



## Valves and accessories



			Valve material	In/Out	Service flow rate (m³/h-gpm)	Backwash flow rate (m³/h-gpm)	Softener tank size	Filter tank size	Regeneration
RESIDENTIAL		WS1TC	NORYL	¾" or 1,25" M BSPT	6 / 27	6 / 27	6"- 21"	6"- 21"	DOWN FLOW
		WS1EI	NORYL	¾" or 1,25" M BSPT	6 / 27	6 / 27	6"- 21"	6"- 21"	DOWN FLOW or UP FLOW
		TT1EI TWIN VALVE	NORYL	¾" or 1,25" M BSPT	6 / 27	6 / 27	6"- 21"	6"- 16"	DOWN FLOW
		WS1CI	NORYL	¾" or 1,25" M BSPT	6 / 27	6 / 27	6"- 21"	6"- 21"	DOWN FLOW or UP FLOW
		TT1CI TWIN VALVE	NORYL	¾" or 1,25" M BSPT	6 / 27	6 / 27	6"- 21"	6"- 21"	DOWN FLOW
		WS125TC	NORYL	1" or 1,25" M BSPT	7,7 / 34	7,3 / 32	6"- 21"	6"- 24"	DOWN FLOW
		WS125EI	NORYL	1" or 1,25" M BSPT	7,7 / 34	7,3 / 32	6"- 21"	6"- 24"	DOWN FLOW or UP FLOW
		WS1125CI	NORYL	1" or 1,25" M BSPT	7,7 / 34	7,3 / 32	6"- 21"	6"- 24"	DOWN FLOW or UP FLOW
COMMERCIAL		WS15EI	Brass	1,5" F BSPT	15,9 / 70	11,8 / 52	12"- 30"	12"- 30"	DOWN FLOW or UP FLOW
		WS15CI	Brass	1,5" F BSPT	15,9 / 70	11,8 / 52	12"- 30"	12"- 30"	DOWN FLOW or UP FLOW
		WS2EI	Brass	2" F BSPT	26,1 / 115	18,2 / 80	12"- 48"	12"- 36"	DOWN FLOW or UP FLOW
		WS2EI QC	Brass	2" F BSPT	26,1 / 115	18,2 / 80	12"- 48"	12"- 36"	DOWN FLOW or UP FLOW
		WS2CI	Brass	2" F BSPT	26,1 / 115	18,2 / 80	12"- 48"	12"- 36"	DOWN FLOW or UP FLOW
		WS2CI QC	Brass	2" F BSPT	26,1 / 115	18,2 / 80	12"- 48"	12"- 36"	DOWN FLOW or UP FLOW
INDUSTRIAL		WS2H	Brass	2" F BSPT or 2,5" QC	28,4 / 125	28,4 / 125	18"- 63"	18"- 43"	DOWN FLOW
		WS3	Brass	3" F BSPT	56,8 / 250	50 / 220	18"- 63"	18"- 63"	DOWN FLOW

Chlorinator	Meter	Mixing valve	Hot water	Timer type	Adjustable cycles	Quick connection	Sun/Power battery	Duplex	Multiplex
NO	OPTION	OPTION	NO	TC	NO	NO	OPTION	NO	NO
NO	OPTION	OPTION	NO	EI	NO	NO	OPTION	✓	NOT RECOMMENDED
NO	OPTION	NOT AVAILABLE	NO	EI	NO	NO	OPTION	Twin	NO
NO	OPTION	OPTION	NO	CI	✓	NO	OPTION	✓	MAX 6 (*)
NO	OPTION	NOT AVAILABLE	NO	CI	✓	NO	OPTION	Twin	NO
NO	OPTION	OPTION	NO	TC	NO	NO	OPTION	NO	NO
NO	OPTION	OPTION	NO	EI	NO	NO	OPTION	✓	NOT RECOMMENDED
NO	OPTION	OPTION	NO	CI	✓	NO	OPTION	✓	MAX 6 (*)
NO	OPTION	OPTION	NO	EI	NO	NO	OPTION	✓	NOT RECOMMENDED
NO	OPTION	OPTION	NO	CI	✓	NO	OPTION	✓	MAX 6 (*)
NO	OPTION	OPTION	NO	EI	NO	NO	OPTION	✓	NOT RECOMMENDED
NO	OPTION	OPTION	NO	EI	NO	✓	OPTION	✓	NOT RECOMMENDED
NO	OPTION	OPTION	NO	CI	✓	✓	OPTION	✓	MAX 6 (*)
NO	INCLUDED	NOT AVAILABLE	NO	CI	✓	✓	NO	✓	MAX 4
NO	NOT INCLUDED	NOT AVAILABLE	NO	CI	✓	✓	NO	✓	MAX 4

(\*) WITH SYSTEM CONTROLLER BOX

## WS1TC WATER SPECIALIST CONTROL VALVE



- Top mount control valve suited for automatic residential water softening or filtration systems
- Single valve, available also for twin alternating, twin parallel and multitank systems
- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- More informative 4 digit LCD Display with Status Indicators
- Solid state microprocessor with easy access front panel settings
- Service flow rate of 27 gpm, backwash 27 gp
- Backwash and brining ability to 21" diameter tanks
- Front panel display for time of day, days until next regeneration
- Days between regeneration feature: 1-99 days standard; 7-day optional
- Double backwash feature offers optimum regeneration, cleaning ability and efficiency
- 10 selectable pre-programmed regeneration cycles
- Coin Cell Lithium battery back-up with a 8 hour carry over
- Auto detection of 50/60 Hz line frequency, with automatic 12/24 hour time keeping formats
- Level VI 15-volt output DC power supply provides safe and easy installation
- Post treated water regenerant refill
- Reliable and proven DC drive
- Certified to NSF/ANSI 44, 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
V1TCDTD-03 (*)	WS1TC VALVE DN T I-D	Softener	9"	Downflow	Not included	Not included	4	160	
V1TCDTD-M03 (*)	WS1TC VALVE DN T I-D W/MIXING VALVE	Softener	9"	Downflow	Not included	Included	4	160	
V1TCDTE-03 (*)	WS1TC VALVE DN T I-E	Softener	10"	Downflow	Not included	Not included	4	160	
V1TCDTE-M03 (*)	WS1TC VALVE DN T I-E W/MIXING VALVE	Softener	10"	Downflow	Not included	Included	4	160	
V1TCDTF-03 (*)	WS1TC VALVE DN T I-F	Softener	12"	Downflow	Not included	Not included	4	160	
V1TCDTF-M03 (*)	WS1TC VALVE DN T I-F W/MIXING VALVE	Softener	12"	Downflow	Not included	Included	4	160	
V1TCBTZ-03 (*)	WS1TC VALVE BW T I-Z	Filter	N/A	Backwash	Not included	Not included	4	160	

(\*) Not available in stock.

#### NOTE:

Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3186-XX).

Drain Line Flow Controls (DLFC) washer is not included. Please order separately: reference order number V3162-007 through V3162-100.

1,05" Top Distributor is not included. Please order separately: reference order number AV071.

Power Rechargeable Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with the normal transformer for applications with a unstable power grid.

Sun Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with a solar panel for applications with no electrical power.

# Water Specialist 1" TC Control Specifications

Inlet/Outlet Fittings (to order separately)..... $\frac{3}{4}$ " to 1.25" Male BSPT  
Cycles ..... up to 6  
Valve Material ..... Noryl (1) or equivalent  
Regeneration ..... downflow

## FLOW RATES

Service @15 psi drop (includes bypass) ..... 6,12 m<sup>3</sup> /h  
Backwash @ 25 psi drop (includes bypass) ..... 6,12 m<sup>3</sup> /h  
Cv Service ..... 7,0  
Cv Backwash ..... 5,4

## OPERATING PRESSURES

Minimum/Maximum ..... 1,4 - 8,6 bar

## OPERATING TEMPERATURES

Minimum/Maximum ..... 4° – 43° C

## DIMENSIONS & WEIGHT

Distributor Pilot ..... 1.05" OD Pipe  
Drain Line .....  $\frac{3}{4}$ " or 1" NPT  
Brine Line .....  $\frac{3}{8}$ " or  $\frac{1}{2}$ " OD Poly Tube  
Mounting Base ..... 2  $\frac{1}{2}$ " - 8 NPSM  
Height From Top Of Tank ..... 187 mm  
Weight ..... 2 kg

## ELECTRICAL SPECIFICATIONS

### POWER SUPPLY

Supply Voltage ..... 200VAC to 240VAC  
Supply Frequency ..... 50/60 Hz  
Output Voltage ..... 15VDC  
Output Current ..... 500 mA

## TANK APPLICATIONS

Water Softener ..... 6" – 21" diameter  
Water Filter ..... 6" – 21" diameter

## CYCLES OF OPERATION (Softener Downflow)

Cycle	Range of times minutes
1. Backwash 1 <sup>st</sup> (upflow) .....	3 - 12
2. Regenerate Draw/Slow Rinse (downflow) .....	50 - 70
3. Backwash 2 <sup>nd</sup> (upflow) .....	3 - 12
4. Fast Rinse (downflow) .....	3 - 8
5. Regenerant Refill (in service with treated water) .....	As Programmed
6. Service (downflow)	

*Options: Backwash Filter, Bypass, Weather Cover*

Compatible with the following typical concentration of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines





## WS1EI WATER SPECIALIST CONTROL VALVE

- Top mount control valve suited for automatic residential water softening or filtration system
- Single valve, available also for twin alternating, twin parallel and multitank systems
- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- Solid state microprocessor with easy access front panel setting
- Front panel display for time of day, days until next regeneration, volume remaining, current flow rate and total volume used (Totalizer)
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Optional double backwash feature offers optimum regeneration, cleaning ability and efficiency
- Fully adjustable cycle times with 6-cycle control delivers controlled backwash, downflow brining/slow rinse, second backwash, fast rinse, refill and downflow service
- Coin Cell Lithium battery back-up with an 8 hour carry over
- Backwash and brining ability to 21" diameter tanks
- Downflow or upflow brining regeneration
- Level VI 15-volt output DC power supply provides safe and easy installation
- Control valve design provides optimum service and backwash rates
- Post treated water regenerant refill
- Reliable and proven DC drive
- Certified to NSF/ANSI 44, 61 and 372.

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
V1EIDMC-03 (*)	WS1EI VALVE DN M I-C	Softener	8"	Downflow	Included	Not included	4	160	
V1EIDMC-M03 (*)	WS1EI VALVE DN M I-C W/MIXING VALVE	Softener	8"	Downflow	Included	Included	4	160	
V1EIDMD-03 (*)	WS1EI VALVE DN M I-D	Softener	9"	Downflow	Included	Not included	4	160	
V1EIDMD-M03 (*)	WS1EI VALVE DN M I-D W/MIXING VALVE	Softener	9"	Downflow	Included	Included	4	160	
V1EIDME-03 (*)	WS1EI VALVE DN M I-E	Softener	10"	Downflow	Included	Not included	4	160	
V1EIDME-M03 (*)	WS1EI VALVE DN M I-E W/MIXING VALVE	Softener	10"	Downflow	Included	Included	4	160	
V1EIDMF-03 (*)	WS1EI VALVE DN M I-F	Softener	12"	Downflow	Included	Not included	4	160	
V1EIDMF-M03 (*)	WS1EI VALVE DN M I-F W/MIXING VALVE	Softener	12"	Downflow	Included	Included	4	160	
V1EIUMA-03 (*)	WS1EI VALVE UP M I-A	Softener	8"	Upflow	Included	Not included	4	160	
V1EIUMA-M03 (*)	WS1EI VALVE UP M I-A W/MIXING VALVE	Softener	8"	Upflow	Included	Included	4	160	
V1EIUMB-03 (*)	WS1EI VALVE UP M I-B	Softener	9"	Upflow	Included	Not included	4	160	
V1EIUMB-M03 (*)	WS1EI VALVE UP M I-B W/MIXING VALVE	Softener	9"	Upflow	Included	Included	4	160	
V1EIUMC-03 (*)	WS1EI VALVE UP M I-C	Softener	10"	Upflow	Included	Not included	4	160	
V1EIUMC-M03 (*)	WS1EI VALVE UP M I-C W/MIXING VALVE	Softener	10"	Upflow	Included	Included	4	160	
V1EIDTE-03 (*)	WS1EI VALVE DN T I-E	Softener	10"	Downflow	Not included	Not included	4	160	
V1EIDTE-M03 (*)	WS1EI VALVE DN T I-E W/MIXING VALVE	Softener	10"	Downflow	Not included	Included	4	160	
V1EIBMZ-03 (*)	WS1EI VALVE BW M I-Z	Filter	N/A	Backwash	Included	Not included	4	160	
V1EIBTZ-03 (*)	WS1EI VALVE BW T I-Z	Filter	N/A	Backwash	Not included	Not included	4	160	

(\*) Not available in stock.

### NOTE:

Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3186-XX). Drain Line Flow Controls (DLFC) washer is not included. Please order separately: reference order number V3162-007 through V3162-100.

1,05" Top Distributor is not included. Please order separately: reference order number AV071.

Power Rechargeable Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with the normal transformer for applications with an unstable power grid.

Sun Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with a solar panel for applications with no electrical power.

# Water Specialist 1" EI Control Specifications

Inlet/Outlet Fittings (to order separately)..... $\frac{3}{4}$ " to 1.25" Male BSPT  
 Cycles ..... up to 6  
 Valve Material ..... Noryl or equivalent  
 Regeneration ..... downflow or upflow

## FLOW RATES

Service @15 psi/1 bar drop (includes bypass and meter)..... 6,12 m<sup>3</sup>/h  
 Backwash @ 25 psi/1.7 bar drop (includes bypass)..... 6,12 m<sup>3</sup>/h

## OPERATING PRESSURES

Minimum/Maximum ..... 1,4 - 8,6 bar

## OPERATING TEMPERATURES

Minimum/Maximum ..... 4° - 43°C

## METER

Accuracy .....  $\pm$  5%  
 Flow Rate Range..... 0.95 - 102 lpm  
 Volume Range ..... 0.02 - 5.700 m<sup>3</sup>  
 Totalizer ..... 0,001 - 9.999.000 m<sup>3</sup>

## DIMENSIONS & WEIGHT

Distributor Pilot ..... 1.05" OD Pipe  
 Drain Line .....  $\frac{3}{4}$ " or 1" NPT  
 Brine Line .....  $\frac{3}{8}$ " or  $\frac{1}{2}$ " OD Poly Tube  
 Mounting Base..... 2  $\frac{1}{2}$ " - 8 NPSM  
 Height From Top Of Tank..... 187 mm  
 Weight ..... 2 kg

## ELECTRICAL SPECIFICATIONS

### POWER SUPPLY

Supply Voltage .....200VAC to 240VAC  
 Supply Frequency .....50/60Hz  
 Output Voltage .....15VDC  
 Output Current .....500 mA

## TANK APPLICATIONS

Water Softener ..... 6" - 21" Diameter  
 Water Filter (2) ..... 6" - 21" Diameter

## CYCLES OF OPERATION

Cycle	<u>Softener</u>	<u>Filter</u>
	Range of time in minutes	
1. Backwash 1 <sup>st</sup> (upflow) .....	1-95.....	Backwash 1-95
2. Regenerate Draw/Slow Rinse (downflow) .....	1-180	
3. Backwash 2 <sup>nd</sup> (upflow).....	1-95.....	Rinse 1-95
4. Fast Rinse (downflow) .....	1-95	
5.Regenerant Refill (in service with treated water).....	0,1-99,0	
6. Service (downflow)		

*Options: Backwash Filter, Weather Cover*

Compatible with the following typical concentrations of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines



## TT1EI TWIN ALTERNATING CONTROL VALVE

- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- Service flow 106 lpm (6.36 m<sup>3</sup>/h) (28 gpm), backwash flow 57 lpm (3.40 m<sup>3</sup>/h) (15 gpm) with meter and bypass installed
- Solid state microprocessor with easy access front panel settings
- Front panel display for time of day, days until next regeneration, volume remaining, current flow rate and total volume used (Totalizer), and Tank in Service Indication
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Optional double backwash feature offers optimum regeneration, cleaning ability and efficiency
- Fully adjustable cycle times with 6-cycle control delivers controlled backwash, downflow brining/slow rinse, second backwash, fast rinse, refill and downflow service
- Coin Cell Lithium battery back-up with a 8 hour carry over
- Backwash and brining ability to 21" diameter tanks
- Downflow or upflow brining regeneration
- Level VI 15-volt output DC power supply provides safe and easy installation
- Treated/Soft water post fill and regeneration cycle
- Reliable and proven DC drives
- Certified to NSF/ANSI 44, 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
VTT1EIDME-03	TT1EI VALVE DN M I-E	Softener	10"	Downflow	Included	Not included	1		

If you need a different Injector Tank Size, please order separately the relevant Injector and the ref. V4052-01 (Interconnect Kit)

#### NOTE:

Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3186-XX). Drain Line Flow Controls (DLFC) washer is not included. Please order separately: reference order number V3162-007 through V3162-100.

1,05" Top Distributors are not included. Please order separately: reference order number AV071.

Power Rechargeable Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with the normal transformer for applications with a unstable power grid.

Sun Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with a solar panel for applications with no electrical power.



# Water Specialist 1" El Twin Alternating Specifications

Inlet/Outlet Fittings (to order separately)..... $\frac{3}{4}$ " to 1.25" Male BSPT  
Cycles ..... up to 6  
Valve Material ..... Noryl or equivalent  
Regeneration ..... downflow

## FLOW RATES

Service @15 psi/1 bar drop (includes bypass and meter)..... 6,36 m<sup>3</sup>/h  
Backwash @ 25 psi/1.7 bar drop (includes bypass)..... 3,40 m<sup>3</sup>/h  
Cv Service ..... 7,28  
Cv Backwash ..... 2,96

## OPERATING PRESSURES

Minimum/Maximum ..... 1,4 - 8,6 bar

## OPERATING TEMPERATURES

Minimum/Maximum ..... 4° - 43° C

## METER

Accuracy .....  $\pm$  5%  
Flow Rate Range..... 0.95 - 102 lpm  
Gallon Range..... 0.02 - 5.700 m<sup>3</sup>  
Totalizer ..... 0.001 - 9.999.000 m<sup>3</sup>

## DIMENSIONS & WEIGHT

Distributor Pilot ..... 1,05" OD Pipe  
Drain Line .....  $\frac{3}{4}$ " or 1" Male NPT  
Brine Line .....  $\frac{3}{8}$ " or  $\frac{1}{2}$ " OD Poly Tube Compression  
Mounting Base ..... 2  $\frac{1}{2}$ " - 8 NPSM  
Height From Top Of Tank..... 187 mm  
Weight ..... 7,25 kg

## ELECTRICAL SPECIFICATIONS

### POWER SUPPLY

Supply Voltage ..... 200VAC to 240VAC  
Supply Frequency ..... 50/60 Hz  
Output Voltage ..... 15VDC  
Output Current ..... 500 mA

## TANK APPLICATIONS

Water Softener ..... 6" - 21" diameter  
Water Filter (2) ..... 6" - 16" diameter

## CYCLES OF OPERATION (Softener / Filter Downflow)

	<u>Softener</u>	<u>Filter</u>
Cycle	Range of time in minutes	
1. Backwash 1 <sup>st</sup>	1-120 or off	Backwash 1-120 or off
2. Regenerate Draw/Slow Rinse	1-180 or off	
3. Backwash 2 <sup>nd</sup>	1-120 or off	
4. Fast Rinse	1-120 or off	Rinse 1-120 or off
5. Regenerant Refill	0,1 - 99,0 or off	
6. Service (downflow)		

*Options: Backwash Filter, Bypass, Weather Cover*

Compatible with the following typical concentration of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines

## WS1CI WATER SPECIALIST CONTROL VALVE



- Top mount control valve suited for automatic residential water softening or filtration systems
- Single valve, available also for twin alternating, twin parallel and multitank systems
- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- Solid state microprocessor with easy access front panel settings
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Program in ppm, French degrees, German degrees, or cubic meters
- Fully programmable regeneration cycle sequence (maximum 9)
- Programmable regeneration cycle times
- Days override feature; 1 – 28 days available
- Backwash and brining ability to 21" diameter tanks
- Downflow/upflow regenerati
- Stores system configuration and operation data in nonvolatile memory
- Coin Cell Lithium battery back-up with a 24 hour carry over
- Level VI 15-volt output DC power supply provides safe and easy installation
- Control valve design provides optimum service and backwash rates
- Pre or Post treated water regenerant refill
- Mixing valve option available
- Low salt alarm
- 24-hour clock
- Reliable and proven DC drive
- Certified to NSF/ANSI 44, 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
V1CIDMC-03	WS1CI VALVE DN M I-C	Softener	8"	Downflow	Included	Not included	4	160	
V1CIDMC-M03	WS1CI VALVE DN M I-C W/MIXING VALVE	Softener	8"	Downflow	Included	Included	4	160	
V1CIDMD-03 (*)	WS1CI VALVE DN M I-D	Softener	9"	Downflow	Included	Not included	4	160	
V1CIDMD-M03 (*)	WS1CI VALVE DN M I-D W/MIXING VALVE	Softener	9"	Downflow	Included	Included	4	160	
V1CIDME-03	WS1CI VALVE DN M I-E	Softener	10"	Downflow	Included	Not included	4	160	
V1CIDME-M03	WS1CI VALVE DN M I-E W/MIXING VALVE	Softener	10"	Downflow	Included	Included	4	160	
V1CIDMF-03 (*)	WS1CI VALVE DN M I-F	Softener	12"	Downflow	Included	Not included	4	160	
V1CIDMF-M03 (*)	WS1CI VALVE DN M I-F W/MIXING VALVE	Softener	12"	Downflow	Included	Included	4	160	
V1CIUMA-03	WS1CI VALVE UP M I-A	Softener	8"	Upflow	Included	Not included	4	160	
V1CIUMA-M03 (*)	WS1CI VALVE UP M I-A W/MIXING VALVE	Softener	8"	Upflow	Included	Included	4	160	
V1CIUMB-03 (*)	WS1CI VALVE UP M I-B	Softener	9"	Upflow	Included	Not included	4	160	
V1CIUMB-M03 (*)	WS1CI VALVE UP M I-B W/MIXING VALVE	Softener	9"	Upflow	Included	Included	4	160	
V1CIUMC-03 (*)	WS1CI VALVE UP M I-C	Softener	10"	Upflow	Included	Not included	4	160	
V1CIUMC-M03	WS1CI VALVE UP M I-C W/MIXING VALVE	Softener	10"	Upflow	Included	Included	4	160	
V1CIDTE-03 (*)	WS1CI VALVE DN T I-E	Softener	10"	Downflow	Not included	Not included	4	160	
V1CIDTE-M03 (*)	WS1CI VALVE DN T I-E W/MIXING VALVE	Softener	10"	Downflow	Not included	Included	4	160	
V1CIBMZ-03 (*)	WS1CI VALVE BW M I-Z	Filter	N/A	Backwash	Included	Not included	4	160	
V1CIBTZ-03 (*)	WS1CI VALVE BW T I-Z	Filter	N/A	Backwash	Not included	Not included	4	160	

(\*) Not available in stock.

#### NOTE:

Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3186-XX).

Drain Line Flow Controls (DLFC) washer is not included. Please order separately: reference order number V3162-007 through V3162-100.

1,05" Top Distributor is not included. Please order separately: reference order number AV071.

Power Rechargeable Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with the normal transformer for applications with a unstable power grid.

Sun Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with a solar panel for applications with no electrical power.

# Water Specialist 1" CI Control Specifications

Inlet/Outlet Fittings (to order separately).....	¾" to 1.25" Male BSPT
Cycles .....	up to 9
Valve Material .....	Noryl or equivalent
Regeneration .....	downflow or upflow

## FLOW RATES

Service @ 15 psi/1 bar drop (includes bypass and meter).....	6,12 m³/h
Backwash @ 25 psi/1.7 bar drop (includes bypass).....	6,12 m³/h

## OPERATING PRESSURES

Minimum/Maximum .....	1,4 - 8,6 bar
-----------------------	---------------

## OPERATING TEMPERATURES

Minimum/Maximum .....	4° - 43° C
-----------------------	------------

## METER

Accuracy .....	± 5%
Flow Rate Range.....	0,95 - 102 lpm
Volume Range .....	0,02 - 5.700 m³
Totalizer .....	1 m³ - 99.999 m³

## DIMENSIONS & WEIGHT

Distributor Pilot .....	1.05" OD Pipe
Drain Line .....	¾" or 1" NPT
Brine Line .....	¾" or ½" OD Poly Tube
Mounting Base.....	2 ½" - 8 NPSM
Height From Top Of Tank.....	187 mm
Weight .....	2 kg

## ELECTRICAL SPECIFICATIONS

### POWER SUPPLY

Supply Voltage .....	200VAC to 240VAC
Supply Frequency .....	50/60 Hz
Output Voltage .....	15VDC
Output Current .....	500 mA

## TANK APPLICATIONS

Water Softener .....	6" - 21" Diameter
Water Filter (2) .....	6" - 21" Diameter

## CYCLES OF OPERATION

Choose up to nine regeneration cycles, in any order, with a wide range of available values:

Cycle	Range of values
Backwash.....	1 - 120 minutes
Rinse.....	1 - 120 minutes
Pause (service).....	1 - 480 minutes
Brine (co-current).....	1 - 180 minutes
Brine (counter-current).....	1 - 180 minutes
Refill (softener) .....	0,05 - 90.00 Kg
Refill (filter) .....	0,2 - 76.00 Liters

*Options: Backwash Filter, Bypass, Weather Cover*

Compatible with the following typical concentrations of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines



## TT1CI TWIN ALTERNATING CONTROL VALVE

- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- Service flow 106 lpm (6.36 m<sup>3</sup>/h) (28 gpm), backwash flow 57 lpm (3.40 m<sup>3</sup>/h) (15 gpm) with meter and bypass installed
- Solid state microprocessor with easy access front panel settings
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Program in ppm, French degrees, German degrees, or cubic meters
- Fully programmable regeneration cycle sequence (maximum 9)
- Programmable regeneration cycle times
- Days override feature; 1 – 28 days available
- Backwash and brining ability to 21" diameter tanks
- Downflow/upflow regenerati
- Stores system configuration and operation data in nonvolatile memor
- Coin Cell Lithium battery back-up with a 24 hour carry over
- Level VI 15-volt output DC power supply provides safe and easy installation
- Control valve design provides optimum service and backwash rates
- Soft/treated water regeneration
- Pre or Post soft/treated water regenerant refill
- Low salt alarm
- 24-hour clock
- Reliable and proven DC drive
- Certified to NSF/ANSI 44, 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
VTT1CIDME-03	TT1CI VALVE DN M I-E	Softener	10"	Downflow	Included	Not included	1		

If you need a different Injector Tank Size, please order separately the relevant Injector and the ref. V4052-01 (Interconnect Kit)

### NOTE:

Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3186-XX).

Drain Line Flow Controls (DLFC) washer is not included. Please order separately: reference order number V3162-007 through V3162-100.

1,05" Top Distributors are not included. Please order separately: reference order number AV071.

Power Rechargeble Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with the normal transformer for applications with a unstable power grid.

Sun Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with a solar panel for applications with no electrical power.

# Water Specialist 1" CI Twin Alternating Specifications

Inlet/Outlet Fittings (to order separately).....	¾" to 1.25" Male BSPT
Cycles .....	up to 9
Valve Material .....	Noryl (1) or equivalent
Regeneration .....	downflow or upflow

## FLOW RATES

Service @ 15 psi/1 bar drop (includes bypass and meter).....	6,36 m³/h
Backwash @ 25 psi/1.7 bar drop (includes bypass).....	3,40 m³/h
Cv Service .....	7,28
Cv Backwash .....	2,96

## OPERATING PRESSURES

Minimum/Maximum .....	1,4 - 8,6 bar
-----------------------	---------------

## OPERATING TEMPERATURES

Minimum/Maximum .....	4° - 43° C
-----------------------	------------

## METER

Accuracy .....	± 5%
Flow Rate Range.....	0,95 - 102 lpm
Volume Range .....	0,02 - 5.700 m³
Totalizer .....	1 m³ - 99.999 m³

## DIMENSIONS & WEIGHT

Distributor Pilot .....	1.05" OD Pipe
Drain Line .....	¾" or 1" NPT
Brine Line .....	¾" or ½" OD Poly Tube Compression
Mounting Base.....	2 ½" - 8 NPSM
Height From Top Of Tank.....	187 mm
Weight .....	7,25 kg

## ELECTRICAL SPECIFICATIONS

## POWER SUPPLY

Supply Voltage .....	200VAC to 240VAC
Supply Frequency .....	50/60 Hz
Output Voltage .....	15VDC
Output Current .....	500 mA

## TANK APPLICATIONS

Water Softener .....	6" - 21" Diameter
Water Filter .....	6" - 21" Diameter

## CYCLES OF OPERATION

Choose up to nine regeneration cycles, in any order, with a wide range of available values:

Cycle .....	Range of values
Backwash.....	1 - 120 minutes
Rinse.....	1 - 120 minutes
Pause (service).....	1 - 480 minutes
Brine (co-current).....	1 - 180 minutes
Brine (counter-current).....	1 - 180 minutes
Refill (softener) .....	0,05 - 90,00 Kg
Refill (filter) .....	0,2 - 76,00 Liters

*Options: Backwash Filter, Bypass, Weather Cover*

Compatible with the following typical concentrations of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines



## WS125TC WATER SPECIALIST CONTROL VALVE

- Top mount control valve suited for automatic residential water softening or filtration systems
- Single valve, available also for twin alternating, twin parallel and multitank systems
- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- More informative 4 digit LCD Display with Status Indicators
- Solid state microprocessor with easy access front panel settings
- Service flow rate of 34 gpm, backwash 32 gp
- Backwash and brining ability to 21" diameter tanks
- Front panel display for time of day, days until next regeneration
- Days between regeneration feature: 1–99 days standard; 7-day optional
- Double backwash feature offers optimum regeneration, cleaning ability and efficiency
- 10 selectable pre-programmed regeneration cycles
- Coin Cell Lithium battery back-up with a 8 hour carry over
- Auto detection of 50/60 Hz line frequency, with automatic 12/24 hour time keeping formats
- Level VI 15-volt output DC power supply provides safe and easy installation
- Post treated water regenerant refill
- Reliable and proven DC drive
- Certified to NSF/ANSI 44, 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
V125CIDTE-08 (*)	WS125CI VALVE DN T I-E	Softener	10"	Downflow	Not included	Not included	2	96	
V125CIDTE-M08 (*)	WS125CI VALVE DN T I-E W/MIXING VALVE	Softener	10"	Downflow	Not included	Included	2	96	
V125CIDTF-08 (*)	WS125CI VALVE DN T I-F	Softener	12"	Downflow	Not included	Not included	2	96	
V125CIDTF-M08 (*)	WS125CI VALVE DN T I-F W/MIXING VALVE	Softener	12"	Downflow	Not included	Included	2	96	
V125CIDTG-08 (*)	WS125CI VALVE DN T I-G	Softener	13"	Downflow	Not included	Not included	2	96	
V125CIDTG-M08 (*)	WS125CI VALVE DN T I-G W/MIXING VALVE	Softener	13"	Downflow	Not included	Included	2	96	
V125CIBTZ-08 (*)	WS125CI VALVE BW T I-Z	Filter	N/A	Backwash	Not included	Not included	2	96	

(\*) Not available in stock.

### NOTE:

Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3186-XX).

Drain Line Flow Controls (DLFC) washer is not included. Please order separately: reference order number V3162-007 through V3162-100.

32 mm Top Distributor is not included. Please order separately: reference order number V-D1203-03.

Power Rechargeable Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with the normal transformer for applications with a unstable power grid.

Sun Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with a solar panel for applications with no electrical power.



# Water Specialist 1.25" TC Control Specifications

Inlet/Outlet Fittings (to order separately)..... 1" to 1.50" Male BSPT  
Cycles ..... up to 6  
Valve Material ..... Noryl or equivalent  
Regeneration ..... downflow

## FLOW RATES

Service @15 psi drop ..... 34 gpm  
Backwash @ 25 psi drop ..... 32 gpm  
Cv Service ..... 8,8  
Cv Backwash ..... 6,4

## OPERATING PRESSURES

Minimum/Maximum ..... 20 psi – 125 psi

## OPERATING TEMPERATURES

Minimum/Maximum ..... 4° - 43°C

## DIMENSIONS & WEIGHT

Distributor Pilot ..... 32 mm OD Pipe  
Drain Line ..... ¾" or 1" NPT  
Brine Line ..... ¾" or ½" OD Poly Tube  
Mounting Base ..... 2 ½" - 8 NPSM  
Height From Top Of Tank ..... 187 mm  
Weight ..... 2 kg

## ELECTRICAL SPECIFICATIONS

### POWER SUPPLY

Supply Voltage ..... 200VAC to 240VAC  
Supply Frequency ..... 50/60 Hz  
Output Voltage ..... 15VDC  
Output Current ..... 500 mA

## TANK APPLICATIONS

Water Softener ..... 6" – 21" diameter  
Water Filter (3) ..... 6" – 24" diameter

## CYCLES OF OPERATION (Softener Downflow)

Cycle	Range of times minutes
1. Backwash 1 <sup>st</sup> (upflow) .....	3 - 12
2. Regenerate Draw/Slow Rinse (downflow) .....	50 - 70
3. Backwash 2 <sup>nd</sup> (upflow) .....	3 - 12
4. Fast Rinse (downflow) .....	3 - 8
5. Regenerant Refill (in service with treated water) .....	As Programmed
6. Service (downflow)	

*Options: Backwash Filter, Bypass, Weather Cover*

Compatible with the following typical concentration of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines



## WS125EI WATER SPECIALIST CONTROL VALVE

- Top mount control valve suited for automatic residential water softening or filtration systems
- Single valve, available also for twin alternating, twin parallel and multitank systems
- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- Solid state microprocessor with easy access front panel settings
- Front panel display for time of day, days until next regeneration, volume remaining, current flow rate and total volume used (Totalizer)
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Optional double backwash feature offers optimum regeneration, cleaning ability and efficiency
- Fully adjustable cycle times with 6-cycle control delivers controlled backwash, downflow brining/slow rinse, second backwash, fast rinse, refill and downflow service
- Coin Cell Lithium battery back-up with an 8 hour carry over
- Backwash and brining ability to 21" diameter tanks
- Downflow or upflow brining regeneration
- Level VI 15-volt output DC power supply provides safe and easy installation
- Control valve design provides optimum service and backwash rates
- Post treated water regenerant refill
- 24 Hour Clock
- Mixing Valve option available
- Certified to NSF/ANSI 44, 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
V125EIDME-08 (*)	WS125EI VALVE DN M I-E	Softener	10"	Downflow	Included	Not included	2	96	
V125EIDME-M08 (*)	WS125EI VALVE DN M I-E W/MIXING VALVE	Softener	10"	Downflow	Included	Included	2	96	
V125EIDMF-08 (*)	WS125EI VALVE DN M I-F	Softener	12"	Downflow	Included	Not included	2	96	
V125EIDMF-M08 (*)	WS125EI VALVE DN M I-F W/MIXING VALVE	Softener	12"	Downflow	Included	Included	2	96	
V125EIDMH-08 (*)	WS125EI VALVE DN M I-H	Softener	14"	Downflow	Included	Not included	2	96	
V125EIDMH-M08 (*)	WS125EI VALVE DN M I-H W/MIXING VALVE	Softener	14"	Downflow	Included	Included	2	96	
V125EIDMI-08 (*)	WS125EI VALVE DN M I-I	Softener	16"	Downflow	Included	Not included	2	96	
V125EIDMI-M08 (*)	WS125EI VALVE DN M I-I W/MIXING VALVE	Softener	16"	Downflow	Included	Included	2	96	
V125EIDMK-08 (*)	WS125EI VALVE DN M I-K	Softener	21"	Downflow	Included	Not included	2	96	
V125EIDMK-M08 (*)	WS125EI VALVE DN M I-K W/MIXING VALVE	Softener	21"	Downflow	Included	Included	2	96	
V125EIUMD-08 (*)	WS125EI VALVE UP M I-D	Softener	12"	Upflow	Included	Not included	2	96	
V125EIUMD-M08 (*)	WS125EI VALVE UP M I-D W/MIXING VALVE	Softener	12"	Upflow	Included	Included	2	96	
V125EIUMF-08 (*)	WS125EI VALVE UP M I-F	Softener	14"	Upflow	Included	Not included	2	96	
V125EIUMF-M08 (*)	WS125EI VALVE UP M I-F W/MIXING VALVE	Softener	14"	Upflow	Included	Included	2	96	
V125EIDTF-08 (*)	WS125EI VALVE DN T I-F	Softener	12"	Downflow	Not included	Not included	2	96	
V125EIDTF-M08 (*)	WS125EI VALVE DN T I-F W/MIXING VALVE	Softener	12"	Downflow	Not included	Included	2	96	
V125EIBMZ-08 (*)	WS125EI VALVE BW M I-Z	Filter	N/A	Backwash	Included	Not included	2	96	
V125EIBTZ-08 (*)	WS125EI VALVE BW T I-Z	Filter	N/A	Backwash	Not included	Not included	2	96	

(\*) Not available in stock.

### NOTE:

Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3186-XX).

Drain Line Flow Controls (DLFC) washer is not included. Please order separately: reference order number V3162-007 through V3162-100.

32 mm Top Distributor is not included. Please order separately: reference order number V-D1203-03.

Power Rechargeable Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with the normal transformer for applications with a unstable power grid.

Sun Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with a solar panel for applications with no electrical power.

# Water Specialist 1.25" EI Control Specifications

Inlet/Outlet Fittings (to order separately)..... 1" to 1,5" Male BSPT  
Cycles ..... up to 6  
Valve Material ..... Noryl or equivalent  
Regeneration ..... downflow or upflow

## FLOW RATES

Service @15 psi/1 bar drop (includes meter)..... 7,7 m<sup>3</sup>/h  
Backwash @ 25 psi/1.7 bar drop..... 7,3 m<sup>3</sup>/h

## OPERATING PRESSURES

Minimum/Maximum ..... 1,4 - 8,6 bar

## OPERATING TEMPERATURES

Minimum/Maximum ..... 4° - 43°C

## METER

Accuracy ..... ± 5%  
Flow Rate Range..... 0,95 - 129 lpm  
Volume Range ..... 0,02 - 5.700 m<sup>3</sup>  
Totalizer ..... 0,001 - 9.999.000 m<sup>3</sup>

## DIMENSIONS & WEIGHT

Distributor Pilot ..... 32 mm OD Pipe  
Drain Line ..... ¾" or 1" NPT  
Brine Line ..... ⅜" or ½" OD Poly Tube  
Mounting Base..... 2 ½" - 8 NPSM  
Height From Top Of Tank.....187 mm  
Weight ..... 2 kg

## ELECTRICAL SPECIFICATIONS

### POWER SUPPLY

Supply Voltage .....200VAC to 240VAC  
Supply Frequency .....50/60Hz  
Output Voltage .....15VDC  
Output Current .....500 mA

## TANK APPLICATIONS

Water Softener ..... 6" - 21" Diameter  
Water Filter ..... 6" - 24" Diameter

## CYCLES OF OPERATION

Cycle	Softener	Filter
	Range of time in minutes	
1. Backwash 1 <sup>st</sup> (upflow) .....	1-95.....	Backwash 1-95
2. Regenerate Draw/Slow Rinse (downflow) .....	1-180	
3. Backwash 2 <sup>nd</sup> (upflow).....	1-95.....	Rinse 1-95
4. Fast Rinse (downflow) .....	1-95	
5.Regenerant Refill (in service with treated water).....	0,1-99,0	
6. Service (downflow)		

*Options: Backwash Filter, Weather Cover*

Compatible with the following typical concentrations of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines



## WS125CI WATER SPECIALIST CONTROL VALVE

- Top mount control valve suited for automatic residential water softening or filtration systems
- Single valve, available also for twin alternating, twin parallel and multitank systems
- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- Solid state microprocessor with easy access front panel settings
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Program in ppm, French degrees, German degrees, or cubic meters
- Fully programmable regeneration cycle sequence (maximum 9)
- Programmable regeneration cycle times
- Days override feature; 1 – 28 days available
- Backwash and brining ability to 21" diameter tanks
- Downflow regeneration
- Stores system configuration and operation data in nonvolatile memory
- Coin Cell Lithium battery back-up with a 24 hour carry over
- Level VI 15-volt output DC power supply provides safe and easy installation
- Control valve design provides optimum service and backwash rates
- Pre or Post treated water regenerant refill
- Mixing valve option available
- Low salt alarm
- 24-hour clock
- Reliable and proven DC drive
- Certified to NSF/ANSI 44, 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
V125CIDME-08	WS125CI VALVE DN M I-E	Softener	10"	Downflow	Included	Not included	2	96	
V125CIDME-M08 (*)	WS125CI VALVE DN M I-E W/MIXING VALVE	Softener	10"	Downflow	Included	Included	2	96	
V125CIDMF-08 (*)	WS125CI VALVE DN M I-F	Softener	12"	Downflow	Included	Not included	2	96	
V125CIDMF-M08	WS125CI VALVE DN M I-F W/MIXING VALVE	Softener	12"	Downflow	Included	Included	2	96	
V125CIDMH-08 (*)	WS125CI VALVE DN M I-H	Softener	14"	Downflow	Included	Not included	2	96	
V125CIDMH-M08 (*)	WS125CI VALVE DN M I-H W/MIXING VALVE	Softener	14"	Downflow	Included	Included	2	96	
V125CIDMI-08 (*)	WS125CI VALVE DN M I-I	Softener	16"	Downflow	Included	Not included	2	96	
V125CIDMI-M08 (*)	WS125CI VALVE DN M I-I W/MIXING VALVE	Softener	16"	Downflow	Included	Included	2	96	
V125CIDMK-08 (*)	WS125CI VALVE DN M I-K	Softener	21"	Downflow	Included	Not included	2	96	
V125CIDMK-M08 (*)	WS125CI VALVE DN M I-K W/MIXING VALVE	Softener	21"	Downflow	Included	Included	2	96	
V125CIUMD-08 (*)	WS125CI VALVE UP M I-D	Softener	12"	Upflow	Included	Not included	2	96	
V125CIUMD-M08 (*)	WS125CI VALVE UP M I-D W/MIXING VALVE	Softener	12"	Upflow	Included	Included	2	96	
V125CIUMF-08 (*)	WS125CI VALVE UP M I-F	Softener	14"	Upflow	Included	Not included	2	96	
V125CIUMF-M08 (*)	WS125CI VALVE UP M I-F W/MIXING VALVE	Softener	14"	Upflow	Included	Included	2	96	
V125CIDTF-08 (*)	WS125CI VALVE DN T I-F	Softener	12"	Downflow	Not included	Not included	2	96	
V125CIDTF-M08 (*)	WS125CI VALVE DN T I-F W/MIXING VALVE	Softener	12"	Downflow	Not included	Included	2	96	
V125CIBMZ-08 (*)	WS125CI VALVE BW M I-Z	Filter	N/A	Backwash	Included	Not included	2	96	
V125CIBTZ-08 (*)	WS125CI VALVE BW T I-Z	Filter	N/A	Backwash	Not included	Not included	2	96	

(\*) Not available in stock.

### NOTE:

Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3186-XX).

Drain Line Flow Controls (DLFC) washer is not included. Please order separately: reference order number V3162-007 through V3162-100.

32 mm Top Distributor is not included. Please order separately: reference order number V-D1203-03.

Power Rechargeable Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with the normal transformer for applications with an unstable power grid.

Sun Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with a solar panel for applications with no electrical power.

# Water Specialist 1.25" CI Control Specifications

Inlet/Outlet Fittings (to order separately).....	1" to 1,5" Male BSPT
Cycles .....	up to 9
Valve Material .....	Noryl or equivalent
Regeneration .....	downflow or upflow

## FLOW RATES

Service @ 15 psi/1 bar drop (includes meter).....	7,7 m³/h
Backwash @ 25 psi/1.7 bar drop.....	7,3 m³/h

## OPERATING PRESSURES

Minimum/Maximum .....	1,4 - 8,6 bar
-----------------------	---------------

## OPERATING TEMPERATURES

Minimum/Maximum .....	4° - 43° C
-----------------------	------------

## METER

Accuracy .....	± 5%
Flow Rate Range.....	0.95 - 129 lpm
Volume Range .....	0.02 - 5.700 m³
Totalizer .....	1 m³ - 99.999 m³

## DIMENSIONS & WEIGHT

Distributor Pilot .....	32 mm OD Pipe
Drain Line .....	¾" or 1" NPT
Brine Line .....	¾" or ½" OD Poly Tube
Mounting Base.....	2 ½" - 8 NPSM
Height From Top Of Tank.....	187 mm
Weight .....	2 kg

## ELECTRICAL SPECIFICATIONS

### POWER SUPPLY

Supply Voltage .....	200VAC to 240VAC
Supply Frequency .....	50/60 Hz
Output Voltage .....	15VDC
Output Current .....	500 mA

## TANK APPLICATIONS

Water Softener .....	6" - 21" Diameter
Water Filter .....	6" - 24" Diameter

## CYCLES OF OPERATION

Choose up to nine regeneration cycles, in any order, with a wide range of available values:

Cycle	Range of values
Backwash.....	1 - 120 minutes
Rinse.....	1 - 120 minutes
Pause (service).....	1 - 480 minutes
Brine (co-current).....	1 - 180 minutes
Refill (softener) .....	0.05 - 90.00 Kg
Refill (filter) .....	0.2 - 76.00 Liters

*Options: Backwash Filter, Bypass, Weather Cover*

Compatible with the following typical concentrations of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines



## WS15EI WATER SPECIALIST CONTROL VALVE

- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- 1.5" top mount control valve suited for mid-size commercial/industrial applications
- Epoxy coated lead free brass valve body\*
- Economical optional meter
- Service flow rate of 265 lpm (15.9 m3/h) (70 gpm), backwash 197 lpm ( 1.8 m3/h) (52 gpm)
- Solid state microprocessor with easy access front panel settings
- Front panel display for time of day, days until next regeneration, volume remaining, current flow rate and total volume used (Totalizer)
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Optional double backwash feature offers optimum regeneration, cleaning ability and efficiency
- Fully adjustable cycle times with 6-cycle control delivers controlled backwash, downflow brining or upflow brining, slow rinse, second backwash, fast rinse, refill and downflow service
- Coin Cell Lithium battery back-up with a 8 hour carry over
- Level VI 15-volt output DC power supply provides safe and easy installation
- Post treated water regenerant refill
- 24 hour clock
- Reliable and proven DC drive
- Certified to NSF/ANSI 44, 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
V15EIDMB-05 (*)	WS15EI VALVE DN M I-B	Softener	12"	Downflow	Included	Not included	1		
V15EIDMD-05 (*)	WS15EI VALVE DN M I-D	Softener	14"	Downflow	Included	Not included	1		
V15EIDMF-05 (*)	WS15EI VALVE DN M I-F	Softener	18"	Downflow	Included	Not included	1		
V15EIDMG-05 (*)	WS15EI VALVE DN M I-G	Softener	21"	Downflow	Included	Not included	1		
V15EIUMB-05 (*)	WS15EI VALVE UP M I-B	Softener	14"	Upflow	Included	Not included	1		
V15EIUMD-05 (*)	WS15EI VALVE UP M I-D	Softener	18"	Upflow	Included	Not included	1		
V15EIDTD-05 (*)	WS15EI VALVE DN T I-D	Softener	14"	Downflow	Not included	Not included	1		
V15EIDTF-05 (*)	WS15EI VALVE DN T I-F	Softener	18"	Downflow	Not included	Not included	1		
V15EIDTG-05 (*)	WS15EI VALVE DN T I-G	Softener	21"	Downflow	Not included	Not included	1		
V15EIBMZ-05 (*)	WS15EI VALVE BW M I-Z	Filter	N/A	Backwash	Included	Not included	1		
V15EIBTZ-05 (*)	WS15EI VALVE BW T I-Z	Filter	N/A	Backwash	Not included	Not included	1		

(\*) Not available in stock.

### NOTE:

Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3186-XX).  
 Drain Line Flow Controls (DLFC) washer is not included. Please order separately. For 3/4" drain fitting (V3158-04), Flow rates 0.07 - 10.0 gpm: reference order numbers V3162-007 through V3162-100. For 1" drain fitting (V3008-05), Flow rates 9.0 - 25.0 gpm: reference order numbers V3190-090 through V3190-250. For 1.25" x 1.5" drain fittings (V3079BSPT), Flow rates 9 to 85 gpm: reference order numbers V3162-007 through V3162-100, and V3190-090 through V3190-250. 50 mm Top Distributor is not included. Please order separately: reference order numbers V-D1199-04 or V-D1300.  
 Power Rechargeable Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with the normal transformer for applications with a unstable power grid.  
 Sun Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with a solar panel for applications with no electrical power.



# Water Specialist 1.5" EI Control Specifications

Inlet/Outlet .....	1,5" Female BSPT
Cycles .....	up to 6
Valve Material .....	Lead free brass
Regeneration .....	downflow or upflow

## CONTROL VALVE FLOW RATES

Service @ 1 bar/15 psi drop (includes meter) .....	15,9 m <sup>3</sup> /h
Backwash @ 1.7/25 psi bar drop .....	11,8 m <sup>3</sup> /h

## OPERATING PRESSURES

Minimum/Maximum .....	1,4 - 8,6 bar
-----------------------	---------------

## OPERATING TEMPERATURES

Minimum/Maximum .....	4° - 43° C
-----------------------	------------

## METER SPECIFICATIONS

Accuracy .....	± 5%
Flow Rate Range .....	2 - 284 lpm
Volume Range .....	0.02 - 5.700 m <sup>3</sup>
Totalizer .....	0,001 - 4.294.000 m <sup>3</sup>

## DIMENSIONS & WEIGHT

Distributor Pilot .....	50 mm OD
Drain Line Connection .....	1.25" Female NPT
Adapter Included .....	¾" Male NPT Elbow
Brine Line Connection .....	¾" Female NPT
Adapter Included .....	½" OD Poly Tube Compression
Mounting Base .....	4" - 8 UN
Height From Top Of Tank .....	191 mm
Shipping Weight With Meter .....	9,5 kg

## ELECTRICAL SPECIFICATIONS

### POWER SUPPLY

Supply Voltage .....	200VAC to 240VAC
Supply Frequency .....	50/60 Hz
Output Voltage .....	15VDC
Output Current .....	500 mA

## TANK APPLICATIONS

Water Softener .....	12" - 30" Diameter (4)
Water Filter (3) .....	12" - 30" Diameter

## CYCLES OF OPERATION

Cycle	Softener	Filter
	Range of time in minutes	
1. Backwash 1 <sup>st</sup> (upflow) .....	1-95	Backwash 1-95
2. Regenerate Draw/Slow Rinse (downflow) .....	1-180	
3. Backwash 2 <sup>nd</sup> (upflow) .....	1-95	Rinse 1-95
4. Fast Rinse (downflow) .....	1-95	
5. Regenerant Refill (in service with treated water) .....	0,1-99,0	
6. Service (downflow)		

Options: Backwash Filter, Weather Cover

Compatible with the following typical concentrations of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines



## WS15CI WATER SPECIALIST CONTROL VALVE

- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- 1.5" top mount control valve suited for mid-size commercial/industrial applications
- Epoxy coated lead free brass valve body\*
- Economical stainless steel optional meter assembly
- Service flow rate of 265 lpm (15.9 m3/h) (70 gpm)  
backwash 197 lpm (11.8 m3/h) (52 gpm)
- Solid state microprocessor with easy access front panel settings
- Front panel display for time of day, days until next regeneration, volume remaining and current flow
- Four methods to initiate the downflow regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Program in ppm, French degrees, German degrees, or cubic meters
- Fully programmable regeneration cycle sequence (maximum 9)
- Programmable regeneration cycle times
- Days override feature; 1-28 days available
- Level VI 15-volt output DC power supply provides safe and easy installation
- Pre or Post treated water regenerant refill
- Low salt alarm
- 24 hour clock
- Coin Cell Lithium battery back-up with a 24 hour carry over
- Reliable and proven DC drive
- Certified to NSF/ANSI 44, 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
V15CIDMB-05 (*)	WS15CI VALVE DN M I-B	Softener	12"	Downflow	Included	Not included	1		
V15CIDMD-05 (*)	WS15CI VALVE DN M I-D	Softener	14"	Downflow	Included	Not included	1		
V15CIDMF-05 (*)	WS15CI VALVE DN M I-F	Softener	18"	Downflow	Included	Not included	1		
V15CIDMG-05 (*)	WS15CI VALVE DN M I-G	Softener	21"	Downflow	Included	Not included	1		
V15CIUMB-05 (*)	WS15CI VALVE UP M I-B	Softener	14"	Upflow	Included	Not included	1		
V15CIUMD-05 (*)	WS15CI VALVE UP M I-D	Softener	18"	Upflow	Included	Not included	1		
V15CIDTD-05 (*)	WS15CI VALVE DN T I-D	Softener	14"	Downflow	Not included	Not included	1		
V15CIDTF-05 (*)	WS15CI VALVE DN T I-F	Softener	18"	Downflow	Not included	Not included	1		
V15CIDTG-05	WS15CI VALVE DN T I-G	Softener	21"	Downflow	Not included	Not included	1		
V15CIBMZ-05 (*)	WS15CI VALVE BW M I-Z	Filter	N/A	Backwash	Included	Not included	1		
V15CIBTZ-05 (*)	WS15CI VALVE BW T I-Z	Filter	N/A	Backwash	Not included	Not included	1		

(\*) Not available in stock.

### NOTE:

Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3186-XX).  
 Drain Line Flow Controls (DLFC) washer is not included. Please order separately. For 3/4" drain fitting (V3158-04), Flow rates 0.07 - 10.0 gpm: reference order numbers V3162-007 through V3162-100. For 1" drain fitting (V3008-05), Flow rates 9.0 - 25.0 gpm: reference order numbers V3190-090 through V3190-250.  
 For 1.25" x 1.5" drain fittings (V3079BSPT), Flow rates 9 to 85 gpm: reference order numbers V3162-007 through V3162-100, and V3190-090 through V3190-250.  
 50 mm Top Distributor is not included. Please order separately: reference order numbers V-D1199-04 or V-D1300.  
 Power Rechargeable Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with the normal transformer for applications with an unstable power grid.  
 Sun Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with a solar panel for applications with no electrical power.

# Water Specialist 1.5" CI Control Specifications

Inlet/Outlet .....	1,5" Female BSPT
Cycles .....	up to 9
Valve Material .....	Lead free brass
Regeneration .....	downflow or upflow

## CONTROL VALVE FLOW RATES

Service @ 1 bar/15 psi drop (includes meter) .....	15,9 m³/h
Backwash @ 1.7 bar/25 psi drop .....	11,8 m³/h

## OPERATING PRESSURES

Minimum/Maximum .....	1,4 - 8,6 bar
-----------------------	---------------

## OPERATING TEMPERATURES

Minimum/Maximum .....	4° - 43° C
-----------------------	------------

## METER SPECIFICATIONS

Accuracy .....	± 5%
Flow Rate Range .....	2 - 284 lpm
Volume Range .....	0.02 - 5.700 m³
Totalizer .....	1 - 99.999 m³

## DIMENSIONS & WEIGHT

Distributor Pilot .....	50 mm OD
Drain Line Connection .....	1.25" Female NPT
Adapter Included .....	¾" Male NPT Elbow
Brine Line Connection .....	¾" Female NPT
Adapter Included .....	½" OD Poly Tube Compression
Mounting Base .....	4" - 8 UN
Height From Top Of Tank .....	191 mm
Shipping Weight With Meter .....	9,5 kg

## ELECTRICAL SPECIFICATIONS

### POWER SUPPLY

Supply Voltage .....	200VAC to 240VAC
Supply Frequency .....	50/60 Hz
Output Voltage .....	15VDC
Output Current .....	500 mA

## TANK APPLICATIONS

Water Softener .....	12" - 30" Diameter (4)
Water Filter .....	12" - 30" Diameter

## CYCLES OF OPERATION

Choose up to nine regeneration cycles, in any order, with a wide range of available values:

Cycle .....	Range of values
Backwash .....	1 - 120 minutes
Rinse .....	1 - 120 minutes
Pause (service) .....	1 - 480 minutes
Brine (co-current) .....	1 - 180 minutes
Refill (softener) .....	0,05 - 90,00 Kg / .1 - 99 minutes
Refill (filter) .....	0,2 - 76,00 Liters

Options: Backwash Filter, Weather Cover

Compatible with the following typical concentrations of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines



## WS2EI WATER SPECIALIST CONTROL VALVE

- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- 2" Top mount control valve suited for commercial/industrial applications
- Epoxy coated lead free brass valve body\*
- Economical stainless steel optional meter assembly
- Service flow rate of 435 lpm (26.1 m<sup>3</sup>/h) ( 15 gpm), backwash 303 lpm (18.2 m<sup>3</sup>/h) (80 gpm)
- Solid state microprocessor with easy access front panel settings
- Front panel display for time of day, days until next regeneration, volume remaining, current flow rate and total volume used (Totalizer)
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Optional double backwash feature offers optimum regeneration, cleaning ability and efficiency
- Fully adjustable cycle times with 6-cycle control delivers controlled backwash, downflow brining or upflow brining, slow rinse, second backwash, fast rinse, refill and downflow service
- Coin Cell Lithium battery back-up with an 8 hour carry over
- Level VI 15-volt output DC power supply provides safe and easy installation
- Post treatment water regenerant refill
- 24 Hour Clock
- Reliable and proven DC drive
- Certified to NSF/ANSI 44, 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
V2EIDMA-05 (*)	WS2EI VALVE DN M I-A	Softener	18"	Downflow	Included	Not included	1		
V2EIDMB-05 (*)	WS2EI VALVE DN M I-B	Softener	21"	Downflow	Included	Not included	1		
V2EIDMC-05 (*)	WS2EI VALVE DN M I-C	Softener	24"	Downflow	Included	Not included	1		
V2EIDMD-05 (*)	WS2EI VALVE DN M I-D	Softener	30"	Downflow	Included	Not included	1		
V2EIDME-05 (*)	WS2EI VALVE DN M I-E	Softener	36"	Downflow	Included	Not included	1		
V2EIDMF-05 (*)	WS2EI VALVE DN M I-F	Softener	42"	Downflow	Included	Not included	1		
V2EIDMG-05 (*)	WS2EI VALVE DN M I-G	Softener	48"	Downflow	Included	Not included	1		
V2EIUMA-05 (*)	WS2EI VALVE UP M I-A	Softener	24"	Upflow	Included	Not included	1		
V2EIUMB-05 (*)	WS2EI VALVE UP M I-B	Softener	30"	Upflow	Included	Not included	1		
V2EIDTA-05 (*)	WS2EI VALVE DN T I-A	Softener	18"	Downflow	Not included	Not included	1		
V2EIDTB-05 (*)	WS2EI VALVE DN T I-B	Softener	21"	Downflow	Not included	Not included	1		
V2EIDTC-05 (*)	WS2EI VALVE DN T I-C	Softener	24"	Downflow	Not included	Not included	1		
V2EIDTD-05 (*)	WS2EI VALVE DN T I-D	Softener	30"	Downflow	Not included	Not included	1		
V2EIDTE-05 (*)	WS2EI VALVE DN T I-E	Softener	36"	Downflow	Not included	Not included	1		
V2EIDTF-05 (*)	WS2EI VALVE DN T I-F	Softener	42"	Downflow	Not included	Not included	1		
V2EIDTG-05 (*)	WS2EI VALVE DN T I-G	Softener	48"	Downflow	Not included	Not included	1		
V2EIBMZ-05 (*)	WS2EI VALVE BW M I-Z	Filter	N/A	Backwash	Included	Not included	1		
V2EIBTZ-05 (*)	WS2EI VALVE BW T I-Z	Filter	N/A	Backwash	Not included	Not included	1		

(\*) Not available in stock.

#### NOTE:

Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3186-XX).  
 Drain Line Flow Controls (DLFC) washer is not included. Please order separately. For 3/4" drain fitting (V3158-04), Flow rates 0.07 - 10.0 gpm: reference order numbers V3162-007 through V3162-100. For 1" drain fitting (V3008-05), Flow rates 9.0 - 25.0 gpm: reference order numbers V3190-090 through V3190-250.  
 For 1.5" x 1.5" drain fittings (V3080BSPT), Flow rates 9 to 85 gpm: reference order numbers V3162-007 through V3162-100, and V3190-090 through V3190-250.  
 50 mm Top Distributor is not included. Please order separately: reference order numbers V-D1199-04 or V-D1300.  
 Power Rechargeable Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with the normal transformer for applications with an unstable power grid.  
 Sun Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with a solar panel for applications with no electrical power.

# Water Specialist 2" EI Control Specifications

Inlet/Outlet ..... 2" Female BSPT  
Cycles ..... up to 6  
Valve Material ..... Lead free brass  
Regeneration ..... Downflow or Upflow

## CONTROL VALVE FLOW RATES

Service @ 1 bar/15 psi drop ..... 26,1 m<sup>3</sup>/h  
Backwash @ 1.7 bar/25 psi drop..... 18,2 m<sup>3</sup>/h  
Cv Service ..... 29,7  
Cv Backwash ..... 16,0

## OPERATING PRESSURES

Minimum/Maximum ..... 1,4 - 8,6 bar

## OPERATING TEMPERATURES

Minimum/Maximum ..... 4° - 43° C

## METER SPECIFICATIONS

Accuracy ..... ± 5%  
Flow Rate Range..... 5,7 - 568 lpm  
Volume Range ..... 0,02 - 5.700 m<sup>3</sup>  
  
Totalizer ..... 0,001 - 4.294.000 m<sup>3</sup>

## DIMENSIONS & WEIGHT

Distributor Pilot ..... 50 mm OD  
Drain Line Connection ..... 1.5" Female NPT  
Brine Line Adapters Included..... 1" Male NPT elbow,  
3/4" x 1" solvent weld elbow and  
1/2" OD Poly Tube Compression  
  
Mounting Base ..... 4" - 8 UN  
Height From Top Of Tank..... 216 mm  
Shipping Weight With Meter ..... 13 kg

## ELECTRICAL SPECIFICATIONS

### POWER SUPPLY

Supply Voltage ..... 200VAC to 240VAC  
Supply Frequency ..... 50/60 Hz  
Output Voltage ..... 1 15VDC  
Output Current ..... 500 mA

## TANK APPLICATIONS

Water Softener ..... 12" - 48" diameter  
Water Filter ..... 12" - 36" diameter

## CYCLES OF OPERATION

Cycle	Softener	Filter
		Range of time in minutes
1. Backwash 1 <sup>st</sup> (upflow) .....	1-95.....	Backwash 1-95
2. Regenerate Draw/Slow Rinse (downflow) .....	1-180	
3. Backwash 2 <sup>nd</sup> (upflow).....	1-95.....	Rinse 1-95
4. Fast Rinse (downflow) .....	1-95	
5.Regenerant Refill (in service with treated water).....	0,1-99,0	
6. Service (downflow)		

*Options: Backwash Filter, Weather Cover*

Compatible with the following typical concentrations of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines



## WS2EI QC WATER SPECIALIST CONTROL VALVE

- Single valve, available also for twin alternating, twin parallel and multitank systems
- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- 2" top mount or side mount control valve suited for commercial/industrial applications
- Epoxy coated lead free brass valve body\*
- Economical stainless steel optional meter assembly
- Service flow rate of 473 lpm (28.4 m<sup>3</sup>/h) (125 gpm), backwash 322 lpm (19.3 m<sup>3</sup>/h) (85 gpm)
- Solid state microprocessor with easy access front panel settings
- Front panel display for time of day, days until next regeneration, volume remaining, current flow rate and total volume used (Totalizer)
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Optional double backwash feature offers optimum regeneration, cleaning ability and efficiency
- Fully adjustable cycle times with 6-cycle control delivers controlled backwash, downflow brining or upflow brining, slo rinse, second backwash, fast rinse, refill and downflow servi
- Coin Cell Lithium battery back-up with an 8 hour carry over
- Level VI 15-volt output DC power supply provides safe and easy installation
- Post treated water regenerant refill
- 24 Hour Clock
- Certified to NSF/ANSI 44, 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
V2EIDMA-18 (*)	WS2EI VALVE DN M I-A QC	Softener	18"	Downflow	Included	Not included	1		
V2EIDMB-18 (*)	WS2EI VALVE DN M I-B QC	Softener	21"	Downflow	Included	Not included	1		
V2EIDMC-18 (*)	WS2EI VALVE DN M I-C QC	Softener	24"	Downflow	Included	Not included	1		
V2EIDMD-18 (*)	WS2EI VALVE DN M I-D QC	Softener	30"	Downflow	Included	Not included	1		
V2EIDME-18 (*)	WS2EI VALVE DN M I-E QC	Softener	36"	Downflow	Included	Not included	1		
V2EIDMF-18 (*)	WS2EI VALVE DN M I-F QC	Softener	42"	Downflow	Included	Not included	1		
V2EIDMG-18 (*)	WS2EI VALVE DN M I-G QC	Softener	48"	Downflow	Included	Not included	1		
V2EIUMA-18 (*)	WS2EI VALVE UP M I-A QC	Softener	24"	Upflow	Included	Not included	1		
V2EIUMB-18 (*)	WS2EI VALVE UP M I-B QC	Softener	30"	Upflow	Included	Not included	1		
V2EIDTA-18 (*)	WS2EI VALVE DN T I-A QC	Softener	18"	Downflow	Not included	Not included	1		
V2EIDTB-18 (*)	WS2EI VALVE DN T I-B QC	Softener	21"	Downflow	Not included	Not included	1		
V2EIDTC-18 (*)	WS2EI VALVE DN T I-C QC	Softener	24"	Downflow	Not included	Not included	1		
V2EIDTD-18 (*)	WS2EI VALVE DN T I-D QC	Softener	30"	Downflow	Not included	Not included	1		
V2EIDTE-18 (*)	WS2EI VALVE DN T I-E QC	Softener	36"	Downflow	Not included	Not included	1		
V2EIDTF-18 (*)	WS2EI VALVE DN T I-F QC	Softener	42"	Downflow	Not included	Not included	1		
V2EIDTG-18 (*)	WS2EI VALVE DN T I-G QC	Softener	48"	Downflow	Not included	Not included	1		
V2EIBMZ-18 (*)	WS2EI VALVE BW M I-Z QC	Filter	N/A	Backwash	Included	Not included	1		
V2EIBTZ-18 (*)	WS2EI VALVE BW T I-Z QC	Filter	N/A	Backwash	Not included	Not included	1		

(\*) Not available in stock.

When using the WS2EI/QC Control Valve, one of the following Tank Base Assemblies must be ordered, to complete the Control Valve:

Ref.	Description	Q.ty/ Carton	Q.ty/ Pallet	
V3064	WS2H / WS2QC 4" BASE ASSEMBLY	1		
V3055	WS2H / WS2QC 6" FLANGE BASE ASSEMBLY	1		
V3260BSPT-02	WS2H / WS2QC 2" SIDE MOUNT ASSEMBLY BSPT	1		

#### NOTE:

Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3186-XX). Drain Line Flow Controls (DLFC) washer is not included. Please order separately. For 3/4" drain fitting (V3158-04), Flow rates 0.07 - 10.0 gpm: reference order numbers V3162-007 through V3162-100. For 1" drain fitting (V3008-05), Flow rates 9.0 - 25.0 gpm: reference order numbers V3190-090 through V3190-250. For 1.5" x 1.5" drain fittings (V3080BSPT), Flow rates 9 to 85 gpm: reference order numbers V3162-007 through V3162-100, and V3190-090 through V3190-250.

63 mm Top Distributor is not included. Please order separately: reference order numbers V-D1199-05 or V-D1200-04.

Power Rechargeable Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with the normal transformer for applications with a unstable power grid.

Sun Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with a solar panel for applications with no electrical power.



# Water Specialist 2" EI/QC Control Specifications

Inlet/Outlet (1) .....	2" Female BSPT
Cycles .....	up to 6
Valve Material .....	Lead free brass
Regeneration .....	Downflow or Upflow

## CONTROL VALVE FLOW RATES

Service @ 1 bar/15 psi drop .....	473 lpm (28,4 m <sup>3</sup> /h) (125 gpm)
Backwash @ 1.7 bar/25 psi drop.....	322 lpm (19,3 m <sup>3</sup> /h) (85 gpm)
Cv Service .....	32,3
Cv Backwash .....	17,0

## OPERATING PRESSURES

Minimum/Maximum .....	1.4 - 8.6 bar
-----------------------	---------------

## OPERATING TEMPERATURES

Minimum/Maximum .....	4° - 43° C
-----------------------	------------

## METER SPECIFICATIONS

Accuracy .....	± 5%
Flow Rate Range.....	5,7 - 568 lpm (1.5 - 150 gpm)
Volume Range .....	0,02 - 5.700 m <sup>3</sup>
Totalizer .....	0,001 - 4.294.000 m <sup>3</sup>

## DIMENSIONS & WEIGHT

Distributor Pilot .....	63 mm OD
Drain Line Connection .....	1.5" Female NPT
Brine Line Adapters Included.....	1" Male NPT elbow, ¾" x 1" solvent weld elbow and ½" OD Poly Tube Compression
Mounting Base.....	4" - 8 UN, 6" Flange or Side Mount
Height From Top Of Tank with 4" - 8 UN QC Base.....	284.5 mm
Height From Top Of Tank with 6" Flange QC Base .....	287
Shipping Weight With Meter .....	14 kg

## ELECTRICAL SPECIFICATIONS

### POWER SUPPLY

Supply Voltage .....	200VAC to 240VAC
Supply Frequency .....	50/60 Hz
Output Voltage .....	15VDC
Output Current .....	500 mA

## TANK APPLICATIONS

Water Softener .....	12" – 48" diameter
Water Filter (2).....	12" – 36" diameter

## CYCLES OF OPERATION

	<u>Softener</u>	<u>Filter</u>
Cycle	Range of time in minutes	
1. Backwash 1 <sup>st</sup> (upflow) .....	1-20.....	Backwash 1-95
2. Regenerate Draw/Slow Rinse (downflow) .....	1-180	
3. Backwash 2 <sup>nd</sup> (upflow).....	1-20.....	Rinse 1-95
4. Fast Rinse (downflow) .....	1-95	
5.Regenerant Refill (in service with treated water).....	0,1-99,0	
6. Service (downflow)		

### Options: Backwash Filter, Weather Cover

Compatible with the following typical concentrations of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines.

1. See Distributor Pilot

2. Filter tank size calculated @ 407 lpm per m<sup>2</sup> of bed area/10 gpm of backwash per square foot of bed area



## WS2CI WATER SPECIALIST CONTROL VALVE

- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- 2" Top mount control valve suited for commercial/industrial applications
- Epoxy coated lead free brass valve body\*
- Economical stainless steel optional meter assembly
- Service flow rate of 435 lpm (26.1 m<sup>3</sup>/h) ( 15 gpm), backwash 303 lpm (18.2 m<sup>3</sup>/h) (80 gpm)
- Solid state microprocessor with easy access front panel settings Front panel display for time of day, days until next regeneration, volume remaining and current flow rate
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Program in ppm, French degrees, German degrees, or cubic meters
- Fully programmable regeneration cycle sequence (maximum 9)
- Programmable regeneration cycle times
- Days override feature; 1-28 days available
- Coin Cell Lithium battery back-up with an 24 hour carry over
- Level VI 15-volt output DC power supply provides safe and easy installation
- Pre or Post treated water regenerant refill
- 24 Hour Clock
- Reliable and proven DC drive
- Certified to NSF/ANSI 44, 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
V2CIDMD-05	WS2CI VALVE DN M I-D	Softener	30"	Downflow	Included	Not included	1		
V2CIDME-05 (*)	WS2CI VALVE DN M I-E	Softener	36"	Downflow	Included	Not included	1		
V2CIDMF-05 (*)	WS2CI VALVE DN M I-F	Softener	42"	Downflow	Included	Not included	1		
V2CIDMG-05 (*)	WS2CI VALVE DN M I-G	Softener	48"	Downflow	Included	Not included	1		
V2CIUMA-05 (*)	WS2CI VALVE UP M I-A	Softener	24"	Upflow	Included	Not included	1		
V2CIUMB-05 (*)	WS2CI VALVE UP M I-B	Softener	30"	Upflow	Included	Not included	1		
V2CIDTA-05 (*)	WS2CI VALVE DN T I-A	Softener	18"	Downflow	Not included	Not included	1		
V2CIDTB-05 (*)	WS2CI VALVE DN T I-B	Softener	21"	Downflow	Not included	Not included	1		
V2CIDTC-05 (*)	WS2CI VALVE DN T I-C	Softener	24"	Downflow	Not included	Not included	1		
V2CIDTD-05	WS2CI VALVE DN T I-D	Softener	30"	Downflow	Not included	Not included	1		
V2CIDTE-05 (*)	WS2CI VALVE DN T I-E	Softener	36"	Downflow	Not included	Not included	1		
V2CIDTF-05 (*)	WS2CI VALVE DN T I-F	Softener	42"	Downflow	Not included	Not included	1		
V2CIDTG-05 (*)	WS2CI VALVE DN T I-G	Softener	48"	Downflow	Not included	Not included	1		
V2CIBMZ-05 (*)	WS2CI VALVE BW M I-Z	Filter	N/A	Backwash	Included	Not included	1		
V2CIBTZ-05 (*)	WS2CI VALVE BW T I-Z	Filter	N/A	Backwash	Not included	Not included	1		

(\*) Not available in stock.

### NOTE:

Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3186-XX).

Drain Line Flow Controls (DLFC) washer is not included. Please order separately. For 3/4" drain fitting (V3158-04), Flow rates 0.07 - 10.0 gpm: reference order numbers V3162-007 through V3162-100. For 1" drain fitting (V3008-05), Flow rates 9.0 - 25.0 gpm: reference order numbers V3190-090 through V3190-250. For 1.5" x 1.5" drain fittings (V3080BSPT), Flow rates 9 to 85 gpm: reference order numbers V3162-007 through V3162-100, and V3190-090 through V3190-250.

50 mm Top Distributor is not included. Please order separately: reference order numbers V-D1199-04 or V-D1300.

Power Rechargeable Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with the normal transformer for applications with an unstable power grid.

Sun Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with a solar panel for applications with no electrical power.

# Water Specialist 2" CI Control Specifications

Inlet/Outlet .....	2" Female BSPT
Cycles .....	up to 9
Valve Material .....	Lead free brass
Regeneration .....	Downflow or Upflow

## CONTROL VALVE FLOW RATES

Service @ 1 bar/15 psi drop .....	26,1 m <sup>3</sup> /h
Backwash @ 1.7 bar/25 psi drop.....	18,2 m <sup>3</sup> /h
Cv Service .....	29,7
Cv Backwash .....	16,0

## OPERATING PRESSURES

Minimum/Maximum .....	1,4 - 8,6 bar
-----------------------	---------------

## OPERATING TEMPERATURES

Minimum/Maximum .....	4° - 43° C
-----------------------	------------

## METER SPECIFICATIONS

Accuracy .....	± 5%
Flow Rate Range.....	5.7 - 568 lpm
Volume Range .....	0,02 - 5.700 m <sup>3</sup>
Totalizer .....	1 - 99.999 m <sup>3</sup>

## DIMENSIONS & WEIGHT

Distributor Pilot .....	50 mm OD
Drain Line Connection .....	1,5" Female NPT
Brine Line Adapters Included.....	1" Male NPT elbow, ¾" x 1" solvent weld elbow and ½" OD Poly Tube Compression
Mounting Base .....	4" - 8 UN
Height From Top Of Tank.....	216 mm
Shipping Weight With Meter .....	13 Kg

## ELECTRICAL SPECIFICATIONS

### POWER SUPPLY

Supply Voltage .....	200VAC to 240VAC
Supply Frequency .....	50/60 Hz
Output Voltage .....	15VDC
Output Current .....	500 mA

## TANK APPLICATIONS

Water Softener .....	12" - 48" diameter
Water Filter .....	12" - 36" diameter

## CYCLES OF OPERATION

Choose up to nine regeneration cycles, in any order, with a wide range of available values:

Cycle .....	Range of values
Backwash.....	1 - 120 minutes
Rinse.....	1 - 120 minutes
Pause (service).....	1 - 480 minutes
Brine (co-current).....	1 - 180 minutes
Refill (softener) .....	0,1 - 99,0 minutes
Refill (filter) .....	0,1 - 99,0 minutes

*Options: Backwash Filter, Weather Cover*

Compatible with the following typical concentrations of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines



## WS2CI QC WATER SPECIALIST CONTROL VALVE

- Single valve, available also for twin alternating, twin parallel and multitank systems
- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- 2" top mount or side mount control valve suited for commercial/industrial applications
- Epoxy coated lead free brass valve body\*
- Economical stainless steel optional meter assembly
- Service flow rate of 473 lpm (28.4 m<sup>3</sup>/h) (125 gpm), backwash 322 lpm (19.3 m<sup>3</sup>/h) (85 gpm)
- Solid state microprocessor with easy access front panel settings
- Front panel display for time of day, days until next regeneration, volume remaining and current flow rate
- Four methods to initiate regeneration; meter immediate, meter delayed, time clock delayed or pressure differential
- Program in ppm, French degrees, German degrees, or cubic meters
- Fully programmable regeneration cycle sequence (maximum 9)
- Programmable regeneration cycle times
- Days override feature; 1-28 days available
- Coin Cell Lithium battery back-up with an 24 hour carry over
- Level VI 15-volt output DC power supply provides safe and easy installation
- Pre or Post treated water regenerant refill
- 24 Hour Clock
- Reliable and proven DC drive
- Certified to NSF/ANSI 44, 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
V2CIDMA-18 (*)	WS2CI VALVE DN M I-A QC	Softener	18"	Downflow	Included	Not included	1		
V2CIDMB-18 (*)	WS2CI VALVE DN M I-B QC	Softener	21"	Downflow	Included	Not included	1		
V2CIDMC-18 (*)	WS2CI VALVE DN M I-C QC	Softener	24"	Downflow	Included	Not included	1		
V2CIDMD-18 (*)	WS2CI VALVE DN M I-D QC	Softener	30"	Downflow	Included	Not included	1		
V2CIDME-18 (*)	WS2CI VALVE DN M I-E QC	Softener	36"	Downflow	Included	Not included	1		
V2CIDMF-18 (*)	WS2CI VALVE DN M I-F QC	Softener	42"	Downflow	Included	Not included	1		
V2CIDMG-18 (*)	WS2CI VALVE DN M I-G QC	Softener	48"	Downflow	Included	Not included	1		
V2CIUMA-18 (*)	WS2CI VALVE UP M I-A QC	Softener	24"	Upflow	Included	Not included	1		
V2CIUMB-18 (*)	WS2CI VALVE UP M I-B QC	Softener	30"	Upflow	Included	Not included	1		
V2CIDTA-18 (*)	WS2CI VALVE DN T I-A QC	Softener	18"	Downflow	Not included	Not included	1		
V2CIDTB-18 (*)	WS2CI VALVE DN T I-B QC	Softener	21"	Downflow	Not included	Not included	1		
V2CIDTC-18 (*)	WS2CI VALVE DN T I-C QC	Softener	24"	Downflow	Not included	Not included	1		
V2CIDTD-18 (*)	WS2CI VALVE DN T I-D QC	Softener	30"	Downflow	Not included	Not included	1		
V2CIDTE-18 (*)	WS2CI VALVE DN T I-E QC	Softener	36"	Downflow	Not included	Not included	1		
V2CIDTF-18 (*)	WS2CI VALVE DN T I-F QC	Softener	42"	Downflow	Not included	Not included	1		
V2CIDTG-18 (*)	WS2CI VALVE DN T I-G QC	Softener	48"	Downflow	Not included	Not included	1		
V2CIBMZ-18 (*)	WS2CI VALVE BW M I-Z QC	Filter	N/A	Backwash	Included	Not included	1		
V2CIBTZ-18 (*)	WS2CI VALVE BW T I-Z QC	Filter	N/A	Backwash	Not included	Not included	1		

(\*) Not available in stock.

When using the WS2EI/QC Control Valve, one of the following Tank Base Assemblies must be ordered, to complete the Control Valve:

Ref.	Description	Q.ty/ Carton	Q.ty/ Pallet	
V3064	WS2H / WS2QC 4" BASE ASSEMBLY	1		
V3055	WS2H / WS2QC 6" FLANGE BASE ASSEMBLY	1		
V3260BSPT-02	WS2H / WS2QC 2" SIDE MOUNT ASSEMBLY BSPT	1		

#### NOTE:

Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3186-XX).  
 Drain Line Flow Controls (DLFC) washer is not included. Please order separately. For 3/4" drain fitting (V3158-04), Flow rates 0.07 - 10.0 gpm: reference order numbers V3162-007 through V3162-100. For 1" drain fitting (V3008-05), Flow rates 9.0 - 25.0 gpm: reference order numbers V3190-090 through V3190-250. For 1.5" x 1.5" drain fittings (V3080BSPT), Flow rates 9 to 85 gpm: reference order numbers V3162-007 through V3162-100, and V3190-090 through V3190-250.

63 mm Top Distributor is not included. Please order separately: reference order numbers V-D1199-05 or V-D1200-04.

Power Rechargeable Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with the normal transformer for applications with a unstable power grid.

Sun Battery Pack Option: Control Valves listed can be used with a rechargeable battery pack and custom PC board. This battery pack can be recharged with a solar panel for applications with no electrical power.

# Water Specialist 2" CI/QC Control Specifications

Inlet/Outlet (1) .....	2" Female BSPT
Cycles .....	up to 9
Valve Material .....	Lead free brass
Regeneration .....	Downflow or Upflow

## CONTROL VALVE FLOW RATES

Service @ 1 bar/15 psi drop .....	473 lpm (28,4 m³/h)
Backwash @ 1.7 bar/25 psi drop.....	322 lpm (19,3 m³/h)
Cv Service .....	32,3
Cv Backwash .....	17,0

## OPERATING PRESSURES

Minimum/Maximum .....	1,4 - 8,6 bar
-----------------------	---------------

## OPERATING TEMPERATURES

Minimum/Maximum .....	4° - 43° C
-----------------------	------------

## METER SPECIFICATIONS

Accuracy .....	± 5%
Flow Rate Range.....	5,7 - 568 lpm
Volume Range .....	0,02 - 5.700 m³
Totalizer .....	1 - 99.999 m³

## DIMENSIONS & WEIGHT

Distributor Pilot .....	63 mm OD
Drain Line Connection .....	1.5" Female NPT
Brine Line Adapters Included.....	1" Male NPT elbow, ¾" x 1" solvent weld elbow and ½" OD Poly Tube Compression
Mounting Base.....	4" - 8 UN, 6" Flange or Side Mount
Height From Top Of Tank with 4" - 8 UN QC Base .....	284,5 mm
Height From Top Of Tank with 6" Flange QC Base .....	287 mm
Shipping Weight With Meter .....	14 kg

## ELECTRICAL SPECIFICATIONS

## POWER SUPPLY

Supply Voltage .....	200VAC to 240VAC
Supply Frequency.....	50/60 Hz
Output Voltage .....	15VDC
Output Current .....	500 mA

## TANK APPLICATIONS

Water Softener .....	12" - 48" diameter
Water Filter (2).....	12" - 36" diameter

## CYCLES OF OPERATION

Choose up to nine regeneration cycles, in any order, with a wide range of available values:

Cycle .....	Range of values
Backwash.....	1 - 120 minutes
Rinse.....	1 - 120 minutes
Pause (service).....	1 - 480 minutes
Brine (co-current).....	1 - 180 minutes
Refill (softener) .....	0,1 - 99,0 minutes
Refill (filter) .....	0,1 - 99,0 minutes

### Options: Backwash Filter, Weather Cover

Compatible with the following typical concentrations of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines

1. See Distributor Pilot

2. Filter tank size calculated @ 407 lpm per m² of bed area /10 gpm of backwash per square foot of bed



## WS2H WATER SPECIALIST CONTROL VALVE

- 2" top mount or side mount control valve suited for industrial applications
- Epoxy coated lead free brass valve body
- Built-in Internal Flow Meter standard with all valves
- Service flow rate 125 gpm (473 lpm) (28.4 m<sup>3</sup>/h), Backwash flow rate 125 gpm (473 lpm) (28.4 m<sup>3</sup>/h)
- Solid state microprocessor with easy access front removable POD
- Front panel display for Time of Day, Current Flow Rate, Totalizer and Volume/Days until Regeneration
- Four methods to initiate the down flow regeneration; meter delayed, meter immediate, time clock delayed, or pressure differential
- Fully programmable regeneration cycle sequences (maximum 9)
- Fully programmable regeneration cycle times
- Pre or Post treated water regenerant refill
- Days override feature; 1-28 days available
- Level VI 18-volt output DC power supply provides safe and easy installation
- Reliable and proven DC drive
- Certified to NSF/ANSI 44, 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
V2HDM-A-05 (*)	WS2H VALVE DN M I-A	Softener	18"	Downflow	Included	Not included	1		
V2HDM-B-05 (*)	WS2H VALVE DN M I-B	Softener	21"	Downflow	Included	Not included	1		
V2HDM-C-05 (*)	WS2H VALVE DN M I-C	Softener	24"	Downflow	Included	Not included	1		
V2HDM-D-05	WS2H VALVE DN M I-D	Softener	30"	Downflow	Included	Not included	1		
V2HDM-E-05 (*)	WS2H VALVE DN M I-E	Softener	36"	Downflow	Included	Not included	1		
V2HDM-F-05 (*)	WS2H VALVE DN M I-F	Softener	42"	Downflow	Included	Not included	1		
V2HDM-G-05 (*)	WS2H VALVE DN M I-G	Softener	48"	Downflow	Included	Not included	1		
V2HDM-H-05 (*)	WS2H VALVE DN M I-H	Softener	63"	Downflow	Included	Not included	1		
V2HBMZ-05	WS2H VALVE BW M I-Z	Filter	N/A	Backwash	Included	Not included	1		

(\*) Not available in stock.

When using the WS2H Control Valve, one of the following Tank Base Assemblies must be ordered, to complete the Control Valve:

Ref.	Description	Q.ty/ Carton	Q.ty/ Pallet	
V3064	WS2H / WS2QC 4" BASE ASSEMBLY	1		
V3055	WS2H / WS2QC 6" FLANGE BASE ASSEMBLY	1		
V3260BSPT-02	WS2H / WS2QC 2" SIDE MOUNT ASSEMBLY BSPT	1		

### NOTE:

All WS2H Control Valves listed above come standard with a V3162-022, 2.2 gpm Brine Line Flow Control (BLFC). Other sizes are available. Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3461XX-01). Drain Line Flow Controls (DLFC) washer is not included. Please order separately. The V3051BSPT DLFC Assembly BSPT is capable of up to 4 – V3190-XXX Flow Controls and 5 – V3162-XXX Flow Controls for a total flow rate of 150 gpm. For 3/4" DLFC buttons, reference order numbers V3162-007 through V3162-100. For 1" DLFC buttons, reference order numbers V3190-090 through V3190-250. 63 mm Top Distributor is not included. Please order separately: reference order numbers V-D1199-05 or V-D1200-04.



# Water Specialist 2" H Control Specifications

Inlet/Outlet .....	2" Female BSPT or 2.5" Groove Lock
Cycles .....	up to 9
Valve Material .....	Lead free brass
Regeneration .....	Downflow

## CONTROL VALVE FLOW RATES

Service @ 15 psi/1 bar drop (includes meter) .....	28,4 m <sup>3</sup> /h
Backwash @ 25 psi/1.7 bar drop .....	28,4 m <sup>3</sup> /h
Cv Service .....	32,3
Cv Backwash .....	25,0

## OPERATING PRESSURES

Minimum/Maximum .....	1,4 - 8,6 bar
-----------------------	---------------

## OPERATING TEMPERATURES

Minimum/Maximum .....	4° - 43° C
-----------------------	------------

## METER SPECIFICATIONS

Accuracy .....	± 5%
Flow Rate Range .....	5.7 - 473 lpm
Volume Range .....	(38 - 3,796.2 liters x1000)
Totalizer .....	(3.786 - 3.785.407,9 liters x1000)

## DIMENSIONS & WEIGHT

Distributor Pilot .....	63 mm OD
Drain Line Connection .....	2" Female NPT/BSPT/2.5" Groove Lock
Brine Line Adapters Included .....	1" Male NPT elbow and ¾" x 1" solvent weld elbow
Optional Adapters .....	½" or ⅝" OD Poly Tube Compression
Mounting Base .....	4" - 8 UN, 6" Flange or Side Mount
Height From Top Of Tank with 4" - 8 UN QC Base .....	292 mm
Height From Top Of Tank with 6" Flange QC Base .....	294,6 mm
Shipping Weight With Internal Meter .....	22,7 kg

## ELECTRICAL SPECIFICATIONS

### POWER SUPPLY

Supply Voltage .....	240VAC
Supply Frequency .....	60 Hz
Output Voltage .....	18VDC
Output Current .....	750 mA

## TANK APPLICATIONS

Water Softener .....	18" - 63" Diameter
Water Filter .....	18" - 48" Diameter

## CYCLES OF OPERATION

Choose up to nine regeneration cycles, in any order, with a wide range of available values:

Cycle .....	Range of values
Backwash .....	1 - 95 minutes
Brine (draw) .....	1 - 180 minutes
Slow Rinse .....	1 - 95 minutes
Fast Rinse .....	1 - 95 minutes
Refill .....	0,1 - 99 minutes
Hold (service) .....	1 - 480 minutes

*Options: Backwash Filter*

Compatible with the following typical concentrations of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines



## WS3 WATER SPECIALIST CONTROL VALVE

- Transformer, Drain Line Flow Control (DLFC) washer, Top Distributor and accessories not included, to order separately
- 3" top mount or side mount control valve suited for industrial applications
- Epoxy coated lead free brass valve body
- Economical stainless steel optional meter assembly
- Service flow rate 250 gpm (946 lpm) (56.8 m<sup>3</sup>/h), Backwash flow rate 220 gpm (833 lpm) (50.0 m<sup>3</sup>/h)
- Solid state microprocessor with easy access front removable POD
- Front panel display for Time of Day, Current Flow Rate, Totalizer and Volume/Days until Regeneration
- Four methods to initiate the down flow regeneration; meter delayed, meter immediate, time clock delayed, aor pressure differential
- Fully programmable regeneration cycle sequences (maximum 9)
- Fully programmable regeneration cycle times
- Pre or Post treated water regenerant refill
- Days override feature; 1-28 days available
- Capacitor back-up with up to 24 hour carry over
- Level VI 18-volt output DC power supply provides safe and easy installation
- Reliable and proven DC drive
- Certified to NSF/ANSI 61 and 372

Ref.	Description	Softener/ Filter	Injector Tank Size	Downflow/ Upflow	Meter	Mixing valve	Q.ty/ Carton	Q.ty/ Pallet	
V3DTA-05 (*)	WS3 VALVE DN T I-A	Softener	18"	Downflow	Not included	Not included	1		
V3DTB-05 (*)	WS3 VALVE DN T I-B	Softener	21"	Downflow	Not included	Not included	1		
V3DTC-05 (*)	WS3 VALVE DN T I-C	Softener	24"	Downflow	Not included	Not included	1		
V3DTD-05 (*)	WS3 VALVE DN T I-D	Softener	30"	Downflow	Not included	Not included	1		
V3DTE-05 (*)	WS3 VALVE DN T I-E	Softener	36"	Downflow	Not included	Not included	1		
V3DTF-05 (*)	WS3 VALVE DN T I-F	Softener	42"	Downflow	Not included	Not included	1		
V3DTG-05 (*)	WS3 VALVE DN T I-G	Softener	48"	Downflow	Not included	Not included	1		
V3DTH-05 (*)	WS3 VALVE DN T I-H	Softener	63"	Downflow	Not included	Not included	1		
V3BTZ-05 (*)	WS3 VALVE BW T I-Z	Filter	N/A	Backwash	Not included	Not included	1		

(\*) Not available in stock.

When using the WS3 Control Valve, one of the following Tank Base Assemblies must be ordered, to complete the Control Valve:

Ref.	Description	Q.ty/ Carton	Q.ty/ Pallet	
V3090	WS3 6" FLANGE BASE ASSEMBLY	1		
V3674BSPT-02	WS3 SIDE MOUNT ASSEMBLY BSPT	1		

#### NOTE:

All WS3 Control Valves listed above come standard with a V3162-022, 2.2 gpm Brine Line Flow Control (BLFC). Other sizes are available.  
Controls listed are priced without a power cord or transformer. For AC Adapter (Transformer) selection see "ACCESSORIES" section (V3461XX-01).  
Drain Line Flow Controls (DLFC) washer is not included. Please order separately. For the 3" drain fittings (V3764BSPT), Flow rates 9 to 225 gpm: uses up to 9 of the 1" DLFC buttons, reference order numbers V3190-090 through V3190-250.  
90 mm Top Distributor is not included. Please order separately.

# Water Specialist 3" Control Specifications

Inlet/Outlet .....	3" Female BSPT
Cycles .....	up to 9
Valve Material .....	Lead free brass
Regeneration .....	Downflow

## CONTROL VALVE FLOW RATES

Service @ 15 psi/1 bar drop.....	56,8 m <sup>3</sup> /h
Backwash @ 25 psi/1.7 bar drop.....	50,0 m <sup>3</sup> /h
Cv Service.....	64,6
Cv Backwash.....	44,0

## OPERATING PRESSURES

Minimum/Maximum .....	1,4 - 8,6 bar
-----------------------	---------------

## OPERATING TEMPERATURES

Minimum/Maximum .....	4° - 43° C
-----------------------	------------

## METER SPECIFICATIONS

Accuracy.....	± 5%
Flow Rate Range.....	13,3 - 1325 lpm
Volume Range .....	(3.786 - 3.785.407,9 liters x1000)

## DIMENSIONS & WEIGHT

Distributor Pilot .....	90 mm OD
Drain Line Connection .....	3" Female NPT/BSPT "No Groove Lock"
Brine Line Adapters Included.....	1" Male NPT elbow and ¾" x 1" solvent weld elbow
Mounting Base.....	6" Flange or Side Mount
Height From Top Of Tank with 6" Flange QC Base .....	318 mm
Shipping Weight Without Optional Meter .....	25,9 kg

## ELECTRICAL SPECIFICATIONS

### POWER SUPPLY

Supply Voltage .....	240VAC
Supply Frequency .....	60Hz
Output Voltage .....	18VDC
Output Current .....	750 mA

## TANK APPLICATIONS

Water Softener .....	18" - 63" Diameter
Water Filter .....	18" - 63" Diameter

## CYCLES OF OPERATION

Choose up to nine regeneration cycles, in any order, with a wide range of available values:

Cycle .....	Range of values
Backwash.....	1 - 95 minutes
Brine (draw) .....	1 - 180 minutes
Slow Rinse .....	1 - 95 minutes
Fast Rinse .....	1 - 95 minutes
Refill .....	0,1 - 99 minutes
Hold (service) .....	1 - 480 minutes

*Options: Backwash Filter*

Compatible with the following typical concentrations of regenerants or chemicals: Sodium chloride, potassium chloride, potassium permanganate, sodium bisulfite, chlorine and chloramines



## Accessories

WS1CI, WS1CI TWIN, WS1EI, WS1EI TWIN, WS1TC, WS125TC, WS125CI, WS125EI, WS15CI, WS15EI, WS2CI, WS2EI, WS2CI/QC, WS2EI/QC,

ACCESSORIES

Ref.	Description		Ref.	Description	
V3006	WS1 Bypass Assembly		V3162-065	WS1 DLFC 065 (6.5 gpm) for 3/4"	
V3007	WS1 Fitting 1" PVC Male NPT Elbow Assembly		V3162-075	WS1 DLFC 075 (7.5 gpm) for 3/4"	
V3007-01	WS1 Fitting 3/4" x 1" PVC Solvent Elbow Assembly		V3162-090	WS1 DLFC 090 (9.0 gpm) for 3/4"	
V3007-02LF	WS1 Fitting 1" Brass Sweat Assembly LF		V3162-100	WS1 DLFC 100 (10.0 gpm) for 3/4"	
V3007-03LF	WS1 Fitting 3/4" Brass Sweat Assembly LF		V3175WC-A	WS1 Weather Cover Almond	
V3007-06	WS1 Fitting 1" Plastic Male BSPT Assembly		V3175WC-W	WS1 Weather Cover White	
V3007-07	WS1 Fitting 1-1/4" & 1-1/2" PVC Solvent Assembly		V3186	WS1 AC Adapter (Transformer) 120V-12V	
V3007-08	WS1 Fitting 1-1/4" Plastic Male BSPT Assembly		V3186-01	WS1 AC Adapter (Transformer) Cord Only 15 Feet	
V3007-09LF	WS1 Fitting 1-1/4" & 1-1/2" Brass Sweat Assy LF		V3186-06	WS1 AC Power Supply (Transformer) US 15 Volt DC	
V3007-14	WS1 Fitting 3/4" Plastic Male BSPT Assembly		V3186-36	WS1 AC Adapter Cord Only 36 Feet	
V3007-15	WS1 Fitting 3/4" John Guest QC Elbow Assembly		V3186-OD	WS1 AC Adapter (Transformer) 110V-12V (Outdoor)	
V3007-16	WS1 Fitting 1" PVC Male BSPT 90 Assembly		V3186EU-06	WS1 AC Power Supply (Transformer) EU 15 Volt DC	
V3007-17	WS1 Fitting 1" John Guest QC Assembly		V3186EU-OD	WS1 AC Adapter (Transformer) 240V-12V European (Outdoor)	
V3007-19	WS1 Fitting 3/4" Straight John Guest QC		V3186UK	WS1 AC Adapter (Transformer) 220-240V-12V UK	
V3008-02	WS1 Drain Fitting 1" Straight w/Silencer		V3186UK-05	WS1 AC Power Supply (Transformer) UK 15 Volt DC	
V3008-04	WS1 Drain Fitting 1" Straight w/o Silencer		V3190-090	WS1 DLFC 090 (9.0 gpm) for 1"	
V3008-05	WS2 Drain Fitting 1" Male NPT w/o Silencer		V3190-100	WS1 DLFC 100 (10.0 gpm) for 1"	
V3009	WS1 Auxiliary Microswitch Assembly		V3190-110	WS1 DLFC 110 (11.0 gpm) for 1"	
V3014	WS1 Series Microswitch Assembly		V3190-130	WS1 DLFC 130 (13.0 gpm) for 1"	
V3017	WS2 Service Or Fill Switch Assembly		V3190-150	WS1 DLFC 150 (15.0 gpm) for 1"	
V3022	WS1 Stack Puller Assembly		V3190-170	WS1 DLFC 170 (17.0 gpm) for 1"	
V3030-01	System Controller Box		V3190-200	WS1 DLFC 200 (20.0 gpm) for 1"	
V3040BSPT	WS15 Meter Assembly Male x Female BSPT		V3190-250	WS1 DLFC 250 (25.0 gpm) for 1"	
V3040BSPT-15	WS15 Meter Assy Male x Female BSPT 15' Meter Cable		V3191-01	WS1 Bypass Vertical Adapter Assembly	
V3051BSPT	WS2H/3 DLFC Assy 2 M-BSPT x 2 F-BSPT (No DLFC Buttons)		V3192	WS1 Nut 3/4" Drain Elbow-Use w/PKP10TS8-BULK (5/8x1/2)	
V3053	WS2 2-1/2" Groove Lock Clamp Assembly		V3193-02	WS1 Service Spanner Wrench	
V3055	WS2H/2 QC 6" Flange Base Assembly		V3260BSPT-02	WS2H/2 QC 2" Side Mount Base Assembly BSPT	
V3064	WS2H/2 QC 4" Base Assembly		V3467	WS1 Bypass Inline Adapter Fittings	
V3069FF-01	WS1/125 Motorized Alternating Valve Female x Female 3-Wire		V3474	WS Alt Connection Cord 8' Black for Single Meter (3 Wire Int.)	
V3069MM-01	WS1/125 Motorized Alternating Valve Male x Male 3-Wire		V3475-12	WS2H/3 System Connection Cord 12' Red	
V3070FF	WS1/125 No Hard Water Bypass Valve Female x Female		V3475-24	WS2H/3 System Connection Cord 24' Blue	
V3070FM	WS1/125 No Hard Water Bypass Valve Female x Male		V3475-36	WS2H/3 System Connection Cord 36' Yellow	
V3071BSPT	MAV 15 BSPT Revision 2		V3478	WS1 Inline Bypass Assembly 1 Brass Sweat	
V3076BSPT	WS2 Motorized Alternating Valve BSPT Revision 2 (Piston Style)		V3478-01	WS1 Inline Bypass Assembly 3/4 Brass Sweat	
V3079BSPT	WS15 DLFC Assy 1.25 M-NPT x 1.5 F-BSPT (No DLFC Buttons)		V3783WC-A	WS2 Weather Cover Almond	
V3080BSPT	WS2 DLFC Assy 1.5 M-NPT x 1.5 F-BSPT (No DLFC Buttons)		V3783WC-W	WS2 Weather Cover White	
V3094BSPT	WS2 Meter Assy Male x Female BSPT		V3974WC-A	WS15 Weather Cover Almond Generation 2	
V3094BSPT-15	WS2 Meter Assy Male x Female BSPT 15' Meter Cable		V3974WC-W	WS15 Weather Cover White Generation 2	
V3097BSPT	15" No Hard Water Bypass Male x Female BSPT		V3962	WS1 Drain Elbow & Retainer Assy w/o Silencer	
V3098BSPT	2" No Hard Water Bypass Male x Female BSPT		V4052-01	TT Twin Tank Interconnect Kit for 12"-21" Tanks	
V3158-04	WS2 Drain Elbow 3/4" Male NPT No Silencer		V4057	WS1 Drain Elbow & Retainer Assy w/Silencer	
V3162-007	WS1 DLFC 007 (0.7 gpm) for 3/4"		V4099	WS1 External In-Line Mixing Valve	
V3162-010	WS1 DLFC 010 (1.0 gpm) for 3/4"		V4276-15	15' Power Cord	
V3162-013	WS1 DLFC 013 (1.3 gpm) for 3/4"		V4276-36	36' Power Cord	
V3162-017	WS1 DLFC 017 (1.7 gpm) for 3/4"		V4325	Software Configurator Program	
V3162-022	WS1 DLFC 022 (2.2 gpm) for 3/4"		V-D1199-04	Top Stack Distributor 50 mm	
V3162-027	WS1 DLFC 027 (2.7 gpm) for 3/4"		V-D1199-05	Top Stack Distributor 63 mm	
V3162-032	WS1 DLFC 032 (3.2 gpm) for 3/4"		V-D1200-04	Top Stack Distributor 63 mm for Flange Tanks	
V3162-042	WS1 DLFC 042 (4.2 gpm) for 3/4"		V-D1203-03	Upper Screen 32 mm - Twist Lock	
V3162-053	WS1 DLFC 053 (5.3 gpm) for 3/4"		V-D1300	Top Baffle Distributor 50 mm	
			V-PKP10TS8-BULK	Polytube Insert 5/8" - "For Drain Line with V3192 Nut"	



## WS2H, WS3

### ACCESSORIES

Ref.	Description		Ref.	Description	
V3051BSPT	WS2H/3 DLFC Assy 2 M-BSPT x 2 F-BSPT (No DLFC Buttons)		V3162-100	WS1 DLFC 100 (10.0 gpm) for 3/4"	
V3053	WS2 2-1/2" Groove Lock Clamp Assembly		V3190-090	WS1 DLFC 090 (9.0 gpm) for 1"	
V3055	WS2H/2 QC 6" Flange Base Assembly		V3190-100	WS1 DLFC 100 (10.0 gpm) for 1"	
V3064	WS2H/2 QC 4" Base Assembly		V3190-110	WS1 DLFC 110 (11.0 gpm) for 1"	
V3076BSPT	WS2 Motorized Alternating Valve BSPT Revision 2 (Piston Style)		V3190-130	WS1 DLFC 130 (13.0 gpm) for 1"	
V3079BSPT	WS15 DLFC Assy 1.25 M-NPT x 1.5 F-BSPT (No DLFC Buttons)		V3190-150	WS1 DLFC 150 (15.0 gpm) for 1"	
V3080BSPT	WS2 DLFC Assy 1.5 M-NPT x 1.5 F-BSPT (No DLFC Buttons)		V3190-170	WS1 DLFC 170 (17.0 gpm) for 1"	
V3083BSPT	WS3 Motorized Alternating Valve BSPT		V3190-200	WS1 DLFC 200 (20.0 gpm) for 1"	
V3090	WS3 6" Flange Base Assembly		V3190-250	WS1 DLFC 250 (25.0 gpm) for 1"	
V3095BSPT	WS3 3" Meter Assembly BSPT Male x Female		V3260BSPT-02	WS2H/2 QC 2" Side Mount Base Assembly BSPT	
V3095BSPT-15	WS3 3" Meter Assembly BSPT Male x Female 15' Meter Cable		V3243-01BOARD	WS2H/3 PC Board System with Relay	
V3098BSPT	2" No Hard Water Bypass Male x Female BSPT		V3461-01	WS2H/3 AC 20V Adapter	
V3099BSPT	WS3 No Hard Water Bypass Male x Female BSPT		V3461EU-01	WS2H/3 AC 20V Adapter EU	
V3162-007	WS1 DLFC 007 (0.7 gpm) for 3/4"		V3461UK-01	WS2H/3 AC 20V Adapter UK	
V3162-010	WS1 DLFC 010 (1.0 gpm) for 3/4"		V3474	WS Alt Connection Cord 8' Black for Single Meter (3 Wire Int.)	
V3162-013	WS1 DLFC 013 (1.3 gpm) for 3/4"		V3475-12	WS2H/3 System Connection Cord 12' Red	
V3162-017	WS1 DLFC 017 (1.7 gpm) for 3/4"		V3475-24	WS2H/3 System Connection Cord 24' Blue	
V3162-022	WS1 DLFC 022 (2.2 gpm) for 3/4"		V3475-36	WS2H/3 System Connection Cord 36' Yellow	
V3162-027	WS1 DLFC 027 (2.7 gpm) for 3/4"		V3674BSPT-02	WS3 Side Mount Base Assembly BSPT	
V3162-032	WS1 DLFC 032 (3.2 gpm) for 3/4"		V3764BSPT	WS3 DLFC Assy 3 M-BSPT x 3 F-BSPT (No DLFC Buttons)	
V3162-042	WS1 DLFC 042 (4.2 gpm) for 3/4"		V4039	WS3 Meter Assembly with 4' Cord	
V3162-053	WS1 DLFC 053 (5.3 gpm) for 3/4"		V4051WC	WS2H/3 Weather Cover	
V3162-065	WS1 DLFC 065 (6.5 gpm) for 3/4"		V-D1199-05	Top Stack Distributor 63 mm	
V3162-075	WS1 DLFC 075 (7.5 gpm) for 3/4"		V-D1200-04	Top Stack Distributor 63 mm for Flange Tanks	
V3162-090	WS1 DLFC 090 (9.0 gpm) for 3/4"				



**INJECTORS FOR VARIOUS TANK SIZES**

(CAN BE ORDERED SEPARATELY)

**WS1 AND WS1.25**

ORDER NUMBER	DESCRIPTION	INJECTOR COLOR	TYPICAL TANK DIAMETER		
			DOWN-FLOW BRINE	UP-FLOW BRINE	
V3010-1A	WS1 Injector Assembly A Black	Black	6"	8"	
V3010-1B	WS1 Injector Assembly B Brown	Brown	7"	9"	
V3010-1C	WS1 Injector Assembly C Violet	Violet	8"	10"	
V3010-1D	WS1 Injector Assembly D Red	Red	9"	12"	
V3010-1E	WS1 Injector Assembly E White	White	10"	13"	
V3010-1F	WS1 Injector Assembly F Blue	Blue	12"	14"	
V3010-1G	WS1 Injector Assembly G Yellow	Yellow	13"	16"	
V3010-1H	WS1 Injector Assembly H Green	Green	14"	18"	
V3010-1I	WS1 Injector Assembly I Orange	Orange	16"	21"	
V3010-1J	WS1 Injector Assembly J Light Blue	Light Blue	18"	n/a	
V3010-1K	WS1 Injector Assembly K Light Green	Light Green	21"	n/a	
V3010-1Z	WS1 Injector Assembly Z Plug				

**INJECTORS FOR VARIOUS TANK SIZES**

(CAN BE ORDERED SEPARATELY)

**WS1.5/2L**

REF.	DESCRIPTION	INJECTOR COLOR	TYPICAL TANK DIAMETER		
			DOWN-FLOW BRINE	UP-FLOW BRINE	
V3010-15B	WS15/2L Injector Assembly B Violet	Violet	12"	14"	
V3010-15C	WS15/2L Injector Assembly C Red	Red	13"	16"	
V3010-15D	WS15/2L Injector Assembly D White	White	14"	18"	
V3010-15E	WS15/2L Injector Assembly E Blue	Blue	16"	21"	
V3010-15F	WS15/2L Injector Assembly F Yellow	Yellow	18"	24"	
V3010-15G	WS15/2L Injector Assembly G Green	Green	21"	30"	
V3010-15H	WS15/2L Injector Assembly H Orange	Orange	24"	n/a	
V3010-15I	WS15/2L Injector Assembly I	Gray PVC	30"	n/a	
V3010-15Z	WS15/2L Injector Assembly Z Plug		n/a		

**WS2/2H/3**

REF.	DESCRIPTION	INJECTOR COLOR	TYPICAL TANK DIAMETER		
			DOWN-FLOW BRINE	UP-FLOW BRINE	
V3010-2A	WS2/2H/3 Injector Assembly A	Stamped A	18"	24"	
V3010-2B	WS2/2H/3 Injector Assembly B	Stamped B	21"	30"	
V3010-2C	WS2/2H/3 Injector Assembly C	Stamped C	24"	36"	
V3010-2D	WS2/2H/3 Injector Assembly D	Stamped D	30"	42"	
V3010-2E	WS2/2H/3 Injector Assembly E	Stamped E	36"	48"	
V3010-2F	WS2/2H/3 Injector Assembly F	Stamped F	42"	n/a	
V3010-2G	WS2/2H/3 Injector Assembly G	Stamped G	48"	n/a	
V3010-2H	WS2H/3 Injector Assembly H	Gray PVC	63"	n/a	

**WS2 \***

REF.	DESCRIPTION	TYPICAL TANK DIAMETER		
		DOWN-FLOW BRINE	UP-FLOW BRINE	
V3010-2R-15B	WS2/2H Injector R Modified Assembly w/V3010-15B	12"	14"	
V3010-2S-15C	WS2/2H Injector S Modified Assembly w/V3010-15C	13"	16"	
V3010-2T-15D	WS2/2H Injector T Modified Assembly w/V3010-15D	14"	18"	
V3010-2U-15E	WS2/2H Injector U Modified Assembly w/V3010-15E	16"	21"	
V3010-2A	WS2/2H/3 Injector Assembly A	18"	24"	
V3010-2B	WS2/2H/3 Injector Assembly B	21"	30"	
V3010-2C	WS2/2H/3 Injector Assembly C	24"	36"	
V3010-2D	WS2/2H/3 Injector Assembly D	30"	42"	
V3010-2E	WS2/2H/3 Injector Assembly E	36"	48"	
V3010-2F	WS2/2H/3 Injector Assembly F	42"	n/a	
V3010-2G	WS2/2H/3 Injector Assembly G	48"	n/a	

**\*Note:** Injector Recommendations - Above injectors are for downflow brining units,

For upflow brining units the injector should be "down-sized" two tank sizes.

Example: A 24" downflow softener would use a "C" injector, where as a 24" upflow softener would use an "A" injector



# EUROTROL®

WATER TREATMENT COMPONENTS

Eurotrol S.p.A.  
Via Enrico Fermi, 23  
20019 Settimo M.se (MI) - ITALY  
Tel +39.02.335458 r.a.  
e-mail: [eurotrol@eurotrol.it](mailto:eurotrol@eurotrol.it)  
web: [www.eurotrol.it](http://www.eurotrol.it)