



Master-seal

Modular sealing system for pipe and cable penetrations

Drykos® **Master-seal** is a modular mechanical sealing system designed for the watertight sealing of pipe, cable, and conduit penetrations passing through walls, floor slabs, wall sleeves, or core-drilled holes in concrete structures. The system consists of a modular chain formed by individual sealing modules, each composed of an EPDM rubber elastomeric element, reinforced polyamide pressure plates, and bolts with tightening nuts, available in V2A stainless steel or galvanized versions depending on the model.

The operating principle is based on the controlled compression of the elastomeric elements: the progressive tightening of the bolts generates the radial expansion of the rubber, which compresses simultaneously against the inner wall of the hole or sleeve and against the outer surface of the pipe or cable, creating a continuous, stable seal resistant to water pressure.

Drykos® **Master-seal** is particularly suitable for both new constructions and retrofit interventions on existing penetrations, thanks to the possibility of installing the chain even around pipes that have already been laid.

CHARACTERISTICS

Main characteristics

- Modular system adaptable to various pipe/hole diameter combinations
- Watertight mechanical seal without the use of additional sealants
- Applicable even on pipes already installed
- Controlled tightening using a torque wrench
- High-elasticity EPDM rubber sealing elements
- Reinforced polyamide pressure plates
- Bolts and nuts available in stainless steel or galvanized versions
- Simple, adjustable, and inspectable installation
- Possibility of inspection and re-tightening after the initial settling phase

Fields of use

- Water, sewage, and utility pipe penetrations
- Cable and technical conduit passages
- Retaining walls and underground structures
- Technical rooms, utility compartments, and technological plants
- Tanks, reservoirs, and hydraulic works
- Civil, industrial, and infrastructural plants
- New construction and retrofit interventions
- Mechanical sealing of core-drilled holes and wall sleeves
- Suitable for hydraulic pressures up to 3 bar



SPECIFICHE TECNICHE

Color

Red.

Appearance

Modular chain.

Shelf life

The product has no storage limitations if correctly stored.

Storage conditions

Store in the original intact packaging, in a dry, clean environment protected from direct sunlight. Avoid storage near heat sources, aggressive chemicals, or conditions that could damage the elastomeric elements and tightening parts.

APPLICATION DATA

Theoretical consumption

1 piece for each penetration to be sealed.

Application temperature

Minimum +5 °C | Maximum +35 °C

APPLICATION INFO

Substrate preparation

Before installing Drykos® **Master-seal**, it is necessary to verify that the core-drilled hole, the wall sleeve, or the penetration conduit is correctly sized relative to the external diameter of the pipe or cable to be sealed. The internal surfaces of the hole or wall sleeve must be clean, continuous, regular, and free of dust, oils, grease, processing residues, cement laitance, loose parts, or sharp elements that could damage the elastomeric element or compromise the system's seal. The external surface of the pipe, cable, or conduit must also be thoroughly cleaned and free of contaminants.

In the case of installation within core-drilled holes, the internal surface of the hole must be treated with a suitable epoxy resin to obtain a smooth, regular, and protected surface. This treatment also protects any reinforcement bars intercepted during drilling against corrosion phenomena.

The pipe or cable must be dimensionally stable in the sealing area and must not show signs of crushing, ovalization, breakage, or surface damage.

Product preparation

Drykos® **Master-seal** is supplied ready for installation, in the dimensional configuration required based on the hole diameter and the external diameter of the passing element.

Before installation, it is necessary to check the integrity of the modular chain, the elastomeric elements, the pressure plates, the bolts, and the nuts. The size selection must be based on the actual dimensions of the hole or wall sleeve and the external diameter of the pipe or cable to be sealed.

The system is normally supplied in an open configuration. To close the chain around the pipe, it is necessary to loosen and remove the last connecting bolt, temporarily separate the relative pressure element, bring the rubber ends of the chain together, reinsert the bolt through the connection holes, and reassemble the tightening system. Once closure is complete, Drykos® **Master-seal** is ready for insertion into the hole.



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Application

Drykos® **Master-seal** must be positioned around the pipe or cable to be sealed and inserted inside the wall sleeve or the previously prepared core-drilled hole.

The system must be placed as close as possible to the external side of the wall, i.e., towards the soil/water side, keeping the nuts facing the inspectable side to allow for subsequent monitoring and any necessary re-tightening. Once correctly positioned, the bolts must be tightened progressively and in sequence, proceeding in a circular direction using a torque wrench. Tightening must be performed gradually, repeating the tightening cycle several times until the maximum torque specified for the product's configuration is reached. This procedure ensures uniform compression of the elastomeric elements and a regular distribution of the sealing pressure along the entire circumference.

Approximately 2 hours after the first tightening, it is necessary to re-verify the applied torque, as the elastomeric element may undergo an initial settling. If necessary, the bolts must be re-tightened to the prescribed value.

In the case of installation on existing penetrations, the open chain is positioned around the pipe already in place, then closed and tightened according to the same procedure.

Other indications

- Always verify the correct match between the hole diameter, the external diameter of the pipe/cable, and the size of the Drykos® **Master-seal** system
- Do not install the product on pipes that are deformed, damaged, ovalized, or not dimensionally stable in the sealing area
- Do not install in irregular, dirty holes or those with sharp surfaces that have not been adequately prepared
- In the case of a core-drilled hole, protect and smooth the internal surface with a suitable epoxy resin before installation
- Position the nuts on the inspectable side to allow for monitoring and re-tightening
- Use a torque wrench and respect the tightening torque specified for the specific configuration
- Tighten the bolts progressively and in an alternating manner, avoiding localized and non-uniform tightening
- Re-verify the tightening after approximately 2 hours
- In the presence of particularly aggressive chemical, thermal, or environmental conditions, verify the suitability of the system in advance
- For anything not covered, contact Technical Support at +39 0171 1874992 or write to info@drykos.com

ENVIRONMENT AND SAFETY

Safety

The product is classified as an article and, in accordance with Regulation (EC) No. 1907/2006 (REACH), does not require the preparation of a Safety Data Sheet. During handling and use, it is nonetheless recommended to use appropriate personal protective equipment, such as gloves and protective goggles, and to comply with the safety procedures established at the workplace.

Use

For professional use.



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WARRANTIES AND LEGAL NOTES

Should the product be defective, the liability of Drykos S.r.l. shall be limited solely to its replacement. The information and instructions in this technical data sheet regarding the application and end-use of the products are provided in good faith and reflect current scientific and technical knowledge; however, they do not constitute any guarantee or assumption of liability regarding the final outcome of the work involving their use. Given the variety of operating conditions and external factors beyond the control of Drykos S.r.l. during execution, it is the user's responsibility to verify the product's suitability for the specific application, assuming all risks and liabilities. Drykos S.r.l. reserves the right to modify the properties of its products at any time. Always refer to the most recent version of the product's technical data sheet. This edition cancels and replaces all previous versions. The latest updated technical data sheets are available on our portal at www.drykos.com.



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