

Beta SMALL ENGINE RANGE Heat Exchanger Cooled

£ Pounds Sterling Date: September 2009 – Issue 3

Engine Types	Beta 10	Beta 14	Beta 16	Beta 20	Beta 25	Beta 28	Beta 35	Beta 38
Cylinders	2	2	2	3	3	3	4	4
BHP	10	13.5	16	20	25	25	35	38
RPM	3000	3600	3600	3600	3600	3600	2800	3600
Capacity cc's	479	479	599	719	898	1001	1498	1498

Price of our standard engine is complete with gearbox, control panel, flexible mountings - as detailed below **excluding VAT**. If these specifications do not cover your requirements then please ask and we will quote you.

STANDARD SPECIFICATION

Beta Marine heat exchanger cooled propulsion engine (Recreational Craft Directive emission compliant) with heat exchanger and header tank, water cooled exhaust manifold, fresh and sea water pumps, cast injection bend, mechanical fuel lift pump, fuel and oil filters, sump pump*, flywheel with heavy inertia ring for super smooth running at low rpm, flywheel housing, special quiet air intake filter, 12 volt starter, 65 amp battery charging alternator (40 amp on Beta 10 to Beta 25 with 'polyvee' belt and pulleys), shutdown solenoid energised to stop, control panel "A" with, keystack switch, pushbutton stop, warning lights and alarm buzzer for low oil pressure, high water temperature, no charge, and power on; with 3 m interconnection cable with multi pin plug and sockets to engine harness. Gearbox as indicated under section (a), (b), (c), (d) or (e) with nominal 2:1 reduction of the type shown, heavy duty engine feet with flexible mountings, flexible coupling disc on gearbox*, "Morse" type end fittings for speed and gear control, engine test certificate, operators manual. Red paint and packed on skid base with a 3 year warranty.

* IMPORTANT - Beta 10 specification does **NOT** include either the sump pump or flexible coupling disc.

1.	NOTE - All mechanical gearboxes must be used with a right-handed propeller in ahead.								
a.	Technodrive mechanical gearbox	3344	3582	3849	4193	4601	4779	5274	5593
b.	Newage PRM mechanical gearbox	3444	3683	3949	4292	4701	4880	5381	5700
c.	Newage PRM 150 hydraulic gearbox	N/A	N/A	N/A	N/A	N/A	5651	6104	6265
d.	Kanzaki 7° down angle mechanical gearbox	N/A	4083	4340	4672	5065	5235	5434	5589
e.	ZF V drive gearbox	N/A	5647	5865	5963	6275	6558	7199	7299
f.	Bobtail engine with drive plate, housing (less gearbox)	N/A	3166	3434	3782	4177	4371	4783	4964
g.	Bobtail engine with drive plate, housing (less gearbox) to suit Borg Warner Velvet Drive	N/A	N/A	N/A	N/A	N/A	4843	5256	5496
h.	Allowance for keel cooling, with dry exhaust stub.	(192)	(192)	(198)	(198)	(203)	(208)	(213)	(213)

PROPELLERS	12"x9"	12"x9"	13"x8"	13"x9"	14"x8"	14"x9"	16"x11"	16"x8"
A general guidance for propeller dimensions in inches – based upon 3 blade RH rotation and reduction ratio 2:1. For accurate guidance please provide us with full boat details.								

GEARBOX OPTIONS		Beta 10	Beta 14	Beta 16	Beta 20	Beta 25	Beta 28	Beta 35	Beta 38	
The following gearbox options can be fitted at the extra cost over the standard box already included in item 1.										
Technodrive mechanical gearbox										
a.	TMC 40	2.00 : 1	Incl.	Incl.	Incl.	Incl.	Incl.	N/A	N/A	
		2.60 : 1	Incl.	Incl.	Incl.	Incl.	N/A	N/A	N/A	
	TMC 60	2.0:1 or 2.45:1 or 2.83:1	N/A	324	324	324	324	324	Incl.	Incl.
	TMC 60 Oil cooler for running LH in ahead		N/A	96	96	96	96	96	96	96
Newage PRM mechanical gearbox										
b.	PRM 80	2.04:1	Incl.	Incl.	Incl.	Incl.	Incl.	N/A	N/A	
		2.5:1	Incl.	Incl.	Incl.	Incl.	Incl.	N/A	N/A	
	PRM 120	2.04:1 or 2.50:1 or 2.94:1	N/A	N/A	N/A	N/A	N/A	241	Incl.	Incl.
Newage PRM hydraulic gearbox with special 2 stage "quiet" damper. (Free wheeling propeller when sailing)										
c.	PRM 150	2.09:1 or 2.82:1	N/A	N/A	N/A	N/A	N/A	Incl.	Incl.	Incl.
	PRM 260	1.96:1 or 2.94:1	N/A	N/A	N/A	N/A	N/A	859	859	859
Kanzaki mechanical gearbox with 7° down angle										
d.	TTMC35A-2	2.33:1	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.
		2.64:1	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.	N/A	N/A
ZF V drive gearbox										
e.	ZF 15 MIV	2.13:1 or 2.64:1 or 3.00:1	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.

OPTIONS - The following options are available and the prices indicated are the **extra** cost of these options over the standard specification with ABV panel.

2.	CONTROL PANELS								
a.	Control panel ABV - as panel A but including a tachometer and running hour recorder.	179	179	179	179	179	179	179	179
b.	Control panel ABVW - as panel ABV but fully waterproof sealed push buttons instead of keyswitch.	260	260	260	260	260	260	260	260
c.	Control panel B as start panel ABV - but including water temperature gauge.	219	219	219	219	219	219	219	219
d.	Control panel C as panel ABV - but including voltmeter, water temperature and oil pressure gauges.	343	343	343	343	343	343	343	343
e.	Extension loom together with starter motor relay on engine - price for 2m.	£56 basic + £22 per extra metre							

3.	SPECIAL ENGINE FEET								
a.	Manufactured to suit your existing engine bearers & shaft alignment/ installation (owner to provide required Dimensions on our drawing) Nett Price.	263	263	263	263	263	263	263	263
b.	Feet to suit an ' Atomic 4 ' installation Nett Price.	-	36	36	36	36	36	N/A	N/A
c.	Feet to suit a Vega installation Nett Price.	56	56	56	56	56	-	-	-
d.	West Sail rear feet Nett Price.	-	-	-	-	-	50	50	50

4.	FLEXIBLE COUPLINGS		Beta 10	Beta 14	Beta 16	Beta 20	Beta 25	Beta 28	Beta 35	Beta 38
a.	R&D Flexible coupling disc.	4" Flange	57	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.
b.		5" for PRM260	N/A	N/A	N/A	N/A	N/A	108	108	108
c.	Split boss steel clamp coupling (Std: 25mm & 1")	4" Flange	85	85	85	85	85	85	85	85
d.		5" for PRM260	N/A	N/A	N/A	N/A	N/A	109	109	109
The following couplings replace the standard R&D flexible coupling disc and split boss clamp coupling for 2:1 reduction gearboxes.										
e.	Centaflex type 12 bore up to 38mm – extra price		224	167	167	167	167	167	167	N/A
f.	Centaflex type 16 bore up to 40mm – extra price		N/A	251	251	251	251	251	251	251

5.	ENGINE MOUNTED OPTIONS									
a.	Calorifier connections fitted.		24	24	24	24	24	24	24	24
b.	'Aft' dipstick – short one		N/A	N/A	N/A	N/A	N/A	10	10	10
c.	Shallow sump fitted		105	105	105	105	105	111	115	115
d.	Sump drain pump fitted.		54	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.
e.	Stainless injection bend in place of cast one 50mm		66	66	66	66	66	66	66	66
f.	High rise injection bend (150 mm rise above centre of manifold) including lagging tape.		139	139	139	139	139	139	139	139
g.	High rise / Cross-over injection bend 50mm		142	142	142	142	142	142	142	142
h.	Rear facing Sea Water Pump		N/A	N/A	N/A	N/A	N/A	45	45	45
i.	Bilge Pump complete with Jabsco pump 1 inch manual clutch, belt, pulley, 2 metres of pipe and clips and fitted. (Must be used with shaft extension).		536	536	536	536	536	536	536	536
j.	Shaft Extension PTO – gear end 32mm		122	122	122	122	122	122	122	122
k.	Mounting for Sea Frost Compressor		N/A	507	507	507	507	405	405	405
l.	Brackets and special feet for conversion to Hybrid		N/A	N/A	N/A	N/A	347	347	347	347

6.	INSTALLATION KITS									
a.	Water inlet kit comprising 1 seacock with strainer and 2 metres of pipe with clips. (1" ID)		164	164	164	164	164	164	164	164
b.	Water cooled exhaust kit comprising 3 metres of exhaust hose, skin fitting, stainless steel clips.		175	175	175	175	175	175	175	175
c.	Wet exhaust silencer with clips.		84	84	84	84	84	84	84	84
d.	Antisiphon kit with airvent, 2m x 22mm hose & clips		132	132	132	132	132	132	132	132
e.	Flexible fuel pipe connections to engine (2 off).		37	37	37	37	37	37	37	37
f.	Fuel delivery kit comprising 5 metres of copper pipe with end fittings - from tank and to flexible pipe (e).		35	35	35	35	35	35	35	35
g.	Fuel leak off kit comprising 5 metres of copper pipe with end fittings - from flexible pipe (e) to fuel tank.		35	35	35	35	35	35	35	35
h.	Diesel fuel filter/water separators.		74	74	74	74	74	74	74	74
i.	Electric fuel lift pump.		68	68	68	68	68	68	68	68
j.	Remote oil filter either engine or for bulk head mounting		224	224	224	224	224	224	224	224
k.	Remote Header Tank kit supplied loose		165	165	165	165	165	165	165	165

7	ENGINE CONTROLS	Beta 10	Beta 14	Beta 16	Beta 20	Beta 25	Beta 28	Beta 35	Beta 38
a.	Single lever control head for speed and gearbox. Side mount.	99	99	99	99	99	99	99	99
b.	Control cable lengths from 3 – 7.5 metres in increments of 0.25 metres. Price for 3m length (each).	17	17	17	17	17	17	17	17
c.	Extra cost per cable 0.25 metres (2 cables required)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

8	ELECTRICAL OPTIONS	Minimum recommended battery size: 12 Volt battery 75 Ah (CCA 540A)							
a.	1 metre battery leads (2 off).	28	28	28	28	28	28	28	28
b.	Battery isolating switch	19	19	19	19	19	19	19	19
c.	12V Alternator 40 Amp	Incl.	Incl.	Incl.	Incl.	Incl.	N/A	N/A	N/A
d.	12V Alternator 65 Amp	N/A	N/A	N/A	N/A	N/A	Incl.	Incl.	Incl.
e.	Fitting flat polyvee belt and pulleys to standard alternator	Incl.	Incl.	Incl.	Incl.	Incl.	113	113	113
f.	Allowance for V belt drive with 40 Amp alternator	(65)	(65)	(65)	(65)	(65)	Incl.	Incl.	Incl.
g.	12V Alternator 70 amp in place of standard with Polyvee belt drive (No split charge relay included)	122	122	122	122	122	N/A	N/A	N/A
h.	12V Alternator 100 A in standard position with Polyvee belt drive (No split charge relay or diode included)	N/A	N/A	N/A	N/A	N/A	290	290	290
i.	Beta Controller (smart charger) to fit 100 amp alternator only	N/A	N/A	N/A	N/A	N/A	171	171	171
j.	12V Alternator 70 amp standard position with <u>insulated return</u> and polyvee belt drive	N/A	N/A	N/A	N/A	N/A	342	342	342
k.	2nd - 12V Alternator - 100 amps engine mounted.	N/A	N/A	N/A	N/A	N/A	455	455	455
l.	12V Split charging system for engine and domestic batteries – Voltage Sensitive Relay - 125 amp.	77	77	77	77	77	77	77	77
m.	Engine mounted Travel Power generator with 230 volt, single phase 50Hz, with new AC output panels – develops 230 volt output at variable engine speed in addition to standard battery charging alternator.								
	3.5kVA Travel Power including new remote panel	N/A	N/A	N/A	N/A	N/A	N/A	3377	3377
	5.0kVA Travel Power including new remote panel	N/A	N/A	N/A	N/A	N/A	N/A	4246	4246

9.	SAILDRIVE – Please refer to our Saildrive Price List for complete adaption kits to suit an existing Volvo/Yanmar saildrive leg.
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10.	Short voyage Spares Kit in a plastic box: Lubricating oil x 2, Fuel and Air Filters; Impellor, "O" Rings, standard polyvee / V-Belt, and Fuse.	107	107	107	107	107	99	99	99
11.	Engine Storage – beyond 6 months – requires Ensis and Calibration fluid protection.	36	36	36	36	36	36	36	36
12.	Sound deadening material: size 1.25m x 1m x 38mm – to be supplied in engine packing case and may be cut.	108	108	108	108	108	108	108	108
13.	Tri-wall packing on a wooden base	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.	Incl.
14.	Extra for Wooden Export packing case (Nett Price)	69	69	69	69	69	69	69	69
15.	2/3 Day Delivery UK Mainland (Nett Price) (For Scotland - Price on Application)	68	68	68	68	73	73	73	73

Prices and specifications are subject to amendment without notice. Information given is subject to our current conditions of Tender and Sale.