



SPB 32-42 Pipe Bending Machine

Operating weight	95,900 lbs / 43,500 kg
Max. Operating Pressure	4,640 p.s.i. / 320 bar
Horsepower	225 HP / 168 kW



SPB 32-42 PIPE BENDER

ABOUT THE SPB 32-42

The new pipe bending machine SPB 32-42 belongs to the "Millennium Series" fleet, which is the new generation of SUPERIOR pipe benders. Despite its simplicity, this machine guarantees high performances in terms of speed and push.

The hydraulic system has 5 spools; the fifth spool may be used to control the hydraulic mandrel, if fitted. The separate valves enable the operator to set the mandrel pressure independently from the machine. The hydraulic cylinders are sized in such a way that they can operate with pressures exceeding 300 bar.

The system design and the proportional valves offer excellent modularity and sensitivity of machine movements, at the same time making the machine speed and push very easy to control.

The new position of the piloting platform and the engine compartment on opposite sides make this machine unique in terms of operating comfort and guarantee maximum visibility and low noise levels to the operator.

The SPB 32-42 is installed on tilting idle tracks. Its dimensions and low profile make its travel easy on any job site. The Caterpillar chains are equipped with three bar shoes, the rollers are life-long lubrication type, and the track tensioning device is greased type. All these elements guarantee maximum machine reliability and life over time.

On request, LGP tracks are available. These are longer and have larger shoes to operate on soft soils where low specific pressure on the ground is required.



SPECIFICATIONS

ENGINE

Model	Caterpillar C-6.6 ACERT
Net flywheel power (DIN 6271)	225 HP / 168 kW
Governed speed	1,900 rpm
Displacement	6.6 liters
Compression ratio	16:1
Engine bore	105 mm - 127 mm
Number of cylinders	6

HYDRAULIC PUMP

Type	Axial piston, load-sensing pump, with tilted plate and constant power control
Maximum flow rate	108 U.S. gal/min - 410 lt/min
Maximum constant pressure	127 U.S. gal/min - 483 lt/min
Maximum peak pressure	320 bar

CONTROL VALVE

Brand	Rexroth
Type	Load-sensing with proportional control (LUDV)
Spools	N.5

HYDRAULIC WINCH

Type	2.280.0017
Maximum pull at first layer	17,306 lbs / 7,850 kg
Hydraulic motor	Orbital DANFOSS
Frame	Aluminum alloy + ductile cast iron
Reduction gear	With worm screw, irreversible
Neutral	Manual
Maximum operating pressure	1,885 p.s.i. / 130 bar
Maximum feed flow rate	26 U.S. gal/min - 100 lt/min
Speed at first layer	16 ft/min - 4,85 m/min
Recommended cable diameter	1/2 inch / Ø 13 mm
Wire rope type	6 strands with textile core
R=2,160 N/mm ² min. breaking load guaranteed 15,700 kg	

HYDRAULIC OIL TANK

Type	Metal work with filter
Capacity	121 U.S. gal / 460 lt
Cartridge type	Parker

FUEL TANK

Type	Metal work with filter
Capacity	76 U.S. gal / 290 lt

SPOOLS

Spool 1: Out-board and in-board cylinders, clamp

Maximum flow	84.5 U.S. gal/min - 320 lt/min
Pressure	4,641 p.s.i. / 320 bar

Spool 2: Wedge cylinder

Maximum flow	84.5 U.S. gal/min - 320 lt/min
Pressure	2,175-3,190 p.s.i. / 150-220 ¹ bar

Spool 3: Winch

Maximum flow	42.2 U.S. gal/min - 160 lt/min
Pressure	1,990 p.s.i. / 140 bar

Spool 4: Auxiliary control 1

Maximum flow	42.2 U.S. gal/min - 160 lt/min
Pressure	1,740 p.s.i. / 120 ² bar

Spool 5: Auxiliary control 2

Maximum flow	42.2 U.S. gal/min - 160 lt/min
Pressure	1,740 p.s.i. / 120 ² bar

¹ Cylinder out / in pressure

² Adjustable

FEATURES



ENGINE (Not shown)

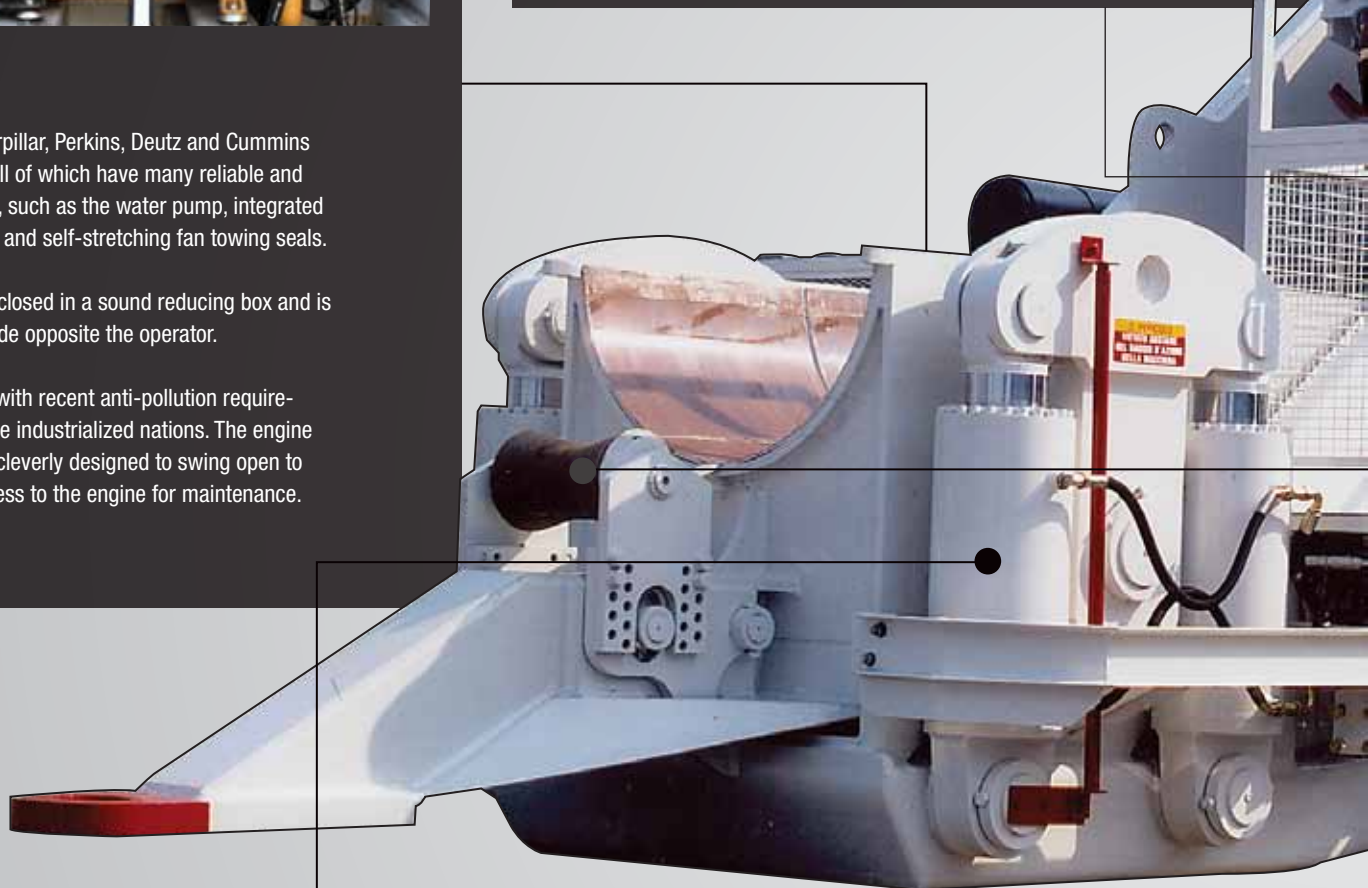
A choice of Caterpillar, Perkins, Deutz and Cummins diesel engines, all of which have many reliable and modern features, such as the water pump, integrated filtration system, and self-stretching fan towing seals.

The engine is enclosed in a sound reducing box and is located on the side opposite the operator.

It also complies with recent anti-pollution requirements in all of the industrialized nations. The engine compartment is cleverly designed to swing open to allow easier access to the engine for maintenance.

OPERATOR'S PLATFORM

The position of the piloting platform and the engine compartment on opposite sides make this machine unique in terms of operating comfort and guarantee maximum visibility and low noise levels to the operator.



HYDRAULIC SYSTEM

New operator friendly hydraulic system with a load-sensing variable pump and a five-spool proportional valve, allowing much safer, faster and more precise control of movements. The new valve which was only recently introduced to the market allows the regulation of the pressure and the capacity of each function according to its purpose.

The three largest machines have an automatic power controlling system allowing a quick approach and a progressive slowing down when close to the maximum push. The hydraulic system features high quality components manufactured by Mannesmann Rexroth or Parker-Voac. All these components contribute to higher productivity and a reduction in power consumption.

The Millennium Series also has stronger hydraulic cylinders that have been tested to work at high pressures. The cylinders have molybdenum chromium-plated steel piston rods with components made to bear high pressure to 6,000 PSI.



HYDRAULIC WINCHES

The hydraulic winches have a pulling capacity ranging from 3,000 to 10,000 Kg. The free drum control is located in the control panel on the operator's platform.



TRACKS

Caterpillar-type crawler undercarriages with triple grouser bars on industrial-grade shoes. A hydraulic cylinder controls the tensioning of the tracks, as on all earth-moving tractors.

ROLLERS

Pipe drive rollers are mounted on non-friction bearing and coated with 90 SH polyurethane for smoother handling of the pipe.



FRAME

The main frame is built with high quality steel plate and box-section design. This makes the machine stronger and more resistant to stresses, thus permitting bending of pipes with very high tensile strength.



BENDING DATA

U.S.

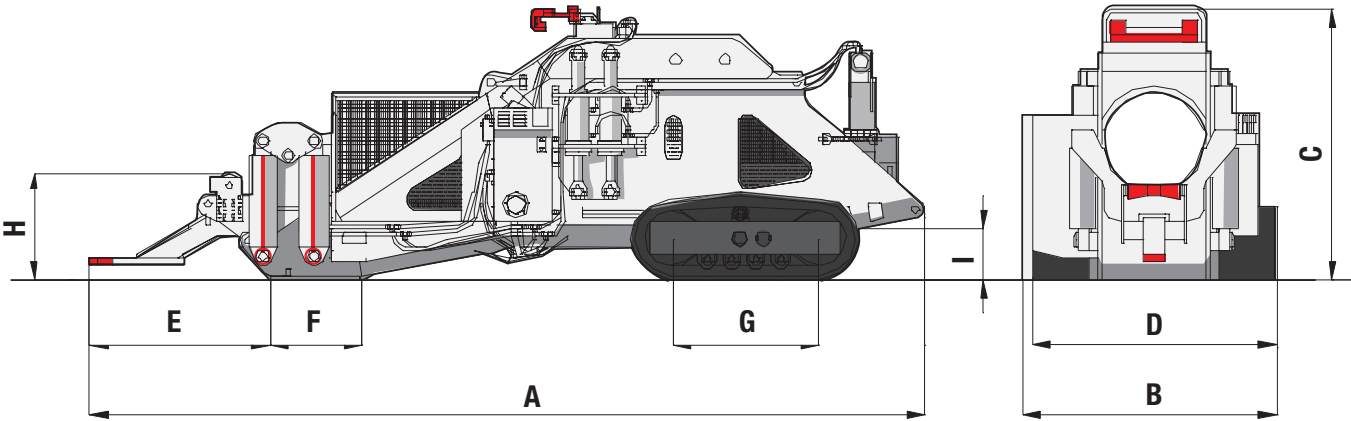
Pipe O.D.	Maximum Wall Thickness By Grade (Inch)							Recommended Bend		
<i>inch</i>	<i>X52</i>	<i>X56</i>	<i>X60</i>	<i>X65</i>	<i>X70</i>	<i>X80</i>	<i>X100</i>	<i>Degree per Arc Foot</i>	<i>Radius Feet</i>	<i>Max Degree Per 40 Feet</i>
32	2	2	2	2	2	1-3/4	1-5/16	0.58	99	14.50
34	2	2	2	1-7/8	1-3/4	1-1/2	1-1/8	0.55	104	13.75
36	2	1-15/16	1-3/4	1-5/8	1-1/2	1-5/16	1	0.50	115	12.50
38	1-13/16	1-11/16	1-9/16	1-7/16	1-5/16	1-1/8	7/8	0.50	115	12.50
40	1-5/8	1-1/2	1-3/8	1-1/4	1-1/8	1	13/16	0.50	115	12.50
42	1-7/16	1-5/16	1-3/16	1-1/8	1	7/8	11/16	0.50	115	12.50

METRIC

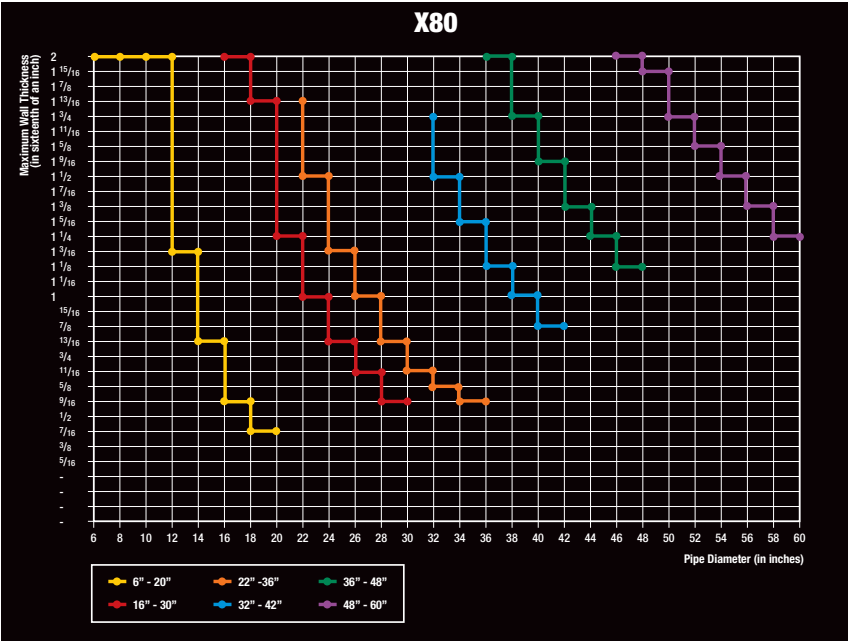
Pipe O.D.	Maximum Wall Thickness By Grade (Inch)							Recommended Bend		
<i>inch/mm</i>	<i>X52</i>	<i>X56</i>	<i>X60</i>	<i>X65</i>	<i>X70</i>	<i>X80</i>	<i>X100</i>	<i>Ratio Radius: O.D.</i>	<i>Radius Meter</i>	<i>Max Degree Per 12 Meters</i>
32 / 812.8	50.80	50.80	50.80	50.80	50.80	44.45	33.34	37.1	30.18	14.50
34 / 863.6	50.80	50.80	50.80	47.63	44.45	38.10	28.58	36.7	31.70	13.75
36 / 914.4	50.80	49.22	44.45	41.28	38.10	33.34	25.40	38.4	35.05	12.50
38 / 965.2	46.04	42.87	39.69	36.52	33.34	28.58	22.23	36.3	35.05	12.50
40 / 1016	41.28	38.10	34.93	31.75	28.58	25.40	20.64	34.5	35.05	12.50
42 / 1066.8	36.52	33.34	30.17	28.58	25.40	22.23	17.47	32.9	35.05	12.50

DIMENSIONS

Operating weight 95,900 lbs / 43,500 kg



	Feet	Meters
A Overall length	29 ft	8.9 m
B Overall width	10.5 ft	3.25 m
C Height	10 ft	3 m
D Width to outside of tracks	10 ft	3 m
E Length of front section	6.5 ft	2 m
F Length of undercarriage touching the ground	4.4 ft	1.35 m
G Length of track on the ground	5 ft	1.5 m
H Height to top of roller	3.2 ft	1 m
I Ground clearance	1.2 ft	39 cm
Track weight (loose pair) 7,111 lbs / 3,200 kg		



BENDING STRENGTH

Here's an example of our pipe bending machines high bending strength. The bending performance data shown was calculated using **API X80** as an example. The machine is capable of bending all grades of currently available API-5L pipe within its range.



ACCURACY-BEND SYSTEM



ACCURATE BENDING MADE EASY

This equipment consists of three different parts; one of which will have to be fitted on the machine control platform and two at the ends of the pipe to be bent. These two end parts are to be secured to the pipe by means of magnet plates. The electronic components are placed inside a housing made with steel and strong plastic material (polyurethane).

The box on the control platform will be equipped with a high-luminosity display (easy to see even on very sunny

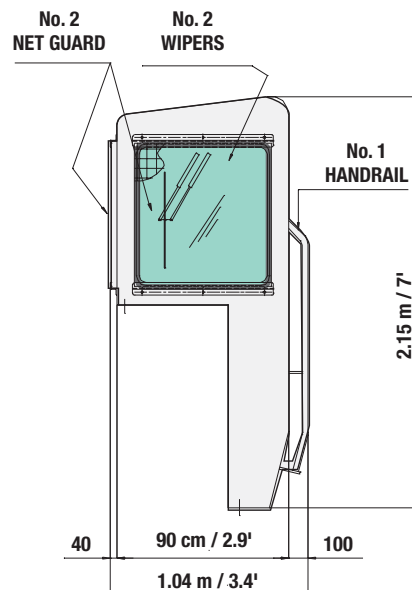
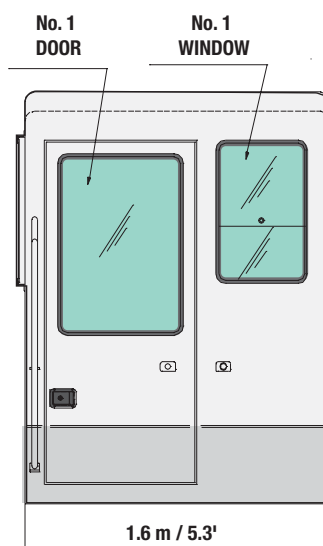
days), showing 4 digits, two of them being decimals.

All the components are made of extremely durable and high quality material designed to withstand heavy-duty applications, and wide temperature variations of -30°C to $+80^{\circ}\text{C}$.

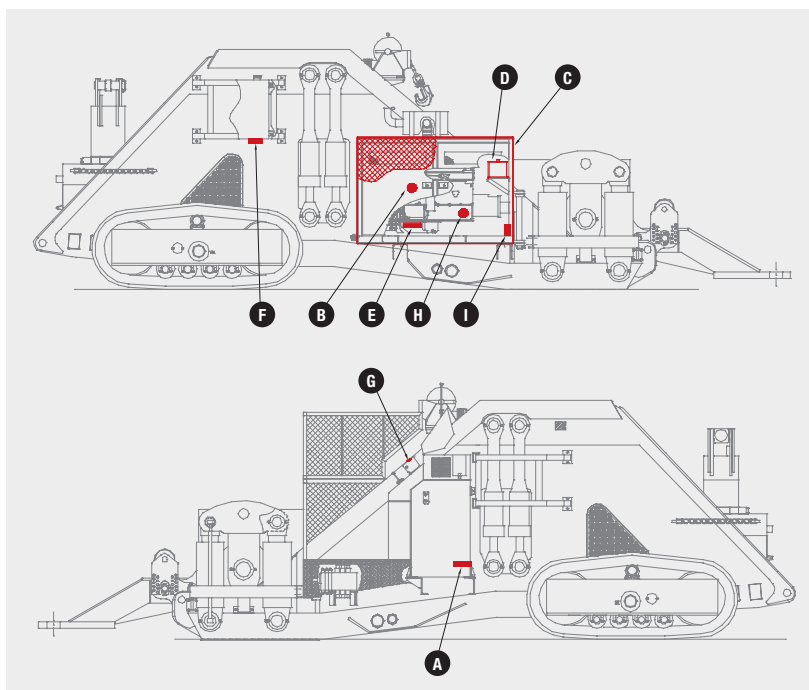
The level of precision of this device is 1/50 grade. Its battery life is approximately 70 hours before requiring recharging.

ARCTIC PACKAGE

Not available for the SPB 6-20



STANDARD WINTERIZATION FOR -30°C TEMPERATURES



- A. Heater group for hydraulic tank (220 Volt - 110 Volt). Immersion type, 750 Watts.
- B. Heater group for the engine (220 Volt - 110 Volt). Immersion type, 750 Watts.
- C. External plastic sheeting over engine box with radiator side part to be rolled up if needed.
- D. Oversized battery.
- E. Very fluid engine oil: SAE 10W20 for low temperatures.
- F. Heavy oil tank condensation discharge.
- G. Hydraulic oil temperature gauge.
- H. Higher setting of engine power.
- I. Shut off group.

RECOMENDATIONS FOR MACHINE OPERATION

- Use only arctic fuel; see Caterpillar book.
Use only arctic type fuel as recommended by manufacturer.
- Warm up the hydraulic oil and coolant sufficiently before starting the diesel engine.
- Let engine run for a few minutes and then engage hydraulics without bending any pipe.
- For the first 15 minutes, let the engine turn at idle power before starting bending operations.
- Bend pipe carefully and thoroughly, and if temperatures are very low, perform all movements slowly.

FEATURES

- Built with high quality steel
- Cab lined with insulation for noise and temperature abatement control
- Maximum visibility
- Side windows protected with steel grids
- Side windows equipped with windshield wipers
- Available with heater or air conditioning
- Pressurized cab available

AVAILABLE MODELS



SPB 6-20 Millennium Series



SPB 16-30 Millennium Series



SPB 22-36 Millennium Series



SPB 32-42 Millennium Series



SPB 36-48 Millennium Series



SPB 48-60 Millennium Series

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