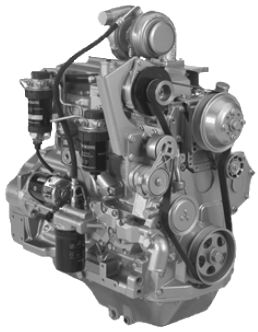
PowerTech ™ E 4045HF285 Diesel Engine

Industrial Engine Specifications

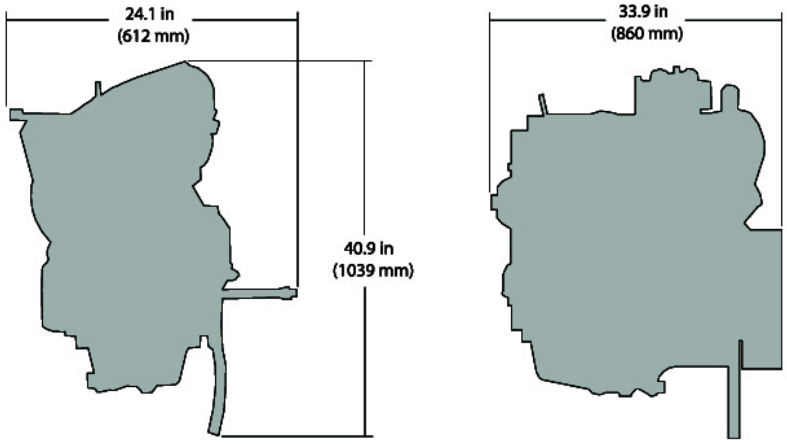


4045HF285 shown

Certifications

CARB
EPA Tier 3
EU Stage III A

Engine dimensions



Dimensions may vary according to options selected. Call your distributor for more information.

General data

Model	4045HF285	Length - mm (in)	860 (33.9)
Number of cylinders	4	Width - mm (in)	612 (24.1)
Displacement - L (cu in)	4.5 (275)	Height-- mm (in)	1039 (40.9)
Bore and Stroke-- mm (in)	106 x 127 (4.17 x 5.00)	Weight, dry-- kg (lb)	491 (1082)
Compression Ratio	19.0:1		
Engine Type	In-line, 4-cycle		
Aspiration	Turbocharged and air-to-air aftercooled		

Performance data range

Application ratings	Intermittent	Heavy Duty	Continuous
Rated power/Rated speed	93-104 kW (125-139 hp) @2200-2400rpm	86-93 kW (115-125 hp) @2200-2400rpm	86 kW (115 hp) @2400rpm
Peak power	100-104 kW (134-139 hp) @2000-2400rpm	90-93 kW (121-125 hp) @2000-2400rpm	86 kW (115 hp) @2400rpm
Power bulge	NA @2000rpm	5% @ 2000rpm	0% @ NA rpm
Peak torque	525 N.m (387ft-lb) @1500rpm	480-481 N.m (354-355ft-lb) @1500rpm	430 N.m (317ft-lb) @1500rpm
Torque rise	27-30%	29-30%	26%

The Industrial Intermittent engine power rating is for applications that operate at varying loads and speeds, and do not fit the Industrial Heavy-Duty rating information.

Some applications require Industrial Heavy-Duty engine power ratings. Please contact yo ur John Deere Power Systems engine distributor for more information.

The Industrial Continuous engine power rating is for applications that operate with constant load and speed, except for short periods during startup or shutdown.

Power output is within + or - 5% at standard SAE J 1995 and ISO 3046.

Features and benefits

2-Valve Cylinder Head

- Cross flow head design that provides excellent breathing from a lower cost two-valve cylinder head

High-Pressure Common-Rail (HPCR) and Engine Control Unit (ECU)

- The HPCR fuel system provides variable common-rail pressure, multiple injections, and higher injection pressures, up to 1600 bar (23,000 psi). It also controls fuel injection timing and provides precise control for the start, duration, and end of the injection

Fixed Geometry Turbocharger

- Fixed geometry turbochargers are sized for a specific power range and optimized to provide excellent performance across the entire torque curve. They are also designed to maximize fuel economy between the engine's rated speed and peak torque.

Air-to-Air Aftercooled

- This is the most efficient method of cooling intake air to help reduce engine emissions while maintaining low-speed torque, transient response time, and peak torque. It enables an engine to meet emissions regulations with better fuel economy and the lowest installed costs

Multiple Injection Strategy

- The new HPCR fuel system and engine control unit (ECU) allow for multiple fuel injections. The number of fuel injections, based on speed and load, help contribute to lower combustion temperatures, which reduce the formation of NOx and particulates. The multiple injection strategy also provides an added benefit of noise reduction

Compact Size

- Mounting points are the same as Tier 2/Stage II engine models

John Deere Electronic Engine Controls

- PowerTech E engines offer electronically controlled fuel systems with improved cold-start performance, precise engine speed control, torque curve shaping and more. Because these systems have less need for redundant sensors, add-on electronic governors, add-on electronic governors, and shutdown devices - they result in a lower total installed cost.

Additional Features

- Self-adjusting poly-vee fan drive
- Forged-steel connecting rods
- Replaceable wet-type cylinder liners
- Either-side service
- 500-hour oil change
- Standard gear auxiliary drive

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All values at rated speed and power with standard options unless otherwise noted. Specifications and design subject to change without notice.