

onga[®]

TAKING WATER FURTHER

B and BM Series – Engine Drive Pumps for Water Transfer and Fire fighting



Owner's Manual

Should the installer or owner be unfamiliar with the correct installation or operation of this type of equipment, contact the distributor or manufacturer for correct advice before proceeding with installation or operation of the product



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Relax - you've bought an Onga ...

Congratulations on your decision to purchase an Onga product. Onga is one of the best known companies in its field, with a proud local and international reputation.

In fact, wherever people need to move water from one point to another - whether in leisure industry, horticulture, agriculture or in and around the home - Onga is a byword for reliability, value for money and technological innovation. So why does Onga lead its field? Here are a few simple reasons ...

1. Continual Product Improvement

Onga employ the best engineers both in Australia and around the world to develop new and better ways to pump and handle water.

2. Dedication to Quality

There is only one standard that we at Onga set ourselves for both product quality and the quality of our service. That standard is excellence ... to have no-one better than us at what we do ... nothing short of that is acceptable.

3. A Fair Price

Onga products are neither the cheapest nor the most expensive in their field. Our products do, on the other hand, always represent very good value for money - they always have and they always will.









4. Our Team of Dealers

We believe Onga's hand picked authorised dealer network throughout Australia and worldwide are second to none. We invest a huge sum training them and supporting them. They are your link to us, and we value their expertise and trust.

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1. Warnings:

	These instructions are a guide only. Users not familiar with pumping equipment should seek advice from people with experience in pump equipment and installation
	The pump operator must be provided with this owner's manual and the engine manufacturer's owner's manual. These must be read before operation and followed during operation.
	No oil is supplied with the engine. Oil must be added in accordance with the engine manufacturer's instructions
	Do not run the pump without liquid in the casing. Always fill the pump casing with liquid and prime the pump before use (see page 5). Do not allow the pump to continue running once the water supply is empty or has been shut off.
	Do not use the pump in an enclosed area – engine exhaust will build up and cause asphyxiation
	Do not operate the pump in an explosive environment or near combustible matter.
	Ensure the pump is on a stable footing before operating. Please refer to the engine manufacturer's owner's manual.
	After use, the engine will be very hot. Do not touch the engine. During use the engine will become very hot. Make sure that you do not touch the engine before it has completely cooled down.

2. Models and Technical Information

Pump Model	Hp Nominal	Engine Model	Suction (BSP) Male	3 Way Discharge (BSP) Male	Drain Plug (BSP) Male	Shaft Thread	Volume Fuel Tank	Fuel Type
B50H	5	Honda GC160	1.5"	1",1",1.5"	1/4	3/4" UNF	2.0 Litres	Petrol
B55H	5.5	Honda GX160	1.5"	1",1",1.5"	1/4	5/8" UNF	2.5 Litres	Petrol
B65H	6.5	Honda GX200	2"	1",1",2"	1/4	5/8" UNF	3.6 Litres	Petrol
B65HE	6.5	Honda GX200 (Electric Start)	2"	1",1",2"	1/4	5/8" UNF	3.6 Litres	Petrol
B90H	9	Honda GX270	2"	1",1",2"	1/4	1" UNF	6.0 Litres	Petrol
B90HE	9	Honda GX270 (Electric Start)	2"	1",1",2"	1/4	1" UNF	6.0 Litres	Petrol
B13HE	13	Honda GX390 (Electric Start)	2"	1",1",2"	1/4	1" UNF	6.5 Litres	Petrol
B48Y	4.8	Yanmar L48E	1.5"	1",1",1.5"	1/4	3/4" UNF	2.5 Litres	Diesel
B70Y	7	Yanmar L70AE	2"	1",1",2"	1/4	1" UNS	3.5 Litres	Diesel
B70YE	7	Yanmar L70AE (Electric Start)	2"	1",1",2"	1/4	1" UNS	3.5 Litres	Diesel
B10YE	10	Yanmar L100AE (Electric Start)	2"	1",1",2"	1/4	1" UNS	5.5 Litres	Diesel
B06W	-	3/4" WET END	1.5"	1",1",1.5"	1/4	3/4" UNF	-	-
BM55H	5.5	Honda GX160	1.5"	1",1",1.5"	1/4	5/8" UNF	2.5 Litres	Petrol
BM65H	6.5	Honda GX200	2"	1",1",2"	1/4	5/8" UNF	3.6 Litres	Petrol
BM65HE	6.5	Honda GX200 (Electric Start)	2"	1",1",2"	1/4	5/8" UNF	3.6 Litres	Petrol
BM90H	9	Honda GX270	2"	1",1",2"	1/4	1" UNS	6.0 Litres	Petrol
BM90HE	9	Honda GX270 (Electric Start)	2"	1",1",2"	1/4	1" UNS	6.0 Litres	Petrol
BM13HE	13	Honda GX390 (Electric Start)	2"	1",1",2"	1/4	1" UNS	6.5 Litres	Petrol
BM70Y	7	Yanmar L70AE	2"	1",1",2"	1/4	1" UNS	3.5 Litres	Diesel
BM70YE	7	Yanmar L70AE (Electric Start)	2"	1",1",2"	1/4	1" UNS	3.5 Litres	Diesel
BM10YE	10	Yanmar L100AE (Electric Start)	2"	1",1",2"	1/4	1" UNS	5.5 Litres	Diesel
BM06W	-	3/4" WET END	1.5"	1",1",1.5"	1/4	3/4" UNF	-	-

TECHNICAL DATA

Priming Port: 2" BSP
 Max Working Pressure 1300 kpa
 Water temp range 5°C – 40°C
 Max amb temperature 40°C as per engine manufacturer's data

OPTIONAL ACCESSORIES

- Rollover Frames
 - Part Number 411010 [up to 9HP Petrol]
 - Part Number 411020 [9HP +, and diesel]
- Suction Strainer
 - Part Number 503271
- Ball Valves
 - 1" BSP Part Number 703033
 - 1 1/2" BSP Part Number 703031
 - 2" BSP Part Number 703030
- Fire Fighting Kits Part Number 701124 *comprising*
 - 1 X 4 metre grey PVC Suction Hose 38mm I.D,
 - 2 X 6 metre Yellow PVC Delivery Hose 20mm I.D,
 - 2 X Adjustable Fire Nozzles,
 - Brass Nuts & Tails
 - Suction Strainer PVC
 - Stainless Steel Hose Clamps.

3. APPLICATION

If the pump is to be used for pumping liquids other than water, ask your pump supplier for advice as to which model is best suited to your needs. Special models with viton elastomers are available for pumping aggressive liquids.

4. INSTALLATION

a) Preparation for operation

Read these instructions first.

Inspect your pump for shipping damage. Report any damage to your Onga dealer.

Fill the engine crankcase with oil, as per the engine manufacturer's owner's manual.

Fill the fuel tank with **unleaded petrol** (petrol engine models) or **diesel** (diesel engine models), as per the engine owner's manual.

Make sure the suction piping is free of air leaks and is laid so that there can be no air locks (see C) Suction)

Fit a strainer to the suction line

b) Pump Protection

Warranty of these pumps is void unless they are operated in accordance with this owner's manual and the enclosed engine manufacturer's owner's manual. The pumps should be protected from the weather, floods, chemicals, dust, vermin, insects etc. If the pump has a fixed location; it should be housed in a weather proof, well-vented enclosure so that engine heat and exhaust can escape. When bolted down flexible mounts should be used. Depending on application they do not have to be bolted down.

c) Suction

To maintain optimum performance from your pump, the suction pipe should be:

- **Kept to the shortest length possible – place the pump as close to the water as possible.**
- Reinforced crush resistant (non-collapsible) hose or pipe.
- All fittings should be air tight
- Flexible pipes should rise gently from the water source to the suction/inlet port without excessive dips and sharp angles, to avoid air locks.
- Pipes should be equal to or larger than the diameter of the suction/inlet port.
- Suction strainers should be fitted to prevent foreign matter entering the pump.
- Where practicable, the installation and use of a suction float will aid in the performance of your pump, by keeping suction away from the debris on the bottom of the dam or river.
- **Ensure that the suction is completely submersed.**

4. INSTALLATION (continued)

d) Discharge

The length and diameter of the discharge hoses will affect the pressure and flow rate at which your pump operates. Care should be taken when selecting discharge pipe/hoses and fittings. Pressure ratings of all components must exceed the maximum pressure of the pump by an appropriate safety factor. We recommend the use of the Onga's own hose kit

- Suitable for either flexible or rigid piping.
- Models include 1" BSP or NPT side outlets.
- Models include 1 ½" or 2" BSP or NPT front outlets.

All have 2" priming inlets

5. OPERATION



Ensure that your pump is filled with water before operating.

Connect suction piping, and ensure that the suction is completely submerged. Remove the priming plug and fill the pump with water. Your pump is equipped with a suction flap valve and is capable of drawing air out of normal size suction pipes or hoses.

Replace the priming plug – screw it down tightly to seal.

Follow Engine Manufacturer's Instructions for starting the engine.

If only a small amount of water is pumped, and then flow stops, switch off the engine and check the suction pipe/hose assembly for possible air leaks. Repair leaks before starting priming procedure again.

Blazemaster single stage pumps, when filled with water, will gradually draw air out of the suction line to a maximum prime depth of 6m. The Blazemaster Twin models will prime to a maximum depth of 3.5m. If priming a long or larger diameter pipe, additional water may have to be added to the pump at 3-minute intervals. Switch off the engine each time.



Do not remove any caps while the pump is operating.

6 Service & Maintenance



Pumping water containing solids will reduce the life of the pump, and may affect warranty



Pumping chemicals or agricultural products may affect the warranty. Please ask your Onga dealer about viton seals.



Do not pump hydrocarbons with this pump



The pump should be drained after use and flushed out with clean, fresh water. Flushing will extend the pump's life.



Store your pump in a dry location



Service the engine as recommended in the engine manufacturer's owner's manual



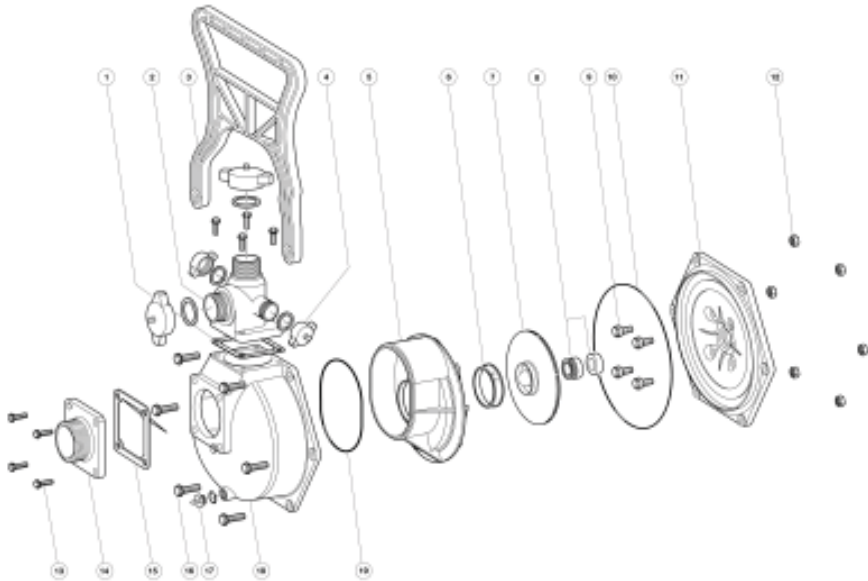
Drain the fuel if the pump will not be used for some time (more than two months). The engine will be difficult or impossible to start if the fuel is stale.



Do not refuel the engine while the pump is operating.

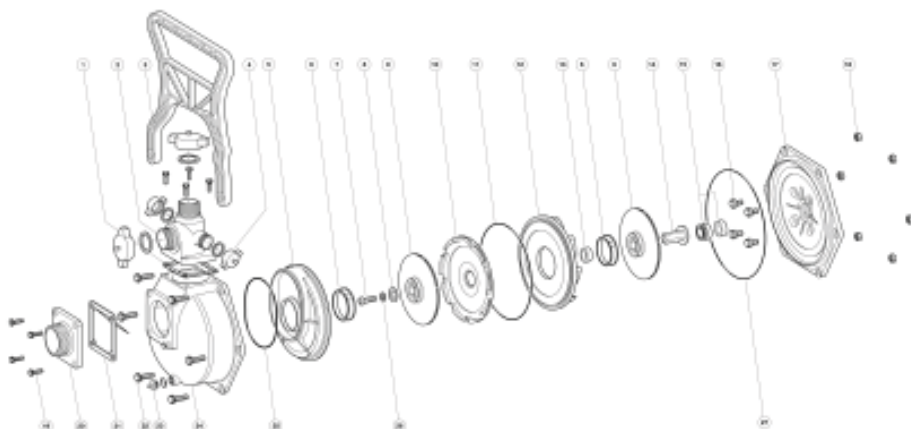
Always use original service parts as supplied and recommended by Onga and the engine manufacturer. Failure to do so may void warranty.

7 Exploded diagram- Internal parts BLAZEMASTER



Item	Description	Qty	Item	Description	Qty
1	Gasket - Discharge	1	10	O'ring - Casing	1
2	Flange - Discharge 1½" BSP	1	11	Yoke ¾" Blazemaster	1
	Flange - Discharge 2" BSP	1		Yoke 1" Blazemaster	1
3	Handle	1	12	Nuts - Casing (Set/12)	6
4	Cap & Washer 2" BSP	As Required		Nut - Bush 3/8" (Handle)	2
	Cap & Washer 1.5"BSP	As Required	13	Screw (Set/8) M8	8
	Cap & Washer 1"BSP	2	14	Flange - Suction 1 1/2" BSP	1
5	Diffuser	1		Flange - Suction 2" BSP	1
6	Wear Ring	1	15	Gasket - Clacker Assy	1
7	Impeller - ¾" Shaft	1	16	Bolts Casing	6 (4 if handle)
	Impeller - 5/8" Shaft	1		Bolts Casing	2
	Impeller - 1" Shaft	1	17	Plug ¼" Drain (Including Oring)	1
8	Seal - Mechanical ¾"	1	18	Casing	1
	Seal - Mechanical 1"	1	19	O'ring Difuser	1
	Spacer - Yoke Bolt (Not Shown)	4	NS	Strap - Cap (Triple)	1
9	Bolt & Seal Kit (Set/12)	4	NS	Anti Vibration Feet (Set/2)	1
	Bolt & Seal Kit (Set/12) B48Y Only	4	NS	Bracket Support	1

7 Exploded diagram- Internal parts BLAZEMASTER TWIN



Item	Description	Qty	Item	Description	Qty
1	Gasket - Discharge	1	15	Stub Shaft 1"	1
2	Flange - Discharge 1½" BSP	1	16	Seal - Mechanical ¾"	1
	Flange - Discharge 2" BSP	1		Seal - Mechanical 1"	1
3	Handle	1		Spacer - Yoke Bolt (Not Shown)	4
	Nut - Bush 3/8" (Handle) Not shown	2	16	Bolt & Seal Kit (Set/12)	4
4	Cap & Washer 2" BSP	As Required	17	Yoke ¾" Blazemaster	1
	Cap & Washer 1½"BSP	As Required		Yoke 1" Blazemaster	1
	Cap & Washer 1"BSP	2	18	Nuts Casing (Set/12)	6
5	Suction Cover	1	19	Screw (Set/8) M8	8
6	Wear Ring	2	20	Flange - Suction 1½" BSP	1
7	Screw - Impeller	1		Flange - Suction 2" BSP	1
8	Washer Impeller M10 x 30	1	21	Gasket - Clacker Assy	1
	Washer Impeller M10 x 40(Not Shown)	1	22	Bolts - Casing	6 (4 if handle)
9	Impeller - 5/8" Shaft	2		Bolts - Casing	2
	Impeller - 1" Shaft	2	23	Plug ¼" Drain (Including Oring)	1
10	Diffuser - Interstage	1	24	Casing	1
11	O'ring - Diffuser Interstage	1	25	O'ring Suction Cover	1
12	Diffuser - 2nd Stage	1	26	Washer (Spring) - Impeller	1
13	Spacer Sleeve 5/8" & ¾" Shaft	1	27	O'ring - Casing	1
	Spacer Sleeve 1" Shaft	1	NS	Strap - Cap (Triple)	1
14	Stub Shaft 5/8"	1	NS	Anti Vibration Feet (Set/2)	1
NS	Bracket Support	1			

Onga Product Warranty

Onga warrants that, when this product is used for the purpose it was designed, is correctly housed and vented against weather, vermin, dust etc., that it will be free of material and manufacturing defects at the time of the original purchase.

This warranty is limited to the cost of the product and does not cover third party costs including the costs of electricians, plumbers, etc. unless authorised by Onga pumps.

TERMS AND CONDITIONS APPLICABLE INTERNATIONALLY

- How long the warranty is effective Internationally**
- 1) This Onga product is warranted for 12 months for all parts from the date of the first consumer purchase. Should any parts fail as a result of such defects within the specified period, the part will be replaced free of charge. (This does not include travel charges, removal and reinstallation charges.)

TERMS AND CONDITIONS APPLICABLE IN AUSTRALIA AND NEW ZEALAND

- 1) YOU SHOULD CAREFULLY READ THE INSTRUCTIONS SUPPLIED PRIOR TO USING THIS ONGA PRODUCT.
This product is to be installed and operated in accordance with the instructions provided. This warranty will not apply if it is used in a manner otherwise than in accordance with the instructions.

What the warranty covers:

Onga warrants its products to be free of defects in material and workmanship during the warranty period. If a product proves to be defective in material or workmanship during the warranty period, then Onga will, at its sole option repair or replace the product with a like product. Replacement product or parts may include re-manufactured or refurbished parts or components.

How long the warranty is effective:

- 1) **This Onga product is warranted for 12 months for all parts from the date of the first consumer purchase.**
- 2) **Where this Onga product is sold for commercial application as defined in the relevant Trade Practices and Consumer Protection legislation the warranty shall be for a period of six months from the date of purchase by the end user.**
- 3) **Ancillary equipment including but not limited to plastics and metal fittings, electrical controls (including touch pads), bladders, pressure switches, filter cartridges, pressure gauges, etc. shall be warranted for a period of twelve months only in relation to consumer applications and six months in relation to commercial applications.**

Who the warranty protects:

This warranty is valid only for the consumer purchaser.

What the warranty does not cover:

- 1) **Damage, deterioration or malfunction resulting from:**
 - a) accident, misuse, negligence, fire, water, lightning, or other acts of nature, unauthorised product modification or failure to follow instructions supplied with the product;
 - b) repair or attempted repair by anyone not authorised by Onga;
 - c) any damage to the product due to shipment;
 - d) removal or installation of the product;
 - e) causes external to the product such as electric power fluctuations or failure;
 - f) use of supplies or parts not meeting Onga specifications;
 - g) normal wear and tear;
 - h) water ingress or exposure to abnormal corrosive conditions or run in dry conditions;
 - i) any other cause which does not relate to a product defect.
- 2) **Damage caused to the product as a consequence of use of another manufacturer's product used in conjunction with Onga and affiliate companies.**
- 3) **This warranty does not cover such products as combustion engines, mechanical seals or other component parts of units not manufactured by Onga, but where possible Onga will make available to purchaser the benefit of any warranty of that manufacturer.**
- 4) **This guarantee does not cover underwater light bulbs, underwater lights will only be warranted if wiring is to approved standards, and an approved transformer incorporating thermistors has been used, running the light not submerged in water will void warranty.**

Onga Product Warranty (Continued)

- 5) Hydrostatic relief valve supplied separately or incorporated in products are sold with the express understanding that such products offer limited hydrostatic relief and no offer is made or implied as to the suitability of such products for a specific application as their condition at the time of sale are unknown and beyond Onga's control. It is the responsibility of the installer to ensure that the performance of the valve meets the required application.
- 6) Swimming pools or spa equipment will not be warranted where the Langelier Saturation Index 'pH' range is outside 7.2 to 7.6 and they have not been regularly treated with chlorine or bromine based sanitising systems, or other recognised sanitising systems.

Spare Parts:

Spare parts are usually stocked for a reasonable period of time following last production.

Onga does not warrant that spare parts will be made available for the whole of the reasonable period and reserves its right to cease supplying spare parts or providing facilities for repair of spare parts in circumstances which are beyond its control including the requirement to remove spare parts from sale as a consequence of changes in the law or otherwise as it deems fit.

How to get service:

In Australia please contact 1800 664 266

In New Zealand please contact 0800 664 269

Claims under this warranty must give evidence of date of purchase, model and serial number of the product and the claimants name, address and telephone number.

- 1) To obtain warranted service, you will be required to provide to either Onga state office or recommended service agent:-
 - a) the product;
 - b) confirmation in writing specifying the nature of your claim;
 - c) proof providing date of original purchase;
 - d) full contact details including name and address;
 - e) the serial number of the product if any.
- 2) The product is to be forwarded by the customer freight paid to Onga.
Infield service by an authorised Onga Service Agent will incur a travel, removal & reinstallation fee to adjudicate on warranty issues.
Authorised warranty will be free of charge for the first 12 month period from date of the first consumer purchase.
- 3) Warranty service work will be denied or suspended, on equipment not readily accessible to service personnel, that is products that are behind barriers, tiled or bricked in, installed in roofs or second storey external walls including inaccessible power points.
- 4) Any service of any product which is found to be faulty due to abuse, misuse or improper installation will be charged to the owner at the service agents current servicing

Limitation of implied warranties:

THERE ARE NO WARRANTIES, EXPRESSED OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION CONTAINED HEREIN INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Exclusion of damages:

ONGA'S LIABILITY IS LIMITED TO THE COST OF REPAIR OR REPLACEMENT OF THE PRODUCT. ONGA SHALL NOT BE LIABLE FOR:

- 1) DAMAGE TO OTHER PROPERTY CAUSED BY ANY DEFECTS IN THE PRODUCT, DAMAGES BASED UPON INCONVENIENCE, LOSS OF USE OF THE PRODUCT, LOSS OF TIME, LOSS OF PROFITS, LOSS OF BUSINESS OPPORTUNITY, LOSS OF GOODWILL, INTERFERENCE OF BUSINESS RELATIONSHIPS, OR OTHER COMMERCIAL LOSS, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
- 2) ANY OTHER DAMAGES, WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE.
- 3) ANY CLAIM AGAINST THE CUSTOMER BY ANY OTHER PARTY.

Effective law:

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Nothing in this warranty limits or restricts, or is intended to derogate from, any right or remedy which the purchaser or ultimate user of the product may have pursuant to Australian state and/or Australian federal consumer protection legislation, New Zealand Sale of Goods Act, Consumer Guarantees Act, Fair Trading Act or any other relevant and applicable New Zealand legislation or authority and where necessary shall so be read and construed.