

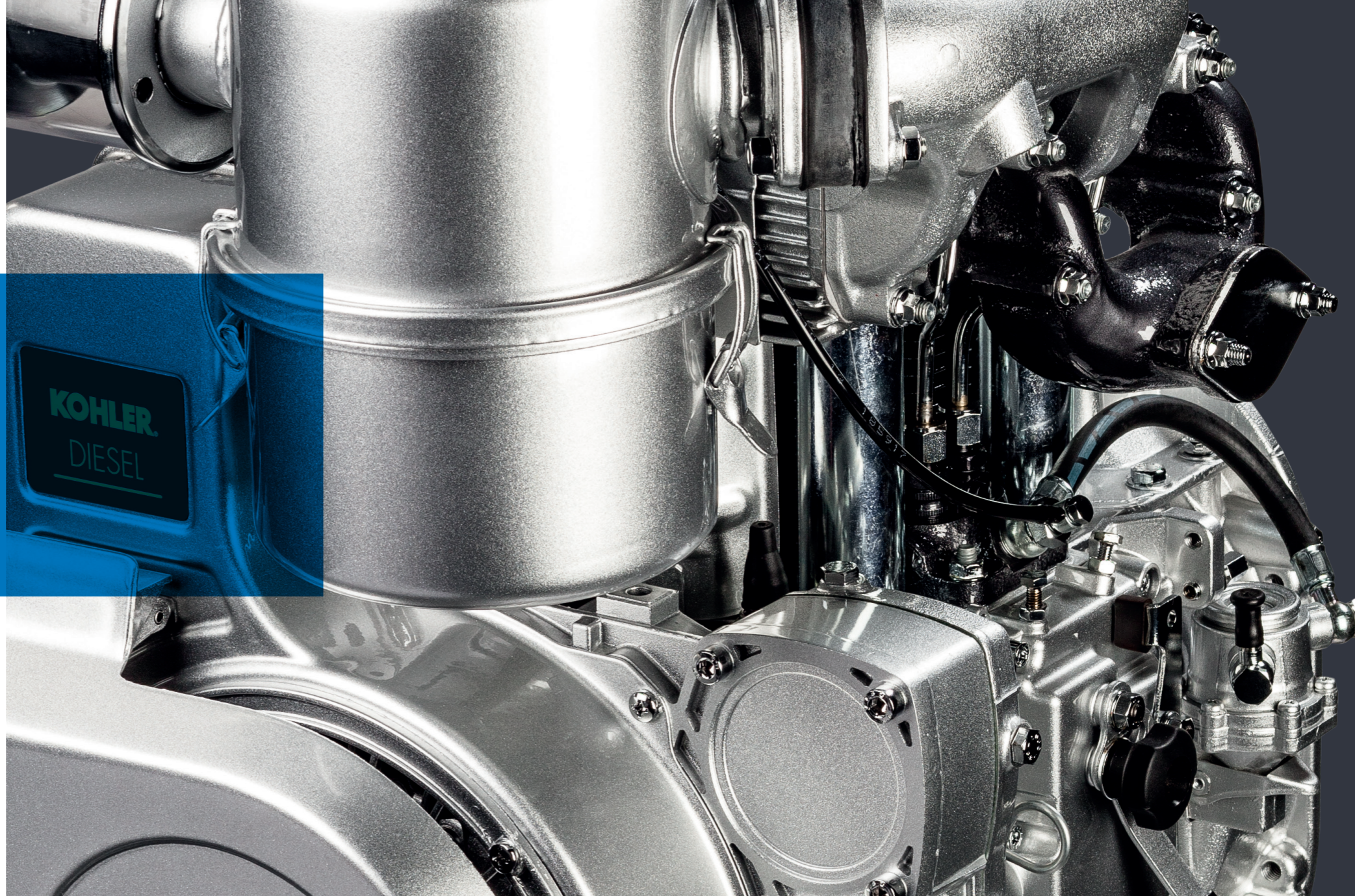
AIR COOLED DIESEL ENGINES

12.0 – 18.8 kW | 16.3 – 25.5 hp



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IN POWER. SINCE 1920.

AIR COOLED DIESEL ENGINES



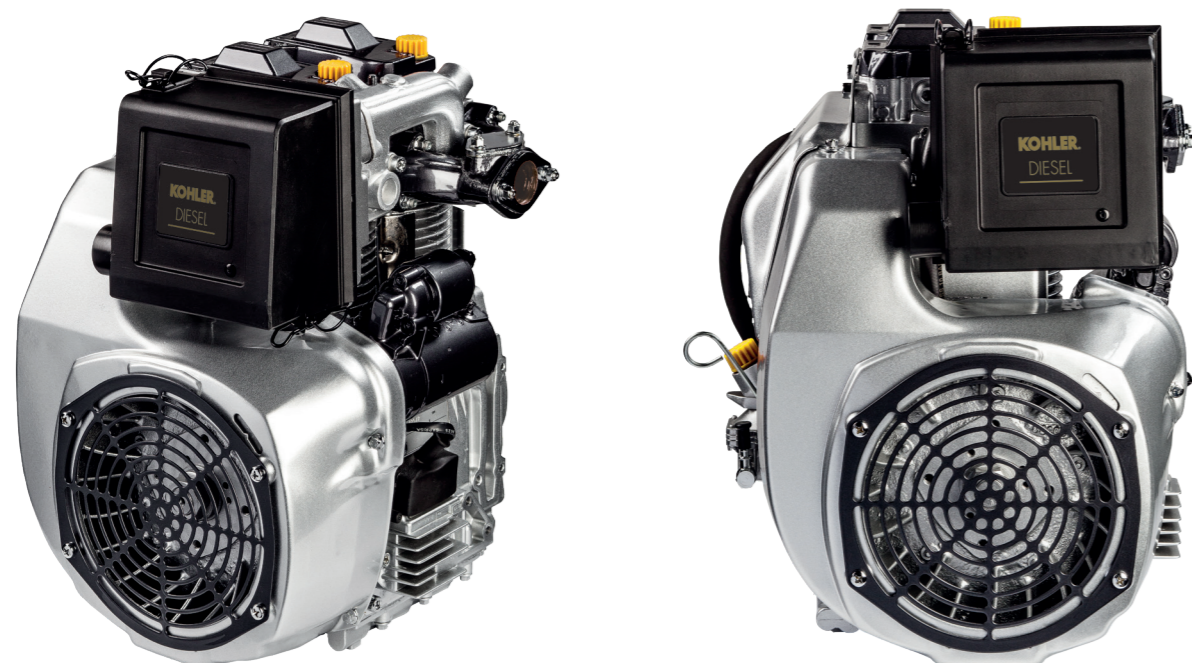
STANDARD EQUIPMENT

Electric starting with 12 V starter motor and alternator
Remote throttle
Oil pressure switch
Combined manifold and exhaust muffler
Engine feet
Fuel lift pump
Counter-clockwise rotation on power take-off side
Automatic extra fuel device
Use, maintenance and spare parts booklet
Oil bath air filter
Manual control accelerator
Power take-off on flywheel (KD-625/2)
Power take-off on crankshaft (KD-425/2)
Fuel tank with filter

ACCESSORIES ON DEMAND

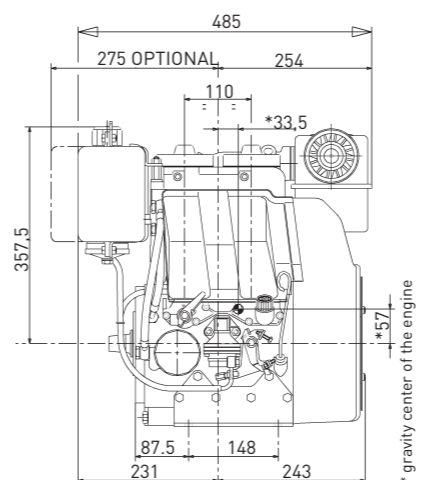
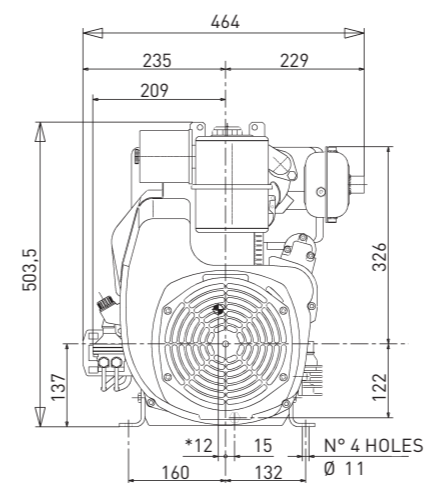
| | |
|--|---|
| Different guards according to use | Hydraulic pump adapters |
| 24V alternators and starter motors | Range of flywheels for various clutches |
| Automatic release decompression system | Mufflers and exhaust pipes |
| Flanges | Controls |
| Dry air filter | Pulleys |
| External fuel filter | Oil cooler (KD-625/2; KD-425/2) |
| Clutches | Crank starter (KD-625/2) |
| Range of fuel tanks of various sizes | Keyswitch panel and wiring harness |

KD 425/2



DATA

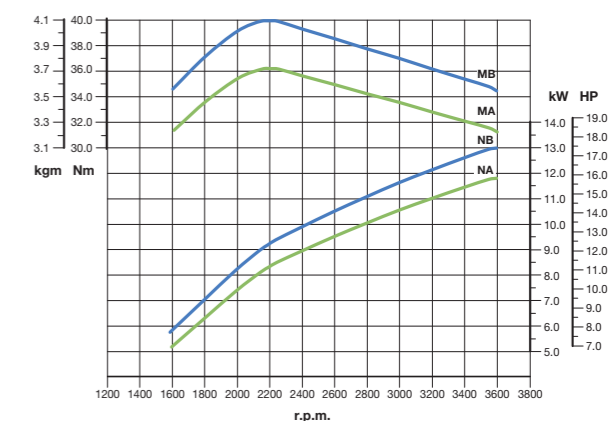
Dimensions (mm)



PERFORMANCE CURVES

(IFN-ACCORDING TO ISO 3046)

KD-425/2 NE36



- NB - Power curve
- NA - Power curve
- MB - Torque curve - (NB curve)
- MA - Torque curve - (NA curve)

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 levels drop by 1% every 100 m altitude and by 2% every 5°C above +25°C.

Quick specifics

KD-425/2 NE36

| | |
|--------------------------|------------------|
| CYLINDERS | 2 |
| MAX POWER kW (hp)@rpm | 13 (17.4) @ 3600 |
| MAX TORQUE Nm@rpm | 40 @ 2200 |
| EMISSIONS COMPLIANCE | ECE R 24 |
| OPERATING SPEED | Variable speed |



(Power & torque NB curve - ISO 3046/1 - IFN)

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KD 625/2

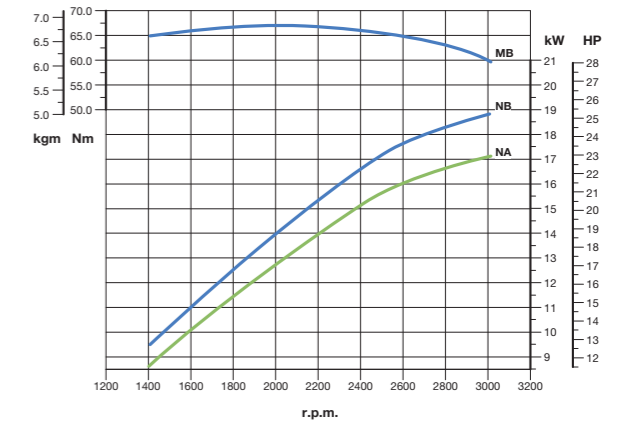
DATA

Dimensions (mm)

PERFORMANCE CURVES

(IFN-ACCORDING TO ISO 3046)

KD-625/2 ECE R 24

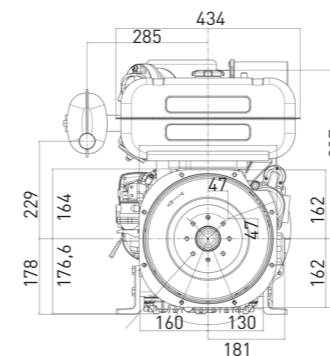
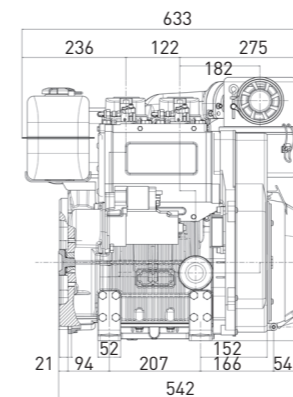
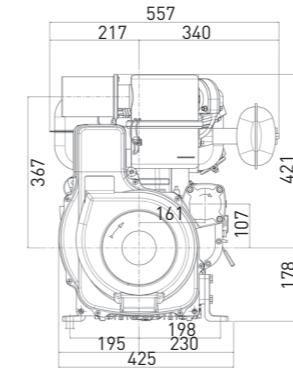


- NB - Power curve
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- MB - Torque curve - (NB curve)

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 levels drop by 1% every 100 m altitude and by 2% every 5°C above +25°C.

Setting @ 2800 RPM

| Power NB (kW) | Torque NB (Nm) |
|-----------------|-----------------|
| 18.2 @ 2800 rpm | 67.0 @ 2000 rpm |



Quick specifics

| | |
|--------------------------|--------------------|
| CYLINDERS | 2 |
| MAX POWER kW (hp)@rpm | 18.8 (25.5) @ 3000 |
| MAX TORQUE Nm@rpm | 67.0 @ 2200 |

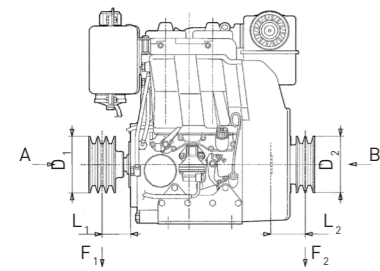


(Power & torque NB curve - ISO 3046/1 - IFN)

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APPLICATION SPECS

KD-425/2



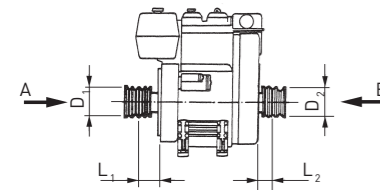
Minimum pulley diameters for belt drive

$$330/2: D_1 (\text{mm}) \geq 585 [49 + L_1(\text{mm})] \frac{N (\text{kW})}{n (\text{rpm})} \quad D_2 (\text{mm}) \geq 1030 [31 + L_2(\text{mm})] \frac{N (\text{kW})}{n (\text{rpm})}$$

$$425/2: D_1 (\text{mm}) \geq 700 [45 + L_1(\text{mm})] \frac{N (\text{kW})}{n (\text{rpm})} \quad D_2 (\text{mm}) \geq 1540 [17 + L_2(\text{mm})] \frac{N (\text{kW})}{n (\text{rpm})}$$

Max intermittent axial load in both directions A - B = 300 kg

KD-625/2



Minimum pulley diameters for belt drive

$$D_1 (\text{mm}) \geq 136 [162 + L_1(\text{mm})] \frac{N (\text{kW})}{n (\text{rpm})} \quad D_2 (\text{mm}) \geq 204 [260 + L_2(\text{mm})] \frac{N (\text{kW})}{n (\text{rpm})}$$

Max intermittent axial load in both directions A - B = 300 kg

AVAILABLE FLANGES*

| | Flange standard type | Standard version | |
|----------|-----------------------------|-------------------------------|---------------------------------------|
| KD-625/2 | | | |
| KD-625/2 | <p>Flange type B</p> | <p>SAE 4, 7^{1/2}</p> | |
| KD-425/2 | <p>Flange standard type</p> | <p>Standard version</p> | <p>Flange type crankshaft version</p> |

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*Other flanges available on request

TECHNICAL SPECIFICATIONS

| Model | | KD-330/2 | KD-425/2 |
|----------------------------------|---|------------------------|----------------------|
| Engine specs | 4 stroke air cooled diesel engine | • | • |
| | Direct injection | • | • |
| | Mechanical fuel lift pump | • | • |
| | Forced lubrication with oil pump | • | • |
| | Full flow oil filtration | • | • |
| | Torque adapter | • | • |
| | Centrifugal speed governor | • | • |
| | Crankcase in die-cast aluminum | • | • |
| | Electric starting | • | • |
| | Counter-clockwise rotation (from power take-off side) | • | • |
| | Aluminum alloy independent heads | • | • |
| | Independent and replaceable cast iron cylinders | • | • |
| | Automatic extra fuel starting device | • | • |
| | Air cooled by fan | • | • |
| | Power take-off on crankshaft | • | • |
| Power take off on Flywheel | - | - | |
| Technical features | Cylinder | 2 | 2 |
| | Bore (mm) | 80 | 85 |
| | Stroke (mm) | 65 | 75 |
| | Engine displ (cm³) | 654 | 851 |
| | Injection system | DI | DI |
| | Compression ratio | 19:1 | 19:1 |
| Performance | Emission compliance | ECE R 24 | ECE R 24 |
| | Rating (kW/HP) NB ISO 3046 IFN NA ISO 3046 ICXN | 12.0/16.1 10.0/13.4 | 13/17.4 11.8/15.8 |
| | Max torque (Nm@rpm) | 32.0@2400 | 40.0@2200 |
| | Min idling speed (rpm) | 1000 | 1000 |
| | | | |
| 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 < 5000 ppm (< 0.5%) | • | • |
| | High Sulfur Fuel > 5000 ppm (> 0.5%) | • | • |
| | Military NATO Fuels F34 - F35 - F44 - F63 - F64 - F65 * | • | • |
| | Military US Fuels JP5 - JP8 (AVTUR) * | • | • |
| | Civil Jet Fuels Jet A/ A1* | • | • |
| HVO - Hydrotreated Vegetable Oil | • | • | |
| Service features | Fuel tank capacity (l) | 4 | 4 |
| | Oil sump capacity (l) | 1.5 | 1.7 |
| | Oil consumption (kg/h) | 0.007 | 0.0085 |
| | Oil change interval std/synthetic (hr) | 250 ** | 250 ** |
| | Oil filter change interval std/synthetic (hr) | 250 ** | 250 ** |
| | Valve adjustment | 500 | 500 |
| | | | |
| Physical characteristics | H x L x W (fan excluded) (mm) | 485x485x438 | 503.5x485x464 |
| | Dry weight (kg) | 60 | 63 |
| | Daily service points - positions | 1 side service | 1 side service |
| | Ambient operating temps (°C) | -5° +45° *** | -5° +45° *** |
| | Gradeability-all round (intermittent-30 min) (deg) | 25° | 25° |
| | Gradeability-all round (peak value-1min) (deg) | 35° | 35° |
| | Cap. of air required for correct combustion @3600 (l/min) | 1050/875 | 1330/1110 |
| | Cap. of air required for correct cooling @3600 (l/min) | 11700/9750 | 14200/11835 |
| Lubrication | Oil type | SAE 5W-40 / API CF4 | SAE 5W-40 / API CF4 |

(Power & torque NB curve - ISO 3046/1 - IFN)

* With restrictions ** According to operating conditions *** -32°C on demand

TECHNICAL SPECIFICATIONS

| Model | | KD-625/2 | |
|----------------------------------|---|------------------------|-----------|
| Engine specs | 4 stroke air cooled diesel engine | • | |
| | Direct injection | • | |
| | Mechanical fuel lift pump | • | |
| | Forced lubrication with oil pump | • | |
| | Full flow oil filtration | • | |
| | Torque regulator | • | |
| | Centrifugal speed governor | • | |
| | Crankcase in die-cast aluminum | • | |
| | Electric starting | • | |
| | Counter-clockwise rotation (from power take-off side) | • | |
| | Aluminum alloy independent heads | • | |
| | Independent cast iron cylinders | • | |
| | Automatic extra fuel starting device | • | |
| | Air cooled by fan | • | |
| | Power take-off on crankshaft | - | |
| Power take off on Flywheel | • | | |
| Technical features | Cylinder | 2 | |
| | Bore (mm) | 95 | |
| | Stroke (mm) | 88 | |
| | Engine displ (cm³) | 1248 | |
| | Injection system | DI | |
| | Compression ratio | 17.5:1 | |
| Performance | Emission compliance | ECE R 24 | |
| | Rating (kW/HP) NB ISO 3046 IFN NA ISO 3046 ICXN | 18.8/25.2 16.8/22.5 | |
| | Max torque (Nm@rpm) | 67.0@2000 | 52.5@3000 |
| | Min idling speed (rpm) | 1000-1100 | |
| | | | |
| 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 < 5000 ppm (< 0.5%) | • | |
| | High Sulfur Fuel > 5000 ppm (> 0.5%) | • | |
| | Military NATO Fuels F34 - F35 - F44 - F63 - F64 - F65 * | • | |
| | Military US Fuels JP5 - JP8 (AVTUR) * | • | |
| | Civil Jet Fuels Jet A/ A1* | • | |
| HVO - Hydrotreated Vegetable Oil | • | | |
| Service features | Fuel tank capacity (l) | 10 | |
| | Oil sump capacity (l) | 2.8 | |
| | Oil consumption (kg/h) | 0.013 | |
| | Oil change interval std/synthetic (hr) | 250 ** | |
| | Oil filter change interval std/synthetic (hr) | 250 ** | |
| | Valve adjustment | 250 | |
| | | | |
| Physical characteristics | H x L x W (fan excluded) (mm) | 599x633x557 | |
| | Dry weight (kg) | 115 | |
| | Daily service points - positions | 1 side service | |
| | Ambient operating temps (°C) | -10° +45° *** | |
| | Gradeability-all round (intermittent-30 min) (deg) | 25° | |
| | Gradeability-all round (peak value-1min) (deg) | 35° | |
| | Cap. of air required for correct combustion @3600 (l/min) | 1600 (@3000) | |
| | Cap. of air required for correct cooling @3600 (l/min) | 26300 (@3000) | |
| Lubrication | Oil type | SAE 5W-40 / API CF4 | |

* With restrictions ** According to operating conditions *** -32°C on demand

