

HYDRAULIC VERTICAL RAIL JOINT STRAIGHTENER

MODEL JA 100

The **Hydraulic Vertical Rail Joint Straightener model JA 100** is specially designed to **straighten welded or fish-plated sag rail joints without the need to dismount fishplates.**

It is suitable for all **kind of flat bottom rails (and grooved rails with optional kit)** up to 60 kg/m.



1. DESCRIPTION AND OPERATION

The Hydraulic Rail Joints Straightener model JA 100 measures and accurately controls the straightening operation with graduated gauges.

The solid steel welded frame includes an articulated bearing on one end and a second bearing link to the rod of the double acting ram on the other end. The ram is controlled with a two speed hand pump. The frame is equipped with two handling bars, two double flanged rollers (retracted during operation), an outrigger bearing on the adjacent rail with single flange roller; this bar can be adjusted according to the track gauge.

In the centre is a rail clamp. It includes two articulated arms which go both sides of the rail and a locking system linking both arms under the rail.

The rail clamp is linked to an eccentric system which can be adjusted through notches. It enables to reduce the gap between the locking system and the rail foot.

The principle of operation is to bear on two points on the rail head and to lift the rail joint with a central vertical pull under the rail foot.

For travel on rail, the clamp arms are folded in the upper position, using spindles. Double flanged rollers, each mounted at the end of the articulated arm on the frame, when set in transport position enables only one operator to easily push the machine from one joint to another one.

1. DESCRIPTION AND OPERATION (Cont'd)

The Hydraulic Vertical Rail Joint Straightener model JA 100 is mainly composed of the following elements:

- A solid frame;
- Two bearing skates;
- Two double flanged rollers;
- One adjustable outrigger with single flange roller;
- One rail clamp and a vertically adjusted locking system;
- One double acting hydraulic ram;
- One two speed manual pump with automatic switch of flows (high / low pressure);
- One graduated gauge.

All active parts of the bender are made of high tensile steel.

2. TECHNICAL DATA

- Two Speed Hydraulic hand pump and automatic switch:

High flow (high speed):	32.6 cc/stroke from 0 to 50 bar
Feed per stroke (high speed):	4,15 mm
Low flow (low speed):	4.6 cc/stroke from 50 to 625 bar
Feed per stroke (low speed):	0.6 mm
Working pressure:	625 bar
- Double acting hydraulic ram:

Nominal power	500 kN (≈ 50 tonnes)
Stroke:	120 mm
- Power at clamp: ≈ 1000 kN (≈ 100 tonnes)
- Vertical straightening stroke: ≈ 60 mm
- Bending moment: 300 000 Nm
- Distance between both bearing points: 1 200 mm
- Mass of rails to bend: 60 kg/m
- Dimensions (in working position with balancing bar):

Length:	$\approx 1\,450$ mm
Width:	$\approx 1\,880$ mm
Height:	$\approx 1\,000$ mm
- Mass: 230 kg

3. ACCESSORIES AND OPTIONS (at extra price)

- **Pressure gauge graduated from 0 to 1,000 bar**
- **Additional bending toolkit for grooved rails**
 (In case of order, rail type to be bent must be specified (rail profile drawing to be supplied))

We reserve the right to modify any equipment specification of the present offer to take into account the latest technical improvements and working conditions at the date of manufacturing.
 Pictures and drawings may include some options and are not contractual.