



The Jefa RP100 rack and pinion steering system.

With the 100 series pedestal Jefa Steering introduces a new style in classic pedestal design. The traditional "wine glass" shape is combined with modern lines into a beautiful pedestal design. The important accessories like the guardrail and the compass binnacle are integrated into the concept. Due to this innovative design no mounting bolts are visible on any part of the exterior of the pedestal. The integrated compass offers easy and clear readings without the need of a separate binnacle. The 32 mm diameter stainless steel 316 guardrail is firmly attached to the pedestal head offering the best protection for the compass and pedestal combined with a strong support when moving around in the cockpit. The integrated powerful and progressive friction brake can be operated without putting one's hand through the wheel.

The 100 series pedestal concept has big advantages over existing similar concepts:

- All pedestal parts are machined from seawater resistant solid Aluminium 6082. As this material is also used for rudder shafts, it will not corrode, even when it's exposed by a surface damage. No casted aluminium parts are used in this pedestal.
- The robust powder coated aluminium base has no mounting holes for pedestal bolts as these are integrated in the pedestal deck flange. This avoids multiple weak points for damage with the accompanying corrosion and possible leaking.
- The input socket has no exterior mounting bolts for a stylish look and avoiding multiple potential corrosion and damage points.
- The robust guardrail is mounted directly to the pedestal head avoiding a top plate with mounting bolts with potential corrosion points.
- The compass binnacle is integrated in the pedestal design avoiding a set of mounting bolts with potential corrosion.
- The steering shaft is sealed by the Jefa developed PUR seal. Normal industry seals use steel reinforcement rings in the rubber housing. As the standard industry rubber will start to crack due to the UV in the sunlight, the steel rings will corrode and destroy the seal letting water in the steering shaft bearings with disastrous effects. The PUR seal will guarantee an life long sealing.



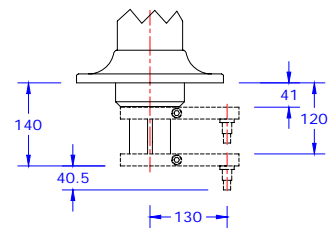
The RP100 is the rack and pinion steering version of the 100 series pedestal. The steering pedestal is usable for boats up to 50' in length (above 45' a big wheel has to be used). The 25 mm steering shaft is equipped with the standard international 1" taper to fit all Jefa wheels up to 1500 mm diameter. The steering shaft has 2 ball bearings spaced maximum apart in the input pinion of the pedestal driving the gearwheel with a reduction of 5:1.

On top of the exterior innovative advantages described above, the RP100 also has major construction advantages over existing similar pedestal concepts:

- The input pinion has no exterior mounting bolts for a stylish look and less chance of damage and corrosion. The input assembly can be easily removed from the inside of the pedestal.
- The nickel aluminium bronze gearwheel is not casted but made from solid extruded nickel aluminium bronze, making it extremely strong and homogeneous and free from any porosity.
- The gearwheel is bolted to the vertical driving shaft with 4 off M12 bolts allowing the gearwheel to be easily removable for service, inspection and if necessary future replacement.
- The vertical driving shaft is made of high strength aluminium (proof stress of 280 N/mm² compared to 200 N/mm² for stainless steel) with a large outside diameter of 70 mm and a wall thickness of 5 mm making it indestructible and enormously stiff, so the gears will never run out of mesh.
- The vertical driving shaft bottom bearing is a 70 mm Jefa rudder bearing guaranteeing a strong and non-corrosive solution.

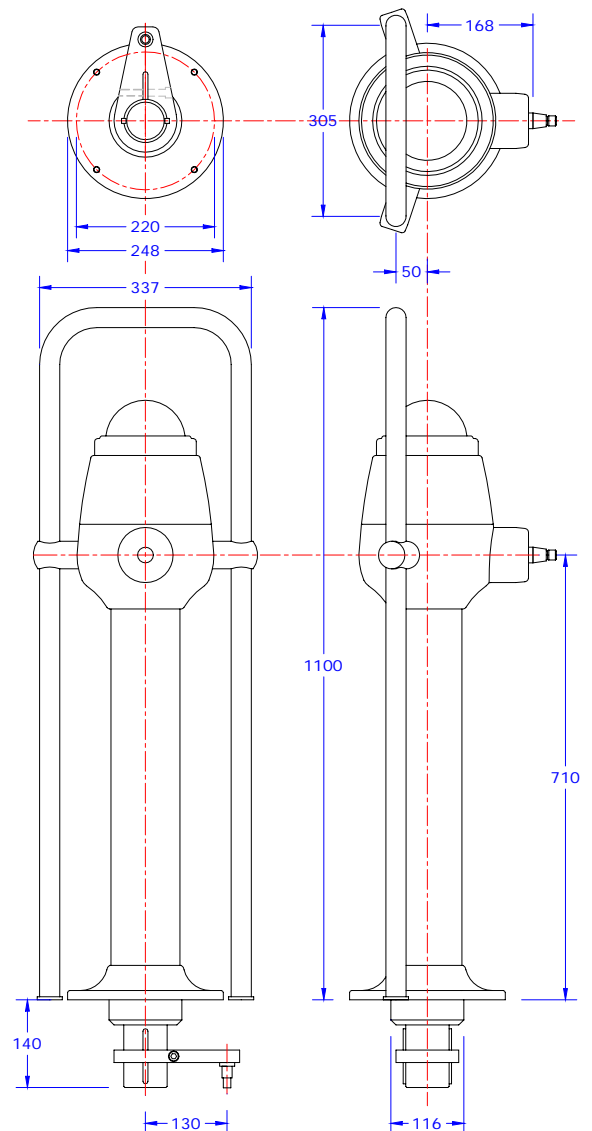
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- The output lever isn't welded to the vertical driving shaft but secured with a double key. This provides the most flexible solution as the position of the lever depends on the variable deck thickness and can be adjusted during the installation. The distance between the bottom of the deck flange and the top of the lever is adjustable from 41 to 120 mm. Another advantage of this solution is the fact that the steering geometry can be swapped from starboard geometry (standard) to port geometry during the installation.
- The draglink between the pedestal and the rudder is made of anodised high strength aluminium, which provides a stronger and lighter solution than a stainless steel variant.
- The rose joints on the draglink aren't industry joints, but a special design by Jefa Steering and made from high strength anodised aluminium with an easy removable delrin ball inside. This solution finally solves the electrically disconnection of the rudder from the rest of the steering system and boat. (See our electrolysis page on the web for further information.)



Jefa RP100 rack and pinion steering pedestal dimensions

- The standard heights of the pedestal are 630, 710 and 800 mm. Custom heights are available at request.
- The compass mounting flange should not exceed 180 mm diameter.
- The appropriate compass hole will be drilled when the compass is ordered together with the pedestal.
- The pedestal mounting studs are available in multiple lengths to suit the cockpit floor thickness. The mounting studs are positioned on a circle of 220 mm.
- The vertical driving shaft offset relative to the middle of the pedestal is 24 mm in ships forward direction.
- The RP100 should never be used without the RP100 stopring to limit the travel of the output lever and avoid damage to the steering system and rudder system.
- All RP100 pedestal variations are available as CAD drawing in our download area.



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CE Jefa RP100, RP200 & RP300 rack and pinion steering complies with ISO13929

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