



### We supply top-quality pipe extrusion lines at competitive prices.

Whatever you require to process plastics, WONIL is your best partner and the worth company with a variety skills and expertise in the extrusion field.

Thermoplastic technology has been progressing to be higher performance, more competitive prices and fully automatic system to keep pace with customer requirements.

As requirements of extruders, WONIL always does our best to supply high performance and economical products, in addition to the knowhow in processing technology.

Our pipe extrusion technology has been steadily developing and we still strive to meet changeable extrusion market. We always keep in touch with our existing customers and potential customers to have the opportunity to discuss what our unique product can do for you and for your business.

The development of our pipe extrusion machines is the result of feedback from our customers. Needless to say, we appreciate customer feed-back and continued interest in our products.

There is a reason why WONIL is acknowledged the reliable market leader in the manufacture of pipe extrusion industries around the world as well as domestic.

# Our product portfolio covers complete extrusion pipe lines such as;

- Water supply pipe extrusion lines up to 1200mm o.d
- Gaseous pipe extrusion lines up to 630mm o.d
- Floor heating pipe extrusion lines up to 35mm o.d
  Applicable resin PB and PERT (Polyethylene raised temperature)
- Hot & cold water supply pipe extrusion lines up to 63mm o.d
- Sewage pipe extrusion lines up to 3000mm i.d

All our components are easy to use and handily maintain and repair with improved productivity. They are also engineered to maximize savings of energy and costs as well as the highest quality products.

#### Pipe extrusion systems

# Complete production lines for floor heating(hot & cold water supply) pipe extrusion

As a system supplier, WONIL supplies extrusion lines for producing floor heating(hot & cold water supply) pipe from 16mm to 63mm with single-screw extruders and all downstream components such as screen changer, base die, vacuum calibrator, cooling bath, haul-off device, cutter, stacker and etc.

The equipments are designed and constructed inside the company, made with the most modern processing machines precisely tested and finally subjected to a function test. The functions of all machine line elements are harmonised and equipped with economic automation systems.



#### Pipe coiler

- · Double station coilers
- Automatic winders for high performances on request

# Pipe cutter

- Perfect for high speed and small pipe production
- Low noise cutting without generating chips(blades)
- Faster cutting response due to the ultra light weight blade head design
- Exceptionally long cutting edge for a swarf free cut face

#### Haul-off device

- Twin belt haul-off units, suitable for small pipes with high production speeds
- For high linespeeds, high power and high performance applications
- Perfect synchronization with each motor having it's own servo drive
- Floating upper belt, hauloff force adjustable

#### Cooling bath

- Excellent cooling efficiency
- Consist of visible tempered glasses covers
- · Fine filter unit
- Water temperature display

#### Vacuum calibrator

- . Designed to be convenient for use
- Single and double chamber vacuum calibrators
- Vacuum system are ability and adjustable
- Tank upper section and pipework made from stainless steel with cast aluminum lids

#### Extrusion base die

- Ideal residence time pipe with selective temperature control of the sensitive material
- Optimum flow properties over the entire flow channel
- · Designed special for PB and PERT
- Homogeneous melt distribution with selective temperature control
- Designed by means of computer aided systems for the dimensioning of the flow channels
- Low pressure build-up and low melt temperature even at high throughputs

#### Single-screw extruder

- Excellent plasticity performance in combination with a effective screw
- Gentle processing and a more homogeneous melt
- High performance control system with touch screen for maximized operating comfort
- Optimized design of screw to application PB, PERT character
- · Equipped with a grooved feed bush

# Extruder for floor heating(hot & cold water supply) pipe extrusion

#### Single screw extruder

These extruders for hot & cold pipe extrusion are designed to meet the specific requirements of the products and processes as if tailor made and to maximize savings on energy and costs without compromising on product quality.



#### Grooved feed bush

For the extrusion of polyolefin pipes, WONIL's extruders are equipped with a grooved feed bush. In combination with a barrier screw, these extruders achieve high plastification rates while delivering an perfectly melted pellet.

#### Control system

For optimizing and automating pipe extrusion lines, WONIL have developed an automatic control system.

- Touch screen
- · Shorter start-up and change-over times
- Continuous product monitoring and avoidance of faulty production
- Simple operation

#### Screw design

Each WONIL Extruder is individually equipped with an optimum single-screw which is geometrically designed to achieve maximum working life.

- · Highly wear resistant screw
- · Consistent quality of melt
- . Even flow of melt into the die



#### Base die with gear pump

Floor heating(hot & cold water supply) extrusion lines must be equipped with a gear pump and screen changer.

With a gear pump between extruder and base die, it provides a linear output over a wide range of operating conditions.



Its key advantage is to provide a consistent pressure and volume to the die. Add to material savings and product uniformity.

### Screen changer

Put a screen changer in front of gear pump or base die and further increase the productivity of the extrusion line.



# Pipe extrusion systems

# Specification for floor heating pipe extrusion

# **Extrusion line up**

Product range	16-32mm	32-63mm
Max. Output (kg/h)	150	300
Application resin	PB, PERT	PB, PERT

# Single screw extruders

Model	EX-50/30	EX-80/30
Screw diameter (mm)	50	80
Installed drive rating (kw)	45-55	75-90

# Extrusion base die (Die head)

Model	PO-32	PO-63
Pipe diameter range (mm)	16-32	32-63
Max. throughput rate (kg/h)	250	400

#### Vacuum calibrators

Model	VT-32/6	VT-63/6
Pipe diameter ragne (mm)	16-32	32-63

# Cooling bathes

Model	CB-32/9	CB-63/9
Pipe diameter range (mm)	16-32	32-63

#### **Haul-off devices**

Model	HO-32/2B	HO-63/2B
Pipe diameter range (mm)	16-32	32-63
Max. Haul-off rate (m/min)	50	30

# Pipe cutter

Model	PC-32/SV	PC-63/SV
Pipe diameter range (mm)	16-32	32-63
Max. speed (m/min)	100	100

# Pipe coiler

Model	CO-32/DS	CO-63/DS
Pipe diameter range (mm)	16-32	32-63

<sup>\*</sup> Performance data depending on pipe dimension and material type