

Established over 40 years ago, Blagdon are committed to producing a comprehensive range of high quality, easy to use, pond equipment. An ongoing programme of research and development ensures excellent performance and value for all their customers. This product excellence is demonstrated by Blagdon's award winning range of water gardening equipment. As a result Blagdon's reputation for quality is unrivalled amongst experienced pond gardeners and retailers alike.

**Blagdon - The Pond Masters**  
The name you can rely on

[www.blagdonthepondmasters.co.uk](http://www.blagdonthepondmasters.co.uk)

Interpet, Dorking, Surrey, RH4 3YX



THE POND MASTERS GUIDE TO  
**FORCE=HYBRID**  
SOLIDS HANDLING  
WATER GARDEN PUMP

**5000/6000**  
**8000/10000**  
**14000/16000**



THE POND MASTERS GUIDE TO  
**FORCE-HYBRID**  
SOLIDS HANDLING  
WATER GARDEN PUMP

5000/6000/8000/10000/14000/16000

Congratulations on buying a Blagdon Force-Hybrid solids handling water garden pump. Force-Hybrid pumps have been manufactured with the highest quality materials to deliver durable, powerful and economical pumping. The range of fittings and advanced features included, have been researched and designed to provide outstanding water garden performance. Please take the time to carefully read this pond master guide so you gain the maximum safety and benefits from this product.

**IMPORTANT**

Please attach proof of purchase to this manual and file in a safe place.

**IMPORTANT**

**FAULTS - PROBLEMS PROCEDURE**

Before returning your pump to your dealer or contacting our Consumer Advice Department, please carry out the following steps. This will solve most problems quickly and easily.

1. Ensure electrical procedure has been followed fully. Check fuse and any cable connectors/switch boxes.  
**NOTE:** If the pump has overheated the thermal overload will temporarily switch off the pump.
2. (a) Follow routine maintenance and check pump. (b) Follow monthly maintenance and check pump. (c) Follow troubleshooting guide. (d) Follow annual maintenance guide.
3. Return pump to point of purchase for inspection and advice (You may need proof of purchase).

**Consumer Advice contact details**

**Interpet (Blagdon) Consumer Advice Department**

Vincent Lane, Dorking, Surrey RH4 3YX

**Telephone:** 0845 226 7437

(Monday to Friday 10am to 1pm except Bank Holidays - Times may vary)

**Fax:** 01306 876712

**E-mail:** [customercare@interpet.co.uk](mailto:customercare@interpet.co.uk)

[www.blagdonthepondmasters.co.uk](http://www.blagdonthepondmasters.co.uk)

**GUARANTEE**

This product is guaranteed against defects in material and workmanship for 3 years from the date of purchase, under normal usage. **The guarantee DOES NOT APPLY in case of improper use,** negligence, lack of maintenance or accidental damage either to the pump or to the impeller or impeller shaft. If the pump fails due to a manufacturing fault within this period it will be either repaired or replaced free of charge. Liability is limited to replacement of the faulty product only, no other costs will be reimbursed.

This guarantee is not transferable and does not affect your statutory rights. This guarantee does not confer any rights other than those expressly set out above. Excludes the sponge pre-filter, which should be replaced every six months and the impeller, which may require replacing annually. If any parts need replacing, spares are available from your retailer.

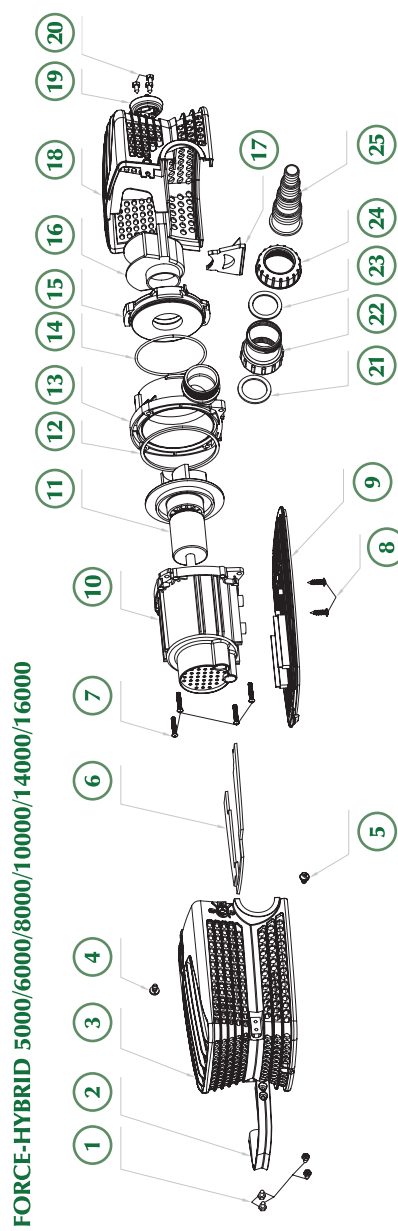
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## GETTING TO KNOW YOUR FORCE-HYBRID PUMP



## GETTING TO KNOW YOUR FORCE-HYBRID PUMP

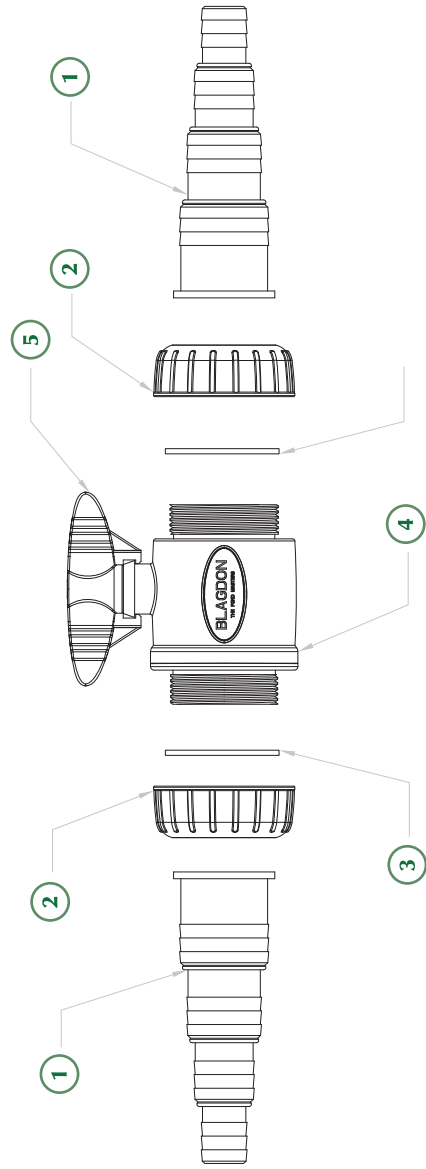


No.	Part Description	Code	No.	Part Description	Code
1	Handle screws		12	Impeller housing seal 5000-6000-8000-10000	in part 14
2	Handle		13	Impeller housing seal 14000-16000	in part 14
3	Back cage		14	Impeller housing 14000-16000	1050807
4	Cage locks		15	Impeller cover seal 5000-6000-8000-10000	1050814
5	Back cage divider 5000		16	Impeller cover seal 14000-16000	1050838
	Back cage divider 6000-8000-10000		17	Impeller cover 14000-16000	1050845
	Back cage divider 14000-16000		18	Inlet valve	in part 15
7	Impeller housing screws	in part 11	19	Valve locator	in part 15
8	Motor location screws	in part 11	20	Front cage	
9	Cage base		21	Intake valve switch	
10	Motor Housing		22	Intake valve switch screws	
11	Impeller assembly 5000	1050722	23	Outlet cage adaptor seal	
	Impeller assembly 6000	1050739	24	Outlet cage adaptor	
	Impeller assembly 8000	1050746	25	Inlet / outlet lock nut seal	1050821
	Impeller assembly 10000	1050753		Inlet / outlet lock nut	
	Impeller assembly 14000	1050760		1 1/2 - 1 1/4" - 1" - 3/4" multi Hostail	
	Impeller assembly 16000	1050777			

Please note: Spares / replacements of all of the parts / fittings listed above are available from your retailer.



**FORCE-HYBRID - INLINE FLOW CONTROL VALVE EXPLODED**



No.	Part Description	Spare Code
1	1 1/2" - 1 1/4" - 1" - 3/4" multi Hose tail	1050616
2	Inlet / outlet lock nut	
3	Inlet / outlet lock nut seal	
4	Ball valve	
5	Flow control valve handle	

**GETTING TO KNOW YOUR FORCE-HYBRID PUMP**

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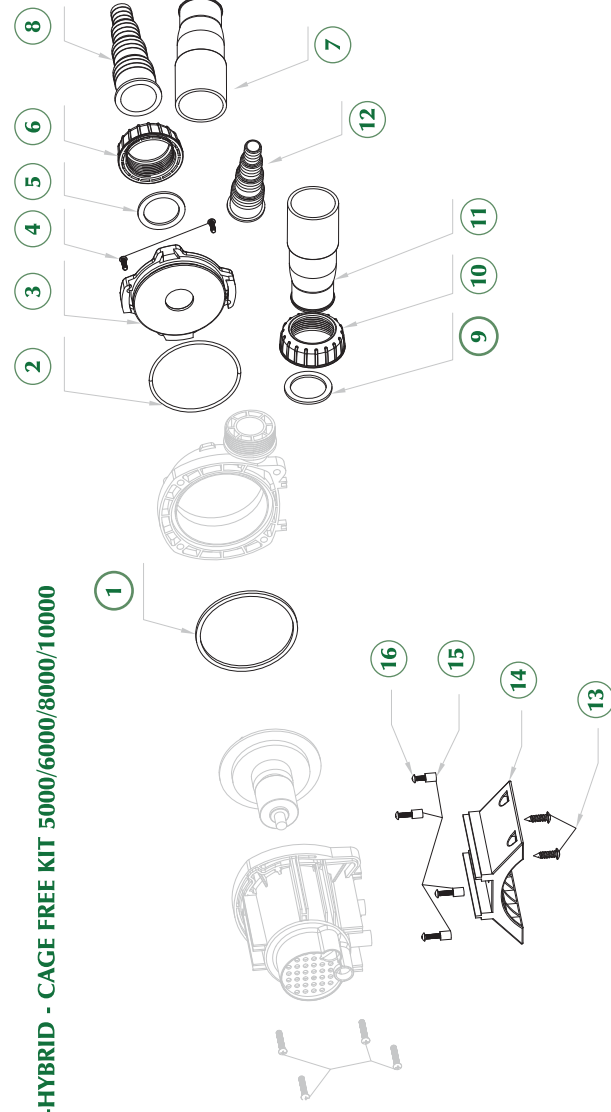
**PUMP - LIFT CHART**  
**FORCE-HYBRID PUMP FLOW RATE IN LITRES/HOUR**

HEAD (M)	MEDIUM FH5000	MEDIUM+ FH6000	LARGE FH8000	LARGE+ FH10000	XLARGE FH14000	XLARGE+ FH16000
5.00						1500
4.50			800	1800	2000	3000
4.00			1800	2500	3000	4200
3.50			2500	3340	4290	5600
3.00		1200	3500	4350	5700	6400
2.50	1100	2000	4180	5050	7200	7730
2.00	2050	2880	5000	5900	8360	9250
1.50	2735	3575	5590	6700	9570	10625
1.00	3460	4360	6220	7520	10750	12000
0.50	4100	5100	6800	8400	12000	13320
0.00	4650	5800	7300	9200	12900	14900

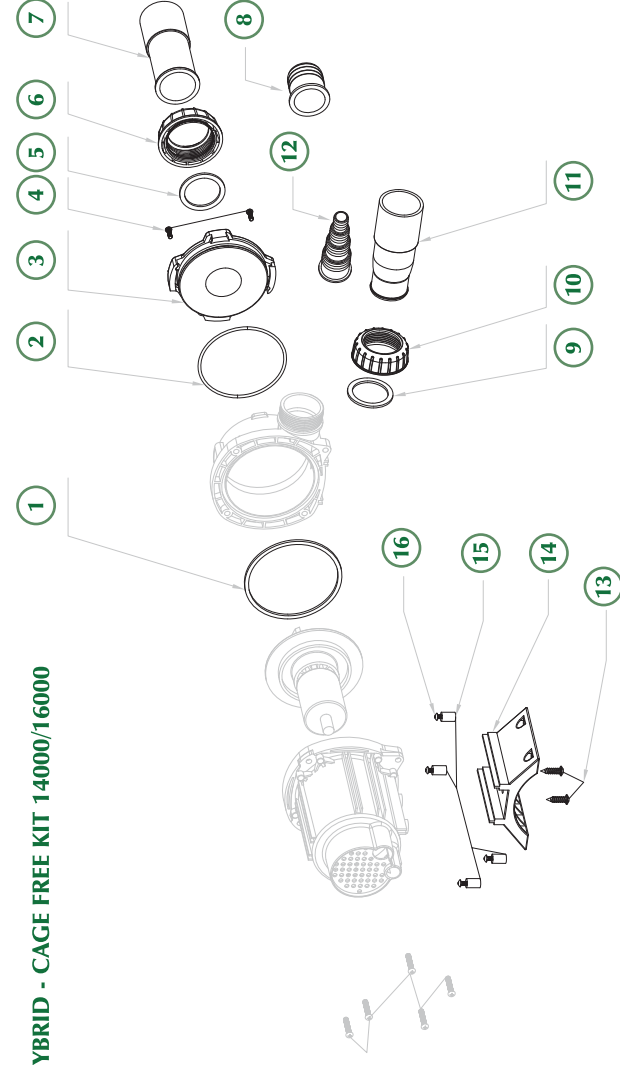
Flow is given as optimum rate

**Technical Specification and Performance**

MODEL	MEDIUM FH5000	MEDIUM+ FH6000	LARGE FH8000	LARGE+ FH10000	XLARGE FH14000	XLARGE+ FH16000
Cable Fitted	10m	10m	10m	10m	10m	10m
Voltage	230V	230V	230V	230V	230V	230V
Hertz	50Hz	50Hz	50Hz	50Hz	50Hz	50Hz
Watts	77W	105W	140W	185W	220W	260W
Safety Rating	IPX8	IPX8	IPX8	IPX8	IPX8	IPX8
Maximum Flow	4650 ltr/hr 1023 gal/hr	5800 ltr/hr 1276 gal/hr	7300 ltr/hr 1606 gal/hr	9200 ltr/hr 2024 gal/hr	12900 ltr/hr 2838 gal/hr	14900 ltr/hr 3278 gal/hr
Maximum Lift	3m 9'8"	3.5m 11'5"	4.8m 15'7"	5.5m 18'	4.8m 15'7"	5.5m 18'

**FORCE-HYBRID - CAGE FREE KIT 5000/6000/8000/10000**

**GETTING TO KNOW YOUR FORCE-HYBRID PUMP**

No.	Part Description	No.	Part Description	Spare Code
1	Impeller housing seal 5000-6000-8000-10000	9	Inlet / Outlet lock nut seal	
2	Impeller cover seal 5000-6000-8000-10000	10	Inlet / outlet lock nut	
3	Cage free kit Impeller cover 5000-6000-8000-10000	11	Inlet outlet solvent weld female 1 1/2 fitting	
4	Cage free kit Impeller cover locating screws	12	1 1/2 - 1 1/4" - 1" - 3/4" multi Hose tail	1050784
5	Inlet / Outlet lock nut seal	13	Motor location screws	
6	Inlet / outlet lock nut	14	Cage free motor foot	
7	Inlet outlet solvent weld female 1 1/2 fitting	15	Foot location wall plugs	
8	1 1/2 - 1 1/4" - 1" - 3/4" multi Hose tail	16	Foot location screws	

**FORCE-HYBRID - CAGE FREE KIT 14000/16000**

**GETTING TO KNOW YOUR FORCE-HYBRID PUMP**

No.	Part Description	No.	Part Description	Spare Code
1	Impeller housing seal 14000-16000	9	inlet / Outlet lock nut seal	
2	Impeller cover seal 14000- 16000	10	Inlet / outlet lock nut	
3	Cage free kit Impeller cover 14000-16000	11	Inlet outlet solvent weld female 1 1/2 fitting	
4	Cage free kit Impeller cover locating screws	12	1 1/2 - 1 1/4" - 1" - 3/4" multi Hose tail	1050791
5	14000-16000 wide bore Inlet lock nut seal	13	Motor location screws	
6	14000-16000 wide bore Inlet lock nut	14	Cage free motor foot	
7	14000-16000 wide bore Inlet solvent weld female 1 1/2 fitting	15	Foot location wall plugs	
8	14000-16000 1 1/2 Hose tail	16	Foot location screws	

## INSTALLATION

### Electrical installation



The power supply must meet the specifications on the product.

The pump is intended to be used with either a weather-proof cable connector or connected by means of a plug and socket.

The cores in the supply cable are coloured in accordance with the following code:

**Brown = Live, Blue = Neutral, Green/Yellow = Earth.**

The electric cable is permanently connected and sealed in the motor body.

If the supply cable is damaged the pump must not be used.

Do not use the supply cable to lift the pump as this may cause damage.

**IMPORTANT:** If this product is installed using a Blagdon Powersafe armoured garden power supply fitted with a flexible lead to a three pin plug, in conjunction with a circuit breaker as recommended. It would not therefore be deemed to be a permanent part of the house wiring and would not fall within the scope of Part P of the building regulations. However if the product is wired directly into a fixed wiring spur, it will fall under part P of the building regulations and must be installed by a qualified electrician or in consultation with a building control officer.

### ELECTRICAL STANDARDS STATE THAT:

- All outdoor power supplies must be protected by a circuit breaker.
- All outdoor electrical components must comply with outdoor weatherproof safety standards.
- All power supplies across the garden must be carried by metal sheathed armoured cable. If buried, warning tape must be applied.



You can take power to your pond/garden using a Blagdon Powersafe Armoured Garden Power Supply and Circuit Breaker. This provides safe, legal and easy DIY power to your pond or garden. Other garden power products are available in the Blagdon Powersafe range.



### WARNING - THIS PUMP MUST BE EARTHED

A Residual Current Device (RCD), also known as the Residual Current Circuit Breaker (RCCB), with a tripping current not exceeding 30mA must be installed in the supply circuit. A means of disconnection from the supply having a contact separation of at least 3mm in all poles must be incorporated in the fixed wiring.

## INSTALLATION

For permanent installations to the mains supply, it is necessary to conform to the regulations of the local electricity authority and this would include the use of a metal or plastic conduit to protect the cable.

Attention has been drawn to the fact that special rules may exist concerning the installation of your pond pump (i.e. local building regulations). These pumps must not be used in swimming pools, or areas where people are in contact with the water.

Always disconnect and isolate the mains electricity supply whilst the equipment is being installed, repaired, maintained or handled. Consult a qualified electrician if in any doubt about wiring this product to the main supply.



**Warning -** The Force-Hybrid pump is provided with a thermal cut out that temporarily switches off the pump in case of overheating and the pump may automatically restart.

### Locating your Force-Hybrid Pump

The Force-Hybrid pump should be located on a firm and level base in the pond/water feature in a depth of at least 15cm, but no more than 3m.

### Water Feature / Filter / Waterfall

Depending on water feature to be supplied, your pump can be used with 1 1/2" 1/4" 1" 1/2" hose fitting. Hose clips should be used to secure hose.

**Tip:** The larger 1 1/2" hose fitting will give maximum pump flow performance.

- Ensure pipe work is not blocked, leaking or is laid so that it gets crushed or kinked.
- Keep the height that water is to be pumped from the water surface (called Head) to a minimum. The higher the head the lower the flow rate and the more wear on the pump.
- Use the largest diameter, smoothest bore pond hose over the shortest distance and keep hose fittings to a minimum. This removes frictional loss of flow and so increases pump flow rates.

Also see the explanatory diagram on page 2.

## MAINTENANCE & CLEANING

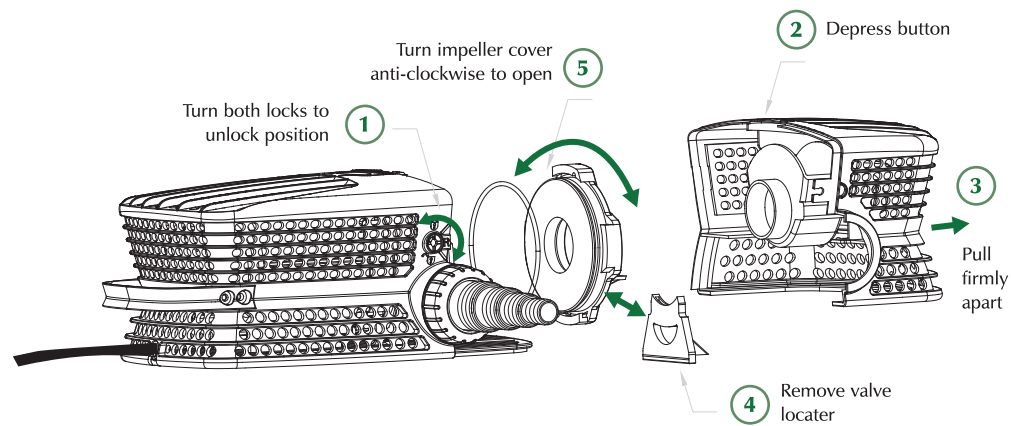


**Warning** - Failure to carry out routine maintenance leaving the pump under reduced or no flow conditions for long periods (i.e. blocked outlet, pipework filter cage) will result in a shorter pump life and will invalidate the guarantee.

**Blagdon Force-Hybrid Pumps** are centrifugal pumps with a magnetic impeller movement driven by a watertight asynchronous motor. They require minimum cleaning, only periodic cleaning of the pre-filter cage and impeller is necessary.

### Monthly Maintenance/Opening the cage

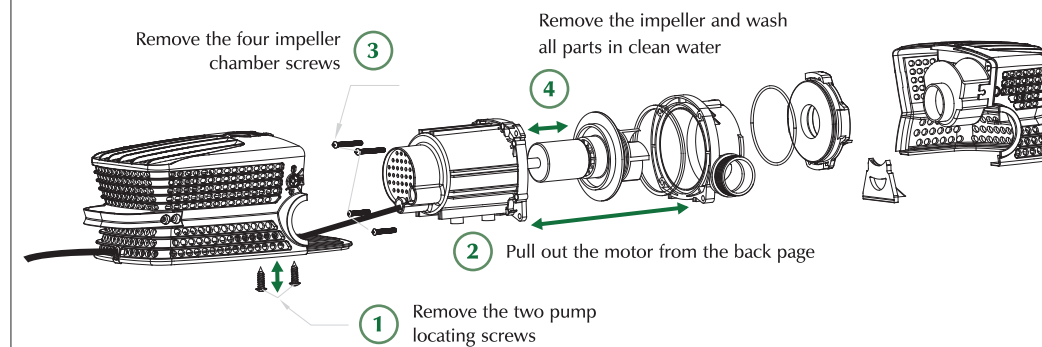
Remove cage and impeller cover, wash all parts thoroughly with fresh water.



## MAINTENANCE & CLEANING

### Annual Maintenance/Removing the impeller

First follow the Monthly Maintenance/Opening the cage steps. Remove the impeller and wash all parts thoroughly with fresh water.



Dismantle pump and examine all parts for wear or damage, replacing any parts that show obvious wear and/or damage. (See getting to know your pump for parts/description and replacement parts codes.) Particular care should be taken to examine the cable entry point and the cable; if there is any sign of damage the pump should be discarded.

### Winter Storage

The pump can be run in the pond during the winter but care should be taken to ensure that it is fully immersed and cannot freeze solid. If the pump is not used during the winter, follow annual maintenance procedure and store frost-free in the house or garage until spring.



## TROUBLESHOOTING

### Problem

#### Low flow from pump

1. Follow monthly cleaning procedure if no improvement.
2. Follow annual cleaning procedure.
3. Ensure pipe work is not blocked, leaking or is laid so that it gets crushed or kinked.
4. Keep the height that water is to be pumped from the water surface (called Head) to a minimum. The higher the head the lower the flow rate and the more wear on the pump.
5. Use the largest diameter, smoothest bore pond hose over the shortest distance and keep hose fittings to a minimum. This removes frictional loss of flow and so increases pump flow rates.

#### No flow from pump

1. Check power supply is on.
2. Check fuse and wiring (SEE ELECTRICAL INSTALLATION).
3. Follow low flow procedure as above.
4. If the pump has overheated the thermal overload will temporarily switch off the pump.

If none of the above works contact Interpet (Blagdon) Consumer Advice Department (See Faults problem procedure Page 13).