

## Friends - Glossary of Terms

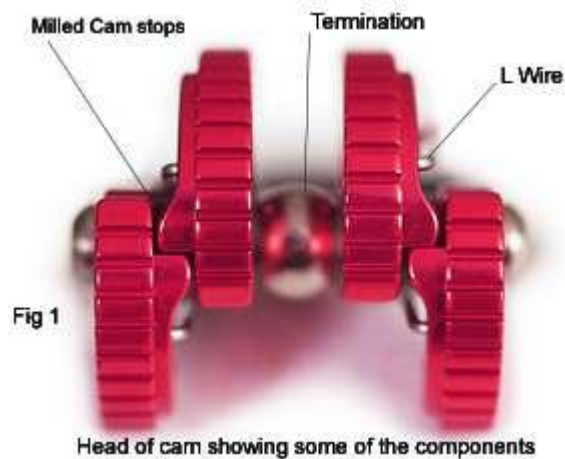
**Axle:** The steel rod about which the cams rotate.

**Bar tack:** Special high strength stitch pattern protected by overstitching used to connect climbing tape together. Used on the Friends 12mm dyneema sling.

**Cam:** The generic name often used to describe all types of camming device.

**Cam Stop:** The load bearing stop or pin which prevents the cams over rotating when a camming device runs out of expansion range. Milled onto the Friend for extra strength. [See Fig 1](#)

**Cam Bounce:** The reactive force generated when the cam impacts the rock surface when holding a fall. The reason our springs are strong.



**Camming angle:** The angle between a horizontal line drawn through the axle and a line drawn through the contact point that the cam makes with the rock. See [How Cams Work. Fig 3](#)

**CNC:** Computer numeric control used to programme automatic milling machines.

**Coefficient of friction:** A term to describe the roughness of any given surface when measured using a calibrated apparatus. Less on Limestone and Slate more on Sandstone and Grit.

**Constant angle cam:** The term used to describe a type of cam which maintains the same angle of attach between itself and the crack face throughout its expansion range.

**Dyneema:** A high strength polyamide fibre which is weight for weight stronger than steel.

**Direction of loading:** A term used to describe the way in which the force of a fall loads a camming device.

**Expansion range;** The distance between the closed and opened position of a camming device.

Flared crack; A rock fissure which increases in size either inwards or outwards.

Forging: The process of heating metal before shaping it by pressure or impact.

L wire: The L shaped rigid wire used to connect the cam to the trigger assembly. [See Fig 1](#)

Patent: An official licence from a government granting a business the sole right, for a certain period, to make and sell a piece of equipment.

Plane of rotation; The direction of rotation of the cams which is at right angles to the axis about which the axle rotates.

Swage: The method of construction used to join metal together using extreme pressure to compress one component onto another.

Stem: The name for the component that connects the cam/axle assembly to the sling. Can be Forged or Flexible and made of stainless steel wire rope in the case of flexible and aluminium in the case of the forged.

Springs: The components which push the cams into their fully expanded position thereby holding the cams against the crack wall. Strong spring give a firmer grip and help stop walking and Cam Bounce.

Stem frame: The component which supports the flexible stem providing directional control see page 21 component 8.

SLCD: Acronym for 'spring loaded camming device' often used generically to describe 'Cams' see above.

Termination: The name used to describe the component swaged (see above) to either end of a the flexible stem. [See Fig 1](#)

Trigger: The name given to the component which is used to activate the triggering mechanism which retracts the cam head.

Trigger wire: The component which connects the L wire to the Trigger.

Walking: Process whereby the camming device climbs deeper into a crack by reacting to rope movement.