

# Protectorshell

**Protectorshell Articulated Pipe** has been developed to provide shallow water abrasion and impact protection for submarine cables.

**Protectorshell** is unique in that it clips together, avoiding the nuts and bolts of traditional articulated pipe. This clip together feature allows quick real time application during laying and a much simplified diver installation onto pre-laid cables.

The **Protectorshell** system comprises two different cast segments which are identified as uppers and lowers. Each successive pair of segments clips over and retains the end of the preceding pair.

A wide range of adaptors and attachments are available for use with **Protectorshell** Articulated Pipe. These adaptors and attachments allow the reversal of application direction and interfacing with other cable protection measures such as directionally drilled pipes, pipe flanges and concrete abutments.



## PS160/455/10

### Specifications

Segment Length - Overall	520mm
Effective Installed Length/segment pair	455mm
Minimum Internal Diameter	160mm - for cables up to 145mm diameter
Maximum External Diameter	266mm
Wall Thickness	10mm
Material	Ductile Iron to ISO 1083
Tensile Strength / Elongation	400MPa / 15% elongation
Impact Resistance	12m Drop test or 26kg
Minimum Bend Diameter	4.0m
Weight per Segment	27.3kg
Weight per installed metre (air)	60.0kg
Weight per installed metre (water)	52.5kg
Fasteners	M16x70 Bolt and M16 Nyloc Nut – Material Stainless Steel G316/A4 Recommended usage: 1 pair per 10 metres of installed pipe

#### Protectorshell SL

C Regata Cutty Sark No 21 4 IZ 15002 La Coruña, Spain  
T: +34 8 8124 1115 F: +34 8 8192 4978

[www.protectorshell.com](http://www.protectorshell.com)

#### MS Diversified Services Pty Limited

PO Box 150 Maroubra NSW 2035 Australia  
1135 Anzac Parade, Matraville, NSW 2036 Australia  
T: +61 2 9694 1004 F: +61 2 9314 3526

