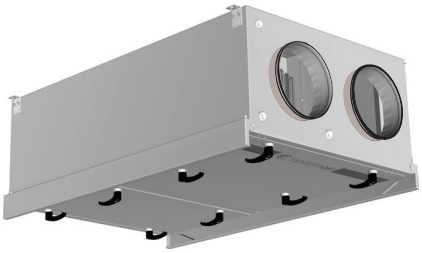
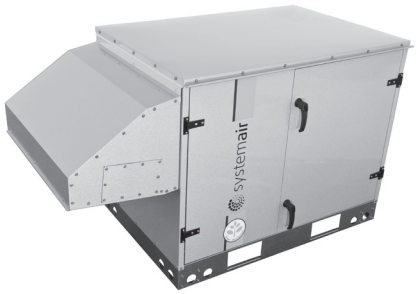
Topvex FR, TR, ERV

Compact Air Handling Unit





Commissioning Record

AHRI CERTIFIED™
www.ahridirectory.org
Air-to-Air ERV
AHRI Standard 1060
Energy Recovery COMPONENT is certified. Actual performance in packaged equipment may vary.

Green Ventilation

c UL US

Item# 401131
2022-05-13

Contents

1 Commissioning Protocol

Company:

Responsible:

Customer	Date	Installation
Object/Unit	Item no.	Installation address
Model/size	Serial number	

Time and date set: ☐ Weekly program set: ☐

External connections (sensors, dampers, external alarm, etc) performed: ☐

1.1 Function settings

Function	Default setting			Set value		
Temp. (°F (°C))						
Control function temp.	Supply ☐	Extract ☒	Room ☐	Supply ☐	Extract ☐	Room ☐
Set point	65 °F (18 °C)			___ °F (°C)		
Outdoor temp. compensated supply air control.						
Outdoor/supply air temp.						
Point 1, 2 and 3	-22 (-30) / 72 (22)	-4 (-20) / 70 (21)	12 (-11) / 68 (20)	____ / ____	____ / ____	____ / ____
Point 4, 5 and 6	-25 (-4) / 60 (20)	41 (5) / 66 (19)	50 (10) / 64 (18)	____ / ____	____ / ____	____ / ____
Point 7 and 8	54 (12) / 64 (18)	59 (15) / 64 (18)		____ / ____	____ / ____	
If Cascade control:						
Low supply air set point	57 °F (14)			___ °F (°C)		
High supply air set point	86 °F (30)			___ °F (°C)		
Outdoor temperature dependent switching between room control and supply air control.	55 °F (13)			___ °F (°C)		

Function	Default setting	Set value
Pre-heater	OFF ☐	ON ☐ OFF ☐

Function	Default setting	Set value
Airflow		
Fan control	Airflow (CFM)[1] (m^3/h) ☐ (CAV) Pressure (in. wg.)[1] (Pa) ☐ (VAV)	Airflow (CFM) (m^3/h) ☐ (CAV) Pressure (in. wg.) (Pa) ☐ (VAV)
Set point normal	Supply fan/duct: 1 Extract fan/duct: 1	Supply fan/duct: ___ Extract fan/duct: _____
Set point reduced	Supply fan/duct: 1 Extract fan/duct: 1	Supply fan/duct: ___ Extract fan/duct: _____
Outdoor temp compensation:	Lower point: -4 °F (-20) 0 CFM (m^3/h) Upper point: 50 °F (10) 0 CFM (m^3/h)	Lower point: ___°F (°C) ___CFM (m^3/h) Upper point: ___°F (°C) ___CFM (m^3/h)
Only reduced fan speed when outdoor temperature is below:	-4 °F (-20)	___°C (°F)
CO_2 control	Off ☒ On when active time channel ☐ On when inactive time channel ☐ On ☐ Start reduced speed at CO_2 level: 800 ppm Start normal speed at CO_2 level: 1000 ppm Stop at CO_2 level difference: 160 ppm CO_2 control Type: Fan ☒	Off ☐ On when active time channel ☐ On when inactive time channel ☐ On ☐ Start reduced speed at CO_2 level: _____ppm Start normal speed at CO_2 level: _____ppm Stop at CO_2 level difference: _____ppm CO_2 control Type: Fan ☐

[1]. Individual settings for each unit

Function	Default setting	Set value
Cooling (log on to system level required)		
Control function cooling	Not Active ☒ 0-10V ☐ On/Off ☐	Not Active ☐ 0-10V ☐ On/Off ☐
On/Off function	1 step ☐ 2 step ☐ Binary step ☒	1 step ☐ 2 step ☐ Binary step ☐
Number of binary steps	1 ☐ 2 ☒ 3 ☐	1 ☐ 2 ☐ 3 ☐
Lowering of min. control temp. supply air, DX cooling	41 °F (5)	___°F (°C)
Extended operation	60 ___min	_____min

Function	Default setting	Set value
Frost Protection (Only visible for units without EL heater)		
Mode (EL unit Off):	ON ☒	ON ☐
Frost limit temperature:	See Alarm settings/Low frost guard temp	See Alarm settings/Low frost guard temp
Set point when stopped: (return water)	45 °F (7)	___°F (°C)
P-band when running:	5_____	_____
VAV duct pressure Duct pressure sensors, only for VAV units, Supply/extract air fan		
	Supply air duct pressure at reduced speed: 1_____in.wg (Pa)	Supply air duct pressure at reduced speed: _____in.wg (Pa)
	Extract air duct pressure at reduced speed: 1_____in.wg (Pa)	Extract air duct pressure at reduced speed: _____in.wg (Pa)
	Supply air duct pressure at normal speed: 1_____in.wg (Pa)	Supply air duct pressure at normal speed: _____in.wg (Pa)
	Extract air duct pressure at normal speed: 1_____in.wg (Pa)	Extract air duct pressure at normal speed: _____in.wg (Pa)
Free cooling		
Mode:	Off ☐	Off ☐
Activation at outdoor temperatures higher than:	72 °F (22)	___°F (°C)
Stopped at outdoor night temperature higher than:	59 °F (15)	___°F (°C)
Stopped at outdoor night temperature lower than:	41 °F (5)	___°F (°C)
Stopped at room temperature lower than:	64 °F (18)	___°F (°C)
Hour for start/stop:	Start: 00:00 Stop: 07:00	Start: _____ Stop: _____
Time to block heat output after free cooling:	60 _____min.	_____min.
Fan output when free cooling:	SAF: 0% EAF: 0%	SAF: ____ EAF: ____

Function	Default setting	Set value
Cool Recovery		
Mode:	Off ☒	Off ☐
Start at temp. difference:	36 °F (2)	°F (°C)
Fire Function		
Operation in case of fire alarm	Stopped ☒	Stopped ☐
	Only EAF ☐	Only EAF ☐
	Only SAF ☐	Only SAF ☐
	Normal Run ☐	Normal Run ☐
	Continuous Run ☐	Continuous Run ☐
Fire Input	Normally opened ☒	Normally opened ☐
	Normally closed ☐	Normally closed ☐
External Set point Knob		
External set point knob:	Off ☒	Off ☐
Min. set point of knob:	54 °F (12)	°F (°C)
Max set point of knob:	86 °F (30)	°F (°C)
HW Heat Pump		
Pump stop mode (EL unit Off):	Off ☒	Off ☐
Stop Delay:	_____min	_____min
Pump stop at outdoor temperature:	50 °F (10)	°F (°C)
Hysteresis:	34 °F (2)	°F (°C)
Hours for pump exercising:	15 h	_____h
Cooling, cold water pump		
Stop Delay	5 min.	_____min.
General		
Heat Pump Indication	Motor protection ☐	Motor protection ☐
	Run indication ☒	Run indication ☐
Cool Pump Indication	Motor protection ☐	Motor protection ☐
	Run indication ☒	Run indication ☐
Outdoor Temperature Related Settings		
Full heat when outdoor temp is below:	37 °F (3)	°F (°C)

1.2 Setting the weekly program

Factory setting of the normal and reduced fan speed are:

- Normal fan speed 07:00 to 16:00 Monday to Friday and Reduced fan speed remaining time Monday to Sunday.
- Settings of 00:00 to 00:00 stops the unit. E.g. Changing Reduced fan speed setting from 00:00-24:00 to 00:00-00:00 will stop the unit outside the time of Normal fan speed.

Note:

Normal fan speed had priority over a reduced fan speed.

Weekday	Period	Normal fan speed	Reduced Fan speed
Monday	1	_____ : _____ – _____ : _____	_____ : _____ – _____ : _____
	2	_____ : _____ – _____ : _____	_____ : _____ – _____ : _____
Tuesday	1	_____ : _____ – _____ : _____	_____ : _____ – _____ : _____
	2	_____ : _____ – _____ : _____	_____ : _____ – _____ : _____
Wednesday	1	_____ : _____ – _____ : _____	_____ : _____ – _____ : _____
	2	_____ : _____ – _____ : _____	_____ : _____ – _____ : _____
Thursday	1	_____ : _____ – _____ : _____	_____ : _____ – _____ : _____
	2	_____ : _____ – _____ : _____	_____ : _____ – _____ : _____
Friday	1	_____ : _____ – _____ : _____	_____ : _____ – _____ : _____
	2	_____ : _____ – _____ : _____	_____ : _____ – _____ : _____
Saturday	1	_____ : _____ – _____ : _____	_____ : _____ – _____ : _____
	2	_____ : _____ – _____ : _____	_____ : _____ – _____ : _____
Sunday	1	_____ : _____ – _____ : _____	_____ : _____ – _____ : _____
	2	_____ : _____ – _____ : _____	_____ : _____ – _____ : _____

Holiday (month.day)	Holiday (month.day)	Holiday (month.day)	Holiday (month.day)
1. ___ . ___ – ___ . ___	7. ___ . ___ – ___ . ___	13. ___ . ___ – ___ . ___	19. ___ . ___ – ___ . ___
2. ___ . ___ – ___ . ___	8. ___ . ___ – ___ . ___	14. ___ . ___ – ___ . ___	20. ___ . ___ – ___ . ___
3. ___ . ___ – ___ . ___	9. ___ . ___ – ___ . ___	15. ___ . ___ – ___ . ___	21. ___ . ___ – ___ . ___
4. ___ . ___ – ___ . ___	10. ___ . ___ – ___ . ___	16. ___ . ___ – ___ . ___	22. ___ . ___ – ___ . ___
5. ___ . ___ – ___ . ___	11. ___ . ___ – ___ . ___	17. ___ . ___ – ___ . ___	23. ___ . ___ – ___ . ___
6. ___ . ___ – ___ . ___	12. ___ . ___ – ___ . ___	18. ___ . ___ – ___ . ___	24. ___ . ___ – ___ . ___

1.3 Alarm configuration

Alarm settings	Def. setting	Set value	Alarm settings	Def. setting	Set value
1. Run Error Supply Air Fan			**35. Ventilation manual mode**		
Class	A		Class	C	
Delay	300 s		Delay	0 s	
The unit stopped at alarm	No		The unit stopped at alarm	No	
2. Run Error Extract Air Fan			**36. Manual supply air control**		
Class	A		Class	C	
Delay	300 s		Delay	0 s	
The unit stopped at alarm	No		The unit stopped at alarm	No	
3. Run Error, P1-Heater (HW-units)			**37. Manual Supply Air Fan mode**		
Class	B		Class	C	
Delay	5 s		Delay	0 s	
The unit stopped at alarm	No		The unit stopped at alarm	No	
4. Run error, P1-Cooler (Cold water pump)			**38. Manual Supply Air Fan freq control**		
Class	B		Class	C	
Delay	5 s		Delay	0 s	
The unit stopped at alarm	No		The unit stopped at alarm	No	
6. Filter guard			**39. Manual Extract Air Fan Mode**		
Class	B		Class	C	
Delay	300 s		Delay	0 s	
The unit stopped at alarm	No		The unit stopped at alarm	No	
7. Flow guard			**40. Manual Extract Air Fan freq control**		
Class	B		Class	C	
Delay	5 s		Delay	0 s	
The unit stopped at alarm	No		The unit stopped at alarm	No	
8. External frost guard			**41. Manual heater control**		
Class	A		Class	C	
Delay	0 s		Delay	0 s	
The unit stopped at alarm	No		The unit stopped at alarm	No	
10. Fire alarm			**42. Manual exchanger control**		
Class	A		Class	C	
Delay	0 s		Delay	0 s	
The unit stopped at alarm	No		The unit stopped at alarm	No	
11. External switch			**43. Manual cooler control**		
Class	C		Class	C	
Delay	0 s		Delay	0 s	
The unit stopped at alarm	No		The unit stopped at alarm	No	
12. External alarm			**44. Manual P1-Heater** (HW-units)		
Class	B		Class	C	
Delay	0 s		Delay	0 s	
The unit stopped at alarm	No		The unit stopped at alarm	No	

Alarm settings	Def. setting	Set value	Alarm settings	Def. setting	Set value
13. Supply Air control error			**46. Manual P1-Cooler**		
Class	B		Class	C	
Delay	30 min		Delay	0 s	
The unit stopped at alarm	No		The unit stopped at alarm	No	
Largest diff. between setpoint and supply air	50 °F (10)				
16. Low supply air temp			**48. Internal battery error**		
Class	A		Class	A	
Delay	300 s		Delay	0 s	
The unit stopped at alarm	No		The unit stopped at alarm	No	
Low inlet air temperature	50 °F (10)				
23. Electric heating is overheated (EL-units)			**49. Sensor error Supply Air temp**		
Class	B		Class	B	
Delay	5 s		Delay	5 s	
The unit stopped at alarm	Yes		The unit stopped at alarm	No	
24. Frost risk (HW-units)			**50. Sensor error Extract Air temp**		
			Class	B	
Class	B		Delay	5 s	
Delay	2 s		The unit stopped at alarm	No	
The unit stopped at alarm	No				
25. Low frost guard temp			**53. Sensor error Exhaust Air temp**		
Class	A		Class	B	
Delay	2 s		Delay	5 s	
The unit stopped at alarm	No		The unit stopped at alarm	No	
Freezing limit	36 °F (2)				
27. Sensor error Outdoor temp			**55. Sensor error SAF pressure** (Unit with EC fans)		
Class	B		Class	B	
Delay	5 s		Delay	5 s	
The unit stopped at alarm	No		The unit stopped at alarm	No	
29. Rotation guard exchanger (Rotating heat exchanger)			**56. Sensor error EAF pressure** (Units with EC fans)		
Class	A		Class	B	
Delay	120 s		Delay	5 s	
The unit stopped at alarm	Yes		The unit stopped at alarm	No	
31. Supply Air Fan Control error (Units with EC fans)			**58. Sensor error Frost Protection temp**		
Class	B		Class	B	
Delay	10 min		Delay	5 s	
The unit stopped at alarm	Yes		The unit stopped at alarm	No	
Largest diff. between must/is value	0.8 in.wg (200Pa)				
32. Extract Air Fan Control error (Units with EC fans)			**43. Manual cooler control**		
Class	B		Class	C	
Delay	10 min		Delay	0 s	
The unit stopped at alarm	Yes		The unit stopped at alarm	No	
largest diff. between must/is value	0.8 in.wg (200Pa)				

1.4 Notes and Signature

Notes:

Signature
Place: _____
Signature: _____
Tel. number: _____

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