



LANCASTER

WATER TREATMENT

INSTALLATION, OPERATING AND SERVICE MANUAL

CITYGUARD LTE UFAS UP-FLOW ANTI-SCALE SYSTEM WITH GLASS FILLED COMPOSITE IN/OUT HEAD

- 7-UFAS-011
- 7-UFAS-016
- 7-UFAS-026
- 7-UFAS125-044
- 7-UFAS15-058



NON-ELECTRIC NON- REGENERATING
MAINTENANCE FREE CHEMICAL FREE SALT FREE

Congratulations on purchasing your new **Lancaster Anti-Scale System**. This unit is designed to give you many years of trouble free service. When installed in accordance with the following instructions and if given reasonable care, reduced scale in your water system/piping will be the result. For servicing and future inspection purposes, please file this booklet with your important documents. In the event that you need assistance for servicing your anti-scale system, please first contact the professional contractor who installed the system.

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INTRODUCTION

CITYGUARD LTE is an Up-Flow Anti-Scale (UFAS) system providing protection from scale formation throughout the plumbing system. It can be installed as a Point-of-Entry (POE) system to treat your entire system, both hot and cold water, or it can be located directly before a water heater or other device that requires protection from hard water.

CITYGUARD LTE uses EcoSense SP-3 media, preventing the formation of scale on heating elements and on internal and external plumbing surfaces as well as reducing spotting and streaking normally associated with hard water.

Water is directed UPFLOW through a fluidized layer of EcoSense SP-3 media which acts as a catalyst, pulling the hardness minerals of calcium and magnesium out of solution. The opaque white colored media (modified ceramic beads) transform the calcium and magnesium cations into neutral inactive crystal particles. The crystal particles attach to the media for a short time until they cluster to nano-sized particles and break off, freely flowing through the system and not able to attach to any surfaces. This process is called NUCLEATION ASSISTED CRYSTALLIZATION or NAC. Nano-sized particles are typically between 1 and 100 nanometers (nm) in diameter; 100 nm = 0.1 micron.

The media also effectively descales existing scale buildup within the plumbing system. During the NAC process, dissolved carbon dioxide (CO₂) is released as near-visible micro-bubbles, which gradually reduce previously formed scale over a period of time determined by water usage.

BENEFITS

- Maintenance Free
- Chemical Free
- Salt Free
- No Wasted Water (i.e. no regeneration or backwashing)
- No Electricity Required

OPERATING PARAMETERS

Like conventional water softeners, CITYGUARD LTE may require pre-treatment to protect the EcoSense SP-3 media from an undesirable accumulation and buildup of contaminants reducing its effectiveness over time.

CITYGUARD LTE is typically the last stage in the treatment chain; exceptions are ...

- Point-of-Entry (POE) Ultraviolet (UV) disinfection
- Point-of-Use (POU) drinking water filters, e.g. carbon
- Point-of-Use (POU) Reverse Osmosis (RO) system

Do not apply phosphate-based products, particularly polyphosphates, or any other antiscalant/scale sequestering chemicals either before or after CITYGUARD LTE.

Do not exceed recommended flow rates.

Designed for intermittent flows; for continuous flows, consult factory.

Feed Water Limitations:

- pH 6.5 - 9.5 (6.8 - 7.5 optimum pH range for calcium carbonate, 7.0 - 8.0 optimum range for magnesium hydroxide).
- Ferrous Iron (Soluble) < (less than) 0.3 mg/L (or ppm).
- Manganese (Soluble) < (less than) 0.05 mg/L (or ppm).
- Chlorine - up to 3 ppm (treat EcoSense SP-3 media the same as water softener resin regarding chlorine, i.e. de-chlorination is recommended).
- No Hydrogen Sulfide, Oil, Grease or Polyphosphates.
- Hardness 25 gpg (grains per gallon) max. for models shown (up to 75 gpg possible but unit size must be re-evaluated).
- Copper 1.3 mg/L (or ppm) max.

Install CITYGUARD LTE in new facilities with copper pipe after six weeks of water use.

SPECIFICATIONS

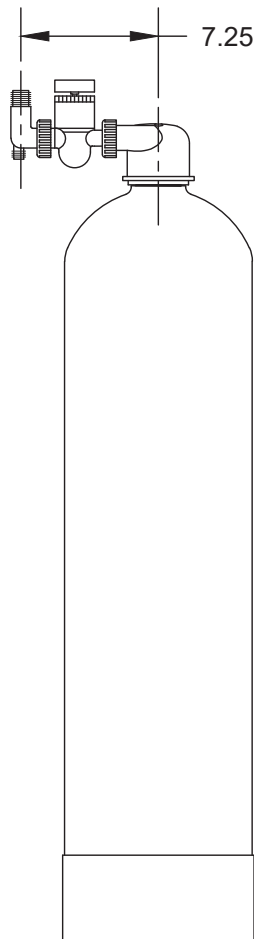
Model Number	7-UFAS-011	7-UFAS-016	7-UFAS-026	7-UFAS125-044	7-UFAS15-058
Inlet/Outlet Fitting Options (Inches)	0.75 - 1.0 ¹ - 1.25 - 1.5	0.75 - 1.0 ¹ - 1.25 - 1.5	0.75 - 1.0 ¹ - 1.25 - 1.5	0.75 - 1.0 - 1.25 ² - 1.5	1.5 ³ - 2.0
In / Out Head 1191 (Part Number)	D1400	D1400	D1400	D1400-04	-
In / Out Head 1192 (Part Number)	-	-	-	-	D1403
Bypass Included	Yes	Yes	Yes	Yes	Yes
Water Pressure Range (PSI)	20 - 100	20 - 100	20 - 100	20 - 100	20 - 100
Water Operating Temperature Range (°F)	35 - 100	35 - 100	35 - 100	35 - 100	35 - 100
EcoSense Media (SP-3) (Cubic Feet)	0.11	0.16	0.26	0.44	0.58
EcoSense Media (SP-3) Weight (LBS)	5.0	7.6	12.7	21.4	28.25
Maximum Service Flow Rates (GPM)	10	15	20	30	40
Overall Height (Inches)	49.2	59.4	53.3	70.73	70.7
Mineral Tank Size: Diameter x Height (Inches)	8 x 44	10 x 54	13 x 48	14 x 65	16 x 65
Bottom Distributor Type	Plate	Plate	Plate	Plate	Plate
Top Basket Distributor	Yes	Yes	Yes	Yes	Yes
Underbed Layer	No	No	No	No	No

¹1.0" Composite Plastic Male NPT Elbow Assembly Standard (PN: V3007) - Options Available

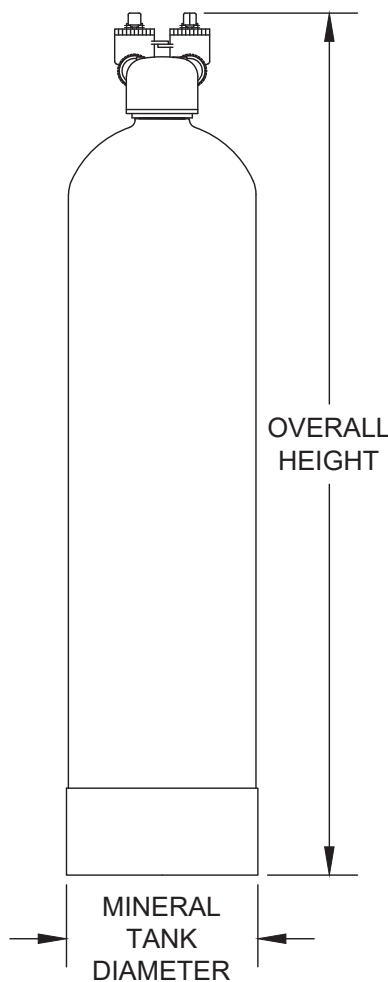
²1.25" Composite Plastic Male NPT Straight Assembly Standard (PN: V3007-05) - Options Available

³1.5" Composite Plastic Male NPT Straight Assembly Standard (PN: V4430-01) - Options Available

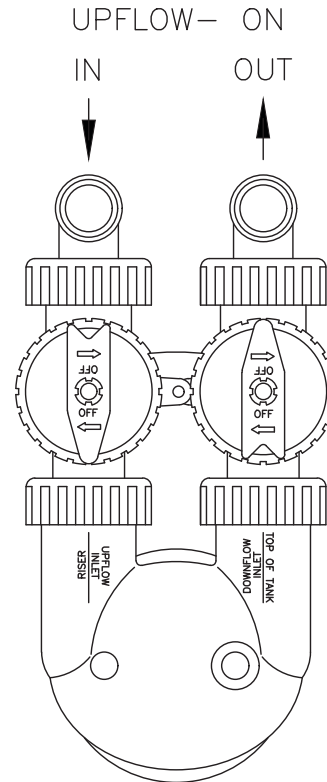
**INLET SIDE VIEW
SHOWN WITH BYPASS
AND
1.0 MNPT ELBOW ASSEMBLY**



FRONT VIEW



**ENLARGED TOP VIEW
OF IN/OUT HEAD, BYPASS
AND
1.0 MNPT ELBOW ASSEMBLY**



— PRE-INSTALLATION REVIEW & IMPORTANT NOTES TO THE INSTALLER —

Please review the operating parameters and specifications described in this manual to ensure compatibility.

All plumbing should be done in accordance with local plumbing codes when installing the system.

CAUTION - Do not let the system freeze; damage to the tank may result.

CITYGUARD LTE is factory loaded with EcoSense SP-3 media and ready to use.

The CITYGUARD LTE system weighs less than a conventional water softener; this is normal, i.e. the UPFLOW operation of the CITYGUARD LTE system requires a lot of freeboard to allow the shallow bed of EcoSense SP-3 media to fully fluidize.

CITYGUARD LTE must operate in a vertical position, placed on a smooth, level surface.

Because CITYGUARD LTE operates in the UPFLOW mode, the tank connections are opposite of traditional installations. Refer to diagrams.

The in/out head, bypass valve and fitting assemblies are designed to accommodate minor plumbing misalignments but are not designed to support the weight of a system or the plumbing.

Do not use Vaseline, oils, other hydrocarbon lubricants or spray silicone anywhere.
A silicone lubricant may be used on black o-rings but it is not necessary.

The nuts and caps are designed to be unscrewed or tightened by hand or with special plastic wrench V3193 - optional, not included.
If necessary, pliers can be used to unscrew the nuts or caps.
Do not use a pipe wrench to tighten or loosen nuts or caps.
Do not place a screwdriver in the slots on caps and/or tap with a hammer.

Do not use pipe dope or other sealants on threads.
Use Teflon tape on the threaded inlet and outlet fittings.
Teflon tape is not necessary on the nut connection or caps because of o-rings seals.

When assembling the installation fitting package (inlet and outlet), connect the fitting to the plumbing system first and then attach the nut, split ring and o-ring.
Heat from soldering or solvent cements may damage the nut, split ring or o-ring.
Solder joints should be cool, and solvent cements should be set before installing the nut, split ring and o-ring.
Avoid getting primer and solvent cement on any part of the o-rings, split rings or bypass valve.

If the building's plumbing is metal (e.g. copper) and the building's electrical system is grounded to the plumbing, install a copper grounding strap from the filter inlet pipe to the filter outlet pipe.

— INSTALLATION —

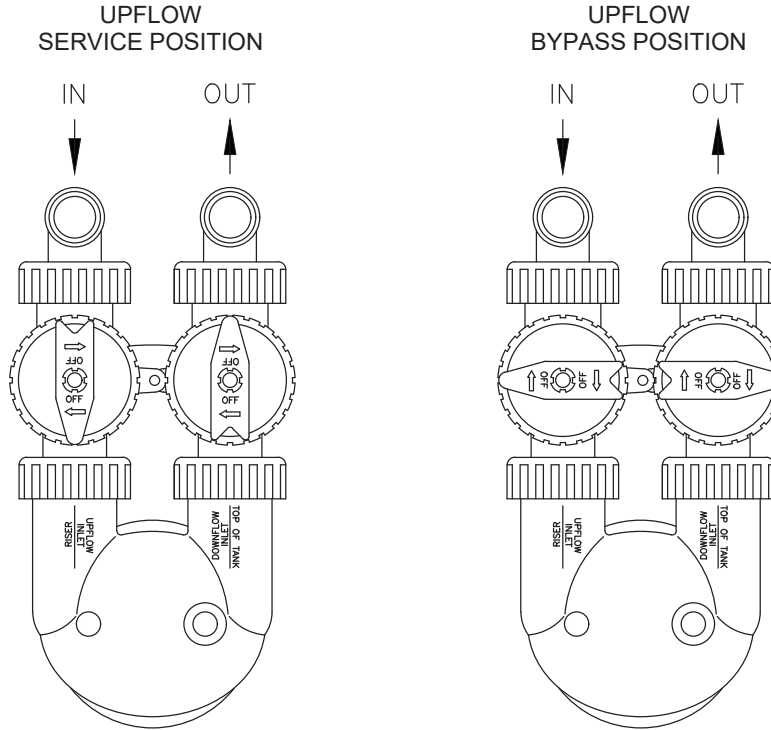
Place the system in the desired location, keeping the system far enough away from walls and other obstructions to allow enough room for servicing the system.

INSTALL THE ANTI-SCALE SYSTEM AS AN UPFLOW FILTER (which is opposite of a conventional softener).
MAKE SURE THE BYPASS VALVE ARROW SHAPED HANDLES ARE INSTALLED AS SHOWN FOR UPFLOW USE.
If the arrow shaped handles are not pointing in the correct direction as shown, pull up on each red handle until they come off, rotate each handle 180 degrees and put back on the valve stem.

The bypass valve connects to the in/out head using nuts that only require hand tightening.
Press the end of the bypass valve with o-rings into the in/out head. **HAND TIGHTEN NUTS.**
DO NOT use pipe dope or any other sealant on threads; teflon tape is not necessary because of o-ring seals.
DO NOT use Vaseline or other unacceptable lubricants on o-rings; silicone lubricant may be used on black o-rings.
Turn the bypass valve handles to the bypass position.

As previously noted in the pre-installation review section, when assembling the installation fitting package (inlet and outlet), connect the fitting to the plumbing system first and then attach the nut, split ring and o-ring.
Heat from soldering or solvent cements may damage the nut, split ring or o-ring.
Solder joints should be cool, and solvent cements should be set before installing the nut, split ring and o-ring. Avoid getting primer and solvent cement on any part of the o-rings, split rings or bypass valve.

TOP VIEW
IN/OUT HEAD, BYPASS
AND
1.0 MNPT ELBOW ASSEMBLY



PLACING THE SYSTEM INTO SERVICE

SLOWLY open the cold-water supply valve to the CITYGUARD LTE Up-Flow Anti-Scale (UFAS) system.
SLOWLY turn the bypass to the UPFLOW SERVICE POSITION.

Open the nearest cold-water faucet downstream of the system to allow air to expel and water to flow.

When water is flowing steadily, clear and without the presence of air, close faucet.

Open additional faucets downstream of the system to relieve any air.

Check for leaks; repair as needed.

The system is now ready for service.

EXPECTATIONS & RECOMMENDATIONS

CITYGUARD LTE is not a water softener.

Hot water tanks should be drained and flushed after the initial 30-90 days and again in a year to remove the fallen scale in the bottom of the tank caused by the descaling action of the system. Follow the manufacturer's instructions when draining the tank.

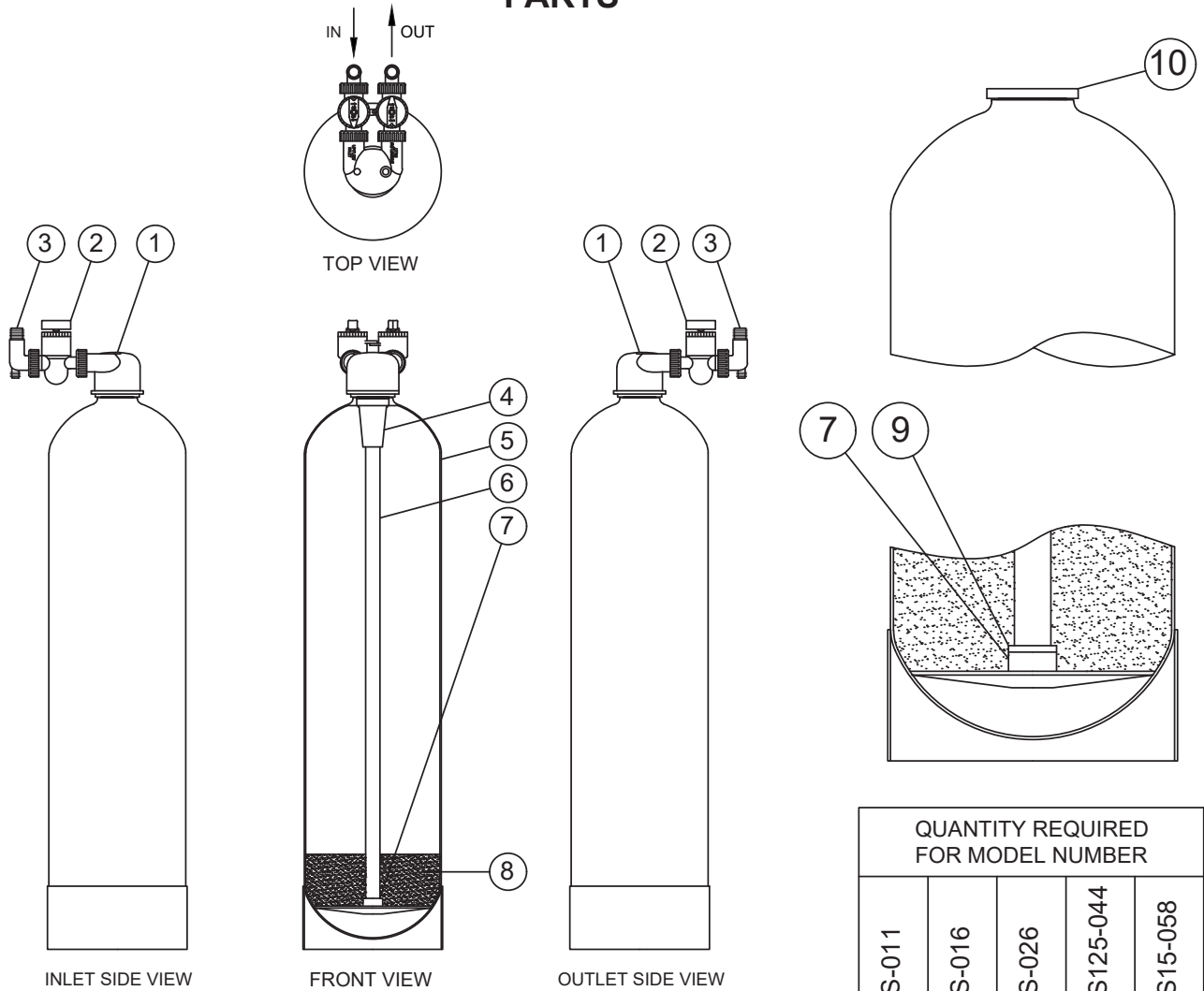
Faucet aerators and drains may plug occasionally during the initial 30-90 days as old scale is removed from your plumbing system and water heater. Unscrew the aerators to clean the screens, then reinstall. You may also experience milky water while descaling is taking place.

Sinks, fixtures, shower doors and tiles should have little or no spotting. If water is allowed to evaporate off the surface, small spots may be left behind. This spotting should not require any more than a wet cloth or sponge to remove. No harsh chemical should be required as with typical hard water spotting.

Dishwasher- spotting on dishes and on the surface of the dishwasher should be greatly reduced or eliminated. We recommend that you reduce the amount of dishwashing detergent by approximately 50% as compared to hard water use. In very hard water areas, the use of a rinse aid may be advised.

The effective average lifespan of EcoSense SP-3 is 5 to 7 years, depending on the feed water conditions.

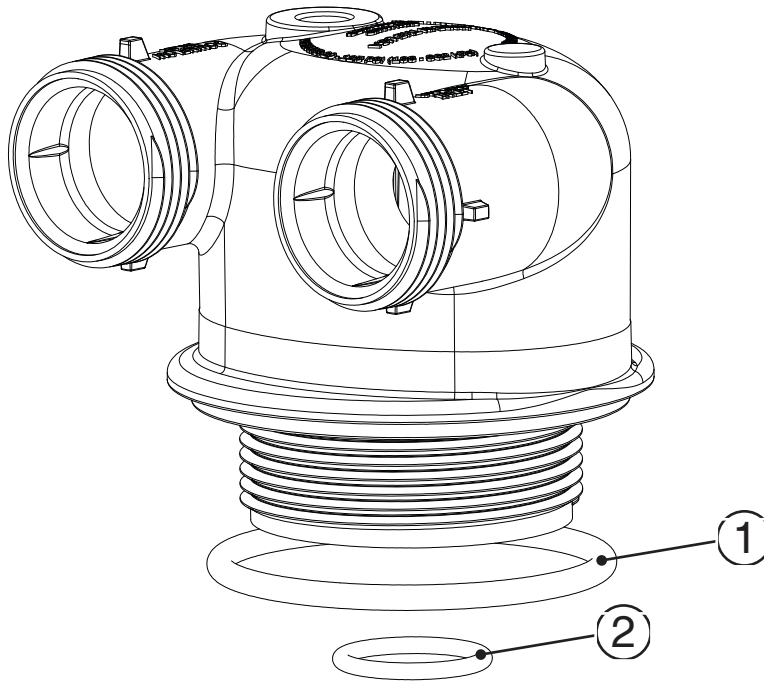
PARTS



QUANTITY REQUIRED FOR MODEL NUMBER					
	7-UFAS-011	7-UFAS-016	7-UFAS-026	7-UFAS125-044	7-UFAS15-058
1	1	1	1	-	-
2	1	1	1	1	-
3	1	1	1	-	-
4	1	1	1	-	-
5,6,7	1	-	-	-	-
8	0.11 (5.0)	0.16 (7.6)	0.26 (12.7)	0.44 (21.4)	0.58 (28.25)
10	-	-	-	1	-

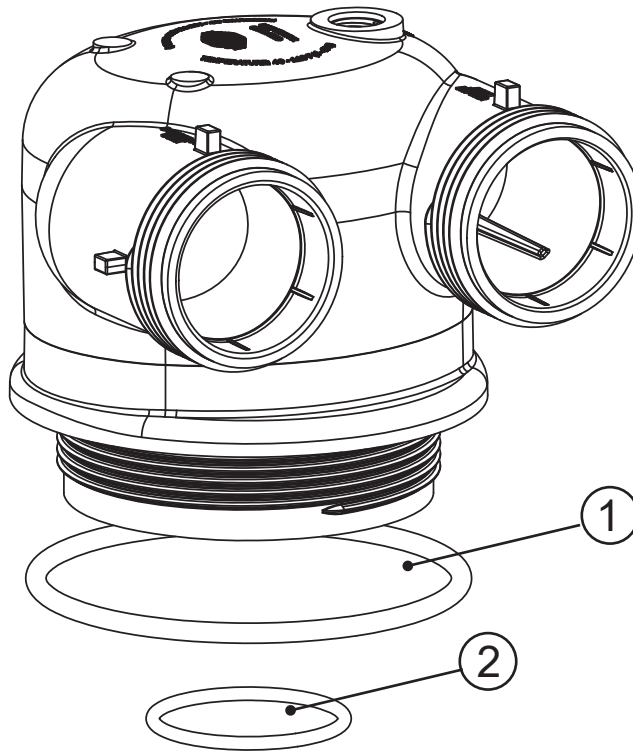
DWG. NO.	PART NUMBER AND DESCRIPTION
1	D1400 IN/OUT HEAD 1191 (1.050" RISER PILOT)
	D1400-04 IN/OUT HEAD 1191 (1.320" RISER PILOT)
	D1403 IN/OUT HEAD 1192 (1.90"/1.5" NPS RISER PILOT)
2	BP2000 BYPASS VALVE
	V4678 BYPASS VALVE
3	V3007 FITTING 1" GFPP MALE NPT ELBOW ASSEMBLY (V3007 = 2 FITTING ASSEMBLIES)
	V3007-05 FITTING 1-1/4" PLASTIC MALE NPT ASSEMBLY (V3007-05 = 2 FITTING ASSEMBLIES)
	V4430-01 FITTING 1-1/2" PLASTIC MALE NPT ASSEMBLY (V4430-01 = 2 FITTING ASSEMBLIES)
4	D1203 BAYONET LOCK TOP BASKET DISTRIBUTOR (1.050" RISER PIPE INSERT)
	D1203-02 BAYONET LOCK TOP BASKET DISTRIBUTOR (1.320" RISER PIPE INSERT)
	D1199-10 SNAP TOP STACK DISTRIBUTOR (1.5" RISER PIPE INSERT)
5,6,7	TANK ASSY - FG844VT TANK, D1130-12FT DISTRIBUTOR TUBE (CUT FOR 44"), R-DIP1050 CONNECTOR
	TANK ASSY - FG1054VT TANK, D1130-12FT DISTRIBUTOR TUBE (CUT FOR 54"), R-DIP1050 CONNECTOR
	TANK ASSY - FG1348VT TANK, D1130-12FT DISTRIBUTOR TUBE (CUT FOR 48"), R-DIP1050 CONNECTOR
	TANK ASSY - FG1465VT TANK, D1139-64.5 DISTRIBUTOR TUBE (CUT FOR 65"), R-DIP1315 CONNECTOR
5,6,7 9	TANK ASSY - FG1665VT TANK, DWV-72 1-1/2" SCH 40 PVC PIPE (CUT FOR 65"), R-DIP2375 CONNECTOR, 437-251 2" X 1-1/2" SCH 40 PVC REDUCING BUSHING
8	ECOSENSE SP-3 (FILTERSORB SP3) MEDIA CU. FT. (LBS)
10	C2015 TANK ADAPTER WITH O-RING SEAL, 4"-8 UN x 2.5"-8 UN

D1400 & D1400-04 1191 IN/OUT HEAD



Drawing No.	Order No.	Description	Quantity
1	V3180	O-Ring 337	1
2	V3105	O-Ring 215 (Distributor Tube) for D1400	1
	V3358	O-Ring 219 (Distributor Tube) for D1400-04	1

D1403 1192 IN/OUT HEAD

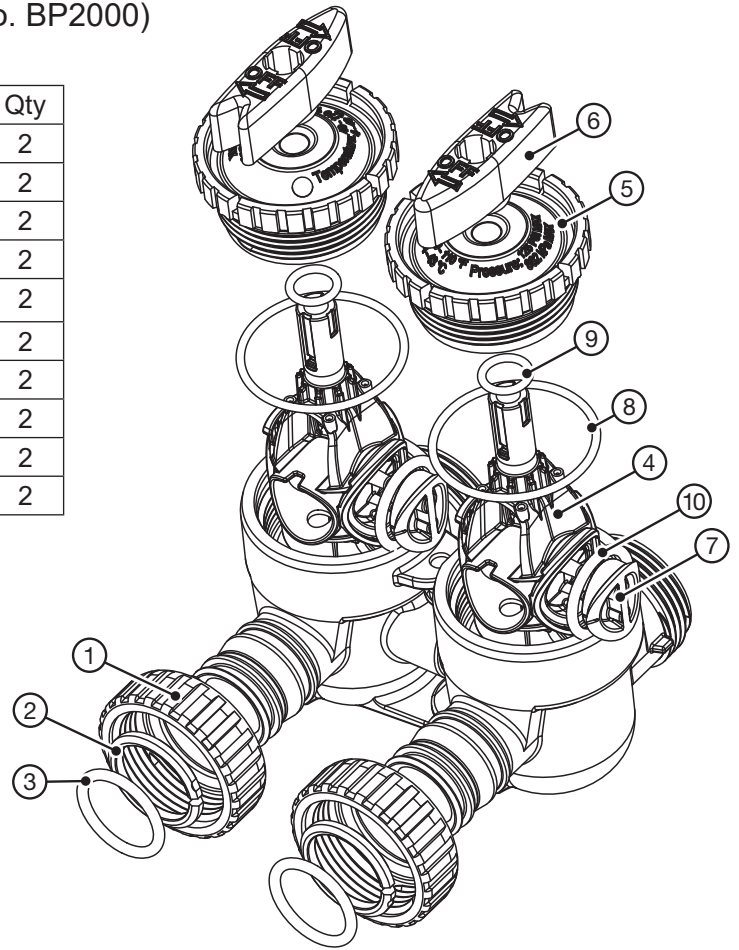


Drawing No.	Order No.	Description	Quantity
1	V3419	O-Ring 347	1
2	V3641	O-Ring 225 (Distributor Tube)	1

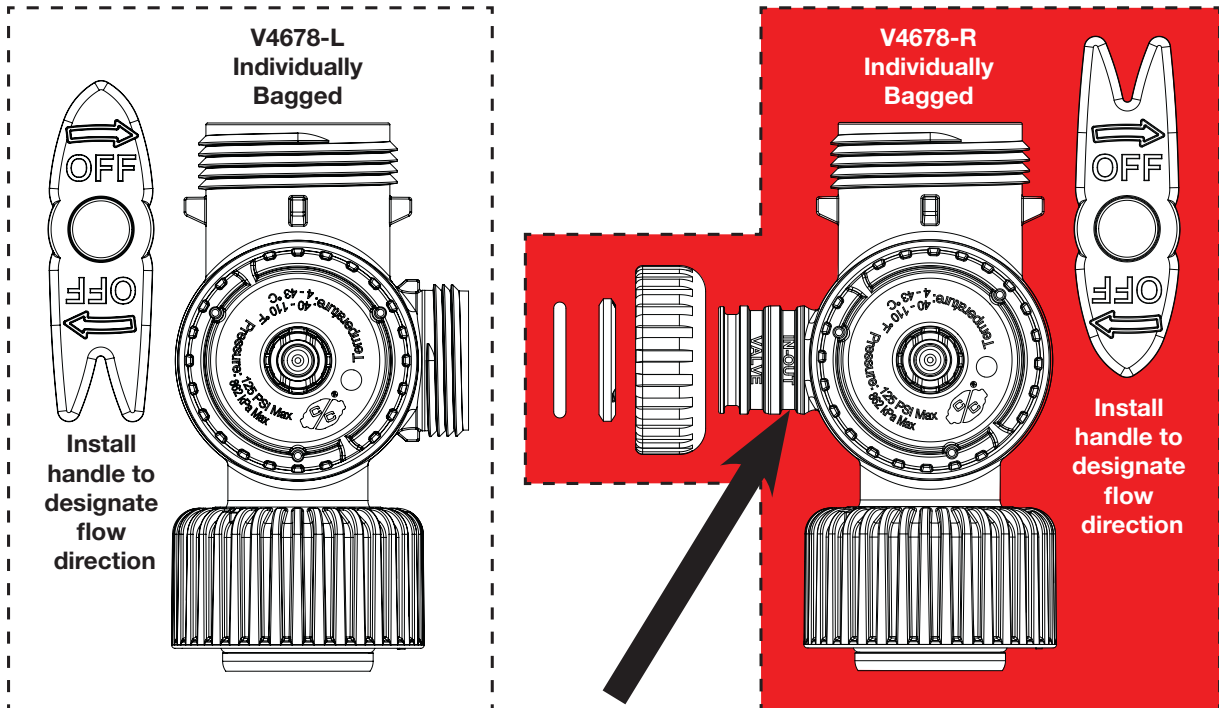
BYPASS VALVE

(Order No. BP2000)

Drawing No.	Order No.	Description	Qty
1	V3151	Nut 1" Quick Connect	2
2	V3150	Split Ring	2
3	V3105	O-Ring 215	2
4	V3145	Bypass 1" Rotor	2
5	V3146	Bypass Cap	2
6	V3147	Bypass Handle	2
7	V3148	Bypass Rotor Seal Retainer	2
8	V3152	O-ring 135	2
9	V3155	O-ring 112	2
10	V3156	O-ring 214	2



V4678 WS15 Bypass = V4678-L and V4678-R (for Model 7-UFAS15-058 only)

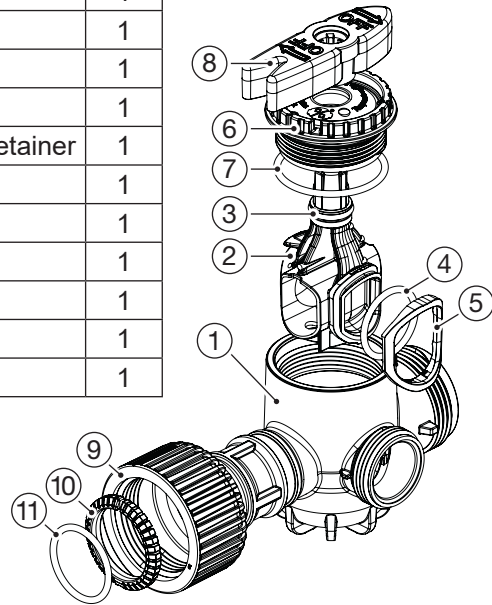


In-Out port spacing determined by split ring placement.
 "Valve" groove for wide spacing, "In/Out Head" groove for narrow spacing.
 See next page for V4678-L and V4678-R components breakdown.

V4678-L

Description: WS15 BYPASS LEFT

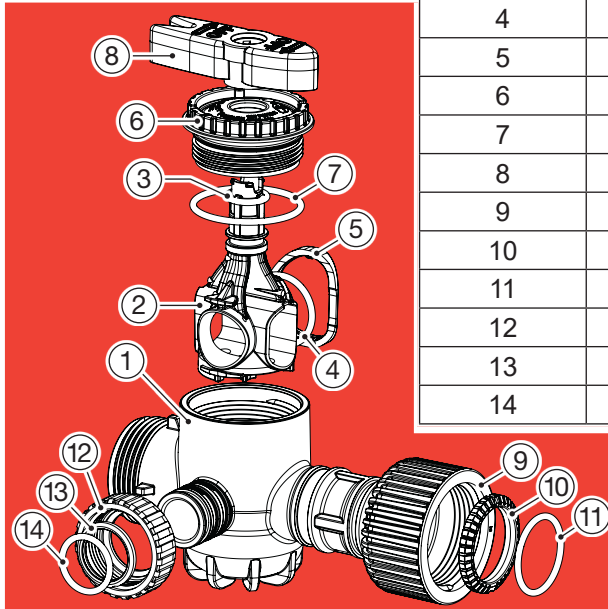
Drawing No.	Order No.	Description	Qty
1	V4670	WS15P Bypass Body Left	1
2	V4672	WS15P Bypass Rotor	1
3	V4676	O-Ring 209	1
4	V3286	O-Ring 216	1
5	V4673	WS15P Bypass Rotor O-Ring Retainer	1
6	V4674	WS15P Bypass Cap	1
7	V4677	O-ring 227	1
8	V4675	WS15P Bypass Handle	1
9	V4344	QC Nut 1.5 Plastic	1
10	V4345	1.5 Split Ring	1
11	V4367	O-Ring 222	1



V4678-R

Description: WS15 BYPASS RIGHT

Drawing No.	Order No.	Description	Qty
1	V4671	WS15P Bypass Body Right	1
2	V4672	WS15P Bypass Rotor	1
3	V4676	O-Ring 209	1
4	V3286	O-Ring 216	1
5	V4673	WS15P Bypass Rotor O-Ring Retainer	1
6	V4674	WS15P Bypass Cap	1
7	V4677	O-ring 227	1
8	V4675	WS15P Bypass Handle	1
9	V4344	QC Nut 1.5 Plastic	1
10	V4345	1.5 Split Ring	1
11	V4367	O-Ring 222	1
12	V3151	WS1 QC Nut	1
13	V3150	WS1 QC Fitting Split Ring	1
14	V3156	O-Ring 214	1



STANDARD INSTALLATION FITTING ASSEMBLIES

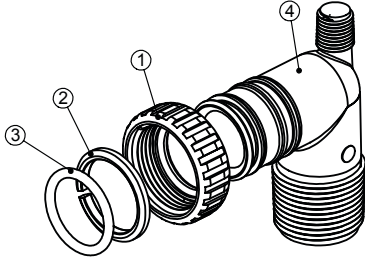
For Models 7-UFAS-011, -016, -026 :

For Model 7-UFAS125-044:

Order No: **V3007**

Description: **Fitting 1" GFPP Male NPT Elbow Assembly**

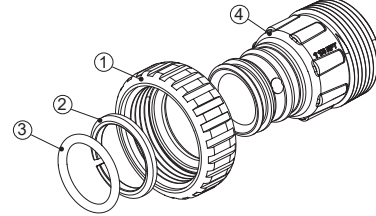
Drawing No.	Order No.	Description	Quantity
1	V3151	Nut 1" Quick Connect	2
2	V3150	Split Ring	2
3	V3105	O-Ring 215	2
4	V3149	Fitting 1 GFPP Male NPT Elbow	2



Order No: **V3007-05**

Description: **Fitting 1-1/4" Plastic Male NPT Assembly**

Drawing No.	Order No.	Description	Quantity
1	V3151	Nut 1" Quick Connect	2
2	V3150	Split Ring	2
3	V3105	O-Ring 215	2
4	V3317	Fitting 1-1/4" Plastic Male NPT	2



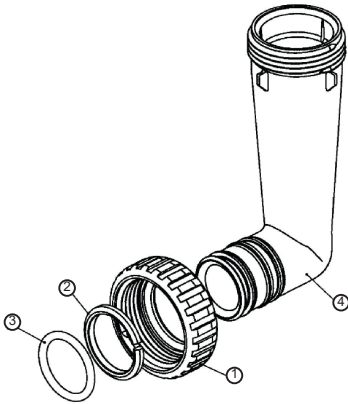
OPTIONAL INSTALLATION FITTING ASSEMBLIES

For Models 7-UFAS-011, -016, -026 , and 7-UFAS125-044:

Order No. **V3191-01**

Description: **Fitting Vertical Adapter Assembly**

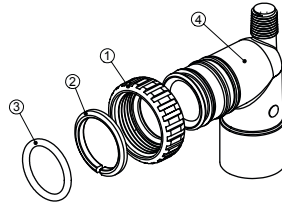
Drawing No.	Order No.	Description	Quantity
1	V3151	Nut 1" Quick Connect	2
2	V3150	Split Ring	2
3	V3105	O-Ring 215	2
4	V3191	Vertical Adapter	2



Order No: **V3007-01**

Description: **Fitting 3/4" & 1" PVC Solvent 90° Assembly**

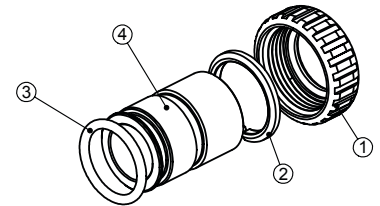
Drawing No.	Order No.	Description	Qty.
1	V3151	Nut 1" Quick Connect	2
2	V3150	Split Ring	2
3	V3105	O-Ring 215	2
4	V3189	Fitting 3/4" & 1" PVC Solvent 90	2



Order No: **V3007-02**

Description: **Fitting 1" Brass Sweat Assembly LF**

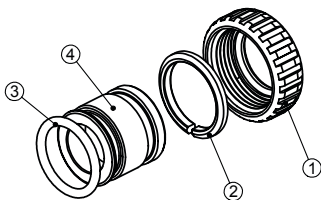
Drawing No.	Order No.	Description	Qty.
1	V3151	Nut 1" Quick Connect	2
2	V3150	Split Ring	2
3	V3105	O-Ring 215	2
4	V3188	Fitting 1 Brass Sweat Assembly	2



Order No: **V3007-03**

Description: **Fitting 3/4" Brass Sweat Assembly LF**

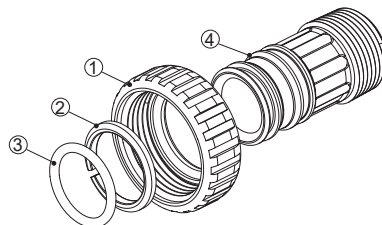
Drawing No.	Order No.	Description	Qty.
1	V3151	Nut 1" Quick Connect	2
2	V3150	Split Ring	2
3	V3105	O-Ring 215	2
4	V3188-01	Fitting 3/4 Brass Sweat	2



Order No: **V3007-04**

Description: **Fitting 1" Plastic Male NPT Assembly**

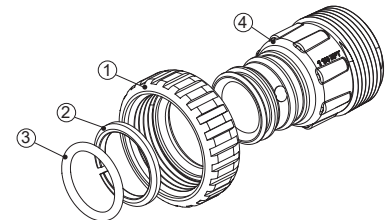
Drawing No.	Order No.	Description	Qty.
1	V3151	Nut 1" Quick Connect	2
2	V3150	Split Ring	2
3	V3105	O-Ring 215	2
4	V3164	Fitting 1" Plastic Male NPT	2



Order No: **V3007-05**

Description: **Fitting 1-1/4" Plastic Male NPT Assembly**

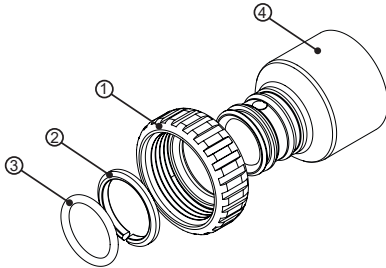
Drawing No.	Order No.	Description	Qty.
1	V3151	Nut 1" Quick Connect	2
2	V3150	Split Ring	2
3	V3105	O-Ring 215	2
4	V3317	Fitting 1-1/4" Plastic Male NPT	2



Order No. **V3007-07**

Description: **Fitting 1 1/4" & 1 1/2" PVC Solvent Assembly**

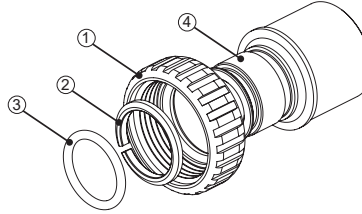
Drawing No.	Order No.	Description	Qty.
1	V3151	Nut 1" Quick Connect	2
2	V3150	Split Ring	2
3	V3105	O-Ring 215	2
4	V3352	Fitting 1 1/4" & 1 1/2" PVC Solvent	2



Order No. **V3007-09**

Description: **Fitting 1 1/4" & 1 1/2" Brass Sweat Assembly LF**

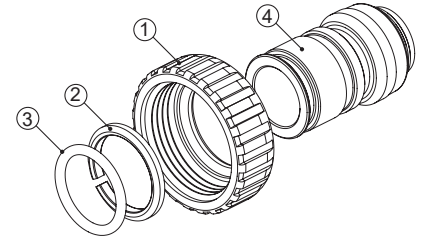
Drawing No.	Order No.	Description	Quantity
1	V3151	Nut 1" Quick Connect	2
2	V3150	Split Ring	2
3	V3105	O-Ring 215	2
4	V3375	Fitting 1 1/4" & 1 1/2" Brass Sweat	2



Order No. **V3007-12**

Description: **Fitting 3/4" Brass SharkBite Assembly LF**

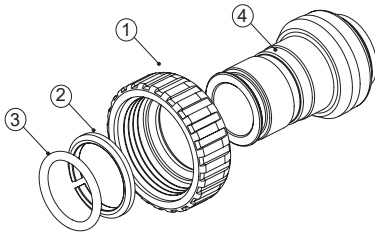
Drawing No.	Order No.	Description	Qty.
1	V3151	Nut 1" Quick Connect	2
2	V3150	Split Ring	2
3	V3105	O-Ring 215	2
4	V3628	Ftg 3/4 Brass Shark-Bite	2



Order No. **V3007-13**

Description: **Fitting 1" Brass SharkBite Assembly LF**

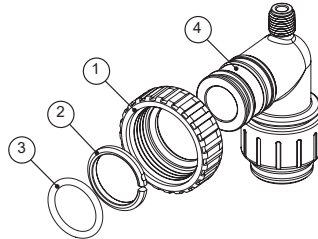
Drawing No.	Order No.	Description	Qty.
1	V3151	Nut 1" Quick Connect	2
2	V3150	Split Ring	2
3	V3105	O-Ring 215	2
4	V3629	Ftg 1" Brass Shark-Bite	2



Order No. **V3007-15**

Description: **WS1 FTG 3/4 JG QC 90 Assembly**

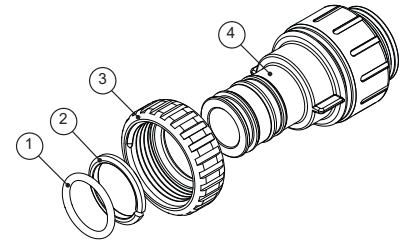
Drawing No.	Order No.	Description	Qty.
1	V3151	Nut 1" Quick Connect	2
2	V3150	Split Ring	2
3	V3105	O-Ring 215	2
4	V3790	WS1 Elbow 3/4 QC W/Stem	2



Order No. **V3007-17**

Description: **WS1 FTG 1" JG QC Assembly**

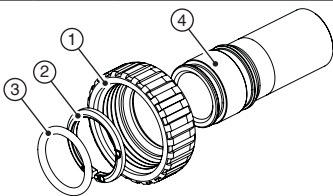
Drawing No.	Order No.	Description	Qty.
1	V3105	O-Ring 215	2
2	V3150	WS1 Split Ring	2
3	V3151	WS1 Nut 1 QC	2
4	V4045	WS1 Ftg 1 Inch QC	2



Order No. **V3007-22**

Description: **WS1 FTG 1" Brass Press/Sweat Assembly LF**

Drawing No.	Order No.	Description	Qty.
1	V3151	WS1 Nut 1" Quick Connect	2
2	V3150	WS1 Split Ring	2
3	V3105	O-Ring 215	2
4	V4318-LF	WS1 Fitting 1 Brass Press/Sweat LF	2



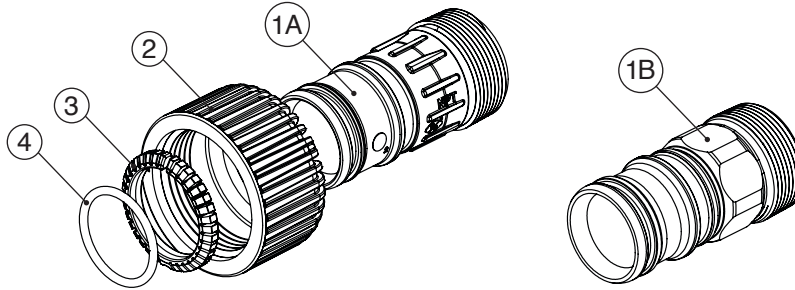
INSTALLATION FITTING ASSEMBLIES

For Model 7-UFAS15-058:

Standard Fitting Assembly: Order No: V4430-01 - Description: WS15P QC Plastic Fitting Kit

Optional Fitting Assembly: Order No: V4430-11 - Description: WS15P QC Stainless Steel Fitting Kit

Drawing No.	Order No.	Description	Quantity
1A	V4353	WS15P QC to NPT Fitting, Plastic	2
1B	V4610-01	WS15P QC to NPT Fitting, Stainless Steel	2
2	V4344	WS15P QC Nut	2
3	V4345	WS15P Split Ring	2
4	V4367	O-Ring 222	2



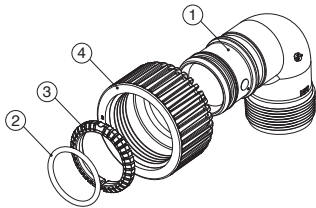
OPTIONAL INSTALLATION FITTING ASSEMBLIES

For Model 7-UFAS15-058:

Order No. V4430-07

Description: WS15 Plastic Elbow QC to NPT

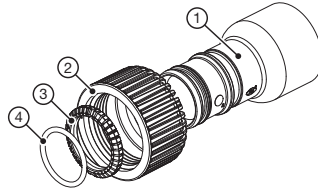
Drawing No.	Order No.	Description	Quantity
1	V4432NPT	1.5 Plastic QC to NPT Elbow	2
2	V4367	O-Ring 222	2
3	V4345	1.5 Split Ring	2
4	V4344	QC Nut 1.5 Plastic	2



Order No: V4430-13

Description: WS15P FTG Asy QC to 1.5/2 Solvent

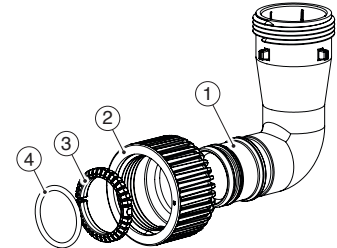
Drawing No.	Order No.	Description	Qty.
1	V4369	1.5 PVC QC Connection	2
2	V4344	QC Nut 1.5 Plastic	2
3	V4345	1.5 Split Ring	2
4	V4367	O-ring -222	2



Order No: V4430-14

Description: WS15P Vertical Elbow Adapter Asy

Drawing No.	Order No.	Description	Qty.
1	V4315	WS15P Bypass Vert Adapter	1
2	V4344	QC Nut 1.5 Plastic	1
3	V4345	1.5 Split Ring	1
4	V4367	O-ring -222	1



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