

'MDAS' Series Dealkalizer Systems



System shown with skid mount and copper piping options.

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-III 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
- Prewired 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

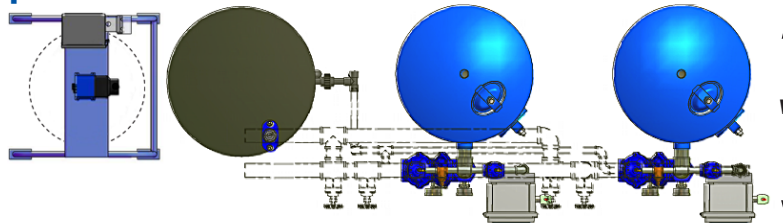
Options Available

- 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)

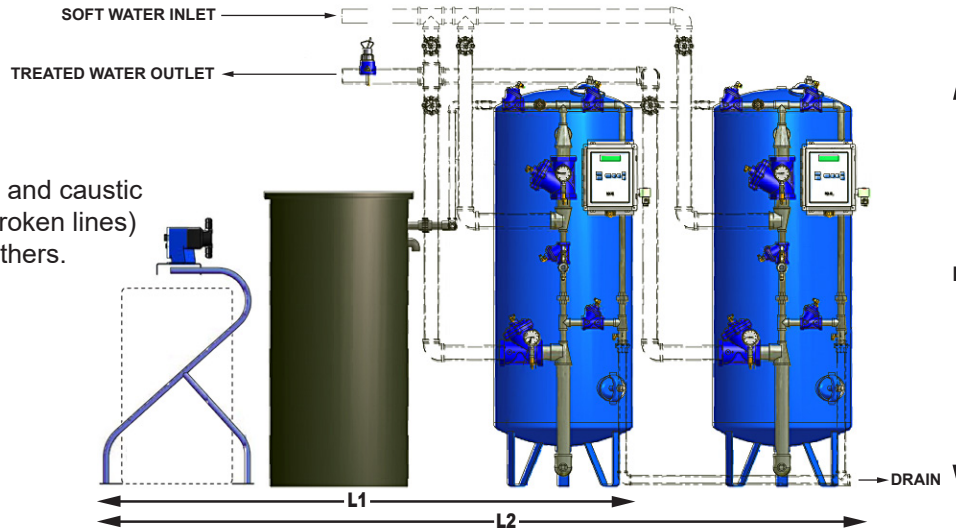
'MDAS' Series Specifications

MODEL NUMBER	GRAIN CAPACITY ①	SALT DOSAGE PER REGENERATION	CAUSTIC DOSAGE PER REGENERATION	PIPE SIZE (INCHES)		SERVICE FLOW RATE		BACKWASH FLOW RATE	ANION RESIN PER TANK	TANK SIZES		SALT STORAGE	OVERALL DIMENSIONS (LxWxH, INCHES) ④		SHIPPING WEIGHT (LBS) ⑤	
	GRAINS PER TANK	LBS.	LBS.	SERVICE	DRAIN	CONT.	PEAK			GPM	CU. FT.		SOFTENER	BRINE	LBS.	SINGLE L1
								INCHES	INCHES							
MDAS-50-1-1/2	50,000	25	1.65	1-1/2	1	12.5	25	5.5	5	20x54	18x40	325	74x29x68	112x29x68	715	1,325
MDAS-80-1-1/2	80,000	40	2.65	1-1/2	1	20	40	8	8	24x54	24x40	550	84x32x69	126x32x69	970	1,775
MDAS-140-1-1/2	140,000	70	4.60	1-1/2	1	35	70	12	14	30x60	24x50	700	90x38x79	138x38x79	1,625	3,045
MDAS-200-2	200,000	100	6.60	2	1	50	100	18	20	36x60	24x50	700	96x48x84	150x48x84	2,335	4,440
MDAS-250-2	250,000	125	8.25	2	1	65	125	18	25	36x72	24x60	850	96x48x96	150x48x96	2,690	5,075
MDAS-330-2-1/2	330,000	165	10.9	2-1/2	1-1/2	85	165	25	33	42x72	24x60	850	102x55x100	162x55x100	3,360	6,415
MDAS-440-2-1/2	440,000	210	13.85	2-1/2	1-1/2	105	210	30	44	48x72	30x60	1100	114x62x107	182x62x107	5,570	10,470
MDAS-550-3	550,000	275	18.15	3	1-1/2	140	275	40	55	54x72	39x60	1900	129x70x112	203x70x112	6,715	12,560
MDAS-680-3	680,000	340	22.45	3	2	170	340	50	68	60x72	39x60	1900	105x76x118	215x76x118	8,160	15,450
MDAS-830-4	830,000	415	27.40	4	2	210	420	60	83	66x72	50x60	2300	152x86x120	238x86x120	10,230	19,510
MDAS-980-4	980,000	490	32.35	4	2	245	490	70	98	72x72	50x60	2300	158x92x122	250x92x122	11,480	21,870

'MDAS' Series - Top View



'MDAS' Series - Front View



NOTE:

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

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.