Unit Report For 50TC-D08A2A6-0A0G0_SUMBITTAL

Project: 1.0 RTU Submittals for Website - Page 3 11/26/2019
Prepared By: 01:25PM

Unit Parameters

Unit Model: **50TC-D08A2A6-0A0G0**
Unit Size: **08 (7.5 Tons)**
Volts-Phase-Hertz: **460-3-60**
Heating Type: **None**
Duct Cfg: **Vertical Supply / Vertical Return**
Two-Stage Compressor Models
Round Tube Plate Fin

Dimensions (ft. in.) & Weight (lb.) ***

Unit Length: **7' 4.125"**
Unit Width: **4' 11.5"**
Unit Height: **3' 5.25"**
*** Total Operating Weight: **795** lb

* Weights and Dimensions are approximate.
* Weight does not include unit packaging.
* Approximate dimensions are provided primarily for shipping purposes. For exact dimensions and weights, refer to appropriate product data catalog.

Lines and Filters

Condensate Drain Line Size: **3/4**
Return Air Filter Type: **Throwaway**
Return Air Filter Quantity: **4**
Return Air Filter Size: **16 x 20 x 2**

Unit Configuration

Medium Static Option (Belt Drive)
Al/Cu - Al/Cu
Base Electro-mechanical controls
Standard Packaging
2-Speed indoor fan motor controlled by VFD

Warranty Information

5-Year compressor parts (STD.)
1-Year parts (STD.)

No optional warranties were selected.

NOTE: Please see Warranty Catalog 500-089 for explanation of policies and ordering methods.

Ordering Information

Part Number	Description	Quantity
50TC-D08A2A6-0A0G0	Rooftop Unit	1

NOTES:

1. DIMENSIONS ARE IN INCHES, DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. CENTER OF GRAVITY
3. DIRECTION OF AIR FLOW

UNIT	OUTDOOR COIL TYPE	J	K	H
50TC-A08	RTPF	41 1/4 [1048]	33 [658]	15 7/8 [403]
50TC-A09	RTPF	49 3/8 [1253]	37 1/4 [946]	27 7/8 [708]
50TC-A12	RTPF	49 3/8 [1253]	37 1/4 [946]	15 7/8 [403]
50TC-D08	RTPF	41 1/4 [1048]	33 [658]	15 7/8 [403]
50TC-D09	RTPF	49 3/8 [1253]	37 1/4 [946]	15 7/8 [403]
50TC-D12	RTPF	49 3/8 [1253]	37 1/4 [946]	15 7/8 [403]
50TC-D08	MCHX	41 1/4 [1048]	33 [658]	23 [584.2]
50TC-D12	MCHX	49 3/8 [1253]	37 1/4 [946]	11 [279.4]

RTPF - ROUND TUBE, PLATE FIN (COPPER/ALUM)
MCHX - NOVATION (ALUM/ALUM)

UNITED TECHNOLOGIES CARRIER P.O. BOX 4808 SYRACUSE, NY 13221

	CONNECTION SIZES
A	1 3/8" [35] DIA FIELD POWER SUPPLY HOLE
B	2 1/2" [64] DIA POWER SUPPLY KNOCKOUT
C	1 3/4" [51] DIA GAUGE ACCESS PLUG
D	7/8" [22] DIA FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
G	2 " [51] DIA POWER SUPPLY KNOCK-OUT

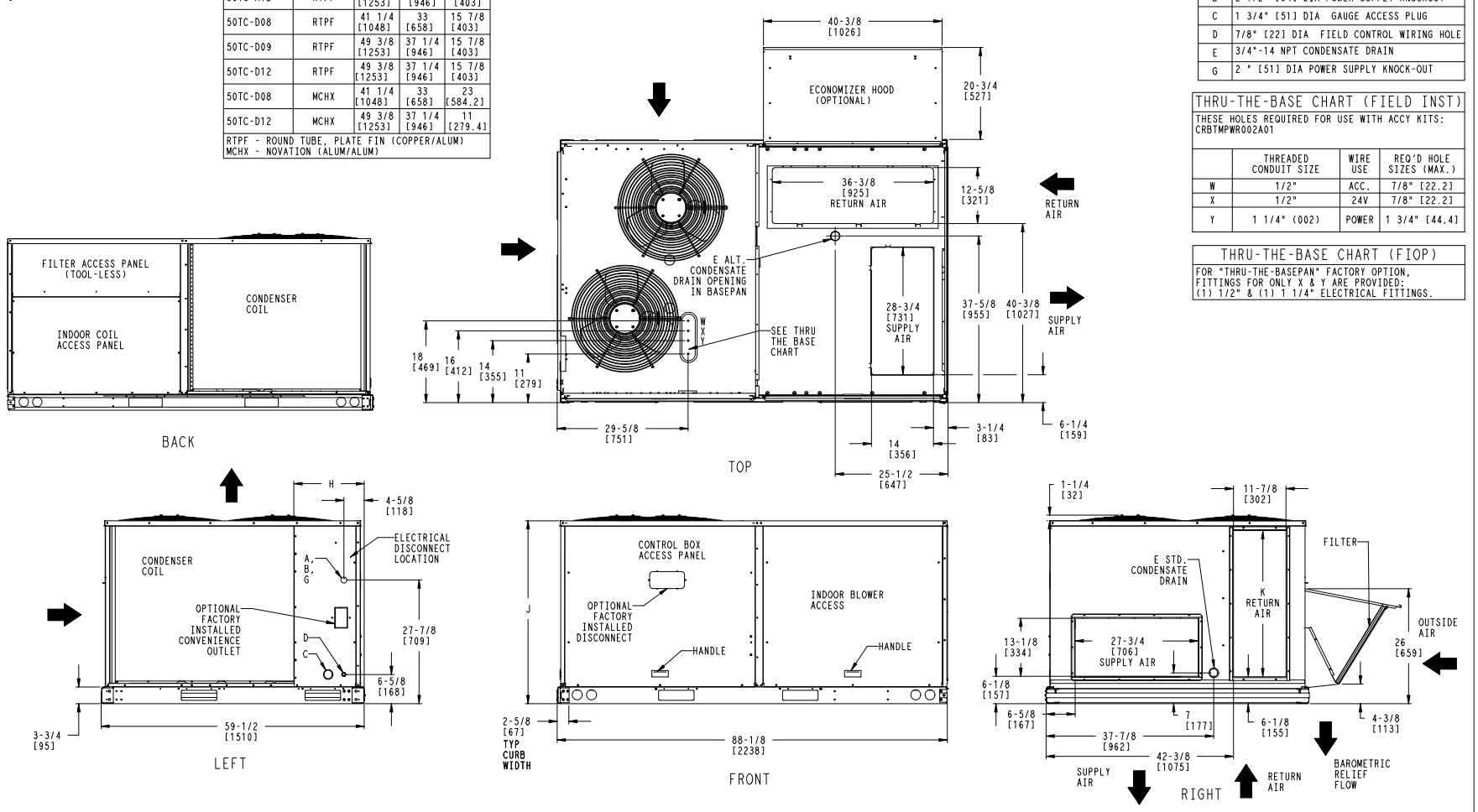
THRU-THE-BASE CHART (FIELD INST)

THESE HOLES REQUIRED FOR USE WITH ACCY KITS: CRBTMPWR002A01

	THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
W	1/2"	ACC.	7/8" [22.2]
X	1/2"	24V	7/8" [22.2]
Y	1 1/4" (002)	POWER	1 3/4" [44.4]

THRU-THE-BASE CHART (FIOP)

FOR "THRU-THE-BASEPAN" FACTORY OPTION, FITTINGS FOR ONLY X & Y ARE PROVIDED: (1) 1/2" & (1) 1 1/4" ELECTRICAL FITTINGS.



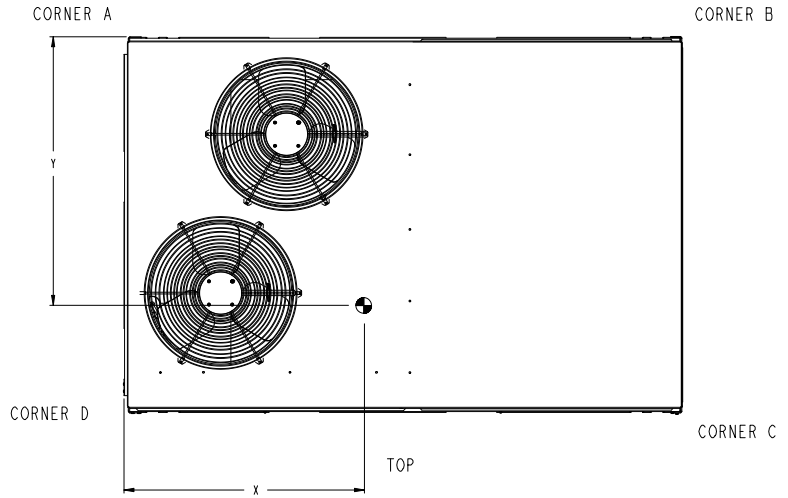
SHEET	DATE	SUPERCEDES			REV
1 OF 2	03-08-10	11-24-08	50TC 08-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48TM500986	F

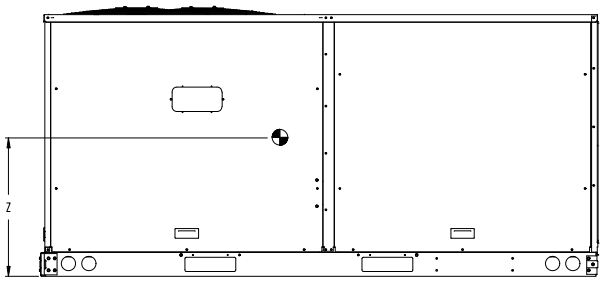
UNIT	OUTDOOR COIL TYPE	STD. UNIT WEIGHT ***		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)		C.G.		
		LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	LBS.	KG.	X	Y	Z
50TC-A08	RTPF	705	320	172	78	142	64.5	177	80.4	214	97.2	39 7/8 [1013]	33 [838]	21 1/4 [540]
50TC-A09	RTPF	845	383.6	206	93.5	167	76	212	96.2	261	118.5	39 1/2 [1003]	33 1/4 [845]	24 [610]
50TC-A12	RTPF	855	388	210	95.3	180	81.7	215	97.6	250	113.5	40 3/4 [1035]	32 3/8 [822]	25 1/4 [641]
50TC-D08	RTPF	760	345	158	71.7	155	70.4	222	100.8	225	102.2	43 3/4 [1111.3]	35 [889]	20 [508]
50TC-D09	RTPF	855	388.2	223	101.2	171	77.6	200	90.8	261	118.5	38 3/8 [975]	32 1/8 [816]	19 1/8 [486]
50TC-D12	RTPF	865	392.7	225	102.2	173	78.5	203	92.2	264	120	38 3/8 [975]	32 1/8 [816]	19 1/8 [486]
50TC-D08	MCHX	730	331.4	153	69.5	138	62.7	208	94.4	231	104.9	41 3/4 [1060.5]	35 3/4 [908]	21 1/8 [536.6]
50TC-D12	MCHX	820	372.3	179	81.3	161	73.1	228	103.5	253	114.9	41 3/4 [1060.5]	34 7/8 [885.8]	23 3/4 [603.3]

RTPF - ROUND TUBE, PLATE FIN (COPPER/ALUM)
MCHX - NOVATION (ALUM/ALUM)

UNITED TECHNOLOGIES CARRIER P.O. BOX 4808 SYRACUSE, NY 13221

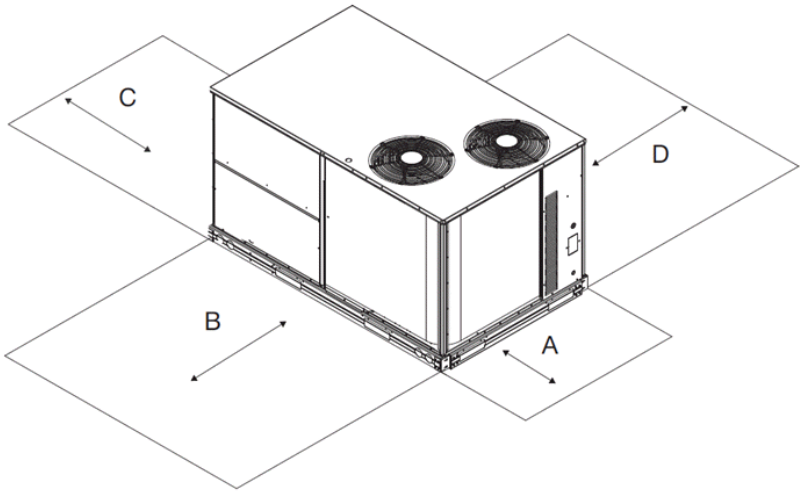
*** STANDARD UNIT WEIGHT IS WITHOUT ELECTRIC HEAT AND WITHOUT PACKAGING.
FOR OTHER OPTIONS AND ACCESSORIES, REFER TO THE PRODUCT DATA CATALOG.





SHEET	DATE	SUPERCEDES			REV
2 OF 2	03-08-10	11-24-08	50TC 08-12 SINGLE ZONE ELECTRICAL COOLING WITH ELECTRIC HEAT	48TM500986	F

Service Clearance



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LOCATION	DIMENSION	CONDITION
A	48-in (1219 mm)	• Unit disconnect is mounted on panel
	36-in (914 mm)	• If dimension-B is 12-in (305 mm)
	18-in (457 mm)	• No disconnect, convenience outlet option • Recommended service clearance (use electric screwdriver)
	12-in (305 mm)	• Minimum clearance (use manual ratchet screwdriver)
B	36-in (914 mm)	• Unit has economizer
	12-in (305 mm)	• If dimension-A is 36-in (914 mm)
	Special	• Check for sources of flue products within 10-ft of unit fresh air intake hood
C	36-in (914 mm)	• Side condensate drain is used
	18-in (457 mm)	• Minimum clearance
D	48-in (1219 mm)	• No flue discharge accessory installed, surface is combustible material
	42-in (1067 mm)	• Surface behind servicer is grounded (e.g., metal, masonry wall, another unit)
	36-in (914 mm)	• Surface behind servicer is electrically non-conductive (e.g., wood, fiberglass)
	Special	• Check for adjacent units or building fresh air intakes within 10-ft of this unit's flue outlet

NOTE: Unit not designed to have overhead obstruction. Contact Application Engineering for guidance on any application planning overhead obstruction or vertical clearances.

Chassis 3-4a

Part Number:50TC-D08A2A6-0A0G0

ARI EER:	**11.20**	
Application EER (Rooftop Unit only):	**10.44**	
IEER:	**13.0**	

Base Unit Dimensions

Unit Length:	**88.1**	in
Unit Width:	**59.5**	in
Unit Height:	**41.3**	in

Operating Weight

Base Unit Weight:	**760**	lb
Medium Static Option (Belt Drive):	**15**	lb
2-Speed Indoor Fan (VFD) Controller:	**20**	lb
Total Operating Weight:	**795**	lb

Unit

Unit Voltage-Phase-Hertz:	**460-3-60**	
Air Discharge:	**Vertical**	
Fan Drive Type:	**Belt**	
Actual Airflow:	**3000**	CFM
Site Altitude:	**0**	ft

Cooling Performance

Condenser Entering Air DB:	**95.0**	F
Evaporator Entering Air DB:	**80.0**	F
Evaporator Entering Air WB:	**67.0**	F
Entering Air Enthalpy:	**31.44**	BTU/lb
Evaporator Leaving Air DB:	**58.7**	F
Evaporator Leaving Air WB:	**57.6**	F
Evaporator Leaving Air Enthalpy:	**24.76**	BTU/lb
Unit Discharge Air DB:	**60.0**	F
Unit Discharge Air WB:	**58.1**	F
Unit Discharge Air Enthalpy:	**25.07**	BTU/lb
Gross Cooling Capacity:	**90.10**	MBH
Net Cooling Capacity:	**85.91**	MBH
Gross Sensible Capacity:	**68.90**	MBH
Net Sensible Capacity:	**64.71**	MBH
Compressor Power Input:	**6.40**	kW
Coil Bypass Factor:	**0.092**	

Supply Fan

External Static Pressure:	**0.50**	in wg
Fan RPM:	**727**	
Fan Power:	**1.44**	BHP

NOTE: **The Selected Indoor Fan Motor requires a Field-Supplied Drive (RPM Range: 733 - 949).**

Electrical Data

Voltage Range:	**414 - 506**
Compressor #1 RLA:	**6.1**
Compressor #1 LRA:	**41**
Compressor #2 RLA:	**6.1**
Compressor #2 LRA:	**41**
Indoor Fan Motor Type:	**MED**
Indoor Fan Motor FLA:	**4.2**
Power Supply MCA:	**20**
Power Supply MOCP (Fuse or HACR):	**25**
Disconnect Size FLA:	**20**
Disconnect Size LRA:	**113**

Electrical Convenience Outlet: **None**
Outdoor Fan [Qty / FLA (ea)]: **2 / 0.8**

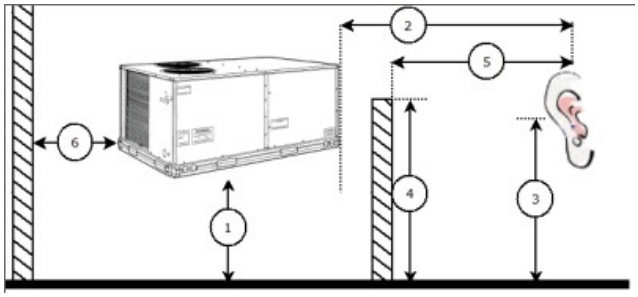
Control Panel SCCR: 5kA RMS at Rated Symmetrical Voltage

Acoustics

Sound Power Levels, db re 10E-12 Watts

	Discharge	Inlet	Outdoor
63 Hz	92.5	86.1	85.8
125 Hz	83.1	79.0	84.3
250 Hz	71.0	67.1	80.5
500 Hz	67.1	65.2	78.7
1000 Hz	65.7	62.6	76.4
2000 Hz	62.2	56.9	72.7
4000 Hz	61.6	54.3	68.3
8000 Hz	59.8	49.5	65.1
A-Weighted	73.4	69.1	82.0

Advanced Acoustics



Advanced Accoustics Parameters

1. Unit height above ground: **30.0** ft
2. Horizontal distance from unit to receiver: **50.0** ft
3. Receiver height above ground: **5.7** ft
4. Height of obstruction: **0.0** ft
5. Horizontal distance from obstruction to receiver: **0.0** ft
6. Horizontal distance from unit to obstruction: **0.0** ft

Detailed Acoustics Information

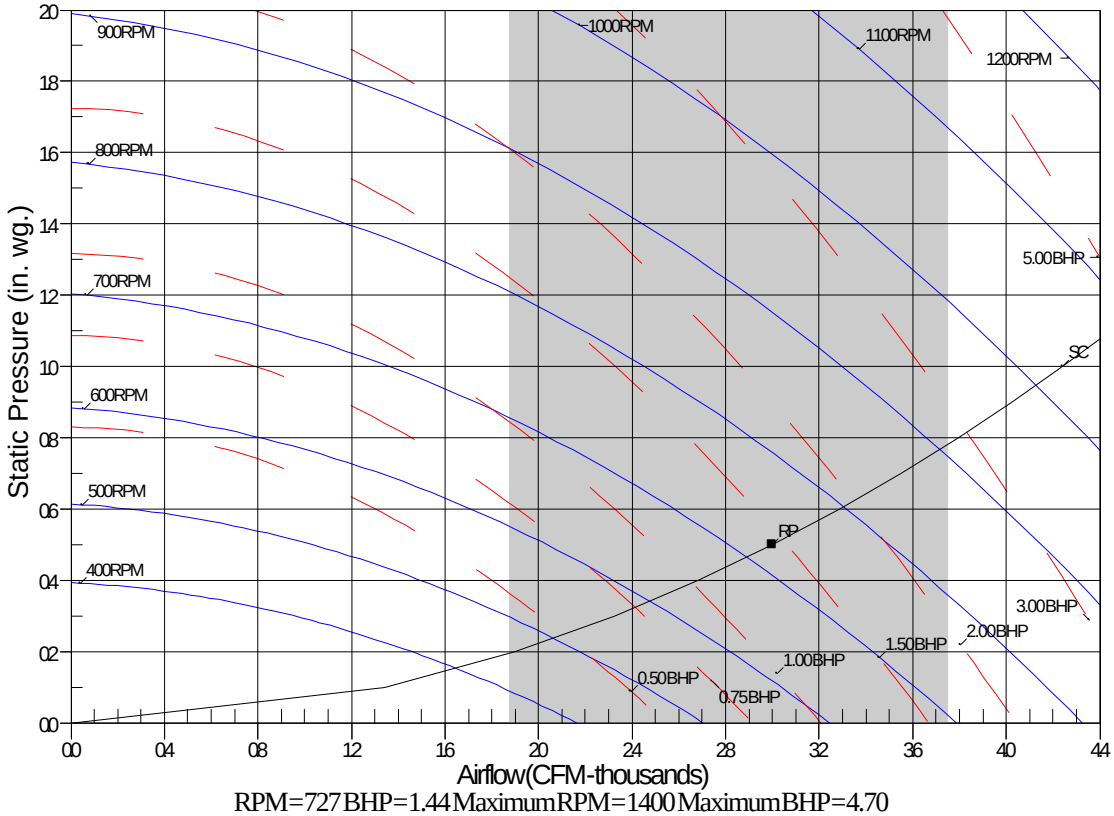
Octave Band Center Freq. Hz		63	125	250	500	1k	2k	4k	8k	Overall

A		85.8	84.3	80.5	78.7	76.4	72.7	68.3	65.1	89.6 Lw
B		59.6	68.2	71.9	75.5	76.4	73.9	69.3	64.0	81.4 LwA
C		53.4	51.9	48.1	46.3	44.0	40.3	35.9	32.7	57.2 Lp
D		27.2	35.8	39.5	43.1	44.0	41.5	36.9	31.6	49.0 LpA

Legend
A Sound Power Levels at Unit's Acoustic Center, Lw
B A-Weighted Sound Power Levels at Unit's Acoustic Center, LwA
C Sound Pressure Levels at Specific Distance from Unit, Lp
D A-Weighted Sound Pressure Levels at Specific Distance from Unit, LpA

Calculation methods used in this program are patterned after the ASHRAE Guide; other ASHRAE Publications and the AHRI Acoustical Standards. While a very significant effort has been made to insure the technical accuracy of this program, it is assumed that the user is knowledgeable in the art of system sound estimation and is aware of the tolerances involved in real world acoustical estimation. This program makes certain assumptions as to the dominant sound sources and sound paths which may not always be appropriate to the real system being estimated. Because of this, no assurances can be offered that this software will always generate an accurate sound prediction from user supplied input data. If in doubt about the estimation of expected sound levels in a space, an Acoustical Engineer or a person with sound prediction expertise should be consulted.

Fan Curve



RPM=727 BHP=1.44 Maximum RPM=1400 Maximum BHP=4.70
Note: Please contact application engineering for selections outside the shaded region.
SC-System Curve RP-Rated Point