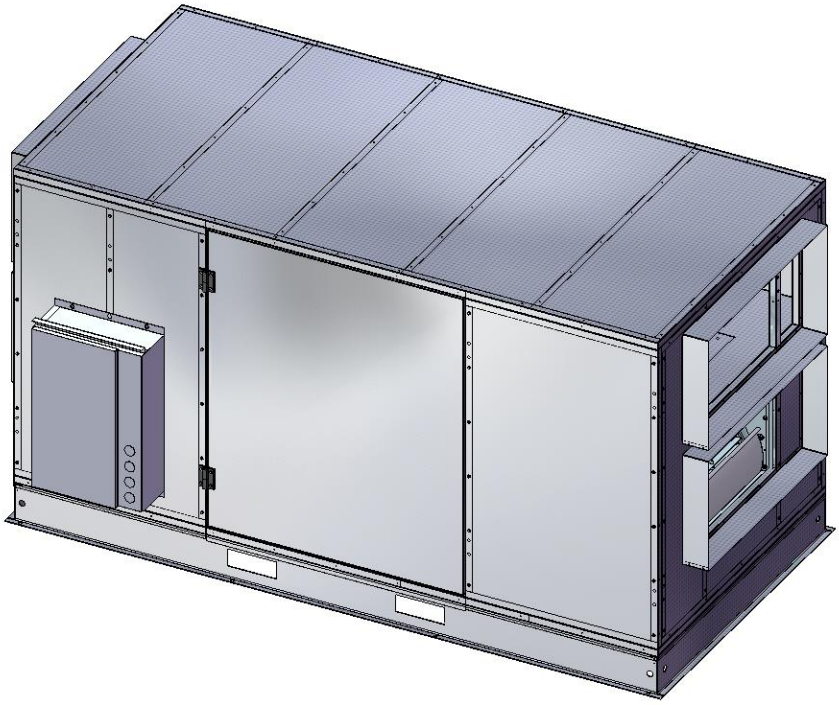
P.O. Box 2758 Windsor, Nova Scotia, B0N 2T0
Ph. 902-798-2261 Fax: 902-798-2557
www.nu-airventilation.com email: nuair@nu-airventilation.com

COMPLIANT SERIES



HRV/ERV PRODUCT MANUAL
NU0820/NU2035/NU2540/NU1030

* LEAVE THIS DOCUMENT WITH THE BUILDING OWNER

Specifications, dimensions and ratings may change without notice
as a result of ongoing product development and improvements.

TABLE OF CONTENTS

1 ABOUT THE H/ERV

The heat recovery ventilator (HRV) provides fresh air to a conditioned space while exhausting an equal amount of stale air. Heat energy is transferred from one air stream to the other within a non-contact cross flow heat exchanger. ERV models transfer latent energy (moisture) from the higher to lower air stream.

A. Two fan motor sets deliver fresh air into the space and exhaust stale air from the space.

B. Incoming fresh air is filtered before flowing through the heat exchange core.

C. Stale air flows through the cross-flow heat exchanger and transfers the heat (HRV) (and moisture (ERV)) to the incoming fresh air.

D. Warm fresh air is distributed through an independent ductwork system or an existing air distribution system.

2 PRODUCT SELECTION

Unit Options

		NU0820	NU2035	NU1030	NU2540
Capacity (cfm range)		800 - 2000	2000 - 4000	1000 - 3000	2000 - 4000
Location	Indoor	O	S		
	Outdoor	O		S	S
Defrost	None	S	S	S	S
	Exhaust Only (temperature on/off)	$	$	$	$
	Timed Exhaust(temperature on/timed off)	$	$	$	$
	Recirculation	$			
	*Face and by Pass	$	$	$	$
Voltage and Speeds	208-240/1 1 speed	S	S	S	S
	240/1 1 speed	O	O	O	O
	208/3 1 speed	O	O	O	O
	460/3 1 speed	O	O	O	O
	575/3 1 speed	O	O	O	O
Core	Polypropylene	S	S	S	S
	Enthalpy	$	$	$	$
Cabinet Finish	Galvanized Steel	S	S	S	S
	Painted Aluminum (white)	$	$	$	$
Supply air Dampers	None	S	S	S	S
	Motorized	$	$	$	$
Exhaust Air Dampers	None	S	S	S	S
	Gravity	$	$	$	$
Supply Air discharge	Horizontal (end)	O	S	O	O
	Vertical (down)	O		S	S
Return air intake	Horizontal (end)	O	S	$	$
	Vertical (down)	O		S	S
VFD		$			
Premium efficiency motors 89.5% & VFD compatible		$	$	$	$
Dirty Filter contacts		$	$	$	$
Auxiliary contacts –e.g. interlock		S	S	S	S

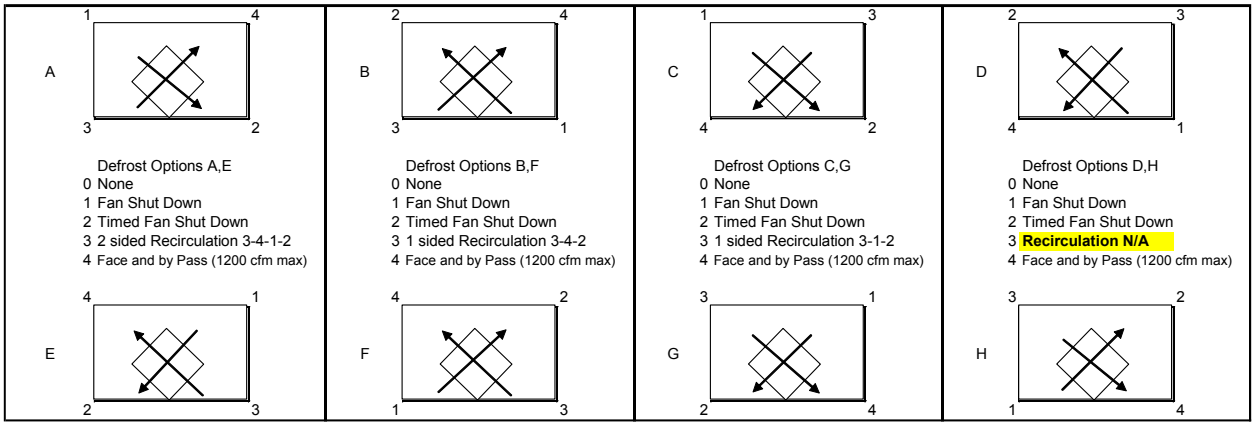
* refer to motor hp tables for cfm limitations

S - standard
O – optional for no additional charge
$ - optional for additional charge

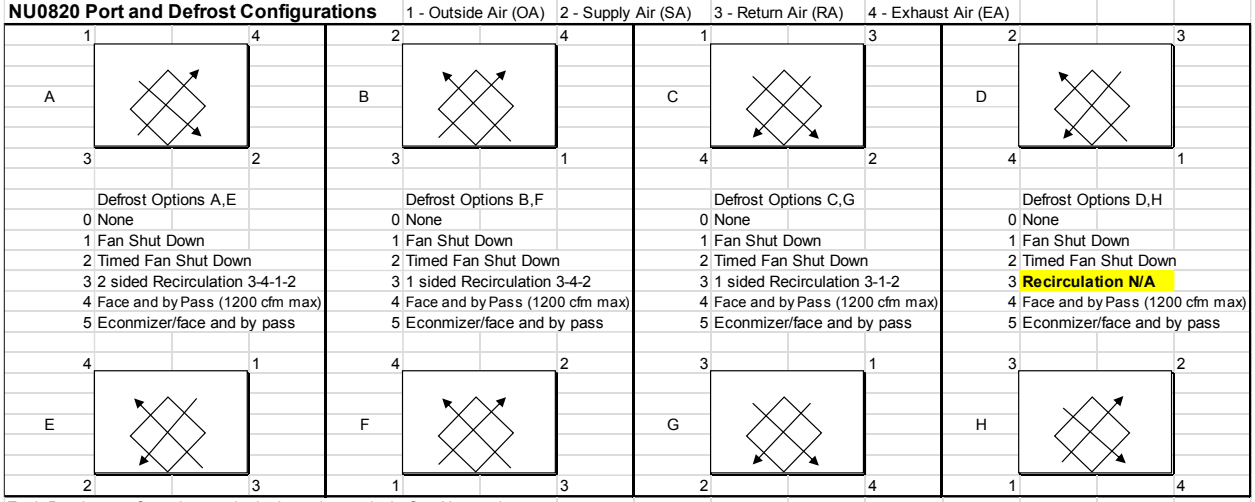
3 NOMENCLATURE

3.1 NU0820

NU0820 Port and Defrost Configurations 1 - Outside Air (OA) 2 - Supply Air (SA) 3 - Return Air (RA) 4 - Exhaust Air (EA)



NU0820 Port and Defrost Configurations 1 - Outside Air (OA) 2 - Supply Air (SA) 3 - Return Air (RA) 4 - Exhaust Air (EA)



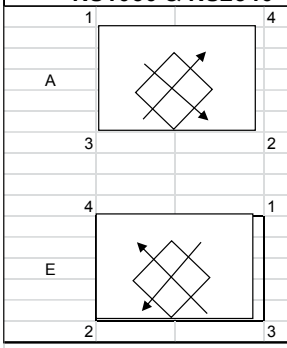
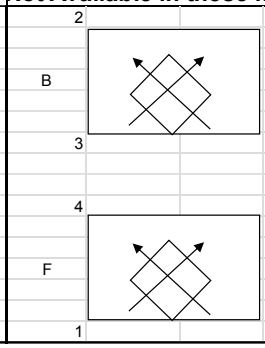
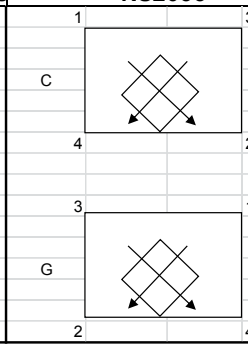
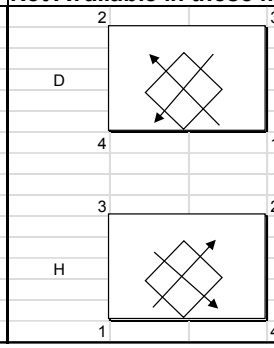
Each Port in a configuration can be horizontal or vertical. See Nomenclature

Defrost Recommendations*

Type	Winter Design Temperature Celsius	Winter Design Temperature Fahrenheit	Factory default timing (field adjustable) Run	Defrost
0 - none	> -5	> 23		
1 - fan shut down	> -10	> 14		
2 - timed fan shut down	> -15	> 5	36 min	6 min
3 - recirculation	<-15	<5	36 min	6 min
4 - face&by pass	uninterrupted ventilation and free cooling			

* not withstanding other design considerations such as building pressure, preheat, delivered air temperature, etc.

3.2 NU1030, NU2035, NU2540

NU1030 & NU2540	Not Available in these models	NU2035	Not Available in these models
			

1 - OA 2 - SA 3 - RA 4 - EA

Nomenclature Example												
NU2035	Configuration	OA	SA	RA	EA	Defrost	Voltage	Premium Mtr	Sup mtr	Ex mtr	Core	Cabinet
	C					0-none	1 - 240/1	0 - no	a - 1/2 hp	a - 1/2 hp	p - poly	g - galv
	G	2-horizontal	2-horizontal	2-horizontal	2-horizontal	1-fan	2 - 208/3	*1 - yes	b - 3/4 hp	b - 3/4 hp	e - enthalpy	a - aluminum
						2-timed fan	4 - 460/3		c - 1 hp	c - 1 hp		white
							5 - 575/3		d - 1.5 hp	d - 1.5 hp		
									e - 2 hp	e - 2 hp		
		4-horizontal mtr BD damper			4-horizontal gravity BD damper	4-face&by pass			f - 3 hp	f - 3 hp		
						5-economizer						
								*89.5% eff, VFD Compatible				
NU2540	Configuration	OA	SA	RA	EA	Defrost	Voltage	Premium Mtr	Sup mtr	Ex mtr	Core	Cabinet
NU1030												
	A		1-vertical	1-vertical		0-none	1 - 240/1	0 - no	a - 1/2 hp	a - 1/2 hp	p - poly	g - galv
	E	2-horizontal	2-horizontal	2-horizontal	2-horizontal	1-fan	2 - 208/3	*1 - yes	b - 3/4 hp	b - 3/4 hp	e - enthalpy	a - aluminum
					gravity BD	2-timed fan	4 - 460/3		c - 1 hp	c - 1 hp		white
							5 - 575/3		d - 1.5 hp	d - 1.5 hp		
						4-face&by pass			e - 2 hp	e - 2 hp		
						5-economizer			f - 3 hp	f - 3 hp		
		4-horizontal mtr BD damper			4-horizontal gravity BD damper			*89.5% eff, VFD Compatible				

4 SAMPLE SPECIFICATION

GENERAL

System description:

Packaged Heat (Energy) Recovery Ventilator capable of transferring sensible (sensible and latent) energy designed to be used as a standalone ventilation system or as part of an engineered HVAC system with flat plate, cross flow heat exchanger integral to the unit.

Quality Assurance

Unit shall be constructed to CSA C22.2 standards and carry the mark label of an approved certifying body. Unit shall undergo 100% functionality testing at the factory prior to shipping. Heat exchangers shall be certified and currently listed AHRI and shall meet UL 94 flame spread and smoke generation requirements.

Storage and Handling

Unit shall not be used during construction. Unit shall be stored and handled according to the manufacturer's instructions.

Warranty

Unit shall have a 2 year warranty on all parts except the core which has a 15 year warranty (polypropylene) or 5 year warranty (enthalpy).

EQUIPMENT

Construction

The cabinet shall be double wall construction. 22 Ga. galvanized steel inner wall and 22 Ga. galvanized steel (0.050 painted white aluminum) outer wall. The unit shall be insulated with 1" R4 expanded polystyrene. All serviceable components shall be accessible through a hinged front access panel.
The heat exchanger core shall be easily removable for servicing.

Blowers

Blowers shall be FC DWDI, dynamically balanced and operate at not more than 1500 rpm. Internal vibration isolation is not required. Blower housing shall be galvanized steel.

Motors

Motors shall be continuous duty, permanently lubricated with a service factor of 1.15, matched to the fan load and required voltage and phase. Motors enclosure shall be Totally Enclosed.

Electrical requirements

The unit shall have a single point power connection within a NEMA4 enclosure with integral non-fused disconnect switch.. The unit shall be c/w 24 VAC control transformer with 200 VA for internal and remote controls.

Filtration

Unit shall come complete with 2" thick MERV 8 filters (standard).
Unit shall come complete with 2" thick MERV 13 filters (optional).

Heat exchanger

Polypropylene core constructed of flame retardant material and certified and currently listed with AHRI to Standard 1060.

Enthalpy core shall be constructed of a washable polymer membrane, treated with permanent Microban® antimicrobial protection to resist mould and odour causing bacteria, have latent energy transfer properties, flame retardancy, certified and currently listed with AHRI to Standard 1060.

Defrost

1. None - the unit may be ordered without defrost ability
2. Exhaust only defrost – a temperature sensor shuts down the supply fan when the leaving exhaust air is cold enough to freeze condensate. The supply fan remains off until the leaving exhaust air has reached +8C (47 F). The defrost sensor will allow some field adjustment of the initiation temperature.
3. Timed fan defrost – a temperature sensor shuts down the supply fan when the outside air is cold enough to freeze condensate. The supply fan remains off for a set length of time. The supply fan resumes normal operation for a set length of time and the cycle repeats as long as the outside air temperature is below the set point. Both defrost and run cycles shall be field adjustable via the unit's control.
4. Recirculation Defrost (NU0820) – a temperature sensor initiates defrost when outside air is cold enough to freeze condensate. The exhaust fan shuts down, the recirculation damper opens, the gravity and motorized back draft dampers close. The defrost cycle occurs for a field selectable length of time followed by a field selectable time of normal operation. The cycle repeats as long as the outside air temperature warrants.
5. Face and by Pass – a temperature sensor initiates by pass mode when the leaving exhaust temperature is cold enough to freeze condensate. Heat recovery is interrupted and both fans continue to run. Heat recovery mode resumes when the leaving exhaust temperature is above +8C (47 F).
6. Economizer – Economizer controls are integrated with the face and by pass damper. Temperature sensors in the RA and OA communicate with an adjustable temperature sensing relay to enable free cooling when the conditions are suitable.

Variable frequency drive

N0. Unit comes with motor starters.
Yes. Factory shall supply VFD for each motor.

Cabinet

22 Ga. Galvanized Steel
0.050 pre-painted white aluminum

Dirty filter contact

Yes – 2 pressure switches with the unit.
No – pressure switches not supplied.

End switch

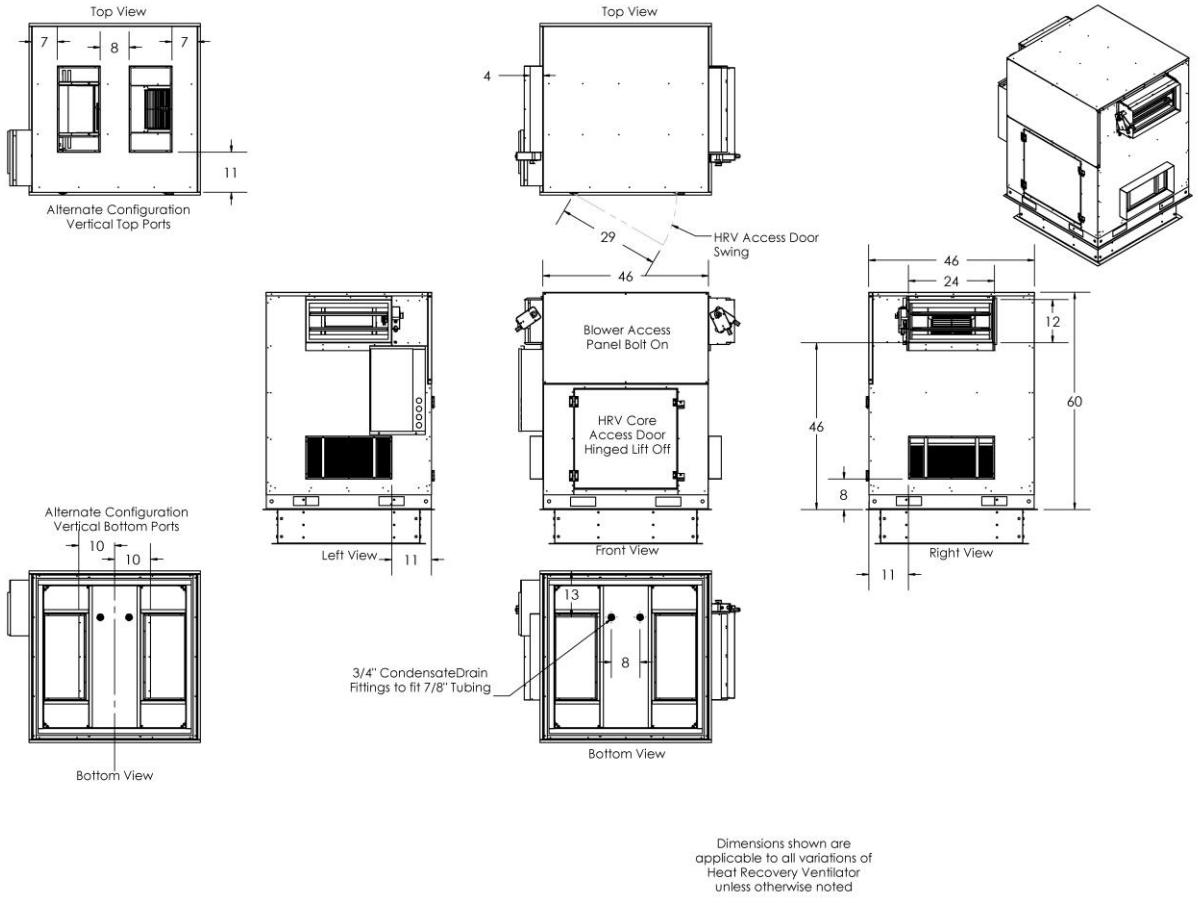
An auxiliary contact from each motor starter shall be provided. This contact is shipped dry but can be made 24VAC by moving a jumper.

Roof Curb

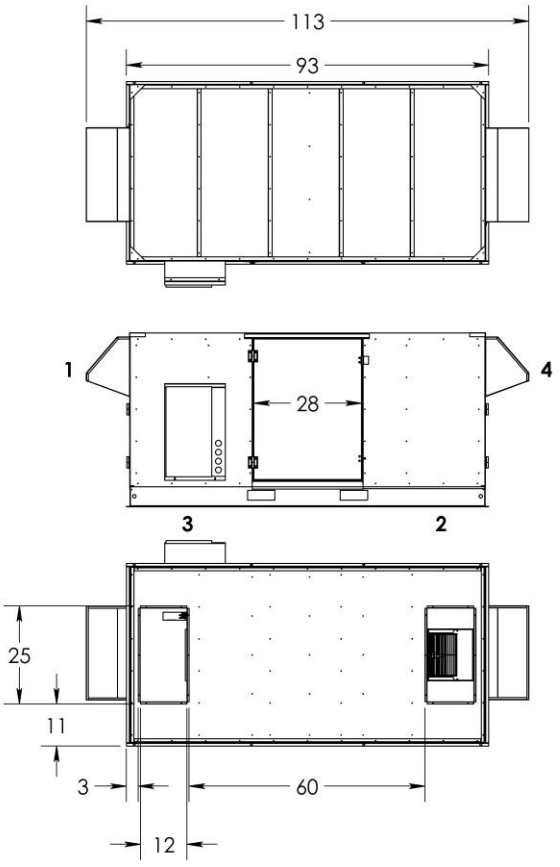
A 14” roof curb shall be supplied by the equipment manufacturer.

5 DIMENSIONAL DATA

5.1 NU0820

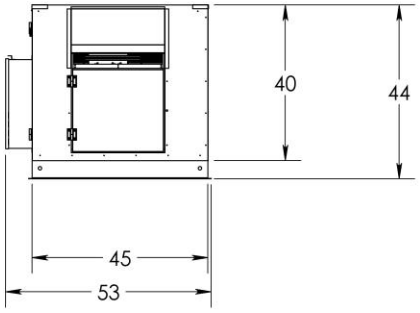


5.2 NU1030

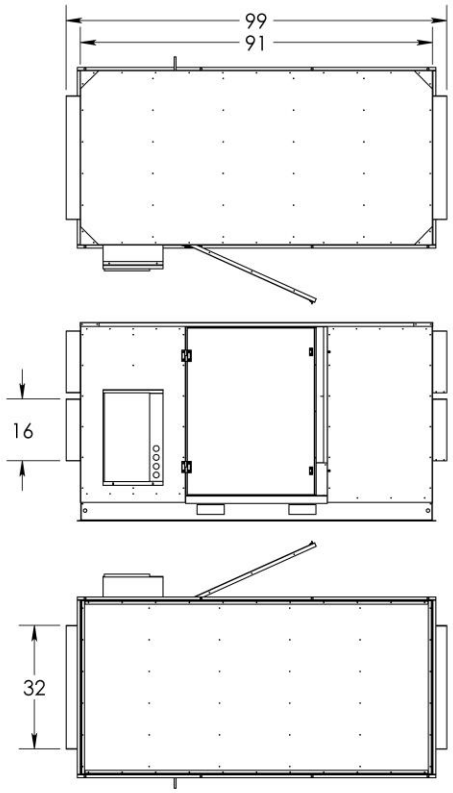


Air Stream	Designation	Location	
Standard Door Location		Standard	Option
Outside Air (OA)	1	Side	None
Supply Air (SA)	2	Bottom	Side
Return Air (RA)	3	Botton	Side*
Exhaust Air (EA)	4	Side	None
Reverse Door Location			
Outside Air (OA)	4	Side	None
Supply Air (SA)	3	Bottom	Side
Return Air (RA)	2	Bottom	Side*
Exhaust Air (EA)	1	Side	None

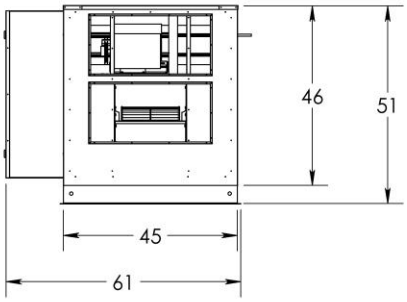
* When side port, OA hood must be field relocated to a minimun of 36" above nearest horizontal surface to avoid snow or rain entering or blocking the hood.



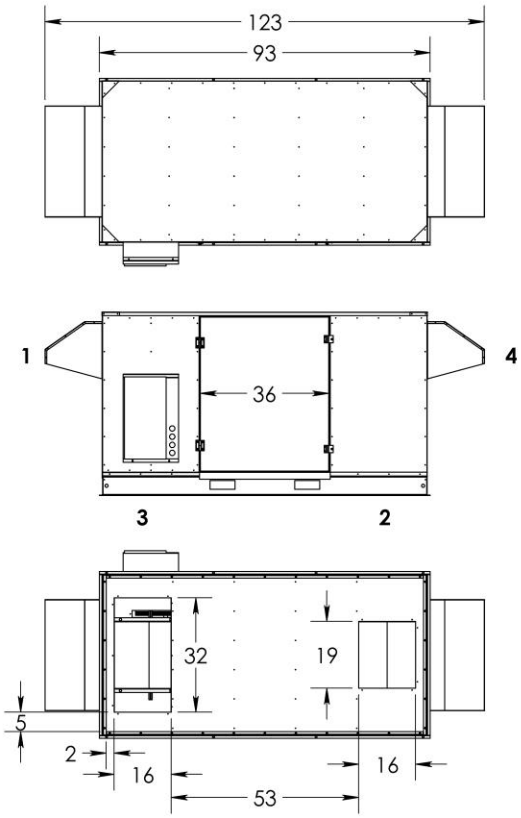
5.3 NU2035



Air Stream	Designation	Location	
Standard Door Location		Standard	Option
Outside Air (OA)	1	Side	None
Supply Air (SA)	2	Bottom	Side
Return Air (RA)	3	Bottom	Side*
Exhaust Air (EA)	4	Side	None
Reverse Door Location			
Outside Air (OA)	4	Side	None
Supply Air (SA)	3	Bottom	Side
Return Air (RA)	2	Bottom	Side*
Exhaust Air (EA)	1	Side	None

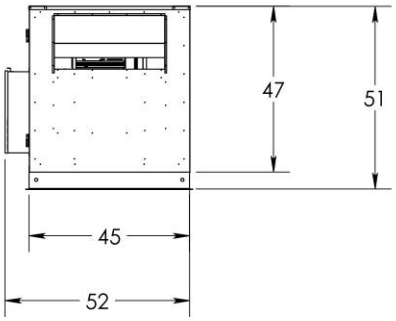


5.4 NU2540

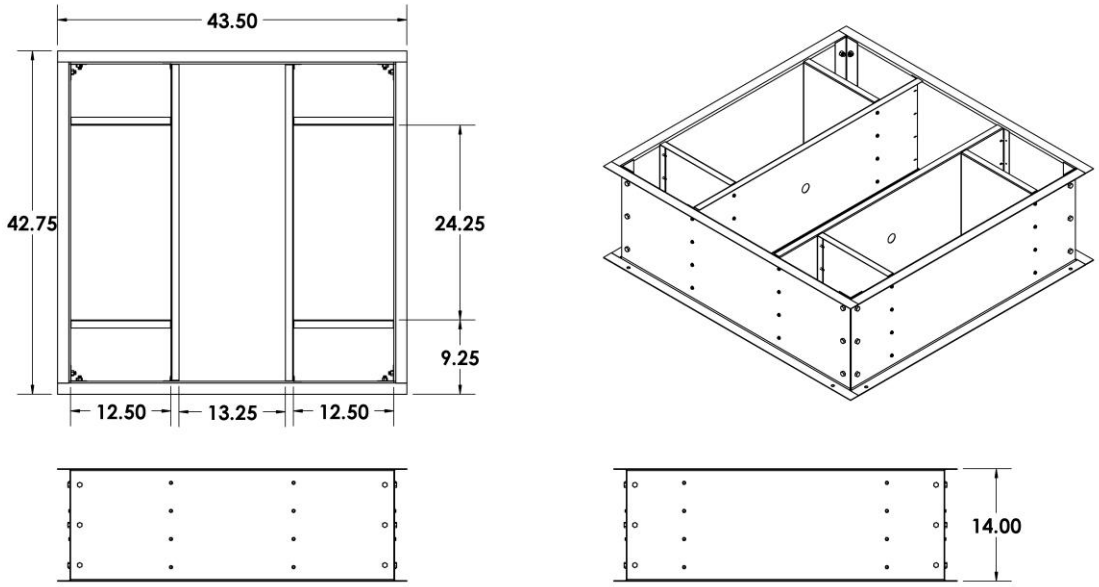


Air Stream	Designation	Location	
Standard Door Location		Standard	Option
Outside Air (OA)	1	Side	None
Supply Air (SA)	2	Bottom	Side
Return Air (RA)	3	Botton	Side*
Exhaust Air (EA)	4	Side	None
Reverse Door Location			
Outside Air (OA)	4	Side	None
Supply Air (SA)	3	Bottom	Side
Return Air (RA)	2	Bottom	Side*
Exhaust Air (EA)	1	Side	None

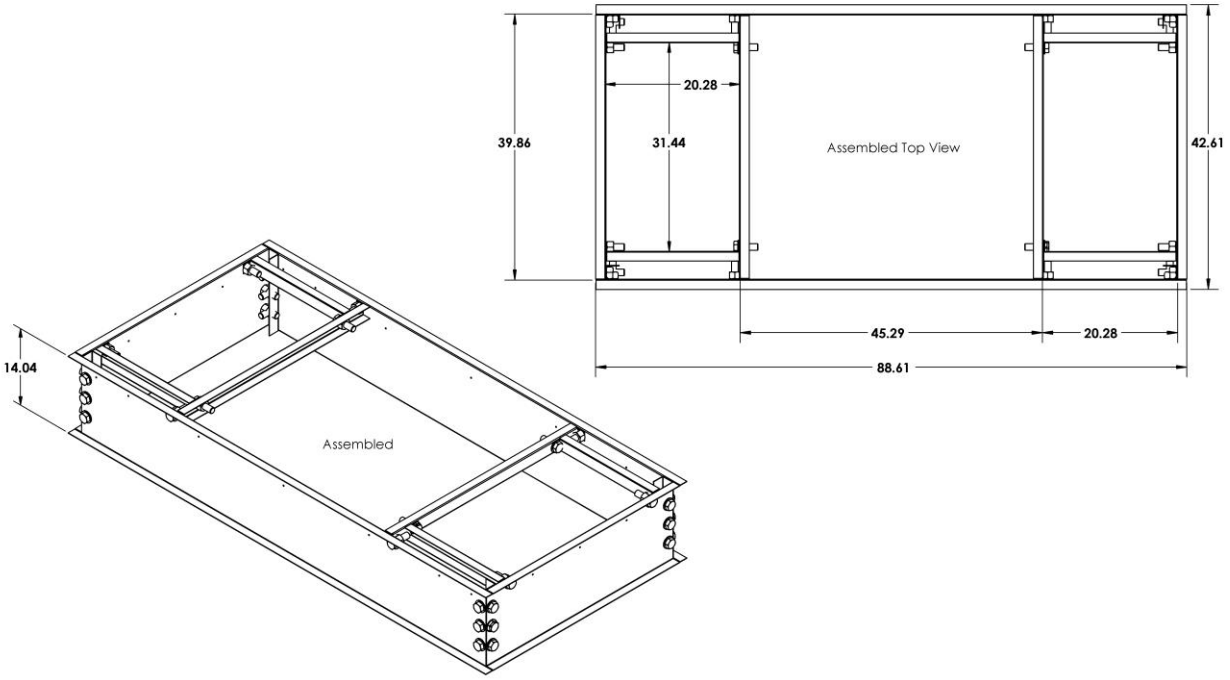
* When side port, OA hood must be field relocated to a minimun of 36" above nearest horizontal surface to avoid snow or rain entering or blocking the hood.



5.5 NU0820 Curb



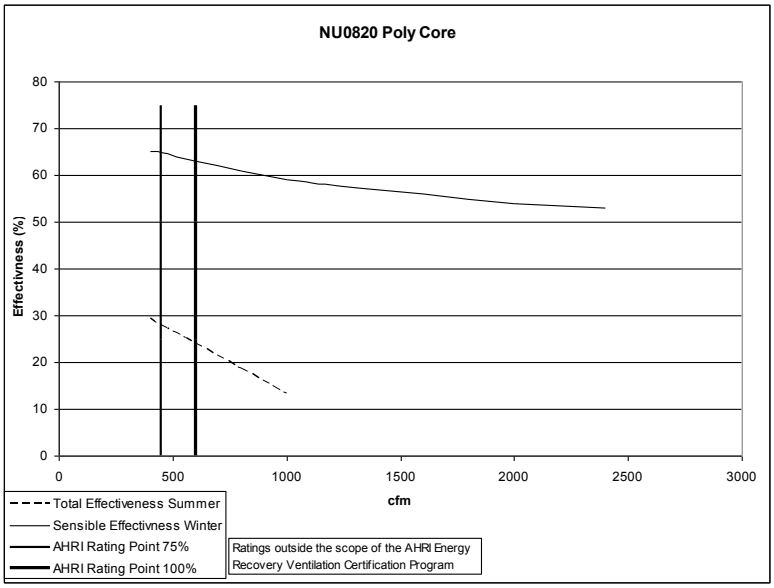
5.6 NU1030 and NU2540 Curb



6 PERFORMANCE DATA – EFFECTIVENESS

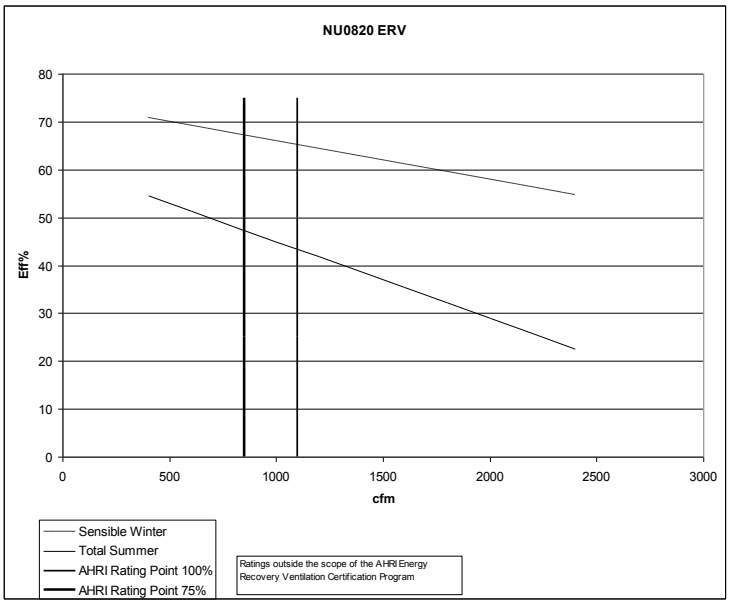
6.1 NU0820 & NU1030

6.1.1 HRV



Model no.	PC 18		
Type	Plate		
Nominal Air Flow (scfm)	300		
Pressure drop (inches)	0.07		
Leakage Ratings	Diff. Pressure	EATR %	OACF
Test 1	-0.5	0.00	1.00
Test 2	0	0.00	1.00
Test 3	0.5	0.00	1.00
Thermal Effectiveness Ratings at 0" Pressure Differential			
	Sensible	Latent	Total
100% air Flow Heating	63	0	39
75% air Flow Heating	65	0	43
100% air Flow cooling	67	0	24
75% air Flow Cooling	71	0	28
	Net Sensible	Net Latent	Net Total
100% air Flow Heating	63	0	39
75% air Flow Heating	65	0	43
100% air Flow cooling	67	0	24
75% air Flow Cooling	71	0	28

6.1.2 ERV



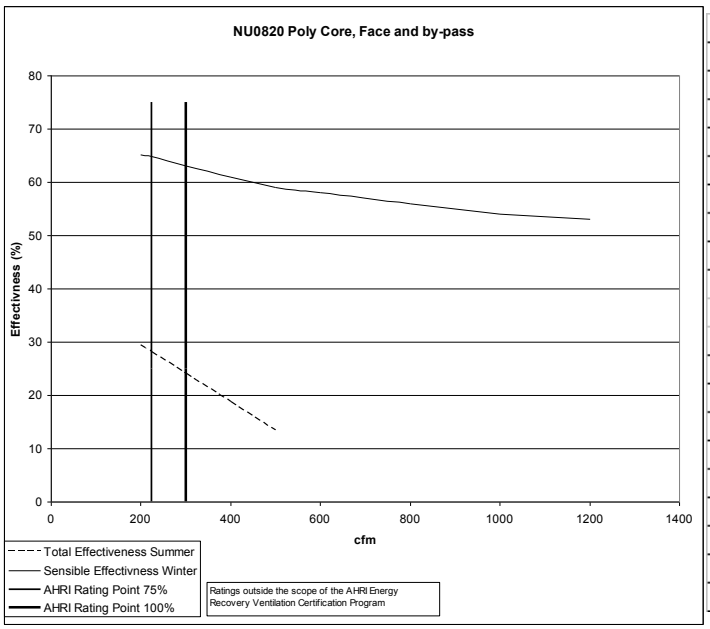
Model no.	EXC-17S-20H-250		
Type	Plate		
Nominal Air Flow (scfm)	550		
Pressure drop (inches)	0.35		
Leakage Ratings	Diff. Pressu	EATR %	OACF
Test 1	-0.5	0.00	1.00
Test 2	0	0.00	1.00
Test 3	0.5	0.00	1.00

Thermal Effectiveness Ratings at 0" Pressure Differential

	Sensible	Latent	Total
100% air Flow Heating	66	30	54
75% air Flow Heating	68	32	56
100% air Flow cooling	80	24	45
75% air Flow Cooling	82	28	49
	Net Sensib	Net Latent	Net Total
100% air Flow Heating	66	30	54
75% air Flow Heating	68	32	56
100% air Flow cooling	80	24	45
75% air Flow Cooling	82	28	49

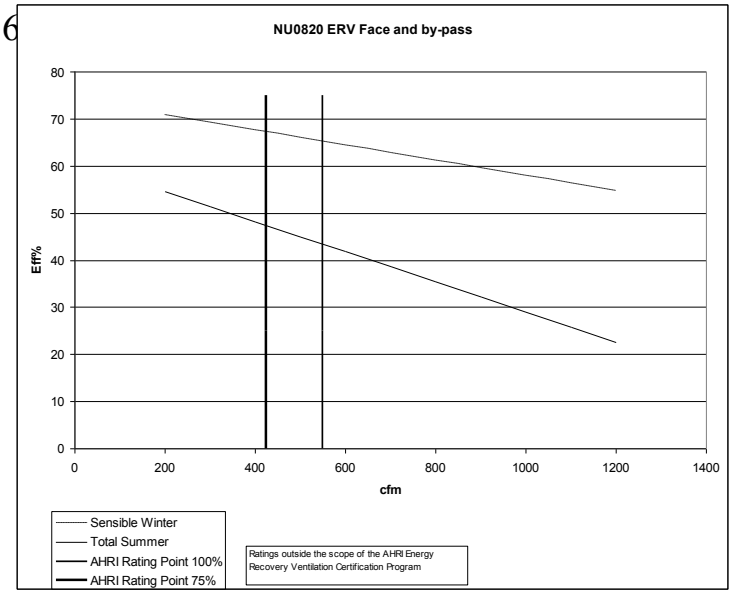
6.2 NU0820 Face and By Pass

6.2.1 HRV



Model no.	PC 18		
Type	Plate		
Nominal Air Flow (scfm)	300		
Pressure drop (inches)	0.07		
Leakage Ratings	Diff. Pressure	EATR %	OACF
Test 1	-0.5	0.00	1.00
Test 2	0	0.00	1.00
Test 3	0.5	0.00	1.00
Thermal Effectiveness Ratings at 0" Pressure Differential			
	Sensible	Latent	Total
100% air Flow Heating	63	0	39
75% air Flow Heating	65	0	43
100% air Flow cooling	67	0	24
75% air Flow Cooling	71	0	28
	Net Sensible	Net Latent	Net Total
100% air Flow Heating	63	0	39
75% air Flow Heating	65	0	43
100% air Flow cooling	67	0	24
75% air Flow Cooling	71	0	28

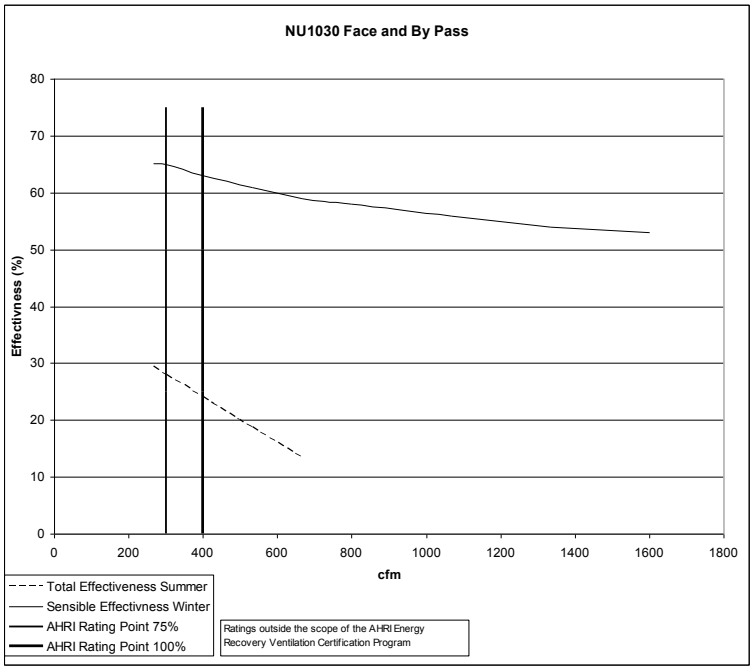
6.2.2 ERV



Model no.	EXC-17S-20H-250		
Type	Plate		
Nominal Air Flow (scfm)	550		
Pressure drop (inches)	0.35		
Leakage Ratings	Diff. Pressu	EATR %	OACF
Test 1	-0.5	0.00	1.00
Test 2	0	0.00	1.00
Test 3	0.5	0.00	1.00
Thermal Effectiveness Ratings at 0" Pressure Differential			
	Sensible	Latent	Total
100% air Flow Heating	66	30	54
75% air Flow Heating	68	32	56
100% air Flow cooling	80	24	45
75% air Flow Cooling	82	28	49
	Net Sensib	Net Latent	Net Total
100% air Flow Heating	66	30	54
75% air Flow Heating	68	32	56
100% air Flow cooling	80	24	45
75% air Flow Cooling	82	28	49

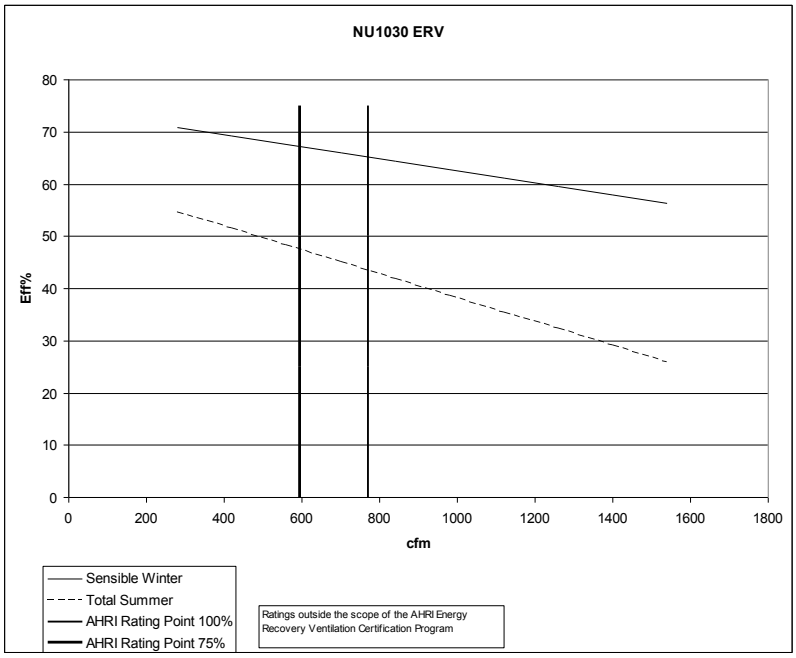
6.3 NU1030 face and by Pass

6.3.1 HRV



Model no.	PC 18		
Type	Plate		
Nominal Air Flow (scfm)	300		
Pressure drop (inches)	0.07		
Leakage Ratings	Diff. Pressure	EATR %	OACF
Test 1	-0.5	0.00	1.00
Test 2	0	0.00	1.00
Test 3	0.5	0.00	1.00
Thermal Effectiveness Ratings at 0" Pressure Differential			
	Sensible	Latent	Total
100% air Flow Heating	63	0	39
75% air Flow Heating	65	0	43
100% air Flow cooling	67	0	24
75% air Flow Cooling	71	0	28
	Net Sensible	Net Latent	Net Total
100% air Flow Heating	63	0	39
75% air Flow Heating	65	0	43
100% air Flow cooling	67	0	24
75% air Flow Cooling	71	0	28

6.3.2 ERV



Model no.	EXC-17S-20H-250		
Type	Plate		
Nominal Air Flow (scfm)	550		
Pressure drop (inches)	0.35		
Leakage Ratings	Diff. Pressure	EATR %	OACF
Test 1	-0.5	0.00	1.00
Test 2	0	0.00	1.00
Test 3	0.5	0.00	1.00

Thermal Effectiveness Ratings at 0" Pressure Differential

	Sensible	Latent	Total
100% air Flow Heating	66	30	54
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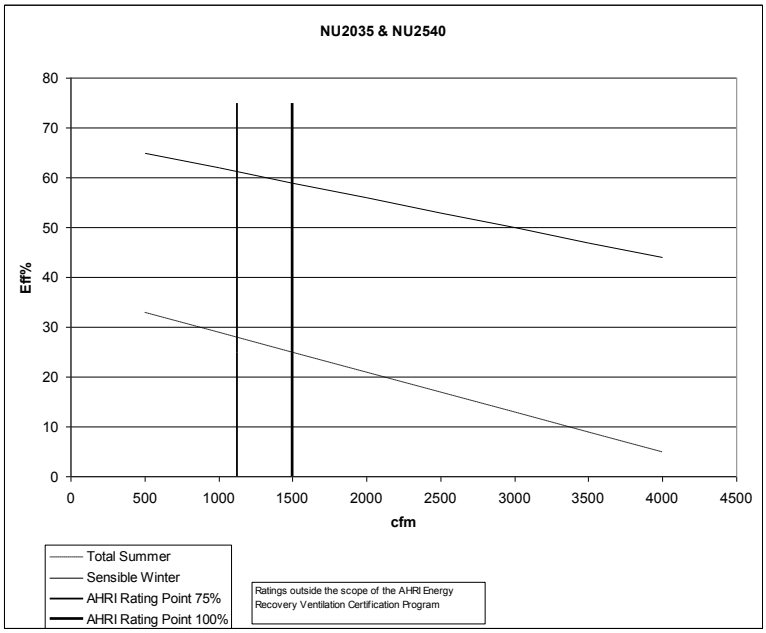
	Net Sensible	Net Latent	Net Total
100% air Flow Heating	66	30	54
75% air Flow Heating	68	32	56
100% air Flow cooling	80	24	45
75% air Flow Cooling	82	28	49

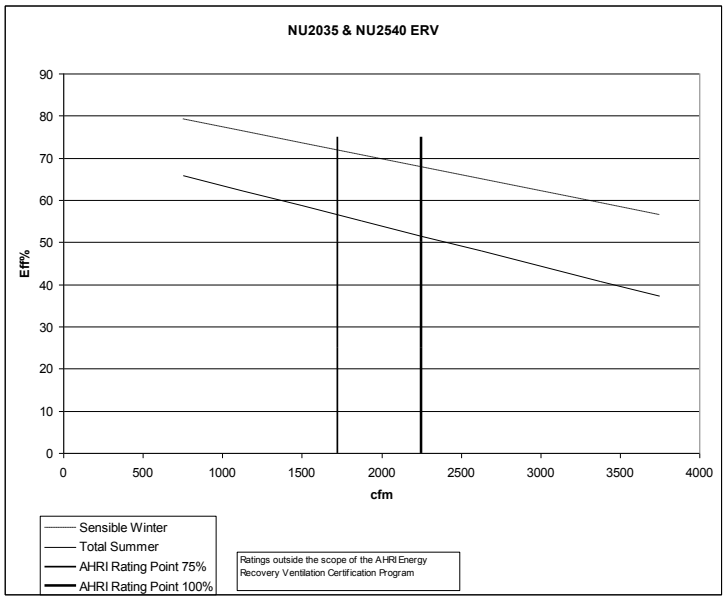
6.4 NU2035 & NU2540

6.4.1 HRV



Model no.	PC 24		
Type	Plate		
Nominal Air Flow (scfm)	500		
Pressure drop (inches)	0.18		
Leakage Ratings	Diff. Pressure	EATR %	OACF
Test 1	-0.5	0.00	1.00
Test 2	0	0.00	1.00
Test 3	0.5	0.00	1.00
Thermal Effectiveness Ratings at 0" Pressure Differential			
	Sensible	Latent	Total
100% air Flow Heating	59	0	38
75% air Flow Heating	62	0	42
100% air Flow cooling	60	0	25
75% air Flow Cooling	65	0	28
	Net Sensible	Net Latent	Net Total
100% air Flow Heating	59	0	38
75% air Flow Heating	62	0	42
100% air Flow cooling	60	0	25
75% air Flow Cooling	65	0	28

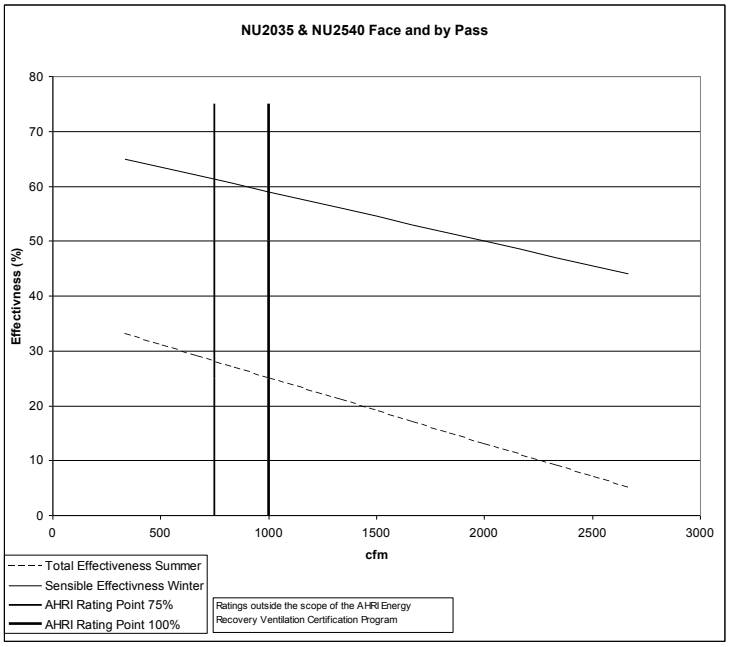
6.4.2 ERV



Model no.	EXC-24S-15H-250		
Type	Plate		
Nominal Air Flow (scfm)	750		
Pressure drop (inches)	0.63		
Leakage Ratings	Diff. Pressure	EATR %	OACF
Test 1	-0.5	0.00	1.00
Test 2	0	0.00	1.00
Test 3	0.5	0.00	1.00
Thermal Effectiveness Ratings at 0" Pressure Differential			
	Sensible	Latent	Total
100% air Flow Heating	68	38	58
75% air Flow Heating	72	40	61
100% air Flow cooling	81	34	52
75% air Flow Cooling	87	38	57
	Net Sensible	Net Latent	Net Total
100% air Flow Heating	68	38	58
75% air Flow Heating	72	40	61
100% air Flow cooling	81	34	52
75% air Flow Cooling	87	38	57

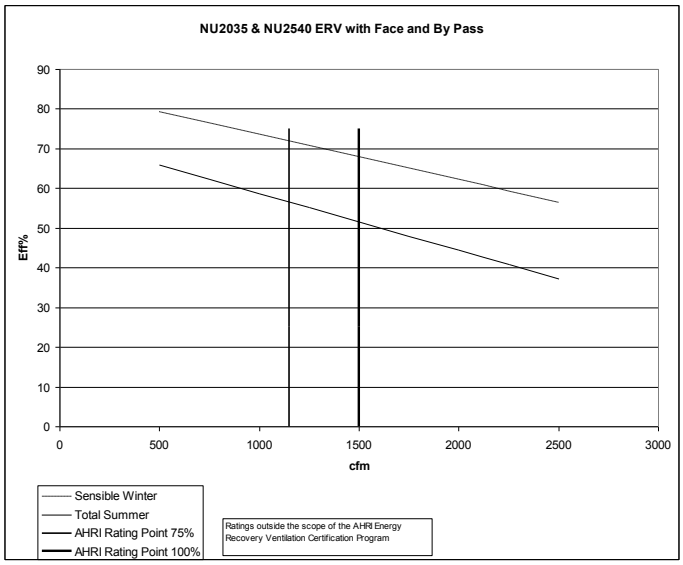
6.5 NU2035 & NU2540 Face and By Pass

6.5.1 HRV



Model no.	PC 24		
Type	Plate		
Nominal Air Flow (scfm)	500		
Pressure drop (inches)	0.18		
Leakage Ratings	Diff. Pressure	EATR %	OACF
Test 1	-0.5	0.00	1.00
Test 2	0	0.00	1.00
Test 3	0.5	0.00	1.00
Thermal Effectiveness Ratings at 0" Pressure Differential			
	Sensible	Latent	Total
100% air Flow Heating	59	0	38
75% air Flow Heating	62	0	42
100% air Flow cooling	60	0	25
75% air Flow Cooling	65	0	28
	Net Sensible	Net Latent	Net Total
100% air Flow Heating	59	0	38
75% air Flow Heating	62	0	42
100% air Flow cooling	60	0	25
75% air Flow Cooling	65	0	28

6.5.2 ERV



Model no.	EXC-24S-15H-250		
Type	Plate		
Nominal Air Flow (scfm)	750		
Pressure drop (inches)	0.63		
Leakage Ratings	Diff. Pressure	EATR %	OACF
Test 1	-0.5	0.00	1.00
Test 2	0	0.00	1.00
Test 3	0.5	0.00	1.00
Thermal Effectiveness Ratings at 0" Pressure Differential			
	Sensible	Latent	Total
100% air Flow Heating	68	38	58
75% air Flow Heating	72	40	61
100% air Flow cooling	81	34	52
75% air Flow Cooling	87	38	57
	Net Sensible	Net Latent	Net Total
100% air Flow Heating	68	38	58
75% air Flow Heating	72	40	61
100% air Flow cooling	81	34	52
75% air Flow Cooling	87	38	57

7 PERFORMANCE DATA – FANS

7.1 NU0820 HRV

Motor Blower Data - all defrost except Face and by-pass													
	ESP		ESP		ESP		ESP		ESP		ESP		
	0.25		0.50		0.75		1.00		1.25		1.50		
CFM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	
800	0.10	586	0.18	773	0.26	919	0.34	1040	0.43	1143	0.52	1235	3/4 hp
900	0.12	605	0.20	789	0.29	935	0.39	1057	0.48	1164	0.58	1258	
1000	0.15	628	0.23	899	0.33	950	0.43	1073	0.54	1181	0.65	1278	
1100	0.17	652	0.27	823	0.37	966	0.48	1089	0.59	1197	0.71	1295	
1200	0.21	682	0.31	841	0.42	982	0.53	1104	0.65	1213	0.78	1310	1hp
1300	0.25	714	0.35	862	0.47	999	0.59	1120	0.72	1228	0.85	1326	
1400	0.29	746	0.40	884	0.52	1018	0.65	1137	0.79	1244	0.92	1342	
1500	0.34	781	0.45	909	0.58	1037	0.72	1154	0.86	1260	1.01	1357	1.5hp
1600	0.40	816	0.51	936	0.65	1058	0.79	1172	0.94	1277	1.09	1374	
1700	0.46	851	0.58	966	0.72	1080	0.87	1191	1.02	1294	1.18	1390	
1800	0.54	887	0.66	997	0.80	1103	0.95	1211	1.12	1312	1.28	1407	
1900	0.62	924	0.75	1030	0.89	1129	1.05	1233	1.12	1332	1.39	1424	
2000	0.70	961	0.84	1063	0.99	1158	1.15	1256	1.32	1352	1.50	1443	

7.2 NU0820 HRV Face and By Pass

Motor Blower Data for Face and by-pass													
	ESP		ESP		ESP		ESP		ESP		ESP		
	0.25		0.50		0.75		1.00		1.25		1.50		
CFM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	
													0.5 hp
800	0.22	849	0.30	982	0.39	1094	0.48	1190	0.57	1277	0.67	1358	3/4 hp
900	0.28	920	0.38	1044	0.47	1153	0.57	1248	0.67	1333	0.78	1412	
1000	0.36	993	0.47	1110	0.57	1214	0.68	1308	0.79	1392	0.90	1469	1 hp
1100	0.46	1068	0.57	1179	0.69	1278	0.81	1368	0.93	1452			
1200	0.58	1145	0.70	1249	0.82	1344	0.95	1431					

NU0820										
RPM	Pulley Set		Turns							
Range	Motor	Blower	5	4.5	4	3.5	3	2.5	2	1.5
600-800	MVL34	MBL67	600	625	650	700	725	750	775	800
750-900	MVL34	MBL57	725	750	775	800	825	875	900	925
900-1150	MVL34	MBL47	900	950	975	1000	1075	1125	1150	1175
1150-1450	MVL34	MBL37	1100	1150	1200	1250	1450			

7.3 NU0820 ERV

Motor Blower Data - all defrost except Face and by-pass

	CFM	ESP 0.25 BHP	RPM	ESP 0.50 BHP	RPM	ESP 0.75 BHP	RPM	ESP 1.00 BHP	RPM	ESP 1.25 BHP	RPM	ESP 1.50 BHP	RPM	
	800	0.12	637	0.20	814	0.28	952	0.37	1070	0.46	1169	0.55	1258	
	900	0.15	663	0.23	835	0.32	972	0.42	1090	0.51	1193	0.61	1283	3/4hp
	1000	0.18	700	0.27	864	0.37	999	0.47	1116	0.58	1219	0.69	1312	
	1100	0.22	826	0.32	892	0.42	1025	0.53	1140	0.65	1243	0.76	1336	
	1200	0.26	773	0.37	923	0.48	1052	0.60	1166	0.72	1268	0.85	1361	1hp
	1300	0.31	810	0.42	953	0.55	1079	0.67	1191	0.80	1293	0.93	1385	
1/2hp	1400	0.37	850	0.49	987	0.62	1109	0.75	1219	0.89	1319	1.03	1410	
	1500	0.43	888	0.56	1018	0.70	1137	0.84	1245	0.98	1343	1.13	1435	1.5hp
	1600	0.51	932	0.64	1054	0.79	1169	0.93	1274	1.09	1371	1.24	1461	
	1700	0.60	978	0.74	1093	0.89	1203	1.04	1305	1.20	1400	1.37	1488	
	1800	0.69	1023	0.84	1130	0.99	1236	1.16	1336	1.32	1429			
	1900	0.80	1065	0.94	1166	1.10	1268	1.27	1365	1.45	1456			
	2000	0.92	1114	1.07	1209	1.24	1307	1.41	1401	1.60	1489			

7.4 NU0820 ERV Face and By Pass

Motor Blower Data for Face and by-pass

	CFM	ESP 0.25 BHP	RPM	ESP 0.50 BHP	RPM	ESP 0.75 BHP	RPM	ESP 1.00 BHP	RPM	ESP 1.25 BHP	RPM	ESP 1.50 BHP	RPM	
1/2hp	800	0.30	978	0.39	1091	0.47	1187	0.57	1275	0.66	1356	0.76	1431	1 hp
	900	0.40	1072	0.50	1178	0.60	1270	0.70	1353	0.80	1430			
3/4hp	1000	0.52	1167	0.63	1265	0.74	1354	0.85	1433					
	1100	0.67	1262	0.79	1354	0.91	1439							
	1200	0.85	1361	0.98	1448									

7.5 NU1030 HRV

	ESP 0.25		ESP 0.50		ESP 0.75		ESP 1.00		ESP 1.25		ESP 1.50		
CFM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	
1000	0.15	628	0.23	899	0.33	950	0.43	1073	0.54	1181	0.65	1278	3/4 hp
1100	0.17	652	0.27	823	0.37	966	0.48	1089	0.59	1197	0.71	1295	
1200	0.21	682	0.31	841	0.42	982	0.53	1104	0.65	1213	0.78	1310	1 hp
1300	0.25	714	0.35	862	0.47	999	0.59	1120	0.72	1228	0.85	1326	
1400	0.29	746	0.40	884	0.52	1018	0.65	1137	0.79	1244	0.92	1342	
1500	0.34	781	0.45	909	0.58	1037	0.72	1154	0.86	1260	1.01	1357	1.5 hp
1600	0.40	816	0.51	936	0.65	1058	0.79	1172	0.94	1277	1.09	1374	
1700	0.46	851	0.58	966	0.72	1080	0.87	1191	1.02	1294	1.18	1390	
1800	0.54	887	0.66	997	0.80	1103	0.95	1211	1.12	1312	1.28	1407	
1900	0.62	924	0.75	1030	0.89	1129	1.05	1233	1.12	1332	1.39	1424	
2000	0.70	961	0.84	1063	0.99	1158	1.15	1256	1.32	1352	1.50	1443	
2100	0.80	1001	0.94	1098	1.10	1190	1.26	1281	1.44	1374	1.62	1463	2 hp
2200	0.91	1037	1.05	1131	1.21	1220	1.37	1305	1.56	1395	1.75	1482	
2300	1.02	1076	1.18	1167	1.34	1253	1.51	1335	1.69	1419			
2400	1.15	1115	1.31	1202	1.47	1286	1.65	1365	1.83	1444			
2500	1.28	1156	1.45	1240	1.62	1321	1.80	1398	1.99	1472			
2600	1.42	1192	1.60	1273	1.77	1352	1.96	1427					
2700	1.59	1234	1.76	1313	1.95	1389							
2800	1.75	1271	1.93	1348									
2900	1.94	1314											

7.6 NU1030 HRV Face and By Pass

Face and by pass core

NU1030 Face and by Pass

	ESP 0.25		ESP 0.50		ESP 0.75		ESP 1.00		ESP 1.25		ESP 1.50		
CFM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	
800	0.10	582	0.17	771	0.26	917	0.34	1039	0.43	1142	0.52	1234	
900	0.12	607	0.20	791	0.29	936	0.39	1058	0.49	1165	0.58	1259	
1000	0.15	624	0.23	802	0.33	948	0.43	1071	0.54	1179	0.64	1276	3/4hp
1100	0.17	656	0.27	826	0.37	969	0.48	1091	0.60	1199	0.71	1296	
1200	0.21	682	0.31	841	0.42	982	0.53	1104	0.65	1213			
1300	0.25	714	0.35	863	0.47	1000	0.59	1121	0.72	1229			
1400	0.29	746	0.40	884	0.52	1017	0.65	1136	0.79	1243			
1500	0.34	782	0.45	910	0.58	1038	0.72	1155	0.86	1261			
1600	0.40	817	0.52	937	0.65	1059	0.79	1173	0.94	1278			1hp
1700	0.46	850	0.58	965	0.72	1079	0.87	1190	1.02	1293			
1800	0.54	887	0.66	997	0.80	1103	0.95	1211					
1900	0.61	923	0.75	1029	0.89	1128	1.05	1232					
2000	0.70	962	0.84	1064	0.99	1159	1.15	1256					1.5hp

7.7 NU1030 ERV

	ERV	NU1030												
		ESP 0.25		ESP 0.50		ESP 0.75		ESP 1.00		ESP 1.25		ESP 1.50		
	CFM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	
	1000	0.18	700	0.27	864	0.37	999	0.47	1116	0.58	1219	0.69	1312	
	1100	0.21	734	0.32	892	0.42	1025	0.53	1140	0.65	1243	0.76	1336	
	1200	0.26	773	0.37	923	0.48	1052	0.60	1166	0.72	1268	0.85	1361	1hp
	1300	0.31	810	0.42	953	0.55	1079	0.67	1191	0.80	1293	0.93	1385	
0.5hp	1400	0.37	850	0.49	987	0.62	1109	0.75	1219	0.89	1319	1.03	1410	
	1500	0.43	888	0.56	1018	0.70	1137	0.84	1245	0.98	1343	1.13	1435	
	1600	0.51	932	0.64	1054	0.79	1169	0.93	1274	1.09	1371	1.24	1461	
	1700	0.60	978	0.74	1093	0.89	1203	1.04	1305	1.20	1400	1.37	1488	1.5hp
	1800	0.70	1031	0.84	1130	0.99	1236	1.16	1336	1.32	1429			
	1900	0.80	1065	0.94	1166	1.10	1268	1.27	1365	1.45	1456			
	2000	0.92	1114	1.07	1209	1.24	1307	1.41	1401	1.60	1489			
	2100	1.05	1161	1.20	1250	1.38	1344							

7.8 NU1030 ERV Face and By Pass

	Face and by pass core													
		ESP 0.25		ESP 0.50		ESP 0.75		ESP 1.00		ESP 1.25		ESP 1.50		
	CFM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	
	800	0.18	776	0.26	921	0.35	1043	0.43	1145	0.53	1237	0.62	1320	3/4hp
	900	0.23	835	0.32	972	0.42	1090	0.51	1193	0.61	1283	0.71	1366	
	1000	0.29	893	0.39	1024	0.49	1138	0.60	1239	0.71	1331	0.82	1412	1hp
1/2hp	1100	0.36	952	0.47	1077	0.58	1187	0.70	1285	0.82	1375	0.94	1458	
	1200	0.45	1018	0.57	1136	0.69	1241	0.81	1337	0.94	1424			
	1300	0.55	1084	0.68	1196	0.81	1297	0.94	1389	1.08	1474			
	1400	0.67	1149	0.80	1256	0.94	1352	1.08	1442					
	1500	0.80	1216	0.94	1317	1.09	1409	1.24	1496					
	1600	0.95	1281	1.10	1378	1.26	1467							1.5hp
	1700	1.12	1352	1.28	1443									
	1800	1.30	1418											

7.9 NU2035 & NU2540 HRV

NU2035 and NU2540

		ESP = 0		ESP = 0.2		ESP = 0.6		ESP = 1.0		ESP = 1.2		ESP = 1.4		ESP = 1.75		ESP = 2.0		
CFM		BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	
2400		0.32	440	0.46	535	0.76	695	0.97	840	1.12	898	1.27	951	1.54	1035	1.74	1090	
2500	1/2hp	0.37	461	0.51	552	0.82	707	1.04	851	1.19	908	1.35	962	1.59	1044	1.83	1101	2.0hp
2600		0.42	481	0.56	568	0.88	719	1.11	862	1.27	919	1.43	972	1.71	1056	1.92	1111	
2700		0.47	500	0.61	584	0.95	731	1.18	872	1.34	930	1.51	982	1.8	1066	2.02	1121	
2800		0.52	517	0.67	599	1.01	743	1.25	883	1.42	939	1.59	992	1.89	1076	2.11	1131	
2900	3/4hp	0.58	535	0.73	614	1.08	755	1.33	893	1.50	949	1.67	1002	1.99	1086	2.25	1149	
3000		0.63	552	0.80	629	1.16	766	1.40	902	1.58	959	1.76	1011	2.08	1095	2.31	1150	
3100		0.70	572	0.87	647	1.24	781	1.49	914	1.67	970	1.86	1022	2.19	1106	2.43	1160	3.0hp
3200		0.77	589	0.94	661	1.32	792	1.57	923	1.76	979	1.95	1031	2.29	1115	2.53	1170	
3300	1hp	0.85	608	1.02	678	1.41	806	1.66	934	1.86	990	2.05	1042	2.40	1125	2.65	1180	
3400		0.93	627	1.11	695	1.51	820	1.76	946	1.96	1001	2.16	1052	2.51	1135	2.70	1190	
3500		1.01	645	1.20	711	1.60	834	1.85	956	2.06	1011	2.27	1063	2.63	1146	2.90	1200	
3600		1.10	662	1.29	727	1.70	847	1.95	967	2.17	1022	2.38	1073	2.75	1155			
3700	1.5hp	1.20	683	1.39	746	1.82	863	2.07	980	2.28	1034	2.50	1085	2.89	1167			
3800		1.29	700	1.49	761	1.93	876	2.17	990	2.39	1043	2.62	1095					
3900		1.40	719	1.61	779	2.05	892	2.29	1003	2.52	1055	2.75	1106					
4000		1.51	738	1.72	797	2.18	906	2.42	1015	2.65	1067	2.88	1117					

7.10 NU2035 & NU2540 Face and By Pass HRV

NU2035 and NU2540 Face and by Pass

		ESP = 0		ESP = 0.2		ESP = 0.6		ESP = 1.0		ESP = 1.2		ESP = 1.4		ESP = 1.75		ESP = 2.0		
CFM		BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	
1600		0.18	489	0.26	591	0.42	745	0.56	868	0.63	921	0.71	971	0.83	1052	0.92	1106	1.0hp
1700		0.22	520	0.30	617	0.47	767	0.63	887	0.70	941	0.78	990	0.91	1070	1.01	1123	
1800		0.26	549	0.35	641	0.52	788	0.69	907	0.77	959	0.85	1008	0.99	1087	1.10	1140	
1900		0.31	581	0.40	670	0.59	812	0.77	928	0.85	980	0.97	1044	1.09	1107	1.16	1144	1.5hp
2000		0.36	612	0.46	697	0.65	835	0.84	949	0.94	1000	1.06	1064	1.18	1126	1.30	1177	
2100		0.42	641	0.52	722	0.72	857	0.92	969	1.02	1020	1.12	1067	1.28	1144	1.40	1195	
2200		0.48	673	0.59	751	0.80	881	1.01	992	1.12	1041	1.22	1088	1.39	1164			
2300		0.55	703	0.66	778	0.88	905	1.10	1013	1.21	1062	1.32	1109	1.51	1184			
2400	3/4hp	0.63	735	0.74	808	0.97	931	1.20	1037	1.32	1085	1.49	1151					
2500		0.71	766	0.83	836	1.07	956	1.31	1060	1.43	1107	1.66	1191					
2600		0.80	797	0.92	864	1.17	981	1.42	1083	1.55	1129	1.67	1174					2.0hp
2700		0.89	825	1.02	890	1.28	1004	1.54	1104	1.67	1150	1.80	1195					
2800		0.99	856	1.13	919	1.40	1030	1.67	1128	1.80	1174							
2900		1.10	886	1.24	947	1.52	1056	1.80	1152	1.94	1196							
3000		1.22	918	1.37	977	1.65	1083	1.94	1177									

7.11 NU2035 and NU2540 ERV

	ESP = 0		ESP = 0.2		ESP = 0.4		ESP = 0.6		ESP = 0.8		ESP = 1.0		ESP = 1.2		ESP = 1.4		ESP = 1.5	
CFM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
2000	0.37	617	0.46	700	0.56	769	0.66	838	0.75	897	0.85	952	0.94	1003	1.03	1050	1.08	1073
2100	0.43	650	0.53	729	0.63	796	0.73	863	0.83	921	0.93	974	1.03	1025	1.13	1072	1.18	1094
2200	0.49	681	0.60	758	0.71	823	0.81	887	0.92	944	1.02	997	1.13	1046	1.23	1093		
2300	0.56	711	0.67	785	0.78	848	0.89	911	1.00	966	1.11	1018	1.22	1067				
2400	0.63	739	0.75	811	0.87	873	0.98	934	1.10	988	1.21	1039	1.33	1088				
2500	0.72	770	0.84	840	0.96	900	1.08	959	1.20	1012	1.32	1063	1.44	1110				
2600	0.81	804	0.93	870	1.06	928	1.19	986	1.31	1038	1.44	1087						
2700	0.90	832	1.03	896	1.16	953	1.29	1010	1.42	1061	1.55	1109						
2800	1.00	863	1.14	925	1.28	980	1.41	1035	1.55	1086	1.68	1133						
2900	1.12	895	1.26	956	1.40	1010	1.54	1063	1.68	1112								
3000	1.24	927	1.39	986	1.54	1038	1.68	1090	1.82	1138								
3100	1.37	957	1.52	1014	1.67	1065	1.82	1116										
3200	1.50	987	1.66	1042														
3300	1.65	1018	1.81	1072														
3400	1.81	1051	1.97	1103														
3500	1.97	1080	2.14	1131														

7.12 NU2035 and NU2540 ERV face and by pass

	ESP = 0		ESP = 0.2		ESP = 0.4		ESP = 0.6		ESP = 0.8		ESP = 1.0		ESP = 1.2		ESP = 1.4	
CFM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
1600	0.41	742	0.49	807	0.56	863	0.63	918	0.70	969	0.77	1016	0.85	1061	0.92	1104
1700	0.50	790	0.58	851	0.66	905	0.73	958	0.80	1007	0.88	1052	0.96	1096	1.04	1137
1800	0.59	835	0.67	893	0.75	945	0.83	996	0.91	1043	0.99	1087	1.08	1130		
1900	0.69	884	0.79	939	0.88	988	0.96	1037	1.04	1083	1.13	1126				
2000	0.81	930	0.91	983	1.00	1031	1.09	1078	1.18	1121	1.26	1163				
2100	0.94	977	1.04	1027	1.17	1073	1.29	1119	1.32	1161						
2200	1.07	1022	1.18	1070	1.28	1114	1.38	1158								
2300	1.23	1070	1.34	1116	1.45	1158	1.55	1200								
2400	1.40	1115	1.51	1159												
2500	1.58	1161														

8 PERFORMANCE DATA – DRIVES

RPM	Pulley Set		Turns							
Range	Motor	Blower	5	4.5	4	3.5	3	2.5	2	1.5
	5/8 motor shaft 56H									
600-800	MVL34	MBL67	600	625	650	700	725	750	775	800
750-900	MVL34	MBL57	725	750	775	800	825	875	900	925
900-1150	MVL34	MBL47	900	950	975	1000	1075	1125	1150	1175
1150-1450	MVL34	MBL37	1100	1150	1200	1250	1450			
	7/8 motor shaft 145T									
1300-1500	8325x7/8	MBL37		1300	1350	1390	1425	1500		

9 ELECTRICAL DATA

9.1 Motors – all units

Mtr Data

	Voltage																			
hp	240/1										208/3									
	Stock	Type	Frame	RPM	Shaft	S.F.	Eff.	FLA	MCA	MOP	Stock	Type	Frame	RPM	Shaft	S.F.	Eff.	FLA	MCA	MOP
1/2	C612	TEFC	56	1725	5/8	1.15	67.1	3.6	9.1	15	H868	TEFC	56	1725	5/8	1.15	80.4	1.6	4.6	15
3/4	C669	TEFC	56	1725	5/8	1.15	69.3	5.2	12.7	20.0	H869	TEFC	56	1725	5/8	1.15	79.3	2.4	6.4	15
1	C683	TEFC	56	1725	5/8	1.15	71.0	7.5	17.9	25.0	H524	TEFC	56	1725	5/8	1.15	79.0	3.3	8.4	15
1.5	C693	TEFC	56	1725	5/8	1.15	72.0	7.5	17.9	25.0	H535	TEFC	56	1725	5/8	1.15	82.9	4.5	11.1	15.0
2	K200	TEFC	182T	1750	7/8	1.15		12.0	28.0	40.0	TE115	TEFC	145T	1730	7/8	1.15	86.5	5.6	13.6	20.0
3	K203	TEFC	184T	1725	7/8	1.15		16.0	37.0	55.0	TE121	TEFC	182T	1745	1 1/8	1.15	89.5	8.4	19.9	30.0

	Voltage																			
hp	460/3										575/3									
	Stock	Type	Frame	RPM	Shaft	S.F.	Eff.	FLA	MCA	MOP	Stock	Type	RPM	Frame	Shaft	S.F.	Eff.	FLA	MCA	MOP
1/2	H868	TEFC	56C	1725	5/8	1.15	80.4	0.9	3.0	15	H276	TENV	1725	56	5/8	1.15	77.0	0.7	2.6	15
3/4	H869	TEFC	56C	1725	5/8	1.15	79.3	1.2	3.7	15	H461	TENV	1725	56	5/8	1.15	82.0	0.8	2.8	15
1	H524	TEFC	56C	1725	5/8	1.15	79.0	1.7	4.8	15	H525	TEFC	1725	56	5/8	1.15	81.0	1.4	4.2	15
1.5	H535	TEFC	56HC	1725	5/8	1.15	82.9	2.2	6.0	15	TE109	TEFC	1740	145T	7/8	1.15	86.5	1.6	4.6	15
2	TE115	TEFC	145T	1730	7/8	1.15	86.5	2.5	6.6	15	TE116	TECF	1730	145T	7/8	1.15	86.5	2.2	6.0	15
3	TE121	TEFC	182T	1760	1 1/8	1.15	89.5	3.8	9.6	15	TE122	TEFC	1760	182T	1 1/8	1.15	89.5	3.1	8.0	15

MCA = **Minimum** circuit amps MOP = **Maximum** over-current protection Chose a standard sized overcurrent device equal or less than the

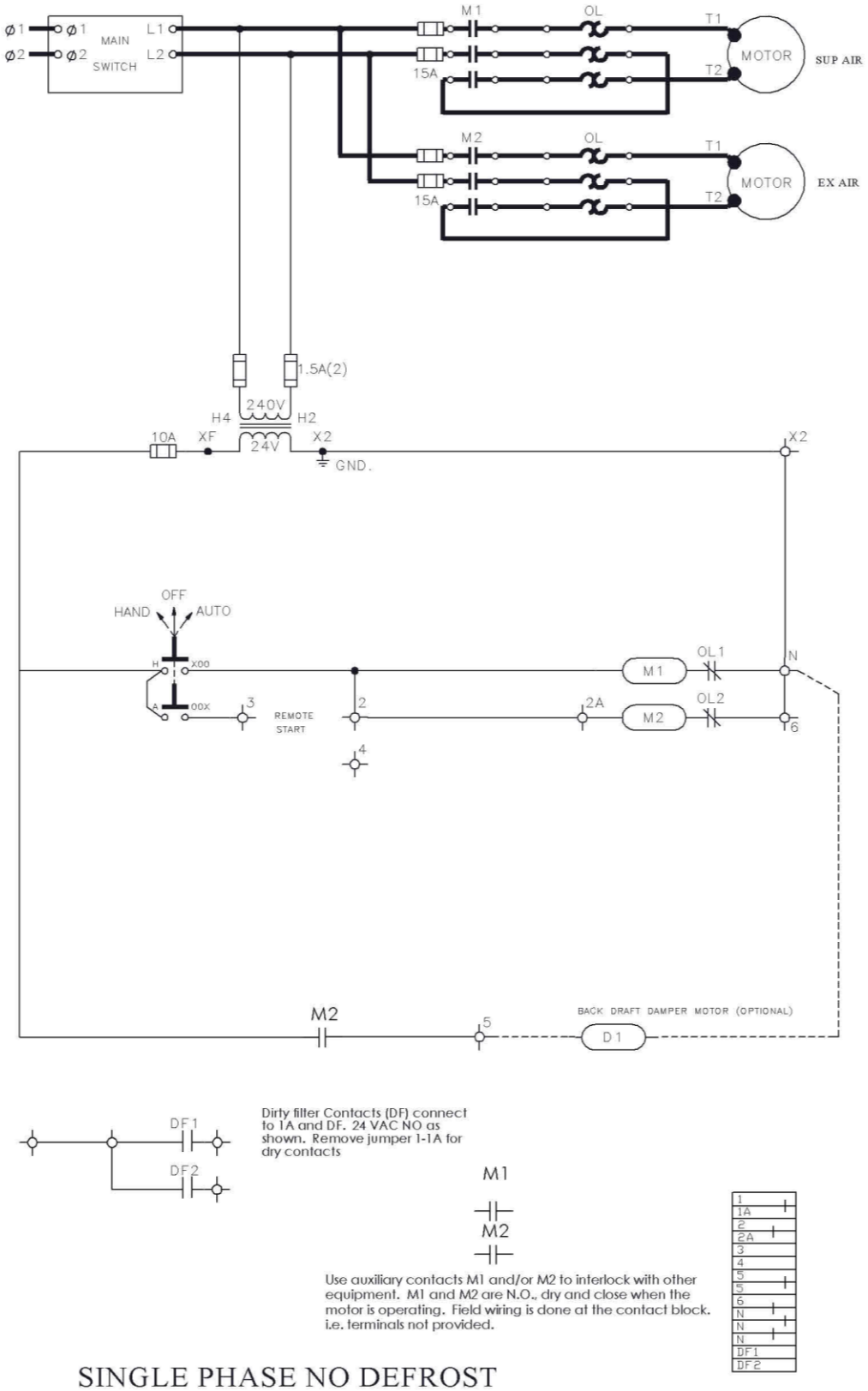
MCA = **Minimum** circuit amps MOP = **Maximum** over-current protection Chose a standard sized overcurrent device equal or less than the MOP

MCA & MOP are the HRV unit total based on both motors (supply and exhaust) being equal hp

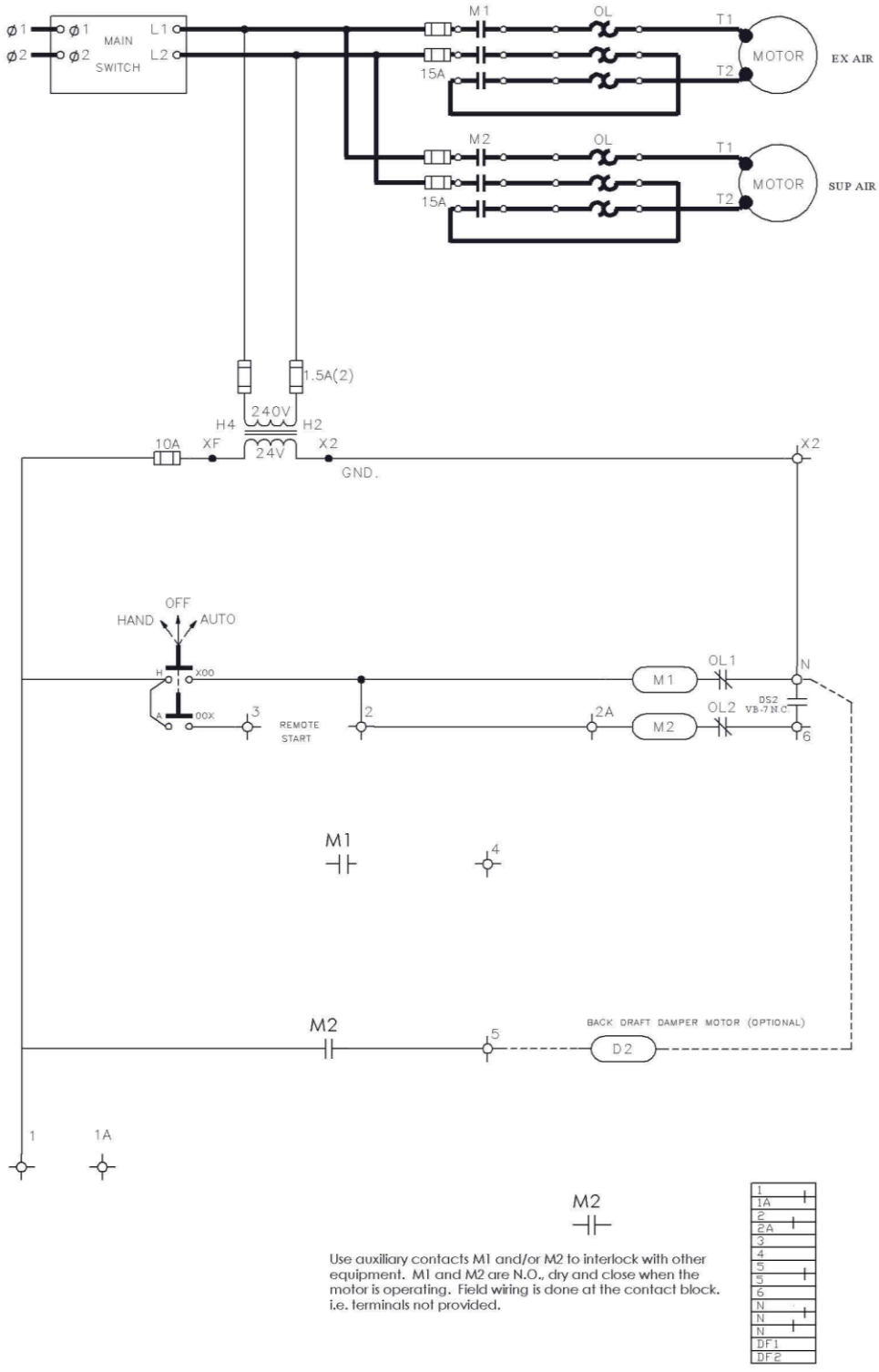
For unequal motors: MCA = FLA(larger mtr)*1.25 + FLA(smaller mtr) + 1 MOP = FLA(larger mtr)*2.25 + FLA(smaller mtr) + 1 rounded down to

9.2 Electrical Schematics

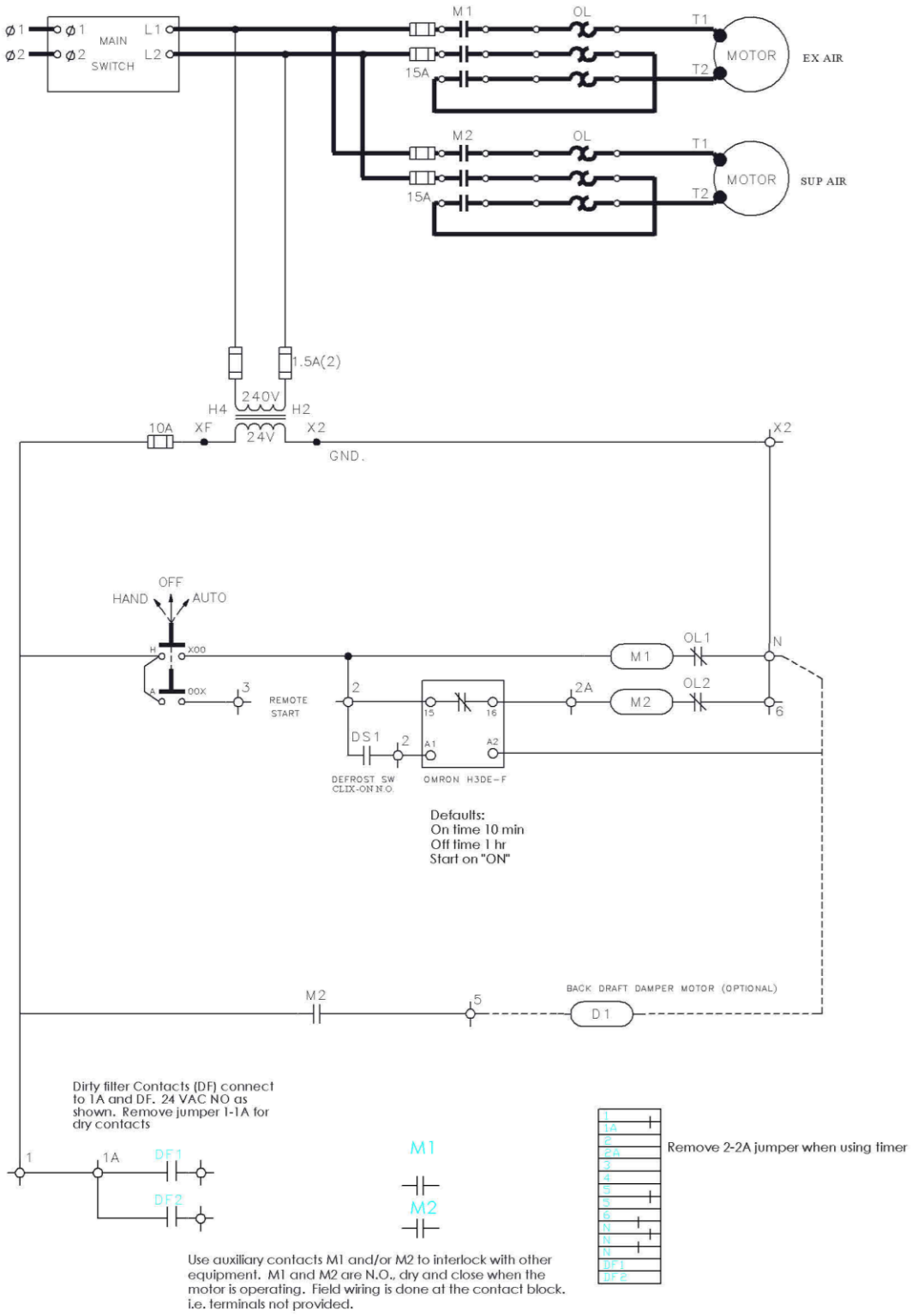
Several common electrical schematics are found below. The “as built” schematic for this unit was supplied with the equipment and is available from the factory by request.



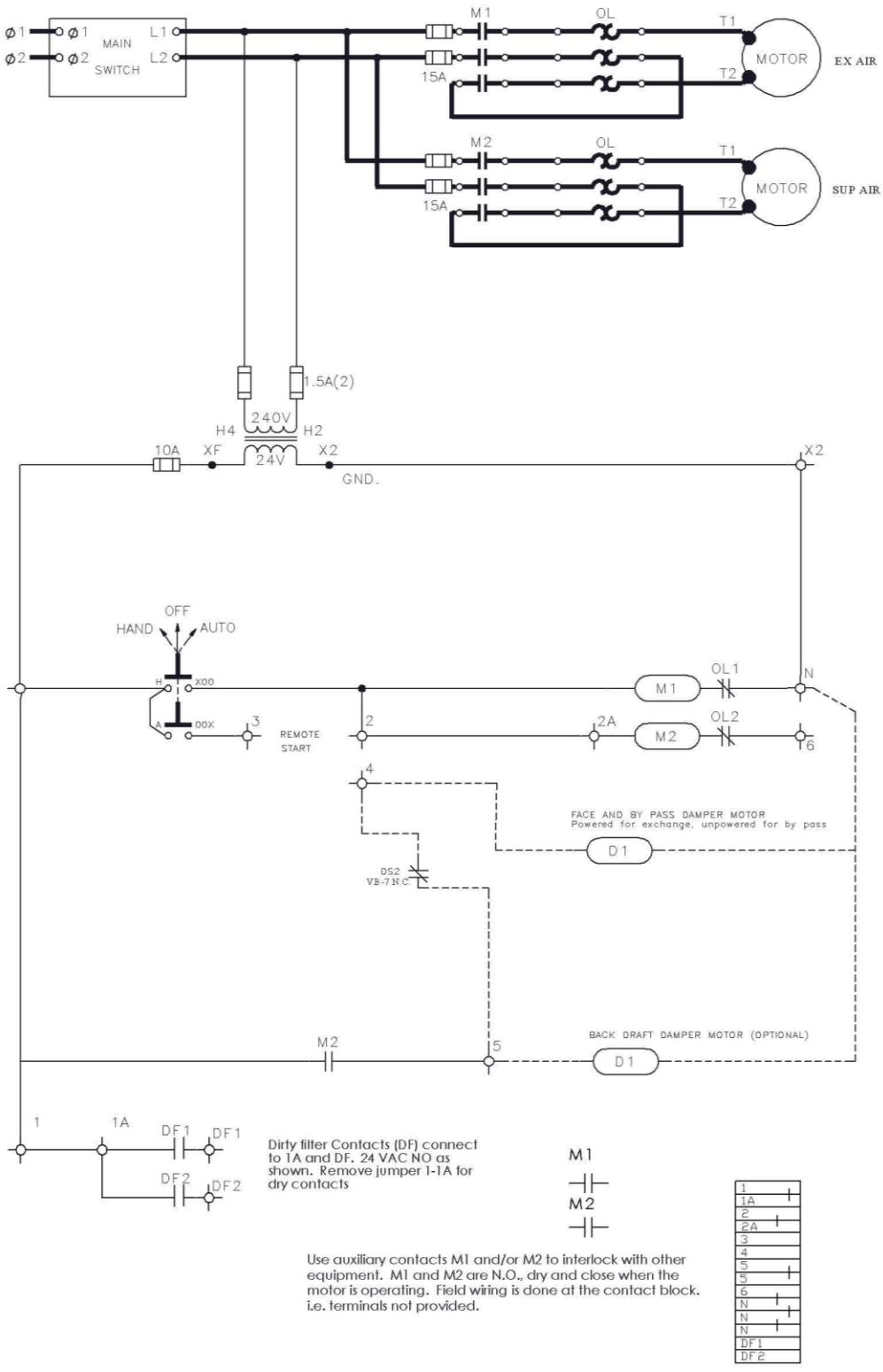
SINGLE PHASE NO DEFROST



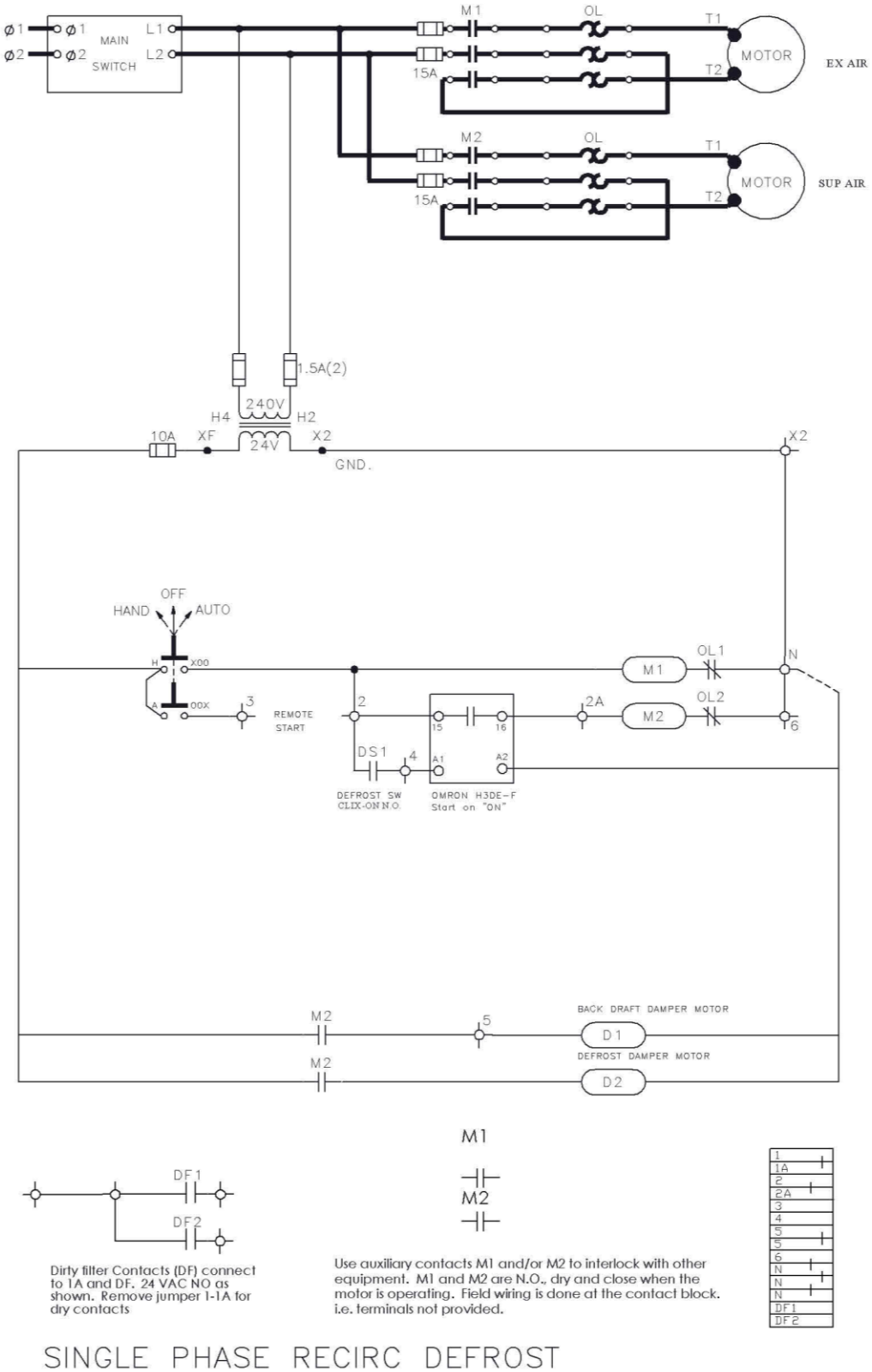
SINGLE PHASE FAN DEFROST



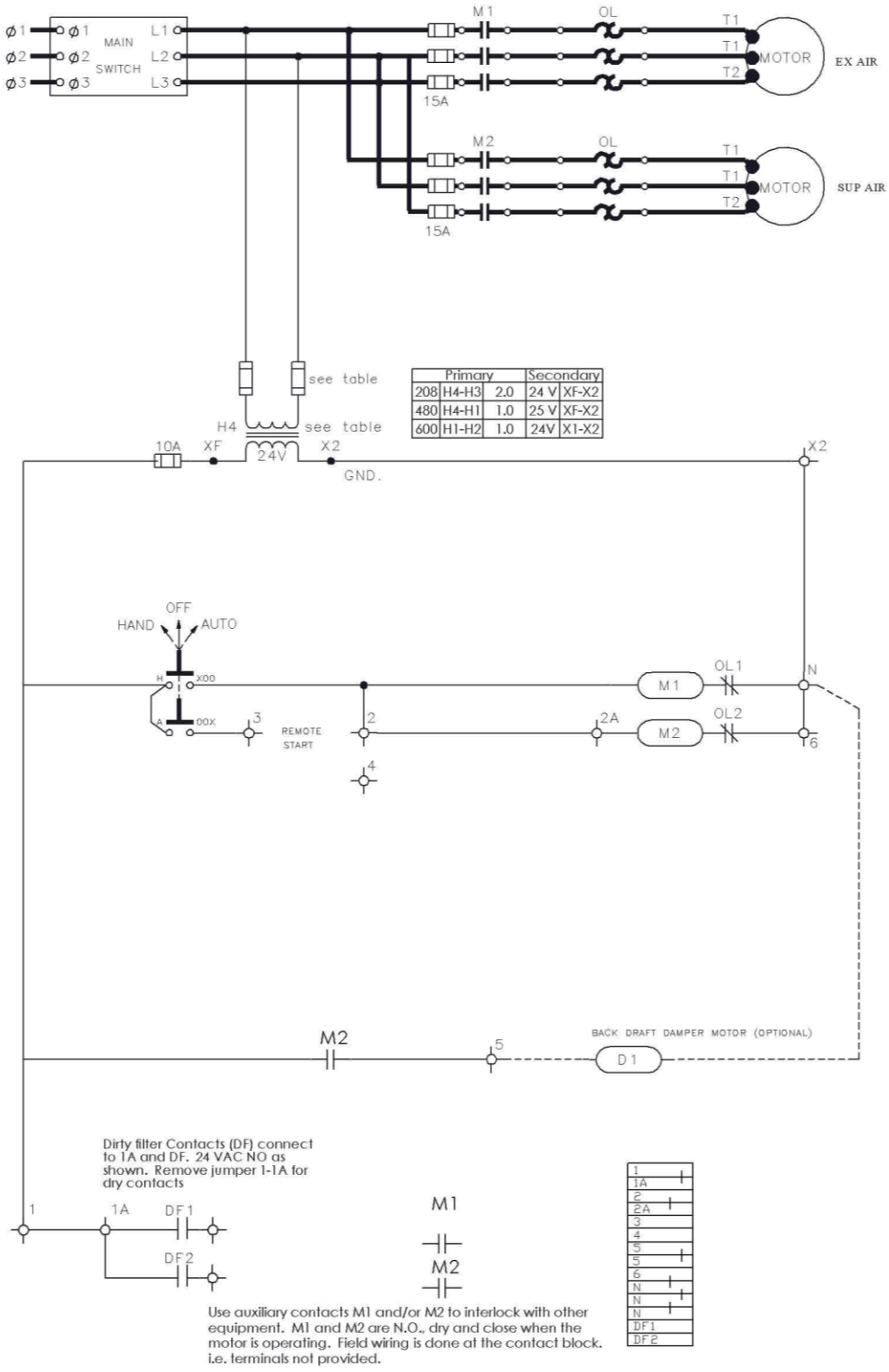
SINGLE PHASE TIMED FAN



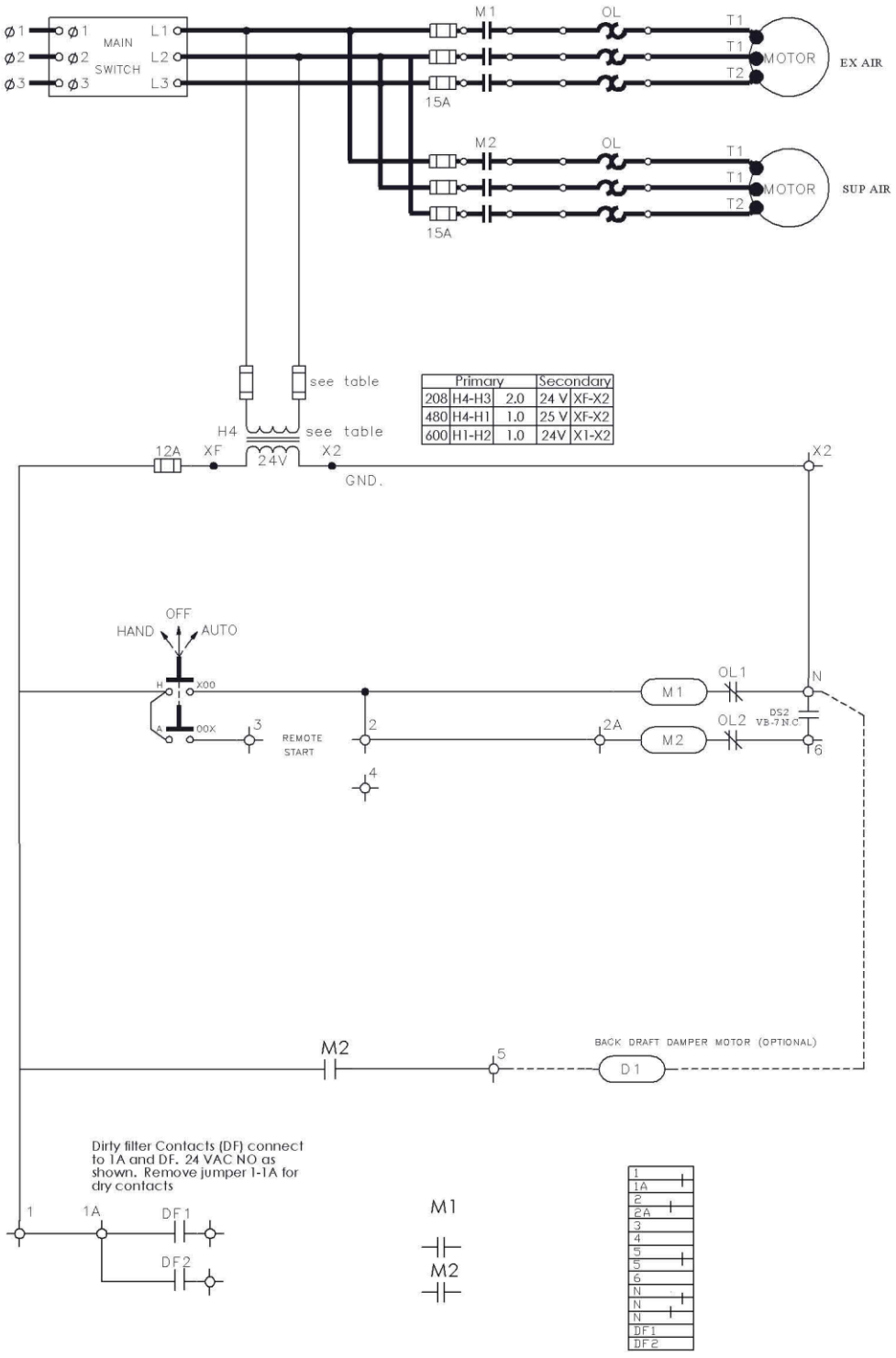
SINGLE PHASE FACE AND BY PASS



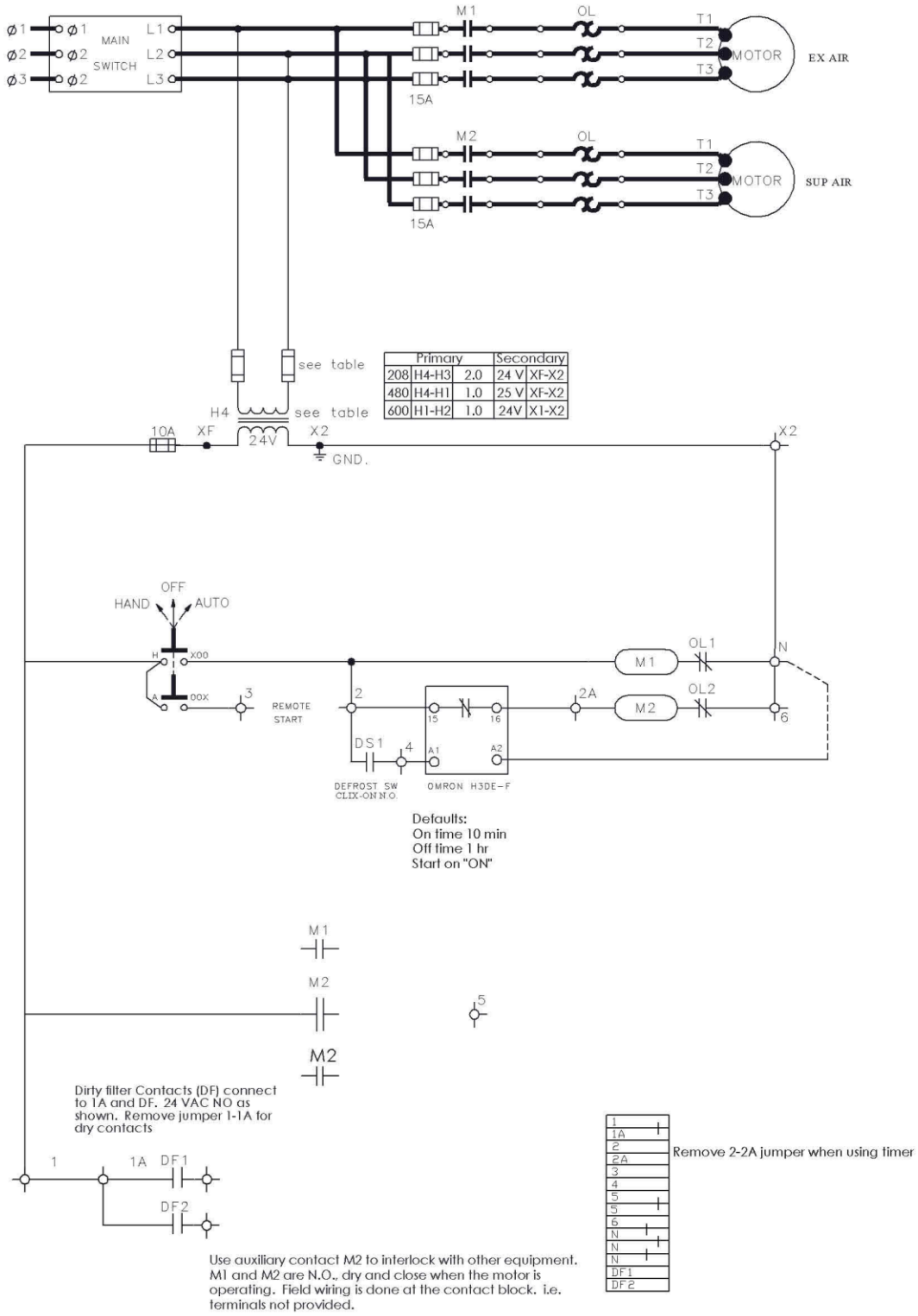
SINGLE PHASE RECIRC DEFROST



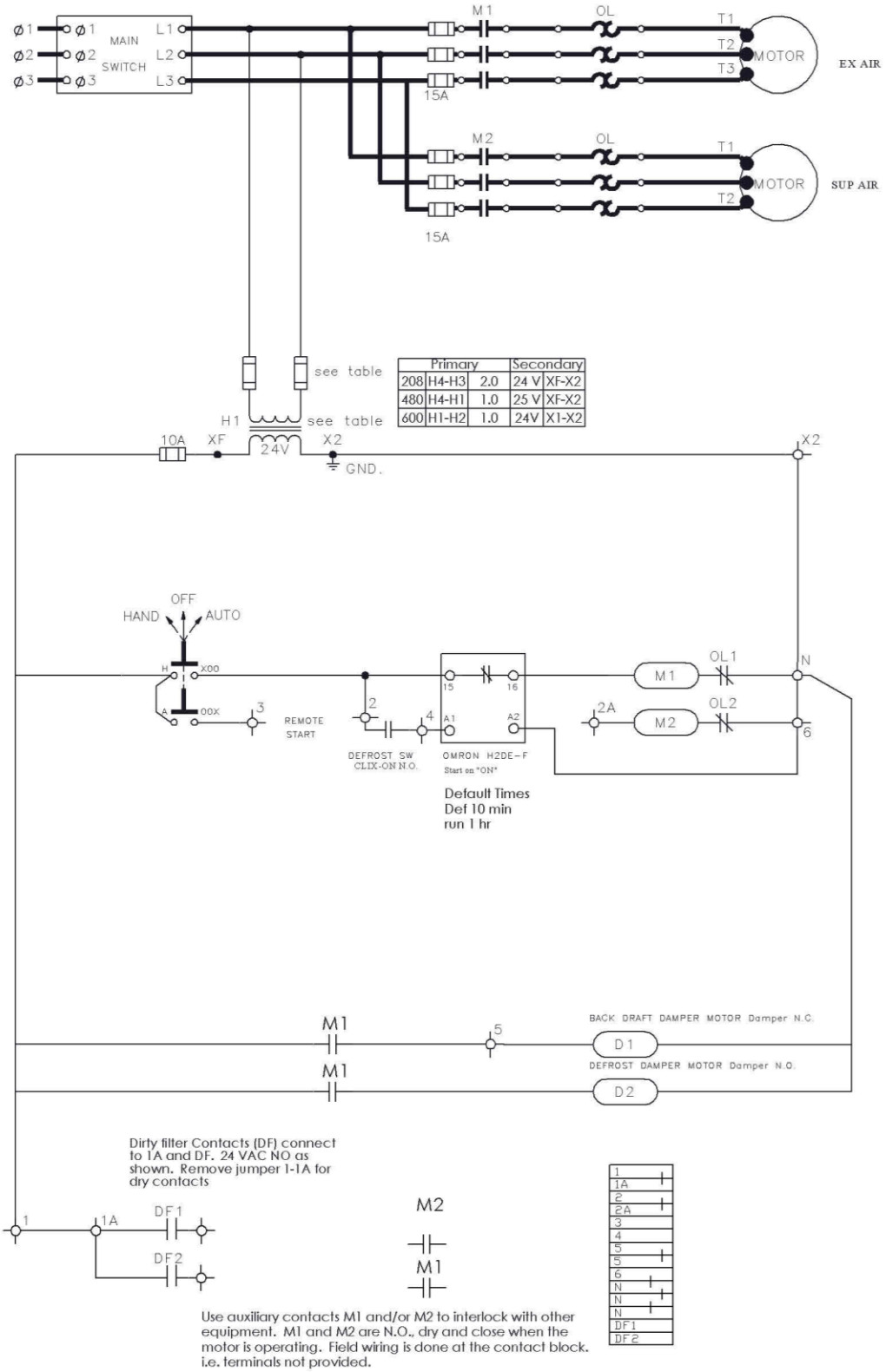
THREE PHASE NO DEFROST



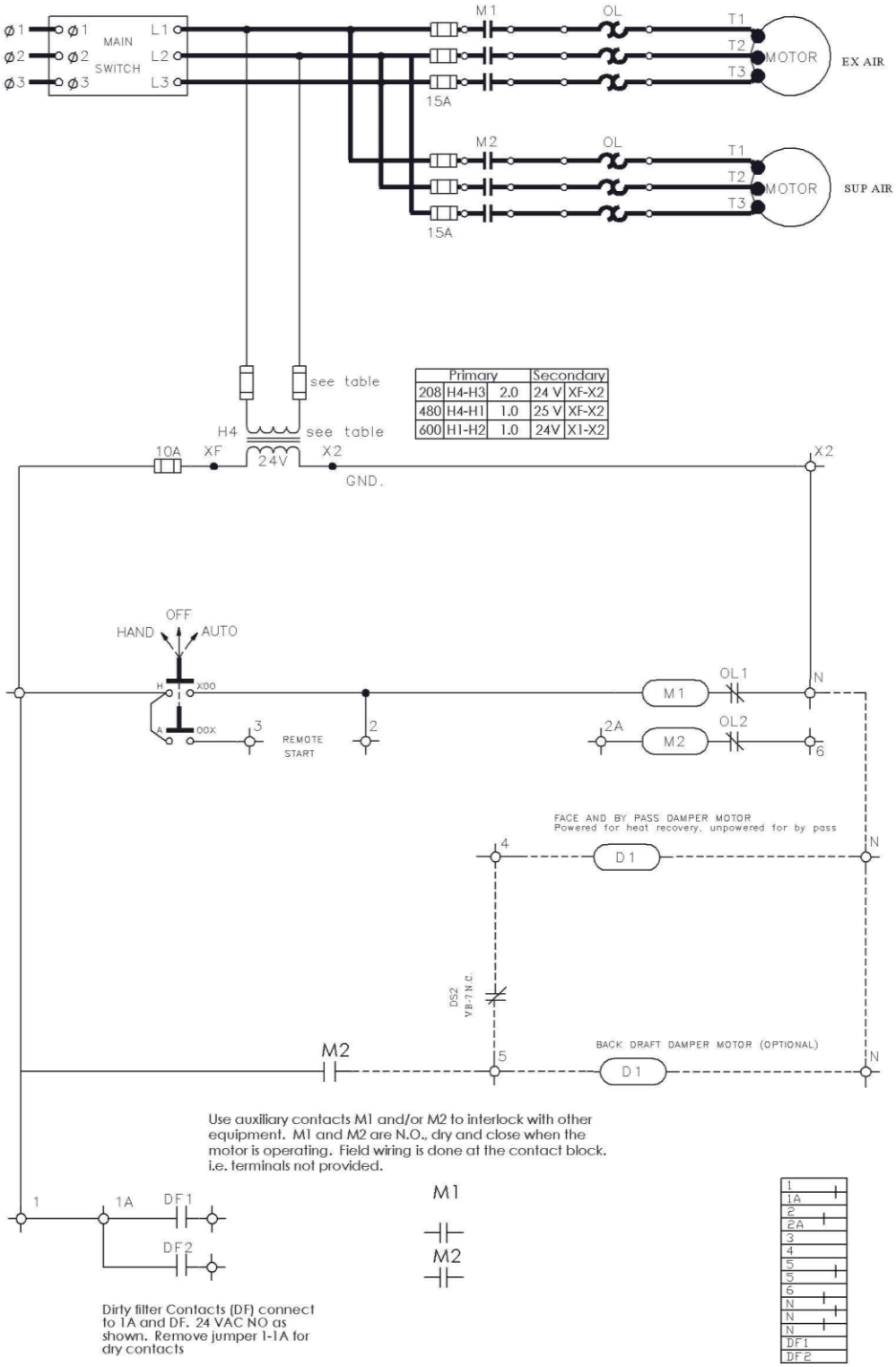
THREE PHASE FAN DEFROST



THREE PHASE TIMED FAN



THREE PHASE RECIRC DEFROST



THREE PHASE FACE AND BY PASS

10 INSTALLATION

The HRV motors are controlled and protected by a multi-starter which includes a disconnect switch. A Hand/Off/Auto selector is located on the starter for local or remote switching.

10.1 Remote Control

Any dry contact switch closure may be used. Control voltage is 24 VAC.

10.1.1 INSTALLATION INSTRUCTIONS

10.1.1.1 Installer's Responsibilities

Installers are responsible for the performance of the ventilation system and for ensuring that all codes and standards are met.

- Do not mount the fresh air supply near a source of contaminated air such as automotive exhaust, gas or propane exhaust or oil tanks.
- Combustion appliances such as furnaces and hot water heaters must not draw combustion air directly from an HRV.

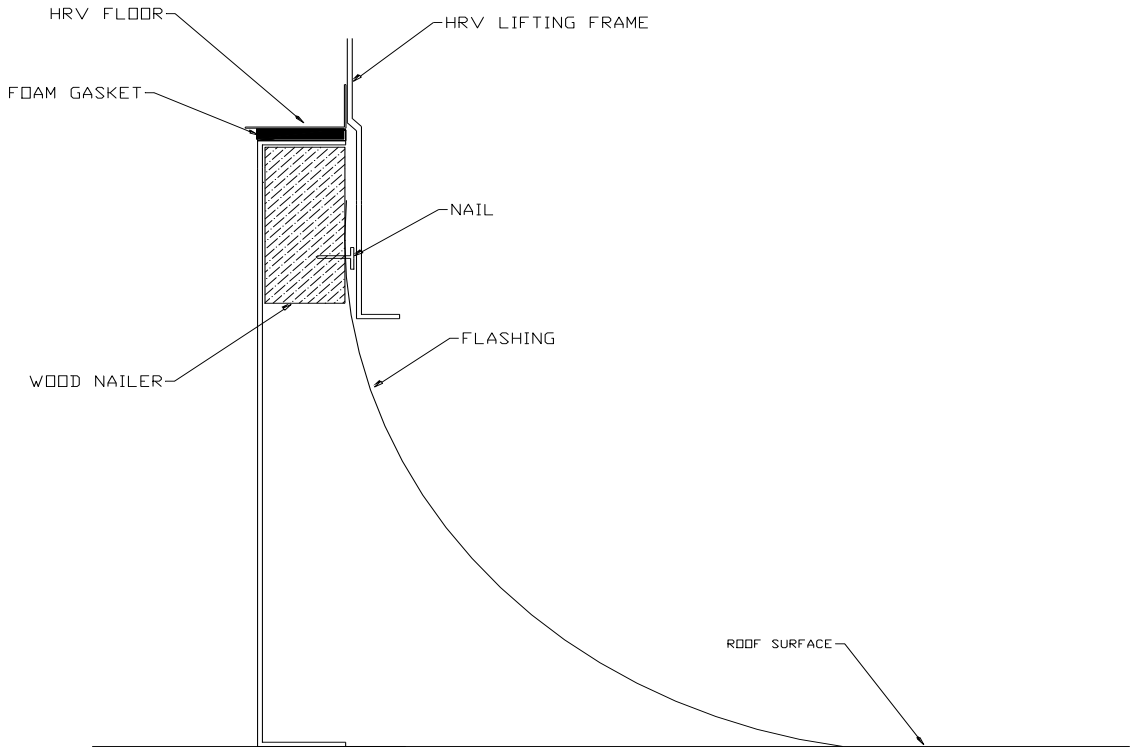
10.2 Installation Basics

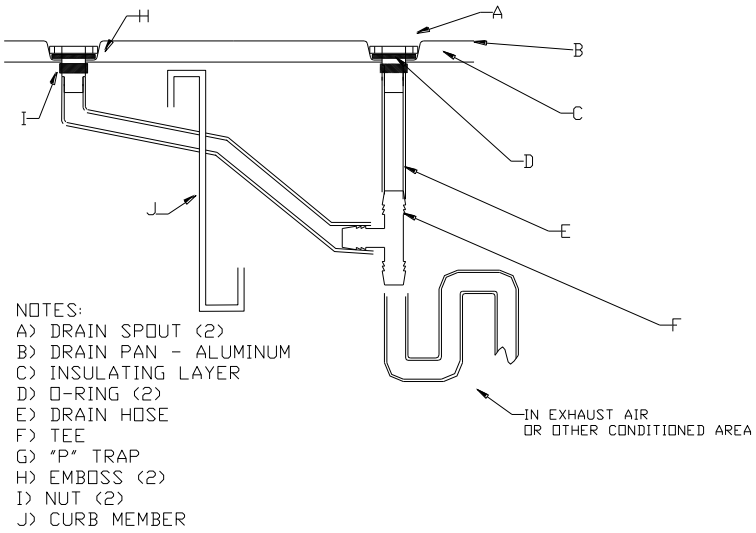
ASHRAE Standard 62-99 recommends the following. Ventilation systems should be designed to prevent re-entrainment of exhaust contaminants, condensation or freeze-ups and growth of microorganisms. Make-up air inlets and exhaust air outlets shall be located to avoid contamination of the makeup air. Contaminants from sources such as cooling towers, sanitary vents, vehicular exhaust, and street traffic should be avoided.

10.3 Mounting The Unit (Roof Top Units)

1. Determine where the unit is to be located on the roof
2. Refer to the unit detail drawing for roof openings and cut accordingly
3. Place the curb on the roof and ensure it is level
4. Flash the curb with roofing membrane tying in to the wood nailer. Do not attach flashing to the HRV.

5. Apply the foam gasket to all top flanges of the curb forming a continuous, watertight seal.
6. With the HRV lifted, connect the drain hose to the spouts from underneath, feed the fresh air hose through the center curb member and tee into the exhaust drain.
7. Lift the unit onto the curb. Do not drag on the roof.
8. Tie in the supply and return ducts, electrical wiring and run condensate drain into the conditioned space through the exhaust air duct.
9. Do not drain to the roof.





10.4 Connecting To Other Equipment

If the HRV is used upstream of an air handler or similar equipment (e.g. fresh air into economizer section), the startup sequence must be HRV first followed by the air handler. If the air handler is started first, the HRV's fresh air fan will rotate backward and the motor may not be able to overcome the extra load causing the motor to over amp and potentially damage the blower wheel.

10.5 Controls And Electrical Connection

A single point connection of mains power in the starter box powers the HRV. HRV must be connected to a power source of voltage and phase indicated on the starter box and according to applicable local electrical codes.

10.6 Balancing The System

Unless otherwise specified by the system designer, set up the HRV with balanced supply and exhaust air flows.

The pulleys used on the supply and exhaust motors are a split type that allows some field adjustment of the fan rpm and corresponding air flow. Adjust the pulley in ½ turn increments. **Close to increase rpm, open to decrease rpm.**

Once the HRV system is installed, do the following:

- Close all windows and doors.
- Turn off any exhaust only systems.
- To balance the HRV, set the machine on high speed.
- Make a small hole in the supply duct at least 10 feet downstream of the fan. Insert a Pitot tube in the cross sectional center of the duct.
- Measure the pressure with a digital manometer or magnehelic gauge.
- Record the value and repeat the procedure for the exhaust air stream.
- Install a balancing damper in the air stream with the greater flow and damper back until the pressure equals that of the opposite air stream.

10.7 COMMISSIONING AND START UP - COMPLIANT SERIES

Conduct a visual comparison of the HRV against the "As Built Drawing" available from the factory.

Correct air flow configuration ☐

Correct Motors Installed ☐

Correct Pulleys Installed ☐

Correct Defrost Installed ☐

Correct Belts Installed ☐ also check tension, alignment and wear.

After the unit has been installed according to the plans and manual and the appropriate power
supplied turn on the disconnect switch and start the HRV with the selector (e.g. hand or auto).

Verify correct fan rotation Supply Fan ☐ Exhaust Fan ☐

Fan rotation can be reversed by disconnecting the power and reversing any 2 legs of the three phase feed.

If equipped, confirm motorized dampers are operational ☐

The defrost system has been factory tested. ***Optionally during commissioning***, this can be verified by opening (VB7, capillary tube style) or jumping (Clix-on, thermal disc style) the defrost switch. ***Remember to replace or remove the test wiring.***

Checked by: _____ Date: _____
Factory Representative

Company: _____

At this point the unit is ready for final air balancing.

The fan rpm and cfm have been factory set to as near as practical to the specified level. A certified air balancer will fine tune the air flows using dampers and adjusting the motor's pulleys if needed. During the air balancing procedure, the balancer will measure the amp draw of each motor with all access covers closed and ensure it is less than the rated FLA. If the amp draw is greater than the FLA plus service factor, the fan rpm must be lowered. A final balancing report will include fan and motor rpm, individual and total motor amps, voltage on each leg, unit and branch duct cfm, external static pressure in each duct.

Commissioning is considered complete with the final air balance and report.

11 MAINTENANCE

CAUTION: ***Disconnect power before servicing***.

a. FILTERS

Dirty filters can reduce ventilation efficiency, resulting in unbalanced airflow and damage or shorten the life of the motors. Check at least every three months and replace yearly or when necessary depending on indoor and outside air conditions.

Filters	NU0820	NU2035	NU1030	NU2540
Size	17x13.5x2	23.5x13.5x2	17x13.5x2	23.5x14.5x2
Quantity	6	6	6	6

Nu-Air recommends a spare set of filters be ordered with the HRV for maintenance stores.

b. FANS

When cleaning the filters, take the opportunity to vacuum any interior surfaces including the fan blades.

c. MOTORS

The motors are equipped with permanently sealed and lubricated bearings

d. BELTS

Inspect belts for wear and cracks. Replace as required. Inspect belts for mis-alignment and proper tension during maintenance.

e. CONDENSATE DRAIN

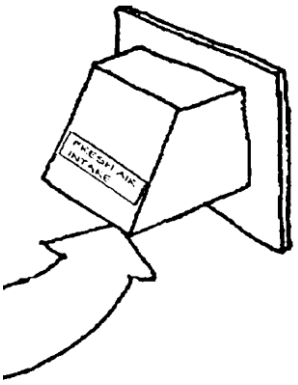
Twice per year wipe clean the condensate drain pan. Check the condensate drain and tubing to ensure they are free flowing. The tubing must have an "S" or loop that traps a quantity of water to prevent air from entering the HRV via this tubing.

f. CORE

The core (heat exchanger) should be removed and cleaned at least once a year using a non-corrosive enzyme detergent in cold water. The core can be removed

from the HRV by sliding it forward on the guides. Observe proper orientation when replacing the core in the HRV.

g. EXTERIOR HOODS



Regularly check the outside vents and clean any obstructions such as grass, leaves or other debris. Do not replace the screen with mesh smaller than 1/4" as this will restrict airflow. During winter operation, ensure snow and frost does not build up and restrict or block openings.

12 WARRANTY:

NU-AIR COMPLIANT SERIES HRV's & ERV's

Nu-Air warrants its Compliant Series HRV's and ERV's to be free from defects on all components including motors, circuit boards, transformers, and switches when subject to normal and proper use for a period of two (2) years from the date of purchase. Nu-Air warrants its Compliant Series HRV core to be free from defects for a period of 15 years. Nu-Air warrants its Compliant Series ERV core to be free from defects for a period of 5 years.

Should a manufacturing defect occur during the warranty period, Nu-Air will supply replacement parts FOB our plant at no charge. Labour costs to remove and reinstall these parts are not covered under this warranty.

This warranty is expressly in lieu of all other warranties or obligations and in no event shall Nu-Air be liable for consequential or incidental damages of any kind, including damage to the building, its contents or any person therein.

nu-air

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