

SERVICE AND PARTS MANUAL FOR MOISTURE SEPARATORS



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Your Choice. Our Commitment.™

OPERATION & MAINTENANCE MANUAL



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Rotron Moisture Separator

Thank you for purchasing an AMETEK Rotron MS series moisture separator. When matched with the correct Rotron blower, and properly installed and maintained, this separator will effectively and efficiently remove moisture from the air stream. To ensure good results, please take the time to read these instructions before starting the installation of your moisture separator.

Sizing for Optimal Efficiency

Separator	Max. CFM	Max. Vac	Capacity	Blowers – DR, EN & CP
MS200P(S)	200	12* IHg	7 gal.	101-555, 513, 523, 623, 633
MS200D(S)	200	22 IHg	10 gal.	101-555, 513, 523, 623, 633
MS300P(S)	300	12* IHg	7 gal.	606, 6, 707, 757, 823, 833
MS300D(S)	300	22 IHg	10 gal.	606, 6, 707, 757, 823, 833
MS350B(S)	350	22 IHg	40 gal.	808, 1223, 1233
MS500B(S)	500	22 IHg	40 gal.	858
MS600B(S)	600	22 IHg	40 gal.	909
MS1000B(S)	1000	22 IHg	65 gal.	14

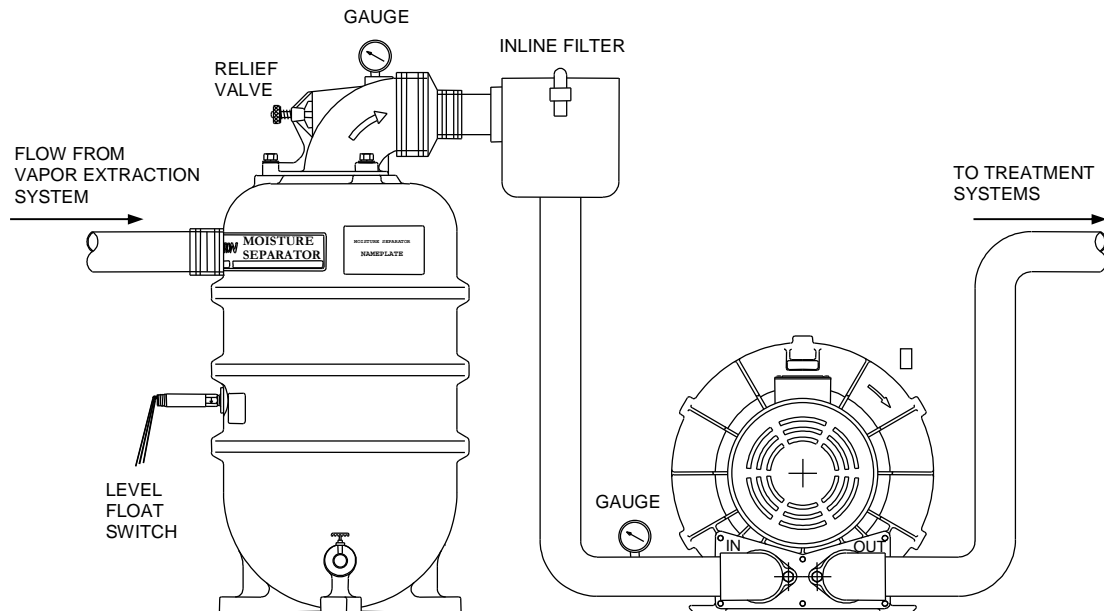
Note: "S" suffix denotes presence of XP high level switch.
* Special Construction with 20 IHg capability available.

Installation

- Unpacking** - For MS200/300, remove drain valve taped to packing material and box containing liquid level switch, if so equipped. For MS350/500/600, remove box containing valve hardware as well as box containing liquid level switch (if so equipped) and remove internal cardboard packaging and cable ties from screen assembly.
- Bolt Down** (w/ feet included) - For MS200/300 models, built-in feet or a mounting ring is included. It is recommended that these units be bolted in place. All models will only work in an upright position.
- Piping** - Attach to system piping with flexible couplings to minimize stress incurred by rigid system piping. The connections should be airtight but not sealed with an adhesive for ease of disassembly during routine maintenance. Install drain valve, using teflon tape on threads.
- Installation and Wiring of Liquid Level Switch** - Remove plug from the bulkhead fitting. Thread the switch by hand until snug with index arrow pointing down. Wire in accordance with the nameplate wiring schematic. Typically, the wiring is connected back to the starter to shut down the system but can be used for other purposes.
- Install/Adjust Relief Valve** - For MS500/600, first install the relief valve with teflon tape on threads. Use a wrench, but tighten only enough to prevent leakage. Next step for all MS units, back off the relief valve adjuster relaxing spring pressure. Then block the moisture separator inlet while measuring the motor current. Adjust the valve until the motor current is 90% of the max. nameplate blower amps.
- Continuous Service** - For cold weather service, appropriate steps should be taken to prevent freezing. Also, the maximum vacuum ratings are based on 115°F maximum. Consult factory for higher potential ambients.

Note: A moisture separator is not a substitute for an inline air filter. A Rotron inline filter should be used to remove particles that pass through the separator.

Typical Vapor Extraction System



Operation

Moisture-laden air enters the separator through the tangential inlet. Cyclonic action removes free moisture from the air stream and allows the air to discharge through the top of the separator. When the separator is full, the float valve shuts off the air flow through the separator, and the relief valve opens to limit the vacuum of the blower.

To drain the separator, turn off the blower and open the drain valve at the bottom of the separator. Caution: The liquid contained in the separator should be analyzed before it is released back into the environment. It may be considered hazardous waste in certain geographical areas and require special treatment/disposal. Once the liquid is drained, the unit can be reset by turning the blower back on.

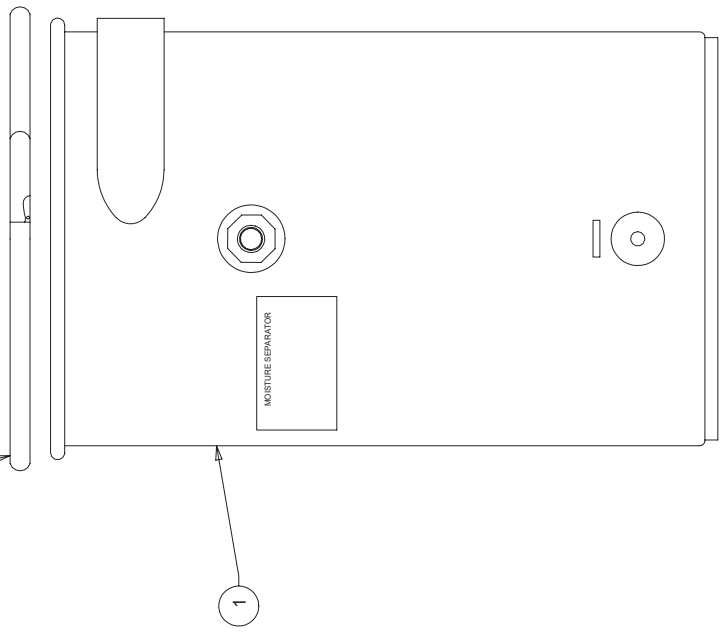
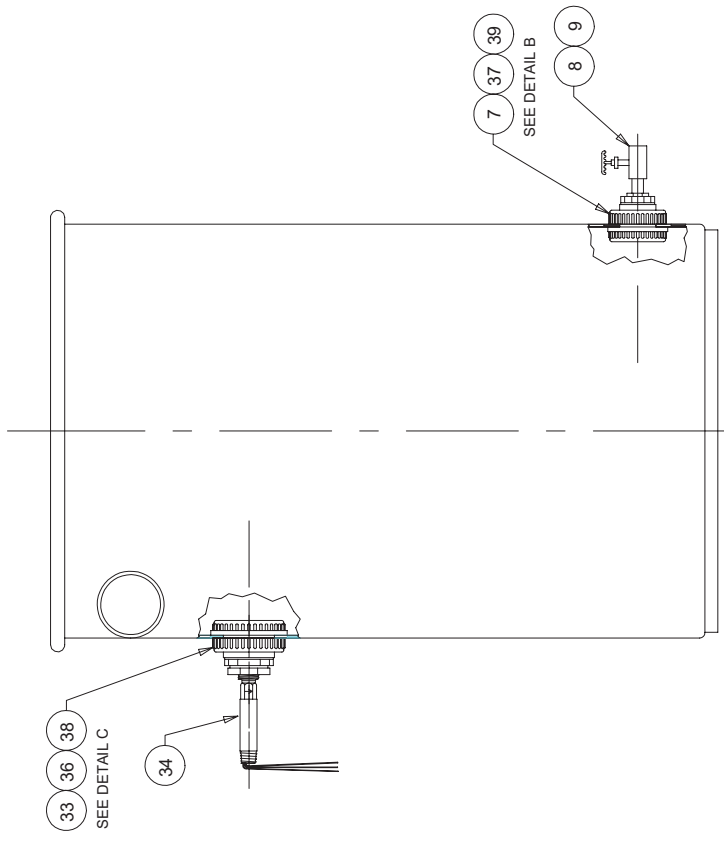
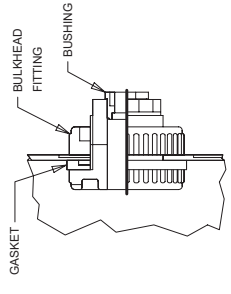
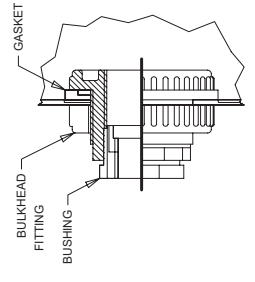
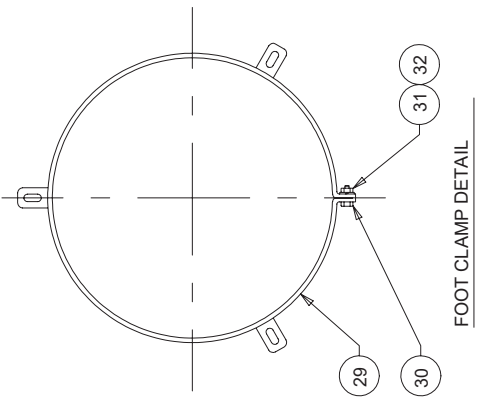
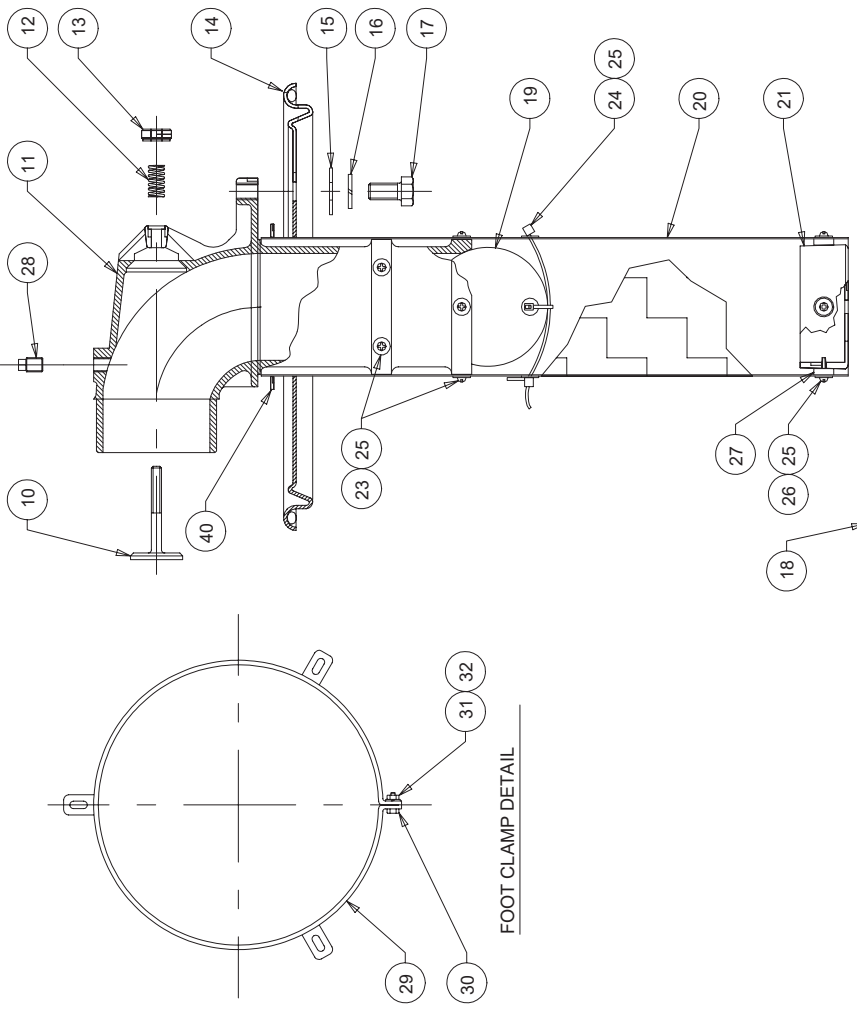
Automatic draining options are at the discretion of the customer.

Maintenance

This MS series moisture separator has been designed to require minimal maintenance. During normal operation a layer of sludge may build up on the bottom of the separator. As necessary, the top assembly of the moisture separator should be removed and the inside cleaned out with water. Keeping the inside clean will prevent the valve from becoming clogged with sediment. The relief valve should be inspected upon emptying the separator and readjusted (per installation instruction 5) upon restart.

If you have any questions regarding this product, contact your local sales representative or our Application Engineering Department at the factory.

AMETEK ROTRON MOISTURE SEPERATOR



**Moisture Separator
Service and Parts Manual**

Model:
Part No.:

MS200/300D_ 038355
038356
038275
038276
080086
080087
ALL OBSOLETE

Parts Breakdown
MS350B_ 038277
038357

MS200/300P_ 038517
038518
038519
038520
MS500/600B_ 038353
038354
038003
038075
080657
080658
080659
080660
080661
080662
OBSOLETE

MS1000
038914
038916
080019

Item No.	Qty. Req'd	Description	See Next Page	See Next Page	See Next Page	See Next Page
1	1	Drum Assembly	See Next Page	See Next Page	See Next Page	See Next Page
7	1	Bulkhead Fitting Drain	529830	529830	529830	529830
8	1	Drain Valve	523374	523374	5-4398	5-4398
9	1	Pipe Nipple Drain	551140	5-4397	5-4397	5-4397
10	1	Relief Valve Stern	529318	529318	Not Used	550621
11	1	Outlet	529323	529323	See Outlet Assy #42 Below	550646
12	1	Spring - Relief Valve	155339	155339	Not Used	155476
13	1	Nut-Knurled Relief Valve	155342	155342	Not Used	155471
14	1	Lid	550674	523403	523404	550566
15	3	Gasket for lid	Not Used	551102	551102	551640
16	3	Washer, Flat, Lid/Outlet	155159	155159	Not Used	155159
17	3	Washer, Lock, Lid/Outlet	120338	120338	Not Used	120338
18	1	Lock Ring - Lid	155343	120255	Not Used	155343
19	1	Float Ball	See Next Page	528926	528926	550652
20	1	Cage, Float	528803	528803	528956	550569
21	1	Endcap	529884	529887	529888	550568
23	6	Screws Cage	251645	251645	529954	550678
24	4	Tie Cable *	155276	251645	(9 pcs) 251645	(11 pcs) 251645
25	13	Washer Cage - Various Places	155115	155115	155276	155276
26	3	Screws Endcap	155415	(9 pcs) 155115	(16 pcs) 155115	(18 pcs) 155115
27	3	Spacer Endcap	155417	155415	(3 pcs) 251645	(3 pcs) 251645
28	1	Pipe Plug - Outlet	155344	155417	Not Used	Not Used
29	1	Foot Clamp	See Next Page	155344	Not Used	155344
30	1	Bolt, Foot Clamp	Not Used	Not Used	Not Used	Not Used
31	1	Nut, Foot Clamp	120325	Not Used	Not Used	Not Used
32	1	Lockwasher, Foot Clamp	15049	Not Used	Not Used	Not Used
33	1	Bulkhead Fitting Float Switch	120203	Not Used	Not Used	Not Used
34	1	Float Switch	See Next Page	See Next Page	See Next Page	See Next Page
36	1	Bushing, Float Switch	See Next Page	See Next Page	See Next Page	See Next Page
37	1	Gasket, Bulkhead Fitting - Drain Spigot	See Next Page	Not Used	529831	529831
38	1	Bushing, Bulkhead Fitting	529831	Not Used	529831	529831
39	1	Bushing, Drain Valve	See Next Page	See Next Page	See Next Page	See Next Page
40	1	Gasket, Outlet	529849	Not Used	Not Used	Not Used
41	1	Pipe Plug, Float Switch	529514	529514	Not Used	550653
42	1	Outlet Assembly (consists of one each of the following)	Not Used	See Next Page	Not Used	Not Used
			Not Used	Not Used	Tee - 523402	Not Used
					Pipe - 116135	
					Seat Float - 528955	
					Reducer, Relief Valve - 528959	
					Bushing, Relief Valve - 551639	
43	1	Relief Valve Complete	Not Used	Not Used	523230	Not Used

**Viewed looking at inlet/outlet ports

Model	Model Part No.	Item No.	Item Part #	Model	Model Part No.	Item No.	Item Part #
MS200DS	038355 OBSOLETE	1	529463	MS200PS	038519	1	529435
		14	529006			34	529461
		18	529004			41	Not Used
		29*	529367				529668
MS300DS	038356 OBSOLETE	29*	529841	MS300P	038518	1	Not Used
		33	529461			34	155405
		34	529461			41	529435
		36	552634			34	Not Used
		38	529842			41	155405
			529842			1	529465
MS200D	038275 OBSOLETE	1	523362	MS500B	038354 (Obsolete)	1	529841
		14	529006			33	529841
		18	529004			34	529461
		29*	529367			36	552634
		33	529841			38	529842
		34	529461			1	529466
		36	552634			33	529841
		38	529842			34	529461
			529842			36	552634
			529842			38	529842
MS300D	038276 OBSOLETE	1	551141	MS500B	038075(Obsolete)	1	523399
		14	529006			33	Not Used
		18	529004			34	Not Used
		29*	529367			36	Not Used
		33	Not Used			38	Not Used
		34	Not Used				551143
		36	Not Used				Not Used
		38	Not Used				Not Used
			529465			1	550561
			529841			33	529841
MS350BS	038357	34	529461	MS600B	038003 (Obsolete)	33	Not Used
		36	552634			34	Not Used
		38	529842			36	Not Used
			529842			38	Not Used
MS350B	038277	1	523399	MS1000BS	038914	1	550561
		33	Not Used			33	529841
		34	Not Used			34	529461
		36	Not Used			36	552634
		38	Not Used			38	529842
			529842				550672
MS300PS	038520	1	529668	MS300DS	080087 OBSOLETE	1	550672
		34	529461			18	523296
		41	Not Used			29	550688
			550560			33	529841
MS1000B	038916	1	550560	MS200DS	080086 OBSOLETE	1	550669
			Not Used			18	523296
MS1000B2S	080019	1	550566	MS500B2S	080662	1	550650
		18	Not Used			33	529841
		33	(2 pcs)			34	529461
		34	(2 pcs)			36	552634
		36	(2 pcs)			38	529842
		38	(2 pcs)				550650

**Viewed looking at inlet/outlet ports