

# دیزل نیرو

واردات و فروش انواع دیزل ژنراتورهای صنعتی

# Air cooled Diesel engines

12.0-26.0 kW



 **LOMBARDINI**<sup>®</sup>  
A KOHLER COMPANY





**ENGINES WITH 2 AND 3 CYLINDERS IN MODELS 25 LD, 12 LD, 9 LD AND 11 LD COVERING A POWER RANGE OF 12.0 TO 26.0 KW. THESE ARE THE BEST OPTION IN THEIR MARKET SECTOR, OFFERING DURABLE PERFORMANCE,**

**COMPACTNESS AND LOW MAINTENANCE COSTS. WIDELY USED FOR APPLICATIONS SUCH AS MOTOR-CULTIVATORS, SMALL FOUR-WHEELED TRACTORS, PUMPS AND COMPRESSORS.**

# AIR COOLED DIESEL ENGINES

12.0-26.0 KW

## 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 (9 LD; 11 LD)  
Power take-off on crankshaft (25 LD; 12 LD)  
Fuel tank with filter  
Guard for belt (11 LD)

## ACCESSORIES ON DEMAND

Different guards according to use  
Range of alternative alternators and 24 V  
Compression release  
Flanges  
Dry air filter  
External fuel filter  
Clutches  
Hydraulic pump adapters  
Range of fuel tanks of various sizes  
Range of flywheels for various clutches  
Mufflers and exhaust pipes  
Controls  
Pulleys  
Oil cooler (9 LD; 25 LD; 11 LD)  
Crank starter (9 LD)  
Keyswitch panel







# 25 LD 425/2



## QUICK SPECIFICS

**2**  
CYLINDER

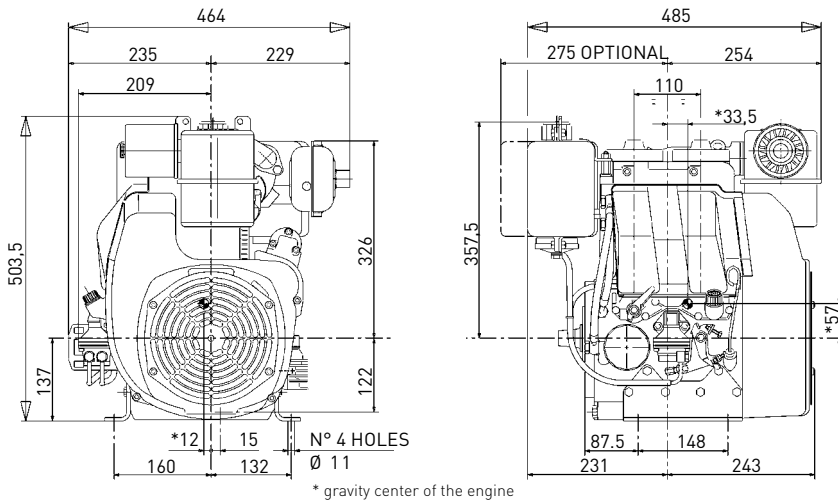
**19.0** | **14.0** @ 3600 rpm  
HP | kW

**42.0** @ 2200 rpm  
Nm

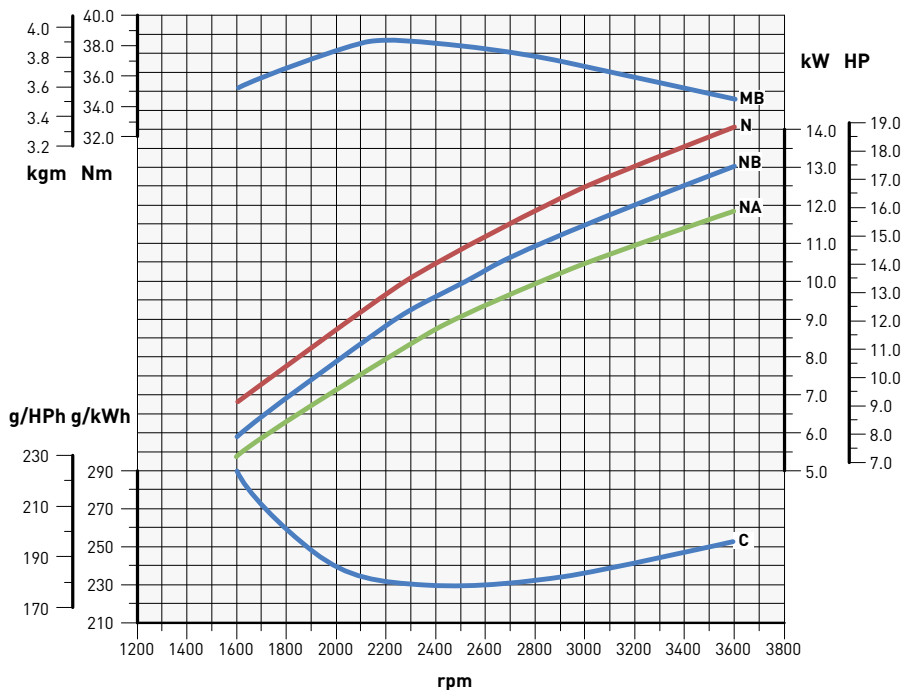


## DATA

### DIMENSIONS (mm)



### PERFORMANCE CURVES (IFN- ISO 3046 AND ISO 14396)



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

**MB** - Torque curve - (NB curve)

**NB** - Power curve - ISO 3046/1 - IFN

**C** - Specific fuel consumption - (NB curve)

**NA** - Power curve - ISO 3046/1 - ICXN

Power ratings refer to engines equiped with air filter, standard muffler, after being run in and in ambient conditions of 25°C and 1 bar. Power levels drop by 1% every 100m altitude and by 2% every 5°C above 25°C.



# 12 LD 477/2

## QUICK SPECIFICS

**2**  
CYLINDER

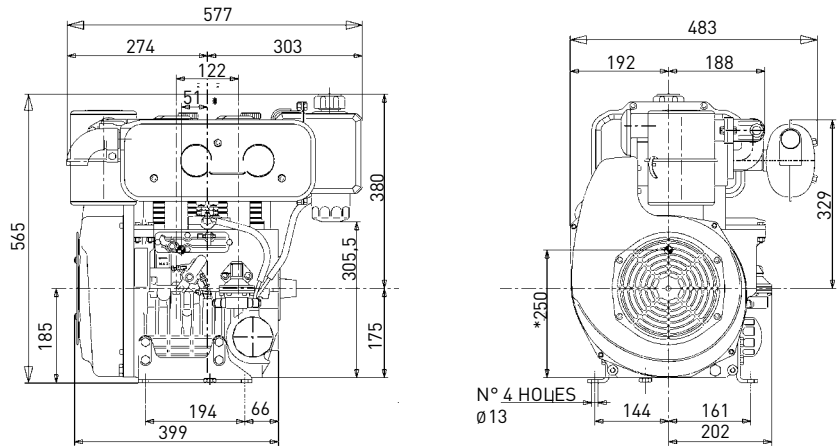
**22.8** | **16.8** @ 3600 rpm  
HP | kW

**55.0** @ 2100 rpm  
Nm



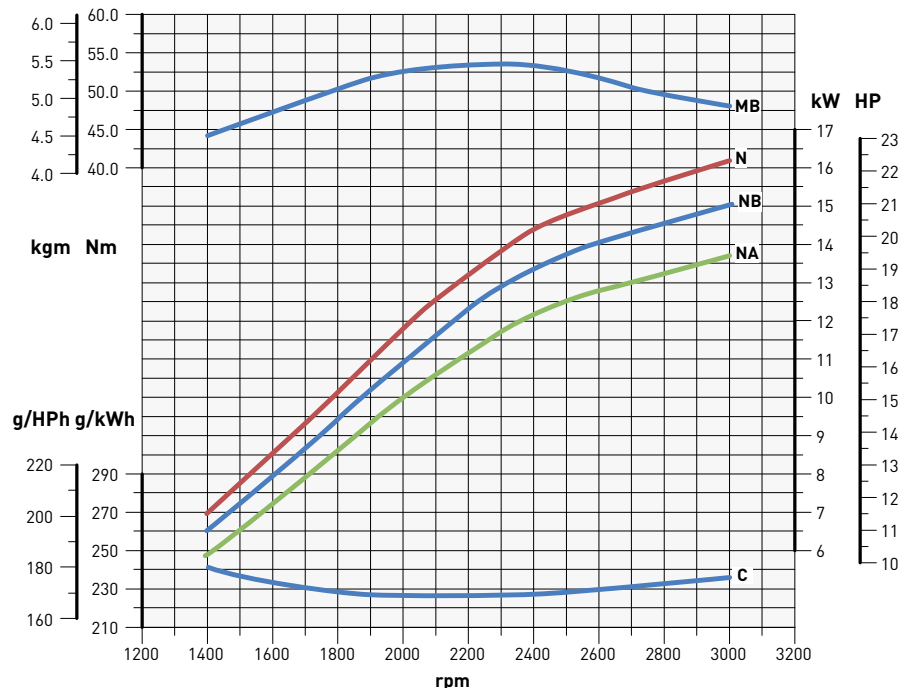
## DATA

### DIMENSIONS (mm)



\* gravity center of the engine

### PERFORMANCE CURVES (IFN - ISO 3046 AND ISO 14396)



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

**MB** - Torque curve - (NB curve)

**NB** - Power curve - ISO 3046/1 -IFN

**C** - Specific fuel consumption - (NB curve)

**NA** - Power curve - ISO 3046/1 - ICXN

Power ratings refer to engines equiped with air filter, standard muffler, after being run in and in ambient conditions of 25°C and 1 bar. Power levels drop by 1% every 100m altitude and by 2% every 5°C above 25°C.

# 9 LD 625/2



## QUICK SPECIFICS

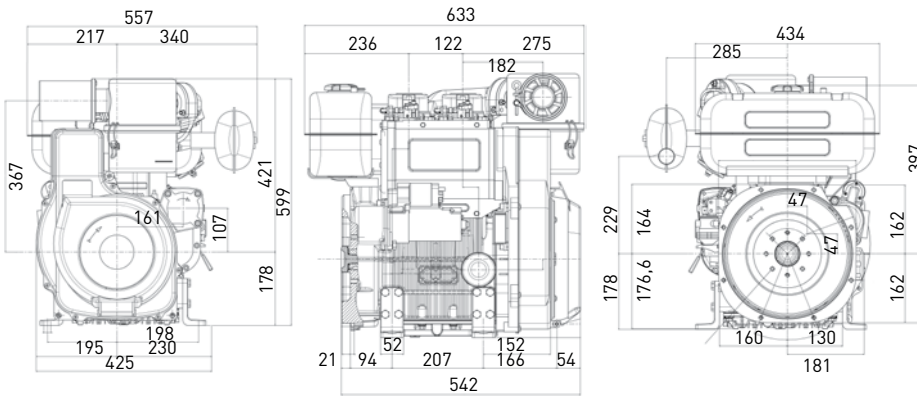
**2**  
CYLINDER

**25.5** | **18.8** @ 3000 rpm  
HP | kW

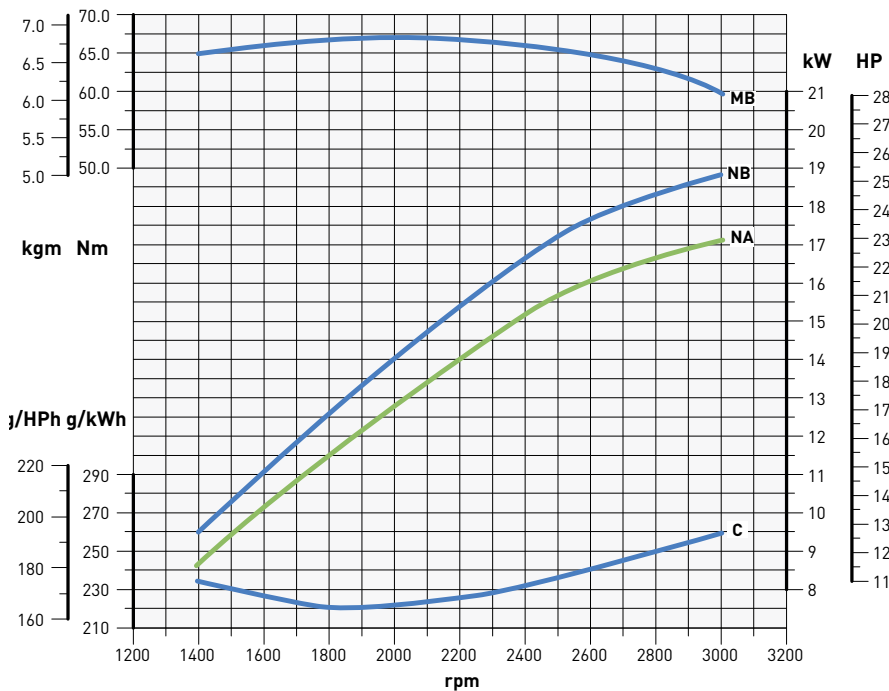
**67.0** @ 2000 rpm  
Nm

## DATA

### DIMENSIONS (mm)



## PERFORMANCE CURVES (IFN- ISO 3046 AND ISO 14396)



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

**NB** - Power curve - ISO 3046/1 -IFN

**NA** - Power curve - ISO 3046/1 - ICXN

**MB** - Torque curve - (NB curve)

**C** - Specific fuel consumption - (NB curve)

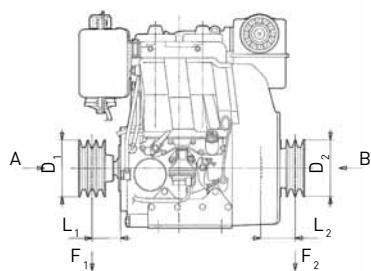
Power ratings refer to engines equiped with air filter, standard muffler, after being run in and in ambient conditions of 25°C and 1 bar. Power levels drop by 1% every 100m altitude and by 2% every 5°C above 25°C.

## SETTING @ 2800 RPM

Max power N* (kW)	Max torque (Nm)
18.2 @ 2800 rpm	67.0 @ 2000 rpm



## APPLICATIONS SPECS



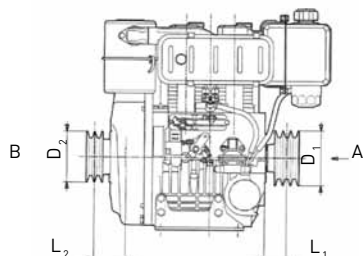
### 25 LD 330/2 - 425/2

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

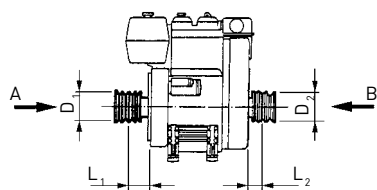


### 12 LD 477/2

Minimum pulley diameters for belt drive

$$D_1 \text{ (mm)} \geq 220 [78 + L_1(\text{mm})] \frac{N \text{ (kW)}}{n \text{ (rpm)}} \quad D_2 \text{ (mm)} \geq 196 [150 + L_2(\text{mm})] \frac{N \text{ (kW)}}{n \text{ (rpm)}}$$

Max intermittent axial load in both directions A - B = 350 kg

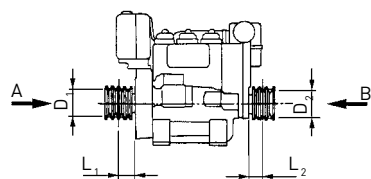


### 9 LD 625/2

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



### 11 LD 626/3

Minimum pulley diameters for belt drive

$$D_1 \text{ (mm)} \geq 100 [185 + L_1(\text{mm})] \frac{N \text{ (kW)}}{n \text{ (rpm)}} \quad D_2 \text{ (mm)} \geq 113 [169 + L_2(\text{mm})] \frac{N \text{ (kW)}}{n \text{ (rpm)}}$$

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

## GENSET RATINGS

Freq.	Rpm	Engine model	NET ENGINE POWER*		ELECTRICAL POWER**				Flanging	Max. Emission compliance available***
			Stand-by	Prime	Intermittent (Stand-by)		Continuous (Prime)			
			kW-HP	kW-HP	kVA	kW	kVA	kW		
50 Hz	1500	12 LD 477/2	7,7 - 10,5	7,0 - 9,5	8,1	6,5	7,3	5,9	SAE 5 - 6,5"	EU not required
		9 LD 625/2	10,7 - 14,6	9,8 - 13,3	11,4	9,1	10,4	8,3	SAE 4 - 7,5"	EU not required
		11 LD 626/3	16,2 - 22,0	14,7 - 20,0	17,2	13,7	15,4	12,3	SAE 4 - 7,5"	EU not required
	3000	25 LD 330/2	9,4 - 13,5	8,5 - 11,6	10,0	8,0	9,0	7,2	§ TAPER Ø 30	EU not required
		25 LD 425/2	11,5 - 15,6	10,5 - 14,2	12,2	9,8	11,0	8,8	§ TAPER Ø 30	EU not required
		12 LD 477/2	14,0 - 19,0	12,7 - 17,3	14,9	11,9	13,4	10,7	§ TAPER Ø 38	EU not required
		9 LD 625/2	18,8 - 25,5	17,1 - 23,2	20,3	16,3	18,8	15,0	§§ STD Lombardini	EU Stage II
11 LD 626/3	28,6 - 39,0	26,0 - 35,4	30,5	24,4	27,9	22,3	§§ STD Lombardini	EU Stage III A		
60 Hz	1800	12 LD 477/2	8,9 - 12,1	8,1 - 11,0	9,5	7,6	8,5	6,8	SAE 5 - 6,5"	-
		9 LD 625/2	13,5 - 18,4	12,3 - 16,7	14,4	11,5	12,8	10,3	SAE 4 - 7,5"	-
		11 LD 626/3	20,1 - 27,3	18,3 - 24,9	21,3	17,1	19,2	15,4	SAE 4 - 7,5"	-
	3600	25 LD 330/2	11,2 - 15,2	10,2 - 13,8	11,9	9,5	10,7	8,6	§ TAPER Ø 30	-
		25 LD 425/2	13,0 - 17,7	11,8 - 16,1	13,7	11,0	12,3	9,9	§ TAPER Ø 30	Tier 4 F <sup>(1)</sup>
		12 LD 477/2	15,7 - 21,4	14,3 - 19,4	16,7	13,4	15,0	12,0	§ TAPER Ø 38	-

\* Engine power rating ISO IFN (Stand-by) and ICXN (Prime) according to ISO 3046 and ISO 14396, after running-in period at ambient condition +25°C, relative humidity 30%, and ambient pressure 100 kPa [1 bar]. Fuel specification EN590

\*\*Electrical power includes fan power absorption, typical alternator efficiency and a power factor (cos ø) of 0.8.

Continuous (Prime) power can be overloaded of 10% for 1 h every 12 hours operation. Intermittent (Standby) power cannot be overloaded.

\*\*\* Possible de-rating might have to be taken in consideration to ensure emission compliance.

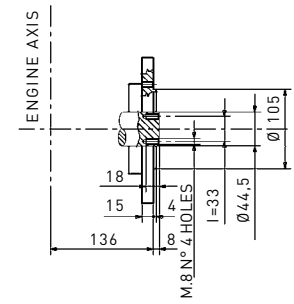
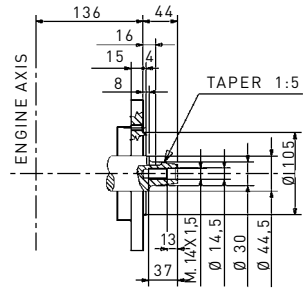
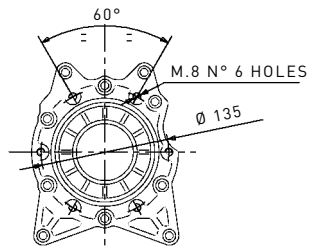
(1) for stationary + emergency applications EPA compliant.

§ ON REQUEST SAE 5 - 6,5" - §§ ON REQUEST SAE 4 - 7,5"

# AVAILABLE FLANGES\*

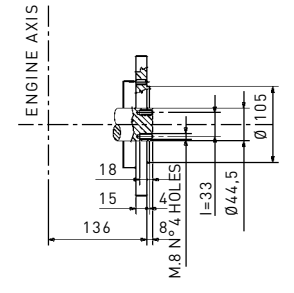
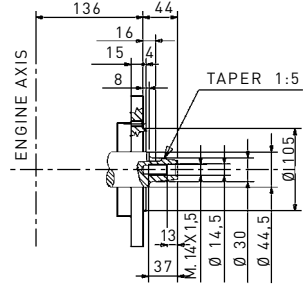
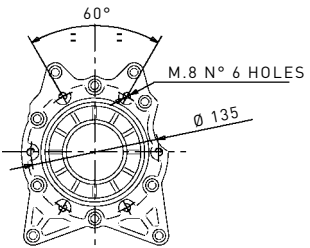
	Flange standard type	Standard version	Flange type crankshaft version
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25 LD 330/2



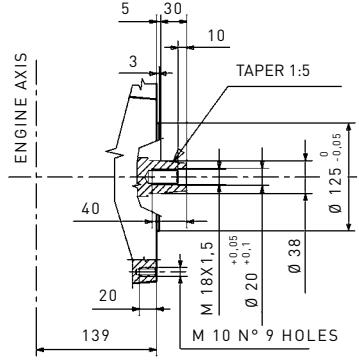
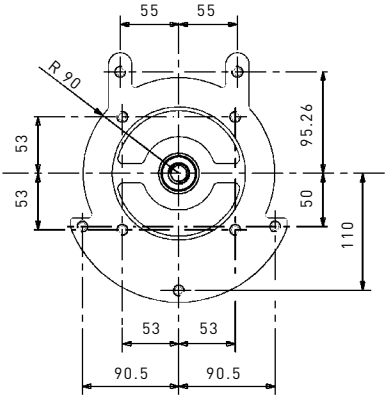
	Flange standard type	Standard version	Flange type crankshaft version
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25 LD 425/2



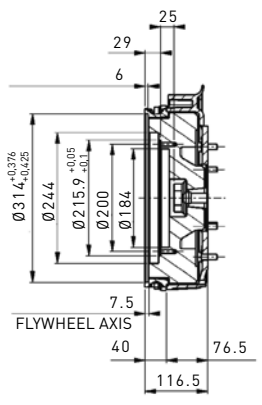
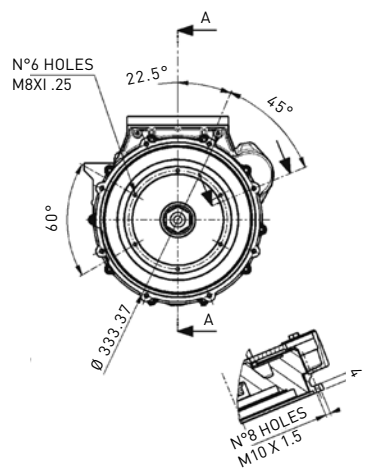
	Flange standard type	Standard version	
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12 LD 477/2



	Flange type B	SAE 5, 6" 1/2	
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12 LD 477/2



# AVAILABLE FLANGES\*

	Flange standard type	Standard version
9 LD 625/2		
9 LD 625/2	<p><b>Flange type B</b></p>	<p><b>SAE 4, 7 1/2</b></p>
11 LD 626/3	<p><b>Flange standard type</b></p>	<p><b>Standard version</b></p>
11 LD 626/3	<p><b>Flange type B</b></p>	<p><b>SAE 4, 7 1/2</b></p>

\*Other flanges available on request

# TECHNICAL SPECIFICATIONS

Model		25 LD 330/2	25 LD 425/2
<b>Engine specs</b>	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	-	-	
<b>Technical features</b>	Cylinder	2	2
	Bore (mm)	80	85
	Stroke (mm)	65	75
	Engine displ (cm <sup>3</sup> )	654	851
	Injection system	DI	DI
	Compression ratio	19:1	19:1
<b>Performance</b>	Emission compliance	ECE R 24	ECE R 24
	Rating (kW/HP) N (80/1269/CEE)ISO 1585 NB ISO 3046 IFN NA ISO 3046 ICXN	12.0/16.3 11.2/15.2 10.3/14.0	14.0/19.0 13.0/17.7 12.0/16.3
	Max torque (Nm@rpm)	32.0@2400	42.0@2200
	Min idling speed (rpm)	1000	1000
<b>Fuel compatibility</b>	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*	•	•	
<b>Service features</b>	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
<b>Physical characteristics</b>	H×L×W (fan excluded) (mm)	485×485×438	503.5×485×464
	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
<b>Lubrication</b>	Oil type	SAE 15 W-40 API CF4/SG ACEA B2/E2	SAE 15 W-40 API CF4/SG ACEA B2/E2

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

Model		12 LD 477/2	9 LD 625/2	11 LD 626/3	
<b>Engine specs</b>	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	-	•	•	
<b>Technical features</b>	Cylinder	2	2	3	
	Bore (mm)	90	95	95	
	Stroke (mm)	75	88	88	
	Engine displ (cm <sup>3</sup> )	954	1248	1870	
	Injection system	DI	DI	DI	
	Compression ratio	19:1	17.5:1	17:1	
<b>Performance</b>	Emission compliance	ECE R 24	ECE R 24 / EPA TIER 4		ECE R 24
	Rating (kW/HP)				
	N (80/1269/CEE)ISO 1585	16.8/22.8	-	-	-
	NB ISO 3046 IFN	15.7/21.4	18.8/25.5	16.5/22.4	26.0/35.4
	NA ISO 3046 ICXN	14.5/19.7	16.9/23.0	15.0/20.4	23.4/31.8
Max torque (Nm@rpm)	55.0@2100	67.0@2000	52.5@3000	102.0@2000	
Min idling speed (rpm)	1000	1000=1100		800-900	
<b>Fuel compatibility</b>	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*	•	•	•		
<b>Service features</b>	Fuel tank capacity (l)	7	10	15	
	Oil sump capacity (l)	2.5	2.8	5	
	Oil consumption (kg/h)	0.011	0.013	0.017	
	Oil change interval std/synthetic (hr)	200 **	250 **	250 **	
	Oil filter change interval std/synthetic (hr)	200 **	250 **	250 **	
	Valve adjustment	300	250	500	
<b>Physical characteristics</b>	H×L×W (fan excluded) (mm)	565×577×483	599×633×557	686×770×495	
	Dry weight (kg)	78	115	170	
	Daily service points - positions	1 side service	1 side service	1 side service	
	Ambient operating temps (°C)	-10° +45° ***	-10° +45° ***	-10° +45° ***	
	Gradeability-all round (intermittent-30 min) (deg)	25°	25°	25°	
	Gradeability-all round (peak value-1min) (deg)	35°	35°	35°	
	Cap. of air required for correct combustion @3600 (l/min)	1500/1220	1600 (@3000)	2400 (@3000)	
	Cap. of air required for correct cooling @3600 (l/min)	15800/13200	26300 (@3000)	38000 (@3000)	
<b>Lubrication</b>	Oil type	SAE 15 W-40 API CF4/SG ACEA B2/E2	SAE 10 W-40 API CF4/SG ACEA B2/E2	SAE 15 W-40 API CF4/SG ACEA B2/E2	

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





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