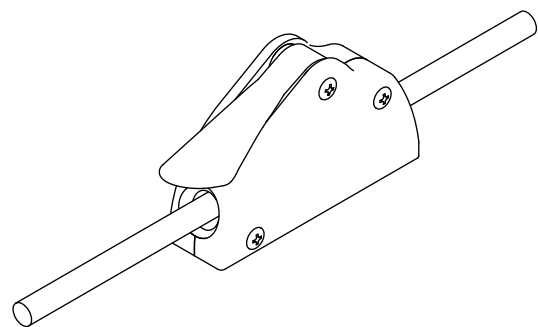


## Clutches

### Cam 611 & Cam 611/V



#### CAM 611 CLUTCH

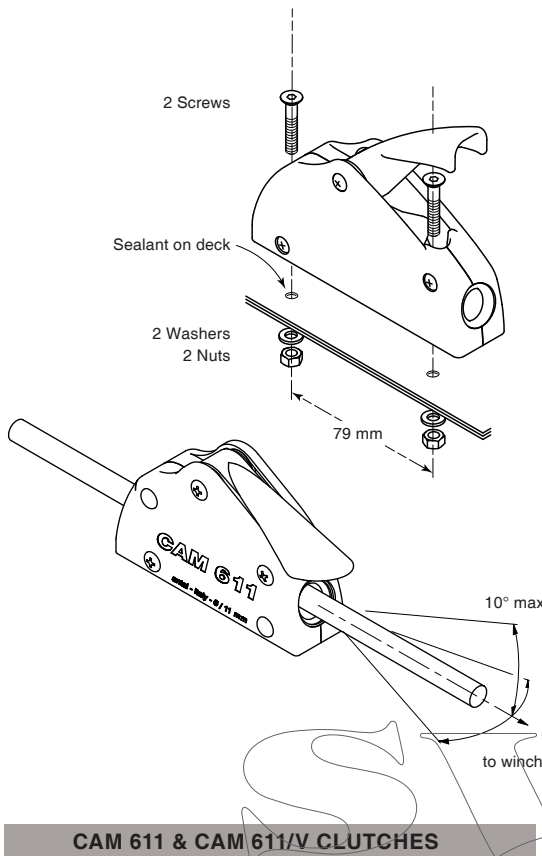
The smallest among antal clutches; one single model, for lines ranging from 6 to 10 mm.

#### CAM 611/V CLUTCH

CAM 611 clutches have been improved with a new 'V' shaped cam, that supports much higher loads. Two models: one for 6 mm and one for 8 mm lines. Working loads: 400 kg on the 6 mm and 600 kg on the 8 mm. All other features remain the same as those of Cam 611.



**Internationally patented Antal V-Grip system:** Antal Cam 611/V is fitted with the **V-Grip system:** a "V" shaped cam that improves the holding power, increases the bearing surface on the line and consequently gives higher working loads without cover damages.



#### CAM 611 & CAM 611/V CLUTCHES

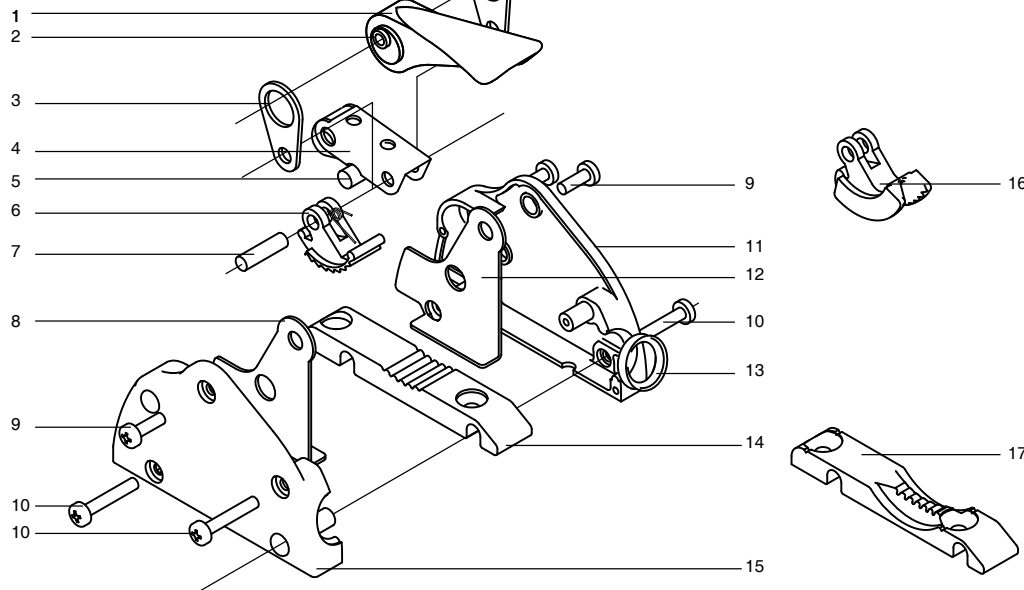
The CAM 611 and Cam 611/V clutches have a box-structure in UV-resistant resin with stainless steel reinforcements, an extruded aluminium base, wear-resistant bronze cam mechanism and stainless steel aligning bushing.

Their mechanism guarantees easy opening even under load. A line can be tailed or winched with the handle closed. They can be completely dismantled for servicing; simple maintenance can be done with the clutch on deck.

#### Installation:

- Each clutch has to be fixed with 2 x 6 mm AISI316 stainless countersunk flat head screws.
- Install the clutch forward of the winch, keeping the line deflection angles as narrow as possible (10° max), as shown in the drawing.
- Mark the screw's position on your deck using the clutches' holes directly, or, alternatively, the full scale template on the back of this guide.
- Lift the handle and place the screws. To ensure a watertight seal, apply sealant

#### Cam 611



#### Cam 611/V

1	Handle	6	Cam (Only for Cam 611)	11	Sideplate Right
2	Handle Pin	6/V	V-Cam (Only for Cam 611/V)	12	s.steel Reinforcement Right
3	Link	7	Cam Pin	13	Ring
4	Lever	8	s.steel Reinforcement Left	14	Base (Only for Cam 611)
5	Lever Knob	9	Screw, 5Ø, L=14mm (Only for single clutch)	14/V	V-Base (Only for Cam 611/V)
		10	Screw, 5Ø, L=30mm (Only for single clutch)	15	Sideplate Left

around the holes under the clutch base,

- **Horizontal mounting:** an extra aluminium side-mount base is provided with the clutch. The same base fits left and right horizontal mounting. For more info visit [antal.it](http://antal.it) or contact us at [antal@antal.it](mailto:antal@antal.it).

#### Usage

- A line can be **tailed** with the handle closed. It stops automatically in the new position.
- **Release** the line by opening the handle, also under load, without the use of a winch.
- **Line's cover:** Continuous openings of the clutch with the line under tension cause wear of the cover. It is advisable to pull the line with the winch before lifting the clutch's lever.
- **Loss of tension:** after pulling the line with the winch, the removal of the line from the winch causes a mechanical shift of the cam. This forward movement of the cam locks the line, but produces a small loss of tension. To reduce the tension loss, open and close the clutch handle just before removing the loaded-up line from the winch.

#### Maintenance and Servicing:

- Refer to the exploded view to identify parts.
- For maintenance, lift the handle and spray fresh water onto all inner moving parts. Wait until they are dry, thus lubricate parts n. 2, 3, 4 and 7 with lubricant spray. Take care not to leave lubricant traces onto the line's bearing surface and on the Cam or V-Cam teeth, as this may reduce the clutches' grip performance.
  - Cam 611 and Cam 611/V can be dismantled for complete servicing; remove the two mounting screws and take the clutch off the deck.
  - Remove the Sideplate screws (n. 9, 10) in order to take the Sideplates off.
  - Clean the inside from dirt and sea salt which could cause corrosion, lubricate all moving parts, using a light grease, e.g. Teflon based.
  - Ensure all internal faces of moving parts are clean and smooth. Replace any worn parts.
  - Parts for Cam 611 and Cam 611/V clutches are available. Refer to the exploded view's numbers to order the parts.

**Rope Choice:**

Extensive Load tests show that choice of rope is very important for the optimal usage of the clutches. Exceeding Working Loads may damage the line cover, not the clutch.

Tests reveal that the best results are achieved on Dyneema® lines with composite Kevlar/Polyester covers, while traditional pure-Polyester covers over a Dyneema® core prove to have poor resistance. Also “all-Polyester” core/cover versions give excellent results.

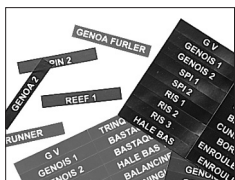
**Clutch Choice:**

For the clutch choice, consider the following table

Line Ø	Cam 611	base for 6mm lines Cam 611/V	base for 8mm lines Cam 611/V
6 mm	250 kg	400 kg	
8 mm	380 kg		600 kg
10 mm	500 kg		

Loads exceeding values of the table may damage the line cover. Make sure that effective loads are always lower than values of the table.

TYPE	WIDTH mm	WEIGHT kg	SCREWS N° x Ø mm
SINGLE	33	0.37	2 x Ø6
DOUBLE	62	0.74	4 x Ø6
TRIPLE	91	1.10	6 x Ø6



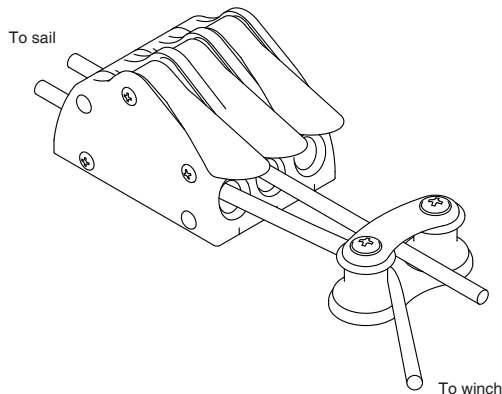
**Stickers**

Ask for Cam 611 stickers, too, to easily recognize the manoeuvres in your battery of Cam 611 clutches. Available in Red, Green and Black colors.

**Contacts:**

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• Download 2013/4 antal catalogue, containing all products' characteristics and antal CAD library, on www.antal.it



**Full Scale:**

Cam 611 & Cam 611/V

Although all antal clutches are fitted with stainless steel rings and guides at both the entry and the exit side of the line, only very small line deflections are allowed to prevent damage to the clutch.

**Organizers:**

Organizers allow for lines to be angled from clutches to a winch which may not be aligned with the clutches. They are in particular useful for batteries of several clutches which are operated by a single winch. A special organizer (Mod. 522.031) has been designed for Cam 611, which allows the passage of up to three maneuvers.

**Organizers' Description:**

- Resin sheave organizer, with double ball bearing and black aluminium cover.
- Designed for Double and Triple 611 clutch.

**Installation:**

- Each sheave's screw is fixed on the deck; screws, washers and nuts are included.
- To ensure a watertight seal, apply sealant around the holes and on the threads of the mounting screws under the organizer's base.

