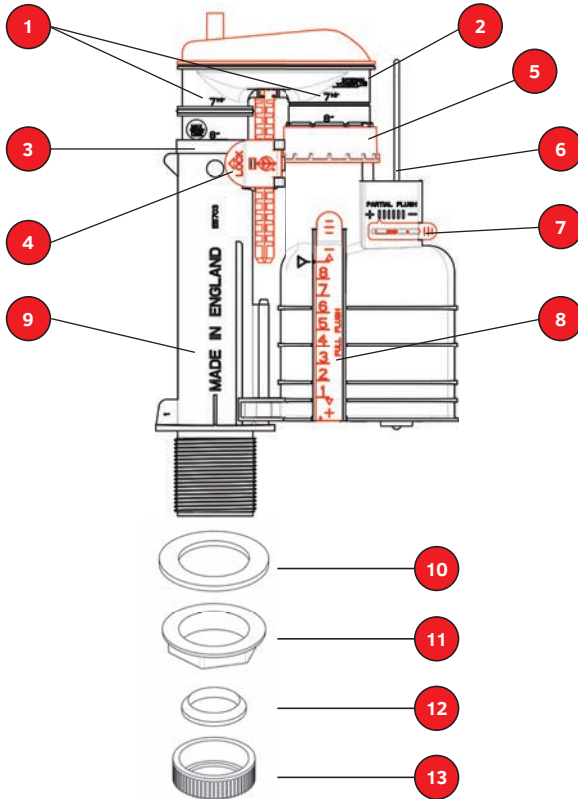


# ULTRA SYPHON INSTALLATION GUIDE



- 1 Syphon Height Indication – 7<sup>1</sup>/<sub>2</sub>" - 9<sup>1</sup>/<sub>2</sub>"
- 2 Overflow Height Indication
- 3 Max. Water Level (DO NOT EXCEED)
- 4 Syphon Height Adjuster Lock
- 5 Bell Housing Height Adjust Collar
- 6 "C" Link
- 7 Partial Flush Volume Adjuster
- 8 Full Flush Volume Adjuster
- 9 Outlet Tube
- 10 Sealing Washer
- 11 Back Nut
- 12 Coupling Seal
- 13 Coupling Nut



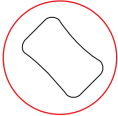
## CONTENTS

### Section:

- S1:** Before you start and installation preparation
- S2:** Ultra Syphon height adjustment
- S3:** Setting Ultra Syphon overflow height using old syphon
- S4:** Installation: High or Low Level Cisterns
- S5:** Installation: Close Coupled Cisterns
- S6:** Setting Full and Partial Flush volumes
- S7:** Service, repairs and maintenance
- S8:** Troubleshooting

## BEFORE YOU START

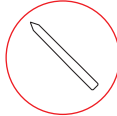
Here is a list of tools and equipment you will require to complete this task (not included):



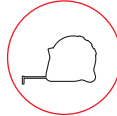
Sponge  
or Towel



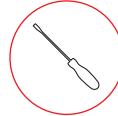
Adjustable  
Wrench



Pencil



Tape Measure



Screwdrivers



Pliers



Buckets

You may also need (not included):

### Close Coupled Suites:

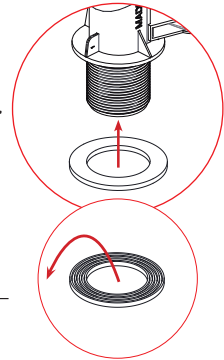
- Replacement cistern to pan Sealing kit (Doughnut Seal with Clamping Bolt set or Coupling Plate Kit).

### If cistern is to be removed:

- New Fibre Washer or Seal for inlet connection.
- PTFE Tape.

## PREPARATION FOR SYPHON REPLACEMENT

- 1 Fit ribbed Sealing Washer **10** over threaded section of syphon – ribs facing down.
- 2 Remove cistern lid and mark water line.  
**Note: cistern water level should be the same after you have changed the syphon.**
- 3 Turn off the water supply.
- 4 Flush the cistern with the existing device and mark the lowest water level.  
(If flushing is not possible, decant 6 litres of water then mark the lower water level. Keep water for setting flush volumes later).
- 5 Remove remaining water/debris from cistern with a sponge.
- 6 Disconnect the water supply from the inlet valve and remove the cistern if required – **see S4 or S5.**
- 7 Remove old syphon and put aside.
- 8 Adjust the Ultra Syphon – see **S2 and S3.**



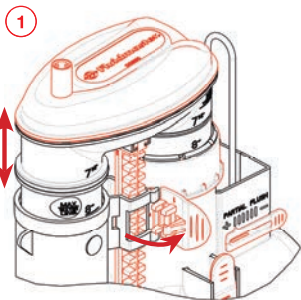
## MEASUREMENTS

NOTE YOUR MEASUREMENTS HERE

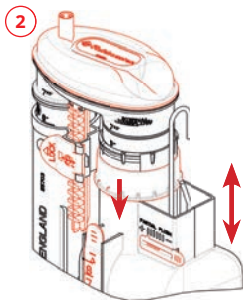
**S2**

## ULTRA SYPHON HEIGHT ADJUSTMENT

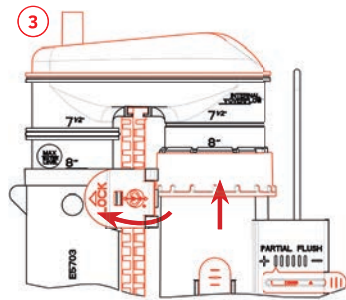
You will need to adjust the Ultra Syphon to A) match your old syphon – **see** ① ② ③ below or B) suit a new cistern – **see** S6. Cisterns have a Water Line marked internally and this must be used for reference.



Open Height Adjust Lock ④.  
Set height of Overflow/Outlet –  
locks into steps every 1/2".



Slide down unlock Height Adjust  
Collar ⑤. Set height of Bell Housing –  
snaps into rings every 1/2".

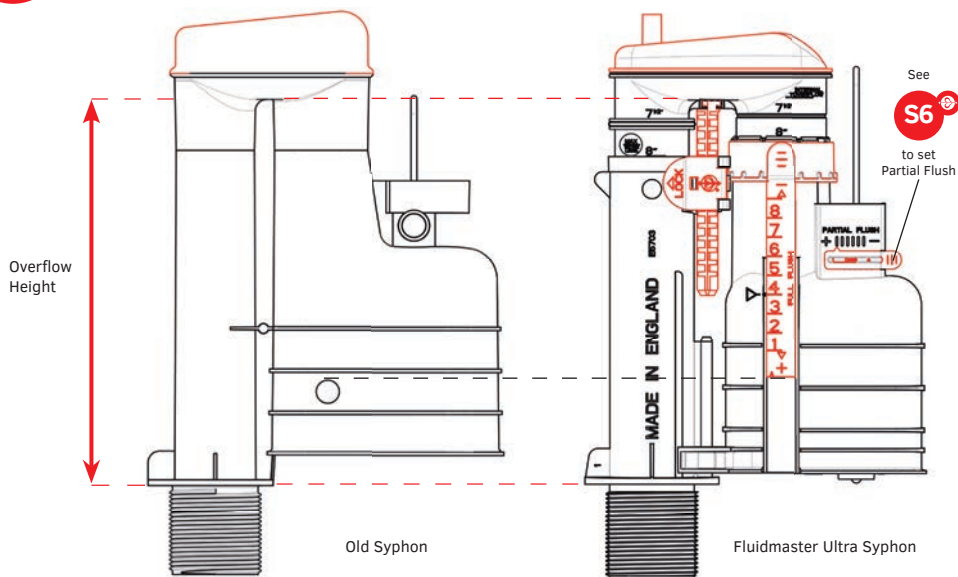


Slide Height Adjust Collar ⑤ up to  
lock. Close Height Adjust Lock ④.

**Note: Ultra Syphon should be adjusted so that the "Max Water Line" ③ is same as Water Level Line in cistern when filled. If retaining an external overflow pipe, ensure Ultra Syphon "Overflow Height" ② is set on or slightly above the cistern external overflow pipe level. Ultra Syphon "Overflow Line" ② should be 1" (25mm) above the cistern Water Level Line when filled.**

**S3**

## SETTING THE ULTRA SYPHON OVERFLOW HEIGHT USING OLD SYPHON



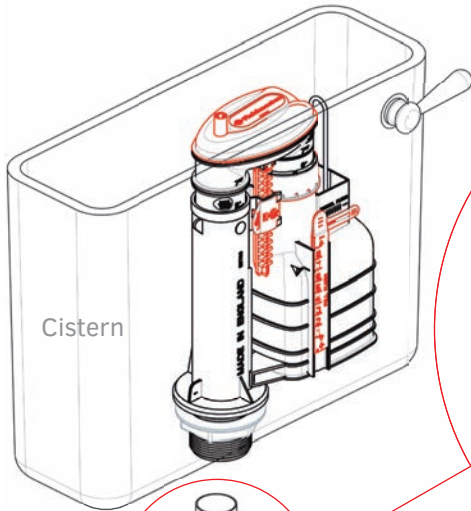
Ultra Syphon is ready to fit to the cistern.

Go to **S4** for installation to High or Low Level Cisterns or **S5** for Close Coupled Cisterns.

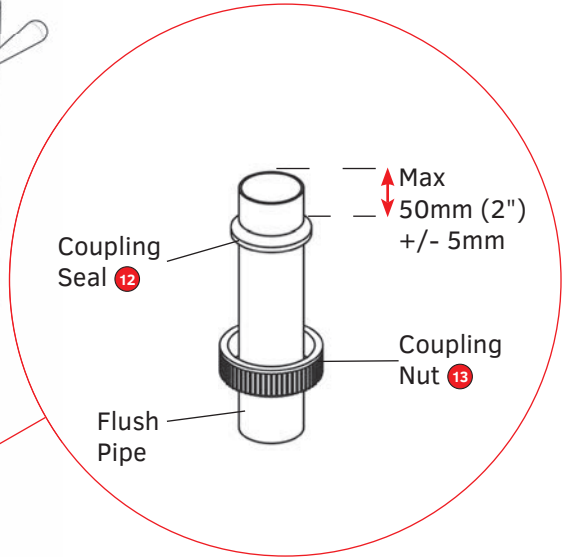
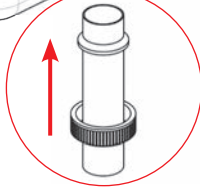


## INSTALLATION: HIGH OR LOW LEVEL CISTERNS

*Removal of cistern from the wall should not be necessary.*



Cistern



Coupling  
Seal 12

Max  
50mm (2")  
+/- 5mm

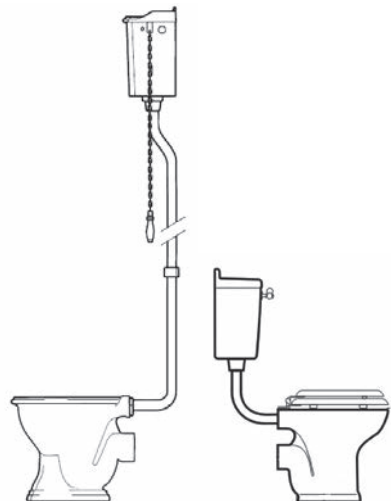
Coupling  
Nut 13

Flush  
Pipe

- 1 Fit Ultra Syphon to cistern ensuring rubber Sealing Washer 10 is on inside of cistern, ribs facing down.
- 2 Fit the Back Nut 11, tighten firmly by hand then another  $\frac{1}{4}$  to  $\frac{1}{2}$  turn using a spanner/wrench.
- 3 Fit the Coupling Nut 13 followed by the new supplied Coupling Seal 12 to the flush pipe. Tighten Coupling Nut to syphon thread.

**Note: Insert NO MORE than 50mm ( $\pm$  5mm) of pipe into the syphon thread.**

- 4 Attach "C" Link 6 to the lever mechanism ensuring lever is in correct position.
- 5 Re-attach and turn on the water supply – check the installation is functioning and water tight.
- 6 Set Full & Partial Flush volumes – see S6.

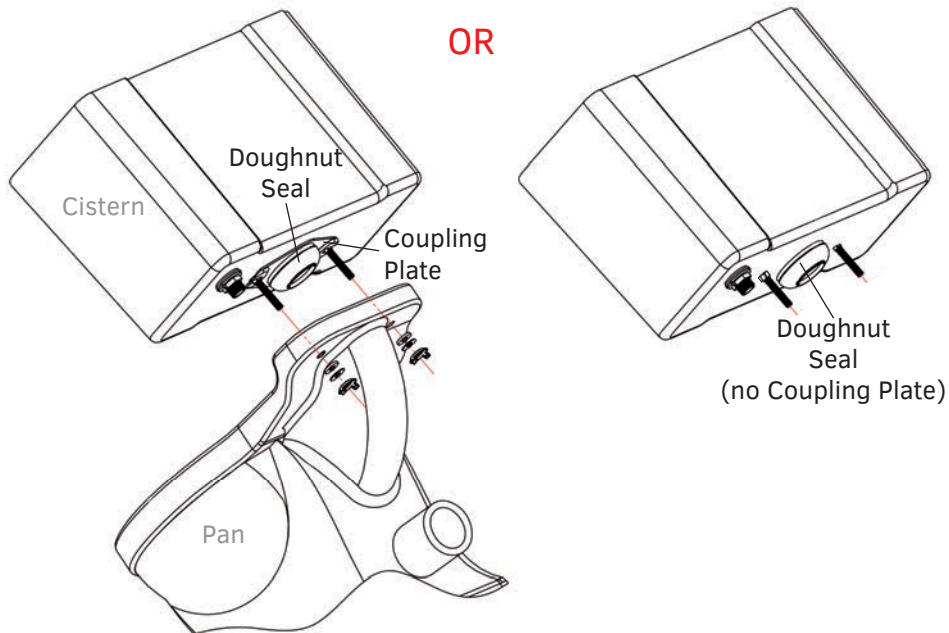


High/Low Cistern



# INSTALLATION: CLOSE COUPLED CISTERNS

*Cistern removal from the WC pan and wall IS necessary.*



- 1 Fit Ultra Syphon to cistern ensuring rubber Sealing Washer **10** is on inside of cistern, ribs facing down. Fit coupling plate over the syphon thread.
- 2 Fit the Back Nut **11**, tighten firmly by hand then another  $\frac{1}{4}$  to  $\frac{1}{2}$  turn using a spanner/wrench.
- 3 Place a new Doughnut Seal over the Syphon Outlet.
- 4 Tighten the Coupling Bolts evenly to secure the cistern to the pan. For a direct bolting cistern (no plate), tighten the Back Nut **11** directly to cistern.
- 5 Attach "C" Link **6** to the lever mechanism ensuring lever is in correct position.
- 6 Re-attach and turn on the water supply – check the installation is functioning and water tight.
- 7 Set Full & Partial Flush volumes – **see S6**.



Close Coupled Cistern

# SETTING FULL AND PARTIAL FLUSH VOLUMES FOR NEW INSTALLATIONS

Ultra Syphon is fully adjustable and can be set to 9, 7 or 6 litre Full Flush and a reduced Partial Flush to save water. Follow **Steps 1 and 2 below** to set the Ultra Syphon to 6 and 4 litres to comply with current regulations. You may set Ultra Syphon to lower flush volumes to save further water.

## Step 1: Full Flush

- 1 Fill cistern to marked Water Line, turn the water supply off, flush the cistern.
- 2 Pour 6L\* of water into cistern (from Step 4 in the preparation). Mark 6L\* water level on cistern wall.
- 3 Measure and note distance in mm between A) 6L\* water level B) cistern water line mark.
- 4 Deduct distance A) from B) and move the Full Flush Adjuster Slide **8** this distance to achieve regulation 6L\* flush.

### Example:

**Water level A) is 10mm below the line B) raise the Full Flush Adjust Slide **8** up 10mm = 1 gradation.**

**Note: If more than 1/2" (12.5mm) of slide adjustment required, re-set Syphon Height as S2 & repeat steps 1-4 above.**

\*Use 7 or 9 litres if required.

## Step 2: Partial Flush (2/3rds Full Flush)

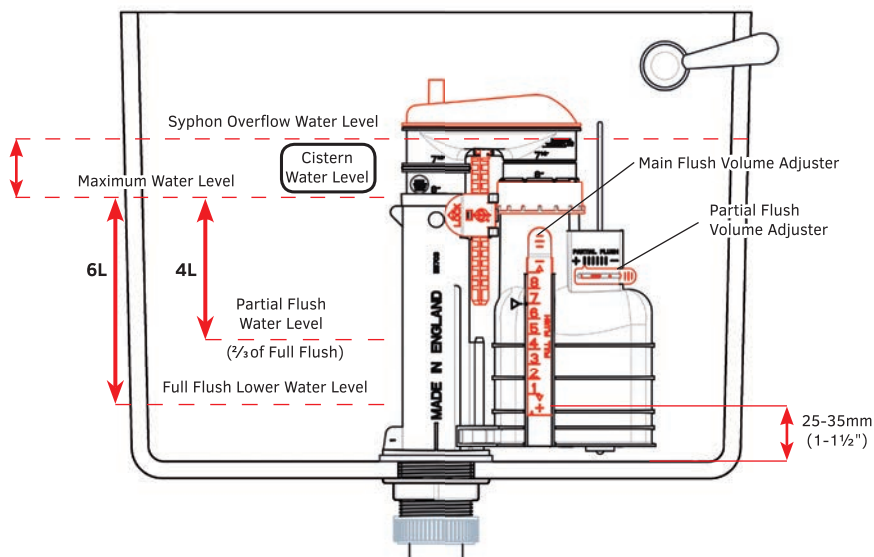
- 1 Ensure cistern is full to water line. Turn off water supply.
- 2 Press and release lever for Full Flush. Mark the resulting lower water level on cistern wall.
- 3 Measure and note distance in mm between A) Full Flush lower water level B) cistern water line mark.
- 4 Divide (÷) distance by 3 then times (x) by 2 for 2/3 Partial Flush setting water level.

### Example:

Cistern water line	200mm*
Full Flush lower mark	50mm*
Difference	150mm*
Partial Flush water line =	$150 \div 3 \times 2 = 100\text{mm}$ from cistern base.

- 5 Small adjustments can be made to obtain 2/3 flush using the Partial Flush Volume Adjuster Slide **7**. Slide towards the "+" to increase and slide towards the "-" to reduce.
- 6 If major adjustment is required, Cistern Water Level, the Overflow Height of the syphon and/or Bell Housing may need to be adjusted.

\*Measured from cistern base.





# ULTRA SIPHON

## SERVICE, REPAIRS AND MAINTENANCE

### How to service or repair a Fluidmaster Ultra Syphon.

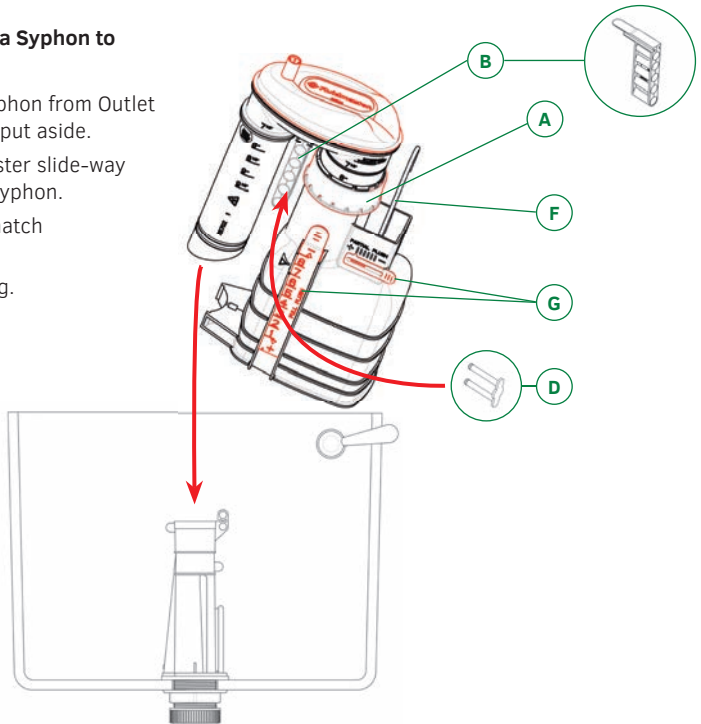
- 1 Remove cistern lid.
- 2 Take note of Ultra Syphon height settings **1**.
- 3 Unlock Height Adjust Lock **4** and remove lift arm and "C" Link **6**.
- 4 Remove syphon, inspect and repair using Fluidmaster Ultra Syphon Spare Parts Kit.
- 5 Re-install Ultra Syphon taking care to set to correct height.
- 6 Ensure Syphon functions correctly.

## HOW TO SERVICE OR REPAIR OTHER SIPHONS

Fluidmaster Ultra Syphon can retrofit to other syphons Outlet Legs\* – see below.

### How to retrofit Fluidmaster Ultra Syphon to Thomas Dudley Outlet Leg

- A Note height & remove old syphon from Outlet Leg. Remove Yellow Peg and put aside.
- B Replace Syphon Height Adjuster slide-way with white adaptor to Ultra Syphon.
- C Set Ultra Syphon height to match old syphon height – **see S3**.
- D Fit Ultra Syphon to Outlet Leg.
- E Set Overflow Height and use Yellow Peg to secure.
- F Re-fit "C" Link.
- G Adjust Full and Partial Flush – **see S6**.



### Disclaimer

- i) The Fluidmaster Ultra Syphon Retro-fit Adaptor is supplied for servicing convenience and is not authorised or licensed by Thomas Dudley Limited.
- ii) It is the responsibility of the installer to ensure when using the Fluidmaster Ultra Syphon Retro-fit Adaptor that the Thomas Dudley Syphon Outlet Leg, Cistern Seal and Back Nut are in serviceable condition and do not leak.
- iii) It is the responsibility of the installer to ensure the installation functions correctly, does not leak and is compliant with relevant Regulations.

\*Ultra Syphon retrofits to the Outlet Leg of the following Thomas Dudley Ltd. 2/3 part syphons: Turbo 88 7-9 1/2", Turbo S44R 8-9 1/2", S1-11 8-9 1/2"



# TROUBLESHOOTING

ISSUE	POTENTIAL REASON	REMEDY
<b>Water is continually running into WC.</b>	The Back Nut has not been tightened and is leaking.	Check and tighten the Back Nut.
	Cistern water level is too high and is overflowing.	Adjust fill valve so the water level is 1" below the syphon overflow.
	Fill valve is faulty and not shutting off.	Service or replace inlet valve.
<b>Water is leaking out of the cistern into the pan or onto the floor.</b>	If continuously leaking regardless of flush, the Back Nut is likely loose.	Check and tighten Back Nut.
	High or Low Level: Check Back Nut, Coupling Nut are tight and seals are fitted correctly.	Replace or re-fit leaking seals and ensure Back Nut and Coupling Nut are tight.
	Close Coupled: only leaks during flush then Doughnut Seal between WC and cistern is leaking.	Remove cistern and check Doughnut Seal, use a new Doughnut Seal and ensure correctly installed and Flush Plate bolts are tight.
	Securing Bolts/Seals may be leaking.	Check Seals, tighten or replace Bolt Set.
	Syphon Outlet Tube O-Seals are leaking.	Undo Syphon Lock, remove syphon and check O-Seals in place and are not twisted.
<b>Not enough water is being flushed.</b>	The Flush Adjust Slide is set incorrectly – low flush volume.	Full Flush: Push Adjust Slide down until desired flush volume is achieved. Partial Flush: Adjust slide to "+" to increase, or to "-" to reduce flush. See Adjustment Settings.
	The fill valve is not filling to the water line.	Ensure the fill valve is filling to the water line.
<b>Syphon will not flush.</b>	Water level in cistern is too low.	Increase the water level to 1" below the overflow level.
	Syphon Diaphragm is damaged or worn.	Remove syphon and inspect/service Diaphragm.
	Insufficient syphon stroke – lever/linkage wrong.	Ensure lever and linkage set correctly; lever at 2-3 o'clock must give full stroke travel.
<b>Syphon is flushing continuously.</b>	Blockage in flush pipe or pan inlet – backs-up flow causing continual flush.	Inspect Flush Pipe and WC Pan inlet to ensure it is clear and not blocked.
	Cistern filling too fast – syphon overflows.	Reduce water supply pressure/flow so cistern does not fill too quickly.
<b>Water leaks out of the cistern lever holes.</b>	Cistern overflow level is too high.	Adjust syphon so internal overflow level is 1" above cistern "Water Level" mark.

If you require further assistance please call



**TECHSUPPORT**  
01432 357331