

Introduction to Adjustable Steel Manhole Shutters:

Proshore's User Guide aims to provide all the necessary information required to allow for safe, effective and well-informed use of Proshore's Manhole Shutters. The guide will cover aspects of practical handling, assembly, installation and systems of best practice. Aspects of the guide will assume general competence within the field, however item specifics such as design components and planning for lifting operations will be comprehensively described.

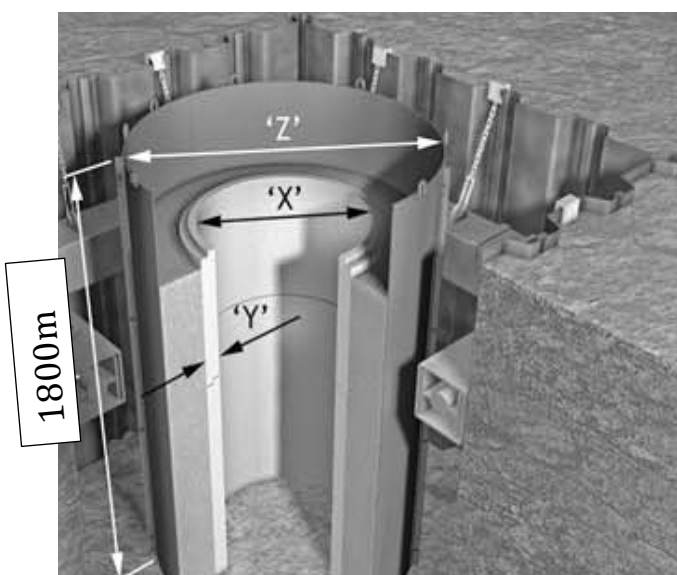
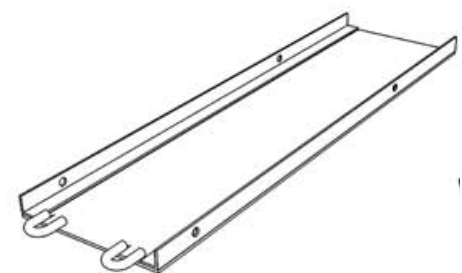
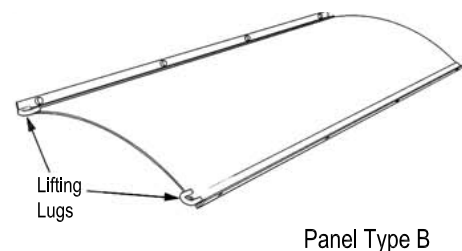
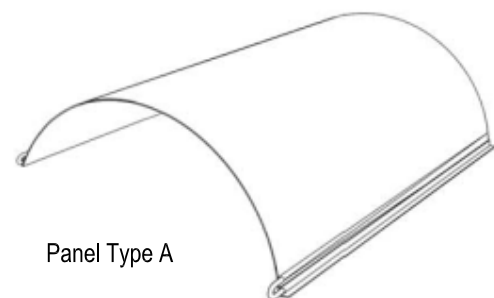
Proshore's adjustable Steel Manhole Shutters are intended to be used as an engineered temporary circular formwork shutter solution, in order to support uniform thickness concrete, which is to be poured 'In-Situ' for pre-cast concrete manhole rings. The product aims to accommodate all standard sizes of manhole rings, by using a combination of 3 panels, which shall be referred to in this guide as A, B & C.

User Guide Contents:

- **Page 1:** Components
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- **Page 3:** User Summary Guide

Components:

1800mm High Panel		
Panel Type	Width (mm)	Weight (kg)
A	1530	62
B	620	36
C	250	25



Product User Guide

PRO SHORE

Title: Adjustable Steel Manhole Shutters

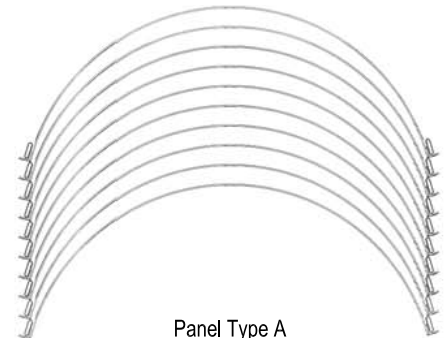
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Date: Nov 16'

"X" Nominal Internal Diameter of Manhole (mm)	"Y" Thickness (mm)	Number of Sections Req			"Z" External Diameter of Concrete (mm) (mm)	Theoretical Thickness of Concrete (mm)	Volume of Concrete Surround (m3)
		A	B	C			
675	65	2	1	0	1171	183	1.02
900	75	2	2	0	1368	159	1.09
1050	85	3	0	1	1541	160	1.25
1200	100	3	1	1	1738	169	1.5
1350	112	3	2	0	1855	141	1.36
1500	115	4	0	1	2028	150	1.58
1800	115	4	2	0	2342	156	1.93
2100	120	5	1	1	2712	186	2.66
2400	135	6	0	1	3002	166	2.66
2700	162	6	2	1	3396	186	3.38
3000	210	7	2	0	3800	190	3.89

Stacking & Handling:

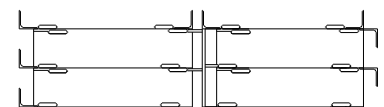
All shutter sections will be supplied pre-coated with a concrete release agent, which aims to help protect the sections against concrete contamination. Therefore, it is recommended that all operatives should wear protective gloves when handling the sections. Gloves should be included as mandatory PPE on sites using Proshore Shutter sections.



Panel Type A
(Max 10 High)



Panel Type B
(Max 10 High)



Panel Type C
(Max 5 High and banded)

Handling notes:

- All operatives that complete Unloading or slinging of the product, should be experienced and competent with sufficient training relating to the plant and lifting equipment required.
- Each shutter has TWO lifting lugs.
- Assembled panels should be lifted with chains and load spreaders to avoid distortion.
- Manhole shutters are extremely flexible
- Transportation drivers should ensure that precautions have been taken to adequately secure the shutters to the vehicle.

Operational Guidance

This particular Manhole shutter has been designed to be a solution for up to **190mm** thick concrete around pre-cast rings. They therefore **MUST NOT** be used as an attempted solution for cover greater than 190mm. Secondly, the shutters are not intended for multiple height pours and multiple height pours cannot be achieved by mounting shutters on top of one another.

Before each use, the shutter should have its full complement of pins and wedges. One side of the shutter should have a pin by each connector hole and the other side should have a wedge.

User Summary - Adjustable Steel Manhole Shutters:

- X** - Product is not compatible with similar products from other suppliers and should not be used as a combined solution.
- X** - Used for Multiple height pours
- X** - Use excessive force to tighten flange joints

- ✓** - Store and stack separately
- ✓** - Full PPE including Protective Gloves
- ✓** - Operations completed by experienced and efficiently trained workers.
- ✓** - Check all pins and wedges are in place for each shutter before use.
- ✓** - Checklist for maintenance and operation, which should be completed regularly by operatives during use:
 - ✓ Check for splits or holes in the body of the shutter
 - ✓ Check that the connector holes are intact.
 - ✓ Check that the lifting lugs have not been damaged.
 - ✓ Check that the pins and wedges are kept clean and well maintained.
 - ✓ Check that the flange faces are free to allow a tight flange connection.