

Rolux Fishing Rods Ltd.



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forefinger to “flex” the tip of the rod applying all the pressure against their thumb and simply breaking the rod at that point. Never flex a rod against a small point or a sharp edge.



2. Rod Blank Materials – then and now

Through the ages, fishing rods have been made from various materials, some simple and others very high tech. In the early days, natural materials were employed from flexible saplings to, what was considered at the time to be the ultimate hand crafted segmented split cane rods made by such companies as Hardy’s and Farlow among others. Some rods were made from light steel and other even less suitable materials, until fibreglass came available in the 1950’s.

The first fibreglass blanks were manufactured by the Pultrusion process and had a low percentage of glass compared to the polyester resin matrix that was used to bind the fibres



together. For many years, Pultruder’s had to make do with materials that had been designed for other purposes like hand lay-up and spraying. The fibres used for these processes were hard and stiff and were difficult to process successfully and economically. As the Pultrusion process grew worldwide, the raw materials were tailored specifically for it, resulting in faster production speeds and a vastly superior product. Pultrusion produces, among other shapes, parallel round stock which is the base for rod blanks. The colour is mixed into the resin and

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1. What exactly is point loading a blank or fishing rod?

Simply speaking it is applying force to a specific small area typically near the tip of the rod where the blank is most vulnerable. This does not just occur while fishing when the rod can be damaged by a hard surface but I have seen it happen more than once in tackle shops where the uninitiated use their thumb &

the wet fibres take on the colour which is baked right through the rod as it passes through the Pultrusion machine.

Once the fibreglass rod is cut to the required length, it has to pass through a Centreless Grinding machine to achieve the desired taper



which gives the action of the rod. As the colour goes right through the blank, it does not have to be painted but finished with one or two clear coats of polyurethane.

Hollow fibreglass, carbon fibre and composite blanks.

Used with different materials to manufacture blanks from Fly rods through Salmon casting rods up to large Surf rods and heavy rated Game rods.

Most modern rods on the market today are manufactured from hollow blanks.

Hollow blanks are made by cutting resin pre-impregnated fibre - cloth to a precise pattern and wrapping around a tapered steel mandrel. The mandrel, the shape of the cut cloth and the number of wraps determine the taper, strength and the action of the blank. The cloth and mandrel are then spiral wrapped with cellophane tape to keep the resin in place when it "wets" out in the oven under heat. After being wrapped, the blanks are hung in a large oven and cured. When cooled, the wrapping material is removed and the blank is sent for trimming and if required, sanding and spraying with special paint or clear finish.

The above process is basically the same whether the "cloth" is fibreglass, carbon fibre or a combination of the 2. The modulus (basically the stiffness) of the material is taken into account in the design stage of the blank. Carbon fibre is much stiffer and lighter than fibreglass as it has a much higher modulus and therefore is ideally suited to light, small fishing rods or those requiring a lot of power for the size of the rod. Fly rods are made from

different grades of carbon fibre and as a result are ultra-light, stiff and responsive. The higher the modulus, the stiffer the blank and the faster a rod can recover therefore keeping pressure on the fish and giving more power for casting. This extra power results in better properties all round. The only problem with carbon fibre is that it is more susceptible to damage and must be treated accordingly. If a powerful Fly rod is not built correctly, it can blow apart when under pressure from casting or fighting a fish.

An alternative to the above options is a composite blank made from 2 or more materials combined. Although some performance is sacrificed, for many anglers, the composite blank provides a strong powerful rod that can take a little more abuse without failing. Many people prefer the extra reliability over ultimate performance. As composite blanks are normally cheaper than graphite, the resulting rod is correspondingly less expensive.

3. Blank action explained

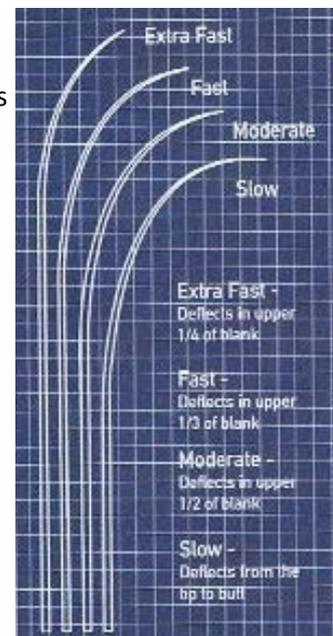
Slow, medium, fast or extra fast action - what does it all mean?

A **slow action** blank deflects under pressure evenly from the Butt to the tip.

A **moderate or medium action** blank deflects under pressure in the top half (50%) of the blank.

A **fast action** blank deflects under pressure in the top third (33%) of the blank.

An **extra fast action** blank deflects under pressure in the top quarter (25%) of the blank



4. Choosing the right guides

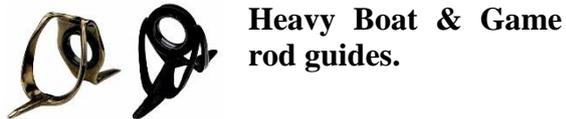
There are many combinations of frame types and centre ring materials which can come with, or without, a plastic shock ring to help protect the extremely hard but slightly fragile centre ring material.



Casting & Spinning two foot stamped frame guides



Single foot spinning guide



Heavy Boat & Game rod guides.

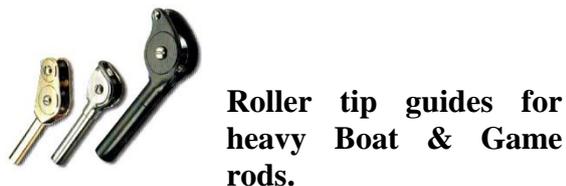


Different Tip rings with light to heavy frames in various finishes and inner ring materials.

Factors that have to be taken into account when designing a rod are how the guides will flex with the blank, the appropriate type and size of frame (height & diameter of ring). Weight and insert material, which must be suitable for the line being used.



Roller Game Guides



Roller tip guides for heavy Boat & Game rods.

5. Guide insert material & frame development

Frames can be stamped from 1 piece of Stainless Steel or Titanium or alternatively of the welded brass variety. In the case of heavy roller guides for Game rods, they are either machined from a solid block of quality Aluminium, or pressed from heavier stainless or titanium. Typical colour finishes are Chrome, Black, and Gold, Gunsmoke or bright (natural Stainless Steel look).

The centre ring can be made from many different materials also, but the most common are **Titanium Oxide, Aluminium Oxide, Hialoy, Zirconium and Silicon Carbide**. These materials have different hardness ratings, but all are capable of handling the modern more abrasive lines in use today.

You can read my full article on Rod Guide Development on the Rolux website [here](#).

The “Crown” range of tent pegs, rope slides and keyhole tensioners will be available on the website from the end of June. **If you register on the website, you will get an automatic 10% discount and all orders received in June over \$50.00 in value will get free delivery.**



Thanks for reading my Newsletter and please feel free to contact me with your comments and let me know if there are any Rod building topics you want discussed.

Kind regards,
Al.
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