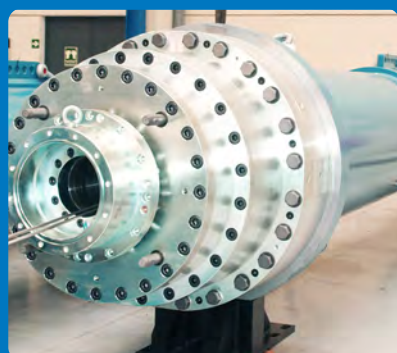




**Complete range of quality, efficient and sustainable solutions for water service**



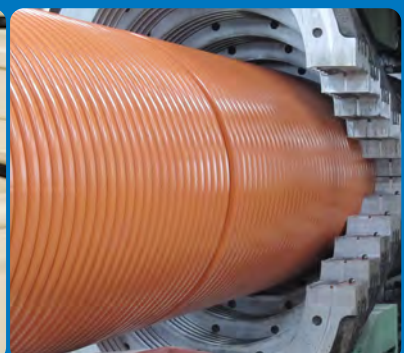
Technology



Supply



Building



Sewage & Drainage

## Molecor

**Molecor** is a Spanish company specialized in supply, building, sewage and drainage solutions, whose pipes and fittings are distributed in more than 30 countries around the world.

It was founded in 2006 with focus on the development of **Molecular Orientation Technology** applied to pressurized water pipelines. Since then, its exponential growth and continuous improvement in the progress of efficient and innovative solutions for the development of technology for the manufacture of Oriented PVC pipes, have made it the current world leader in the sector. In August 2020, the Spanish fund MCH Private Equity acquired a majority stake to provide Molecor with more strength to grow and develop its full potential, in addition to the monetary contribution, MCH contributes with its industrial and financial expertise in both the organic and inorganic growth of the project.

On September 30, 2021, Molecor completes the process of acquiring the Adequa production unit (former Uralita Sistemas de Tuberías), adding to its portfolio building, sewage and drainage solutions to become **one of the leading companies in pipes and fittings in Spain**. It thus continues a large industrial project with a strong focus on technology, efficient water use and internationalization.

### Our purpose:

To improve the life quality of people everywhere in the world, providing them with affordable water through innovative, efficient and sustainable solutions.

### Our values:

- **Nonconformism:** We seek to surpass previously achieved levels (quality, efficiency, innovation, safety, etc.) and we are not satisfied with what we have achieved.
- **Globality:** We are a global company, capable of offering our services and products anywhere in the world. To this end, we create an open, diverse and inclusive environment in which any talent can develop, regardless of nationality, location or origin.
- **Honesty:** We apply integrity at all levels in our relationships and decisions, within an environment of tolerance and respect. With transparency, but always respecting legality, regulatory limits and the principles of confidentiality and privacy.
- **Commitment:** We value, look for and are highly committed to the people around us, to the environment and to the communities in which we are present and in which we provide our services.
- **Attitude:** We like challenges and we are willing to face them actively, giving the best of ourselves, with maximum collaboration, flexibility, openness and sincerity.



2006

- **Molecor** establishment



2007

- **Air Based System** development
- **DN200 mm**



2008

- **M-OR-P 1640** development
- **DN400** and **DN90 mm**



2009

- **AENOR** Certificate (N mark) and **AFNOR** (NF mark)
- **M-OR-P 1640** in **Australia**



2010

- **DN500 mm PN25**
- **M-OR-P 3163** development
- **M-OR-P 1640** in **Italy**



## Differentiation

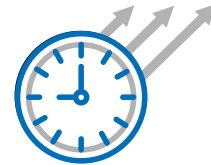
**Molecor** has developed a unique business model in the piping sector based on three fundamental pillars: innovation, internationalization and agility in decision making, which has allowed it to achieve growth rates well above those of the sector even in the toughest periods of the crisis, and an extraordinary international presence.



**Innovation**



**Internationalization**



**Agility**

The efficient transport and management of water is one of the fundamental bases for progress and therefore represents a great business potential. Molecor's objective is to be a world leader in the sector and a **benchmark for quality, efficiency and sustainability**.

**Molecor** has **5 manufacturing plants in Spain**, two of them in Madrid, in Getafe and Loeches, and other three in Guadalajara, Ciudad Real and Málaga (Alovera, Alcázar de San Juan and Antequera, respectively). The Getafe plant develops the PVC-Oriented technology and, at the same time, is the R&D headquarter. While the rest of the plants manufacture the following:

- **Building solutions** (EVAC+®, AR®, floor drainage, gutter systems, siphons)
- **Sewage and drainage solutions** (SANECOR® corrugated PVC pipes, SANECOR® manholes, COMPACT SN4 smooth system, PVC drainage system).
- **Supply and distribution solutions** (TOM®, ecoFITTOM®, smooth PVC pressure, PE smooth pipe fittings)



**Building solutions**



**Sewage & drainage solutions**



**Supply solutions**



**2011**

- M-OR-P 1640 in Ecuador
- DN630 mm



**2012**

- Integral Seal System (ISS+)
- M-OR-P 3163 in Australia
- M-OR-P 1640 in Colombia



**2013**

- M-OR-P 1640 in Ecuador
- Production capacity: 11,000 T/year



**2014**

- AENOR Environmental Management Certificate
- M-OR-P 3180 development
- Production capacity: 14,000 T/year

## Molecor factories, the most efficient production

### R+D+I and machinery manufacturing center



Getafe, Madrid

**Molecor's R+D+I facilities** are located in Getafe, Madrid, where innovative and increasingly efficient systems are being developed for the manufacture of PVC-O products applied to pressurized water transport.

The development of **technology for the manufacture of CPVC-O pipes** is one of the latest projects the company is working on.

### TOM® PVC-O pipes and ecoFITTOM® PVC-O fittings factory

**The largest PVC-O pipes and fittings production center in Spain** is located in Loeches, Madrid. It has eight **TOM® pipes** manufacturing lines and one **ecoFITTOM® fittings** manufacturing line. The facilities produce pipes of all available diameters, from DN90 to DN1200 mm at pressures from 12.5 to 25 bar and fittings from DN110 to DN400 mm at pressures of 16 bar. These products are manufactured with technology developed exclusively by the company and are exported to five continents.

**Thousands of kilometers of TOM® PVC-O pipes are already installed all over the world** in supply, irrigation, reuse, fire-fighting networks, etc.



Loeches, Madrid



2015

- **M-OR-P 1640, M-OR-P 3163 and M-OR-P 3180** in **India, Malaysia and Canada**
- Production capacity: **20,000 T/year**
- **DN800 mm**



2016

- **Factory opening in South Africa**
- **M-OR-P 1640** in **Kazakhstan**



2017

- **ecoFITTOM®** the first fittings in the world in **PVC-O**



2018

- New development: **CPVC-O pipes**
- **Molecor Peru**

## Factory of PVC and GPPF fittings



The Alovera, located in Guadalajara, center produces a wide range of **PVC** and **polypropylene fittings** with diameters between DN16 and DN315. A total of 1,300 references are manufactured to provide solutions for the **EVAC+®** and **AR® soundproofing** evacuation families, floor evacuation, gutters, PE pipe fittings and siphons. An average of **7,000 tons** of products are manufactured each year, and a project to expand the manufacturing volume to 10,000 tons/year is currently being developed.

## SANECOR® Corrugated PVC and AR® Soundproof System Factory

The Alcázar de San Juan, in Ciudad Real, production center manufactures most of the **SANECOR® corrugated PVC** pipes and systems for sewage networks, drainage pipes, **AR® soundproof systems**, foamed structured pipes, compact pipes for water drainage in buildings, the profile and downpipes of gutter systems. In total, about **20,000 tons/year** are manufactured.



## PVC-O and PVC pipe production center



The Antequera, located in Málaga, plant produces more than **15,000 tons of products per year**, including **TOM® PVC-O pipes** for pressurized water transport from DN110 to DN400 mm, smooth PVC pressure pipes from DN16 to DN630 mm, **Compact SN4 pipes** for sewage from DN110 to DN500 mm, and compact sanitary pipes from DN32 to DN200 mm



2019

- Consolidation of **ecoFITOM® fittings**
- Publication **EN 17176**



2020

- **ecoFITOM®** certification
- **TOM®: 50 years warranty**
- **MCH** incorporation
- **DN1000 mm**



2021

- **UPA Acquisition**
- Expansion of **ecoFITOM® range**



2022

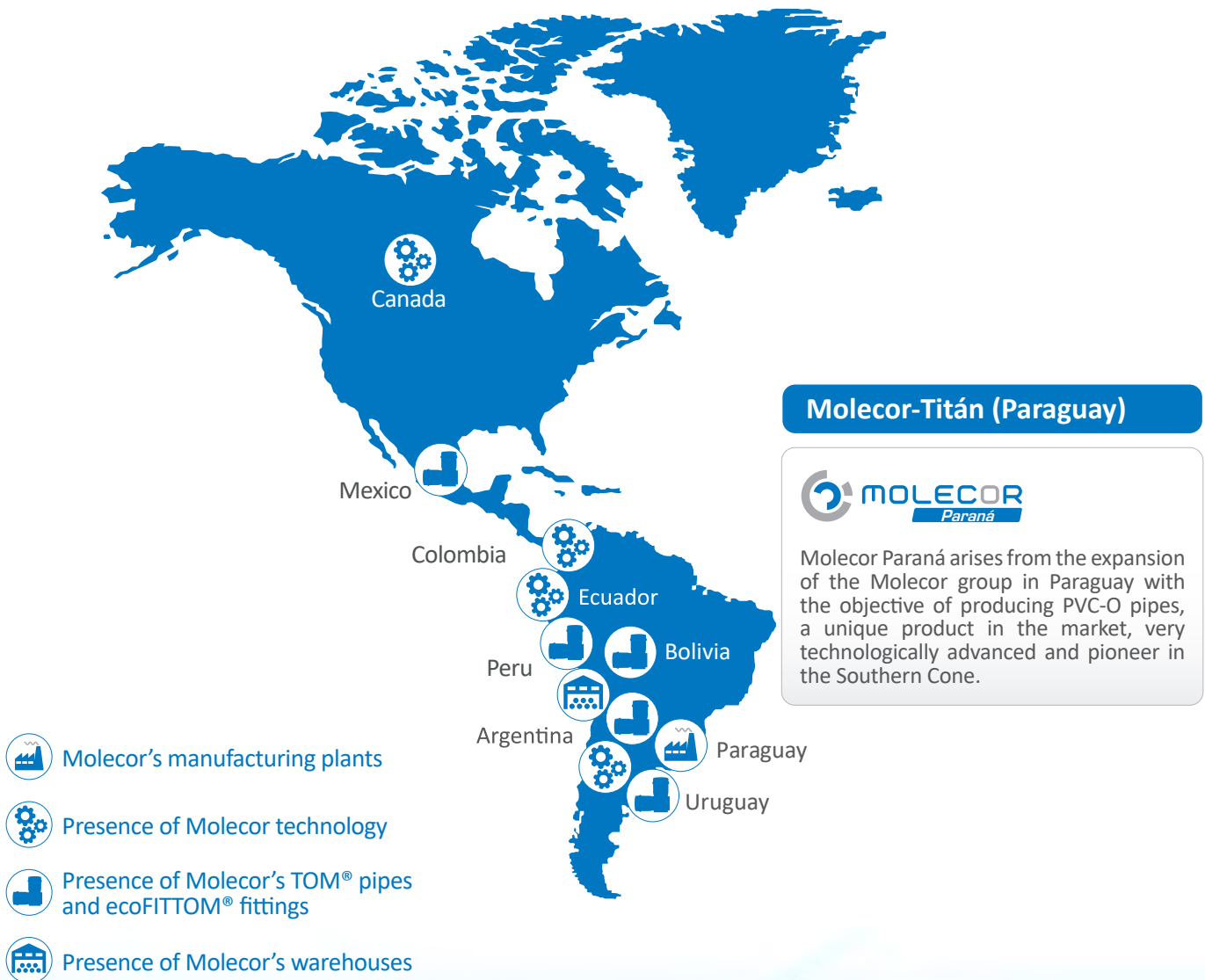
- **TOM® PVC-O pipe DN1200 mm**
- **Molecor Smart Water**



## Molecor, solutions present all over the world

Since the beginning of its activity, **Molecor** had a **clear vocation to expand outside Spain**, and achieved it with its first sale of technology in **Australia during 2008**. The company was born out of an idea: **to make water an accessible resource, ensuring a sustainable future**. This idea became **Molecor's purpose**, and to achieve it, internationalization is a key part of the company's DNA. The development of technology and its availability to the market of any country allows the creation of water networks and pipelines of superior quality in a more environmentally respectful way.

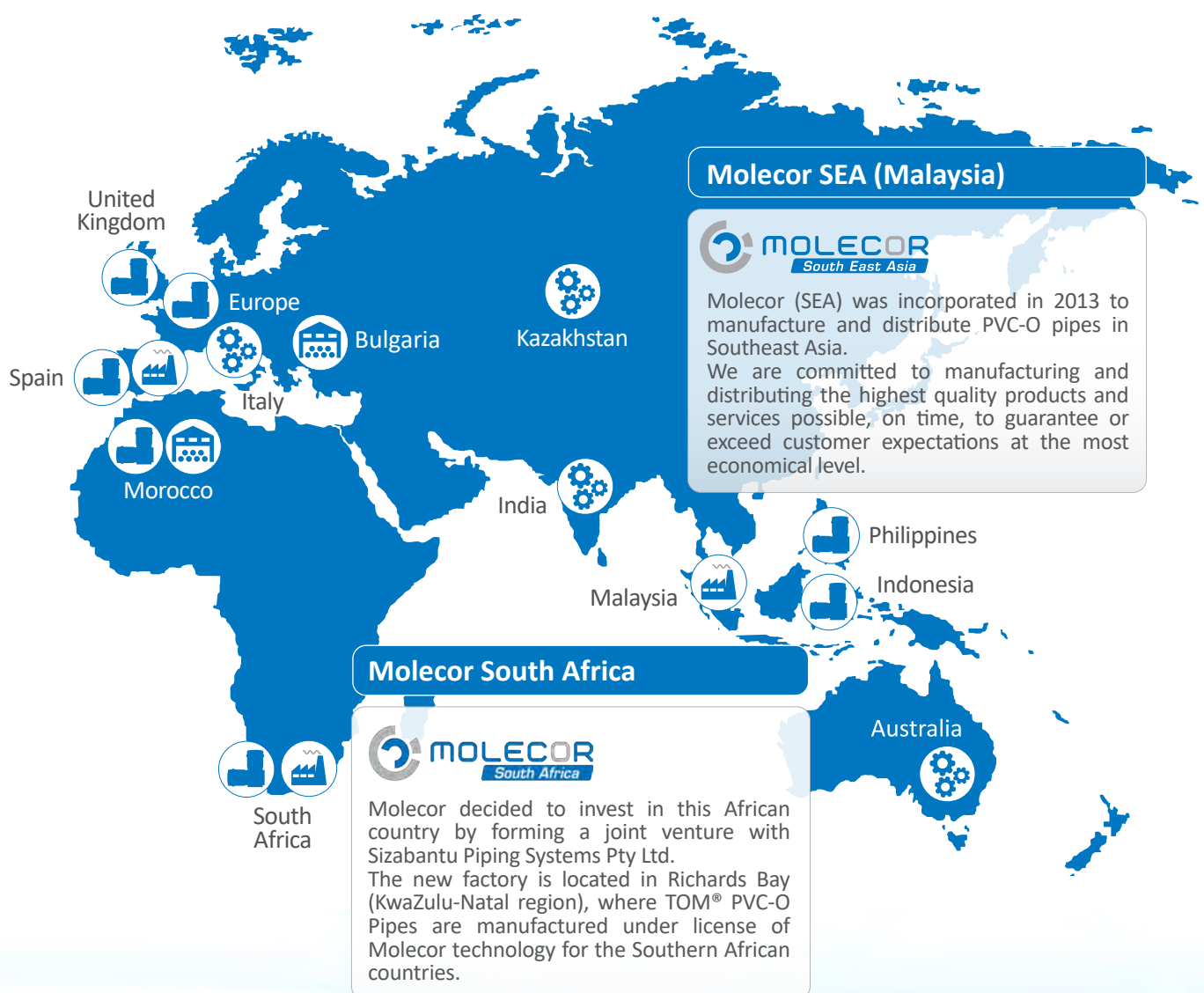
The objective of **internationalizing** the company is included in a solid and sustainable business model that is fundamentally based on the **development of markets** and the offer of a product with unbeatable characteristics for the transport of water compared to other alternatives. This market development is carried out by supplying the product, the technology and implementing production plants in several countries.



## Always expanding

**Molecor's** firm commitment to R+D+i, recognized with several PCT registered in the World Intellectual Property Organization, goes beyond the development of technology. The company has translated its technical advances into manufacturing and commercialization with new functionalities that optimize the production process, improve the customer experience and adapt to the diverse demands of the market with innovations that increase the range of products, reaching applications previously reserved for other solutions.

In 2021, our commitment to internationalization was considerably strengthened with the acquisition of the Adequa Production Unit, now **Molecor Canalizaciones**. The increase in Molecor's productive strength and the introduction of **new product ranges** has enabled us to meet greater production demands more quickly, not only in **water supply** projects, but also in **building, sewage and drainage**.



## Why Molecor



### R+D+i. The core of the company

**Molecor** is a company committed to innovation, product development and technology for its commercialization worldwide. The company is firmly devoted to **R+D+i**, an aspect in which it invests more than two million euros every year. A compromise that goes beyond the development of recognized technology with several PCTs registered at WIPO to reach agreements with the most reputable public research and development centers in Spain, such as the Center for Technological and Industrial Development and the National Innovation Company.

In addition, as part of the R+D+i process, we monitor all of our clients' technological projects to provide them with competitive strengths and **new strategic opportunities** in the water pipes market.

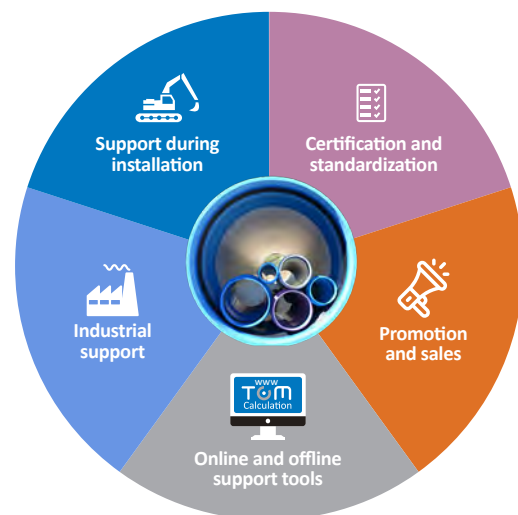


### Know-how. Support in all areas

The company's efforts in R+D+i, as well as its dedication to the creation of water piping networks, have provided us with a **complete knowledge of the sector** to be able to provide support in all phases of manufacturing and installation of the product in supply, building, sewage and drainage projects.

Thanks to this knowledge and development, **Molecor** offers the widest range of **PVC-O** pipes and fittings on the market in a wide variety of nominal pressures. In addition to a broad catalog of products manufactured in **PVC** and **PP**.

In addition, as an added value, multiple digital tools are offered to facilitate installation calculations or to geolocate canalization projects. Thanks to these programs and applications, the performance of water networks is optimized and ensures efficient, accurate and simple maintenance.



**TOM® Calculation**  
Mechanical calculation  
online tool



**SANECOR® Configurator**  
Manhole configuration  
online tool



**geoTOM®**  
App for geolocation and  
digitalisation of networks



### 4.0 Technology. Oriented differentiation



Thanks to the **MindSphere** operating system, developed by **Siemens** and based on The Cloud, **Molecor** is able to monitor critical variables of the state of its lines in real time, avoiding, at the same time, possible punctual problems that could arise and reducing additional costs. With this technology, predictive and preventive learning and maintenance are enhanced, exponentially increasing production. The **optimization of the value chain through the adoption of new technologies is a differentiating feature** that increases **Molecor's** competitiveness.

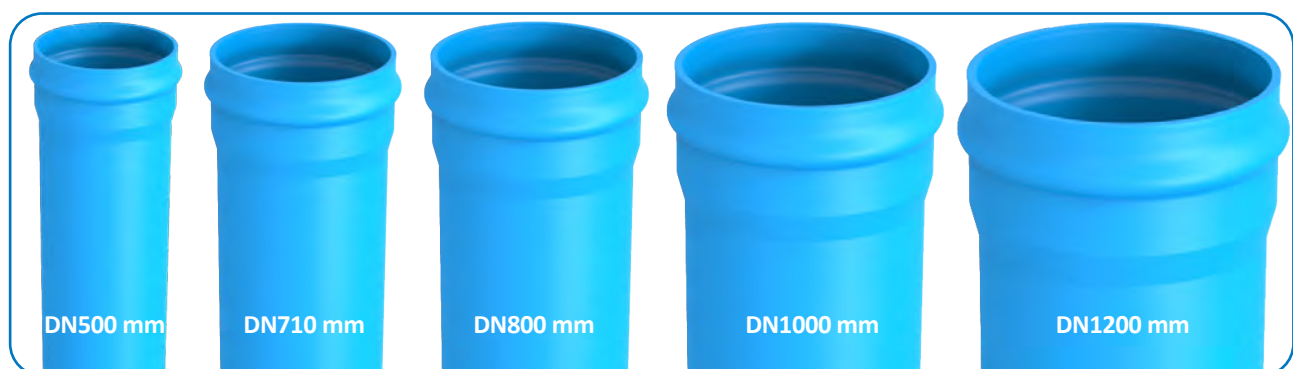


## Value-added products.

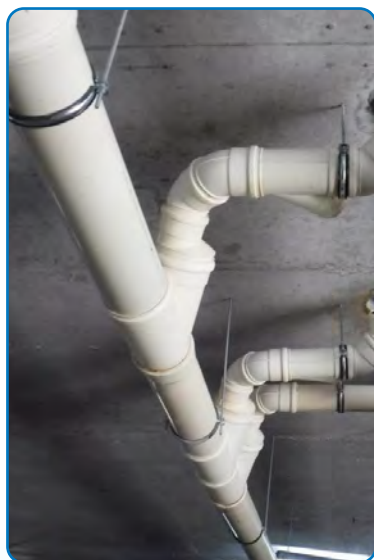
### Unique technology and products worldwide

**Molecor** offers a wide range of products for any piping project that includes a selection of exceptional items with differentiating characteristics that **bring added value to water conduction networks**.

**Molecor's TOM® oriented PVC pipes** are the only ones in the world that are manufactured with a **Genuine Air System**, developed exclusively by the company itself. This **Molecular Orientation System** provides them with outstanding characteristics compared to other materials and makes it possible to manufacture pipes of diameters such as **DN500 mm, DN630 mm, DN710 mm, DN800 mm**, and now up to **DN1200 mm**, diameters that have been turning points in the sector.



**ecoFITOM®**, the exclusive range of **PVC-O fittings on the market**, adopts the hydraulic and mechanical characteristics of TOM® pipes to socketed bends, reducers and couplers to offer an integrative solution in water networks that replaces traditional fittings for nominal diameters between 110 and 400 mm with nominal pressures of 16 bar.



**AR® soundproof evacuation system** allow the construction of silent structures for building projects. The **three-layer PVC** that makes up this line has unique advantages that, among others, include the reduction of acoustic levels and the best possible protection against fire that a plastic can achieve.

**SANECOR® manholes** offer a reliable and versatile solution by using **corrugated PVC** to create strong, easy-to-install manholes. In addition, their design and materials allow the possibility of creating complex structures and adding extra service connections.

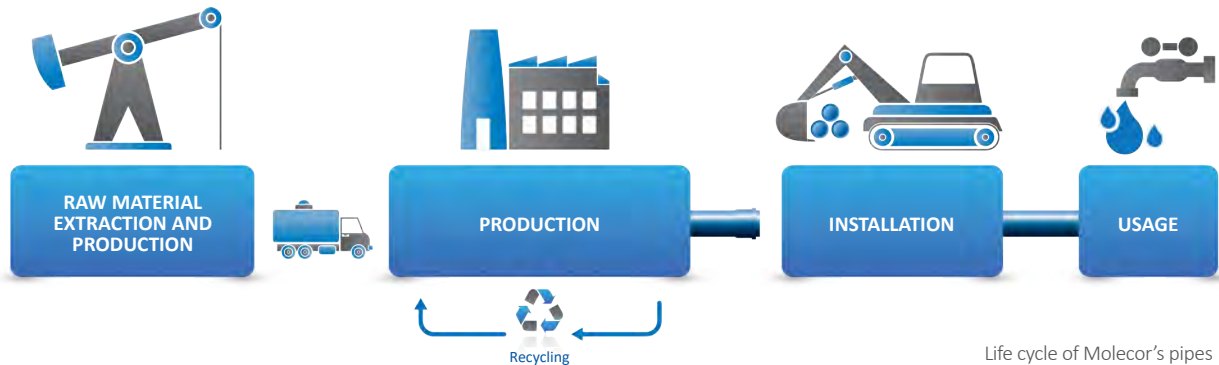


## International recognition. Exclusive dedication

Throughout its history, **Molecor** has received **multiple awards** that have contributed to consolidate its presence and worldwide leadership as a **company specialized in the manufacture of pipes and fittings for water canalization and the development of technology for the molecular orientation of PVC**. Among the most important awards **Molecor** has received are:



## Sustainability. The most eco-efficient pipes and fittings



The environmental impact of a piping system depends on its composition and application. The **type of raw material** used, the **production process**, the **finishing** of the product, and its **useful life** are the main factors that determine the efficiency and sustainability during the whole life cycle.

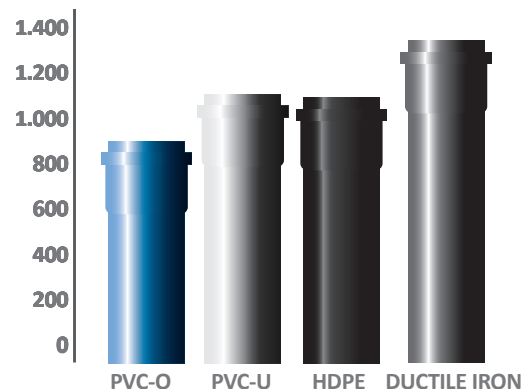
As shown by different studies worldwide, **Molecor** products are the **most ecological solution**, as they are the ones that best contribute to the correct sustainable development of the planet and also present environmental advantages in all phases of their life cycle.

### Efficiency in natural resources

**Polyvinyl Chloride** or **PVC** is a thermoplastic made by polymerizing the monomer Vinyl Chloride, which in turn is obtained from common salt (57%) and petroleum (43%). Its composition makes it a **more sustainable plastic**, since it is less dependent on petroleum than other options.

Moreover, as it is a very resistant plastic, products made of PVC have a **very long useful life**, up to 50 years, and **more than 100 years in the case of oriented PVC**. This, when combined with the extraction of the raw material and its manufacture, results in the solution with the lowest energy consumption during its life cycle.

Pumping energy consumed in 50 years (kWh)



"Estimate of energy consumption and CO<sub>2</sub> emissions associated with the production, use and disposal of PVC, HDPE, PP, cast iron and concrete". Department of Engineering Projects. Universitat Politècnica de Catalunya.

### Efficiency in waste management

**PVC is a 100% recyclable** material that can be reused to manufacture new pipes or other plastic applications with new technical requirements, **without losing its original properties**.





## Efficiency in production

**Molecor's factories** highlight in their **Quality Policy** and firm commitment to environmental protection through an efficient management that prevents pollution and promotes an increasingly sustainable development. To this end, **Molecor** has an **Integrated Quality and Environmental System** according to **ISO 14001:2015**, **certified by AENOR**, and complies with national pollution regulations through the maintenance of equipment and the control of emissions into the atmosphere through OCA bodies.

Likewise, as part of Molecor's responsibility in waste management during production, the factories are adhered to the **Operation Clean Sweep (OCS)** program, a global and voluntary initiative of the plastics industry to reduce the loss of primary microplastics in any of its forms: pellets, flakes or powder, to the environment.



## Commitment to a sustainable future

As part of **Molecor's** project to create a more sustainable future are the actions to help achieve the **Sustainable Development Goals proposed by the United Nations**.

Due to the very nature of the company and its products, the main objective is **SDG 6** "Ensure availability and sustainable management of water and sanitation for all". The company's activity revolves around two main axes: the development and manufacture of increasingly efficient production systems, and the manufacture of PVC pipes and fittings, with the goal of building safer and more sustainable water networks that can supply the entire world.

But this is not the only objective that is part of **Molecor's** activity. The company also participates in the achievement of SDGs 7, 9, 11, 12, 13, 14, 15 and 17.



# TOM® The most sustainable tube for pressurized pipelines



## Best contribution to sustainability

**TOM®** is the most sustainable PVC-O pipe on the market, an achievement reached thanks to the fact that in its design environmental preservation was taken into account and aspects such as **energy saving, the sustainable use of natural resources, the durability of the construction works and the environmental friendliness of the materials used** were considered.

As an avant-garde company, **Molecor** follows the latest common calculation methodology of **Recommendation 179/2013/EC proposed by the European Commission for the study of the Environmental Product Footprint**. The company has assessed the environmental impact of the **TOM® pipe** at all stages of its life cycle from cradle to grave, i.e. from the extraction of the raw material to the final disposal of the product, including the manufacture, distribution and use of the pipes.

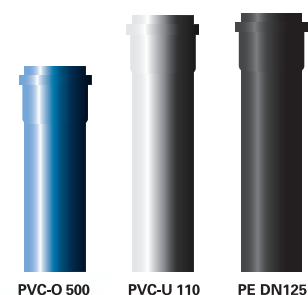
Environmental impacts	Absoluts	
Climate change*	8.3E+01	kg CO2e
Ozone depletion	5.3E-06	kg CFC-11e
Ecotoxicity – aquatic, fresh water	1.8E+02	CTUe
Human toxicity – cancer effects	4.8E-06	CTUe
Human toxicity - non-cancer effects	8.6E-06	CTUh
Particulate Matter / Respiratory Inorganics	1.3E-02	kg PM2.5e
Ionising radiation – human health effects	5.3E+00	kg U235e
Photochemical ozone formation	4.1E-01	kg NMVOC
Acidification	4.1E-01	mol H+e
Eutrophication - terrestrial	1.0E+00	mol Ne
Eutrophication – aquatic, fresh water	1.6E-03	kg Pe
Eutrophication – aquatic, sea water	9.5E-02	kg Ne
Resource depletion – water	1.9E-01	m³ SWU
Resource depletion – mineral, fossil	3.8E-03	kg Sbe
Land transformation	1.6E+02	kg Cdef

TOM® PVC-O Class 500 pipe's Environmental Footprint according to 179/2013/CE

The best known environmental parameter is the **Carbon Footprint**, which takes into account the emissions of greenhouse gases into the atmosphere. According to the Environmental Product Declaration (EPD), **PVC-O pipes have a lower environmental impact**, not only on global warming, but also on many other environmental parameters such as effects on human health, resource depletion or land use, among others.

**TOM® pipes** have been awarded the **FVS Environmental Footprint Seal**, promoted by the **Sustainable Life Foundation and the General Directorate for Corporate Social Responsibility of the Ministry of Employment and Social Security**.

## CO<sub>2</sub> emissions throughout the life cycle



"Estimate of energy consumption and CO<sub>2</sub> emissions associated with the production, use and disposal of PVC, HDPE, PP, cast iron and concrete". Department of Engineering Projects. Universitat Politècnica de Catalunya.





Supply

**TOM**

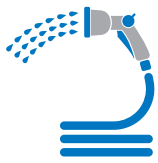
**ecoFITTON**

## PVC-O. Unique technology and products worldwide

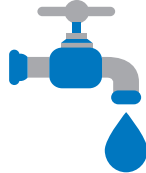
The **Genuine Air System**, a technology exclusively developed by **Molecor**, enables the company to manufacture a **wide variety of PVC-O unique products worldwide**. The offer includes **TOM®** pipes in a wide range of diameters and nominal pressures and **ecoFITTON®** fittings with various designs and functions to facilitate the creation of more efficient piping networks.



The Molecular Orientation process modifies the structure of PVC by arranging the polymer molecules in line.



**Irrigation**



**Supply**



**Reuse**



**Industrial applications**



**Fire-fighting networks**



The **Molecular Orientation** process dramatically improves the physical and mechanical properties of PVC, provides it with exceptional characteristics, without altering the advantages and chemical properties of the original polymer. The result is a plastic with **unsurpassed tensile and fatigue strength, ductility and impact resistance**.

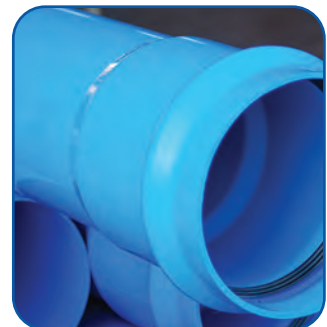






It is becoming increasingly common for **TOM® PVC-O pipes** and **ecoFIT TOM® PVC-O fittings** to be the product of choice for piping projects, thanks to the wide range of advantages they offer for all those involved in the sector, from the contractor to the end user:

- **Unsurpassed impact resistance.** The high impact resistance reduces breakage during installation or on-site testing and prevents the propagation of cracks.
- **High hydrostatic resistance in the short and long term.** Molecor PVC-O pipes and fittings have a service life expectancy of more than 100 years.
- **Excellent water hammer resistance.** These pipes and fittings have lower celerity than other solutions, which minimizes water hammer and reduces the possibility of breaks.
- **Greater hydraulic capacity.** They have a hydraulic capacity between 15% and 40% higher than pipes made of other materials with similar external diameters.
- **Maximum ductility.** Excellent elastic behavior, which allows them to withstand large deformations of the inner diameter and immediately recover their original shape.
- **Total watertightness.** The pipes and fittings are supplied with a tested sealing gasket that includes a propylene ring and a synthetic rubber lip that are an integral part of the piece, preventing it from moving or shifting during installation.
- **Chemical resistance.** Oriented PVC is a chemically inert material, immune to corrosion and attacks by organisms present in nature, thus guaranteeing the total quality of water transported for human consumption.
- **Lightweight and easy to install.** TOM® pipes and ecoFIT TOM® fittings are lighter and easier to install than products made of other materials.



**TOM® PVC-O pipes are certified in 10 countries**



**Widest range of diameters and pressures in the world**



**Progressive increase in the manufacturing capacity of PVC-O products**

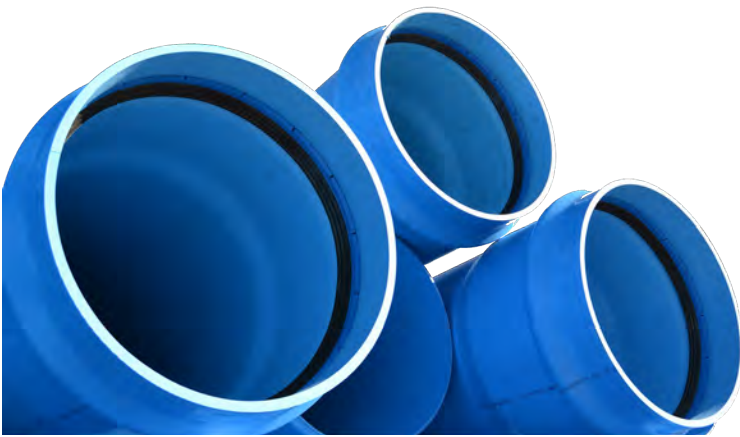


**Thousands of kilometers of PVC-O pipe manufactured with Molecor's technology**



## TOM® The best choice for pressurized water pipelines

**TOM® PVC-O pipes** are a product exclusively developed with the innovative **Molecular Orientation Technology created by Molecor**. The manufacturing process is carried out in a continuous and fully automatic way, which ensures the maximum reliability of the product and a tube by tube quality control on 100% of the production. In addition, as an added value, they have a **50-year warranty\*** to ensure the optimal performance of the pipeline networks for decades.

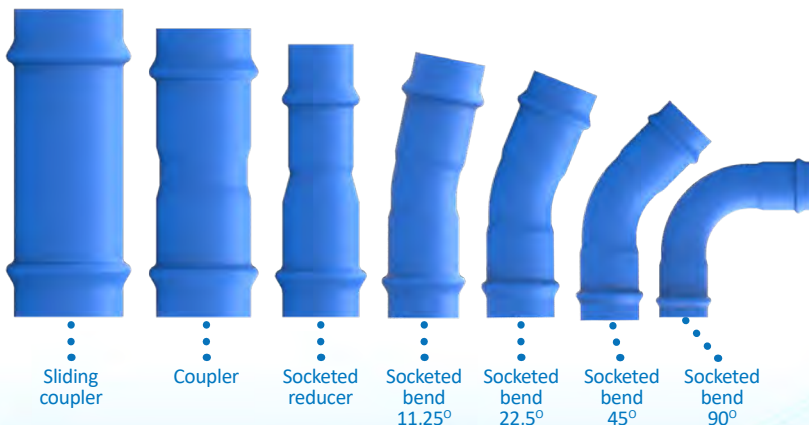


See some of the projects in which TOM® pipes have been used.



## ecoFITTOM® High technology at the service of water transport networks

For several years now, **Molecor** has been manufacturing and distributing the **world's first PVC-O fittings, ecoFITTOM®**, to offer a solution with the same hydraulic and mechanical properties as **TOM®** pipes. Moreover, these fittings are compatible with any type of PVC used in piping. **ecoFITTOM®** is currently manufactured from DN110 to DN400 mm with a nominal pressure of 16 bar, although thanks to **Molecor's** continuous R&D&i process, this range will be progressively extended.



See some of the projects in which ecoFITTOM® fittings have been used



\* Guarantee applicable exclusively to pipes manufactured at the Loeches (Madrid) production center with AENOR Product Certificate No. 001/007104 in accordance with UNE-EN 17176:2019.





TOM										
Nominal Diameter (mm)										Nominal Pressure (bar)
90	110	125	140	160	200	225	250	315	355	PN12.5 / 16 / 20 / 25
400	450	500	630	710	800	900	1000	1100	1200	



	FITTON						Nominal Pressure (bar)
	Nominal Diameter (mm)						
Socketed bend 11,25° / 22,5°/ 45° / 90°	110	125	140	160	200	PN16	
	225	250	315	400*			
Socketed reducer	110/90	125/110	140/110	160/110	160/140	200/160	PN16
	225/160	225/200	250/200	315/250	400/315		
Coupler	110	125	140	160	200	PN16	
	225	250	315	400			
Sliding coupler	110	125	140	160	200	PN16	
	225	250	315	400			



50 years warranty\*  
for TOM® pipes

\* Socketed bend 90° DN400 mm available under request

## Smooth PVC pressure system

### Efficient piping

As part of the product offer for infrastructure, **MolecOR** also includes a range of **smooth PVC pipes** with nominal diameters from 16 mm to 630 mm, from 6 to 20 bar nominal pressure and two connection systems: **elastic ring joint** or **glued joint**.



## Fittings for smooth pipes

### Versatility and ease of assembly

To complete the construction of piping networks, **MolecOR** also offers various fittings made of **PE**, **FRPP** or **PVC** that provide a total sealing of the structure and **adapt to any pressure piping project**. In addition, the range of FRPP fittings with a nominal diameter between 20 and 40 mm has a **quick assembly system** that does not require disassembly of the fitting.







## AR<sup>®</sup> soundproof evacuation system Innovation without noise

**Noise pollution** is a crucial factor in determining the quality of life indicators in building projects and the best way to avoid it is the **AR<sup>®</sup> range of Soundproof Evacuation System**. A wide range of specially designed pieces for evacuation (drains, downspouts and suspended collectors) adapted to the requirements of the **Technical Building Code**. Its wide variety of pipes and fittings offers solutions for any type and part of the building.



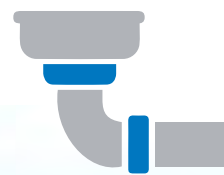
- **Soundproofing.** The design and composition of the AR System prevents noise pollution. Its silent system is certified with Aenor's N Mark for noise performance.
- **Reaction to fire.** The products have a B-s1, d0 reaction to fire classification, the best that can be granted to a plastic product, due to its special additives that prevent the propagation of flames.
- **Chemical resistance.** PVC is a chemically inert material, immune to corrosion and attacks by organisms present in nature.
- **Durability.** Three-layer PVC pipes and fittings have a tested useful life of more than 50 years.
- **Better qualities than traditional compact pipes.** The three-layer PVC pipes and fittings have a lower weight, which facilitates their transportation, and a more competitive cost than traditional PVC mixtures or other materials.
- **Recyclability.** All PVC products are 100% recyclable.



**Drains**



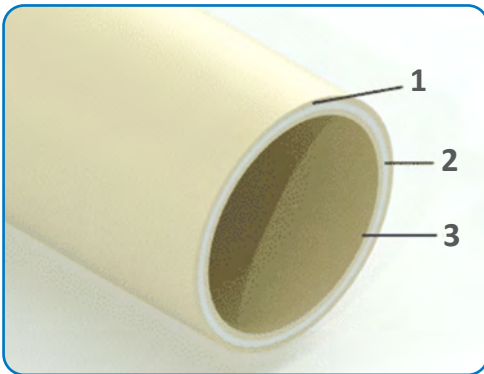
**Hanging  
collectors**



**Downspouts**



The AR® Soundproof Evacuation System have a three-layer technology that provides the pipes with qualities tested by our R+D+I department that surpass traditional compact pipes. Its structure is composed of:



1. **Outer layer:** in PVC with special additives, designed to withstand adverse mechanical actions without any additional protection.
2. **Intermediate layer:** in PVC with high density mineral charge, which provides an unbeatable acoustic insulation of the pipe.
3. **Inner layer:** in additivated PVC, specially designed to withstand high temperatures and abrasive substances. In addition, it gives the inner surface an extremely smooth surface to avoid adhesions.

## Solutions for floor evacuation

### Designs that resist

**Molecor's** floor drainage solutions offer complete and innovative systems **for indoors and outdoors**. The catalog includes manholes, troughs, sumps and drains made of PVC enhanced with polypropylene, stainless steel or cast iron parts, depending on the part and model.

The range of pieces presents a studied design to achieve the highest performance, durability and resistance, as well as a modern and functional aesthetics. They are suitable for use in pedestrian areas, gardens, terraces, patios, garages, saunas, gyms, swimming pools, commercial areas, sports facilities, etc.



- **All drains and cesspits are siphonic**, preventing unpleasant odors from escaping to the outside.
- **Manholes are pre-marked** with the entrances of the downpipes.
- **Gutters are tongue and groove**, can be cut and joined together with PVC adhesives.
- All products are **treated to protect against UV radiation**.
- **Total watertightness** on all floor drainage parts without the need for coatings.







Building

**EVAC+** 

## EVAC+® evacuation system All possible solutions

**Molecor** combines experience and innovation to offer a wide range of evacuation pipes and fittings that meet **all the necessary requirements for any construction site**. In addition, as an added value, it provides **greater safety and fire protection** compared to other non-certified pipes.

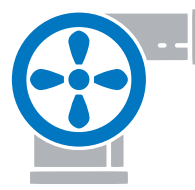
The **EVAC+® system** is used in the evacuation of wastewater for domestic use, at low and high temperatures, ventilation ducts associated with the above and rainwater channeling inside the building structure, among other multiple uses.



Stormwater



Wastewater



Ventilation

- **Wide range of products:** EVAC+® evacuation systems have components for all types of building works and the possibility of creating special solutions for complex installations.
- **Fire resistance:** The pieces have a reaction to fire classification B-s1, d0, the best that can be granted to a plastic product, due to its special additives that prevent the propagation of flames
- **Corrosion immunity:** PVC is a chemically inert material, resistant to the attacks of organisms present in nature.
- **Quality certification:** The EVAC+ product range is certified by AENOR's UNE EN 1453 and 1329 certificates and fully complies with the Technical Building Code.







## Gutter system. A solution for any style

Our range of gutters allows the creation of structures that adapt to the aesthetics of any type of facade with maximum efficiency for rainwater drainage in four different models: **Plunia gutter, double volute circular, single volute circular and trapezoidal.**

Among the different options, the innovative **Plunia** model stands out, a gutter with a semicircular interior geometry that provides a large hydraulic capacity and a fast drainage speed, while its straight front part provides a larger opening and better water collection. In addition, the fittings are equipped with an innovative clip locking system, which increases the safety of the connection between the profile and the fitting.

- **Optimal hydraulic capacity** to capture and convey even the highest volumes of rainwater.
- **UV protection** to extend the service life and maintain the color of the gutter for decades.
- **Resistance to thermal shocks.** PVC offers high resistance to the thermal changes to which it is exposed in outdoor installations.
- **Diversity of designs and colors.** There is a solution for any type of building.



## Siphons. Experience and reliability

To complete the evacuation systems, **Molecor's** range of siphons allows the hydraulic closing of the installation with a wide offer that includes extensions, connections and accessories. The siphons prevent the entry of gases or odors from the pipes and can be used in the drains of toilets, bathtubs, bidets, showers and sinks or for the evacuation of used water.



**White range of valves,** siphons and accessories made of PP polypropylene, **chrome-plated range** (made of chrome-plated ABS) and **chrome-plated brass range** for application in exposed installations and designer sinks (glass sinks, stainless steel, etc.)

- All siphons have a **register system** to facilitate cleaning and maintenance.
- Siphons and valves with DN40 mm outlet include a **reduction joint** to DN32 mm.
- **Decades of proven efficiency** in the market.



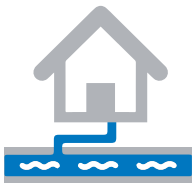
## **SANECOR® corrugated PVC systems**

### **Maximum efficiency in sanitation**

The development of sewage facilities must be able to meet the **performance, health and environmental protection** standards demanded by today's society while preserving the maximum available resources for future generations. **SANECOR® corrugated PVC** combines the advantages of plastic materials with a solid and resistant structure without increasing the cost of the product.



**SANECOR® pipes** consist of a **double-layer structured wall, smooth inside and corrugated outside**, in nominal diameters between DN160 mm and DN1200 mm. They are designed for use in urban sewage networks, sewage collectors and, in general, pipelines carrying acid or alkaline solutions.



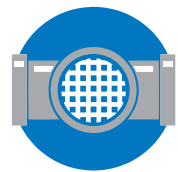
**Urban  
sewerage**



**Wastewater**



**Industrial  
applications**



**Drainages**





More than 55,000 km of **SANECOR® pipes** have already been installed worldwide for sanitation projects. The reason for this is the wide range of advantages offered by the product's characteristic corrugated PVC:

- **Rigidity with a touch of ductility:** Corrugated PVC pipes are able to withstand heavy loads without deformation thanks to their design, but in addition, they allow some ductility to transmit stresses to the trench backfill and thereby increasing their strength and adaptability.
- **Chemical resistance:** PVC is an exceptional material for the transport of wastewater due to its immunity to corrosion and its better performance against grease, oil or fuel.
- **Abrasion resistance:** The low internal roughness values of PVC pipes offer great resistance to the constant dragging of solid particles by the effluent.
- **Total watertightness:** Pipes, fittings and manholes are joined by means of an elastomeric gasket system that takes advantage of the corrugated design to offer absolute watertightness.
- **Durability:** Corrugated PVC pipes and fittings have a tested service life of over 50 years.
- **Greater hydraulic capacity:** They have a greater hydraulic capacity than pipes made of other materials with similar external diameters.
- **Reduces the creation of deposits and incrustations:** The lack of porosity of the internal surface and the higher water velocity avoid the creation of deposits of solid materials that cause obstructions.
- **Lightweight and easy to install:** SANECOR® pipes, manholes and fittings are lighter and easier to install than products made of other materials.







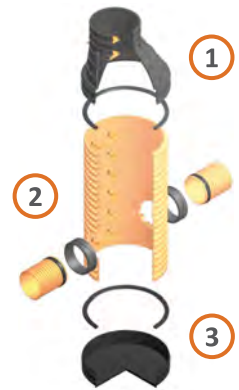
## SANECOR® corrugated PVC manholes

### Control and safety in sewage

Traditionally, manholes have been made of materials such as reinforced concrete or brick masonry, but as with pipes, **corrugated PVC** has proven to offer a much better solution. The **SANECOR®** design ensures **optimum mechanical performance and excellent watertightness** for the network while at the same time greatly reducing costs. It has more than 12 years of experience and hundreds of installations throughout Spain. **SANECOR® manholes** have a range of diameters between 600 and 1200 mm with a height between 1.5 and 9m. The connections of the collector or possible connections to the manhole body are made by means of elastomeric joints.

The manhole consists of three parts:

- 1. Access to the manhole:** Highly rigid conical piece that reduces the diameter of the manhole to the diameter of the register (600 mm).
- 2. Shaft or manhole body:** Its high stiffness does not require concrete reinforcement and includes factory-installed access steps.
- 3. Well bottom:** The pipes enter directly into the well body through elastomeric joints that, taking advantage of the great thickness of the corrugated wall, guarantee a total watertightness.



## SANECOR® corrugated PVC fittings

### The widest range of shapes and designs

In any sewerage network it is desirable that all components have similar characteristics to maintain the mechanical stability of the system, guarantee watertightness and facilitate maintenance. For this reason, the **SANECOR®** catalogue includes a wide variety of special PVC parts including: sockets, elbows (30°, 45° and 90°), branches (45° and 90°), extensions, plugs, graft connections and elastomeric or mechanical clips. All fittings are made up to DN1200 diameter and are composed of two series: **SN4 smooth series** for pieces up to DN630 and **SN8 corrugated series** up to DN1200. In addition, it is also possible to make custom-made parts on request.



## Compact SN4 smooth PVC system

### The most versatile solution

**Molecor** also has in its catalog an offer of **smooth PVC pipes for sewage and drainage**, the **Compact SN4** range. It is a totally watertight, reliable and durable system with a high hydraulic capacity and sustainable design, since it is 100% recyclable. It also has the AENOR UNE-EN 1401 quality certificate.

**Compact SN4** is a pipe with an elastic joint, as in pressurized water pipes. It is manufactured in nominal diameters from 110 to 500 mm and its main applications are urban sewerage networks, sewage or rainwater collectors, pipes for building evacuation, drainage and industrial piping. The main advantages of the Compact SN4 pipe are:



- **High chemical and abrasion resistance:** PVC is a chemically inert material, immune to corrosion, and with a low internal roughness that allows it to resist the abrasion produced by the transported contents.
- **High hydraulic capacity:** They have a higher hydraulic capacity compared to pipes made of other materials with similar external diameters.
- **Wide range of fittings:** Uniform solutions for networks with all types of designs.
- **Total watertightness:** No need for coatings thanks to its integrated elastic gasket.

## PVC drainage systems. Rigidity and durability

To complete the offer of PVC solutions, Molecor has **slotted systems for drainage**. These pipes are used for **surface and deep drainage** (over 4m), as well as drainage of roads (highways, railroads, airports), walls and dams, tunnels, landfills, agriculture, ponds, buildings, sports facilities and other applications. They stand out for their:

- **High resistance** to crushing loads
- **Resistance to corrosion** and chemical attack from aggressive soils
- **Smooth inner wall** for optimized hydraulic capacity
- **High watertightness** thanks to its elastic seal
- **Three types of grooving** to adapt to each project (2, 4 and 5 grooves)
- **Sustainability** due to its 100% recyclable material







## Technology

# Molecor System. Redefines technology with air

Molecor developed in 2007 a unique and **Genuine Air Based System**, an evolved technology that manufactures **Oriented PVC-O pipes** in line with the extruder to ensure maximum product quality.

This system makes it possible to manufacture **PVC-O pipes** using air, instead of water, during the entire orientation process, which is a turning point with the systems existing up to date.

Molecor's Air Based System **increases speed, improves energy efficiency and eliminates intermediate stock** to become a system that **works continuously** at the same speed as conventional PVC extrusion lines.

This use of air instead of water provides the system with a number of advantages over other manufacturing systems:

### Safety



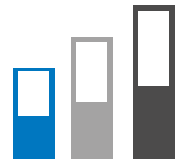
### Versatility



### Productivity



### Profitability



## Safety

- Clean air system that prevents boiling water leaks.
- Tube to tube quality control.
- Preventive maintenance follow-up and advice.
- Closed orientation environment (mold).
- Continuous but disconnected extrusion and orientation to prevent propagation of possible failures.
- Remote control assistance from Molecor's offices.







## Versatility

- Structured process development to offer tailor-made solutions on customer's request.
- Fast diameter changeover. While the extruder is running, adjustments can be applied to Molecor technology and vice versa.
- Compatible with standard PVC extrusion systems.

## Productivity

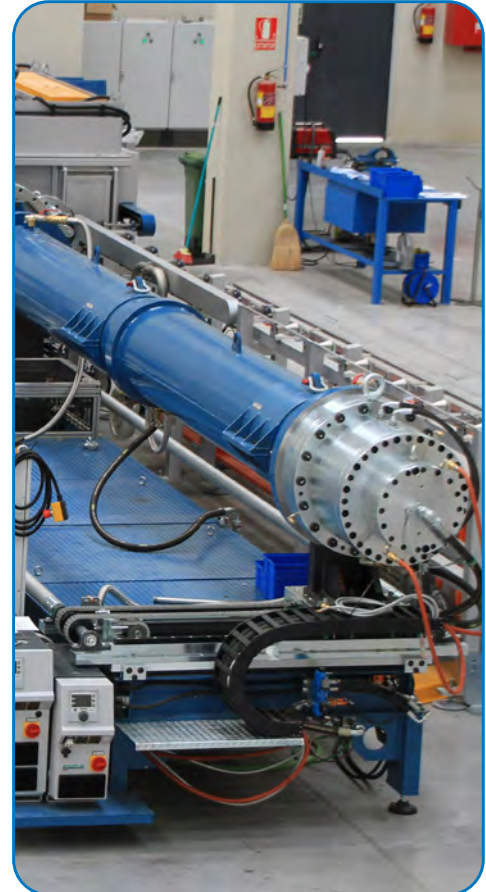
- In-line operation at the same speed as the extruder.
- No intermediate stocks.
- Machine start-up in less than one hour.
- Standard factory layout, even for large diameters.
- Intuitive system with low learning curve.
- Parameter loading via recipe.

## Profitability

- Electricity consumption similar to that of a conventional extrusion line.
- Use of reprocessed material.
- Automatic system with minimum manpower required.
- Energy applied only in the pipe by means of specific air distribution.
- Optimization of the use of raw material for pipe manufacturing.

*The technology developed by Molecor meets the requirements of different international standards. Moreover, those projects in whose country there is no local PVC-O standard are supported during the certification and standardization process when required.*

*Quality equipment: the product complies with safety, health and environmental requirements of the EU as well as with the CE mark on the product.*



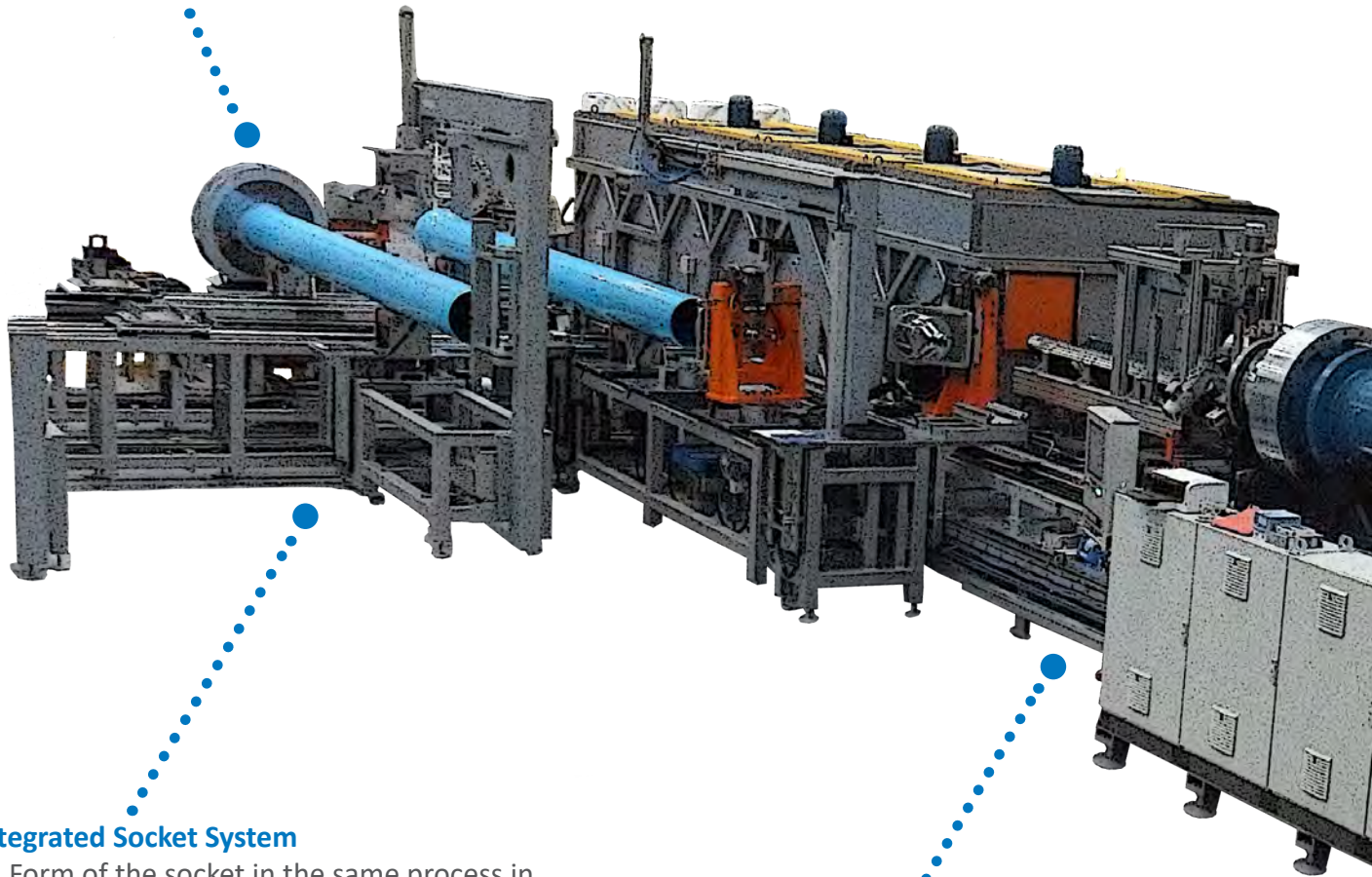


## Technology

# Molecor System. Technology to manufacture the largest PVC-O pipe in the world

### Integrated Seal System (ISS+)

Automatic positioning of the gasket and form of the socket



### Integrated Socket System

Form of the socket in the same process in which orientation takes place

### 100% automatic System. Receipt System

Low learning curve



**The widest range of products**

From DN90 mm up to DN1200 mm in nominal pressures up to 25 bar.

**Genuine Air Based System**

Efficiency, cleanliness, security, easy maintenance, etc.

**The highest degree of orientation**

Class 500 PVC-O pipes with the best mechanical properties and the maximum raw materials savings





## Project references. Case studies

The **experience** and **quality** of **Molecor's** products have led to the successful completion of many different canalization projects around the world. The improved characteristics of **PVC-O** and the company's services have been an optimal choice for the construction of water pipeline networks for years.



### Installation of large diameter pipeline network

**Kolabura, Serbia 2022**

Infrastructure

For the water management of the Radljevo-Server coal mine, large-diameter pipes with high strength and ease of installation were required. For this reason, more than 4 km of TOM® DN1000 mm pipes were used, the only PVC-O pipe of this diameter in the world.



### Sewage system modernization project

**Madrid, Spain 2022**

Sewage and drainage

The Caleido Tower in Madrid's business center chose SANECOR® corrugated PVC system for the creation of its subterranean sanitation system. More than 1,200 meters of SANECOR® pipes and fittings were installed for the creation of this building focused on sustainable and modern design.



### Installation of a residential evacuation network

**Nantes, France 2022**

Building

A new 102-unit residential complex used the AR® soundproofing system to build a silent evacuation network that meets today's quality standards. Piping, fittings and multi-connector grafts were used to create uniform and completely silent networks.



### Creation of drinking water and sewerage services

**Piura, Peru 2020**

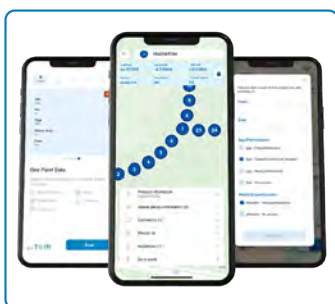
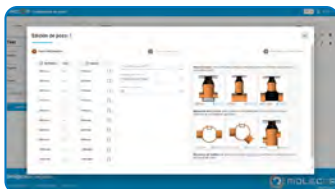
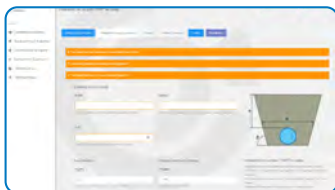
Supply and distribution

Piping network for the creation of drinking water service in four populated centers in the district of Paita. TOM® pipes and more than 180 ecoFITOM® oriented PVC fittings were used due to their excellent physical-mechanical characteristics, ease of installation and continuity of the network.

For more site references visit [www.molecor.com](http://www.molecor.com)

## Molecor Tools. Exclusive value

Molecor's work to improve the quality of water piping networks includes not only the creation of high quality products, but also providing services that help the customer in the process of creating the system. For this reason, Molecor has developed **exclusive tools** to facilitate the **planning** and **maintenance** of pipeline networks.



### TOM® Mechanical Calculation Program

**Tomcalculation** is a mechanical calculation online service for **TOM® oriented PVC pipes** that allows to perform all calculations prior to the installation design. It is only necessary to provide the project information to obtain the different forces and stresses that the pipe will support, as well as its safety coefficients to breakage and crushing.

Available via web browser. Visit [www.tomcalculation.com](http://www.tomcalculation.com)

### SANECOR® manhole configurator

It is a very useful tool to select the **SANECOR® manholes** that best fit the characteristics and conditions of each project or work. Through the web it is possible to obtain all the necessary information about the manhole: prices, components, sketches in pdf and dwg, work unit, technical documentation and catalogues.

Available via web browser. Visit [www.sanecorconfigurator.com](http://www.sanecorconfigurator.com)

### geoTOM® app

App developed by **Molecor** to create complete virtual layouts and geolocate each of the pieces of a water canalization network. Get full traceability of the entire range of **TOM® pipes** and **ecoFITOM® fittings** by reading the QR code of the piece or manually add products from other manufacturers.

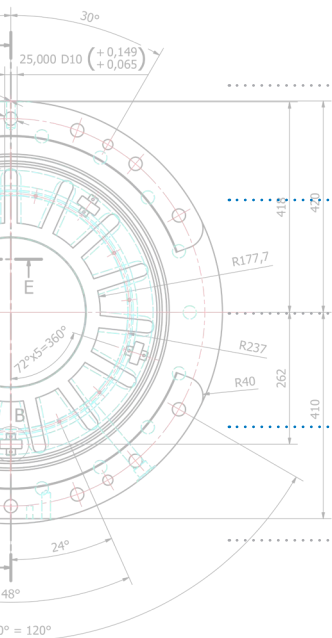
Available on IOS and Android.

### Technical Manual for Network Design and Use

Manual that gathers the exclusive technology applied for the production and properties of **TOM® pipes** and **ecoFITOM® fittings in PVC-O**. It includes range, characteristics, advantages, fields of application, suitability for use and sustainability. It also offers a wide range of practical cases of mechanical and hydraulic calculations, to help design water networks.

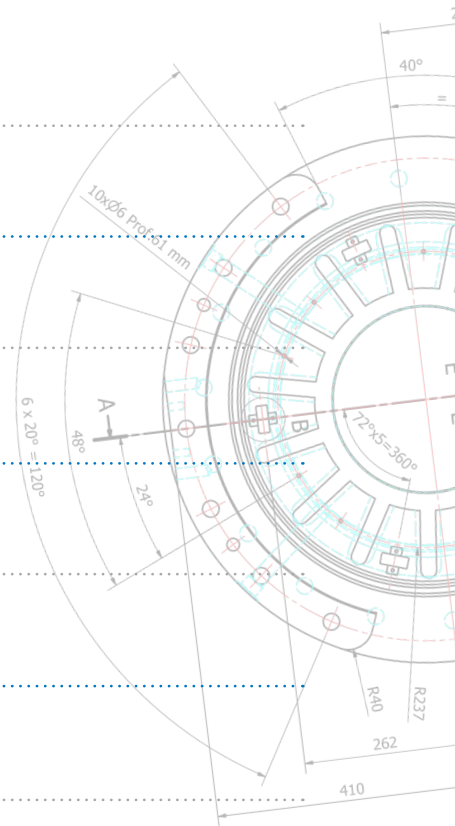
Download it at [www.molecor.com](http://www.molecor.com)

## Notes

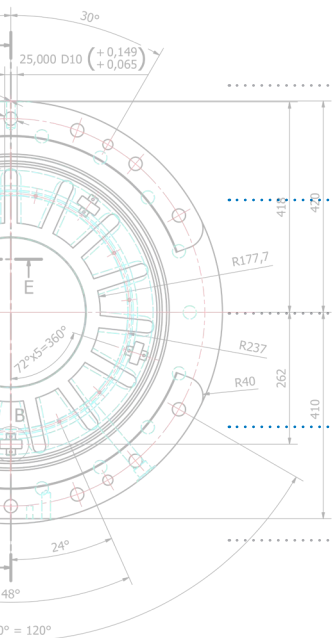




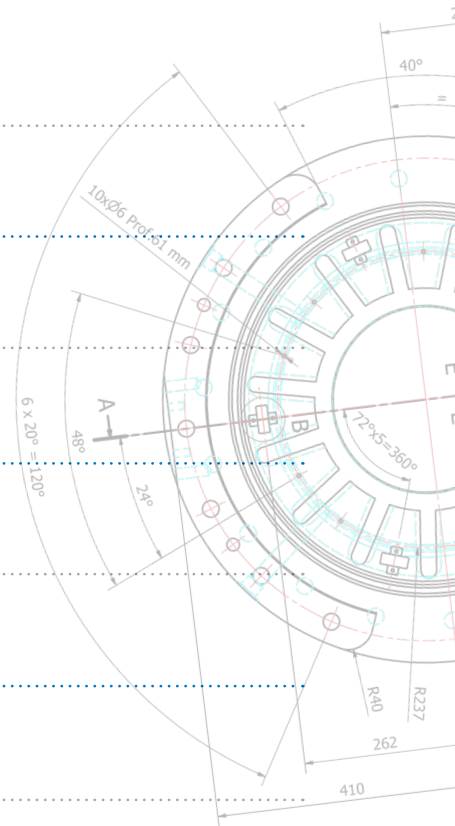
## Notes



## Notes

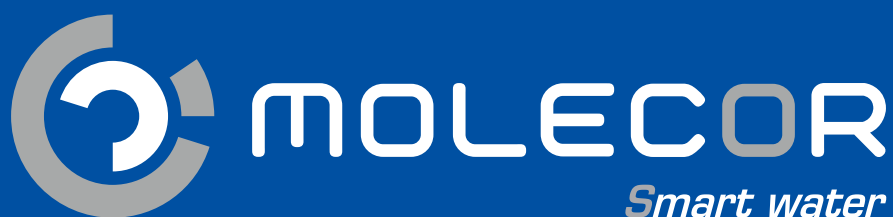


## Notes



The drawings, illustrations, technical characteristics, as well as the data grid and figures included in this document are not contractual. Molecor Tecnología, S.L. reserves the right to modify for their continuous improvement and without notice any of the characteristics of their products according to new manufacturing technologies and the legislation in force.





Experience



Quality



Differentiated  
and innovative  
products



Range



Technical and  
commercial support

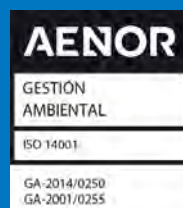


Logistics  
service



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