

## SPECIFICATIONS

|  |                 |            |
|--|-----------------|------------|
| Thermodynamic cycle                            | Diesel 4 stroke |            |
| Air Feeding                                    | TCA             |            |
| Cylinders arrangement                          | 4L              |            |
| Bore x Stroke                                  | millimeters     | 95.8 x 104 |
| Total displacement                             | liters          | 3          |
| Valves per cylinder                            | number          | 4          |
| Cooling System                                 | liquid          |            |
| Direction of Rotation (viewed facing flywheel) | CCW             |            |
| Engine management                              | electronic      |            |
| Injection System                               | CR              |            |

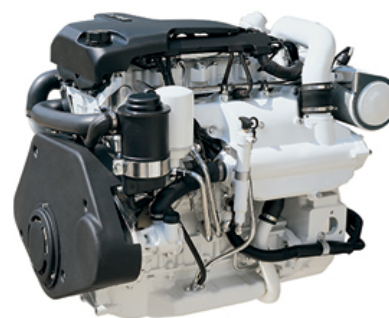
## STANDARD CONFIGURATION

|  |  |       |
|--|--|-------|
| Flywheel housing                               | type   | SAE 4 |
| Flywheel size                                  | inch   | 8"    |
| Air filter                                     | rear side  |       |
| Turbocharger                                   | Waste Gate (water cooled) Turbo with Aftercooler (TCA) |       |
| Heat exchanger                                 | tube type  |       |
| Exhaust gas water mixer - Exhaust cooled elbow | -  |       |
| Water charge tank                              | included   |       |
| Fuel filter                                    | number   | 1     |
| Fuel prefilter                                 | included (loose)                                       |       |
| Fuel pump                                      | included   |       |
| Oil filter                                     | number   | 1     |
| Oil sump                                       | aluminium  |       |
| Oil vapours blowby circuit                     | front  |       |
| Oil heat exchanger                             | built in the crankcase                                 |       |
| Oil filler                                     | on front cover   |       |
| Starter  | 12V - 2.3kW  |       |
| Alternator                                     | 12 V - 110 A   |       |
| Engine stop device                             | by electronic central unit                             |       |
| Wiring harness                                 | with EDC (Electronic Diesel Control)                   |       |
| Painting color                                 | white "ICE"  |       |

## WEIGHT AND DIMENSIONS

|                        |    |                 |
|------------------------|----|-----------------|
| Dimensions (L x W x H) | mm | 780 x 775 x 753 |
| Dry Weight             | Kg | 330             |

DIMENSIONS CAN BE CHANGED ACCORDING TO ENGINE OPTIONS



**PLEASURE**

IMAGES SHOWN ARE FOR ILLUSTRATION PURPOSE ONLY

## ELECTRICAL SYSTEM

|         |   |    |
|---------|---|----|
| Voltage | V | 12 |
|---------|---|----|

## NOT INCLUDED IN STANDARD CONFIGURATION

|  |    |        |
|--|----|--------|
| Battery - minimum capacity recommended               | Ah | 110 Ah |
| Battery - minimum cold cranking capacity recommended | Ah | 800 Ah |

Do you want to know more?

### LEGEND

| Arrangement               | Air Handling                        | Turbocharger                         | Injection System               | Exhaust System                      |
|---------------------------|-------------------------------------|--------------------------------------|--------------------------------|-------------------------------------|
| L (in line)               | TC (Turbocharged)                   | WG (Wastegate)                       | M (Mechanical)                 | EGR (Exhaust Gas Recirculation)     |
| V (90° "V" configuration) | NA (Naturally Aspirated)            | VGT (Variable Geometry Turbocharger) | CR (Common Rail)               | SCR (Selective Catalytic Reduction) |
|                           | TCA (Turbocharged with aftercooler) | TST (Twin Stage Turbocharger)        | EUI (Electronic Unit Injector) |                                     |
|                           |                                     |                                      | MPI (Multi Point Injection)    |                                     |

A1 High Performance Crafts. Full throttle operation restricted within 10% of total use period. Cruising speed at engine rpm <90% of rated speed setting - Maximum usage 300 hours per year.  
A2/B1 Pleasure Commercial Vessels. Full throttle operation restricted within 10% of total use period. Cruising speed at engine rpm <90% of rated speed setting - Maximum usage 1000 hours per year.

B Light Duty: Full throttle operation restricted within 10% of use period. Cruising speed at engine rpm <90% of rated speed setting - Maximum usage 1500 hours per year.  
C Medium Duty: Full throttle operation < 25% of use period. Cruising speed at engine rpm <90% of rated speed setting - Maximum usage 3000 hours per year.  
D Heavy Duty

FOR INFORMATION ON THE AVAILABLE RATINGS NOT LISTED IN THIS DOCUMENT PLEASE CONTACT THE FPT INDUSTRIAL SALES NETWORK OR VISIT OUR SITE [WWW.FPTINDUSTRIAL.COM](http://WWW.FPTINDUSTRIAL.COM)

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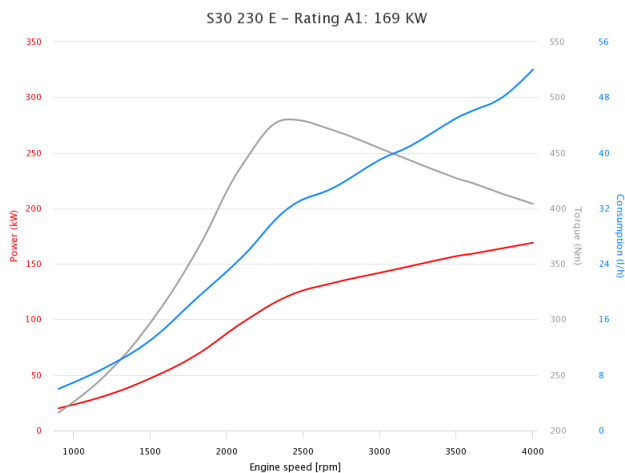
## RATING TYPE

**A1**

|   |                   |            |
|---|-------------------|------------|
| Maximum power [*]                                       | kW (HP)           | 169 (230)  |
| At speed  | rpm               | 4000       |
| Maximum no load governed speed at max rating            | rpm               | 4280       |
| Minimum idling speed                                    | rpm               | 750        |
| Mean piston speed at rated speed                        | m/s               | 13.9       |
| BMEP at max power                                       | bar               | 20.5       |
| Specific fuel consumption (best value)                  | g/kWh @ rpm       | 252 @ 4000 |
| IMO Marpol Tier 2 (IMO Annex VI Technical Code 2008)    |                   | ✓          |
| RCD Stage 2 (2013/53/EC)                                |                   | ✓          |
| IWW Stage V (EU 2016/1628)                              |                   | -          |
| EPA Tier 3 Commercial                                   |                   | -          |
| EPA Tier 3 Recreational                                 |                   | -          |
| China GB I (GB15097-2016)                               |                   | -          |
| China GB II (GB15097-2016)                              |                   | -          |
| Oil consumption at max rating                           | (% of fuel cons.) | < 0.2      |
| Minimum starting temperature without auxiliaries        | °C                | -10°       |
| Oil and oil filter maintenance interval for replacement | hours             | 600        |

\* Net Power at flywheel according to ISO 8665, after 50 hours running, Fuel Diesel EN 590. Power tolerance 5%.

## POWER & TORQUE



**PLEASURE**

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