

Gusher Titan

Tough and Lightweight Polypropylene Models

Combines powerful performance and lightweight design



**Thru deck/Bulkhead
BP4410**



**On deck
BP4402**

Proven design
- tough yet lightweight



Easy to use
ball handle

Multiple installation
- removable clamping ring
for head rotation



Simple plumbing
- 38mm (1½")
smooth hose connections

Whale's Tough Lightweight Proven Pump - A design that has been tried tested and trusted by sailors for decades

- High flow rate: 105 ltrs (28 US gals) per minute
- Quick maintenance
 - Clamping ring is easily removed for pump head rotation
- Tough, lightweight proven design
- 2 mounting options -bulkhead and thru deck models
- Suitable for use on boats over 12 m (40 ft)

5 Year Warranty

Tips

It is important to ensure that a vented anti-syphon loop is incorporated in the system

Awards and Accreditations

- Suitable as a primary bilge pump on boats equal to or greater than 12 m (40ft) accordance with ISO15083

COMPLETE YOUR SYSTEM

Whale high quality bilge accessories including non-return valves, elbows and Y pieces see page 48 - 51



Product Information

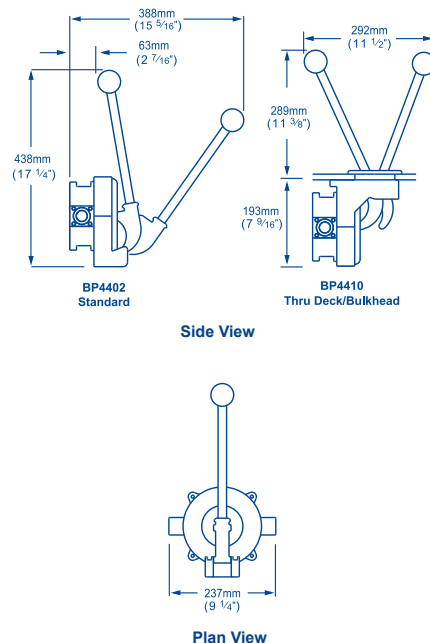
Model Specifications

Model	On Deck BP4402	Thru Deck / Bulkhead BP4410
Product Code	BP4402	BP4410
Weight	1.5 kg (3.3 lbs)	1.85 kg (4.1 lbs)
Hose Connections	38 mm (1½") Smooth Hose Connections	
Materials	Pump Body: Glass-filled Polypropylene, Clamp Ring: Acetal Diaphragm and Valves: Neoprene, (Nitrile® option available) Operating Lever: Glass-filled Nylon, Gaiter: EPDM Fasteners: Stainless Steel	
Materials In Contact With Fluid	Glass-filled Polypropylene, Acetal, Neoprene, Nitrile®	
Service Kits	AK4400 - Neoprene Parts AK4419 - Nitrile® Parts for Oil and Diesel Contains: Diaphragm, Valves, Seals AK4400 - Whale Gusher Titan Neoprene (for on deck installations) - diaphragm, valves and fixings AK4419 - Whale Gusher Titan Nitrile® (for below deck installations) - diaphragm, valves and fixings AS4406 - Whale Gusher Titan - Standard Lever Kit AS4407 - Whale Gusher Titan - Standard Clamping Ring Kit AS4408 - Whale Gusher Titan - Operating Lever U/Deck AS4409 - Whale Gusher Titan - UnderDeck Clamping Ring Kit AS4412 - Whale Gusher Titan - Clamping Plate Kit AS3725 - Gaiter Kit For Deckplates (for underdeck models - Gusher 30 and 10, Titan, Urchin, MarkV)	
Accessories	DP8904 - Deck Plate Kit for BP4410 only AS4405 - Spare Handle	
Maximum Suction Lift	4 m (13.5 ft)	
Maximum Discharge Head	4 m (13.5 ft)	

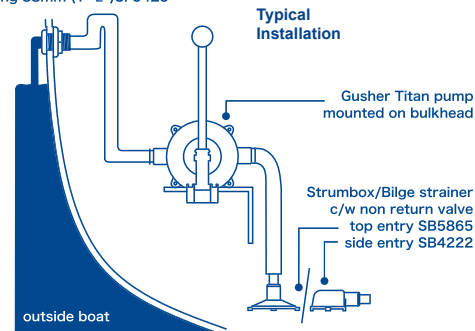
Performance Data

	BP4402 / BP4410	BP4402 / BP4410
Suction Lift	1 m (3 ft)	2 m (6 ft)
Discharge Head	0.5 m (1.5 ft)	0.5 m (1.5 ft)
45 Strokes per Minute	67 ltrs (18 US gals)	65 ltrs (17 US gals)
70 Strokes per Minute	105 ltrs (28 US gals)	98 ltrs (26 US gals)

Note: These specifications are retail items only.
For details of our bulk pack range for boat builders and wholesalers - contact Whale Support.



Skin fitting 38mm (1½")SF5425



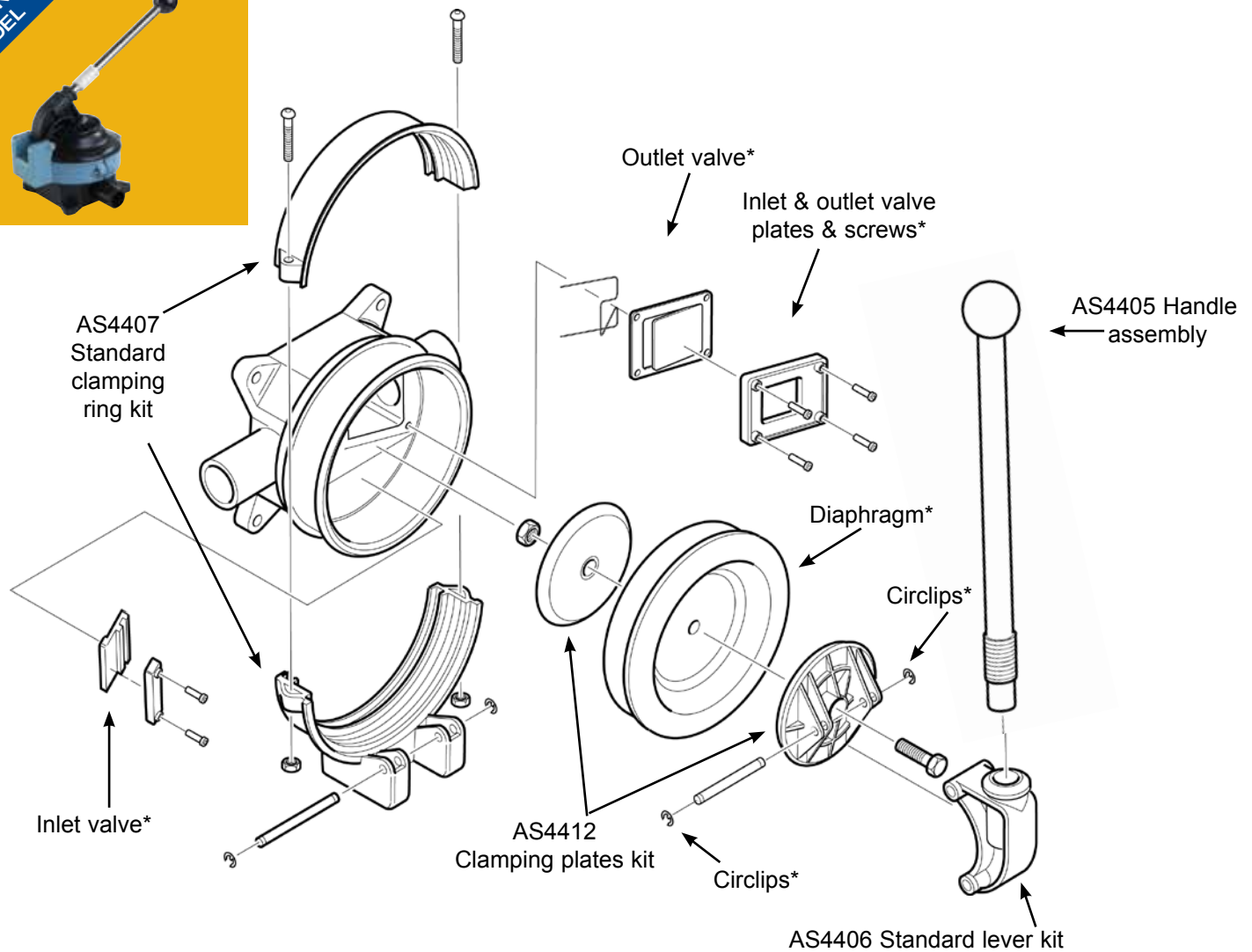


Manual Bilge Pumps

Gusher® Titan Standard

On Deck/Bulkhead: BP4402 - Powerful Lightweight Bilge and Waste Pump

Note* Contained in Service Kit AK4400 (Neoprene™) or AK4419 (Nitrile®)



Accessories

- AS4405 Spare Handle
- SB4222 Side Entry Strainer
- SB5865 Top Entry Strainer
- SF5425 1 1/2" Skin Fitting
- LV1215 1" / 1 1/2" Non-return Valve
- EB3488 1 1/2" Elbow

Service Kits (for On Deck/Bulkhead Model BP4402)

AK4400 Service Kit with Complete Set of Serviceable Parts for Gusher® Titan (Neoprene™)

Qty	Containing
4	Circlip
6	Screw
1	Outlet valve spring

1	Clamping nut
1	Outlet valve plate
1	Inlet valve plate
1	Outlet valve
1	Inlet valve
1	Diaphragm

AK4419 Service Kit with Complete Set of Serviceable Parts for Gusher® Titan (Nitrile®)

Qty	Containing
4	Circlip
6	Screw
1	Outlet valve spring
1	Clamping nut
1	Outlet valve plate
1	Inlet valve plate
1	Outlet valve
1	Inlet valve
1	Diaphragm

AS4406 Standard Lever kit

Qty	Containing
4	Circlip
1	Standard operating lever
1	Lever fulcrum pin
1	Standard fulcrum pin

AS4407 Standard Clamping Ring Kit

Qty	Containing
2	Nut
2	Screw
1	Top clamping ring
1	Bottom clamping ring
4	Circlip

AS4412 Clamping Plates Kit

Qty	Containing		
1	Clamping bolt	1	Inner clamping plate
1	Clamping nut	4	Circlip
1	Outer clamping plate		

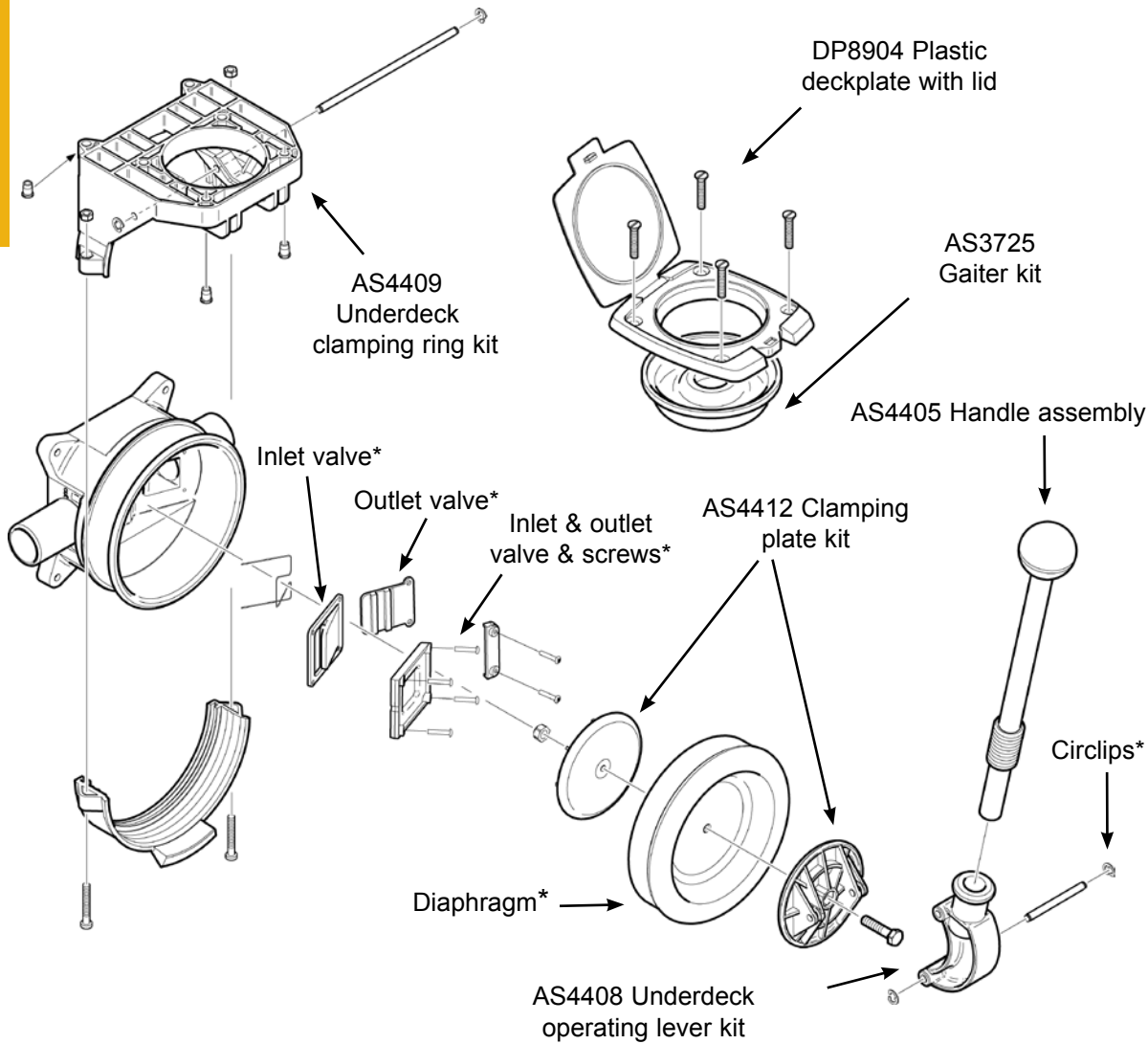


Manual Bilge Pumps

Gusher® Titan Underdeck

Underdeck: BP4410 - Powerful Lightweight Bilge and Waste Pump

Note* Contained in Service Kit AK4400 (Neoprene™) or AK4419 (Nitrile®)



Accessories

- DP8904 Plastic Deckplate Kit
- AS4405 Spare Handle
- SB4222 Side Entry Strainer
- SB5865 Top Entry Strainer
- SF5425 1 1/2" Skin Fitting
- LV1215 1" / 1 1/2" Non Return Valve
- EB3488 1 1/2" Elbow

Service Kits

(for Underdeck Model BP4410)

AK4400 Service Kit with Complete Set of Parts for Gusher® Titan (Neoprene™)
(See list below)

AK4419 Service Kit with Complete Set of Parts for Gusher® Titan (Nitrile®)

Qty	Containing
4	Circlip
6	Screw
1	Outlet valve spring
1	Clamping nut
1	Outlet valve plate
1	Inlet valve plate
1	Outlet valve
1	Inlet valve
1	Diaphragm

AS4408 Underdeck Operating Lever Kit

Qty	Containing
4	Circlip
1	U/D operating lever
1	U/D fulcrum pin
1	Lever fulcrum pin

AS3725 Gaiter Kit for Deckplates

Qty	Containing
1	Gaiter (for plastic or metal deckplate)
1	O-ring (for metal deckplate Whale Gusher® 10 & Whale Gusher® 30 only)

On Deck/Bulkhead: BP4402

Underdeck: BP4410



AK4400



AK4419



AS3725



AS4405



AS4406 for BP4402



AS4407 for BP4402



AS4408 for BP4410



AS4409 for BP4410



AS4412



DP8904



SB4222 / SB5865



SF5425

Service Kits (Continued)

DP8904 Plastic Deckplate with Lid

Qty	Containing
1	Deckplate & lid
1	Gaiter
6	Screws M6x40
6	Nuts M6
6	Washers M6

AS4412 Clamping Plate Kit

Qty	Containing
1	Clamping bolt
1	Clamping nut
1	Outer clamping plate
1	Inner clamping plate
4	Circlip

AS4409 Underdeck Clamping Ring Kit

Qty	Containing
2	Nut
4	Circlip
4	Inserts for U/D clamping ring
2	Screw
1	U/D clamping ring
1	Top clamping ring



Whale Gusher® Titan® Bilge Pumps
Models: BP4402, BP4410 and BP4429

READ CAREFULLY BEFORE INSTALLATION AND USE

To the Fitter: Check that the product is suitable for the intended application, follow installation instructions and ensure operating instructions are passed on to the end user.

To the User: Read the instructions carefully. (See parts diagram)

APPLICATION

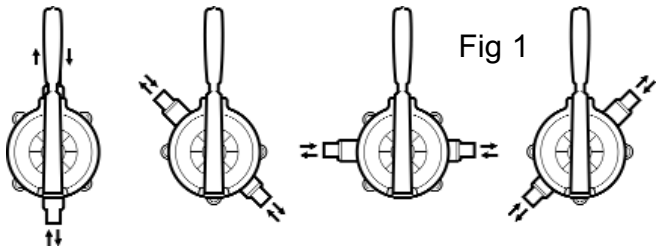
This bilge pump is designed exhaust standing water. Output capacity depends on installation conditions and pumping rate. (see fig. 3)

Users should be aware that capacity may not be sufficient to cope with rapid influx of water.

If it is intended for any other purpose or with any other liquid, it is the users responsibility to ensure that the pump is suitable for the intended use and, in particular, that the materials are fully compatible with the liquids to be used. With all applications it is important that a system of safe working practice is applied to installation, use and maintenance.

INSTALLATION

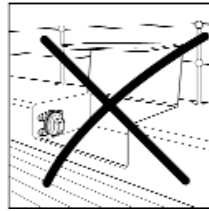
The Gusher Titan is designed for mounting on or through deck, or on or through bulkhead. The standard model (BP4402) allows considerable flexibility in the choice of handle position in relation to the direction of the flow.



To Change Flow Direction:

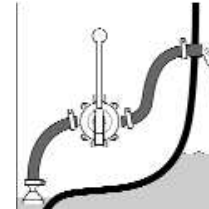
- (a) Release the screws on both sides of the clamping ring
- (b) Ease off the diaphragm and rotate body to new position relative to the fork and diaphragm
- (c) Reassemble diaphragm and clamping ring remembering to tighten the clamping screws evenly on both sides.

Select a suitable position free from obstructions where the pump can be operated efficiently and comfortably



Avoid installations which require a cockpit locker to be opened in order to operate the pump.

To minimise pumping effort, site the pump halfway (in height) between the strumbox / strainer and hull outlet

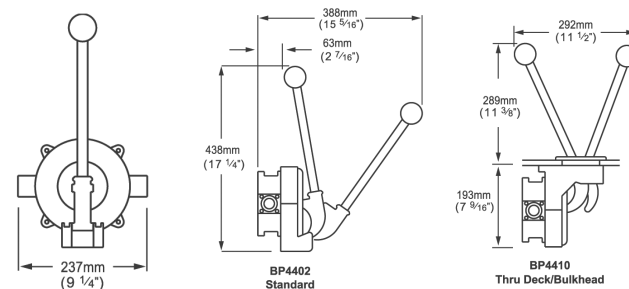


To ensure good priming and flow, avoid sharp bends in pipework and fit a Whale strumbox/strainer (incorporating a non-return valve) which prevents the end of the hose sucking against a flat surface and allows the water level to be reduced to a minimum.

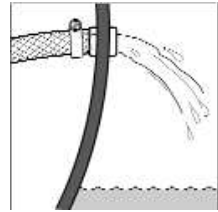
Ensure that the pump is installed to allow easy access for servicing.

For Mounting On Bulkhead: (BP4402)

1. Use pump as a template, mark off and drill four 1/4" (6mm) holes.
2. Check flow direction and secure the pump with 1/4" (6mm) bolts.
3. Attach 1 1/2" (38mm) smooth bore reinforced hose with stainless steel worm drive hose clips. Tighten to prevent air leaks



4. With thru-hull discharge, make sure that the discharge point is well above the water line.
5. Check the installation for air leaks, correct priming and discharge



For Mounting On Deck (BP4429) or Thru Deck/Bulkhead (BP4410)

1. For the on deck or thru deck/bulkhead models, the inlet and outlet directions can be reversed by following the instructions and repositioning the handle.
2. For the on deck or thru deck/bulkhead models, the deck thickness must be a minimum of 13mm (1/2") and a maximum of 25mm (1")
3. For on deck model (BP4429) follow points 1-5 of previous instructions.
4. With thru deck/bulkhead models (BP4410) a plastic deckplate (DP8904) is supplied.
5. Position pump under deck and check flow direction. Work the rubber gaiter up through the hole until its flange rests on the deck. Secure the six 1/4" (6mm) countersunk mounting screws provided.
6. As points 3 - 5 of previous instructions

OPERATION

The Gusher Titan ensures efficient throughput with an easy pumping action. Full even strokes will obtain the best results. The detachable handle is fitted with a lanyard and should be safely secured close to the pump.

Gusher Titan output at 1m Lift and 0.5m Head

Ouput	At 60 strokes/min	At 70 strokes/min
Gallons/min	20	23.2
Litres/min	90	105.6

Fig 3: Performance table

Performance data is based on factory tests and is typical of what may reasonably be achieved. Actual performance may vary depending on installation and operating conditions.

MAINTENANCE

Inspection:

Regular inspection of the pump is recommended. Rubber components should be replaced if worn or every three years regardless of condition.

Replacement components and service kits (AK4400 for Neoprene (clean bilge water) and AK4419 for Nitrile(oily bilge water)) are available from your local chandlery. It is recommended a service kit is kept on board.

Winterising

At the end of the season, drain all water in the pipework and pump chamber.

Changing the Diaphragm and Valves

1. Release screws on both sides of the clamping ring.
2. Remove clamping plate and diaphragm
3. Remove both circlips from the fulcrum pin and lever to expose the clamping bolt
4. Remove clamping bolt, noting position of the diaphragm plates.
5. Remove and replace inlet and outlet valves as illustrated in parts diagram
6. Fit new diaphragm, reassemble pump and test for correct priming and discharge

ACCESSORIES

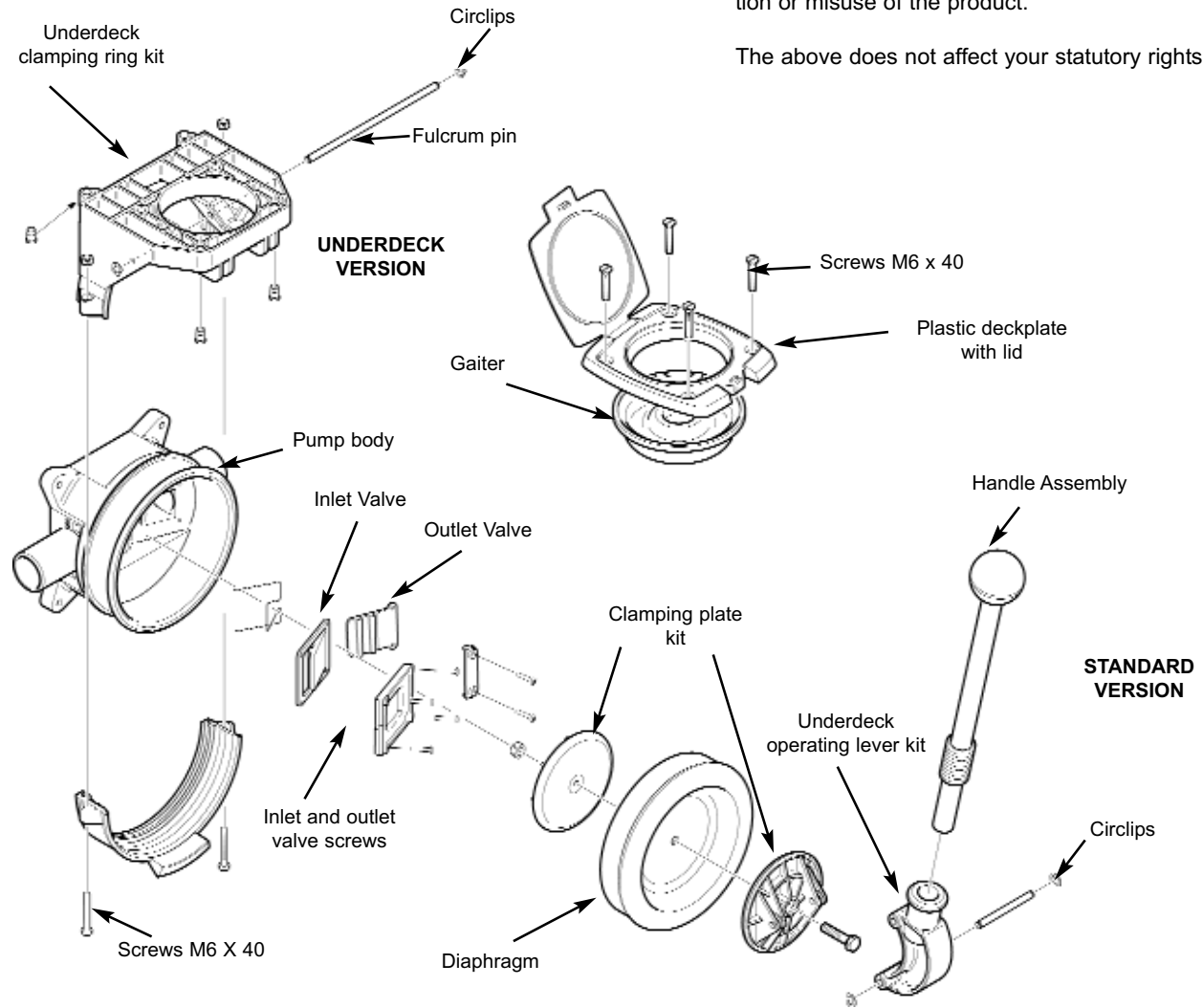
- DP8904 - Plastic deckplate
- AK4400 - Neoprene Spares Kit
- AK4419 - Nitrile Spares Kit
- *SF5425 – Skinfitting
- *SB5865 – Top entry strainer
- *SB4222 – Side entry strainer
- *DV5606 – 2 way diverter valve
- *EB3488 – 90° elbow (male to female)
- *LV1215 – In line non return valve

HELPFUL HINTS

Pump fails to prime or chokes:

1. Check inlet hose connection is airtight, free from blockages and does not collapse during suction stroke
2. Inspect diaphragms - replace if damaged
3. Solid objects in the body of the pump may not prevent its operation but should be removed to prevent damage
4. Inspect inlet and outlet valves for blockages. Clear with finger or screwdriver and test.

MAINTENANCE LIST



WARRANTY

Whale Pumps are guaranteed for 5 years (1 year on rubber parts) from date of purchase against defects in materials and workmanship. If the unit proves faulty return it to your supplier with proof of purchase and purchase date.

The manufacturer retains the right to repair or replace the unit.

The manufacturer cannot be held responsible for claims arising from the incorrect installation, unauthorised modification or misuse of the product.

The above does not affect your statutory rights.

Old Belfast Road Bangor, Co. Down, N. Ireland, BT19 1LT
Tel: 02891 270531 Fax: 02891 466421 info@whalepumps.com

Whale and Gusher are registered marks of:
Munster Simms Engineering Ltd

Ref No: sr_180.15_0311