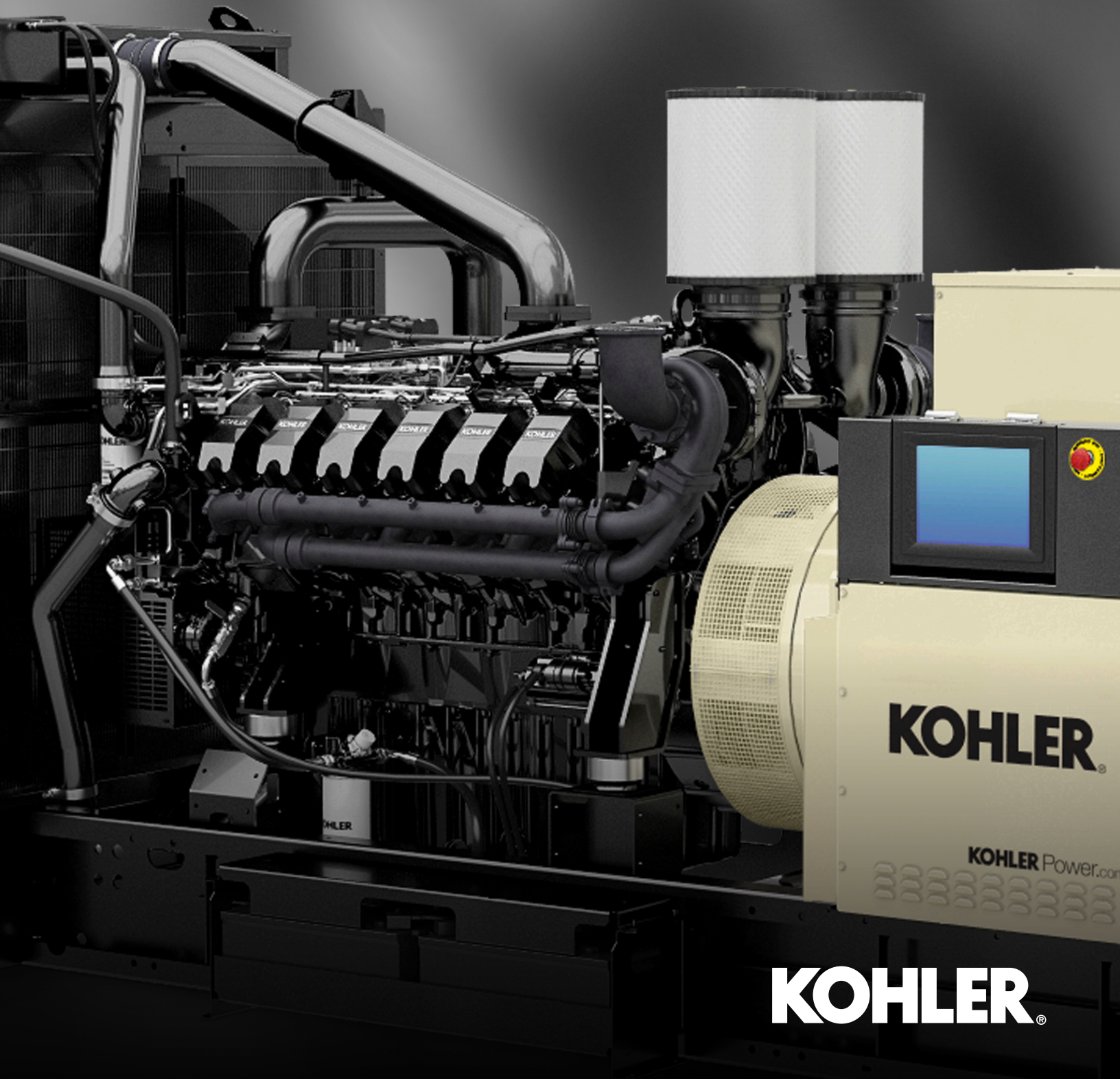


GENERATORS

KD Series™ Specification Guide



KD SERIES™ GENERATORS

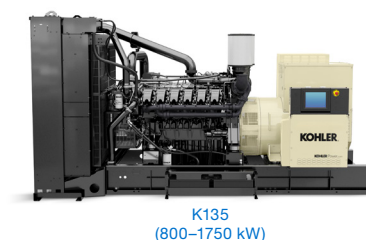
Built for the most critical jobs on earth.

KD Series generators are the next leap forward in industrial power. Engineered for hospitals, data centers, airports, and critical facilities, our KD Series generators are built to last for decades, with better fuel economy and a smaller footprint than ever before.

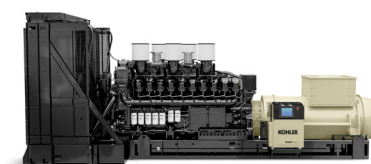
QUICK SPECS

KD SERIES GENERATORS	
kW Range (60 Hz)	800–4000 kW
Engine Manufacturer	Kohler
Displacement Range	27–103 liters
Cylinder / Arrangement	V12, V16, V20
Bore Sizes	135 mm, 175 mm
Gross Horsepower Range	1195–5699 BHP
EPA Rating	Tier 2, Tier 4*

*Select models.



K135
(800–1750 kW)



K175
(2000–4000 kW)

EXCLUSIVE FEATURES

Innovative Design

- High-ambient standard cooling systems (50°C)
- Common rail injection systems, designed specifically for our KD Series generators
- Large touch-screen controller with intuitive interface for load and generator management
- Full accessory package options including circuit breakers, battery heaters, block heaters, battery chargers, prelube pumps, and centrifugal oil filters

Best-in-Class Performance

- Superior fuel efficiency, power density, fuel lift, exhaust flow, and many other performance standards
- Ideal for crucial applications including data centers, hospitals, power plants, and mining sites
- Premium three-year unlimited warranty for installations in the U.S.
- Competitively priced

Tested and Certified

- Provides advanced short-circuit capability; Meets NEMA MG 1, IEEE, and ANSI standards; Multiple alternator options available
- KOHLER® enclosures are built and manufactured at the same factory as the generator system—factory-certified UL2200, IBC seismic-certified, and OSHPD-certified
- EPA Tier II-certified, as well as CSA, NFPA, IBC, ISO 8528-5 factory-certified

SPECIFICATION GUIDE

Take a look below. This information will help you identify the characteristics you need to write a better specification—ultimately resulting in a better, more reliable product for your customer.

KOHLER® KD SERIES ENGINE

FEATURES	BENEFITS
Variable-flow-rate, engine-driven fuel pump(s) help adjust for the required flow rate and result in low-temperature fuel return	Lower Cost No need for fuel coolers or oversized day tanks; fewer accessories needed in the specification means lower total cost for customers
Capable of 12-foot minimum fuel lift	Bigger Fuel Tanks High fuel lifts create flexible site design, allowing for deeper day tanks while also reducing the need for any auxiliary fuel pumps
A minimum of 140-ampere automatic battery-charging alternator with a solid-state voltage regulator	Always Ready High-output battery-charging capability ensures safety and reliability
Governor regulated by an electronic control unit (ECU)	Easy Maintenance ECU and KOHLER controllers communicate seamlessly with one another for easier maintenance and service
Engine fuel system capable of deaerating the fuel upon return to the fuel tank	Lasts Longer Deaerating improves fuel life and overall engine life, lowering total cost of ownership
Closed crankcase ventilation capable of filtering debris discharge to a minimum of 95% efficiency	Reduced Maintenance, Better Reliability Less debris in atmosphere minimizes service intervals and extends reliability of engine, ultimately resulting in a more sustainable product
Capable of 85% load factor in emergency backup power scenarios and 75% load factor in prime applications	Maximum Power Highest load acceptance to maximize value
Engine-tested and capable of generating 2,200 (bar) injection pressure	Cleaner Emissions Better atomization of fuel leading to increased efficiency and cleaner emissions

COOLING SYSTEM

FEATURES	BENEFITS
Engine is liquid-cooled by a closed-loop, unit-mounted radiator rated to operate the generator set at a full-load ambient temperature of 50°C (122°F)	Reliable in Extreme Conditions Minimizes cooling air and maximizes performance of the engine. With 50°C standard, the generator will be able to run in some of the harshest conditions
Radiator core is modular	Cost-Effective Design Damaged section can be replaced individually, instead of needing to replace the entire core
Standard mechanical fan drive, driven from the engine	Lower Maintenance Costs, Better Quality Electric fans can be very troublesome and temperamental. The mounted fan lowers maintenance costs and increases the cooling quality over other options with multiple fans

KOHLER® CONTROLLER

FEATURES	BENEFITS
Onboard paralleling allows paralleling of up to eight generator sets of mixed sizes and fuel types	Cost Savings Both load management and generator management, eliminating the need for a master control panel (MCP)
Load management supporting up to 16 loads per system with ability to be used on a single generator or paralleling system	Low-Cost Configurability Allows shedding of lower-priority loads if needed to ensure critical loads are always powered
Support for RS-485 ports for Modbus RTU, RJ45 Ethernet port for Modbus TCP, SNMP, or BACnet	Simplified Communication User flexibility for monitoring critical equipment
Meets UL6200 and NFPA 110, Level 1	Code Compliance Thermal and instantaneous current-limiting settings for alternator protection. Provides protection against line-to-line and line-to-neutral faults
Data logging automatically captures specific data	Easy Reporting Download and analyze generator operation data for reports like JCAHO
The generator set controller continuously monitors and stores critical operational data for 24 hours	Fast Troubleshooting Access to operational data to confirm proper operation and quickly troubleshoot system issues
Large, full-color touch-screen display with easy-to-use interface	Easy to Use Intuitively provides quick access to information
Stores data of critical operating parameters	Instant Access to System Data On-site troubleshooting is possible without a PC or the need to download the data to display elsewhere
Highlights all active faults and warnings; stores an event log of events, faults, and warnings	Detailed History of Events Allows for obvious insight into any system issues while providing a detailed history of events
Provides password access to protect modification of parameters by unintended users	Secure Data Protection Protects the generators from any accidental or intentional tampering

ALTERNATOR

FEATURES	BENEFITS
Permanent-magnet generator (PMG) alternator	More Reliable Brushless PMG design provides consistent, lasting reliability
Class H per UL1446 insulation, vacuum-pressure impregnation (VPI) varnish, fungus-resistant epoxy	Added Durability Class H temperature rise coated with a VPI epoxy better secures the alternator, protecting it from harm from the conditions of the site
Superior voltage waveform from 2/3 pitch windings and skewed stator	Low Harmonic and Voltage Distortion 2/3 pitch eliminates third harmonic and provides low total harmonic distortion. A subtransient reactance of less than 10% will limit voltage distortion. Kohler offers a wide range of models to meet this benefit
Adequate bus bar for customer connection	Easy Installation Bus bars allow for easier installation
Alternator meets requirements of NEMA MG1, UL2200, CSA, and CE low-voltage directive	Certified Ensures that the specification calls for adequate U.S. certifications

WARRANTY

FEATURES	BENEFITS
Three-year 1,000 hours in standby mode* Two-year 8,700 hours in prime mode <small>*Not available for Tier 4 units and generators outside of the United States</small>	Peace of Mind Better warranty to protect the customer against any unforeseen damage

KOHLER® SKIN-TIGHT ENCLOSURES

FEATURES	BENEFITS
All enclosure parts receive a 100% epoxy primer electrocoat (e-coat) with high-edge protection	Advanced Protection KOHLER corrosion-resistant epoxy coating system can lead to a longer life for the generator and keep aesthetics in high-quality shape for longer
Internal exhaust system (including muffler)	Space-Efficient and Quieter A fully integrated exhaust system not only saves space, but also cuts down on the noise emitted by the unit
All enclosures surpass a 3,000-hour salt spray corrosion test per ASTM B-1117 and are capable of meeting 299 kph (186 mph) wind loading with proper bracing (if required). Sloped roof is standard	Superior Durability In the harshest conditions and towns with governmental limits, KOHLER enclosures stand up to the elements
Every enclosure is UL2200-certified from the factory and IBC-certified, if required	Tested and Approved No on-site certification necessary; most certifications are done in our factory

eFRAME™ WALK-IN ENCLOSURES

FEATURES	BENEFITS
Custom-designed modular enclosure	Allows for ultimate serviceability and ease of access to engine and radiator with reduction in service costs and generator downtime
UL 2200 FTTP, 135-mph wind load rating, IBC certified for site specific use	Tested and reliable enclosure ensures compliance with national and local regulations
Designed and manufactured by generator set manufacturer (single-source supply)	Single-source provider to reduce lead times and end-user risk
All-aluminum frame and skin construction	Durable-proven construction method that also offers the highest level of corrosion protection
Heavy-duty sound-attenuated entrance doors with stainless steel exterior hardware, hidden hinges, and locking soft-close mechanism	Safe and secure enclosure access points
Multiple egress exits equipped with exit lights and crash bars on each side of enclosure	Operator safety during an emergency
Enclosure-mounted switchboard with internal main and load bank breaker with cam-locks accessible from exterior of enclosure	Simplified load bank connection for testing and also allows portable generator hookup for facility
Minimum 20 inches of walk-in clearance around sides and rear of generator set within enclosure	Quicker diagnosing and servicing of generator set

AFTERTREATMENT†

FEATURES	BENEFITS
Selective catalytic reduction (SCR) only. No diesel particulate filter (DPF) or diesel oxidation catalyst (DOC)	Simple to engineer, install, operate, and maintain. Lower total cost of ownership and highly reliable. No power loss from regeneration required for the DPF
Entire diesel exhaust fluid (DEF) system, including tank and catalyst housing, consists of stainless steel	Durable for handling during installation and operation. Extreme weather resistance
Wrapped and heated system components	DEF will not freeze, ensuring system operates as expected in all weather conditions
DEF purged from the system when not in use	Ensures system remains clean and free of crystallization
DEF controlled by electric pump only	No requirement for compressed air system
SCR act as critical grade silencers	No additional silencer required
Factory packaging available for use with aftertreatment	Nearly eliminates application engineering requirements normally associated with aftertreatment systems
APM603 generator controller, KOHLER engine ECU, and DEF controls all integrated and tested	Robust communication and control between every aspect of the system
Common components used across product line	Improves serviceability and familiarity of equipment

†This applies to Tier 4 generators only.

