

**NU1030 HRV ROOF MOUNT**

**CABINET:**

- Double wall, 22 Ga galvanized steel outer finish
- Optional .050 prepainted white aluminum finish.

**HEAT EXCHANGER CORE:**

- **HRV** - polypropylene core with sensible energy transfer
- **ERV** - enthalpic cross flow heat exchange core with the unique ability to *transfer both latent and sensible energy*

**BLOWERS:** Belt drive performance blowers FC, DWDI

**ADDITIONAL FEATURES:**

- Temperature activated fan shut down defrost method
- Face and Bypass damper defrost
- Economizer

**FILTER:**

- STANDARD - 2" pleated filters, 30%-40% ASHRAE dust spot efficiency
- OPTIONS - Electrostatic, charcoal pads

**CUSTOMIZATION:**

If an application requires a door or ports to be located differently, simply specify the configuration.

**WARRANTY:**

- Fifteen years on Polypropylene Cores
- Five years on Enthalpy Cores
- Two years on all other components.

	NU1030
DUCT SIZE (L x W)	24 x 12 in. 610 x 305 mm
CORE SIZE (L x W)	17.5 x 17.5 in. 444.5 x 444.5 mm
CABINET SIZE (L x H x D)	91 x 39 x 45 in. 2311x991x1143 mm
BLOWERS (FWD CURVE DIRECT DRIVE)	810
PSC	
HORSE POWER	Specify
VOLTS	
AMPS	
RPM	1725/1140
WEIGHT	900LBS

**NU1030 HRV**

**\*\*NU1030 AIRFLOW PERFORMANCE\*\***

CFM	ESP = 0		ESP = 0.2		ESP = 0.4		ESP = 0.5		ESP = 0.6		ESP = 0.8		ESP = 1.0		ESP = 1.2	
	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
1000	0.04	300	0.09	492	0.15	647	0.19	721	0.22	790	0.30	910	0.38	1014	0.46	1107
1100	0.06	324	0.11	505	0.17	648	0.21	720	0.25	788	0.33	908	0.41	1015	0.50	1109
1200	0.07	359	0.13	527	0.20	664	0.23	727	0.27	792	0.36	911	0.45	1018	0.54	1113
1300	0.09	390	0.15	547	0.22	678	0.26	738	0.30	790	0.39	915	0.49	1021	0.59	1117
1400	0.12	422	0.18	569	0.26	695	0.29	751	0.33	806	0.43	917	0.53	1022	0.63	1118
1500	0.14	451	0.22	591	0.29	711	0.33	766	0.37	818	0.46	920	0.57	1023	0.68	1119
1600	0.18	480	0.25	611	0.33	727	0.37	781	0.41	831	0.51	928	0.61	1025	0.72	1119
1700	0.21	508	0.29	633	0.37	745	0.41	796	0.46	853	0.55	939	0.66	1028	0.77	1120
1800	0.25	535	0.33	654	0.41	762	0.46	812	0.51	859	0.60	950	0.71	1035	0.82	1121
1900	0.29	568	0.38	681	0.47	784	0.52	833	0.56	879	0.67	966	0.77	1049	0.89	1128
2000	0.34	599	0.44	707	0.53	807	0.58	853	0.63	898	0.73	983	0.84	1064	0.96	1140
2100	0.40	630	0.50	733	0.59	828	0.64	874	0.69	918	0.80	1001	0.91	1079	1.03	1153
2200	0.45	655	0.56	754	0.66	847	0.71	890	0.76	933	0.87	1013	0.99	1091	1.11	1163
2300	0.52	689	0.63	784	0.73	873	0.79	915	0.84	957	0.96	1035	1.08	1110	1.20	1181
2400	0.59	718	0.70	809	0.81	895	0.87	936	0.92	976	1.04	1053	1.16	1125	1.29	1196
2500	0.66	746	0.78	833	0.90	917	0.96	957	1.01	996	1.13	1071	1.26	1142	1.39	1210
2600	0.75	777	0.87	862	0.99	943	1.05	982	1.11	1019	1.23	1092	1.37	1162	1.50	1228
2700	0.84	805	0.96	886	1.09	964	1.15	1002	1.21	1039	1.34	1110	1.47	1178	1.61	1244
2800	0.93	836	1.07	914	1.20	990	1.26	1026	1.33	1062	1.46	1132	1.59	1198	1.73	1262
2900	1.04	865	1.18	941	1.31	1015	1.38	1051	1.44	1085	1.58	1153	1.71	1218	1.86	1281
3000	1.15	895	1.29	969	1.43	1040	1.50	1075	1.57	1109	1.71	1174	1.85	1239	1.99	1300

\*\* Table values above are for Polypropylene Core ONLY. Consult factory for Enthalpy Core data. \*\*

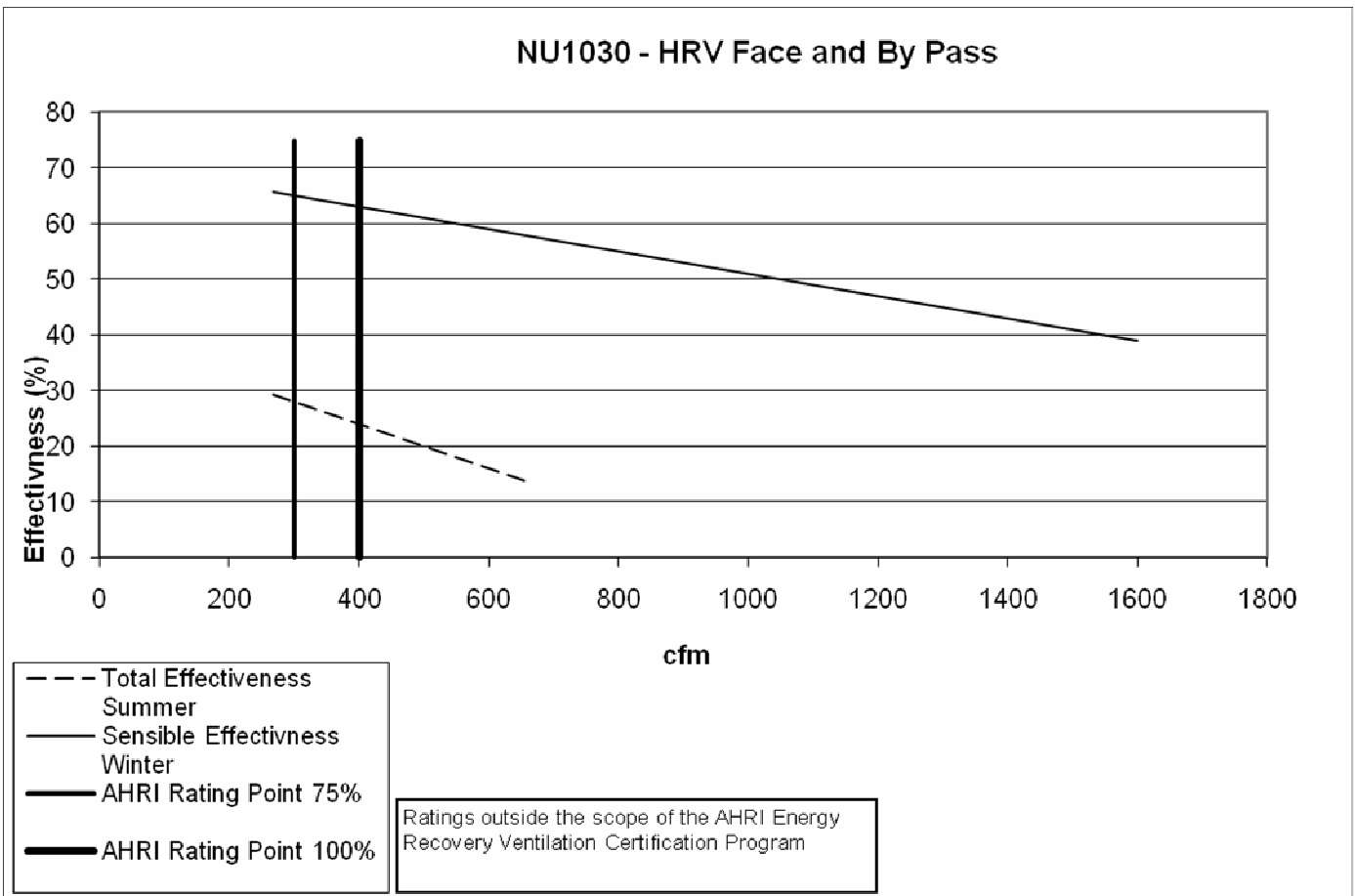
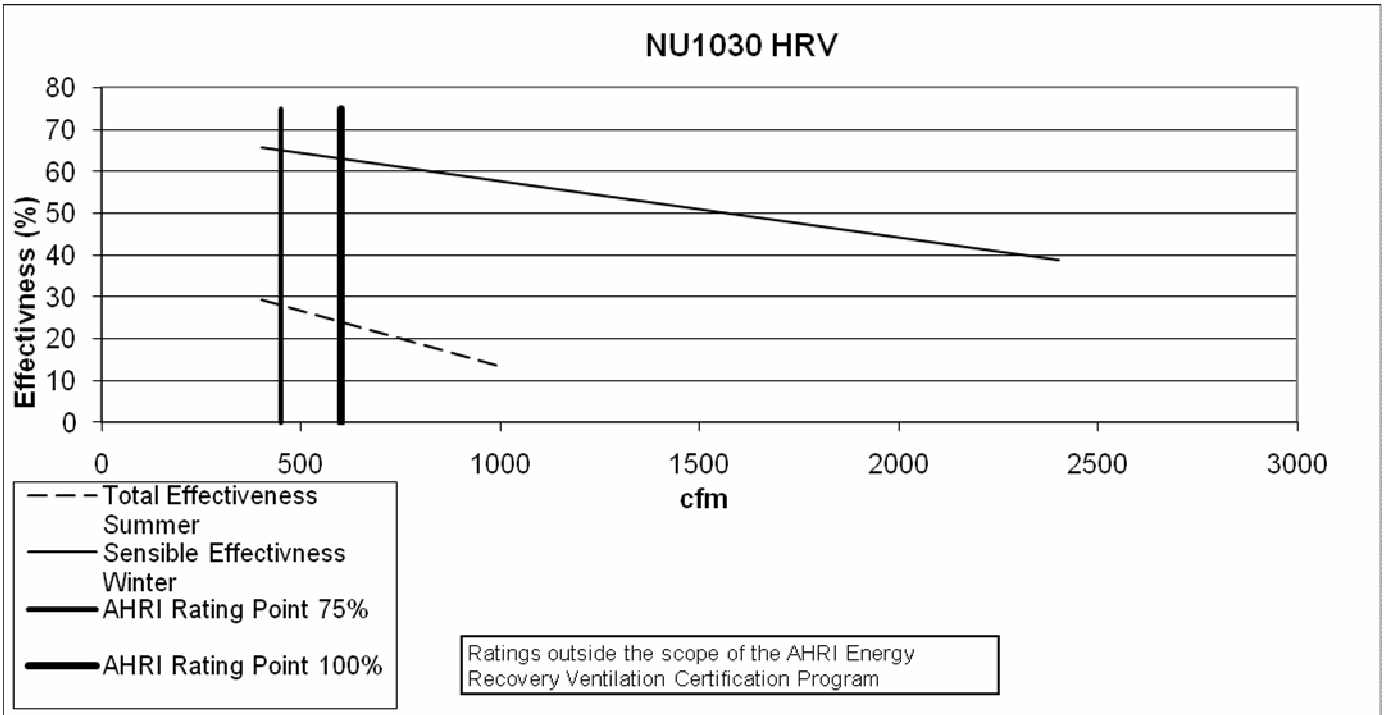
<b>Model no.</b>	<b>PC 18</b>
<b>Type</b>	<b>Plate</b>
<b>Nominal Air Flow (scfm)</b>	<b>300</b>
<b>Pressure drop (inches)</b>	<b>0.07</b>



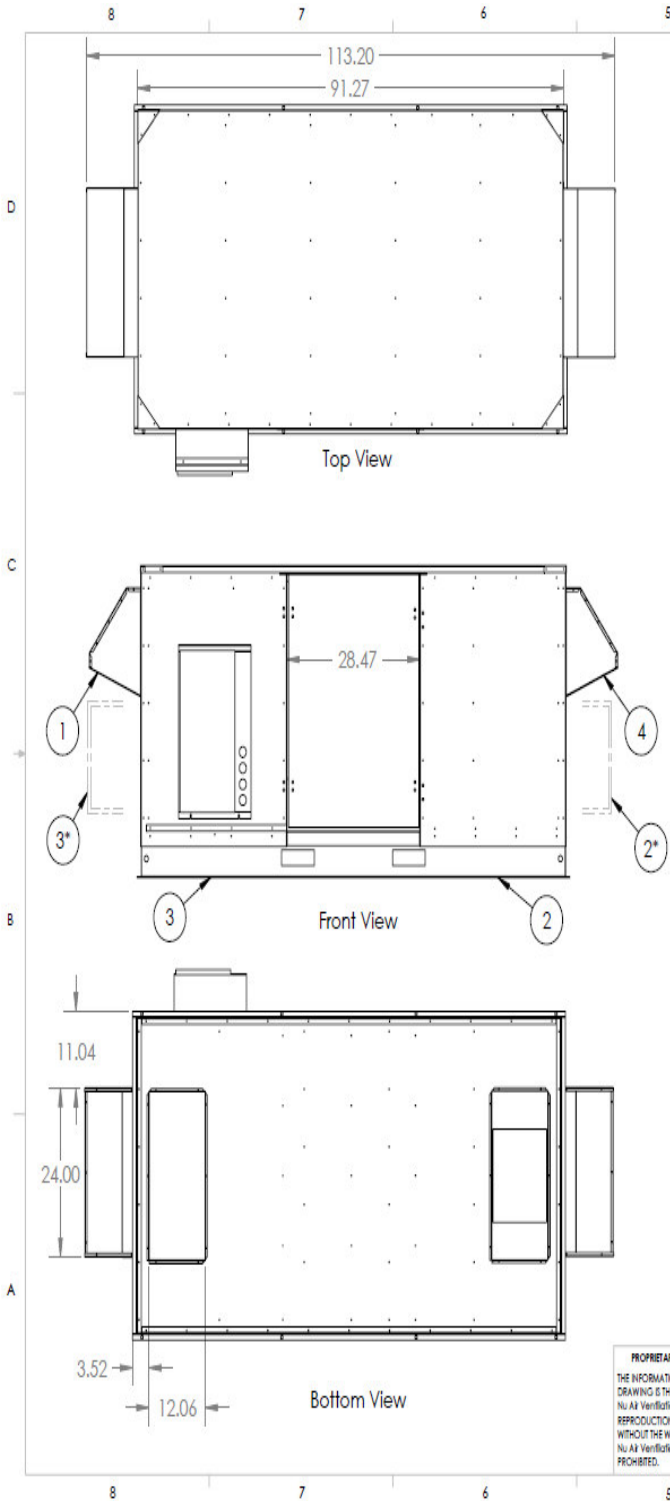
Energy recovery component is certified by AHRI to AHRI Standard 1060. Actual performance in packaged equipment may vary.

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

<b>Thermal Effectiveness Ratings at 0" Pressure Differential</b>			
	<b>Sensible</b>	<b>Latent</b>	<b>Total</b>
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
	<b>Net Sensible</b>	<b>Net Latent</b>	<b>Net Total</b>
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

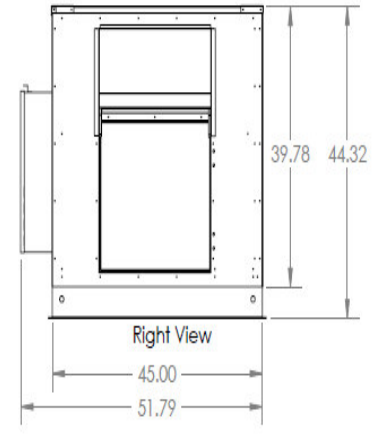


Revised May 6, 2010



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

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

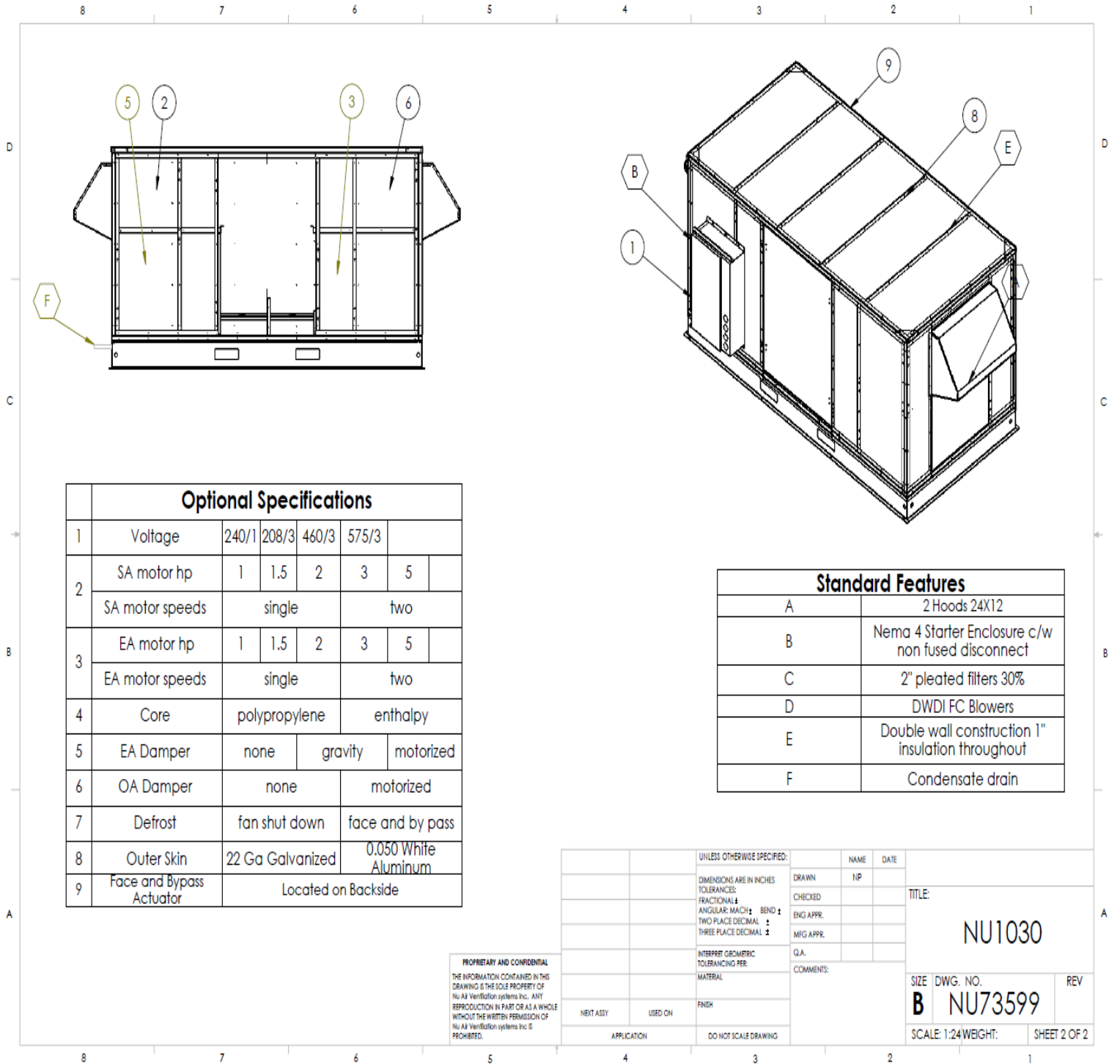


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UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN INCHES		DRAWN	HP
TOLERANCES:		CHECKED	
FRACTIONAL 1/16		ENG APPR.	
ANGULAR MATCH ± BEND ±		MFG APPR.	
TWO PLACE DECIMAL ±		Q.A.	
THREE PLACE DECIMAL ±		COMMENTS:	
INTERPRET GEOMETRIC TOLERANCING PER MATERIAL			
FINISH			
NEXT ASSY	USED ON		
APPLICATION	DO NOT SCALE DRAWING		

TITLE: <b>NU1030</b>		
SIZE DWG. NO.	REV	
<b>B</b> NU73599		
SCALE: 1:20	WEIGHT:	SHEET 1 OF 2

Revised March 22<sup>nd</sup> 2010



### Optional Specifications

Optional Specifications						
1	Voltage	240/1	208/3	460/3	575/3	
2	SA motor hp	1	1.5	2	3	5
	SA motor speeds	single			two	
3	EA motor hp	1	1.5	2	3	5
	EA motor speeds	single			two	
4	Core	polypropylene			enthalpy	
5	EA Damper	none	gravity	motorized		
6	OA Damper	none			motorized	
7	Defrost	fan shut down			face and by pass	
8	Outer Skin	22 Ga Galvanized		0.050 White Aluminum		
9	Face and Bypass Actuator	Located on Backside				

### Standard Features

A	2 Hoods 24X12
B	Nema 4 Starter Enclosure c/w non fused disconnect
C	2" pleated filters 30%
D	DWDI FC Blowers
E	Double wall construction 1" insulation throughout
F	Condensate drain

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UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN INCHES		DRAWN	JIP
TOLERANCES:		CHECKED	
FRACTIONAL: ±		ENG APPR.	
ANGULAR: MACH ±		MFG APPR.	
BEND: ±		Q.A.	
TWO PLACE DECIMAL: ±		COMMENTS:	
THREE PLACE DECIMAL: ±			
INTERPRET GEOMETRIC TOLERANCING PER:			
MATERIAL:			
FINISH:			
NEXT ASSY	USED ON		
APPLICATION	DO NOT SCALE DRAWING		

TITLE:

NU1030

SIZE DWG. NO.	REV
B NU73599	

SCALE: 1:24 WEIGHT: SHEET 2 OF 2

Revised March 22<sup>nd</sup> 2010

## **BACKDRAFT DAMPERS**



Optional gravity dampers for exhaust air and motorized intake air dampers prevent unwanted outside air from entering the space when the heat recovery unit is not operating. Factory mounted in the collar of the HRV.

## **DEFROST**

### ***1.) Fan Shut Down Defrost***

A thermostat monitors the temperature of the exhaust air after the core. When a frost condition is detected the fresh air motor shuts down. The exhaust motor continues to operate. When the exhaust air leaving the core reaches 45F (7C) the supply air motor restarts.

### ***2.) Face/Bypass Defrost Damper***

- The FBDD is used to prevent frost build-up in the energy recovery core.
- The FBDD is operated by an actuator controlled by the thermostat located in the exhaust air (after the core) quadrant of the HRV.
- When the thermostat detects a freezing condition the fresh air bypass damper opens and the face damper closes. Warm exhaust air is moved through the core for defrost while outside air bypasses the core to prevent the build up of negative pressure in the building. The normal energy recovery cycle resumes when leaving air reaches 45F (7C).

## **ECONOMIZER**

With the economizer feature, a temperature sensor in the leaving air (before core) quadrant powers the face & by-pass damper actuator. This reverses the normal damper position allowing the HRV to bring cool outside air into the building without any heat transfer for “free” cooling.

## **SPRING ISOLATORS - NU2035**

The NU2035 can be supplied with optional vibration isolators for floor mounted or suspended applications.

