

Technical Data

400 Series

ElectropaK

403C-15G

13,3 kW @ 1500 rev/min

Basic technical data

Number of cylinders 3
Cylinder arrangement Vertical in-line
Cycle Four stroke
Induction system Indirect injection
Compression ratio 22.5 : 1
Bore 84 mm (3.3 in)
Stroke 90 mm (3.5 in)
Cubic capacity 1,496 litres (91 in³)
Direction of rotation Clockwise viewed from front
Firing order 1, 2, 3
Estimated total weight (dry) 197 kg (434 lb)
Estimated total weight (wet) TBA kg (TBA lb)

Overall dimensions

-height 791 mm (31.1 in)
-length 820 mm (32.3 in)
-width 476 mm (18.7 in)

Moments of inertia (GD²)

-engine TBA kg m²
-flywheel 2,01 kg m²

Centre of gravity

-forward from rear of block TBA mm (TBA in)
-above centre line of block TBA mm (TBA in)
-offset to Rhs of centre line TBA mm (TBA in)

Performance

Note: All data based on operation to ISO 14396 standard reference conditions.

Speed variation at constant load $\pm 0.5\%$
Cyclic irregularity

-at 110% stand-by power TBA

Test conditions

-air temperature 25 °C (77 °F)
-barometric pressure 100 kPa (29.61 in hg)

Sound level

Average sound pressure level for bare engine (without inlet and exhaust) at 1 metre 76.7 dbA
-all ratings certified to within $\pm 5\%$
If the engine is to operate in ambient conditions other than those of the test conditions, suitable adjustments must be made for these changes. For full details, contact Perkins Technical Service Department.

TBA% of the prime power rating can be applied 10 seconds after the starter motor is energised. The remaining TBA% can be applied 15 seconds after start if the ambient temperature is not less than 15 °C (59 °F). If it is less than 15 °C (59 °F), an immersion heater is recommended. For additional information, contact Perkins Technical Service Department.

General installation

Designation	Units	Type of operation and application	
		Prime	Stand-by
		50Hz	50Hz
Gross engine power	kW (bhp)	12,2 (16.4)	13,5 (18.1)
Brake mean effective pressure	kPa (lbf/in ²)	649,7 (94.2)	721,9 (104.7)
Mean piston speed	m/s (ft/s)	4,5 (14.8)	4,5 (14.8)
ElectropaK net engine power	kW (bhp)	12 (16.1)	13,3 (17.8)
Engine coolant flow (coolant pump ratio 1.15:1)	l/min (UK gal/min)	37,7 (8.3)	37,7 (8.3)
Combustion air flow	m ³ /min (ft ³ /min)	1,08 (38.1)	1,08 (38.1)
Exhaust gas flow (max)	m ³ /min (ft ³ /min)	2,72 (96.1)	2,88 (102)
Exhaust gas temperature (max)	°C (°F)	445 (833)	490 (914)
Cooling fan air flow (zero duct allowance)	m ³ /min (ft ³ /min)	36,6 (1293)	36,6 (1293)
Cooling fan air flow (0,125 kPa duct allowance)	m ³ /min (ft ³ /min)	25,2 (889)	25,2 (889)
Energy balance			
Energy in fuel (heat of combustion)	kW (Btu/min)	36,3 (2066)	40,2 (2288)
Gross heat to power	kW (Btu/min)	12,2 (691)	13,5 (768)
Energy to coolant and lubricating oil	kW (Btu/min)	11,6 (661)	12,9 (732)
Energy to exhaust	kW (Btu/min)	9,3 (529)	10,3 (587)
Heat to radiation	kW (Btu/min)	3,2 (182)	3,5 (201)

Caution: The airflows shown in this table will provide acceptable cooling for an open power unit operating in ambient temperatures of up to 53 °C (127 °F) or 46 °C (115 °F) if a canopy is fitted with an air flow restriction of up to 0,125 kPa. If the power unit is to be enclosed totally, a cooling test should be done to check that the engine cooling is acceptable. If there is insufficient cooling, contact Perkins Technical Service Department.