



# Yanmar type 4BY180Z

## The Powerful Gem



<b>Configuration</b>	In line, 4-stroke cycle, water cooled diesel engine
<b>Maximum output at crankshaft *</b>	132 kW ( 180 mhp) / 4000 rpm
<b>Continuous rating output at crankshaft</b>	102 kW (137 mhp) 3600 rpm
<b>Displacement</b>	1.995 L (122 cu in)
<b>Bore x stroke</b>	84 mm x 90 mm (3.31 in x 3.54 in)
<b>Cylinders</b>	4, Common Rail with vertical injectors
<b>Combustion system</b>	Direct injection
<b>Aspiration</b>	Wastegated, turbocharged with intercooler
<b>Starting system</b>	Electric starting 12 V - 2 kW
<b>Alternator</b>	12 V - 150 A
<b>Cooling system</b>	Fresh water cooling with heat exchanger, and sea water cooled charge air cooler
<b>Lubrication system</b>	Totally enclosed, forced lubricating system with pump
<b>Can Bus</b>	Device net according to NMEA 2000 protocol
<b>Direction of rotation (crankshaft)</b>	Counter clockwise viewed from stern
<b>Dry weight without sterndrive</b>	250 kg (551 lbs)
<b>Environmental</b>	EPA Tier 2, RCD, SAV, BSO. Meets the EU comprehensive emissions regulation 2006
<b>Engine mounting</b>	Rubber type antivibration mounts

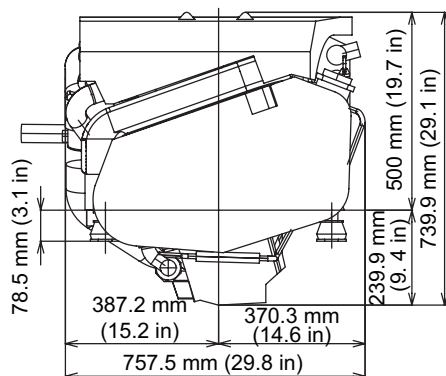
NOTE: Fuel condition: Density at 15°C = 0.84 g/cm<sup>3</sup>; 1kW = 1.3596 mhp = 1.3410 HP

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

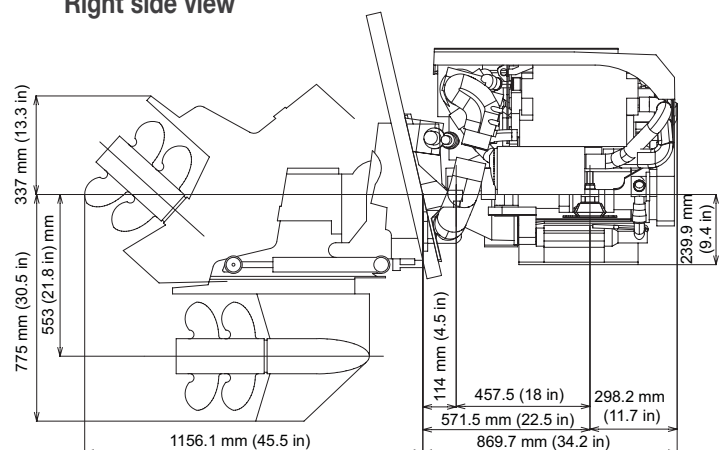
Technical data is according to ISO 8665 / 3046

**Dimensions** (For detailed line-drawings, please refer to our web-site: [www.yanmarmarine.com](http://www.yanmarmarine.com) or contact your supplier)

### Front view

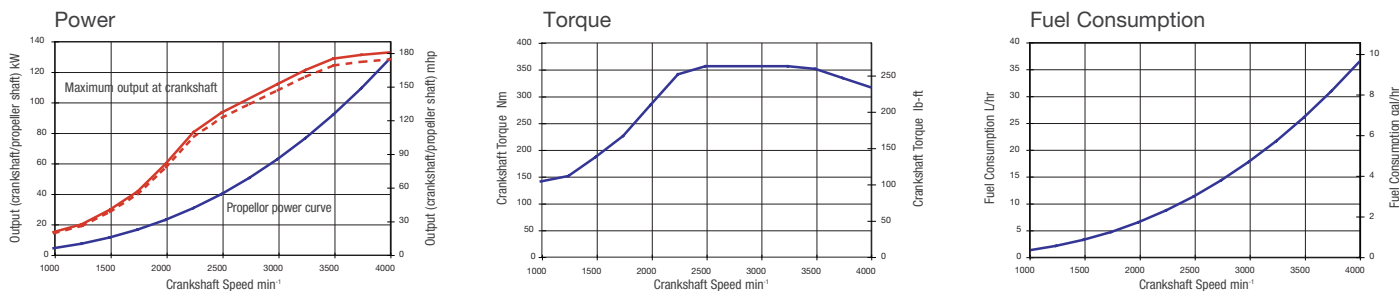


### Right side view



4BY180Z w/ BravoX-3 Sterndrive

## Performance Curves (Output is according ISO 8665 - Output includes +/- 3% tolerance)

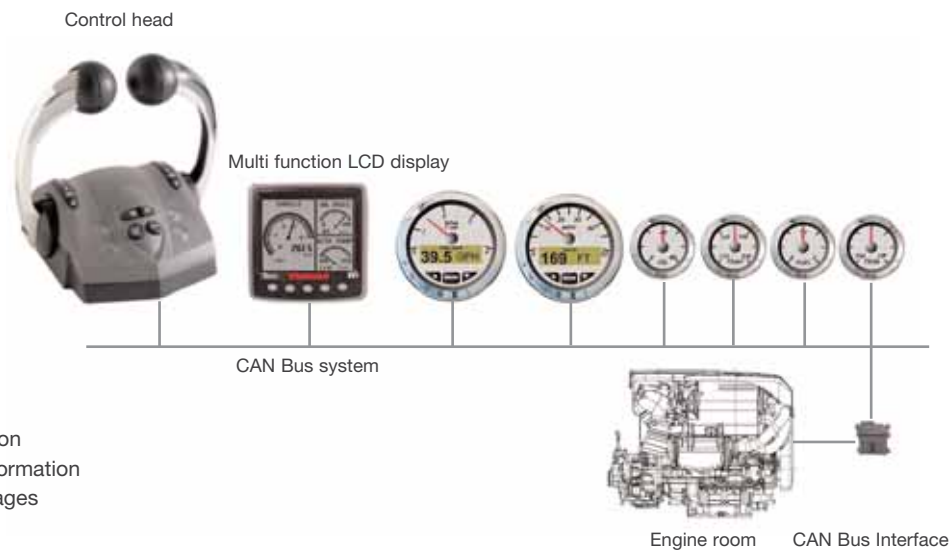


## Yanmar & Mercruiser sterndrive set Engine

Model	"Mercruiser" Bravo Sterndrive series				
Type	Bravo X-3				
Dry weight	98 kg (216 lbs)				
Reduction ratio (fwd/asn)	1,50/1,50	1,65/1,65	1,81/1,81	2,00/2,00	2,20/2,20
Propeller speed (fwd/asn)	2667/2667	2424/2424	2210/2210	2000/2000	1818/1818
Direction of rotation (propeller shaft - fwd)	Clockwise & counter clockwise viewed from stern				
Dry weight engine with sterndrive	348 kg (767 lbs)				
Length engine without sterndrive	870 mm (34 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



Multi function LCD display:

- engine information
- maintenance information
- diagnosis messages

## Accessories

### Standard Package

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

- Exhaust mixing elbow (L-type)

### Optional

- High riser mixing elbow
- Exhaust side dipstick
- Glow plug controller and related parts

- Dual top mount Teleflex control head (throttle 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