



EVOLUTION PL105



PL105 has maximum lifting capacity, 105 tons at 1.20 metres from the chain, 32 tons at 4 metres .

The machine is fully hydrostatic and the operator controls translation and direction with a single joystick. With the engine on minimum, moving the joystick sideways, to the right or left, the tracks counter-rotate and the machine rotates on itself.

The engineering choice of equipping the machine with 4 driving sprockets has the aim of dividing the translation torque, which was calculated with the maximum weight applied on a 60% slope, on 4 "standard size" planetary reduction gears, instead of 2 non-standard ones which would be difficult to find. In addition they are equipped with 4 brakes instead of 2.

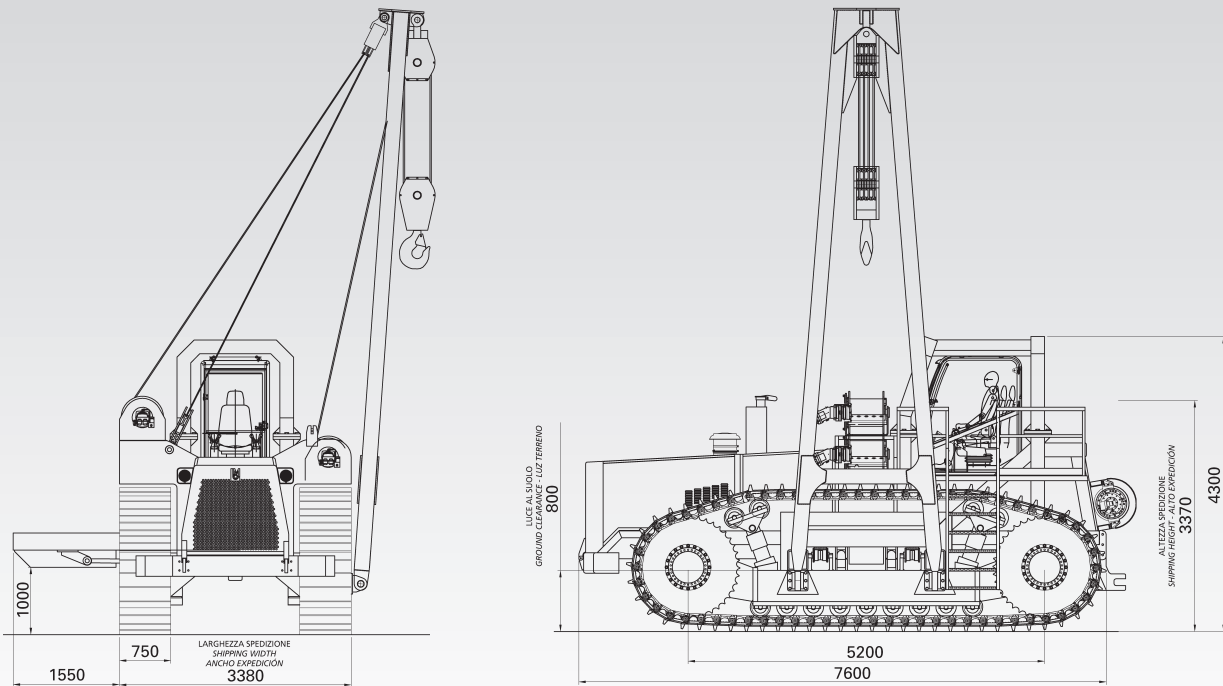
This means that when the machine is working on a slope, as you release the joystick, the machine is **BLOCKED** in the real sense of the word and held by 4 wheels with negative brakes. This ensures maximum safety. Translation speed is from 0 to 9 km/h .

Standard boom length is 8.5 metres but lengths up to 11.5 can easily be supplied. The counterweight extending outside the undercarriage allows keeping the centre of gravity within a height of 1.20 metres , compared to the 2.30/2.80 of most of the pipe-layers available on the market.

This makes the PL105 the most stable machine for work in mountain areas and may even increase the current slope limit for work on very steep slopes. An international patent has been filed for the 4 driving sprockets with hydraulic tightening system and for the undercarriage counterweight. Overall dimensions are: external shoe width = 3400mm and since the boom supports are bolted on and can be removed, this is also the maximum width for transport.

Height is over 4 metres in terms of operation, but the interesting point is that by removing the ROPS protection, flanged onto the 4 columns, the cab lowers hydraulically by means of a 24 V electric pump and the maximum height for transport becomes 3.30 metres, which complies with requirements for normal transport. The complete machine weighs 57 tons but the counterweight can be removed using the 2 eyebolts and this reduces the weight by 15 tons.

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TECHNICAL DATA

Diesel engine (make)	CATERPILLAR
Model	C13 ACERT
No. of cylinders	6
Cooling	Acqua
Power at 2000 revs.11'	440 HP
Max. lifting power	106000 kg
Drive	idrostatica
No. of tracks	2
Track width	750 mm
No. of pumps hydraulic drive system	2
No. of pumps hydraulic winch system	2
Track gauge	5000 mm
Shipping weight	42000 kg
Counterweight	15000 kg
Operating speed	0-3 km/h
Translation speed	0-9 km/h
Total Weight (with full tanks)	60000 kg

Hydraulic winches	Hook	Boom
Drum diameter	400 mm	103.93400 mm
Flange diameter	630 mm	630 mm
Drum lenght	480 mm	480 mm
Capacity - 19 mm (3/4" Ø)	181 mm	181 mm
Wire roped installed - 19 mm (3/4" Ø)	124 mm	62.5 mm
Hook speed (raise) with 8 part line	15 m/min.	
Boom square section standard	8,5 m	
Removable counterweight	14500 kg	