Model #: UV40C0DG4J1LFP11A1
Seial#: N2N0423582

Year: 2020
Size: 40 Tons

Technical Guide: Fraser-Johnston® Relia™ UV28 to UV50 and UH28 to UH50

Operating Weight: 5,742 lbs

L: 21' 1"
W: 7' 7"
H: 6' 11"

York International Corporation, 5005 York Drive, Norman, OK 73069

www.johnsoncontrols.com

2020-12-14

5759100-FTG-C-1220

Revision: C-1220

Nomenclature

Figure 2: Product nomenclature

U V 4 0 C 0 D G 4 J 1 L F P 1 1 A 1

Select model number nomenclature

U V 3 5 N 1 C P 2 A 1 C A A 1 1 A 1

Package
U = Select package

Efficiency
V = Standard vertical
H = Standard horizintal

Capacity
28 = 27.5 ton
30 = 30 ton
35 = 35 ton
40 = 40 ton
50 = 50 ton

Heat type
C = Cooling only

Gas heat options
N = Natural gas, staged
S = Natural gas, staged with stainless steel heat exchanger
T = Natural gas, modulating gas heat with stainless steel heat exchanger

Electric heat options
E = Electric heat

Heat size
0 = Cooling only
1 = Low heat
2 = Medium heat[1]
3 = High heat
4 = Ultra high heat[1]

1. Electric heat only

Electric Heat Sizing				
Tonnage	Low heat	Medium heat	High heat	Ultra high heat
27.5 – 35 ton	36 kW	54 kW	72 kW	90 kW
40 – 50 ton	54 kW	72 kW	92 kW	108 kW

Blower
B = Standard
C = Medium
D = High

Air volume
G = VFD/VAV
H = VFD/VAV w/ shaft grounding ring
J = VFD/VAV w/ bypass
K = VFD/VAV w/ bypass and shaft grounding ring
L = VFD/VAV, customer supplied VFD
P = IntelliSpeed
Q = IntelliSpeed w/ shaft grounding ring
R = IntelliSpeed w/ bypass
S = IntelliSpeed w/ bypass and shaft grounding ring
T = IntelliSpeed, customer supplied VFD
V = Constant volume
W = ISP 4 stage
X = ISP w/ GR 4 stage
Y = ISP w/ bypass 4 stage
Z = ISP w/ bypass/GR 4 stage

Voltage
2 = 208/230-3-60
4 = 460-3-60
5 = 575-3-60
B = 208/230-3-60 high SCCR
D = 460-3-60 high SCCR
E = 575-3-60 high SCCR

Outdoor air
A = No economizer
B = Manual damper
C = Economizer with barometric relief
D = Economizer BAS with modulating power exhaust
E = Economizer with power exhaust
F = Economizer BAS with barometric relief
G = Economizer BAS with modulating power exhaust
H = Economizer BAS with power exhaust
J = Economizer with barometric relief, single enthalpy
K = Economizer with modulating power exhaust, single enthalpy
L = Economizer with power exhaust, single enthalpy
Q = Economizer with barometric relief, dual enthalpy
R = Economizer with modulating power exhaust, dual enthalpy
S = Economizer with power exhaust, dual enthalpy

Coils
1 = Standard condenser and evaporator coil
2 = Standard condenser and ElectroFin evaporator coil
3 = ElectroFin condenser and standard evaporator coil
4 = ElectroFin condenser and ElectroFin evaporator coil

Controls
A = Smart Equipment™ controls
C = Smart Equipment™ with COM
J = Verasys single zone
K = Verasys change over bypass
L = Verasys VAV

Sensors
A = No sensors
B = Air proving switch
C = Dirty filter switch
D = Supply air smoke detector
E = Return air smoke detector
F = CO2 sensor
G = APS, DFS
H = APS, SSD
J = APS, RSD
K = APS, CO2
L = DFS, SSD
M = DFS, RSD
N = DFS, CO2
P = SSD, RSD
Q = SSD, CO2
R = RSD, CO2
S = APS, DFS, SSD
T = APS, DFS, RSD
U = APS, DFS, CO2
V = APS, SSD, RSD
W = APS, SSD, CO2
X = APS, RSD, CO2
Y = DFS, SSD, RSD
Z = DFS, SSD, CO2
1 = DFS, RSD, CO2
2 = SSD, RSD, CO2
3 = APS, DFS, SSD, RSD
4 = APS, DFS, SSD, CO2
5 = APS, DFS, RSD, CO2
6 = APS, SSD, RSD, CO2
7 = DFS, SSD, RSD, CO2
8 = APS, DFS, SSD, RSD, CO2

Service options
A = No service options
B = Phase monitor (PHM)
C = Non-Power convenience outlet (NCO)
D = Circut breaker (CB)
E = Disconnect switch (DSC)
F = Powered convenience outlet (PCO)
G = PHM, CB
H = PHM, DSC
J = PHM, NCO
K = PHM, PCO
L = CB, NCO
M = CB, PCO
N = DSC, NCO
P = DSC, PPCO
Q = PHM, CB, NCO
R = PHM, CB, PCO
S = PHM, DSC, NCO
T = PHM, DSC, PCO

Refrigeration
1 = Standard
3 = Low ambient head pressure control (HPC)
4 = Modulating hot gas reheat (HGR)
A = Service valves (SV)
C = HPC, SV
D = HGR, SV

Additional options
1 = Standard Throwaway filter
2 = 2" pleated filter MERV 8
4 = 4" pleated filter MERV 13
5 = Standard filter, coil guard (CG)
6 = 2" pleated, CG
7 = 4" pleated, CG

Cabinet options
A = Standard cabinet
B = Hinged access panel (HAP)
C = Condensate overflow switch (COF)
D = Double wall (DBL) *
E = Stainless steel drain pan (SSD)
F = HAP, SSD
G = HAP, COF
H = SSD, COF
J = DBL, SSD
K = DBL, COF
L = DBL, SSD, COF
M = HAP, SSD, COF

* Double wall will include HAP

Generation
1 = First generation
2 = Second generation

Table 3: UV35 to UV40 vertical airflow unit physical data

Component	Models			
	UV35		UV40	
Nominal tonnage	35		40	
ARI cooling performance	2 Stage	4 Stage	2 Stage	4 Stage
Gross capacity @ ARI A point (Btu)	400,295	400,592	436,406	435,211
ARI net capacity (Btu)	388,000	388,000	414,000	414,000
EER	10.7[1] / 10.5[2]	10.8[1]/ 10.5[2]	11.1[1] / 10.8[2]	11.1[1] / 10.8[2]
IEER CV	13.0[1] / 12.5[2]	n/a	12.0[1] / 11.4[2]	n/a
IEER with Intellispeed	15.1[1] / 14.6[2]	15.5[1]/15.2[2]	14.9[1] / 14.6[2]	16.2[1]/16.0[2]
IEER with VAV	n/a	15.4[1] / 15.0[2]	n/a	15.4[1] / 15.2[2]
CFM	10679	10517	15348	15093
System power (KW)	32.4	31.9	31.40	30.8
Refrigerant type	R-410A	R-410A	R-410A	R-410A
Refrigerant charge (lb-oz)				
System 1	19-02	19-02	26-08	26-00
System 2	17-13	17-08	25-00	24-08
ARI heating performance				
Heating model	N(S)1	N(S)3	T3	N(S)1	N(S)3	T3
Heating type	Stg. Low	Stg. High	Mod. High	Stg. Low	Stg. High	Mod. High
1st stage heat input (K Btu)	320	400	140	320	400	140
2nd stage heat input (K Btu)	400	800	800	400	800	800
1st stage heat output (K Btu)	259	324	113	259	324	113
2nd stage heat output (K Btu)	324	648	648	324	648	648
Steady state efficiency (%)	81	81	81	81	81	81
No. of burners	9	9/9	9/9	9	9/9	9/9
No. of stages/turn down	2/1.25	2/2	2/5.71	2/1.25	2/2	2/5.71
Temperature rise range (°F)	20-30	35-60	35-60	15-25	35-50	35-50
Gas limit setting (°F) (top/bottom)	140	140/160	170/210	170	140/140	170/170
Gas piping connection (in.)	3/4	1-1/4	1-1/14	3/4	1-1/4	1-1/14
Dimensions (in.)				
Length	180		232	
Width	90		90	
Height	70		77	
Operating weight (lb)	4191		5742	
Compressors	2 Stage	4 Stage	2 Stage	4 Stage
Type	Scroll	Scroll	Scroll	Scroll
Quantity	2	3	2	3
Unit capacity steps (%)	50 / 100	25 / 50/ 75 / 100	50 / 100	25 / 50/ 75 / 100
Condenser coil data				
Face area (sq. ft)	61.6		112.4	
Type	MCHX		MCHX	
Thickness (mm)	20		20	
FPI	23		23	
Circuitry type	2-Pass		2-Pass	
Evaporator coil data				
Face area (sq. ft)	34.4		38.9	
Rows	4		4	
Fins per inch	15		15	
Tube diameter	3/8		3/8	
Circuitry type	Intertwined		Intertwined	
Refrigerant control	TXV		TXV	
Condenser fan data				
Quantity	4		4	
Fan diameter (in.)	30		30	
Type	Prop		Prop	
Drive type	Direct		Direct	
Number of motors	4		4	
Motor HP each	1		1	
RPM	1140		1140	
Nominal total CFM	29800		34109	
Belt drive evap fan data				
Quantity	2		2	

Table 3: UV35 to UV40 vertical airflow unit physical data

Component	Models					
	UV35			UV40		
Nominal tonnage	35			40		
Fan size (in.)	18x18			20x18		
Type	Centrifugal			Centrifugal		
Static range	Std	Med	High	Std	Med	High
Motor sheave	1VP65	2VP60	2VP60	1VP60	1VP75	2VP60
Blower sheave	1B5V124	2B5V94	2B5V86	1B5V124	1B5V136	2B5V94
Belt	BX82	BX75	5VX780	5VX830	5VX880	5VX780
Motor HP each	7.5	10.0	15.0	10.0	15.0	20.0
Motor RPM	1800	1800	1800	1800	1800	1800
Frame size	213T	215T	254T	215T	254T	256T
Filters						
Quantity - size	9 - (20 x 20 x 2)[3, 4]			4 - (20 x 20 x 2)[3, 4]		
	9 - (20 x 20 x 4)[5]			4 - (20 x 20 x 4)[5]		
	3 - (20 x 25 x 2)[3, 4]			8 - (20 x 25 x 2)[3, 4]		
	3 - (20 x 25 x 4)[5]			8 - (20 x 25 x 4)[5]		
ID Blower power (kW)	3089[1] / 3603[2]		3046[1] / 3690[2]	5778[1] / 6566[2]		5470[1] / 6217[2]

1 Cooling only unit or cooling unit with electric heat
2 Cooling unit with gas heat
3 2 in. throwaway, standard, MERV (Minimum Efficiency Reporting Value) 3
4 Optional 2 in. pleated, MERV 8
5 Optional 4 in. pleated, MERV 13

40 ton cooling capacity performance

Table 15: UH40 and UV40 cooling capacity performance

Air on evaporator coil		Temperature of air on condenser coil																					
		Return dry bulb temp (°F)												Return dry bulb temp (°F)									
CFM	WB (°F)	90		85		80		75		70		65		90		85		80		75		70		65	
		TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC
		75 (°F)												85 (°F)											
10000	77	550.3	276.7	547.1	232.0	545.4	187.2	-	-	-	-	-	-	524.0	267.0	520.8	222.6	517.5	177.7	-	-	-	-	-	-
	72	505.9	325.1	502.9	280.2	499.4	234.8	496.1	189.1	-	-	-	-	481.2	314.4	478.2	270.0	474.7	225.0	471.3	179.7	-	-	-	-
	67	463.6	372.5	460.5	327.8	457.6	282.5	454.1	236.8	450.6	190.7	-	-	440.4	360.9	437.4	316.6	434.6	271.8	431.2	226.6	427.7	181.0	-	-
	62	437.7	401.1	420.3	373.5	417.4	329.0	414.4	283.5	411.3	237.4	407.9	191.2	419.8	384.5	400.2	360.7	396.5	317.6	393.5	272.6	390.3	227.1	386.9	181.3
	57	436.9	402.1	412.7	382.7	389.2	363.6	378.3	329.5	375.7	284.0	372.6	237.7	419.0	385.5	395.2	366.4	372.0	347.3	358.0	317.9	355.7	272.4	352.6	226.7
12000	77	570.8	301.9	567.5	248.5	565.5	195.2	-	-	-	-	-	-	543.2	291.8	539.8	238.9	536.3	185.6	-	-	-	-	-	-
	72	525.5	359.1	522.4	305.7	519.2	251.9	515.6	197.5	-	-	-	-	498.8	347.6	496.3	295.0	492.9	241.6	489.4	187.9	-	-	-	-
	67	482.5	415.1	479.8	362.5	476.7	308.8	473.1	254.1	469.6	199.6	-	-	458.2	402.1	455.4	350.6	452.0	297.4	448.7	243.6	445.0	189.5	-	-
	62	470.2	430.9	443.9	409.8	436.0	364.3	432.9	310.2	429.4	255.5	425.8	200.4	450.3	412.6	424.8	391.9	413.2	352.0	410.4	298.7	407.1	244.6	403.5	190.3
	57	469.4	431.8	443.1	410.9	417.1	389.7	395.6	363.8	391.9	310.5	389.1	255.9	449.6	413.7	424.1	392.8	398.6	372.2	375.6	349.1	371.0	298.6	367.9	244.5
14000	77	585.5	325.5	582.5	264.0	580.5	202.2	-	-	-	-	-	-	556.7	315.1	553.5	254.1	549.7	192.5	-	-	-	-	-	-
	72	540.2	391.4	537.4	329.8	534.1	267.7	530.3	204.9	-	-	-	-	513.2	379.5	510.2	318.8	506.9	257.2	502.9	195.1	-	-	-	-
	67	500.6	450.1	493.9	394.9	490.6	332.8	487.5	270.4	483.6	207.1	-	-	476.4	434.3	468.1	382.2	464.9	321.2	461.7	259.2	458.0	196.9	-	-
	62	496.7	455.1	468.7	432.8	449.4	397.3	446.4	335.2	443.2	272.0	439.3	208.5	475.6	435.7	448.1	413.5	426.3	383.7	422.9	323.1	419.6	260.7	415.8	198.0
	57	495.8	456.3	467.9	433.9	440.3	411.2	412.8	388.6	405.0	335.8	401.7	272.5	474.8	436.5	447.2	414.5	420.5	392.4	393.9	370.6	383.0	323.3	379.7	260.8
16000	77	596.9	348.2	593.8	278.6	591.6	208.8	-	-	-	-	-	-	567.3	337.5	564.1	268.3	560.3	198.8	-	-	-	-	-	-
	72	551.6	422.3	548.6	352.8	545.3	282.5	541.1	211.5	-	-	-	-	523.2	410.0	520.4	341.3	517.2	271.8	512.9	201.4	-	-	-	-
	67	519.6	473.9	504.4	426.7	501.6	356.6	498.3	285.5	494.3	214.0	-	-	496.9	453.1	478.1	413.3	475.1	344.4	472.0	274.3	467.7	203.6	-	-
	62	518.6	475.2	489.4	451.7	463.1	424.1	457.2	358.6	453.7	287.4	449.8	215.6	496.4	454.5	467.5	431.4	439.5	408.4	432.9	346.4	429.2	275.7	425.1	204.7
	57	517.7	476.6	488.6	452.8	459.4	429.1	430.9	405.2	414.7	360.1	412.0	288.3	495.6	455.6	466.9	432.3	438.7	409.1	410.9	386.1	392.0	347.4	389.4	276.4
18000	77	605.8	370.1	602.8	292.5	600.5	214.8	-	-	-	-	-	-	575.3	359.0	572.2	281.9	568.3	204.4	-	-	-	-	-	-
	72	560.6	452.0	557.2	375.1	554.2	296.6	550.2	217.7	-	-	-	-	531.1	440.3	528.4	363.3	525.4	285.7	521.2	207.6	-	-	-	-
	67	538.1	490.7	514.0	455.4	510.7	378.9	507.4	300.0	502.9	220.4	-	-	514.8	469.1	488.5	439.0	483.6	366.3	480.3	288.5	476.0	209.7	-	-
	62	537.3	492.3	506.8	467.8	476.8	442.9	465.8	381.7	462.3	302.2	458.1	222.1	513.9	470.7	484.3	446.3	454.6	422.3	440.3	368.4	437.1	290.1	432.9	211.0
	57	536.4	493.7	506.0	469.0	476.1	444.1	446.1	419.5	423.1	382.8	419.7	303.0	513.2	471.9	483.5	447.5	454.0	423.5	425.1	399.3	400.5	368.5	396.9	290.9
		95 (°F)												105 (°F)											
10000	77	495.7	256.8	492.4	212.6	489.3	168.2	-	-	-	-	-	-	465.5	245.7	462.4	202.2	459.2	158.3	-	-	-	-	-	-
	72	454.8	303.1	451.8	259.1	448.5	214.7	445.1	169.9	-	-	-	-	426.9	291.3	424.1	247.8	420.7	203.9	417.4	159.7	-	-	-	-
	67	415.6	348.5	412.8	304.8	410.1	260.6	406.8	215.8	403.5	170.9	-	-	389.7	335.7	387.3	292.6	384.3	248.7	381.3	204.8	377.8	160.3	-	-
	62	400.5	366.6	379.3	346.0	374.1	305.6	371.1	261.1	367.9	216.1	364.5	171.1	379.9	347.8	357.6	329.7	349.8	293.0	347.4	249.1	344.2	204.7	340.9	160.3
	57	399.7	367.5	376.7	349.1	354.0	330.5	337.4	305.1	335.1	260.7	332.1	215.7	379.2	348.6	356.9	330.5	334.9	312.6	316.4	291.1	313.1	248.3	310.4	204.0
12000	77	513.3	281.0	509.9	228.6	506.3	175.8	-	-	-	-	-	-	481.4	269.5	478.1	217.7	474.6	165.6	-	-	-	-	-	-
	72	471.0	335.8	468.4	283.7	465.1	230.9	461.4	177.7	-	-	-	-	441.7	323.2	438.9	271.8	435.6	219.6	431.9	167.1	-	-	-	-
	67	434.2	386.9	429.4	338.2	426.1	285.4	422.8	232.4	419.1	179.0	-	-	408.0	371.1	402.1	325.2	399.0	273.4	395.7	220.9	391.9	168.1	-	-
	62	429.2	393.1	404.2	372.9	388.7	339.3	386.2	286.4	383.2	233.2	379.5	179.4	406.8	372.4	382.5	352.7	363.6	325.5	361.1	273.8	358.0	221.1	354.4	168.3
	57	428.5	394.0	403.5	373.8	379.1	353.7	354.9	333.9	349.3	286.3	346.1	232.9	406.1	373.6	381.8	353.5	358.0	334.0	334.8	314.6	325.6	273.5	322.8	220.5
14000	77	525.5	303.8	522.2	243.3	518.6	182.5	-	-	-	-	-	-	492.5	291.9	489.3	232.3	485.5	171.9	-	-	-	-	-	-
	72	484.0	367.1	481.1	307.1	477.8	246.2	473.8	184.7	-	-	-	-	452.9	353.9	450.2	294.8	447.0	234.4	443.1	173.9	-	-	-	-
	67	453.3	413.3	440.4	370.0	437.7	309.1	434.7	247.8	430.8	186.1	-	-	429.6	391.3	412.1	356.0	409.4	296.3	406.3	235.7	402.4	175.0	-	-
	62	452.5	414.6	426.1	392.9	402.6	367.7	398.0	310.2	394.5	248.9	390.7	186.9	428.6	392.4	403.1	371.4	377.6	350.6	371.9	297.3	368.4	236.5	364.5	175.3
	57	451.9	415.4	425.3	393.8	399.2	372.3	373.7	351.2	359.7	310.4	356.8	248.7	428.1	393.4	402.4	372.4	377.0	351.3	352.2	330.7	335.1	297.0	332.6	235.9
16000	77	535.1	325.7	532.1	257.4	528.0	188.5	-	-	-	-	-	-	500.8	313.5	498.1	246.0	494.2	177.9	-	-	-	-	-	-
	72	493.1	396.8	490.2	329.3	487.0	260.2	482.9	190.9	-	-	-	-	461.0	384.0	458.3	316.6	455.5	248.3	451.4	179.8	-	-	-	-
	67	473.4	431.1	450.8	399.3	447.4	331.6	444.0	262.4	439.9	192.6	-	-	448.0	407.6	423.4	381.2	418.0	318.2	414.7	250.0	410.5	181.0	-	-
	62	472.5	432.5	444.5	409.7	416.9	387.1	406.8	333.2	403.4	263.5	399.3	193.4	447.2	408.6	420.0	386.9	393.3	364.9	379.3	319.5	376.3	250.7	372.3	181.6
	57	471.6	433.6	443.8	410.7	416.3	388.2	389.4	365.6	368.4	333.0	365.7	263.8	446.4	409.8	419.3	387.9	392.7	365.9	366.7	344.0	344.0	317.9	340.5	250.5
18000	77	542.4	347.0	539.7	271.0	535.4	194.1	-	-	-	-	-	-	508.0	334.8	505.0	259.3	500.7	183.5	-	-	-	-	-	-
	72	500.7	425.7	497.9	350.6	494.5	273.8	490.4	196.7	-	-	-	-	469.0	409.7	465.8	337.2	462.4	261.8	458.1	185.5	-	-	-	-
	67	490.0	445.9	461.3	421.6	454.7	353.3	451.7	276.4	447.2	198.4	-	-	463.4	421.6	435.2	398.4	424.2	339.3	421.6	263.4	417.3	186.8	-	-
	62	489.2	447.2	460.0	423.8	431.4	400.1	413.3	355.4	410.6	277.5	406.3	199.4	462.6	422.7	434.5	399.5	406.6	377.0	385.8	340.7	384.9	265.4	378.7	187.4
	57	488.4	448.7	459.3	425.0	430.8	401.3	402.7	377.7	376.9	351.7	372.2	278.0	461.8	423.9	433.8	401.0	411.4	382.9	378.9	355.2	352.7	332.7	346.7	264.3

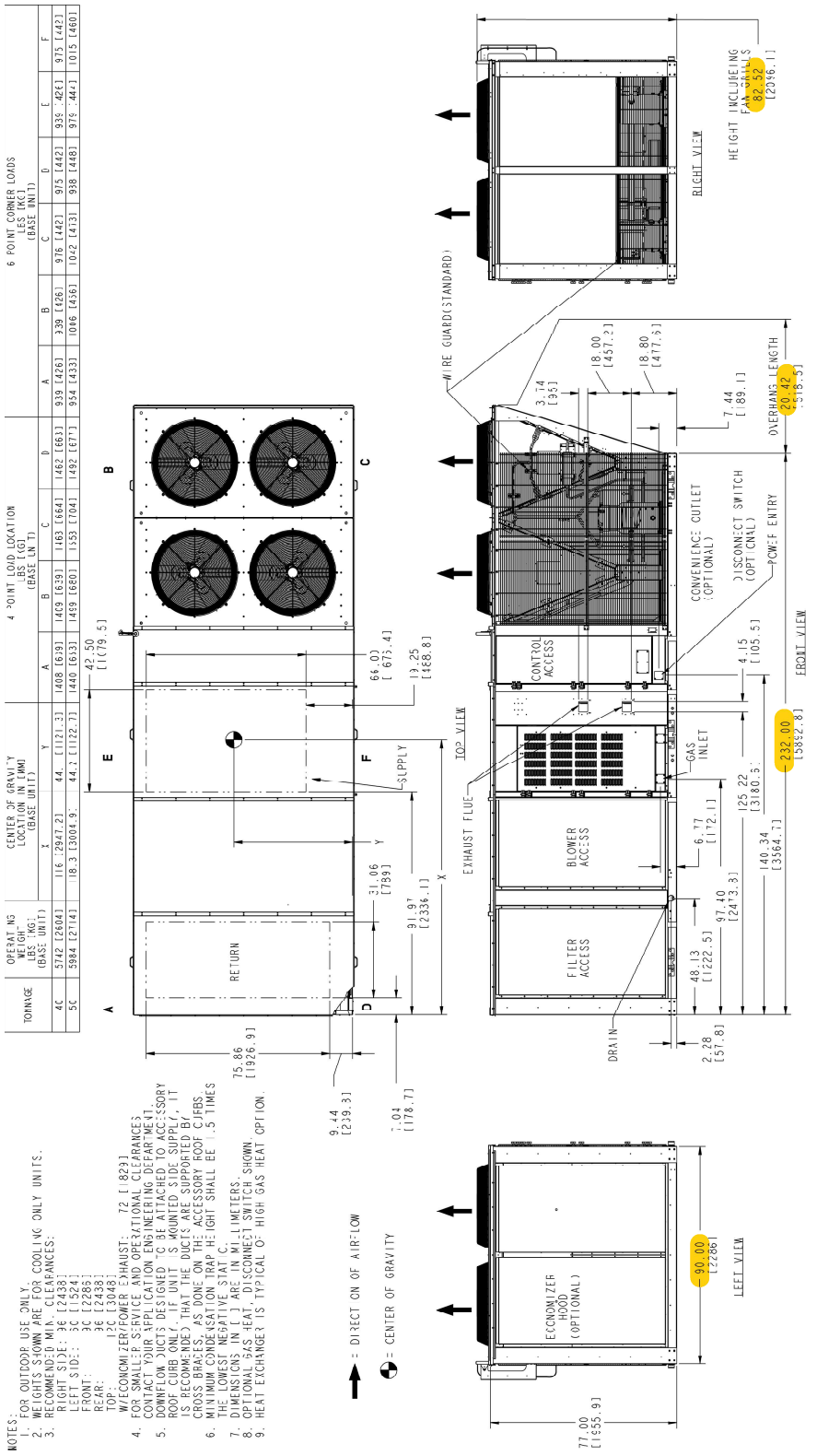
Table 16: UH40 and UV40 cooling capacity performance continued

Air on evaporator coil		Temperature of air on condenser coil																							
		Return dry bulb temp (°F)												Return dry bulb temp (°F)											
CFM	WB (°F)	90		85		80		75		70		65		90		85		80		75		70		65	
		TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC	TC	SC
		115 (°F)												125 (°F)											
10000	77	433.7	234.3	430.7	191.3	427.4	147.9	-	-	-	-	-	-	400.3	234.1	397.4	187.9	394.1	142.1	-	-	-	-	-	-
	72	401.8	280.7	394.7	235.9	391.5	192.6	388.2	149.0	-	-	-	-	366.8	279.7	363.9	232.9	360.9	187.0	357.7	141.3	-	-	-	-
	67	363.6	321.0	360.4	279.7	357.5	236.6	354.4	193.2	351.1	149.5	-	-	336.6	319.7	331.3	277.2	329.2	230.8	326.4	185.2	323.1	140.0	-	-
	62	357.7	327.5	336.6	310.3	324.5	279.9	322.5	236.5	319.5	192.9	316.1	149.0	335.2	320.8	314.3	300.3	298.3	273.5	296.4	227.7	293.8	182.7	290.5	137.9
	57	357.6	328.6	336.0	311.0	314.7	293.5	294.3	275.7	290.2	235.3	287.5	191.7	334.6	320.9	313.6	300.5	293.3	280.6	273.3	261.1	265.9	224.3	263.6	179.2
12000	77	447.8	257.6	444.7	206.5	441.5	155.0	-	-	-	-	-	-	412.4	258.3	409.5	203.2	405.8	148.8	-	-	-	-	-	-
	72	410.7	310.3	407.9	259.5	404.7	207.9	401.1	156.0	-	-	-	-	377.9	311.6	374.9	256.6	372.4	202.2	369.0	148.2	-	-	-	-
	67	383.7	349.5	372.7	312.4	370.3	260.6	367.3	208.8	363.5	156.7	-	-	358.7	342.0	342.7	309.1	340.3	254.6	337.4	200.5	333.7	146.8	-	-
	62	382.9	350.5	359.6	331.3	338.9	309.3	335.0	260.6	331.8	208.8	328.2	156.7	358.1	342.3	335.5	320.5	313.3	298.7	307.0	252.1	304.5	197.9	301.1	145.1
	57	382.5	351.4	359.1	332.2	336.1	313.3	313.7	294.3	301.1	259.5	298.6	207.7	357.4	342.5	334.8	320.6	312.8	299.0	291.2	277.8	275.4	247.7	273.4	194.4
14000	77	457.4	279.5	454.7	220.6	450.9	161.1	-	-	-	-	-	-	420.8	281.0	418.1	217.6	414.6	155.1	-	-	-	-	-	-
	72	420.2	340.6	417.7	281.8	415.0	222.4	411.0	162.6	-	-	-	-	386.1	342.8	384.2	279.7	381.3	216.8	377.6	154.6	-	-	-	-
	67	404.1	367.7	383.6	340.7	379.7	282.8	376.5	223.3	372.8	163.3	-	-	377.0	359.4	353.1	335.6	348.5	277.0	345.8	215.0	342.2	153.3	-	-
	62	403.4	368.8	378.5	348.5	354.0	328.3	344.0	283.8	340.9	223.5	337.1	163.4	376.3	359.8	352.6	336.3	329.0	313.5	315.3	275.0	312.6	212.5	308.8	151.3
	57	402.7	369.8	377.9	349.5	353.5	329.2	329.6	309.2	315.8	285.1	307.4	222.6	375.7	360.0	352.1	336.5	328.5	313.7	305.6	291.4	284.8	267.9	281.0	208.8
16000	77	465.1	301.0	462.5	234.2	458.5	166.8	-	-	-	-	-	-	427.8	303.0	424.9	231.2	421.3	160.8	-	-	-	-	-	-
	72	428.1	369.1	425.2	302.7	422.5	236.0	418.3	168.4	-	-	-	-	395.3	368.2	390.8	301.3	387.8	230.3	384.3	160.3	-	-	-	-
	67	420.8	382.8	394.9	361.3	387.2	304.6	384.3	237.1	380.5	169.3	-	-	392.2	373.5	367.8	349.8	355.6	299.9	352.6	228.7	347.9	158.7	-	-
	62	420.1	384.0	394.2	362.3	368.5	341.3	351.0	305.8	348.0	237.3	344.1	169.3	391.6	374.1	366.5	349.5	342.2	325.7	321.8	295.6	318.8	226.1	315.0	157.1
	57	419.5	385.1	393.6	363.4	367.9	342.3	342.9	321.3	318.6	300.6	314.4	236.9	391.0	374.2	366.2	349.8	341.7	325.9	317.9	302.6	294.7	279.7	287.7	222.5
18000	77	471.8	338.5	468.6	257.9	464.5	178.3	-	-	-	-	-	-	433.3	323.9	430.7	244.7	426.6	166.2	-	-	-	-	-	-
	72	437.3	410.9	431.8	337.6	428.7	257.3	424.3	177.9	-	-	-	-	405.7	385.2	396.1	322.7	393.4	243.4	389.7	165.6	-	-	-	-
	67	435.1	414.2	407.9	388.1	396.3	337.9	390.5	255.9	386.1	177.0	-	-	404.9	385.3	379.4	360.3	360.2	320.4	357.9	241.8	353.6	164.2	-	-
	62	434.3	414.9	407.2	388.4	380.7	362.5	357.7	331.2	353.5	253.4	350.4	175.4	404.4	385.9	378.7	360.6	353.4	335.8	328.9	311.8	324.1	239.0	320.2	162.4
	57	433.7	415.2	406.7	388.8	380.1	362.6	354.3	337.3	329.0	312.4	320.3	250.1	403.9	386.4	378.3	361.0	353.0	336.2	328.3	311.9	304.1	288.3	292.7	236.1

Table 49: 27.5 ton to 50 ton constant volume standard static without power exhaust

Size (tons)	Voltage	Comp. 1		Comp. 2		OD Fan motors each FLA	OD Fan motors each LRA	Supply blower motor FLA	Supply blower motor LRA	120 V trans FLA	Electric heat option			MCA A	Max f/b size A	Min disconnect rating		MCA with 120V trans A	Max f/b size with 120V trans A	Min disconnect rating/120V trans	
		RLA	LRA	RLA	LRA						kW	Stages	A			FLA	LRA			FLA	LRA
35	208-3-60	48.1	351	48.1	351	4	24.8	19.4	144.4	14.4	None	-	-	143.6	175	151	946	158.0	200	168	960
											27.0	2	74.9	143.6	175	151	946	158.0	200	168	960
											40.6	2	112.7	165.1	175	152	946	183.1	200	168	960
	230-3-60	48.1	351	48.1	351	4.2	24.8	19.4	144.4	13	None	-	-	144.4	175	152	946	157.4	200	167	959
											36.0	2	86.6	144.4	175	152	946	157.4	200	167	959
											54.0	2	129.9	154.2	175	172	946	170.4	200	187	959
	460-3-60	24.7	197	24.7	197	2.1	12.7	9.7	72.2	6.5	None	-	-	73.7	90	78	517	80.2	100	85	524
											36.0	2	43.3	73.7	90	78	517	80.2	100	85	524
											54.0	2	65.0	77.1	90	86	517	85.3	100	93	524
											72.0	2	86.6	98.7	110	111	517	106.9	110	118	524
											90.0	2	108.3	120.4	150	136	517	128.6	150	143	524
	575-3-60	22.4	135	22.4	135	1.6	8.8	8.01	59.1	5.2	None	-	-	64.8	80	68	364	70.0	90	74	370
											54.0	2	52.0	64.8	80	69	364	70.0	90	75	370
											72.0	2	69.3	79.3	90	89	364	85.8	90	95	370
											90.0	2	86.6	96.6	110	109	364	103.1	110	115	370
40	208-3-60	48.1	351	48.1	351	4	24.8	25	173.44	14.4	None	-	-	149.2	175	158	975	163.6	200	174	989
											40.6	2	112.7	172.1	175	158	975	190.1	200	175	989
	230-3-60	48.1	351	48.1	351	4.2	24.8	25	173.44	13	None	-	-	150.0	175	159	975	163.0	200	174	988
											54.0	2	129.9	161.2	175	178	975	177.4	200	193	988
	460-3-60	24.7	197	24.7	197	2.1	12.7	12.5	86.72	6.5	None	-	-	76.5	100	81	532	83.0	100	88	538
											54.0	2	65.0	80.6	100	89	532	88.8	100	97	538
											72.0	2	86.6	102.2	110	114	532	110.4	125	121	538
											90.0	2	108.3	123.9	150	139	532	132.1	150	146	538
											108.0	2	129.9	145.5	175	164	532	153.7	175	171	538
	575-3-60	22.4	135	22.4	135	1.6	8.8	10	71.77	5.2	None	-	-	66.8	80	70	377	72.0	90	76	382
											54.0	2	52.0	66.8	80	71	377	72.0	90	77	382
											72.0	2	69.3	81.8	90	91	377	88.3	90	97	382
											90.0	2	86.6	99.1	110	111	377	105.6	110	117	382
											108.0	2	103.9	116.4	150	131	377	122.9	150	137	382
50	208-3-60	67.3	485	67.3	485	7.2	40.7	25	173.44	14.4	None	-	-	205.2	250	217	1306	219.6	275	233	1321
											40.6	2	112.7	205.2	250	217	1306	219.6	275	233	1321
	230-3-60	67.3	485	67.3	485	6.8	40.7	25	173.44	13	None	-	-	203.6	250	215	1306	216.6	275	230	1319
											54.0	2	129.9	203.6	250	215	1306	216.6	275	230	1319
	460-3-60	32.7	215	32.7	215	3.4	20.4	12.5	86.72	6.5	None	-	-	99.7	125	105	598	106.2	125	113	605
											54.0	2	65.0	99.7	125	105	598	106.2	125	113	605
											72.0	2	86.6	102.2	125	114	598	110.4	125	121	605
											90.0	2	108.3	123.9	150	139	598	132.1	150	146	605
											108.0	2	129.9	145.5	175	164	598	153.7	175	171	605
	575-3-60	26.3	175	26.3	175	2.7	16.4	10	71.77	5.2	None	-	-	80.0	100	84	487	85.2	110	90	493
											54.0	2	52.0	80.0	100	84	487	85.2	110	90	493
											72.0	2	69.3	81.8	100	91	487	88.3	110	97	493
											90.0	2	86.6	99.1	110	111	487	105.6	110	117	493
											108.0	2	103.9	116.4	150	131	487	122.9	150	137	493

Figure 25: 40 ton to 50 ton physical dimensions



TONNAGE	OPERATING WEIGHT LBS [KG] (BASE UNIT)	CENTER OF GRAVITY LOCATION IN [MM] (BASE UNIT)		4 POINT LOAD LOCATION LBS [KG] (BASE UNIT)				6 POINT CORNER LOADS LBS [KG] (BASE UNIT)					
		X	Y	A	B	C	D	A	B	C	D	E	F
4C	5742 [2604]	116.2947.2]	44.[1121.3]	1408 [639]	1409 [639]	1463 [664]	1462 [663]	939 [426]	939 [426]	976 [442]	975 [442]	938 [426]	975 [442]
5C	5984 [2714]	118.3 [3004.9]	44.2 [1122.7]	1440 [653]	1499 [680]	1353 [704]	1492 [677]	954 [433]	1046 [436]	1042 [473]	938 [448]	975 [444]	1015 [460]

NOTES:
1. FOR OUTDOOR USE ONLY.
2. WEIGHTS SHOWN ARE FOR COOLING ONLY UNITS.
3. RECOMMENDED MIN. CLEARANCES:
   RIGHT SIDE: 36 [2438]
   LEFT SIDE: 5C [1524]
   FRONT: 3C [2286]
   REAR: 36 [2438]
   TOP: 12C [3048]
   W/ECONOMIZER/POWER EXHAUST: 72 [1829]
4. FOR SMALLER SERVICE AND OPERATIONAL CLEARANCES, CONTACT YOUR APPLICATION ENGINEERING DEPARTMENT.
5. DOWNFLOW DUCTS DESIGNED TO BE ATTACHED TO ACCESSORY ROOF CURB ONLY. IF UNIT IS SIDE SUPPLY, IT IS RECOMMENDED THAT THE DUCTS ARE SUPPORTED BY CROSS BRACES AT THE CONNECTION TO THE ACCESSORY ROOF CURBS.
6. MINIMUM HEIGHT FOR TRAP HEIGHT SHALL BE 1.5 TIMES THE LOWEST NEGATIVE STATIC.
7. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
8. OPTIONAL GAS HEAT DISCONNECT SWITCH SHOWN
9. HEAT EXCHANGER IS TYPICAL O- HIGH GAS HEAT OPTION.