

STS® humidifier dimensions

Figure 1-1:
Dimensions, STS models 25, 50, 100, 200, and 400 (with copper or stainless steel heat exchangers)

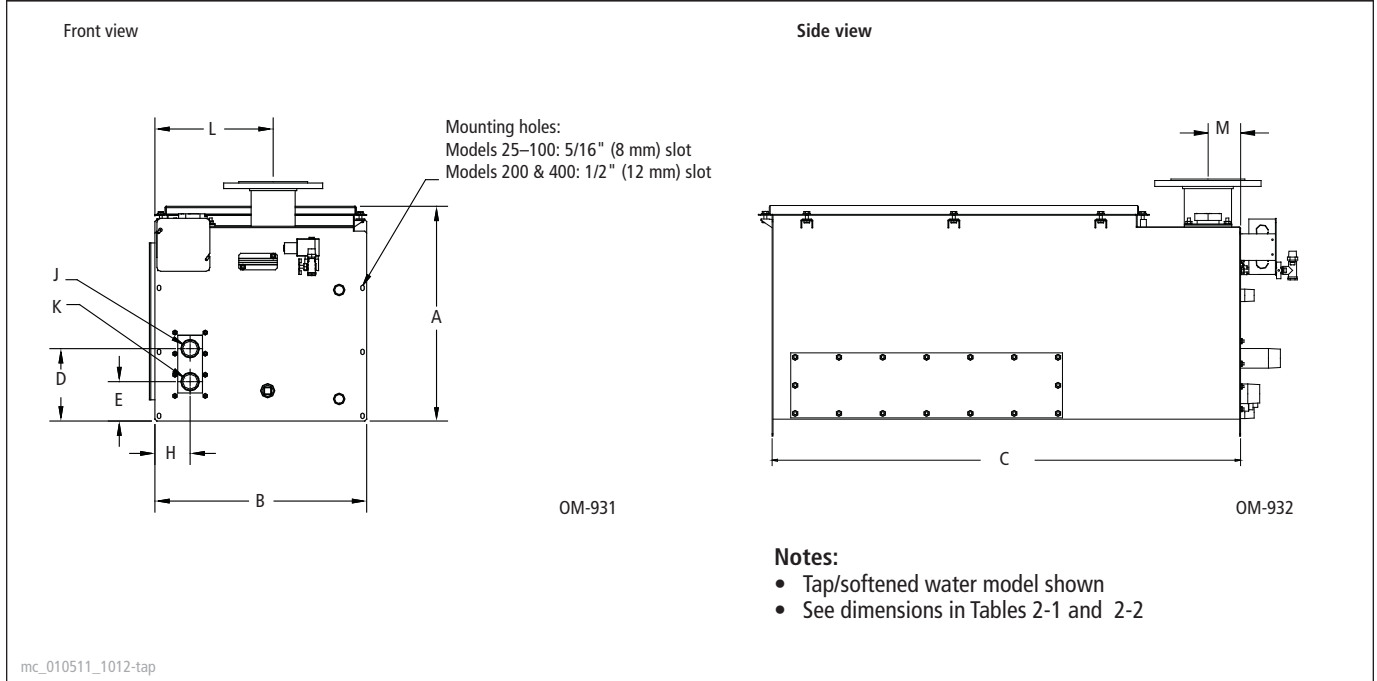
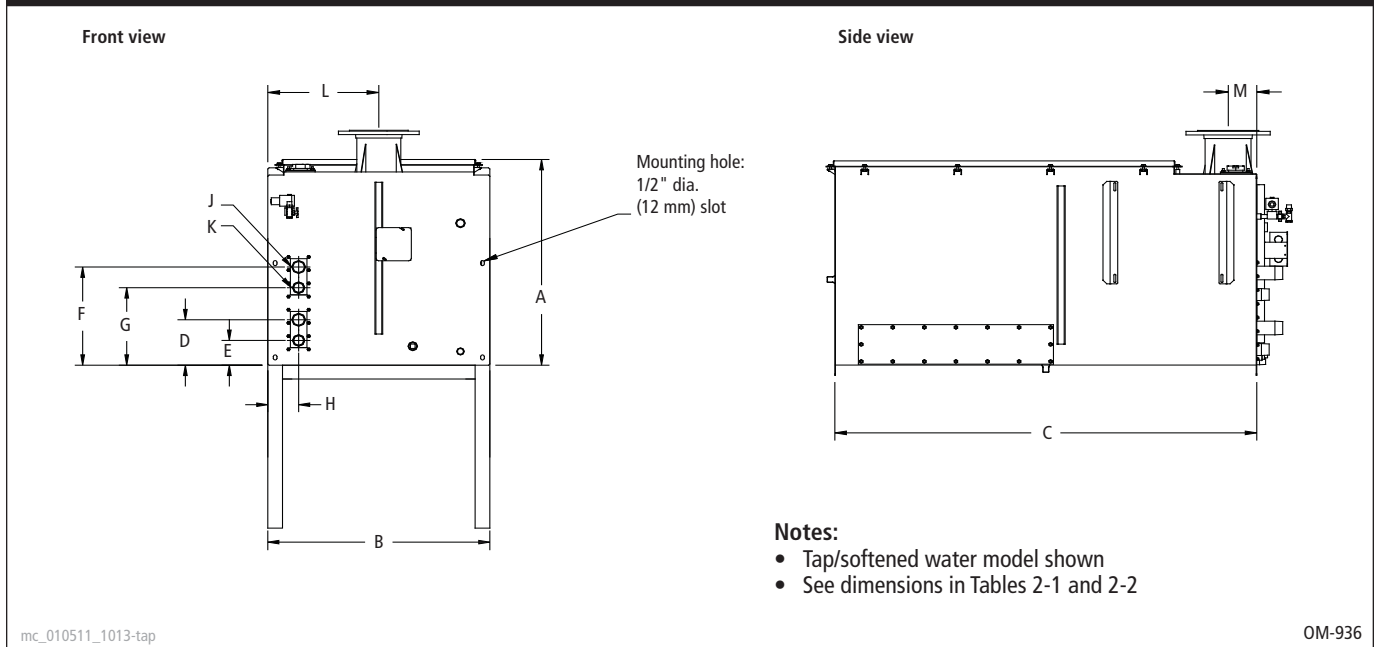


Figure 1-2:
Dimensions, STS model 800 (with copper or stainless steel heat exchangers)



STS humidifier dimensions

**Table 2-1:
Dimensions, STS with copper heat exchangers**

	Description See drawings in Figures 1-1 and 1-2	STS model*									
		25C		50C		100C		400C		800C	
		inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
A	Height**	19.50	495	19.50	495	19.50	495	19.50	495	29.75	756
B	Width	14.75	375	14.75	375	19.25	489	30.25	768	30.25	768
C	Length	23.65	600	39.65	1007	39.65	1007	55.15	1401	55.15	1401
D	Bottom to supply inlet of first heat exchanger	6.63	168	6.63	168	6.63	168	6.63	168	6.63	168
E	Bottom to return outlet of first heat exchanger	3.63	92	3.63	92	3.63	92	3.63	92	3.63	92
F	Bottom to supply inlet of second heat exchanger	—	—	—	—	—	—	—	—	14.28	363
G	Bottom to return outlet of second heat exchanger	—	—	—	—	—	—	—	—	11.24	285
H	Side to heat exchanger	3.25	83	3.25	83	3.25	83	3.25	83	3.25	83
J	Pressurized steam supply inlet	3/4" pipe thread	DN20	1 1/4" pipe thread	DN32	1 1/4" pipe thread	DN32	1 1/2" pipe thread	DN40	1 1/2" pipe thread	DN40
K	Pressurized steam return outlet	3/4" pipe thread	DN20	3/4" pipe thread	DN20	1 1/4" pipe thread	DN32	1 1/4" pipe thread	DN32	1 1/4" pipe thread	DN32
L	Side to steam outlet	6.25	159	8.63	219	9.63	245	13.00	330	13.00	330
M	Front to steam outlet	2.50	64	2.25	57	2.75	70	3.75	95	3.75	95

* C, S, and SNC in model numbers are explained in "Heat exchangers and water types" Page 3.
 **Add 23.5" (597 mm) to overall height when STS is mounted on four support legs. Add 22.5" (572 mm) to overall height when STS is mounted on two H-legs.

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**Table 2-2:
Dimensions, STS with stainless steel heat exchangers**

	Description See drawings in Figures 1-1 and 1-2	STS model*											
		25S		50S		100S		200S		400SNC		800SNC	
		inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
A	Height**	19.50	495	19.50	495	19.50	495	19.50	495	19.50	495	29.75	756
B	Width	14.75	375	14.75	375	19.25	489	30.25	768	30.25	768	30.25	768
C	Length	23.65	600	39.65	1007	39.65	1007	55.15	1401	55.15	1401	55.15	1401
D	Bottom to supply inlet of first heat exchanger	6.85	174	6.85	174	6.85	174	6.85	174	6.85	174	6.85	174
E	Bottom to return outlet of first heat exchanger	3.35	85	3.35	85	3.35	85	3.35	85	3.35	85	3.35	85
F	Bottom to supply inlet of second heat exchanger	—	—	—	—	—	—	—	—	—	—	14.5	368
G	Bottom to return outlet of second heat exchanger	—	—	—	—	—	—	—	—	—	—	11.0	279
H	Side to heat exchanger	3.25	83	3.25	83	3.25	83	3.25	83	3.25	83	3.25	83
J	Pressurized steam supply inlet	3/4" pipe thread	DN20	1" pipe thread	DN25	1" pipe thread	DN25	1 1/2" pipe thread	DN40	1 1/2" pipe thread	DN40	1 1/2" pipe thread	DN40
K	Pressurized steam return outlet	3/4" pipe thread	DN20	3/4" pipe thread	DN20	3/4" pipe thread	DN20	3/4" pipe thread	DN20	3/4" pipe thread	DN20	3/4" pipe thread	DN20
L	Side to steam outlet	6.25	159	8.63	219	9.63	245	13.00	330	13.00	330	13.00	330
M	Front to steam outlet	2.50	64	2.25	57	2.75	70	3.75	95	3.75	95	3.75	95

* C, S, and SNC in model numbers are explained in "Heat exchangers and water types" on Page 3.
 **Add 23.5" (597 mm) to overall height when STS is mounted on four support legs. Add 22.5" (572 mm) to overall height when STS is mounted on two H-legs.

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STS humidifier capacities

**Table 3-1:
Output capacities for STS models with copper heat exchangers**

STS model	Steam pressure*							
	5 psi	34 kPa	10 psi	69 kPa	13 psi	90 kPa	15 psi	103 kPa
	lbs/hr	kg/h	lbs/hr	kg/h	lbs/hr	kg/h	lbs/hr	kg/h
25C	20	9	70	32	100	45	120	54
50C	50	23	150	68	200	91	240	109
100C	100	45	300	136	400	181	480	218
400C	300	136	580	263	720	327	790	358
800C	650	295	1275	578	1500	680	1600	726

* Steam pressure at connection to STS steam valve (valve provided by DriSteem)

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**Table 3-2:
Output capacities for STS models with stainless steel heat exchangers**

STS model	Steam pressure*							
	5 psi	34 kPa	10 psi	69 kPa	13 psi	90 kPa	15 psi	103 kPa
	lbs/hr	kg/h	lbs/hr	kg/h	lbs/hr	kg/h	lbs/hr	kg/h
25S	10	5	25	11	30	14	35	16
50S	30	14	55	25	75	34	80	36
100S	60	27	110	50	140	64	150	68
200S	150	68	290	132	360	163	390	177
400SNC	170	77	392	178	552	250	637	289
800SNC	212	96	825	374	1095	497	1223	555

* Steam pressure at connection to STS steam valve (valve provided by DriSteem)

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**Table 3-3:
STS weights**

STS model	Shipping weight		Operating weight*	
	lbs	kg	lbs	kg
25	95	43	175	79
50	125	57	336	152
100	139	63	350	159
200	245	111	850	386
400	320	145	950	431
800	410	186	1450	658

* Operating weight does not include weight of interconnecting piping provided by installer.

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Heat exchangers and water types

For use with tap/softened or DI/RO water:

- STS models ending in C (copper heat exchangers with a nickel coating)
- STS models ending in S (stainless steel heat exchangers with a Teflon coating)

For use with DI/RO water option only:

- STS models ending in SNC (stainless steel heat exchangers with no coating)

Piping

**Table 4-1:
Steam loss of interconnecting steam hose, tubing, and pipe**

Description	Nominal hose, tubing or pipe size		Steam loss				Insulation thickness	
			Noninsulated		Insulated			
	inches	DN	lbs/hr/ft	kg/h/m	lbs/hr/ft	kg/h/m	inches	mm
Hose	1½	40	0.15	0.22	N/A	N/A	N/A	N/A
	2	50	0.20	0.30	N/A	N/A	N/A	N/A
Tubing	1½	40	0.11	0.16	0.020	0.030	2.0	50
	2	50	0.14	0.21	0.025	0.037	2.0	50
	3	80	0.20	0.30	0.030	0.045	2.5	64
	4	100	0.26	0.39	0.030	0.045	3.0	76
	5	125	0.31	0.46	0.035	0.052	3.0	76
	6	150	0.36	0.54	0.039	0.058	3.0	76
Pipe	1½	40	0.22	0.33	0.020	0.030	2.0	50
	2	50	0.25	0.38	0.025	0.037	2.0	50
	3	80	0.39	0.58	0.030	0.045	2.5	64
	4	100	0.49	0.73	0.030	0.045	3.0	76
	5	125	0.59	0.88	0.035	0.052	3.0	76
	6	150	0.70	1.04	0.039	0.058	3.0	76

Note: Data based on an ambient air temperature of 80 °F (27 °C), fiberglass insulation, copper tubing, and Schedule 40 pipe.

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**Table 4-2:
Maximum steam carrying capacity and length of interconnecting steam hose, tubing, and pipe***

DriSteem steam hose ^{†††}						Copper or stainless steel tubing and Schedule 40 steel pipe					
Hose I.D.		Maximum capacity		Maximum length ^{**}		Tube or pipe size ^{***}		Maximum capacity		Maximum developed length [†]	
inches	DN	lbs/hr	kg/h	ft	m	inches	DN	lbs/hr	kg/h	ft	m
2	50	250	113	10	3	2	50	220	100	30	9
						3 ^{††}	80 ^{††}	450	204	80	24
						4 ^{††}	100 ^{††}	750	340	100	30
						5 ^{††}	125 ^{††}	1400	635	100	30
						6 ^{††}	150 ^{††}	2300	1043	100	30

* Based on total maximum pressure drop in hose, tubing, or pipe of 5" wc (1244 Pa)

** Maximum recommended length for steam hose is 10' (3 m). Longer distances can cause kinking or low spots.

*** To minimize loss of capacity and efficiency, insulate tubing and pipe.

† Developed length equals measured length plus 50% of measured length to account for pipe fittings.

†† Requires flange connection.

††† When using steam hose, use DriSteem steam hose for best results. Field-supplied hose may have shorter life and may cause foaming in the evaporating chamber resulting in condensate discharge at the dispersion assembly. Do not use steam hose for outdoor applications.

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