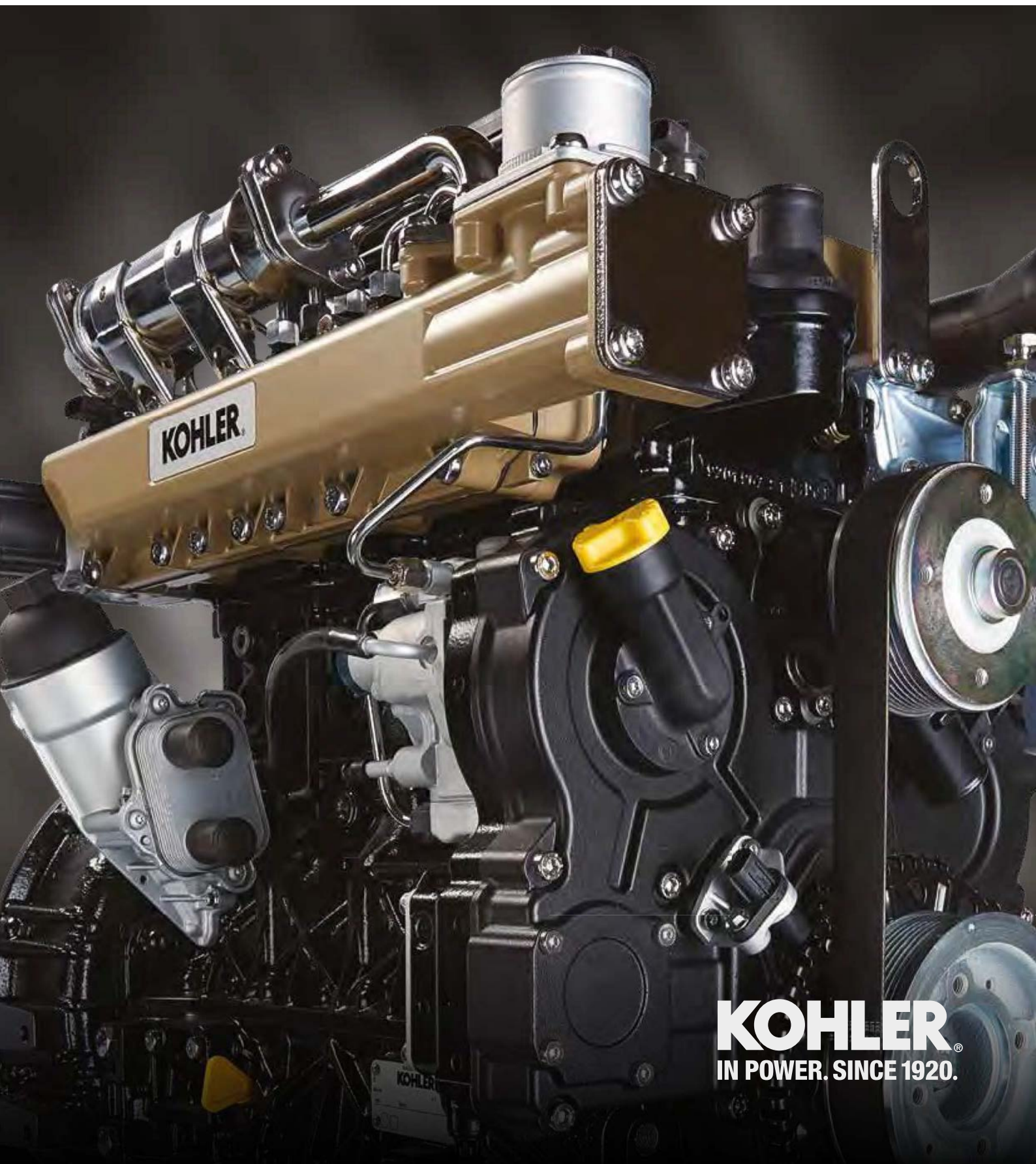


KOHLER® DIESEL KDI

31.0 – 55.4 kW | 42 – 75 hp



KOHLER®
IN POWER. SINCE 1920.

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

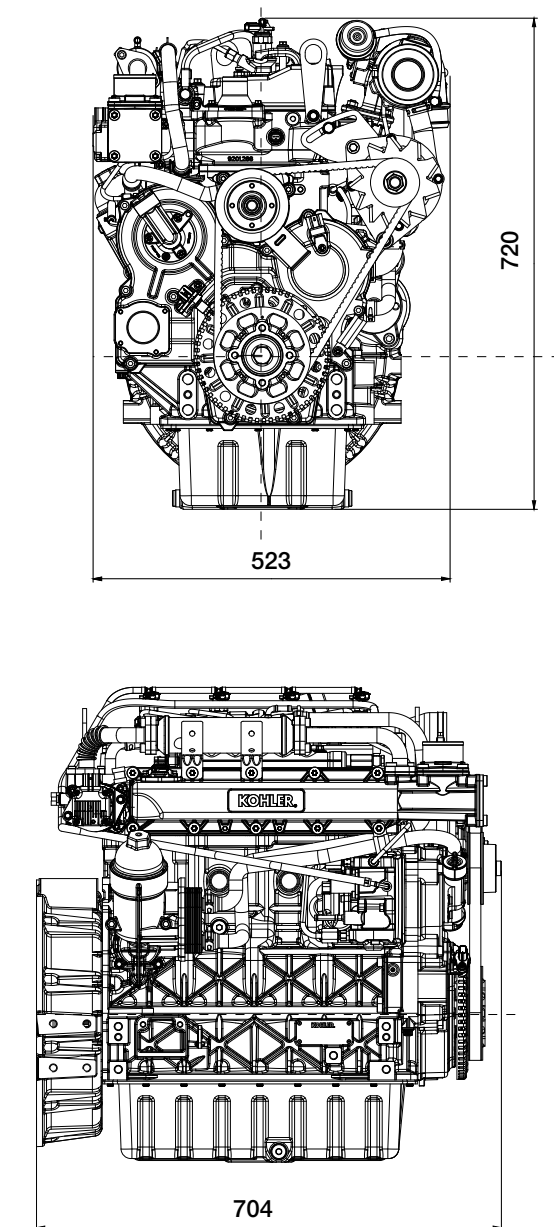
KDI 2504



Quick specifications	KDI-TCK 2504U3/26	KDI-TCF 2504U4/26	KDI-TCR 2504E5/26	KDI-TC 2504E5/26
CYLINDERS / FIE	4 / Turbo Common Rail	4 / Turbo Common Rail	4 / Turbo Common Rail	4 / Turbo Common Rail
MAX POWER kW (hp)@rpm	55.4 (74) @ 2600	55.4 (74) @ 2600	55.4 (74) @ 2600	50 (67) @ 2600
MAX TORQUE Nm@rpm	300 @ 1500	300 @ 1500	315 @ 1500	236 @ 1500
EMISSION COMPLIANCE	EU Stage IIIA 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
KOHLER Flex Emissions Management system	U3 -	U4 (EGR+DOC)	E5 (EGR+DOC+DPF)	E5 (EGR+DOC+DPF)
AFTERCOOLER	•	•	•	-

DATA

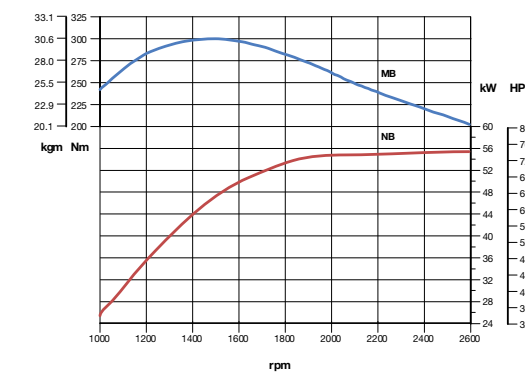
Dimensions (mm)



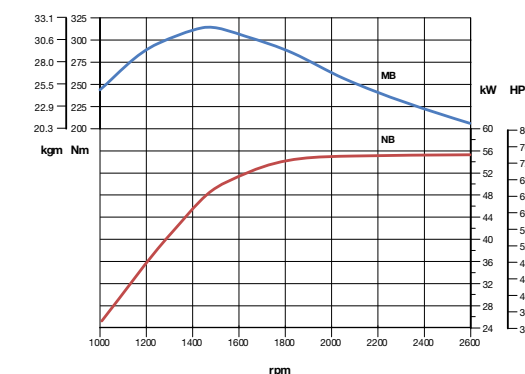
PERFORMANCE CURVES

(IFN-ACCORDING TO ISO 3046 and ISO 14396)

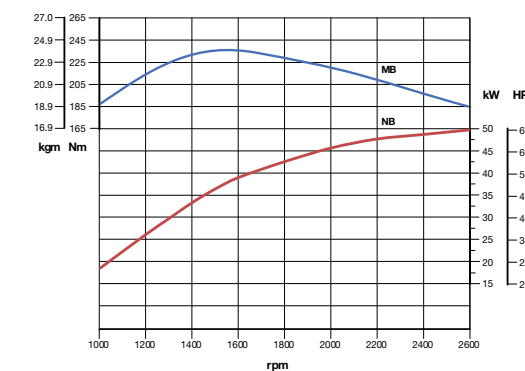
KDI-TCK 2504U3/26 - KDI-TCF 2504U4/26



KDI-TCR 2504E5/26



KDI-TC 2504E5/26



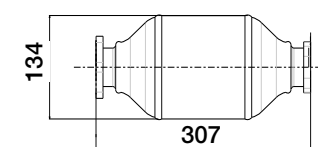
— MB - Torque curve - ISO 3046/1 - IFN
— NB - Power curve - ISO 3046/1 - IFN

Power ratings refer to engines equipped with air filter, standard muffler, after running-in period at ambient conditions of +25°C, relative humidity 30% and 1 bar. De-rating depending on applications.

KOHLER Flex ENVELOPE

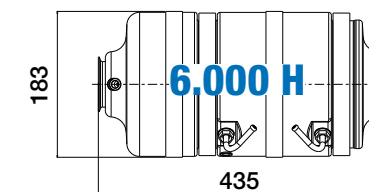
Dimensions (mm)

Flex U4

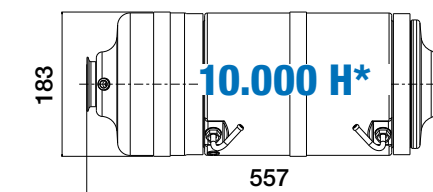


DOC

Flex E5



DOC + DPF

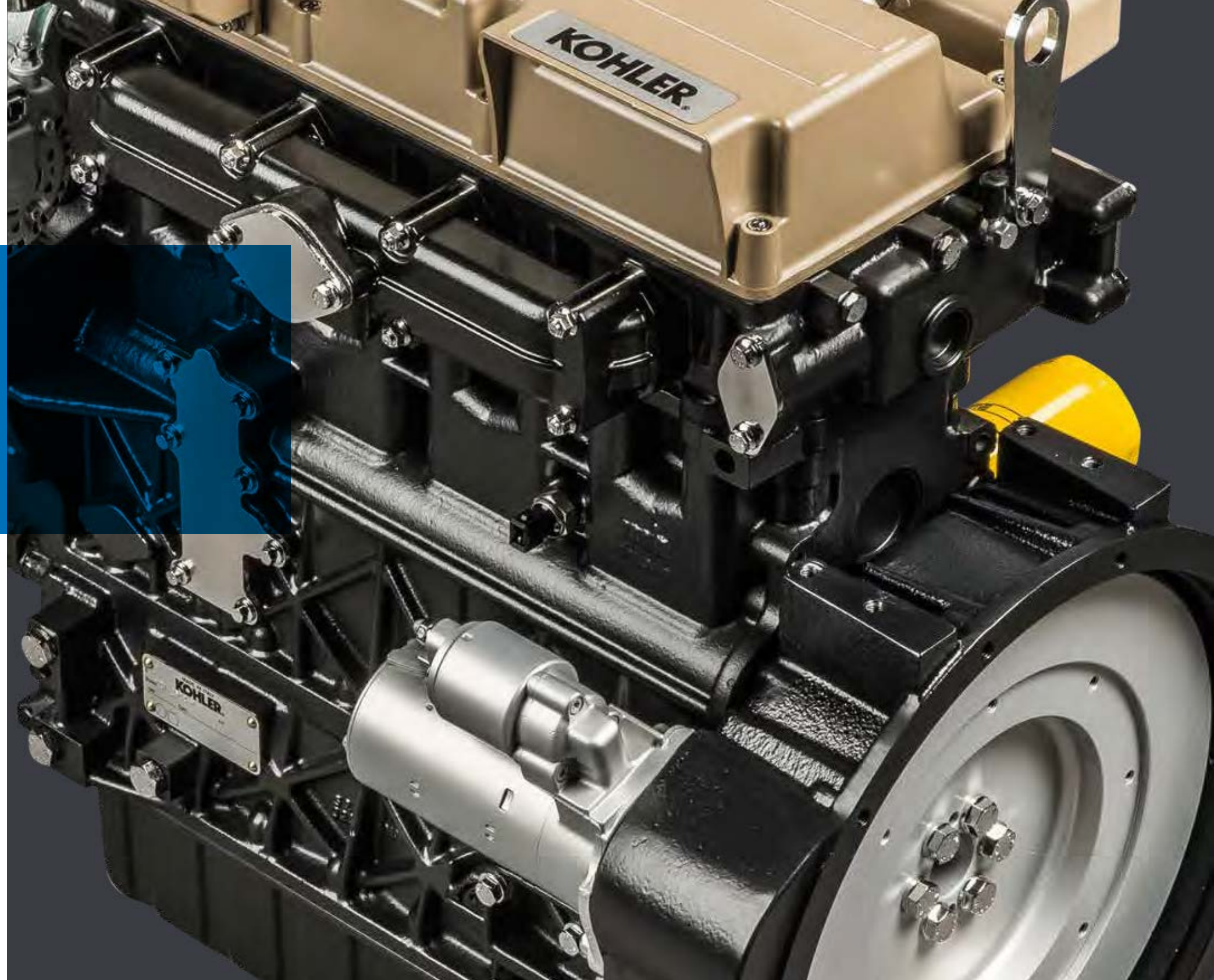


*available on demand

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

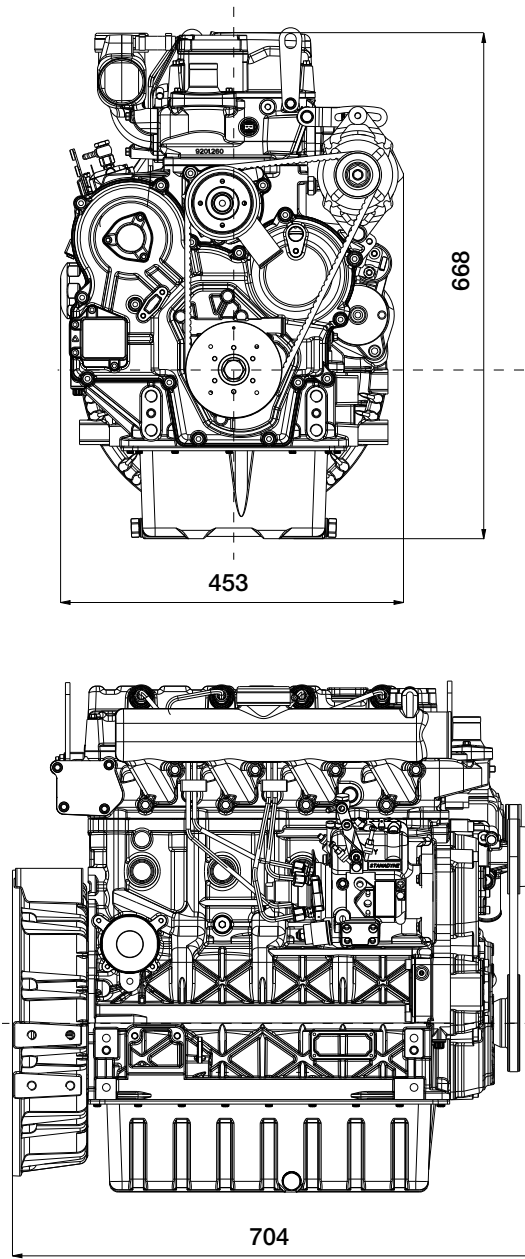
KDI-M

2504



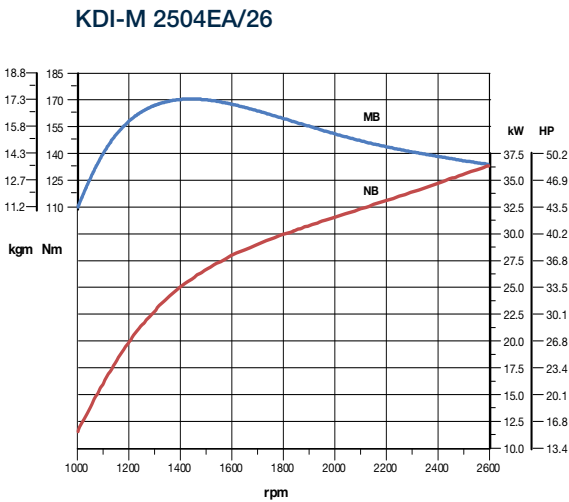
DATA

Dimensions (mm)



PERFORMANCE CURVES

(IFN-ACCORDING TO ISO 3046 and ISO 14396)



— MB - Torque curve - ISO 3046/1 - IFN
— NB - Power curve - ISO 3046/1 - IFN

Power ratings refer to engines equipped with air filter, standard muffler, after running-in period at ambient conditions of +25°C, relative humidity 30% and 1 bar. Power drops by 1% every 100 m altitude and by 2% every 5°C above +25°C.

Quick specifications	KDI-M 2504EA/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 III A

TURBO COMMON
RAIL ENGINES



Model		KDI 1903				KDI 2504			
Engine specs	4 stroke diesel with cylinder in line	•				•			
	Liquid cooling	•				•			
	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 displ (cm³)	1861				2482			
	Injection system	DI				DI			
	Injection Equipment	Turbo high pressure common rail				Turbo high pressure common rail			
	Aftercooler	•	•	•	-	•	•	•	-
Performance	Max power (IFN - ISO 3046 and ISO 14396) (kW(hp)@rpm) @2600	42 (56)	42 (56)	42 (56)	37 (50)	55.4 (74)	55.4 (74)	55.4 (74)	50 (67)
	Max torque (IFN - ISO 3046 and ISO 14396) (Nm@rpm) @1500	225	225	225	170	300	300	315	236
	Low-end torque (Nm@1000 rpm)	172	172	172	135	242	242	242	185
	KOHLER Flex solution	U3	U4	E5	E5	U3	U4	E5	E5
KOHLER Flex Emissions Management system	EGR	•	•	•	•	-	•	•	•
	DOC	-	•	•	•	-	•	•	•
	DPF	-	-	•	•	-	-	•	•
	Emission compliance	US TIER 3 EQUIV.	EU STAGE IIIB US TIER 4 FINAL	EU STAGE V US TIER 4 FINAL	EU STAGE V US TIER 4 FINAL	US TIER 3 EQUIV.	EU STAGE IIIB US TIER 4 FINAL	EU STAGE V US TIER 4 FINAL	EU STAGE V TIER 4 FINAL
Fuel economy	Best point (g/kWh)	215				210			
	Max power (g/kWh@2600 rpm)	237				226			
Startability	Unaided (°C)	down to -19				down to -19			
	Aided (°C) [Manifold grid heater]	below -19				below -19			
	Aided (°C) [Manifold grid heater + coolant heater]	/				below -25			
Fuel compatibility	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 *	-				•	-	-	-
Service features	Oil/filter change interval std/synthetic (hr)	500-750**				500-750**			
	Alternator belt replacement	36mth				36mth			
	Coolant change	24 mth				24 mth			
	Oil consumption (% fuel)	<0.1				<0.1			
	H x L x W (fan excluded) (mm)	726 x 598 x 530				720 x 704 x 523			
Physical characteristics	Weight (kg)	233				267			
	Daily service points - positions	1 side service				1 side service			
	Ambient operating temps (°C)	-40 to +50				-40 to +50			
	Gradeability-all round (continuous) (deg)	25				25			
	Gradeability-all round (intermittent-1min) (deg)	35				35			
Lubrication	Oil type	SAE 5W 40 low SAPS/ EURO 6 API CJ-4				SAE 5W 40 low SAPS/ EURO 6 API CJ-4			
Auxiliary PTOs (3rd & 4th) (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 ** According to operating conditions

MECHANICAL
ENGINES



Model		KDI-M 1903		KDI-M 2504	
Engine specs	4 stroke diesel with cylinder in line	•		•	
	Liquid cooling	•		•	
	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	•		•	
	Waste-gate turbocharger	—		—	
Technical features	Cylinder	3		4	
	Bore (mm)	88		88	
	Stroke (mm)	102		102	
	Engine displ (cm³)	1861		2482	
	Injection system	DI		DI	
	Injection Equipment	Mech-Rotary pump		Mech-Rotary pump	
Performance	Emission compliance	EU STAGE III A (EA)		EU STAGE III A (EA)	
	Max power (IFN - ISO 3046 and ISO 14396) (kW@rpm)	31 (41.5) @2600		36.4 (48.8) @2600	
	Max torque (IFN - ISO 3046 and ISO 14396) (Nm@rpm)	133@1500		170@1500	
	Low-end torque (Nm@1000 rpm)	80		110	
Fuel economy	Best point (g/kWh)	223		220	
	Max power (g/kWh@2600)	237		234	
Startability	Unaided (°C)	down to -15		down to -15	
	Aided (°C) [Manifold grid heater]	below -15		below -15	
Fuel compatibility	EN 590	•		•	
	No 1 Diesel (US) - ASTM D 975-09 B - Grade 1-D S 15	•		•	
	No 1 Diesel (US) - ASTM D 975-09 B - Grade 1-D S 500	•		•	
	No 2 Diesel (US) - ASTM D 975-09 B - Grade 2-D S 15	•		•	
	No 2 Diesel (US) - ASTM D 975-09 B - Grade 2-D S 500	•		•	
	ARCTIC EN 590/ASTM D 975-09 B	•		•	
	High Sulfur Fuel < 2000 ppm*	•		•	
	Military NATO Fuels F34 - F35 - F44 - F63 - F64 - F65 *	•		•	
	Military US Fuels JP5 - JP8 (AVTUR) *	•		•	
	Jet Fuels - Jet A/ A1*	•		•	
Service features	Oil/filter change interval std/synthetic (hr)	500-750**		500-750**	
	Valve adjustment	—		—	
	Alternator belt replacement	36mth		36mth	
	Coolant change	24 mth		24 mth	
	Oil consumption (% fuel)	<0.1		<0.1	
Physical characteristics	H x L x W (fan excluded) (mm)	667.5 x 598.3 x 452.5		667.5 x 704.3 x 452.5	
	Weight (kg)	210		244	
	Daily service points - positions	1 side service		1 side service	
	Ambient operating temps (°C)	-40 to +50		-40 to +50	
	Gradeability-all round (continuous) (deg)	25		25	
Lubrication	Oil type	SAE 15W40 / API CH4		SAE 15W40 / API CH4	
Auxiliary PTOs (3rd & 4th) (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 ** According to operating conditions

For more information, contact your KOHLER source of supply.
Kohler Co. reserves the right to make modifications without prior notice.