

Liebherr Diesel Engines

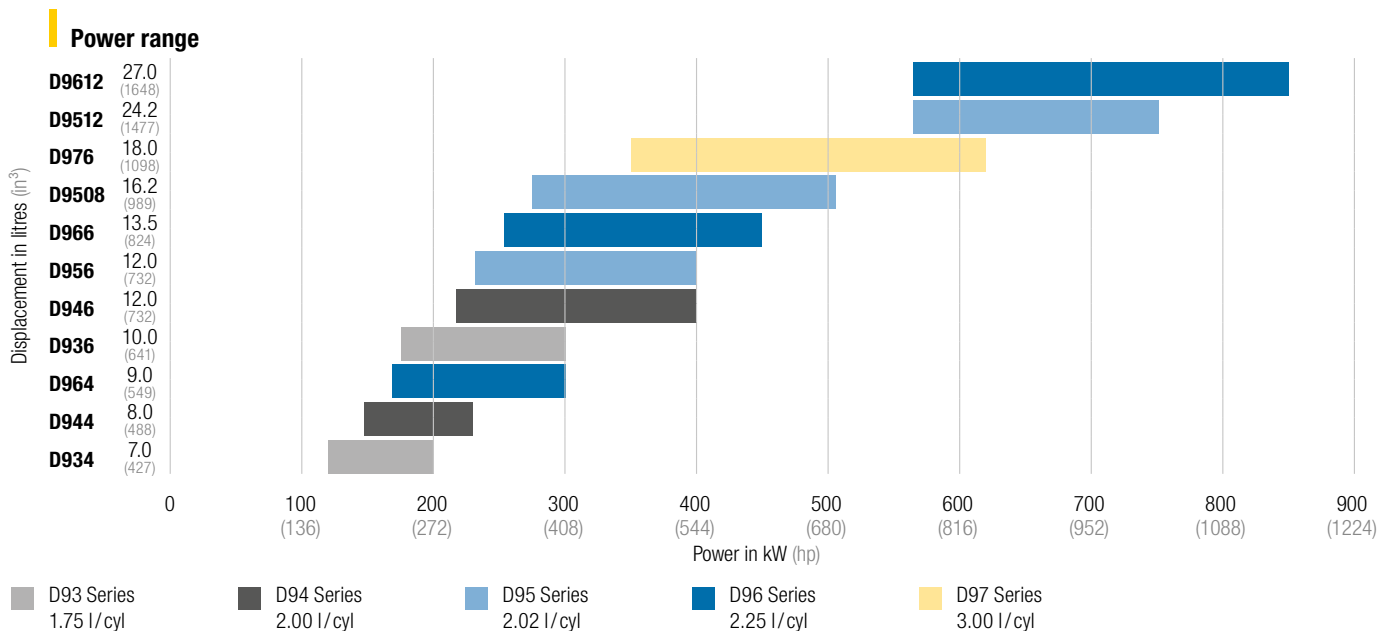
for **Construction and Industry**



LIEBHERR

Construction and Industry

Liebherr is your perfect partner for construction and industry heavy duty engines. Building tough engines for the construction and the industry is where we originated from. Our dedicated engines have a robust and sturdy design resulting in long engine life. This makes them the most reliable engines for C&I. Our customers require tough, reliable and economic engines. Modularity exists providing a comprehensive list of system options and power take offs that allow to make a Liebherr engine your engine.



Application know-how

Our diesel engines have been specially developed for use in off-road applications. They are perfectly suited to the toughest environmental conditions and are thus ideal for a large variety of industries and applications. The units have proven their efficiency for the better part of the last 35 years in Liebherr construction machinery such as crawler and wheeled excavators, wheel loaders, crawler tractors and dozers, mobile and crawler cranes as well as maritime cranes. Liebherr as an engine manufacturer has developed a very deep knowledge and know-how of integrating its engine in the construction and industry segments. A growing number of customers have decided to trust us to be the engine of their success. They value our power units because of their performance capability, reliability, and low cost of operations.

Mastering components

In addition, our engines are delivering outstanding low liquids consumption by matching the exact engine subsystems from the highest quality of in-house developed key components such as Liebherr engine control unit and common rail fuel system.

From 130 to 300 kW



Engine		D934	
Bore	mm (in)	122	4.80
Stroke	mm (in)	150	5.91
Displacement	dm ³ (in ³)	7.0	427
Power rating	kW (hp)	130–200	174–268
Rated speed	rpm	1,500–1,900	
Peak torque	Nm (lb-ft)	1,245 at 1,253 rpm	918 at 1,253 rpm
Dry weight	kg (lb)	883	1,947
Dimensions (LxWxH)	mm (in)	1,089 x 798 x 1,122	42.87 x 31.42 x 44.17
Fuel Rail Pressure	bar	2,000	
Min brake specific fuel cons.	g/kWh	192	



Engine		D944	
Bore	mm (in)	130	5.12
Stroke	mm (in)	150	5.91
Displacement	dm ³ (in ³)	8.0	488
Power rating	kW (hp)	145–230	194–308
Rated speed	rpm	1,500–1,900	
Peak torque	Nm (lb-ft)	1,430 at 1,438 rpm	1,055 at 1,438 rpm
Dry weight	kg (lb)	868	1,914
Dimensions (LxWxH)	mm (in)	1,089 x 730 x 936	42.87 x 28.74 x 36.85
Fuel Rail Pressure	bar	2,000	
Min brake specific fuel cons.	g/kWh	187	



Engine		D964	
Bore	mm (in)	135	5.31
Stroke	mm (in)	157	6.18
Displacement	dm ³ (in ³)	9.0	549
Power rating	kW (hp)	170–300	228–402
Rated speed	rpm	1,500–1,900	
Peak torque	Nm (lb-ft)	1,739 at 1,400 rpm	1,283 at 1,400 rpm
Dry weight	kg (lb)	735	1,621
Dimensions (LxWxH)	mm (in)	1,015 x 838 x 1,116	39.96 x 32.99 x 43.94
Fuel Rail Pressure	bar	2,200	
Min brake specific fuel cons.	g/kWh	195	



Engine		D936	
Bore	mm (in)	122	4.80
Stroke	mm (in)	150	5.91
Displacement	dm ³ (in ³)	10.5	641
Power rating	kW (hp)	175–300	235–402
Rated speed	rpm	1,500–1,900	
Peak torque	Nm (lb-ft)	1,994 at 1,350 rpm	1,471 at 1,350 rpm
Dry weight	kg (lb)	1,183	2,609
Dimensions (LxWxH)	mm (in)	1,429 x 814 x 1,041	56.26 x 32.05 x 40.98
Fuel Rail Pressure	bar	2,000	
Min brake specific fuel cons.	g/kWh	194	

From 215 to 505 kW



Engine	D946		
Bore	mm (in)	130	5.12
Stroke	mm (in)	150	5.91
Displacement	dm ³ (in ³)	12.0	732
Power rating	kW (hp)	215–400	288–536
Rated speed	rpm	1,500–1,900	
Peak torque	Nm (lb-ft)	2,334 at 1,103 rpm	1,721 at 1,103 rpm
Dry weight	kg (lb)	1,183	2,609
Dimensions (LxWxH)	mm (in)	1,391x821x1,106	54.76x32.32x43.54
Fuel Rail Pressure	bar	2,000	
Min brake specific fuel cons.	g/kWh	191	



Engine	D956		
Bore	mm (in)	130	5.12
Stroke	mm (in)	150	5.91
Displacement	dm ³ (in ³)	12.0	732
Power rating	kW (hp)	230–400	308–536
Rated speed	rpm	1,500–1,900	
Peak torque	Nm (lb-ft)	2,520 at 1,350 rpm	1,859 at 1,350 rpm
Dry weight	kg (lb)	1,280	2,822
Dimensions (LxWxH)	mm (in)	1,390x853x1,156	54.72x33.58x45.51
Fuel Rail Pressure	bar	2,200	
Min brake specific fuel cons.	g/kWh	195	

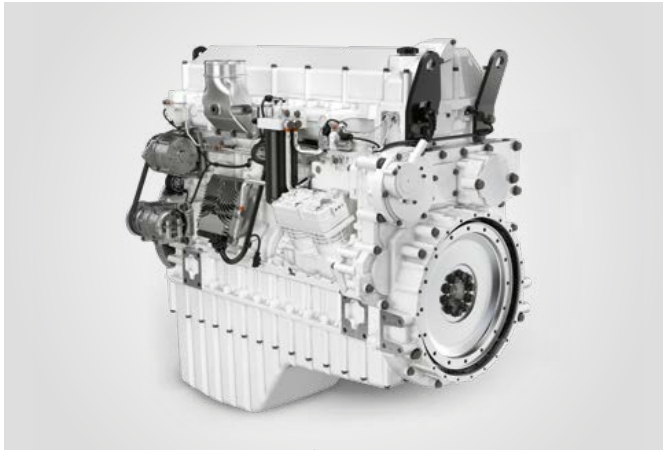


Engine	D966		
Bore	mm (in)	135	5.31
Stroke	mm (in)	157	6.18
Displacement	dm ³ (in ³)	13.5	824
Power rating	kW (hp)	250–450	335–603
Rated speed	rpm	1,500–1,900	
Peak torque	Nm (lb-ft)	2,800 at 1,350 rpm	2,065 at 1,350 rpm
Dry weight	kg (lb)	1,100	2,425
Dimensions (LxWxH)	mm (in)	1,340x930x1,160	52.76x36.61x45.67
Fuel Rail Pressure	bar	2,200	
Min brake specific fuel cons.	g/kWh	195	



Engine	D9508		
Bore	mm (in)	128	5.04
Stroke	mm (in)	157	6.18
Displacement	dm ³ (in ³)	16.2	989
Power rating	kW (hp)	275–505	369–677
Rated speed	rpm	1,500–1,900	
Peak torque	Nm (lb-ft)	3,019 at 1,300 rpm	2,227 at 1,300 rpm
Dry weight	kg (lb)	1,520	3,352
Dimensions (LxWxH)	mm (in)	1,631x1,119x1,273	64.21x44.06x50.12
Fuel Rail Pressure	bar	2,000	
Min brake specific fuel cons.	g/kWh	197	

From 350 to 850 kW



Engine		D976	
Bore	mm (in)	148	5.83
Stroke	mm (in)	174	6.85
Displacement	dm ³ (in ³)	18.0	1,098
Power rating	kW (hp)	350–620	469–831
Rated speed	rpm	1,500–1,900	
Peak torque	Nm (lb-ft)	3,650 at 1,500 rpm	2,692 at 1,500 rpm
Dry weight	kg (lb)	1,850	4,079
Dimensions (LxWxH)	mm (in)	1,545x987x1,215	60.83x38.86x47.83
Fuel Rail Pressure	bar	2,200	
Min brake specific fuel cons.	g/kWh	195	



Engine		D9512	
Bore	mm (in)	128	5.04
Stroke	mm (in)	157	6.18
Displacement	dm ³ (in ³)	24.2	1,477
Power rating	kW (hp)	565–750	758–1,006
Rated speed	rpm	1,500–1,900	
Peak torque	Nm (lb-ft)	4,675 at 1,500 rpm	3,448 at 1,500 rpm
Dry weight	kg (lb)	2,050	4,520
Dimensions (LxWxH)	mm (in)	1,856x1,236x1,314	73.07x48.66x51.73
Fuel Rail Pressure	bar	2,000	
Min brake specific fuel cons.	g/kWh	190	

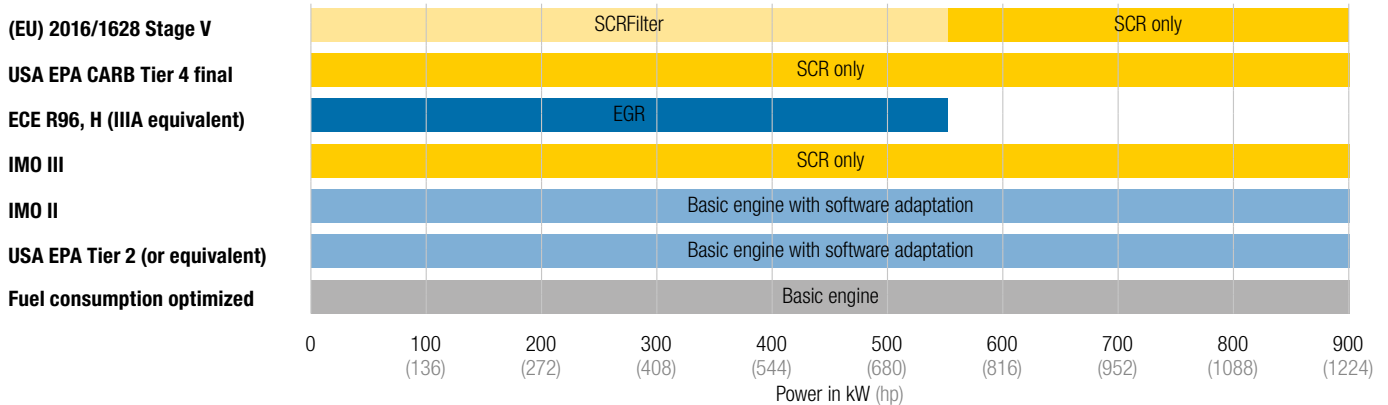


Engine		D9612	
Bore	mm (in)	135	5.31
Stroke	mm (in)	157	6.18
Displacement	dm ³ (in ³)	27.0	1,648
Power rating	kW (hp)	565–850	758–1,140
Rated speed	rpm	1,500–1,900	
Peak torque	Nm (lb-ft)	5,411 at 1,500 rpm	3,991 at 1,500 rpm
Dry weight	kg (lb)	2,350	5,182
Dimensions (LxWxH)	mm (in)	1,839x1,262x1,338	72.4x49.69x52.68
Fuel Rail Pressure	bar	2,000	
Min brake specific fuel cons.	g/kWh	190	

Emission Standards

Diesel engines from Liebherr preserve the environment and resources with low fuel consumption and reduced emissions. Liebherr offers exhaust gas aftertreatment systems that are adapted to the application and to legislative requirements applicable in each region respectively.

Aftertreatment technologies



Model	D93 In-line	D94 In-line	D95 In-line	D95 V-engine	D96 In-line	D96 V-engine	D97 In-line
Configuration	4/6	4/6	6	8/12	4/6	12	6
(EU) 2016/1628 Stage V	•	•	•	•	•	•	•
USA EPA CARB Tier 4 final	•	•	•	•	•	•	•
ECE R96, H (IIIA conform)	•	•	•	•	•		
IMO III				•		•	
IMO II				•		•	
Tier 2 (or equivalent)						•	•
Fuel consumption optimized	•	•	•	•	•	•	•

Modular system

Modularity is at the core of Liebherr's Diesel engines development: Each engine exists as a base version that can receive different exhaust gas aftertreatments to meet the required emission standards, including the most stringent global requirements. For Tier 4 final, Liebherr relies fully on an

innovative SCR only system, and for Stage V on the SCRFilter system, both inhouse developments. Keywords being: compactness and a low TCO for the end customer. This means that OEMs only require one machine design to comply with all relevant industry Standards and Norms.

Service

Our diesel engines are designed to support the highest level of serviceability. The clear arrangement of the installed parts and a well-structured documentation facilitate the efficient performance of maintenance work. Ongoing training makes effective and accurate customer service operations possible. Original spare parts are available quickly. The practically oriented assembly of maintenance and repair sets also contribute towards maximum operational readiness of the equipment.



Service operations

When required, customers are supported by experienced Liebherr service technicians worldwide in customer support operations and trained on site.

Maintenance and spare parts sets

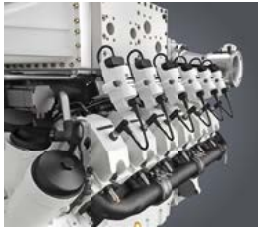
Practically-orientated maintenance and repair kits, such as packs of seals, facilitate combined ordering of parts which need to be replaced together and ensure a high level of repair quality.

Digitalization

Very soon, thanks to the development of condition monitoring and predictive maintenance many more possibilities for scheduling services, fluid changes and maintenance will be available.



Liebherr Components



Gas engines



Diesel engines



Fuel injection systems



Axial piston hydraulics



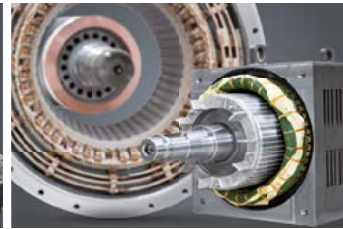
Hydraulic cylinders



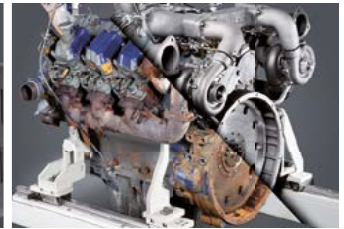
Slewing bearings



Gearboxes and winches



Electric machines



Remanufacturing



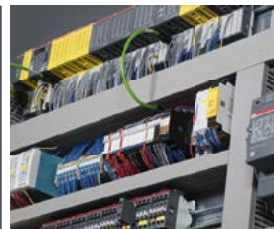
Human-machine interfaces and gateways



Control electronics and sensor technology



Power electronics



Control cabinets



Software

From A to Z – the components division of the Liebherr Group offers a broad range of solutions in the area of mechanical, hydraulic, electric and electronic drive system and control technology. The efficient components and systems are produced at a total of ten production sites around the world to the highest standards of quality. Central contact persons for all product lines are available to our customers at Liebherr-

Components AG and the regional sales and distribution branches.

Liebherr is your partner for joint success: from the product idea to development, manufacture and commissioning right through to customer service solutions like remanufacturing.

components.liebherr.com