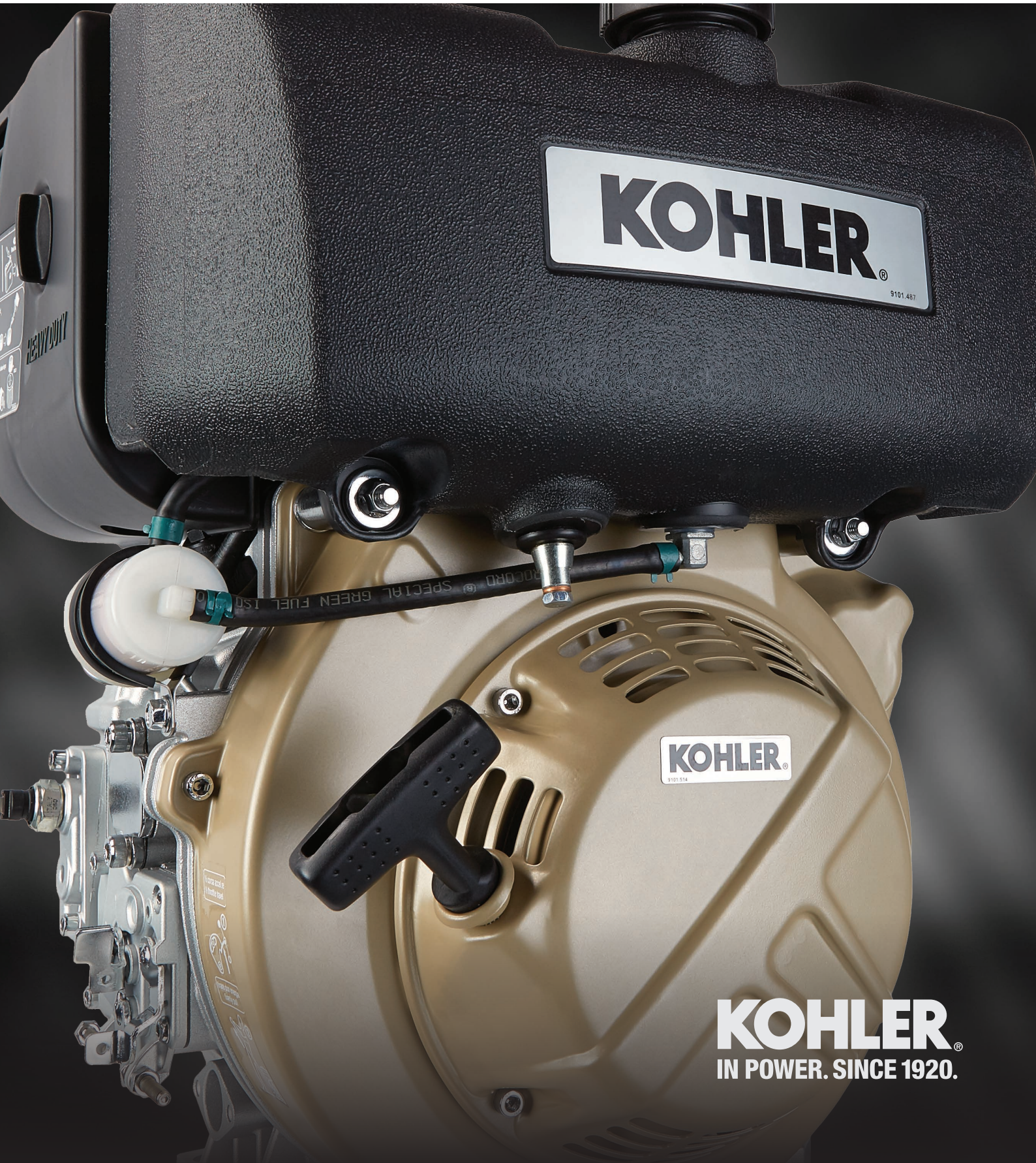
AIR COOLED DIESEL ENGINES

2.7 – 8.8 kW | 3.7 – 12.0 hp



AIR COOLED DIESEL ENGINES

STANDARD EQUIPMENT

Recoil starting with automatic compression release
Fuel tank
Fuel filter
Dry air cleaner
Muffler with guard
Accelerator and stop manual control
Automatic deaeration on injection pump
Wire mesh oil filter
Conical power take-off
External safety fuel filter
Automatic fuel control during start
User maintenance and spare parts booklet

Specific for KD15-440 model:

Hydraulic tappets
High capacity dry air cleaner
Fuel tank drain tap
3 years warranty

ACCESSORIES ON DEMAND

Power take-off flywheel side (engines with electrical starting)

Power take-offs with flanging and special shaft

Lateral power take-off*

Internal dynamic balancer

Electric start 12V / 24 V

Keyswitch panel
Fuel lift pump

Emergency stop through electrovalve

Accelerator and stop remote control

Oil pressure switch

Oil temperature switch

Oil bath air cleaner

Cylinder head temperature switch

Glow plug on intake manifold

Stop with solenoid valve
Recoil with denoising cover

Grass protection for engine cooling

Alternator with voltage regulator 12 V or 24 V

Oil level sensor switch

High capacity oil sump (KD15-350 and KD15-440)

High capacity oil and fuel filters for remote assembly*

Single lever control

Control lever guard

*On KD15-350 and KD15-440

Specific for KD15-440 model:

In-tank fuel pre-filter

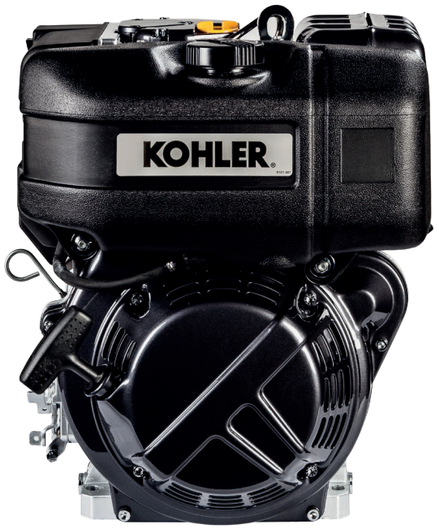
Cyclonic air intake pre-filter

Air filter clogging indicator, integrated into the engine

External spin on oil filter

KD15

225



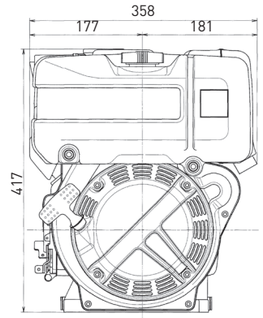
Quick specifics	
CYLINDERS	1
MAX POWER kW (hp)@rpm	3.5 (4.7) @ 3600
MAX TORQUE Nm@rpm	10.4 @ 2400

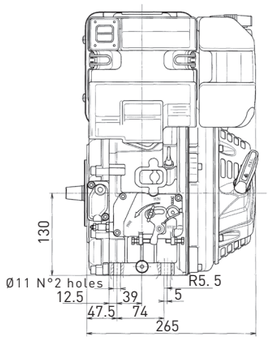
HVO APPROVED FOR HVO RENEWABLE FUEL

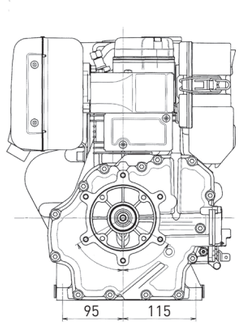
(Power & torque N curve - 80/1269/CE E-ISO 1585)

DATA

Dimensions (mm)



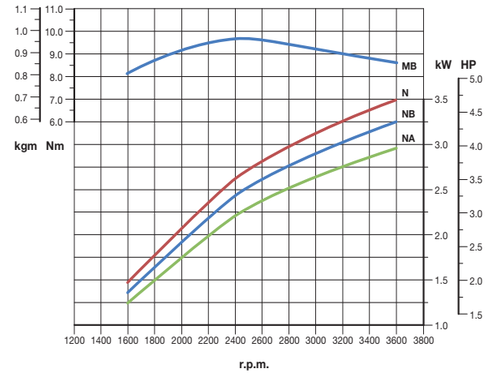




PERFORMANCE CURVES

(IFN-ACCORDING TO ISO 3046)

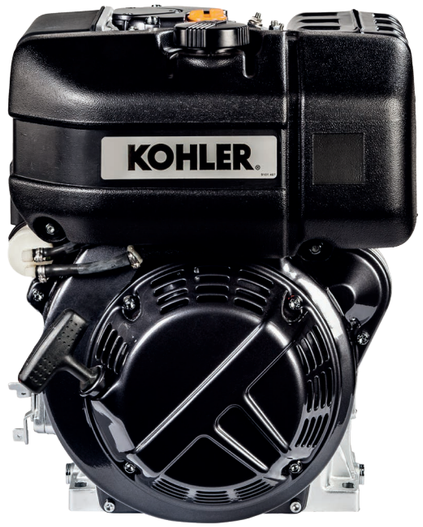
KD15-225 ECE R 24



- N - Power curve - 80/1269/CE E-ISO 1585
- NB - Power curve
- NA - Power curve
- 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.

KD15
350



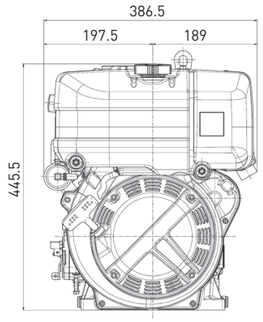
Quick specifics	KD15-350 NE36	KD15-350 U436	KD15-350 E536
CYLINDERS	1	1	1
MAX POWER kW (hp)@rpm	5.1 (6.8) @ 3600	5.0 (6.7) @ 3600	5.5 (7.4) @ 3600
MAX TORQUE Nm@rpm	15.3 @ 2400	14.6 @ 2500	16.0 @ 2500
EMISSION COMPLIANCE	-	US TIER 4 Final	EU STAGE V
OPERATING SPEED	Variable speed	Single speed	Variable speed

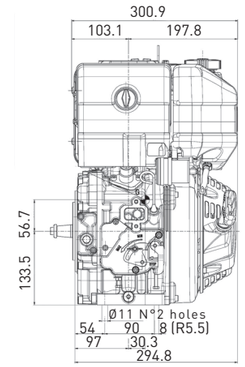
HVO APPROVED FOR HVO RENEWABLE FUEL

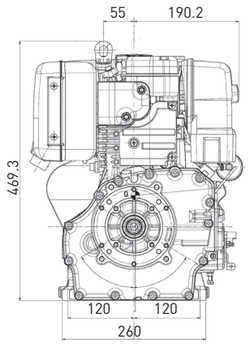
(Power & torque NB curve - ISO 3046/1 - IFN)

DATA

Dimensions (mm)



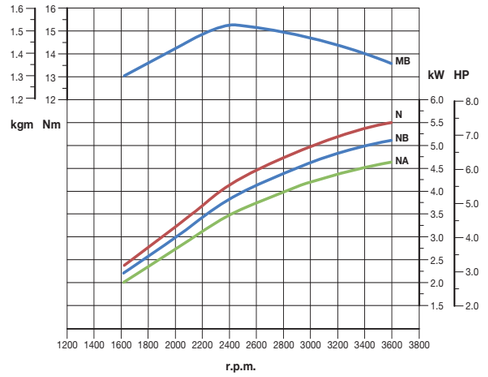




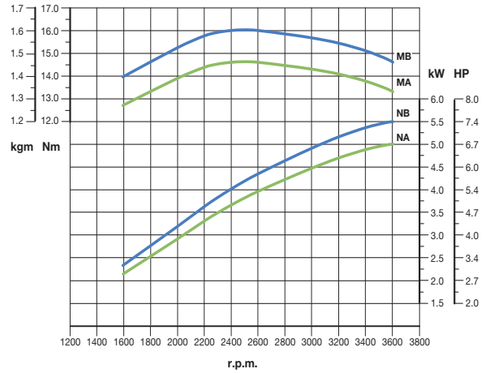
PERFORMANCE CURVES

(IFN-ACCORDING TO ISO 3046)

KD15-350 NE36



KD15-350 E536



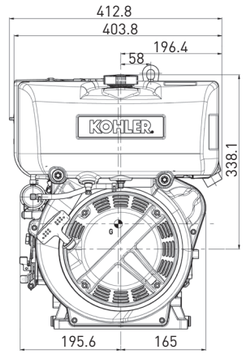
- N - Power curve - 80/1269/CE E-ISO 1585
- NB - Power curve
- NA - Power curve
- MB - Torque curve - (NB curve)
- MA - Torque curve - (NA curve)

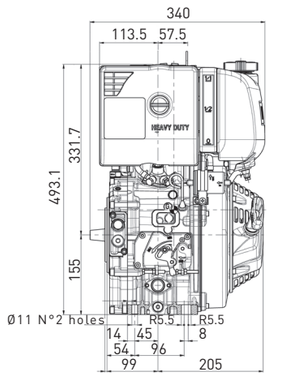
Power ratings refer to engines equipped with air filter, standard muffler, after running-in period at ambient conditions of +25°C, relative humidity 30% and 1 bar. Power levels drop by 1% every 100 m altitude and by 2% every 5°C above +25°C.

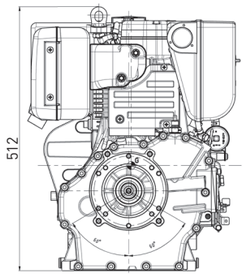
KD15
440

DATA

Dimensions (mm)







Quick specifics	KD15-440 NE36	KD15-440 U436	KD15-440 E536
CYLINDERS	1	1	1
MAX POWER kW (hp)@rpm	7.5 (10.1) @ 3600	7.0 (9.4) @ 3600	7.5 (10.1) @ 3600
MAX TORQUE Nm@rpm	23 @ 2200	23 @ 2200	24.5 @ 2200
EMISSION COMPLIANCE	-	US TIER 4 Final	EU STAGE V
OPERATING SPEED	Variable speed	Single speed	Variable speed

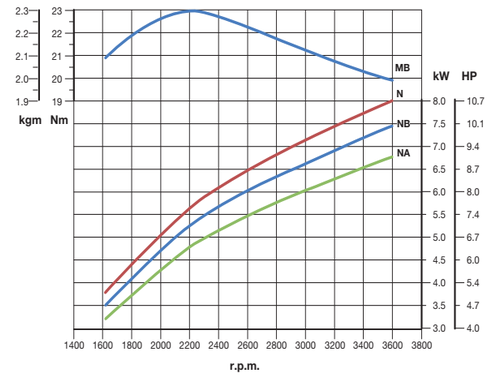
HVO APPROVED FOR HVO RENEWABLE FUEL

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

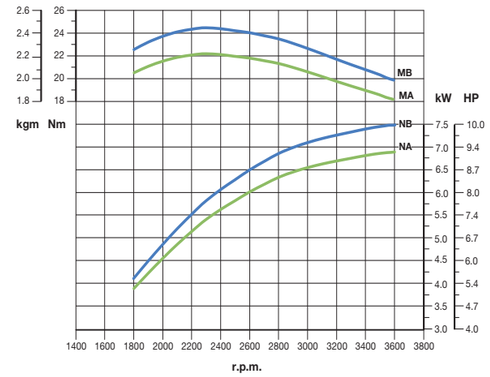
PERFORMANCE CURVES

(IFN-ACCORDING TO ISO 3046)

KD15-440 NE36



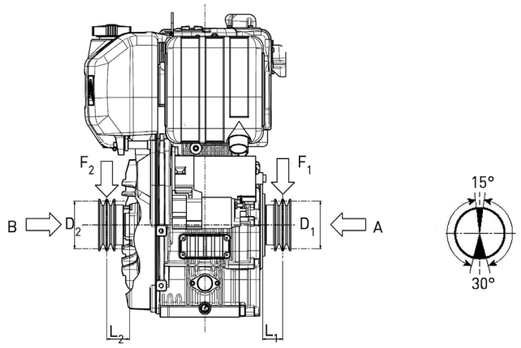
KD15-440 E536



- N - Power curve - 80/1269/CE E-ISO 1585
- 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.

APPLICATION SPECS



KD15-225

Minimum pulley diameters for belt drive

D_2 (mm) ≥ 740 [90 + L_2(mm)] $\frac{N\ (kW)}{n\ (rpm)}$

D_1 (mm) ≥ 820 [55 + L_1(mm)] $\frac{N\ (kW)}{n\ (rpm)}$

Max intermittent axial load in both directions A - B = 150 kg

Max radial force on pulley for belt drive

F2 (N) ≤ $\frac{77000}{90+L2\ (mm)}$

F1 (N) ≤ $\frac{70000}{55+L1\ (mm)}$

KD15-350

Minimum pulley diameters for belt drive

D_2 (mm) ≥ 860 [60 + L_2(mm)] $\frac{N\ (kW)}{n\ (rpm)}$

D_1 (mm) ≥ 820 [55 + L_1(mm)] $\frac{N\ (kW)}{n\ (rpm)}$

Max intermittent axial load in both directions A - B = 200 kg

Max radial force on pulley for belt drive

F2 (N) ≤ $\frac{67000}{60+L2\ (mm)}$

F1 (N) ≤ $\frac{70000}{55+L1\ (mm)}$

KD15-440

Minimum pulley diameters for belt drive

D_2 (mm) ≥ 620 [66 + L_2(mm)] $\frac{N\ (kW)}{n\ (rpm)}$

D_1 (mm) ≥ 650 [53 + L_1(mm)] $\frac{N\ (kW)}{n\ (rpm)}$

Max intermittent axial load in both directions A - B = 2000 N Max

Max radial force on pulley for belt drive

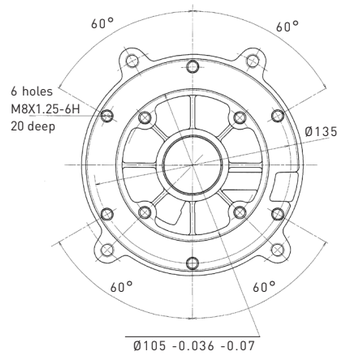
F_1 (N) ≤ $\frac{89000}{53+L_1\ (mm)}$

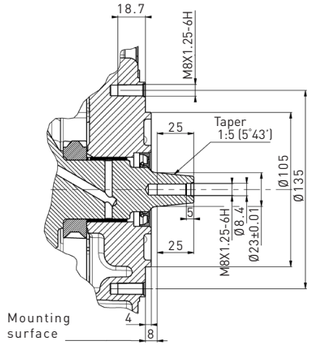
F_2 (N) ≤ $\frac{92000}{66+L_2\ (mm)}$

AVAILABLE FLANGES*

Standard version - KD15-225 and KD15-350

Flange standard - KD15-225 and KD15-350	Industrial version

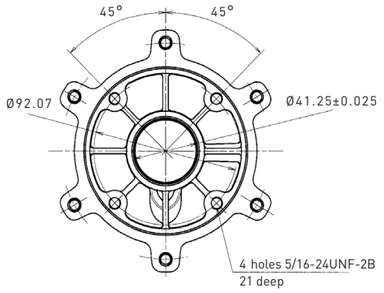




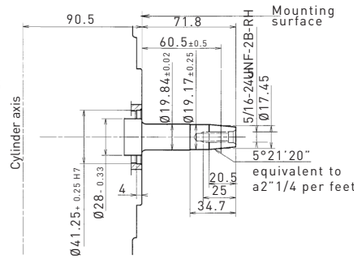
KD15-225

Flange type A - KD15-225	Genset version	Industrial version

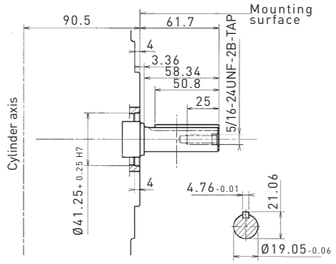
Flange SAE J609a



EXT a4 J609a



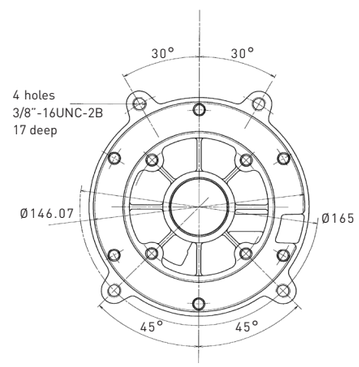
EXT 3 SAE J609a



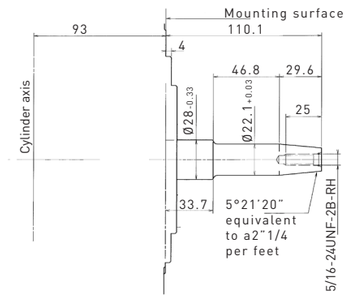
KD15-350

Flange type B - KD15-350	Genset version	Industrial version

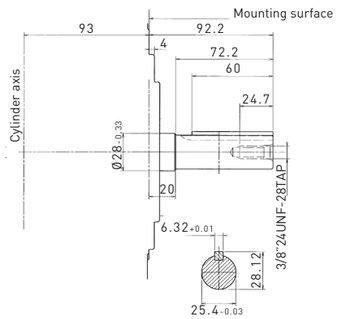
Flange SAE J609a



EXT 6 SAE



EXT.4 SAE

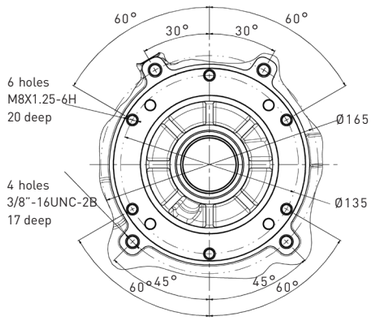


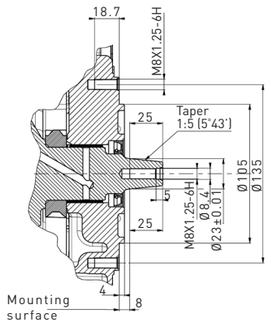
*Other flanges available on request

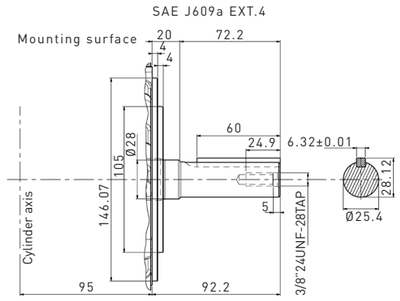
AVAILABLE FLANGES*

KD15-440

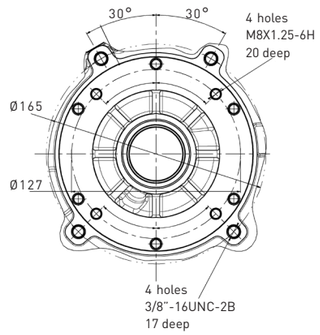
Flange standard type	Standard version	Industrial version

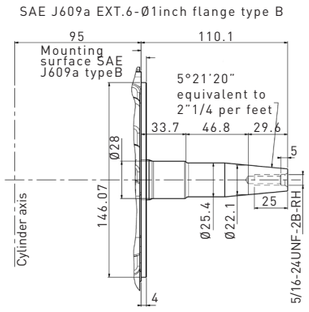






Flange 2° type	Genset version	





*Other flanges available on request

NOTE

TECHNICAL SPECIFICATIONS

Model		KD15-225	KD15-350		
Engine specs	4 stroke air cooled diesel engine	•	•		
	Conical power take-off on crankshaft	•	•		
	Anticlockwise rotation	•	•		
	Forced lubrication with oil pump	•	•		
	Centrifugal mass governor	•	•		
	Built-in full flow oil filter	•	•		
	Oil breathing blow-by with safety device	•	•		
	Automatic extra fuel starting device	•	•		
	Self bleeding fuel system	•	•		
	Torque adjuster	•	•		
	Automatic compression release	•	•		
	Die-cast aluminum crankcase with integral cast iron cylinder liner	•	•		
	Re-borable independent cast iron cylinders	-	-		
	Aluminum cylinder head	•	•		
	Built-in rigid feet	•	•		
	Hydraulic tappets	-	-		
Technical features	Cylinder	1	1		
	Bore (mm)	69	82		
	Stroke (mm)	60	66		
	Engine displ (cm^3)	224	349		
	Injection system	DI	DI		
	Compression ratio	21:1	20.3:1		
Performance	Emission compliance	ECE R 24	ECE R 24	US TIER 4 F	EU STAGE V
	Rating (kW/HP) N (80/1269/CEE)ISO 1585 NB NA	(3600 rpm) 3.5 /4.8 3.3/4.5 3.1/4.2	(3600 rpm) 5.5 /7.4 5.1 /6.8 4.7/6.2	(3600 rpm) - 5.0/6.7 -	(3600 rpm) - 5.5/7.4 -
	Max torque (Nm@rpm)	10.4@2400	15.3@2400	14.6@2500	16.0 @2500
	Min idling speed	950 ÷1000	950 ÷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)	3	4.3		
	Oil sump capacity (l)	0.9	1.2		
	Oil consumption (kg/h)	0.0021	0.0032		
	Oil change interval std/synthetic (hr)	250**	250**		
	Oil filter change interval std/synthetic (hr)	500	500		
	Dry air cleaner change interval (hr)	250	250		
	Valve adjustement	500	500		
Physical characteristics	H × L × W (fan excluded) (mm)	417 ×358 ×265	445.5×386.5×300.9		
	Dry weight (kg)	28	33		
	Daily service points - positions	1 side service	1 side service		
	Ambient operating temps (°C)	-10 to +50	-10 to +50		
	Gradeability-all round (intermittent -30 min) (deg)	25°	25°		
	Gradeability-all round (peak value -1 min) (deg)	35°	35°		
	Cap. of air required for correct combustion @3600 (l/min)	350	540		
	Cap. of air required for correct cooling @3600 (l/min)	3800	5000		
Lubrication	Oil type	SAE 5W 40 / API CF4	SAE 5W 40 / API CF4		

* With restrictions ** According to operating conditions

TECHNICAL SPECIFICATIONS

Model		KD15-440		
Engine specs	4 stroke air cooled diesel engine	•		
	Conical power take-off on crankshaft	•		
	Anticlockwise rotation	•		
	Forced lubrication with oil pump	•		
	Centrifugal mass governor	•		
	Built-in full flow oil filter	•		
	Oil breathing blow-by with safety device	•		
	Automatic extra fuel starting device	•		
	Self bleeding fuel system	•		
	Torque regulator	•		
	Automatic compression release	•		
	Die-cast aluminum crankcase with integral cast iron cylinder liner	•		
	Re-borable independent cast iron cylinders	-		
	Aluminum alloy cylinder head	•		
	Built-in rigid feet	•		
	Hydraulic tappets	•		
Technical features	Cylinder	1		
	Bore (mm)	86		
	Stroke (mm)	76		
	Engine displ (cm^3)	441		
	Injection system	DI		
	Compression ratio	20.3:1		
Performance	Emission compliance	ECE R 24	US TIER 4 F	EU STAGE V
	Rating (kW/HP) N (80/1269/CEE)ISO 1585 NB NA	(3600 rpm) - 7.5 /10.1 -	(3600 rpm) - 7.0 / 9.4 -	(3600 rpm) - 7.5 /10.1 -
	Max torque (Nm@rpm)	23 @2200	23@2200	24.5@2200
	Min idling speed	950 ÷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)	4.3		
	Oil sump capacity (l)	1.2		
	Oil consumption (kg/h)	0.0032		
	Oil/filter change interval std/synthetic (hr)	250**		
	Oil filter change interval std/synthetic (hr)	500		
	Dry air cleaner change interval (hr)	500		
	Valve adjustement	none		
Physical characteristics	H × L × W (fan excluded) (mm)	493.1 ×412.8 ×340		
	Dry weight (kg)	45		
	Daily service points - positions	1 side service		
	Ambient operating temps (°C)	-10 to +50		
	Gradeability-all round (intermittent -30 min) (deg)	25		
	Gradeability-all round (peak value -1 min) (deg)	35		
	Cap. of air required for correct combustion @3600 (l/min)	640		
	Cap. of air required for correct cooling @3600 (l/min)	5500		
Lubrication	Oil type	SAE 5W 40 / API CF4		

* 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.

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