Detail Report

Report Information	
Report generated date	11-12-25
Systems/tags included in this report	HUM-01-02

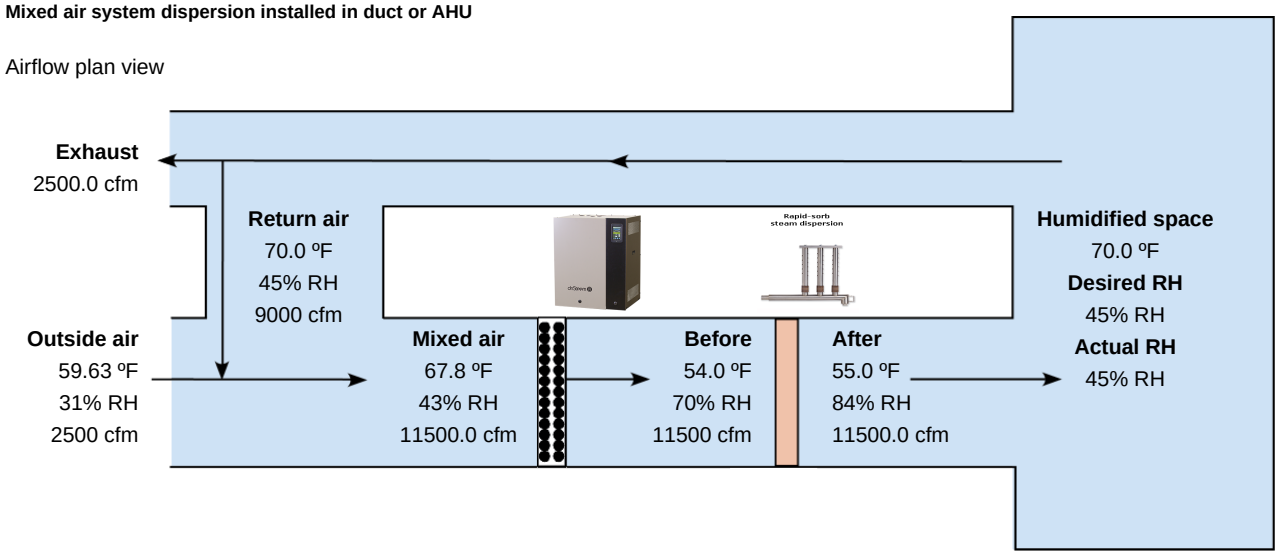
Project Information	
Project name	Humidificateur Beth Esther
Project description	10911
Project ID	276381
System Location	Canada

System/tag : HUM-01-02

System View

Mixed air system dispersion installed in duct or AHU

Airflow plan view



Detail Report

Load, Mechanical	
System Quantity	2
System Location	Canada
Elevation at project site (ft)	0.0
Outside air dry bulb temperature (°F)	59.63
Outside air moisture content (%RH)	30.06
Ventilation system type	Mixed Air System, Dispersion Installed In Duct Or AHU
Total air volume (cfm)	11500.0
Outside air intake rate	Constant
Outside air intake (cfm)	2500.0
Desired air dry bulb temperature (°F) in humidified space	70.0
Desired air moisture content (% RH) in humidified space	45.0
Actual moisture content (% RH) in humidified space	45.0
Calculated load (lbs/hr)	41.72
Final load(lbs/hr)	41.72

Application: Dispersion	
Dispersion installation location	Duct
Available inside duct/AHU width (inches)	40.0
Available inside duct/AHU height (inches)	26.0
Header location	Inside duct
Trap location	Outside duct
Air movement	Through and around dispersion assembly perimeter not blanked off
Airflow direction	Horizontal
Interconnecting piping type	Insulated Piping
Interconnecting piping distance(ft)	0.0

Steam dispersion, Rapidsorb	
Unit quantity	1
Face width (inches)	40.0
Face height (inches)	14.0
Duct/AHU wall thickness (inches)	0.0
Header diameter (inches)	2.0
Tube diameter (inches)	1.5
Tube drain	No
Tube spacing on-center (inches)	6.0

Application	
Energy source	Electricity

Application: Generation	
Water type	Potable

Supply Water Guidelines	
Chlorides	< 50 ppm
Total Hardness	< 500 ppm
pH	6.5 to 8.5
Silica	< 15 ppm

· Damage caused by chloride corrosion is not covered by your DriSteem warranty.

Detail Report

Project ID: 276381

Project name: Humidificateur Beth Esther

System/tag : HUM-01-02 (continued)

Steam dispersion, Rapidsorb continued		
Tube quantity	6	
Overall dimensions W x H x L (inches)	44.5 X 21.0 X 2	
Operating & shipping weight (lbs)	15	19

Dispersion-Options	
Header and tube material	304 Stainless Steel
High-efficiency insulated tubes	No
Duct plate material	Galvanized steel
Same side piping	Yes

Dispersion-Performance		
Non-wetting distance (inches)	6	
Heat gain from assembly (°F) / steam (°F)	0.81	0.21
Load plus loss (lbs/hr)	47.4	
Air velocity (ft/min)	1592.31	
Airflow pressure drop (inches w.c.)	0.04	

Dispersion-Control Options
NA

Steam generation, RTS RX Series		
Generator model	RX-48-1	
Unit quantity	1	
Unit capacity (lbs/hr)	48.0	
Power (kW)	16	
Voltage (Vac) / Phase / Hz	600/3/(50/60)	
Max amps per unit (FLA)	17.3	
Overall dimensions H x L x W (inches)	24.9 X 16.4 X 24.8	
Operating & shipping weight (lbs)	140.3	142.1

Generation-Options	
Tank material	304 Stainless Steel
Tank insulation	Yes
Enclosure type	Indoor Enclosure
Drain type	Auto Drain NC
Mini-drain operating mode	No
Support	Wall mount

Generation-Control Options		
Interoperability	BACnet	
Display mounting	Mounted on humidifier	
Display language & units	English	Inch-pound
Input signal: DriSteem	Humidity Transmitter	

Steam Connections

Dispersion		
Inlet type and diameter (inches)	Hose	2

Generator		
Outlet type and diameter (inches)	Hose	2

Accessories

Dispersion Accessories
NA

Generator Accessories
· Alternate mechanical drain tempering : No

System Accessories
NA

Detail Report

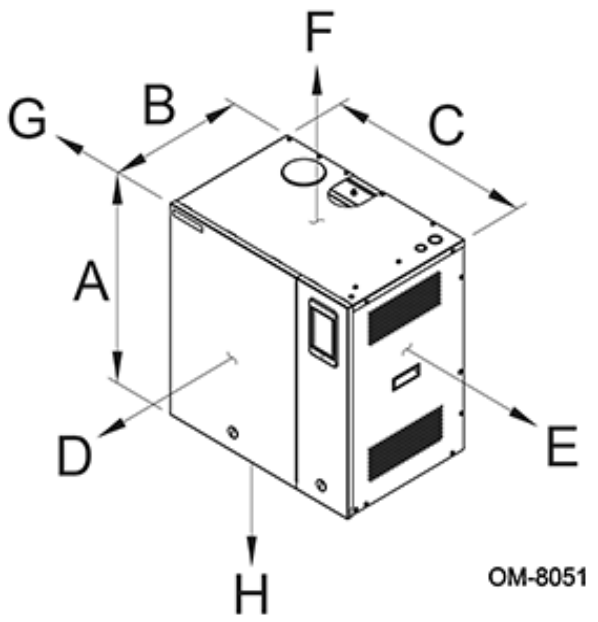
Project ID: 276381

Project name: Humidificateur Beth Esther

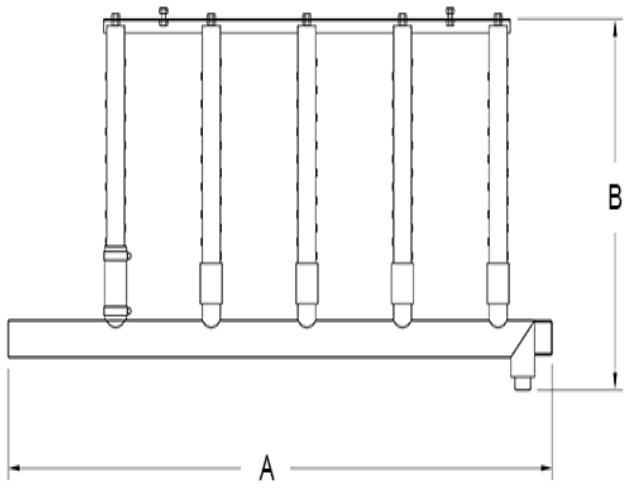
System/tag HUM-01-02

System Drawings

Steam generator dimensions and clearances



Dimensions (in.)			Clearances (in.)				
A	B	C	D	E	F	G	H
24.9	16.4	24.8	36.0	6.0	12.0	2.0	12.0



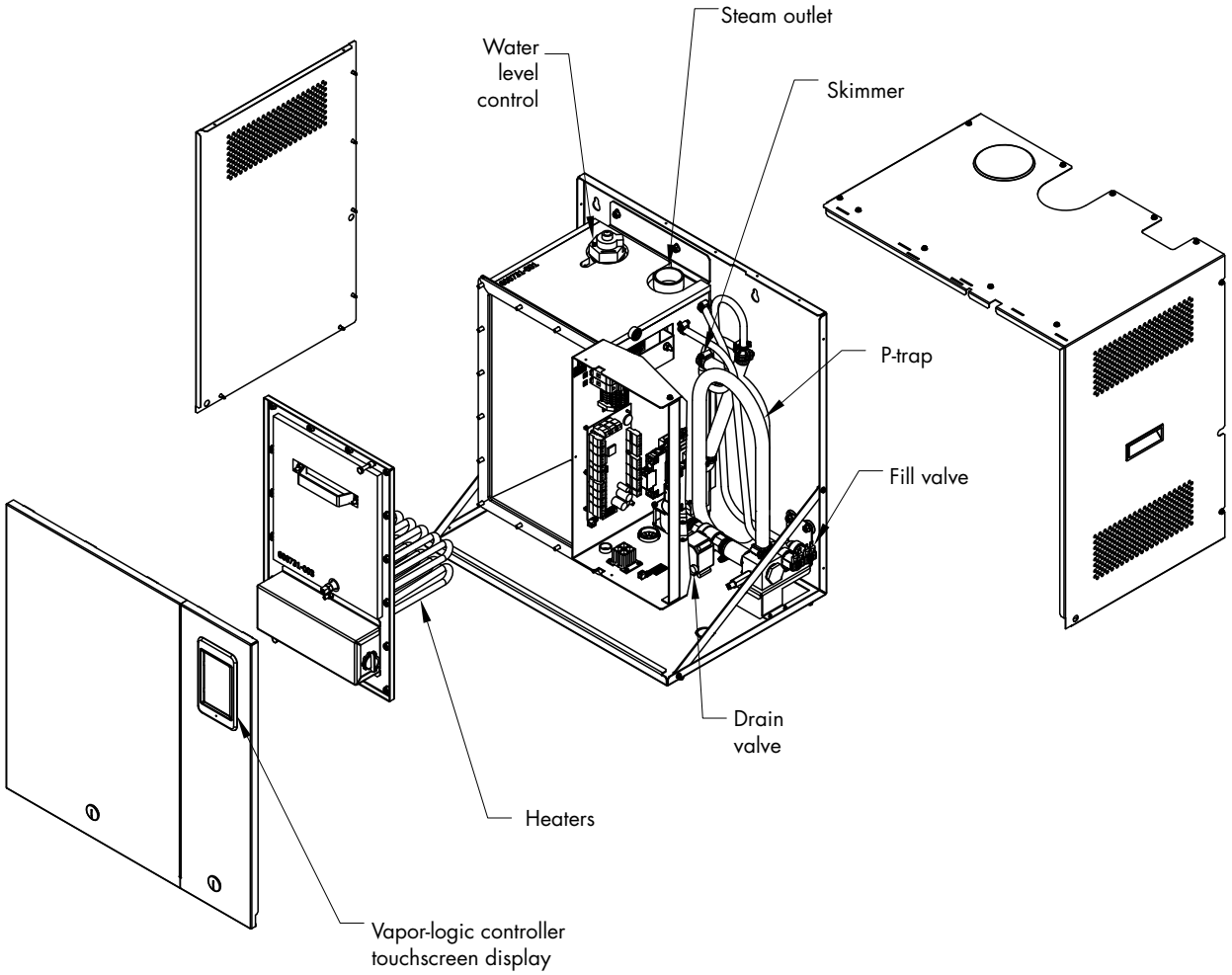
Dimensions (in.)		
A	B	C
44.5	21.0	2

RTS® Humidifier RX Series

ELECTRIC RESISTIVE HUMIDIFIER

From providing comfort humidity to meeting the strictest clean-room requirements, the RTS electric humidifier is designed to meet the humidification demands of any building environment. The RTS humidifier RX series is an electric humidifier that uses resistive heating elements to boil water into steam. While RO/DI water will grant you the best accuracy with the RTS, any water type can be used. Drain rates are automatically determined per the quality of your water, and integrated drain water tempering is standard on every unit.

FIGURE 1-1: RTS HUMIDIFIER



Models, capacities, and electrical specifications

Table 2-1:
RTS humidifier capacities, electrical specifications

RTS model	Maximum steam capacity		Power	Stages	Total max current draw (amps)										
					Single-phase						Three-phase				
	lbs/hr	kg/h	kW	Contactors	120V	208V	240V	277V	480V	600V	208V	240V	380V	480V	600V
RX-6-1	6	2.7	2	1	16.7	9.6	8.3	21.7	4.2	3.3	—	—	—	—	—
RX-12-1	12	5.4	4	1	33.3	19.2	16.7	21.7	8.3	6.7	16.7	14.4	9.10	7.2	5.8
RX-18-1	18	8.2	6	1	—	28.9	25	21.7	12.5	10	16.7	14.4	9.10	7.2	5.8
RX-24-1	24	10.9	8	1	—	38.5	33.3	43.3	16.7	13.3	25	21.7	13.70	10.8	8.7
RX-30-1	30	13.6	10	1	—	—	41.7	43.3	20.8	16.7	33.3	29.9	18.20	14.4	11.6
RX-36-1	36	16.3	12	1	—	—	—	43.3	25	20	33.3	28.9	18.20	14.4	11.6
RX-42-1	42	19.0	14	1	—	—	—	—	29.2	23.3	41.6	36.1	22.80	18	14.4
RX-48-1	48	21.8	16	1	—	—	—	—	33.3	26.7	—	43.3	27.40	21.7	17.3
RX-63-1	63	28.6	21	1	—	—	—	—	43.8	35	—	—	34.2	27.1	21.7
RX-75-1	75	34.0	25	1	—	—	—	—	—	45	—	—	41	32.5	26
RX-30-2	30	13.6	10	2	—	57.7	—	—	—	—	—	—	—	—	—
RX-36-2	36	16.3	12	2	—	57.7	50	—	—	—	—	—	—	—	—
RX-48-2	48	21.8	16	2	—	76.9	66.7	86.6	—	—	50	—	—	—	—
RX-63-2	63	28.6	21	2	—	—	91.7	86.6	—	—	66.6	57.7	—	—	—
RX-75-2	75	34.0	25	2	—	—	—	—	54.2	—	83.2	72.2	—	—	—
RX-90-2	90	40.8	30	2	—	—	—	—	62.5	50	—	86.6	54.7	43.3	34.6
RX-102-2	102	46.3	34	2	—	—	—	—	70.8	56.7	—	86.6	54.7	43.3	34.6
RX-126-2	126	57.1	42	2	—	—	—	—	87.5	70	—	—	68.4	54.1	43.3
RX-144-2	144	65.3	48	2	—	—	—	—	—	80	—	—	82	65	52
RX-162-2	162	73.5	54	2	—	—	—	—	—	90	—	—	82	65	52

All RTS humidifier models operate at 50/60 Hz.
For wire sizing, the highest leg draw is shown due to current imbalance.

Models, capacities, and electrical specifications (continued)

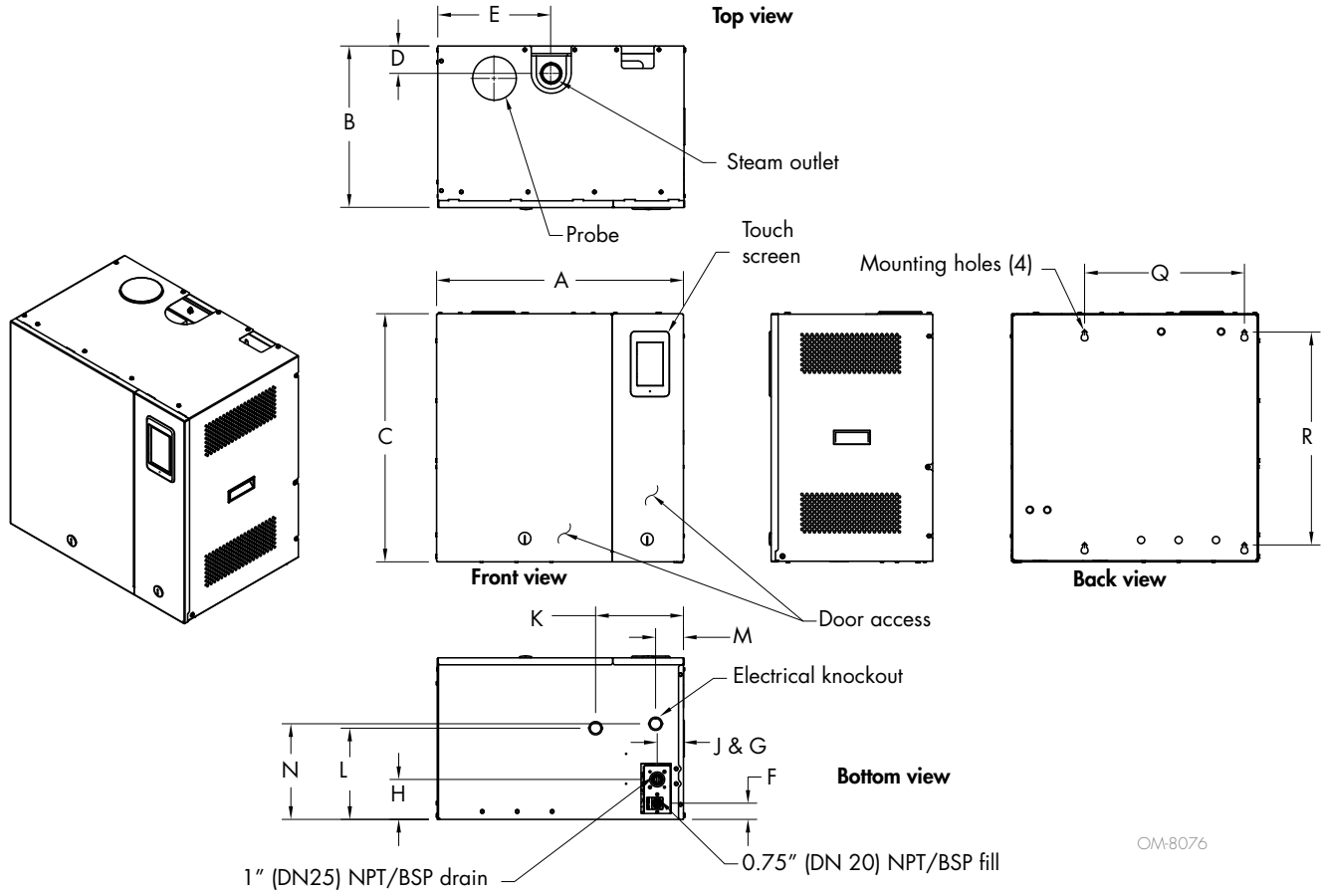
Table 3-1:
RTS humidifier capacities, electrical specifications (continued)

RTS model	Maximum steam capacity		Power	Stages	Total max current draw (amps)										
					Single-phase						Three-phase				
	lbs/hr	kg/h	kW	Contactors	120V	208V	240V	277V	480V	600V	208V	240V	380V	480V	600V
RX-63-3	63	28.6	21	3	—	115.4	—	—	—	—	—	—	—	—	—
RX-75-3	75	34.0	25	3	—	129.8	112.5	130	—	—	—	—	—	—	—
RX-90-3	90	40.8	30	3	—	—	125	130	—	—	99.9	—	—	—	—
RX-102-3	102	46.3	34	3	—	—	—	130	—	—	99.9	—	—	—	—
RX-126-3	126	57.1	42	3	—	—	—	—	—	—	124.9	108.3	—	—	—
RX-144-3	144	65.3	48	3	—	—	—	—	100	—	—	129.9	—	—	—
RX-162-3	162	73.5	54	3	—	—	—	—	112.5	—	—	129.9	—	—	—
RX-189-3	189	85.7	63	3	—	—	—	—	137.5	110	—	—	102.6	81.2	65
RX-216-3	216	98.0	72	3	—	—	—	—	—	120	—	—	123.1	97.4	77.9
RX-243-3	243	110.2	81	3	—	—	—	—	—	135	—	—	123.1	97.4	77.9
RX-102-4	102	46.3	34	4	—	173.1	150	—	—	—	—	—	—	—	—
RX-126-4	126	57.1	42	4	—	—	183.3	173.3	—	—	—	—	—	—	—
RX-144-4	144	65.3	48	4	—	—	—	173.3	—	—	133.2	—	—	—	—
RX-162-4	162	73.5	54	4	—	—	—	—	—	—	166.5	—	—	—	—
RX-216-4	216	98.0	72	4	—	—	—	—	150	—	—	173.2	—	—	—
RX-264-4	264	119.7	88	4	—	—	—	—	183.3	146.7	—	—	164.1	129.9	103.9
RX-288-4	288	130.6	96	4	—	—	—	—	—	160	—	—	164.1	129.9	103.9
RX-324-4	324	146.9	108	4	—	—	—	—	—	180	—	—	164.1	129.9	103.9

All RTS humidifier models operate at 50/60 Hz.
For wire sizing, the highest leg draw is shown due to current imbalance.

Indoor and no enclosure dimensions (RX-XX-1 and RX-XX-2)

FIGURE 4-1: RTS HUMIDIFIER DIMENSIONS



See Table 5-1 for dimension.

Indoor and no enclosure dimensions (RX-XX-1 and RX-XX-2)

Table 5-1:
Indoor unit dimensions

	Description	RX-XX-1		RX-XX-2	
		inches	mm	inches	mm
A	Overall length	24.8	629	26.1	663
B	Overall width	16.4	416	21.0	533
C	Overall height	24.9	632	31.4	798
D	Steam outlet	11.3	286	11.9	301
E		2.8	70	3.3	83
F	Supply water	1.6	41	3.0	76
G		2.6	66	1.6	41
H	Drain water	4.0	102	3.0	76
J		2.6	66	4.0	102
K	Electrical knockout (Control)	8.8	224	2.8	71
L		9.1	231	10.1	256
M	Electrical knockout (Power)	2.8	71	8.8	224
N		9.6	244	9.4	239
Q	Mounting holes	16.0	406	16.0	406
R		21.3	541	28.0	711

Indoor and no enclosure dimensions (RX-XX-3 and RX-XX-4)

FIGURE 6-1: RTS HUMIDIFIER DIMENSIONS

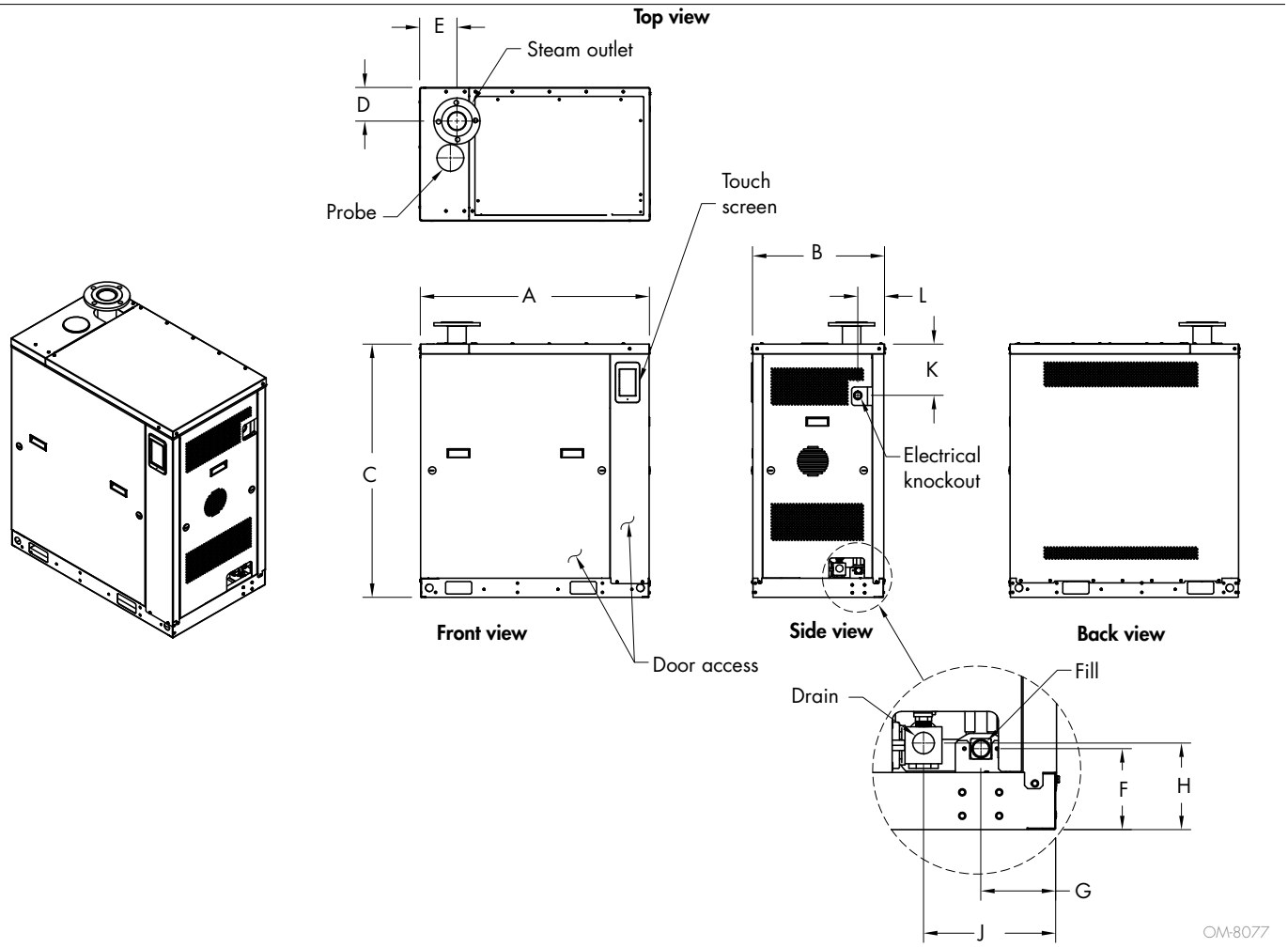


Table 6-1:
Indoor unit dimensions

	Description	RX-XX-3 & RX-XX-4	
		inches	mm
A	Overall length	37.4	950
B	Overall width	21.6	549
C	Overall height	41.3	1049
D	Steam outlet	31.2	792
E		5.3	135
F	Supply water	4.4	112
G		4.3	109
H	Drain water	4.7	119
J		7.2	183
K	Electrical knockout	8.3	211
L		4.2	107

Weights: RX-XX-1 and RX-XX-2

Table 7-1:
RTS humidifier (RX-XX-1 and RX-XX-2) weights

RTS model	No Enclosure				Indoor Enclosure				Outdoor Enclosure			
	Shipping Weight* (Empty)		Operating Weight No Enclosure		Shipping Weight* (Empty)		Operating Weight		Shipping Weight* (Empty)		Operating Weight	
	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg
RX-6-1	91.3	41.5	135.5	61.6	92.9	42.2	137.1	62.3	357.7	162.6	401.5	182.5
RX-12-1	92.5	42.0	136.7	62.1	94.1	42.8	138.3	62.9	358.5	163.0	402.7	183.0
RX-18-1	93.7	42.6	137.9	62.7	95.3	43.3	139.5	63.4	359.7	163.5	403.9	183.6
RX-24-1	93.7	42.6	137.9	62.7	95.3	43.3	139.5	63.4	359.7	163.5	403.9	183.6
RX-30-1	93.7	42.6	137.9	62.7	95.3	43.3	139.5	63.4	359.7	163.5	403.9	183.6
RX-36-1	93.7	42.6	137.9	62.7	95.3	43.3	139.5	63.4	359.7	163.5	403.9	183.6
RX-42-1	94.1	42.8	138.3	62.9	95.7	43.5	139.9	63.6	360.1	163.7	404.3	183.8
RX-48-1	94.5	43.0	138.7	63.0	96.1	43.7	140.3	63.8	360.5	163.9	404.7	184.0
RX-63-1	95.4	43.4	139.6	63.5	97.0	44.1	141.2	64.2	361.4	164.3	405.6	184.4
RX-75-1	96.4	43.8	140.6	63.9	98.0	44.5	142.2	64.6	362.4	164.7	406.6	184.8
RX-30-2	131.6	59.8	245.9	111.8	132.6	60.3	246.9	112.2	397.6	180.7	511.9	232.7
RX-36-2	131.6	59.8	245.9	111.8	132.6	60.3	246.9	112.2	397.6	180.7	511.9	232.7
RX-48-2	135.6	61.6	249.9	113.6	136.6	62.1	250.9	114.0	401.6	182.5	515.9	234.5
RX-63-2	135.6	61.6	249.9	113.6	136.6	62.1	250.9	114.0	401.6	182.5	515.9	234.5
RX-75-2	139.6	63.5	253.9	115.4	140.6	63.9	254.9	115.8	405.6	184.4	519.9	236.3
RX-90-2	137.2	62.4	251.5	114.3	138.2	62.8	252.5	114.8	403.2	183.3	517.5	235.2
RX-102-2	138.0	62.7	252.3	114.7	139.0	63.2	253.3	115.1	404.0	183.6	518.3	235.6
RX-126-2	139.0	63.2	253.3	115.1	140.0	63.6	254.3	115.6	405.0	184.1	519.3	236.0
RX-144-2	140.0	63.6	254.3	115.6	141.0	64.1	255.3	116.0	406.0	184.5	520.3	236.5
RX-162-2	141.0	64.1	255.3	116.0	142.0	64.5	256.3	116.5	407.0	185.0	521.3	236.9

* Add approximately 46 lbs (21 kg) for packaging material.

Weights: RX-XX-3 and RX-XX-4

Table 8-1:
RTS humidifier (RX-XX-3 and RX-XX-4) weights

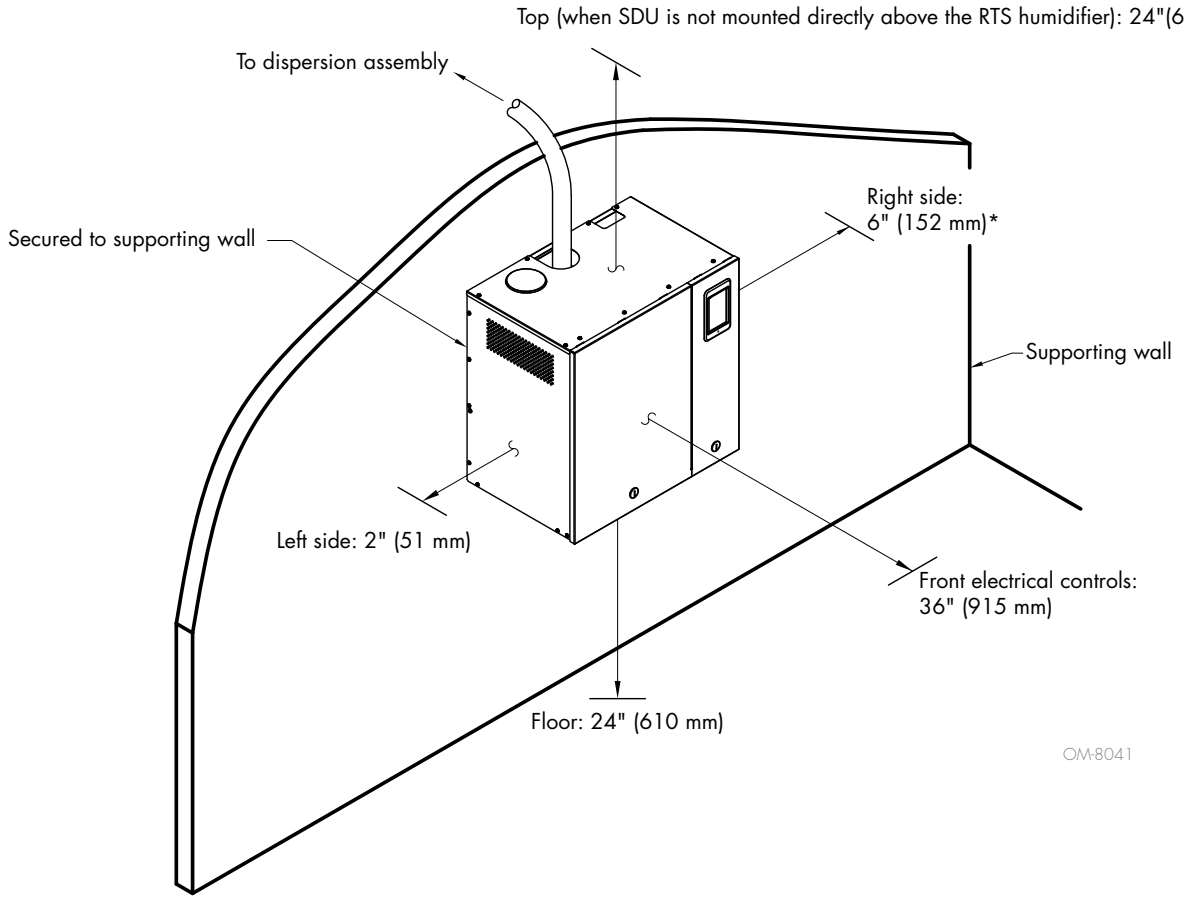
RTS model	No Enclosure				Indoor Enclosure				Outdoor Enclosure			
	Shipping Weight* (Empty)		Operating Weight No Enclosure		Shipping Weight* (Empty)		Operating Weight		Shipping Weight* (Empty)		Operating Weight	
	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg	lbs	kg
RX-63-3	166.0	75.5	422.9	192.2	193.5	88.0	450.4	204.7	476.3	216.5	733.1	333.2
RX-75-3	165.1	75.0	422.0	191.8	192.6	87.5	449.5	204.3	475.4	216.1	732.2	332.8
RX-90-3	169.6	77.1	426.5	193.9	197.1	89.6	454.0	206.4	479.9	218.1	736.7	334.9
RX-102-3	169.6	77.1	426.5	193.9	197.1	89.6	454.0	206.4	479.9	218.1	736.7	334.9
RX-126-3	170.8	77.6	427.7	194.4	198.3	90.1	455.2	206.9	481.1	218.7	737.9	335.4
RX-144-3	172.0	78.2	428.9	194.9	199.5	90.7	456.4	207.4	482.3	219.2	739.1	336.0
RX-162-3	173.2	78.7	430.1	195.5	200.7	91.2	457.6	208.0	483.5	219.8	740.3	336.5
RX-189-3	175.0	79.5	431.9	196.3	202.5	92.0	459.4	208.8	485.3	220.6	741.8	337.2
RX-216-3	176.2	80.1	433.1	196.9	203.7	92.6	460.6	209.4	486.5	221.1	743.3	337.9
RX-243-3	177.7	80.8	434.6	197.5	205.2	93.3	462.1	210.0	488.0	221.8	744.8	338.6
RX-102-4	168.7	76.7	425.6	193.4	196.2	89.2	453.1	205.9	479.0	217.7	735.8	334.5
RX-126-4	173.5	78.9	430.4	195.6	201.0	91.4	457.9	208.1	483.8	219.9	740.6	336.6
RX-144-4	174.7	79.4	431.6	196.2	202.2	91.9	459.1	208.7	483.4	219.7	741.8	337.2
RX-162-4	176.3	80.1	433.2	196.9	203.8	92.6	460.7	209.4	486.6	221.2	743.4	337.9
RX-216-4	179.5	81.6	436.4	198.4	207.0	94.1	463.9	210.9	489.8	222.6	746.6	339.4
RX-264-4	181.9	82.7	438.8	199.4	209.4	95.2	466.3	211.9	492.2	223.7	749.0	340.5
RX-288-4	183.5	83.4	440.4	200.2	211.0	95.9	467.9	212.7	493.8	224.4	750.6	341.2
RX-324-4	185.5	84.3	442.4	201.1	213.0	96.8	469.9	213.6	495.8	225.3	752.6	342.1

* Add approximately 46 lbs (21 kg) for packaging material.

Location and clearance recommendations (Indoor and no enclosure)

FIGURE 9-1: RX SERIES CLEARANCE RECOMMENDATIONS FOR -1 AND -2 MODELS (INDOOR AND NO ENCLOSURE UNITS)

Maintain these clearances for service and maintenance.



* If there is more space available, increase the clearance on this side of the unit. Infrequent access may be required to the hoses behind the electrical cabinet.

RTS EVAPORATIVE HUMIDIFIER

DATE	REV	RECORD	DR
6/21	C	E.C.# 6992	JK
7/21	D	E.C.# 7004	JK

REFER TO FOLLOWING DOCUMENTS
–INSTALLATION REQUIREMENTS
–EXTERNAL CONNECTIONS
–HEATER ELEMENT WIRING ARRANGEMENTS

POWER BLOCK L1 L2 L3

EARTH GROUND

EQUIPMENT GROUND

5

F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12

K68 Q64 Q65 — STAGE 1 — H1 H2 H3 THREE PHASE LOAD

K57 — STAGE 2 — H4 H5 H6 THREE PHASE LOAD 5

K59 — STAGE 3 — H7 H8 H9 THREE PHASE LOAD 5

K61 — STAGE 4 — H10 H11 H12 THREE PHASE LOAD 5

F13 11 SDU TERMINALS

F14 21 SDU TERMINALS

CIRCUIT PROTECTION (OPTIONAL) Q16A Q16B

Q18 INTEGRAL TO T16

Q18 T16 4A 24VAC — AUXILIARY TRANSFORMER 75VA — 001 to 61 — 801 to 62

Q21 T19 4A 24VAC — 801 — Q21 INTEGRAL TO T19 — 000 — TRANSFORMER 75VA

VAPOR–LOGIC

P1 P1–1 24VAC P1–2 000

P2 Top P2–3 BLACK Mid P2–2 WHITE Low P2–1 RED P2–4 4 E31

P10 RJ–11 CABLE — VAPOR–LOGIC TOUCH SCREEN DISPLAY

801 to 36

000 to 36

PROBE GROUND (TANK)

TOP PROBE

MIDDLE PROBE

BOTTOM PROBE

LEGEND

K	RELAY/CONTACTOR	Y	SOLENOID
T	TRANSFORMER	N	SENSOR
Q	CIRCUIT BREAKER	J	JUMPER
S	SWITCH	E	WATER PROBE
H	HEATER	M	MOTOR/FAN
F	FUSE	R	SOLID STATE RELAY

BREAK TO EXTERNAL CONNECTIONS DIAGRAM

POWER WIRING
CONTROL CIRCUIT WIRING
FIELD WIRING
OPTIONAL FACTORY
OPTIONAL FIELD

NOTES:

1. WIRING AND BRANCH CIRCUIT PROTECTION PROVIDED BY INSTALLER AS PER NATIONAL ELECTRICAL CODE.
2. FOR SUPPLY HEATER AND MACHINE GROUND CONNECTIONS, SIZE WIRE USING 75°C WIRE TABLE PER NATIONAL ELECTRICAL CODE.
3. USE COPPER CONNECTORS RATED FOR 105°C.
4. WATER LEVEL PROBE GROUND MUST BE CONNECTED TO TANK FOR PROPER HUMIDIFIER OPERATION.

801 from 35

000 from 35

VAPOR–LOGIC

P3 LW P3–3

P4 TT Isw P4–3 P4–2 P4–1 — HUMIDIFIER TANK — N38 — TANK TEMPERATURE SENSOR

P6 CS2 21VDC — N42 — DRAIN TEMPERATURE SENSOR

P13 AFsw 24Vac P13–1 P13–2 — SDU TERMINALS AF PS

P16 PV/CA SDU P16–3 P16–2 — Y48 PULSE FILL VALVE — M49 CONTROL CABINET FAN — M50 CONTROL CABINET FAN (USED ON 3 & 4 STAGE UNITS) — SDU TERMINALS A B 000

P17 Fill Drain P17–1 P17–2 — Y52 FILL VALVE (N.C.) — M54 DRAIN VALVE (N.C.) (N.O. OUTDOOR)

P17–3 CT1

WITHOUT AUXILIARY TRANSFORMER

P18 CT2 CT3 CT4 P18–1 P18–2 P18–3 — K57 K59 K61 A1 A2 P3–3A — S59 13 NO 14 NO — 001 from 18 — 801 from 19

5

HEAT CONTACTOR 2
NO 4,5,6

HEAT CONTACTOR 3
NO 7,8,9

S59 (K68 SAFETY CONTACTOR) AUXILLIARY SWITCH (N.O.)

HEAT CONTACTOR 4
NO 10,11,12

USING AUXILIARY TRANSFORMER

P19 +SSR/BL –SSR/BL P19–1 P19–2 — Q64 Q65 A2 A1 — SSR CONTROLLER — COMMON

GREEN S68 WHITE — SAFETY THERMAL CUTOUT SWITCH (N.C.) (S68)

GREEN S68A WHITE — USED ON 3 & 4 STAGE UNITS — SAFETY THERMAL CUTOUT SWITCH (N.C.) AND SAFETY CONTACTOR COIL N.O. 1,2,3

P3–3 K68 A1 A2 000

801

000

HUMIDIFIER TANK

5 WIRING DIAGRAM SHOWS MAXIMUM NUMBER OF STAGES. YOUR PARTICULAR HUMIDIFIER MAY HAVE LESS. ON SINGLE STAGE UNITS, FUSES AND FUSE BLOCKS ARE OMITTED.

driSteem

RTS THREE PHASE WIRING DIAGRAM EXCEPT FOR 208V

MAT'L:

SCALE:

DRAWN BY: JK

DATE: 10/21/20

P/N RTS–VL–1

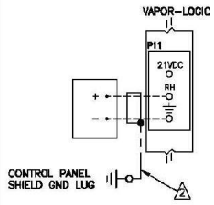
DATE	REV	RECORD	DR
5/15	A	E.C.# 5413	JK

VAPOR–LOGIC EXTERNAL CONTROL CONNECTIONS DIAGRAM

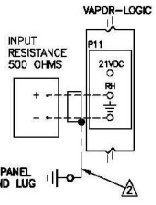
CONTROL INPUTS

SIGNAL BY OTHERS

0–10 VDC SIGNAL BY OTHERS

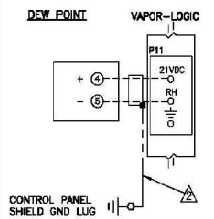


4–20 MA SIGNAL BY OTHERS



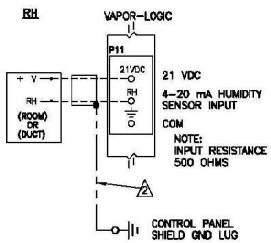
TRANSMITTER

DEW POINT



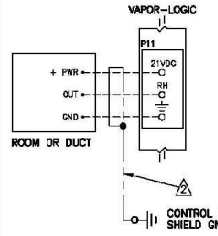
NOTE: INPUT RESISTANCE ON 4–20 MA IS 500 OHMS

RH

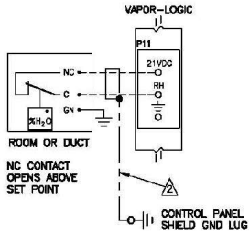


RH HUMIDISTAT

MODULATING HUMIDISTAT



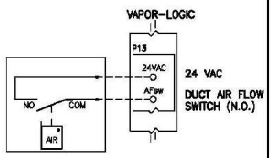
ON/OFF DUCT HUMIDISTAT



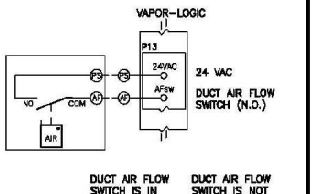
LIMIT CONTROLS

AIR FLOW SWITCH

WHEN USING THE AIRFLOW SWITCH IN THE DUCT



WHEN USING A MODEL SDU–1 OR SDU–E



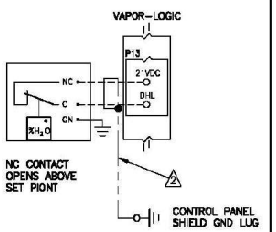
DUCT AIR FLOW SWITCH IS IN SDU CABINET

DUCT AIR FLOW SWITCH IS NOT USED ON AREA–TYPE

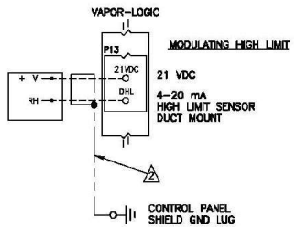
NOTE: FIELD WIRING REQUIRED BETWEEN SDU CABINET TERMINAL STRIP AND CONTROL CABINET TERMINAL STRIP FOR SDU BLOWER AND AIR FLOW SWITCH.

DUCT HIGH LIMIT (NOT USED ON SDU OR AREA–TYPE)

ON/OFF

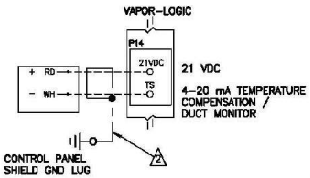


TRANSMITTER

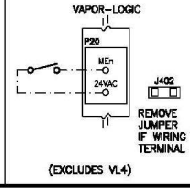


TEMP COMPENSATION/DUCT MONITOR

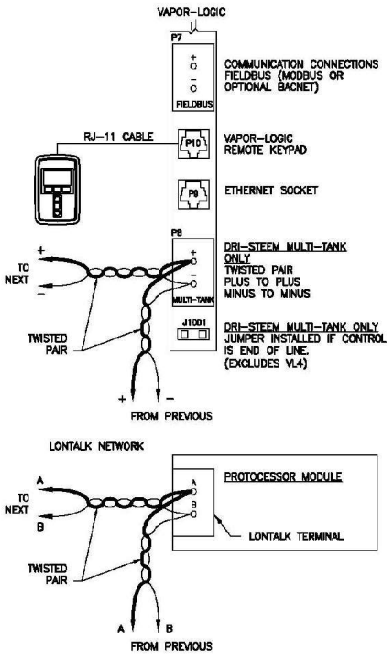
TEMP COMP TRANSMITTER



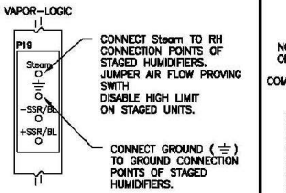
MASTER ENABLE



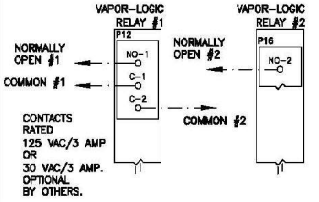
COMMUNICATION/MULTI–TANK CONTROL



STAGING MULTIPLE XT HUMIDIFIERS



PROGRAMABLE RELAYS



NOTES:

1. CHANGING CONTROL INPUT SIGNAL MAY REQUIRE WIRING CHANGE AND PROGRAM CHANGE. REFER TO VAPOR–LOGIC INSTALLATION AND OPERATION MANUAL (IOM), KEYPAD INPUT SELECTION SUB–MENU.
2. FOR ALL CONTROL DEVICES, EXCEPT WATER LEVEL CONTROLS/PROBE USE: 18 AWG/1.5 mm² PLENUM RATED 2–WIRE SHIELDED CABLE.
3. THIS PRODUCT WAS FACTORY TESTED FOR PROPER OPERATION. FAULTY HANDLING OR WIRING IS NOT COVERED UNDER DriSteem'S WARRANTY.

BREAK TO EXTERNAL CONNECTIONS DIAGRAM

CONTROL CIRCUIT WIRING
FIELD WIRING
OPTIONAL FACTORY
OPTIONAL FIELD

driSteem	VAPOR–LOGIC CONNECTIONS WIRING DIAGRAM
	MATL:
	SCALE: P/N VL–1
	DRAWN BY: JK
	DATE: 5/19/15

CONTRÔLES

Les cases indiqués avec un "X" indique les éléments fournit par Aireau Qualité Contrôle Inc.

X	**Transmetteur de gaine HED2MSX**
	Transmetteur mural HEW2MSX

Fabricant: Veris Industries
Signal: 4-20mA
Précision: +/- 2%
Condition: 0 à 95% H.R.
32F à 122F
(0C à 50C)

GAINE

MURAL

X	Haute-Limite On/Off
	Haute-Limite Modulante

Modèle: HC-201

Modèle: HED2MSX

Haute-Limite ON/OFF

Haute-Limite MODULTANTE

X	Interrupteur de débit d'air

Modèle: AFS-262-112
Fabricant: Cleveland Controls
Type: Ajustable
Précision: 0.05" à 2" W.C.
Condition: -40F à 180F
(-40C à 82C)

Standard Duct Humidity Sensors

IDEAL FOR BID SPEC!

2%, 3%, and 5% Accuracies

DESCRIPTION

HED Standard Series duct mount humidity transmitters offer high performance in an easy to install housing at an affordable price. The thin-film capacitive sensor element provides high accuracy and performance, great long-term stability, and full recovery from saturation. Temperature sensing options are also available.

The duct-mounted HED includes a rugged all plastic housing with a tool-less gasketed entry lid, large cage clamp terminal blocks, and sturdy ABS material. All Standard models come with a standard one-year warranty.

FEATURES

- Monitor humidity and temperature with a single device...reduce installation costs
- Semiconductor, temperature transmitter, or popular thermistor/RTD sensors available
- Tool-less gasketed entry lid...no more lost screws
- Large cage clamp terminal blocks...easy hoop-up with no wire nuts
- Circuitry is embedded in the probe for durability and protection

APPLICATIONS

- HVAC economizer control
- Managing energy systems
- Facilitating ASHRAE standards for environmental control

HUMIDITY

SPECIFICATIONS

1 Year Warranty

Input Power:

Input Power, Voltage Version	12-24VDC or 24VAC
Input Power, mA Version	12-24VDC
AC Voltage Tolerance	±10%
AC Frequency	50-60 Hz
Max. Inrush Current after 1 msec (mA version)	25mA

Output Power:

mA Output	4-20mA, 2-wire, not polarity sensitive
mA Max. Loop Resistance	500Ω at 24VDC input voltage; 250Ω at 12VDC input voltage
Voltage Output	0-5V or 0-10V (jumper selectable)
Voltage Min. Load Resistance	5kΩ
Voltage Min. Sinking Current	0.2mA

Humidity:

RH Element	Digitally profiled thin-film capacitive, non-removable
Accuracy	±2%, 3%, or 5% (10-90% RH, 20° to 30°C)
Temperature Effect (Outside 20° to 30°C)	≤0.1% RH per °C
Response Time (to 90% change at 20°C)	110 sec
Annual Drift	≤1%
Output Scaling	0-100% RH

Temperature:

Active Output Accuracy	±0.5°C
Active Output Temperature Scaling	Type 1: -40° to 50°C (-40° to 122°F); Type 2: 0° to 50°C (32° to 122°F)
Self-Heating Error (Resistive Temperature Only)	≤±0.5°C at 20° to 30°C (68° to 86°F); ≤±0.75°C outside of 20° to 30°C (68° to 86°F)

Operating Environment:

Operating Temperature	-40° to 50°C (-40° to 122°F)
Operating Humidity	0-100% RH noncondensing (Unit will recover from saturation)

Housing:

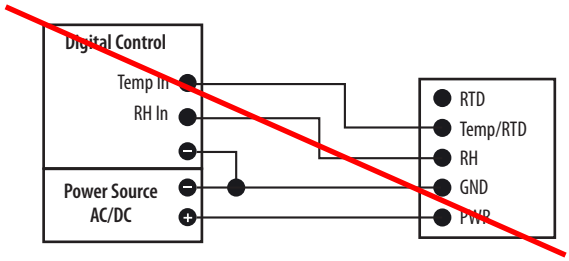
Material	ABS plastic with UL V-0 5VA Flame Class

EMC Conformance: EN61000-6-3:2007+A1:2011 Class B; EN61326-1:2006 Class B; EN61000-6-1:2007
Meets UL requirements for plenum rating.

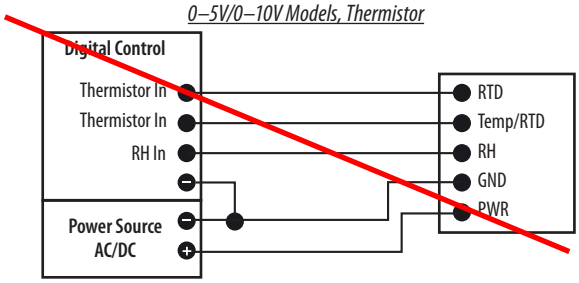
VERIS INDUSTRIES

APPLICATION/WIRING DIAGRAMS

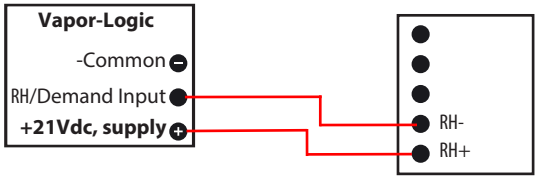
0–5V/0–10V Models, No Thermistor



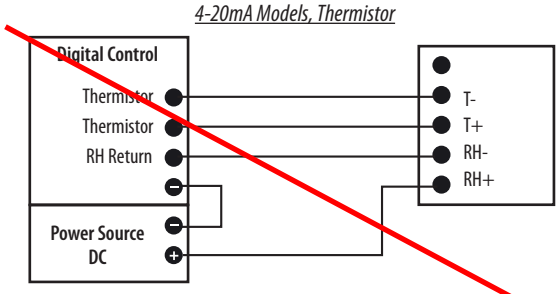
0–5V/0–10V Models, Thermistor



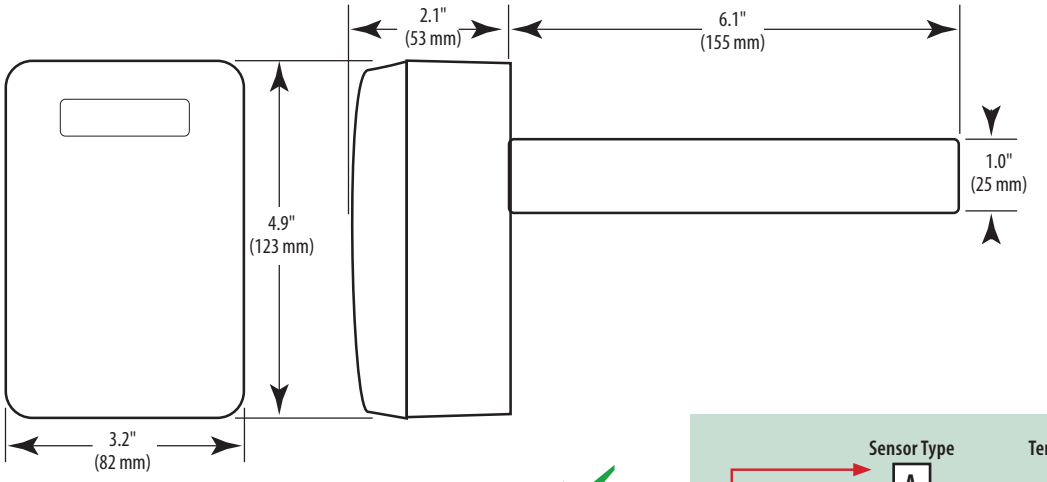
4-20mA Models, w/ Vapor-Logic



4-20mA Models, Thermistor



DIMENSIONAL DRAWING



ORDERING INFORMATION

RoHS Compliant

HED [Accuracy] [Output] [US or EU] [Temp.]

Accuracy
2 = 2%
3 = 3%
5 = 5%

Output
M = 4-20mA
V = 0-5VDC/0-10VDC

US or EU
S = Standard

Temp.
T = Temp
X = No Temp (Stop here)

Sensor Type
A = Temp. transmitter

Temp Range
1 = -40° to 50°C (-40° to 122°F)
2 = 0° to 50°C (32° to 122°F)

Temp Cert
Blank = None
1 = 1 pt cal
2 = 2 pt cal

Sensor Type
B = 100R Platinum, RTD
C = 1k Platinum, RTD
D = 10k T2, Thermistor
E = 2.2k, Thermistor
F = 3k, Thermistor
G = 10k CPC Thermistor
H = 10k T3, Thermistor
J = 10k Dale, Thermistor
K = 10k with 11k shunt, Thermistor
M = 20k NTC, Thermistor
N = 1800 ohm TAC, Thermistor
R = 10k US, Thermistor
S = 10k 3A 221 Thermistor
T = 100k, Thermistor
U = 20k "D", Thermistor
W = 10k T2 high accuracy, Thermistor
Y = 10k T3 high accuracy, Thermistor
Z = 10k E1, Thermistor

Temp Cert
Blank = None
1 = 1 pt cal
2 = 2 pt cal

Example:

With Temp
HED 3 M S T C

Without Temp
HED 3 V S X *Stop Here*

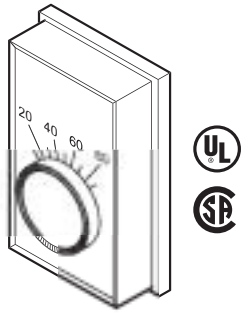
HUMIDITY

Two-Position Electric Controller

These controllers provide low or line voltage on-off single stage control of humidifiers, dehumidifiers, valves, solenoid valves, compressors, relays, etc.

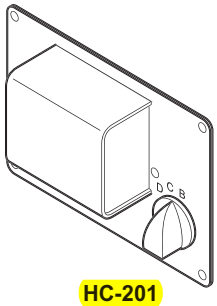
Features:

- SPDT switching for humidification/dehumidification.
  Agency listed room and duct units.
  Long life nylon elements.
  Standard locking feature.



HC-101

(Only models with metal covers are CSA certified)



HC-201

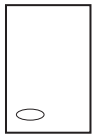
Model Chart

Description.

Model No.	Description	Scale Range % RH	Differential % RH	
			Switch	Interstage
HC-101	Room	10 to 90	5	—
HC-201	Duct	15 to 95		

Maximum Electrical Ratings.

Model No.	AC Volt 50/60 Hz	FLA	LRA	Resistive Amps	Pilot Duty VA
HC-101	24	—	—	8	60
HC-201	240	3.6	21.6		345



Blank cover insert and 5/64" Allen head cover screw included to convert room humidistat to concealed adjustment if required.

HC-101

Figure 1 Blank Cover (HC-101).

HC-101 Series, HC-201

Installation Information.

Model No.	Connections	Dimensions	Cover Material
HC-101	6 in. (150 mm) color coded leads	4-3/8 H x 2-7/8 W x 1-5/8 D in. (111 x 73 x 41 mm)	Beige Plastic
HC-201	Coded screw terminals	4-3/4 H x 6-1/2 W x 2-1/4 D in. (121 x 165 x 57 mm)	Metal

Specifications

Control dial settings	Refer to Description Model Chart.
Humidity sensing element	Nylon ribbon.
Differential	Refer to Description Model Chart.
Environment	
Ambient temperature limits	Operating: 40 to 125°F (4 to 52°C). Shipping and Storage: -40 to 140°F (-40 to 60°C).
Humidity	5 to 95% RH non-condensing.
Locations	NEMA Type 1.
Electrical Switch	One snap-acting SPDT.
Ratings	Refer to Maximum Electrical Ratings Model Chart.
Connections	Refer to Installation Information Model Chart.
Mounting	
HC-101	Flush or surface switch boxes or, for 24 V only, directly to wall.
HC-201	In any position on the outside surface of return air duct.
Dimensions	Refer to Installation Information Model Chart.
Cover	Refer to Installation Information Model Chart.

Accessories

Model No.	Description
Accessories for HC-101 only	
AT-504	Aux. mounting base.
AT-505	Wall box cover plate.
AT-546	Aux. mounting base.
AT-1104	Cast guard.
AT-1155	Plastic guard.
AT-1165	Plastic guard.

Typical Applications

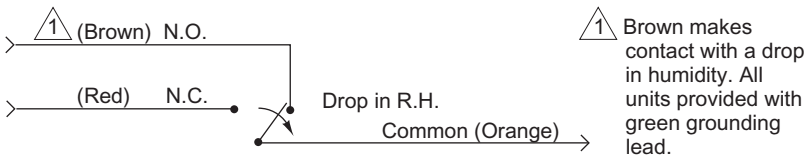


Figure 2 HC-101, and HC-201 Switch Action and Terminal Identification.

Cleveland Controls
Division of UniControl Inc.

Model AFS–262–112

AIR PRESSURE SENSING SWITCH WITH ADJUSTABLE SET POINT RANGE

APPLICATION

Model AFS-262-112 Air Pressure Sensing Switch is a general purpose proving switch designed for HVAC and Energy Management applications. It may be used to sense positive, negative, or differential air pressure. The AFS-262-112 is equipped with convenient barbed sample line connectors that accept flexible tubing.

GENERAL DESCRIPTION & OPERATION

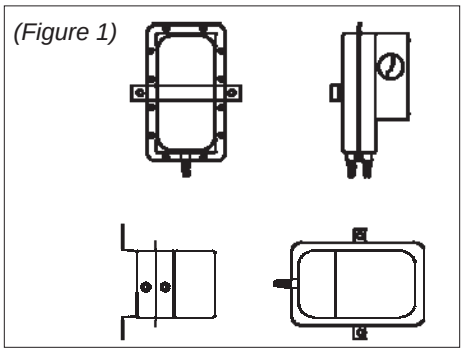
The plated housing contains a diaphragm, a calibration spring and a snap-acting SPDT switch.The barbed sample line connections located on each side of the diaphragm accept flexible tubing.

An enclosure cover guards against accidental contact with the live switch terminal screws and the set point adjusting screw. The enclosure cover will accept a ½" conduit connection.

MOUNTING (SEE FIGURE 1)

Select a mounting location which is free from vibration. The **AFS-262-112** must be mounted with the diaphragm in any vertical plane in order to obtain the lowest specified operating set point. Avoid mounting with the sample line connections in the "up" position. Surface mount via the two 3/16" diameter holes in the integral mounting bracket. The mounting holes are 3-7/8" apart.

(Figure 1)



AIR SAMPLING CONNECTION (SEE FIGURE 2)

The **AFS-262-112** is designed to accept flexible tubing by means of barbed 1/4" slip-on connections. For sample lines of up to 10 feet, ¼" OD tubing is acceptable. For lines up to 20 feet, use ¼" ID tubing. For lines up to 60 feet, use ½" ID tubing. Locate the sampling probe a minimum of 1.5 duct diameters downstream from the air source. Install the sampling probe as close to the center of the airstream as possible. Refer to Figure 2 to identify the high pressure inlet (H) and the low pressure inlet (L). Connect the sample lines as follows:

POSITIVE PRESSURE ONLY: Connect the sample line to inlet H; inlet L remains open to the atmosphere.

NEGATIVE PRESSURE ONLY: Connect the sample line to inlet L; inlet H remains open to the atmosphere.

TWO NEGATIVE SAMPLES: Connect the higher negative sample to inlet L. Connect the lower negative sample to inlet H.

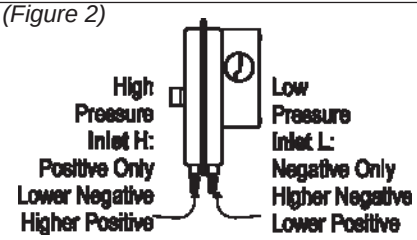
TWO POSITIVE SAMPLES: Connect the higher positive sample to inlet H. Connect the lower positive sample to inlet L.

ONE POSITIVE AND ONE NEGATIVE SAMPLE: Connect the positive sample to inlet H. Connect the negative sample to inlet L.

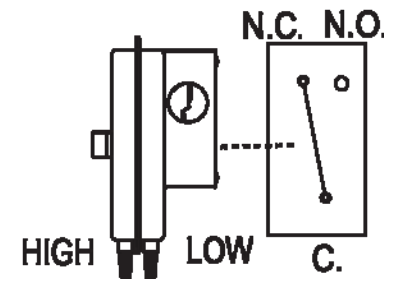
Cleveland Controls
DIVISION OF UNICONTROL INC.
1111 Brookpark Rd
Cleveland OH 44109

Tel: **216-398-0330**
Fax: **216-398-8558**
Email:**saleshvac@unicontrolinc.com**
Web page: **http://www.clevelandcontrols.com**

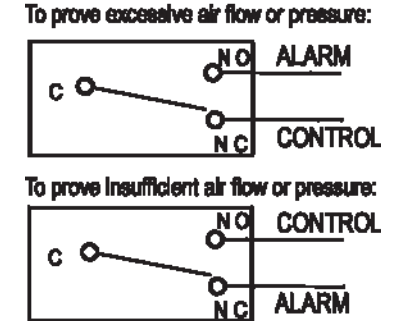
(Figure 2)



(Figure 3)



(Figure 4)



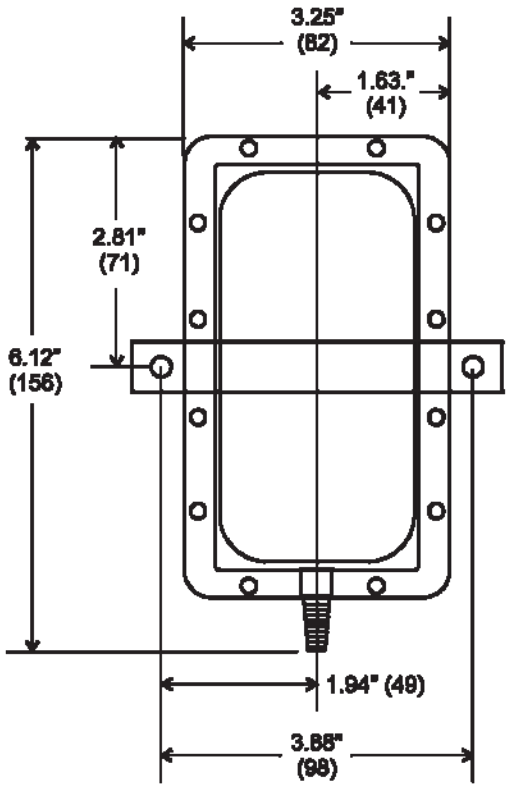
ELECTRICAL CONNECTIONS (SEE FIGURE 3)

Before pressure is applied to the diaphragm, the switch contacts will be in the normally closed (NC) position. The snap switch has screw top terminals with cup washers. Wire alarm and control applications as shown in Figure 4.

FIELD ADJUSTMENT

The adjustment range of an **AFS-262-112** Air Switch is 0.05 ±.02" w.c. to 2.0" w.c. To adjust the set point, turn the adjust- ing screw counterclockwise until motion has stopped. Next, turn the adjusting screw 4 complete turns in a clockwise direction to engage the spring. From this point, the next ten turns will be used for the actual calibration. **Each full turn rep- resents approximately 0.2" w.c.**

Please note: To properly calibrate an air switch, a digital manometer or other measuring device should be used to confirm the actual set point.



Nominal Dimensions in Inches (Millimeters)

SPECIFICATIONS

MODEL AFS-262-112 AIR PRESSURE SENSING SWITCH WITH ADJUSTABLE SET POINT RANGE

Mounting Position: Mount with the diaphragm in any vertical plane.

Set Point Range: 0.05 ± 0.02" w.c. to 2.0"w.c.

Field Adjustable "Operate Range": 0.07"w.c. to 2.0" w.c.

Field Adjustable "Release Range": 0.04"w.c. to 1.9" w.c.

Approximate Switching Differential: Progressive, increasing from 0.02 ± 0.01"w.c. at minimum set point to approximately 0.1 " w.c. at maximum set point.

Measured Media: Air, or combustion by-products that will not degrade silicone.

Maximum Pressure: ½ psi (0.03 bar).

Operating Temperature Range: -40F to 180F (-40 to 82C).

Life: 100,000 cycles minimum at 1/2 psi maximum pressure each cycle and at maximum rated electrical load.

Electrical Rating: 300 VA pilot duty at 115 to 277 VAC, 15 amps noninductive to 277 VAC, 60 Hz.

Contact Arrangement: SPDT.

Electrical Connections: Screw-type terminals with cup washers.

Conduit Opening: 7/8" diameter opening accepts ½" conduit.

Sample Line Connectors: Two barbed ¼" connectors will accept flexible tubing.

Sample Line Connections: Two barbed ¼" connectors will accept flexible tubing.

Approval: UL, FM, CSA, CE

Shipping Weight: 1.2 lbs.

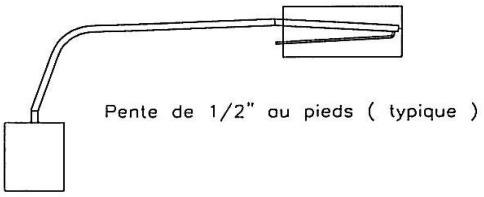
Accessories:

- Sample line probes.
- Orifice plugs (pulsation dampers).

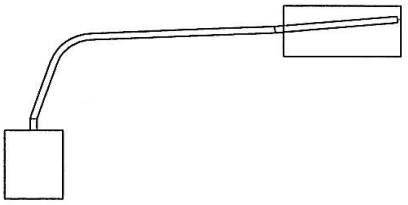
RÉSEAU DE VAPEUR

POUR TOUTES QUESTIONS, CONTACTER AIREAU QUALITÉ CONTRÔLE AU 1-800-474-0186

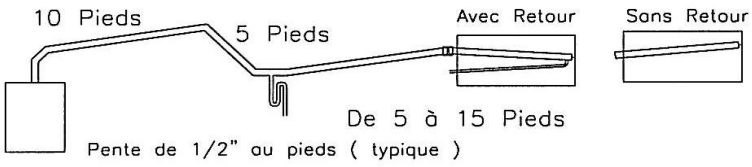
10 Pieds MAX (flexible)



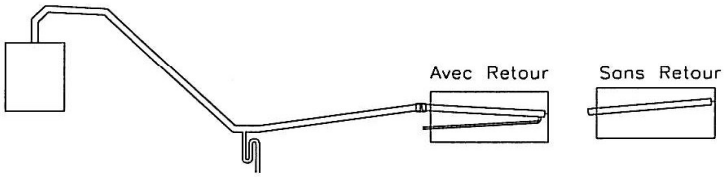
10 Pieds MAX (flexible)



Plus de 10 Pieds (rigide)

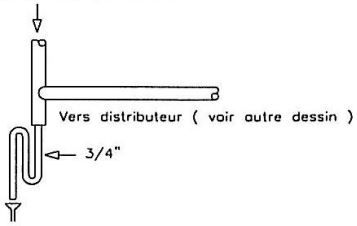


Distributeur Plus Bas (rigide)



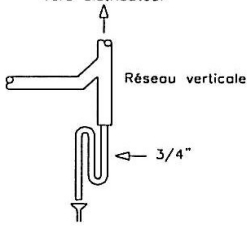
Pente de 1/2" au pieds (typique)

Alimentation par la haut

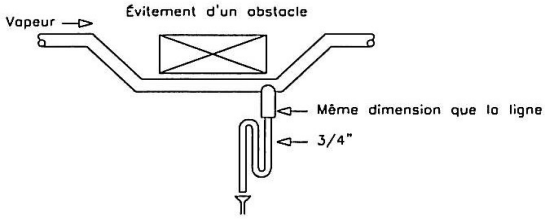


Tout " P-Trap" doit avoir 10" min.
Tout changement de direction sera fait avec des coudes 45 seulement

Vers distributeur



Évitement d'un obstacle



Sur ligne de vapeur