

- 2 cylinders in line
- 440 cm<sup>3</sup>
- 4,0 kW/5,4 HP @ 3600 r.p.m.
- 8,5 kW/11,5 HP @ 4400 r.p.m.  
Nm 21,0 @ 2200 r.p.m.



## Construction

- 4-stroke diesel engine with 2 cylinder in line
- Liquid-cooled (loose radiator with electrical fan optional)
- Tilted position of 40° towards exhaust and inlet manifolds
- Die-casted aluminium engine block with re-borable cast iron integral liners
- Aluminium cylinder head
- “Uni flow” intake and exhaust manifold cab side
- Exhaust manifold complete with thermal protection
- Dry air cleaner on the flywheel side
- Breather return oil steam
- Double balance shaft
- Belt- driven Single overhead camshaft
- Rocker arm with hydraulic tappets
- Direct injection “common rail” system with electronic control
- High pressure pump on cylinder head
- Forced lubrication with vane pump
- Full flow external oil filter
- High capacity denoised oil sump
- Water pump in engine bloc
- Heating cab system provision
- Electrical starting with starter motor and external alternator (40 Amp)
- Pre-heating glow plugs controlled by the ECU

- Complete electrical harness and fuses box
- Single connector cab interface
- Denoised cover

## CVT characteristics

- Centrifugal mass system on driving pulley
- Engine brake effect with shaft on driven pulley
- Exclusive electronic management (ECU) for the engine brake

## Reduction gear / Differential

- Transmission range: 1 gear forward and 1 reverse
- Two speed ratio available
- Speed detector for electronic vehicle speedometer
- Integrated shock absorber
- Integrated oil breather
- Magnetic filter
- Integrated differential

## Main applications

- Mini cars (possible homologation EURO 2)
- A.T.V. (All Terrain Vehicles)

## Specifications

Cylinders	N.	2
Displacement	cm <sup>3</sup>	440
Bore	mm	68,0
Stroke	mm	60,6
Compression ratio		20:1
Combustion	degrees	360
Rating kW/HP max	N (80/1269/CEE) ISO 1585	8,5/11,5
Max torque	Nm	21,0@2200
Min.idle speed	rpm	1000
Water pump delivery at 5000 rpm	l/min	55
Oil consumption	kg/h	0,004
Oil sump capacity	l	2,1
Max. allowable inclination for:		
- short periods of operation (max. time 30 minutes)		25°*
- peak values (max. time 1 minute)		35°*
Air combustion volume @ 3600 rpm	m <sup>3</sup> /h	41
Air combustion volume @ 4400 rpm	m <sup>3</sup> /h	49
Dry weight	kg	70
Recommended battery	V/Ah	11/44 400 A (EN)
Starter	kW	1,1

\* Intake/Exhaust manifold side

## CVT Specifications

Continuous variation ratio		0,5 - 2,0
Transmission range		4,0
CVT connection rate	rpm	1300

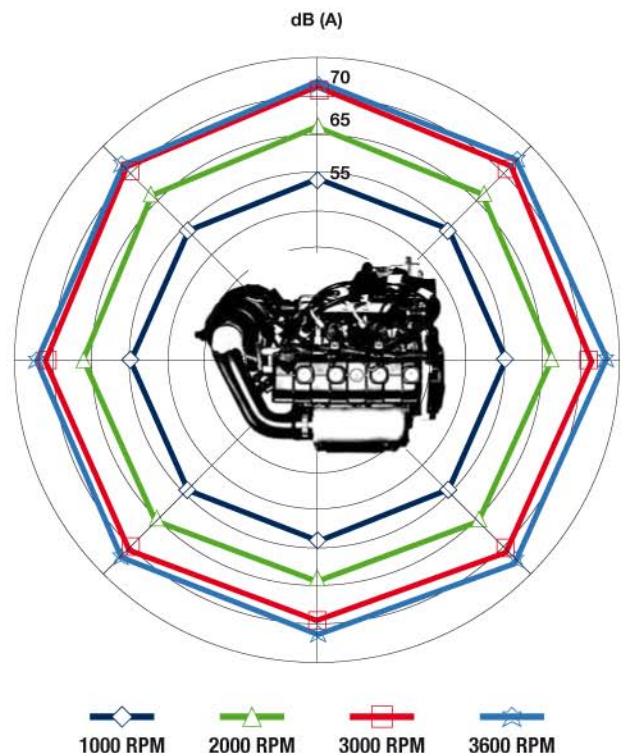
## Reduction gear / Differential Specification

Transmission range		1 forward motion – 1 reverse motion
Speed ratio (forward-reverse)		12,25 : 1 – 10 : 1
Gearbox oil	l	1
	Type	ZC75 SYNTH
Speed sensor for electronic speedometer		"effect hall"



## Sound pressure level dB (A)

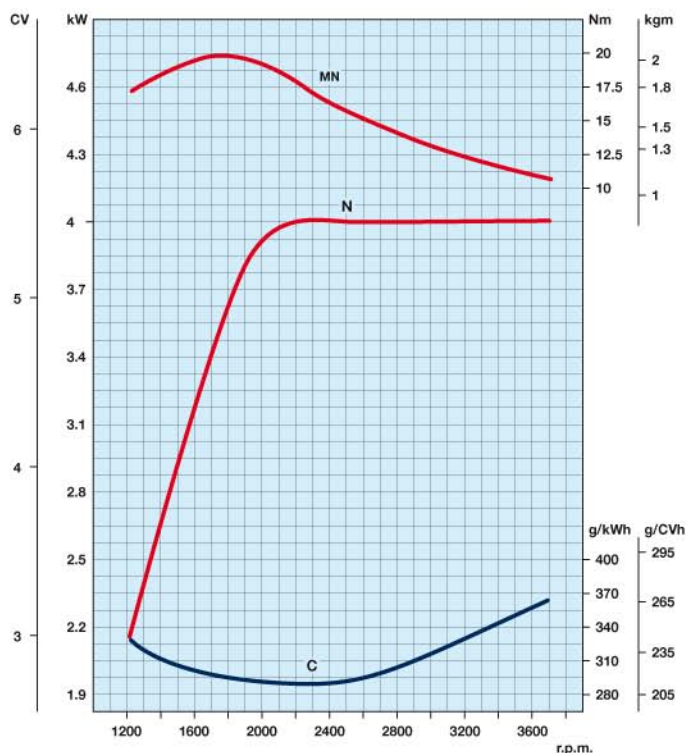
Sound level polar diagram open field – 7 meters micro-phone  
– no load running engine



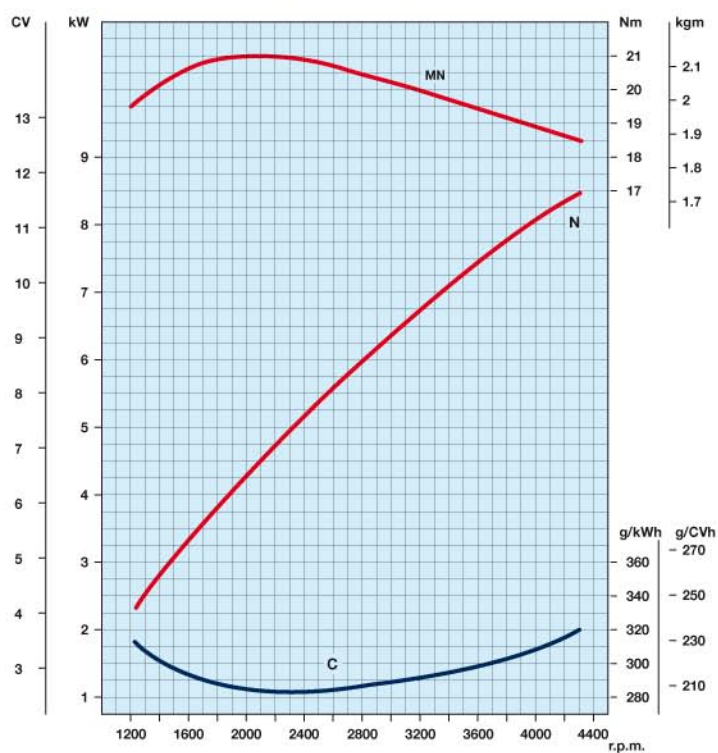


## Curves

LDW 442 CRS automotive @ 3600 r.p.m.



LDW 442 CRS @ 4400 r.p.m.



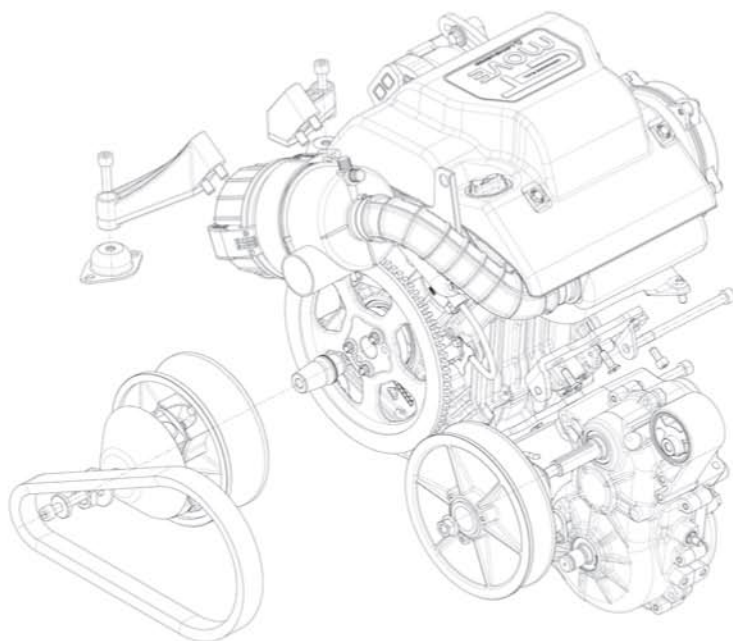
**N** Power curve - 80/1269/CEE - ISO 1585 -

**MN** Torque curve - (N curve)

**MB** (NB curve) - **MA** (NA curve)

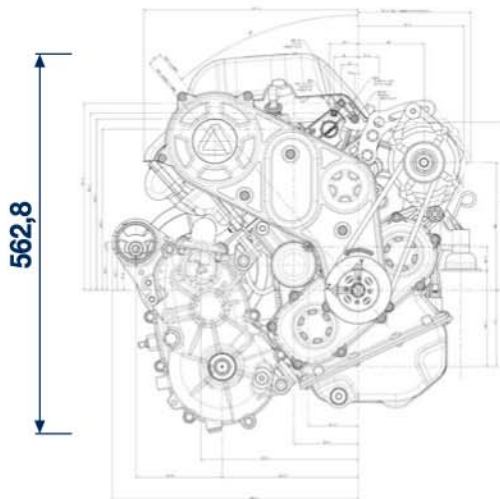
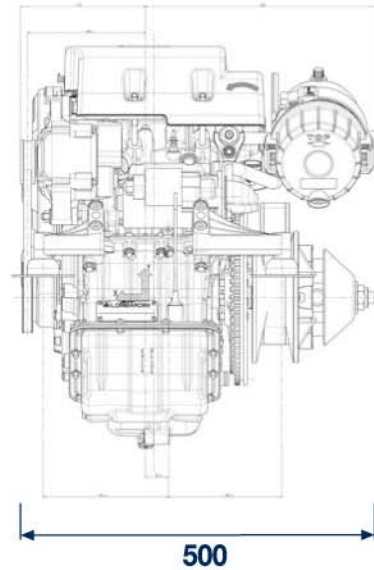
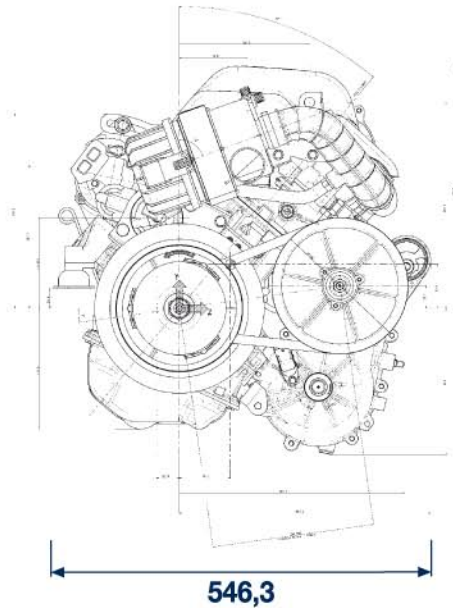
**C** Specific fuel consumption - (NB curve)

## CT Move Exploded drawing



Power ratings refer to engines equiped with air filter, standard muffler, after being run in and in ambient conditions of 20°C and 1 bar. Power levels drop by 1% every 100m altitude and by 2% every 5°C above 20°C.

## Technical drawings \*



## Standard equipment

- Accelerator pedal with potentiometer
- Fuses and relays box
- Engine electronic control unit (ECU)
- Fuel filter with water indicator
- Shock absorbers on 3 points (2 forward and 1 rear)
- Electrical fuel feeding pump

\* More specific dimensions are available on [www.lombardini.it](http://www.lombardini.it) (see table at the bottom of the page)



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