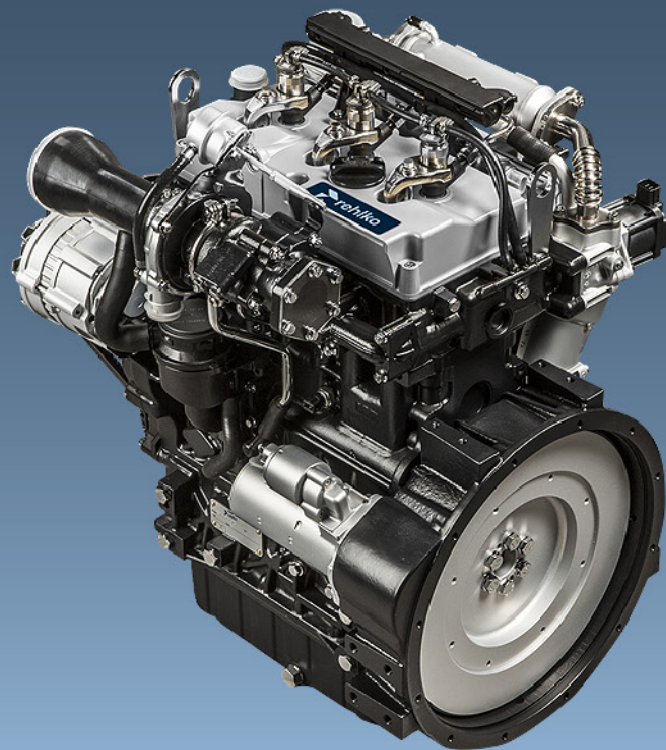


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KDI Series

31.0–55.4 kW | 42–75 hp



 **rehlko**
DIESEL ENGINES

More power. Smaller footprint. The ultimate diesel engine.

Anybody can add more power to an engine. That's not the hard part. The challenge is increasing the performance without increasing the body size.

With the KDI diesel engine, we started from scratch to build an entirely new engine experience. Using state-of-the-art technology to control the combustion process, we created a diesel that delivers more power and more torque in a smaller frame. So you can keep your performance and downsize your engine.

But we didn't stop there. The KDI lineup is a comprehensive platform of engines equipped to meet all emission regulations worldwide. Our engineers created a specific aftertreatment solution for every continent on earth in the smallest size possible. So wherever you are, we offer the most compact solution for your machine.

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COMPACT

LOW VIBRATIONS

MORE POWER WITH
SMALL FOOTPRINT



ONE ENGINE PLATFORM
FOR THE ENTIRE WORLD

EASY MAINTENANCE

LONG SERVICE INTERVALS



REDUCED NOISE

SMART EMISSION MANAGEMENT SYSTEM

EXCELLENT FUEL EFFICIENCY

COMMON-RAIL SYSTEM

Rehiko has selected the most advanced common-rail system available on the market and specifically engineered for extreme durability and longevity within arduous agricultural, industrial and construction equipment applications. The 2000 bar high-pressure pump, together with the advanced multiple injection control of the solenoid-injectors, allows an excellent fuel rate control during the injection process.

TURBOCHARGER AND CHARGE AIR COOLER

The waste-gated turbocharger has been specifically tuned to minimize the turbo-lag response and provide the precise volume of air for an excellent low-end torque capability. The special design of the lubrication system guarantees extended durability of the turbocharger. The use of a charge air cooler is required to ensure the correct air inlet temperature for the optimal engine performance whilst achieving emissions compliance.

4 VALVES

The 4 valves per cylinder design has been selected to enable the installation of the injectors precisely on the cylinder axis and centered with the combustion bowl. This solution allows for a symmetrical fuel atomization and distribution within the combustion bowl ensuring optimal mixing of fuel and air. The design of the combustion bowl itself together with the inlet ports shaping, have been studied and developed with CFD analysis to complete the absolute optimization of the combustion process.

ECU

The engine electronic control unit (ECU), together with the common rail injection system, is a part of the most advanced automotive style engine management system and has been specifically developed for agricultural, industrial and construction equipment applications. It allows a full control of the engine calibration parameters to achieve the engine performances and emissions targets. A CAN bus link allows the ECU to interface with other electronic systems within the final application in order to optimize the engine's operating parameters. Options of specific functionalities have been enabled within the ECU in order to provide OEMs with different governing characteristics ensuring total compatibility with individual equipment.

EGR SYSTEM

The Exhaust Gas Recirculation (EGR) system has been designed with CFD analysis and the use of comprehensive research and development resources. The chosen design of a "hot side" EGR layout will avoid valve-sticking problems that are historically the most common failures seen within these systems.

Exhaust gas routing across the cylinder head ensures a beneficial preliminary gas cooling before entering the EGR valve to reduce the overall dimensions of the unit to assist installation parameters.

DOC (DIESEL OXIDATION CATALYST)

The DOC reacts with exhaust gases to reduce carbon monoxide, hydrocarbons and some particulate matter (PM). It promotes oxidation of several exhaust gas components

by oxygen, which is present in ample quantities in diesel exhaust. When passed over an oxidation catalyst, diesel pollutants - carbon monoxide (CO), gas phase hydrocarbons (HC), organic fraction of diesel particulates (SOF) - can be oxidized to CO₂. Rehiko strategy is to offer a maintenance free DOC using the latest available technology, able to extend the service intervals and reduce the fuel consumption in order to let the end user spend more time in motion.

DPF (DIESEL PARTICULATE FILTER)

The DPF is a soot trap, which physically captures diesel particulate matter (PM) and prevents the release into the atmosphere. The DPF traps soot particles but at the same time accumulates ashes from engine oil combustion and particles from engine wear.

The DPF is kept clean from the soot, during normal engine operation through a process called filter regeneration. The regeneration strategy has been designed to maintain optimal machine operation, even at low load and low temperatures, thus preventing downtime due to forced regeneration events. From this perspective, the aftertreatment system is a key enabler to spend more time in motion, consequently increasing machine productivity.

Rehiko engines always operate efficiently with outstanding performance that raise the bar in the off-road market. To ensure extra-long lifecycle of its products, Rehiko offer official services aimed at maximizing the uptime of machines, such as the DPF Switch Program.

KDI Flex

The integrated suite of engine systems

		KDI Flex Solutions							
		EA	EB	E5	U3	U4	C4	E5	NE
Emission Standard		Europe			North America & Canada		China	Korea	Less Regulated Countries
		Stage IIIA EQ	Stage IIIB	Stage V	Tier 3	Tier 4 Final/ CARB	China 4 #	Stage V	
<56kW	Mechanical Injection			•	•	•			•
	High-Pressure Common Rail	•	•	•		•	•	•	(• **)
	C-EGR		•	•		•	•	•	
	DOC		•	•		•	•	•	
	DPF			•			(• *)	•	•

* Homologation process for US - Tier 4 Final ongoing

** With limitation on max sulfur content in fuel

China 4 ready

KDI Flex is the range of solutions for emission control that Rehlko has designed to enable each configuration of the engines of the KDI platform to comply with all emissions standards and regulations, worldwide.

At the heart of KDI Flex there is the clean combustion of KDI engines that enables the adoption of a compact DPF to meet the more stringent emission standard.

KDI Flex combines the clean in-cylinder combustion of KDI engines, made possible by state-of-the-art High Pressure Common Rail (2000 bar), 4 valves head, turbocharger, cooled-EGR, and the most compact aftertreatment devices (DOC, DPF and SCR) to comply with all emission requirements. Each combination of KDI Flex has been designed in line with the all-in-one philosophy, with the objective of minimize change for OEMs while installing and fitting into existing packages.

These systems are efficient and reliable and can be deployed in many combinations to achieve effective emissions solutions for the different markets.

Turbo Common Rail Engines

Standard Equipment

- Intake manifold
- Exhaust manifold
- Side oil refilling
- Electric starter
- 80A alternator
- SAE 4 (7" 1/2)
- Cabin heating provision
- Oil filter engine mounted
- Fuel filter with water sensor
- Environmentally friendly oil filter
- ECU
- Oil sump capacity
8.5 L (KDI 1903) and 11.3 L (KDI 2504)

Accessories on Demand

- SAE 3 (11" 1/2)
- Radiators with integral charge air cooler
- Heavy duty air cleaner
- Hydraulic pump provision on 3rd and 4th PTO
- 100A alternator
- Balancer shafts (for KDI 2504 only)
- High fan configuration
- Structural oil sump and bell housing
- 100% power take-off front PTO
- DPF engine mounted
- ATS insulation
- Remote oil filter

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EU Stage IIIB, EU Stage V
US Tier 3, US Tier 4 Final
Bharat TREM V/CEV V, China IV

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

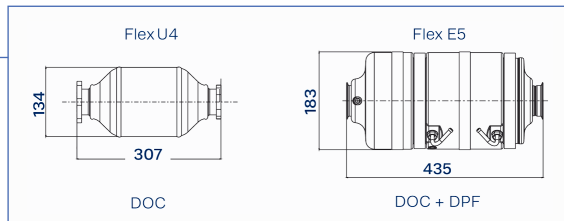


KDI-TCR1903



KDI Flex ENVELOPE

Dimensions (mm)

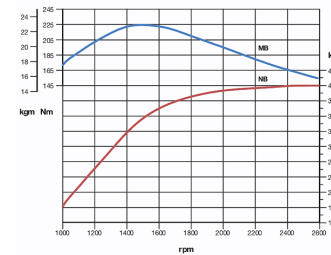


Quick Specifications

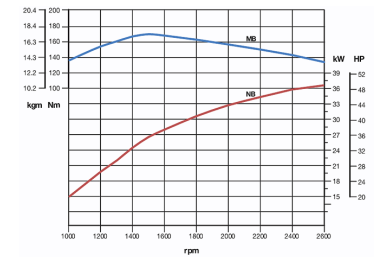
Engine Model	KDI-TCQ 1903U3/26	KDI-TCF 1903U4/26	KDI-TCR HP 1903E5/26	KDI-TCR 1903E5/26	KDI-TC 1903E5/26
Cylinders / FIE	3 / Turbo Common Rail				
Max Power, kW (hp) @ rpm	42 (56) @ 2600	42 (56) @ 2600	50 (67) @ 2600	42 (56) @ 2600	37 (50) @ 2600
Max Torque, Nm @ rpm	225 @ 1500	225 @ 1500	250 @ 1500	225 @ 1500	170 @ 1500
Emission Compliance	US Tier 3 equivalent	EU Stage IIIB US Tier 4 Final	EU Stage V, US Tier 4 Final*	EU Stage V, US Tier 4 Final *, Bharat TREM V/CEV V, China IV	
KDI Flex Emissions Management System	U3 (EGR)	U4 (EGR+DOC)	E5 (EGR+DOC+DPF)		
Aftercooler	•	•	•	•	No

Performance Curves (according to ISO 14396)

KDI-TCQ 1903U3/26 - KDI-TCF 1903U4/26
KDI-TCR 1903E5/26



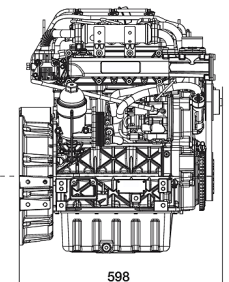
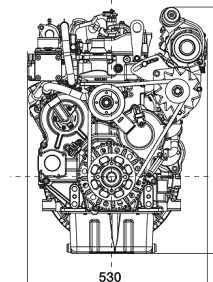
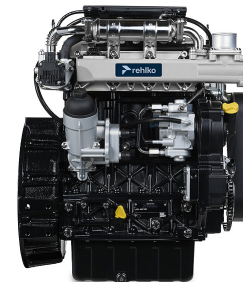
KDI-TC 1903E5/26



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.

— MB - Torque curve
— NB - Power curve

Dimensions, mm



* Engine capable, homologation process for US - Tier 4 Final ongoing



EU Stage IIIA, EU Stage IIIB
EU Stage V, US Tier 3, US Tier 4 Final
Bharat TREM V/CEV V, China IV

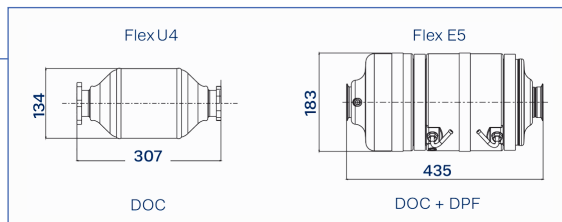
Information accurate as of 2025.
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KDI-TCR2504



KDI Flex ENVELOPE

Dimensions (mm)

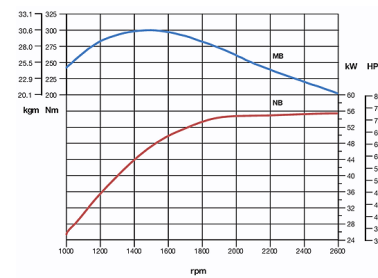


Quick Specifications

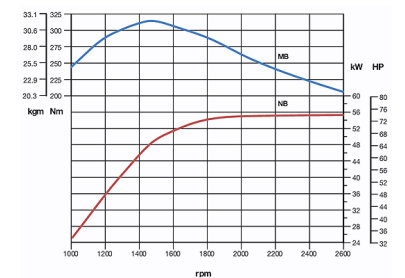
Engine Model	KDI-TCK 2504U3/26	KDI-TCF 2504U4/26	KDI-TCR 2504E5/26
Cylinders / FIE	4 / Turbo Common Rail		
Max Power, kW (hp) @ rpm	55.4 (74) @ 2600	55.4 (74) @ 2600	55.4 (74) @ 2600
Max Torque, Nm @ rpm	300 @ 1500	300 @ 1500	315 @ 1500
Emission Compliance	EU Stage IIIA US Tier 3 equivalent	EU Stage IIIB US Tier 4 Final	EU Stage V, US T4F, China IV, Bharat TREM V/CEV V
KDI Flex Emissions Management System	U3 -	U4 (EGR+DOC)	E5 (EGR+DOC+DPF)
Aftercooler	•	•	•

Performance Curves (according to ISO 14396)

KDI-TCK2504U3/26-KDI-TCF2504U4/26



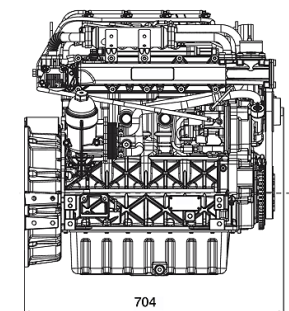
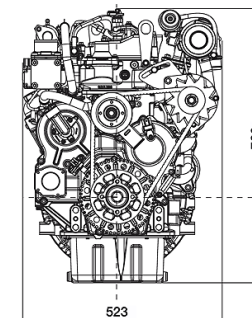
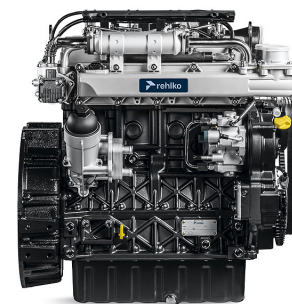
KDI-TCR2504E5/26



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.

— MB - Torque curve
— NB - Power curve

Dimensions, mm



* Engine capable, homologation process for US - Tier 4 Final ongoing

Mechanical Engines

Standard Equipment

- Intake manifold
- Exhaust manifold
- Side oil refilling
- Electric starter
- 55A alternator
- SAE 4 (7" 1/2)
- Cabin heating provision
- Engine mounted oil filter
- Fuel filter
- Oil sump capacity
8.5 L (KDI-M 1903) and 11.3 L (KDI-M 2504)

Accessories on Demand

- SAE 3 (11" 1/2)
- Radiators
- Hydraulic pump provision
on 3rd and 4th PTO
- Heavy duty air cleaner
- Structural oil sump and bell housing
- High fan configuration
- Fuel feeding pump
- Balancer shafts (for KDI-M 2504 only)
- 100% power take-off front PTO

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Information accurate as of 2025.
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KDI-M 1903

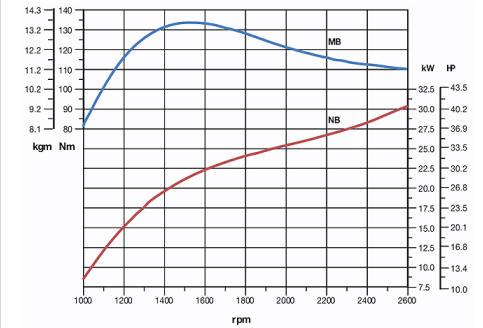


Quick Specifications

Engine Model	KDI-M 1903EA/26
Cylinders / FIE	3 / Mechanical Rotary Pump
Max Power, kW (hp) @ rpm	30(42) @ 2600
Max Torque, Nm @ rpm	133 @ 1500
Emission Compliance	EU Stage IIIA EQ

Performance Curves (according to ISO 14396)

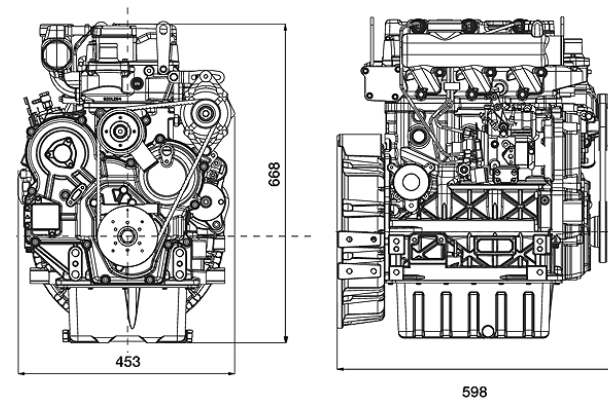
KDI-M1903EA/26



— MB - Torque curve
— NB - Power curve

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.

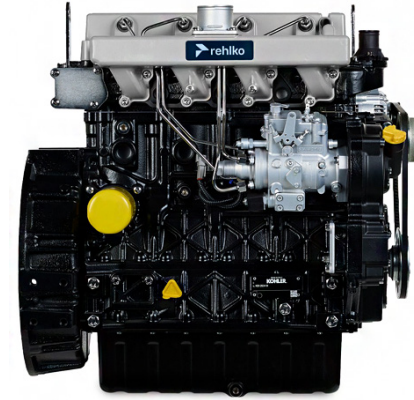
Dimensions, mm



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

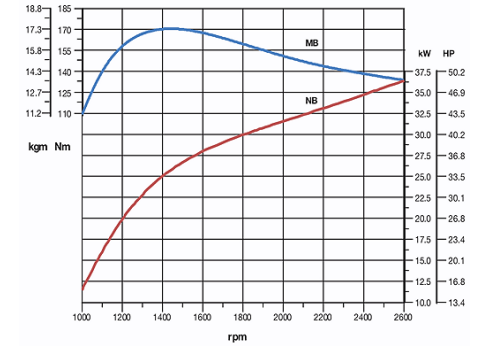


KDI-M 2504



Performance Curves (according to ISO 14396)

KDI-M2504EA/26



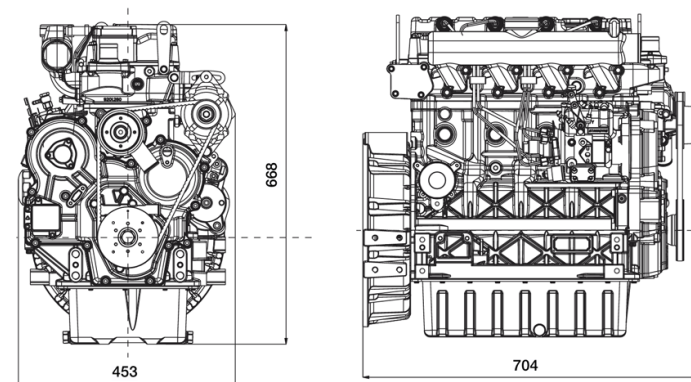
Quick Specifications

Engine Model	KDI-M2504EA/26
Cylinders / FIE	4 / Mechanical Rotary Pump
Max Power, kW (hp) @ rpm	36.4 (49) @ 2600
Max Torque, Nm @ rpm	170 @ 1500
Emission Compliance	EU Stage IIIA EQ

— MB - Torque curve
— NB - Power curve

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



Turbo Common Rail Engines

Model		KDI-TCR 1903					KDI-TCR 2504		
Engine Specifications	4 stroke diesel engine with cylinder in line	•					•		
	Liquid cooled	•					•		
	4 valves per cylinder	•					•		
	In crankcase camshaft, gear train driven	•					•		
	Pushrod - rocker arms timing with hydraulic tappets	•					•		
	Cast iron crankcase with bed-plate	•					•		
	Cast iron cylinder head	•					•		
Closed crankcase ventilation system		•					•		
Technical Features	Cylinder	3					4		
	Bore, mm	88					88		
	Stroke, mm	102					102		
	Engine displacement, cm ³	1861					2482		
	Injection system	DI					DI		
	Injection equipment	Turbo high pressure common rail							
	Aftercooler	•	•	•	•	-	•	•	•
Performance	Max power (ISO 14396), kW(hp) at 2600 rpm	42 (56)	42 (56)	50 (67)	42 (56)	37 (50)	55.4 (74)	55.4 (74)	55.4 (74)
	Max torque (ISO 14396), Nm at 1500rpm	225	225	250	225	170	300	300	315
	Low end torque, Nm at 1000 rpm	172	172	172	172	135	242	242	242
KDI Flex Emissions Management System	KDI Flex Solution	U3	U4	E5	E5	E5	U3	U4	E5
	EGR	•	•	•	•	•	-	•	•
	DOC	-	•	•	•	•	-	•	•
	DPF	-	-	•	•	•	-	-	•
	Emission compliance	US Tier 3 EQ	EU Stage IIIB, US Tier 4 Final	EU Stage V	EU Stage V, US Tier, 4 Final, China IV, Bharat TREM V/CEV V		US Tier 3 EQ	EU Stage IIIB, US Tier 4 Final	EU Stage V, US Tier 4 Final, China IV, Bharat TREM V/CEV V
Fuel economy	Best point (g/kWh)	215					210		
	Max power (g/kWh @ 2600 rpm)	237					226		

* With restrictions

¹ Engine capable, homologation process for US - Tier 4 Final ongoing

Turbo Common Rail Engines

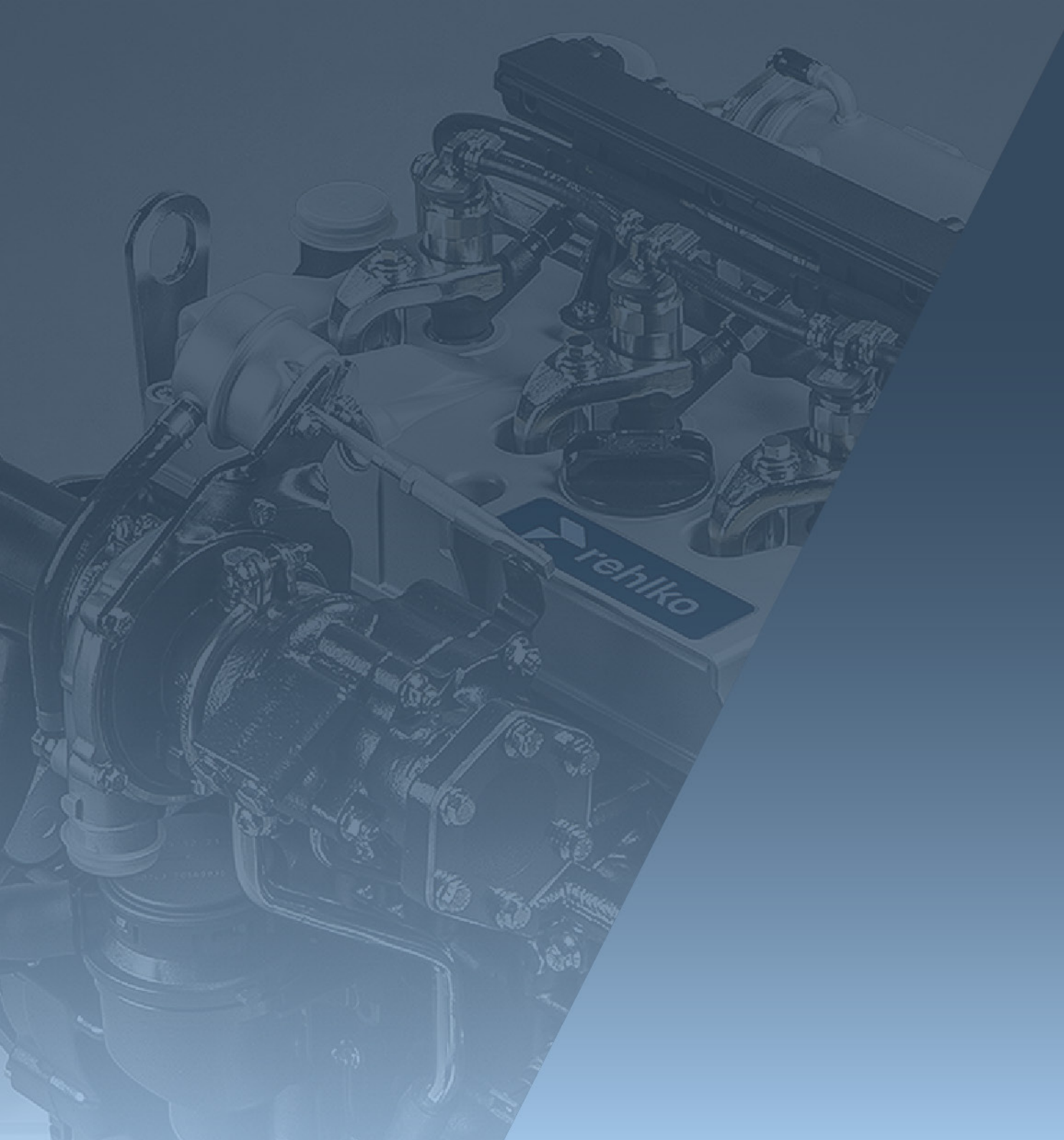
Model		KDI-TCR 1903	KDI-TCR 2504
Startability	Unaided, °C	Down to -15	Down to -15
	Aided (manifold grid heater), °C	Below -15	Below -15
	Aided (manifold grid heater+coolant heater), °C	Below -20	Below -20
Fuel Compatability	EN 590	•	•
	No 1 Diesel (US) - ASTM D 975-09 B - Grade 1-D S 15	•	•
	No 2 Diesel (US) - ASTM D 975-09 B - Grade 2-D S 15	•	•
	Arctic EN 590/ASTM D 975-09 B (no petroleum added)	•	•
	High sulfur fuel <2000 ppm*	-	• - -
	HVO - hydrotreated vegetable oil	•	•
Service Features	Oil / filter change interval std / synthetic, hrs	500	500
	Alternator belt replacement	36 mth	36 mth
	Coolant change	24 mth	24 mth
	Oil consumption, % fuel	<0.1	<0.1
Physical Characteristics	H × L × W (fan excluded), mm	726 x 598 x 530	720 x 704 x 523
	Weight, kg	233	267
	Daily service points - positions	1 side service	1 side service
	Ambient operating temperature, °C	-30 to +50	-30 to +50
	Gradeability - all round (continuous), deg	25	25
	Gradeability - all round (intermittent - 1 min), deg	35	35
Lubrication	Oil type	SAE 10W 40 LOW SAPS/ API CJ-4/ API CK-4/ ACEA E6-E7-E9	SAE 10W 40 LOW SAPS/ API CJ-4/ API CK-4/ ACEA E6-E7-E9
Auxiliary PTOs (3 rd & 4 th) (optional)	Max torque (Nm)	100	100
	Drive ratio	1.23 times engine speed	1.23 times engine speed
	Provision for a double gr. 2 tandem hydraulic pump	•	•

* With restrictions

¹ Engine capable, homologation process for US - Tier 4 Final ongoing

Mechanical Engines

Model		KDI-M 1903	KDI-M 2504	Model		KDI-M 1903	KDI-M 2504	
Engine Specifications	4 stroke diesel engine with cylinder in line	•	•	Fuel Compatibility	EN 590	•	•	
	Liquid cooling	•	•		No 1 Diesel (US) - ASTM D 975-09 B - Grade 1-D S 15	•	•	
	4 valves per cylinder	•	•		No 1 Diesel (US) - ASTM D 975-09 B - Grade 1-D S 500	•	•	
	In crankcase camshaft, gear train driven	•	•		No 2 Diesel (US) - ASTM D 975-09 B - Grade 2-D S 15	•	•	
	Pushrod - rocker arms timing with hydraulic tappets	•	•		No 2 Diesel (US) - ASTM D 975-09 B - Grade 2-D S 500	•	•	
	Cast iron crankcase with bed-plate	•	•		Arctic EN 590/ASTM D 975-09 B	•	•	
	Cast iron cylinder head	•	•		High sulfur fuel <2000 ppm*	•	•	
	Closed crankcase ventilation system	•	•		Military NATO fuels F34-F35-F44-F63-F64-F65*	•	•	
	Waste-gate turbocharger	-	-		Military US fuels JP5-JP8 (AVTUR)*	•	•	
Technical Features	Cylinder	3	4		Jet fuels - Jet A/A1*	•	•	
	Bore, mm	88	88		HVO - hydrotreated vegetable oil	•	•	
	Stroke, mm	102	102		Service Features	Oil / filter change interval std / synthetic, hrs	500	500
	Engine displacement, cm ³	1861	2482			Valve adjustment	-	-
	Injection system	DI	DI	Alternator belt replacement		36 mth	36 mth	
	Injection equipment	Mech-rotary pump		Coolant change		24 mth	24 mth	
	Emission compliance	EU Stage IIIA EQ (EA)		Oil consumption, % fuel		<0.1	<0.1	
Performance	Max power (ISO 14396), kW(hp) at rpm	30 (41.5) @ 2600	36.4 (48.8) @ 2600	H x L x W (fan excluded), mm		667.5 x 598.3 x 452.5	667.5 x 704.3 x 452.5	
	Max torque (ISO 14396), Nm at rpm	133 @ 1500	170 @ 1500	Weight, kg		210	244	
	Low end torque, Nm at 1000 rpm	80	110	Daily service points - positions	1 side service	1 side service		
Fuel economy	Best point (g/kWh)	223	220	Physical Characteristics	Ambient operating temperature, °C	-30 TO +50	-30 TO +50	
	Max power (g/kWh @ 2600 rpm)	237	234		Gradeability - all round (continuous), deg	25	25	
Startability	Unaided, °C	Down to -15	Down to -15		Gradeability - all round (intermittent - 1 min), deg	35	35	
	Aided (manifold grid heater), °C	Below -15	Below -15		Lubrication	Oil type	SAE 15W40 / API CH-4	SAE 15W40 / API CH-4
* With restrictions ¹ Engine capable, homologation process for US - Tier 4 Final ongoing			Auxiliary PTOs (3 rd & 4 th) (optional)	Max torque (Nm)		100	100	
				Drive ratio		1.23 times engine speed	1.23 times engine speed	
				Provision for a double gr. 2 tandem hydraulic pump		•	•	



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