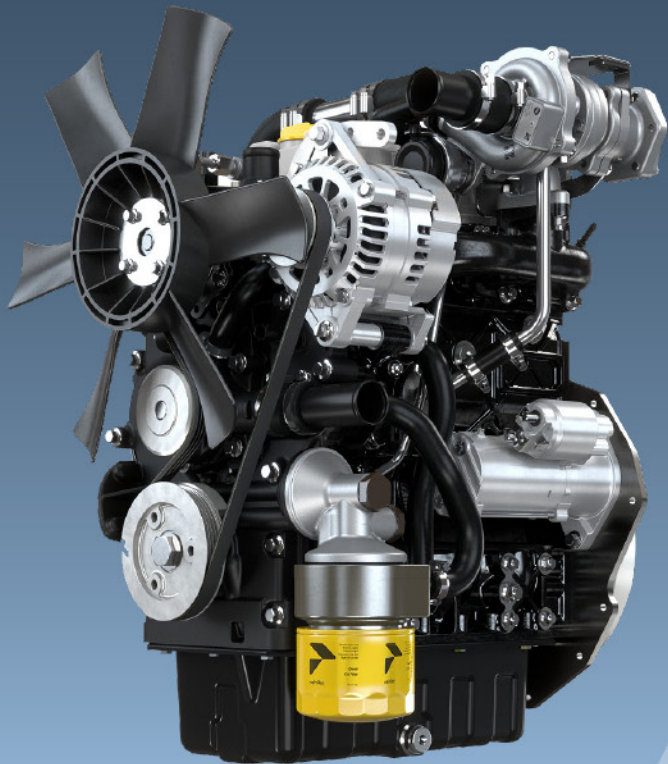


# SLEEMANS

World Class Brands, One Trusted Partner

## KSD Series

18.4 kW | 24.7 hp



 rehiko

## EMISSIONS STANDARDS

The wide variety of emission standards has introduced a new level of complexity to the engines business. The KSD is a new base engine below 19 kW that complies with all global emissions standards and fuels.

## ELECTRONIC CONTROL

The versatility of KSD engines goes beyond performance, with the ability to easily fit into existing machine platforms. KSD engines are electronically managed, while being as simple to use as mechanical engines. The fuel system allows precise fuel metering and excellent load response, resulting in increased productivity.

Moreover, KSD engines offer switchability for gensets.

## COMBUSTION SYSTEM

The innovative technology brought on by the KSD is its architecture: it features a state-of-the-art indirect injection system but has the electronic management typical of direct injection engines.

- The engine performance is maximized in every operating condition and environment
- Outstanding engine response
- The remarkable low-end torque values allow the operator to run their piece of equipment at lower rpm to save fuel
- The electronic injection system results in no visible black smoke
- Noise and vibrations are minimized

## EASE OF INSTALLATION

Rehiko KSD engines require minimal machine re-designing from OEMs. As a result, KSD engines offer a drop-in solution for existing applications.

## SERVICE & TOTAL COST OF OWNERSHIP

Rehiko KSD engines allow for prognostic, diagnostic, geolocation, and remote monitoring to minimize machine downtime. Rehiko KSD engines offer 2.000 hours of service interval of the Poly-V fan belt and no valve lash adjustment.

The service interval of up to 500 hours for both oil and fuel filters and a 3-year warranty provides up to 3000 hours of protection. This reduces the total cost of ownership, making KSD-powered applications extremely productive with increased uptime.

The indirect injection system does not affect the fuel consumption rate: on the contrary, the electronic management and the focus on clean combustion drive low oil and fuel consumption and avoid oil dilution as well as heavy soot oil contamination.



ELECTRONIC FUEL INJECTION INCREASES MACHINE PRODUCTIVITY

DURABLE COMPONENTS ALLOW THE END USER TO USE THE MACHINE FOR LONGER



VERSATILE ENGINE OPTIONS FOR EASY-TO-INTEGRATE SOLUTIONS ON MACHINES



COMPLIANCE TO GLOBAL EMISSION NORMS, PROMOTING LEAN INVENTORY MANAGEMENT

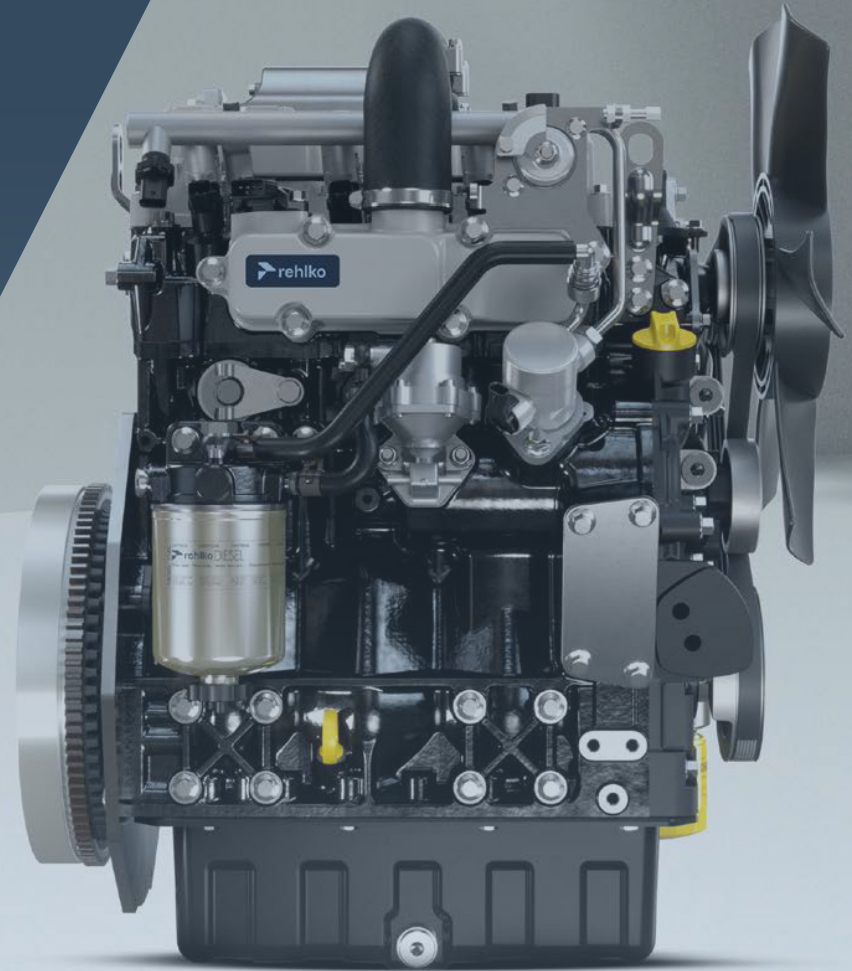
# Turbo Common Rail Engines

## Standard Equipment

- Intake manifold
- Exhaust manifold
- Side oil refilling
- Electric starter
- 45A alternator
- Backplate flange
- 7 ½" flywheel
- Oil filter engine mounted + oil cooler
- Fuel filter engine mounted
- Engine Control Unit (ECU)
- Oil sump capacity 3.7 L
- J1939 enabled wiring harness

## Accessories on Demand

- Flywheel housing (flywheel):
  - SAE 5 (6 ½")
  - SAE 4 (7 ½")
- Hydraulic pump provision on 3<sup>rd</sup> PTO
- Flexible fan position
- High capacity oil sump 5.3 L
- Remote oil and fuel filter
- Arctic Boost ( $\leq -26^{\circ}\text{C}$  startability)
- 80A or 60A alternator
- Full capacity wiring harness
- Muffler
- Radiator
- Heavy duty air cleaner



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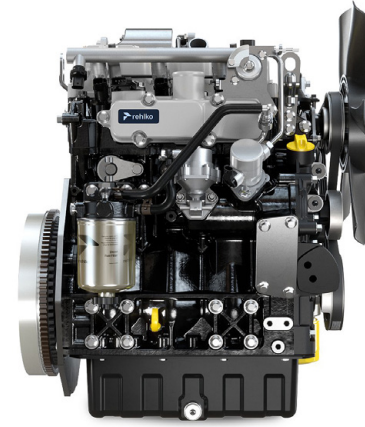
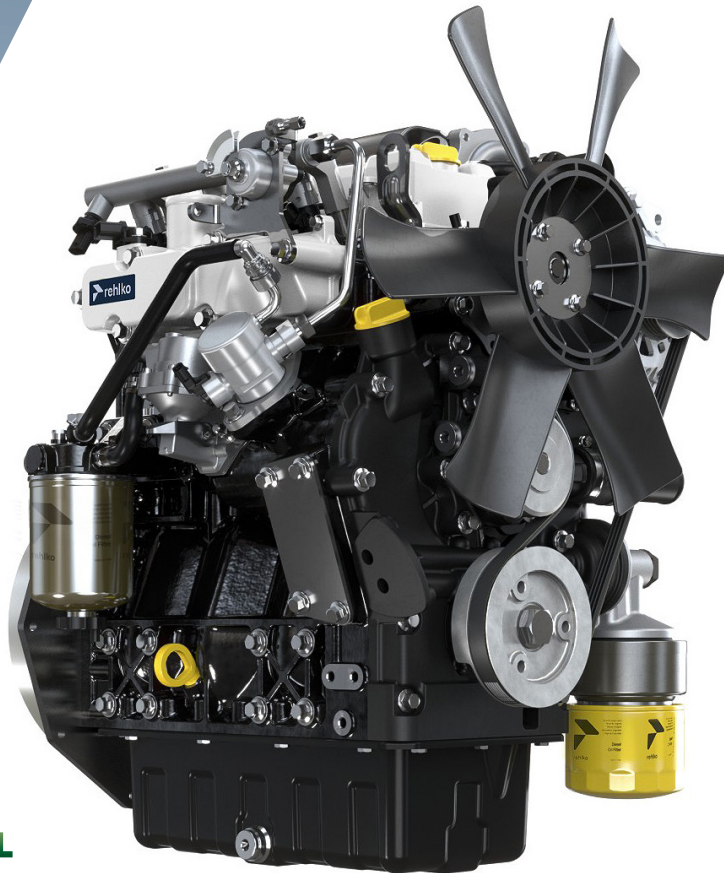
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EU Stage V  
US Tier 4 Final (EPA/CARB)  
Bharat TREM V/CEV V

Information accurate as of 2025.  
For information about applications and each country's regulations, please contact Sleemans.

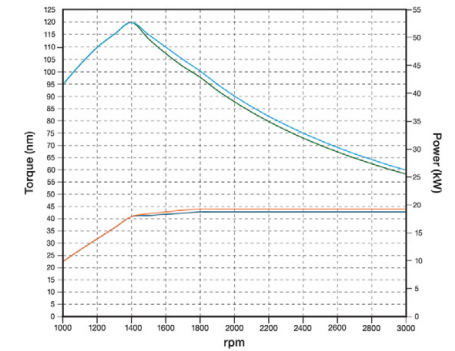
## KSD 1403TCA

Turbo Common Rail with Aftercooler



### Performance Curves (according to ISO 14396)

KSD 1403TCA  
Turbo Common rail with Aftercooler



Nominal curves, production tolerances apply

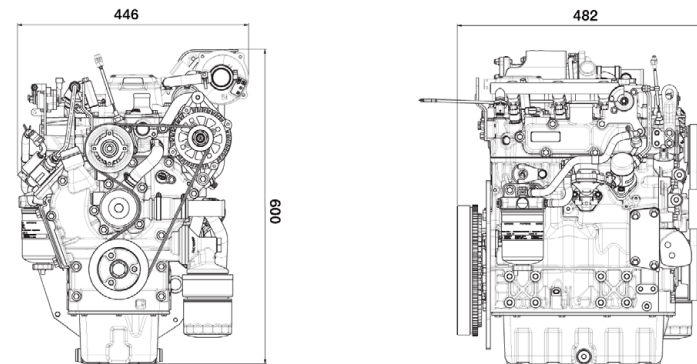
### Quick Specifications

Engine Model	KSD 1403TCA
Cylinders / FIE	3 / Turbo Common Rail
Max Power, kW (hp) @ rpm	18.4 (24.7) @ 3000, US Tier 4 Final 18.9 (25.7) @ 3000, Stage V*
Max Torque, Nm (lb-ft) @ rpm	120 (88) @ 1400
Emission Compliance	EU Stage V, US Tier 4 Final (EPA/CARB), Bharat TREM V/CEV V

- 18.4 kW Torque
- 18.9 kW Torque
- 18.4 kW Power
- 18.9 kW Power

Performances measured according to ISO 14396 without final intake and exhaust line. Actual engine performances may be affected by accessories (intake and exhaust line, charging, cooling fan, etc.), application, ambient operating conditions (temperature, humidity, and altitude) and other factors.

### Dimensions, mm



Photos may show non-standard equipment

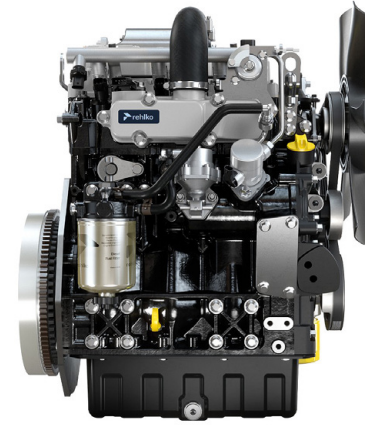
\* Engine model with multiple emission compliance (Stage V / Tier 4 Final (EPA/CARB) / Bharat TREM V, CEV V)

EU Stage V  
US Tier 4 Final (EPA/CARB)  
China IV, Bharat TREM V/CEV V

Information accurate as of 2025.  
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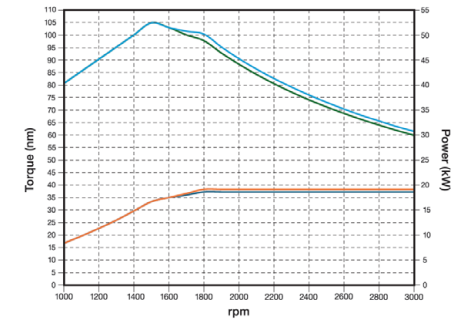
## KSD 1403TC

Turbo Common Rail



### Performance Curves (according to ISO 14396)

KSD 1403TC  
Turbo Common rail



Nominal curves, production tolerances apply

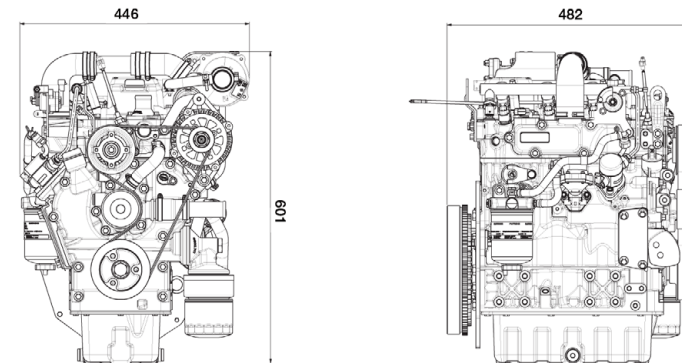
### Quick Specifications

Engine Model	KSD 1403TC
Cylinders / FIE	3 / Turbo Common Rail
Max Power, kW (hp) @ rpm	18.4 (24.7) @ 3000, US Tier 4 Final 18.9 (25.7) @ 3000, Stage V*
Max Torque, Nm @ rpm	105 @ 1500
Emission Compliance	EU Stage V, US Tier 4 Final (EPA/CARB), China IV, Bharat TREM V/CEV V

- 18.4 kW Torque
- 18.9 kW Torque
- 18.4 kW Power
- 18.9 kW Power

Performances measured according to ISO 14396 without final intake and exhaust line. Actual engine performances may be affected by accessories (intake and exhaust line, charging, cooling fan, etc.), application, ambient operating conditions (temperature, humidity, and altitude) and other factors.

### Dimensions, mm



Photos may show non-standard equipment

\* Engine model with multiple emission compliance (Stage V / Tier 4 Final (EPA/CARB) / China IV / Bharat TREM V, CEV V)

# Naturally Aspirated Engines

## Standard Equipment

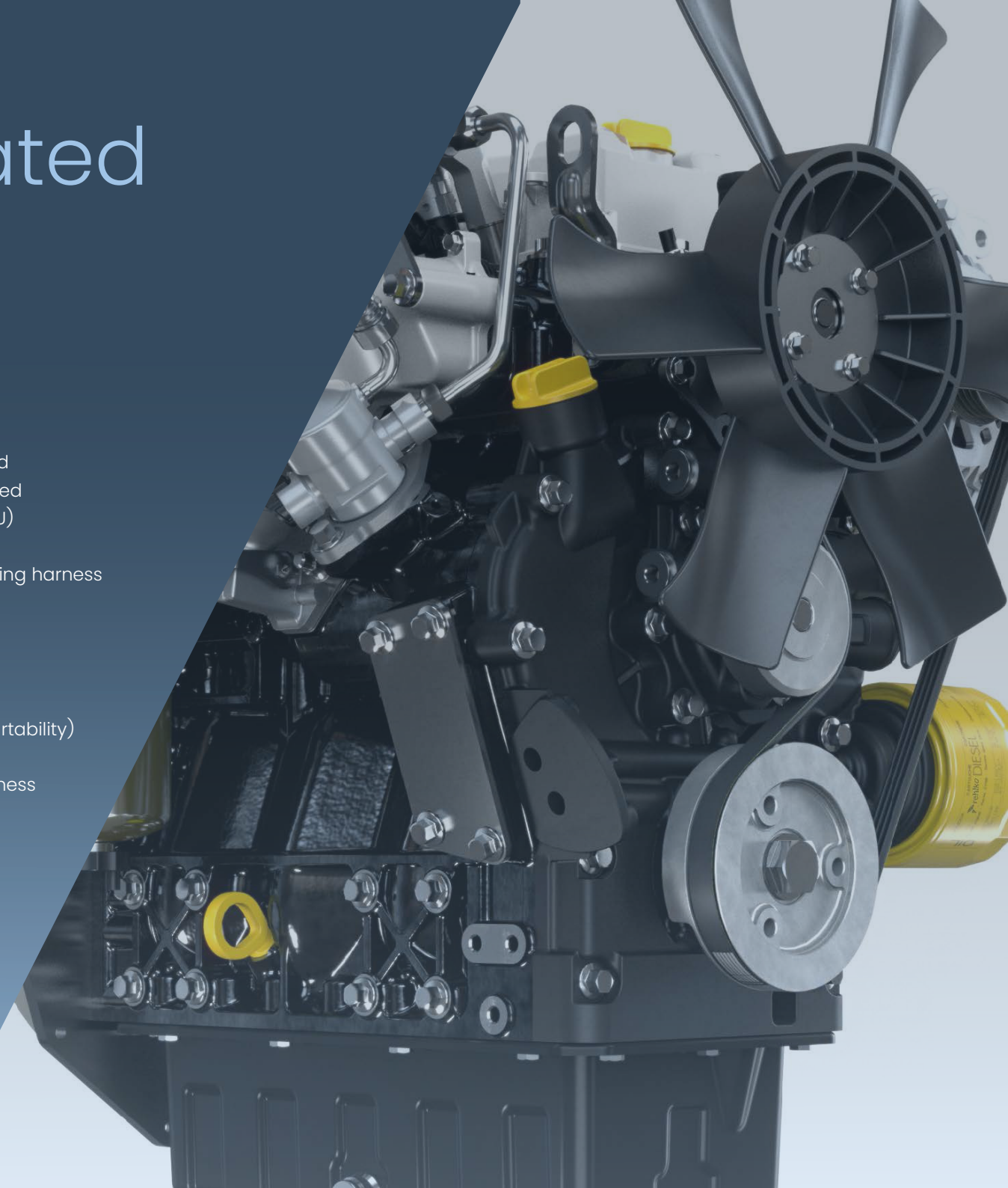
- Intake manifold
- Exhaust manifold
- Side oil refilling
- Electric starter
- 45A alternator
- Backplate flange
- 7 ½" flywheel
- Oil filter engine mounted
- Fuel filter engine mounted
- Engine Control Unit (ECU)
- Oil sump capacity 3.7 L
- Basic J1939 enabled wiring harness

## Accessories on Demand

- Flywheel housing (flywheel):
  - SAE 5 (6 ½")
  - SAE 4 (7 ½")
- Hydraulic pump provision on 3<sup>rd</sup> PTO
- Flexible fan position
- High capacity oil sump 5.3 L
- Remote oil and fuel filter
- Arctic Boost ( $\leq -26^{\circ}\text{C}$  startability)
- 80A or 60A alternator
- Full capacity wiring harness
- Muffler
- Radiator
- Heavy duty air cleaner

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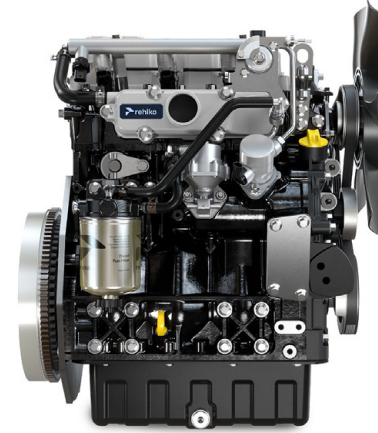


EU Stage V  
US Tier 4 Final (EPA/CARB)  
China IV, Bharat TREM V/CEV V

Information accurate as of 2025.  
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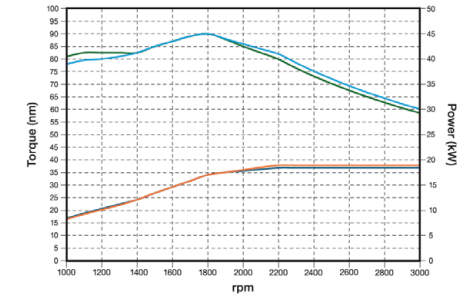
## KSD 1403NA

Naturally Aspirated



### Performance Curves (according to ISO 14396)

KSD 1403NA  
Naturally Aspirated



Nominal curves, production tolerances apply

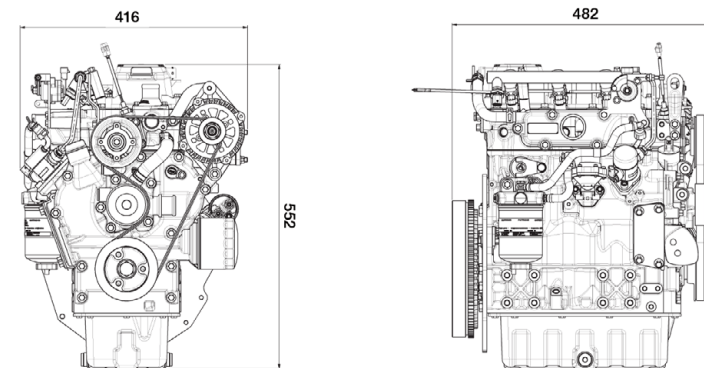
### Quick Specifications

Engine Model	KSD 1403NA
Cylinders / FIE	3 / Common Rail
Max Power, kW (hp) @ rpm	18.4 (24.7) @ 3000, US Tier 4 Final 18.9 (25.7) @ 3000, Stage V*
Max Torque, Nm (lb-ft) @ rpm	90 (66) @ 1800
Emission Compliance	EU Stage V, US Tier 4 Final (EPA/CARB), China IV, Bharat TREM V/CEV V

- 18.4 kW Torque
- 18.9 kW Torque
- 18.4 kW Power
- 18.9 kW Power

Performances measured according to ISO 14396 without final intake and exhaust line. Actual engine performances may be affected by accessories (intake and exhaust line, charging, cooling fan, etc.), application, ambient operating conditions (temperature, humidity, and altitude) and other factors.

### Dimensions, mm



Photos may show non-standard equipment

\* Engine model with multiple emission compliance (Stage V / Tier 4 Final (EPA/CARB) / China IV / Bharat TREM V, CEV V)

# Turbo Common Rail Engines

	Model	KSD 1403TCA	KSD 1403TC		Model	KSD 1403TCA	KSD 1403TC
Engine Specifications	4 stroke diesel engine with cylinder in line	•	•	Startability	Unaided, °C	Down to -15	Down to -15
	Liquid cooled	•	•		Unaided with arctic boost, °C	Down to -26	Down to -26
	2 valves per cylinder	•	•		Aided (coolant heater), °C	Below -26	Below -26
	In crankcase camshaft, gear train driven	•	•	Fuel Compatability	EN 590	•	•
	Pushrod - rocker arms timing with hydraulic tappets	•	•		No 1 Diesel (US) - ASTM D 975-09 B - Grade 1-D S 15	•	•
	Cast iron crankcase	•	•		No 2 Diesel (US) - ASTM D 975-09 B - Grade 2-D S 15	•	•
	Cast iron cylinder head	•	•		Arctic EN 590/ASTM D 975-09 B (no petroleum added)	•	•
	Closed crankcase ventilation system	•	•		High sulfur fuel <2000 ppm*	•	•
Technical Features	Cylinder	3	3	Service Features	HVO - hydrotreated vegetable oil	•	•
	Bore, mm	81	81		Oil / filter change interval std / synthetic, hrs	500-1000**	500-1000**
	Stroke, mm	90	90		Alternator belt replacement	36 mnths	36 mnths
	Engine displacement, cm <sup>3</sup>	1391	1391		Coolant change	24 mnths	24 mnths
	Injection system	IDI	IDI		Oil consumption, % fuel	<0.05	<0.05
	Injection equipment	IDI common rail	IDI common rail		H x L x W (fan excluded), mm	600 x 482 x 445	600 x 482 x 445
	Aftercooler	•	-		Weight, kg	126	127
Performance	Max power (ISO 14396), kW(hp) at rpm	18.4 (24.7) @ 3000 US Tier 4 Final 18.9 (25.7) @ 3000 Stage V <sup>1</sup>	18.4 (24.7) @ 3000 US Tier 4 F 18.9 (25.7) @ 3000 Stage V <sup>1</sup>	Physical Characteristics	Daily service points - positions	Optional single service side (select side)	Optional single service side (select side)
	Max torque (ISO 14396), Nm at rpm	120 @ 1400	105 @ 1500		Ambient operating temperature, °C	-40 to +50***	-40 to +50***
	Low end torque, Nm at 1000 rpm	95	80		Gradeability - all round (continuous), deg	34	35
	Emission compliance	EU Stage V, US Tier 4 Final (EPA/CARB), Bharat TREM V/CEV V	EU Stage V, US Tier 4 Final (EPA/CARB), China IV, Bharat TREM V/CEV V		Gradeability - all round (intermittent - 1 min), deg	45	45
Fuel Economy	Best point, G/kWh	242	245	Lubrication	Oil type	10W-40 API C14	10W-40 API C14
	Max power, G/kWh @ 1800 rpm	255	256		Max torque, Nm	40	40
				Auxiliary PTOs (3 <sup>rd</sup> optional)	Drive ratio	1:1 times engine speed	1:1 times engine speed
					Provision for a double GR2 tandem hydraulic pump	•	•

\* With restrictions

\*\* According to operating conditions

\*\*\* -32°C on demand

<sup>1</sup> Engine model with double emission compliance (Stage V/Tier 4 Final): 18.4 kW (24.7 hp) @ 3000 rpm

# Naturally Aspirated Engines

Model		KSD 1403NA	Model	KSD 1403NA	
Engine Specifications	4 stroke diesel engine with cylinder in line	•	Startability	Unaided, °C	Down to -15
	Liquid cooled	•		Unaided with arctic boost, °C	Down to -26
	2 valves per cylinder	•		Aided (coolant heater), °C	Below -26
	In crankcase camshaft, gear train driven	•	Fuel Compatibility	EN 590	•
	Pushrod - rocker arms timing with hydraulic tappets	•		No 1 Diesel (US) - ASTM D 975-09 B - Grade 1-D S 15	•
	Cast iron crankcase	•		No 2 Diesel (US) - ASTM D 975-09 B - Grade 2-D S 15	•
	Cast iron cylinder head	•		Arctic EN 590/ASTM D 975-09 B (no petroleum added)	•
	Closed crankcase ventilation system	•		High sulfur fuel <2000 ppm*	•
		HVO - hydrotreated vegetable oil		•	
		Oil / filter change interval std / synthetic, hrs		500-1000**	
Technical Features	Cylinder	3	Service Features	Alternator belt replacement	36 mnths
	Bore, mm	81		Coolant change	24 mnths
	Stroke, mm	90		Oil consumption, % fuel	<0.05
	Engine displacement, cm <sup>3</sup>	1391		H x L x W (fan excluded), mm	552 x 482 x 418
	Injection system	IDI	Weight, kg	121	
	Injection equipment	IDI common rail	Daily service points - positions	Optional single service side (select side)	
	Aftercooler	-	Ambient operating temperature, °C	-40 to +50***	
Performance	Max power (ISO 14396), kW(hp) at rpm	18.4 (24.7) @ 3000 US Tier 4 Final 18.9 (25.7) @ 3000 Stage V <sup>1</sup>	Physical Characteristics	Gradeability - all round (continuous), deg	35
	Max torque (ISO 14396), Nm at rpm	90 @ 1800		Gradeability - all round (intermittent - 1 min), deg	45
	Low end torque, Nm at 1000 rpm	70			
	Emission compliance	EU Stage V, US Tier 4 Final, China IV, Bharat TREM V/CEV V			
Fuel Economy	Best point, G/kWh	243	Lubrication	Oil type	10W-40 API CI4
	Max power, G/kWh @ 2200 rpm	253	Auxiliary PTOs (3 <sup>rd</sup> optional)	Max torque, Nm	40
		Drive ratio		1:1 times engine speed	
		Provision for a double GR2 tandem hydraulic pump		•	

\* With restrictions

\*\* According to operating conditions

\*\*\* -32°C on demand

<sup>1</sup> Engine model with double emission compliance (Stage V/Tier 4 Final): 18.4 kW (24.7 hp) @ 3000 rpm



# SLEEMANS

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+44 (0)1626 778266



[sales@sleemans.com](mailto:sales@sleemans.com)



[www.sleemans.com](http://www.sleemans.com)



Broadmeadow Industrial Estate  
Teignmouth, TQ14 9AE, United Kingdom

