Overview

The Marlo 'MDAS' Series dealkalizer system offers an efficient alkalinity reduction solution for larger commercial & industrial applications. Dealkalization of boiler feed water reduces system blowdown and helps lower energy and water costs. It also promotes a more effective boiler chemical program and reduces condensate return line corrosion. Pre-engineered designs are available for single and twin tank configurations with numerous custom options available. MDAS systems can also be specially designed for high silica, nitrate, and sulfate removal applications.

Standard Features

- Carbon steel resin tanks with epoxy-lined interior
- Water activated diaphragm style control valves
- Volume and/or time initiated regeneration cycle
- Polyethylene brine tank assembly with injector
- Caustic injection pump with mounting stand
- Chloride form anion exchange resin
- Inlet/Outlet tank sampling valves
- Alkalinity testing kit
- Factory Hydro-tested at 100 psig

Materials of Construction

- Resin Tanks: Carbon steel with Safety Blue exterior paint
- Tank Lining: NSF 61 rated epoxy coating
- Exterior Piping: Galvanized steel pipe & cast iron fittings
- Internal Distributors: Sch 80 PVC/ABS
- Control Valves: Painted cast iron body
- Caustic Pump Wetted End: PVC
- Caustic Pump Stand: Painted carbon steel

Instrumentation / Controls

- Marlo MX-II electronic system controller
- Metered control with bypass for single units
- Alternating metered control for twin units
- NEMA-4X electrical enclosures
- Signet paddle-type flow sensors
- Inlet/Outlet pressure gauges
- Pre wired caustic pump panel with adjustable relay timer

Operating Parameters

- Inlet Feedwater: Pre-softened (<1 gpg)
- Inlet Pressure: 30-100 psig
- Electrical: 120 VAC, 1-Ph, 60Hz
- Temperature: 35-110 °F

Options Available

- Skid mounted, pre-piped, pre-wired systems
- ASME code stamped resin tanks
- Allen-Bradley PLC systems
- Brine pump systems
- PVC or CPVC exterior piping
- Copper or Stainless steel exterior piping
- Stainless steel internal distributor piping
- Butterfly control valves (air operated)
## 'MDAS' Series Specifications

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>GRAIN CAPACITY</th>
<th>SALT DOSAGE PER REGENERATION</th>
<th>CAUSTIC DOSAGE PER REGENERATION</th>
<th>PIPE SIZE INCHES</th>
<th>SERVICE FLOW RATE GPM</th>
<th>BACKWASH FLOW RATE</th>
<th>ANION RESIN PER TANK</th>
<th>TANK SIZES</th>
<th>SALT STORAGE OVERALL DIMENSIONS</th>
<th>SHIPPING WEIGHT LBS</th>
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**Notes**

1. Capacity based on 10,000 grains per cubic foot of resin when regenerated with 5 lbs. salt and 0.33 lbs. caustic. Capacity decreases as chloride levels exceed 10% of the total anions.
2. At pressure loss not exceeding 10 psi.
3. At pressure loss not exceeding 20 psi.
4. Dimensions are estimate only. Actual dimensions may vary based on job-site space limits and piping layout. Allow a minimum of 24” above height dimension for resin loading. Use of ASME rated tanks may add up to 12” of tank height.
5. Shipping weights are estimate only. Weights include resin and support gravel, which are added to the tanks after installation.

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**'MDAS' Series - Top View**

**'MDAS' Series - Front View**

**Note:**
Installation piping and caustic drum (shown in broken lines) are provided by others.