

Data sheet WM11000E-340

11000 lpd (2906 gpd)

With energy recovery system



AUTOMATED FEATURES:

- User friendly interface with single button operation
- Automatically adjusts to changes in feed water temp. and salinity
- Output for start stop of feed pump
- Input for start-stop on tank level switch
- Automatic fresh water flush system (start/stop, 4 hours/24 hours)
- Shut down at high/low membrane pressure, low/high feed water pressure, high product water flow, high salinity product water
- Integrated timer for setting quiet intervals

METERS/MONITORS:

- Custom made controller enables close monitoring
- Coloured icons giving continuous overview
- Single button gives access to lot of data:
 - Product water TDS
 - Hour counter
 - Approx. cumulative production
 - Feed/flush water pressure
 - Membrane pressure

PARTS AND MATERIALS:

- Danfoss APPM2 with integrated energy recovery in duplex and super duplex steel
- Main saltwater wetted steel parts in duplex or super duplex steel
- Overvoltage protection
- Frame in high quality PEHD polymer

OPTIONS:

- GSM based monitoring, control and alarm messaging

Data sheet WM11000E-340

Hydraulic Data	50 Hz / 60 Hz
Nominal water production l/day (gallon/day)	11000 (2906)
Nominal membrane pressure bar (psi)	56.6 (821) / 53.9 (782)
Total dissolved solids, fresh water (TDS) mg/l	<550
Stabilized salt rejection %	99.4
Membrane pressure range bar (psi)	20-69 (290-1001)
Membrane pressure control	Automatic
Total dissolved solids range, feed water (TDS)* mg/l	1500 – 45000
Minimum inlet flow (feed & flush) m ³ /h (gallon/h)	1.2 (317) / 1.4 (374)
Minimum flush water volume (3 x flush) l (gallon)	40 (10.6) / 48 (12.7)
Minimum inlet pressure (feed & flush) bar (psi)	0.5 (7.3)
Maximum inlet pressure (feed & flush) bar (psi)	5 (73)
Maximum back pressure on fresh water bar (psi)	1.0 (14.5)

Electrical Data	50 Hz/60 Hz
Motor size kW (hp)	1.5 (2.0) / 1.8 (2.4)
Nominal power consumption kW	1.0
Maximum power consumption kW	1.3
Specific energy kWh/m ³ (kWh/1000 gallon)	2.2 (8.3)
Motor voltage V	1 ph: 230 3 ph: 230-Y or 400-Δ
Motor speed (50/60 Hz grid) rpm	1440 / 1728
Feed pump control	Relay output
Water level signal	Relay input
Electrical ingress protection	IP 54

Rated performance may vary ±15%, Nominal conditions: 25 °C seawater at 32.000 mg/l TDS

* Depending on feed water temperature/amount of feed water solids (TDS)

Dimensions	
Watermaker (LxWxH) mm (inch)	1192x504x412 (47x20x16)
Control box (LxWxH) mm (inch)	392x200x155 (12x8x6)
Water inlet/outlet (OD) mm (inch)	22 (0.9)
Weight kg (lb)	90 (198)

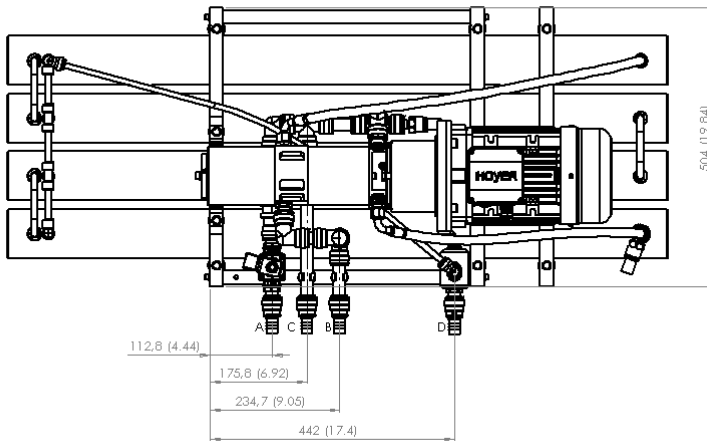
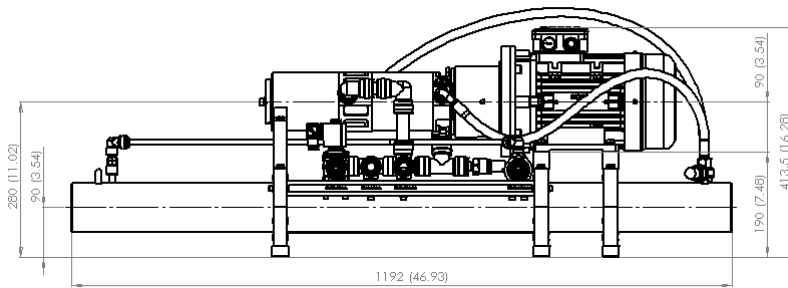
Operating limits	
Feed water temperature* °C (°F)	0.5 – 45 (32.9 – 113)
Ambient temperature °C (°F)	0.5 – 50 (32.9 – 122)

Components	
Membrane type	DOW/AqSep seawater
Membrane quantity	4
Membrane size Inches	3x40
High pressure pump & recovery unit	APPM2 - Duplex steel
Lubrication, coolants etc.	Not required
Frame	Plastic, 316 steel
Saltwater exposed parts	Duplex/316 steel, plastic
Fresh water parts	316 steel, brass, plastic
Controller	Custom made with display (GSM interface as option)

Part Number	
WM11000E-340 1x230 V, 60 Hz, 1700 rpm	182B0048
WM11000E-340 3x400 V, 60 Hz, 1700 rpm	182B0049
WM11000E-340 1x230 V, 50 Hz, 1400 rpm	182B0050
WM11000E-340 3x400 V, 50 Hz, 1400 rpm	182B0051

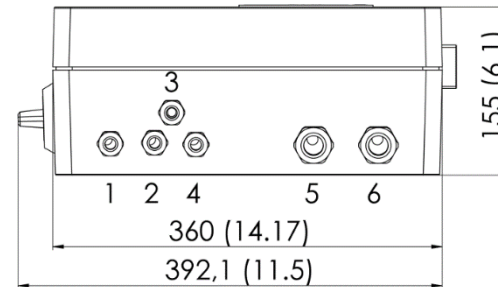
Data sheet WM11000E-340

mm (inch)

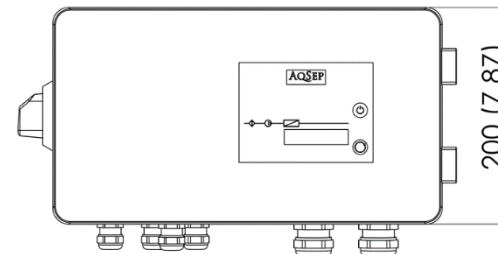


A	Flush water IN
B	Seawater OUT
C	Seawater IN
D	Fresh water OUT

Control Box



1	Power Connection
2	Electrical motor
3	Solenoid valve
4	Cable tree – sensors
5	Feed pump signal – XS1
6	Level switch signal – XS2



The control box is connected to the sensors on the hydraulic unit via a cable tree of 3 m (9.9 ft.). Separate cables connects the electrical motor and valve.

Mating electrical connectors for start & stop of well pump/isolating valve as well as level switch signal are located inside the control box.

The optional GSM modem is also fitted to the control box.

AqSep A/S

c/o Danfoss · Nordborgvej 81· 6430 Nordborg · Phone: +45 7488 4100

E-mail: anders@aqsep.com · www.aqsep.com

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