

# ProMinent water softeners

DULCO®-SOFT – professional solution without scale

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# DULCO®-SOFT water softening

Our water softeners operate on the basis of the so-called ion exchange process. Hard water flows through high quality cation-exchange resin which is filled in a plastic pressure vessel. The resin extracts calcium and magnesium ions from raw water and exchanges them for sodium ions.

The ion exchanger resin loses its water softening capacity after a certain water flow. The water softener regenerates exhausted resin with the help of an automatic control valve, using NaCl solution.

## DULCO®-SOFT domestic water softener series

Due to their design, ProMinent® domestic type water softeners are suitable for intermittent, automatic work. During regeneration time they do not provide soft water. The system is volume controlled, which means that the regeneration of

the exhausted ion-exchange resin bed is regulated by a built-in water meter. No continuous supervision is required for the system; only additional supplies of salt tablets for regeneration should be added to the brine tank.

### DULCO®-SOFT DMEb RC water softener – with GE control valve

The shape of the GE control valve of the water softener is more up-to-date, suits better the requirements of modern design.

DULCO®-SOFT DMEb RC – type		
Equipment data	Mini 30	Maxi 100
Nominal flow rate [m³/h]	0.5	2
Capacity [m³ × °dH]	30	100
Control valve type: GE LOGIX	255-760	
Operating pressure [bar]	2.5 – 8.0	
Water inlet/outlet connection	1"	



### DULCO®-SOFT DMEa MDL water softener – with FLECK control valve

Due to the FLECK control valve, the water softeners:

- Contain more safety devices
- Are more flexible, ensure wider programming opportunities

DULCO®-SOFT DMEa MDL – type				
Equipment data	00 0008	00 0030	00 0060	00 0100
Nominal flow rate [m³/h]	0.3	0.5	1	2
Capacity [m³ × °dH]	8	30	60	100
Control valve type: FLECK	5600 SE			
Operating pressure [bar]	2.5 – 8.5			
Water inlet/outlet connection	1"			

# DULCO®-SOFT industrial water softener series

Types of equipment

Equipment type	Control type		Operation type		Construction type			
	Time controlled	Volume controlled	Intermittent	Continuous	Simplex	Duplex	Triplex	Quadplex
DULCO®-SOFT DMEb RC WZE		X	X		X			
DULCO®-SOFT DMEb RC WZD		X		X		X		
DULCO®-SOFT DMEa ZGE	X		X		X			
DULCO®-SOFT DMEa WZE		X	X		X			
DULCO®-SOFT DMEa WZD		X		X		X		
DULCO®-SOFT DMEa WZT		X		X			X	
DULCO®-SOFT DMEa WZQ		X		X				X

## DULCO®-SOFT DMEb RC WZE simplex volume controlled water softener

Types of equipment



DULCO®-SOFT DMEb RC WZE – type						
Equipment data	1.5 – 72	3.5 – 260	5.0 – 440	8.0 – 760	10 – 1040	13 – 1400
Nominal flow rate [m³/h]	1.5	3.5	5	8	10	13
Capacity [m³ × °dH]	72	260	440	760	1040	1400
Control valve type: GE LOGIX	255-762	255-762	268-762	298-762	298-762	298-762
Operating pressure [bar]	2.5 – 8.5					
Water inlet/outlet connection	1"	1"	5/4"	2"	2"	2"

Due to their design, ProMinent® WZE type water softeners are suitable for intermittent, automatic work. During regeneration time, they do not provide soft water. The device starts regeneration cycle depending on water quantity having passed through: it means the system is volume controlled. (Regeneration starts automatically after the exhaustion of the resin column). No continuous supervision is required for the system; only additional supplies of salt tablets for regeneration should be added to the brine tank.



## DULCO®-SOFT DMEb RC WZD duplex volume controlled water softener

Due to their twin-column design, ProMinent® WZD type water softeners are suitable for continuous and automatic work. During regeneration time they can provide soft water. The device starts regeneration cycle depending on water quantity having passed through: it means the system is volume controlled. (Regeneration starts automatically after the exhaustion of the resin column). No continuous supervision is required for the system; only additional supplies of salt tablets for regeneration should be added to the brine tank.

Types of equipment

DULCO®-SOFT DMEb RC WZD – type						
Equipment data	1.5 – 72	3.5 – 260	5.0 – 440	8.0 – 760	10 – 1040	13 – 1400
Nominal flow rate [m³/h]	1.5	3.5	5	8	10	13
Capacity [m³ × °dH]	72	260	440	760	1040	1400
Control valve type: GE LOGIX	255A-764	255A-764	278A-764	298A-764	298A-764	298A-764
Operating pressure [bar]	2.5 – 8.5					
Water inlet/outlet connection	1"	1"	5/4"	2"	2"	2"

## DULCO®-SOFT DMEa ZGE simplex time controlled water softener

It is applicable when water withdrawal is constant in time. The device starts regeneration cycle depending on the time elapsed. (Regeneration starts at 2 a.m.) The device is for intermittent operation, so it provides hard water during regeneration.



Types of equipment

DULCO®-SOFT DMEa ZGE – type										
Equipment data	01 0060	02 0120	03 0200	04 0320	05 0400	06 0500	07 0600	08 0800	09 1000	10 1200
Nominal flow rate [m³/h]	1	2	3	4	5	6	7	8	9	10
Capacity [m³ × °dH]	60	120	200	320	400	500	600	800	1000	1200
Control valve type: FLECK CHRONO	5600 SE	5600 SE	5600 SE	5600 SE	7700 SE	7700 SE	7700 SE	2850 SE	2850 SE	2850 SE
Operating pressure [bar]	2.5 – 8.5									
Water inlet/outlet connection	1"	1"	1"	1"	5/4"	5/4"	5/4"	6/4"	6/4"	6/4"

## DULCO®-SOFT DMEa WZE simplex volume controlled water softener

Suggested in case of fluctuating water withdrawal.  
Regeneration starts depending on water consumption.  
The device starts regeneration cycle depending on water quantity having passed through: it means the system is volume controlled.  
(Regeneration starts at 2 a.m.)  
The device is for intermittent operation, so it provides hard water during regeneration.



### Types of equipment

DULCO®-SOFT DMEa WZE – type										
Equipment data	01 0060	02 0120	03 0200	04 0320	05 0400	06 0500	07 0600	08 0800	09 1000	10 1200
Nominal flow rate [m³/h]	1	2	3	4	5	6	7	8	9	10
Capacity [m³ × °dH]	60	120	200	320	400	500	600	800	1000	1200
Control valve type: FLECK	5600 SE	5600 SE	5600 SE	5600 SE	7700 SE	7700 SE	7700 SE	2850 SE	2850 SE	2850 SE
Operating pressure [bar]	2.5 – 8.5									
Water inlet/outlet connection	1"	1"	1"	1"	5/4"	5/4"	5/4"	6/4"	6/4"	6/4"

## DULCO®-SOFT DMEa WZD duplex volume controlled water softener

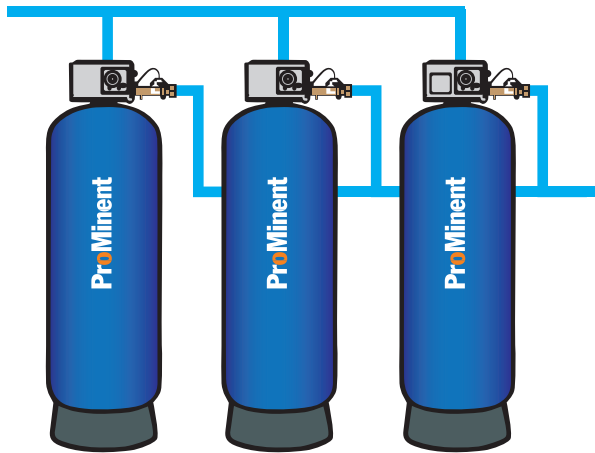
Suggested in case of fluctuating water withdrawal.  
The device is for continuous operation, so it is capable of providing soft water during regeneration, too.  
The device starts regeneration cycle depending on water quantity having passed through: it means the system is volume controlled.  
(Regeneration starts automatically after the exhaustion of the resin column).



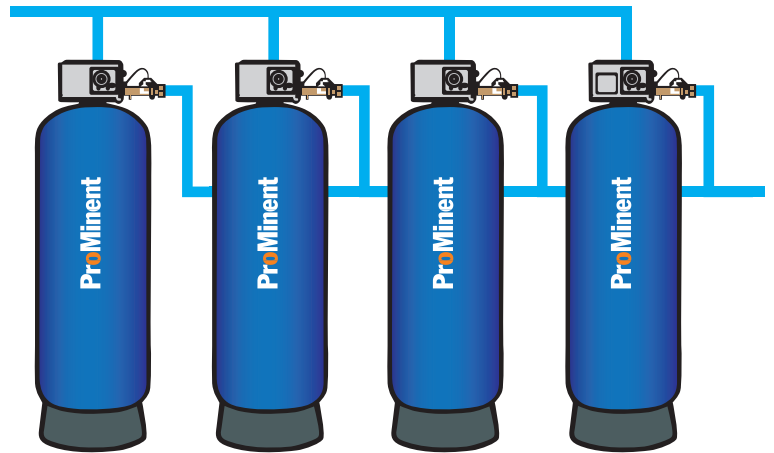
### Types of equipment

DULCO®-SOFT DMEa WZD – type													
Equipment data	01 0060	02 0120	03 0200	04 0320	05 0400	06 0500	07 0600	08 0800	09 1000	10 1200	15 1200	20 1400	25 2000
Nominal flow rate [m³/h]	1	2	3	4	5	6	7	8	9	10	15	20	25
Capacity [m³ × °dH]	60	120	200	320	400	500	600	800	1000	1200	1200	1400	2000
Control valve type: FLECK	9100 SE	9100 SE	9100 SE	9100 SE	9500 SE	9500 SE	9500 SE	9500 SE	9500 SE	9500 SE	2900 SE	2900 SE	2900 SE
Operating pressure [bar]	2.5 – 8.5												
Water inlet/outlet connection	1"	1"	1"	1"	6/4"	6/4"	6/4"	6/4"	6/4"	6/4"	2"	2"	2"

# DULCO®-SOFT DMEa WZT triplex and DMEa WZQ quadplex volume controlled water softeners



Triple-column softener: TRIPLEX



Four-column softener: QUADPLEX

## DULCO®-SOFT DMEa WZT triplex volume controlled water softeners

These units can be used at high flow rates and low hardness rate.

Flow rates of up to 113 m<sup>3</sup>/h with WZT.

ProMinent® WZT equipment is an automatic, sodium-cycle, 3 column, volume-controlled water softener with concurrent regeneration.

## DULCO®-SOFT DMEa WZQ quadplex volume controlled water softeners

These units can be used at high flow rates and low hardness rate.

Flow rates of up to 170 m<sup>3</sup>/h with WZQ.

ProMinent® WZQ equipment is an automatic, sodium-cycle, 4 column, volume-controlled water softener with concurrent regeneration.



In case of customer request the following equipment is available.

- **Gravel filters**

ProMinent® gravel filters provide solution for filtering out mechanical impurities and suspended solids present in water.

- **Activated carbon filters**

Sometimes it occurs that free chlorine is present in water, and other organic matters cause unpleasant taste and smell. ProMinent® activated carbon filter units provide solution for this problem.

- **Iron and manganese removal filters**

High iron and manganese contents cause discolouration of water. The transparent colour of clean water turns reddish, but sediments may also be formed on surfaces in contact with water. We offer our equipment to prevent these adverse effects.

# Global service locally



We already offer our service to you even if you are not yet our customer. Our pre-sales services ensure that you get the optimum solution for your individual needs:

- Advice in choosing the products
- Application and process optimisation
- Project planning

However, our commitment does not end with delivery. We offer you a comprehensive after-sales service, which lasts for the entire service life of your equipment.

That maximises your productivity and minimises your operating costs:

- Assembly/installation
- Commissioning
- Maintenance
- Spare parts service
- Repair
- Troubleshooting

Thanks to our worldwide presence in over 100 countries, our service is available wherever you need it.

# Contact



ProMinent is at home in more than 100 countries of the world. This guarantees world-wide availability of the products and short distances to the customer. We offer you the same high quality standard in products and services worldwide. For you at your location: experience and knowhow in water treatment and chemical fluid handling are available world-wide.

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Experts in Chem-Feed and Water Treatment

Technical changes reserved.



Further information:  
[www.dulcosoft.com](http://www.dulcosoft.com)