological consulting on many issues related to plastic processing.

We offer:

- projects of technological lines
- operation optimization to reduce operating costs
- selection of peripheral equipment and designing the closed recirculating cooling water systems
- visualisation of the line arrangement in a production hall.



EKO-CHEM

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