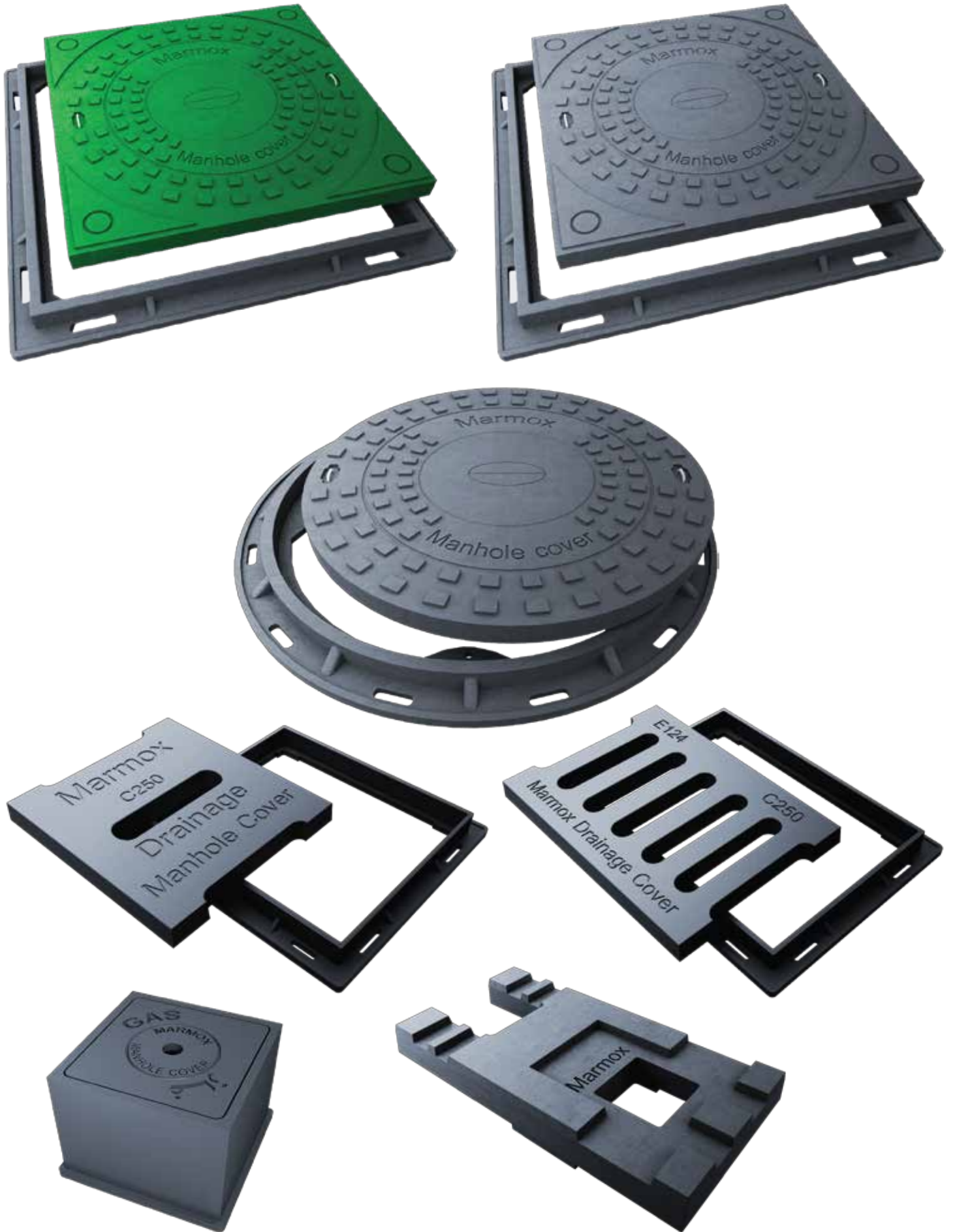




**Manhole Cover  
Marmox 2020**



# Marmox Manhole Cover



# Marmox Manhole Cover

## Description :

(GRP) Marmox manhole covers are manufactured from an innovative polymeric binder with a newly developed high strength reinforced acrylic with graded sizes filler and reinforced with glass fiber mesh to ensure heavy-duty products fulfilling all standard specification requirements.

## Advantages :

- Reasonable weight and easy to handle.
- No risk of theft due to low scrap value.
- Very high impact and abrasion resistance.
- Strong, durable and highly chemical resistant.
- Fulfills with all standard specification requirements (EN 124:2015, EOS 4207:2008).
- Standard sizes available and also customized to order.
- Load rate from 1.5 to 40 ton.

## Technical Specification :

Property	Measurement Method	Limits
Bending Strength	DIN 1164	300 ( $\pm 5\%$ ) / Kg/cm <sup>2</sup>
Compressive Strength	DIN 1164	900 ( $\pm 5\%$ ) / Kg/cm <sup>2</sup>
Tensile Strength	DIN 53455	150 ( $\pm 5\%$ ) / Kg/cm <sup>2</sup>
Density	DIN 53472	2.4 ( $\pm 5\%$ ) / g/cm <sup>3</sup>
Modulus of Elasticity	DIN 53452	2.5 x 10 <sup>5</sup> kg/cm <sup>2</sup>
Linear Thermal Coefficient of Expansion	VDE 0304/1	1.5 x 10 <sup>-5</sup> / 1°C
Surface Hardness	ASTM D2583 & EN59	$\geq 35$
Water Absorption	DIN 53495	< 0.3 %
Environmental Aspects	-	Environmentally Friendly
Fire Resistance	DIN 4102	Fire Resistant (A2)
Impact Resistance	ISO 3127	No Evidence of Cracking
Ignition Loss	ASTM D 2584	$\leq 15\%$

## Chemical Resistance

Sodium chloride (NaCl)	The samples were immersed in the following acids separately for 24 hours at room temperature	Highly Resistant
Sodium hydroxide (NaOH)		Highly Resistant
Sulfuric acid (H <sub>2</sub> SO <sub>4</sub> )		Highly Resistant
Hydrochloric acid (HCl)		Highly Resistant
Nitric acid (HNO <sub>3</sub> )		Highly Resistant
Acetone Solvent	The samples were immersed in the following solvents separately for 24 hours at room temperature	$\leq 2\%$
Methylene Chloride Solvent		$\leq 2\%$
Petroleum Ether Solvent		Highly Resistant
Benzene Solvent		Highly Resistant
Toluene Solvent		$\leq 1\%$

**Note :** Our products already confirmed with EN 124:2015, EOS 4207:2008, ISO 9001:2015 (QMS), ISO 45001:2018 (Health and Safety), and ISO 14001:2015 (Environmental)

# Marmox Manhole Cover

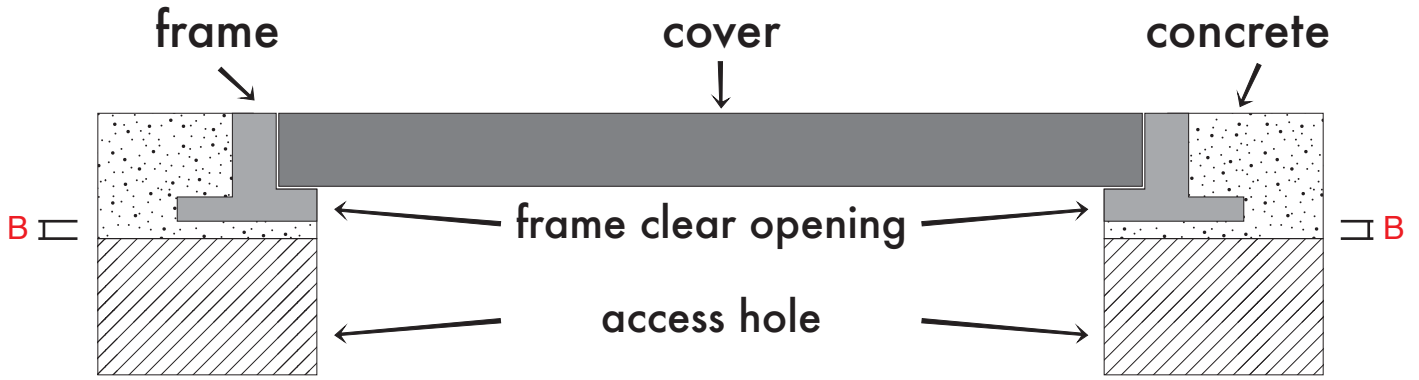
No.	Model	Type	Clear Opening (mm)	Frame Outer Dimensions (mm)	Frame Height (mm)
1	Marmox Manhole Cover ( A 15 ) 1.5 ton	A15 SQ 200 x 200	170 x 170	270 x 270	40
		A15 SQ 300 x 300	275 x 275	390 x 390	45
		A15 SQ 400 x 400	375 x 375	450 x 450	50
		A15 SQ 500 x 500	475 x 475	550 x 550	45
		A15 SQ 600 x 600	600 x 600	730 x 730	45
		A15 RD 500	490	620	45
		A15 RD 600	600	730	45
		A15 SQ 700 x 700	670 x 670	755 x 755	45
		A15 SQ 800 x 800	760 x 760	855 x 855	45
		A15 SQ 900 x 900	860 x 860	955 x 955	50
		A15 SQ 1000 x 1000	860 x 860	1000 x 1000	50
		A15 RC 600 x 900	600 x 900	720 x 1020	45
2	Marmox Manhole Cover ( A 30 ) 3 ton	A30 SQ 600 x 600	600 x 600	730 x 730	45
		A30 RD 600	600	730	45
		A30 RC 600 x 900	600 x 900	720 x 1020	45
		A30 SQ 900 x 900	900 x 900	960 x 960	30
		A30 SQ 1000 x 1000	950x 950	1012 x 1012	30
3	Marmox Manhole Cover ( A 60 ) 6 ton	A60 SQ 600 x 600	600 x 600	730 x 730	50
		A60 RD 600	600	720	55
4	Marmox Manhole Cover ( B 125 ) 12.5 ton	B125 SQ 400 x 400	375 x 375	450 x 450	70
		B125 SQ 600 x 600	600 x 600	720 x 720	65
		B125 SQ 800 x 800	800 x 800	862 x 862	55
		B125 SQ 900 x 900	900 x 900	960 x 960	55
		B125 SQ 1000 x 1000	950 x 950	1012 x 1012	55
		B125 RC 600 x 900	600 x 900	720 x 1020	70
		B125 RD 600	600	730	65
		B125 RD 800	760	880	75
5	Marmox Manhole Cover ( B 150 ) 15 ton	B150 SQ 600 x 600	600 x 600	720 x 720	65
		B150 RC 600 x 900	600 x 900	720 x 1020	70

# Marmox Manhole Cover

No.	Model	Type	Clear Opening (mm)	Frame Outer Dimensions (mm)	Frame Height (mm)
6	Marmox Manhole Cover ( C 250 ) 25 ton	C250 SQ 400 x 400	360 x 360	500 x 500	90
		C250 SQ 600 x 600	600 x 600	720 x 720	85
		C250 SQ 800 x 800	800 x 800	862 x 862	65
		C250 RC 600 x 900	600 x 900	1020 x 720	70
		C250 SQ 900 x 900	900 x 900	962 x 962	65
		C250 RD 500	500	640	85
		C250 RD 600	600	730	85
		C250 RD 760	700	830	85
7	Marmox Manhole Cover ( D 400 ) 40 ton	D400 SQ 600 x 600	600 x 600	720 x 720	100
		D400 SQ 800 x 800	800 x 800	862 x 862	85
		D400 SQ 900 x 900	900 x 900	962 x 962	85
		D400 RD 600	600	740	100
		D400 OC 600	600	730	120
		D400 RD 760	700	840	105
		D400 OC 760	700	920	115
		D400 RD 800	760	880	105
8	Marmox Drainage Manhole Cover	DRG C250 SQ 405 x 450	460 x 370	575 x 530	80
		DRG B125 RECT 400 x 600	360 x 600	510 x 710	75
		DRG C250 RECT 400 x 600	360 x 600	710 x 510	80
9	Marmox Gas Manhole Cover ( B 125 ) 12.5 ton	GAS B125 180 x 180	125 x 125	180 x 180	147
		GAS B125 240 x 240	185 x 185	260 x 260	150
10	Marmox Manhole Steps	310 x 150	—	310 x 158	—

No.	Model	Type	Cover Outer Dimensions (mm)	Cover Height (mm)
11	Marmox Drainage Cover	DRG A15 RECT 200 x 490	200 x 490	20
		DRG A15 RECT 105 x 500	105 x 500	20
		DRG B125 RECT 230 x 590	226 x 590	35
		DRG C250 RECT 200 x 590	200 x 590	50
		DRG D400 RECT 200 x 590	200 x 590	60
		DRG D400 RECT 390 x 590	388 x 588	70

## Installation :



## Correct Installation :

- The concrete around the frame is C20 or over, recommended C25.
- The size of the access hole is not more than the frame clear opening.
- The thickness of bedding mortar (B) is over 20mm.
- Vehicles are not allowed to move on the cover before completing the installation stages.
- Please follow the correct installation instructions to ensure the efficiency of the product.

## Wrong Installation :

- The clear opening of the frame is smaller than the access hole.




- The product sinks under the ground level.



- The product is protruded over the ground level.







# CERTIFICATE

**TUV  
AUSTRIA**

**Management system as per  
EN ISO 9001 : 2015**

In accordance with TÜV AUSTRIA CERT procedures, it is hereby certified that


**MARMOX EGYPT**  
Head Office & Factory 1: The South Village, Industrial Zone, Wadi El Natron, El BEHIRA, EGYPT

Applies a Quality Management System in line with the above standard for the following scope

**MANUFACTURING OF:**


- MARMOX (STAIRS, WINDOWS SILLS, COUNTER TOPS AND POLYPROFILES).
- MARMOX MANHOLE COVERS, FIREPLACE ELEMENTS, MARMOX SHOWERTRAY (UNDERLAY). (FACTORY 1).
- MARMOX BOARD. (FACTORY 2).
- MARMOX THERMOBLOCK (FACTORY 3).
- MARMOX COSYSTONE HEATERS (FACTORY 4).

Certificate Registration No. 20100183003872      Valid until: 2020-05-12  
Initial certification: 2008-05-13



Certification Body  
at TÜV AUSTRIA CERT GMBH      Vienna, 2018-07-06

This certification was conducted in accordance with TÜV AUSTRIA CERT auditing and certification procedures and is subject to regular surveillance audits.  
TÜV AUSTRIA CERT GMBH    Deutschstraße 10    A-1230 Wien    www.tuv.at



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## Attachment to the Certificate

No. 20100183003872

The certificate is valid for the following sites of the company  
**MARMOX EGYPT**

**Head Office & Factory 1: The South Village, Industrial Zone, Wadi El Natron, El BEHIRA, EGYPT**


**Factory 2:  
Sadat city, Industrial area 4, MENOFIA, EGYPT**

**Factory 3:  
Sadat city, Industrial area 2, MENOFIA, EGYPT**

**Factory 4:  
6 October, GIZA, EGYPT**



Certification Body  
at TÜV AUSTRIA CERT GMBH      Vienna, 2018-07-06



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**Housing and Building National Research Center  
Construction and Project Management Research Institute**





## Verification of Compliance

Certificate's Holder No. 1001- Issue 2  
**Marmox Egypt**  
*The South Village, Industrial Zone, Wadi El Natron Elbehira, Egypt*

The holder has demonstrated compliance with  
**EN 124:2015-5,**  
Gully tops and manhole tops for vehicular and pedestrian areas.

Verification of:  
**Design Requirements, Type Testing, Marking, and Production Quality Control**  
has been certified in the following classes of composite manhole covers:

**Product: Composite Manhole Covers**

**Classes: A15 Square, A15 Round,  
B125 Square, B125 Round,  
C250 Square, C250 Round,  
D400 Square, D400 Round,**

**The certificate is valid from 1<sup>st</sup> of March 2019 until 1<sup>st</sup> of March 2022, and remains valid subject to satisfactory annual surveillance audits. Re certification audit due before 15 February 2022**

**Remark:** This verification of compliance has been issued on a voluntary basis. HBRC confirms that a Technical Construction File (TCF) is existent for the above listed products. The TCF satisfactory covers the essential requirements of the above listed directives. Other relevant directives have to be observed in case they are applicable. This document is only valid for equipment and configuration described and in conjunction with the TCF detailed above whereas the manufacture is responsible of the certification on the products and not exempted to perform all the necessary activities before placing to the market. The manufacturer is also responsible of the internal production control to ensure the products are in compliance with the essential requirements of the above-mentioned directives.

**Authorized by:**

Prof. Mahmoud Kamel Mahmoud





Prof. Manal Abdel Hamid





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 **marmox**

**CMIB**  
GROUP