



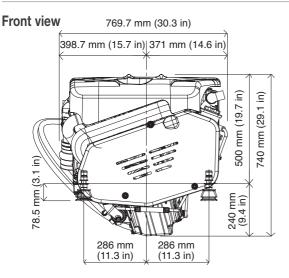


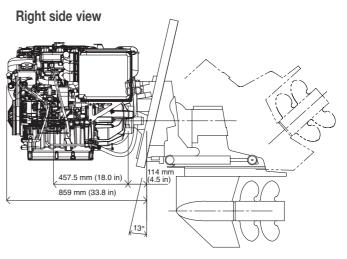


Configuration	In line, 4-stroke cycle, water cooled diesel engine			
Maximum output at crankshaft *	110 kW (150 mhp) / 4000 rpm			
Continuous rating output at crankshaft	85 kW (114 mhp) / 3600 rpm			
Displacement	1.995 L (122 cu in)			
Bore x stroke	84 mm x 90 mm (3.31 in x 3.54 in)			
Cylinders	4, Common Rail with vertical injectors			
Combustion system	Direct injection			
Aspiration	Wastegated, turbocharged with intercooler			
Starting system	Electric starting 12 V - 2 kW			
Alternator	12 V - 150 A			
Cooling system	Fresh water cooling with heat exchanger, and sea water cooled charge air cooler			
Lubrication system	Totally enclosed, forced lubricating system with pump			
Can Bus	Device net according to NMEA 2000 protocol			
Direction of rotation (crankshaft)	Counter clockwise viewed from stern			
Dry weight without gear	250 kg (551 lbs)			
Environmental	EPA Tier 2, RCD, SAV, BSO. Meets the EU comprehensive emissions regulation 2006			
Engine mounting	Rubber type antivibration mounting			

NOTE: Fuel condition: Density at $15^{\circ}\text{C} = 0.84 \text{ g/cm}^3$; 1kW = 1.3596 mhp = 1.3410 HP

Technical data is according to ISO 8665 / 3046



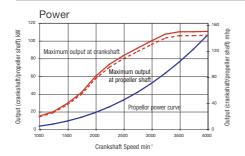


4BY150Z w/ BravoX-3 Sterndrive

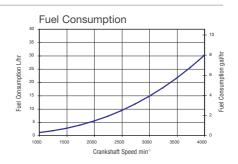


^{*} Fuel temperature 40°C at the inlet of the fuel injection pump (ISO 8665)

Performance Curves (Output is according ISO 8665)





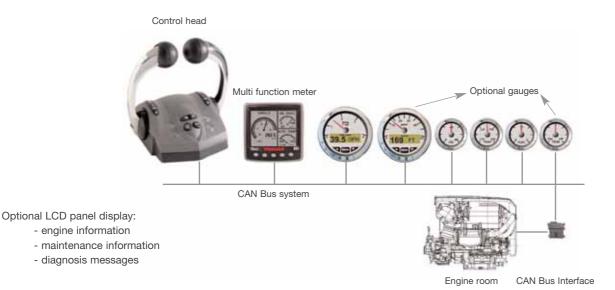


Yanmar & Mercruiser sterndrive set Engine

Model	"Mercruiser" Bravo Sterndrive series							
Type	Bravo X-3							
Dry weight	98 kg (216 lbs)							
Reduction ratio (fwd/asn)	1,36/1,36	1,50/1,50	1,65/1,65	1,81/1,81	2,00/2,00	2,20/2,20		
Propeller speed (fwd/asn)	2647/2647	2400/2400	2181/2181	1989/1989	1800/1800	1636/1636		
Direction of rotation (propeller shaft - fwd)	Clockwise & counter clockwise viewed from stern							
Dry weight engine and gear	348 kg (767 lbs)							
Length engine and gear	925 mm (36 in)							

- 1, Inner and outer transom surface must be parallel within 3mm in area covered by transom plates and remain within transom thickness limits. 2, Area covered by gimbal housing assembly must be flat to within 1.6mm.
- 3, Area covered by inner transom plate must be flat to within 3.2mm 4, Transom angle: 13° to 16°
- 5, Also available with: BravoX-1 and BravoX-2. Contact your local supplier for available configurations

Instrument Panels



Accessories

Standard Package

- Set of flexible mounts
- Alternator 12 V 150 A single pole (24V is not available)
- Engine top and belt cover
- Power steering pump

Optional

- High riser mixing elbow
- Exhaust side dipstick
- ECU boat mount kit
- Glow plug controller and related parts

- Exhaust mixing elbow (L-type)
- · Single side mount control head (throtle position sensor included)
- CAN tachometer with digital display
- Dual top mount Teleflex control head (throtle position sensor included)
- Teleflex CAN single and double top mount control heads
- Teleflex interface module for analogue sensors (engine oil pressure, fuel tank level, etc)
- Various gauges

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