



## SPB 48-60 PIPE BENDER

Max. Operating Pressure	4,640 psi / 320 bar
Operating weight	211,644 lbs / 96,000 kg
Horsepower	168 kW / 225 HP





The SPB 48-60 is the biggest of the SUPERIOR fleet of benders. The machine is equipped with an excellent load sensing LUDV hydraulic system, which makes it unique and unprecedented on the market in terms of specifications. The proportional system enables the operator to “dose” bending power and speed, which is a very important feature when high-yield pipes are bent.

Thanks to its frame and the load-bearing structures that are sized to bear the highest pushes, the new SPB 48-60 also bends the most recent and robust pipes like the x-80 and x-100 pipes. The standard machine is equipped with quick disconnects for the hydraulic connection of the mandrel.

The new generation electronic injection Caterpillar engine supplies more power, thus favoring and further enhancing the potential of the Bosch Rexroth system.

The new operator’s platform has been redesigned for fitting the new cabin (optional), which offers great comfort. The controls have been repositioned in such a way as to give the operator a wider operating visibility.

One more roller guiding the pipe into the machine has been added to the front part of the machine so that management of large diameter and heavy pipes is easier. All the guiding rollers of the SUPERIOR fleet of benders are ball-bearing mounted in order to enable the roller to slide smoothly.

The long undercarriage pitch prevents the pressure exercised by the machine on the ground from increasing and keeps it at regular levels.



**ENGINE (Opposite Side)**

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.



**HYDRAULIC SYSTEM**

New operator friendly hydraulic system with a load-sending variable pump and a five-spool proportional valve, allowing much safer, faster and more precise control of movements. The new valve 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 for higher productivity and a reduction in power consumption.



**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 WINCHES (Opposite Side)**

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.



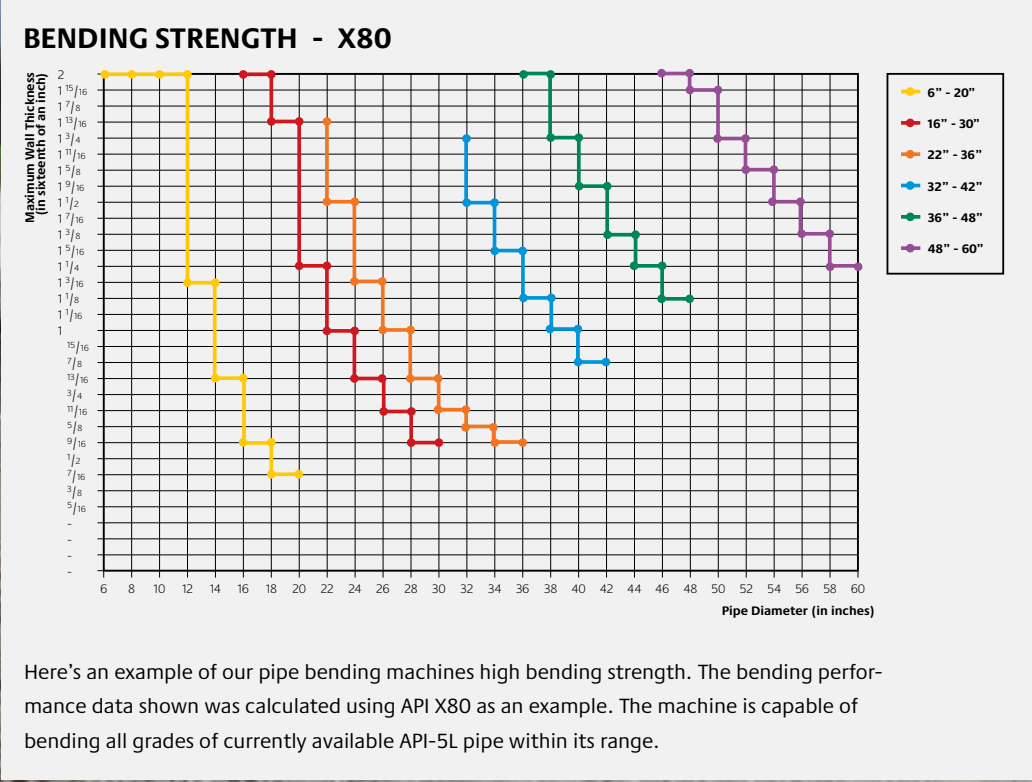
*Shown with optional cabin*



**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.





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.6

HYDRAULIC WINCH

Type	2.280.0019
Maximum pull at first layer	33,070 lbs / 15,000 kg
Hydraulic motor	Orbital DANFOSS
Frame	Aluminum allow + ductile cast iron
Reduction gear	With worm screw, irreversible
Neutral	Manual
Maximum operating pressure	2,175 p.s.i. / 150 bar
Maximum feed flow rate	42 U.S. gal/min - 160 lt/min
Speed at first layer	16 ft/min - 4,85 m/min
Recommended cable diameter	3/4 inch / Ø 19 mm
Wire rope type	6 strands with textile core
	R=2,160 N/mm2 min. breaking load guaranteed 30,000 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

<b>Spool 1:</b> 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:** 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 3:** Wedge cylinder

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

**Spool 4:** Winch

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

**Spool 5:** Auxiliary control 1

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

**Spool 6:** Auxiliary control 2

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



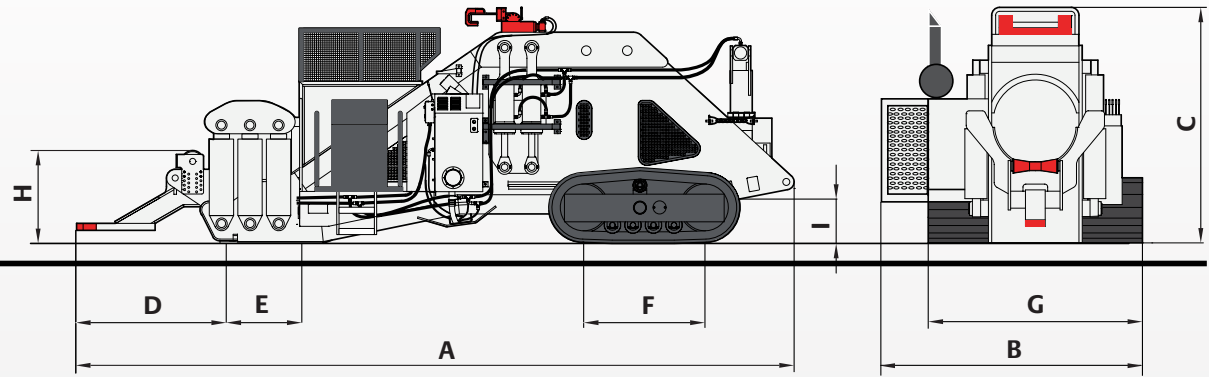


U.S.

Pipe O.D. <i>inch</i>	Maximum Wall Thickness By Grade (Inch)							Recommended Bend		
	X52	X56	X60	X65	X70	X80	X100	<i>Degree per Arc Foot</i>	<i>Radius Feet</i>	<i>Max Degree Per 40 Feet</i>
48	2	2	2	2	2	2	1-11/16	0.50	115	10.50
50	2	2	2	2	2	2	1-1/2	0.50	115	10.50
52	2	2	2	2	2	1-3/4	1-3/8	0.50	115	10.50
54	2	2	2	2	1-7/8	1-5/8	1-1/4	0.50	115	10.50
56	2	2	2	1-7/8	1-3/4	1-1/2	1-3/16	0.50	115	10.50
58	2	2	1-7/8	1-3/4	1-9/16	1-3/8	1-1/16	0.50	115	10.50
60	2	1-7/8	1-3/4	1-5/8	1-7/16	1-1/4	1	0.50	115	10.50

METRIC

Pipe O.D. <i>inch/mm</i>	Maximum Wall Thickness By Grade (Inch)							Recommended Bend		
	X52	X56	X60	X65	X70	X80	X100	<i>Ratio Radius: O.D.</i>	<i>Radius Meter</i>	<i>Max Degree Per 12 Meters</i>
48 / 1219.2	50.80	50.80	50.80	50.80	50.80	50.80	42.87	28.8	35.05	10.50
50 / 1270	50.80	50.80	50.80	50.80	50.80	50.80	38.10	27.6	35.05	10.50
52 / 1320.8	50.80	50.80	50.80	50.80	50.80	44.45	34.93	26.5	35.05	10.50
54 / 1371.6	50.80	50.80	50.80	50.80	47.63	41.28	31.75	25.5	35.05	10.50
56 / 1422.4	50.80	50.80	50.80	47.63	44.45	38.10	30.17	24.6	35.05	10.50
58 / 1473.2	50.80	50.80	47.63	44.45	36.69	34.93	26.99	23.8	35.05	10.50
60 / 1524	50.80	47.63	44.45	41.28	36.52	31.75	25.40	23.0	35.05	10.50



A Overall length	36.1 ft	11 m
B Overall width	13 ft	4.02 m
C Height	12.5 ft	3.82 m
D Length of front section	6.5 ft	2 m
E Length of U/C touching the ground	5 ft	1.55 m
F Length of track on the ground	7.9 ft	2.43 m
G Width to outside of tracks	11.4 ft	3.94 m
H Height to top of roller	3.7 ft	1.15 m
I Ground clearance	1.4 ft	43.5 cm
Track weight (loose pair) 18,900 lbs / 8,500 kg		
Operating weight	211,644 lbs	96,000 kg

AVAILABLE MODELS





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