



MEMECO
GENERAL TRADING

MEMECO

SMC - FIBER GLASS REINFORCED MATERIAL VALVE BOX DATASHEET



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Introduction

An irrigation valve box plays a pivotal role in safeguarding the integrity and functionality of irrigation systems. This protective enclosure serves as a sturdy casing that houses vital components, including valves and electrical elements, essential to the proper functioning of an irrigation system. Typically installed flush with the ground surface, irrigation valve boxes come in various sizes and materials to accommodate diverse irrigation setups.

The fundamental purpose of an irrigation valve box is twofold: it shields valves and associated electrical equipment from external elements such as adverse weather, debris, and potential damage from human activity. Additionally, these valve boxes provide a convenient means of accessing the valves and other components for maintenance and repair.

Within an irrigation system, valves in these boxes regulate the flow of water to distinct zones within a landscape, ensuring each area receives the precise amount of water needed for optimal growth and health. This precise control minimizes water wastage, promoting eco-friendliness and cost-efficiency in irrigation practices.

In light of these critical functions, investing in high-quality irrigation valve boxes becomes paramount. Such an investment ensures the long-term protection of irrigation systems, reduces the need for frequent maintenance, and sustains the health and vibrancy of landscaped areas.

At MEMECO, we have made it our mission to meet these essential requirements through our products. Crafted from robust raw materials, our valve boxes possess a range of features and benefits designed to enhance the efficiency and reliability of your irrigation systems. Below, we outline the key features of our SMC (Sheet Molding Compound) valve boxes that set them apart as a premium choice for your irrigation needs.



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Features of MEMECO “SMC” Box

Our SMC (Sheet Molding Compound) valve boxes are engineered with a focus on durability, functionality, and environmental responsibility. Here are the key features that make our valve boxes stand out:

1. Environmental Friendliness:

- Our SMC molded products are halogen-free and contain no harmful substances, aligning with the principles of green development and environmental sustainability.

2. Chemical Corrosion Resistance:

- SMC valve boxes exhibit exceptional resistance to a wide range of corrosive elements, including acids, dilute alkalis, salt, organic solvents, seawater, and more. This resistance surpasses that of conventional metal materials.

3. Lightweight and High Strength:

- With a remarkable specific strength and specific modulus, our SMC valve boxes offer a robust and durable solution while remaining lightweight. They provide up to four times the specific strength of regular steel or metal materials.

4. Fire- and Flame-Retardant Performance:

- Our SMC valve boxes are fire retardant and have been tested as B class non-combustible material by national authorities, ensuring safety and reliability.

5. Good Heat Resistance and UV Resistance:

- Operating in a wide temperature range (-60°C to 150°C) and maintaining physical characteristics even in harsh high-temperature environments. The excellent UV resistance ensures long-lasting surface color stability. This material exhibits a high thermal deformation temperature, surpassing 280 degrees Celsius, making it well-suited for applications under elevated temperatures. Additionally, it boasts exceptional UV resistance, ensuring that its surface color remains vibrant and resistant to fading even when exposed to prolonged sunlight.

6. Low Thermal Conductivity and Small Expansion Coefficient:

- Our SMC material reduces thermal stress generated by temperature differences, offering superior thermal insulation performance compared to metal.

7. Excellent Anti-Aging Performance:

- SMC molded products demonstrate outstanding anti-aging properties, with maximum aging thickness on the surface being less than 50µm over 20 years.

8. Long Service Life:

- Proven through years of use, our SMC valve boxes boast a service life of at least 30 years, ensuring long-term reliability and cost-effectiveness.



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9. Electromagnetic Wave Penetration:

- SMC is an excellent material for transmitting electromagnetic waves without altering their properties, making it suitable for applications in the telecommunications industry.

10. Dimensional Stability:

- SMC materials exhibit good dimensional stability, which means they maintain their shape and size under various conditions, including temperature changes.

11. Corrosion Resistance:

- The metal component in SMC materials provides corrosion resistance, making them suitable for outdoor or harsh environment.

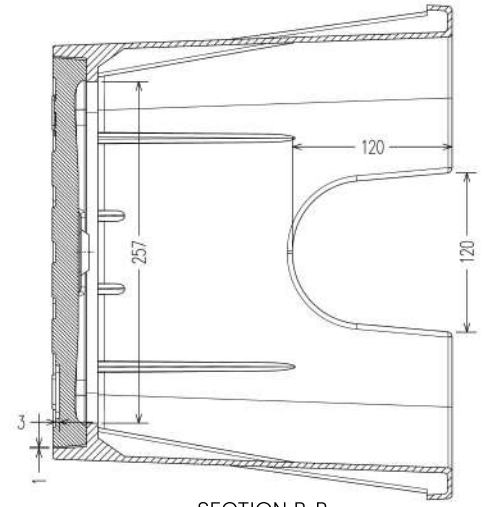
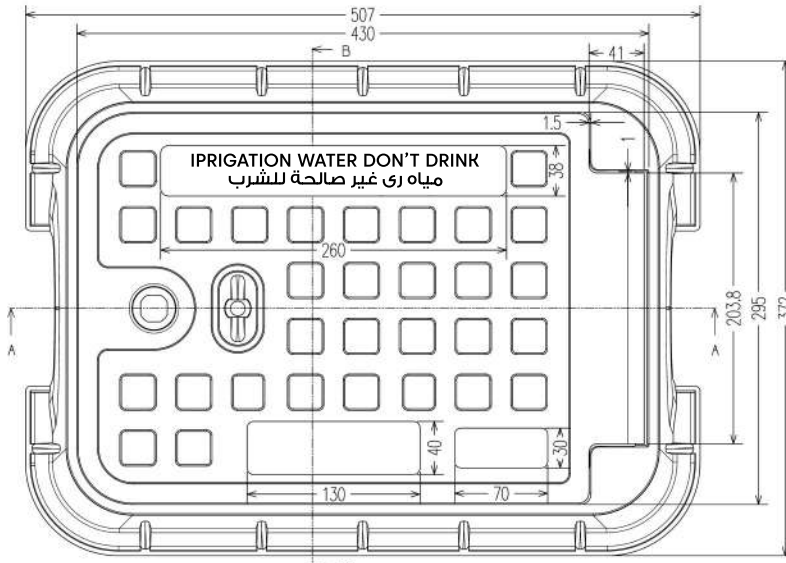
These features collectively make our SMC valve boxes a superior choice for protecting your irrigation system's vital components while contributing to a sustainable and efficient landscape management approach.



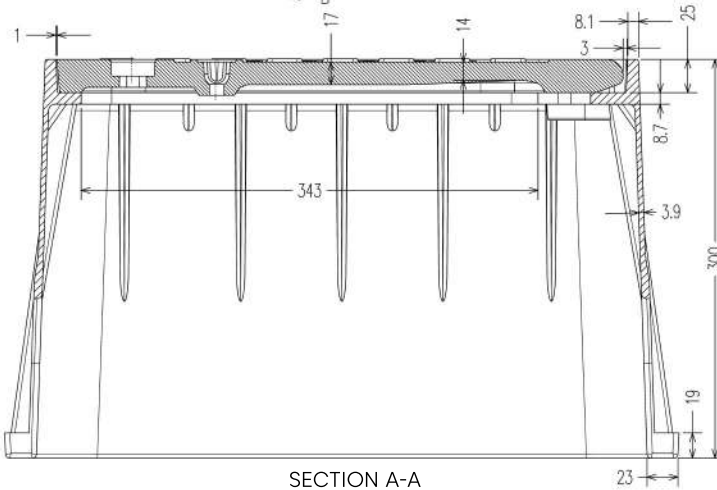
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M-vlv-12" - Valve Box-430x295x300



SECTION B-B



SECTION A-A



Material	Sheet Moulding Compound / Fiberglass Composite	Standard size	430x295x300mm
Process	Thermal Compression	Outside Size	507x372x300mm
Shape	Trapezoidal Cylinder	Cover Size	427x292mm
Colour	Dark Green / optional	Clear Opening	350x257mm
Working Temperature	-50°C ~ +160°C	Net Weight	9± 7% kg
Standard	EN124-1:2015; EN124-5: 2015	Accessories	Hinge, lock, rubber plug, lifting part
Warranty	5 years	Service Life	>20 years

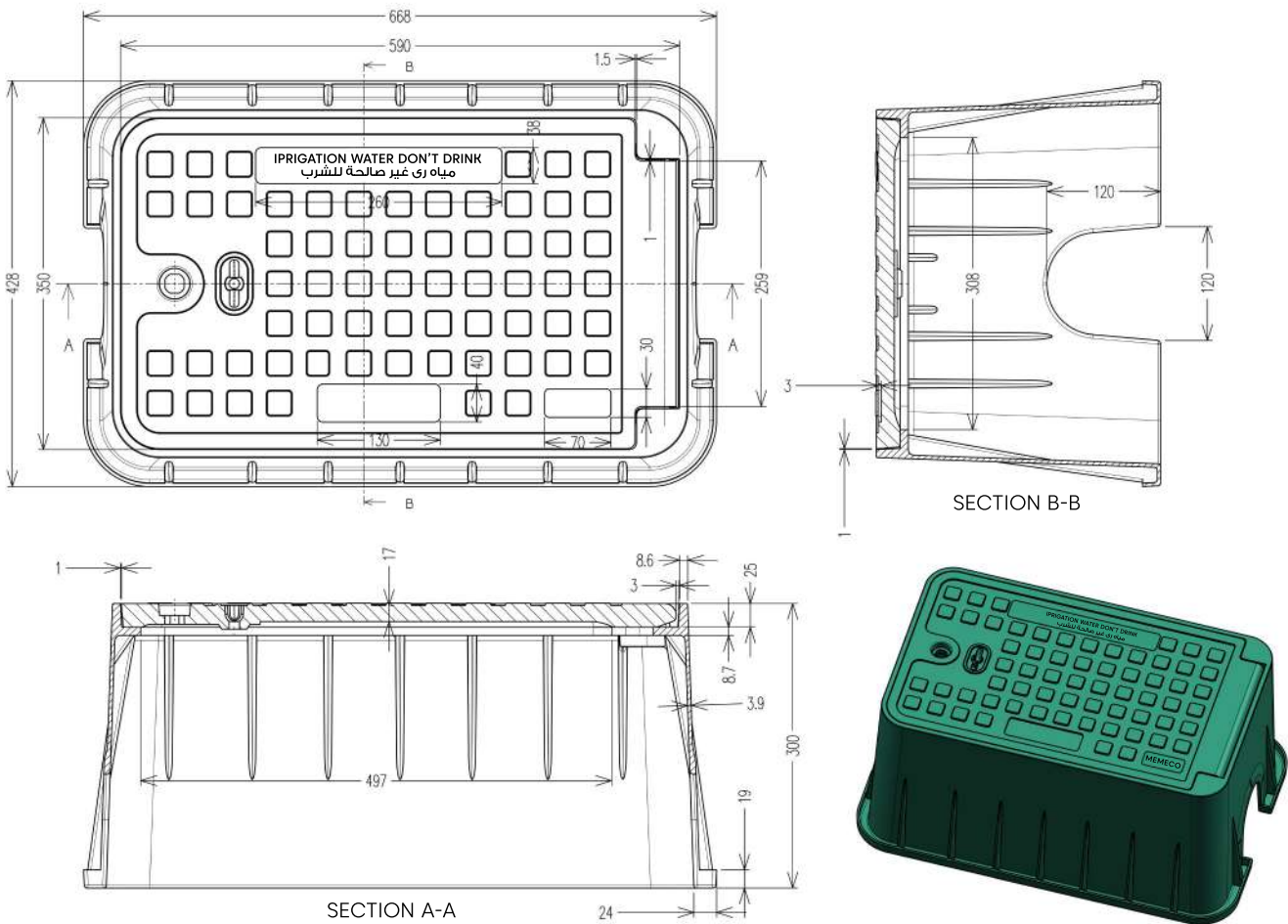
Measures may vary slightly



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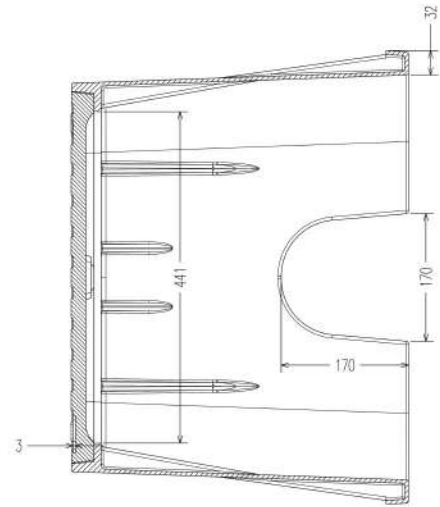
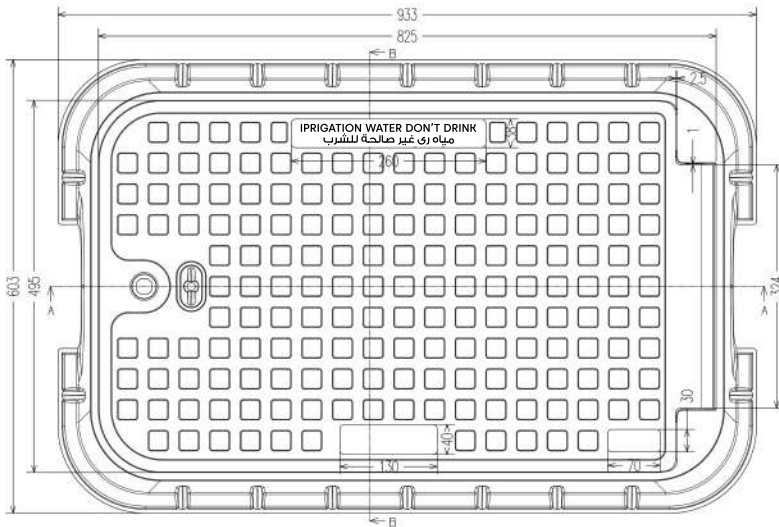
M-vlv-15" - Valve Box-590x350x300



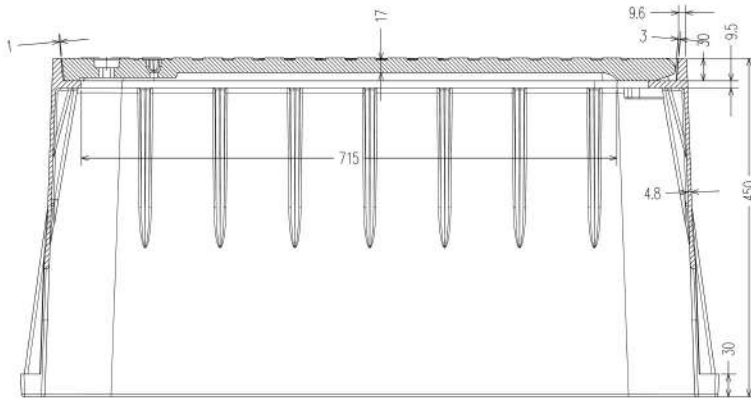
Material	Sheet Moulding Compound / Fiberglass Composite	Standard size	590x349x300mm
Process	Thermal Compression	Outside Size	668x428x300mm
Shape	Trapezoidal Cylinder	Cover Size	587x347mm
Colour	Dark Green / optional	Clear Opening	497x308mm
Working Temperature	-50°C ~ +160°C	Net Weight	14.6± 7% kg
Standard	EN124-1:2015; EN124-5: 2015	Accessories	Hinge, lock, rubber plug, lifting part
Warranty	5 years	Service Life	>20 years

Measures may vary slightly

M-vlv-18" - Valve Box-825x495x450



SECTION B-B



SECTION A-A



Material	Sheet Moulding Compound / Fiberglass Composite	Inside Size	825x495x450mm
Process	Thermal Compression	Outside Size	932.5x602.5x450mm
Shape	Trapezoidal Cylinder	Cover Size	822x492mm
Colour	Dark Green	Clear Opening	715x441mm
Working Temperature	50°C~160°C	Net Weight	32.2±0.5kg
Standard	EN124-1:2015; EN124-5: 2015	Accessories	Hinge, lock, rubber plug, lifting part
Warranty	5 years	Service Life	>20 years

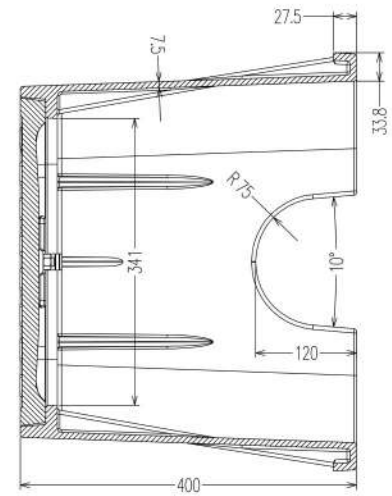
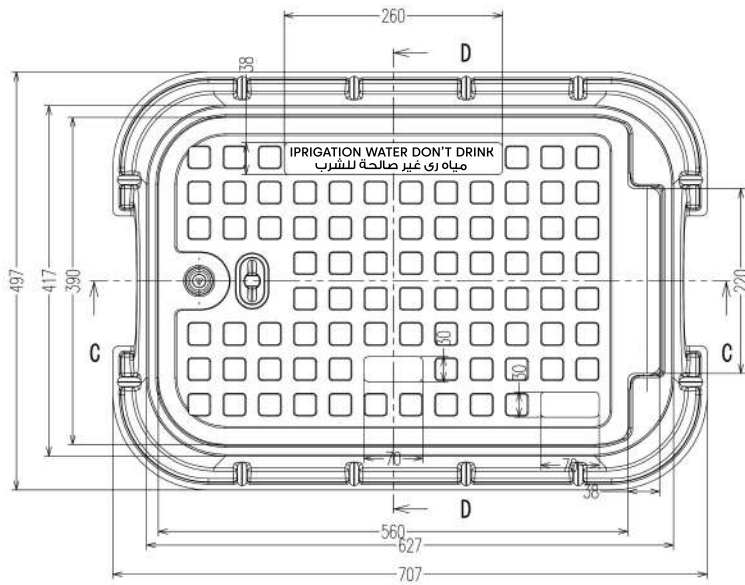
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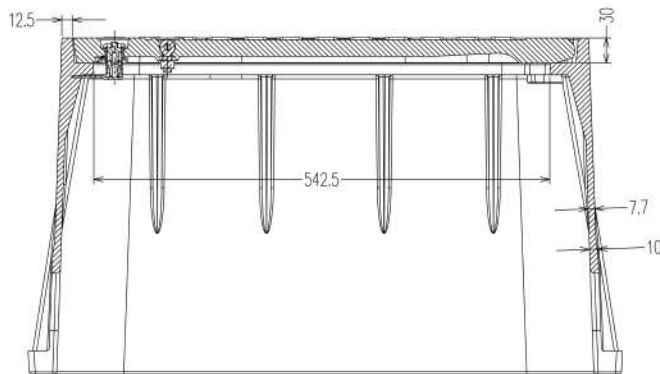
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M-*vlv-17*" HL - Valve Box-627x417x400



SECTION D-D



SECTION C-C



Material	Sheet Moulding Compound / Fiberglass Composite	Standard size	627x417x400mm
Process	Thermal Compression	Outside Size	707x497x400mm
Shape	Trapezoidal Cylinder	Cover Size	597x390x30mm
Colour	Dark Green / optional	Clear Opening	542.5x341mm
Working Temperature	-50°C ~ +160°C	Net Weight	24± 7% kg
Standard	EN124-1:2015; EN124-5: 2015	Accessories	Hinge, lock, rubber plug, lifting part
Warranty	5 years	Service Life	>20 years

Measures may vary slightly



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Valve Box Accessories

At MEMCO, we understand that valve boxes are integral components of irrigation and utility systems, and their functionality depends not only on the box itself but also on the accessories that enhance their performance and usability. Our valve box accessories are designed to complement and optimize the functionality of our SMC (Sheet Molding Compound) valve boxes. Below, we provide a detailed overview of these accessories:

STAINLESS STEEL SCREW:

The stainless steel screw is a critical component for securely fastening the valve box cover to the base. It ensures a tight seal, preventing the intrusion of dirt, debris, or moisture into the valve box, which is essential for maintaining the integrity of the enclosed components.



TRIANGULAR CYLINDRICAL LOCK WITH KEY:

This lock, designed with both security and ease of access in mind, provides an added layer of protection to the valve box. It helps safeguard the contents of the box, especially in areas where unauthorized access is a concern. The key allows authorized personnel to unlock and access the valve box conveniently.

Keychain and Medal Hook:

The inclusion of a keychain and medal hook is a thoughtful addition to our valve box accessories. It provides users with a convenient means to store and manage keys or other small items related to the valve box. This feature adds practicality to the valve box design.



STAINLESS STEEL SCREW HINGE:

The stainless steel screw hinge is essential for attaching the valve box cover securely to the base while allowing easy opening and closing when maintenance or inspection is required. Its durability ensures long-lasting performance and ease of access.

RUBBER PLUG:

The rubber plug serves as an important accessory for sealing openings or holes in the valve box that may not be in use. It prevents dirt, insects, or debris from entering and interfering with the system. This protective measure helps maintain the cleanliness and functionality of the valve box.



These valve box accessories are designed to enhance the durability, security, and functionality of our SMC valve boxes. Whether you need to protect your valve box against unauthorized access, ensure a secure seal, or maintain cleanliness, our carefully crafted accessories contribute to the overall reliability and longevity of your irrigation or utility system.



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Installation (For Reference)

Size selection

- Size mentioned on the technical sheet is clear opening size.
- Usually, the clear opening of the base should not be smaller than the bore of the chamber. Bore opening shall be designed after consideration of standard clear opening size.

Instructions

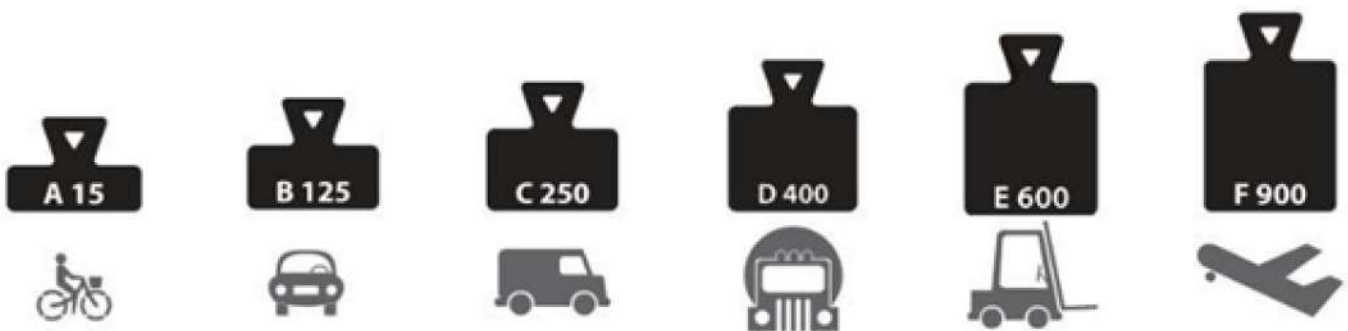
- Prepare the concrete bed after fixing the height of the frame.
- The base should be completely embedded in a minimum of M-20 Grade Concrete.
 - The level of the concrete bed must be flat so that entire frame is uniformly supported.
 - A base should be set in concrete for a minimum time of 7 days before start using it.

Precaution before/ during installation

- Ensure that the top level of the base is aligned to ground level, and the base is completely resting in concrete/ or land scape material on all sides/edges.
- Ensure that the base or cover is not dropped / exposed by impact.

Precaution when using Box

- ENSURE THAT YOU USE THE RIGHT LOADING CAPACITY COVER AND FRAME BASED ON VEHICULAR MOVEMENT.
- USE ONLY COVERS WITH APPROPRIATE BASE.
- USE THE LIFTING KEY / STICK SUPPLIED WITH THE COVER TO LIFT IT.
- REMOVE THE COVER FROM THE BASE AND CLEAN THE RIM OF THE BASE OF ANY DIRT/DUST.



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