MEGOTEC MTA300

Manufactured by Hydro, Inc. Atlanta GA

Laboratory Purification Systems
Clinical Analytic Pure Water Supplier

Answering the need for a reliable lab analyzer pure water feed system, Hydro, Inc. Atlanta GA has developed the **Megotec** MTA series ultra pure water system.

Megotec will distribute Type I Laboratory grade water as specified by ASTM, CAP/NCCLS and USP to chemistry analyzers and various other points of use within your laboratory. Producing water quality with minimal (low) background noise, **Megotec** may also be used with mass spectrometer equipment.

With a production rate of 94.6 LPH, and the incorporation of our internal **semi-automatic emergency bypass** feature, **Megotec** can feed more than one (1) analyzer at any given time (depends upon certain equipment feed requirements).

If you are interested in working with a personable water company that manufactures water systems in the U.S.A. (Georgia) and is backed by a personable service department with an outstanding Preventative Maintenance Agreement (PMA), then please contact **Hydro, Inc.**

(800) 579-6869

Service Centers:
Atlanta, GA
Tampa, FL
Charlotte, NC

Coming Soon:
Nashville, TN
Mobile, AL

admin@hydroinc.net

www.hydroinc.net

HYDRO
Water Quality Specialist
Since 1984

The Southeast's Water Quality Specialist
Built to YOUR Specifications

HYDRO
Water Quality Specialist
Since 1984

Conductivity and Resistivity Chart
(NaCl and $CaCO_3$ Solutions at 25° C)

GRAINS/Gal as CaCO	PPM as CaCO	PPM NaCl	CONDUCTIVITY microhms/cm	RESISTIVITY megohms/cm
99.3	1700	2000	3860	0.00026
74.5	1275	1500	2930	0.00034
49.6	850	1000	1990	0.0005
24.8	425	500	1020	0.00099
9.93	170	200	415	0.0024
7.45	127.5	150	315	0.0032
4.96	85	100	210	0.0048
2.48	42.5	50	105	0.0095
0.992	17	20	42.7	0.023
0.742	12.7	15	32.1	0.031
0.496	8.5	10	21.4	0.047
0.248	4.25	5	10.8	0.093
0.099	1.7	2	4.35	0.023
0.074	1.27	1.5	3.28	0.3
0.048	0.85	1	2.21	0.45
0.025	0.42	0.5	1.13	0.88
0.0099	0.17	0.2	0.49	2.05
0.0076	0.13	0.15	0.38	2.65
0.005	0.085	0.1	0.27	3.7
0.0025	0.042	0.05	0.16	6.15
0.00099	0.017	0.02	0.098	10.2
0.0007	0.012	0.015	0.087	11.5
0.00047	0.008	0.01	0.076	13.1
0.00023	0.004	0.005	0.066	15.2
0.00012	0.002	0.002	0.059	16.9
0.00006	0.001	0.001	0.057	17.6
none	none	none	0.055	18.3

American Society for Testing and Materials (ASTM)
Standard Specification for Reagent Grade Water

	Type I	Type II	Type III	Type IV
Electrical Conductivity Max (pS/cm @ 25° C)	0.056	1.0	0.25	5.0
Electrical Resistivity Min. (MΩ-cm @ 25° C)	18	1.0	4.0	0.2
pH @ 25° C	-	-	-	5.0 - 8.0
TOC max. (μ g/L)	100	50	200	No limit
Sodium max. (μg/L)	1	5	10	50
Silica max. (μg/L0	3	3	500	No limit
Chloride max. (μg/L)	1	5	10	50

When bacterial levels need to be controlled, reagent grade types should be further discussed a follows:

	Type A	Type B	Type C
Total Bacterial Count Max. CFU/100ml	1	10	1000
Endotoxin max. IU.ml	0.03	0.25	-

National Committee for Clinical Laboratory Standards (NCCLS)

	Type I	Type II	Type III
Bacteria (CFU/ml)	< 10	< 1000	NA
pH	NA	NA	5.0 - 8.0
Resistivity (MΩ-cm @ 25° C)	> 10	> 1	> 0.1
$SiCO_2$ mg/L	< 0.05	< 0.1	< 1
Total Solids mg/L	0.1	1	5
Total Oxizable Organic Carbon mg/L	< 0.05	< 0.2	< 1

Type I water must be free of particulate matter larger than 0.2μm

17.1 ppm = 1 grain per gallon
1 US gallon = 3.785 Liters

$$1 - \left(\frac{\text{Product TDS}}{\text{Feed TDS}}\right) \times 100 = \%\ \text{Rejection}$$

$$\left(\frac{\text{Product GPM}}{\text{Feed GPM}}\right) \times 100 = \%\ \text{Recovery}$$

Megotec MTA300

Equipment (Standard): *Unless Noted
Controller: Micro Process Digital Display
RO System: 2,271 liters per day production (24 hrs)
RO Concentrate: Recycle valve for water conservation
Membrane: TFC/Cold water/Low energy (2) 2521
Ultra-Filtration Syste,: Optional UF* - Standard .22
Low Pressure Protection: RO/Recirc systems
High tank level auto shut-off RO
Flow Meters (4) product/concentrate/recycle/circulation
Semi-Automatic mechanical by-pass
Ultraviolet system (1) 254 nm (1) 185 nm
Stainless steel membrane housing (2) 2521
Stainless pumps (2) One RO/One Recirc
Pre-filtration 20" depth 20" GAC carbon
Water softener *(optional adder-not included) needed only in certain parts of US
Re-circulating point-of-use dispensing gun/faucet *(optional adder)
POU carboy fill station *(optional added)
Auto flush system
Pressure reduction valve
24 hour continuous recirculation

Specifications:
Net weight: 79 lb wet
Enclosure: Stainless ribbed, acrylic/ABS skin
Dimensions: L31" X W14" X H34"
Shelf Dimensions: L24" X W12"
Duty Cycles: Continuous with programmable options
Voltage: 110V/60Hz/10 Amp
Feed Water Flow: 3 gpm minimum
Feed Water Pressure: 20 psi minimum, 60 psi maximum
Drain: 3 gpm
Product Flow Rate: 1.6 liters per minute
Quality: Resistivity 17.5 - 18.2 megohm
Distribution: 1.5 gpm maximum (loop)
RO make-up: 94.6 liters per hour
Bacteria: < 1 cfu/ml with monthly sanitization
TOC: < 500 ppb
Ultra-Filter: 10,000 mwc. Optional* .22 Standard
UV Dual Wave Length: 254 nm and 185 nm
RO Storage: PE/Conical/40Liter Capacity, 13"x13"x21"H
Deionization Cartridge/Tank: SDI 635-844

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