

# INGERSOLL-RAND®

## SD-180 Vibratory Soil Compactor PRO-PAC™



The Ingersoll-Rand SD-180 PRO-PAC Series features a powerful Cummins turbocharged and aftercooled diesel engine. The 230 hp (172 kW) liquid-cooled engine and special hydraulics provide power and torque to handle demanding compaction projects. The unique 100 inches (2.54 meters) wide drum provides highest rolling productivity for a wide variety of soil types, including rock fill. The lightweight, single-piece engine enclosure is top hinged to allow unobstructed access to the engine, radiator, battery, filters and daily maintenance checkpoints.

The SD-180 PRO-PAC operator's station is designed for comfort and safety. A fully adjustable, suspension-mounted seat is standard. Four independent vibration dampeners isolate the operator's platform from machine vibration. Controls and gauges are ergonomically positioned.

A variable frequency control is provided to adjust vibration to the natural resonant frequency of the material being compacted, within a range of 1300 to 1825 VPM (18.3 to 31.5 Hz). Variable centrifugal force up to 80,900 lb. (360 kN) quickly densifies even the most difficult-to-compact materials.

A smooth drum model, the SD-180D, is ideal for compaction of rock fill, aggregates and granular soil mixtures. The pad foot drum model SD-180F is used for compaction of fine-grained soils like clay and silt or cohesive soil mixtures. High drum amplitude is suited for deep lift compaction projects, densifying layers up to three feet (one meter) or greater. Low drum amplitude is selected for thinner layers with smaller sized aggregates. Amplitude change is accomplished using a control on the operator console.

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SD-180 PRO-PAC Specifications	SD-180D PRO-PAC		SD-180F PRO-PAC	
<b>Machine Weights (w/ ROPS/FOPS)</b>				
Operating Weight (CECE)	39,780 lb.	(18040 kg)	40,220 lb.	(18240 kg)
Static Weight at Drum	24,345 lb.	(11040 kg)	24,695 lb.	(11200 kg)
Static Weight at Tires	15,435 lb.	(7000 kg)	15,525 lb.	(7040 kg)
Shipping Weight	39,440 lb.	(17890 kg)	39,880 lb.	(18085 kg)
<b>Machine Dimensions</b>				
Overall Length	245 in.	(6215 mm)	245 in.	(6215 mm)
Overall Width	113 in.	(2860 mm)	113 in.	(2860 mm)
Overall Height (top of ROPS/FOPS)	122 in.	(3110 mm)	130 in.	(3290 mm)
Wheelbase	139 in.	(3525 mm)	139 in.	(3525 mm)
Curb Clearance	18 in.	(470 mm)	21 in.	(535 mm)
Outside Turning Radius <sup>1</sup>	310 in.	(7885 mm)	310 in.	(7885 mm)
<b>Drum</b>				
Drum Width	100 in.	(2540 mm)	100 in.	(2540 mm)
Drum Diameter	63 in.	(1600 mm)	62 in.	(1580 mm)
Drum Diameter Over Pad Feet	-	-	72 in.	(1835 mm)
Drum Shell Thickness	1.6 in.	(40 mm)	1.2 in.	(30 mm)
Number of Pad Feet	-	-	-	144
Pad Height	-	-	5 in.	(125 mm)
Pad Tip Area	-	-	21 in. <sup>2</sup>	(135 cm <sup>2</sup> )
<b>Vibration</b>				
Frequency	1300-1825 VPM	(21.7-30.4 Hz)	1300-1825 VPM	(21.7-30.4 Hz)
Centrifugal Force	- high	80,900 lb. (360 kN)	80,900 lb. (360 kN)	
	- low	40,500 lb. (180 kN)	40,500 lb. (180 kN)	
Nominal Amplitude	- high	0.065 in. (1.66 mm)	0.065 in. (1.66 mm)	
	- low	0.033 in. (0.83 mm)	0.033 in. (0.83 mm)	
<b>Propulsion</b>				
Type System	Hydrostatic, two-speed motor on planetary axle / No Spin® differential			
Tire Size	23.1 x 26 - 8PR R3		23.1 x 26 - 8PR R1	
Drum Drive	Two-speed, low speed, high torque motor			
Travel Speed	- high gear	0-8.2 mph (0-13.2 km/hr)	0-8.6 mph	(0-13.8 km/hr)
	- low gear	0-4.1 mph (0-6.6 km/hr)	0-4.3 mph	(0-6.9 km/hr)
<b>Engine</b>				
Make & Model	Cummins C8.3			
Engine Type	Turbocharged and aftercooled six cylinder			
Rated Power @ 2200 rpm	230 hp (172 kW)			
Electrical System	12-volt DC, negative ground; 63A alternator; 2 ea 800 CCA batteries			
<b>Brakes</b>				
Service	Dynamic hydrostatic through propulsion system			
Parking/Secondary	Spring-Applied, Hydraulically-Released on axle			
<b>Miscellaneous</b>				
Articulation Angle	±40°		±40°	
Oscillation Angle	±17°		±17°	
Fuel Capacity	100 gal.	(377 liters)	100 gal.	(377 liters)
Hydraulic Oil Capacity	35 gal.	(132 liters)	35 gal.	(132 liters)
Gradeability (theoretical)	46%		44%	

<sup>1</sup>Turning radius measured to drum edge

## Standard Features

- Adjustable scraper
- Back-up alarm
- Dual-beam, halogen front light
- Ground level access for maintenance/service
- No-Spin® differential planetary axle
- Oil bath eccentric lubrication
- Patented, dual amplitude eccentric mechanism
- ROPS/FOPS with seat belt
- Variable vibration frequency
- Vibration isolated mounted platform

## Options

- Air precleaner
- Biodegradable hydraulic oil
- Compactometer
- Conversion drums (D to F or F to D)
- EROPS with heat or A/C and heat
- Rear work lights
- Please call factory for additional options

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