

# CANAL STAR ENGINES

**18, 27, 36, 45**

*Variable speed; maximum power at flywheel at 3000 r/min:  
14.9—41.0 kW; 20—55 bhp*

## LIQUID COOLED MARINE PROPULSION DIESEL ENGINES FOR CANAL BOATS

### SUITABLE FOR:

- canal narrowboats and barges
- pleasure boats and hire fleets
- any other keel or skin tank cooled vessels

### BASIC ENGINE CHARACTERISTICS

- 2, 3 or 4 cylinders
- liquid cooled
- indirect or direct injection
- naturally aspirated or turbocharged (45 only)
- durable, economical and reliable
- low fuel consumption
- long service periods
- quiet running, low vibration, low emissions

### DESIGN FEATURES AND EQUIPMENT

- Newage or ZF gearbox
- air cleaner
- fresh water cooling suitable for skin tanks
- fuel filter/agglomerator
- 12 volt starter motor
- sump drain pump
- anti-vibration mountings
- high level bearers
- calorifier connections providing fast domestic hot water warm-up
- traditional 'Lister' green paint finish

### OPTIONAL ITEMS

A range of options enables your Alpha marine engine to be built to your exact needs:

- choice of gearboxes (see above)
- choice of air cleaners
- high output alternator, 50 or 70 Amp (dependent on model)
- twin alternators (see illustration)



**CANAL STAR ENGINE**

- start panels
- instrument panel with hour recorder, key switch and visual and audible warnings
- drive adaptors
- wiring loom
- protection systems

**TWIN  
ALTERNATORS  
ARE  
AVAILABLE  
AS AN OPTION**



### TECHNICAL DATA

Canal Star model		18	27	36	45
Cylinders		2	3	4	4
Bore	mm	86	86	86	86
Stroke	mm	80	80	80	80
Total cylinder capacity	cm <sup>3</sup>	930	1395	1860	1860
Off load idle speed	r/min	800	800	800	800
Fuel consumption (approx.) at 1500 r/min	l/hr	1.2	1.8	2.4	2.7
Oil sump capacity	litres	3.3	4.5	5.6	5.6
Propeller rotation viewed from stern in forward gear		Clockwise			

**Note:** 1. The dimensions (mm) given are for guidance only and must not be used for installation purposes.

### RATING DEFINITIONS, TO ISO 3046

#### ISO Standard Conditions

Barometric pressure	100 kPa
Relative humidity	30%
Ambient temperature at air inlet manifold	25°C

#### 1. Fixed speed power: continuous power (ICN)

The power in kW which the engine is capable of delivering continuously at the stated crankshaft speed, under ISO standard conditions, measured at the flywheel without power-absorbing accessories, provided that the engine is overhauled and maintained in good operating condition and that fuel to BS EN 590 Class A1 or A2, and lubricating oils to the correct performance specification and viscosity classification as recommended by Lister Petter Limited, are used.

#### 2. Fixed speed power: overload power (ICXN)

The maximum power in kW which the engine is capable of delivering intermittently at the stated crankshaft speed for a period not exceeding one hour in any period of twelve hours' continuous running, immediately after working at the continuous power, under ISO standard conditions and with the provisions specified in (1) above.

#### 3. Variable speed: fuel-stop power, continuous power (IFN)

The maximum power in kW which an engine is capable of delivering continuously at stated crankshaft speed, under ISO standard conditions and with the provisions specified in (1) above, with the fuel limited so that the fuel stop power cannot be exceeded.

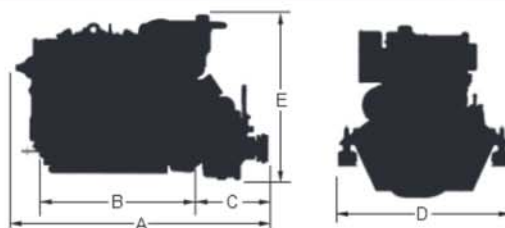
#### 4. Variable speed: fuel-stop power, intermittent power (IOFN)

The maximum power in kW which an engine is capable of delivering intermittently at the stated crankshaft speed, for a period not exceeding one hour in any period of twelve hours' continuous running, with the fuel limited so that the fuel stop power cannot be exceeded, immediately after running at the rating in (3) above, under ISO standard conditions and with the provisions specified in (1) above.

#### 5. De-rating

For non-standard site conditions, reference should be made to relevant BS, ISO and DIN standards. The overload capability applies to a fully run-in engine. This is normally attained after a running period of about 50 hours.

### APPROXIMATE DIMENSIONS AND WEIGHT <sup>1</sup>



Canal Star model		18	27	36	45
Overall	mm	797	897	997	997
Length A	in.	31.4	35.1	39.3	39.3
Length B	mm	439	539	639	639
	in.	17.3	21.2	25.2	25.2
Length C	mm	179	179	179	179
	in.	7.0	7.0	7.0	7.0
Width D	mm	647	647	647	647
	in.	25.5	25.5	25.5	25.5
Height E	mm	653	653	653	653
	in.	25.7	25.7	25.7	25.7
Dry weight	kg	150	180	210	210
	lb	331	397	463	463

### POWER OUTPUTS

	Model	r/min	2600	3000
Maximum power at flywheel	18	kW	13.4	
		bhp	18.0	
	27	kW	20.1	
		bhp	27.0	
	36	kW	26.8	
		bhp	36.0	
	45	kW		33.6
		bhp		45.0

### TORQUE

	Model	r/min	1800	2800
Maximum torque at flywheel	18	Nm	53	
	27	Nm	80	
	36	Nm	106	
	45	Nm		112

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