



The Jefa RP200 rack and pinion steering system.

With the 200 series pedestal Jefa Steering introduces a new style integrated pedestal design. All major functions for the modern helmsman are integrated in one central steering and control centre: The integrated engine control offers easy installation and quick access. The integrated compass offers easy and clear readings without the need of a separate binnacle. The 25 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 glass fibre pedestal head accepts 2 instruments and multiple control buttons. The integrated powerful and progressive friction brake can be operated without putting one's hand through the wheel.

The 200 series pedestal concept has big advantages over existing similar concepts:



- 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 a large water draining groove behind the cover plate to prevent any water entering the pedestal.
- The pedestal head largely overhangs the aluminium base to prevent any splash water entering the pedestal from underneath the head.
- The engine control mechanism is not attached to the pedestal head but to the pedestal base. This offers the unique advantage of mounting the complete mechanism to the pedestal and the attachment of the control cables independently from the pedestal head. The pedestal head can be worked on separately in the workshop to be adapted to the customer requirements with instruments, buttons and joysticks. This concept also eases the retrofit of a mechanism, or a swap from starboard to port.
- The robust guardrail has a four point connection to the pedestal head, spreading the loads smoothly over the pedestal.
- The guardrail is attached to the back of the pedestal leaving the top surfaces completely usable for small instruments, buttons or joysticks.
- The underside of the pedestal deck flange has two large milled grooves with twin foam gaskets for easy mounting without any additional sealant.
- 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.



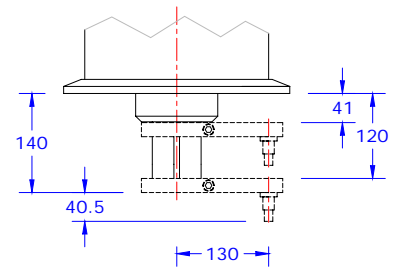
The RP200 is the rack and pinion steering version of the 200 series pedestal. The steering pedestal is usable for boat up to 50' in length (above 45' a big wheel has to be used). The 25 mm nickel aluminium bronze steering shaft is equipped with the standard international 1" taper to fit all Jefa wheels 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 concept advantages described above, the RP200 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.

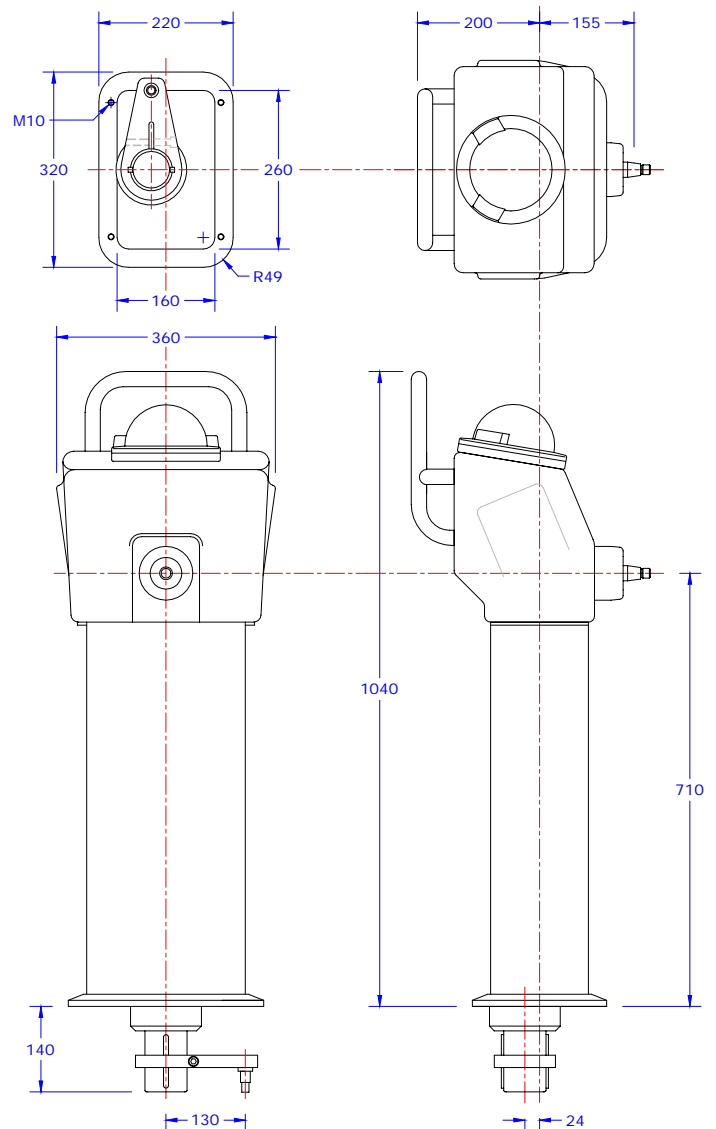
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- The output lever isn't welded to the vertical driving shaft but secured with a double key. This provides the most flexible solution as the position of the lever depends on the variable deck thickness and can be adjusted during the installation. The 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 electrical disconnection of the rudder from the rest of the steering system and boat.
- All Jefa stainless steel and carbon steering wheels have a 25 mm rim, in stead of the usual 22 mm. This dramatically improves the grip and feel of the steering wheel.



Jefa RP200 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 square of 220 by 180 mm.
- The vertical driving shaft offset relative to the middle of the pedestal is 24 mm in ships forward direction.
- The RP200 should never be used without the RP200 stopring to limit the travel of the output lever and avoid damage to the steering system and rudder system.



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

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