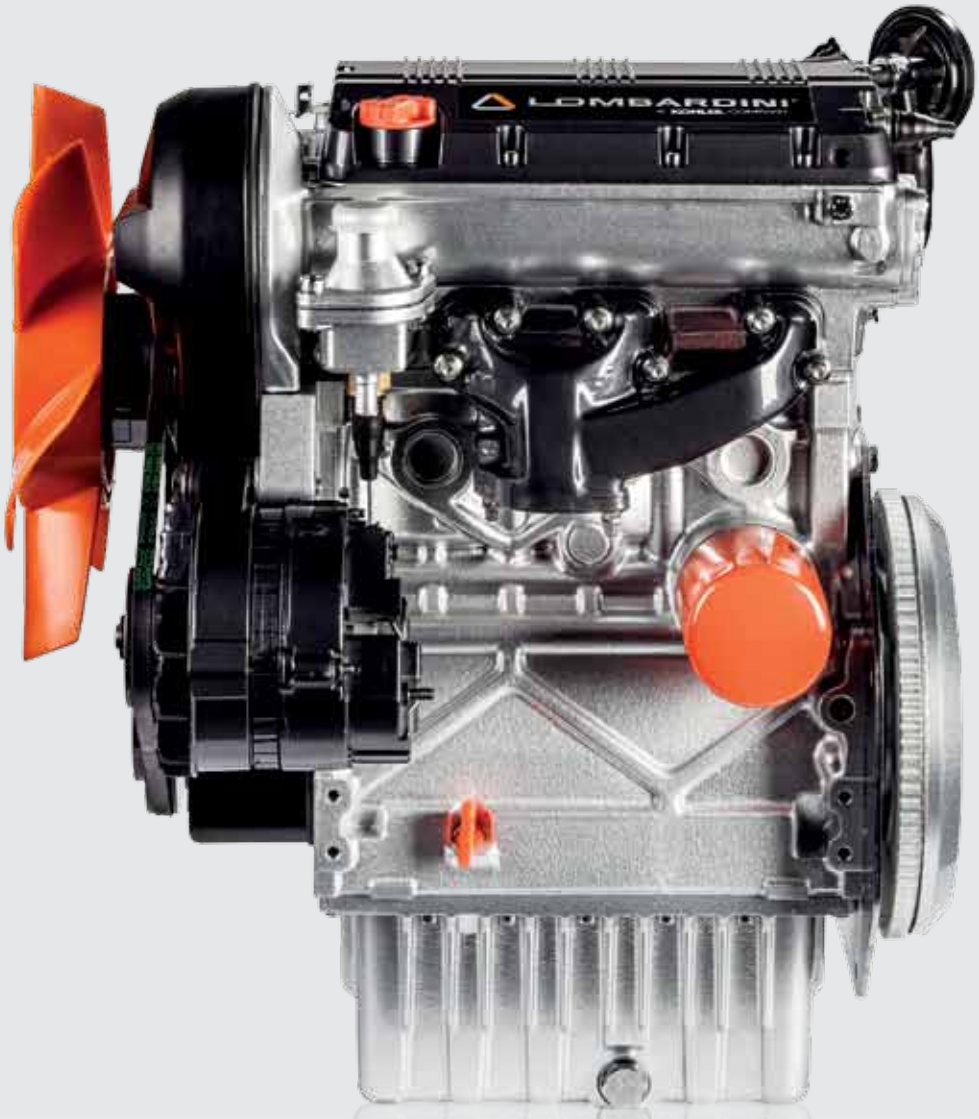
Water cooled Diesel engines

8.6-26.0 kW



LOMBARDINI®
A KOHLER COMPANY

WATER COOLED DIESEL ENGINES

8.6-26.0 KW

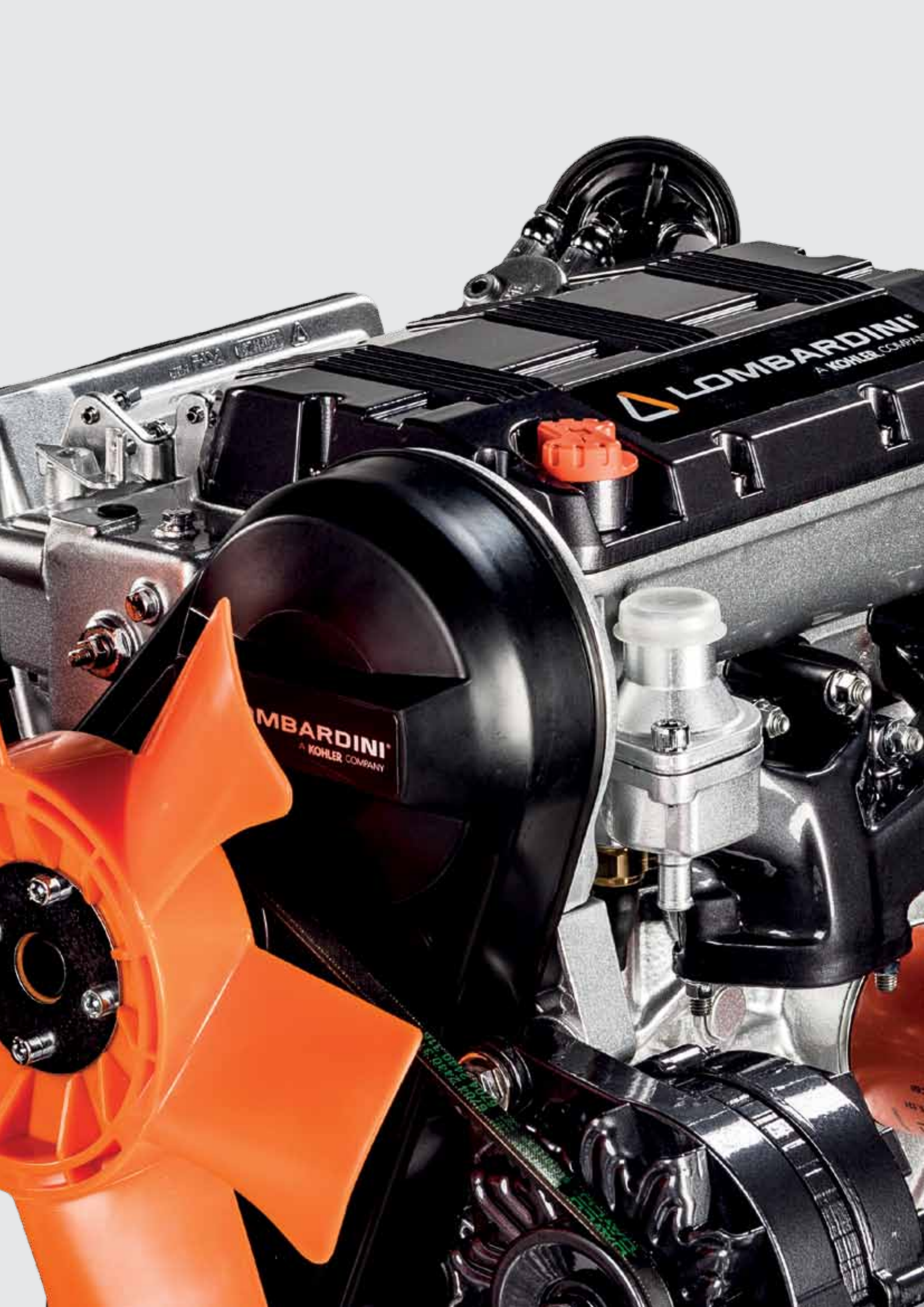
STANDARD EQUIPMENT

External oil filter
Exhaust manifold
Intake manifold
Intake fan
Accelerator control
Electric starter and 12V alternator
Thermostatic valve
Flywheel with ring gear
Fuel feed diaphragm pump
Starter plate
Water pump
Flanging plate
Electric stop
Electronic plant for plugs
Alternators 12V or 24V
Fuel filter on engine
User maintenance &
spare parts booklet

ACCESSORIES ON DEMAND

Different guards according to use
Clutch flywheels
Flanges
Trasmission adaptors
Keyswitch panel
Radiators
Blowing fan
Engine feet
Fuel tanks
Mufflers
Dry air cleaners mounted and separated
Cyclonic precleaners
High capacity oil sumps*
Cab heating system
Hydraulic pump adaptors
Vacuum system adaptors
Electrical fuel feeding pump

* Not on LDW502 model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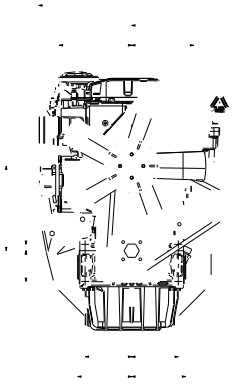
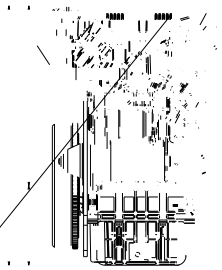
LDW 502

2

11.5 | **8.6**
HP | kW

24.5
Nm



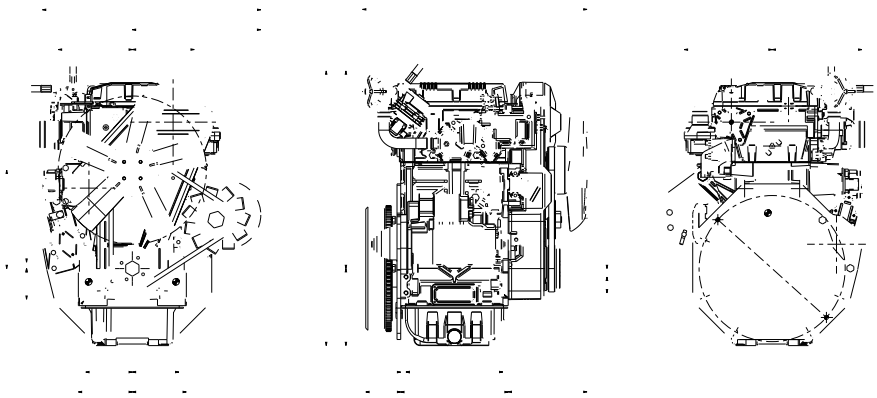


LDW 702

2

16.8 | **12.5**
HP | kW

40.5
Nm

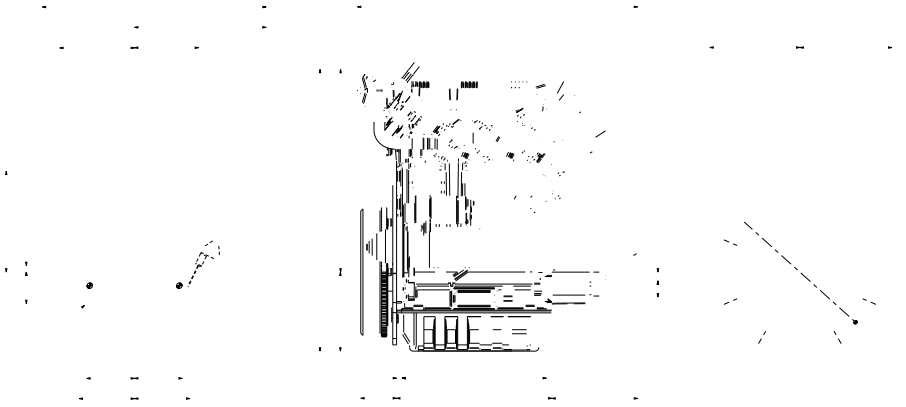


LDW 1003

3

26.1 HP | **19.5** kW

67 Nm

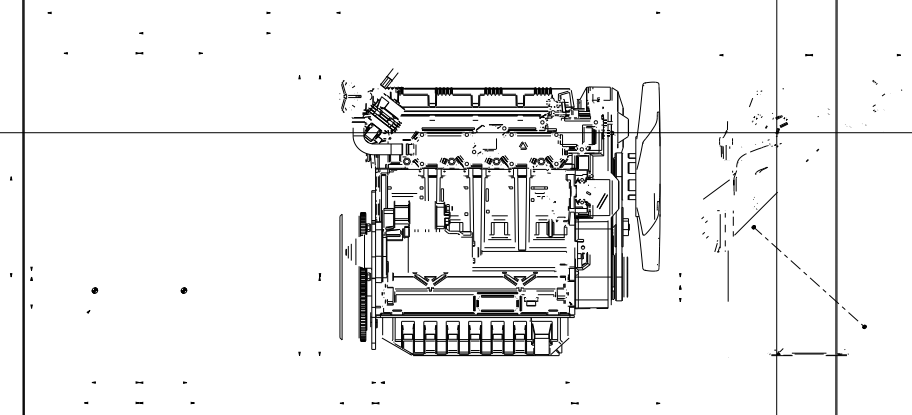


LDW 1404

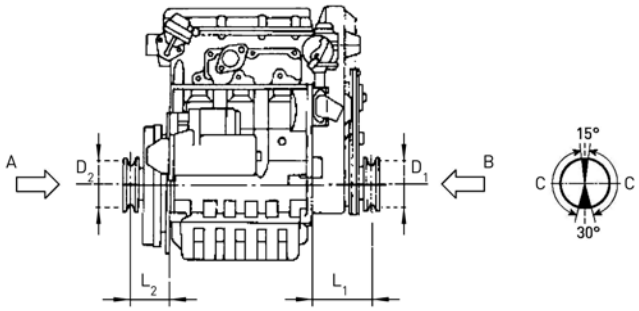
4

34.8 HP | **26** kW

84 Nm



APPLICATIONS SPECS



LDW 502

Minimum pulley diameters for belt drive

V BELT

$$D_2\ (mm) \geq 85\ [191 + L_2(mm)]\frac{N\ (HP)}{n\ (rpm)}$$

COGGED BELT

$$D_1\ (mm) \geq 65\ [191 + L_1(mm)]\frac{N\ (HP)}{n\ (rpm)}$$

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

C - Zone in which the radial loads can be applied

LDW 702

Minimum pulley diameters for belt drive

V BELT

$$D_2\ (mm) \geq 143\ [101 + L_2(mm)]\frac{N\ (HP)}{n\ (rpm)}$$

COGGED BELT

$$D_1\ (mm) \geq 99\ [101 + L_1(mm)]\frac{N\ (HP)}{n\ (rpm)}$$

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

C - Zone in which the radial loads can be applied

LDW 1003

Minimum pulley diameters for belt drive

V BELT

$$D_2\ (mm) \geq 114\ [101 + L_2(mm)]\frac{N\ (HP)}{n\ (rpm)}$$

COGGED BELT

$$D_1\ (mm) \geq 79\ [101 + L_1(mm)]\frac{N\ (HP)}{n\ (rpm)}$$

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

C - Zone in which the radial loads can be applied

LDW 1404

Minimum pulley diameters for belt drive

V BELT

$$D_2\ (mm) \geq 110\ [101 + L_2(mm)]\frac{N\ (HP)}{n\ (rpm)}$$

COGGED BELT

$$D_1\ (mm) \geq 72\ [101 + L_1(mm)]\frac{N\ (HP)}{n\ (rpm)}$$

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

C - Zone in which the radial loads can be applied

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	LDW 702	5,5 - 6,8	5,0 - 7,5	**5,5**	4,4	**5,0**	4,0	SAE 5 - 6,5"	EU not required
		LDW 1003	8,5 - 10,5	7,7 - 11,6	**9,0**	7,2	**8,2**	6,5	SAE 5 - 6,5"	EU not required
		LDW 1404	11,5 - 14,3	10,5 - 15,6	**12,2**	9,8	**11,2**	8,9	SAE 5 - 6,5"	EU not required
	3000	LDW 702	11,0 - 15,0	10,0 - 13,6	**11,7**	9,4	**10,6**	8,5	SAE 5 - 6,5"	EU not required
		LDW 1003	16,5 - 22,4	15,0 - 20,4	**17,5**	14,0	**15,9**	12,8	SAE 5 - 6,5"	EU not required
		LDW 1404	22,0 - 29,9	20,0 - 27,2	**23,4**	18,7	**21,3**	17,0	SAE 5 - 6,5"	EU Stage III A
60 Hz	1800	LDW 702	6,5 - 8,8	5,9 - 8,0	**6,9**	5,5	**6,3**	5,0	SAE 5 - 6,5"	Tier 4 F
		LDW 1003	10,0 - 13,6	9,1 - 12,4	**10,6**	8,5	**9,7**	7,7	SAE 5 - 6,5"	Tier 4 F
		LDW 1404	13,5 - 18,4	12,3 - 16,7	**14,3**	11,5	**13,1**	10,4	SAE 5 - 6,5"	Tier 4 F
	3600	LDW 702	11,7 - 16,0	10,6 - 14,5	**12,2**	9,9	**11,0**	9,0	SAE 5 - 6,5"	Tier 4 F
		LDW 1003	18,0 - 24,5	16,4 - 22,3	**19,1**	15,3	**17,4**	13,9	SAE 5 - 6,5"	Tier 4 F
		LDW 1404	24,5 - 33,3	22,3 - 30,3	**26,0**	20,8	**23,7**	18,9	SAE 5 - 6,5"	Tier 4 i(1)

* 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.

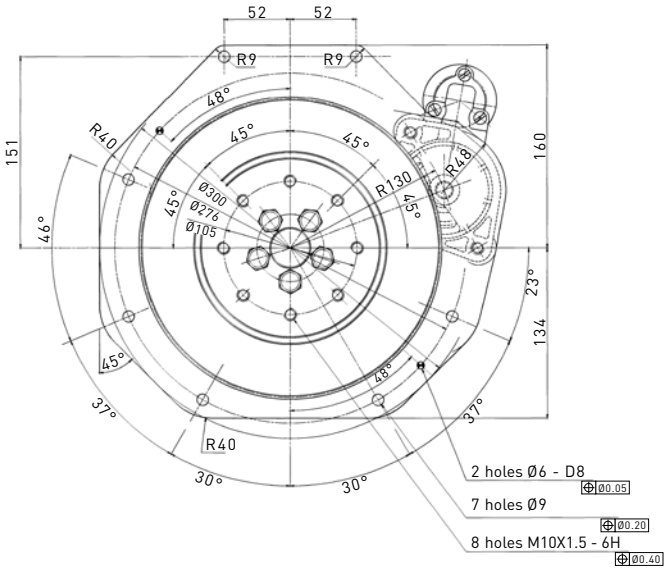
*** Possible de-rating might have to be taken in consideration to ensure emission compliance.

(1) for stationary + emergency applications.

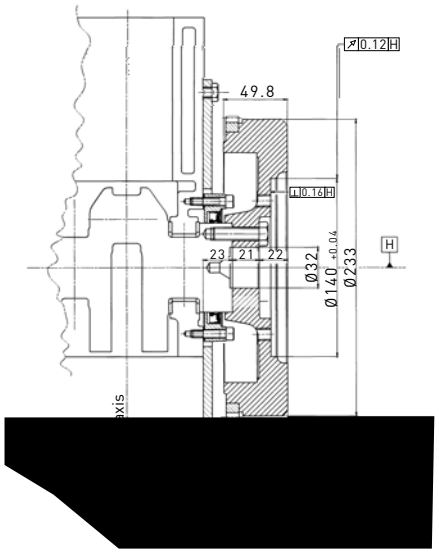
AVAILABLE FLANGES*

Standard version - LDW 502 / LDW 702 / LDW 1003 / LDW 1404

Flange standard type LDW 502 / LDW 702 / LDW 1003 / LDW 1404

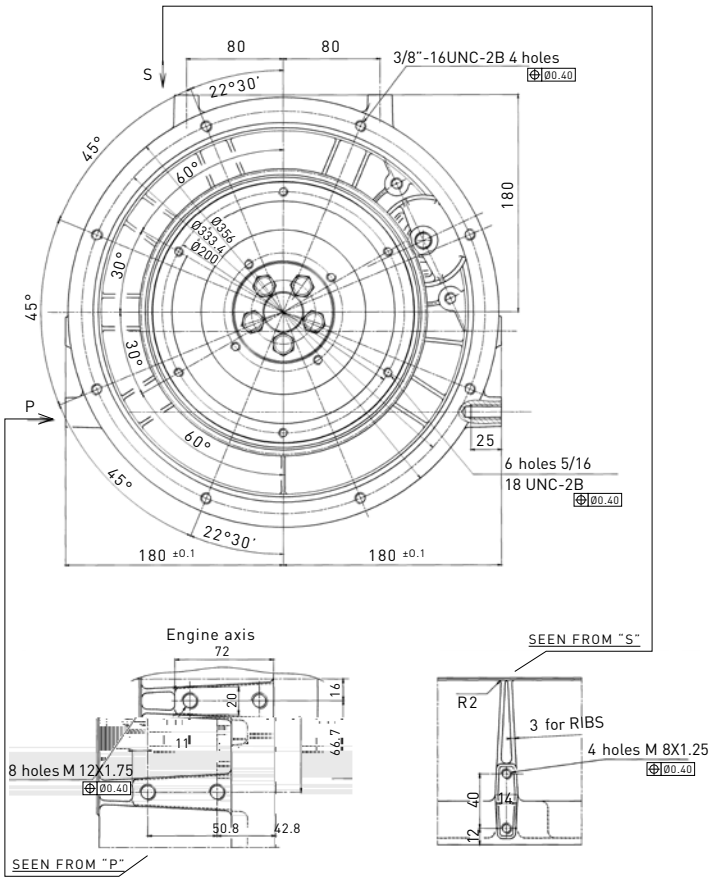


Standard version

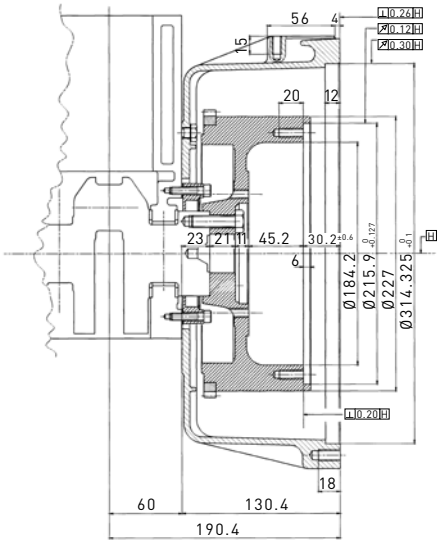


Version Genset - LDW 502 / LDW 702 / LDW 1003 / LDW 1404

Flange Genset LDW 502 / LDW 702 / LDW 1003 / LDW 1404



Standard version



*Other flanges available on request

TECHNICAL SPECIFICATIONS

Model		LDW 502	LDW 702	
Engine specs	4 stroke diesel engine with cylinders in line	•	•	
	Liquid cooled with axial fan	•	•	
	Indirect injection with injector pump on head	•	•	
	Single –shaft distribution in head	•	•	
	Double PTO on crankshaft	•	•	
	3rd PTO on the distribution	•	•	
	Counterclockwise rotation (1st PTO)	•	•	
	Forced lubrication with vane pump on the crankshaft	•	•	
	Full flow external oil filter	•	•	
	Water pump in the engine block	•	•	
	Automatic extra fuel starting device	•	•	
	Centrifugal governor	•	•	
	Torque regulator	•	•	
	Aluminum cylinder head	•	•	
	Cast iron engine block with re-borable integral liners	-	•	
	Die-cast aluminum engine block with reinforced structure	•	-	
	2 valves per cylinder	•	•	
	Overhead camshaft on head driven by cogged belt	•	•	
	Breather return oil steam	•	•	
	Heating cab system predisposition	•	-	
Technical features	Cylinder	2	2	
	Bore (mm)	72	75	
	Stroke (mm)	62	77.6	
	Engine displ (cm^3)	505	686	
	Injection system	IDI	IDI	
	Compression ratio	22.8:1	22.8:1	
Performance	Emission compliance	ECE R 24	ECE R 24	EPA TIER 4
	Rating (kW/HP): N (80/1269/CEE)ISO 1585 NB ISO 3046 IFN NA ISO 3046 ICXN	8.6 /11.7 8.0 /10.8 7.25 /9.8	12.5 /17.0 11.7 /16.0 10.7 /14.5	- 11.5 /15.6 # 10.5 /14.3 #
	Max torque (Nm@rpm)	24.5 @ 2200	40.5 @ 2000	34.0 @ 2200
	Min idling speed (rpm)	900	900	
Fuel compatibility	UNI EN 590-2010	•	•	
	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*	•	•	
Service features	Oil sump capacity (l)	1.4	1.6	
	Oil consumption (kg/h)	0.007	0.009	
	Oil change interval std/synthetic (hr)	150**	250**	
	Oil filter change interval std/synthetic (hr)	150**	250**	
	Valve adjustement	500	500	
	Oil consumption (% fuel)	<0.2	<0.2	
Physical characteristics	H × L × W (mm)	490 × 426 × 387	519 × 424 × 412	
	Dry weight (kg)	54	66	
	Ambient operating temps (°C)	-15 +50***	-15 +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)	910	1240	
	Cap. of air required for correct cooling @3600 (m^3/min)	65 (1:1.23)	65 (1:1.23)	
Cooling & lubrication	Heat rejection to coolant (includes oil cooler) (kW)	8.6	12.5	
	Cooling fluid: 50/50 water/antifreeze	•	•	
	Oil type	SAE 5W 40 API SERVICE CF	SAE 5W 40 API SERVICE CF	
Auxiliary PTOs (3rd optional)	Max torque (Nm)	-	37.0 @ 1800 rpm	
	Drive ratio	0.5:1	0.5:1	

* With restrictions ** According to operating conditions *** -32° on demand # Net power rating without cooling fan

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