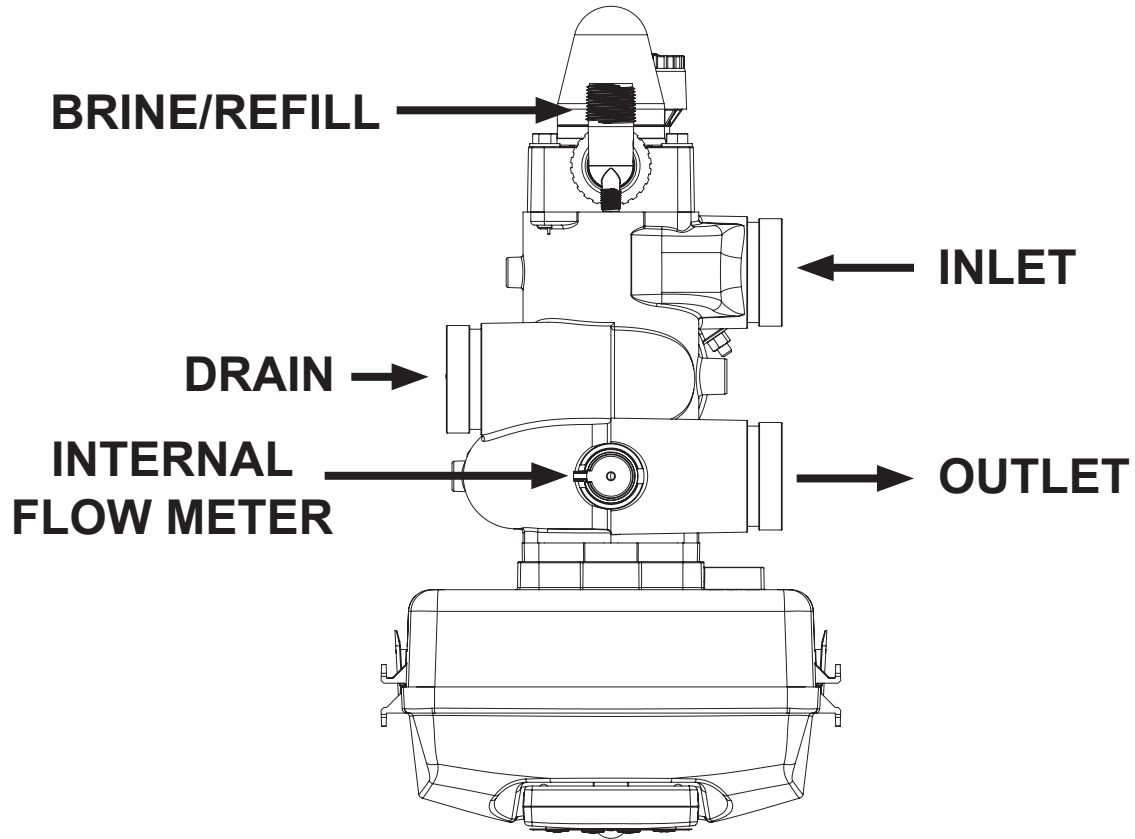
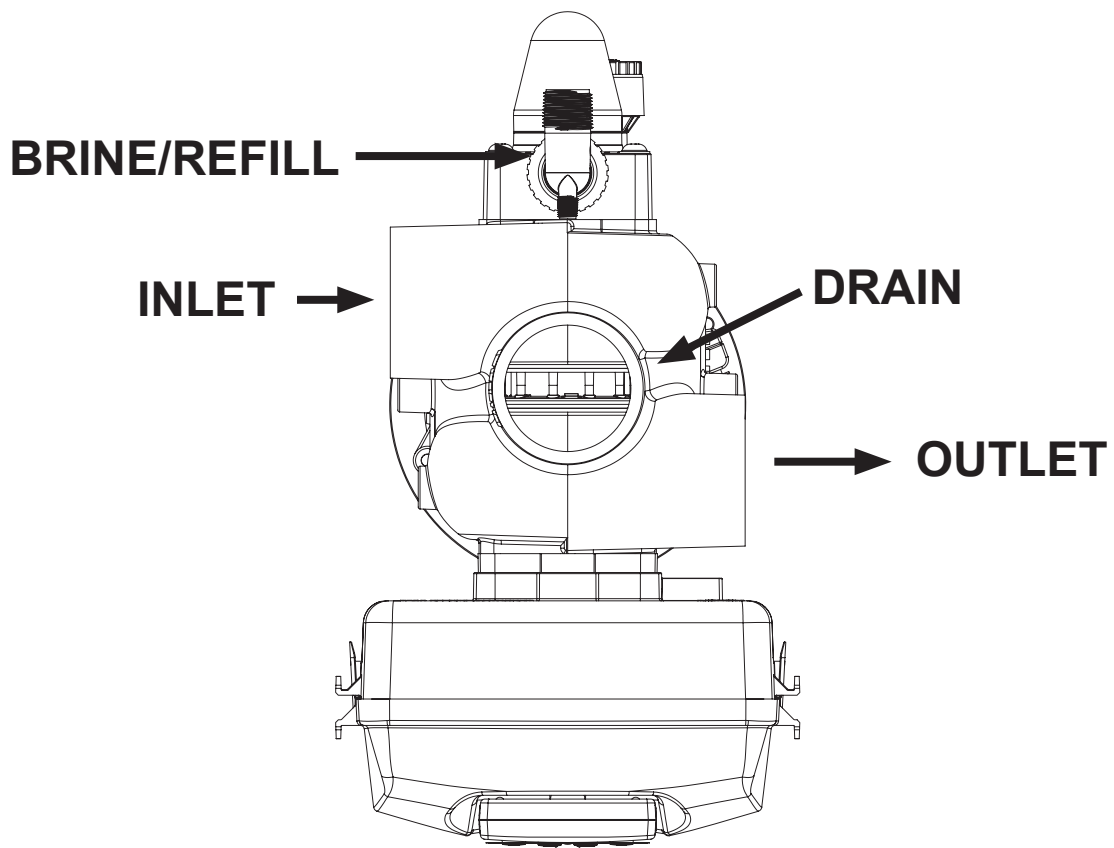


**Installation:**

**WS2H CONTROL VALVE TOP VIEW**



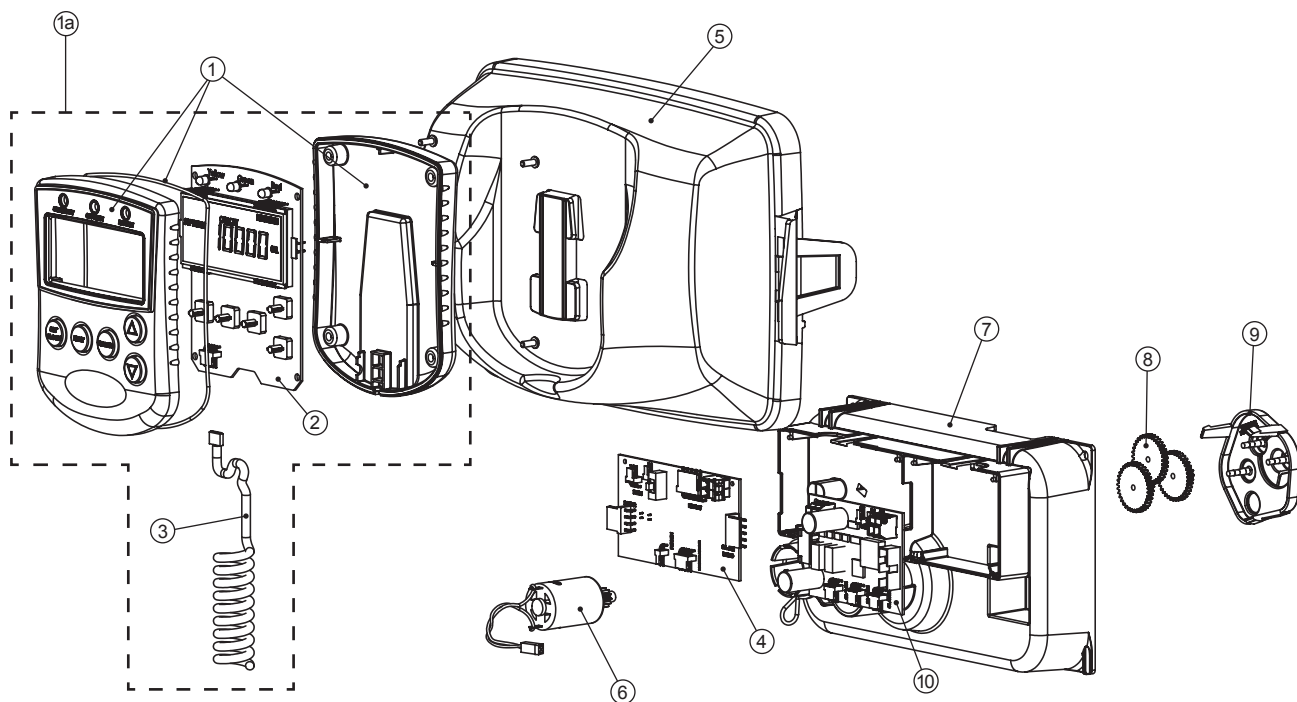
**WS3 CONTROL VALVE TOP VIEW**



## Front Cover and Drive Assembly

Drawing No.	Order No.	Description	Quantity
1	V3068	WS2H/3 POD FRNT-BK COVERS	1
1a	V3082	WS2H/3 POD ASY COMPLETE W/BOARD*	Optional
2	V3241-01 BOARD	WS2H/3 PC BOARD DISPLAY	1
3	V3248	WS2H/3 CABLE DISPLAY POD	1
4	V3242-01BOARD	WS2H/3 PC BOARD VALVE	1
5	V3224-01R	WS2H/3 COVER ASY PLATINUM	1
6	V3107-01	WS1 MOTOR ASY	1
7	V3226-01	WS2H/3 DRIVE BRACKET ASY	1
8	V3110	WS1 DRIVE GEAR 12X36	3
9	V3109	WS1 DRIVE GEAR COVER	1
Not Shown	V3461	WS2H/3 AC ADAPTER (shipped less cord)	1 See Table 2 Software and Power Supply Compatibility for option selection
	V3461EU	WS2H/3 AC ADAPTER EU	
	V3461UK	WS2H/3 AC ADAPTER UK	
	V3461-01	WS2H/3 AC ADAPTER 20VAC	
	V3461EU-01	WS2H/3 AC ADAPTER EU 20VAC	
	V3461UK-01	WS2H/3 AC ADAPTER UK 20VAC	
10	V3243-01BOARD	WS2H/3 PC BOARD SYSTEM	Optional
Not Shown	V3475-12	WS2H/3 SYS CONNECT CORD 12 FT RED	Optional
Not Shown	V3475-24	WS2H/3 SYS CONNECT CORD 24 FT BL	Optional
Not Shown	V3475-36	WS2H/3 SYS CONNECT CORD 36 FT YEL	Optional

\*Contains items 1,2 & 3 Pod Assembly, PC Board and Cable

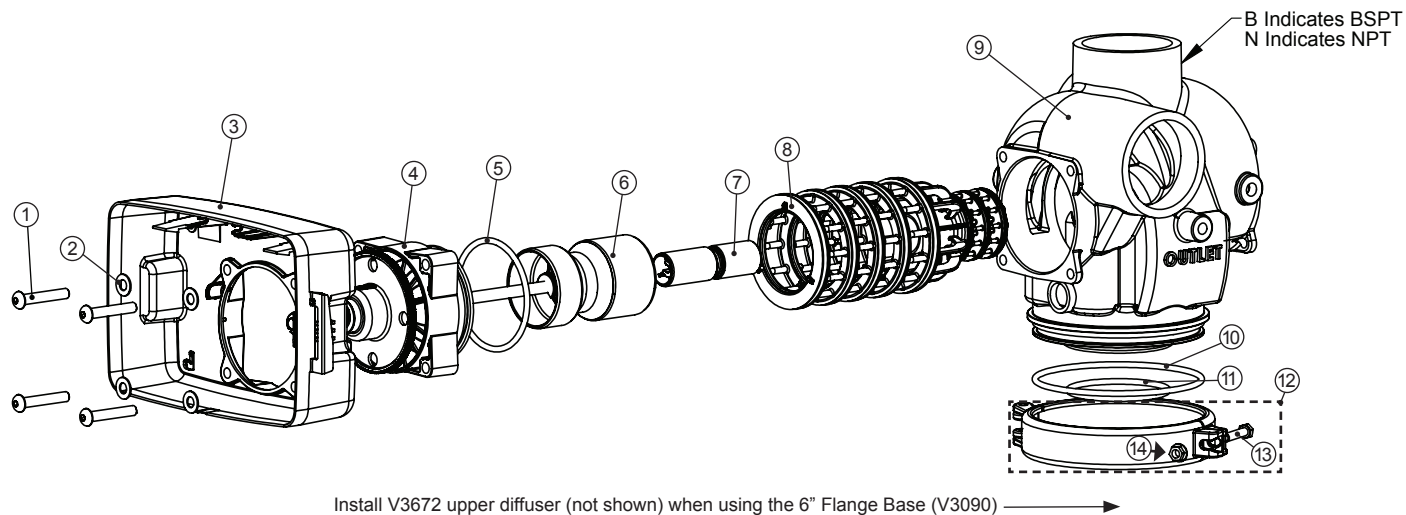


**WS3 Drive Cap Assembly, Downflow Piston, Regenerant Piston, Spacer Stack Assembly,  
Drive Back Plate and Main Body**

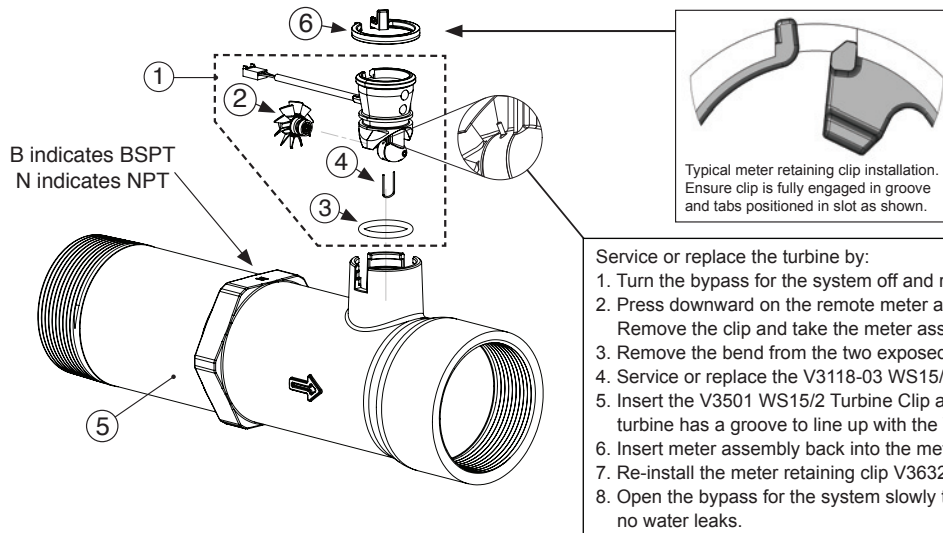
Drawing No.	Order No.	Description	Quantity
1	V3274	WS2H/3 SCREW BTNSKT HD SS3/8-16X2 (7/32" hex allen wrench required)	4
2	V3291	WS2H/3 WASHER SS 3/8	4
3	V3225	WS2H/3 BACK PLATE	1
4	V3093	WS3 DRIVE ASY	1
5	V3289	O-RING 344	1
6	V3666-01	WS3 PISTON	1
7	V3238-01**	WS2H/3 BRINE PISTON	1
8	V3092	WS3 STACK ASY	1
Not Shown	V3468	WS2H/3 PLUG 1/4 HEX NPT (included when ordering V3667-03)	2
	V3465	WS2H/3 PLUG 1/4 HEX BSPT (included when ordering V3667BSPT-03)	
9	V3667-03	WS3 BODY W/V3468 PLUG	1
	V3667BSPT-03	WS3 BSPT BODY W/V3465 PLUG	
10	V3763	O-RING 361	1
11	V3762	O-RING 341 FOR VALVE BODIES WITH NPT OR BSPT THREADS	1
12	V3091*	WS3 BASE CLAMP ASY	1
13	V3276	WS2H/3 BOLT HEX SS 5/16-18X1-3/4	1
14	V3269	WS2H/3 NUT 5/16-18 SS HEX	1
Not Shown	V3672	TOP BAFFLE DFSR CLACK 3/90MM	1

\*V3091 WS3 BASE CLAMP ASY includes a V3276 WS2H/3 BOLT HEX SS 5/16-18X1-3/4 and V3269 WS2H/3 NUT 5/16-18 SS HEX.

\*\*V3238-01 Brine Piston is used for Backwash Only valves.



**V3095 WS3 Meter NPT MxF Assembly and V3095BSPT-15 WS3 Meter BSPT MxF Assembly  
V3095-15 WS3 Meter ASY NPT MxF 15FT and V3095BSPT-15 WS3 Meter ASY BSPT MxF 15FT**



Drawing No.	Order No.	Description	V3095	V3095BSPT	V3095-15	V3095BSPT-15
1	V4039	WS3 METER COMMERCIAL ASY 4 FT CORD (includes V3118-03, V3105 & V3501)	1	1		
	V3221	WS REMOTE METER ASY 15 FT CORD (includes V3118-03, V3105 & V3501)			1	1
2	V3118-03	WS15/2 TURBINE ASY	1	1	1	1
3	V3105	O-RING 215	1	1	1	1
4	V3501	WS15/2 TURBINE CLIP	1	1	1	1
5	V3844-01	WS3 METER NPT MxF HOUSING	1		1	
	V3844BSPT-01	WS3 METER BSPT MxF HOUSING		1		1
6	V3632	WS1.5/2/3 METER RETAINING CLIP	1	1	1	1
Not shown	V3602	WS3 FLOW STRAIGHTENER (located inside meter housing)	1	1	1	1

## Installation

Installation of the V3075 WS3 Meter NPT Assembly can be accomplished with 3" NPT pipe. For V3075BSPT WS3 Meter BSPT Assembly use 3" BSPT pipe. It is recommended that the meter assembly be installed horizontally or in a downflow vertical position to reduce turbine bearing wear.

**WHEN INSTALLING THE METER, MAKE SURE THE ARROW ON THE METER BODY IS GOING THE SAME DIRECTION AS THE WATER FLOW. THE METER CAN BE INSTALLED IN HORIZONTAL OR VERTICAL APPLICATIONS.**

**THIS WATER METER SHOULD NOT BE USED AS THE PRIMARY MONITORING DEVICE FOR CRITICAL OR HEALTH EFFECT APPLICATIONS.**

**OPERATING PRESSURES: 20 PSI MINIMUM / 125 PSI MAXIMUM**

**OPERATING TEMPERATURES: 40°F MINIMUM / 110°F MAXIMUM**

The 22 gauge wire crimp terminals are Molex Series 41572 or 40445. The housing connector is Molex Series 2695 White Housing, P/N 22-01-3037.

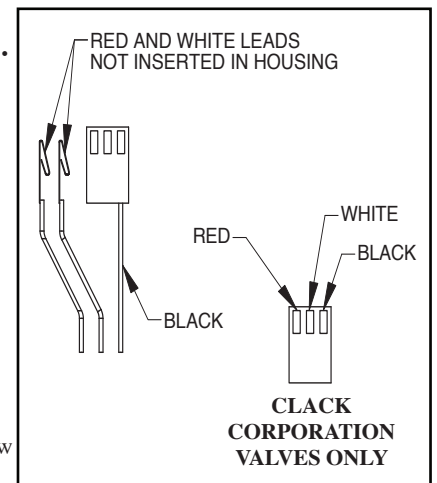
**The housing connector diagram shows the proper installation of the RED, WHITE and BLACK wires for CLACK CORPORATION CONTROL VALVES. When connecting to other manufacturers control valves please contact your original equipment manufacturer for proper wiring instructions.**

### Wiring:

- The meter must be supplied with a DC voltage between 4 and 24 volts
- The RED wire is positive
- The BLACK wire is negative
- The WHITE wire is the meter output

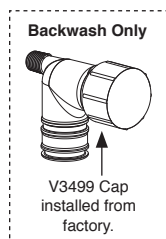
### Calibration:

- For WS2H valves select 8 pulses if valve software records in gallons and 2.1 if valve software records in liters.
- The calibration factor for the WS3 Meter Assembly is 8 pulses per gallon when used on applications other than WS2H valves.
- The meter flow range is 3.5-350 gpm  $\pm$  5% (output signal 0.46 Hz to 46.6 Hz). NOTE: Not all flow monitors will register accurately at either the low or high flow range of this meter. Contact your flow monitor manufacturer for limitations.
- Pressure drop at 350 gpm is 7.3 PSI

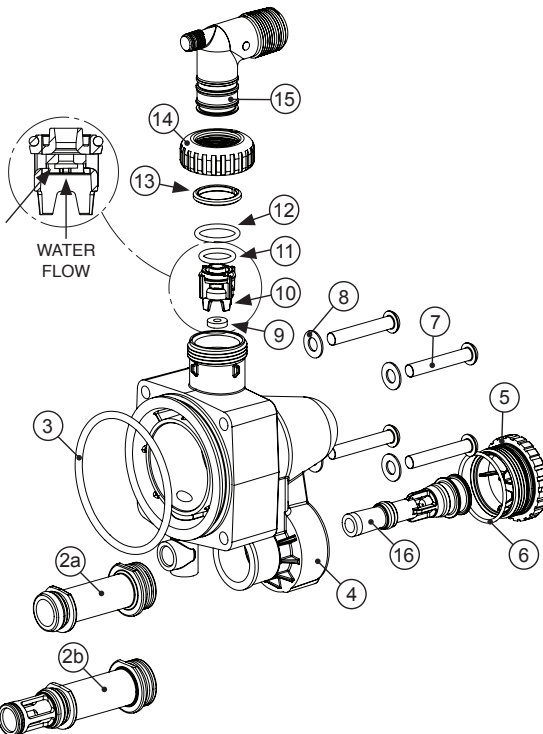


## WS2H and WS3 Brine Valve Body and Injector Components

Drawing No.	Order No.	Description	Quantity	
			WS2H	WS3
1	V3237-01	WS2H/3 SOFTFILL TUBE ASY	1	1
2a	V3236-04*	WS2H INJECTOR TUBE ASY FOR A THRU H	1	
2b	V3670-01**	WS3 INJECTOR TUBE DOWNFLOW ASY		1
3	V3289	O-RING 344	1	1
4	V3067	WS2H/3 BRINE BODY ASY	1	1
5	V3477	WS2H/3 INJECTOR CAP	1	1
6	V3152	O-RING 135	1	1
7	V3275	WS2H/3 SCREW BSHD SS 3/8-16X2-1/4 (7/32" hex allen wrench required)	4	4
8	V3291	WS2H/3 WASHER SS 3/8	4	4
9	V3162-022***	WS1 DLFC 022 FOR 3/4	1	1
10	V3231	WS2H/3 REFILL FLOW CNTRL RETAINER	1	1
11	V3277	O-RING 211	1	1
12	V3105	O-RING 215	1	1
13	V3150	WS1 SPLIT RING	1	1
14	V3151	WS1 NUT 1 QC	1	1
15	V3149	WS1 FTG 1 PVC MALE NPT ELBOW	1	1
Not Shown	V3189	WS1 FTG 3/4&1 PVC SLVNT 90	Optional	Optional
16****	V3010-2A	WS2/2H/3 INJECTOR ASY A		
	V3010-2B	WS2/2H/3 INJECTOR ASY B		
	V3010-2C	WS2/2H/3 INJECTOR ASY C		
	V3010-2D	WS2/2H/3 INJECTOR ASY D		
	V3010-2E	WS2/2H/3 INJECTOR ASY E		
	V3010-2F	WS2/2H/3 INJECTOR ASY F		
	V3010-2G	WS2/2H/3 INJECTOR ASY G		
	V3010-2H	WS2/2H/3 INJECTOR ASY H		
Not Shown	V3499*****	WS2H/3 FITTING CAP 1 IN THREADED	1	1
Not Shown	V3797*****	WS1 FTG 1 PVC MALE BSPT ELBOW	BSPT Only	BSPT Only



Proper RFC orientation directs refill water flow towards the washer face with radius and text.



\*V3236-04 WS2H INJECTOR TUBE ASY A thru H contains a V3285 O-RING 213 and a V3286 O-RING 216.

\*\*V3670-01 WS3 INJECTOR TUBE DOWNFLOW ASY contains a V3285 O-RING 213, V3286 O-RING 216 and a V3163 O-RING 019.

\*\*\*Any V3162-XXX flow control may be used. V3237-01 WS2H SOFTFILL TUBE ASY contains a V3155 O-RING 112, V3287 O-RING 110 and a V3288 O-RING 206.

\*\*\*\*V3010-2A through V3010-2G injectors contain a V3283 O-RING 117 and a V3284 O-RING 114. V3010-2H injectors use a V3283 O-RING 117 and D1263 O-RING 116.

Backwash Only Valves include a V3499 but do not include the following parts: V3189, V3162-022, V3231 and V3277.

\*\*\*\*\* Install V3499 on V3149 if valve is to be set up as a backwash only valve.

\*\*\*\*\* BSPT valves also include a V3797 WS1 FTG 1 PVC MALE BSPT ELBOW

\*\*\*V3236-01. Could be used "as is" with A-C injectors. Diffuser is snipped off if using D through G injectors. Order V3236-04 if using H injector.

