

# RANGER I

## Features

- Slow-speed silence
- Compact dimensions
- Thrifty in consumption
- Convenient in service
- Low noise
- Ultimate reliability
- With ISUZU diesel engine
- Sound cover to eliminate noise
- Brushless Alternator



## Accessories

- 12V remote electric start/stop
- Oil pressure and c.w. temp. cut out
- Heat exchanger cooling
- Speed fine adjustment
- Seawater pump
- Fuel lift pump 12V
- Water-cooled exhaust manifold
- Resilient mounting system
- 1 phase or 3 phase voltage

Model	KVA	KW	Hz	Phase	Voltage	Dimensions LxWxH mm	Weight kg	Engine Motor
H3N8IZ15	8.5	6.8	50	1	230	980x550x600	277	Isuzu 3LB1
H3N12IZ15	12.5	10.0	50	1	230	1075x550x620	325	Isuzu 3LD1
H4N14IZ15	14.5	11.6	50	1	230	1195x600x700	355	Isuzu 4LC1
H4N18IZ15	18.0	14.4	50	1	230	1470x600x700	540	Isuzu 4LE1
H4N24IZ15	24.0	19.2	50	1	230	1525x720x950	585	Isuzu 4JB1
H4N35IZ15	35.0	28.0	50	3	220/380	1730x720x950	755	Isuzu 4BG1
H4N50IZ15	50.0	40.0	50	3	220/380	1770x720x950	835	Isuzu 4BG1 T

Model	3LB1	3LB1	3LB1	3LB1	3LB1	3LB1	K4M
No of cylinders	3	3	4	4	4	4	4
Bore/Stroke mm	77x79	83x92	77x92	85x96	93x102	105x125	105x125
INCLINATION ANGLE APPROXIMATELY 25 DEGREES IN ALL DIRECTIONS							

## Standard Specification

Engine and alternator close-coupled via bellhousing and resiliently mounted. Engine supports raised to achieve a low vibration performance. All pipework and electrical wiring on set. Rasting as per BS649 and DIN 6270, governing class 2. Failsafe system providing protection against lack of oil pressure and overheating. Fan for hot air extraction from beneath the sound enclosure. Each set factory tested and sprayed in heat resistant paint.

The sound enclosure is of substantial construction, combining the best use of GRP and Balsa wood. Lead strips are laminated into the glass fibre structure to improve the acoustic performance. Noise reduction is considerable, bearing in mind the small dimensions and the low weight. The set incorporates all relevant features to simplify installation on board.

## Engine

Low weight, low profile, slow-speed watercooled 4-stroke ISUZU with indirect injection. Cylinder heads and blocks are light-weight but rigid with high durability. Low noise, smooth running characteristics with individual injection pump and mechanical centrifugal type governor. Forced oil lubrication system. Marination by HFL using dual circuit cooling via heat exchanger and watercooled exhaust manifold with water injected elbow. Belt-driven seawater pump with easily accessible belt tension adjustment.

## Alternator

Brushless, lightweight alternator. Good current-compounding characteristic which offers excellent motor starting without overloading the engine. Power factor 0.8. Temporary overload capacity of up to 300% maximum i.e. 2 to 3 times full load current. Radio suppression to meet VDE 0875 grade N and BS 800 as standard.

All machines to comply to BS 5000:3, BS 4999, IEC 34-1 and VDE 0530.

Voltage 115-230 dual 1-phase: 220/380 3-phase.

**All machines are available in 60Hz or 3-phase configuration, please contact HFL for further details.**