Air Distribution Concepts
204 Hallberg St.
PO BOX 507
Delavan, WI.
53115

FLOWCON FABRIC DIFFUSER SUBMITTAL INFORMATION
Manufactured in the United States

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
04/23/2018

March 13, 2018

Job Name: Thayer Corp.: PO#51391

FABRIC: Antimicrobial Polyester

Construction.....250/150 denier
With EPA approved antimicrobial agent

Color..... Green

Weight.....5.3 oz. per sq. yard

Flame Resistance.....UL Classified File: R20672
Complies with UL 2518
ASTM E84 Class A
(Building Material) AC-167
Evaluation Report (ESR-2646) from ICC-ES

Suspension.....Cable Suspension W/ Galvanized Hardware

Air Permeability.....@125 Pa 2.0 cfm/sq.ft

Design Temperature.....0 deg. F to 350 deg. F (-17.8 deg. C to 176.7 deg. C)

Design Pressure..... .25" to 3.1" of water column

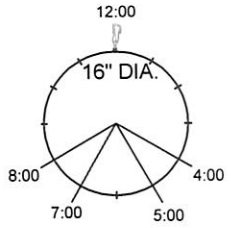
Air Diffusion..... Air jet orifices

Warranty..... 10 year warranty

Best regards
Air Distribution Concepts, Inc.

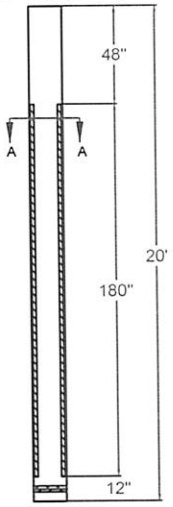
Phone 262-728-6860 **Fax 262-728-6840**

OPEN END
16" DIA 26" LF
2.000 CFM @ 5 ESP
1.432 FPM @ 13 VP



SECTION VIEW A-A

PLEASE CONFIRM
AIR JET DIRECTIONS



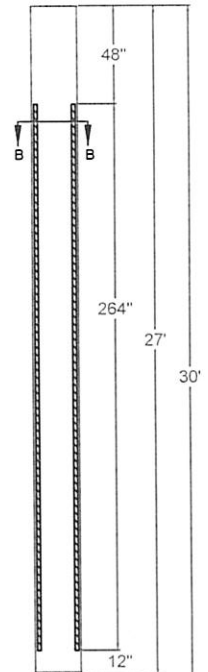
END CAP
CLEANOUT
ZIPPER

PLEASE SELECT (CIRCLE) AIR JET SIZE OF DIFFUSER.			
POSSIBLE AIR JET CHOICES			
	DIAMETER	CENTERS	VELOCITY
	1.5"	9.75"	13 [illegible] 10'
	2"	17.25"	[illegible] 10'
	2.5"	27.75"	[illegible] 10'

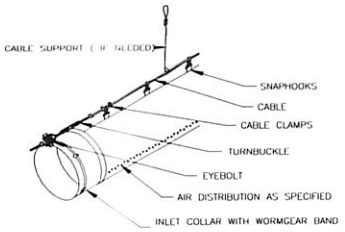
OPEN END
22" DIA 35.5" LF
4.000 CFM @ 5 ESP
1.515 FPM @ 14 VP

SECTION VIEW B-B

PLEASE CONFIRM
AIR JET DIRECTIONS

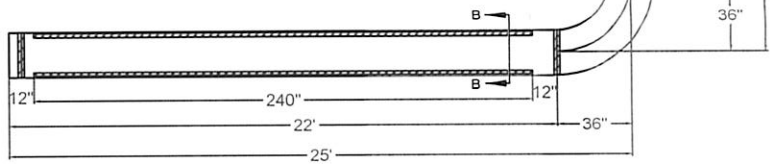


PLEASE SELECT (CIRCLE) AIR JET SIZE OF DIFFUSER.			
POSSIBLE AIR JET CHOICES			
	DIAMETER	CENTERS	VELOCITY
	1.5"	14.5"	133 FPM @ 10'
	2"	25.25"	175 FPM @ 10'
	2.5"	38.75"	220 FPM @ 10'



SUSPENSION DETAIL
1 ROW CABLE SUSPENSION AT 12 O'CLOCK

END CAP
CLEANOUT
ZIPPER



DRAWING FOR SUBMITTAL ONLY

CUSTOMER APPROVAL REQUIRED

SIGNATURE DATE

COMPANY NAME: THAYER CORP.	INV #: 18169	TAG	90°
QTY: 1	MATERIAL: ANTI-M POLYESTER	COLOR: GREEN	
THREADWEBBING: BLACK	SNAPHOOKS: ZINC, 3" CTR'S	DRAWN BY: GLK	12
VIEW: TOP	SCALE: NO	LABEL: UL	3
TITLE/NOTES: PO#51391		DATE: 3/13/18	6

SUPPORT HARDWARE

X ONLY OR STAINLESS STEEL

2 WORMGEAR BANDS

SET OF CABLES

SPECIFICATION CABLES

CABLE CLAMPS

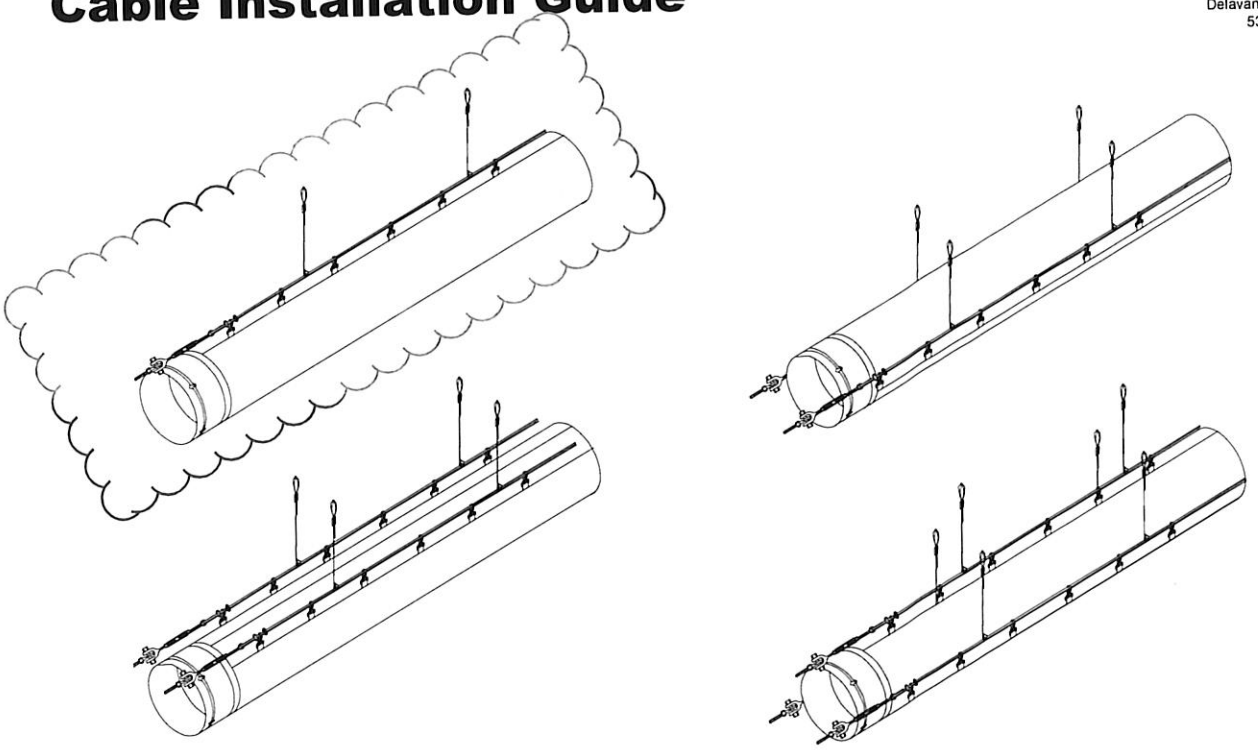
TURNBUCKLES

EYEBOLTS

FlowCon
Fabric Air Diffusers

Air Distribution Concepts
204 Hallberg St.
PO BOX 507
Delavan, WI.
53115

Cable Installation Guide



INSTALLATION INSTRUCTIONS OVERVIEW

STEP ONE: INVENTORY

Before installing fabric diffuser system read all general information in the following sections. For best results use this manual in conjunction with the mechanical blue print or diffuser layout if supplied.
Check the shipment carefully. Diffuser systems are shipped in polyethylene bags or boxes. Larger orders will be shipped in large skidded containers with individual contents in polyethylene bags or folded.
All packages will be labeled with diffuser diameter and length.
Make sure contents match the packing list. Note any missing or damaged pieces and notify your supplier before starting installation. Check length & diameters before installing & contact supplier before installation. (Not responsible for labor costs accrued from installing incorrect lengths or layouts.)

STEP TWO: SUSPENSION HARDWARE

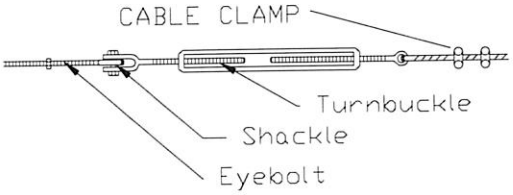
A) Single Suspension Hardware

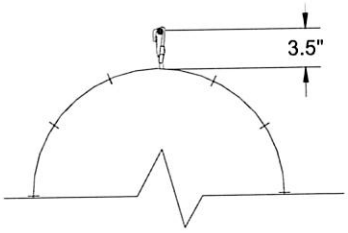
The cable supplied is .1875 dia. (7x7) aircraft cable, (vinyl coated or stainless cable may also be supplied). The orientation (12 o, clock) suspension cable should be positioned 3.5" (standard) above the surface of the diffuser. If plastic or stainless steel snap hooks are specified, position cable 3" above the surface of the diffuser. Cable must be aligned with the centerline of the airflow. If diffuser bounces for the first 20'-30' it is not anchored with the airflow. Move the end of the cable. Locate and secure end points of the cable run with eyebolts at required locations. Install eyebolt to turnbuckle and turnbuckle to cable and cable to eyebolt. Turnbuckle is used at one end to tighten cable.

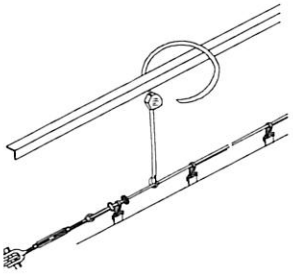
General Note: one 1/2" x 6" turnbuckle for every 100' of length

Multiple turnbuckles may be required. Vertical cable supports can be installed to prevent cable from sagging. Number of supports depends on desired cable levelness. Vertical supports cannot be installed until diffuser has been hung and inflated. Cable tension can be estimated by the amount of sag of the cable over the length installed.

(See Cable Tension chart ,page 4)



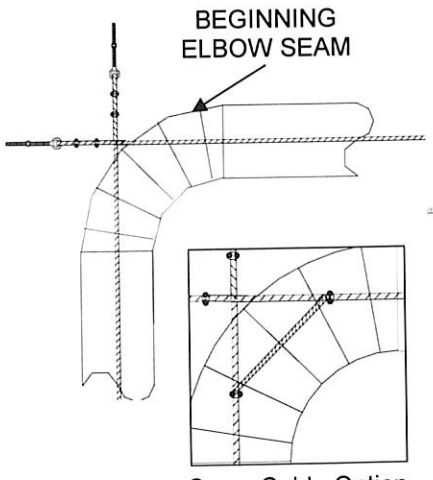




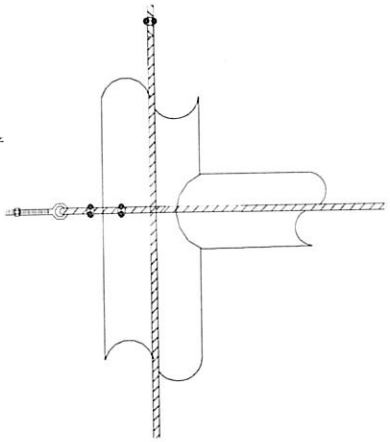
When fabric fittings are incorporated in your installation, align cables with the centerline of the system. All cables should be installed at the same elevation.

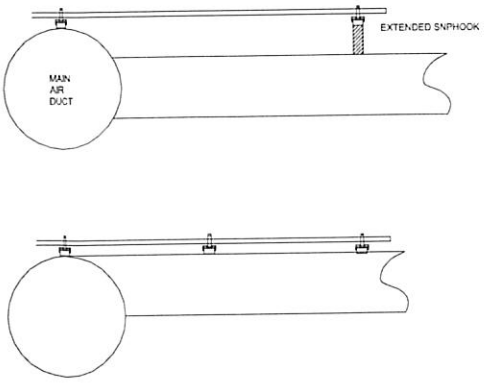
When elbows are used in the system cable should be installed as indicated as above. It is recommended to inflate system before suspending elbow. Make sure elbow is fully inflated without kinks. Then use cable to support the elbow from the snaphooks in the elbow seams to the suspension cable where needed to suspend elbow when system is deflated. A cable can be installed with cable clamps from one cable to the other at a 45 degree angle above elbow to help suspend elbow. Starting from where the seam of the elbow begins measure (.414)x (radius of elbow) and clamp the cross cable. Then connect the cross cable to the cable perpendicular to first cable. It should be connected to that cable the same distance coming from the other end of the elbow. Use short lengths of cable or "S" hooks to attach "O" rings to the cable.

When tee's or take offs are used install cables as above. Install cable perpendicular to main cable to suspend branch runs. To insure proper alignment the main of the fabric system can be installed to the cable and the air handler first. Then the cross cables perpendicular to the main can be installed to suspend the branch runs. If the take off port is top even all snap hooks will be the same distance of the diffuser. If the take off port is centered on the side of the main, the snap hooks are normally extended the same level as the snap hooks of the main duct. Fittings may have quick connect joints such as zippers to ease the installation and maintenance of the system.



Cross Cable Option

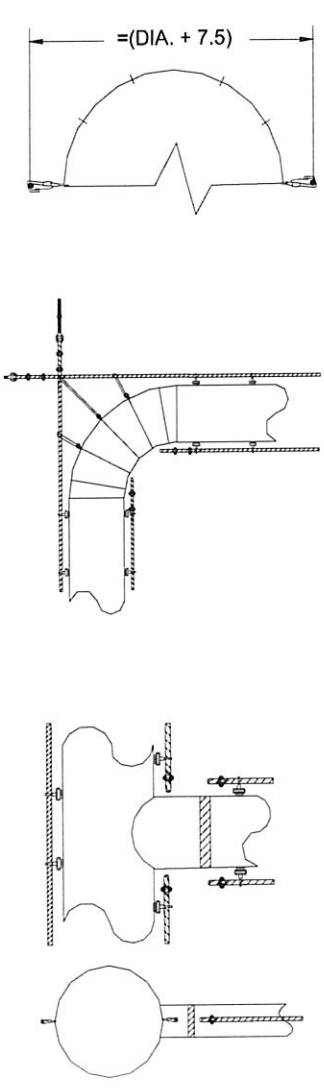




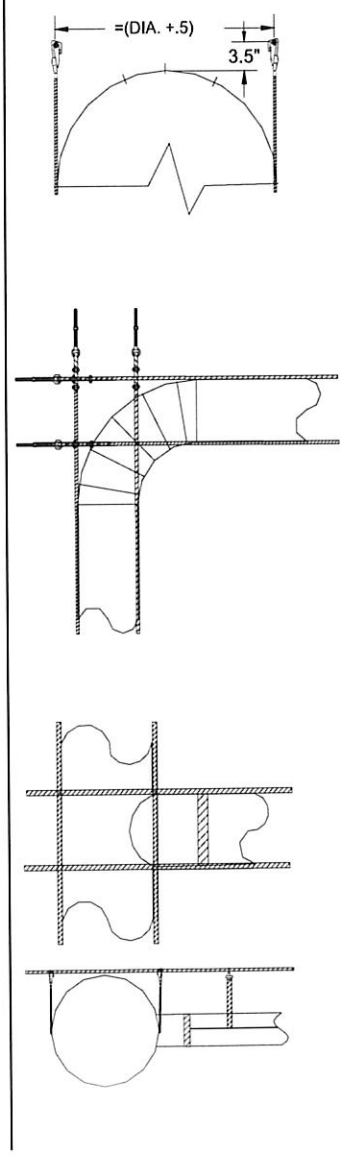
B) DOUBLE CABLE SUSPENSION

When installing a two cable suspension system, it is important to review the diffuser layout. It is important to notice location of elbows, tees, or reductions. Improper placement of the cable may cause wear on the fabric. Cable and turnbuckle installation are similar to single cable suspension systems. There are different variations of double cable systems. Refer to the diagrams below. Snap hooks can be extended so that all cables will be at the same elevation. Fittings may have quick connect joints such as zippers to ease the installation and maintenance of the system. NOTE: 6:00 & 12:00 suspension is similar to 12:00 suspension with cable to cable distance the same as 3 & 9:00 suspension. For Triple suspension use a combination of either 2:00, 10:00 with 12:00 or 3:00, 9:00 with 12:00

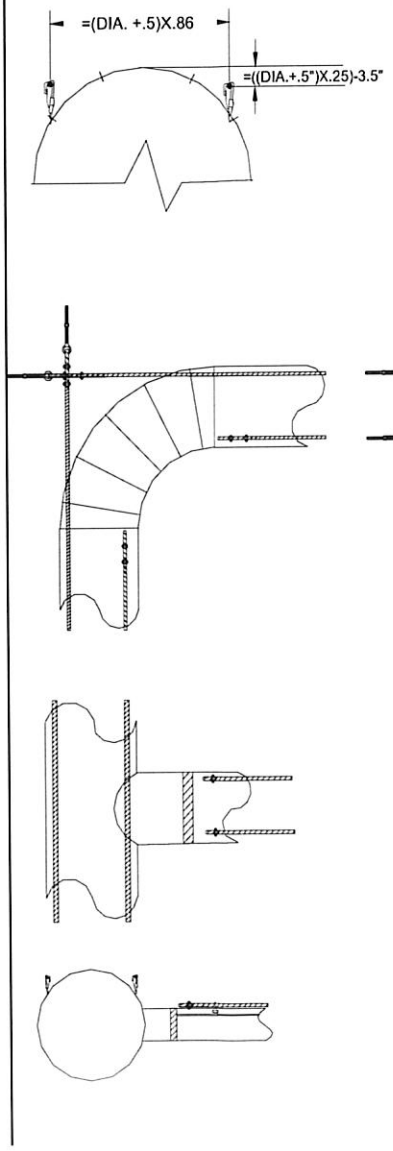
3:00 & 9:00



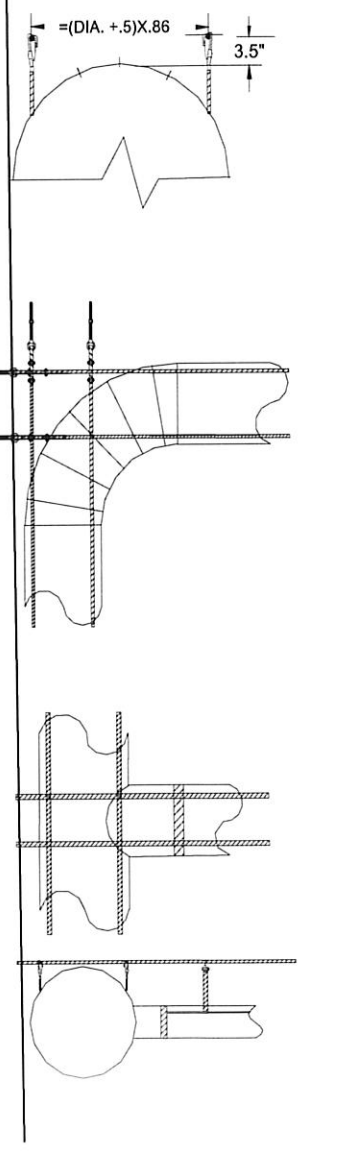
3:00 & 9:00 EXTENDED



2:00 & 10:00



2:00 & 10:00 EXTENDED



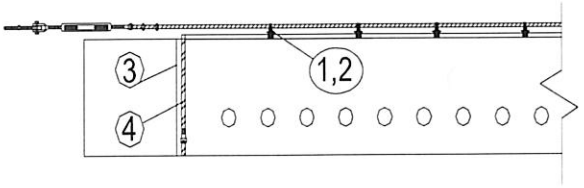
Note: The previous drawings illustrate possible double cable suspension systems. Some installations may require cable support brackets. Since every installation is different, support brackets are not supplied. Triple suspension systems used on larger diameters systems would be a combination of both single and double suspension guidelines.

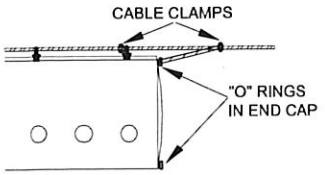
STEP THREE: INSTALLATION OF FABRIC DIFFUSER

When handling a diffuser prior and during installation, please keep anything that comes in contact with the diffuser clean. If a diffuser is to be laid out on the floor, make sure floor is clean or something is laid down to protect diffuser from dirt or debris on the ground that could catch on air jets and damage diffuser during installation.

1.) Attach the diffuser's snap hooks to the cable.
2.) Pull diffuser down cable until fully extended.
3.) Pull open end of diffuser and slip over metal collar or metal duct (about 6-12").
4.) install worm gear band around diffuser to secure it to metal duct.

Note: Worm gear bands are perforated and self taping screws can be used to help secure band and keep from slipping. (screws not included).





STEP FOUR: START UP

Turn on air handler and inflate diffuser. With the diffuser inflated, anchor the end cap or last snap hook of the diffuser to the support cable as shown. This will keep the diffuser fully extended when diffuser is deflated and keep the diffuser from sliding.

If the diffuser system flutters after installation, check to see if air handler is operating at its designed air volume and static pressure. Fluttering can cause damage to fabric shortening life of system.

WARRANTY INFORMATION

Diffuser systems are subject to a 10 and 5 year limited warranty. The warranty covers workmanship and materials on all components of the system. Only replacement costs and credits are covered. Cash payments are not available. The warranty covers freight costs, but does not cover installation costs. The warranty excludes damage caused by improper installation, failure to specify all system requirements and air handling equipment not performing as specified. The effective start date of the warranty is the product ship date. See warranty sheet for more information.

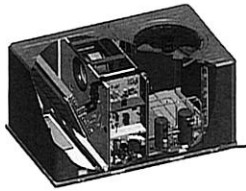
CABLE TENSION CHART (AMOUNT OF SAG (in inches) BASED ON CABLE TENSION OF 500 LBS.)

	LENGTH IN FEET											
DIA."	25	50	75	100	125	150	175	200	225	250	275	300
12	0.35	1.41	3.17	5.63	8.80	12.67	17.25	22.53	28.51	35.20	42.59	50.68
18	0.49	1.97	4.44	7.89	12.33	17.76	24.17	31.57	39.96	49.33	59.69	71.03
20	0.54	2.16	4.86	8.65	13.51	19.45	26.48	34.58	43.77	54.04	65.39	77.81
24	0.63	2.54	5.71	10.15	15.86	22.84	31.09	40.61	51.40	63.46	76.78	91.38
30	0.78	3.10	6.98	12.41	19.40	27.93	38.02	49.66	62.85	77.59	93.88	111.73
36	0.92	3.67	8.25	14.67	22.93	33.02	44.94	58.70	74.29	91.72	110.98	132.07
38	0.96	3.86	8.68	15.43	24.11	34.71	47.25	61.71	78.11	96.43	116.68	138.86
42	1.06	4.23	9.53	16.94	26.46	38.11	51.87	67.74	85.74	105.85	128.08	152.42
48	1.20	4.80	10.80	19.20	29.99	43.19	58.79	76.79	97.18	119.98	145.17	172.77
52	1.29	5.18	11.65	20.70	32.35	46.58	63.40	82.81	104.81	129.40	156.57	186.33
56	1.39	5.55	12.49	22.21	34.70	49.97	68.02	88.84	112.44	138.82	167.97	199.90
62	1.53	6.12	13.77	24.47	38.24	55.06	74.94	97.89	123.89	152.95	185.07	220.24
68	1.67	6.68	15.04	26.73	41.77	60.15	81.87	106.93	135.33	167.08	202.16	240.59
74	1.81	7.25	16.31	28.99	45.30	65.23	88.79	115.97	146.78	181.21	219.26	260.94
76	1.86	7.44	16.73	29.75	46.48	66.93	91.10	118.99	150.59	185.92	224.96	267.72
84	2.05	8.19	18.43	32.76	51.19	73.71	100.33	131.04	165.85	204.76	247.76	294.85

EXAMPLE: 30" DIA. X 200 ft. diffuser would have a sag of about 50". With one vertical support 100 ft. in the sag is reduced to 12.41" and two supports at, (66 ft. & 132 ft.) would reduce the sag between supports to about 5".

M/N YHC120F3RMA--G0C1

Quick Reference Guide



Precedent™ - High Efficiency
Cooling, Gas/Electric
3 to 10 Tons Packaged Rooftop Units

Model Number:	Used With:
~~YHC~~	~~High Efficiency Cooling Only (Electric Heat Optional)~~
YHC	High Efficiency Gas Heat Unit

Table 1. List of factory installed options[a]

0-50% Motorized outside air damper	LonTalk® Communication Interface (LCI)
Air-Fi™ Wireless Communication Interface	Manual outside air damper
BACnet® Communication Interface (BCI-R)	MERV 8 filters
Barometric relief	MERV 13 filters
Belt drive motor	Multiple zone VAV (variable air volume)
Clogged filter switch	Multi-speed indoor fan system
CompleteCoat™ (microchannel condenser coil)	NOVAR 2024 controls
Condensate overflow switch	NOVAR 3051 controls without zone sensor
Dehumidification	NOVAR 3051 zone sensor
Demand control ventilation wiring	NOVAR return air sensor
Discharge air temperature sensing kit	Powered convenience outlet
Economizer - comparative enthalpy	ReliaTel™ controls
Economizer - dry bulb	Stainless steel drain pan
Economizer - low leak, dry bulb	Stainless steel heat exchanger
Economizer - reference enthalpy	Supply, return, and plenum air smoke detectors
Fan failure switch	Through-the-base electric provision
Fault detection & diagnostics (FDD); Meets CA Title 24 requirements	Through-the-base gas provision
Frostat™	Unit mounted circuit breaker
Hail guard	Unit mounted non-fused disconnect
Hinged access panels	Unpowered convenience outlet
Human interface - 5 inch color touchscreen	

(a) Verify option availability in product catalog.

May 2017

RT-PRC074C-EN

Ingersoll Rand.

Table 2. High efficiency, 3 to 10 ton packaged rooftop performance data (cooling or gas)

Nominal Size (Tons)	3	4	5	6	6 Dual Compressors	7.5 Dual Compressors	8.5	10
Cooling Performance								
Supply Air (cfm)[a]	1,200	1,600	2,000	2,400	2,400	3,000	3,400	4,000
Tot / Sens Cap (MBh)[b],[c]	37.6/27.9	49.9/37.0	61.0/45.4	72/53	73.6/58.7	92/63.3	104/82	116/87
SEER/EER	15.0	15.0	15.0	12.6	13.1	12.6	12.5	12.4
IEER[d]	N/A	N/A	N/A	14.5	15.5	14.5	14.7	14.7
Gas Heating Performance[d]								
Low Heat (Input/output) - (MBh)	60.0/48.0	60.0/49.0	60.0/49.0	80/64	150.0/121.5	120/96	120/96	150/120
Medium Heat (Input/output) - (MBh)	80.0/64.0	80.0/64.0	80.0/64.0	120/96	120.0/97.2	150/120	150/120	200/160
High Heat (Input/output) - (MBh)	120.0/96.0	120.0/97.2	130.0/104.0	150/120	80.0/64.8	200/160	200/160	250/200
Other Information								
Net Weight (Lbs) - Gas Heat	532	711	755	822	1016	1026	1035	1259
Net Weight (Lbs) - Electric Heat	480	642	679	740	918	928	937	1132
Roof Curb	BAYCURB042*			BAYCURB043*				BAYCURB044*
Unit Cabinet Size	B	C		D				E[e]
Filters[f] - Type Furnished	Throwaway	Throwaway	Throwaway	Throwaway	Throwaway	Throwaway	Throwaway	Throwaway
Number Size Recommended	(2) 20x30x2	(2) 16x25x2	(4) 16x25x2	(4) 20x25x2	(4) 20x25x2	(4) 20x25x2	(4) 20x25x2	(3) 20x25x2 (2) 20x30x2

(a) Nominal cfm
(b) Cooling performance is rated at 80/67/95
(c) All units listed utilize 3-phase voltage
(d) SZVAV and multi-speed indoor fan system IEER 6T Dual - 16.0, 7.5T - 15.0, 8.5T - 15.5, 10T - 15.2. Two-stage gas heat standard on 6 ton dual compressor and above.
(e) BAYCURB044E available for 10 ton high efficiency only
(f) Optional 2" MERV 8 and MERV 13 filters also available

Table 3. Unit MCA & MOP electrical data (standard indoor fan motor) (cooling or gas[a])

T/YHC	Volts	MCA	MOP
036	208-230/1	28.3	45
036	208-230/3	20.6	30
036	460/3	11.0	15
036	575/3	7.9	15
048	208-230/1	37.3	50
048	208-230/3	27.2	40
048	460/3	12.8	15
048	575/3	9.8	15
060	208-230/1	41.4	60
060	208-230/3	30.0	45
060	460/3	13.8	20
060	575/3	10.2	15
072	208-230/3	32.3	50
072	460/3	15.1	20
072	575/3	12.7	15
074	208-230/3	37.4	50
074	460/3	18.7	25
092	208-230/3	42.4	50
092	460/3	20.7	25
092	575/3	15.6	20
102	208-230/3	42.0	50
102	460/3	21.6	25
102	575/3	16.5	20
120	208-230/3	46.1	60
120	460/3	21.9	30
120	575/3	16.4	20

(a) For MCA/MOP of units with electric heat, refer to product catalog.

Table 4. Unit indoor fan data (cooling or gas)

T/YHC	Volts	Standard - HP - RPM	Oversize - HP - RPM
036	208-230/1[a]	3/4 - MULT	—
036	208-230/3	1 - FIXED	—
036	460/1[a]	3/4 - MULT	—
036	460/3	1 - FIXED	—
036	575/1[a][b]	3/4 - MULT	—
036	575/3	1 -FIXED	—
048	208-230/1[a]	3/4 - MULT	—
048	208-230/3	1 - FIXED	—
048	460/1[a]	3/4 - MULT	—
048	460/3	1 - FIXED	—
048	575/1[a][b]	3/4 - MULT	—
048	575/3	1 -FIXED	—
060	208-230/1[a]	3/4 - MULT	—
060	208-230/3	1 - FIXED	—
060	460/1[a]	3/4 - MULT	—
060	460/3	1 - FIXED	—
060	575/1[a][b]	3/4 - MULT	—
060	575/3	1 -FIXED	—
072	208-230/3	1 - 1725	2.0 - 1725
072	460/3	1 - 1725	2.0 - 1725
072	575/3	1.5 - 1725	2.0 - 1725
074	208/-230/3	2.75 - MULT	—
074	460	2.75 - MULT	—
092	208-230/3[a]	2.75 - MULT	—
092	460/3[a]	2.75 - MULT	—
092	575/3[a][c]	2.75 - MULT	—
102	208-230/3[a]	2.75 - MULT	—

Table 4. Unit indoor fan data (cooling or gas) (continued)

T/YHC	Volts	Standard - HP - RPM	Oversize - HP - RPM
102	460/3[a]	2.75 - MULT	—
102	575/3[a][c]	2.75 - MULT	—
120	208-230/3[a]	2.75 - MULT	—
120	460/3[a]	2.75 - MULT	—
120	575/3[a][c]	2.75 - MULT	—

(a) Direct drive motor
(b) Powered through 575/230V transformer
(c) Powered through 575/480V transformer

Table 5. Unit dimensional data

	B	C	D	E
Unit Length UL	69 7/8	88 5/8	88 5/8	99 11/16
Unit Width UW	44 1/4	53 1/4	53 1/4	63 3/16
Unit Height UH	36 1/4	40 7/8	46 7/8	50 7/8
Clearance C1	48	48	48	48
Clearance C2	36	36	36	36
Clearance C3	36	36	36	36
Clearance C4	36	36	36	36
Clearance C5	72	72	72	72
Curb Length CL	65 13/16	84 1/2	84 1/2	84 1/2
Curb Width CW	41 7/16	50 3/8	50 3/8	60 3/8
Supply Length SL[a]	16 3/4	18 1/2	18 1/2	18 1/2
Supply Width SW[a]	17 7/8	34 3/8	34 3/8	34 3/8
Return Length RL[a]	14 9/16	18 1/4	18 1/4	18 1/4

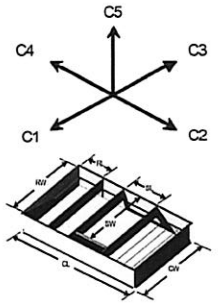
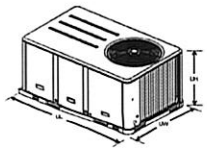


Table 5. Unit dimensional data (continued)

	B	C	D	E
Return Width RW[a]	25 3/16	34 3/8	34 3/8	34 3/8

(a) Dimensions are for curb openings and not duct inserts. Reference the product catalog for duct insert dimensions.



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