

PB 42" - 56"

PIPE BENDING MACHINE



TECHNICAL FEATURES

The PB 42-56 pipe bending machine is the result of extensive experience gained on the construction site. It reflects all the wishes of the contractor when performing work on bending large diameter pipes.

The main characteristics of PB 42-56 are:

- ◆ Machine size from 1066 to 1420 mm, which allows processing pipes of almost all large diameters;
- ◆ Robust design allows bending pipes of the new generation X80 with a diameter of 1420 mm and a wall thickness of up to 27.43 mm;
- ◆ The design concept allows for quick disassembly of the machine for its further transportation within its dimensions;
- ◆ The barycenter distribution combined with the long undercarriage makes it easy to move the machine along the pipe on the job site by simply pulling it with the pipelayer



The ability to move the car along the route saves a lot of money and time:

The following calculation was made for a 60 km project with a pipe diameter of 1420 mm. Using the PB 42-56 on the right-of-way allowed the contractor to save more than half a million euros on the project.

The technical solution lies in an improved center of gravity, which provides a load on the pulling pipelayer of only 28 tons, and in a longer chassis, as a result of which the machine has a fairly low ground pressure.



TECHNICAL CHARACTERISTICS

Operating dimensions:

Width	3.800 mm
Height	4.200 mm
Length	12.000 mm
Weight	70.000 kg

In half a day the machine can be disassembled and reduced in overall dimensions (down to a width of 3 m) and weight for comfortable transportation.

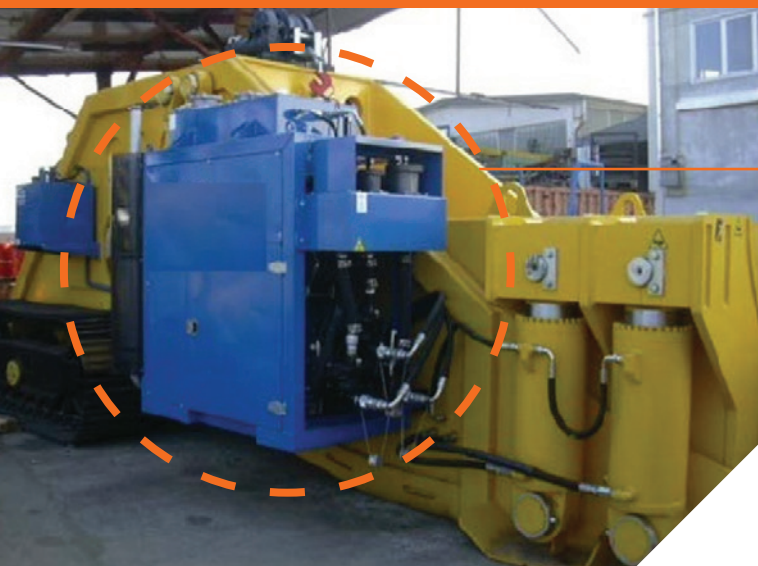
If necessary, the weight of the main frame can be reduced down to 48 tons.

Main frame transport dimensions:

Width	3.000 mm
Height	3.200 mm
Length	12.000 mm
Weight	56.000 kg



The photo shows the transport of the main frame on a trailer.



Engine:

Model	IVECO N67 MNT
Power	175 HP/129 kW
Speed	1250 rpm
Compression	17.5:1
Bore stroke	105 mm – 127 mm
Displacement	6.7 l
Fuel tank	290 l

Hydraulic system:

Pumps	2 pumps HPD 3563
Displacement, cub.cm/rev	63.88
Max pressure	270 bar
Max speed	3000 min ⁻¹
Pump	1 pump LVP 90S
Displacement, cub.cm/rev	87.90
Max pressure	250 bar
Max speed	1850 min ⁻¹



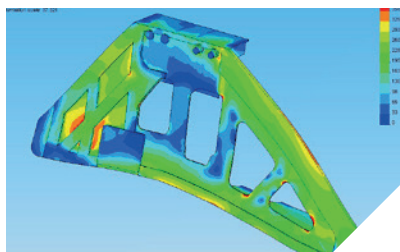
TECHNICAL CHARACTERISTICS

Bending Chart

Pipe diameter, mm	X52	X60	X65	X70	X80
1066	58,27	49,57	45,35	41,80	36,57
1220	50,98	43,38	39,68	36,57	32,00
1320	47,06	40,04	36,63	33,76	29,54
1420	43,70	37,18	34,01	31,35	27,43

Recommended bend

Ratio radius/diam	Radius m	Max angle for 12 m
8,33	11,6	45*
13,00	15,85	33°
14,76	19,5	27°
16,87	24	22°



This image is the result of a 3D modeling program.

With its help, the structure of the pipe bending machine was studied and optimized in accordance with the results of the stress analysis carried out using the FEM method (finite element method).

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