

## Bergen B32:40

Land-based liquid fuel engine – 720rpm/60Hz

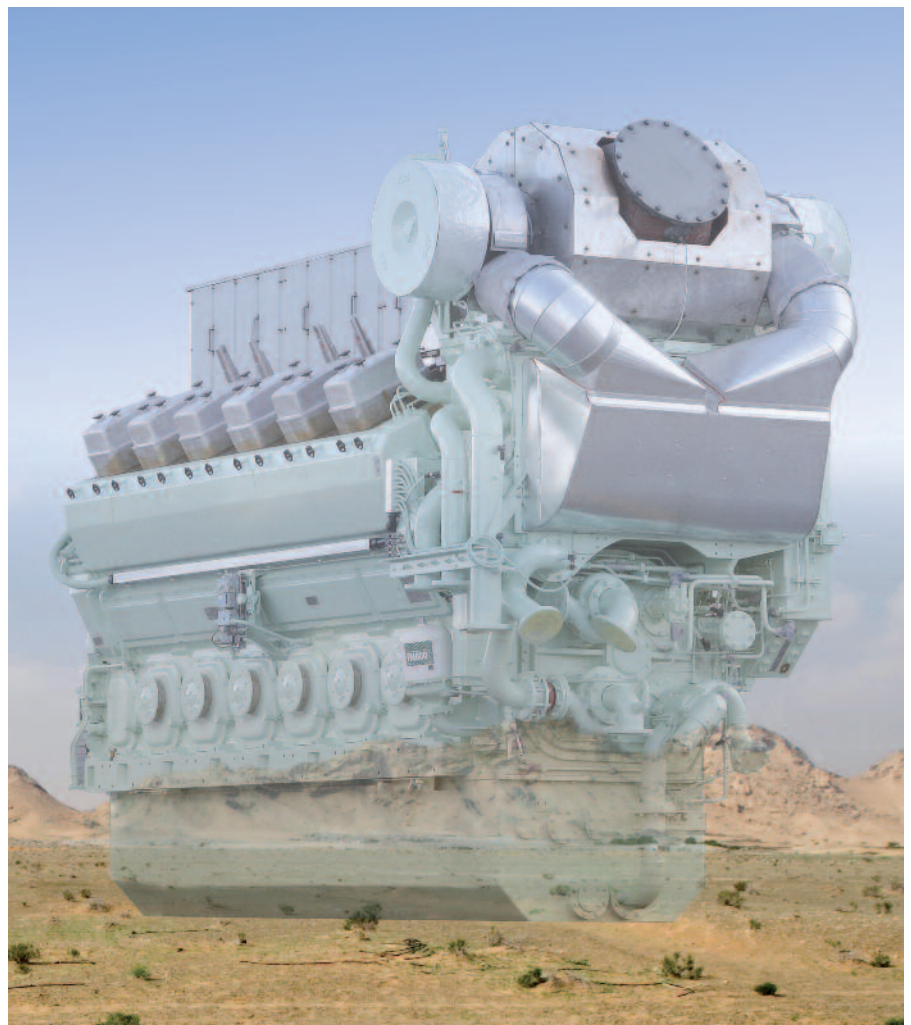
**The Rolls-Royce Bergen B32:40 is a powerful and reliable diesel engine based on traditional robustness of the Bergen B32:36 engine series, but with an increased power output per cylinder at 450kW and reduced fuel consumption. A combination of high performance, reliability and cost-effective operation make it an ideal engine for a wide range of land based power applications.**

The Bergen B32:40 range is available with outputs from 2.6 to 7.0MW in 6, 8 and 9 cylinder in-line configuration or 12 and 16 cylinder Vee configuration.

It uses the latest design techniques and production technologies to realise the full potential of the B engine family, which first entered service in 1985.

A new crankshaft gives greater bearing area while also allowing for the extended stroke. New bearing technologies cater for greater loads and changes to cylinder liners, pistons and rings ensure close control over temperature at all points, ensuring minimum consumption of lubricating oil and low cylinder wear.

With our wealth of experience in the power generation and mechanical drive fields Rolls-Royce can engineer the optimum Bergen B32:40 solution for any application, whether base load or island mode. In addition, our ability to provide Integrated Power Solutions allows us to supply not only the bare engine but to extend this further with a more comprehensive power package including combined heat and power or waste to energy plants.

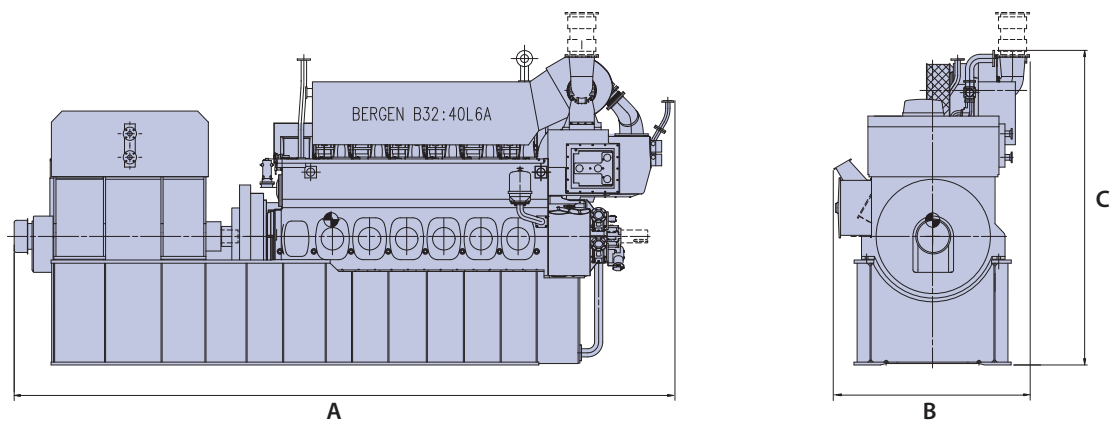


Rolls-Royce also have the skills and expertise for full mechanical system designs, including fuel storage, handling, cooling options and

heat recovery systems. Switchgear, distribution and station control systems can also be supplied.



## Principal dimensions



**Cylinder diameter 320mm**

**Piston stroke 400mm**

All dimensions in mm and weights in kg

Dimensions and weight will change depending on type of generator

Engine type	A	B	C	Weight dry engine
B32:40L6	9235	2738	4326	47000
B32:40L8	10459	2630	4251	56890
B32:40L9	10770	3095	4446	61220
B32:40V12	10550	2650	4220	86000
B32:40V16	12000	2650	4220	109000

## Technical data

Engine type		B32:40L6	B32:40L8	B32:40L9	B32:40V12	B32:40V16
Number of cylinders		6	8	9	12	16
Mean effective pressure	bar	22.4	22.4	22.4	22.4	22.4
Mechanical output	kW	2595	3455	3885	5185	6910
Electrical output, $\eta = 0.96$	kW	2495	3320	3730	5030	6705
Specific fuel consumption	g/kWh	185	185	185	185	183
Fuel consumption	kW	5694	7581	8525	11377	14999
Charge air cooler LT+HT	kW	399+421	532+560	597+631	797+842	1064+1121
Lub oil cooler	kW	342	456	511	624	832
Jacket water cooler	kW	401	535	601	810	1079
Exhaust mass	kg/h	18400	24600	27700	37500	50100
Exhaust gas temperature	°C	320	320	320	315	315
Specific lub oil consump.	g/kWh	0.8	0.8	0.8	0.8	0.8
Nom. electrical efficiency	%	45.6	45.6	45.6	44.2	44.7

## Reference conditions

Engine power definition according to ISO 3046-1

Air inlet temperature	max. 25 °C
Air inlet temperature	min. 0 °C
Charge air low temp. fresh water inlet temp. for In-line configuration	max. + 38 °C
Charge air low temp. fresh water inlet temp. for Vee configuration	max. + 42 °C
Relative humidity	60 %

Specific fuel oil consumption is measured on testbed according to ISO 3046-1, using diesel-oil with a net heating value of 42.7 MJ/kg and two engine driven pumps. The engines are designed for operations on heavy fuel oil with viscosity up to 55 cSt at 100 °C ISO 8217 RMH. Specific lubricating oil consumption is for guidance only.

**Note:** Due to continuous development, some data may be changed without notice.

A ten per cent increase in output may be applied for island mode operation.



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ER162-07/09-2M