

RoofPak™ Heating and Cooling Units

R-410A Addendum for Catalogs 214-7 and 217-6

Models RPS/RFS/RCS/RDT 050D to 140D
50 to 140 Tons
R-410A Refrigerant



MEA
368-93-N



McQuay
Air Conditioning

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R-410A for RPS, RFS, RCS, and RDT Rooftop Units

McQuay applied rooftop systems are now available with R-410A refrigerant from 50 to 140 nominal tons. Catalogs 214-7 and 217-6 cover these rooftops with R-22 or R-407C refrigerant. This addendum describes all the changes in design and performance when R-410A refrigerant is used. Application, control and air handler information in 214-7 and 217-6 still applies when R-410A is used.

Maverick II MPS 30 to 50 ton commercial rooftops are also available with R-410A refrigerant. See Catalog 250 for details.

Environmental Solutions from McQuay

McQuay rooftop units are available with environmentally friendly HFC refrigerant and superior energy savings. These units are available with efficiencies that exceed ASHRAE 90.1-2010 requirements. The 2010 requirements are much more stringent than today's efficiency requirements.

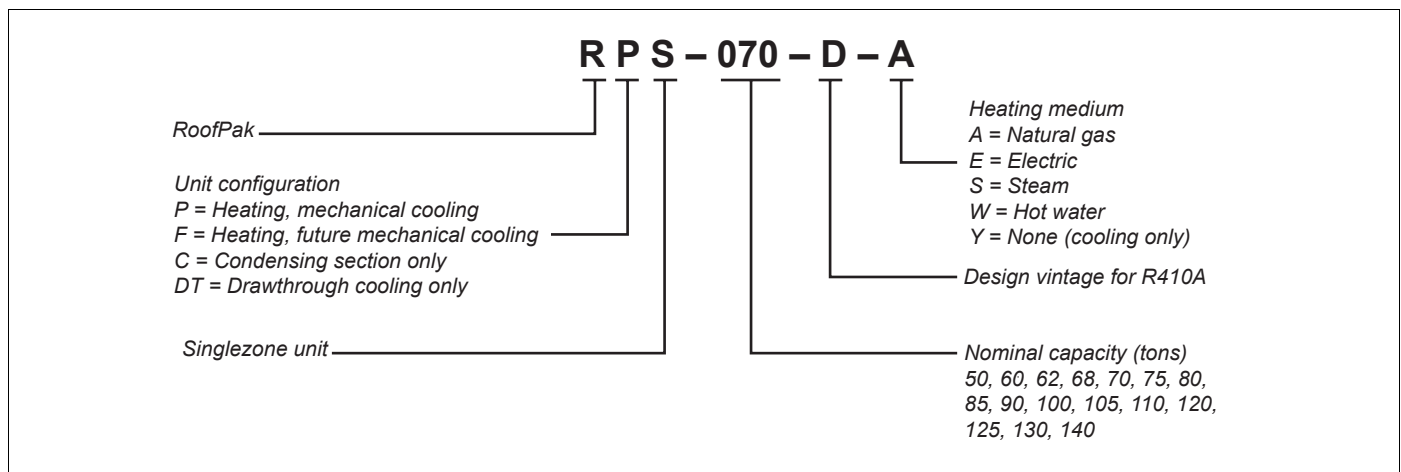
Agency Listed



MEA
368-93-N



Nomenclature



Features and Benefits

R-410A Refrigerant

- R-410A refrigerant is an environmentally friendly HFC refrigerant with zero ozone depletion. Customers have no phase out and replacement concerns.
- R-410A efficiency is excellent. McQuay R-410A rooftop units are available with EERs that exceed ASHRAE 90.1-2004. Alternative HFC refrigerants like R-407C inevitably force the unit to be significantly less efficient or more expensive, while R-410A reduces energy costs.
- R-410A refrigerant is a blend, but the glide is negligible. This is not true for R-407C. If R-407C leaks, the remaining charge may not have a proper mix of components. R-410A does not have this problem so leaks are easier to repair.
- Micro-channel condensers are used on all of these rooftop units. The condensers are much more robust and corrosion resistant than traditional copper tube and aluminum fin coils. Micro-channel condensers also have smaller diameter tubes so they require less refrigerant. McQuay micro-channel condensers last longer than competitive condensers and are perfect for LEED buildings.

Condensing Section

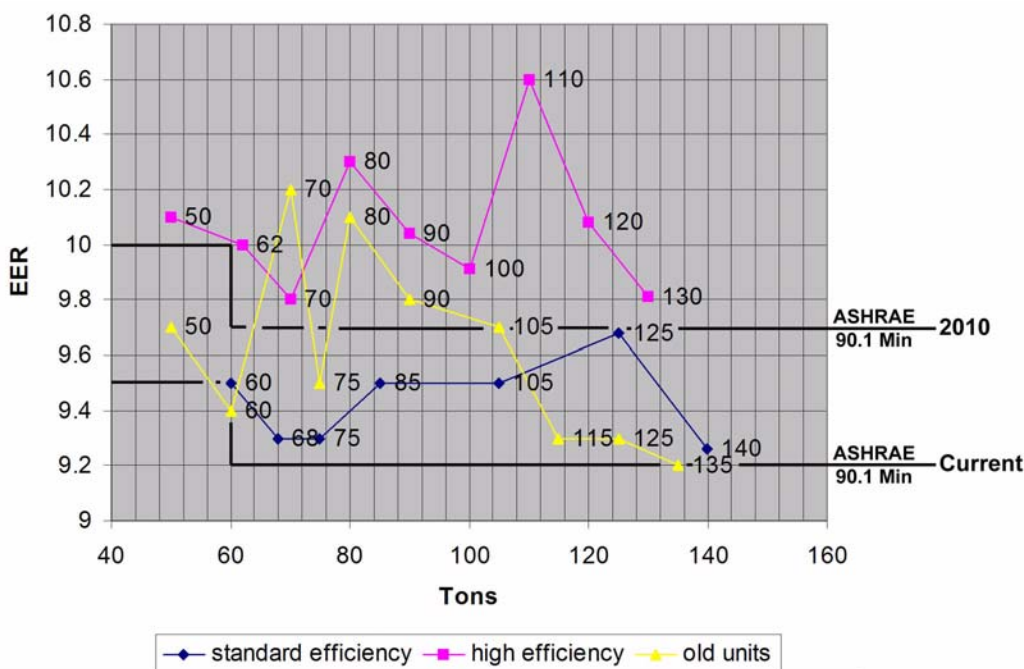
- Open design permits unrestricted condenser airflow, access to compressors, refrigeration components and piping, and access for roof maintenance.
- Unique rail support system allows the roof deck and insulation to help block compressor noise from entering the building.
- High efficiency Copeland® scroll compressors.

- Each refrigerant circuit is furnished with an accessible sightglass, filter drier, manual shutoff valve, high pressure switch, low pressure switch, TXV and manual control switch.
- All units feature dual refrigeration circuits for redundancy and efficient capacity control.
- Large face area condenser constructed of high efficiency, aluminum micro-channel coils for high operating efficiencies.
- Vertical air discharge minimizes noise.
- Three-phase condenser fan motors eliminate reverse rotation failures.
- Up to six steps of compressor capacity control, with hot gas bypass (on one or both circuits) provides for stable discharge temperature and humidity control.
- Optional head pressure control allows mechanical cooling to 0°F ambient temperatures.
- Recessed V-bank condenser coils have built-in hail damage protection.

High and Standard Efficiency Units

- Energy cost continue to rise and better efficiency is critical. McQuay R-410A applied rooftop systems offer both standard efficiency units that comply with ASHRAE 90.1-2004, and high efficiency units that exceed ASHRAE 90.1-2010 (Figure 1).
- Large face area evaporator coils with high efficiency, enhanced copper tubing and aluminum fins, provide for low air pressure drop and high full and part load operating efficiencies.

Figure 1: EER Options



Micro-Channel Condensers

Micro-channel coils are an all-aluminum construction composed of:

- 1 Extended flat tubes (Figure 2) with many small flow channels.
 - 2 Flat fins (Figure 2) that are brazed to adjoining tubes.
 - 3 Two refrigerant manifold headers (Figure 2) that are arranged in a two-pass configuration (Figure 3).
- Flat tubes have better fluid-to-tube heat transfer. Therefore, micro-channel coils have more heat transfer per square foot than traditional coils and require much less refrigerant charge per ton of cooling.
 - All aluminum construction eliminates galvanic corrosion associated with dissimilar metals. All aluminum coils are much more resistant to normal condenser corrosion in any location including the sea coast.
 - Aluminum is lighter than copper, so McQuay R-410A condensers are lighter than competitive condensers.
 - Micro-channel coils were pioneered in the auto industry and one reason is their more robust construction. Fins are brazed between adjoining tubes so there are no exposed and vulnerable edges. Fin damage is therefore virtually eliminated.
 - Energy cost continue to rise and better efficiency is critical. McQuay R-410A applied rooftop systems offer both standard efficiency units that comply with ASHRAE 90.1-2004, and high efficiency units that comply with ASHRAE 90.1-2010 (see Figure 1).

Figure 2: Supply and Return Manifolds

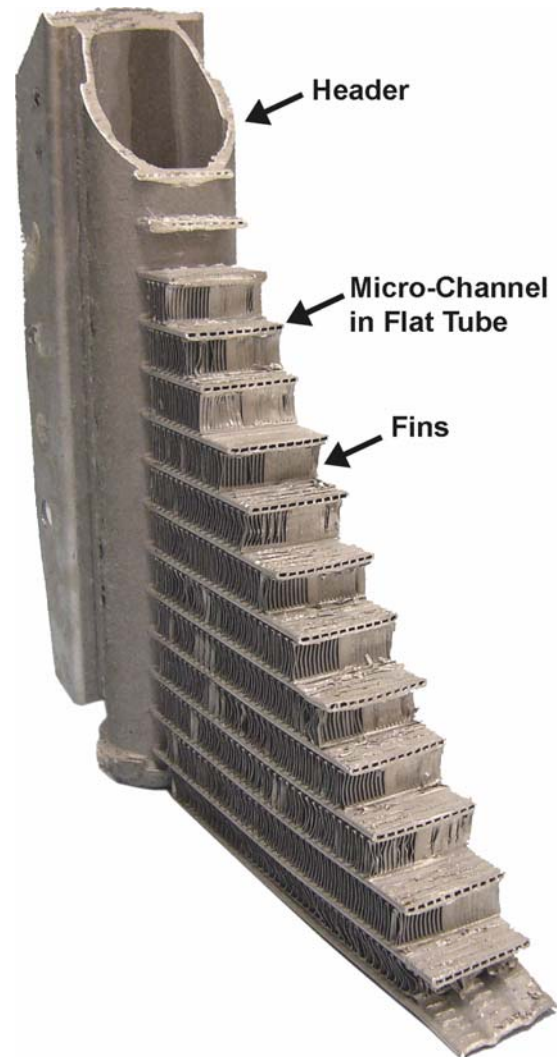
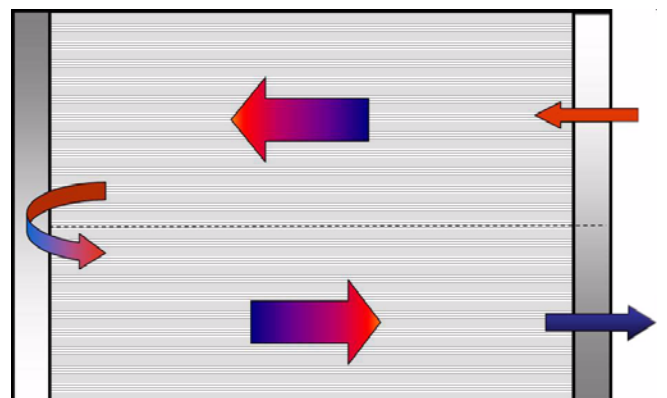


Figure 3: Typical 2-Pass Construction



Application Considerations

Unit Performance

Units are intended for use in normal heating, ventilating and air conditioning applications. Consult your local McQuay sales representative for applications involving operation at high ambient temperatures, high altitudes, non-cataloged voltages and for applications requiring modified or special control sequences. Consult your local McQuay sales representative for job specific unit selections that fall outside of the range of the catalog tables, such as 100% outside air applications.

For proper operation, units should be rigged in accordance with instructions stated in IM 487 and IM 738. Fire dampers, if required, must be installed in the ductwork according to local or state codes. No space is allowed for these dampers in the unit.

Follow factory check, test and start procedures explicitly to achieve satisfactory start-up and operation (see IM 487 and IM 738).

Most rooftop applications take advantage of the significant energy savings provided with economizer operation. When an economizer system is used, mechanical refrigeration is

typically not required below an ambient temperature of 50°F. Standard RoofPak refrigeration systems are designed to operate in ambient temperatures down to 45°F. However, if the condenser coils are not properly shielded from the wind, the minimum ambient conditions stated above must be raised.

Refer to Catalogs 214-7 and 217-6 for more important application information.

Condenser Performance

Altitudes greater than sea level require a derate in condenser and cooling performance that can be estimated as follows:

- 0 to 6000 feet
 - Cooling capacity decrease factor (all sizes) = 0.5% per 1000 feet
 - Compressor kW increase factor = 0.6% per 1000 feet

The actual derate varies with each individual unit and design conditions. Your local McQuay representative can provide exact performance data.

Table 1: Physical Data, RPS/RFS/RCS/RDT 050D to 075D

Data		Unit size					
		050D	060D	062D	068D	070D	075D
Compressor	Quantity—hp	4—11.5	4—13	4—13	4—15	6—10	6—11.5
	Std. capacity control	100-75-50-25-0			100-83-67-50-33-17-0		100-83-67-50-33-17-0
Condenser fans	Qty—diameter (in)	4—26	4—26	6—26	6—26	6—26	8—26
Condenser fan motors	Qty—hp	4—1.0	4—1.0	6—1.0	6—1.0	6—1.0	8—1.0
RPS supply fans	Type	Forward curve, LP/MP					
	Qty—diameter (in)	1—27	1—27	1—27	1—27	1—27	1—27
	Motor hp range	3—50	3—50	3—50	3—50	3—50	3—50
	Type	DWDI airfoil					
	Qty—diameter (in)	1—27,30	1—27,30	1—30,33	1—30,33	1—30,33	1—30,33
RDT supply fans	Motor hp range	3—50	3—50	3—50	3—50	3—50	3—50
	Type	SWSI airfoil					
	Qty—diameter (in)	1—40,44	1—40,44	1—40,44	1—40,44	1—40,44	1—40,44
Return fans	Motor hp range	3—50	3—50	3—50	3—50	3—50	3—50
	Type	SWSI airfoil					
	Qty—diameter (in)	1—40	1—40	1—40	1—40	1—40	1—40
Exhaust fans	Motor hp range	2—30	2—30	2—30	2—30	2—30	2—30
	Type	Propeller					
	Diameter (in)	36	36	36	36	36	36
	Quantity	1 or 2 per unit	1 or 2 per unit	1 or 2 per unit	1 or 2 per unit	1 or 2 per unit	1 or 2 per unit
Evaporator coils	Motor hp	5 each	5 each	5 each	5 each	5 each	5 each
	Rows	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5
	FPI	8, 10, 12	8, 10, 12	8, 10, 12	8, 10, 12	8, 10, 12	8, 10, 12
	F.A., small (sq ft)	39.5	39.5	39.5	39.5	39.5	39.5
	F.A., large (sq ft)	47.1	47.1	47.1	47.1	47.1	47.1
Hot Water coils	Type—rows	5WH—1	5WH—1	5WH—1	5WH—1	5WH—1	5WH—1
		5WS—2	5WS—2	5WS—2	5WS—2	5WS—2	5WS—2
	FPI	9	9	9	9	9	9
	Face area (sq ft)	29.7	29.7	29.7	29.7	29.7	29.7
Steam coils	Type—rows	5JA—1, 2	5JA—1, 2	5JA—1, 2	5JA—1, 2	5JA—1, 2	5JA—1, 2
	FPI	6, 12	6, 12	6, 12	6, 12	6, 12	6, 12
	Face area (sq ft)	29.7	29.7	29.7	29.7	29.7	29.7
Gas furnace ^a	Input (MBh)	250, 312, 400, 500, 625, 800, 812, 988, 1000, 1250					
	Nom. output (MBh)	200, 250, 320, 400, 500, 640, 650, 790, 800, 1000					
Electric heat ^b	Nom. output (kW)	40, 60, 80, 100, 120, 160, 200, 240					
Panel filters	Type	30% pleated					
	Area (sq ft)	73.9	73.9	73.9	73.9	73.9	73.9
	Qty—size (in)	7—16×20×2 21—16×25×2	7—16×20×2 21—16×25×2	7—16×20×2 21—16×25×2	7—16×20×2 21—16×25×2	7—16×20×2 21—16×25×2	7—16×20×2 21—16×25×2
Prefilters (for cartridge filters)	Type	Prefilter, standard flow					
	Area (sq ft)	40.0	40.0	40.0	40.0	40.0	40.0
	Qty—size (in)	4—12×24×2 8—24×24×2	4—12×24×2 8—24×24×2	4—12×24×2 8—24×24×2	4—12×24×2 8—24×24×2	4—12×24×2 8—24×24×2	4—12×24×2 8—24×24×2
	Type	Prefilter, medium flow					
	Area (sq ft)	48.0	48.0	48.0	48.0	48.0	48.0
	Qty—size (in)	8—12×24×2 8—24×24×2	8—12×24×2 8—24×24×2	8—12×24×2 8—24×24×2	8—12×24×2 8—24×24×2	8—12×24×2 8—24×24×2	8—12×24×2 8—24×24×2
Cartridge filters	Type	65% or 95%, standard flow					
	Area (sq ft)	40.0	40.0	40.0	40.0	40.0	40.0
	Qty—size (in)	4—12×24×12 8—24×24×12	4—12×24×12 8—24×24×12	4—12×24×12 8—24×24×12	8—12×24×12 8—24×24×12	8—12×24×12 8—24×24×12	8—12×24×12 8—24×24×12
	Type	65% or 95%, medium flow					
	Area (sq ft)	48.0	48.0	48.0	48.0	48.0	48.0
	Qty—size (in)	8—12×24×12 8—24×24×12	8—12×24×12 8—24×24×12	8—12×24×12 8—24×24×12	8—12×24×12 8—24×24×12	8—12×24×12 8—24×24×12	8—12×24×12 8—24×24×12

a. Gas furnace size availability is limited by minimum airflow (RFS/RPS only).

b. 460-volt capacities are shown. Electric heat availability is limited by minimum airflow (RFS/RPS only).

Physical Data

Table 2: Physical Data, RPS/RFS/RCS/RDT 080D to 105D

Data		Unit size				
		080D	085D	090D	100D	105D
Compressor	Quantity—hp	6—11.5	6—13	6—13	3—13 3—15	6—15
	Std. capacity control	100-83-67-50-33-17-0			100-83-67-49-33-16-0	100-84-67-50-33-17-0
Condenser fans	Qty—diameter (in)	6—26	6—26	8—26	9—26	8—26
Condenser fan motors	Qty—hp	6—1.0	6—1.0	8—1.0	9—1.0	8—1.0
Supply fans	Type	DWDI airfoil				
	Qty—diameter (in)	1—33, 36	1—33, 36	1—33, 36	1—36, 40	1—36, 40
	Motor hp range	5—75	5—75	5—75	5—75	5—75
Return fans	Type	SWSI airfoil				
	Qty—diameter (in)	1—44.5	1—44.5	1—44.5	1—44.5	1—44.5
	Motor hp range	5—60	5—60	5—60	5—60	5—60
Exhaust fans	Type	Propeller				
	Diameter (in)	36	36	36	36	36
	Quantity	1—3 per unit	1—3 per unit	1—3 per unit	1—3 per unit	1—3 per unit
	Motor hp	5 each	5 each	5 each	5 each	5 each
Evaporator coils	Rows	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5
	FPI	8, 10, 12	8, 10, 12	8, 10, 12	8, 10, 12	8, 10, 12
	F.A., small (sq ft)	53.9	53.9	53.9	60.8	60.8
	F.A., large (sq ft)	60.8	60.8	60.8	76.0	76.0
Hot water coils	Type—rows	5WH—1 5WS—2	5WH—1 5WS—2	5WH—1 5WS—2	5WH—1 5WS—2	5WH—1 5WS—2
	FPI	9	9	9	9	9
	Face area (sq ft)	42.2	42.2	42.2	42.2	42.2
Steam coils	Type—rows	5JA—1, 2	5JA—1, 2	5JA—1, 2	5JA—1, 2	5JA—1, 2
	FPI	6, 12	6, 12	6, 12	6, 12	6, 12
	Face area (sq ft)	42.2	42.2	42.2	42.2	42.2
Gas furnace ^a	Input (MBh)	625, 800, 812, 988, 1000, 1250, 1375, 1750, 1875, 2500				
	Nom. output (MBh)	500, 640, 650, 790, 800, 1000, 1100, 1400, 1500, 2000				
Electric heat ^b	Nom. output (kW)	80, 100, 120, 160, 200, 240, 280, 320				
Panel filters	Type	30% pleated				
	Area (sq ft)	116.1	116.1	116.1	116.1	116.1
	Qty—size (in)	11—16×20×2 33—16×25×2	11—16×20×2 33—16×25×2	11—16×20×2 33—16×25×2	11—16×20×2 33—16×25×2	11—16×20×2 33—16×25×2
Prefilters (for cartridge filters)	Type	Prefilter, standard flow		Prefilter, medium flow		
	Area (sq ft)	56.0	56.0	56.0	64.0	64.0
	Qty—size (in)	4—12×24×2 12—24×24×2	4—12×24×2 12—24×24×2	4—12×24×2 12—24×24×2	16—24×24×2	16—24×24×2
	Type	Prefilter, medium flow		Prefilter, high flow		
	Area (sq ft)	64.0	64.0	64.0	80.0	80.0
	Qty—size (in)	16—24×24×2	16—24×24×2	16—24×24×2	8—12×24×2 16—24×24×2	8—12×24×2 16—24×24×2
Cartridge filters	Type	65% or 95% standard flow		65% or 95% medium flow		
	Area (sq ft)	56.0	56.0	56.0	64.0	64.0
	Qty—size (in)	4—12×24×12 12—24×24×12	4—12×24×12 12—24×24×12	4—12×24×12 12—24×24×12	16—24×24×12	16—24×24×12
	Type	65% or 95% medium flow		65% or 95% high flow		
	Area (sq ft)	64.0	64.0	56.0	80.0	80.0
	Qty—size (in)	16—24×24×12	16—24×24×12	16—24×24×12	8—12×24×12 16—24×24×12	8—12×24×12 16—24×24×12

a. Gas furnace size availability is limited by minimum airflow (RFS/RPS only).

b. 460-volt capacities are shown. Electric heat availability is limited by minimum airflow (RFS/RPS only).

Table 3: Physical Data, RPS/RFS/RCS/RDT 110D to 140D

Data		Unit size				
		110D	120D	125D	130D	140D
Compressor	Quantity—hp	6—15	3—15 3—20	6—20	6—20	3—20 3—25
	Std. capacity control	100-84-67-50-33-17-0	100-83-67-49-33-16-0	100-84-67-50-33-17-0		100-83-67-49-33-16-0
Condenser fans	Qty—diameter (in)	8—26	9—26	10—26	12—26	12—26
Condenser fan motors	Qty—hp	8—1.0	9—1.0	10—1.0	12—1.0	12—1.0
Supply fans	Type	DWDI airfoil				
	Qty—diameter (in)	1—36, 40	1—36, 40	1—36, 40	1—36, 40	1—36, 40
	Motor hp range	5—75	5—75	5—75	5—75	5—75
Return fans	Type	SWSI airfoil				
	Qty—diameter (in)	1—44.5	1—44.5	1—44.5	1—44.5	1—44.5
	Motor hp range	5—60	5—60	5—60	5—60	5—60
Exhaust fans	Type	Propeller				
	Diameter (in)	36	36	36	36	36
	Quantity	1—3 per unit	1—3 per unit	1—3 per unit	1—3 per unit	1—3 per unit
	Motor hp	5 each	5 each	5 each	5 each	5 each
Evaporator coils	Rows	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5	3, 4, 5
	FPI	8, 10, 12	8, 10, 12	8, 10, 12	8, 10, 12	8, 10, 12
	F.A., small (sq ft)	60.8	60.8	60.8	—	—
	F.A., large (sq ft)	76.0	76.0	76.0	76.0	76.0
Hot water coils	Type—rows	5WH—1 5WS—2	5WH—1 5WS—2	5WH—1 5WS—2	5WH—1 5WS—2	5WH—1 5WS—2
	FPI	9	9	9	9	9
	Face area (sq ft)	42.2	42.2	42.2	42.2	42.2
	Type—rows	5JA—1, 2	5JA—1, 2	5JA—1, 2	5JA—1, 2	5JA—1, 2
Steam coils	FPI	6, 12	6, 12	6, 12	6, 12	6, 12
	Face area (sq ft)	42.2	42.2	42.2	42.2	42.2
Gas furnace ^a	Input (MBh)	625, 800, 812, 988, 1000, 1250, 1375, 1750, 1875, 2500				
	Nom. output (MBh)	500, 640, 650, 790, 800, 1000, 1100, 1400, 1500, 2000				
Electric heat ^b	Nom. output (kW)	80, 100, 120, 160, 200, 240, 280, 320				
Panel filters	Type	30% pleated				
	Area (sq ft)	116.1	116.1	116.1	116.1	116.1
	Qty—size (in)	11—16×20×2 33—16×25×2	11—16×20×2 33—16×25×2	11—16×20×2 33—16×25×2	11—16×20×2 33—16×25×2	11—16×20×2 33—16×25×2
Prefilters (for cartridge filters)	Type	Prefilter, standard flow		Prefilter, medium flow		
	Area (sq ft)	64.0	64.0	64.0	64.0	64.0
	Qty—size (in)	4—12×24×2 12—24×24×2	4—12×24×2 12—24×24×2	16—24×24×2	16—24×24×2	16—24×24×2
	Type	Prefilter, medium flow		Prefilter, high flow		
	Area (sq ft)	80.0	80.0	80.0	80.0	80.0
	Qty—size (in)	8—12×24×2 16—24×24×2	8—12×24×2 16—24×24×2	8—12×24×2 16—24×24×2	8—12×24×2 16—24×24×2	8—12×24×2 16—24×24×2
Cartridge filters	Type	65% or 95% standard flow		65% or 95% medium flow		
	Area (sq ft)	64.0	64.0	64.0	64.0	64.0
	Qty—size (in)	16—24×24×12	16—24×24×12	16—24×24×12	16—24×24×12	16—24×24×12
	Type	65% or 95% medium flow		65% or 95% high flow		
	Area (sq ft)	80.0	80.0	80.0	80.0	80.0
	Qty—size (in)	8—12×24×12 16—24×24×12	8—12×24×12 16—24×24×12	8—12×24×12 16—24×24×12	8—12×24×12 16—24×24×12	8—12×24×12 16—24×24×12

a. Gas furnace size availability is limited by minimum airflow (RFS/RPS only).

b. 460-volt capacities are shown. Electric heat availability is limited by minimum airflow (RFS/RPS only).

Cooling Capacity Data

Table 4: RPS/RFS/RCS/RDT 050D Low Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
14000 cfm 5 row 12 fpi	75	63	588	415	42.2	559	401	47.1	526	387	52.7
		67	629	349	43	598	335	47.9	563	321	53.6
		71	674	282	43.9	640	269	48.9	603	255	54.6
	80	63	589	492	42.2	560	479	47.1	528	465	52.8
		67	628	426	43	598	413	47.9	563	399	53.6
		71	672	359	43.8	639	346	48.8	602	332	54.6
	85	63	592	570	42.2	564	556	47.2	536	536	53
		67	629	503	43	598	490	48	564	476	53.7
		71	672	436	43.9	639	423	48.9	602	409	54.6
17000 cfm 5 row 12 fpi	75	63	608	456	42.5	577	442	47.5	543	428	53.1
		67	650	376	43.4	616	363	48.3	580	349	54
		71	694	296	44.3	659	283	49.3	619	269	55
	80	63	611	550	42.6	580	536	47.5	547	521	53.2
		67	650	470	43.4	617	457	48.4	581	443	54.1
		71	692	389	44.3	658	376	49.3	619	362	55
	85	63	626	626	42.9	600	600	47.9	571	571	53.8
		67	651	563	43.5	618	550	48.4	582	536	54.1
		71	692	482	44.3	657	470	49.4	618	456	55.1
20000 cfm 5 row 12 fpi	75	63	623	496	42.8	591	482	47.8	555	467	53.5
		67	665	403	43.7	630	390	48.6	592	375	54.3
		71	708	309	44.6	***	***	***	***	***	***
	80	63	628	604	43	597	588	47.9	564	564	53.7
		67	665	513	43.7	630	499	48.7	592	484	54.4
		71	708	419	44.6	***	***	***	***	***	***
	85	63	657	657	43.5	629	629	48.6	598	598	54.4
		67	668	621	43.8	635	607	48.8	599	591	54.5
		71	707	528	44.7	***	***	***	***	***	***

Table 5: RPS/RFS/RCS/RDT 050D High Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
17000 cfm 5 row 12 fpi	75	63	616	460	42.7	584	446	47.6	550	431	53.3
		67	657	379	43.5	624	366	48.5	587	352	54.2
		71	702	299	44.5	667	286	49.5	***	***	***
	80	63	618	554	42.8	586	540	47.7	552	525	53.4
		67	657	473	43.6	623	460	48.6	586	445	54.2
		71	701	392	44.5	666	379	49.5	***	***	***
	85	63	633	633	43	606	606	48.1	577	577	53.9
		67	660	568	43.6	627	554	48.6	590	540	54.3
		71	700	486	44.5	665	473	49.5	***	***	***
20000 cfm 5 row 12 fpi	75	63	632	500	43	599	486	48	561	471	53.6
		67	673	407	43.8	637	393	48.8	599	378	54.5
		71	***	***	***	***	***	***	***	***	***
	80	63	637	610	43.1	603	594	48.1	571	571	53.9
		67	672	516	43.9	637	503	48.9	599	488	54.5
		71	***	***	***	***	***	***	***	***	***
	85	63	665	665	43.7	636	636	48.8	605	605	54.6
		67	676	626	44	641	612	49	605	596	54.7
		71	***	***	***	***	***	***	***	***	***
23000 cfm 5 row 12 fpi	75	63	642	539	43.3	608	525	48.2	571	510	53.9
		67	683	433	44.1	647	419	49.1	607	405	54.7
		71	***	***	***	***	***	***	***	***	***
	80	63	653	653	43.5	624	624	48.5	592	592	54.3
		67	684	559	44.1	648	545	49.1	609	530	54.8
		71	***	***	***	***	***	***	***	***	***
	85	63	691	691	44.2	661	661	49.4	***	***	***
		67	692	681	44.4	659	659	49.4	***	***	***
		71	***	***	***	***	***	***	***	***	***

Cooling Capacity Data

Table 6: RPS/RFS/RCS/RDT 060D Low Airflow Coil—Standard Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
18000 cfm 5 row 12 fpi	75	63	658	489	49.7	627	475	55.7	595	461	62.6
		67	710	407	51.1	676	394	57.1	642	380	64.1
		71	765	324	52.7	730	311	58.7	693	298	65.8
	80	63	660	588	49.8	631	574	55.8	599	560	62.7
		67	710	506	51.1	677	493	57.2	642	479	64.1
		71	764	423	52.7	729	410	58.7	692	397	65.8
	85	63	675	675	50.1	650	650	56.3	623	623	63.5
		67	710	604	51.2	678	591	57.2	643	577	64.2
		71	763	522	52.7	728	509	58.8	691	495	65.8
21000 cfm 5 row 12 fpi	75	63	676	529	50.2	644	516	56.2	610	502	63.1
		67	728	434	51.6	694	421	57.6	657	407	64.6
		71	784	338	53.2	747	326	59.3	708	312	66.3
	80	63	681	643	50.4	650	629	56.4	617	612	63.4
		67	727	549	51.7	693	536	57.7	657	522	64.7
		71	783	453	53.2	746	440	59.3	707	427	66.3
	85	63	711	711	51.1	684	684	57.3	656	656	64.5
		67	730	663	51.7	697	650	57.8	663	635	64.9
		71	782	568	53.3	745	555	59.3	706	541	66.4
23700 cfm 5 row 12 fpi	75	63	688	565	50.6	655	551	56.5	621	536	63.5
		67	740	458	51.9	705	445	58	668	431	64.9
		71	797	351	53.6	759	338	59.7	***	***	***
	80	63	697	688	50.8	667	667	56.9	638	638	64
		67	740	587	52	705	574	58.1	667	559	65.1
		71	796	480	53.6	758	467	59.7	***	***	***
	85	63	739	739	51.9	710	710	58.1	679	679	65.4
		67	748	714	52.2	713	698	58.3	678	678	65.5
		71	795	608	53.7	757	595	59.7	***	***	***

Table 7: RPS/RFS/RCS/RDT 060D High Airflow Coil—Standard Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
21000 cfm 5 row 12 fpi	75	63	687	535	50.5	655	522	56.5	619	507	63.4
		67	739	440	52	706	427	58	668	412	65
		71	797	343	53.6	760	330	59.7	***	***	***
	80	63	691	650	50.7	661	637	56.7	626	619	63.7
		67	739	555	52	704	541	58	667	527	65
		71	794	458	53.7	758	445	59.8	***	***	***
	85	63	722	722	51.5	695	695	57.7	666	666	64.9
		67	744	671	52.1	710	657	58.2	673	642	65.3
		71	796	574	53.7	759	561	59.7	***	***	***
24000 cfm 5 row 12 fpi	75	63	701	575	50.9	667	561	56.9	632	546	63.8
		67	754	467	52.4	718	453	58.4	679	439	65.4
		71	812	357	54.1	***	***	***	***	***	***
	80	63	710	702	51.2	680	680	57.3	650	650	64.4
		67	754	598	52.4	718	584	58.5	680	570	65.5
		71	811	489	54.2	***	***	***	***	***	***
	85	63	754	754	52.3	725	725	58.6	693	693	65.8
		67	762	728	52.7	726	712	58.8	692	692	65.9
		71	***	***	***	***	***	***	***	***	***
27000 cfm 5 row 12 fpi	75	63	713	614	51.3	678	600	57.2	643	585	64.2
		67	765	493	52.7	728	480	58.7	688	465	65.7
		71	***	***	***	***	***	***	***	***	***
	80	63	732	732	51.8	704	704	57.9	672	672	65.1
		67	766	640	52.8	730	626	58.8	691	611	65.9
		71	***	***	***	***	***	***	***	***	***
	85	63	781	781	53.1	749	749	59.4	***	***	***
		67	779	777	53.2	748	748	59.5	***	***	***
		71	***	***	***	***	***	***	***	***	***

Cooling Capacity Data

Table 8: RPS/RFS/RCS/RDT 062D Low Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
18000 cfm 5 row 12 fpi	75	63	672	495	47.3	641	481	52.9	610	468	59.4
		67	725	413	48.5	693	400	54.1	659	387	60.7
		71	782	330	49.9	748	318	55.5	712	305	62.1
	80	63	673	593	47.4	644	581	52.9	613	567	59.5
		67	725	512	48.5	693	499	54.1	659	486	60.7
		71	782	429	49.8	747	417	55.5	711	403	62.1
	85	63	686	686	47.6	662	662	53.3	636	636	60
		67	725	611	48.6	694	598	54.2	660	584	60.7
		71	780	528	49.9	746	515	55.5	710	502	62.1
21000 cfm 5 row 12 fpi	75	63	690	535	47.7	659	522	53.3	626	508	59.8
		67	744	441	48.9	711	428	54.5	675	414	61.1
		71	802	345	50.4	767	332	56	728	319	62.6
	80	63	695	650	47.8	664	636	53.4	632	620	60
		67	743	555	49	710	542	54.6	674	529	61.2
		71	801	460	50.3	765	447	56	727	434	62.6
	85	63	723	723	48.4	698	698	54.2	670	670	60.9
		67	747	670	49	714	657	54.7	679	642	61.3
		71	801	575	50.4	765	562	56	727	548	62.6
23700 cfm 5 row 12 fpi	75	63	703	571	48	671	557	53.6	637	543	60.2
		67	757	465	49.2	722	452	54.8	686	438	61.4
		71	816	358	50.7	779	345	56.3	740	331	62.9
	80	63	711	696	48.2	681	678	53.9	653	653	60.5
		67	757	594	49.3	723	580	54.9	686	566	61.5
		71	813	486	50.7	778	474	56.3	739	460	62.9
	85	63	752	752	49.1	725	725	54.9	695	695	61.6
		67	763	721	49.5	730	706	55.1	695	689	61.8
		71	815	615	50.7	778	602	56.3	***	***	***

Table 9: RPS/RFS/RCS/RDT 062D High Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
21000 cfm 5 row 12 fpi	75	63	702	542	48	671	528	53.6	636	513	60.1
		67	756	446	49.2	722	433	54.8	686	419	61.4
		71	816	350	50.7	780	337	56.3	***	***	***
	80	63	706	657	48.1	675	643	53.7	642	628	60.3
		67	756	562	49.3	722	548	54.9	686	534	61.5
		71	815	466	50.7	779	453	56.4	***	***	***
	85	63	735	735	48.7	709	709	54.5	680	680	61.2
		67	761	678	49.4	728	664	55	691	649	61.6
		71	816	581	50.7	780	568	56.3	***	***	***
24000 cfm 5 row 12 fpi	75	63	716	582	48.3	683	568	53.9	649	553	60.5
		67	772	474	49.6	735	460	55.2	699	446	61.8
		71	832	365	51.1	***	***	***	***	***	***
	80	63	726	710	48.6	695	693	54.2	665	665	60.9
		67	772	605	49.7	737	591	55.3	699	577	61.8
		71	831	496	51.2	***	***	***	***	***	***
	85	63	768	768	49.5	740	740	55.3	710	710	62
		67	779	735	49.8	745	721	55.5	709	704	62.2
		71	833	628	51.2	***	***	***	***	***	***
27000 cfm 5 row 12 fpi	75	63	729	621	48.6	695	607	54.2	660	592	60.8
		67	784	500	49.9	747	487	55.5	709	472	62.1
		71	***	***	***	***	***	***	***	***	***
	80	63	746	746	49.1	718	718	54.8	688	688	61.4
		67	784	647	50	749	633	55.6	711	619	62.2
		71	***	***	***	***	***	***	***	***	***
	85	63	796	796	50.2	766	766	55.9	733	733	62.7
		67	797	787	50.3	764	764	56	732	732	62.8
		71	***	***	***	***	***	***	***	***	***

Cooling Capacity Data

Table 10: RPS/RFS/RCS/RDT 068D Low Airflow Coil—Standard Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
18000 cfm 5 row 10 fpi	75	63	722	515	60.6	682	498	68.4	639	478	77.3
		67	773	432	62	731	414	69.8	685	396	78.7
		71	826	346	63.6	780	329	71.5	731	311	80.4
	80	63	724	614	60.6	684	595	68.4	642	577	77.4
		67	772	530	62	730	512	69.8	684	494	78.8
		71	824	444	63.6	780	427	71.5	731	409	80.4
	85	63	728	709	60.8	691	688	68.7	656	656	77.7
		67	773	628	62	731	610	69.9	686	592	78.9
		71	824	542	63.6	780	526	71.5	730	507	80.5
22000 cfm 5 row 10 fpi	75	63	746	568	61.3	705	550	69	660	531	77.9
		67	797	467	62.7	752	449	70.5	704	430	79.4
		71	851	364	64.3	802	347	72.3	751	329	81.2
	80	63	750	685	61.4	708	666	69.1	664	645	78
		67	797	586	62.7	753	568	70.5	703	549	79.4
		71	849	483	64.4	802	466	72.3	750	448	81.2
	85	63	771	771	61.9	735	735	70	697	697	79.1
		67	799	703	62.8	755	685	70.7	707	665	79.7
		71	849	602	64.4	801	585	72.3	750	566	81.3
26000 cfm 5 row 10 fpi	75	63	765	618	61.7	721	600	69.5	674	580	78.3
		67	814	500	63.2	768	483	71.1	717	464	79.9
		71	867	381	64.9	818	364	72.8	764	346	81.7
	80	63	771	750	61.9	730	726	69.8	689	689	78.9
		67	814	639	63.3	768	621	71.1	717	601	80.1
		71	866	520	64.9	817	503	72.8	763	485	81.7
	85	63	808	808	63	769	769	71.1	727	727	80.3
		67	819	773	63.5	773	752	71.4	726	725	80.4
		71	866	659	65	817	641	72.9	764	623	81.8

Table 11: RPS/RFS/RCS/RDT 068D High Airflow Coil—Standard Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
22000 cfm 5 row 10 fpi	75	63	759	575	61.6	717	557	69.4	671	537	78.3
		67	811	473	63.2	766	455	71	716	436	79.9
		71	866	370	64.9	817	353	72.7	764	334	81.6
	80	63	763	694	61.7	721	675	69.6	675	654	78.5
		67	811	593	63.2	766	575	71.1	716	556	80
		71	864	490	64.8	815	472	72.7	762	453	81.6
	85	63	784	784	62.3	748	748	70.4	708	708	79.6
		67	813	712	63.3	767	693	71.2	719	673	80.1
		71	865	610	65	815	592	72.8	762	573	81.7
26000 cfm 5 row 10 fpi	75	63	777	626	62.2	734	608	70	685	587	78.8
		67	829	508	63.7	781	489	71.5	729	470	80.4
		71	884	388	65.4	833	370	73.3	***	***	***
	80	63	785	762	62.4	742	738	70.3	701	701	79.3
		67	830	648	63.8	782	630	71.7	731	610	80.6
		71	882	527	65.4	831	510	73.3	***	***	***
	85	63	822	822	63.5	783	783	71.6	740	740	80.8
		67	835	785	64	787	763	71.9	738	737	80.9
		71	881	667	65.5	831	650	73.4	***	***	***
30000 cfm 5 row 10 fpi	75	63	792	675	62.6	746	656	70.4	697	635	79.3
		67	842	541	64.1	794	523	72	740	503	80.8
		71	897	404	65.9	***	***	***	***	***	***
	80	63	808	808	63.1	768	768	71.1	724	724	80.2
		67	844	701	64.3	795	682	72.1	742	661	81
		71	896	565	65.9	***	***	***	***	***	***
	85	63	853	853	64.5	811	811	72.6	766	766	81.8
		67	852	846	64.6	809	809	72.7	765	765	81.7
		71	895	724	66	***	***	***	***	***	***

Cooling Capacity Data

Table 12: RPS/RFS/RCS/RDT 070D Low Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
18000 cfm 5 row 10 fpi	75	63	743	525	56.6	705	508	63.9	664	489	72.3
		67	796	441	57.8	757	425	65	712	406	73.4
		71	852	356	59.1	809	340	66.4	762	322	74.8
	80	63	744	623	56.6	706	606	63.9	665	587	72.3
		67	796	539	57.8	755	523	65.1	711	505	73.4
		71	851	454	59.1	808	438	66.4	761	420	74.8
	85	63	749	720	56.7	712	701	64.1	675	675	72.6
		67	795	637	57.8	756	621	65.1	713	603	73.5
		71	850	552	59	808	536	66.4	760	518	74.9
22000 cfm 5 row 10 fpi	75	63	769	578	57.2	728	560	64.5	686	542	72.8
		67	823	477	58.4	780	460	65.7	733	442	74
		71	879	375	59.7	833	358	67.1	783	340	75.5
	80	63	773	696	57.3	732	677	64.6	689	657	72.8
		67	822	595	58.4	779	578	65.7	732	560	74.5
		71	878	493	59.7	833	477	67.1	783	459	75.5
	85	63	789	789	57.7	756	756	65.1	719	719	73.7
		67	824	714	58.5	782	696	65.8	736	677	74.2
		71	877	612	59.8	832	596	67.2	783	578	75.5
25675 cfm 5 row 10 fpi	75	63	787	624	57.6	746	606	64.8	700	587	73.1
		67	840	508	58.8	796	491	66.1	747	472	74.4
		71	897	391	60.2	849	374	67.5	798	356	75.9
	80	63	793	757	57.7	753	736	65	710	710	73.4
		67	840	645	58.8	796	628	66.1	748	609	74.5
		71	895	528	60.2	849	511	67.5	797	493	75.9
	85	63	826	826	58.5	791	791	65.9	750	750	74.5
		67	844	779	59	801	760	66.3	753	738	74.8
		71	895	665	60.2	849	648	67.6	798	630	76

Table 13: RPS/RFS/RCS/RDT 070D High Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
22000 cfm 5 row 10 fpi	75	63	784	586	57.6	743	568	64.7	697	548	73.1
		67	838	484	58.8	794	467	66	746	448	74.4
		71	896	381	60.1	849	364	67.5	797	346	75.9
	80	63	788	705	57.6	746	687	64.8	702	667	73.2
		67	838	604	58.8	794	586	66.1	747	568	74.5
		71	894	500	60.1	847	484	67.5	796	465	75.9
	85	63	804	804	57.9	770	770	65.4	732	732	74
		67	839	723	58.8	796	705	66.2	749	686	74.6
		71	894	621	60.2	847	603	67.6	796	585	75.9
26000 cfm 5 row 10 fpi	75	63	803	637	58	761	619	65.2	714	599	73.6
		67	857	518	59.2	812	501	66.5	762	482	74.9
		71	915	399	60.6	867	382	68	814	364	76.4
	80	63	809	774	58.1	768	753	65.4	725	725	73.8
		67	858	659	59.3	813	641	66.6	763	622	75
		71	915	539	60.6	866	522	68	813	504	76.4
	85	63	845	845	58.9	808	808	66.4	767	767	75
		67	861	796	59.4	819	778	66.8	769	755	75.2
		71	913	679	60.7	865	662	68.1	812	643	76.4
30000 cfm 5 row 10 fpi	75	63	819	687	58.3	774	668	65.6	726	648	73.9
		67	873	552	59.6	826	535	66.9	775	516	75.2
		71	930	415	61	880	399	68.4	***	***	***
	80	63	831	830	58.6	793	793	66	751	751	74.5
		67	874	712	59.7	827	694	67	776	674	75.3
		71	929	576	61	879	559	68.4	***	***	***
	85	63	877	877	59.7	838	838	67.2	795	795	75.8
		67	881	862	59.9	836	835	67.3	793	793	75.9
		71	928	735	61.1	879	718	68.5	***	***	***

Cooling Capacity Data

Table 14: RPS/RFS/RCS/RDT 075D Low Airflow Coil—Standard Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
18000 cfm 5 row 10 fpi	75	63	803	553	63.8	765	535	71.6	724	516	80.6
		67	859	468	65.2	818	450	73.1	776	433	81.9
		71	919	382	66.6	876	366	74.5	830	348	83.5
	80	63	804	651	63.8	766	633	71.6	726	615	80.6
		67	858	566	65.2	818	549	73	776	531	81.9
		71	918	480	66.6	875	463	74.5	829	446	83.5
	85	63	807	749	63.9	770	731	71.7	730	711	80.7
		67	860	665	65.2	819	647	73	775	629	82
		71	917	578	66.5	874	561	74.5	828	544	83.5
22000 cfm 5 row 10 fpi	75	63	833	606	64.5	793	588	72.4	749	569	81.3
		67	891	504	65.9	847	487	73.7	802	468	82.7
		71	951	401	67.4	904	384	75.3	855	366	84.3
	80	63	835	724	64.6	795	706	72.4	751	686	81.4
		67	891	623	65.9	847	605	73.7	801	587	82.7
		71	949	520	67.4	904	503	75.3	855	485	84.3
	85	63	843	836	64.8	807	807	72.8	773	773	81.8
		67	890	741	65.9	848	724	73.8	802	705	82.8
		71	949	639	67.4	903	621	75.3	854	603	84.3
25675 cfm 5 row 10 fpi	75	63	854	653	65.1	811	634	72.9	766	615	81.8
		67	911	535	66.4	866	518	74.2	818	499	83.2
		71	971	417	67.9	923	400	75.8	872	382	84.8
	80	63	857	788	65.1	814	768	73	772	747	81.8
		67	911	673	66.4	866	655	74.3	818	636	83.2
		71	970	554	67.9	922	537	75.8	871	519	84.8
	85	63	880	880	65.7	846	846	73.7	807	807	82.9
		67	913	808	66.5	868	790	74.4	821	770	83.4
		71	969	691	67.9	921	674	75.8	870	656	84.8

Table 15: RPS/RFS/RCS/RDT 075D High Airflow Coil—Standard Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
22000 cfm 5 row 10 fpi	75	63	851	615	65	809	597	72.8	765	577	81.7
		67	910	513	66.3	865	495	74.2	817	476	83.2
		71	970	409	67.9	922	391	75.8	872	372	84.8
	80	63	853	735	65	811	716	72.8	768	697	81.8
		67	909	632	66.3	864	614	74.2	817	596	83.2
		71	969	528	67.9	922	511	75.8	871	492	84.8
	85	63	861	850	65.2	822	822	73.2	787	787	82.3
		67	910	752	66.4	866	734	74.3	819	715	83.3
		71	968	648	67.9	921	630	75.8	871	612	84.9
26000 cfm 5 row 10 fpi	75	63	873	667	65.5	831	649	73.3	785	629	82.2
		67	932	547	66.9	885	529	74.8	836	510	83.7
		71	994	426	68.5	944	409	76.4	891	390	85.4
	80	63	878	806	65.6	835	786	73.4	789	765	82.4
		67	930	687	66.9	885	670	74.8	836	650	83.7
		71	992	566	68.5	942	549	76.4	890	530	85.4
	85	63	903	903	66.2	866	866	74.2	826	826	83.4
		67	935	827	67.1	889	808	75	840	788	84
		71	991	707	68.6	942	689	76.5	890	671	85.5
30000 cfm 5 row 10 fpi	75	63	891	717	65.9	847	699	73.7	799	679	82.6
		67	949	581	67.4	901	563	75.2	850	544	84.2
		71	1011	443	69	958	425	76.9	904	407	85.9
	80	63	899	871	66.1	855	847	74	813	813	83
		67	949	741	67.4	901	723	75.3	850	703	84.3
		71	1008	604	69	957	586	76.9	903	567	85.8
	85	63	940	940	67.1	900	900	75.2	858	858	84.4
		67	954	897	67.6	907	875	75.5	858	851	84.6
		71	1009	764	69	958	746	77	905	727	86

Cooling Capacity Data

Table 16: RPS/RFS/RCS/RDT 080D Low Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
24000 cfm 5 row 12 fpi*	75	63	890	657	64.7	847	638	72.3	799	618	81.1
		67	949	544	66.1	903	525	73.7	853	506	82.6
		71	1013	429	67.7	962	411	75.4	910	392	84.2
	80	63	892	789	64.7	850	770	72.4	804	750	81.2
		67	949	676	66.1	903	657	73.8	853	638	82.7
		71	1011	561	67.6	961	543	75.4	909	524	84.2
	85	63	909	909	65	872	872	72.9	833	833	82
		67	950	808	66.2	904	789	73.9	855	769	82.8
		71	1011	693	67.7	962	675	75.5	908	656	84.3
28000 cfm 5 row 12 fpi*	75	63	910	710	65.1	863	690	72.8	817	670	81.6
		67	969	579	66.6	921	560	74.3	870	541	83
		71	1033	447	68.2	982	429	75.9	***	***	***
	80	63	916	862	65.3	872	841	73	825	818	81.9
		67	970	733	66.7	922	714	74.4	871	694	83.2
		71	1031	600	68.2	980	582	75.9	***	***	***
	85	63	952	952	66.1	912	912	74	870	870	83.1
		67	974	885	66.8	926	865	74.5	875	844	83.4
		71	1031	753	68.3	980	735	76	***	***	***
32000 cfm 5 row 12 fpi	75	63	926	761	65.5	880	742	73.2	830	721	82
		67	985	614	67	935	595	74.6	882	575	83.4
		71	1049	464	68.6	***	***	***	***	***	***
	80	63	937	927	65.8	896	896	73.6	853	853	82.6
		67	987	788	67.1	937	769	74.8	885	749	83.6
		71	1048	639	68.6	***	***	***	***	***	***
	85	63	986	986	67	945	945	74.9	901	901	83.9
		67	994	957	67.3	946	934	75.1	899	899	84.1
		71	1047	812	68.7	***	***	***	***	***	***

Table 17: RPS/RFS/RCS/RDT 080D High Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
28000 cfm 5 row 12 fpi*	75	63	919	715	65.3	873	695	73	824	674	81.8
		67	978	583	66.8	929	564	74.5	877	544	83.3
		71	1043	451	68.4	991	432	76.1	***	***	***
	80	63	925	868	65.5	879	847	73.2	831	823	82.1
		67	980	737	66.9	929	718	74.6	877	698	83.4
		71	1041	604	68.4	990	586	76.2	***	***	***
	85	63	960	960	66.3	920	920	74.2	877	877	83.3
		67	982	890	67	934	871	74.7	882	849	83.7
		71	1040	758	68.5	988	739	76.2	***	***	***
32000 cfm 5 row 12 fpi	75	63	935	767	65.8	888	747	73.4	838	726	82.2
		67	995	619	67.2	945	599	74.9	891	579	83.7
		71	***	***	***	***	***	***	***	***	***
	80	63	946	935	66.1	903	903	73.8	860	860	82.8
		67	994	793	67.3	944	773	75	891	753	83.8
		71	***	***	***	***	***	***	***	***	***
	85	63	995	995	67.2	954	954	75.1	909	909	84.2
		67	1002	964	67.6	955	942	75.3	906	906	84.3
		71	***	***	***	***	***	***	***	***	***
36000 cfm 5 row 12 fpi	75	63	949	817	66.1	900	797	73.8	849	775	82.6
		67	1007	652	67.5	955	633	75.2	900	613	83.9
		71	***	***	***	***	***	***	***	***	***
	80	63	972	972	66.6	929	929	74.5	884	884	83.5
		67	1008	847	67.7	957	828	75.4	904	807	84.2
		71	***	***	***	***	***	***	***	***	***
	85	63	1026	1026	68	982	982	75.9	***	***	***
		67	1023	1023	68.1	978	978	76	***	***	***
		71	***	***	***	***	***	***	***	***	***

* The size 75 has almost as much capacity and costs less, but is less efficient.

Cooling Capacity Data

Table 18: RPS/RFS/RCS/RDT 085D Low Airflow Coil—Standard Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
24000 cfm 5 row 12 fpi	75	63	950	684	77.3	902	662	85.8	852	640	95.3
		67	1014	570	79.2	964	549	87.7	908	527	97.4
		71	1081	455	81.4	1027	434	90	967	413	99.8
	80	63	952	816	77.3	906	795	85.8	853	772	95.4
		67	1014	702	79.2	963	681	87.7	907	659	97.5
		71	1081	587	81.4	1026	567	90	966	545	99.7
	85	63	960	946	77.6	918	918	86.1	875	875	96.2
		67	1015	835	79.4	965	814	87.9	909	791	97.6
		71	1080	719	81.4	1024	698	90	965	676	99.8
28000 cfm 5 row 12 fpi	75	63	974	737	78	926	716	86.4	870	693	96
		67	1038	606	80	985	585	88.5	926	562	98.2
		71	1105	473	82.2	1048	452	90.8	985	430	100.5
	80	63	978	890	78.1	928	868	86.6	874	843	96.2
		67	1038	759	80	984	738	88.5	925	715	98.2
		71	1104	626	82.2	1047	606	90.8	985	584	100.5
	85	63	1005	1005	78.9	963	963	87.7	915	915	97.7
		67	1042	913	80.2	989	891	88.7	931	868	98.5
		71	1104	780	82.3	1047	759	90.9	985	737	100.6
32000 cfm 5 row 12 fpi	75	63	993	790	78.5	942	768	87	885	744	96.6
		67	1056	641	80.6	1001	619	89.1	941	597	98.7
		71	1123	490	82.9	1064	470	91.4	***	***	***
	80	63	999	960	78.8	950	935	87.3	899	899	97.1
		67	1056	815	80.7	1001	793	89.2	941	770	98.9
		71	1122	665	82.8	1063	644	91.4	***	***	***
	85	63	1044	1044	80.2	998	998	89	948	948	99
		67	1062	987	80.9	1007	963	89.5	948	936	99.3
		71	1123	839	82.9	1064	818	91.5	***	***	***

Table 19: RPS/RFS/RCS/RDT 085D High Airflow Coil—Standard Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
28000 cfm 5 row 12 fpi	75	63	984	742	79.1	931	720	87.8	874	696	97.6
		67	1047	610	81.3	991	588	89.9	931	565	99.8
		71	1114	476	83.6	1055	455	92.3	***	***	***
	80	63	986	896	79.3	935	873	88	879	848	97.9
		67	1046	764	81.3	991	742	90	930	718	99.9
		71	1113	630	83.5	1054	609	92.3	989	586	102.2
	85	63	1012	1012	80.1	968	968	89.1	919	919	99.4
		67	1048	917	81.4	993	895	90.2	935	872	100.1
		71	1113	784	83.6	1054	763	92.4	989	740	102.4
32000 cfm 5 row 12 fpi	75	63	1002	795	79.7	948	772	88.4	889	748	98.2
		67	1065	645	81.9	1007	623	90.5	945	600	100.4
		71	1133	494	84.2	***	***	***	***	***	***
	80	63	1007	967	80	955	942	88.7	903	903	98.7
		67	1065	820	82	1008	798	90.7	945	774	100.6
		71	1131	669	84.2	***	***	***	***	***	***
	85	63	1051	1051	81.4	1004	1004	90.4	953	953	100.7
		67	1071	994	82.2	1013	970	90.9	953	942	100.9
		71	1131	844	84.3	***	***	***	***	***	***
36000 cfm 5 row 12 fpi	75	63	1015	845	80.3	959	822	88.9	901	798	98.7
		67	1079	679	82.4	1020	657	91	956	634	100.9
		71	***	***	***	***	***	***	***	***	***
	80	63	1029	1028	80.7	982	982	89.5	929	929	99.8
		67	1080	875	82.5	1021	853	91.2	957	828	101.1
		71	***	***	***	***	***	***	***	***	***
	85	63	1085	1085	82.5	1035	1035	91.5	979	979	101.8
		67	1089	1064	82.9	1033	1032	91.7	978	978	101.9
		71	***	***	***	***	***	***	***	***	***

Cooling Capacity Data

Table 20: RPS/RFS/RCS/RDT 090D Low Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
26000 cfm 5 row 10 fpi	75	63	977	714	73.3	929	693	81.4	879	671	90.7
		67	1044	593	75	994	573	83.1	939	551	92.4
		71	1116	471	76.9	1062	452	85	1003	430	94.4
	80	63	979	855	73.3	935	835	81.5	882	811	90.7
		67	1044	735	75	995	715	83.1	938	692	92.4
		71	1114	612	76.8	1060	592	85	1001	571	94.4
	85	63	991	987	73.7	952	952	81.9	910	910	91.5
		67	1046	876	75.1	997	856	83.2	940	833	92.6
		71	1114	754	76.9	1059	734	85.1	1001	712	94.5
30000 cfm 5 row 10 fpi	75	63	999	766	73.8	951	745	81.9	897	723	91.1
		67	1067	628	75.5	1014	608	83.7	957	586	92.9
		71	1139	489	77.5	1082	469	85.6	1020	447	95
	80	63	1005	926	74	955	903	82	903	878	91.4
		67	1066	790	75.6	1014	770	83.7	957	747	93
		71	1137	651	77.4	1080	631	85.6	1019	609	95
	85	63	1035	1035	74.7	994	994	83.1	947	947	92.6
		67	1069	950	75.7	1017	929	83.9	962	905	93.2
		71	1137	813	77.5	1081	793	85.7	1020	771	95.1
34000 cfm 5 row 10 fpi	75	63	1017	816	74.2	966	795	82.3	911	771	91.6
		67	1084	662	76	1029	641	84.1	970	619	93.4
		71	1156	506	77.9	1098	486	86.1	1033	464	95.4
	80	63	1025	990	74.5	978	966	82.6	927	927	92
		67	1084	844	76.1	1030	823	84.3	971	800	93.5
		71	1154	688	77.9	1095	668	86.1	1032	646	95.4
	85	63	1073	1073	75.7	1028	1028	84.1	979	979	93.7
		67	1091	1021	76.3	1037	997	84.5	980	968	93.9
		71	1156	871	78	1095	849	86.2	1032	827	95.5

Table 21: RPS/RFS/RCS/RDT 090D High Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
30000 cfm 5 row 10 fpi	75	63	1011	773	74.1	961	751	82.2	905	728	91.4
		67	1078	634	75.9	1025	613	84	967	591	93.3
		71	1152	494	77.8	1094	474	86	1032	452	95.3
	80	63	1014	934	74.2	967	912	82.4	914	887	91.7
		67	1079	797	75.9	1025	776	84.1	967	753	93.4
		71	1149	657	77.8	1091	636	86	1029	614	95.3
	85	63	1047	1047	75	1005	1005	83.4	957	957	93
		67	1081	958	76	1028	937	84.2	973	913	93.6
		71	1148	819	77.9	1091	799	86.1	1029	777	95.4
34000 cfm 5 row 10 fpi	75	63	1027	823	74.6	977	802	82.6	921	779	91.9
		67	1096	668	76.3	1041	647	84.4	980	625	93.7
		71	1170	512	78.3	1110	491	86.5	***	***	***
	80	63	1037	1001	74.8	986	974	83	938	938	92.3
		67	1097	852	76.4	1042	830	84.6	982	807	93.9
		71	1169	695	78.3	1107	674	86.5	***	***	***
	85	63	1085	1085	76	1039	1039	84.4	990	990	94
		67	1104	1031	76.6	1049	1007	84.8	991	978	94.2
		71	1166	878	78.4	1107	857	86.6	***	***	***
38000 cfm 5 row 10 fpi	75	63	1043	873	75	990	851	83.1	933	827	92.3
		67	1110	701	76.7	1053	680	84.8	992	658	94.1
		71	1184	528	78.7	1123	508	86.8	***	***	***
	80	63	1059	1057	75.3	1013	1013	83.6	963	963	93.1
		67	1112	905	76.9	1056	883	85	994	859	94.2
		71	1182	732	78.7	1121	711	86.9	***	***	***
	85	63	1116	1116	76.9	1069	1069	85.3	1017	1017	94.9
		67	1122	1095	77.2	1066	1064	85.4	1015	1015	95
		71	1181	934	78.8	***	***	***	***	***	***

Cooling Capacity Data

Table 22: RPS/RFS/RCS/RDT 100D Low Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
32000 cfm 5 row 10 fpi	75	63	1079	824	81	1025	800	89.8	968	776	99.8
		67	1152	676	83	1094	654	91.8	1031	630	101.9
		71	1229	527	85.2	1167	505	94.1	1100	482	104.3
	80	63	1085	995	81.1	1032	971	90	975	942	100.1
		67	1153	850	83	1094	827	91.9	1032	803	102
		71	1227	700	85.2	1165	678	94.1	1098	654	104.3
	85	63	1115	1115	81.9	1071	1071	91	1020	1020	101.5
		67	1155	1021	83.2	1099	998	92	1037	972	102.2
		71	1225	873	85.3	1164	851	94.2	1097	827	104.4
36000 cfm 5 row 10 fpi	75	63	1097	874	81.5	1043	851	90.3	982	826	100.3
		67	1170	710	83.5	1110	688	92.3	1046	663	102.4
		71	1248	545	85.8	1183	522	94.7	***	***	***
	80	63	1105	1060	81.7	1053	1031	90.5	999	991	100.8
		67	1170	904	83.6	1110	881	92.4	1047	856	102.5
		71	1246	738	85.8	1182	716	94.6	***	***	***
	85	63	1154	1154	83	1106	1106	92.1	1052	1052	102.6
		67	1176	1092	83.8	1118	1066	92.7	1056	1033	103
		71	1244	931	85.9	1181	909	94.7	***	***	***
39520 cfm 5 row 10 fpi	75	63	1111	918	81.8	1055	894	90.6	993	868	100.7
		67	1183	740	83.9	1122	717	92.7	1056	692	102.8
		71	1260	559	86.2	***	***	***	***	***	***
	80	63	1126	1107	82.2	1074	1069	91.2	1020	1020	101.5
		67	1184	950	84	1123	927	92.8	1057	901	102.9
		71	1258	770	86.2	***	***	***	***	***	***
	85	63	1183	1183	83.8	1132	1132	93	1077	1077	103.4
		67	1193	1149	84.3	1135	1114	93.3	1075	1071	103.6
		71	1258	981	86.3	***	***	***	***	***	***

Table 23: RPS/RFS/RCS/RDT 100D High Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
36000 cfm 5 row 12 fpi	75	63	1131	897	82.4	1074	873	91.2	1010	846	101.3
		67	1204	729	84.5	1142	705	93.3	1074	680	103.4
		71	***	***	***	***	***	***	***	***	***
	80	63	1140	1091	82.7	1085	1061	91.7	1028	1020	101.9
		67	1205	926	84.7	1143	903	93.5	1075	877	103.6
		71	***	***	***	***	***	***	***	***	***
	85	63	1191	1191	84.1	1140	1140	93.2	1084	1084	103.7
		67	1211	1122	84.9	1151	1097	93.8	1087	1062	104.1
		71	***	***	***	***	***	***	***	***	***
40000 cfm 5 row 12 fpi	75	63	1146	949	82.9	1087	924	91.7	1024	898	101.8
		67	1219	764	85	1155	740	93.8	1086	714	103.9
		71	***	***	***	***	***	***	***	***	***
	80	63	1164	1147	83.4	1111	1107	92.3	1054	1054	102.7
		67	1221	982	85.1	1156	958	93.9	1089	932	104.1
		71	***	***	***	***	***	***	***	***	***
	85	63	1225	1225	85.1	1172	1172	94.3	***	***	***
		67	1234	1193	85.5	1173	1155	94.5	***	***	***
		71	***	***	***	***	***	***	***	***	***
44000 cfm 5 row 12 fpi	75	63	1161	1000	83.3	1100	974	92.1	1034	946	102.2
		67	1232	798	85.4	1167	774	94.2	1096	749	104.2
		71	***	***	***	***	***	***	***	***	***
	80	63	1189	1189	84	1136	1136	93.1	1077	1077	103.5
		67	1234	1037	85.5	1169	1012	94.4	1101	986	104.5
		71	***	***	***	***	***	***	***	***	***
	85	63	1255	1255	86	***	***	***	***	***	***
		67	1256	1243	86.2	***	***	***	***	***	***
		71	***	***	***	***	***	***	***	***	***

Cooling Capacity Data

Table 24: RPS/RFS/RCS/RDT 105D Low Airflow Coil—Standard Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
32000 cfm 5 row 10 fpi	75	63	1123	843	90.3	1066	818	99.8	1007	793	110.6
		67	1198	694	92.7	1138	671	102.3	1072	645	113.2
		71	1275	544	95.5	1211	521	105.1	1141	496	116.1
	80	63	1127	1015	90.3	1071	990	99.9	1011	962	110.8
		67	1197	868	92.7	1137	844	102.3	1072	818	113.3
		71	1274	717	95.5	1210	694	105.1	1140	669	116.1
	85	63	1152	1152	91.1	1104	1104	101	1053	1053	112.4
		67	1200	1040	92.9	1140	1016	102.5	1076	989	113.5
		71	1273	890	95.5	1209	867	105.1	1139	842	116.2
36000 cfm 5 row 10 fpi	75	63	1142	893	90.9	1086	870	100.3	1021	842	111.2
		67	1217	728	93.3	1155	704	102.9	1087	679	113.9
		71	1294	561	96.2	1228	538	105.8	1156	513	116.8
	80	63	1149	1083	91	1093	1056	100.6	1032	1023	111.6
		67	1216	922	93.4	1153	897	102.9	1088	872	113.9
		71	1293	755	96.2	1227	731	105.8	1155	707	116.8
	85	63	1191	1191	92.4	1142	1142	102.4	1086	1086	113.8
		67	1221	1112	93.6	1160	1086	103.3	1093	1057	114.3
		71	1292	948	96.3	1226	925	105.9	1155	900	116.9
39520 cfm 5 row 10 fpi	75	63	1157	937	91.3	1097	912	100.8	1033	885	111.7
		67	1230	757	93.9	1167	734	103.4	1098	708	114.3
		71	1307	575	96.8	1240	552	106.3	1167	527	117.3
	80	63	1168	1138	91.6	1110	1105	101.2	1054	1054	112.5
		67	1230	968	93.9	1167	944	103.5	1098	918	114.4
		71	1306	787	96.7	1239	764	106.3	1166	739	117.3
	85	63	1221	1221	93.5	1169	1169	103.5	1111	1111	114.9
		67	1237	1172	94.3	1174	1143	103.9	1109	1106	115
		71	1306	998	96.9	1239	974	106.5	1166	949	117.5

Table 25: RPS/RFS/RCS/RDT 105D High Airflow Coil—Standard Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
36000 cfm 5 row 12 fpi	75	63	1177	916	92	1118	891	101.6	1052	864	112.5
		67	1253	748	94.7	1191	724	104.2	1118	696	115.2
		71	1334	577	97.7	1265	553	107.3	***	***	***
	80	63	1186	1114	92.4	1126	1087	102	1062	1054	113
		67	1254	946	94.9	1190	921	104.4	1118	893	115.4
		71	1331	774	97.7	1262	750	107.3	***	***	***
	85	63	1231	1231	93.8	1177	1177	103.8	1120	1120	115.2
		67	1258	1142	95.1	1195	1116	104.7	1127	1088	115.7
		71	1330	972	97.9	1262	947	107.5	***	***	***
40000 cfm 5 row 12 fpi	75	63	1195	969	92.7	1133	943	102.2	1066	915	113.1
		67	1269	783	95.3	1203	757	104.8	1130	731	115.7
		71	1349	594	98.4	***	***	***	***	***	***
	80	63	1207	1182	93.1	1148	1147	102.7	1091	1091	114
		67	1272	1002	95.5	1206	977	105	1132	949	115.9
		71	1349	813	98.4	***	***	***	***	***	***
	85	63	1266	1266	95.2	1211	1211	105.1	1151	1151	116.5
		67	1279	1216	95.9	1216	1188	105.5	1147	1147	116.8
		71	1346	1031	98.5	***	***	***	***	***	***
44000 cfm 5 row 12 fpi	75	63	1209	1020	93.2	1146	994	102.7	1077	965	113.6
		67	1284	818	95.8	1216	792	105.3	1143	765	116.2
		71	***	***	***	***	***	***	***	***	***
	80	63	1231	1231	93.9	1176	1176	103.7	1115	1115	115
		67	1283	1056	96	1216	1030	105.5	1145	1003	116.5
		71	***	***	***	***	***	***	***	***	***
	85	63	1297	1297	96.3	1240	1240	106.3	1176	1176	117.7
		67	1299	1283	96.6	1237	1237	106.5	***	***	***
		71	***	***	***	***	***	***	***	***	***

Cooling Capacity Data

Table 26: RPS/RFS/RCS/RDT 110D Low Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
34000 cfm 5 row 10 fpi	75	63	1176	887	83.7	1119	862	92.7	1059	837	103
		67	1256	731	85.8	1196	707	94.7	1131	682	105
		71	1342	573	88.1	1278	550	97.1	1207	525	107.5
	80	63	1181	1069	83.8	1125	1043	92.8	1065	1015	103.1
		67	1255	914	85.8	1195	890	94.8	1131	865	105.1
		71	1339	756	88.1	1275	733	97.1	1206	708	107.4
	85	63	1209	1209	84.5	1162	1162	93.8	1111	1111	104.4
		67	1259	1097	85.9	1200	1072	94.9	1136	1045	105.3
		71	1339	939	88.1	1275	916	97.2	1205	891	107.5
37000 cfm 5 row 10 fpi	75	63	1189	924	84.1	1134	901	93	1072	875	103.3
		67	1271	756	86.2	1210	732	95.1	1143	707	105.5
		71	1357	586	88.5	1290	562	97.5	1219	537	107.9
	80	63	1197	1119	84.3	1141	1093	93.2	1082	1063	103.6
		67	1271	955	86.2	1209	931	95.2	1143	905	105.5
		71	1354	784	88.5	1289	761	97.5	1218	736	107.8
	85	63	1240	1240	85.3	1191	1191	94.6	1136	1136	105.2
		67	1276	1151	86.4	1215	1125	95.4	1150	1097	105.8
		71	1354	983	88.6	1288	960	97.6	1218	935	107.9
39520 cfm 5 row 10 fpi	75	63	1201	956	84.4	1144	932	93.3	1081	905	103.6
		67	1282	777	86.4	1220	753	95.4	1152	728	105.7
		71	1368	597	88.8	1300	573	97.8	1227	548	108.2
	80	63	1210	1160	84.6	1155	1132	93.5	1096	1095	104
		67	1282	988	86.5	1219	964	95.5	1152	938	105.8
		71	1365	807	88.9	1298	784	97.8	1226	759	108.1
	85	63	1263	1263	85.9	1213	1213	95.2	1156	1156	105.9
		67	1288	1194	86.7	1227	1167	95.7	1160	1136	106.2
		71	1365	1019	88.9	1299	995	97.9	1227	970	108.2

Table 27: RPS/RFS/RCS/RDT 110D High Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
39520 cfm 5 row 12 fpi	75	63	1242	984	85.4	1181	958	94.4	1115	930	104.7
		67	1325	800	87.6	1258	775	96.6	1187	748	106.9
		71	1411	614	90.2	1342	590	99.1	***	***	***
	80	63	1252	1197	85.7	1193	1169	94.7	1130	1130	105.2
		67	1326	1017	87.8	1258	991	96.7	1188	964	107
		71	1409	830	90.2	1340	806	99.1	***	***	***
	85	63	1308	1308	87.1	1254	1254	96.4	1196	1196	107.1
		67	1331	1231	88	1269	1205	97	1201	1174	107.4
		71	1408	1046	90.3	1338	1022	99.2	***	***	***
43000 cfm 5 row 12 fpi	75	63	1256	1029	85.8	1194	1003	94.8	1127	975	105.1
		67	1338	831	88	1271	805	96.9	1199	779	107.2
		71	1424	629	90.6	***	***	***	***	***	***
	80	63	1269	1253	86.2	1213	1213	95.3	1157	1157	105.9
		67	1337	1064	88.1	1271	1039	97.1	1200	1011	107.4
		71	1422	864	90.6	***	***	***	***	***	***
	85	63	1337	1337	88	1282	1282	97.3	1222	1222	108
		67	1347	1293	88.5	1284	1263	97.6	1219	1219	108.1
		71	1422	1098	90.7	***	***	***	***	***	***
45600 cfm 5 row 12 fpi	75	63	1265	1061	86.1	1203	1035	95	1134	1007	105.3
		67	1346	853	88.2	1279	827	97.1	1206	800	107.4
		71	***	***	***	***	***	***	***	***	***
	80	63	1285	1285	86.6	1233	1233	95.8	1172	1172	106.4
		67	1346	1099	88.4	1280	1074	97.3	1207	1046	107.6
		71	***	***	***	***	***	***	***	***	***
	85	63	1358	1358	88.6	1302	1302	97.9	1240	1240	108.5
		67	1362	1336	88.9	1299	1299	98	1235	1235	108.7
		71	***	***	***	***	***	***	***	***	***

Cooling Capacity Data

Table 28: RPS/RFS/RCS/RDT 120D Low Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
34000 cfm 5 row 10 fpi	75	63	1275	931	96.1	1214	904	106.6	1150	876	119
		67	1364	774	98.6	1299	748	109.2	1231	721	121.5
		71	1460	617	101.2	1391	591	111.9	1315	564	124.5
	80	63	1278	1114	96.2	1218	1086	106.7	1154	1057	119.1
		67	1363	958	98.6	1298	932	109.2	1231	905	121.5
		71	1458	800	101.2	1389	774	111.9	1315	747	124.5
	85	63	1297	1273	96.7	1241	1233	107.4	1185	1185	120
		67	1367	1142	98.6	1302	1115	109.3	1233	1086	121.7
		71	1456	983	101.2	1387	958	111.9	1314	931	124.5
37000 cfm 5 row 10 fpi	75	63	1293	969	96.7	1231	943	107.1	1165	914	119.4
		67	1382	800	99.1	1318	775	109.6	1246	747	122
		71	1479	630	101.8	1407	604	112.5	1331	577	125
	80	63	1297	1166	96.8	1236	1138	107.2	1172	1107	119.6
		67	1382	999	99.1	1317	974	109.7	1246	945	122.1
		71	1476	829	101.8	1406	803	112.5	1330	776	125
	85	63	1325	1319	97.5	1271	1271	108.3	1215	1215	121.1
		67	1386	1197	99.2	1320	1169	109.8	1249	1139	122.3
		71	1475	1027	101.8	1405	1002	112.5	1330	975	125.1
39250 cfm 5 row 10 fpi	75	63	1304	998	97	1242	971	107.4	1175	942	119.8
		67	1394	819	99.5	1328	794	110	1256	766	122.4
		71	1491	640	102.2	1417	614	112.9	1340	587	125.4
	80	63	1310	1204	97.1	1249	1174	107.6	1184	1140	120
		67	1395	1030	99.5	1328	1004	110	1256	976	122.4
		71	1488	850	102.2	1417	824	112.8	1340	797	125.4
	85	63	1346	1346	98.1	1294	1294	108.9	1236	1236	121.7
		67	1399	1237	99.6	1331	1209	110.2	1260	1177	122.7
		71	1489	1060	102.2	1417	1034	112.9	1340	1007	125.4

Table 29: RPS/RFS/RCS/RDT 120D High Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
39520 cfm 5 row 12 fpi	75	63	1358	1034	98.4	1291	1005	109	1221	975	121.3
		67	1451	850	101	1379	822	111.6	1303	793	124.1
		71	1550	664	103.9	1473	637	114.7	***	***	***
	80	63	1365	1249	98.6	1301	1219	109.2	1231	1183	121.6
		67	1452	1067	101.1	1380	1039	111.7	1304	1009	124.2
		71	1547	880	104	1471	853	114.7	***	***	***
	85	63	1404	1404	99.7	1348	1348	110.6	1287	1287	123.4
		67	1456	1282	101.3	1387	1254	112	1313	1222	124.5
		71	1546	1096	104	1470	1069	114.8	***	***	***
43000 cfm 5 row 12 fpi	75	63	1374	1079	99	1308	1051	109.4	1236	1021	121.8
		67	1468	881	101.5	1395	853	112.2	1318	823	124.6
		71	1567	680	104.5	***	***	***	***	***	***
	80	63	1385	1309	99.2	1320	1272	109.8	1254	1227	122.3
		67	1467	1115	101.6	1394	1086	112.2	1316	1057	124.7
		71	1564	914	104.5	***	***	***	***	***	***
	85	63	1440	1440	100.7	1381	1381	111.7	1318	1318	124.5
		67	1475	1347	101.9	1405	1316	112.6	1331	1277	125.3
		71	1563	1149	104.6	***	***	***	***	***	***
45600 cfm 5 row 12 fpi	75	63	1386	1113	99.3	1318	1084	109.7	1245	1053	122.1
		67	1478	903	101.8	1405	875	112.5	1326	846	124.9
		71	***	***	***	***	***	***	***	***	***
	80	63	1402	1348	99.6	1337	1304	110.3	1270	1256	122.8
		67	1479	1151	101.9	1405	1122	112.6	1327	1092	125.1
		71	***	***	***	***	***	***	***	***	***
	85	63	1464	1464	101.4	1404	1404	112.4	1339	1339	125.3
		67	1490	1393	102.3	1419	1358	113.1	1345	1309	125.8
		71	***	***	***	***	***	***	***	***	***

Cooling Capacity Data

Table 30: RPS/RFS/RCS/RDT 125D High Airflow Coil—Standard Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
42000 cfm 5 row 12 fpi	75	63	1486	1116	112	1415	1085	124	1341	1054	138.3
		67	1592	922	114.9	1514	891	127.2	1432	859	141.8
		71	1703	726	118.2	1617	695	130.8	1529	663	145.6
	80	63	1496	1347	112.1	1422	1314	124.1	1346	1279	138.7
		67	1592	1152	114.9	1513	1120	127.2	1430	1088	141.8
		71	1700	955	118.2	1616	924	130.8	1528	893	145.6
	85	63	1531	1531	113	1469	1469	125.6	1405	1405	140.7
		67	1597	1382	115.1	1520	1350	127.5	1438	1317	142.2
		71	1699	1184	118.3	1615	1154	130.9	1527	1122	145.7
46000 cfm 5 row 12 fpi	75	63	1509	1169	112.5	1436	1138	124.5	1356	1104	138.9
		67	1613	957	115.5	1533	926	127.9	1448	894	142.4
		71	1725	744	118.9	1636	712	131.5	1546	681	146.3
	80	63	1518	1417	112.7	1444	1383	124.9	1370	1347	139.4
		67	1613	1208	115.5	1533	1177	127.9	1448	1144	142.6
		71	1721	993	118.8	1635	963	131.4	1544	931	146.3
	85	63	1573	1573	114.3	1510	1510	127	1441	1441	142.2
		67	1621	1457	115.8	1541	1424	128.3	1457	1389	143.1
		71	1721	1244	119	1635	1213	131.6	1545	1181	146.5
49400 cfm 5 row 12 fpi	75	63	1525	1213	112.9	1450	1182	125	1369	1147	139.5
		67	1628	987	115.9	1546	955	128.3	1460	923	142.9
		71	1737	758	119.4	1650	727	132	1558	695	146.8
	80	63	1536	1474	113.2	1465	1439	125.4	1389	1389	140.2
		67	1628	1255	116	1546	1223	128.5	1461	1190	143.1
		71	1736	1026	119.3	1648	995	131.9	1556	964	146.7
	85	63	1607	1607	115.3	1539	1539	128.1	1469	1469	143.2
		67	1638	1519	116.4	1557	1484	128.9	1472	1445	143.7
		71	1737	1294	119.5	1649	1263	132.1	1558	1231	147

Table 31: RPS/RFS/RCS/RDT 130D High Airflow Coil—High Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
42000 cfm 5 row 10 fpi	75	63	1487	1111	109.2	1414	1079	121	1340	1048	134.9
		67	1591	918	112	1515	888	123.9	1435	857	138.1
		71	1704	724	115	1622	695	127.3	1534	663	141.6
	80	63	1491	1335	109.3	1422	1304	121.1	1347	1270	135.1
		67	1589	1145	112	1515	1115	124	1432	1083	138.1
		71	1700	951	115	1619	921	127.2	1532	890	141.6
	85	63	1521	1521	110.2	1465	1465	122.3	1401	1401	136.9
		67	1595	1372	112.1	1520	1341	124.2	1441	1308	138.4
		71	1700	1178	115.1	1618	1148	127.4	1532	1117	141.7
46000 cfm 5 row 10 fpi	75	63	1507	1161	109.8	1435	1131	121.5	1358	1098	135.4
		67	1613	953	112.6	1534	922	124.5	1452	891	138.7
		71	1725	742	115.7	1642	712	127.9	1551	681	142.3
	80	63	1516	1405	110	1444	1371	121.7	1369	1334	135.9
		67	1612	1200	112.6	1534	1169	124.6	1452	1138	138.8
		71	1722	989	115.6	1638	959	127.9	1550	928	142.2
	85	63	1567	1567	111.2	1504	1504	123.6	1439	1439	138.2
		67	1619	1445	112.8	1542	1412	124.9	1460	1377	139.1
		71	1722	1236	115.7	1639	1206	128	1550	1175	142.4
49400 cfm 5 row 10 fpi	75	63	1523	1204	110.2	1450	1173	121.9	1371	1140	135.9
		67	1628	981	113	1548	951	125	1465	919	139.2
		71	1741	757	116.1	1656	727	128.3	1564	695	142.7
	80	63	1532	1459	110.4	1462	1424	122.3	1388	1382	136.5
		67	1628	1246	113.1	1549	1215	125.1	1465	1182	139.3
		71	1738	1020	116.1	1652	990	128.3	1563	959	142.7
	85	63	1598	1598	112.2	1535	1535	124.5	1466	1466	139.2
		67	1637	1504	113.3	1558	1470	125.5	1475	1432	139.8
		71	1739	1285	116.2	1654	1255	128.5	1564	1223	142.9

Cooling Capacity Data















Table 32: RPS/RFS/RCS/RDT 140D High Airflow Coil—Standard Efficiency Unit

Unit Data	Entering Air		Ambient Dry Bulb Temperature								
			85			95			105		
	DB	WB	TH	SH	KW	TH	SH	KW	TH	SH	KW
42000 cfm 5 row 10 fpi	75	63	1586	1155	125.6	1510	1121	139.4	1427	1085	155.3
		67	1697	961	128.8	1614	928	142.6	1528	893	158.6
		71	1815	766	132.2	1727	733	146.2	1631	699	162.5
	80	63	1590	1381	125.7	1515	1347	139.4	1433	1309	155.4
		67	1695	1188	128.8	1614	1155	142.7	1526	1120	158.7
		71	1813	993	132.1	1724	960	146.2	1631	926	162.5
	85	63	1610	1584	126.3	1542	1534	140.2	1471	1471	156.8
		67	1699	1415	128.8	1618	1381	142.8	1530	1345	158.9
		71	1811	1219	132.1	1723	1187	146.2	1630	1153	162.6
46000 cfm 5 row 10 fpi	75	63	1611	1207	126.4	1531	1172	140	1447	1136	155.9
		67	1720	996	129.5	1638	963	143.3	1548	928	159.4
		71	1840	784	132.9	1749	751	147	1651	716	163.3
	80	63	1616	1451	126.4	1538	1415	140.2	1455	1376	156.2
		67	1721	1244	129.5	1637	1210	143.4	1547	1175	159.4
		71	1837	1031	132.8	1747	998	147	1651	963	163.2
	85	63	1650	1646	127.3	1582	1582	141.6	1511	1511	158.2
		67	1725	1489	129.6	1641	1454	143.5	1551	1417	159.7
		71	1836	1278	132.9	1747	1245	147	1650	1211	163.3
49400 cfm 5 row 10 fpi	75	63	1628	1249	126.8	1547	1215	140.5	1462	1178	156.4
		67	1740	1025	129.9	1653	992	143.8	1562	956	159.9
		71	1859	799	133.4	1765	766	147.5	1666	731	163.8
	80	63	1634	1508	127	1556	1471	140.8	1474	1428	156.9
		67	1741	1290	130	1653	1256	143.9	1562	1220	160
		71	1855	1063	133.4	1763	1030	147.5	1665	995	163.7
	85	63	1683	1683	128.4	1615	1615	142.7	1542	1542	159.2
		67	1744	1550	130.1	1658	1514	144.1	1567	1474	160.4
		71	1856	1327	133.5	1763	1294	147.6	1665	1259	163.8

Section Options and Locations

Figures 4–10 show section options, curb lengths, and relative positions. Curb lengths (in inches) are shown below each icon.


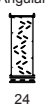

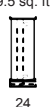
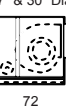


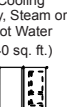

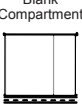







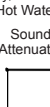
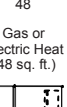



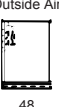


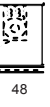
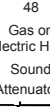
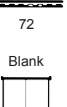



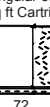



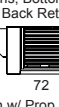
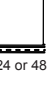

Figure 4: RPS/RFS/RCS/RDT 050D to 075D, Blow-Through Coil Section (NA Final Filters)

Position A Outdoor/ Return Air Mandatory	Position B Filter Mandatory	Position C Blank Optional	Position F Supply Air Fan Mandatory	Position G Heat Mandatory	Position H Blank Optional	Position I DX Coil Mandatory	Position K Discharge Plenum Mandatory	Position L Blank Compartment Optional	Position M Air-cooled Condensing Unit
 Outdoor Air Hood 0 Plenum 48 30% Outside Air 48 Economizer 72 Economizer w/ Return Air Fan 72 Econ w/ Prop. Exh. Fans, Bottom or Back Ret. Fans 72 Econ w/ Prop. Exh. & Side Ret. Fans 120	Angular 24 Cartridge (40 sq. Ft.) 24 Cartridge (48 sq. Ft.) 48 Blender & Angular or 40 sq ft Cartridge 72 Blender & 48 sq ft Cartridge 96 Blank 24 or 48	Blank 48 VFD Section 48	27" & 30" Dia  72 30" Dia  72 33" Dia  96	Steam/Hot Water  48 Electric  48 Gas  48 Blank  48	Blank 48 Sound Attenuator 48 Sound Attenuator* 72	(39.5 sq. ft.)  24 (47.1 sq. ft.)  48	Discharge Plenum  48	Blank Compartment  72	050D-068D Air-cooled Condenser  83 (Does not affect curb length) 070D-075D Air-cooled Condenser  106 (Does not affect curb length)

Note: Exhaust fan section dimensions do not include the hood.

Dimensional Data

Figure 5: RPS/RFS/RCS/RDT 050D to 070D, Draw-Through Coil Section

Position A Outdoor/ Return Air Mandatory	Position B Filter Mandatory	Position C Blank Optional	Position D DX Coil Mandatory	Position F Supply Air Fan Mandatory	Position G Heat Mandatory	Position H Blank Optional	Position J Final Filter Optional	Position K Discharge Plenum Mandatory	Position L Blank Compartment Optional	Position M Air-cooled Condensing Unit
Outdoor Air Hood  0	Angular  24	Blank  48	(39.5 sq. ft.)  24	27" & 30" Dia  72	Steam/ Hot Water  48	Blank  48	Cooling Only, Steam or Hot Water (40 sq. ft.)  48	Discharge Plenum  48	Blank Compartment  72	050D-068D  83 (Does not affect curb length)
Plenum  48	Cartridge (40 sq. ft.)  24	VFD Section  48	(47.1 sq. ft.)  48	30" Dia  72	Electric  48	Cooling Only, Steam or Hot Water Sound Attenuator  48	Gas or Electric Heat (48 sq. ft.)  72	Blank  48	Blank Compartment  72	070D-075D  106 (Does not affect curb length)
30% Outside Air  48	Cartridge (48 sq. ft.)  48			33" Dia  96	Gas  48	Gas or Electric Heat Sound Attenuator*  72	Blank  48	Blank  48	Blank Compartment  72	
Economizer  72	Blender & Angular or 40 sq ft Cartridge  72				Blank  48					
Economizer w/ Return Air Fan  72	Blender & 48 sq ft Cartridge  96									
Econ w/ Prop. Exh. Fans, Bottom or Back Ret.  72	Blank  24 or 48									
Econ w/ Prop. Exh. & Side Ret.  120										

Note: Exhaust fan section dimensions do not include the hood.










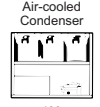







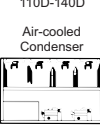


















Use Figures 4 through 10 to determine the total air handler length and total unit length. The total air handler length, which is needed to determine roof curb knockouts, includes all unit sections except the air cooled condensing section.

Example: RPS 050D with draw-through coil section

Section description	Length (in.)
Economizer with return air fan =	72
Angular filters =	24
Cooling coil =	24
Supply fan =	72
Gas heat =	48
Final filter, standard flow =	48
Discharge plenum =	48
Air cooled condensing unit =	83
Total air handler length =	336
Total unit length (including condensing unit) =	419

For a custom certified drawing of your specific requirements, consult your local McQuay sales representative.











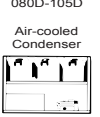









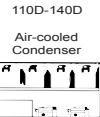



















Figure 6: RPS/RFS/RCS/RDT 080D to 135D, Blow-Through Coil Section (NA Final Filters)

Position A Outdoor/ Return Air Mandatory	Position B Filter Mandatory	Position C Blank Optional	Position F Supply Air Fan Mandatory	Position G Heat Mandatory	Position H Blank Optional	Position I DX Coil Mandatory	Position K Discharge Plenum Mandatory	Position L Blank Compartment Optional	Position M Air-cooled Condensing Unit
Outdoor Air Hood  0	Angular  24	Blank  48	33" Dia  72	Steam/ Hot Water  48	Blank  48	080D-090D (53.9 sq. ft.)  24	Discharge Plenum  48	Blank Compartment  72	080D-105D Air-cooled Condenser  106 (Does not affect curb length)
Plenum  72	Cartridge (56 sq. ft.) (080D-090D only)  24	VFD Section  48	36" Dia  96	Electric  48	Sound Attenuator  48	60.8 sq. ft.)  48			110D-140D Air-cooled Condenser  139 (Does not affect curb length)
30% Outside Air  72	Cartridge (64 sq. ft.) (080D-140D only)  48		36" & 40" Dia  96	Gas  48	Sound Attenuator*  72	100D-110D (60.8 sq. ft.)  48			
Economizer  96	Cartridge (80 sq. ft.) (100D-140D only)  72			Blank  48		76.0 sq. ft.)  72			
Economizer w/ Return Air Fan  96	Blender & Angular or 56 sq ft Cartridge  72					120D-140D (76.0 sq. ft.)  72			
Econ w/Prop. Exh. Fans, Back Ret.  72	Blender & 64 sq ft Cartridge  96								
Econ w/Prop. Exh. & Side Ret.  120	Blank  24 or 48								
Econ w/Prop. Exh. Fans & Bottom Return  96									

Note: Exhaust fan section dimensions do not include the hood.

Dimensional Data

Figure 7: RPS/RFS/RCS/RDT 080D to 140D, Draw-Through Coil Section

Position A Outdoor/ Return Air Mandatory	Position B Filter Mandatory	Position C Blank Optional	Position D DX Coil Mandatory	Position F Supply Air Fan Mandatory	Position G Heat Mandatory	Position H Blank Optional	Position J Final Filter Optional	Position K Discharge Plenum Mandatory	Position L Blank Compartment Optional	Position M Air-cooled Condensing Unit
Outdoor Air Hood  0	Angular  24	Blank  48	080D-090D (53.9 sq. ft.)  24	33" Dia  72	Steam/ Hot Water  48	Blank  48	Cooling Only, Steam or Hot Water (56 sq. ft.) (080D-090D only)  48	080D-090D Discharge Plenum  48	Blank Compartment  72	080D-105D  Air-cooled Condenser 108 (Does not affect curb length)
Plenum  72	Cartridge (56 sq. ft.) (080D-090D only)  24	VFD Section  48	(60.8 sq. ft.)  48	36" Dia  96	Electric  48	Cooling Only, Steam or Hot Water Sound Attenuator  48	Gas or Electric Heat (64 sq. ft.)  72	100D-140D Discharge Plenum  72		110D-140D  Air-cooled Condenser 139 (Does not affect curb length)
30% Outside Air  72	Cartridge (64 sq. ft.) (080D-140D only)  48		100D-110D (60.8 sq. ft.)  48	36" & 40" Dia  96	Gas  48	Gas or Electric Heat Sound Attenuator*  48	(80 sq. ft.) (100D-140D only)  96			
Economizer  96	Cartridge (80 sq. ft.) (100D-140D only)  72		(76.0 sq. ft.)  72		Blank  48					
Economizer w/ Return Air Fan  96	Blender & Angular or 56 sq ft Cartridge  72		120D-140D (76.0 sq. ft.)  72							
Econ w/ Prop. Exh. Fans, Back Ret.  72	Blender & 64 sq ft Cartridge  96									
Econ w/ Prop. Exh. & Side Ret.  120	Blank  24 or 48									
Econ w/ Prop. Exh. Fans & Bottom Return  96										

Note: Exhaust fan section dimensions do not include the hood.

Figure 8: RPS/RFS/RCS/RDT 050D to 075D

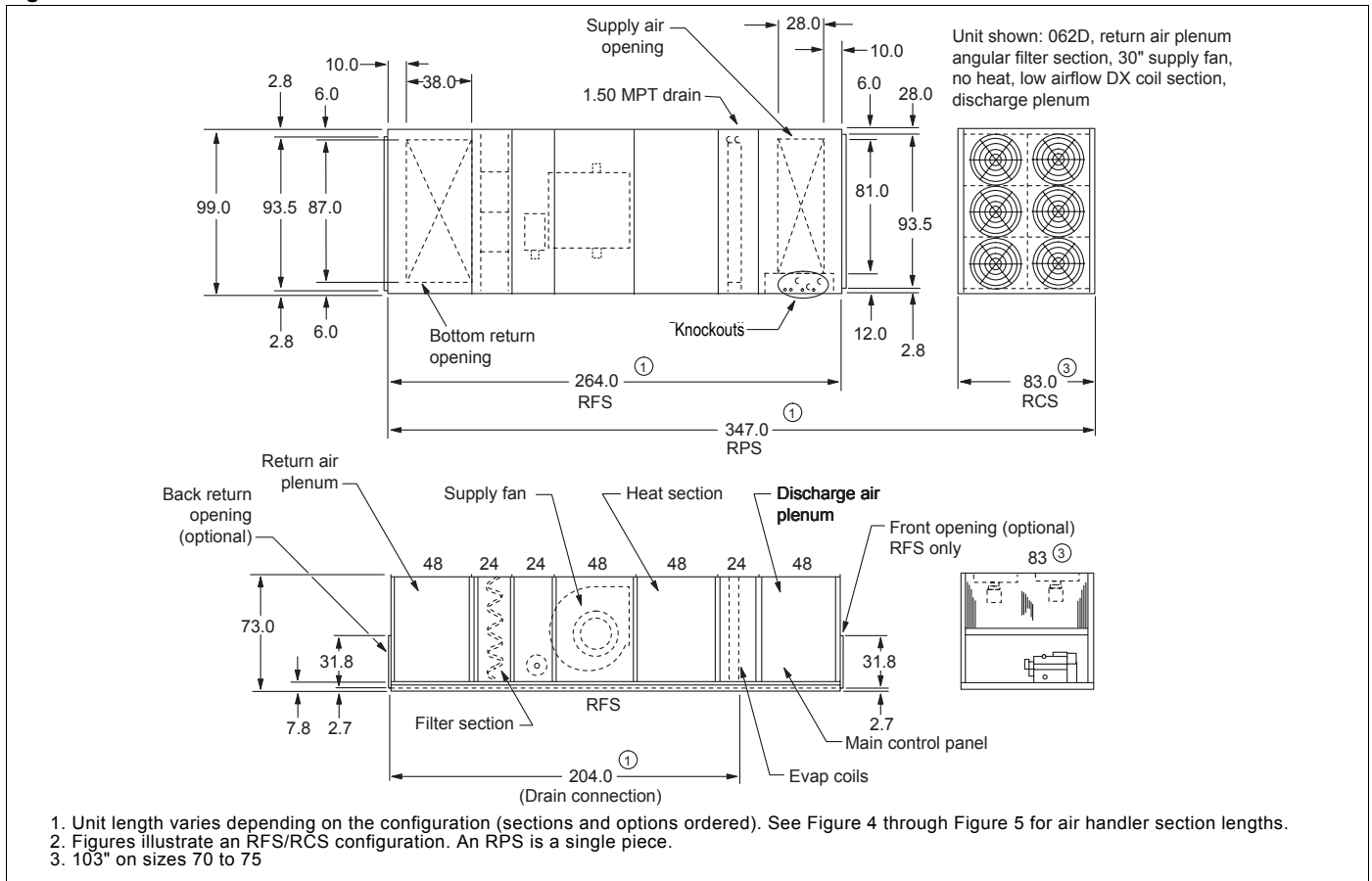
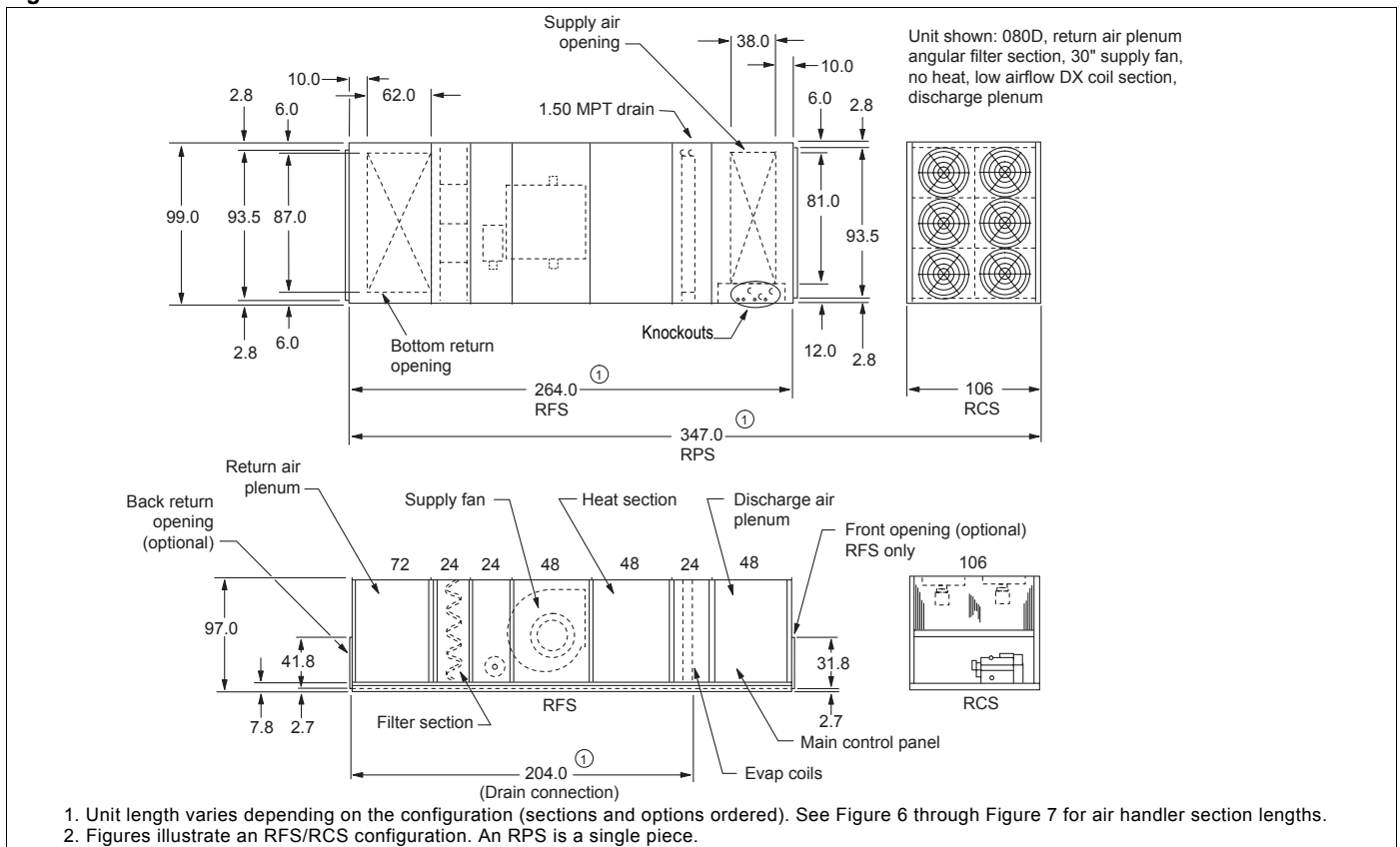
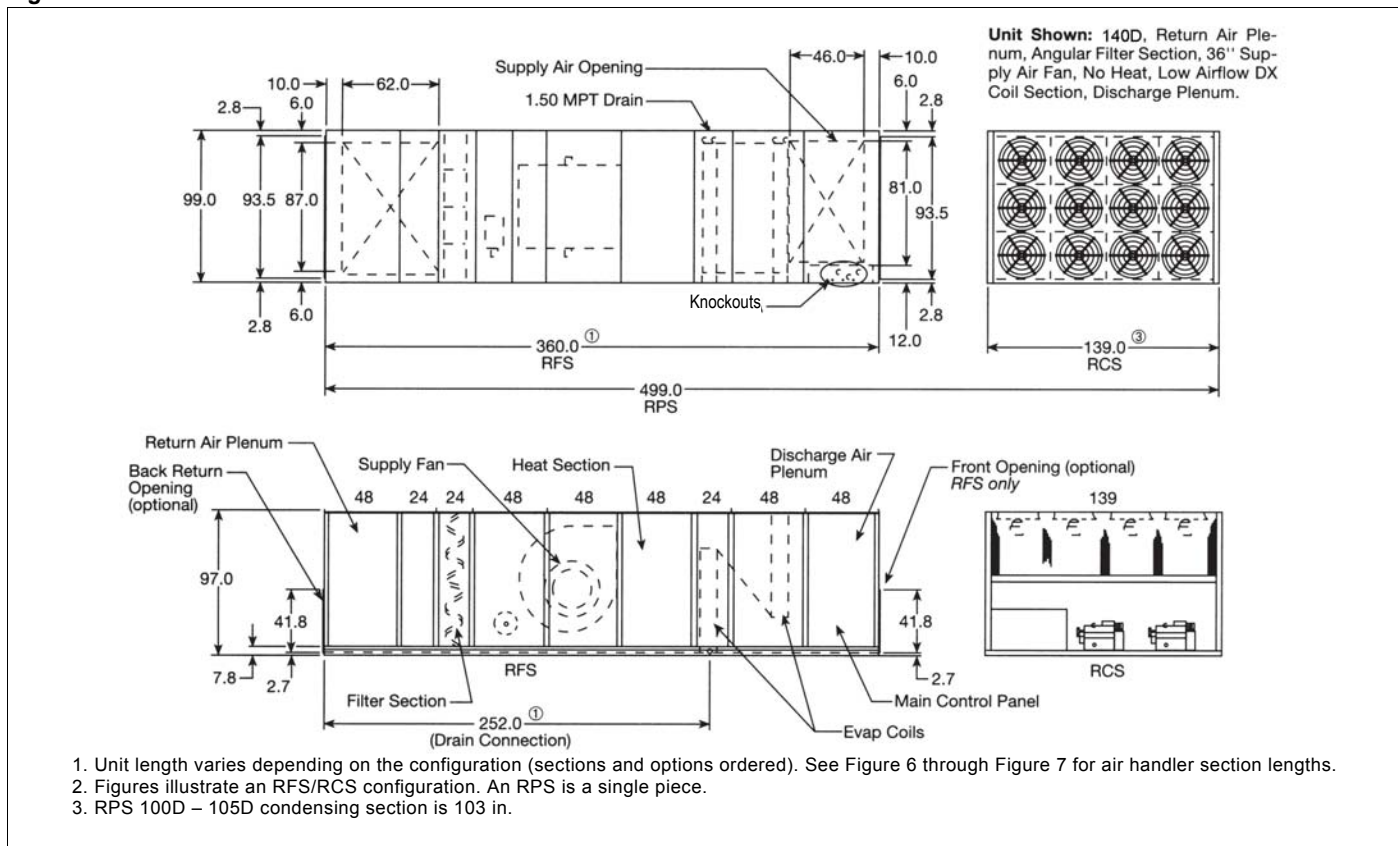


Figure 9: RPS/RFS/RCS/RDT 080D to 105D



Dimensional Data

Figure 10: RPS/RFS/RCS/RDT 110D to 140D



1. Unit length varies depending on the configuration (sections and options ordered). See Figure 6 through Figure 7 for air handler section lengths.
2. Figures illustrate an RFS/RCS configuration. An RPS is a single piece.
3. RPS 100D - 105D condensing section is 103 in.

Supply Power Wiring

Table 33: RPS/RFS/RCS/RDT Rated Load Amps

Model	Voltage	Circuit 1		Circuit 2		Model	Voltage	Circuit 1		Circuit 2	
		RLA / com	Comp Qty	RLA / com	Comp Qty			RLA / com	Comp Qty	RLA / com	Comp Qty
050D	208-60-3	53.2		53.2		090D	208-60-3	56.7		56.7	
	230-60-3	48.1	2	48.1	2		230-60-3	51.3	3	51.3	3
	460-60-3	18.6		18.6			460-60-3	23.1		23.1	
	575-60-3	14.7		14.7			575-60-3	19.9		19.9	
060D	208-60-3	56.7		56.7		100D	208-60-3	56.7		61.7	
	230-60-3	51.3	2	51.3	2		230-60-3	51.3	3	55.8	3
	460-60-3	23.1		23.1			460-60-3	23.1		26.9	
	575-60-3	19.9		19.9			575-60-3	19.9		23.7	
062D	208-60-3	56.7		56.7		105D	208-60-3	61.7		61.7	
	230-60-3	51.3	2	51.3	2		230-60-3	55.8	3	55.8	3
	460-60-3	23.1		23.1			460-60-3	26.9		26.9	
	575-60-3	19.9		19.9			575-60-3	23.7		23.7	
068D	208-60-3	61.7		61.7		110D	208-60-3	61.7		61.7	
	230-60-3	55.8	2	55.8	2		230-60-3	55.8	3	55.8	3
	460-60-3	26.9		26.9			460-60-3	26.9		26.9	
	575-60-3	23.7		23.7			575-60-3	23.7		23.7	
070D	208-60-3	36.8		36.8		120D	208-60-3	61.7		81.7	
	230-60-3	33.3	3	33.3	3		230-60-3	55.8	3	73.9	3
	460-60-3	17.9		17.9			460-60-3	26.9		30.6	
	575-60-3	12.8		12.8			575-60-3	23.7		24.6	
075D	208-60-3	53.2		53.2		125D	208-60-3	81.7		81.7	
	230-60-3	48.1	3	48.1	3		230-60-3	73.9	3	73.9	3
	460-60-3	18.6		18.6			460-60-3	30.6		30.6	
	575-60-3	14.7		14.7			575-60-3	24.6		24.6	
080D	208-60-3	53.2		53.2		130D	208-60-3	81.7		81.7	
	230-60-3	48.1	3	48.1	3		230-60-3	73.9	3	73.9	3
	460-60-3	18.6		18.6			460-60-3	30.6		30.6	
	575-60-3	14.7		14.7			575-60-3	24.6		24.6	
085D	208-60-3	56.7		56.7		140D	208-60-3	81.7		98.5	
	230-60-3	51.3	3	51.3	3		230-60-3	73.9	3	89.1	3
	460-60-3	23.1		23.1			460-60-3	30.6		42.9	
	575-60-3	19.9		19.9			575-60-3	24.6		32.1	

Table 34: Condenser Fan Quantity

RPSRCS model	Quantity fans
050D, 060D	4
062D, 068D, 070D, 080D, 085D	6
075D, 090D, 105D, 110D	8
100D, 120D	9
125D	10
130D, 140D	12

Table 35: Condenser Fan Amps (each)

Voltage	Standard fan, rpm = 1140	
	FLA	LRA
208/230	4	19.8
460	2	9.9
575	1.7	9.6

Electrical Data

Table 36: RPS/RFS/RCS/RDT Supply, Exhaust and Return Fan Motors

Fan motor			208/60/3		230/60/3		460/60/3 ^a		575/60/3	
HP	Efficiency		FLA	LRA	FLA	LRA	FLA	LRA	FLA	LRA
1	High	ODP	3.9	26	2.8	20	1.4	10.5	1.15	9
	High	TEFC	4	27	2.8	21	1.4	10.5	1.2	9
	Premium	ODP	—	—	3	19.2	1.5	15	1.1	7.7
	Premium	TEFC	3.3	27	3	28	1.5	14	1.3	10
1.5	High	ODP	4.5	39	4.2	32	2.1	16	1.7	12.8
	High	TEFC	6.2	39	4.2	32	2.1	16	1.7	12.8
	Premium	ODP	4.8	40.3	4.2	25	2.1	14	1.7	14
	Premium	TEFC	—	—	4.2	40	2.1	20	1.7	16
2	High	ODP	7.1	47	5.6	42	2.8	21	2.2	16.8
	High	TEFC	7	50.6	5.6	48	2.8	24	2.2	17
	Premium	ODP	6.1	43.2	5.8	37.6	2.9	26.5	2.1	15
	Premium	TEFC	—	—	5.6	44	2.8	22	2.2	17
3	High	ODP	9.9	79	9	64.6	4.5	32.3	3.4	26.1
	High	TEFC	9.6	81	8.2	77.2	4.1	38.6	3.4	30.9
	Premium	ODP	9.3	74	8.2	64	4.1	32	3.1	25.6
	Premium	TEFC	9.4	80	8.2	71	4.1	35.5	3.3	29
5	High	ODP	16.1	106	14	94	7	47	5.3	38
	High	TEFC	15.2	126	13.4	102.4	6.7	51.2	5.4	39
	Premium	ODP	15.7	110	13.6	96	6.8	48	5.2	38.4
	Premium	TEFC	15	124	13	96	6.5	48	5.2	38
7.5	High	ODP	25	137	21.6	148.4	10.8	74.2	8.2	49
	High	TEFC	24.8	175.3	20.4	145.2	10.2	72.6	8.2	58
	Premium	ODP	22.3	185	20	122	10	80	7.4	52
	Premium	TEFC	22	177	20	141	10	70.5	8	56
10	High	ODP	33	290	28	180	14	94	11	72
	High	TEFC	29.5	228	28.4	200	14.2	100	11.4	80
	Premium	ODP	29	247	25.8	192	12.9	106	10.3	76.6
	Premium	TEFC	28.5	209	25	182	12.5	91	10	67
15	High	ODP	44.8	368	40.6	301	20.3	150.5	16.2	120
	High	TEFC	43.7	310	38.8	272	19.4	136	15.5	109
	Premium	ODP	43.4	271	37.8	233.6	18.9	117	14.1	94
	Premium	TEFC	42.4	282	37	246	18.5	123	14	89
20	High	ODP	61	342	50	350	25	175	20	135
	High	TEFC	60	465	48	320	24	160	19.1	123
	Premium	ODP	57	373	49	322	24.5	160.8	18.9	130
	Premium	TEFC	56	403	48	350	24	175	18.8	138
25	High	ODP	74	427	62	382	31	191	24.3	151
	High	TEFC	73	416	60	380	30	190	24.2	152
	Premium	ODP	70	438	61	380	30.5	190	24.2	125
	Premium	TEFC	68.4	431	61	376	30.5	188	22.8	148
30	High	ODP	86.5	560	75	460	37.5	230	30	177
	High	TEFC	87	448	72	460	36	230	28.6	184
	Premium	ODP	83.3	514	72.4	448	36.2	224	29.8	179
	Premium	TEFC	84	566	69	428	34.5	214	27.6	178
40	High	ODP	117	660	102	630	51	315	40	251
	High	TEFC	114	590	95	544	47.5	272	38	214
	Premium	ODP	110	730	96	630	48	315	38	245
	Premium	TEFC	106	734	94	650	47	325	37	213
50	High	ODP	140	832	124	770	62	385	49.2	303
	High	TEFC	136	840	118	744	59	372	48	266
	Premium	ODP	137	877	120	752	60	376	47.5	332
	Premium	TEFC	131	897	118	778	59	389	46	237
60	High	ODP	154	991	144	872	72	442	57.4	355
	High	TEFC	—	—	140	1022	70	511	56	409
	Premium	ODP	160	1125	140	912	70	456	56	345
	Premium	TEFC	—	—	140	1200	70	600	54	403
75	High	ODP	189	1240	176	1108	88	553	71	505
	High	TEFC	—	—	172	1132	86	566	68	447
	Premium	ODP	195	1240	170	1044	85	553	65.5	444
	Premium	TEFC	—	—	168	1186	84	593	66	504

a. For 380/50/3 applications, 460/60/3 motors are used. Derate nameplate by 0.85 to obtain actual horsepower.

Table 37: RPS/RFS/RCS/RDT Recommended Power Wiring

Ampacity	No. of power wires per phase	No. of conduits	Wire gauge	Insulation rating (0°C)
30	1	1	10	60
40	1	1	8	60
55	1	1	6	60
70	1	1	4	60
85	1	1	3	60
95	1	1	2	60
130	1	1	1	75
150	1	1	1/0	75
175	1	1	2/0	75
200	1	1	3/0	75
230	1	1	4/0	75
255	1	1	250	75
285	1	1	300	75
310	1	1	350	75
335	1	1	400	75
380	1	1	500	75
400	2	2	3/0	75
460	2	2	4/0	75
510	2	2	250	75
570	2	2	300	75
620	2	2	350	75
670	2	2	400	75
760	2	2	500	75
765	3	3	250	75
855	3	3	300	75
930	3	3	350	75

1 Units require three-phase power supply.

2 Allowable voltage tolerances:

a 60 Hertz

– Nameplate 208V: Min. 187V, Max. 229V

– Nameplate 230V: Min. 207V, Max. 253V

– Nameplate 460V: Min. 414V, Max. 506V

– Nameplate 575V: Min. 518V, Max. 633V

b 50 Hertz

– Nameplate 380V: Min. 360V, Max. 418V

3 Minimum Circuit Ampacity (MCA) Calculation:

Note: If a unit is provided with multiple power connections, each must be considered alone in selecting power wiring components.

The MCA is calculated based on the following formulas:

1 Units with cooling and all heating except electric heat
 $MCA = 1.25 \times \text{largest load} + \text{sum of all other loads}$

2 On units with electric heat, the MCA is computed both in the cooling mode and the heating mode and the greater of the two values is used.

a Heating Mode

– Electric heat less than or equal to 50 kW

$MCA = 1.25 (\text{heater FLA} + \text{largest motor loads}) + \text{(the rest of the loads)}$

– Electric heat greater than or equal to 50 kW

$MCA = 1.25 (\text{largest motor load}) + \text{(the rest of the loads)} + \text{heater FLA}$

Note: The compressor and condenser are not included in this heating mode calculation.

b Cooling Mode

– $MCA = 1.25 \times \text{largest load} + \text{sum of all the other loads}$

Note: Control circuit ampacity does not need to be considered in the calculation for wire sizing ampacity.

Note: If the unit is provided with one or more fan section lights, they are powered from the separate 15 amp (minimum), 120V supply required by the NEC for the unit convenience outlet.

3 Size wires in accordance with Table 310-16 or 310-19 of the National Electrical Code.

4 Wires should be sized for a maximum of 3% voltage drop.

5 There are two options for the convenience outlet and light circuit power connections.

a Separate Field Power, 120 V, 15 amps minimum – This option provides optimal service and maintenance flexibility

b Unit Powered – This option provides lowest installed cost

Weights

Unit Weights

Table 38: Base Unit Weights (Less Options)

Unit size	Unit Weight (lbs)			
	RCS	RFS	RDT	RPS
050D	Consult factory			
060D	Consult factory			
062D	Consult factory			
068D	Consult factory			
070D	Consult factory			
075D	Consult factory			
080D	3603	4692	6697	8097
085D	3615	4682	6716	8116
090D	3708	4682	6816	8216
100D	3764	4974	7178	8578
105D	3726	4974	7147	8547
110D	4277	4974	7706	9106
120D	4858	5361	8687	10,087
125D	5439	5361	9275	10,675
130D	5532	5361	9275	10,675
140D	5619	5361	9476	10876

Option Weights

Table 39: RPS/RFS/RCS/RDT 050D to 140D (lbs)

Options	050D - 075D	080D - 090D	100D - 140D
Outdoor/return air options			
Return air plenum	Included in basic unit weight		
0%–30% O.A. hood	222	262	262
Economizer	1065	1266	1266
100% O.A. hood (deduct)	(139)	(71)	(71)
Blender assembly			
Blender (low cfm) ^a	628	632	632
Blender (height cfm) ^a	632	731	731
Filter options—draw-thru section			
30% pleated	4	6	6
65% cartridge—std. flow	57	69	—
– Med. flow	538	589	589
– High flow	—	—	1100
95% cartridge—std. flow	67	83	—
– Med. flow	550	605	605
– High flow	—	—	1120
Filter options—blow-thru section (final filters)^b			
95% cartridge—std. flow	1083	1296	—
– Med. flow	1509	1760	1760
– High flow	—	—	2275
Supply air fan assembly			
27" diameter forward curved—LP	919	—	—
27" diameter forward curved—MP	942	—	—
27" diameter airfoil	868	—	—
30" diameter airfoil	965	—	—
33" diameter airfoil	—	989	—
36" diameter airfoil	—	1719	1719
40" diameter airfoil	—	—	1728
Return air fan assembly			
40" diameter airfoil	629	—	—
44" diameter airfoil	—	971	971
Condenser coil options			
Copper fins	435	649	724
Coil guards	15	23	32
Evaporator coils—aluminum fins, standard airflow face area			
3-row, 8 Fpi	370	487	792
3-row, 10 Fpi	395	520	830
3-row, 12 Fpi	419	553	867
4-row, 8 Fpi	445	588	905
4-row, 10 Fpi	478	632	955
4-row, 12 Fpi	510	676	1005
5-row, 8 Fpi	518	689	1022
5-row, 10 Fpi	559	744	1085
5-row, 12 Fpi	600	799	1147

a. Does not included the required 4' blank section weight.

b. Final filter option includes liners in final filter and discharge plenum sectors.

Table 39: RPS/RFS/RCS/RDT 050D to 140D (lbs)
(continued)

Options	050D - 075D	080D - 090D	100D - 140D
Evaporator coils—aluminum fins, high airflow face area			
3-row, 8 Fpi	1001	1179	1374
3-row, 10 Fpi	1030	1217	1411
3-row, 12 Fpi	1059	1254	1448
4-row, 8 Fpi	1135	1292	1495
4-row, 10 Fpi	1151	1342	1558
4-row, 12 Fpi	1166	1392	1621
5-row, 8 Fpi	1176	1409	1637
5-row, 10 Fpi	1224	1469	1715
5-row, 12 Fpi	1272	1528	1793
Evaporator coil—copper fins, standard airflow face area			
3-row, 8 Fpi	591	788	1133
3-row, 10 Fpi	671	897	1256
3-row, 12 Fpi	750	1005	1379
4-row, 8 Fpi	739	989	1359
4-row, 10 Fpi	845	1134	1523
4-row, 12 Fpi	951	1278	1687
5-row, 8 Fpi	886	1191	1591
5-row, 10 Fpi	1019	1372	1796
5-row, 12 Fpi	1151	1553	2001
Evaporator coil—copper fins, high airflow face area			
3-row, 8 Fpi	1262	1520	1776
3-row, 10 Fpi	1356	1643	1928
3-row, 12 Fpi	1450	1766	2080
4-row, 8 Fpi	1437	1746	2058
4-row, 10 Fpi	1562	1910	2261
4-row, 12 Fpi	1687	2074	2463
5-row, 8 Fpi	1611	1978	2340
5-row, 10 Fpi	1768	2183	2594
5-row, 12 Fpi	1924	2388	2847
Hot water coil			
1-row	373	424	424
2-row	449	531	531
Steam coil			
1-row, 6 Fpi	331	379	379
1-row, 12 Fpi	354	412	412
2-row, 6 Fpi	405	485	485

Table 39: RPS/RFS/RCS/RDT 050D to 140D (lbs)
(continued)

Options	050D - 075D	080D - 090D	100D - 140D
Electric heat			
40 kW	278	—	—
60 kW	286	—	—
80 kW	289	384	384
100 kW	295	390	390
120 kW	301	395	395
160 kW	312	407	407
200kW	336	436	436
240 kW	348	448	448
280 kW	—	460	460
320 kW	—	472	472
Gas furnace			
200, 250 MBh	319	—	—
320, 400 MBh	372	—	—
500, 640 MBh	428	481	481
650, 790 MBh	512	579	579
800, 1000 MBh	577	650	650
1100, 1400 MBh	—	845	845
1500 MBh	—	1067	1067
2000 MBh	—	1082	1082
Exhaust air fan assembly			
1 fan, bottom or back return	525	—	—
2 fans, bottom or back return	785	891	891
3 fans, bottom or back return	—	1151	1151
1 fan, side return	1125	—	—
2 fans, side return	1385	1581	1581
3 fans, side return	—	1841	1841
Accessory items			
Variable frequency drive—SAF	150	150	150
Variable frequency drive—RAF	100	100	100
Sound attenuator	Consult Factory		
Plenum options			
Burglar bars—discharge	53	69	81
Burglar bars—return	73	114	114
Isolation dampers—discharge	85	106	125
Isolation dampers—return	112	172	172
Blank section			
4-foot, unlined	574	651	651
6-foot, unlined	915	1038	1038
Insulation liners^c			
2", 1.5 lbs., with solid liners:	25	30	30
Weight per foot of unit length			

c. The condensing section and "out of air stream" blank section are not available with liners.

Weights

Fan Motor Weights

Table 40: Supply, Exhaust and Return Fan Motors (All Size Units)

Motor hp	Weight (lbs)	
	Open drip-proof	Totally enclosed
1	39	40
1.5	48	49
2	48	49
3	71	72
5	82	85
7.5	124	140
10	144	170
15	185	235
20	214	300
25	266	330
30	310	390
40	404	510
50	452	570
60	620	850
75	680	910

Roof Curb Weights

Calculate the weight of the unit curb using one of the following equations and adding additional weights accordingly.

Unit size Weight formula

050C–140C Base curb wt. (lb.) = 0.74 [170 + 2 × curb length (in.)]

Note – Curb length does not include condenser length.

Additional Weights

- 1 For blank compartment out of airstream, add 30 lbs.
- 2 Cross supports:
 - For curb length greater than 144 in., add 30 lbs.
 - For curb length greater than 288 in., add 60 lbs.
 - For curb length greater than 432 in., add 90 lbs.
 - For curb length greater than 576 in., add 120 lbs.
- 3 For condenser section support rail (RPS only), add 139 lbs.

Example: RPS 090D

Component	Lbs.
Basic unit	8,216
Economizer	1,266
30% efficiency filters	6
Burglar bars, supply	69
Burglar bars, return	114
36" airfoil supply fan	1,719
44" airfoil return fan	971
DX coil—5-row 12 fpi, high airflow aluminum fins	1,528
Gas heat—1000 MBh	650
SAF motor—40 hp	404
RAF motor—15 hp	185
Curb length greater than 288	60
Liners	900
	16,088
Liner calculations	ft
Section Economizer	8
Filter	+ 2
Supply fan	+ 8
Heat	+ 4
DX coil	+ 4
Discharge plenum	+ 4
	= 30
	× 30 lbs.
	per ft.
	= 900 lbs.

Example: RPS 090D

Component	Lbs.
Basic unit	7,492
Economizer	1,266
30% efficiency filters	6
44" airfoil supply fan with VIV	1,437
44" airfoil return fan with VIV	1,122
DX coil—5-row 12 FPI, high airflow aluminum fins	1,528
SAF motor—40 hp	404
RAF motor—15 hp	185
Liners	600
	14,040 lbs
Liner calculations	8 ft.
Section Economizer	8 ft.
Filter	2
Supply fan	8
Heat	4
DX coil	4
Discharge plenum	4
× 30 lbs. per ft.	30
	600 lbs.

Note – For structural purposes, consider roof curb weight.

Engineering Guide Specification – Condensing Section

Manufacturers

A The following manufacturers will be considered provided they comply with contract documents. No substitutions will be permitted.

- 1 McQuay
- 2 Mammoth
- 3 Engineered Air
- 4 Seasons 4
- 5 Energy Labs
- 6 Gouvernaire

General Description

A Furnish as shown on plans, McQuay RoofPak® Singlezone Heating and Cooling Unit(s) model [RPS] [RFS] [RCS] [RDT]. Unit performance and electrical characteristics shall be per the job schedule.

B Configuration: Fabricate as detailed on prints and drawings:

- 1 Return fan/economizer section
- 2 [Air blender]
- 3 Filter section
- 4 Blow-through supply fan section
- 5 Heating coil section
- 6 Access section
- 7 Cooling coil section
- 8 [Draw-through supply fan section]
- 9 Diffuser
- 10 [Sound attenuator]
- 11 [Final filters]
- 12 Discharge plenum
- 13 Condensing unit section

C The complete unit shall be [ETL/MEA] [ETL-Canada] listed. The burner and gas train for the unit furnace shall be [IRI/FIA] [FM] approved.

D Each unit shall be specifically designed for outdoor rooftop application and include a weatherproof cabinet. Units shall be of a modular design with factory installed access sections available to provide maximum design flexibility. Each unit shall be [completely factory assembled and shipped in one piece] [split at the condensing section] and/or [split between the supply fan section and the heat section]. Packaged units shall be shipped fully charged with Refrigerant [410A and refrigerant oil]. RFS/RCS split systems and all units split between the evaporator and the condensing section are shipped with a nitrogen holding charge only.

E The unit shall undergo a complete factory run test prior to shipment. The factory test shall include final balancing of the supply [and return] fan assemblies, a refrigeration circuit run test, a unit control system operations checkout, [test and adjustment of the gas furnace], a unit refrigerant leak test and a final unit inspection.

F All units shall have decals and tags to indicate caution areas and aid unit service. Unit nameplates shall be fixed to the main control panel door. Electrical wiring diagrams shall be attached to the control panels. Installation, operating and maintenance bulletins and start-up forms shall be supplied with each unit.

G Performance: All scheduled capacities and face areas are minimum accepted values. All scheduled amps, kW, and hp are maximum accepted values that allow scheduled capacity to be met.

H Warranty: The manufacturer shall provide 12-month parts only warranty. [The manufacturer will provide extended 48-month, parts only, warranty on the compressor.] Defective parts will be repaired or replaced during the warranty period at no charge. The warranty period shall commence at startup or six months after shipment, whichever occurs first.

Engineering Guide Specification – Condensing Section

Condensing Unit

- A** The condensing section shall be open on the sides and bottom to provide access and to allow airflow through the coils. Condenser coils shall be multi-row and fabricated from cast aluminum micro-channel coils. Each condenser coil shall be factory leak tested with high-pressure air under water. Coils are to be recessed so that the cabinet provides built in hail protection.
- B** Condenser fans shall be direct drive, propeller type designed for low tip speed and vertical air discharge. Condenser fan rpm shall be 1140 rpm maximum. Fan blades shall be constructed of steel and riveted to a steel center hub. Condenser fan motors shall be heavy-duty, inherently protected, three-phase, non-reversing type with permanently lubricated ball bearing and integral rain shield.
- C** Each circuit shall have fan cycling of at least one condenser fan to maintain positive head pressure. An ambient thermostat shall prevent the refrigeration system from operating below 45° F.
- D** Liquid tight conduit shall be provided on exposed condensing section wiring.

Scroll Compressors

- E** Each unit shall have multiple, heavy-duty Copeland scroll compressors. Each compressor shall be complete with crankcase heater, sight-glass, anti-slug protection, current sensing and motor temperature sensing, motor overload protection and a time delay to prevent short cycling and simultaneous starting of compressors following a power failure. Compressors shall be isolated with resilient rubber isolators to decrease noise transmission.

Refrigeration Controls

- F** Each unit shall have two independent refrigeration circuits. Each circuit shall be complete with low pressure control, filter-drier, liquid moisture indicator/sight-glass, solenoid, thermal expansion valve, liquid line shutoff valve with charging port, discharge line shutoff valve, a manual reset high pressure safety switch and high pressure relief device. The thermal expansion valve shall be capable of modulation from 100% to 25% of its rated capacity. Sight-glasses shall be accessible for viewing without disrupting unit operation. Each circuit shall be dehydrated and leak tested.

Capacity Control

- G** Refrigeration capacity control shall be accomplished by staging of the unit's multiple compressors. To maintain desired temperature control, the unit shall have a minimum of [four] [six] steps of capacity control.
- H** All compressor capacity control staging shall be controlled by the factory installed main unit control system.

Options

- I** [Hot gas bypass control shall be factory installed on one [both] refrigerant circuits. Hot gas bypass control shall include a modulating hot gas bypass control valve, all associated piping and be automatically operated by the units microprocessor control.]
- J** [A vandal protection screen shall be provided on the condensing section. It will be constructed from PVC coated, 12-gauge steel wire.]

McQuay Training and Development

Now that you have made an investment in modern, efficient McQuay equipment, its care should be a high priority. For training information on all McQuay HVAC products, please visit us at www.mcquay.com and click on training, or call 540-248-9646 and ask for the Training Department.

Warranty

All McQuay equipment is sold pursuant to its standard terms and conditions of sale, including Limited Product Warranty. Consult your local McQuay Representative for warranty details. Refer to Form 933-43285Y. To find your local McQuay Representative, go to www.mcquay.com.

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