

WATEX CMS WATER SOFTENERS TECHNICAL DATA

Equipment technical parameters	Unit	Model			
		CMS 14	CMS 16	CMS 18	CMS 21
Rated flow rate* Qnom	m ³ /h	2.2	3.1	3.5	3.5
Service flow rate** Qmax	m ³ /h	3.0	4.5	4.5	4.5
Maximum flow rate	m ³ /h	3.0	4.5	4.5	4.5
Treated-water capacity between regenerations	m ³	15.1	18.9	22.7	30.3
Design raw-water quality		Iron - 0.2 mg/L (200 µg/L); hardness - 6.0 meq/L			
Water per regeneration***	L	320	410	500	670
Salt per regeneration	kg	15.0	18.8	22.5	30.0
Minimum backwash flow rate	m ³ /h	0.8	1.1	1.4	1.8
Pressure vessel diameter	in	14	16	18	21
Pressure vessel diameter	m	0.37	0.41	0.454	0.53
Pressure vessel volume	L	145	183	237	316
Filter-media volume	L	100	125	150	200
Overall dimensions					
Length (L)	m	0.88	0.92	1.26	1.36
Width (W)	m	0.37	0.41	0.454	0.53
Height (H)	m	1.87	1.87	1.89	2.02
Connections: inlet/outlet/drain	in	1"/1"/1"	1¼"/1¼"/1"	1¼"/1¼"/1"	1¼"/1¼"/1"
Clack control valve		CI 1.0"	CI 1.25"	CI 1.25"	CI 1.25"
Treatment capability		Hardness, iron, ammonium, turbidity			
Pressure-vessel material		FRP (fibreglass-reinforced plastic)			
Filter media		Ion-exchange resin Resinex KW-8; quartz sand 1–3 mm and 3–5 mm			
Operating pressure	bar	2–6			
Power supply		220 V, 50 Hz, single phase			
Power consumption	W	3 W			



* Filtration rate 25 BV/h
 ** Filtration rate 40 BV/h
 *** Quantity may double if raw-water quality changes

WATEX CMS WATER SOFTENERS DESCRIPTION

WATEX CMS series units are water softeners designed for households and small manufacturing facilities. In addition to hardness-forming salts, they reduce ammonium and iron. Sodium chloride (NaCl salt tablets) is used to regenerate the ion-exchange resin. Regeneration wastewater may be discharged to a biological wastewater treatment plant.

A WATEX CMS system comprises a pressure vessel, a control valve and a brine tank. The vessel contains cation-exchange resin that reduces hardness and ammonium and removes iron. The control valve regenerates the unit automatically. The brine tank supplies sodium chloride for resin regeneration. Treated-water capacity between regenerations depends on resin quantity and raw-water quality.

WATEX CMS units use a metered Clack WS1Cl control valve; the larger models may use a WS1.25Cl valve. Regeneration starts after the programmed volume of water has been treated, helping to reduce rinse-water and salt consumption. An optional bypass valve allows the unit to be isolated for maintenance. Programmed settings are retained during a power failure.

Regeneration time, frequency, salt dosage and other parameters can be adjusted to suit operating requirements. On compatible control valves, outlet-water hardness can also be adjusted.

The unit also removes iron, provided dissolved iron does not exceed 2.5–3.0 mg/L.

Although salt tablets are used for regeneration, treated water is suitable for drinking and other normal domestic uses.

The unit requires a 220 V electrical outlet, a drain, and inlet and outlet water connections with at least 2.5 bar supply pressure.

The unit may be installed in a suitably protected damp room or a purpose-built underground chamber that remains accessible for service.