

KSD Series

Drop-in simplicity

November 2021 – Choosing the right engine for any equipment – from gensets to specialty machines – requires time and significant investment. OEMs and customers choose Kohler because we provide easy-to-integrate solutions that deliver value combined with world-class engineering and aftersales support.

Today Kohler introduces its latest investment, the KSD Series – Kohler Small Displacement –, a new engine family that represents the hard work of its global team. We at Kohler are convinced that a global product must be conceived and designed with a global approach: suitable for all regions, compliant with all standards worldwide, compatible with all kinds of machines.

Integrating an engine in any piece of equipment doesn't mean just selecting and purchasing it. Our passionate global team offers support throughout the process, during and after the engine installation, wherever you are, whatever machine type you have.

Kohler offers the highest standards of support and solutions to transform complexity into simplicity. The KSD is the latest example of our approach to the market and the customers. It's simple, versatile and advanced. It's the KSD Series, the latest platform of engines from Kohler.

SIMPLE | KSD engines can be easily integrated with the more complex electronic systems of ever evolving machines.

VERSATILE | KSD engines are versatile and can be integrated without modifying or redeveloping the machine.

ADVANCED | KSD engines allow customized settings for any duty cycle and the ability to exchange data with few physical connections.

RANGE | KSD Series is currently made of three engine models, and many others will come in the next few years:

KSD 1403NA (Naturally aspirated)

KSD 1403TC (Turbocharged)

KSD 1403TCA (Turbocharged with aftercooler)

PERFORMANCE | The performance is outstanding, here are a few examples:

- High low-end torque: 95 Nm @ 1000 rpm
- Peak torque at low speed: 120 Nm @ 1400 rpm
- Peak power: 18.4 W @ 1800 rpm

EMISSIONS | The wide variety of emission standards has introduced a new level of complexity to the engines business. We have taken this complexity and transformed it into an opportunity. It happened with the KDI Series, and it's happening with the product we are presenting today: a new engine below 19 kW that complies with all global emissions standards and fuels. And multi-fuel solutions will enrich the offering: diesel, gasoline and propane.

FEATURES | The versatility of KSD engines goes beyond performance, with the ability to easily fit into existing telematic solutions.

KSD engines are electronically controlled, while being as simple to use as mechanical engines. The fuel system then allows precise fuel metering and excellent load response, resulting in time saving and increased productivity. Durable components make the engine ready for any heavy duty applications.

Dual side service and full flexibility for fan position make the engine able to fit a wide range of machines.

The integration between the engine and the machine is enhanced: better response, drive by wire, speed control, auto stop, pedal map setting, and fan speed control.

The electronic controls allow the engine to maintain high performance at high altitude.

Furthermore, these features allow you to optimize fuel consumption by controlling the hydraulics of the machine and the engine load and speed.

KSD engines allow for prognostic, diagnostic, geolocation, remote monitoring and switchability for genset application, and offer a service interval of up to 500 hours, for both oil and fuel filters.

The range of possible applications is as wide as your imagination can perceive, because the KSD is ready to fit machines of the present and future: generators in the power sector, tractors in agriculture, excavators and loaders in construction, and forklifts in logistics, as well as compressors, dumpers, mowers, even refrigeration.

COMBUSTION SYSTEM | The injection system is the heart of every engine. The innovative technology brought on by the KSD is its architecture: it features a state-of-the-art indirect injection system but has the specific electronic management typical of direct injection engines. Major benefits are:

- the engine performance is maximized in every operating condition and environment: at sea level as well as at high altitudes;
- outstanding engine response, as the system offers a very limited speed droop as well as isochronous control if required, like in bigger displacement common-rail engines;
- the amazing low-end torque allows the operator to run his piece of equipment at lower rpm to save fuel;
- the electronic injection system results in no visible black smoke;
- operator comfort is a main priority; noise and vibrations are minimized as a result of a carefully conducted NVH analysis.

TOTAL COST OF OWNERSHIP | KSD engines provide extended oil intervals. In fact, the focus on clean combustion drives low oil consumption and avoids oil dilution as well as heavy soot oil contamination. This is thanks to the unique piston ring design, a dedicated in-house honing machining process, and a specific crankcase ventilation system with a cutting-edge design. In addition, KSD engines offer a 2000-hour heavy duty environment Poly-V belt solution. Service intervals have been extended more than ever. Again, complexity becomes simplicity.

EASE OF INSTALLATION | KSD engines do not require any kind of machine re-designing from OEMs. As a result, KSD engines offer a drop-in solution for existing applications, making no further investment. This is possible thanks to:

- adjustable cooling fan position: no need to reposition the radiator because the cooling fan is fully adjustable;
- dual service side option: the oil filter, oil dipstick and fuel filter can be located on the preferred service side;

- the electronic control does not mean additional costs to the OEM. In fact, we have developed a complete solution to offer the same level of installation required by current mechanical engines;
- the electronic control allows for the integration of all the features of bigger machines: CAN BUS communication, TSC1 control, tailored error messages and remote diagnostics.

UPGRADE ON THE GO | OEMs and distributors will certainly appreciate the single-spec ratio that leads to lean warehouses.

Single-spec engines can be purchased and then modified in-house: the possibilities are almost endless, as the engines can be configured based on specific needs. For example:

- the third PTO can be added on later;
- different cooling fan positions;
- dual service side;
- alternative oil sump and filter to extend the oil service interval;
- Kohler Arctic Boost starter motor to start the engine easily when dealing with high parasitics in cold conditions;
- you can choose the alternator that best fits your needs among the available options.

The ordering process will be simpler than ever. One single engine version to fit all applications. Finally, even logistics gains a load of advantages: with the single-spec ratio, the warehouse is more fluid and faster, as well as always stocked with the base spec, ready to be customized.

The simplicity of an advanced, versatile solution.
In other words, KSD.

About Kohler Engines

Kohler began manufacturing engines 100 years ago and has continually enhanced its product lineup in an effort to help make life easier and more profitable for end users around the globe. Today, the company offers a full array of diesel, gasoline, hybrid and gaseous-fueled engines – up to 140 hp. – which are supplied to equipment manufacturers worldwide in the construction, agricultural, industrial and lawn and garden markets. For additional information, visit kohlerengines.com.

About Kohler Co.

Founded in 1873 and headquartered in Kohler, Wis. Kohler Co. is one of America's oldest and largest privately held companies. With more than 50 manufacturing locations worldwide, Kohler is a global leader in the manufacture of engines and power systems; kitchen and bath products; and owner/operator of two of the world's finest five-star hospitality and golf resort destinations in Kohler and St Andrews, Scotland. For more details, please visit kohler.com.

###

CONTACT | Public Relations
Tommaso Maria Vezzosi
tommasomaria.vezzosi@kohler.com
+39 0522 3891