



MARINE COMMON RAIL ENGINES

6LPA Series - STZP2 / ST

Configuration	In-line, 4-stroke, vertical, water-cooled d	iesel engine				
Max. output at crankshaft	*220 kW@3800 rpm **232 kW@3800 rpm	[299 mhp@: [315 mhp@:]]				
No. of cylinders	6 cylinder					
Displacement	4.164 L	[254 cu in]				
Bore x stroke	94 mm x 100 mm	[3.70 in x 3.94 in]				
Aspiration	Turbocharged & intercooled					
Combustion system	Direct, 2-Stage injection					
Starting system	Electric starting 12V - 2.5 kW					
Engine management	Mechanical					
Cooling system	Fresh water cooling by centrifugal fresh water pump Seawater cooling by rubber impeller seawater pump					
Alternator	12V - 80A					
Lubrication system	Enclosed, forced lubricating system					
Engine lube oil specifications	API class: CD or higher, SAE grade: 10W-30 or 15W-40					
Direction of rotation at crankshaft	Counterclockwise viewed from stern					
Dry weight without gear	408 kg	[899 lbs]				
Engine dimensions† L x W x H	1148 x 862 x 784 mm					
Emission compliance	EU: RCD 1 , BSO II, IMO, EMC	US: EPA Tier 2				
Flywheel housing size	n/a					
Controls	Mechanical					

NOTE:

Fuel condition: Density at $15^{\circ}C = 0.84$ g/cm³; 1 kW = 1.3596 mhp = 1.3410 HP Technical data is according to ISO 8665: 2006/3046-1

- $^{\star}~$ Fuel temperature 25°C at the inlet of the fuel injection pump [ISO 3046-1]
- ** Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]

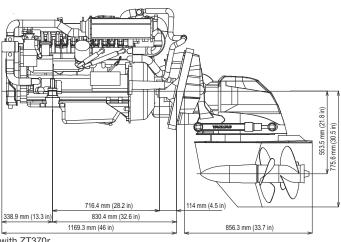
†Measured with through drive exhaust, without sterndrive (Dimensions may vary with other gears/elbow)

DIMENSIONS

Rear view

MAX.112 mm (4.4 in) MIN.92 mm (3.6 in) MIN.92 mm (3.6 in) MIN.92 mm (9.8 in) 30.4 mm (9.8 in) 734.4 mm (3.8 in) 734.4 mm (3.8 in)

Right side view

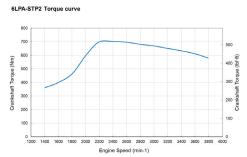


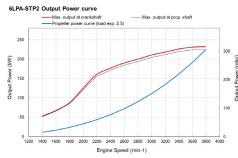
6LPA-STPZ2/C with ZT370r (Not to be used for engine installation)

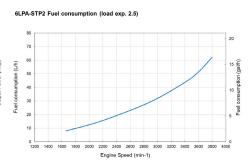




PERFORMANCE CURVES







MARINE GEAR / DRIVE*

Model	YANMAR ZT370		Bravo One X Diesel [†]		Bravo Two X Diesel [†]				
Clutch type	Hydraulic multi-disc		Mechanical cone clutch			Mechanical cone clutch			
Shift Control)	Mechanical / Electric [electro magnetic]		Mechanical			Mechanical			
Dry weight	100 kg [22	20 lbs] **	88 kg [194 lbs]			94 [207 lbs]			
Reduction ratio [fwd/asn]	1.97/1.97	2.18/2.18	1.36/1.36	1.50/1.50	1.65/1.65	1.22/1.22	1.58/1.58	2.08/2.08	2.47/2.47
Direction of rotation [viewed from stern]	Clockwise [rear prop] & counterclockwise [front prop]		Clockwise & counterclockwise		Clockwise & counterclockwise				
Lubrication system	Oil bath		Oil bath		Oil bath				
Lube oil specifications	Quicksilver High Perfo	ormance Gear Lube	Quicksilver High Performance Gear Lube		Quicksilver High Performance Gear Lube				
Max. lube oil capacity (L)	2.95	L	2.6 L			3.0 L			
Dry weight - engine & drive	508 kg [1	496 kg [1094 lbs]			502 kg [1107 lbs]				
Typical Trim Range	-6° to	-5° to 11°			-5° to 11°				
Trailer Limit	51	0	46°			46°			

^{*} Other marine gearboxes and configurations might be available upon request. Contact your local supplier for more information.

ACCESSORIES

Standard engine package

- Exhaust mixing elbow [L-type]
- Alternator 12V 80A
- Water separator
- 3G instrument panel

Optional accessories

- High-riser mixing elbow [instead of L-elbow]
- Flexible mounts
- Extension wire harness [3m, 5m, 10m, 20m]
- Sensor for VDO instrument panels
- SOLAS including Certificate [factory fit only]
- Air venting device for cooling water tank
- Lub oil evacuation pump

^{**}Dry weight includes propellers, cooler and brackets

[†] Not applicable for 6LPA-STZC