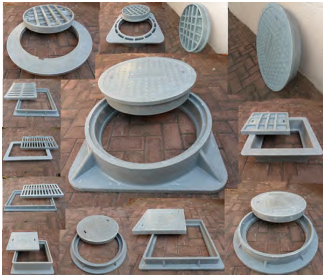




Primus® Manhole Covers



PRIMUS Manhole Covers, a kind of Polymer or BMC manhole covers were made of BMC (Bulk Moulding Compounds) by new technology and SABS (SANS 1882:2003) approved. Nowadays in South Africa it tends to replace iron cast covers with new products for the advantages of non-recycability, lower cost and undoubted weight tolerance.



PRIMUS® MANHOLE COVERS
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INTRODUCTION

Primus® Manhole Covers were manufactured and imported from China by Primus Trading (Pty) Ltd. The trade mark of PRIMUS was registered in South Africa. Primus® manhole covers were SABS (SANS1882:2003) approved. Afrasian Business is the sole agent of Primus® manhole covers in South Africa.

MANUFACTURING TECHNOLOGY

Primus® Manhole Covers, named by SABS as Polymer Concrete Manhole Covers are made of BMC (Bulk Moulding Compounds) which is a kind of material of glass-fiber reinforced thermoset polyester, and the metal frameworks. Therefore we also call the products as BMC Manhole Covers. For details, the manhole cover is constructed by a moulding procedure of welding the framework of the cover with international standard deformed steel bars in a overlapping network type, then casting the frameworks filled with BMC in the mould. With the characters of strength and hardness as metallic materials and the malleability as glass steel compounds, BMC manhole cover becomes a product of anti-pressure and weight tolerance. Primus Trading (Pty) Ltd owned the patent of this technology in South Africa.

QUALITY APPROVAL AND WEIGHT TOLERANCE TESTS

Primus® manhole covers were SABS (SANS1882:2003) approved and achieved the standards or over of CJ/T3012-93, CJ/T121-2000, CJ/T130-2001 specified by Department of Construction, the People's Republic of China. Besides these official QC tests, a normal vehicle (one ton bakkie) and a crane (nett. 43000kg) were used to test the weight tolerance of medium duty and heavy duty Primus® manhole covers respectively. No damage was found after the tests.



TECHNICAL DATA

PRIMUS® Manholes Covers-Products List-Specifications

Circular Manhole Cover

Size (mm)	Type	Weight (KG)	Vehicle Weight Tolerance *	Broken Load (KN)
2A ϕ 600x100	Ex Heavy	63	\leq 80 TONS	\geq 360
2A Cover only**	Ex Heavy	37	\leq 80TONS	\geq 360
ϕ 700x60	Heavy	45.6	\leq 30 TONS	\geq 180
ϕ 600x60	Ex Heavy	41.9	\leq 55 TONS	\geq 270
ϕ 600x50	Heavy	27.7	\leq 30 TONS	\geq 180
ϕ 600x40	Heavy	24.8	\leq 20 TONS	\geq 150
ϕ 500x50	Heavy	20	\leq 55 TONS	\geq 270
ϕ 500x40	Heavy	19	\leq 30 TONS	\geq 180

Square/rectangle Manhole Cover

Size (mm)	Type	Weight (KG)	Vehicle Weight Tolerance*	Broken Load (KN)
600x600x50	Heavy	36.1	\leq 30 TONS	\geq 180
500x500x40	Heavy	22.2	\leq 30 TONS	\geq 180
400x600x40	Heavy	19.2	\leq 30 TONS	\geq 180
5# 400x330x40	Ex Heavy	18	\leq 80 TONS	\geq 360

Bar manhole Cover / Gully Gratings

Size (mm)	Type	Weight (KG)	Vehicle Weight Tolerance*	Broken Load (KN)
450x750x45	Heavy	32.5	\leq 20 TONS	\geq 150
500x500x40	Heavy	22.5	\leq 20 TONS	\geq 150
680x380x40	Light	21.2	\leq 10 TONS	\geq 50

* NB: Vehicle Weight Tolerance, the estimated maximum weight of vehicle driven over the installed manhole cover safely.

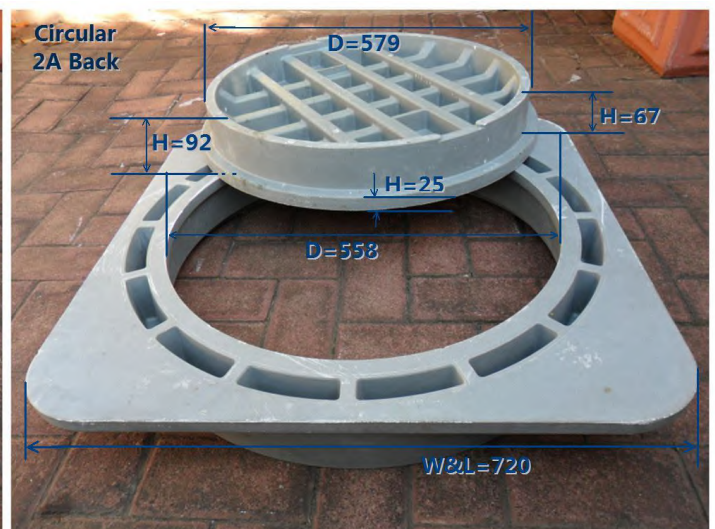
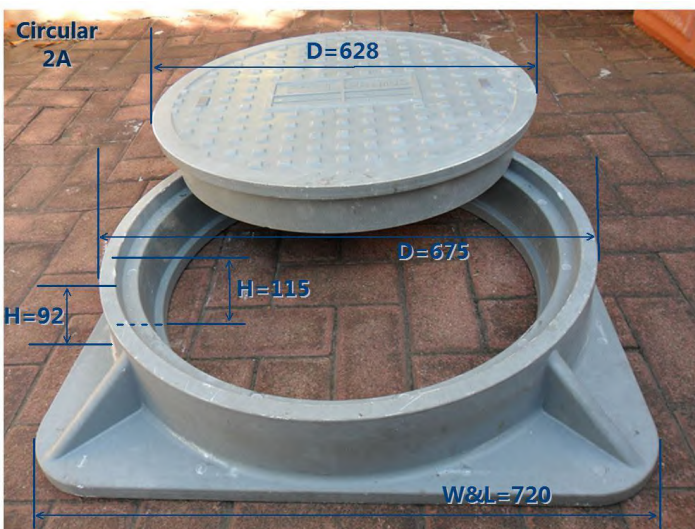
Other Specific Data and Characters of Primus® BMC Manhole Covers

1. Lifespan: over 50 years.
2. Temperature tolerance range: -50 °C to 200 °C.
3. Corrosion resistance and insulation.
4. Non-recycability of no scrap value.
5. Fireproof ability of effective burning resistance.

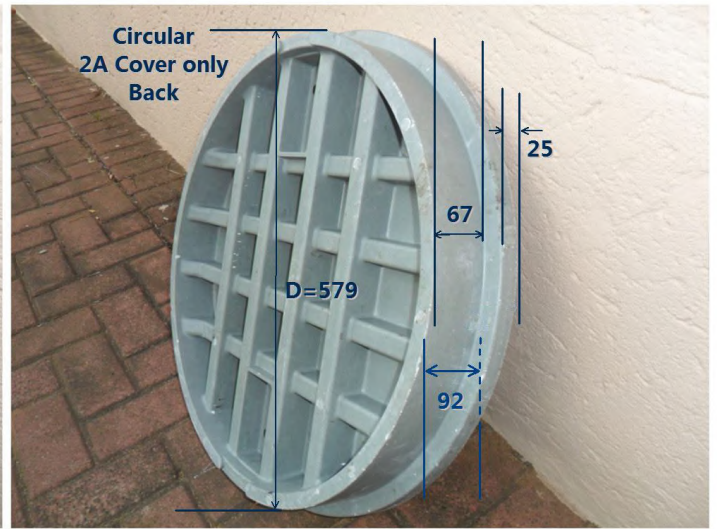
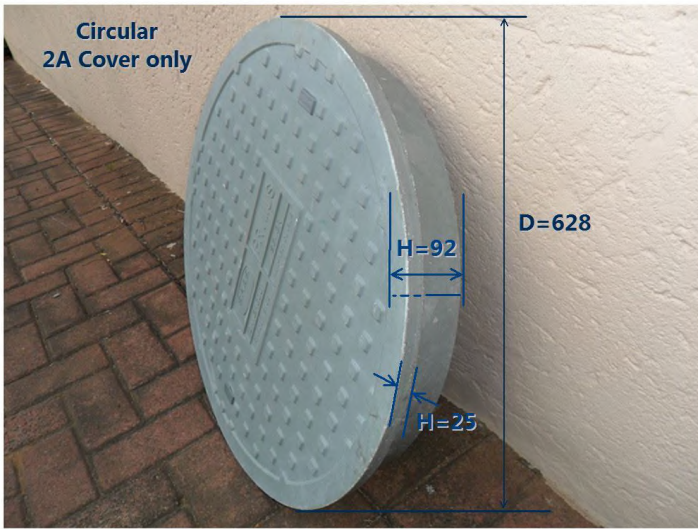
PRODUCTS GALLERY AND DETAIL DIMENTIONS

Circular Primus® BMC Manhole Covers (ϕ Diametre x Thickness of cover)

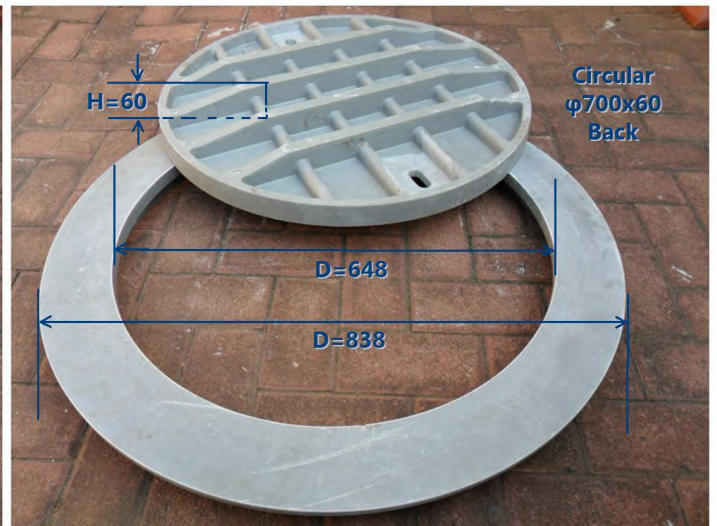
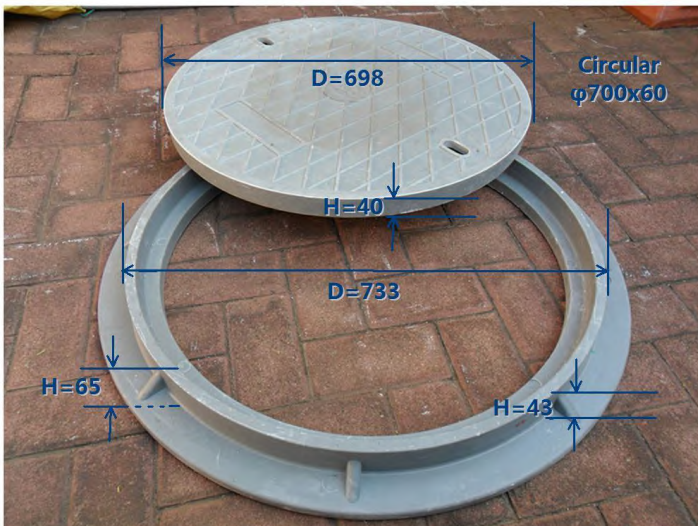
Code 2A ϕ 600x100



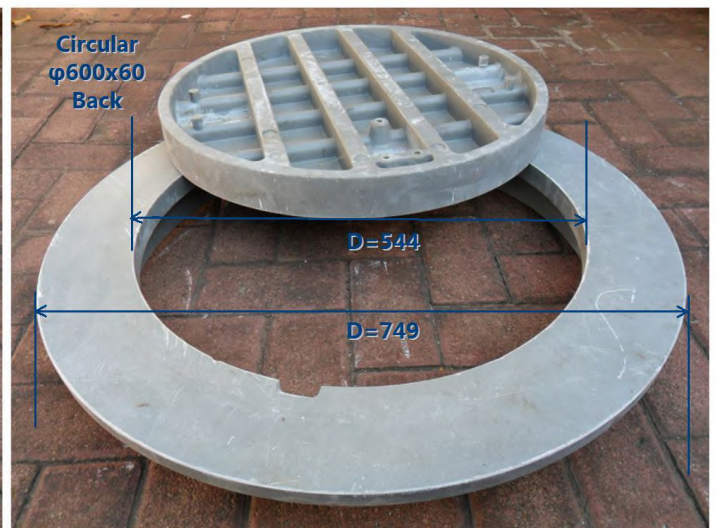
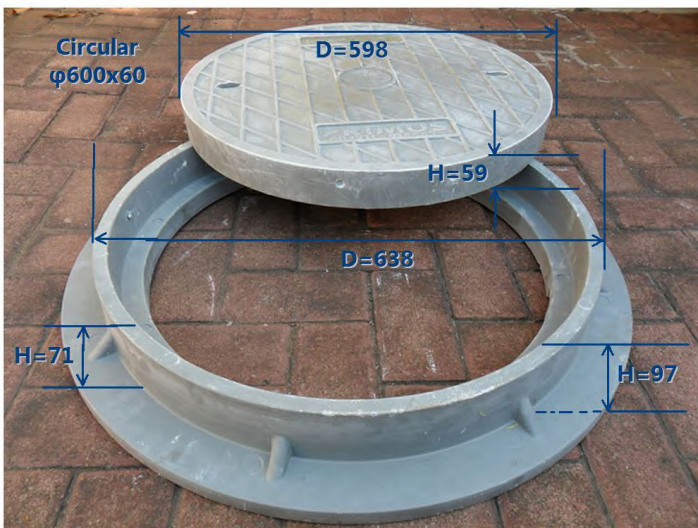
Code 2A ϕ 600x100 Cover Only (Sold separately for missing iron cast covers.)



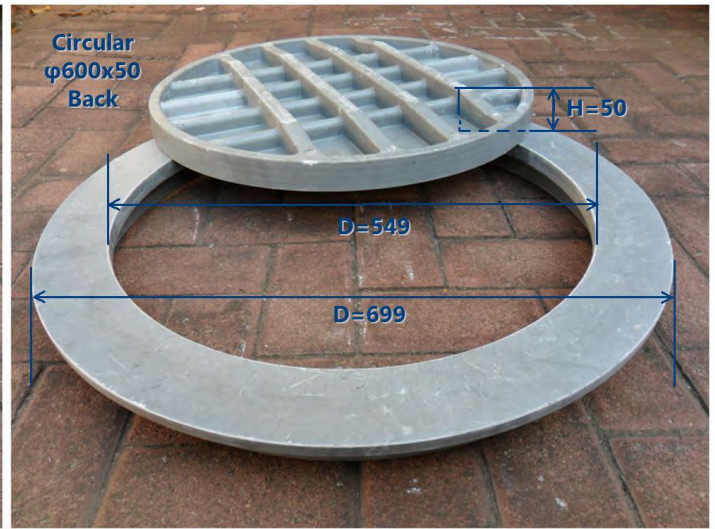
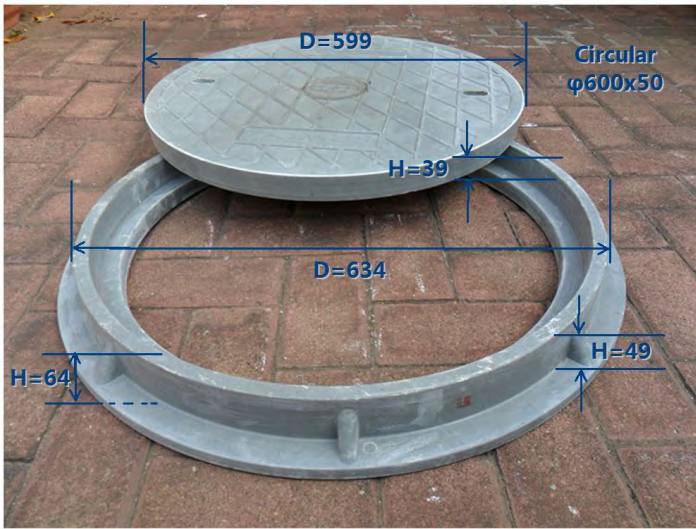
Φ 700x60



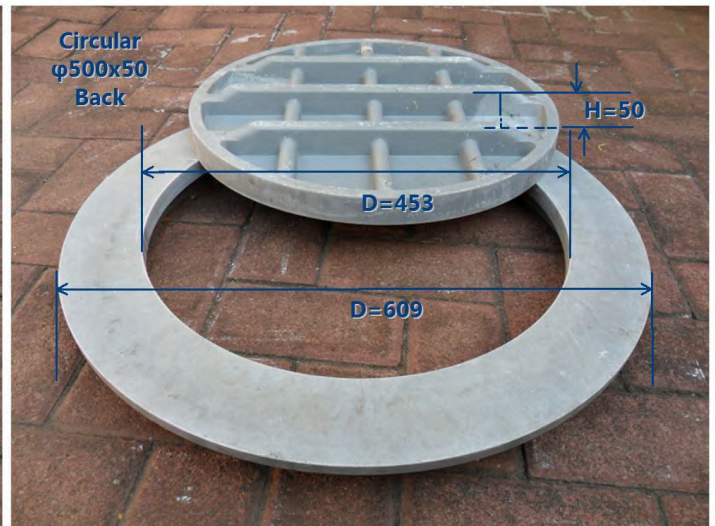
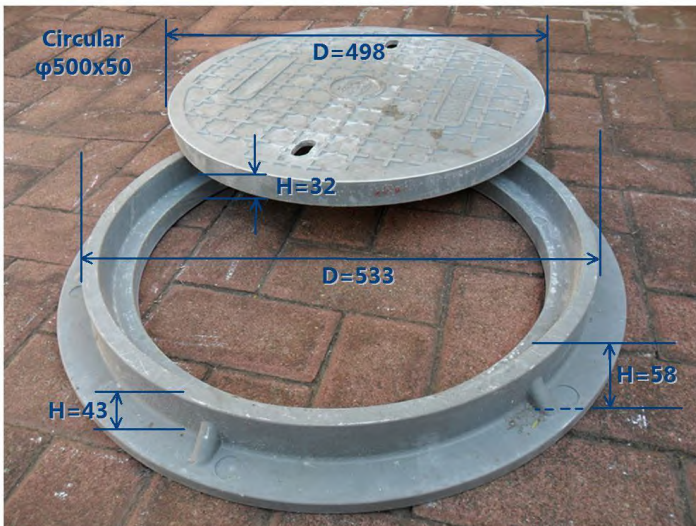
Φ 600x60



Φ600x50

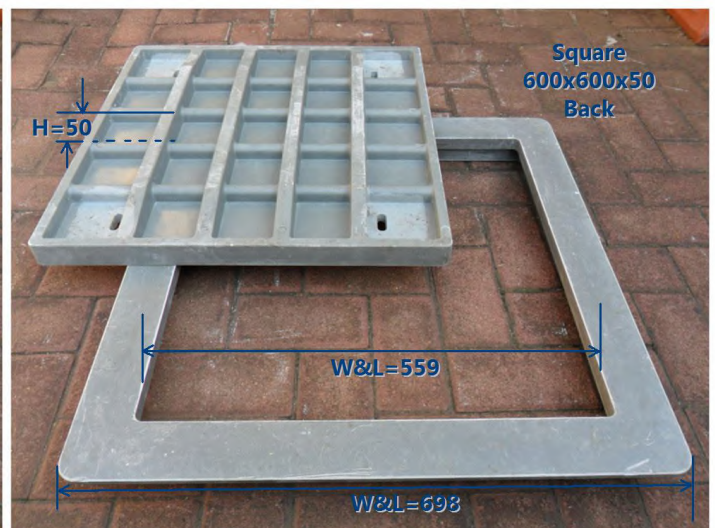
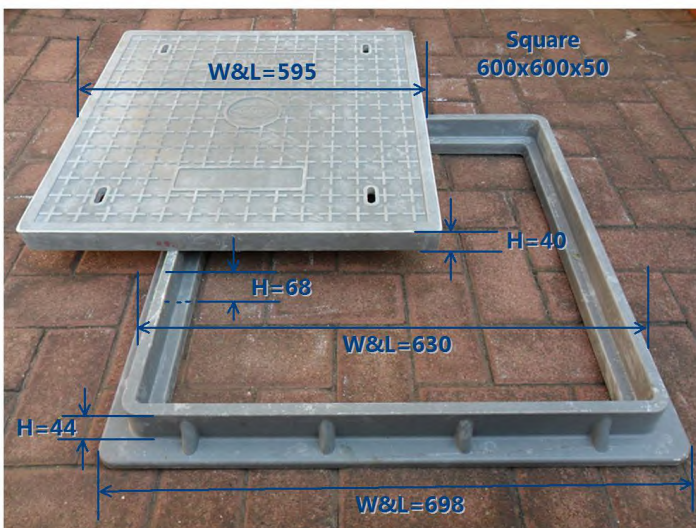


Φ500x50

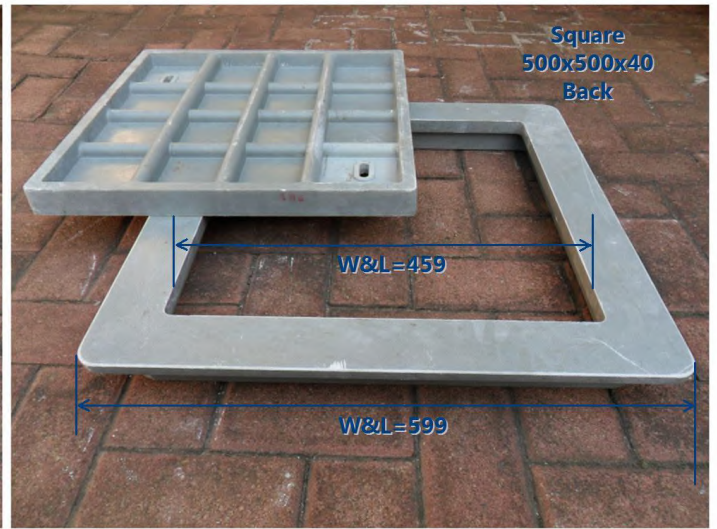
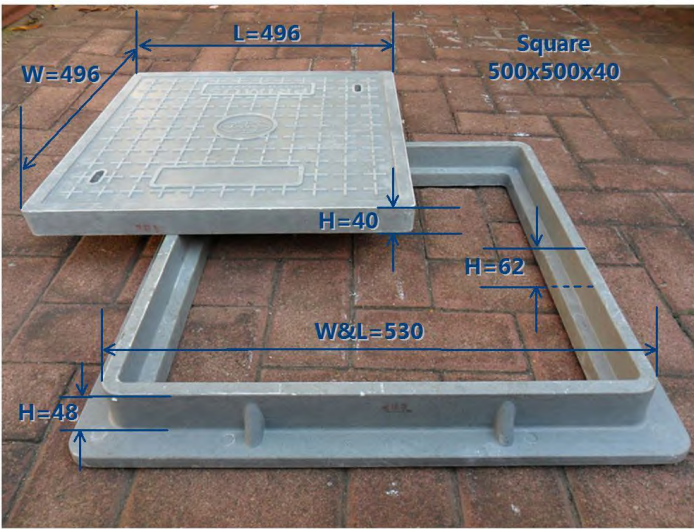


Square and Rectangular Primus® BMC Manhole Covers (Length x Width x Thickness of the Cover)

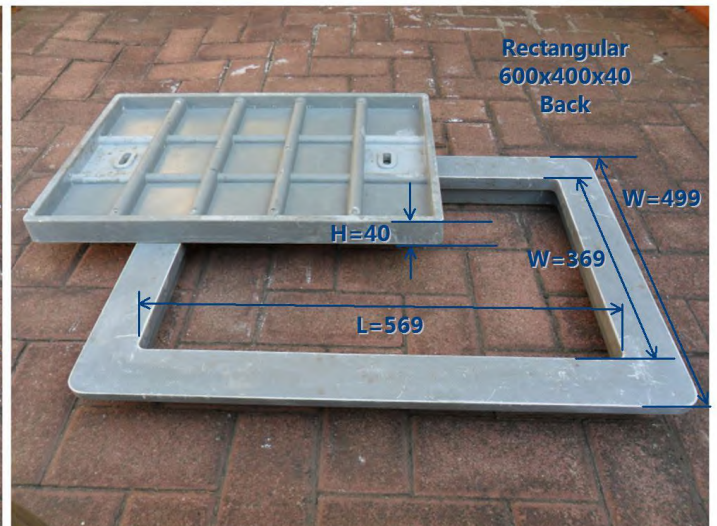
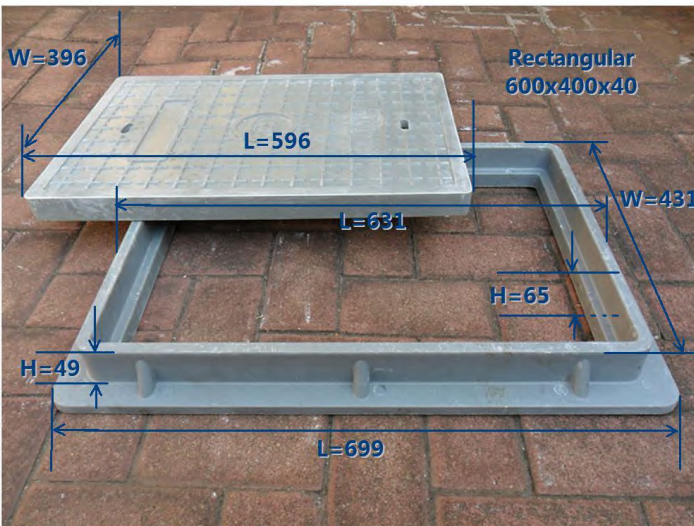
600x600x50



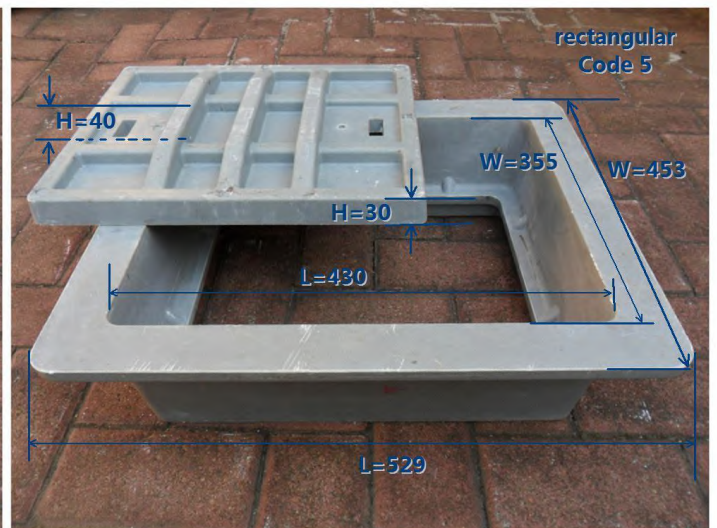
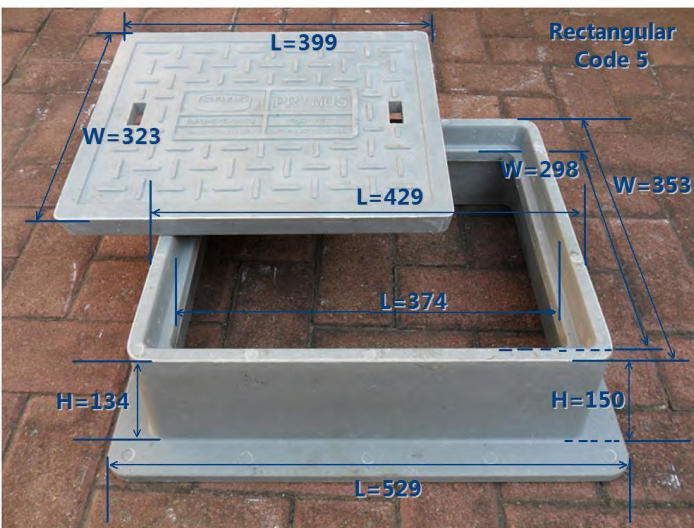
500x500x40



600x400x40

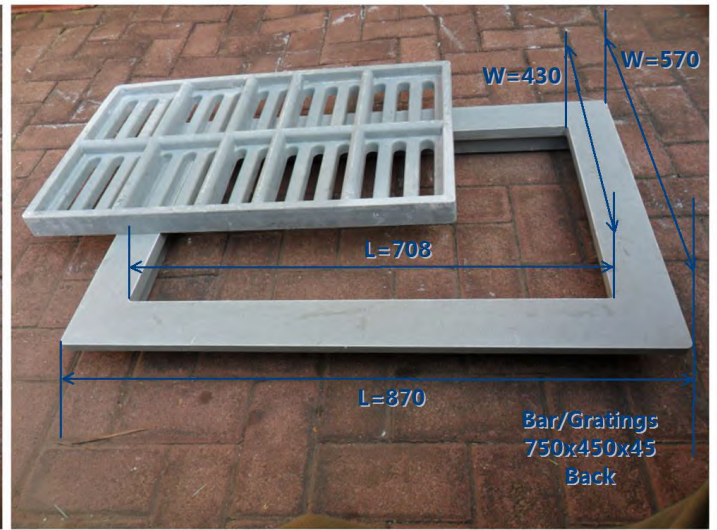
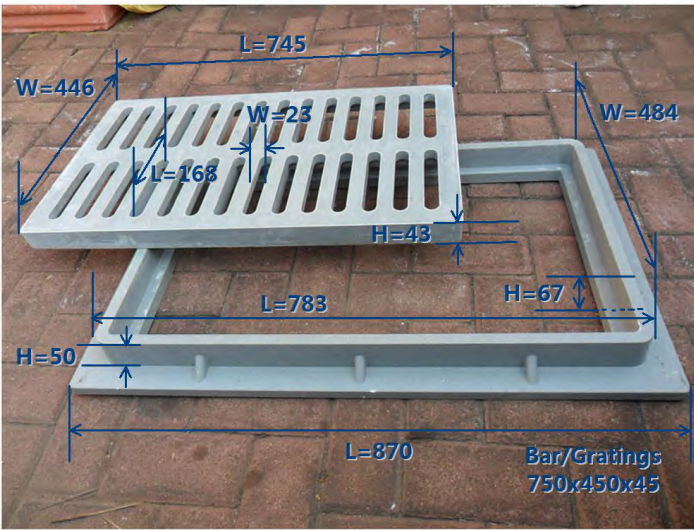


Code 5, 400x330x40

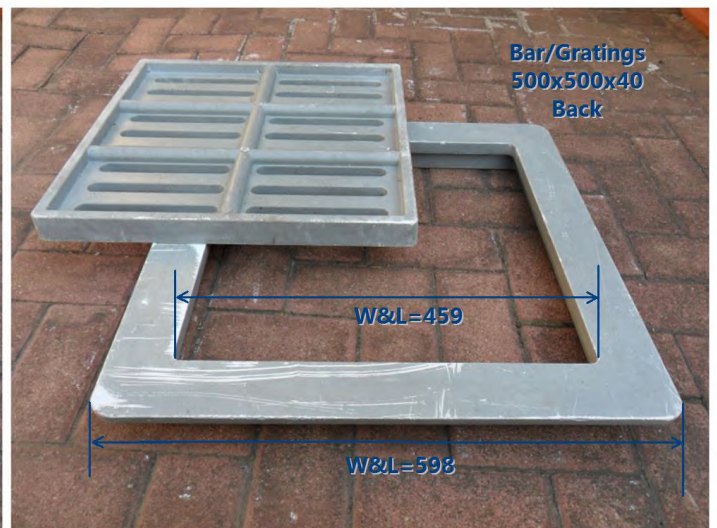
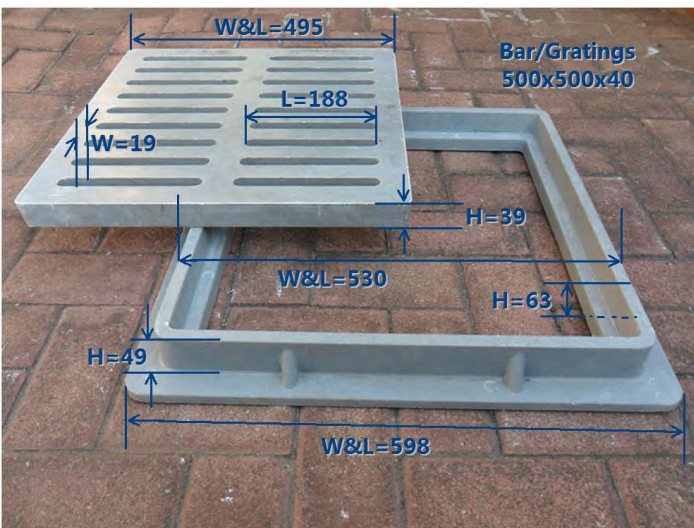


Gully Gratings, Square and Rectangular Bar BMC Manhole Covers (Length x Width x Thickness of Cover)

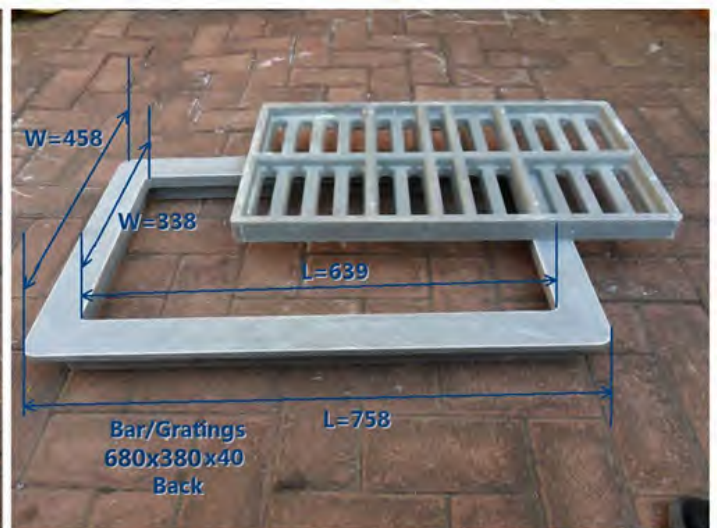
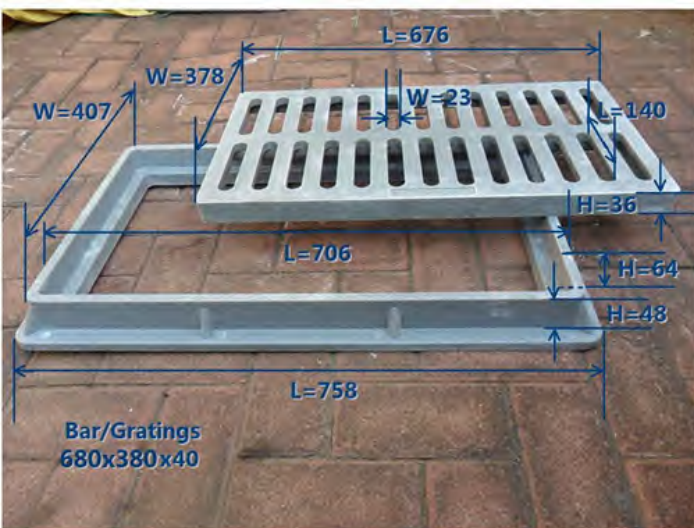
750x450x45



500x500x40



680x380x40



INSTALLATION

There is nothing special to install Primus® Manhole Covers. The following instruction may improve the working effect of our manhole covers.

Installation Instructions:

For the best use of these manhole covers, here are the instructions to explain how to properly install the manhole cover in order to ensure maximum lifetime operation:

- 1.** The brick base of the manhole cover must follow the size and shape of the manhole (suggestion: use the manhole cover when preparing the base). There should be a 40cm concrete ring around manhole cover for protection (A 20cm concrete ring will be accepted for cement surface road with reinforcing bars). Maintain a period of 10 days to start use.
- 2.** For the installment with asphalt road, ensure that the basement of the manhole cover will not be driven over by any construction vehicle. Before road surfacing, reserve an area slightly larger than the manhole to make sure its quality and long life -span.
- 3.** For the better appearance, use plastic cover of the manhole during the road construction work. By the end of construction day, use water clean up the surface for cement or sand.
- 4.** Open the manhole and clean it after the cement surface road work; to avoid the interruption of normal usage ensure the manhole cover would not be blocked.
The above instructions are easily to be followed and should be clear to every unit of the construction work.

GUARANTEE

5 years replacement guarantee on Primus® Manhole Covers sold, Terms and Conditions applied.

TERMS AND CONDITIONS

1. Afrasian Business is the agent of PRIMUS® manhole covers in South Africa and has no legal relationship with Primus Trading (Pty) Ltd.
2. Documents, specifications and figures of PRIMUS® manhole covers, such as weight, weight tolerance and broken load, etc were provided by Primus Trading (Pty) Ltd.
3. Five years replacement guarantee do not cover the damages caused by malicious breaking, wrong purchase of lighter duty or smaller size covers by the clients, and abnormal or improper installation of the manhole covers.

Primus® Manhole Covers

Written by Landon Wuz

Afrasian Business

1st of September, 2013