### AUTOTROL INDUSTRIAL SOFTENING MAGNUM CV 1,5" VALVES WITH SERIES LOGIX CONTROLLER



- for automatic and industrial water softening systems;
- valve body in NSF listed Noryl plastic material with 304 Stainless Steel tank adapter (for heavy applications, like iron removal using KMnO<sub>4</sub> or decarbonisation using HCl, the Noryl tank adapter is available on request);
- o-rings in EPDM material;
- operating flow rate Kv = 17;
- backwash flow rate =  $337 \text{ lpm} @ \Delta p 1,72 \text{ bar};$
- resin volume range = 100 ÷ 700 litres;
- available with series LOGIX controller (see 01-03-02-EN data sheet):
  - 742 electronic chronometric programmable;
    - 762 electronic volumetric programmable;
- with European transformer 12/230V 50/60 Hz;
- available with or without by-pass;
- adapters, manifold kit and accessories (e.g. upper screen, etc.) not included, to order separately: see 01-04-04-EN and 01-04-05-EN data sheets;
- brine tank refill system doesn't need a brine valve, but just an air-check;
- PVC 2" side mounting adapter available on demand (REF. CC084, see 01-04-04-EN data sheet).

| Pressure vessel connection                    | Threaded 4 "- 8 UN male                         |
|---|---|
| Drain line connection                         | 1,5" brass – NPT/BSPT male<br>D50 CPVC to glue  |
| Brine line connection                         | Threaded <sup>3</sup> / <sub>4</sub> " NPT male |
| Distributor tube O. D. diameter               | 1,5 " (= 48,3 mm)                               |
| Pilot drain and auxiliary hydraulic out       | <sup>1</sup> /4" tube fitting                   |
| Distributor tube length above pressure vessel | $16 \pm 3 \text{ mm}$                           |
| Weight (valve + controller)                   | 12,3 kg   |



### AUTOTROL INDUSTRIAL SOFTENING MAGNUM CV 1,5" VALVES WITH SERIES LOGIX CONTROLLER



#### PRESSURE DROP DIAGRAM

| Operating pressure | 1,72 ÷ 6,90 bar               |
|--------------------|-------------------------------|
| Water temperature  | $1^{\circ}C \div 36^{\circ}C$ |



## AUTOTROL INDUSTRIAL MAGNUM CV 1,5" VALVES FOR FILTRATION WITH SERIES LOGIX CONTROLLER



- for automatic and industrial water filtration systems;
- valve body in NSF listed Noryl plastic material with 304 Stainless Steel tank adapter (for heavy applications, like sea water, the Noryl tank adapter is available on request);
- o-rings in EPDM material;
- operating flow rate Kv = 17;
- backwash flow rate =  $337 \text{ lpm} @ \Delta p 1,72 \text{ bar};$
- available with series LOGIX controller (see 01-03-02-EN data sheet):
  - 742 F electronic chronometric programmable;
  - 762 F electronic volumetric programmable;
- with European transformer 12/230V 50/60 Hz;
- available with or without by-pass;
- adapters, manifold kit and accessories (e.g. upper screen, etc.) not included, to order separately: see 01-04-04-EN and 01-04-05-EN data sheets;
- PVC 2" side mounting adapter available on demand (REF. CC084, see 01-04-04-EN data sheet).

| Pressure vessel connection                    | Threaded 4 "- 8 UN male                        |
|---|--|
| Drain line connection                         | 1,5" brass – NPT/BSPT male<br>D50 CPVC to glue |
| Distributor tube O. D. diameter               | 1,5 " (= 48,3 mm)                              |
| Pilot drain and auxiliary hydraulic out       | <sup>1</sup> /4" tube fitting                  |
| Distributor tube length above pressure vessel | $16 \pm 3 \text{ mm}$                          |
| Weight (valve + controller)                   | 12,3 kg  |



## AUTOTROL INDUSTRIAL MAGNUM CV 1,5" VALVES FOR FILTRATION WITH SERIES LOGIX CONTROLLER



#### PRESSURE DROP DIAGRAM

| Operating pressure | 1,72 ÷ 6,90 bar               |
|--------------------|-------------------------------|
| Water temperature  | $1^{\circ}C \div 36^{\circ}C$ |



### AUTOTROL INDUSTRIAL SOFTENING MAGNUM IT 2" VALVES WITH SERIES LOGIX CONTROLLER



- for automatic and industrial water softening systems;
- valve body in NSF listed Noryl plastic material with 304 Stainless Steel tank adapter (for heavy applications, like iron removal using KMnO<sub>4</sub> or decarbonisation using HCl, the Noryl tank adapter is available on request);
- o-rings in EPDM material;
- operating flow rate Kv = 17;
- backwash flow rate =  $337 \text{ lpm} @ \Delta p 1,72 \text{ bar};$
- resin volume range = 100 ÷ 700 litres;
- available with series LOGIX controller (see 01-03-02-EN data sheet):
  - 742 electronic chronometric programmable;
    - 762 electronic volumetric programmable;
- with European transformer 12/230V 50/60 Hz;
- available with or without by-pass;
- adapters, manifold kit and accessories (e.g. upper screen, etc.) not included, to order separately: see 01-04-04-EN and 01-04-05-EN data sheets;
- brine tank refill system doesn't need a brine valve, but just an air-check;
- PVC 2" side mounting adapter available on demand (REF. CC084, see 01-04-04-EN data sheet).

| Pressure vessel connection                    | Threaded 4 "- 8 UN male                         |
|---|---|
| Drain line connection                         | 1,5" brass – NPT/BSPT male<br>D50 CPVC to glue  |
| Brine line connection                         | Threaded <sup>3</sup> / <sub>4</sub> " NPT male |
| Distributor tube O. D. diameter               | 1,5 " (= 48,3 mm)                               |
| Pilot drain and auxiliary hydraulic out       | <sup>1</sup> /4" tube fitting                   |
| Distributor tube length above pressure vessel | $16 \pm 3 \text{ mm}$                           |
| Weight (valve + controller)                   | 12,3 kg   |



### AUTOTROL INDUSTRIAL SOFTENING MAGNUM IT 2" VALVES WITH SERIES LOGIX CONTROLLER



#### PRESSURE DROP DIAGRAM

| Operating pressure | 1,72 ÷ 6,90 bar               |
|--------------------|-------------------------------|
| Water temperature  | $1^{\circ}C \div 36^{\circ}C$ |



## AUTOTROL INDUSTRIAL MAGNUM IT 2" VALVES FOR FILTRATION WITH SERIES LOGIX CONTROLLER



- for automatic and industrial water filtration systems;
- valve body in NSF listed Noryl plastic material with 304 Stainless Steel tank adapter (for heavy applications, like sea water, the Noryl tank adapter is available on request);
- o-rings in EPDM material;
- operating flow rate Kv = 17;
- backwash flow rate =  $337 \text{ lpm} @ \Delta p 1,72 \text{ bar};$
- available with series LOGIX controller (see 01-03-02-EN data sheet):
  - 742 F electronic chronometric programmable;
  - 762 F electronic volumetric programmable;
- with European transformer 12/230V 50/60 Hz;
- available with or without by-pass;
- adapters, manifold kit and accessories (e.g. upper screen, etc.) not included, to order separately: see 01-04-04-EN and 01-04-05-EN data sheets;
- PVC 2" side mounting adapter available on demand (REF. CC084, see 01-04-04-EN data sheet).

| CHARACTERISTICS |  |
|-----------------|--|
|                 |  |

| Pressure vessel connection                    | Threaded 4 "- 8 UN male                        |
|---|--|
| Drain line connection                         | 1,5" brass – NPT/BSPT male<br>D50 CPVC to glue |
| Distributor tube O. D. diameter               | 1,5 " (= 48,3 mm)                              |
| Pilot drain and auxiliary hydraulic out       | <sup>1</sup> /4" tube fitting                  |
| Distributor tube length above pressure vessel | $16 \pm 3 \text{ mm}$                          |
| Weight (valve + controller)                   | 12,3 kg  |



## AUTOTROL INDUSTRIAL MAGNUM IT 2" VALVES FOR FILTRATION WITH SERIES LOGIX CONTROLLER



#### PRESSURE DROP DIAGRAM

| Operating pressure | 1,72 ÷ 6,90 bar               |
|--------------------|-------------------------------|
| Water temperature  | $1^{\circ}C \div 36^{\circ}C$ |



## INDUSTRIAL DUPLEX SYSTEMS WITH AUTOTROL SOFTENING MAGNUM IT 2" VALVES AND 764 CONTROLLER



- for automatic and industrial water softening systems;
- for twin alternating and twin parallel systems;
- consisting of n.2 valves (one "main" and another one "secondary") with 764 electronic volumetric (see 01-03-02-EN data sheet);
- valve body in NSF listed Noryl plastic material with 304 Stainless Steel tank adapter (for heavy applications, like iron removal using KMnO<sub>4</sub> or decarbonisation using HCl, the Noryl tank adapter is available on request);
- o-rings in EPDM material;
- operating flow rate for each tank Kv = 17;
- backwash flow rate for each tank =  $337 \text{ lpm } @ \Delta p 1,72 \text{ bar};$
- resin volume range for each tank =  $100 \div 700$  litres;
- with European transformer 12/230V 50/60 Hz;
- available with or without by-pass;
- adapters, manifold kit and accessories (e.g. upper screen, etc.) not included, to order separately: see 01-04-04-EN and 01-04-05-EN data sheets;
- brine tank refill system doesn't need a brine valve, but just an air-check;
- PVC 2" side mounting adapter available on demand (REF. CC084, see 01-04-04-EN data sheet);
- interconnection not included.

| Pressure vessel connection                    | Threaded 4 "- 8 UN male                         |
|---|---|
| Drain line connection                         | 1,5" brass – NPT/BSPT male<br>D50 CPVC to glue  |
| Brine line connection                         | Threaded <sup>3</sup> / <sub>4</sub> " NPT male |
| Distributor tube O. D. diameter               | 1,5 " (= 48,3 mm)                               |
| Pilot drain and auxiliary hydraulic out       | <sup>1</sup> /4" tube fitting                   |
| Distributor tube length above pressure vessel | $16 \pm 3 \text{ mm}$                           |
| Weight (valve + controller)                   | 12,3 kg   |



## INDUSTRIAL DUPLEX SYSTEMS WITH AUTOTROL SOFTENING MAGNUM IT 2" VALVES AND 764 CONTROLLER



#### PRESSURE DROP DIAGRAM

| Operating pressure | 1,72 ÷ 6,90 bar               |
|--------------------|-------------------------------|
| Water temperature  | $1^{\circ}C \div 36^{\circ}C$ |



### AUTOTROL INDUSTRIAL SOFTENING MAGNUM IT 2" VALVES WITH 764 CONTROLLER FOR MULTITANK SYSTEMS



- for automatic and industrial water softening systems;
- with electronic volumetric 764 controller (see 01-03-02-EN data sheet);
- for parallel systems;
- valve body in NSF listed Noryl plastic material with 304 Stainless Steel tank adapter (for heavy applications, like iron removal using KMnO<sub>4</sub> or decarbonisation using HCl, the Noryl tank adapter is available on request);
- o-rings in EPDM material;
- operating flow rate for each tank Kv = 17;
- backwash flow rate for each tank =  $337 \text{ lpm } @ \Delta p 1,72 \text{ bar};$
- resin volume range for each tank = 100 ÷ 700 litres;
- with European transformer 12/230V 50/60 Hz for each valve;
- available with or without by-pass;
- adapters, manifold kit and accessories (e.g. upper screen, etc.) not included, to order separately: see 01-04-04-EN and 01-04-05-EN data sheets;
- brine tank refill system doesn't need a brine valve, but just an air-check;
- PVC 2" side mounting adapter available on demand (REF. CC084, see 01-04-04-EN data sheet);
- interconnection not included.

| Pressure vessel connection                    | Threaded 4 "- 8 UN male                        |
|---|--|
| Drain line connection                         | 1,5" brass – NPT/BSPT male<br>D50 CPVC to glue |
| Brine line connection                         | Threaded <sup>3</sup> /4" NPT male             |
| Distributor tube O. D. diameter               | 1,5 " (= 48,3 mm)                              |
| Pilot drain and auxiliary hydraulic out       | <sup>1</sup> /4" tube fitting                  |
| Distributor tube length above pressure vessel | $16 \pm 3 \text{ mm}$                          |
| Weight (valve + controller)                   | 12,3 kg  |



## AUTOTROL INDUSTRIAL SOFTENING MAGNUM IT 2" VALVES WITH 764 CONTROLLER FOR MULTITANK SYSTEMS



#### PRESSURE DROP DIAGRAM

| Operating pressure | 1,72 ÷ 6,90 bar               |  |
|--------------------|-------------------------------|--|
| Water temperature  | $1^{\circ}C \div 36^{\circ}C$ |  |



### AUTOTROL INDUSTRIAL MAGNUM IT 2" VALVES FOR FILTRATION WITH 764 CONTROLLER WITH MULTITANK SYSTEMS



- for automatic and industrial water filtration systems;
- with electronic volumetric 764 F controller (see 01-03-02-EN data sheet);
- for parallel systems up to 6 tanks;
- valve body in NSF listed Noryl plastic material with 304 Stainless Steel tank adapter (for heavy applications, like sea water, the Noryl tank adapter is available on request);
- o-rings in EPDM material;
- operating flow rate for each tank Kv = 17;
- backwash flow rate for each tank =  $337 \text{ lpm } @ \Delta p 1,72 \text{ bar};$
- with European transformer 12/230V 50/60 Hz for each valve;
- available with or without by-pass;
- adapters, manifold kit and accessories (e.g. upper screen, etc.) not included, to order separately: see 01-04-04-EN and 01-04-05-EN data sheets;
- PVC 2" side mounting adapter available on demand (REF. CC084, see 01-04-04-EN data sheet);
- interconnection not included.

| Pressure vessel connection                    | Threaded 4 "- 8 UN male                        |
|---|--|
| Drain line connection                         | 1,5" brass – NPT/BSPT male<br>D50 CPVC to glue |
| Distributor tube O. D. diameter               | 1,5 " (= 48,3 mm)                              |
| Pilot drain and auxiliary hydraulic out       | <sup>1</sup> /4" tube fitting                  |
| Distributor tube length above pressure vessel | $16 \pm 3 \text{ mm}$                          |
| Weight (valve + controller)                   | 12,3 kg  |



### AUTOTROL INDUSTRIAL MAGNUM IT 2" VALVES FOR FILTRATION WITH 764 CONTROLLER WITH MULTITANK SYSTEMS



#### PRESSURE DROP DIAGRAM

| Operating pressure | 1,72 ÷ 6,90 bar               |
|--------------------|-------------------------------|
| Water temperature  | $1^{\circ}C \div 36^{\circ}C$ |





MagnuMatic system combines convenience and versatility of Autotrol Magnum multi-way valve, for controlling and programming regeneration sequences in water softening applications, with possibility to couple 2-Way Aquamatic valves  $53\underline{x}$  Series 2" and 3", that can meet up to 40 m<sup>3</sup>/h flow rate.

This solution is provided both for single and twin alternating softening applications and it always requires a Magnum side mount installation with a special adapter and relative connections to Aquamatic valves.

On demand we can provide the entire "MagnuMatic Piping" PVC made, assembled on AISI 304 self-supporting skid, including manual valves as shown on attached diagrams.

Top and bottom PVC pipe connections in place implementation is charged to the Customer.



Single System configuration



Single System consists of:

| Item | Qty | Description                     |
|------|-----|---------------------------------|
| 1a   | 1   | 742 30" MagnuMatic Valve System |
| 1b   | 1   | 742 36" MagnuMatic Valve System |
| 1c   | 1   | 742 42" MagnuMatic Valve System |
| 1d   | 1   | 762 30" MagnuMatic Valve System |
| 1e   | 1   | 762 36" MagnuMatic Valve System |
| 1f   | 1   | 762 42" MagnuMatic Valve System |
| 2    | 1   | 2" Flow meter                   |
| 3    | 1   | Side Mount PVC D.63 Adapter     |
| 4a   | 2   | PLS K535 Aquamatic Valve        |
| 4b   | 2   | PLS K537 Aquamatic Valve        |

| Item | Qty | Description  |
|------|-----|--|
| 5a   | 1   | Right or left Single MagnuMatic<br>Piping D.63/535       |
| 5b   | 1   | Right or left Single MagnuMatic<br>Piping D.75/535       |
| 5c   | 1   | Right or left Single MagnuMatic<br>Piping D.90/537       |
| 6a   | 1   | 30" Pressure Vessel                                      |
| 6b   | 1   | 36" Pressure Vessel                                      |
| 6с   | 1   | 42" Pressure Vessel                                      |
| 7a*  | 1   | 670 litres Brine Tank for 30" Pressure<br>Vessel         |
| 7b*  | 1   | 920 litres Brine Tank for 36" and 42"<br>Pressure Vessel |

\* Not shown.



## MAGNUMATIC SYSTEM FOR "HIGH FLOW" SOFTENING APPLICATIONS Duplex System configuration



Duplex System consists of:

| Item | Qty | Description   |  |  |
|------|-----|---|--|--|
| 8a   | 1   | 764 30" Duplex MagnuMatic Valve System                |  |  |
| 8b   | 1   | 764 36" Duplex MagnuMatic Valve System                |  |  |
| 8c   | 1   | 764 42" Duplex MagnuMatic Valve System                |  |  |
| 9    | 1   | 2" Flow meter   |  |  |
| 10   | 2   | Side Mount PVC D.63 Adapter                           |  |  |
| 11a  | 4   | PLS K535 Aquamatic Valve                              |  |  |
| 11b  | 4   | PLS K537 Aquamatic Valve                              |  |  |
| 12a  | 1   | Duplex MagnuMatic Piping D.63/535                     |  |  |
| 12b  | 1   | Duplex MagnuMatic Piping D.75/535                     |  |  |
| 12c  | 1   | Duplex MagnuMatic Piping D.90/537                     |  |  |
| 13a  | 2   | 30" Pressure Vessel                                   |  |  |
| 13b  | 2   | 36" Pressure Vessel                                   |  |  |
| 13c  | 2   | 42" Pressure Vessel                                   |  |  |
| 14a* | 1   | 920 litres Brine Tank for 30" Pressure Vessel         |  |  |
| 14b* | 2   | 670 litres Brine Tank for 30" Pressure Vessel         |  |  |
| 14c* | 2   | 920 litres Brine Tank for 36" and 42" Pressure Vessel |  |  |



## Performance table

|                        | Resin<br>Volume<br>[litres] | Filter sand<br>and gravel<br>1,5÷2,4 mm<br>[kg] | Min./Max<br>Flow Rate<br>[m <sup>3</sup> /h] | Cycle<br>[m³/°F] | NaCl<br>Consumption<br>[kg] |
|------------------------|-----------------------------|---|--|------------------|-----------------------------|
| 30" pressure vessel    | 425                         | 100   | 10 ÷ 22                                      | 2125 ÷ 2465      | 64 ÷ 85                     |
| 36" pressure<br>vessel | 600                         | 175   | 15 ÷ 28                                      | 3000 ÷ 3480      | 90÷120                      |
| 42" pressure<br>vessel | 800                         | 225   | 22÷40  | 4000 ÷ 4640      | 120 ÷ 160                   |

# Piping table

|             | Aquamatic | Max Flow Rate<br>[m <sup>3</sup> /h] |
|-------------|-----------|--------------------------------------|
| Piping D.63 | K535      | 22                                   |
| Piping D.75 | K535      | 28                                   |
| Piping D.90 | K537      | 40                                   |



Single System overall dimensions





**Duplex System overall dimensions** 



