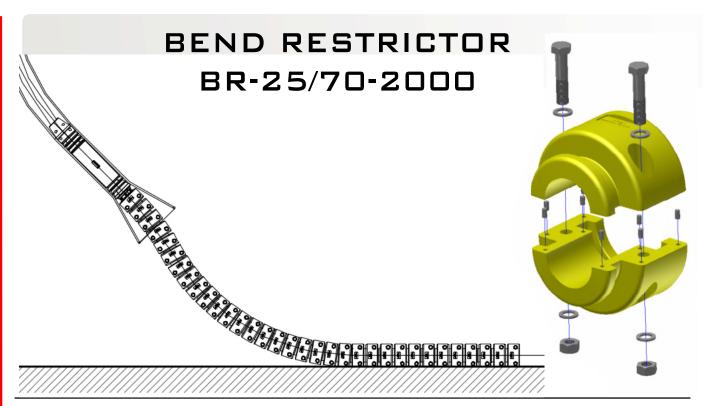
# Submarine Cables & Umbilical Laying, Maintenance and Repair Service



#### **DESCRIPTION:**

Bend restrictors designed by PCS Italiana are suitable to deliver a cable overbending protection at exit of j-tube bell-mouth in order to avoid damage to the submarine cable.

The diverless design allow them to be directly assembled on cable befere laying, avoiding divers operation in water; it is also fitted with necessary coupling flange to accommodate PCS-J-Tube seal or Centralizer.

Dimensioning takes into consideration: cable diameter and MBR, distance between j-tube exit and seabed.

Polyurethane material is suitable to deliver a safe protection to high mechanical bending stresses and also suitable to grant a basic cable protection to any fallen object that may hit cable on platform vicinity.

Design in elements allow the possibility to properly dimensioning the necessary protection length according to specific requirements.

#### MATERIAL:

- Bend restrictor body: MTA31 Hard Polyurethane

(Yellow)

- Bolts & Nuts : AISI 316 A4

# **ENTRY DATA FOR DIMENSIONING:**

- Cable diameter and minimum bending radius
- Installation condition and free span distance between j-tube bellmouth and seabed

### SINGLE ELEMENT MAIN DIMENSIONS AND DATA:

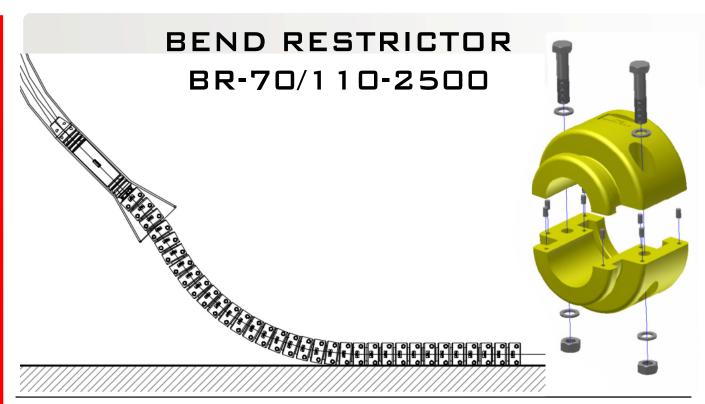
141

mm

- Single element full length

- Single element body length 141 mm - Body outer diameter 185 mm - Body inner diameter 80 mm- Weight in air (approx) 4,0kg - Weight in water (approx) 1,5 kg - Maximum bending stiffness 10 kNm - Maximum axial load 150 kΝ : 2000 - Locking radius mm - No. of element required for 1 m: off 10 2 kJ - Impact protection value

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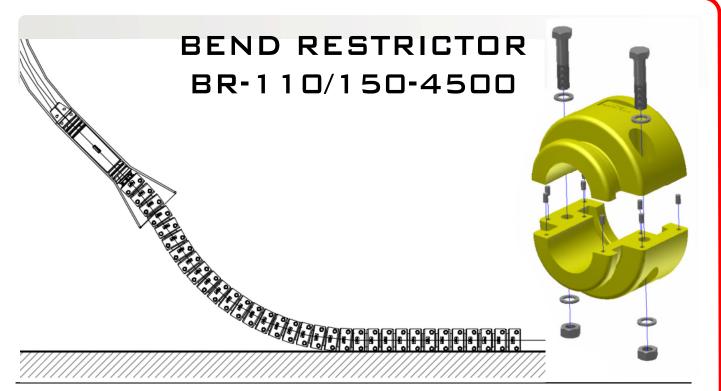
## **ENTRY DATA FOR DIMENSIONING:**

- Cable diameter and minimum bending radius
- Installation condition and free span distance between j-tube bellmouth and seabed

### SINGLE ELEMENT MAIN DIMENSIONS AND DATA:

- Single element full length	:	208	mm
- Single element body length	:	208	mm
- Body outer diameter	:	272	mm
- Body inner diameter	:	118	mm
- Weight in air (approx)	:	8,5	kg
- Weight in water (approx)	:	2,2	kg
- Maximum bending stiffness	:	15	kNm
- Maximum axial load	:	186,4	kN
- Locking radius	:	2500	mm
- No. of element required for 1	m :	7	off
- Impact protection value	:	2	kJ

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Polyurethane material is suitable to deliver a safe protection to high mechanical bending stresses and also suitable to grant a basic cable protection to any fallen object that may hit cable on platform vicinity.

Design in elements allow the possibility to properly dimensioning the necessary protection length according to specific requirements.

### MATERIAL:

- Bend restrictor body: MTA31 Hard Polyurethane

(Yellow)

- Bolts & Nuts : AISI 316 A4

# **ENTRY DATA FOR DIMENSIONING:**

- Cable diameter and minimum bending radius
- Installation condition and free span distance between j-tube bellmouth and seabed
- Eventual requirement for different steel grade/type

## SINGLE ELEMENT MAIN DIMENSIONS AND DATA:

- Single element full length 280 mm - Single element body length 280 mm - Body outer diameter 370 mm - Body inner diameter 160 mm - Weight in air (approx) 20.8 kg - Weight in water (approx) 6.0 kg - Maximum bending stiffness 30 kNm - Maximum axial load 378 kΝ - Locking radius : 4500 mm - No. of element required for 1 m: 5 off - Impact protection value 2 kJ