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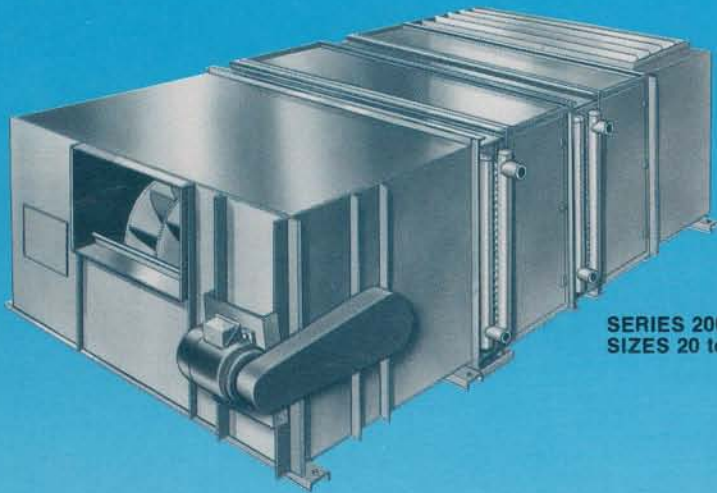


*Leaders in
Fan Technology*

SERIES 2000

**Central Station
Air Handling Units**

Catalogue No. 1038



**SERIES 2000
SIZES 20 to 120**



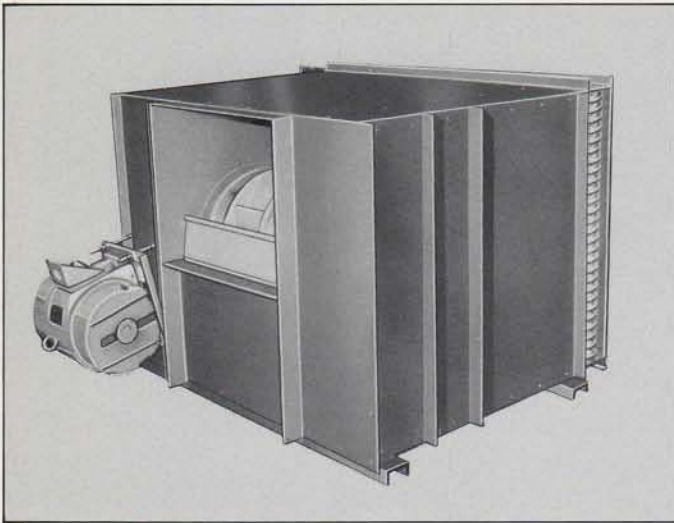
**SERIES 2000
SIZES 145 to 430**



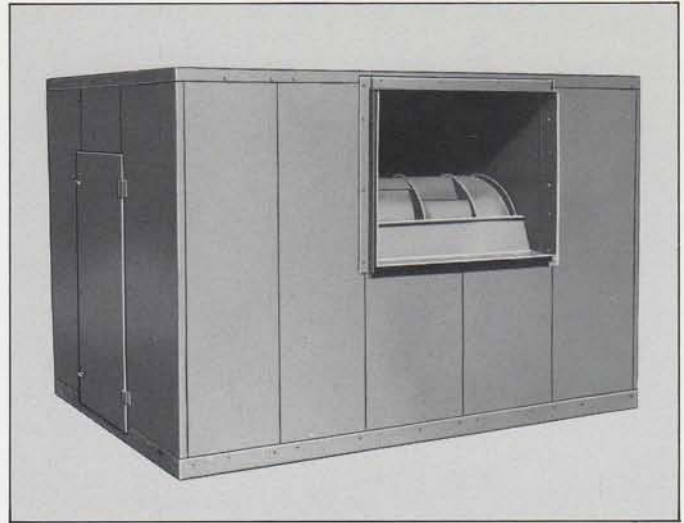
Leaders in
Fan Technology

SERIES 2000

CENTRAL STATION AIR HANDLING UNITS



SERIES 2000 SIZES 20 to 120



SERIES 2000 SIZES 145 to 430

Sheldons SERIES 2000 Central Station Air Handling Units have been designed to incorporate innovative manufacturing procedures providing the user with an economical quality-built unit, while allowing the system designer complete flexibility in the selection of the proper unit for the application.

DESIGN FLEXIBILITY

The SERIES 2000 Unit can be used in any HVAC application by combining standard unit components with special components designed to suit a particular application.

The wide range of sections, and features available, gives SERIES 2000 the design flexibility necessary to meet the custom requirements of most HVAC systems.

- Air flows from 1000 CFM (0.5 m³/s) to 65,000 CFM (30 m³/s)
- Three pressure ranges — from 0.25 in. wg (0.06 kPa) to 10 in. wg (2.5 kPa)
- Three fan types
- Sixteen unit sizes providing optimum selection capability
- Twenty-eight sections to satisfy any system design requirement
- Over forty options to customize any unit to a particular application

This wide range of alternatives makes the SERIES 2000 air handling unit ideal for applications from the simplest to the most complex and demanding.

The SERIES 2000 Unit can be used in applications requiring:

- Cooling
- Heating and cooling
- Heating and ventilating
- Ventilating
- Humidification
- Dehumidification
- Air cleaning
- Air washing
- Air mixing

UNIT DESIGN, SELECTION AND SPECIFICATION

The SERIES 2000 Catalogue has been designed to minimize the amount of time required in designing, selecting and specifying air handling equipment for use in HVAC systems. The catalogue has been set up to take the user logically from the design phase, through the selection procedure, and finally to the preparation of a mechanical specification.

Design

The first task in the selection of an air handling unit is to determine which sections are needed to meet the air treatment requirements of the system. The TECHNICAL INFORMATION section of the catalogue is used to design the air handling unit to meet the needs of the user. The features and available options for the SERIES 2000 Unit, including all the sections, are identified in this section.

Selection

Once the required SERIES 2000 sections have been identified, together with the options needed, unit selections can then be made from the UNIT SELECTION section of the catalogue, along with the AIR FRICTION CHART. The data is arranged in a format that provides complete dimensional and selection information on one page, complete performance ratings on the facing page, and an additional flip-out page common to all unit sizes showing friction data for all available sections. An example fan head selection is shown in the FAN HEAD SELECTION section.

Specification

When the design and selection of the air handling unit has been completed, the GUIDE SPECIFICATION from the back of the catalogue can be used to generate the mechanical specification.

Quick Selection

The initial selection of an appropriate unit size can be made easily from the following QUICK SELECTION CHART.

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TABLE 1: QUICK SELECTION CHART*

UNIT SIZE	STANDARD COIL FACE AREA		FLOW AT STD. COIL VELOCITIES						FAN SIZE AND TYPE						UNIT SELECTION PAGES
			350fpm (1.78m/s)		550fpm (2.79m/s)		750fpm (3.81m/s)		LOW PRESSURE		MEDIUM PRESSURE		HIGH PRESSURE		
	ft ²	m ²	CFM	m ³ /s	CFM	m ³ /s	CFM	m ³ /s							
20	3.29	0.31	1150	0.54	1810	0.85	2470	1.17	100 FC		N.A.				12-13
30	6.04	0.56	2110	1.00	3320	1.57	4530	2.14	120 FC	122 UNF	120 FC	122 UNF			14-15
40	8.26	0.77	2890	1.36	4540	2.14	6200	2.93	150 FC	150 UNF	120 FC	135 UNF			16-17
50	10.14	0.94	3550	1.68	5580	2.63	7610	3.59	180 FC	165 UNF	150 FC	150 UNF			18-19
60	12.18	1.13	4260	2.01	6700	3.16	9140	4.31	180 FC	182 UNF	150 FC	165 UNF	AVAILABLE AS SPECIAL		20-21
70	14.14	1.34	4950	2.34	7780	3.67	10610	5.01	180 FC	200 UNF	180 FC	182 UNF			22-23
85	16.86	1.56	5900	2.78	9270	4.37	12650	5.97	200 FC	222 UNF	180 FC	200 UNF			24-25
100	20.71	1.92	7250	3.42	11390	5.38	15530	7.33	220 FC	222 UNF	200 FC	200 UNF			26-27
120	23.63	2.20	8270	3.90	13000	6.14	17720	8.36	250 FC	245 ULF	220 FC	222 UNF			28-29
145	28.89	2.68	10110	4.77	15890	7.50	21670	10.23	270 ULF		245 ULF		222 UNF	30-31	
170	33.55	3.12	11740	5.54	18450	8.71	25160	11.87	300 ULF		270 ULF		245 ULF	32-33	
200	39.99	3.72	14000	6.61	21990	10.38	29990	14.15	330 ULF		300 ULF		270 ULF	34-35	
240	49.63	4.61	17370	8.20	27300	12.88	37220	17.57	365 ULF		330 ULF		300 ULF	36-37	
300	58.89	5.47	20610	9.73	32390	15.29	44170	20.85	402 ULF		365 ULF		330 ULF	38-39	
360	72.54	6.74	25390	11.98	39900	18.83	54410	25.68	445 ULF		402 ULF		365 ULF	40-41	
430	83.52	7.77	29230	13.80	45940	21.68	62640	29.56	490 ULF		445 ULF		402 ULF	42-43	

*Reference appropriate Unit Selection pages for the maximum recommended air flows of SERIES 2000 sections such as cooling coils and flat filters.

UNIT FEATURES

The Sheldons SERIES 2000 Unit has been designed for central station air handling unit applications requiring either a draw-through or a blow-through configuration. The units are factory assembled to minimize job-site labour and are supplied complete with lifting lugs to facilitate installation on site. When unit size dictates that the unit be shipped in sections, job-site assembly is made easy with bolted connections.

Sheldons utilize a panel concept in the construction of SERIES 2000 units. Flanged-out panels fabricated from 16 gauge galvanized sheets are used on unit sizes 20 to 120. Flanged-in 16 gauge panels are used on sizes 145 to 430. The galvanized panel construction produces a unit casing that is impervious to rust. To provide further protection, the exterior of SERIES 2000 units are coated with a flat reactive vinyl primer. Cooling units are internally insulated with 1 inch (25 mm), 1.5 lb/ft³ (24 kg/m³) coated insulation and are supplied with drain pans treated with a minimum 1/16 inch (1.66 mm) synthetic polymer insulation coating to prevent sweating. Insulating materials comply with NFPA-90A. When a SERIES 2000 cooling unit is specified, insulation and drain pans are supplied on all sections down stream of the cooling coil. In cases where higher density insulation is required contact your Sheldons representative.

FAN HEADS

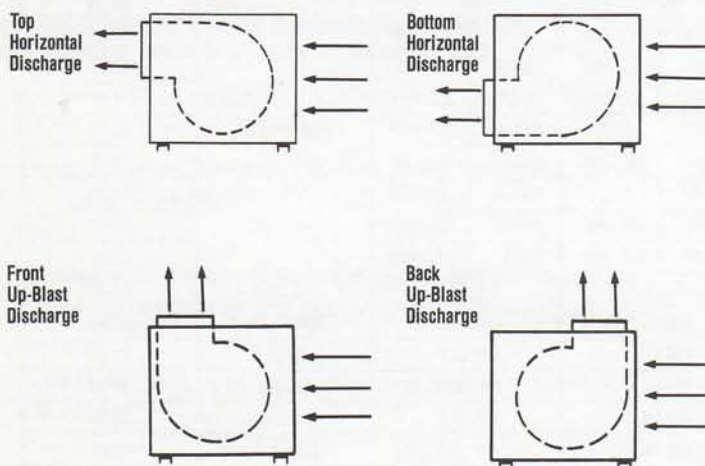
The SERIES 2000 fan head can meet applications requiring air flows from 1,000 CFM (0.47 m³/s) to 65,000 CFM (30.68 m³/s).

Three pressure ranges are offered:

- Low Pressure —
0.25 in. wg (0.062 kPa) - 2.50 in. wg (0.623 kPa)
- Medium Pressure —
2.50 in. wg (0.623 kPa) - 5.00 in. wg (1.25 kPa)
- High Pressure —
5.00 in. wg (1.25 kPa) - 10.00 in. wg (2.49 kPa)

Low pressure and medium pressure units are available for all SERIES 2000 sizes. High pressure units are available on sizes 145 through 430.

Four standard discharge positions are available to allow maximum versatility in HVAC system designs:



Options

CAULKED or GASKETED PANEL can be supplied on SERIES 2000 units when required.

An ENAMEL FINISH COAT can be provided as an option on the unit exterior.

HINGED ACCESS DOORS can be provided as an option in many of the SERIES 2000 sections. They are available in 12 inch (305 mm) and 16 inch (406 mm) widths and are gasketed to provide a positive seal.

MARINE lights can be provided in SERIES 2000 sections where space allows. The marine light is installed on the unit casing ready for wiring on site by others.

OUTDOOR SERIES 2000 UNITS can be custom designed for the application. Your Sheldons representative has further information on these special units.

All SERIES 2000 fan heads are designed for external isolation as standard and are supplied complete with two or more structural steel channel cross-members welded to the underside of the unit. These are used as isolation points/lifting lugs. The use of these cross-members with an integrally mounted fan ensures unit rigidity.

SERIES 2000 fan heads are supplied with bearing inspection panels. Unit sizes 145 through 430 also have hinged doors for motor access.

Forward Curved, Unifoil and Ultrafoil fans are available in SERIES 2000 fan heads as listed in Table 2.

Table 2: FAN TYPES

UNIT SIZE	LOW PRESSURE			MEDIUM PRESSURE			HIGH PRESSURE	
	FORWARD CURVED	UNIFOIL	ULTRAFOIL	FORWARD CURVED	UNIFOIL	ULTRAFOIL	UNIFOIL	ULTRAFOIL
20	•							
30	•	•		•	•			
40	•	•		•	•			
50	•	•		•	•			
60	•	•		•	•			
70	•	•		•	•			
85	•	•		•	•			
100	•	•		•	•			
120	•		•	•	•			
145			•			•	•	
170			•			•		•
200			•			•		•
240			•			•		•
300			•			•		•
360			•			•		•
430			•			•		•

The fans feature:

- Forward Curved Fan — available on small fan heads
 - economical
 - low speed
 - quiet
- Unifoil Fan — available on small fan heads
 - single-thickness, backward inclined airfoil design
 - high efficiency
 - non-overloading power characteristic
- Ultrafoil Fan — available on large fan heads
 - double-thickness, backward inclined airfoil design
 - high efficiency
 - non-overloading power characteristic

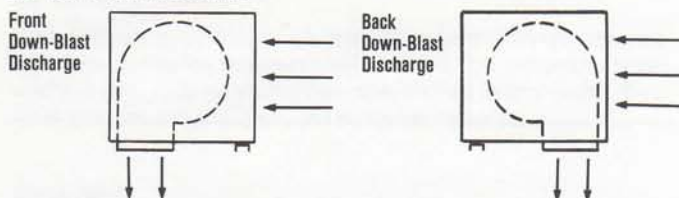
All fans are constructed of heavy gauge steel and are complete with welded structural steel bracing and bearing chair assemblies, spun steel inlets and scroll drains. Fan wheels are statically and dynamically balanced before shipment.

Fan shafts are machined from bar stock to close tolerances for accurate bearing fit. They are selected not to exceed 80% of their first critical speed in their rated pressure range. Grease lubricated, permanently sealed bearings are selected for an average life of not less than 150,000 hours of operation at maximum rated RPM for their pressure range.

SERIES 2000 unit sizes 20 through 120, are supplied with motors mounted on the front of the fan head for easy motor access. Sizes 145 through 430, due to their size, are supplied with internally mounted motors. Hinged doors are provided on these sizes for motor access. For motors up to 7.5 HP (5.6 kw), adjustable V-belt drives are supplied. Fixed V-belt drives are provided when motors are over 7.5 HP (5.6 kw).

Options

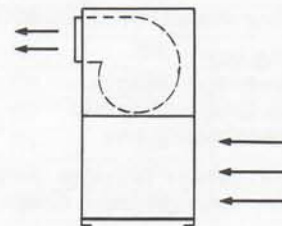
Two optional DOWN-BLAST DISCHARGE ARRANGEMENTS are available:



BASE PLENUMS FOR VERTICAL UNITS

The SERIES 2000 base plenum is designed to provide a vertical unit configuration when combined with a fan head and is available on unit sizes 20 through 120. Fan heads used with a base plenum section can be supplied in any of the four standard discharge arrangements.

A HINGED ACCESS DOOR can be supplied as an option in the base plenum to provide access.



HEATING AND COOLING COILS

SERIES 2000 units can be provided with bolt-on heating and cooling coils with copper or aluminum fins. The coil types available are:

Heating Applications

- Hot water coils
- Non-freeze steam coils
- Flexible tube steam coils

Cooling Applications

- Chilled water coils
- Chilled water coils c/w removeable headers
- Direct expansion refrigerant coils

EXTENDED GREASE LINES can be provided when greasable bearings are required instead of permanently lubricated bearings. Lines are extended to the outside of the casing on the drive side.

INTERNALLY ISOLATED FANS can be provided, when required, on SERIES 2000 sizes 145 through 430. In this arrangement a free standing fan, integral fan and motor base, spring isolation and fan-to-unit flexible connection are supplied. Isolation can be supplied for 1 inch (25 mm) deflection (typically 96% efficient) as a standard, or 2 inch (51 mm) deflection (typically 98% efficient) as an option.

INERTIA BASES can be supplied on internally isolated fans. Contact your Sheldons representative for information regarding fan head dimensions.

TOP MOUNTED MOTORS can be supplied as an option on SERIES 2000 sizes 20 through 120. This arrangement is often desirable when mechanical room floor space is limited.

FRONT MOUNTED MOTORS are available on sizes 145 through 430 as a design option. This arrangement is supplied complete with an external belt guard.

BELT GUARDS can be provided when required on SERIES 2000 fan heads.

VARIABLE INLET VANES complete with the necessary linkage for manual or automatic operation can be supplied on Unifoil and Ultrafoil fans. In Variable Air Volume systems, variable inlet vanes offer energy savings at reduced flows making them more efficient than systems using outlet damper control. All variable inlet vanes are designed to operate to fan shut-off pressure. Refer to Sheldons UNIFOIL and ULTRAFOIL Catalogue for further information on variable inlet vane performance.

STEAM GRID HUMIDIFIERS are available with stainless steel dispersion tubes extending across the full width of the SERIES 2000 Unit. They are mounted in the fan section behind the fan and are shipped ready for the supply and installation of steam operators, traps, strainers, and associated external piping by others.

Cooling coils are supplied complete with a treated drain pan and drain connection for condensate run-off.

INSULATED COVER PLATES can be provided as an option on coils when thermal protection is required.

For selection of the appropriate coil for the application contact your Sheldons representative.

FILTER SECTIONS

Four filter sections are available with SERIES 2000 air handling units:

- Flat filter section
- Angle filter section
- High performance filter section
- Horizontal roll filter section

All SERIES 2000 filter sections are supplied with a service door for side removal of the filters. The filters in flat, angle and high performance filter sections are supported in channel racks, allowing filter by filter removal through the service door. Horizontal roll filter sections are designed for side removal of the media rolls.

Flat and angle filter sections are supplied with 2 inch (51 mm) thick glass fibre disposable filters while high performance filter sections are supplied with 12 inch (305mm) deep bag filters. Horizontal roll filter sections come complete with 2 inch (51 mm) thick glass fibre media rolls.

All filter sections are shipped from the factory with the filters installed and ready for operation. Horizontal roll filter sections require field mounting and wiring of a control panel which is shipped loose.

Options

An **ADDITIONAL SERVICE DOOR** is available to provide access for filter servicing from either side of the unit on flat filter sections. This option also allows the convenience of removing filters by pushing them through the unit.

PERMANENT FILTERS with steel retaining frames housing 2 inch (51 mm) glass fibre replaceable media can be provided as an option on flat and angle filter sections.

PREFILTERS can be supplied on high performance filter sections to give a prefilter/after-filter combination.

FACE FILTER REMOVAL can be specified on high performance filter sections, as an option, for upstream or downstream removal. This option should be used when bag filters of depths greater than 12 inches (305 mm) are required. Sufficient access space on the service side must be provided to allow for filter removal.

For assistance in the selection of filtration for specific applications contact your Sheldons representative.

PLENUM SECTIONS

SERIES 2000 plenum sections can be used to provide space between components such as coil or filter sections, allowing for the installation of controls and sensors. SERIES 2000 plenum sections are available in three standard lengths:

- 12 in. (305 mm)
- 16 in. (406 mm)
- 20 in. (508 mm)

A **HINGED ACCESS DOOR** can be provided on 16 inch (406 mm) and 20 inch (508 mm) plenum sections for access inside the unit for component servicing.

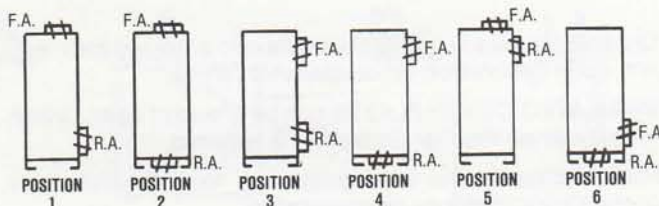
MIXING BOXES

Sheldons offers four designs of SERIES 2000 mixing boxes:

- Standard mixing box
- One stage even-temp mixing box
- Two stage even-temp mixing box
- High performance mixing box

Each mixing box design provides a different level of efficiency to satisfy varying system design requirements.

A wide range of fresh air and return air intake positions are available on the SERIES 2000 mixing boxes.



Positions 5 and 6 are available only on the standard mixing box.

All mixing boxes are supplied with two sets of interconnected parallel bladed dampers and are shipped with an external shaft for the supply and installation of the desired control mechanisms by others.

Even-Temp Mixing Boxes

The SERIES 2000 Even-Temp mixing boxes have been designed and tested with special internal baffles to force the hot and cold air streams into direct contact with each other and thus achieve complete and thorough mixing. Mixing can be obtained with either one or two stages of baffling.

The One Stage Even-Temp mixing box gives a maximum temperature gradient of approximately 15° F (8° C). The Two Stage Even-Temp mixing box has a maximum temperature gradient of approximately 5° F (3° C). These low temperature gradients enable large percentages of fresh air to be used.

Table 3 shows the approximate percentage of fresh air which can be introduced to the air handling system for the four Sheldons SERIES 2000 mixing box designs while ensuring that no point on the coils downstream of the mixing box falls below 35° F (2° C). The fresh air temperatures are listed in the table and the return air is assumed to be 70° F (21° C).

Options

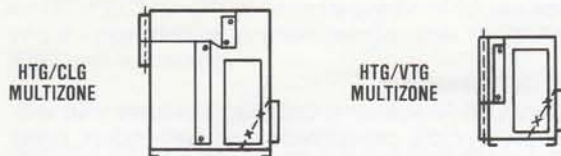
HINGED ACCESS DOORS can be provided on standard or high performance mixing boxes for damper access.

REMOTE DAMPER MOUNTING: Mixing boxes can be supplied without dampers in cases where the fresh air and return air streams are dampered in the ducts leading up to the unit by others. When installed in this manner, however, no guarantee as to the efficiency of mixing can be made.

MULTIZONES

Two standard SERIES 2000 multizone sections are available:

- Heating/Cooling Multizone
- Heating/Ventilating Multizone

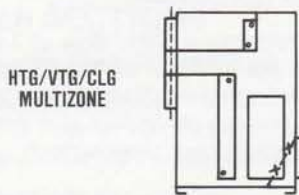


Both sections are designed to be free-standing to permit the isolation of the fan section without affecting the multizone section. An air diffuser plate is supplied at the multizone inlet to provide even air distribution through the coils. A hinged access door is provided as a standard for coil servicing. The coil space in both multizone sections is designed for side slide-out removal of the coils. A treated drain pan and drain connection is supplied on heating/cooling multizones for condensate run-off.

Dampers are supplied on each deck and are inter-connected between zones for temperature control. The minimum zone width is 8 in. (203 mm) and can be supplied in any width, 8 in. (203 mm) or over, in 2 in. (51 mm) increments.

Options

HEATING/VENTILATING/COOLING MULTIZONE



The Heating/Ventilating/Cooling Multizone has been developed to provide an efficient means of satisfying the differing zone temperatures in a multizone air conditioning system. Inherent in the design of a standard multizone system is the inefficiency associated with the mixing of heated air from the hot deck with cooled air from the cold deck. With the introduction of a third deck handling air which has neither been heated nor cooled, individual zone requirements can be satisfied by mixing air from either the hot deck or the cold deck with air from the bypass deck. In this way, the difference in temperature between the two mixing air streams is much less than with a conventional multizone unit having only a cold deck and a hot deck.

Table 3: MAXIMUM PERCENTAGE OF FRESH AIR

MIXING BOXES	FRESH AIR TEMPERATURE									
	10°F (-12°C)	5°F (-15°C)	0°F (-18°C)	-5°F (-21°C)	-10°F (-23°C)	-15°F (-26°C)	-20°F (-29°C)	-25°F (-32°C)	-30°F (-34°C)	-35°F (-37°C)
STANDARD	17%	16%	15%	14%	12%	11%	10%	9%	8%	7%
ONE STAGE EVEN TEMP	46%	44%	43%	40%	37%	35%	32%	29%	27%	23%
TWO STAGE EVEN TEMP	55%	50%	46%	42%	40%	38%	37%	34%	30%	27%
HIGH PERFORMANCE	37%	34%	31%	29%	27%	24%	22%	20%	18%	16%

LOW LEAKAGE DAMPERS can be provided instead of the standard dampers when very low leakage is required. They are supplied complete with neoprene blade seals and stainless steel jamb seals and allow a maximum leakage of only 1% to 2% flow at 1.5 in. wg (0.37 kPa) differential static pressure.

The damper arrangement in the Sheldons Heating/Ventilating/Cooling Multizone Section is designed to allow the hot deck to open only if the cold deck damper is shut and the cold deck to open only if the hot deck damper is shut, thus eliminating the chance of inefficient mixing of air from the hot and cold decks. Two parallel damper shafts in each zone segment make this mixing arrangement possible. Dampers for the cold and bypass deck are mounted on one shaft, and dampers for the hot deck and bypass deck are mounted on the other shaft.

The height of the SERIES 2000 Heating/Ventilating/Cooling Multizone Section will increase over the standard Heating/Cooling Multizone Section. These heights are listed in Table 4. All other dimensions remain unchanged and can be taken from the dimension data on the unit selection pages.

Table 4: HEATING/VENTILATING/COOLING MULTIZONE HEIGHT

UNIT SIZE	SECTION HEIGHT		OUTLET HEIGHT	
	in.	mm	in.	mm
40	61	1549	32	813
50	67	1702	38	965
60	73	1854	44	1118
70	82	2083	48	1219
85	86	2184	54	1372
100	86	2184	54	1372
120	100	2540	60	1524
145	100	2540	60	1524
170	111	2819	66	1676
200	121	3073	76	1930
240	127	3226	82	2083
300	148	3759	98	2489
360	158	4013	108	2743
430	169	4293	114	2896

DUAL DUCT SYSTEMS: In applications where dual duct units are required, a multizone can be supplied without dampers.

LOW LEAKAGE DAMPERS with neoprene blade seals and stainless steel jamb seals can be supplied when very low leakage is required. Low leakage dampers allow a maximum leakage of only 1% to 2% flow at 1.5 in. wg (0.37 kPa) differential static pressure.

WET SECTIONS

Five SERIES 2000 wet sections are available:

- Spray Coil Dehumidifier
- Capillary® Cell Airwasher
- Type C Airwasher
- Sheldek
- Coildek

SERIES 2000 wet sections have been developed for use in draw-through and blow-through applications requiring air cleaning, winter humidification, spring and fall evaporative cooling and summer cooling and dehumidifying. Table 5 shows the saturation efficiency and applications for each of the wet sections.

All wet sections are water tight and are supplied with eliminators or media to stop water carry-over and a welded 12 in. (305 mm) deep 10 gauge tank. Tanks contain suction, make up water, quick-fill and overflow connections, float valve, brass suction screen and a drain. The inside of tanks are treated with a minimum 1/16 in. (1.6 mm) coating of synthetic polymer insulation to prevent condensation. Sections are delivered to site ready for the installation of the external pump, piping, traps, valves and controls by others.

On Spray Coil Dehumidifiers, Capillary Cell Airwashers and Type C Airwashers, upstream access must be provided for servicing of nozzles and for the adjustment of float valves, etc. It is also advisable to provide downstream access for the inspection of eliminator blades on these sections. On Sheldek and Coildek sections, downstream access must be provided for servicing.

Selection of Wet Sections

The specific selection procedures for wet sections are described in the following Sheldons catalogues:

- SPRAY COIL DEHUMIDIFIER Catalogue
- CAPILLARY® AIRWASHER Catalogue
- AIRWASHER Catalogue
- SHELDEK/COILDEK Catalogue

Spray Coil Dehumidifier

The Spray Coil Dehumidifier utilizes slide-in 4, 6 or 8 row, chilled water or direct expansion copper tube/copper fin cooling coils. They include galvanized steel pipe headers, brass spray nozzles and three surface galvanized steel eliminators. On multi-coil sections condensate troughs and drain pipes are provided on the upper coil as standard.

In the Spray Coil Dehumidifier the water flow required is 1.1 USGPM per ft² (0.75 L/s per m²) of coil face area. The spray water is directed against the cooling coils in the direction of air flow and is carried through the coils wetting the entire exposed surface. In this way, it is possible to utilize the evaporative effect of the water from the exposed fin surface to obtain nearly saturated air conditions at the outlet.

Table 5: WET SECTION EFFICIENCIES AND APPLICATION

Saturation Efficiency/Application		Spray Coil Dehumidifier			Capillary Cell Airwasher	Type* C Airwasher	Sheldek	Coildek
		4 row coil	6 row coil	8 row coil				
Saturation Efficiency	Nominal Flow	82%	93%	97%	98%	60%	92%	92%
	Maximum Flow	79%	90%	94%	97%	57%	90%	90%
Application	Air Cleaning and Washing		•		•	•		
	Winter Humidification		•		•	•	•	•
	Spring and Fall Evaporative Cooling		•		•	•	•	•
	Summer Cooling and Dehumidifying		•					•

*Type A and B Airwashers can also be specified with higher saturation efficiency. Refer to your Sheldons Airwasher Catalogue for more information.

Capillary® Cell Airwasher

The Capillary Cell Airwasher is supplied complete with self-cleaning capillary cells, galvanized steel pipe headers, brass spray nozzles and three surface galvanized steel eliminators. The cells are wetted with a water flow of 1.4 USGPM per ft² (0.95 L/s per m²) of cell media.

Air and water are brought together in minute quantities that considerably improve upon other methods of mixing for the purpose of washing, humidification and dehumidification. 20,000 strands of glass fibre per ft² (220,000 strands per m²) of cell media dividing the airflow into tens of thousands of minute streams each passing through the interstices of the fibres.

Type C Airwasher

Type C Airwashers are often used on ventilating installations in industry when the most economical method of air cleaning and washing is required. Intimate mixing of the air and water is maintained by the use of special wide angle spray nozzles to provide maximum wet surface contact area.

The Type C Airwasher requires a water flow of 4.0 USGPM per 1000 CFM (0.53 L/s per m³/s) of air flow. The water is uniformly distributed through galvanized steel spray trees with brass nozzles. Four surface galvanized steel eliminators ensure there is no water carry-over downstream.

Sheldek and Coildek

Sheldek and Coildek sections are supplied complete with 12 in. (305 mm) deep cellulose media and PVC spray headers. A minimum water flow of 1.5 USGPM per ft² (1.02 L/s per m²) of horizontal media cross sectional area (width x depth) is required. The Coildek section utilizes bolt-on 4, 6 or 8 row, chilled water or direct expansion cooling coils upstream of the media. Water is not sprayed on the coil surface permitting the use of aluminum fin coils.

The Sheldek and Coildek sections are often more efficient and economical than other airwasher sections when air cleaning is not required. The Sheldek and Coildek sections are:

- Shorter
- Operate more efficiently at higher air velocities
- Operate with smaller quantities of water, and
- Operate at lower air friction losses

Options

DOUBLE SKIN INSULATED wall and roof panels can be supplied on wet sections for applications where thermal protection is required.

An INSPECTION PORT can be provided on wet sections for visual inspection of internal components while the SERIES 2000 unit is running.

LOW LEVEL CUT-OFF pump switches are available as an option when specified.

INLET BAFFLES to prevent water blow back, can be supplied on Spray Coil Dehumidifiers, Capillary Cell Airwashers, and on Type C Airwashers when required. When inlet baffles are used, 8 in. (203 mm) must be added to the wet sections length.

STAINLESS STEEL ELIMINATORS can be supplied on Spray Coil Dehumidifiers, Capillary Cell Airwashers and on Type C Airwashers when required.

CONDENSATE TROUGHS and DRAIN PIPES can be provided on the upper coil of multi-coil Coildek sections as an option.

MEDIA OPTIONS: In certain cases, the high saturation efficiencies of 12 in. (305 mm) deep cellulose media will not be required on Sheldek and Coildek sections. When this is the case, 6 in. (152 mm) deep media can be supplied. In situations where the media must carry a UL Class 2 fire rating, 6 in. (152 mm) or 12 in. (305 mm) deep glass fibre media can be provided instead of cellulose media.

DRAIN PANS can be provided instead of tanks on Sheldek and Coildek sections for use in once-through water systems.

ELIMINATORS

SERIES 2000 eliminator sections are designed for use downstream of cooling coil sections having face velocities over 550 fpm (2.8 m/s) to eliminate water carry-over. When an eliminator section is used, downstream access should be provided for servicing.

Sheldons offer two SERIES 2000 eliminator sections:

- Galvanized steel eliminator section
- Cellulose media eliminator section

Galvanized steel eliminator sections are supplied with three surface formed blades and cellulose media eliminator sections are supplied with 6 in. (152 mm) deep media.

STAINLESS STEEL ELIMINATORS can be supplied instead of galvanized steel as an option.

DAMPER SECTIONS

Sheldons offer three SERIES 2000 damper sections:

- Face damper section
- Face and internal by-pass damper section
- Face and external by-pass damper section

Damper sections are supplied with factory inter-connected parallel bladed dampers with external shafts for automatic control by others. Internal face and by-pass damper and external face and by-pass damper sections include space for a bolt-on heating coil downstream of the damper.

Options

OPPOSED BLADE DAMPERS can be provided instead of parallel bladed dampers when specified.

LOW LEAKAGE DAMPERS with neoprene blade seals and stainless steel jamb seals can be supplied when very low leakage is required. Low leakage dampers allow a maximum leakage of only 1% to 2% flow at 1.5 in. wg (0.37 kPa) differential static pressure.

SELECTION

The following procedure can be used for the selection of SERIES 2000 Fan Heads.

KNOWING:

Q = Air flow required at actual temperature and elevation in CFM or m³/s
 ESP_a = External static pressure at actual conditions in in. wg or kPa. This represents the static pressure external to the unit.
 T = Temperature at Fan Head in °F or °C
 A = Site elevation in ft. or m.

1. CALCULATE ISP_s:

ISP_s = Internal static pressure at standard conditions (sea level and 70° F or 21° C). From the "Air Friction Chart" (page 44) and from coil manufacturer's data, ISP_s can be determined in in. wg or kPa.

2. DETERMINE DSP_s:

DSP_s = Design static pressure at standard conditions. ESP_a must first be converted to standard conditions using the procedure shown under "Density Correction" on page 11.

3. DETERMINE UNIT PRESSURE:

Select the appropriate pressure range based on DSP_s.

4. DEFINE FAN TYPE:

Depending on the SERIES 2000 size and pressure range, there may be a choice of fan type. Energy efficiency, power characteristics and economy should all be considered when making this choice.

5. DETERMINE N AND FP_s:

Knowing Q, DSP_s, the unit size and pressure range and the fan type, the Performance Ratings can be used to find:
 N = Fan Speed in RPM and
 FP_s = Fan power at standard conditions in BHP or kW
 This may require interpolation between points.

6. FIND MP_s:

MP_s = Motor power required at standard conditions in HP or kW
 DL_s = Drive loss at standard conditions in HP or kW from Figure 1 on page 11.
 MP_s = FP_s + DL_s

7. FIND MP_a:

MP_a = Motor power required at actual conditions in HP or kW
 MP_a = MP_s x DCF

8. SELECT MOTOR:

It is good practice to add 10% to MP_a to arrive at a motor selection.
 RMP ≥ 1.1 x MP_a
 where RMP = Rated motor power in HP or kW

9. CHECK START TIME:

Knowing Fan WK² from the Performance Ratings and the fan speed (N), the procedure under "Start Times" on page 11 should be used to find the fan start time (ST).

EXAMPLE

ASSUME:

Q = 10,000 CFM
 ESP_a = 2.0 in. wg
 T = 110° F
 A = 2,000 ft
 SERIES 2000 Unit Size 70 will be used

1. CALCULATE ISP_s:

Assume that the unit consists of
 — Draw through fan head
 — 2 row heating coil section
 — Angle filter section
 — Standard mixing box
 From the "Size 70 Performance Ratings",
 Std. coil velocity = 6.94 fpm
 therefore ISP_s for angle filter section = 0.15 in. wg
 ISP_s for std. mixing box = 0.10 in. wg
 From coil manufacturer's data
 — ISP_s for 2 row heating coil = 0.31 in. wg
 Total ISP_s = 0.56 in. wg

2. DETERMINE DSP_s:

From Table 6 DCF = 0.878
 therefore ESP_s = ESP_a/DCF = 2.28 in. wg
 and DSP_s = ESP_s + ISP_s = 2.84 in. wg

3. DETERMINE UNIT PRESSURE:

DSP_s falls within the Medium Pressure Unit range.

4. DEFINE FAN TYPE:

Assume that energy efficiency and a non-overloading power characteristic is required. A Size 182 Unifoil Fan will, therefore, be used.

5. DETERMINE N AND FP_s:

From Page 23 N = 1986 RPM
 and FP_s = 8.4 BHP

6. FIND MP_s:

From Figure 1 DL_s = 0.6 HP
 therefore MP_s = FP_s + DL_s = 9.0 HP

7. FIND MP_a:

MP_a = MP_s x DCF = 7.9 HP

8. SELECT MOTOR:

MP_a x 1.10 = 8.7 HP
 therefore RMP = 10 HP

9. CHECK START TIME:

From "Size 70 Performance Ratings" WK² = 29.2 LB-ft²
 Following the procedure under "Start Times" on page 11, ST = 6.7 seconds

IMPERIAL UNITS	METRIC UNITS
10,000 CFM 2.0 in. wg 110° F 2,000 ft	4.72 m ³ /s 0.498 kPa 43° C 610 m
6.94 fpm 0.15 in. wg 0.10 in. wg <u>0.31 in. wg</u> 0.56 in. wg	3.53 m/s 0.037 kPa 0.025 kPa <u>0.077 kPa</u> 0.139 kPa
0.878 2.28 in. wg 2.84 in. wg	0.878 0.567 kPa 0.706 kPa
1986 RPM 8.4 BHP	1986 RPM 6.3 kW
0.6 HP 9.0 HP	0.4 kW 6.7 kW
7.9 HP	5.9 kW
8.7 HP 10 HP	6.5 kW 7.5 kW
29.2 LB-ft ² 6.7 seconds	1.23 kg-m ² 6.7 seconds

DENSITY CORRECTION

The performance ratings in this catalogue are based on standard air: 70°F (21°C) temperature and 0.075 lb/ft³ (1.20 kg/m³) density.

In most applications, the actual air temperature and/or elevation will not be at standard conditions. To use the performance ratings in these situations, the static pressure (calculated at actual temperature and elevation), must be corrected by using the equation shown opposite with the appropriate density correction factor from Table 6.

$$SP_s = SP_a / DCF \text{ where}$$

SP_s = static pressure at standard conditions

SP_a = static pressure at actual conditions

DCF = density correction factor from Table 6

After the fan performance has been determined, the motor power must be converted from standard conditions back to actual conditions, using the following equation:

$$MP_a = MP_s \times DCF \text{ where}$$

MP_a = motor power at actual conditions

MP_s = motor power at standard conditions

Table 6a: DENSITY CORRECTION FACTORS (IMPERIAL)

AIR TEMP. °F	ELEVATION ABOVE SEA LEVEL — ft								
	SEA LEVEL	500	1000	1500	2000	2500	3000	3500	4000
-20	1.204	1.182	1.161	1.140	1.120	1.099	1.079	1.060	1.040
0	1.152	1.131	1.111	1.092	1.072	1.052	1.032	1.014	.995
20	1.104	1.084	1.064	1.045	1.027	1.008	.989	.972	.954
40	1.060	1.041	1.022	1.004	.986	.968	.950	.933	.916
60	1.019	1.001	.982	.965	.948	.930	.913	.897	.880
80	.982	.964	.947	.930	.913	.897	.880	.864	.843
100	.946	.929	.912	.895	.880	.863	.848	.832	.817
120	.911	.894	.877	.861	.845	.829	.813	.797	.781
140	.877	.861	.845	.829	.813	.797	.781	.765	.749

Table 6b: DENSITY CORRECTION FACTORS (METRIC)

AIR TEMP. °C	ELEVATION ABOVE SEA LEVEL — m							
	SEA LEVEL	200	400	600	800	1000	1200	1400
-20	1.159	1.132	1.105	1.079	1.053	1.028	1.004	.979
-10	1.115	1.089	1.063	1.038	1.013	.989	.966	.942
0	1.074	1.049	1.024	1.000	.976	.953	.930	.907
10	1.036	1.012	.988	.965	.942	.919	.898	.875
20	1.001	.978	.955	.932	.909	.888	.867	.846
30	.968	.945	.923	.901	.879	.859	.838	.818
40	.937	.915	.894	.872	.851	.831	.812	.792
50	.908	.887	.866	.845	.825	.806	.787	.767
60	.881	.860	.840	.820	.800	.781	.763	.744

DRIVE LOSSES

As with other manufacturers of air handling equipment, the fan power values in the performance ratings are based on tests conducted on direct-connected fans. It is, therefore, necessary that an allowance be made for drive losses before motors are selected, using the following equation:

$$MP_s = FP_s + DL_s \text{ where}$$

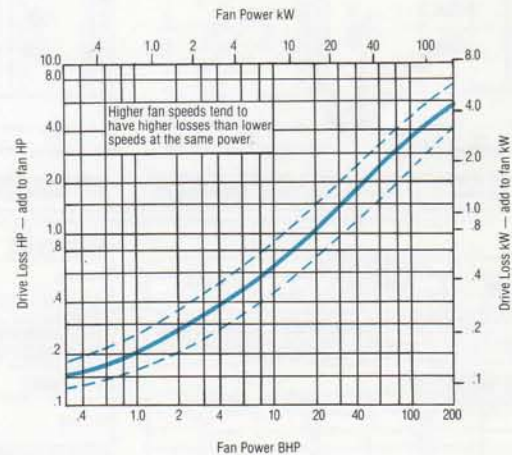
MP_s = motor power at standard conditions

FP_s = fan power at standard conditions

DL_s = drive loss at standard conditions from Figure 1

Figure 1 has been adapted from AMCA Publication #203. After FP_s (BHP or kW) from the performance ratings is known, Figure 1 can be used to find the drive loss (DL_s).

Figure 1: DRIVE LOSSES



START TIMES

Low horsepower motors used on some applications such as large units with low pressure requirement, may not be capable of starting the fan in a reasonable period of time. In general, a start time of:

- 10 seconds or less is satisfactory
- 10 to 15 seconds is probably satisfactory
- over 15 seconds is not recommended

After calculating the motor HP or kW (based on the performance rating and drive loss), it is advisable to check the fan start time. Knowing the fan WK² value and rpm (from

the performance ratings) and the rated motor power, the fan start time can be calculated using the following equation:

$$\text{IMPERIAL UNITS : } ST = \frac{WK^2 \times N^2}{1,615,000 \times RMP}$$

$$\text{METRIC UNITS : } ST = \frac{WK^2 \times N^2}{91,260 \times RMP}$$

where ST = fan start time (seconds)

WK² = first moment of inertia (LB-ft² or kg-m²)

N = fan speed (RPM)

RMP = rated motor power (HP or kW)

Unit Design

Supply and install at locations shown on mechanical drawings, Sheldons SERIES 2000 Central Station Air Handling Units. Sizes and capacities to be in accordance with the equipment schedule.

Units are to be factory assembled to minimize jobsite labour and are to be complete with lifting lugs to facilitate easy installation on site. When it is necessary to ship units in sections due to size, flanged connections shall be provided for site assembly.

Units are to be manufactured using panels fabricated from 16 gauge flanged galvanized sheets. The exterior of the units shall be painted with a flat reactive vinyl primer. Cooling units are to be internally insulated with 1 in. (25 mm), coated insulation and are to have drain pans treated with a minimum 1/16 in. (1.66 mm) synthetic polymer insulation coating to prevent sweating. Insulating materials used shall comply with NFPA-90A. Insulation and drain pans shall be supplied on all sections downstream of the cooling coil.

Fan Heads

Fan heads shall be externally isolated and are to have a minimum of two structural steel channel cross-members welded to the underside of the unit. They are to be supplied complete with bearing inspection panels.

Centrifugal (Forward Curved/Unifoil/Ultrafoil) fans shall be supplied and are to be of the sizes, discharges and rotation listed in the schedule. They shall be double width, double inlet, arrangement #3 fans constructed of heavy gauge steel and are to be supplied with welded structural steel bracing and bearing chair assemblies, spun steel inlets and scroll drain. Fan wheels are to be statically and dynamically balanced before shipment.

Fan shafts are to be machined from bar stock to close tolerances for accurate bearing fit and shall not have speeds greater than 80% of their first critical speed in their rated pressure range. Bearings are to be the grease lubricated, permanently sealed type and shall have an average operating life of not less than 150,000 hours at maximum rated RPM for their pressure range.

Motors shall be open drip proof of the rpm and voltage listed in the schedule. Motor HP's shall be based on fan BHP (kW) and include for drive and box losses, and where applicable, for inlet vane losses. Motor start times shall not exceed (10 seconds/15 seconds). On motors 7.5 HP (5.6 kW) and under, adjustable V-belt drives shall be supplied. When motors over 7.5 HP (5.6 kW) are used fixed V-belt drives shall be supplied. Drives shall have a minimum 1.2 service factor based on rated motor HP (kW).

Heating and Cooling Coils

Units shall be provided with bolt-on heating and cooling coils with copper tubes and (aluminum/copper) fins mounted in galvanized steel frames. Coils are to be guaranteed for a working pressure of 200 psi (1380 kPa) unless removable headers are specified, in which case, a working pressure of 100 psi (690 kPa) is to be guaranteed.

Coil sizes, number of rows and fin spacing shall be as listed in the schedule.

For cooling, coils shall be:

1. Chilled water c/w drains in supply and return headers
2. Chilled water c/w drains in supply and return headers and non-ferrous drain headers connected to intermediate rows of tubes
3. Chilled water c/w removable headers at both ends of the coil
4. Chilled water c/w removable headers at the connection end of the coil
5. Direct expansion

For heating, coils shall be:

1. Hot water
2. Non-freeze steam coils
3. Flexible tube steam coils

Cooling coils are to be supplied with a treated drain pan and drain connection for condensate run-off.

Filter Sections

Filter sections are to be shipped from the factory with filters installed ready for operation. Flat, angle and high performance filter sections shall include channel racks for each row of filters, and an access door for side removal of filters. Horizontal roll filter sections shall be supplied complete with enclosed roll cases at the side of the filter section with access doors for servicing. Roll filters are to be bolted to the unit and are to include a remote control panel to be mounted and wired by others.

Filters shall be:

1. 2 in. (51 mm) thick glass fibre disposable type for flat and angle filter sections
2. 12 in. (305 mm) deep bag type for high performance filter sections
3. 2 in. (51 mm) thick glass fibre media rolls for horizontal roll filter sections

AIR FRICTION — in. wg.

SECTION	NOTES	STANDARD COIL VELOCITY — fpm												
		300	350	400	450	500	550	600	650	700	750	800	850	900
FLAT FILTER SECTION	1	0.10	0.12	0.13	0.15	0.17	0.18	0.20						
ANGLE FILTER SECTION		0.06	0.07	0.08	0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19
HIGH PERFORMANCE FILTER SECTION		0.05	0.08	0.10	0.13	0.15	0.18	0.20	0.23	0.25				
HORIZONTAL ROLL FILTER SECTION		0.09	0.11	0.12	0.14	0.15	0.17	0.18	0.20	0.22				
STANDARD MIXING BOX	2,3	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.09	0.10	0.11	0.13	0.15	0.16
1-STAGE EVEN TEMP MIXING BOX		0.09	0.12	0.16	0.20	0.25	0.31	0.36	0.43	0.50	0.57	0.65	0.73	0.82
2-STAGE EVEN TEMP MIXING BOX		0.16	0.22	0.29	0.37	0.45	0.55	0.65	0.76	0.89	1.02	1.16	1.31	1.46
HIGH PERFORMANCE MIXING BOX		0.04	0.06	0.07	0.09	0.11	0.14	0.16	0.19	0.22	0.26	0.29	0.33	0.37
HEATING/COOLING MULTIZONE		0.07	0.10	0.12	0.16	0.19	0.23							
HEATING/VENTILATING MULTIZONE		0.03	0.03	0.05	0.06	0.07	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.23
SPRAY COIL DEHUMIDIFIER		2	0.16	0.21	0.28	0.35	0.43	0.52	0.62	0.73	0.85			
CAPILLARY CELL AIRWASHER		2	0.17	0.23	0.30	0.38	0.47	0.56	0.67	0.79	0.91			
TYPE C AIRWASHER	0.15		0.20	0.26	0.33	0.41	0.49	0.58	0.69	0.79				
SHELDEK (12" MEDIA)	0.09		0.12	0.16	0.20	0.25	0.30	0.35	0.42	0.48	0.55			
COILDEK (12" MEDIA)	2	0.09	0.12	0.16	0.20	0.25	0.30	0.35	0.42	0.48	0.55			
STEEL ELIMINATOR SECTION	2	0.07	0.09	0.12	0.16	0.19	0.23	0.28	0.32	0.38	0.43			
CELLULOSE MEDIA ELIMINATOR SECTION		0.04	0.06	0.08	0.10	0.12	0.15	0.17	0.21	0.24	0.27			
FACE DAMPER		0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.12	0.13
FACE AND INTERNAL BYPASS DAMPER	2	0.03	0.03	0.05	0.06	0.07	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.23
FACE AND EXTERNAL BYPASS DAMPER		0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.12	0.13

SECTION	FAN OUTLET VELOCITY — fpm							
	1000	1500	2000	2500	3000	3500	4000	4500
BLOW THROUGH FAN HEAD	0.05	0.12	0.21	0.32	0.47	0.64	0.83	1.05
VARIABLE INLET VANES (100% OPEN)	0.03	0.07	0.12	0.19	0.27	0.37	0.48	0.61

AIR FRICTION — kPa

SECTION	NOTES	STANDARD COIL VELOCITY — m/s												
		1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50
FLAT FILTER SECTION	1	0.025	0.029	0.033	0.037	0.041	0.045	0.049						
ANGLE FILTER SECTION		0.015	0.018	0.021	0.023	0.026	0.028	0.031	0.034	0.036	0.039	0.041	0.044	0.046
HIGH PERFORMANCE FILTER SECTION		0.012	0.018	0.024	0.031	0.037	0.043	0.049	0.055	0.061	0.068			
HORIZONTAL ROLL FILTER SECTION		0.023	0.026	0.030	0.034	0.038	0.041	0.045	0.049	0.053	0.056			
STANDARD MIXING BOX	2,3	0.004	0.006	0.008	0.010	0.012	0.015	0.018	0.021	0.024	0.028	0.031	0.035	0.040
1-STAGE EVEN TEMP MIXING BOX		0.022	0.030	0.039	0.049	0.061	0.074	0.088	0.103	0.119	0.137	0.156	0.176	0.197
2-STAGE EVEN TEMP MIXING BOX		0.039	0.053	0.070	0.088	0.109	0.131	0.156	0.184	0.213	0.244	0.278	0.314	0.352
HIGH PERFORMANCE MIXING BOX		0.010	0.014	0.018	0.022	0.028	0.033	0.040	0.047	0.054	0.062	0.071	0.080	0.089
HEATING/COOLING MULTIZONE		0.017	0.023	0.030	0.038	0.047	0.056							
HEATING/VENTILATING MULTIZONE		0.006	0.008	0.011	0.014	0.017	0.021	0.025	0.029	0.033	0.038	0.044	0.049	0.055
SPRAY COIL DEHUMIDIFIER		2	0.037	0.051	0.067	0.084	0.104	0.126	0.150	0.176	0.204			
CAPILLARY CELL AIRWASHER		2	0.040	0.055	0.072	0.091	0.112	0.135	0.161	0.189	0.219			
TYPE C AIRWASHER	0.035		0.048	0.062	0.079	0.098	0.118	0.141	0.165	0.191				
SHELDEK (305 mm MEDIA)	0.021		0.029	0.038	0.048	0.059	0.072	0.085	0.100	0.116	0.133	0.151		
COILDEK (305 mm MEDIA)	2	0.021	0.029	0.038	0.048	0.059	0.072	0.085	0.100	0.116	0.133	0.151		
STEEL ELIMINATOR SECTION	2	0.017	0.023	0.030	0.037	0.046	0.056	0.067	0.078	0.091	0.104	0.118		
CELLULOSE MEDIA ELIMINATOR SECTION		0.011	0.014	0.019	0.024	0.029	0.035	0.042	0.049	0.057	0.066	0.075		
FACE DAMPER		0.004	0.005	0.006	0.008	0.010	0.012	0.014	0.017	0.020	0.022	0.026	0.029	0.032
FACE AND INTERNAL BYPASS DAMPER	2	0.006	0.008	0.011	0.014	0.017	0.021	0.025	0.029	0.033	0.038	0.044	0.049	0.055
FACE AND EXTERNAL BYPASS DAMPER		0.004	0.005	0.006	0.008	0.010	0.012	0.014	0.017	0.020	0.022	0.026	0.029	0.032

SECTION	FAN OUTLET VELOCITY — m/s							
	5.00	7.50	10.00	12.50	15.00	17.50	20.00	22.50
BLOW THROUGH FAN HEAD	0.013	0.028	0.050	0.078	0.113	0.153	0.200	0.253
VARIABLE INLET VANES (100% OPEN)	0.007	0.016	0.029	0.045	0.065	0.088	0.115	0.146

NOTES

1. Filter air frictions are based on clean filters.
2. Coil air friction must be added.
3. Blow through fan head air friction must be added.

Mixing Boxes

Mixing boxes shall be supplied with two sets of interconnected parallel bladed dampers. Operator and operator linkage will be supplied and installed by others. Manufacturers shall ensure that the lowest temperature leaving the mixing boxes is not less than 35°F (2°C) to eliminate the chance of coil freezing. This is to be based on a return air temperature of 70°F (21°C) and on a fresh air temperature of _____ and maximum fresh air content of _____ per cent.

Mixing boxes shall be Sheldons SERIES 2000:

1. Standard Mixing Boxes
2. One Stage Even-Temp Mixing Boxes
3. Two Stage Even-Temp Mixing Boxes
4. High Performance Mixing Boxes

Multizone Sections

Multizone sections shall be supplied as free standing sections, complete with a hinged access door. They shall include diffuser plates at the section inlet to ensure even flow through coils and zone dampers interconnected between decks to provide effective control. Heating/cooling multizones are also to be supplied with a treated drain pan and drain connection for condensate run-off.

Wet Sections

Wet sections shall be water tight and are to be designed such that there is no water carry-over. They shall be supplied with a 12 in. (305 mm) deep, 10 gauge welded tank. Tanks shall include suction, make-up water, quick-fill and trapped overflow connections, float valve, brass suction screen and drain. Tank interiors shall be treated with a minimum 1/16" (1.6 mm) coating of synthetic polymer insulation to prevent condensation.

Pumps, piping, traps, connections, valves and controls external to wet sections shall be supplied and installed by others on site.

SPRAY COIL DEHUMIDIFIERS shall have saturation efficiencies of not less than 80% and shall be sized to operate at a water flow of 1.1 USGPM per ft² (0.75 L/s per m²) of coil face area. Sections shall be designed for slide in (4/6/8) row, (chilled water/direct expansion) copper tube/copper fin cooling coils. Three surface galvanized steel eliminators, galvanized steel pipe headers and brass spray nozzles are to be supplied on all Spray Coil Dehumidifier sections. Access shall be provided upstream of the section for servicing of

nozzles and for adjustment of float valve, etc. On multi-coil sections condensation troughs and drain pipes shall be provided on the upper coil.

CAPILLARY® CELL AIRWASHERS shall have saturation efficiencies of not less than 97% and shall be sized to operate at a water flow of 1.4 USGPM per ft² (0.95 L/s per m²) of cell media area. Sections are to include three surface galvanized steel eliminators, galvanized steel pipe headers and brass spray nozzles. Access shall be provided upstream of section for servicing of nozzles and for adjustment of float valve, etc.

TYPE C AIRWASHERS shall have saturation efficiencies of not less than 57% and shall be sized to operate at a water flow of 4.0 USGPM per 1000 cfm (0.53 L/s per m³/s) air flow. They are to be supplied complete with four surface galvanized steel eliminators and galvanized steel spray trees with brass nozzles. Access shall be provided upstream of the section for servicing of nozzles and for adjustment of float valve, etc.

SHELDEK and COILDEK sections shall have saturation efficiencies of not less than 90% and shall be sized to operate at a water flow of 1.5 USGPM per ft² (1.02 L/s per m²) of horizontal media area (width x depth). Coildek sections shall be designed for bolt-on (4/6/8) row, (chilled water/direct expansion) cooling coils.

Sheldek and Coildek sections shall be supplied complete with 12 in. (305 mm) deep cellulose media and PVC spray headers. Downstream access will be supplied for servicing of media and header and for adjustment to float valve, etc.

Eliminator Sections

Eliminator sections shall be supplied downstream of all cooling coil sections with face velocities over 550 fpm (2.8 m/s) to eliminate water carry-over. Access will be provided downstream of the eliminator sections for servicing. Steel eliminators shall be supplied with three surface, formed, galvanized steel blades, vertically mounted in the section. Cellulose media eliminators are to be supplied with 6 in. (152 mm) deep media.

Damper Sections

Face damper, face and internal by-pass damper and face and external bypass damper sections are to be supplied with factory interconnected blades with external shafts for auto control by others. Face and internal by-pass damper and face and external by-pass damper sections shall include a bolt-on heating coil downstream of the damper.

Manufacturer reserves the right to change design and specification without notice.

SHELDONS ENGINEERING LIMITED

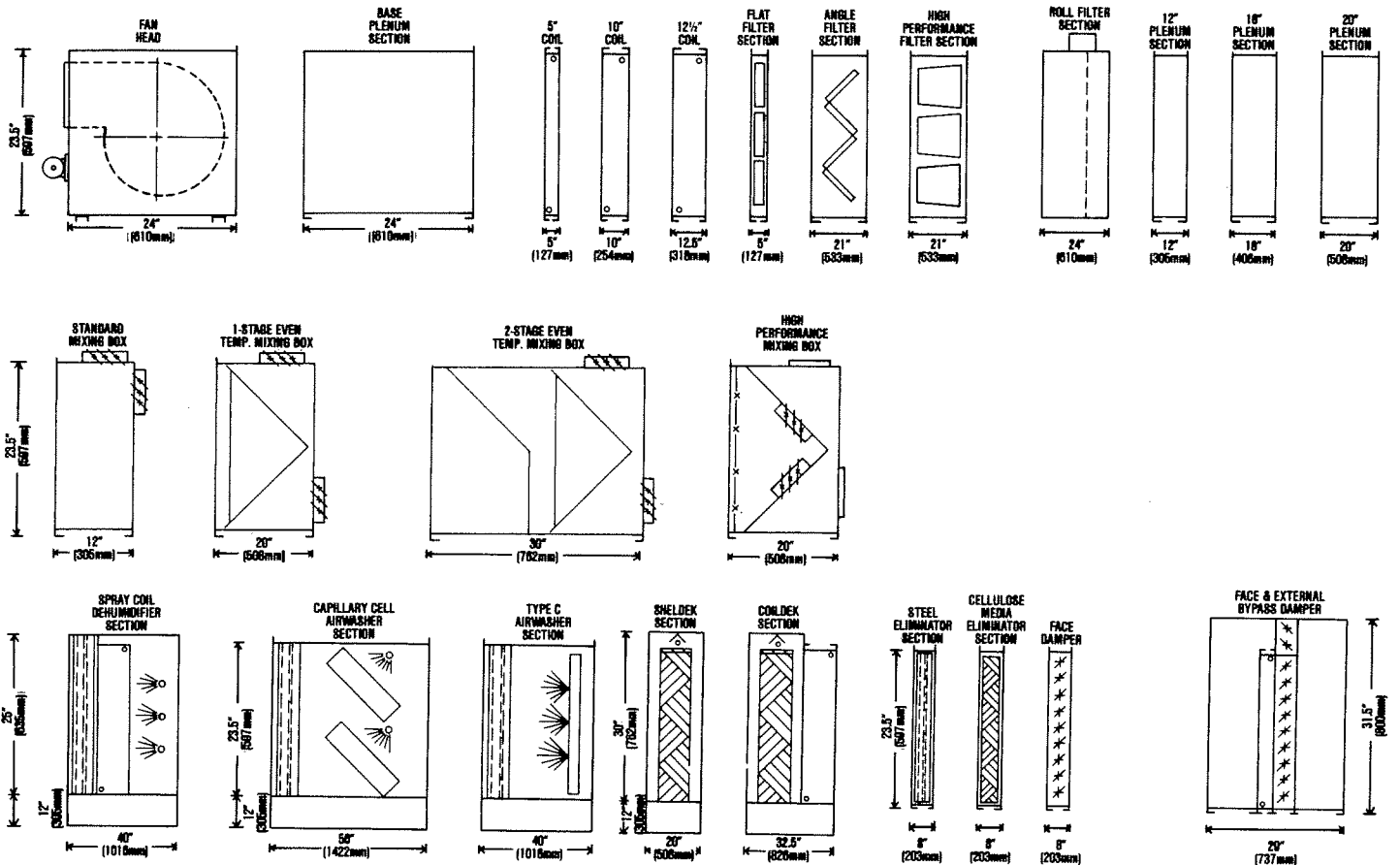
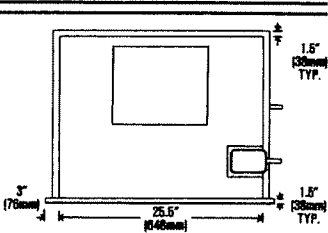
555 Conestogo Boulevard
Cambridge, Ontario, Canada N1R 5X8
Telephone (519) 621-1800
Telex 069-59395



SHELDONS GROUP OF COMPANIES: CAMBRIDGE, ONT.; ELGIN, ILLINOIS

SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

SIZE 20 LP



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 6 in. (152mm) TO UNIT WIDTH AND 3 in (76mm) TO UNIT HEIGHT FOR LUGS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 18 in. (460mm) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDEK AND COILDEK SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

PERFORMANCE RATINGS

SIZE 20

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY		STATIC PRESSURE — in. wg (kPa)														
		ft/min	m/s	0.25 (0.062)		0.5 (0.125)		1.0 (0.249)		1.5 (0.374)		2.0 (0.499)		2.5 (0.623)				
CFM	m ³ /s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

SIZE 100 FORWARD CURVED FAN

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY		STATIC PRESSURE — in. wg (kPa)																			
		ft/min	m/s	0.25 (0.062)		0.5 (0.125)		1.0 (0.249)		1.5 (0.374)		2.0 (0.499)		2.5 (0.623)									
CFM	m ³ /s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW					
1000	0.47	1190	6.05	304	1.54	510	0.09	0.07	681	0.15	0.11	966	0.28	0.21	1210	0.44	0.33	1421	0.61	0.45	1602	0.79	0.59
1100	0.52	1310	6.65	334	1.70	523	0.10	0.08	688	0.17	0.12	961	0.31	0.23	1196	0.47	0.35	1406	0.65	0.48	1591	0.84	0.63
1200	0.57	1429	7.26	365	1.85	537	0.13	0.09	696	0.19	0.14	959	0.34	0.26	1185	0.51	0.38	1390	0.69	0.52	1576	0.89	0.66
1300	0.61	1548	7.86	395	2.01	553	0.15	0.11	707	0.21	0.16	960	0.38	0.28	1179	0.55	0.41	1377	0.74	0.55	1560	0.94	0.70
1400	0.66	1667	8.47	426	2.16	571	0.18	0.13	719	0.24	0.18	963	0.41	0.31	1175	0.60	0.45	1367	0.79	0.59	1545	1.00	0.75
1500	0.71	1786	9.07	456	2.32	583	0.21	0.15	732	0.28	0.21	969	0.45	0.33	1174	0.64	0.48	1361	0.85	0.63	1534	1.06	0.79
1600	0.76	1905	9.68	486	2.47	616	0.24	0.18	745	0.31	0.23	976	0.49	0.37	1175	0.69	0.52	1357	0.91	0.68	1526	1.13	0.84
1700	0.80	2024	10.28	517	2.62	641	0.28	0.21	759	0.35	0.26	985	0.54	0.40	1179	0.75	0.56	1356	0.97	0.73	1520	1.20	0.90
1800	0.85	2143	10.89	547	2.78	667	0.33	0.24	775	0.40	0.30	996	0.59	0.44	1184	0.80	0.60	1356	1.04	0.77	1517	1.28	0.95
1900	0.90	2262	11.49	578	2.93	694	0.38	0.28	793	0.45	0.34	1007	0.64	0.48	1190	0.86	0.64	1358	1.10	0.82	1515	1.36	1.01
2000	0.94	2381	12.10	608	3.09	722	0.43	0.32	812	0.51	0.38	1019	0.70	0.52	1199	0.93	0.69	1362	1.17	0.88	1516	1.44	1.07
2100	0.99	2500	12.70	638	3.24	751	0.49	0.37	833	0.57	0.43	1032	0.77	0.57	1208	1.00	0.74	1368	1.25	0.93	1518	1.52	1.13
2200	1.04	2619	13.30	669	3.40	780	0.56	0.42	856	0.64	0.48	1046	0.84	0.62	1219	1.07	0.80	1375	1.33	0.99	1521	1.61	1.20
2300	1.09	2738	13.91	699	3.55	809	0.63	0.47	880	0.72	0.53	1059	0.92	0.68	1230	1.15	0.86	1383	1.42	1.06	1526	1.70	1.27
2400	1.13	2857	14.51	729	3.71	838	0.71	0.53	905	0.80	0.59	1073	1.00	0.75	1242	1.24	0.93	1392	1.51	1.13	1533	1.80	1.34
2500	1.18	2976	15.12	760	3.86	868	0.79	0.59	931	0.88	0.66	1089	1.09	0.81	1255	1.33	1.00	1403	1.61	1.20	1540	1.90	1.42

FAN HEAD

LOW PRESSURE	MEDIUM PRESSURE	HIGH PRESSURE
14T	N.A.	N.A.

Fan performance ratings are based on standard air and include fan draw through box loss. To establish the unit internal static pressure use the air friction table on page 44 and add for coil losses where applicable. After determining the BHP (kW) add for drive losses (page 11) and check start time to ensure the appropriate motor horsepower selection.

STEAM GRID HUMIDIFIER

STEAM PRESSURE	OUTPUT STEAM PER HOUR
psi	kg/hr
2	13.8
5	34.5
10	68.9

COILS

COIL	SECTION	MAXIMUM FLOW	FACE AREA	ROUNDED TUBE LENGTH	CASING HEIGHT	NO. OF COILS
		CFM	sq ft	in.	in.	
STD. COIL	HEATING COIL SECT.	2500	1.18			
	COOLING COIL SECT.	1800	0.85			
	HTG/CLG MULTIZONE	N.A.	N.A.	3.29	0.31	24
	SPRAY COIL DEHUM.	2000	0.94			610
	COILDEK	2500	1.18			24 1/4
UNDER-SIZED COIL	HTG/VTG MULTIZONE	NOT AVAILABLE				
	FACE & INTERNAL BYPASS DAMPER	NOT AVAILABLE				
SMALL COIL	HTG/CLG MULTIZONE	NOT AVAILABLE				

FILTERS

FILTER SECTION	MAX. FLOW	FACE AREA	FILTER QUANTITY AND SIZE
	CFM	sq ft	
FLAT FILTER	1900	0.90	3.47
ANGLE FILTER	2500	1.18	5.56
HIGH PERFORMANCE FILTER	2400	1.13	4.00
HORIZONTAL ROLL FILTER	2500	1.18	4.16

MIXING BOXES

MIXING BOX	AIR INTAKE WIDTH	AIR INTAKE HEIGHT
	in.	in.
STANDARD MIXING BOX	24	10
1-STAGE EVEN TEMP. MIXING BOX	610	254
2-STAGE EVEN TEMP. MIXING BOX		
HIGH PERFORMANCE MIXING BOX		

MULTIZONES

MULTIZONE	MAXIMUM FLOW	OUTLET WIDTH	OUTLET HEIGHT	MAXIMUM NUMBER OF ZONES
	CFM	in.	in.	
HEATING/COOLING MULTIZONE				
HEATING/VENTILATING MULTIZONE				

WET SECTIONS

WET SECTION	MAXIMUM AIR FLOW	EFFECTIVE FACE AREA	WATER FLOW	WATER HEAD
	CFM	sq ft	USGPM	ft
SPRAY COIL DEHUMIDIFIER	2000	0.94	3.29	0.31
CAPILLARY CELL AIRWASHER	2000	0.94	4.17	0.39
TYPE C AIRWASHER	2000	0.94	3.02	0.28
SHELDEK SECTION	2500	1.18	3.33	0.31
COILDEK SECTION	2500	1.18	3.0	0.19

*Water heads shown include for pressure at nozzles and for unit height. External piping and fitting losses must be added to ensure appropriate pump selection.

ELIMINATORS

ELIMINATOR SECTION	MAXIMUM FLOW	FACE AREA
	CFM	sq ft
STEEL ELIMINATORS	2300	1.09
CELLULOSE MEDIA ELIMINATORS	2500	1.18

DAMPERS

DAMPER SECTION	FACE AREA
	sq ft
FACE DAMPER	3.67
FACE AND INTERNAL BYPASS DAMPER	3.67
FACE AND EXTERNAL BYPASS DAMPER	3.67

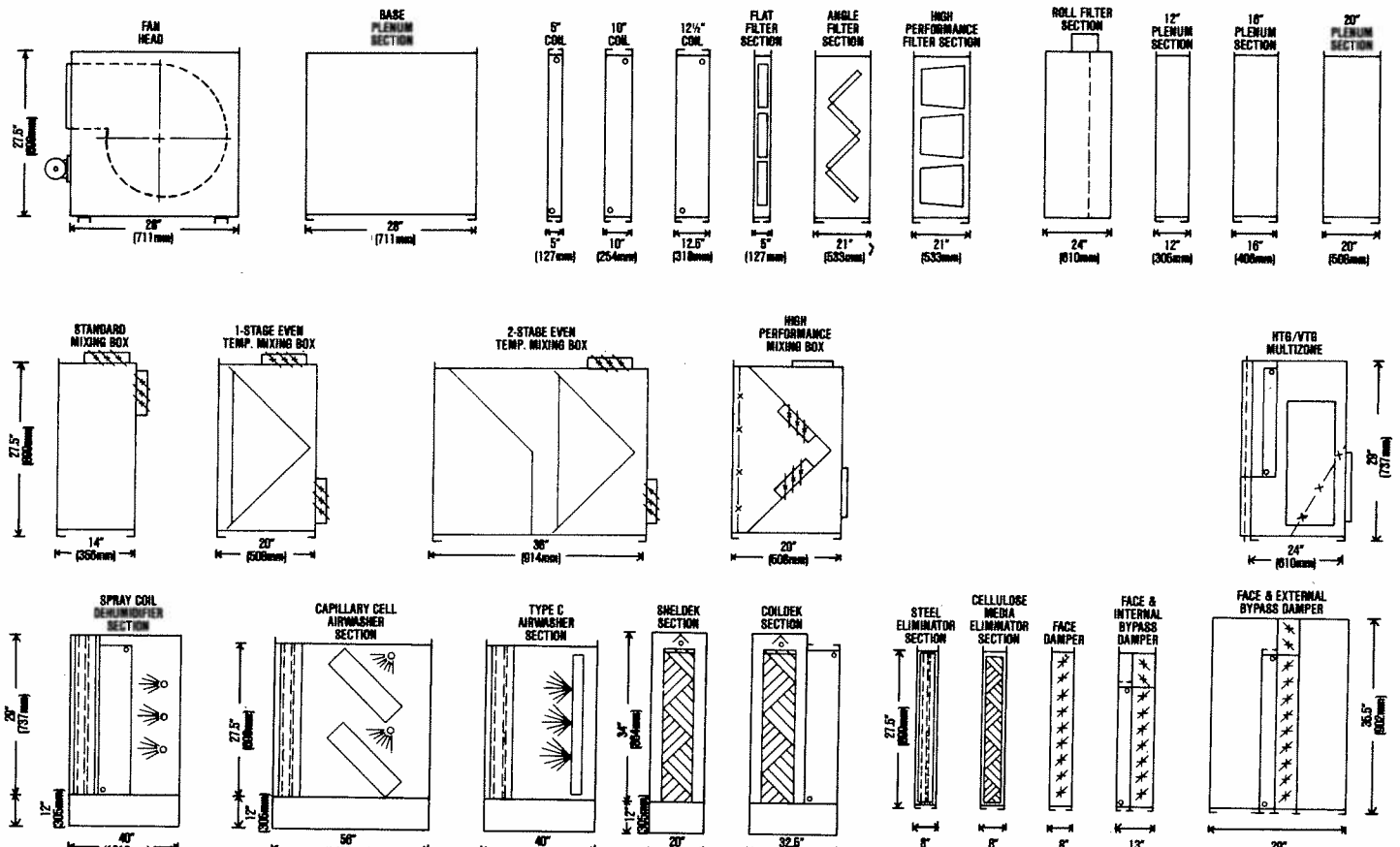
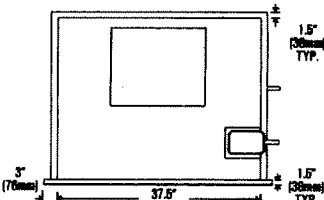
OPERATING WEIGHTS (APPROX.)

SECTION	NOTES	WEIGHT
		LB
FAN HEAD	1	163
BASE PLENUM		74
FLAT FILTER SECTION		48
ANGLE FILTER SECTION		71
HIGH PERFORMANCE FILTER SECTION		85
HORIZONTAL ROLL FILTER SECTION		220
12 IN. PLENUM SECTION		34
16 IN. PLENUM SECTION		45
20 IN. PLENUM SECTION		56
STANDARD MIXING BOX		60
1-STAGE EVEN TEMP. MIXING BOX		94
2-STAGE EVEN TEMP. MIXING BOX		142
HIGH PERFORMANCE MIXING BOX		120
HEATING/COOLING MULTIZONE	3	N.A.
HEATING/VENTILATING MULTIZONE	3	N.A.
SPRAY COIL DEHUMIDIFIER	4	465
CAPILLARY CELL AIRWASHER	2	564
TYPE C AIRWASHER	2	465
SHELDEK SECTION	2	109
COILDEK SECTION	4	134
STEEL ELIMINATORS		127
CELLULOSE MEDIA ELIMINATORS		28
FACE DAMPER		43
FACE AND INTERNAL BYPASS DAMPER	3	N.A.
FACE AND EXTERNAL BYPASS DAMPER	3	96

NOTES: 1 - Add for weight of motor
2 - Add for weight of water
3 - Add for weight of coils
4 - Add for weight of coils and water

SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

SIZES 30 LP 30 MP



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 6 IN. (152mm) TO UNIT WIDTH AND 3 IN (76mm) TO UNIT HEIGHT FOR LUGS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 18 IN. (457mm) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA, ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDEX AND COLDEX SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

FAN HEAD

LOW PRESSURE	MAXIMUM MOTOR FRAME	
	18AT	21ST
		N.A.

Fan performance ratings are based on standard air and include for draw through box loss. To establish the unit internal static pressure use the air friction table on page 44 and add for coil losses where applicable. After determining the BHP (kW) add for drive losses (page 11) and check start time to ensure the appropriate motor horsepower selection.

STEAM GRID HUMIDIFIER

psi	STEAM PRESSURE		OUTPUT STEAM PER HOUR	
	lb/s	kg/hr	lb/hr	kg/hr
2	13.8	49	22	22
5	34.5	75	34	34
10	68.9	117	53	53

COILS

COIL	SECTION	MAXIMUM FLOW CFM	FACE AREA SQ FT	FACIAL VELOCITY FT/SEC	BYPASS AIR FLOW CFM	CASING HEIGHT IN	NO. OF COILS
STD. COIL	HEATING COIL SECT.	5000	2.36				
	COOLING COIL SECT.	3300	1.56				
	MULTIZONE	N.A.	N.A.	6.04	0.58	36	914
	SPRAY COIL DEHUMID.	3000	1.70				
UNDER-SIZED COIL	HTG/VTG MULTIZONE	5000	2.36				
	FACE & INTERNAL BYPASS DAMPER			5.04	0.47		24 1/2
SMALL COIL	HTG/VTG MULTIZONE						NOT AVAILABLE

FILTERS

FILTER SECTION	MAX. FLOW CFM	FACE AREA SQ FT	FILTER QUANTITY AND SIZE
FLAT FILTER	3400	1.80	8.25 0.58 1-25"x20"x2", 1-25"x16"x2"
ANGLE FILTER	5000	2.36	10.00 0.83 2-20"x20"x2", 2-20"x16"x2"
HIGH PERFORMANCE FILTER	3600	1.70	8.00 0.58 1-24"x24"x2", 1-12"x24"x2"
HORIZONTAL ROLL FILTER	3300	1.56	5.50 0.51

MIXING BOXES

MIXING BOX	AIR INTAKE WIDTH		AIR INTAKE HEIGHT	
	IN	MM	IN	MM
STANDARD MIXING BOX				
1-STAGE EVEN TEMP. MIXING BOX	36	914	12	305
2-STAGE EVEN TEMP. MIXING BOX				
HIGH PERFORMANCE MIXING BOX				

MULTIZONES

MULTIZONE	MAXIMUM FLOW CFM	EFFECTIVE FACE AREA SQ FT	WATER FLOW GPM	WATER HEAD FT	MAXIMUM NUMBER OF ZONES
HEATING/COOLING MULTIZONE					
HEATING/VENTILATING MULTIZONE	5000	2.36	36	914	26

WET SECTIONS

WET SECTION	MAXIMUM FLOW CFM	EFFECTIVE FACE AREA SQ FT	WATER FLOW GPM	WATER HEAD FT
SPRAY COIL DEHUMIDIFIER	3000	1.70	6.04	0.58
CAPILLARY CELL AIRWASHER	3600	1.70	8.33	0.77
TYPE C AIRWASHER	3600	1.70	5.55	0.52
SHELDEX SECTION	4500	2.12	6.10	0.57
COLDEX SECTION				

ELIMINATORS

ELIMINATOR SECTION	MAXIMUM FLOW CFM	EFFECTIVE FACE AREA SQ FT	FACE AREA SQ FT
STEEL ELIMINATORS	4200	1.98	5.55
CELLULOSE MEDIA ELIMINATORS	4500	2.12	6.10

DAMPERS

DAMPER SECTION	FACE AREA SQ FT	FACE AREA M ²
FACE DAMPER	6.50	0.60
FACE AND INTERNAL BYPASS DAMPER	5.00	0.46
	1.50	0.14
FACE AND EXTERNAL BYPASS DAMPER	6.50	0.60
	2.00	0.19

OPERATING WEIGHTS (APPROX.)

SECTION	UNITED STATES	WEIGHT	
		LB	KG
FAN HEAD	1	246	112
BASE PLENUM		128	58
FILTER SECTIONS	FLAT FILTER SECTION	50	23
	ANGLE FILTER SECTION	125	57
	HIGH PERFORMANCE FILTER SECTION	136	62
	HORIZONTAL ROLL FILTER SECTION	250	113
PLENUM SECTIONS	12 IN. PLENUM SECTION	48	22
	16 IN. PLENUM SECTION	64	29
	20 IN. PLENUM SECTION	80	36
	STANDARD MIXING BOX	107	49
MIXING BOXES	1-STAGE EVEN TEMP. MIXING BOX	154	70
	2-STAGE EVEN TEMP. MIXING BOX	239	108
	HIGH PERFORMANCE MIXING BOX	214	97
	HEATING/COOLING MULTIZONE	3	N.A.
MULTIZONES	HEATING/VENTILATING MULTIZONE	3	109
	SPRAY COIL DEHUMIDIFIER	4	793
WET SECTIONS	CAPILLARY CELL AIRWASHER	2	903
	TYPE C AIRWASHER	2	793
	SHELDEX SECTION	2	150
	COLDEX SECTION	4	178
ELIMINATOR SECTIONS	STEEL ELIMINATORS	228	103
	CELLULOSE MEDIA ELIMINATORS	41	19
	FACE DAMPER	66	30
DAMPERS	FACE AND INTERNAL BYPASS DAMPER	3	73
	FACE AND EXTERNAL BYPASS DAMPER	3	173

NOTES: 1 - Add for weight of motor
2 - Add for weight of water
3 - Add for weight of coils
4 - Add for weight of coils and water

PERFORMANCE RATINGS

SIZE 30

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY		STD. COIL VELOCITY		STATIC PRESSURE -- in. wg (kPa)																
	CFM	m ³ /s	fpm	m/s	0.25 (0.002)			0.5 (0.025)			1.0 (0.249)			1.5 (0.374)			2.0 (0.498)			2.5 (0.623)	

SIZE 120 FORWARD CURVED FAN

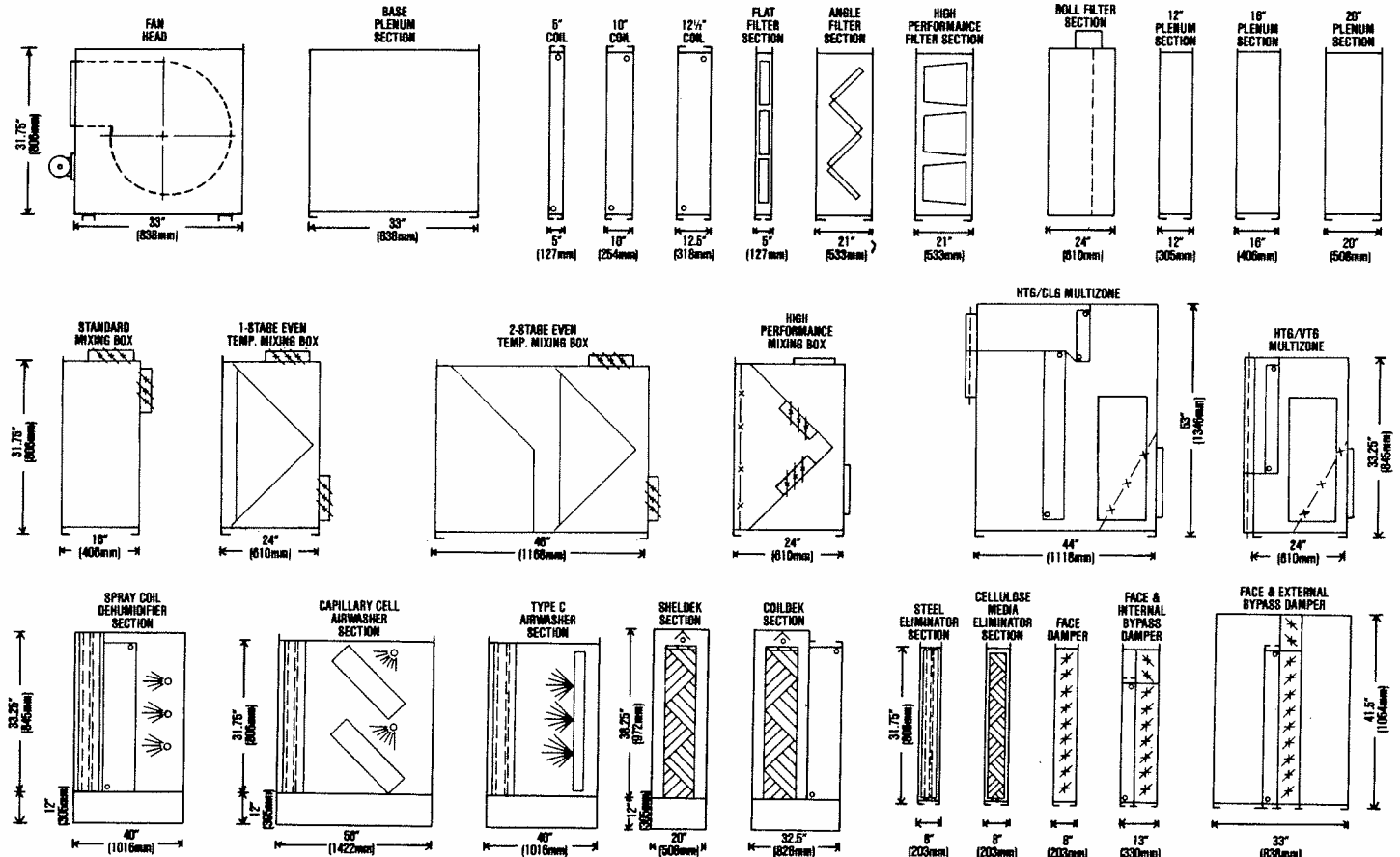
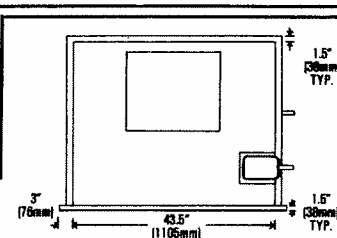
FLOW	FAN OUTLET VELOCITY		STD. COIL VELOCITY		STATIC PRESSURE -- in. wg (kPa)																		
	CFM	m ³ /s	fpm	m/s	0.25 (0.002)			0.5 (0.025)			1.0 (0.249)			1.5 (0.374)			2.0 (0.498)			2.5 (0.623)			
1500	0.71	1014	5.15	248	1.26	429	0.13	0.10	579	0.21	0.16	841	0.43	0.32	1053	0.68	0.51	1221	0.95	0.71	1363	1.24	0.93
1750	0.83	1182	6.01	290	1.47	449	0.17	0.13	585	0.26	0.20	823	0.49	0.36	1037	0.76	0.57	1215	1.05	0.78	1364	1.37	1.02
2000	0.94	1351	6.86	331	1.68	473	0.23	0.17	599	0.33	0.25	818	0.56	0.42	1017	0.84	0.63	1198	1.16	0.86	1356	1.49	1.11
2250	1.06	1520	7.72	373	1.89	501	0.30	0.22	616	0.41	0.30	820	0.65	0.48	1004	0.94	0.70	1179	1.27	0.95	1338	1.62	1.21
2500	1.18	1689	8.58	414	2.10	530	0.38	0.29	638	0.50	0.38	829	0.76	0.56	1001	1.05	0.78	1163	1.39	1.04	1319	1.76	1.32
2750	1.30	1858	9.44	455	2.31	560	0.48	0.36	662	0.61	0.46	842	0.88	0.66	1004	1.18	0.88	1156	1.53	1.14	1302	1.91	1.43
3000	1.42	2027	10.30	497	2.52	593	0.60	0.45	688	0.74	0.55	858	1.03	0.77	1012	1.34	1.00	1156	1.69	1.26	1294	2.08	1.55
3250	1.53	2196	11.16	538	2.73	626	0.74	0.55	716	0.89	0.67	877	1.20	0.90	1024	1.53	1.14	1161	1.88	1.40	1292	2.27	1.70
3500	1.65	2365	12.01	579	2.94	660	0.90	0.67	745	1.06	0.79	898	1.39	1.04	1039	1.74	1.30	1170	2.10	1.57	1295	2.50	1.86
3750	1.77	2534	12.87	621	3.15	694	1.07	0.80	775	1.25	0.94	922	1.61	1.20	1056	1.97	1.47	1182	2.35	1.75	1302	2.75	2.05
4000	1.89	2703	13.73	662	3.36	729	1.28	0.95	807	1.47	1.10	947	1.85	1.38	1076	2.23	1.66	1196	2.63	1.96	1312	3.04	2.27
4250	2.01	2872	14.59	704	3.57	765	1.51	1.12	839	1.71	1.28	973	2.11	1.57	1097	2.52	1.88	1213	2.93	2.19	1325	3.36	2.51
4500	2.12	3041	15.45	745	3.78	801	1.76	1.31	872	1.96	1.48	1001	2.40	1.79	1120	2.83	2.11	1232	3.27	2.44	1339	3.71	2.77
4750	2.24	3209	16.30	786	4.00	838	2.04	1.52	906	2.28	1.70	1030	2.72	2.03	1144	3.17	2.37	1253	3.63	2.71	1356	4.09	3.05
5000	2.36	3378	17.16	828	4.21	874	2.36	1.76	940	2.60	1.94	1059	3.07	2.29	1170	3.55	2.65	1275	4.03	3.00	1375	4.51	3.36

SIZE 122 UNIFOIL FAN

FLOW	FAN OUTLET VELOCITY		STD. COIL VELOCITY		STATIC PRESSURE -- in. wg (kPa)																		
	CFM	m ³ /s	fpm	m/s	2.5 (0.623)			3.0 (0.747)			3.5 (0.872)			4.0 (1.00)			4.5 (1.12)			5.0 (1.26)			
1500	0.71	909	4.62	248	1.26	1007	0.12	0.09	1173	0.21	0.16	1444	0.38	0.28	1673	0.57	0.42	1884	0.78	0.58	2083	1.01	0.75
1750	0.83	1061	5.39	290	1.47	1117	0.17	0.12	1270	0.26	0.19	1526	0.46	0.34	1741	0.66	0.49	1936	0.88	0.66	2119	1.12	0.84
2000	0.94	1212	6.16	331	1.68	1231	0.22	0.16	1372	0.32	0.24	1614	0.55	0.41	1820	0.77	0.57	2004	1.00	0.75	2175	1.25	0.94
2250	1.06	1364	6.93	373	1.89	1348	0.29	0.21	1480	0.39	0.29	1708	0.64	0.48	1905	0.90	0.67	2082	1.15	0.86	2245	1.41	1.05
2500	1.18	1515	7.70	414	2.10	1467	0.37	0.27	1591	0.48	0.36	1806	0.74	0.55	1985	1.03	0.77	2166	1.31	0.96	2323	1.59	1.19
2750	1.30	1667	8.47	455	2.31	1588	0.46	0.35	1705	0.58	0.44	1908	0.86	0.64	2089	1.17	0.87	2254	1.49	1.11	2406	1.79	1.34
3000	1.42	1818	9.24	497	2.52	1710	0.58	0.43	1821	0.71	0.53	2014	0.99	0.74	2187	1.32	0.99	2346	1.67	1.25	2493	2.01	1.50
3250	1.53	1970	10.01	538	2.73	1834	0.71	0.53	1938	0.85	0.63	2123	1.15	0.86	2288	1.49	1.11	2441	1.86	1.39	2584	2.24	1.67
3500	1.65	2121	10.78	579	2.94	1958	0.86	0.64	2058	1.01	0.76	2234	1.33	0.99	2382	1.68	1.25	2539	2.06	1.54	2677	2.47	1.84
3750	1.77	2273	11.55	621																			

SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

SIZES 40 LP 40 MP



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 5 IN. (127MM) TO UNIT WIDTH AND 3 IN. (76MM) TO UNIT HEIGHT FOR LUGS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 18 IN. (457MM) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA, ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDEX AND COILDEK SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

FAN HEAD	MAXIMUM MOTOR FRAME		
	LOW PRESSURE	MEDIUM PRESSURE	HIGH PRESSURE
213T	254T	N.A.	

Fan performance ratings are based on standard air and include for draw through box losses. To establish the unit internal static pressure use the air friction table on page 44 and add for coil losses where applicable. After determining the BHP (kW) add for drive losses (page 11) and check start time to ensure the appropriate motor horsepower selection.

STEAM GRID HUMIDIFIER		OUTPUT STEAM PER HOUR	
STEAM PRESSURE	kg/hr	lb/hr	kg/hr
2	13.8	63	29
5	34.5	105	48
10	68.9	159	72

COILS	SECTION	MAXIMUM FLOW		FACE AREA		NOMINAL TUBE LENGTH		CASING HEIGHT		NO. OF COILS
		CFM	m³/s	ft²	m²	in.	mm	in.	mm	
STD. COIL	HEATING COIL SECT.	6500	3.07	8.26	0.77	42	1067	334	845	1
	COOLING COIL SECT.	4500	2.12							
	HTG/CLB MULTIZONE	5000	2.36							
	HTG/CLB MULTIZONE	5000	2.36							
UNDER-SIZED COIL	HTG/CLB MULTIZONE	8500	3.07	5.92	0.55			24 1/2	632	1
	HTG/CLB MULTIZONE	4500	2.12	4.74	0.44			20 3/4	522	1

FILTERS	FILTER SECTION	MAX. FLOW		FACE AREA		FILTER QUANTITY AND SIZE
		CFM	m³/s	ft²	m²	
	FLAT FILTER	3800	1.79	8.94	0.84	2-25" x 20" x 2"
	ANGLE FILTER	6100	2.88	11.11	1.03	4-20" x 20" x 2"
	HIGH PERFORMANCE FILTER	4800	2.27	8.00	0.74	2-24" x 24" x 1 1/2"
	HORIZONTAL ROLL FILTER	4400	2.08	7.38	0.68	

MIXING BOXES	AIR INTAKE WIDTH		AIR INTAKE HEIGHT	
	in.	mm	in.	mm
STANDARD MIXING BOX	42	1067	14	356
1-STAGE EVEN TEMP. MIXING BOX				
2-STAGE EVEN TEMP. MIXING BOX				
HIGH PERFORMANCE MIXING BOX				

MULTIZONES	MAXIMUM FLOW		OUTLET WIDTH		OUTLET HEIGHT		MAXIMUM NUMBER OF ZONES
	CFM	m³/s	in.	mm	in.	mm	
HEATING/COOLING MULTIZONE	4500	2.12	42	1067	24	610	5
HEATING/VENTILATING MULTIZONE	6500	3.07	42	1067	30	762	5

WET SECTIONS	MAXIMUM FLOW		EFFECTIVE FACE AREA		WRITER FLOW		WRITER HEAD	
	CFM	m³/s	ft²	m²	USGPM	L/s	H ₂ O	ftPa
SPRAY COIL DEHUMIDIFIER	5000	2.36	8.28	0.77	9.1	0.57	24.1	71.9
CAPILLARY CELL AIRWASHER	5000	2.36	11.11	1.03	15.6	0.96	18.5	55.2
TYPE C AIRWASHER	5000	2.36	7.71	0.72	20.0	1.26	44.1	131.6
SHELDEX SECTION	5200	2.45	7.00	0.65	4.5	0.28	5.9	17.6
COILDEK SECTION								

*Water heads shown include for pressure at nozzles and for unit height. External piping and fitting losses must be added to ensure appropriate pump selection.

ELIMINATORS	MAXIMUM FLOW		FACE AREA	
	CFM	m³/s	ft²	m²
STEEL ELIMINATORS	5800	2.74	7.71	0.72
CELLULOSE MEDIA ELIMINATORS	5200	2.45	7.00	0.65

DAMPERS	FACE AREA	
	ft²	m²
FACE DAMPER	8.75	0.81
FACE AND INTERNAL BYPASS DAMPER	FACE	7.00
	BYPASS	1.75
FACE AND EXTERNAL BYPASS DAMPER	FACE	8.75
	BYPASS	2.92

OPERATING WEIGHTS (APPROX.)	SECTION	NOTES	WEIGHT	
			LB	KG
	FAN HEAD	1	370	168
	BASE PLENUM		200	91
	FLAT FILTER SECTION		52	24
	ANGLE FILTER SECTION		151	68
	HIGH PERFORMANCE FILTER SECTION		164	74
	HORIZONTAL ROLL FILTER SECTION		260	118
	12 IN. PLENUM SECTION		55	25
	16 IN. PLENUM SECTION		73	33
	20 IN. PLENUM SECTION		91	41
	STANDARD MIXING BOX		134	61
	1-STAGE EVEN TEMP. MIXING BOX		207	94
	2-STAGE EVEN TEMP. MIXING BOX		348	158
	HIGH PERFORMANCE MIXING BOX		288	122
	HEATING/COOLING MULTIZONE	3	458	208
	HEATING/VENTILATING MULTIZONE	3	131	50
	SPRAY COIL DEHUMIDIFIER	4	915	415
	CAPILLARY CELL AIRWASHER	2	1083	491
	TYPE C AIRWASHER	2	915	415
	SHELDEX SECTION	2	183	83
	COILDEK SECTION	4	213	97
	STEEL ELIMINATORS		287	130
	CELLULOSE MEDIA ELIMINATORS		48	22
	FACE DAMPER		84	38
	FACE AND INTERNAL BYPASS DAMPER	3	92	42
	FACE AND EXTERNAL BYPASS DAMPER	3	234	106

NOTES: 1 - Add for weight of motor
2 - Add for weight of water
3 - Add for weight of coils
4 - Add for weight of coils and water

PERFORMANCE RATINGS

SIZE 40

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																				
			0.25 (0.062)			0.5 (0.125)			1.0 (0.249)			1.5 (0.374)			2.0 (0.498)			2.5 (0.623)					
CFM	m³/s	fpm	m/s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

SIZE 150 FORWARD CURVED FAN

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																				
			0.25 (0.062)			0.5 (0.125)			1.0 (0.249)			1.5 (0.374)			2.0 (0.498)			2.5 (0.623)					
3000	1.42	1442	7.33	363	1.85	401	0.3	0.2	501	0.5	0.4	679	0.8	0.6	841	1.1	0.8	986	1.5	1.1	1114	2.0	1.5
3250	1.53	1563	7.94	393	2.00	417	0.4	0.3	512	0.5	0.4	680	0.9	0.7	835	1.2	0.9	978	1.6	1.2	1106	2.1	1.6
3500	1.65	1683	8.55	424	2.15	434	0.5	0.4	524	0.6	0.5	685	1.0	0.7	832	1.3	1.0	970	1.7	1.3	1098	2.2	1.6
3750	1.77	1803	9.16	454	2.31	451	0.6	0.4	538	0.7	0.5	691	1.1	0.8	832	1.5	1.1	965	1.9	1.4	1089	2.3	1.7
4000	1.89	1923	9.77	484	2.46	469	0.7	0.5	552	0.8	0.6	699	1.2	0.9	834	1.6	1.2	961	2.0	1.5	1082	2.5	1.8
4250	2.01	2043	10.38	515	2.61	487	0.8	0.6	567	0.9	0.7	709	1.3	1.0	838	1.8	1.3	960	2.2	1.6	1077	2.6	2.0
4500	2.12	2163	10.99	545	2.77	506	0.9	0.7	583	1.1	0.8	719	1.5	1.1	844	1.9	1.4	961	2.4	1.8	1074	2.8	2.1
4750	2.24	2284	11.60	575	2.92	525	1.0	0.8	600	1.2	0.9	731	1.6	1.2	851	2.1	1.6	964	2.6	1.9	1073	3.1	2.3
5000	2.36	2404	12.21	605	3.08	544	1.2	0.9	617	1.4	1.0	744	1.8	1.3	860	2.3	1.7	969	2.8	2.1	1074	3.3	2.5
5250	2.48	2524	12.82	636	3.23	564	1.3	1.0	634	1.5	1.2	757	2.0	1.5	870	2.5	1.9	975	3.0	2.3	1077	3.6	2.7
5500	2.60	2644	13.43	666	3.38	584	1.5	1.1	652	1.7	1.3	772	2.2	1.6	880	2.7	2.0	983	3.3	2.4	1081	3.8	2.8
5750	2.71	2764	14.04	696	3.54	604	1.7	1.3	670	1.9	1.4	786	2.4	1.8	892	2.9	2.2	992	3.5	2.6	1087	4.1	3.0
6000	2.83	2885	14.65	726	3.69	624	1.9	1.4	688	2.2	1.6	802	2.7	2.0	905	3.2	2.4	1002	3.8	2.8	1094	4.4	3.3
6250	2.95	3005	15.26	757	3.84	644	2.1	1.6	707	2.4	1.8	817	2.9	2.2	918	3.5	2.6	1012	4.0	3.0	1102	4.7	3.5
6500	3.07	3125	15.88	787	4.00	665	2.4	1.8	726	2.6	2.0	834	3.2	2.4	931	3.8	2.8	1023	4.3	3.2	1111	5.0	3.7

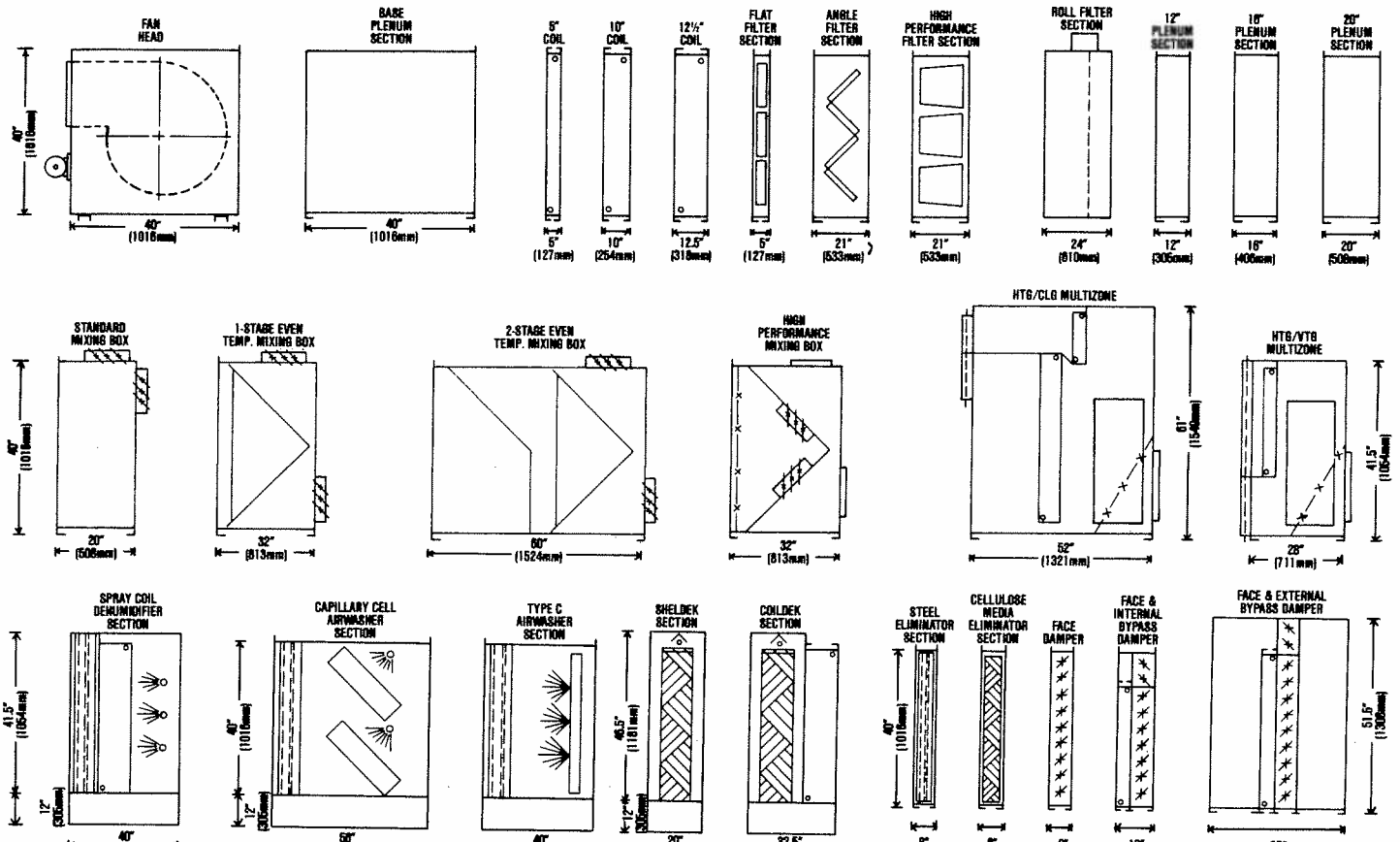
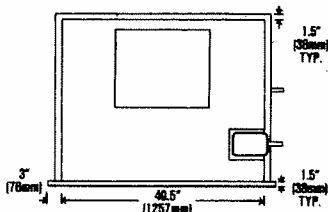
FAN OUTLET: WIDTH = 18 1/2 in (469mm), HEIGHT = 16 in (406mm), AREA = 2.08 ft² (0.19m²). FAN WK² = 5.1 LB-ft² (0.21 kg-m²).

SIZE 150 UNIFOIL FAN

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																				
			0.25 (0.062)			0.5 (0.125)			1.0 (0.249)			1.5 (0.374)			2.0 (0.498)			2.5 (0.623)					
3000	1.42	1230	6.25	363	1.85	978	0.3	0.2	1082	0.5	0.3	1275	0.8	0.6	1443	1.1	0.8	1599	1.5	1.1	1751	1.9	1.4
3250	1.53	1332	6.77	393	2.00	1042	0.4	0.3	1140	0.5	0.4	1322	0.9	0.6	1485	1.2	0.9	1633	1.6	1.2	1776	2.0	1.5
3500	1.65	1434	7.29	424	2.15	1107	0.5	0.3	1199	0.6	0.5	1371	1.0	0.7	1529	1.3	1.0	1671	1.7	1.3	1806	2.1	1.6
3750	1.77	1537	7.81	454	2.31	1173	0.5	0.4	1260	0.7	0.5	1423	1.1	0.8	1575	1.5	1.1	1714	1.9	1.4	1843	2.3	1.7
4000	1.89	1639	8.33	484	2.46	1239	0.6	0.5	1322	0.8	0.6	1476	1.2	0.9	1623	1.6	1.2	1758	2.0	1.5	1883	2.5	1.8
4250	2.01	1742	8.85	515	2.61	1307	0.7	0.5	1385	0.9	0.7	1532	1.3	1.0	1672	1.8	1.3	1804	2.2	1.6	1926	2.7	2.0
4500	2.12	1844	9.37	545	2.77	1374	0.9	0.6	1449	1.0	0.8	1589	1.5	1.1	1723	1.9	1.4	1851	2.4	1.8	1970	2.9	2.1
4750	2.24	1947	9.89	575	2.92	1442	1.0	0.7	1514	1.2	0.9	1648	1.6	1.2	1776	2.1	1.6	1899	2.6	1.9	2016	3.1	2.3
5000	2.36	2049	10.41	605	3.08	1510	1.1	0.8	1579	1.3	1.0	1708	1.8	1.3	1830	2.3	1.7	1949	2.8	2.1	2063	3.3	2.5
5250	2.48	2152	10.93	636	3.23	1579	1.3	1.0	1645	1.5	1.1	1769	2.0	1.5	1886	2.5	1.8	2001	3.0	2.2	2112	3.5	2.6
5500	2.60	2254	11.45	666	3.38	1648	1.4	1.1	1711	1.7	1.2	1830	2.1	1.6	1944	2.7	2.0	2054	3.2	2.4	2161	3.8	2.8
5750	2.71	2357	11.97	696	3.54	1717	1.6	1.2	1778	1.9	1.4	1893	2.4	1.8	2002	2.9	2.2	2108	3.5	2.6	2212	4.1	3.0
6000																							

SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

SIZES 60 LP 60 MP



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 6 IN. (152mm) TO UNIT WIDTH AND 3 IN. (76mm) TO UNIT HEIGHT FOR LUBS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 18 IN. (457mm) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDEX AND COILDEK SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

FAN HEAD

LOW PRESSURE	MAXIMUM MOTOR FRAME	
	21ST	N.A.
21ST	256T	N.A.

Fan performance ratings are based on standard air and include for draw through box loss. To establish the unit internal static pressure use the air friction table on page 44 and add for coil losses where applicable. After determining the BHP (kW) add for drive losses (page 11) and check start time to ensure the appropriate motor horsepower selection.

STEAM GRID HUMIDIFIER

STEAM PRESSURE	OUTPUT STEAM PER HOUR	
	psi/g	kg/hr
2	13.8	92
5	34.5	152
10	68.9	304

COILS

COIL	SECTION	MAXIMUM FLOW	FACE AREA	MINIMUM TUBE LENGTH	CASING HEIGHT	NO. OF COILS				
							CFM	m ³ /s	ft ²	m ²
STD. COIL	HEATING COIL SECT.	10000	4.72	12.18	1.13	48	1219	41%	1057	1
	COOLING COIL SECT.	6700	3.16							
	HTG/CLG MULTIZONE DECK	7500	3.54							
	SPRAY COIL DEHUM.	7500	3.54							
UNDER-SIZED COIL	COILDEK	9000	4.25							
	HTG/YTB MULTIZONE DECK	10000	4.72							
SMALL COIL	HTG/CLG MULTIZONE	6700	3.16							
	HOT DECK									

FILTERS

FILTER SECTION	MAX. FLOW	FACE AREA	FILTER QUANTITY AND SIZE		
				CFM	m ³ /s
FLAT FILTER	6800	3.21	12.50	1.16	2-16"x25"x2", 2-20"x25"x2"
ANGLE FILTER	10000	4.72	20.00	1.86	9-20"x16"x2"
HIGH PERFORMANCE FILTER	7200	3.40	12.00	1.11	2-24"x24"x12", 2-24"x12"x12"
HORIZONTAL ROLL FILTER	7100	3.35	11.92	1.11	

MIXING BOXES

MIXING BOX	AIR INTAKE WIDTH		AIR INTAKE HEIGHT	
	in.	mm	in.	mm
STANDARD MIXING BOX	21	533	18	457
1-STAGE EVEN TEMP. MIXING BOX	48	1219	18	457
2-STAGE EVEN TEMP. MIXING BOX				
HIGH PERFORMANCE MIXING BOX				

MULTIZONES

MULTIZONE	MAXIMUM FLOW	OUTLET WIDTH	OUTLET HEIGHT	MAXIMUM NUMBER OF ZONES			
					CFM	m ³ /s	in.
HEATING/COOLING MULTIZONE	6700	3.16	48	1219	32	813	
HEATING/VENTILATING MULTIZONE	10000	4.72	48	1219	38	965	6

WET SECTIONS

WET SECTION	MAXIMUM AIR FLOW	EFFECTIVE FACE AREA	WATER FLOW	WATER HEAD				
					CFM	m ³ /s	ft ²	gpm
SPRAY COIL DEHUMIDIFIER	7500	3.54	12.16	1.13	13.4	0.85	24.2	72.2
CAPILLARY CELL AIRWASHER	7500	3.54	13.89	1.28	19.4	1.22	19.2	57.3
TYPE C AIRWASHER	7500	3.54	11.55	1.07	30.0	1.89	46.1	137.5
SHELDEX SECTION	9000	4.25	12.00	1.11	6.0	0.38	6.7	20.0
COILDEK SECTION								

ELIMINATORS

ELIMINATOR SECTION	MAXIMUM FLOW		FACE AREA	
	CFM	m ³ /s		ft ²
STEEL ELIMINATORS	8700	4.11	11.55	1.07
CELLULOSE MEDIA ELIMINATORS	9000	4.25	12.00	1.11

DAMPERS

DAMPER SECTION	FACE AREA	
	FACE	BYPASS
FACE DAMPER	12.67	1.18
FACE AND INTERNAL BYPASS DAMPER	10.67	0.99
FACE AND EXTERNAL BYPASS DAMPER	12.67	1.18

OPERATING WEIGHTS (APPROX.)

SECTION	NOTES	WEIGHT	
		LB	kg
FAN HEAD	1	514	233
BASE PLENUM		240	109
FILTER SECTIONS	FLAT FILTER SECTION	70	32
	ANGLE FILTER SECTION	183	83
	HIGH PERFORMANCE FILTER SECTION	215	96
	HORIZONTAL ROLL FILTER SECTION	310	141
PLENUM SECTIONS	12 IN. PLENUM SECTION	62	28
	18 IN. PLENUM SECTION	83	38
	20 IN. PLENUM SECTION	103	47
MIXING BOXES	STANDARD MIXING BOX	172	78
	1-STAGE EVEN TEMP. MIXING BOX	200	92
	2-STAGE EVEN TEMP. MIXING BOX	481	218
	HIGH PERFORMANCE MIXING BOX	344	156
MULTIZONES	HEATING/COOLING MULTIZONE	3	593
	HEATING/VENTILATING MULTIZONE	3	167
WET SECTIONS	SPRAY COIL DEHUMIDIFIER	4	1088
	CAPILLARY CELL AIRWASHER	2	1174
	TYPE C AIRWASHER	2	1088
	SHELDEX SECTION	2	240
	COILDEK SECTION	4	272
	STEEL ELIMINATORS	382	173
DAMPERS	FACE DAMPER	110	50
	FACE AND INTERNAL BYPASS DAMPER	3	121
	FACE AND EXTERNAL BYPASS DAMPER	3	311

Notes: 1 - Add for weight of motor
2 - Add for weight of water
3 - Add for weight of coils
4 - Add for weight of coils and water

PERFORMANCE RATINGS

SIZE 60

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																		
			0.25 (0.062)			0.5 (0.125)			1.0 (0.249)			1.5 (0.374)			2.0 (0.498)			2.5 (0.623)			
CFM	m ³ /s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

SIZE 180 FORWARD CURVED FAN

FAN OUTLET: WIDTH = 22 in (559mm), HEIGHT = 19 in (483mm), AREA = 2.90 ft² (0.27m²)
FAN WK² = 13.9 LB-ft² (0.59 kg-m²)

4000	1.89	1379	7.01	328	1.67	334	0.4	0.3	428	0.6	0.5	588	1.1	0.8	731	1.6	1.2	861	2.2	1.6	975	2.8	2.1
4500	2.12	1552	7.88	369	1.88	350	0.5	0.4	440	0.8	0.6	589	1.3	0.9	722	1.8	1.4	847	2.4	1.8	962	3.1	2.3
5000	2.36	1724	8.76	411	2.09	366	0.7	0.5	453	0.9	0.7	594	1.5	1.1	719	2.1	1.5	836	2.7	2.0	947	3.3	2.5
5500	2.60	1897	9.63	452	2.29	383	0.9	0.6	468	1.1	0.8	602	1.7	1.2	721	2.3	1.7	831	3.0	2.2	936	3.7	2.7
6000	2.83	2069	10.51	493	2.50	400	1.1	0.8	483	1.4	1.0	613	1.9	1.4	726	2.6	1.9	831	3.3	2.5	931	4.0	3.0
6500	3.07	2241	11.39	534	2.71	419	1.3	1.0	499	1.6	1.2	625	2.2	1.6	733	2.9	2.2	833	3.7	2.7	928	4.5	3.3
7000	3.30	2414	12.26	575	2.92	438	1.5	1.2	516	1.9	1.4	639	2.5	1.9	743	3.3	2.4	839	4.1	3.0	930	4.9	3.7
7500	3.54	2586	13.14	616	3.13	459	1.8	1.4	532	2.2	1.7	653	2.9	2.2	754	3.7	2.7	847	4.5	3.3	934	5.4	4.0
8000	3.78	2759	14.01	657	3.34	481	2.2	1.6	549	2.6	1.9	668	3.4	2.5	766	4.1	3.1	856	4.9	3.7	940	5.8	4.4
8500	4.01	2931	14.89	698	3.55	504	2.6	1.9	567	3.0	2.2	684	3.8	2.9	780	4.6	3.4	867	5.4	4.1	948	6.4	4.8
9000	4.25	3103	15.77	739	3.75	527	3.0	2.2	585	3.4	2.6	700	4.4	3.3	794	5.2	3.8	879	6.0	4.5	958	7.0	5.2
9500	4.48	3276	16.64	780	3.96	550	3.5	2.6	604	3.9	2.9	716	4.9	3.7	809	5.8	4.3	892	6.6	5.0	969	7.6	5.7
10000	4.72	3448	17.52	821	4.17	574	4.0	3.0	624	4.5	3.3	732	5.5	4.1	824	6.5	4.8	906	7.3	5.5	981	8.3	6.2

SIZE 182 UNIFOIL FAN

FAN OUTLET: WIDTH = 25 1/2 in (648mm), HEIGHT = 20 in (514mm), AREA = 3.59 ft² (0.33m²)
FAN WK² = 29.2 LB-ft² (1.23 kg-m²)

4000	1.89	1114	5.66	328	1.67	722	0.4	0.3	808	0.6	0.4	975	1.0	0.7	1127	1.4	1.1	1273	2.0	1.5	1410	2.5	1.9
4500	2.12	1253	6.37	369	1.88	792	0.5	0.4	868	0.7	0.5	1019	1.1	0.8	1161	1.6	1.2	1294	2.2	1.6	1424	2.8	2.1
5000	2.36	1393	7.08	411	2.09	863	0.7	0.5	933	0.9	0.6	1070	1.3	1.0	1202	1.8	1.4	1326	2.4	1.8	1445	3.0	2.2
5500	2.60	1532	7.78	452	2.29	936	0.8	0.6	1000	1.0	0.8	1124	1.5	1.1	1247	2.1	1.5	1365	2.7	2.0	1476	3.3	2.4
6000	2.83	1671	8.49	493	2.50	1009	1.0	0.8	1069	1.3	0.9	1183	1.8	1.3	1297	2.3	1.7	1407	3.0	2.2	1514	3.6	2.7
6500	3.07	1811	9.20	534	2.71	1084	1.3	0.9	1139	1.5	1.1	1245	2.0	1.5	1351	2.6	2.0	1454	3.3	2.4	1555	4.0	3.0
7000	3.30	1950	9.91	575	2.92	1159	1.5	1.1	1210	1.8	1.3	1310	2.4	1.8	1407	3.0	2.2	1505	3.6	2.7	1600	4.4	3.2
7500	3.54	2089	10.61	616	3.13	1234	1.8	1.4	1283	2.1	1.6	1376	2.7	2.0	1467	3.4	2.5	1559	4.1	3.0	1648	4.8	3.6
8000	3.78	2228	11.32	657	3.34	1311	2.2	1.6	1356	2.5	1.9	1444	3.1	2.3	1530	3.8	2.8	1615	4.5	3.4	1701	5.3	3.9
8500	4.01	2368	12.03	698	3.55	1387	2.6	1.9	1430	2.9	2.2	1514	3.6	2.7	1595	4.3	3.2	1675	5.0	3.7	1755	5.8	4.3
9000	4.25	2507	12.74	739	3.75	1464	3.0	2.2	1504	3.4	2.5	1583	4.1	3.0	1661	4.8	3.6	1737	5.6	4.2	1812	6.4	4.7
9500	4.48	2646	13.44	780	3.96	1541	3.5	2.6	1579	3.9	2.9	1654	4.6	3.5	1728	5.4	4.0	1801	6.2	4.6	1872	7.0	5.2
10000	4.72	2786	14.15	821	4.17	1618	4.0	3.0	1654	4.4	3.3	1726	5.2	3.9	1797	6.0	4.5	1866	6.8	5.1	1934	7.7	5.7

MEDIUM PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																		
			2.5 (0.623)			3.0 (0.747)			3.5 (0.872)			4.0 (1.00)			4.5 (1.12)			5.0 (1.25)			
CFM	m ³ /s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

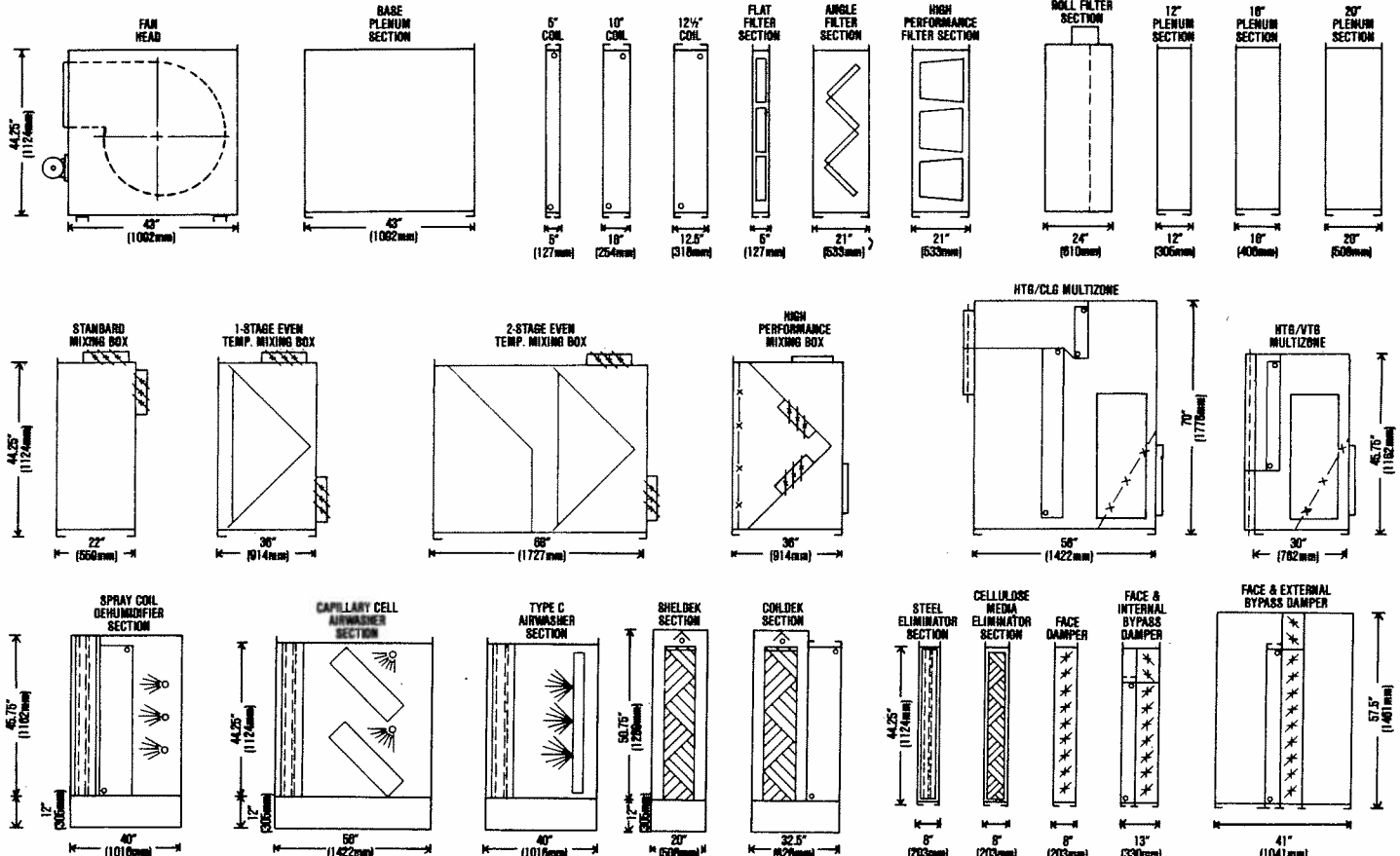
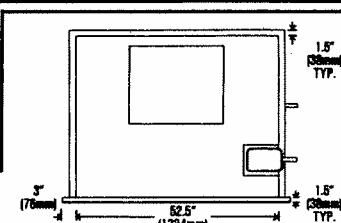
SIZE 150 FORWARD CURVED FAN

FAN OUTLET: WIDTH = 18 1/2 in (349mm), HEIGHT = 16 in (406mm), AREA = 2.08 ft² (0.19m²)
FAN WK² = 5.1 LB-ft² (0.21 kg-m²)

4000	1.89	1923
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SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

SIZES 70 LP 70 MP



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 0.125 IN. (3.175 MM) TO UNIT WIDTH AND 3 IN. (76.2 MM) TO UNIT HEIGHT FOR LUGS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 18 IN. (457 MM) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA, ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDEK AND COLDEK SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

FAN HEAD

MAXIMUM MOTOR FRAME		
LOW PRESSURE	MEDIUM PRESSURE	HIGH PRESSURE
21ST	25ST	N.A.

Fan performance ratings are based on standard air and include a draw through loss. To establish the unit internal static pressure use the air friction table on page 44 and add for coil losses where applicable. After determining the BHP (kW) add for drive losses (page 11) and check start time to ensure the appropriate motor horsepower selection.

STEAM GRID HUMIDIFIER

STEAM PRESSURE		OUTPUT STEAM PER HOUR	
PSI	KPa	LB/hr	kg/hr
2	13.8	100	40
5	34.5	190	82
10	68.9	272	123

COILS

COIL	SECTION	MAXIMUM FLOW		FACE AREA		MINIMUM STAG LENGTH		CARING HEIGHT		NO. OF COILS
		CFM	m³/s	sq ft	sq m	in.	mm	in.	mm	
STD. COIL	HEATING COIL SECT.	11000	3.19	14.41	1.34	51	1295	45%	1162	1
	COOLING COIL SECT.	7900	2.23	14.41	1.34	51	1295	45%	1162	1
UNDER-SIZED COIL	HTB/VTB MULTIZONE DECK	11000	3.19	11.54	1.07			37%	951	1
	HTB/CLB MULTIZONE DECK	7900	2.23	11.54	1.07			37%	951	1

FILTERS

FILTER SECTION	MAX. FLOW		FACE AREA		FILTER QUANTITY AND SIZE
	CFM	m³/s	sq ft	sq m	
FLAT FILTER	7900	2.23	13.80	1.26	4-20"x25"x2"
ANGLE FILTER	11000	3.19	20.83	1.94	6-20"x25"x2"
HIGH PERFORMANCE FILTER	7200	2.03	12.00	1.11	2-24"x24"x12", 2-24"x12"x12"
HORIZONTAL ROLL FILTER	7700	2.17	12.91	1.20	

MIXING BOXES

MIXING BOX	AIR INTAKE WIDTH		AIR INTAKE HEIGHT	
	in.	mm	in.	mm
STANDARD MIXING BOX				
1-STAGE EVEN TEMP. MIXING BOX	52	1321	20	508
2-STAGE EVEN TEMP. MIXING BOX				
HIGH PERFORMANCE MIXING BOX				

MULTIZONES

MULTIZONE	MAXIMUM FLOW		OUTLET WIDTH		OUTLET HEIGHT		MAXIMUM NUMBER OF ZONES
	CFM	m³/s	in.	mm	in.	mm	
HEATING/COOLING MULTIZONE	7900	2.23	32	813	36	914	6
HEATING/VENTILATING MULTIZONE	11000	3.19	32	813	42	1067	6

WET SECTIONS

WET SECTION	MAXIMUM AIR FLOW		EFFECTIVE FACE AREA		WATER FLOW		WATER HEAD
	CFM	m³/s	sq ft	sq m	USGPM	L/s	
SPRAY COIL DEHUMIDIFIER	8000	2.23	14.41	1.34	15.9	1.00	25.1
CAPILLARY CELL AIRWASHER	8000	2.23	15.28	1.42	21.4	1.35	19.6
TYPE C AIRWASHER	8000	2.23	13.76	1.26	35.6	2.25	47.1
SHELDEK SECTION	10000	2.83	13.44	1.24	6.0	0.38	7.0
COLDEK SECTION	10000	2.83	13.44	1.24	6.0	0.38	7.0

ELIMINATORS

ELIMINATOR SECTION	MAXIMUM FLOW		FACE AREA	
	CFM	m³/s	sq ft	sq m
STEEL ELIMINATORS	10000	2.83	13.76	1.26
CELLULOSE MEDIA ELIMINATORS	10000	2.83	13.33	1.24

DAMPERS

DAMPER SECTION	FACE AREA	
	sq ft	sq m
FACE DAMPER	15.17	1.41
FACE AND INTERNAL BYPASS DAMPER	FACE	13.00
	BYPASS	2.17
FACE AND EXTERNAL BYPASS DAMPER	FACE	15.17
	BYPASS	5.06

OPERATING WEIGHTS (APPROX.)

SECTION	NOTES	WEIGHT	
		LB	KG
FAN HEAD	1	277	126
BASE PLENUM			
FLAT FILTER SECTION		76	34
ANGLE FILTER SECTION		194	88
HIGH PERFORMANCE FILTER SECTION		240	109
HORIZONTAL ROLL FILTER SECTION		320	145
PLENUM SECTIONS			
12 IN. PLENUM SECTION		68	31
18 IN. PLENUM SECTION		90	41
20 IN. PLENUM SECTION		113	51
MIXING BOXES			
STANDARD MIXING BOX		223	101
1-STAGE EVEN TEMP. MIXING BOX		356	161
2-STAGE EVEN TEMP. MIXING BOX		587	266
HIGH PERFORMANCE MIXING BOX		446	202
MULTIZONES			
HEATING/COOLING MULTIZONE	3	699	313
HEATING/VENTILATING MULTIZONE	3	210	95
WET SECTIONS			
SPRAY COIL DEHUMIDIFIER	4	1225	556
CAPILLARY CELL AIRWASHER	2	1342	609
TYPE C AIRWASHER	2	1225	556
SHELDEK SECTION	2	286	130
COLDEK SECTION	4	321	146
ELIMINATOR SECTIONS			
STEEL ELIMINATORS		443	201
CELLULOSE MEDIA ELIMINATORS		65	29
DAMPERS			
FACE DAMPER		126	57
FACE AND INTERNAL BYPASS DAMPER	3	139	63
FACE AND EXTERNAL BYPASS DAMPER	3	379	172

NOTES: 1 - Add for weight of motor
2 - Add for weight of water
3 - Add for weight of coils
4 - Add for weight of coils and water

PERFORMANCE RATINGS

SIZE 70

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																		
			0.25 (0.062)			0.5 (0.125)			1.0 (0.249)			1.5 (0.374)			2.0 (0.488)			2.5 (0.623)			
CFM	m³/s	fpm	m/s	RPM	BHP	KW	RPM	BHP	KW	RPM	BHP	KW	RPM	BHP	KW	RPM	BHP	KW	RPM	BHP	KW

SIZE 180 FORWARD CURVED FAN

FAN OUTLET: WIDTH = 22 in (559mm), HEIGHT = 19 in (483mm), AREA = 2.90 ft² (0.27m²). FAN WK² = 13.9 LB-ft² (0.59 kg-m²).

4000	1.89	1379	7.01	278	1.41	334	0.4	0.3	428	0.6	0.5	588	1.1	0.8	731	1.6	1.2	861	2.2	1.6	975	2.8	2.1
4500	2.12	1552	7.88	312	1.59	350	0.5	0.4	440	0.8	0.6	589	1.3	0.9	722	1.8	1.4	847	2.4	1.8	962	3.1	2.3
5000	2.36	1724	8.76	347	1.76	366	0.7	0.5	453	0.9	0.7	594	1.5	1.1	719	2.1	1.5	836	2.7	2.0	947	3.3	2.5
5500	2.60	1897	9.63	382	1.94	383	0.9	0.6	468	1.1	0.8	602	1.7	1.2	721	2.3	1.7	831	3.0	2.2	936	3.7	2.7
6000	2.83	2069	10.51	416	2.12	400	1.1	0.8	483	1.4	1.0	613	1.9	1.4	726	2.6	1.9	831	3.3	2.5	931	4.0	3.0
6500	3.07	2241	11.39	451	2.29	419	1.3	1.0	499	1.6	1.2	625	2.2	1.6	733	2.9	2.2	833	3.7	2.7	928	4.5	3.3
7000	3.30	2414	12.26	486	2.47	438	1.5	1.2	516	1.9	1.4	639	2.5	1.9	743	3.3	2.4	839	4.1	3.0	930	4.9	3.7
7500	3.54	2586	13.14	520	2.64	459	1.8	1.4	532	2.2	1.7	653	2.9	2.2	754	3.7	2.7	847	4.5	3.3	934	5.4	4.0
8000	3.78	2759	14.01	555	2.82	481	2.2	1.6	549	2.6	1.9	668	3.4	2.5	766	4.1	3.1	856	4.9	3.7	940	5.8	4.4
8500	4.01	2931	14.89	590	3.00	504	2.6	1.9	567	3.0	2.2	684	3.8	2.9	780	4.6	3.4	867	5.4	4.1	948	6.4	4.8
9000	4.25	3103	15.77	625	3.17	527	3.0	2.2	585	3.4	2.6	700	4.4	3.3	794	5.2	3.8	879	6.0	4.5	958	7.0	5.2
9500	4.48	3276	16.64	659	3.35	550	3.5	2.6	604	3.9	2.9	716	4.9	3.7	809	5.8	4.3	892	6.6	5.0	969	7.6	5.7
10000	4.72	3448	17.52	694	3.53	574	4.0	3.0	624	4.5	3.3	732	5.5	4.1	824	6.5	4.8	906	7.3	5.5	981	8.3	6.2
10500	4.96	3621	18.39	729	3.70	598	4.6	3.4	645	5.1	3.8	749	6.2	4.6	840	7.2	5.4	920	8.1	6.0	994	9.1	6.8
11000	5.19	3793	19.27	763	3.88	622	5.2	3.9	666	5.7	4.3	766	6.9	5.2	856	8.0	6.0	935	8.9	6.7			

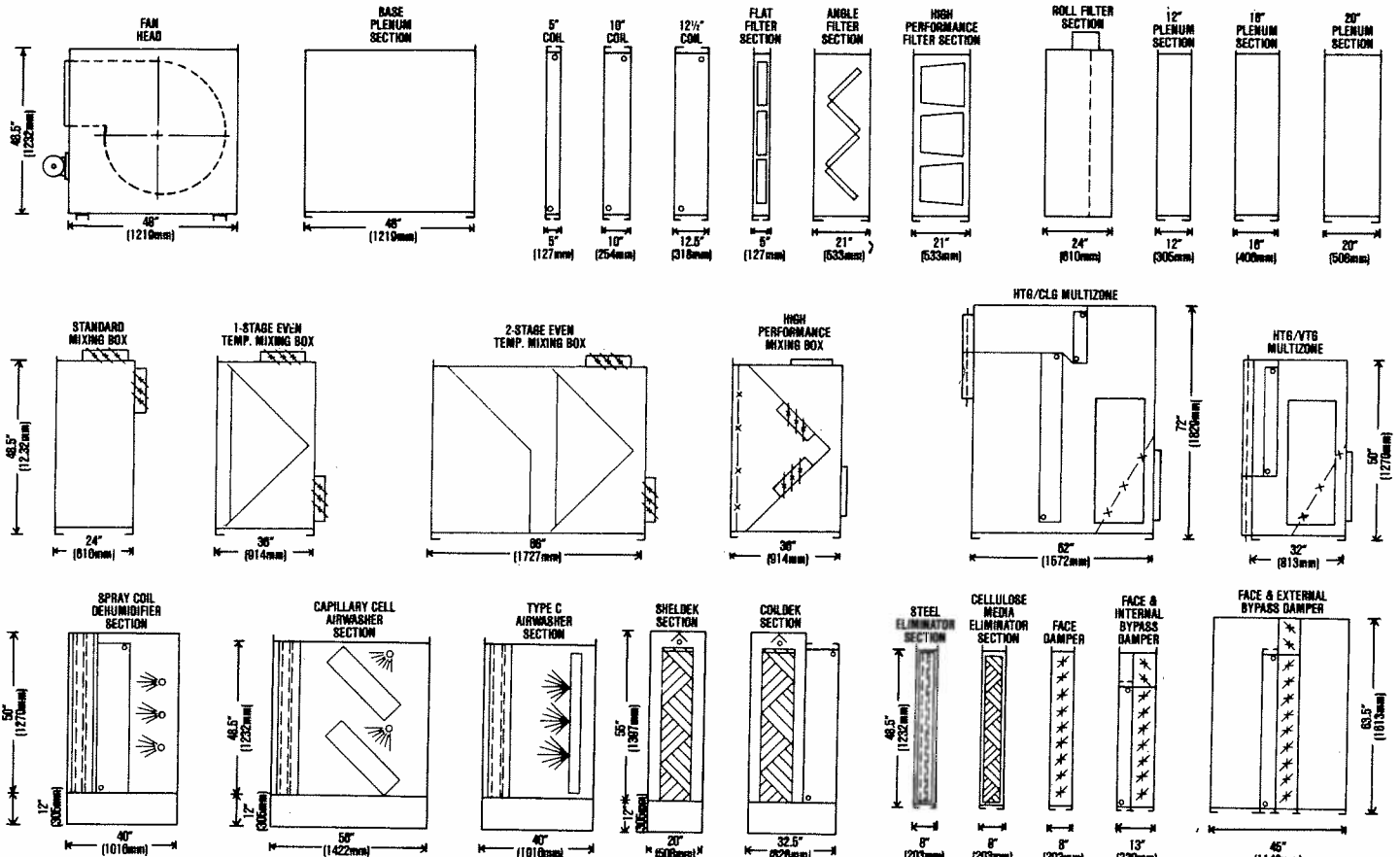
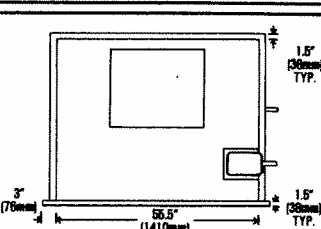
SIZE 200 UNIFOIL FAN

FAN OUTLET: WIDTH = 28 in (711mm), HEIGHT = 22 in (559mm), AREA = 4.28 ft² (0.40m²). FAN WK² = 40.6 LB-ft² (1.71 kg-m²).

4000	1.89	935	4.75	278	1.41	578	0.3	0.2	671	0.5	0.4	843	1.0	0.7	1002	1.5	1.1	1147	2.0	1.5	1277	2.6	2.0
4500	2.12	1051	5.34	312	1.59	628	0.4	0.3	711	0.6	0.5	871	1.1	0.8	1016	1.6	1.2	1155	2.2	1.7	1282	2.9	2.1
5000	2.36	1168	5.93	347	1.76	679	0.5	0.4	755	0.7	0.5	902	1.2	0.9	1038	1.8	1.3	1167	2.4	1.8	1290	3.1	2.3
5500	2.60	1285	6.53	382	1.94	733	0.6	0.5	802	0.9	0.6	937	1.4	1.0	1065	2.0	1.5	1185	2.6	2.0	1302	3.4	2.5
6000	2.83	1402	7.12	416	2.12	787	0.8	0.6	851	1.0	0.8	976	1.6	1.2	1097	2.2	1.6	1210	2.9	2.1	1319	3.6	2.7
6500	3.07	1519	7.71	451	2.29	842	1.0	0.7	902	1.2	0.9	1017	1.8	1.3	1130	2.4	1.8	1239	3.1	2.3	1342	3.9	2.9
7000	3.30	1636	8.31	486	2.47	898	1.1	0.9	953	1.4	1.1	1061	2.0	1.5	1167	2.7	2.0	1271	3.4	2.6	1369	4.2	3.1
7500	3.54	1752	8.90	520	2.64	954	1.4	1.0	1006	1.7	1.2	1107	2.3	1.7	1207	3.0	2.2	1304	3.7	2.8	1400	4.5	3.4
8000	3.78	1869	9.50	555	2.82	1011	1.6	1.2	1060	1.9	1.4	1155	2.6	1.9	1249	3.3	2.5	1341	4.1	3.0	1432	4.9	3.7
8500	4.01	1986	10.09	590	3.00	1068	1.9	1.4	1115	2.2	1.7	1205	2.9	2.2	1292	3.6	2.7	1381	4.5	3.3	1466	5.3	4.0
9000	4.25	2103	10.68	625	3.17	1125	2.2	1.6	1170	2.6	1.9	1255	3.3	2.4	1338	4.0	3.0	1422	4.9	3.6	1504	5.7	4.3
9500	4.48	2220	11.28	659	3.35	1183	2.5	1.9	1225	2.9	2.2	1307	3.7	2.7	1386	4.5	3.3	1464	5.3	4.0	1543		

SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

SIZES 85 LP 85 MP



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 6 IN. (152mm) TO UNIT WIDTH AND 3 IN. (76mm) TO UNIT HEIGHT FOR LUGS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 16 IN. (406mm) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDEK AND COLDEK SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

FAN HEAD

LOW PRESSURE	MEDIUM PRESSURE	HIGH PRESSURE
25AT	28AT	N.A.

Fan performance ratings are based on standard air and include for draw through box loss. To establish the unit internal static pressure use the air friction table on page 44 and add for coil losses where applicable. After determining the BHP (kW) add for drive losses (page 11) and check start time to ensure the appropriate motor horsepower selection.

STEAM GRID HUMIDIFIER

STEAM PRESSURE	MAXIMUM FLOW	OUTPUT STEAM PER HOUR
in. / mm	CFM / m ³ /s	LB/hr / kg/hr
2	13.8	117
5	34.5	194
10	68.9	293

COILS

COIL	SECTION	MAXIMUM FLOW	FACE AREA	INDIVIDUAL TUBE LENGTH	CASING HEIGHT	NO. OF CHLGS.
STD. COIL	HEATING COIL SECT.	13000	6.14			
	COOLING COIL SECT.	9300	4.39			
	HTG/CLG MULTIZONE	10000	4.72	16.86	1.56	54
	SPRAY COIL DEHUM.	10000	4.72	16.86	1.56	54
UNDER-SIZED COIL	HTG/VTG MULTIZONE	13000	6.14	12.23	1.14	37 1/2
	FACE & INTERNAL BYPASS DAMPER	9300	4.39	7.67	0.71	24
SMALL COIL	HTG/CLG MULTIZONE	9300	4.39	7.67	0.71	24

FILTERS

FILTER SECTION	MAX. FLOW	FACE AREA	FILTER QUANTITY AND SIZE	
			CFM	m ³ /s
FLAT FILTER	9600	4.53	17.50	1.63
ANGLE FILTER	13000	6.14	23.33	2.17
HIGH PERFORMANCE FILTER	9600	4.53	16.00	1.49
HORIZONTAL ROLL FILTER	9100	4.29	15.16	1.41

MIXING BOXES

MIXING BOX	AIR INTAKE WIDTH		AIR INTAKE HEIGHT	
	in.	mm	in.	mm
STANDARD MIXING BOX	54	1372	22	559
1-STAGE EVEN TEMP. MIXING BOX				
2-STAGE EVEN TEMP. MIXING BOX				
HIGH PERFORMANCE MIXING BOX				

MULTIZONES

MULTIZONE	MAXIMUM FLOW	OUTLET WIDTH	OUTLET HEIGHT	MAXIMUM NUMBER OF ZONES
HEATING/COOLING MULTIZONE	9300	4.39	54	1372
HEATING/VENTILATING MULTIZONE	13000	6.14	54	1372

WET SECTIONS

WET SECTION	MAXIMUM AIR FLOW	EFFECTIVE FACE AREA	WATER FLOW	WATER HEAD				
					CFM	m ³ /s	gpm	L/s
SPRAY COIL DEHUMIDIFIER	10000	4.72	16.86	1.56	18.5	1.17	26.5	76.1
CAPILLARY CELL AIRWASHER	10000	4.72	20.83	1.94	29.2	1.84	20.0	59.7
TYPE C AIRWASHER	10000	4.72	16.16	1.50	40.0	2.52	47.5	141.7
SHELDEK SECTION	10000	4.72	14.00	1.30	6.0	0.36	7.8	22.7
COLDEK SECTION	10000	4.72	14.00	1.30	6.0	0.36	7.8	22.7

ELIMINATORS

ELIMINATOR SECTION	MAXIMUM FLOW	FACE AREA		
			CFM	m ³ /s
STEEL ELIMINATORS	12000	5.66	16.16	1.50
CELLULOSE MEDIA ELIMINATORS	10000	4.72	14.00	1.30

DAMPERS

DAMPER SECTION	MAXIMUM FLOW	FACE AREA		
			CFM	m ³ /s
FACE DAMPER	12000	5.66	16.16	1.50
FACE AND INTERNAL BYPASS DAMPER	12000	5.66	16.16	1.50
FACE AND EXTERNAL BYPASS DAMPER	12000	5.66	16.16	1.50

OPERATING WEIGHTS (APPROX.)

SECTION	NOTES	WEIGHT	
		LB	KG
FAN HEAD	1	735	333
BASE PLENUM		336	153
FILTER SECTIONS	FLAT FILTER SECTION	81	37
	ANGLE FILTER SECTION	227	103
	HIGH PERFORMANCE FILTER SECTION	265	120
	HORIZONTAL ROLL FILTER SECTION	350	159
PLENUM SECTIONS	12 IN. PLENUM SECTION	73	33
	16 IN. PLENUM SECTION	97	44
	20 IN. PLENUM SECTION	122	55
	24 IN. PLENUM SECTION	157	71
MIXING BOXES	STANDARD MIXING BOX	281	127
	1-STAGE EVEN TEMP. MIXING BOX	407	185
	2-STAGE EVEN TEMP. MIXING BOX	682	300
MULTIZONES	HIGH PERFORMANCE MIXING BOX	582	265
	HEATING/COOLING MULTIZONE	3	750
	HEATING/VENTILATING MULTIZONE	3	750
WET SECTIONS	SPRAY COIL DEHUMIDIFIER	4	1341
	CAPILLARY CELL AIRWASHER	2	1517
	TYPE C AIRWASHER	2	1341
	SHELDEK SECTION	2	344
ELIMINATOR SECTIONS	COLDEK SECTION	4	381
	STEEL ELIMINATORS	500	227
DAMPERS	CELLULOSE MEDIA ELIMINATORS	71	32
	FACE DAMPER	141	64
	FACE AND INTERNAL BYPASS DAMPER	3	156
	FACE AND EXTERNAL BYPASS DAMPER	3	446

NOTES: 1 - Add for weight of motor
2 - Add for weight of water
3 - Add for weight of coils
4 - Add for weight of coils and water

PERFORMANCE RATINGS

SIZE 85

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — In. wg (kPa)																		
			0.25 (0.062)			0.5 (0.125)			1.0 (0.249)			1.5 (0.374)			2.0 (0.498)			2.5 (0.623)			
CFM	m ³ /s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

SIZE 200 FORWARD CURVED FAN FAN OUTLET: WIDTH = 24\"/>

6000	2.83	1412	7.17	356	1.81	306	0.7	0.5	371	0.9	0.7	505	1.6	1.2	615	2.2	1.7	725	3.1	2.3	828	4.0	3.0
6500	3.07	1529	7.77	386	1.96	322	0.9	0.7	379	1.1	0.8	510	1.8	1.3	614	2.4	1.8	715	3.2	2.4	816	4.2	3.1
7000	3.30	1647	8.37	415	2.11	340	1.1	0.8	390	1.3	1.0	513	2.0	1.5	616	2.7	2.0	709	3.5	2.6	804	4.4	3.3
7500	3.54	1765	8.96	445	2.26	358	1.3	1.0	402	1.5	1.1	517	2.2	1.6	620	3.0	2.2	709	3.8	2.8	795	4.6	3.5
8000	3.78	1882	9.56	474	2.41	376	1.5	1.2	417	1.7	1.3	520	2.4	1.8	624	3.3	2.4	711	4.1	3.0	792	5.0	3.7
8500	4.01	2000	10.16	504	2.56	395	1.8	1.4	433	2.0	1.5	525	2.7	2.0	628	3.6	2.7	714	4.4	3.3	792	5.3	4.0
9000	4.25	2118	10.76	534	2.71	414	2.1	1.6	449	2.4	1.8	533	3.0	2.2	631	3.9	2.9	719	4.8	3.6	795	5.7	4.3
9500	4.48	2235	11.36	563	2.86	433	2.5	1.9	466	2.7	2.0	542	3.3	2.5	635	4.2	3.1	723	5.2	3.9	798	6.2	4.6
10000	4.72	2353	11.95	593	3.01	452	2.9	2.2	484	3.1	2.3	553	3.7	2.8	639	4.6	3.4	726	5.6	4.2	803	6.7	5.0
10500	4.96	2471	12.55	623	3.16	472	3.3	2.5	502	3.6	2.7	566	4.1	3.1	645	5.0	3.7	730	6.0	4.5	807	7.2	5.3
11000	5.19	2588	13.15	652	3.31	491	3.8	2.8	520	4.0	3.0	580	4.6	3.4	652	5.4	4.0	733	6.5	4.8	811	7.7	5.7
11500	5.43	2706	13.75	682	3.47	511	4.3	3.2	539	4.6	3.4	595	5.2	3.8	661	5.9	4.4	737	7.0	5.2	814	8.2	6.1
12000	5.66	2824	14.34	712	3.62	531	4.9	3.6	557	5.1	3.8	611	5.7	4.3	672	6.5	4.8	743	7.5	5.6	817	8.7	6.5
12500	5.90	2941	14.94	741	3.77	551	5.5	4.1	576	5.8	4.3	628	6.4	4.8	684	7.1	5.3	750	8.1	6.0	821	9.3	6.9
13000	6.14	3059	15.54	771	3.92	571	6.1	4.6	595	6.4	4.8	645	7.1	5.3	697	7.8	5.8	758	8.7	6.5	826	9.9	7.4

SIZE 222 UNIFOIL FAN FAN OUTLET: WIDTH = 31\"/>

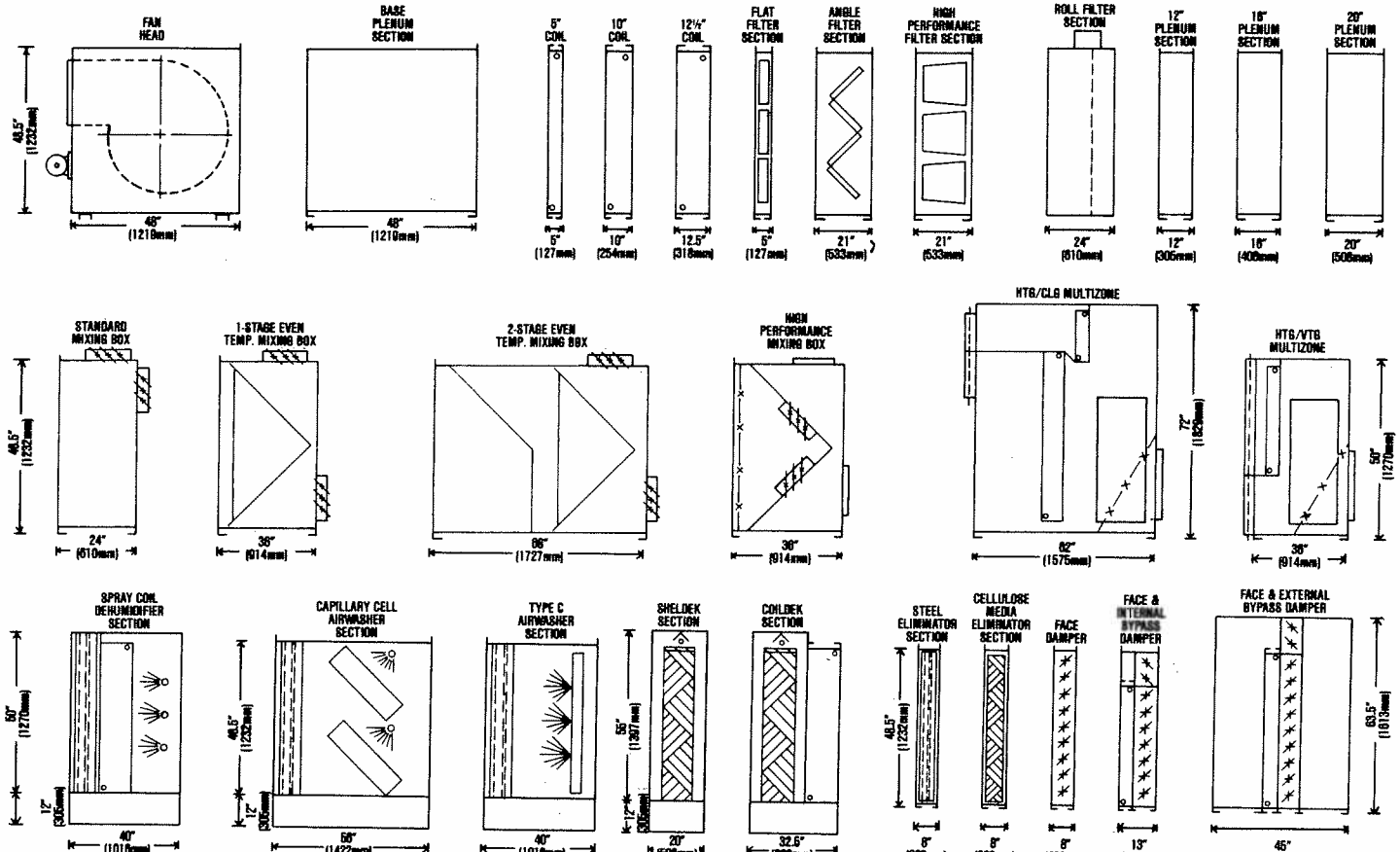
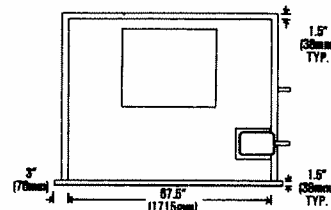
6000	2.83	1139	5.78	356	1.81	596	0.6	0.4	666	0.9	0.6	802	1.5	1.1	926	2.1	1.6	1045	2.9	2.2	1157	3.8	2.8
6500	3.07	1233	6.27	386	1.96	635	0.7	0.5	699	1.0	0.7	826	1.6	1.2	945	2.3	1.7	1056	3.1	2.3	1165	4.0	3.0
7000	3.30	1328	6.75	415	2.11	674	0.8	0.6	734	1.1	0.8	852	1.8	1.3	966	2.5	1.9	1072	3.3	2.5	1174	4.2	3.2
7500	3.54	1423	7.23	445	2.26	713	1.0	0.7	770	1.3	1.0	881	2.0	1.5	989	2.7	2.1	1091	3.6	2.7	1188	4.5	3.3
8000	3.78	1518	7.71	474	2.41	753	1.2	0.9	807	1.5	1.1	911	2.2	1.6	1014	3.0	2.2	1112	3.8	2.9	1204	4.8	3.6
8500	4.01	1613	8.19	504	2.56	794	1.3	1.0	845	1.7	1.3	943	2.4	1.8	1040	3.2	2.4	1135	4.1	3.1	1224	5.1	3.8
9000	4.25	1708	8.68	534	2.71	834	1.6	1.2	883	1.9	1.4	976	2.7	2.0	1069	3.5	2.6	1158	4.4	3.3	1245	5.4	4.0
9500	4.48	1803	9.16	563	2.86	875	1.8	1.3	922	2.2	1.6	1010	2.9	2.2	1098	3.8	2.8	1184	4.8	3.6	1268	5.8	4.3
10000	4.72	1898	9.64	593	3.01	917	2.0	1.5	961	2.4	1.8	1045	3.3	2.4	1129	4.1	3.1	1211	5.1	3.8	1292	6.1	4.6
10500	4.96	1992	10.12	623	3.16	958	2.3	1.7	1000	2.7	2.0	1081	3.6	2.7	1160	4.5	3.4	1240	5.5	4.1	1317	6.5	4.9
11000	5.19	2087	10.60	652	3.31	1000	2.6	2.0	1040	3.1	2.3	1118	4.0	2.9	1194	4.9	3.6	1270	5.9	4.4	1344	7.0	5.2
11500	5.43	2182	11.09	682	3.47	1042	2.9	2.2	1080	3.4	2.6	1155	4.3	3.2	1228	5.3	4.0	1300	6.3	4.7	1372	7.4	5.6
12000	5.66	2277	11.57	712	3.62	1084	3.3	2.5	1121	3.8	2.8	1193	4.8	3.6	1263	5.7	4.3	1332	6.8	5.1	1402	7.9	5.9
12500	5.90	2372	12.05	741	3.77	1126	3.7	2.8	1161	4.2	3.1	1231	5.2	3.9	1298	6.2	4.6	1365	7.3	5.4	1432	8.5	6.3
13000	6.14	2467	12.53	771	3.92	1169	4.1	3.1	1202	4.6	3.5	1270	5.7	4.2	1335	6.7	5.0	1396	7.8	5.8	1462	9.0	6.7

MEDIUM PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — In. wg (kPa)											
			2.5 (0.623)			3.0 (0.747)			3.5 (0.872)			4.0 (1.00)		

SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

SIZES 100 LP 100 MP



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 8 in. (152mm) TO UNIT WIDTH AND 3 in. (76mm) TO UNIT HEIGHT FOR LUGS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 18 in. (457mm) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA, ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDON AND COILDEK SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

FAN HEAD

LOW PRESSURE	MEDIUM PRESSURE	HIGH PRESSURE
2567	3241	N.A.

Fan performance ratings are based on standard air and include fan draw through box loss. To establish the unit internal static pressure use the air friction table on page 44 and add for coil losses where applicable. After determining the BHP (kW) add for drive losses (page 11) and check start time to ensure the appropriate motor horsepower selection.

STEAM GRID HUMIDIFIER

STEAM PRESSURE	OUTPUT STEAM PER HOUR		
psig	kPa	LB/hr	kg/hr
2	13.8	117	53
5	34.5	194	88
10	68.9	293	133

COILS

COIL	SECTION	MAXIMUM FLOW		FACE AREA	MINORAL TUBE LENGTH	CARING HEIGHT	NO. OF COILS
		CFM	m ³ /s				
STD. COIL	HEATING COIL SECT.	18000	8.50	20.71	1.92	86	1267
	COOLING COIL SECT.	11000	5.19				
	HTG/CLG MULTIZONE	13000	6.14				
	SPRAY COIL DEHUM.	13000	6.14				
UNDER-SIZED COIL	HTG/VTB MULTIZONE	18000	8.50	15.03	1.40	37 1/4	951
	FACE & INTERNAL BYPASS DAMPER	11000	5.19	9.42	0.88	24 1/2	832

FILTERS

FILTER SECTION	MAX. FLOW	FACE AREA	FILTER QUANTITY AND SIZE		
CFM	m ³ /s	ft ²	m ²		
FLAT FILTER	11000	5.19	20.00	1.86	4-20"x16"x2" 4-25"x16"x2"
ANGLE FILTER	15000	7.08	27.50	2.55	6-20"x25"x2" 3-20"x16"x2"
HIGH PERFORMANCE FILTER	12000	5.66	20.00	1.86	4-24"x24"x12" 2-12"x24"x12"
HORIZONTAL ROLL FILTER	11000	5.19	18.06	1.73	

MIXING BOXES

MIXING BOX	AIR INTAKE WIDTH	AIR INTAKE HEIGHT
	in.	mm
STANDARD MIXING BOX	66	1676
1-STAGE EVEN TEMP. MIXING BOX	66	1676
2-STAGE EVEN TEMP. MIXING BOX	66	1676
HIGH PERFORMANCE MIXING BOX	66	1676

MULTIZONES

MULTIZONE	MAXIMUM FLOW	OUTLET WIDTH	OUTLET HEIGHT	MAXIMUM NUMBER OF ZONES	
	CFM	m ³ /s	in.	mm	
HEATING/COOLING MULTIZONE	11000	5.19	66	1676	40
HEATING/VENTILATING MULTIZONE	18000	8.50	66	1676	46

WET SECTIONS

WET SECTION	MAXIMUM AIR FLOW	EFFECTIVE FACE AREA	WATER FLOW	WATER HEAD
	CFM	m ³ /s	gpm	L/s
SPRAY COIL DEHUMIDIFIER	13000	6.14	20.71	1.92
CAPILLARY CELL AIRWASHER	13000	6.14	25.00	2.32
TYPE C AIRWASHER	13000	6.14	19.79	1.84
SHELDON SECTION	13000	6.14	17.50	1.63
COILDEK SECTION	13000	6.14	17.50	1.63

ELIMINATORS

ELIMINATOR SECTION	MAXIMUM FLOW	FACE AREA
	CFM	m ³ /s
STEEL ELIMINATORS	15000	7.08
CELLULOSE MEDIA ELIMINATORS	13000	6.14

DAMPERS

DAMPER SECTION	FACE AREA
	ft ²
FACE DAMPER	21.08
FACE AND INTERNAL BYPASS DAMPER	18.50
FACE AND EXTERNAL BYPASS DAMPER	21.08

OPERATING WEIGHTS (APPROX.)

SECTION	NOTES	WEIGHT
		LB
FAN HEAD	1	875
BASE PLENUM		396
FLAT FILTER SECTION		87
ANGLE FILTER SECTION		248
HIGH PERFORMANCE FILTER SECTION		303
HORIZONTAL ROLL FILTER SECTION		360
12 IN. PLENUM SECTION		78
18 IN. PLENUM SECTION		104
20 IN. PLENUM SECTION		130
STANDARD MIXING BOX		323
1-STAGE EVEN TEMP. MIXING BOX		466
2-STAGE EVEN TEMP. MIXING BOX		744
HIGH PERFORMANCE MIXING BOX		646
HEATING/COOLING MULTIZONE	3	850
HEATING/VENTILATING MULTIZONE	3	354
SPRAY COIL DEHUMIDIFIER	4	1506
CAPILLARY CELL AIRWASHER	2	1895
TYPE C AIRWASHER	2	1506
SHELDON SECTION	2	362
COILDEK SECTION	4	404
STEEL ELIMINATORS		995
CELLULOSE MEDIA ELIMINATORS		79
FACE DAMPER		167
FACE AND INTERNAL BYPASS DAMPER	3	206
FACE AND EXTERNAL BYPASS DAMPER	3	325

Notes: 1 - Add for weight of motor
2 - Add for weight of water
3 - Add for weight of coils
4 - Add for weight of coils and water

PERFORMANCE RATINGS

SIZE 100

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)															
			0.25 (0.002)		0.5 (0.125)		1.0 (0.249)		1.5 (0.374)		2.0 (0.499)		2.5 (0.623)					
CFM	m ³ /s	fpm	m/s	RPM	BHP	KW	RPM	BHP	KW	RPM	BHP	KW	RPM	BHP	KW	RPM	BHP	KW

SIZE 220 FORWARD CURVED FAN

FAN OUTLET:		WIDTH HEIGHT AREA		FAN WK ² = 39.9 LB-FT ² (1.68 kg-m ²)																			
		= 27 1/4 in (692mm) = 27 1/4 in (692mm) = 5.16 ft ² (0.45m ²)																					
6000	2.83	1163	5.91	290	1.47	260	0.6	0.5	341	0.9	0.7	476	1.6	1.2	599	2.6	2.0	704	3.8	2.8	783	5.4	4.0
7000	3.30	1357	6.89	338	1.72	275	0.8	0.6	349	1.2	0.9	475	1.9	1.4	586	2.9	2.2	690	4.1	3.0	769	5.7	4.3
8000	3.78	1550	7.78	386	1.96	295	1.1	0.9	360	1.5	1.1	478	2.3	1.7	581	3.3	2.4	677	4.4	3.3	756	6.2	4.6
9000	4.25	1744	8.86	435	2.21	317	1.5	1.1	375	1.9	1.4	486	2.8	2.1	582	3.8	2.8	671	4.9	3.6	756	6.2	4.6
10000	4.72	1938	9.84	483	2.45	340	2.0	1.5	391	2.4	1.8	495	3.4	2.5	587	4.4	3.3	671	5.5	4.1	751	6.8	5.1
11000	5.19	2132	10.83	531	2.70	365	2.6	1.9	410	3.0	2.3	506	4.1	3.0	594	5.1	3.8	675	6.3	4.7	750	7.5	5.6
12000	5.66	2326	11.81	579	2.94	390	3.3	2.4	431	3.7	2.8	519	4.9	3.6	603	6.0	4.5	681	7.2	5.4	753	8.5	6.3
13000	6.14	2519	12.80	628	3.19	416	4.1	3.0	454	4.6	3.4	534	5.7	4.3	614	7.0	5.2	689	8.2	6.1	758	9.5	7.1
14000	6.61	2713	13.78	676	3.43	442	5.0	3.7	477	5.5	4.1	551	6.8	5.0	626	8.1	6.0	698	9.4	7.0	765	10.8	8.0
15000	7.08	2907	14.77	724	3.68	468	6.0	4.5	502	6.6	4.9	569	7.9	5.9	640	9.3	6.9	709	10.7	8.0	774	12.2	9.1
16000	7.55	3101	15.75	773	3.92	495	7.2	5.4	527	7.9	5.9	589	9.2	6.9	655	10.7	8.0	721	12.2	9.1	784	13.7	10.2
17000	8.02	3295	16.74	821	4.17	522	8.6	6.4	552	9.3	6.9	611	10.6	7.9	672	12.2	9.1	734	13.8	10.3	795	15.4	11.5
18000	8.50	3488	17.72	869	4.42	550	10.1	7.5	578	10.8	8.1	633	12.3	9.2	690	13.8	10.3	749	15.5	11.6	807	17.2	12.9

SIZE 222 UNIFOIL FAN

FAN OUTLET:		WIDTH HEIGHT AREA		FAN WK ² = 69.0 LB-FT ² (2.91 kg-m ²)																			
		= 31 in (787mm) = 24 1/4 in (622mm) = 5.27 ft ² (0.49m ²)																					
6000	2.83	1139	5.78	290	1.47	596	0.6	0.4	666	0.9	0.6	802	1.5	1.1	926	2.1	1.6	1045	2.9	2.2	1157	3.8	2.8
7000	3.30	1328	6.75	338	1.72	674	0.8	0.6	734	1.1	0.8	852	1.8	1.3	966	2.5	1.9	1072	3.3	2.5	1174	4.2	3.2
8000	3.78	1518	7.71	386	1.96	753	1.2	0.9	807	1.5	1.1	911	2.2	1.6	1014	3.0	2.2	1112	3.8	2.9	1204	4.6	3.6
9000	4.25	1708	8.68	435	2.21	834	1.6	1.2	883	1.9	1.4	976	2.7	2.0	1069	3.5	2.6	1158	4.4	3.3	1245	5.4	4.0
10000	4.72	1898	9.64	483	2.45	917	2.0	1.5	961	2.4	1.8	1045	3.3	2.4	1129	4.1	3.1	1211	5.1	3.8	1292	6.1	4.6
11000	5.19	2087	10.60	531	2.70	1000	2.6	2.0	1040	3.1	2.3	1118	4.0	2.9	1194	4.9	3.6	1270	5.9	4.4	1344	7.0	5.2
12000	5.66	2277	11.57	579	2.94	1084	3.3	2.5	1121	3.8	2.8	1193	4.8	3.6	1263	5.7	4.3	1332	6.8	5.1	1402	7.9	5.9
13000	6.14	2467	12.53	628	3.19	1169	4.1	3.1	1202	4.6	3.5	1270	5.7	4.2	1335	6.7	5.0	1398	7.8	5.8	1462	9.0	6.7
14000	6.61	2657	13.50	676	3.43	1254	5.0	3.8	1285	5.6	4.2	1347	6.8	5.0	1408	7.9	5.9	1468	9.0	6.7	1527	10.2	7.6
15000	7.08	2846	14.46	724	3.68	1339	6.1	4.6	1368	6.7	5.0	1427	8.0	5.9	1484	9.2	6.8	1540	10.4	7.7	1595	11.6	8.7
16000	7.55	3036	15.42	773	3.92	1425	7.3	5.5	1451	8.0	6.0	1507	9.3	6.9	1561	10.6	7.9	1614	11.9	8.9	1666	13.2	9.8
17000	8.02	3226	16.39	821	4.17	1511	8.7	6.5	1536	9.4	7.0	1588	10.8	8.1	1639	12.2	9.1	1689	13.5	10.1	1745	15.1	11.3
18000	8.50	3416	17.35	869	4.42	1604	10.4	7.8	1627	11.2	8.4	1676	12.7	9.5	1725	14.1	10.5	1773	15.6	11.6	1820	17.0	12.7

MEDIUM PRESSURE

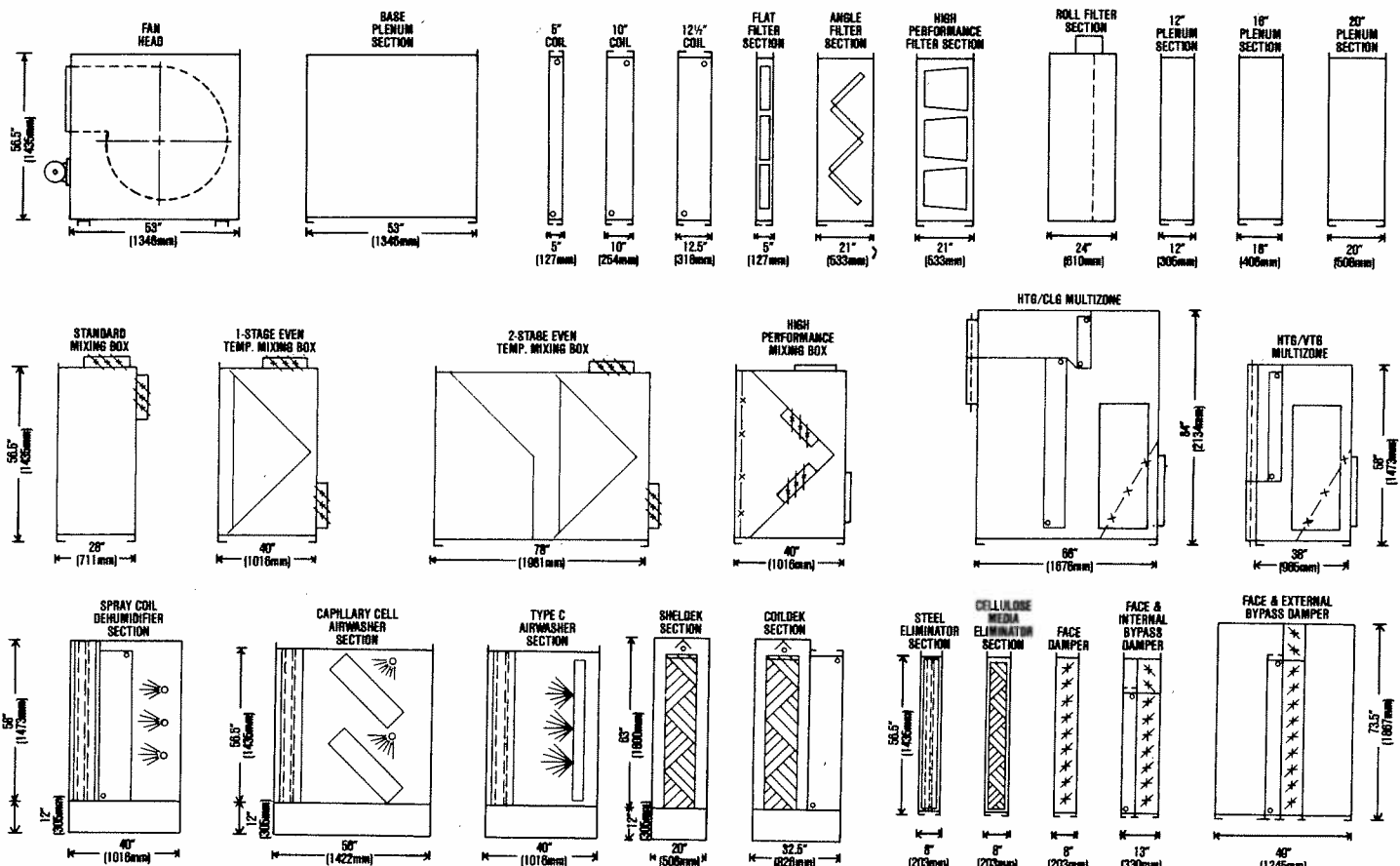
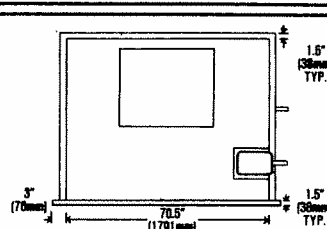
FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)															
			2.5 (0.623)		3.0 (0.747)		3.5 (0.872)		4.0 (1.00)		4.5 (1.12)		5.0 (1.26)					
CFM	m ³ /s	fpm	m/s	RPM	BHP	KW	RPM	BHP	KW	RPM	BHP	KW	RPM	BHP	KW	RPM	BHP	KW

SIZE 200 FORWARD CURVED FAN

FAN OUTLET:		WIDTH HEIGHT AREA		FAN WK ² = 26.8 LB-FT ² (1.13 kg-m ²)											
		= 24 in (609mm) = 24 in (609mm) = 4.25 ft ² (0.39m ²)													
6000	2.83	1412	7.17	290	1.47	828	4.0	3.0	916	4.9	3.7	994	5.8	4.3	</

SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

SIZES 120 LP 120 MP



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 0 in. (152mm) TO UNIT WIDTH AND 3 in (76mm) TO UNIT HEIGHT FOR LUBS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 16 in. (406mm) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA, ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDON AND COILDEK SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

FAN HEAD

LOW PRESSURE	MEDIUM PRESSURE	HIGH PRESSURE
256T	324T	N.A.

Fan performance ratings are based on standard air and include for draw through box fans. To establish the unit internal static pressure use the air friction table on page 44 and add for coil losses where applicable. After determining the BHP (kW) add for drive losses (page 11) and check start time to ensure the appropriate motor horsepower selection.

STEAM GRID HUMIDIFIER

STEAM PRESSURE	OUTPUT STEAM PER HOUR
2	13.8
5	34.5
10	68.9

COILS

COIL	SECTION	MAXIMUM FLOW	FACE AREA	NOMINAL TUBE LENGTH	CAPACITY	NO. OF COILS
STD. COIL	HEATING COIL SECT	20000	9.44	2.20	69	1753
	COOLING COIL SECT	13000	6.14	2.20	69	1753
	HTG/CLG MULTIZONE	16000	7.55	2.28	64	1640
	COILDEK	15000	7.08	2.28	64	1640
UNDER-SIZED COIL	HTG/VTG MULTIZONE	20000	9.44	1.70	1.84	416
	FACE & INTERNAL BYPASS DAMPER	13000	6.14	1.10	1.10	29

FILTERS

FILTER SECTION	MAX. FLOW	FACE AREA	FILTER QUANTITY AND SIZE
FLAT FILTER	13000	6.14	23.61 2.19 6-25" x 16" x 2", 2-25" x 20" x 2"
ANGLE FILTER	20000	9.44	37.78 3.51 12-20" x 16" x 2", 4-20" x 20" x 2"
HIGH PERFORMANCE FILTER	14000	6.81	24.00 2.23 6-24" x 24" x 2"
HORIZONTAL ROLL FILTER	14000	6.81	23.90 2.23

MIXING BOXES

MIXING BOX	AIR INTAKE WIDTH	AIR INTAKE HEIGHT
STANDARD MIXING BOX	70	1778
1-STAGE EVEN TEMP. MIXING BOX	70	1778
2-STAGE EVEN TEMP. MIXING BOX	70	1778
HIGH PERFORMANCE MIXING BOX	70	1778

MULTIZONES

MULTIZONE	MAXIMUM FLOW	OUTLET WIDTH	OUTLET HEIGHT	MAXIMUM NUMBER OF ZONES
HEATING/COOLING MULTIZONE	13000	6.14	70	1118
HEATING/VENTILATING MULTIZONE	20000	9.44	70	1372

WET SECTIONS

WET SECTION	MAXIMUM FLOW	EFFECTIVE FACE AREA	WATER FLOW	WATER HEAD
SPRAY COIL DEHUMIDIFIER	16000	7.55	23.83	2.20
CAPILLARY CELL AIRWASHER	16000	7.55	31.94	2.97
TYPE C AIRWASHER	16000	7.55	24.50	2.28
SHELDON SECTION	15000	7.08	20.00	1.86
COILDEK SECTION	15000	7.08	20.00	1.86

ELIMINATORS

ELIMINATOR SECTION	MAXIMUM FLOW	FACE AREA
STEEL ELIMINATORS	18000	8.50
CELLULOSE MEDIA ELIMINATORS	15000	7.08

DAMPERS

DAMPER SECTION	FACE AREA
FACE DAMPER	26.25
FACE AND INTERNAL BYPASS DAMPER	19.44
FACE AND EXTERNAL BYPASS DAMPER	26.25

OPERATING WEIGHTS (APPROX.)

SECTION	NOTES	LB	KG
FAN HEAD		1083	482
BASE PLENUM		422	191
FLAT FILTER SECTION		121	55
ANGLE FILTER SECTION		288	131
HIGH PERFORMANCE FILTER SECTION		372	169
HORIZONTAL ROLL FILTER SECTION		410	186
12 IN. PLENUM SECTION		87	39
16 IN. PLENUM SECTION		116	53
20 IN. PLENUM SECTION		144	65
STANDARD MIXING BOX		364	174
1-STAGE EVEN TEMP. MIXING BOX		585	265
2-STAGE EVEN TEMP. MIXING BOX		956	434
HIGH PERFORMANCE MIXING BOX		788	348
HEATING/COOLING MULTIZONE		3	1070
HEATING/VENTILATING MULTIZONE		3	402
SPRAY COIL DEHUMIDIFIER		4	1864
CAPILLARY CELL AIRWASHER		2	964
TYPE C AIRWASHER		2	964
SHELDON SECTION		2	361
COILDEK SECTION		4	425
STEEL ELIMINATORS		802	364
CELLULOSE MEDIA ELIMINATORS		91	41
FACE DAMPER		201	91
FACE AND INTERNAL BYPASS DAMPER		3	222
FACE AND EXTERNAL BYPASS DAMPER		3	614

NOTES: 1 - Add for weight of motor
2 - Add for weight of water
3 - Add for weight of coils
4 - Add for weight of coils and water

PERFORMANCE RATINGS

SIZE 120

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																				
			0.25 (0.062)			0.5 (0.125)			1.0 (0.249)			1.5 (0.374)			2.0 (0.498)			2.5 (0.623)					
CFM	m ³ /s	fpm	m/s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

SIZE 250 FORWARD CURVED FAN

FAN OUTLET: WIDTH = 31 1/4 in (794mm), HEIGHT = 31 1/4 in (794mm), AREA = 6.78 ft² (0.63m²)
FAN WK² = 69.8 LB-ft² (2.94 kg-m²)

7000	3.30	1032	5.24	296	1.50	210	0.6	0.4	285	0.9	0.7	424	1.9	1.4	534	3.0	2.2						
8000	3.78	1180	5.99	339	1.72	217	0.7	0.5	286	1.1	0.8	412	2.1	1.6	526	3.3	2.5	617	4.5	3.4			
9000	4.25	1327	6.74	381	1.93	228	0.9	0.7	291	1.3	1.0	405	2.3	1.7	514	3.6	2.7	610	5.0	3.7	680	6.3	4.7
10000	4.72	1475	7.49	423	2.15	240	1.2	0.9	297	1.6	1.2	402	2.7	2.0	503	3.9	2.9	598	5.4	4.1	682	7.0	5.2
11000	5.19	1622	8.24	466	2.36	251	1.5	1.1	305	1.9	1.4	404	3.1	2.3	496	4.3	3.2	586	5.8	4.3	670	7.5	5.6
12000	5.66	1770	8.99	508	2.58	263	1.8	1.3	314	2.3	1.7	408	3.5	2.6	493	4.8	3.6	577	6.2	4.6	658	7.9	5.9
13000	6.14	1917	9.74	550	2.79	275	2.2	1.6	325	2.8	2.1	413	3.9	2.9	493	5.4	4.0	571	6.7	5.0	648	8.4	6.3
14000	6.61	2065	10.49	592	3.01	288	2.6	1.9	337	3.3	2.4	419	4.5	3.3	496	6.0	4.5	569	7.4	5.6	641	9.0	6.7
15000	7.08	2212	11.24	635	3.22	302	3.1	2.3	349	3.8	2.9	426	5.1	3.8	501	6.6	4.9	569	8.3	6.2	637	9.8	7.3
16000	7.55	2360	11.99	677	3.44	316	3.7	2.7	360	4.4	3.3	435	5.8	4.3	506	7.2	5.4	572	9.1	6.8	636	10.8	8.0
17000	8.02	2507	12.74	719	3.65	330	4.3	3.2	372	5.1	3.8	445	6.6	4.9	512	8.1	6.0	576	9.9	7.4	637	11.8	8.8
18000	8.50	2655	13.49	762	3.87	344	5.0	3.8	384	5.8	4.3	456	7.5	5.6	519	9.0	6.7	582	10.7	8.0	640	12.8	9.5
19000	8.97	2802	14.24	804	4.08	359	5.8	4.3	397	6.6	4.9	467	8.4	6.3	527	10.0	7.5	587	11.7	8.7	644	13.8	10.3
20000	9.44	2950	14.99	846	4.30	373	6.7	5.0	410	7.5	5.6	479	9.5	7.1	536	11.1	8.3	594	12.8	9.6	650	14.8	11.1

SIZE 245 ULTRAFOIL FAN

FAN OUTLET: WIDTH = 34 1/4 in (870mm), HEIGHT = 27 in (686mm), AREA = 6.42 ft² (0.60m²)
FAN WK² = 89.0 LB-ft² (3.75 kg-m²)

7000	3.30	1090	5.54	296	1.50	544	0.6	0.4	610	0.9	0.7	727	1.5	1.1	840	2.2	1.6	955	3.0	2.2	1062	3.9	2.9
8000	3.78	1246	6.33	339	1.72	603	0.8	0.6	663	1.1	0.8	770	1.8	1.3	868	2.5	1.9	968	3.3	2.5	1069	4.2	3.2
9000	4.25	1402	7.12	381	1.93	684	1.0	0.8	718	1.4	1.0	817	2.1	1.6	909	2.9	2.2	994	3.8	2.8	1084	4.7	3.5
10000	4.72	1558	7.91	423	2.15	726	1.3	1.0	775	1.7	1.3	868	2.5	1.9	953	3.4	2.5	1032	4.3	3.2	1109	5.2	3.9
11000	5.19	1713	8.70	466	2.36	789	1.7	1.3	834	2.1	1.6	920	3.0	2.2	1000	3.9	2.9	1076	4.9	3.6	1147	5.8	4.4
12000	5.66	1869	9.50	508	2.58	853	2.1	1.6	895	2.6	1.9	974	3.5	2.6	1050	4.5	3.4	1121	5.5	4.1	1190	6.6	4.9
13000	6.14	2025	10.29	550	2.79	918	2.6	2.0	956	3.1	2.3	1030	4.1	3.1	1102	5.2	3.9	1169	6.2	4.7	1234	7.4	5.5
14000	6.61	2181	11.08	592	3.01	982	3.2	2.4	1018	3.7	2.8	1088	4.8	3.6	1155	5.9	4.4	1220	7.1	5.3	1281	8.2	6.1
15000	7.08	2336	11.87	635	3.22	1047	3.9	2.9	1081	4.4	3.3	1146	5.5	4.1	1210	6.7	5.0	1272	8.0	5.9	1330	9.2	6.9
16000	7.55	2492	12.66	677	3.44	1112	4.6	3.4	1145	5.2	3.9	1206	6.3	4.7	1266	7.6	5.7	1325	8.9	6.7	1382	10.3	7.7
17000	8.02	2648	13.45	719	3.65	1178	5.4	4.1	1209	6.0	4.5	1267	7.3	5.4	1324	8.6	6.4	1380	10.0	7.4	1434	11.4	8.5
18000	8.50	2804	14.24	762	3.87	1244	6.4	4.8	1273	7.0	5.2	1328	8.3	6.2	1382	9.7	7.2	1435	11.1	8.3	1487	12.6	9.4
19000	8.97	2960	15.03	804	4.08	1310	7.4	5.5	1338	8.1	6.0	1390	9.5	7.1	1442	10.9	8.1	1492	12.4	9.2	1542	13.9	10.4
20000	9.44	3115	15.83	846	4.30	1375	8.6	6.4	1402	9.3	6.9	1453	10.7	8.0	1502	12.2	9.1	1550	13.7	10.3	1597	15.4	11.5

MEDIUM PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																				
			2.5 (0.623)			3.0 (0.747)			3.5 (0.872)			4.0 (1.00)			4.5 (1.12)			5.0 (1.25)					
CFM	m ³ /s	fpm	m/s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

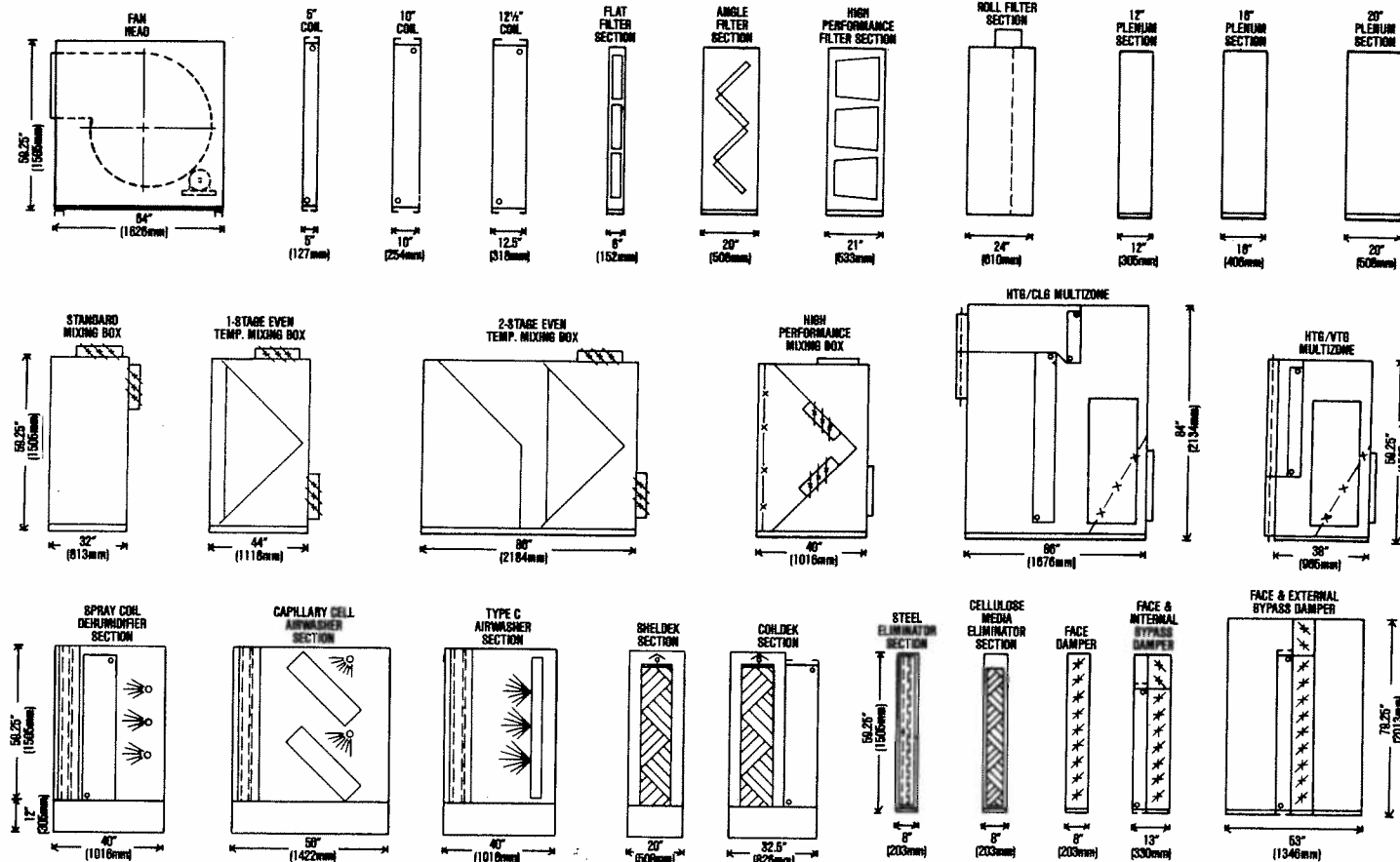
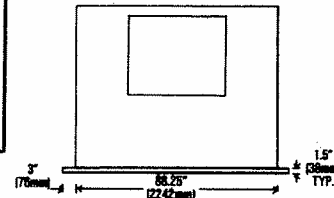
SIZE 220 FORWARD CURVED FAN

FAN OUTLET: WIDTH = 27 1/4 in (692mm), HEIGHT = 27 1/4 in (692mm), AREA = 5.16 ft² (0.45m²)
FAN WK² = 39.9 LB-ft² (1.68 kg-m²)

7000	3.30	1357	6.89	296	1.50	783	5.4	4.0	865	6.7	5.0												
8000	3.78	1550	7.88	339	1.72	769	5.7	4.3	854	7.2	5.4	930	8.										

SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

SIZES 145 LP
145 MP
145 HP



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 8 IN. (162MM) TO UNIT WIDTH AND 3 IN. (76MM) TO UNIT HEIGHT FOR LUGS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 16 IN. (406MM) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA, ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDEX AND COILDEK SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

LOW PRESSURE	MEDIUM PRESSURE	HIGH PRESSURE
25BT	32AT	36BT

Fan performance ratings are based on standard air and include for draw through box loss. To establish the unit internal static pressure use the air friction table on page 44 and add for coil losses where applicable. After determining the BHP (kW) add for drive losses (page 11) and check start time to ensure the appropriate motor horsepower selection.

STEAM PRESSURE	OUTPUT STEAM PER HOUR		
psi	kPa	LB/hr	kg/hr
2	13.8	217	98
5	34.5	360	163
10	68.9	545	247

COIL	SECTION	MAXIMUM FLOW	FACE AREA	MINIMAL TUBE LENGTH	CASING HEIGHT	NO. OF COILS
		CFM	sq ft	in.	in.	
STD. COIL	HEATING COIL SECT.	24000	11.33			
	COOLING COIL SECT.	18000	7.55			
	HTB/CLG MULTIZONE COIL DECK	20000	9.44	28.86	2.68	84
	SPRAY COIL DEHUM.	20000	9.44			1473
	COILDEK	21000	9.11			2
UNDER-SIZED COIL	FACE & EXTERNAL BYPASS DAMPER	24000	11.33			
	HTB/VTB MULTIZONE DECK	24000	11.33	21.62	2.01	41%
SMALL COIL	HTG/CLG MULTIZONE	18000	7.55	14.44	1.34	29

FILTER SECTION	MAX. FLOW	FACE AREA	FILTER QUANTITY AND SIZE
	CFM	sq ft	
FLAT FILTER	16000	29.17	2-25"x20"x2", 8-25"x16"x2"
ANGLE FILTER	24000	46.67	4-20"x20"x2", 16-20"x16"x2"
HIGH PERFORMANCE FILTER	17000	28.00	6-24"x24"x12", 2-24"x12"x12"
HORIZONTAL ROLL FILTER	18000	8.50	29.98

MIXING BOX	AIR INTAKE WIDTH	AIR INTAKE HEIGHT
	in.	in.
STANDARD MIXING BOX		
1-STAGE EVEN TEMP. MIXING BOX	84	2134
2-STAGE EVEN TEMP. MIXING BOX		
HIGH PERFORMANCE MIXING BOX		

MULTIZONE	MAXIMUM FLOW	OUTLET WIDTH	OUTLET HEIGHT	MAXIMUM NUMBER OF ZONES
	CFM	in.	in.	
HEATING/COOLING MULTIZONE	18000	7.55	84	2134
HEATING/VENTILATING MULTIZONE	24000	11.33	84	2134

WET SECTION	MAXIMUM AIR FLOW	EFFECTIVE FACE AREA	WATER FLOW	WATER HEAD
	CFM	sq ft	gpm	ft
SPRAY COIL DEHUMIDIFIER	20000	9.44	28.86	2.68
CAPILLARY CELL AIRWASHER	19000	8.97	38.86	3.82
TYPE C AIRWASHER	20000	9.44	30.50	2.83
SHELDEX SECTION	21000	9.91	28.00	2.60
COILDEK SECTION	21000	9.91	28.00	2.60

ELIMINATOR SECTION	MAXIMUM FLOW	FACE AREA
	CFM	sq ft
STEEL ELIMINATORS	22000	10.38
CELLULOSE MEDIA ELIMINATORS	21000	9.91

DAMPER SECTION	FACE AREA
	sq ft
FACE DAMPER	34.64
FACE AND INTERNAL BYPASS DAMPER	23.86
FACE AND EXTERNAL BYPASS DAMPER	34.64

SECTION	NOTES	WEIGHT
		LB
FAN HEAD	1	1367
BASE PLENUM		N.A.
FILTER SECTIONS	FLAT FILTER SECTION	152
	ANGLE FILTER SECTION	342
	HIGH PERFORMANCE FILTER SECTION	408
	HORIZONTAL ROLL FILTER SECTION	420
PLENUM SECTIONS	12 IN. PLENUM SECTION	98
	18 IN. PLENUM SECTION	131
	20 IN. PLENUM SECTION	163
MIXING BOXES	STANDARD MIXING BOX	540
	1-STAGE EVEN TEMP. MIXING BOX	786
	2-STAGE EVEN TEMP. MIXING BOX	1242
MULTIZONES	HEATING/COOLING MULTIZONE	918
	HEATING/VENTILATING MULTIZONE	3
	SPRAY COIL DEHUMIDIFIER	4
WET SECTIONS	SPRAY COIL DEHUMIDIFIER	4
	CAPILLARY CELL AIRWASHER	2
	TYPE C AIRWASHER	2
ELIMINATOR SECTIONS	SHELDEX SECTION	2
	COILDEK SECTION	4
	STEEL ELIMINATORS	1057
DAMPERS	FACE DAMPER	246
	FACE AND INTERNAL BYPASS DAMPER	3
	FACE AND EXTERNAL BYPASS DAMPER	3

NOTES: 1 - Add for weight of motor
2 - Add for weight of water
3 - Add for weight of coils
4 - Add for weight of coils and water

PERFORMANCE RATINGS

SIZE 145

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																				
			0.25 (0.062)			0.5 (0.126)			1.0 (0.249)			1.5 (0.374)			2.0 (0.498)			2.5 (0.623)					
CFM	m³/s	fpm	m/s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

SIZE 270 ULTRAFOIL FAN

FAN OUTLET: WIDTH = 37 1/2 in (950mm), HEIGHT = 29 1/2 in (749mm), AREA = 7.73 ft² (0.72m²). FAN WK² = 122 LB-ft² (5.14 kg-m²).

10000	4.72	1294	6.57	346	1.76	563	1.1	0.8	616	1.5	1.1	712	2.3	1.7	798	3.2	2.4	886	4.2	3.1	975	5.3	3.9
11000	5.19	1423	7.23	381	1.93	610	1.3	1.0	658	1.7	1.3	747	2.7	2.0	830	3.6	2.7	907	4.6	3.5	987	5.8	4.3
12000	5.66	1552	7.89	415	2.11	656	1.6	1.2	701	2.1	1.6	785	3.1	2.3	863	4.1	3.1	935	5.2	3.8	1006	6.3	4.7
13000	6.14	1682	8.54	450	2.29	704	2.0	1.5	745	2.5	1.8	825	3.5	2.6	898	4.6	3.4	968	5.8	4.3	1033	6.9	5.2
14000	6.61	1811	9.20	485	2.46	752	2.4	1.8	790	2.9	2.2	865	4.0	3.0	935	5.2	3.9	1001	6.4	4.8	1065	7.6	5.7
15000	7.08	1940	9.86	519	2.64	800	2.9	2.1	836	3.4	2.5	907	4.6	3.4	974	5.8	4.4	1036	7.1	5.3	1098	8.4	6.3
16000	7.55	2070	10.51	554	2.81	849	3.4	2.5	883	4.0	3.0	949	5.2	3.9	1013	6.5	4.9	1073	7.9	5.9	1131	9.2	6.9
17000	8.02	2199	11.17	588	2.99	897	4.0	3.0	930	4.6	3.4	992	5.9	4.4	1054	7.3	5.5	1112	8.7	6.5	1167	10.1	7.5
18000	8.50	2329	11.83	623	3.17	946	4.7	3.5	977	5.3	4.0	1037	6.7	5.0	1095	8.1	6.1	1151	9.8	7.2	1204	11.1	8.3
19000	8.97	2458	12.49	658	3.34	995	5.4	4.0	1025	6.1	4.5	1082	7.5	5.6	1137	9.0	6.7	1191	10.6	7.9	1243	12.2	9.1
20000	9.44	2587	13.14	692	3.52	1044	6.2	4.6	1073	6.9	5.2	1127	8.4	6.3	1180	10.0	7.4	1232	11.6	8.7	1282	13.3	9.9
21000	9.91	2717	13.80	727	3.69	1094	7.1	5.3	1121	7.9	5.9	1173	9.4	7.0	1223	11.0	8.2	1273	12.8	9.5	1322	14.5	10.8
22000	10.38	2846	14.46	762	3.87	1144	8.1	6.1	1169	8.9	6.6	1219	10.5	7.8	1268	12.2	9.1	1315	14.0	10.4	1362	15.8	11.8
23000	10.86	2975	15.12	796	4.04	1193	9.2	6.9	1218	10.0	7.5	1266	11.7	8.7	1312	13.4	10.0	1358	15.2	11.4	1403	17.1	12.8
24000	11.33	3105	15.77	831	4.22	1243	10.4	7.7	1267	11.2	8.4	1313	13.0	9.7	1358	14.8	11.0	1402	16.6	12.4	1445	18.6	13.9

MEDIUM PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																				
			2.5 (0.623)			3.0 (0.747)			3.5 (0.872)			4.0 (1.00)			4.5 (1.12)			5.0 (1.26)					
CFM	m³/s	fpm	m/s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

SIZE 245 ULTRAFOIL FAN

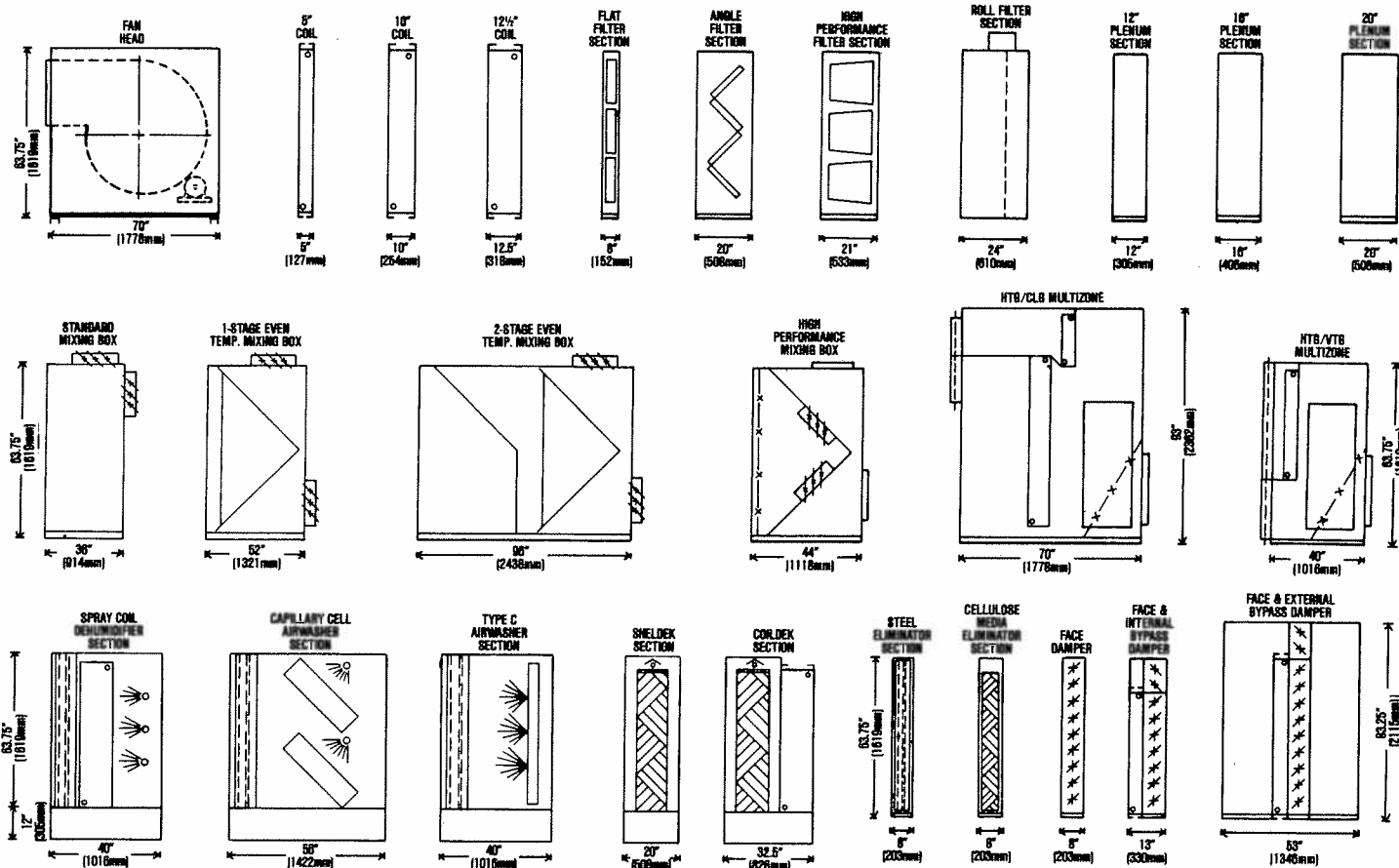
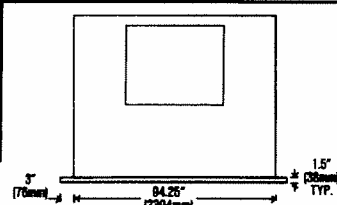
FAN OUTLET: WIDTH = 34 1/2 in (870mm), HEIGHT = 27 in (686mm), AREA = 6.42 ft² (0.60m²). FAN WK² = 89 LB-ft² (3.75 kg-m²).

10000	4.72	1558	7.91	346	1.76	1113	5.3	3.9	1193	6.3	4.7	1274	7.4	5.5	1354	8.5	6.4	1431	9.7	7.3	1505	11.0	8.2
11000	5.19	1713	8.70	381	1.93	1150	5.9	4.4	1220	7.0	5.2	1293	8.1	6.0	1367	9.2	6.9	1440	10.4	7.8	1511	11.7	8.8
12000	5.66	1869	9.50	415	2.11	1194	6.6	5.0	1258	7.7	5.8	1322	8.9	6.6	1388	10.1	7.5	1456	11.3	8.4	1522	12.6	9.4
13000	6.14	2025	10.29	450	2.29	1239	7.4	5.6	1301	8.6	6.4	1360	9.8	7.3	1419	11.0	8.2	1479	12.3	9.2	1542	13.6	10.2
14000	6.61	2181	11.08	485	2.46	1286	8.3	6.2	1346	9.5	7.1	1404	10.8	8.0	1458	12.0	9.0	1512	13.3	9.9	1568	14.7	11.0
15000	7.08	2336	11.87	519	2.64	1336	9.3	7.0	1392	10.6	7.9	1448	11.9	8.9	1502	13.2	9.9	1553	14.5	10.8	1603	15.9	11.9
16000	7.55	2492	12.66	554	2.81	1388	10.4	7.8	1442	11.7	8.7	1494	13.1	9.7	1546	14.5	10.8	1597	15.9	11.8	1645	17.3	12.9
17000	8.02	2648	13.45	588	2.99	1441	11.6	8.6	1493	13.0	9.7	1543	14.4	10.7	1592	15.8	11.8	1641	17.3	12.9	1688	18.8	14.0
18000	8.50	2804	14.24	623	3.17	1495	12.8	9.6	1545	14.3	10.7	1594	15.8	11.8	1641	17.3	12.9	1687	18.8	14.0	1733	20.4	15.2
19000	8.97	2960	15.03	658	3.34	1550	14.2	10.6	1599	15.8	11.8	1646	17.3	12.9	1691	18.9	14.1	1735	20.5	15.3	1779	22.1	16.5
20000	9.44	3115	15.83	692	3.52	1606	15.7	11.7	1653	17.3	12.9	1699	19.0	14.2	1743	20.6	15.4	1786	22.3	16.6	1826	23.9	17.8
21000	9.91	3271	16.62	727	3.69	1663	17.2	12.9	1708	19.0	14.2	1753	20.7	15.5	1796	22.5	16.8	1837	24.2	18.0	1878	25.9	19.3
22000	10.38	3427	17.41	762	3.87	1721	19.0	14.1	1765	20.8	15.5	1807	22.6	16.8	1849	24.4	18.2	1890	26.2	19.6	1929	28.0	20.9
23000	10.86	3583	18.20	796	4.04	1780	20.8	15.5	1822	22.7	16.9	1863	24.6	18.3	1904	26.5	19.7	1943	28.4	21.2	1962	30.3	22.6
24000	11.33	3738	18.99	831	4.22	1840	22.8	17.0	1880	24.7	18.4	1919	26.7	19.9	1959	28.6	21.4	1997	30.7	22.9	2035	32.6	24.3

HIGH PRESSURE

SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

**SIZES 170 LP
170 MP
170 HP**



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 6 in. (152mm) TO UNIT WIDTH AND 3 in. (76mm) TO UNIT HEIGHT FOR LUGS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 18 in. (457mm) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA, ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDEK AND COLDEK SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

FAN HEAD	MAXIMUM MOTOR FRAME		
	LOW PRESSURE	MEDIUM PRESSURE	HIGH PRESSURE
	25T	32T	35T

Fan performance ratings are based on standard air and include a factor for draw through box loss. To establish the unit internal static pressure use the air friction table on page 44 and add for coil losses where applicable. After determining the BHP (kW) add for drive losses (page 11) and check start time to ensure the appropriate motor horsepower selection.

STEAM GRID HUMIDIFIER	OUTPUT STEAM PER HOUR			
	STEAM PRESSURE	PSI	LB/hr	KG/hr
2	13.8	251	114	
5	34.5	416	189	
10	68.9	629	285	

COILS	SECTION	MAXIMUM FLOW	FACE AREA	INLET TUBE LENGTH	CASING HEIGHT	NO. OF COILS			
							CFM	m ³ /s	ft ²
STD COIL	HEATING COIL SECT.	26000	12.27						
	Cooling COIL SECT.	18000	8.50						
	HTB/CLB MULTIZONE	23000	10.85	33.55	3.12	2296	62%	1581	2
	SPRAY COIL DEHUM.	23000	10.85						
UNDER-SIZED COIL	FACE & INTERNAL BYPASS DAMPER	26000	12.27						
	FACE & EXTERNAL BYPASS DAMPER	26000	12.27	25.75	2.38	45%	1162	1	
SMALL COIL	HTB/CLB MULTIZONE	18000	8.50	18.06	1.68	33%	845	1	

FILTERS	FILTER SECTION	MAX. FLOW	FACE AREA	FILTER QUANTITY AND SIZE		
					CFM	m ³ /s
	FLAT FILTER	19000	8.97	35.00	3.25	4-20"x20"x2", 4-20"x25"x2", 2-16"x20"x2", 2-16"x25"x2"
	ANGLE FILTER	20000	12.27	50.00	4.65	8-20"x20"x2", 8-20"x25"x2"
	HIGH PERFORMANCE FILTER	19000	8.97	32.00	2.97	8-24"x24"x12"
	HORIZONTAL ROLL FILTER	20000	9.44	32.00	3.06	

MIXING BOXES	AIR INTAKE WIDTH				AIR INTAKE HEIGHT			
	STANDARD MIXING BOX	1-STAGE EVEN TEMP. MIXING BOX	2-STAGE EVEN TEMP. MIXING BOX	HIGH PERFORMANCE MIXING BOX	90	2286	30	762

MULTIZONES	MULTIZONE	MAXIMUM FLOW	EFFECTIVE FACE AREA	WATER FLOW	WATER HEAD			
						CFM	m ³ /s	in.
	HEATING/COOLING MULTIZONE	18000	8.50	90	2286	48	1219	11
	HEATING/VENTILATING MULTIZONE	28000	12.21	90	2286	62	1575	11

WET SECTIONS	WET SECTION	MAXIMUM AIR FLOW	EFFECTIVE FACE AREA	WATER FLOW	WATER HEAD				
						CFM	m ³ /s	ft ²	m ²
	SPRAY COIL DEHUMIDIFIER	23000	10.85	33.55	3.12	36.9	2.33	28.0	83.5
	CAPILLARY CELL AIRWASHER	23000	10.85	44.44	4.13	62.2	3.92	21.4	63.8
	TYPE C AIRWASHER	23000	10.85	35.48	3.30	92.0	5.00	51.0	152.1
	SHELDEK SECTION	23000	10.85	31.50	2.93	10.5	0.86	8.8	26.3
	COLDEK SECTION	23000	10.85	31.50	2.93	10.5	0.86	8.8	26.3

*Water heads shown include for pressure at nozzles and for unit height. External piping and fitting losses must be added to ensure appropriate pump selection.

ELIMINATORS	ELIMINATOR SECTION	MAXIMUM FLOW	FACE AREA		
				CFM	m ³ /s
	STEEL ELIMINATORS	20000	12.27	35.48	3.30
	CELLULOSE MEDIA ELIMINATORS	23000	10.85	31.50	2.93

DAMPERS	DAMPER SECTION	FACE AREA		
			FACE	BYPASS
	FACE DAMPER	30.61	3.88	
	FACE AND INTERNAL BYPASS DAMPER	FACE	28.11	2.61
		BYPASS	11.50	1.07
	FACE AND EXTERNAL BYPASS DAMPER	FACE	30.61	3.88
		BYPASS	12.78	1.19

OPERATING WEIGHTS (APPROX.)	SECTION	NOTES	WEIGHT	
			LB	KG
	FAN HEAD	1	1580	725
	BASE PLENUM		N.A.	N.A.
FILTER SECTIONS	FLAT FILTER SECTION		164	74
	ANGLE FILTER SECTION		369	167
	HIGH PERFORMANCE FILTER SECTION		515	234
	HORIZONTAL ROLL FILTER SECTION		430	195
PLENUM SECTIONS	12 IN. PLENUM SECTION		106	48
	18 IN. PLENUM SECTION		141	64
	20 IN. PLENUM SECTION		176	80
MIXING BOXES	STANDARD MIXING BOX		860	390
	1-STAGE EVEN TEMP. MIXING BOX		912	414
	2-STAGE EVEN TEMP. MIXING BOX		1456	660
MULTIZONES	HEATING/COOLING MULTIZONE	3	1554	705
	HEATING/VENTILATING MULTIZONE	3	987	266
	SPRAY COIL DEHUMIDIFIER	4	2567	1164
WET SECTIONS	CAPILLARY CELL AIRWASHER	2	3034	1376
	TYPE C AIRWASHER	2	2567	1164
	SHELDEK SECTION	2	508	231
ELIMINATOR SECTIONS	COLDEK SECTION	4	561	254
	STEEL ELIMINATORS		1190	540
DAMPERS	CELLULOSE MEDIA ELIMINATORS		121	55
	FACE DAMPER		278	126
	FACE AND INTERNAL BYPASS DAMPER	3	306	139
	FACE AND EXTERNAL BYPASS DAMPER	3	840	381

NOTES: 1 - Add for weight of motor
2 - Add for weight of water
3 - Add for weight of coils
4 - Add for weight of coils and water

PERFORMANCE RATINGS

SIZE 170

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																		
			0.25 (0.082)			0.5 (0.125)			1.0 (0.249)			1.5 (0.374)			2.0 (0.488)			2.5 (0.623)			
CFM	m ³ /s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

SIZE 300 ULTRAFOIL FAN

FAN OUTLET: WIDTH = 42 in (1067mm), HEIGHT = 32 in (813mm), AREA = 9.55 ft² (0.89m²)
FAN WK² = 207 LB-ft² (8.72 kg-m²)

12000	5.66	1257	6.38	358	1.82	481	1.2	0.9	529	1.6	1.2	618	2.7	2.0	702	3.7	2.8	785	5.0	3.7	868	6.4	4.7
13000	6.14	1361	6.92	387	1.97	514	1.4	1.1	558	1.9	1.4	641	3.0	2.2	721	4.1	3.1	797	5.4	4.0	874	6.8	5.0
14000	6.61	1466	7.45	417	2.12	547	1.7	1.3	588	2.2	1.6	666	3.3	2.5	742	4.6	3.4	813	5.8	4.3	884	7.2	5.4
15000	7.08	1571	7.98	447	2.27	581	2.0	1.5	618	2.5	1.9	692	3.7	2.8	764	5.0	3.7	832	6.3	4.7	898	7.7	5.8
16000	7.55	1675	8.51	477	2.42	614	2.3	1.7	650	2.9	2.2	720	4.2	3.1	787	5.5	4.1	853	6.9	5.2	915	8.3	6.2
17000	8.02	1780	9.04	507	2.57	648	2.7	2.0	682	3.3	2.5	748	4.6	3.5	811	6.0	4.5	875	7.5	5.6	934	9.0	6.7
18000	8.50	1885	9.57	537	2.73	683	3.2	2.4	714	3.8	2.8	777	5.2	3.8	838	6.6	4.9	898	8.2	6.1	956	9.7	7.3
19000	8.97	1990	10.11	566	2.88	717	3.7	2.7	747	4.3	3.2	807	5.7	4.3	865	7.3	5.4	921	8.8	6.6	978	10.5	7.8
20000	9.44	2094	10.64	596	3.03	752	4.2	3.1	780	4.9	3.6	837	6.3	4.7	893	7.9	5.9	946	9.6	7.1	1001	11.3	8.4
21000	9.91	2199	11.17	626	3.18	786	4.8	3.6	814	5.5	4.1	868	7.0	5.2	922	8.6	6.5	973	10.4	7.7	1024	12.1	9.1
22000	10.38	2304	11.70	656	3.33	821	5.4	4.0	848	6.2	4.6	899	7.7	5.8	951	9.4	7.0	1000	11.2	8.4	1049	13.0	9.7
23000	10.86	2408	12.23	686	3.48	856	6.1	4.6	881	6.9	5.2	930	8.5	6.4	960	10.3	7.7	1028	12.1	9.0	1075	14.0	10.4
24000	11.33	2513	12.77	715	3.63	891	6.9	5.1	915	7.7	5.7	963	9.4	7.0	1010	11.2	8.3	1057	13.1	9.7	1102	15.0	11.2
25000	11.80	2618	13.30	745	3.79	926	7.7	5.8	950	8.6	6.4	995	10.3	7.7	1041	12.1	9.1	1086	14.1	10.5	1130	16.1	12.0
26000	12.27	2723	13.83	775	3.94	961	8.6	6.4	984	9.5	7.1	1028	11.3	8.4	1071	13.2	9.8	1115	15.2	11.3	1158	17.3	12.9

MEDIUM PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																		
			2.5 (0.623)			3.0 (0.747)			3.5 (0.872)			4.0 (1.00)			4.5 (1.12)			5.0 (1.25)			
CFM	m ³ /s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

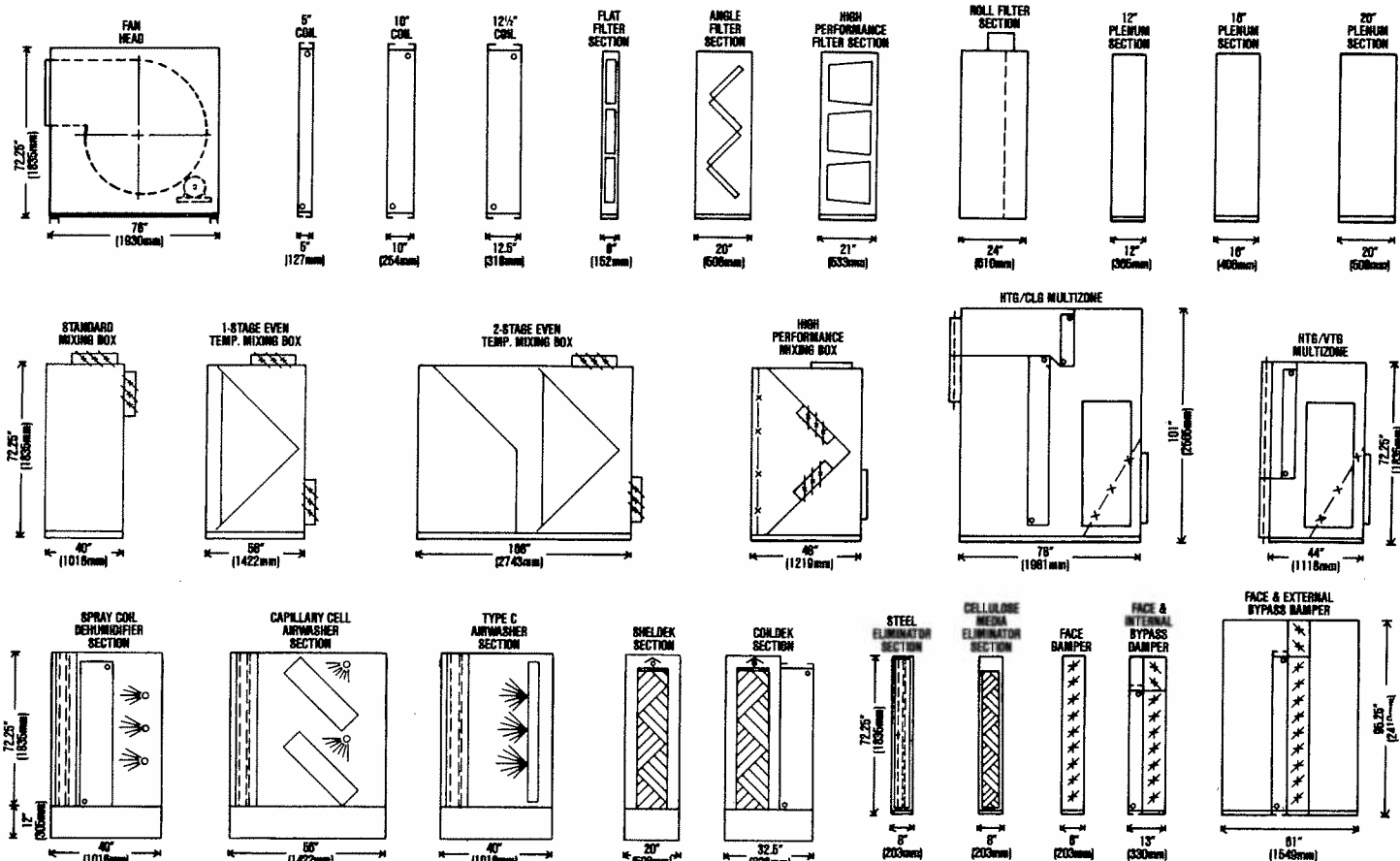
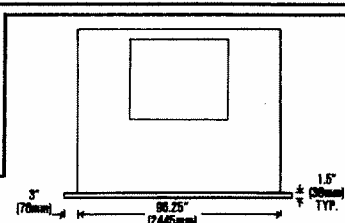
SIZE 270 ULTRAFOIL FAN

FAN OUTLET: WIDTH = 37 in (950mm), HEIGHT = 29 in (740mm), AREA = 7.73 ft² (0.72m²)
FAN WK² = 122 LB-ft² (5.14 kg-m²)

12000	5.66	1552	7.89	358	1.82	1006	6.3	4.7	1081	7.6	5.6	1154	8.8	6.6	1228	10.3	7.6	1298	11.7	8.7	1365	13.3	9.9
13000	6.14	1682	8.54	387	1.97	1033	6.9	5.2	1099	8.2	6.1	1168	9.6	7.1	1236	10.9	8.2	1304	12.4	9.3	1370	14.0	10.4
14000	6.61	1811	9.20	417	2.12	1065	7.6	5.7	1124	8.9	6.6	1186	10.3	7.7	1250	11.8	8.8	1313	13.2	9.9	1376	14.8	11.0
15000	7.08	1940	9.86	447	2.27	1098	8.4	6.3	1155	9.7	7.3	1211	11.1	8.3	1268	12.6	9.4	1328	14.2	10.6	1387	15.7	11.7
16000	7.55	2070	10.51	477	2.42	1131	9.2	6.9	1188	10.6	7.9	1241	12.1	9.0	1293	13.5	10.1	1347	15.2	11.3	1403	16.8	12.5
17000	8.02	2199	11.17	507	2.57	1167	10.1	7.5	1221	11.6	8.6	1274	13.1	9.8	1323	14.6	10.9	1372	16.2	12.1	1423	17.9	13.4
18000	8.50	2329	11.83	537	2.73	1204	11.1	8.3	1256	12.6	9.4	1307	14.2	10.6	1356	15.8	11.8	1402	17.4	13.0	1449	19.1	14.2
19000	8.97	2458	12.49	566	2.88	1243	12.2	9.1	1292	13.7	10.2	1341	15.3	11.4	1389	17.0	12.7	1435	18.7	14.0	1479	20.4	15.2
20000	9.44	2587	13.14	596	3.03	1282	13.3	9.9	1330	14.9	11.1	1376	16.6	12.4	1422	18.3</							

SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

**SIZES 200 LP
200 MP
200 HP**



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 0 IN. (152mm) TO UNIT WIDTH AND 3 IN. (76mm) TO UNIT HEIGHT FOR LUGS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 10 IN. (406mm) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDON AND COILDEK SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

FAN HEAD

LOW PRESSURE	MAXIMUM MOTOR FRAME	
	234T	305T
234T	324T	305T

Fan performance ratings are based on standard air and include for draw through box loss. To establish the unit internal static pressure use the air friction table on page 44 and add for coil losses where applicable. After determining the BHP (kW) add for drive losses (page 11) and check start time to ensure the appropriate motor horsepower selection.

STEAM BRID HUMIDIFIER

STEAM PRESSURE	OUTPUT STEAM PER HOUR		
	psi	lps	kg/hr
2	13.8	301	137
5	34.5	490	226
10	68.9	754	342

COILS

COIL	SECTION	MAXIMUM FLOW	FACE AREA		MINORAL TUBE LENGTH	CABING HEIGHT	IN. OF COILS
			CFM	sq ft			
STD. COIL	HEATING COIL SECT.	30000	14.16				
	COOLING COIL SECT.	22000	10.38				
	HTG/CLS MULTIZONE	27000	12.74	30.90	3.72	93	2382
	SPRAY COIL DEHUM.	27000	12.74	30.90	3.72	93	2382
UNDER-SIZED COIL	HTG/VTB MULTIZONE	30000	14.16	29.39	2.73		45 1/4
	FACE & INTERNAL BYPASS DAMPER	30000	14.16	29.39	2.73		1267
SMALL COIL	HTG/CLS MULTIZONE	22000	10.38	18.67	1.73		33 3/4

FILTERS

FILTER SECTION	MAX. FLOW	FACE AREA		FILTER QUANTITY AND SIZE
		CFM	sq ft	
FLAT FILTER	37000	9.91	38.33	3.58
ANGLE FILTER	30000	14.16	55.88	5.94
HIGH PERFORMANCE FILTER	24000	11.33	40.00	3.72
HORIZONTAL ROLL FILTER	24000	11.33	40.32	3.75

MIXING BOXES

MIXING BOX	AIR INTAKE WIDTH		AIR INTAKE HEIGHT	
	IN.	MM	IN.	MM
STANDARD MIXING BOX	92	2337	34	864
1-STAGE EVEN TEMP. MIXING BOX				
2-STAGE EVEN TEMP. MIXING BOX				
HIGH PERFORMANCE MIXING BOX				

MULTIZONES

MULTIZONE	MAXIMUM FLOW	OUTLET WIDTH		OUTLET HEIGHT		MAXIMUM NUMBER OF ZONES
		CFM	in.	mm	in.	
HEATING/COOLING MULTIZONE	22000	10.38	92	2337	56	1422
HEATING/VENTILATING MULTIZONE	30000	14.16	92	2337	70	1778

WET SECTIONS

WET SECTION	MAXIMUM FLOW	EFFECTIVE FACE AREA		WATER FLOW	WATER HEAD
		CFM	sq ft		
SPRAY COIL DEHUMIDIFIER	27000	12.74	30.90	3.72	44.0
CAPILLARY CELL AIRWASHER	25000	11.80	50.00	4.85	70.0
TYPE C AIRWASHER	27000	12.74	41.98	3.87	108.0
SHELDON SECTION	28000	12.27	35.00	3.25	10.5
COILDEK SECTION	28000	12.27	35.00	3.25	10.5

ELIMINATORS

ELIMINATOR SECTION	MAXIMUM FLOW		FACE AREA	
	CFM	sq ft	sq ft	sq m
STEEL ELIMINATORS	30000	14.16	41.86	3.87
CELLULOSE MEDIA ELIMINATORS	26000	12.27	35.00	3.25

DAMPERS

DAMPER SECTION	FACE AREA	
	sq ft	sq m
FACE DAMPER	45.69	4.25
FACE AND INTERNAL BYPASS DAMPER	32.64	3.03
FACE AND INTERNAL BYPASS DAMPER	13.05	1.22
FACE AND EXTERNAL BYPASS DAMPER	45.69	4.25
FACE AND EXTERNAL BYPASS DAMPER	15.67	1.46

OPERATING WEIGHTS (APPROX.)

SECTION	NOTES	WEIGHT	
		LB	KG
FAN HEAD	1	1840	837
BASE PLENUM		N.A.	N.A.
FILTER SECTIONS	FLAT FILTER SECTION	182	83
	ANGLE FILTER SECTION	405	184
	HIGH PERFORMANCE FILTER SECTION	579	263
	HORIZONTAL ROLL FILTER SECTION	500	227
PLENUM SECTIONS	12 IN. PLENUM SECTION	112	51
	18 IN. PLENUM SECTION	150	68
	20 IN. PLENUM SECTION	187	85
MIXING BOXES	1-STAGE EVEN TEMP. MIXING BOX	710	322
	2-STAGE EVEN TEMP. MIXING BOX	989	453
	HIGH PERFORMANCE MIXING BOX	1637	743
MULTIZONES	HEATING/COOLING MULTIZONE	3	1822
	HEATING/VENTILATING MULTIZONE	4	825
	SPRAY COIL DEHUMIDIFIER	3	2850
WET SECTIONS	CAPILLARY CELL AIRWASHER	2	3400
	TYPE C AIRWASHER	2	2850
	SHELDON SECTION	2	526
ELIMINATOR SECTIONS	STEEL ELIMINATORS	1354	614
	CELLULOSE MEDIA ELIMINATORS	133	60
DAMPERS	FACE DAMPER	317	144
	FACE AND INTERNAL BYPASS DAMPER	3	349
	FACE AND EXTERNAL BYPASS DAMPER	3	1017

NOTES: 1 - Add for weight of motor
2 - Add for weight of water
3 - Add for weight of coils
4 - Add for weight of coils and water

PERFORMANCE RATINGS

SIZE 200

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																				
			0.25 (0.082)			0.5 (0.125)			1.0 (0.249)			1.5 (0.374)			2.0 (0.498)			2.5 (0.823)					
CFM	m ³ /s	fpm	m/s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

SIZE 330 ULTRAFOIL FAN

FAN OUTLET: WIDTH = 48 1/4 in (1175mm), HEIGHT = 36 in (914mm), AREA = 11.56 ft² (1.07m²)
FAN WK² = 308 LB-ft² (13.0 kg-m²)

14000	6.61	1208	6.14	350	1.78	425	1.3	1.0	469	1.9	1.4	553	3.0	2.3	632	4.3	3.2	710	5.8	4.3	787	7.5	5.6
15000	7.08	1294	6.57	375	1.91	449	1.5	1.1	491	2.1	1.6	570	3.4	2.5	644	4.7	3.5	717	6.2	4.6	791	7.9	5.9
16000	7.55	1381	7.01	400	2.03	474	1.8	1.3	513	2.4	1.8	588	3.7	2.8	659	5.1	3.8	727	6.6	4.9	796	8.3	6.2
17000	8.02	1467	7.45	425	2.16	499	2.1	1.5	536	2.7	2.0	606	4.1	3.0	675	5.5	4.1	740	7.1	5.3	804	8.7	6.5
18000	8.50	1553	7.89	450	2.29	524	2.4	1.8	559	3.0	2.2	626	4.5	3.3	692	6.0	4.5	754	7.6	5.7	814	9.3	6.9
19000	8.97	1639	8.33	475	2.41	549	2.7	2.0	582	3.4	2.5	647	4.9	3.6	709	6.5	4.8	769	8.2	6.1	827	9.9	7.4
20000	9.44	1726	8.77	500	2.54	575	3.1	2.3	606	3.8	2.8	668	5.3	4.0	727	7.0	5.2	786	8.7	6.5	841	10.5	7.8
21000	9.91	1812	9.20	525	2.67	600	3.5	2.6	630	4.2	3.2	690	5.8	4.3	746	7.6	5.6	803	9.4	7.0	856	11.2	8.4
22000	10.38	1898	9.64	550	2.79	626	3.9	2.9	655	4.7	3.5	711	6.4	4.7	766	8.1	6.1	820	10.0	7.5	872	11.9	8.9
23000	10.86	1984	10.08	575	2.92	652	4.4	3.3	679	5.2	3.9	734	6.9	5.2	786	8.8	6.6	838	10.7	8.0	889	12.7	9.5
24000	11.33	2071	10.52	600	3.05	678	5.0	3.7	704	5.8	4.3	756	7.5	5.6	808	9.4	7.0	856	11.4	8.5	906	13.5	10.1
25000	11.80	2157	10.96	625	3.18	704	5.5	4.1	730	6.4	4.8	779	8.2	6.1	829	10.2	7.6	876	12.2	9.1	924	14.3	10.7
26000	12.27	2243	11.40	650	3.30	730	6.2	4.6	755	7.0	5.3	803	8.9	6.6	851	10.9	8.1	897	13.0	9.7	942	15.2	11.3
27000	12.74	2330	11.83	675	3.43	756	6.8	5.1	780	7.7	5.8	826	9.7	7.2	873	11.7	8.7	917	13.9	10.4	961	16.1	12.0
28000	13.22	2416	12.27	700	3.56	782	7.5	5.6	806	8.5	6.3	850	10.5	7.8	895	12.6	9.4	938	14.8	11.0	981	17.1	12.8
29000	13.69	2502	12.71	725	3.68	809	8.3	6.2	831	9.3	6.9	874	11.3	8.5	917	13.5	10.1	960	15.8	11.8	1001	18.1	13.5
30000	14.16	2588	13.15	750	3.81	835	9.1	6.8	857	10.1	7.6	898	12.2	9.1	940	14.4	10.8	982	16.8	12.5	1022	19.2	14.3

MEDIUM PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																				
			2.5 (0.823)			3.0 (0.747)			3.5 (0.872)			4.0 (1.00)			4.5 (1.12)			5.0 (1.25)					
CFM	m ³ /s	fpm	m/s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

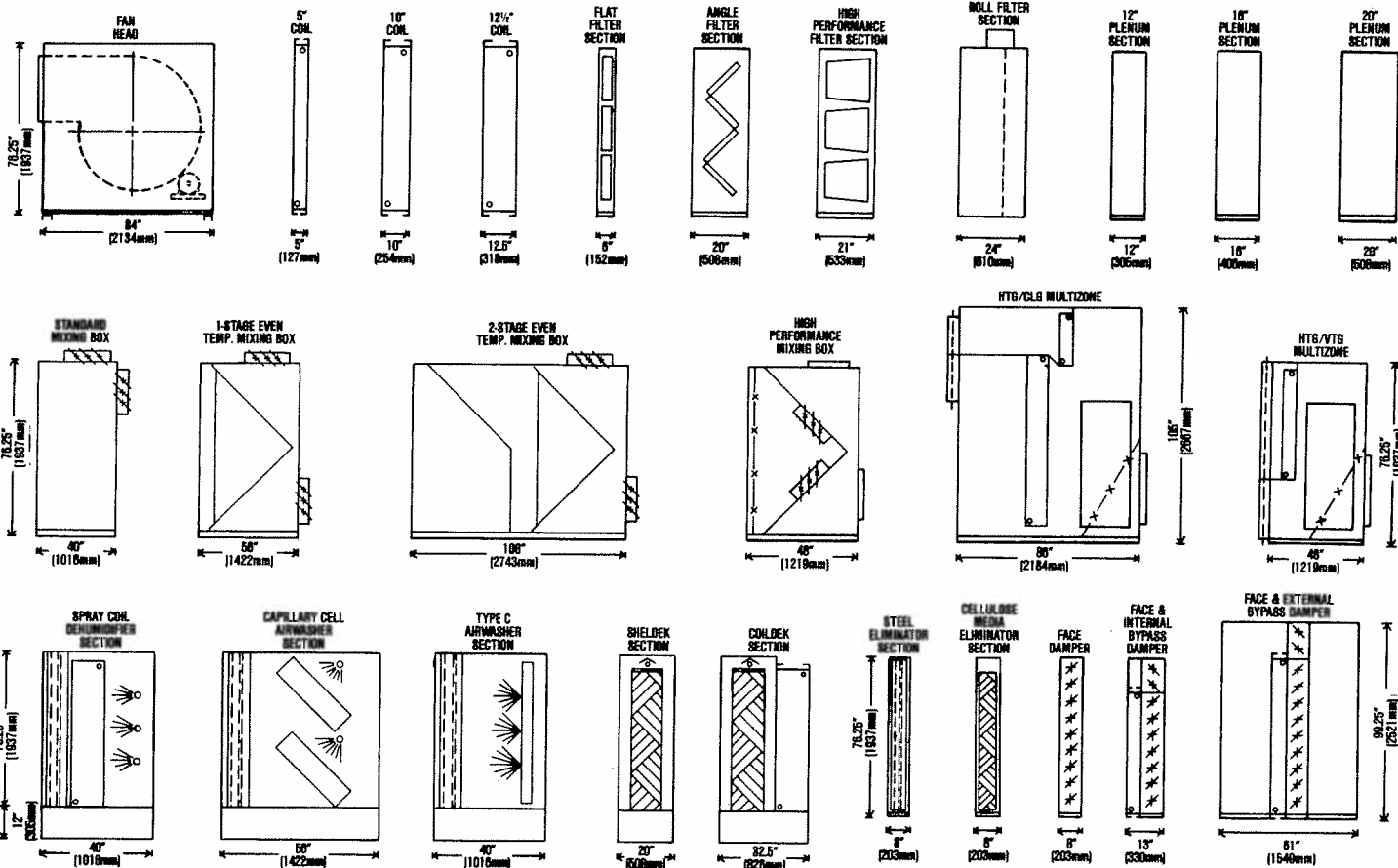
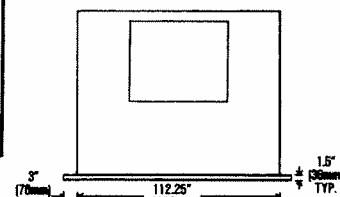
SIZE 300 ULTRAFOIL FAN

FAN OUTLET: WIDTH = 42 in (1067mm), HEIGHT = 32 1/4 in (832mm), AREA = 9.55 ft² (0.89m²)
FAN WK² = 207 LB-ft² (8.72 kg-m²)

14000	6.61	1466	7.45	350	1.78	884	7.2	5.4	955	8.7	6.5	1026	10.4	7.8	1093	12.2	9.1	1157	14.0	10.4	1217	15.8	11.8
15000	7.08	1571	7.98	375	1.91	898	7.7	5.8	964	9.3	6.9	1031	11.0	8.2	1096	12.7	9.5	1160	14.6	10.9	1220	16.5	12.3
16000	7.55	1675	8.51	400	2.03	915	8.3	6.2	977	9.9	7.4	1039	11.6	8.6	1102	13.4	10.0	1163	15.2	11.4	1223	17.2	12.8
17000	8.02	1780	9.04	425	2.16	934	9.0	6.7	993	10.6	7.9	1051	12.2	9.1	1110	14.0	10.5	1168	15.9	11.9	1226	18.0	13.4
18000	8.50	1885	9.57	450	2.29	956	9.7	7.3	1011	11.3	8.5	1066	13.0	9.7	1121	14.8	11.0	1177	16.7	12.5	1232	18.7	14.0
19000	8.97	1990	10.11	475	2.41	978	10.5	7.8	1031	12.2	9.1	1083	13.9	10.4	1135	15.7	11.7	1188	17.6	13.1	1240	19.6	14.6
20000	9.44	2094	10.64	500	2.54	1001	11.3	8.4	1053	13.0	9.7	1103	14.8	11.1	1152	16.6	12.4	1202	18.5	13.8	1251	20.5	15.3
21000	9.91	2199	11.17	525	2.67	1024	12.1	9.1	1075	14.0	10.4	1124	15.8	11.8	1171	17.7	13.2	1218	19.6	14.6	1265	21.6	16.1
22000	10.38	2304	11.70	550	2.79	1049	13.0	9.7	1098	14.9	11.1	1146	16.9	12.6	1192	18.8	14.0	1237	20.8	15.5	1282	22.8	17.0
23000	10.86	2408	12.23	575	2.92	1075	14.0	10.4	1122	16.0	11.9	1168	17.9	13.4	1213	20.0	14.9	1257	22.0	16.4	1300	24.1	17.9
24000	11.33	2513	12.77	600	3.05	1102	15.0	11.2	1146	17.0	12.7	1191	19.										

SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

**SIZES 240 LP
240 MP
240 HP**



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 6 IN. (152mm) TO UNIT WIDTH AND 3 IN. (76mm) TO UNIT HEIGHT FOR LUGS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 16 IN. (406mm) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA, ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDEX AND COILDEK SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

FAN HEAD

LOW PRESSURE	MEDIUM PRESSURE	HIGH PRESSURE
324T	364T	404T

Fan performance ratings are based on standard air and include for draw through box loss. To establish the unit internal static pressure use the air friction table on page 44 and add for coil losses where applicable. After determining the BHP (kW) add for drive losses (page 11) and check start time to ensure the appropriate motor horsepower selection.

STEAM GRID HUMIDIFIER

STEAM PRESSURE	OUTPUT STEAM PER HOUR		
psig	kPa	LB/hr	kg/hr
2	13.8	334	151
5	34.5	554	251
10	68.9	838	380

COILS

COIL	SECTION	MAXIMUM FLOW	FACE AREA	MINIMUM TUBE LENGTH	CARRIAGE HEIGHT	NO. OF COILS	
							CFM
STD. COIL	HEATING COIL SECT.	42000	19.82				
	COOLING COIL SECT.	27000	12.74				
	HTG/CLB MULTIZONE	34000	16.05	49.03	4.81	108	
	HTG/VTG MULTIZONE	34000	16.05	49.03	4.81	108	
UNDER-SIZED COIL	HTG/VTG MULTIZONE	42000	19.82	37.29	3.46	56	
	FACE & INTERNAL BYPASS DAMPER					1473	
SMALL COIL	HTG/CLB MULTIZONE	27000	12.74	24.82	2.31	37	
	HTG/VTG MULTIZONE	27000	12.74	24.82	2.31	37	

FILTERS

FILTER SECTION	MAX. FLOW	FACE AREA	FILTER QUANTITY AND SIZE
CFM	m ³ /s	ft ²	
FLAT FILTER	28000	13.21	51.94 4.83
ANGLE FILTER	42000	19.82	76.30 7.00
HIGH PERFORMANCE FILTER	29000	13.99	48.00 4.46
HORIZONTAL ROLL FILTER	29000	13.99	47.83 4.42

MIXING BOXES

MIXING BOX	AIR INTAKE WIDTH	AIR INTAKE HEIGHT
	in.	mm
STANDARD MIXING BOX	108	2743
1-STAGE EVEN TEMP. MIXING BOX		
2-STAGE EVEN TEMP. MIXING BOX		
HIGH PERFORMANCE MIXING BOX		

MULTIZONES

MULTIZONE	MAXIMUM FLOW	OUTLET WIDTH	OUTLET HEIGHT	MAXIMUM NUMBER OF ZONES
	CFM	m ³ /s	in.	mm
HEATING/COOLING MULTIZONE	27000	12.74	108	2743
HEATING/VENTILATING MULTIZONE	42000	19.82	108	2743

WET SECTIONS

WET SECTION	MAXIMUM AIR FLOW	EFFECTIVE FACE AREA	WATER FLOW	WATER HEAD
	CFM	m ³ /s	gpm	ft
SPRAY COIL DEHUMIDIFIER	34000	16.05	49.03	4.81
CAPILLARY CELL AIRWASHER	34000	16.05	90.44	8.45
TYPE C AIRWASHER	34000	16.05	51.95	4.83
SHELDEX SECTION	34000	16.05	45.00	4.18
COILDEK SECTION	34000	16.05	45.00	4.18

ELIMINATORS

ELIMINATOR SECTION	MAXIMUM FLOW	FACE AREA
	CFM	m ³ /s
STEEL ELIMINATORS	30000	18.41
CELLULOSE MEDIA ELIMINATORS	34000	18.05

DAMPERS

DAMPER SECTION	FACE AREA
	ft ²
FACE DAMPER	56.53
FACE AND INTERNAL BYPASS DAMPER	42.78
FACE AND EXTERNAL BYPASS DAMPER	56.53

OPERATING WEIGHTS (APPROX.)

SECTION	NOTES	LB	KG
FAN HEAD		2312	1049
BASE PLENUM		N.A.	N.A.
FILTER SECTIONS	FLAT FILTER SECTION	198	89
	ANGLE FILTER SECTION	440	200
	HIGH PERFORMANCE FILTER SECTION	668	303
	HORIZONTAL ROLL FILTER SECTION	520	236
PLENUM SECTIONS	12 IN. PLENUM SECTION	125	57
	18 IN. PLENUM SECTION	167	76
	20 IN. PLENUM SECTION	209	95
MIXING BOXES	STANDARD MIXING BOX	790	358
	1-STAGE EVEN TEMP. MIXING BOX	1128	512
	2-STAGE EVEN TEMP. MIXING BOX	1834	832
	HIGH PERFORMANCE MIXING BOX	1344	610
MULTIZONES	HEATING/COOLING MULTIZONE	3	2188
	HEATING/VENTILATING MULTIZONE	3	758
	SPRAY COIL DEHUMIDIFIER	4	3263
WET SECTIONS	CAPILLARY CELL AIRWASHER	2	3841
	TYPE C AIRWASHER	2	3263
	SHELDEX SECTION	2	615
	COILDEK SECTION	4	674
ELIMINATOR SECTIONS	STEEL ELIMINATORS	1008	729
	CELLULOSE MEDIA ELIMINATORS	155	70
	FACE DAMPER	381	173
DAMPERS	FACE AND INTERNAL BYPASS DAMPER	3	419
	FACE AND EXTERNAL BYPASS DAMPER	3	1172

NOTES: 1 - Add for weight of motor
2 - Add for weight of water
3 - Add for weight of coils
4 - Add for weight of coils and water

PERFORMANCE RATINGS

SIZE 240

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																		
			0.25 (0.082)			0.5 (0.125)			1.0 (0.249)			1.5 (0.374)			2.0 (0.498)			2.5 (0.823)			
CFM	m ³ /s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

SIZE 365 ULTRAFOIL FAN

FAN OUTLET: WIDTH = 51 in (1295mm), HEIGHT = 39 in (1010mm), AREA = 14.08 ft² (1.31m²)
FAN WK² = 448 LB-ft² (18.9 kg-m²)

16000	7.55	1136	5.77	322	1.64	360	1.4	1.0	401	2.0	1.5	479	3.4	2.5	550	4.8	3.6	625	6.6	4.9	697	8.5	6.4
18000	8.50	1278	6.49	363	1.84	395	1.8	1.3	432	2.5	1.9	503	4.0	3.0	569	5.6	4.1	632	7.2	5.4	699	9.2	6.9
20000	9.44	1420	7.22	403	2.05	432	2.3	1.7	465	3.1	2.3	529	4.7	3.5	591	6.3	4.7	649	8.1	6.1	705	10.0	7.5
22000	10.38	1563	7.94	443	2.25	469	2.9	2.2	498	3.7	2.8	557	5.4	4.0	615	7.3	5.5	670	9.1	6.8	722	11.1	8.3
24000	11.33	1705	8.66	484	2.46	507	3.6	2.7	533	4.5	3.3	588	6.3	4.7	641	8.4	6.3	693	10.3	7.7	743	12.4	9.3
26000	12.27	1847	9.38	524	2.66	545	4.5	3.3	569	5.3	4.0	620	7.4	5.5	669	9.4	7.0	718	11.7	8.7	765	13.7	10.3
28000	13.22	1989	10.10	564	2.87	583	5.5	4.1	605	6.4	4.7	652	8.5	6.4	698	10.6	7.9	744	13.1	9.8	789	15.4	11.5
30000	14.16	2131	10.82	604	3.07	622	6.6	4.9	642	7.5	5.6	686	9.7	7.3	730	12.1	9.0	772	14.5	10.8	814	17.2	12.8
32000	15.10	2273	11.55	645	3.28	660	7.8	5.8	680	8.8	6.6	720	11.1	8.3	762	13.7	10.2	801	16.1	12.0	841	18.9	14.1
34000	16.05	2415	12.27	685	3.48	699	9.3	6.9	718	10.3	7.7	755	12.7	9.4	794	15.4	11.5	832	17.9	13.4	869	20.7	15.4
36000	16.99	2557	12.99	725	3.68	738	10.9	8.1	756	12.0	8.9	790	14.4	10.7	827	17.2	12.8	864	20.1	15.0	899	22.7	16.9
38000	17.94	2699	13.71	766	3.89	777	12.7	9.4	794	13.8	10.3	827	16.3	12.2	861	19.4	14.3	897	22.3	16.6	930	25.1	18.7
40000	18.88	2841	14.43	806	4.09	817	14.6	10.9	832	15.9	11.8	863	18.4	13.7	895	21.3	15.9	929	24.6	18.3	962	27.7	20.7
42000	19.82	2983	15.15	846	4.30	856	16.8	12.5	871	18.1	13.5	900	20.8	15.5	931	23.7	17.7	962	27.0	20.2	995	30.5	22.7

MEDIUM PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																		
			2.5 (0.823)			3.0 (0.747)			3.5 (0.872)			4.0 (1.200)			4.5 (1.12)			5.0 (1.25)			
CFM	m ³ /s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

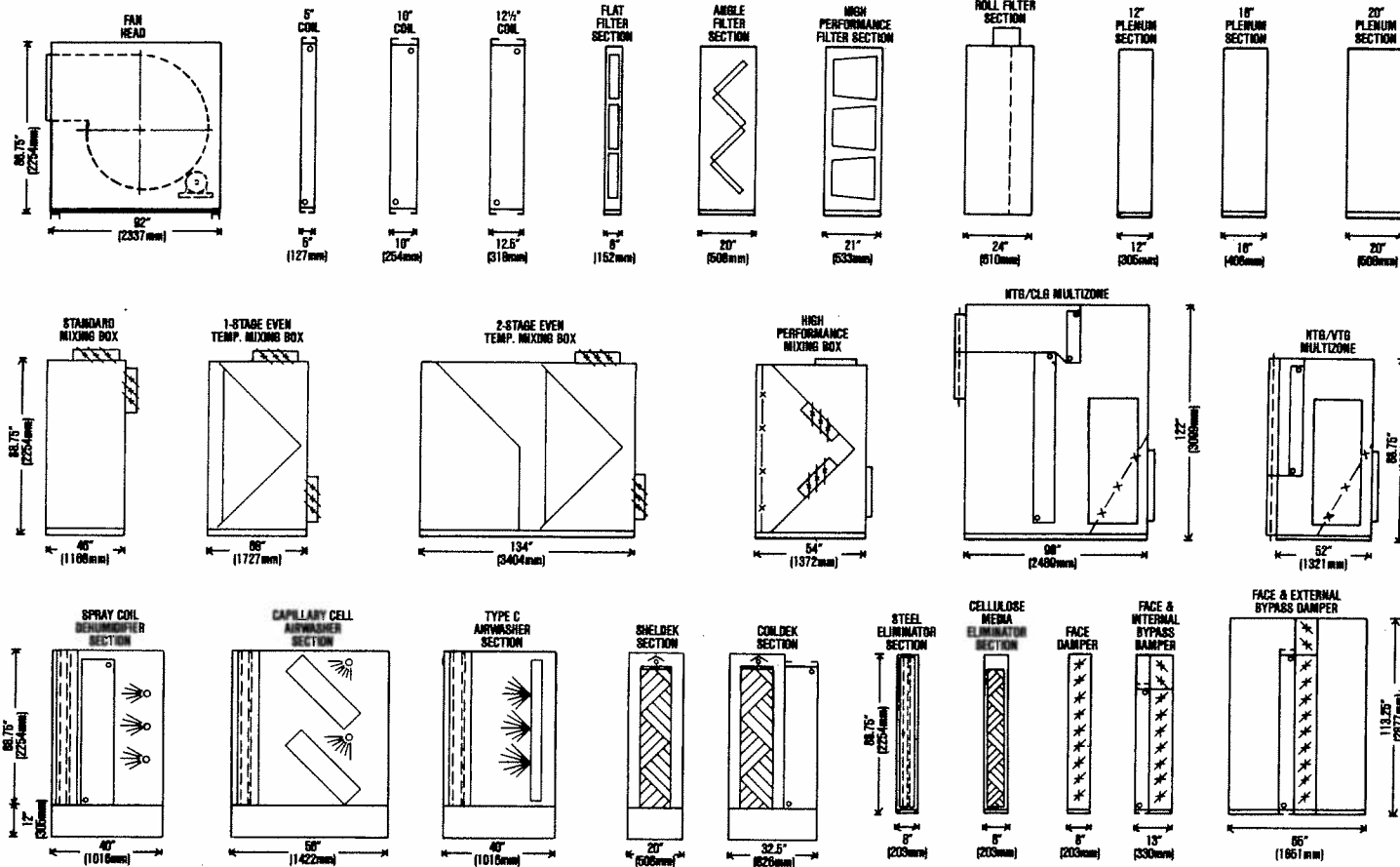
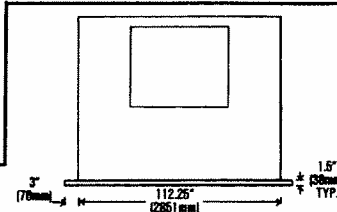
SIZE 330 ULTRAFOIL FAN

FAN OUTLET: WIDTH = 48 in (1175mm), HEIGHT = 36 in (914mm), AREA = 11.58 ft² (1.07m²)
FAN WK² = 308 LB-ft² (13.0 kg-m²)

16000	7.55	1384	7.03	322	1.64	796	8.3	6.2	864	10.1	7.6	930	12.1	9.0	992	14.2	10.6	1049	16.3	12.1	1104	18.4	13.8
18000	8.50	1557	7.91	363	1.84	814	9.3	6.9	875	11.1	8.3	936	13.2	9.8	996	15.3	11.4	1054	17.6	13.1	1109	19.9	14.8
20000	9.44	1730	8.79	403	2.05	841	10.5	7.8	895	12.4	9.2	950	14.4	10.7	1005	16.6	12.4	1060	18.9	14.1	1113	21.3	15.9
22000	10.38	1903	9.67	443	2.25	872	11.9	8.9	922	13.9	10.4	972	15.9	11.9	1021	18.1	13.5	1071	20.4	15.2	1121	22.8	17.0
24000	11.33	2076	10.55	484	2.46	906	13.5	10.1	954	15.6	11.6	1000	17.7	13.2	1045	19.9	14.9	1090	22.2	16.6	1136	24.7	18.4
26000	12.27	2249	11.43	524	2.66	942	15.2	11.3	988	17.5	13.0	1031	19.7	14.7	1074	22.0	16.4	1116	24.4	18.2	1157	26.8	20.0
28000	13.22	2422	12.30	564	2.87	981	17.1	12.8	1023	19.5	14.5	1065	21.9	16.3	1106	24.4	18.2	1145	26.8	20.0	1184	29.3	21.9
30000	14.16	2595	13.18	604	3.07	1022	19.2	14.3	1061	21.7	16.2	1100	24.2	18.1	1140	26.8	20.0	1178	29.5	22.0	1215	32.1	24.0
32000	15.10	2768	14.06	645	3.28	1064	21.5	16.1	1101	24.1	18.0	1138	26.8	20.0	1175	29.5	22.0	1212	32.3	24.1	1248	35.1	26.2
34000	16.05	2941	14.94	685	3.48	1108	24.0	17.9	1143	26.8	20.0	1178	29.6	22.1	1212	32.4	24.2	1247	35.3	26.3	1282	38.2	28.5
36000	16.99	3114	15.82	725	3.68	1152	26.8	20.0	1186	29.7	22.1	1219	32.6	24.3	1252	35.6	26.5	1284	38.5	28.8	1317	41.6	31.0
38000	17.94	3287	16.70	766	3.89	1197	29.9	22.3	1230	32.8	24.5	1262	35.9	26.8	1293	39.0	29.1	1324	42.1	31.4	1355	45.2	33.7
40000	18.88	3460	17.58	806	4.09	1243	33.2	24.8	1274	36.3	27.1	1305	39.4	29.4	1336	42.6	31.8	1365	45.9	34.2	1394	49.2	36.7
42000	19.82	3633	18.46	846	4.30	1290	36.9	27.5	1320	40.0	29.8	1350	43.2	32.2	1379	46.5	34.7	1407	49.9	37.3	1436	53.4	39.8

SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

SIZES 300 LP
300 MP
300 HP



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 6 in. (152mm) TO UNIT WIDTH AND 3 in. (76mm) TO UNIT HEIGHT FOR LUGS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 18 in. (460mm) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA, ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDEK AND COLDEX SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

FAN HEAD

LOW PRESSURE	MEDIUM PRESSURE	HIGH PRESSURE
324T	364T	404T

STEAM GRID HUMIDIFIER

STEAM PRESSURE	OUTPUT STEAM PER HOUR
psig	lb/hr
2	263
5	435
10	667

COILS

COIL	SECTION	MAXIMUM FLOW	FACE AREA	MINORAL TUBE LENGTH	CASING HEIGHT	NO. OF COILS
		CFM	sq ft	ft	in.	
STD. COIL	HEATING COIL SECT.	48000	22.65			
	COOLING COIL SECT.	32000	15.10			
	HTG/CLG MULTIZONE	40000	18.86	58.89	5.47	108
	SPRAY COIL DEHUM.	40000	18.86			
UNDER-SIZED COIL	HTG/VTG MULTIZONE	48000	22.65			
	FACE & INTERNAL BYPASS DAMPER	46000	43.46	4.04		
SMALL COIL	HTG/CLG MULTIZONE	32000	15.10	27.90	2.59	

FILTERS

FILTER SECTION	MAX. FLOW	FACE AREA	FILTER QUANTITY AND SIZE
	CFM	sq ft	
FLAT FILTER	34000	61.11	5.67 12-20"x20"x2", 8-20"x25"x2"
ANGLE FILTER	48000	91.87	8.52 18-20"x20"x2", 12-20"x25"x2"
HIGH PERFORMANCE FILTER	32000	54.00	5.02 12-24"x24"x12", 3-24"x12"x12"
HORIZONTAL ROLL FILTER	34000	58.13	5.21

MIXING BOXES

MIXING BOX	AIR INTAKE WIDTH	AIR INTAKE HEIGHT
	in.	in.
STANDARD MIXING BOX	108	2743
1-STAGE EVEN TEMP. MIXING BOX		40
2-STAGE EVEN TEMP. MIXING BOX		1016
HIGH PERFORMANCE MIXING BOX		

MULTIZONES

MULTIZONE	MAXIMUM FLOW	OUTLET WIDTH	OUTLET HEIGHT	MAXIMUM NUMBER OF ZONES
	CFM	in.	in.	
HEATING/COOLING MULTIZONE	32000	15.10	108	72
HEATING/VENTILATING MULTIZONE	48000	22.65	108	2184

WET SECTIONS

WET SECTION	MAXIMUM FLOW	EFFECTIVE FACE AREA	WATER FLOW	WATER HEAD
	CFM	sq ft	gpm	ft
SPRAY COIL DEHUMIDIFIER	40000	18.86	5.47	64.8
CAPILLARY CELL AIRWASHER	40000	18.86	7.81	114.7
TYPE C AIRWASHER	40000	18.86	5.08	100.0
SHELDEK SECTION	40000	18.86	5.02	13.5
COLDEX SECTION	40000	18.86	5.02	10.3

ELIMINATORS

ELIMINATOR SECTION	MAXIMUM FLOW	FACE AREA
	CFM	sq ft
STEEL ELIMINATORS	46000	21.71
CELLULOSE MEDIA ELIMINATORS	40000	18.86

DAMPERS

DAMPER SECTION	FACE AREA
	sq ft
FACE DAMPER	65.69
FACE AND INTERNAL BYPASS DAMPER	50.42
FACE AND EXTERNAL BYPASS DAMPER	46.69

OPERATING WEIGHTS (APPROX.)

SECTION	NOTES	WEIGHT
		lb
FAN HEAD		2700
BASE PLENUM		N.A.
FLAT FILTER SECTION		227
ANGLE FILTER SECTION		490
HIGH PERFORMANCE FILTER SECTION		785
HORIZONTAL ROLL FILTER SECTION		750
12 IN. PLENUM SECTION		136
16 IN. PLENUM SECTION		181
20 IN. PLENUM SECTION		227
STANDARD MIXING BOX		1037
1-STAGE EVEN TEMP. MIXING BOX		1408
2-STAGE EVEN TEMP. MIXING BOX		2291
HIGH PERFORMANCE MIXING BOX		1782
HEATING/COOLING MULTIZONE		2556
HEATING/VENTILATING MULTIZONE		911
SPRAY COIL DEHUMIDIFIER		4
CAPILLARY CELL AIRWASHER		2
TYPE C AIRWASHER		2
SHELDEK SECTION		2
COLDEX SECTION		4
STEEL ELIMINATORS		1885
CELLULOSE MEDIA ELIMINATORS		174
FACE DAMPER		437
FACE AND INTERNAL BYPASS DAMPER		3
FACE AND EXTERNAL BYPASS DAMPER		3

NOTES: 1 - Add for weight of motor
2 - Add for weight of water
3 - Add for weight of coils
4 - Add for weight of coils and water

PERFORMANCE RATINGS

SIZE 300

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																				
			0.25 (0.082)			0.5 (0.125)			1.0 (0.240)			1.5 (0.374)			2.0 (0.468)			2.5 (0.523)					
CFM	m³/s	fpm	m/s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

SIZE 402 ULTRAFOIL FAN

FAN OUTLET: WIDTH = 56 1/4 in (1429mm), HEIGHT = 44 in (1118mm), AREA = 17.16 ft² (1.60m²). FAN WK² = 729 LB-ft² (30.7 kg-m²).

18000	8.50	1047	5.32	306	1.95	308	1.4	1.1	347	2.2	1.6	422	3.7	2.8	493	5.4	4.1	566	7.6	5.7	629	9.8	7.3
20000	9.44	1163	5.91	340	1.73	333	1.8	1.3	369	2.5	1.9	439	4.2	3.2	502	6.0	4.5	567	8.1	6.1	633	10.6	7.9
22000	10.38	1280	6.50	374	1.90	360	2.2	1.7	393	3.1	2.3	457	4.9	3.7	517	6.8	5.1	573	8.8	6.6	634	11.2	8.4
24000	11.33	1396	7.09	408	2.07	387	2.7	2.0	417	3.6	2.7	476	5.8	4.2	533	7.6	5.6	586	9.7	7.3	638	12.0	9.0
26000	12.27	1513	7.68	442	2.24	415	3.3	2.5	442	4.3	3.2	497	6.3	4.7	551	8.5	6.3	602	10.8	8.0	649	13.1	9.8
28000	13.22	1629	8.27	475	2.42	443	4.0	3.0	468	5.0	3.7	519	7.1	5.3	570	9.6	7.1	618	11.8	8.8	664	14.3	10.7
30000	14.16	1745	8.87	509	2.59	471	4.7	3.5	494	5.8	4.3	543	8.1	6.1	590	10.6	7.9	636	13.1	9.7	680	15.6	11.6
32000	15.10	1862	9.46	543	2.76	499	5.6	4.2	521	6.7	5.0	567	9.2	6.9	610	11.7	8.7	654	14.5	10.8	697	17.0	12.7
34000	16.05	1978	10.05	577	2.93	528	6.6	4.9	548	7.7	5.7	591	10.3	7.7	632	12.9	9.6	674	15.9	11.9	715	18.6	13.9
36000	16.99	2094	10.64	611	3.11	557	7.7	5.7	576	8.9	6.6	616	11.5	8.6	656	14.3	10.7	695	17.3	12.9	734	20.4	15.2
38000	17.94	2211	11.23	645	3.28	586	8.9	6.7	604	10.1	7.6	641	12.9	9.6	680	15.9	11.9	716	18.8	14.0	754	22.2	16.6
40000	18.88	2327	11.82	679	3.45	615	10.3	7.7	632	11.5	8.6	667	14.3	10.7	704	17.6	13.1	739	20.5	15.3	774	23.9	17.8
42000	19.82	2443	12.41	713	3.62	644	11.8	8.8	660	13.1	9.8	693	15.9	11.9	728	19.3	14.4	762	22.5	16.8	795	25.7	19.2
44000	20.77	2560	13.00	747	3.80	673	13.4	10.0	688	14.8	11.0	720	17.7	13.2	753	21.1	15.8	787	24.7	18.4	816	27.8	20.7
46000	21.71	2676	13.59	781	3.97	702	15.2	11.3	717	16.6	12.4	747	19.6	14.6	778	23.1	17.2	811	26.9	20.0	841	30.2	22.5
48000	22.66	2792	14.18	815	4.14	731	17.1	12.8	745	18.6	13.9	774	21.7	16.2	804	25.2	18.8	835	29.1	21.7	865	32.8	24.5

MEDIUM PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																				
			2.5 (0.823)			3.0 (0.747)			3.5 (0.872)			4.0 (1.00)			4.5 (1.12)			5.0 (1.25)					
CFM	m³/s	fpm	m/s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

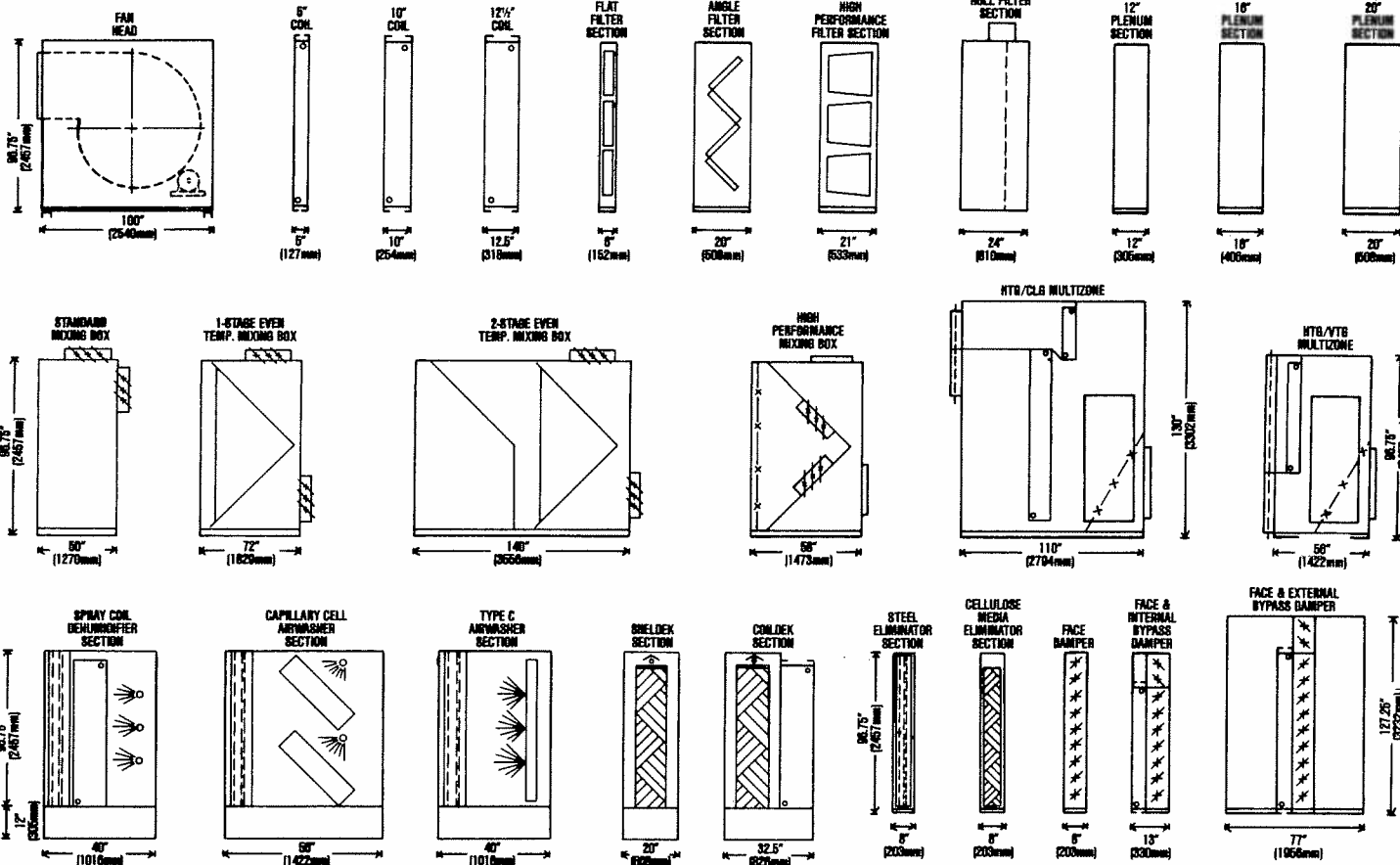
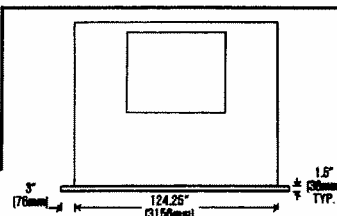
SIZE 365 ULTRAFOIL FAN

FAN OUTLET: WIDTH = 51 in (1295mm), HEIGHT = 39 1/4 in (1010mm), AREA = 14.08 ft² (1.31m²). FAN WK² = 448 LB-ft² (18.9 kg-m²).

18000	8.50	1278	6.49	306	1.55	699	9.2	6.9	765	11.4	8.5	822	13.6	10.2	876	15.9	11.9						
20000	9.44	1420	7.22	340	1.73	705	10.0	7.5	766	12.2	9.1	826	14.6	10.9	881	17.1	12.8	931	19.6	14.6	978	22.1	16.5
22000	10.38	1563	7.94	374	1.90	722	11.1	8.3	773	13.2	9.8	828	15.6	11.6	883	18.2	13.6	936	20.9	15.6	983	23.6	17.6
24000	11.33	1705	8.66	408	2.07	743	12.4	9.3	789	14.6	10.9	836	16.8	12.5	886	19.3	14.4	937	22.1	16.5	987	25.0	18.7
26000	12.27	1847	9.38	442	2.24	765	13.7	10.3	810	16.1	12.0	853	18.4	13.7	896	20.8	15.5	942	23.5	17.5	988	26.4	19.7
28000	13.22	1989	10.10	475	2.42	789	15.4	11.5	832	17.6	13.2	874	20.2	15.1	914	22.7	16.9	953	25.2	18.8	995	28.0	20.9
30000	14.16	2131	10.82	509	2.59	814	17.2	12.8	856	19.5	14.6	896	22.0	16.4	935	24.7	18.5	973	27.4	20.5	1009	30.1	22.4
32000	15.10	2273	11.55	543	2.76	841	18.9	14.1	881	21.6	16.1	919	24.1	18.0	957	26.8	20.0	994	29.7	22.2	1029	32.6	24.3
34000	16.05	2415	12.27	577	2.93	869	20.7	15.4	907	23.8	17.7	944	26.5	19.8	980	29.2	21.8	1015	32.0	23.9	1050	35.1	26.2
36000	16.99	2557	12.99	611	3.11	899	22.7	16.9	935	25.8	19.3	970	29.0	21.7	1005	31.9	23.8	1039	34.7	25.9	1072	37.7	28.1
38000	17.94	2699	13.71	645	3.28	930	25.1	18.7	963	28.0	20.9	997	31.5	23.5	1031	34.8	25.9	1063	37.7	28.2	1095	40.7	30.4
40000	18.88	2841	14.43	679	3.45	962	27.7	20.7	993	30.6	22.8	1025	33.9	25.3	1058	37.6	28.0	1089	41.0	30.6	1120	44.1	32.9
42000	19.82	2983	15.15	713	3.62	995	30.5	22.7	1025	33.5	25.0	1054	36.6	27.3	1085	40.3	30.1	1116	44.2	33.0	1145	47.7	35.6
44000	20.77	3125	15.88	747	3.80	1027	33.3	24.8	1057	36.7	27.4	1085	39.8	29.7	1114	43.3	32.3	1143	47.3	35.3	1172	51.3	38.2
46000	21.71	3267	1																				

SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

SIZES 360 LP
360 MP
360 HP



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 6 IN. (152MM) TO UNIT WIDTH AND 3 IN. (76MM) TO UNIT HEIGHT FOR LOSS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 18 IN. (457MM) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA, ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDEX AND COILDEK SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

FAN HEAD		
LOW PRESSURE	MEDIUM PRESSURE	HIGH PRESSURE
324T	355T	405T

STEAM GRID HUMIDIFIER			
STEAM PRESSURE	OUTPUT STEAM PER HOUR	CFM	kW
2	560	263	263
5	960	435	435
10	1470	657	657

COILS							
COIL	SECTION	MAXIMUM FLOW	FACE AREA	MINIMUM TUBE LENGTH	CASING WEIGHT	NO. OF COILS	NO. OF COILS
STD. COIL	HEATING COIL SECT.	50000	25.43				
	COOLING COIL SECT.	40000	18.88				
	HTB/CLB MULTIZONE DECK	48000	22.85	72.54	6.74	120	3048
	HTB/YTB MULTIZONE DECK	48000	22.85	72.54	6.74	120	3048
UNDER-SIZED COIL	HTB/YTB HOT MULTIZONE DECK	56000	25.43	55.23	5.13	74	1902
	FACE & INTERNAL BYPASS DAMPER	40000	18.88	34.48	3.20	45	1162

FILTERS			
FILTER SECTION	MAX. FLOW	FACE AREA	FILTER QUANTITY AND SIZE
FLAT FILTER	41000	19.35	75.00 8.97 12-20"x20"x2", 12-25"x20"x2"
ANGLE FILTER	55000	25.98	100.00 9.29 36-20"x20"x2"
HIGH PERFORMANCE FILTER	42000	19.82	70.00 6.50 15-24"x24"x12", 5-12"x24"x12"
HORIZONTAL ROLL FILTER	41000	19.35	67.63 6.28

MIXING BOXES			
MIXING BOX	AIR INTAKE WIDTH	AIR INTAKE HEIGHT	CFM
STANDARD MIXING BOX	120	3048	44
1-STAGE EVEN TEMP. MIXING BOX			1118
2-STAGE EVEN TEMP. MIXING BOX			
HIGH PERFORMANCE MIXING BOX			

MULTIZONES					
MULTIZONE	MAXIMUM FLOW	OUTLET WIDTH	OUTLET HEIGHT	MAXIMUM NUMBER OF ZONES	CFM
HEATING/COOLING MULTIZONE	40000	18.88	120	3048	80
HEATING/VENTILATING MULTIZONE	58000	26.43	120	3048	94

WET SECTIONS						
WET SECTION	MAXIMUM AIR FLOW	EFFECTIVE FACE AREA	WATER FLOW	WATER HEAD	WATER PUMP	WATER PUMP
SPRAY COIL DEHUMIDIFIER	48000	22.85	72.54	6.74	70.8	5.03
CAPILLARY CELL AIRWASHER	48000	22.85	100.00	9.29	140.0	8.83
TYPE C AIRWASHER	48000	22.85	74.74	6.94	132.0	12.11
SHELDEX SECTION	52000	24.54	70.00	6.50	15.0	0.95
COILDEK SECTION	52000	24.54	70.00	6.50	15.0	0.95

ELIMINATORS			
ELIMINATOR SECTION	MAXIMUM FLOW	FACE AREA	CFM
STEEL ELIMINATORS	50000	26.43	74.74
CELLULOSE MEDIA ELIMINATORS	52000	24.54	70.00

DAMPERS			
DAMPER SECTION	FACE AREA	FACE	BYPASS
FACE DAMPER	79.94	7.40	
FACE AND INTERNAL BYPASS DAMPER	62.80	5.82	
FACE AND EXTERNAL BYPASS DAMPER	79.94	7.40	

OPERATING WEIGHTS (APPROX.)			
SECTION	NOTES	LB	KG
FAN HEAD	1	3195	1448
BASE PLENUM	N.A.	N.A.	N.A.
FLAT FILTER SECTION		301	137
ANGLE FILTER SECTION		823	383
HIGH PERFORMANCE FILTER SECTION		931	422
HORIZONTAL ROLL FILTER SECTION		800	363
12 IN. PLENUM SECTION		150	68
16 IN. PLENUM SECTION		200	91
20 IN. PLENUM SECTION		250	113
STANDARD MIXING BOX		1284	573
1-STAGE EVEN TEMP. MIXING BOX		1724	782
2-STAGE EVEN TEMP. MIXING BOX		2800	1270
HIGH PERFORMANCE MIXING BOX		2146	975
HEATING/COOLING MULTIZONE	3	3226	1464
HEATING/VENTILATING MULTIZONE	3	1113	505
SPRAY COIL DEHUMIDIFIER	4	4463	2020
CAPILLARY CELL AIRWASHER	2	5247	2380
TYPE C AIRWASHER	2	4463	2020
SHELDEX SECTION	2	890	403
COILDEK SECTION	4	854	433
STEEL ELIMINATORS	2365	1073	
CELLULOSE MEDIA ELIMINATORS	200	91	
FACE DAMPER	515	234	
FACE AND INTERNAL BYPASS DAMPER	3	367	267
FACE AND EXTERNAL BYPASS DAMPER	3	1748	793

NOTES: 1 - Add for weight of motor
2 - Add for weight of water
3 - Add for weight of coils
4 - Add for weight of coils and water

PERFORMANCE RATINGS

SIZE 360

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE -- in. wg (kPa)																		
			0.25 (0.062)			0.5 (0.125)			1.0 (0.240)			1.5 (0.374)			2.0 (0.498)			2.5 (0.623)			
CFM	m³/s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW

SIZE 445 ULTRAFoil FAN

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE -- in. wg (kPa)																				
			0.25 (0.062)			0.5 (0.125)			1.0 (0.240)			1.5 (0.374)			2.0 (0.498)			2.5 (0.623)					
24000	11.33	1139	5.79	331	1.68	297	2.1	1.6	330	3.0	2.3	364	5.0	3.8	452	7.2	5.4	513	9.8	7.3	572	12.8	9.5
26000	12.27	1234	6.27	358	1.82	317	2.5	1.9	348	3.5	2.6	407	5.7	4.2	462	8.0	5.9	516	10.4	7.8	573	13.4	10.0
28000	13.22	1329	6.75	386	1.96	337	3.0	2.2	366	4.1	3.0	421	6.4	4.8	474	8.7	6.5	523	11.2	8.4	575	14.1	10.6
30000	14.16	1424	7.23	414	2.10	357	3.5	2.6	384	4.6	3.5	436	7.1	5.3	486	9.5	7.1	534	12.2	9.1	579	15.0	11.2
32000	15.10	1519	7.72	441	2.24	377	4.1	3.1	402	5.3	3.9	451	7.8	5.8	500	10.5	7.8	545	13.3	9.9	588	16.1	12.0
34000	16.05	1614	8.20	469	2.38	398	4.8	3.6	421	6.0	4.5	468	8.6	6.4	514	11.6	8.6	557	14.3	10.7	599	17.4	13.0
36000	16.99	1709	8.68	496	2.52	419	5.5	4.1	440	6.8	5.0	485	9.6	7.1	528	12.6	9.4	570	15.5	11.6	611	18.6	13.9
38000	17.94	1804	9.16	524	2.66	440	6.4	4.7	460	7.6	5.7	503	10.6	7.9	543	13.7	10.2	584	16.9	12.6	623	20.0	14.9
40000	18.88	1898	9.64	551	2.80	461	7.3	5.4	480	8.6	6.4	521	11.7	8.8	559	14.8	11.0	598	18.3	13.7	636	21.5	16.0
42000	19.82	1993	10.13	579	2.94	482	8.3	6.2	500	9.7	7.2	539	12.9	9.6	576	16.0	12.0	613	19.7	14.7	649	23.2	17.3
44000	20.77	2088	10.61	607	3.08	504	9.4	7.0	521	10.8	8.1	557	14.1	10.5	593	17.5	13.1	628	21.1	15.8	664	25.0	18.6
46000	21.71	2183	11.09	634	3.22	525	10.6	7.9	541	12.1	9.0	575	15.4	11.5	611	19.1	14.2	644	22.6	16.8	678	26.8	20.0
48000	22.66	2278	11.57	662	3.36	546	12.0	8.9	562	13.5	10.0	594	16.8	12.6	629	20.7	15.5	661	24.2	18.1	693	28.5	21.2
50000	23.60	2373	12.06	689	3.50	568	13.4	10.0	583	14.9	11.1	614	18.4	13.7	647	22.4	16.7	678	26.1	19.5	709	30.2	22.5
52000	24.54	2468	12.54	717	3.64	589	14.9	11.1	604	16.4	12.3	633	20.0	14.9	665	24.2	18.0	695	28.2	21.0	725	32.1	24.0
54000	25.49	2563	13.02	744	3.78	611	16.6	12.4	625	18.2	13.6	653	21.8	16.3	683	26.0	19.4	713	30.4	22.7	741	34.2	25.5
56000	26.43	2658	13.50	772	3.92	632	18.4	13.7	646	20.1	15.0	673	23.8	17.7	702	28.0	20.9	731	32.6	24.3	759	36.6	27.3

MEDIUM PRESSURE

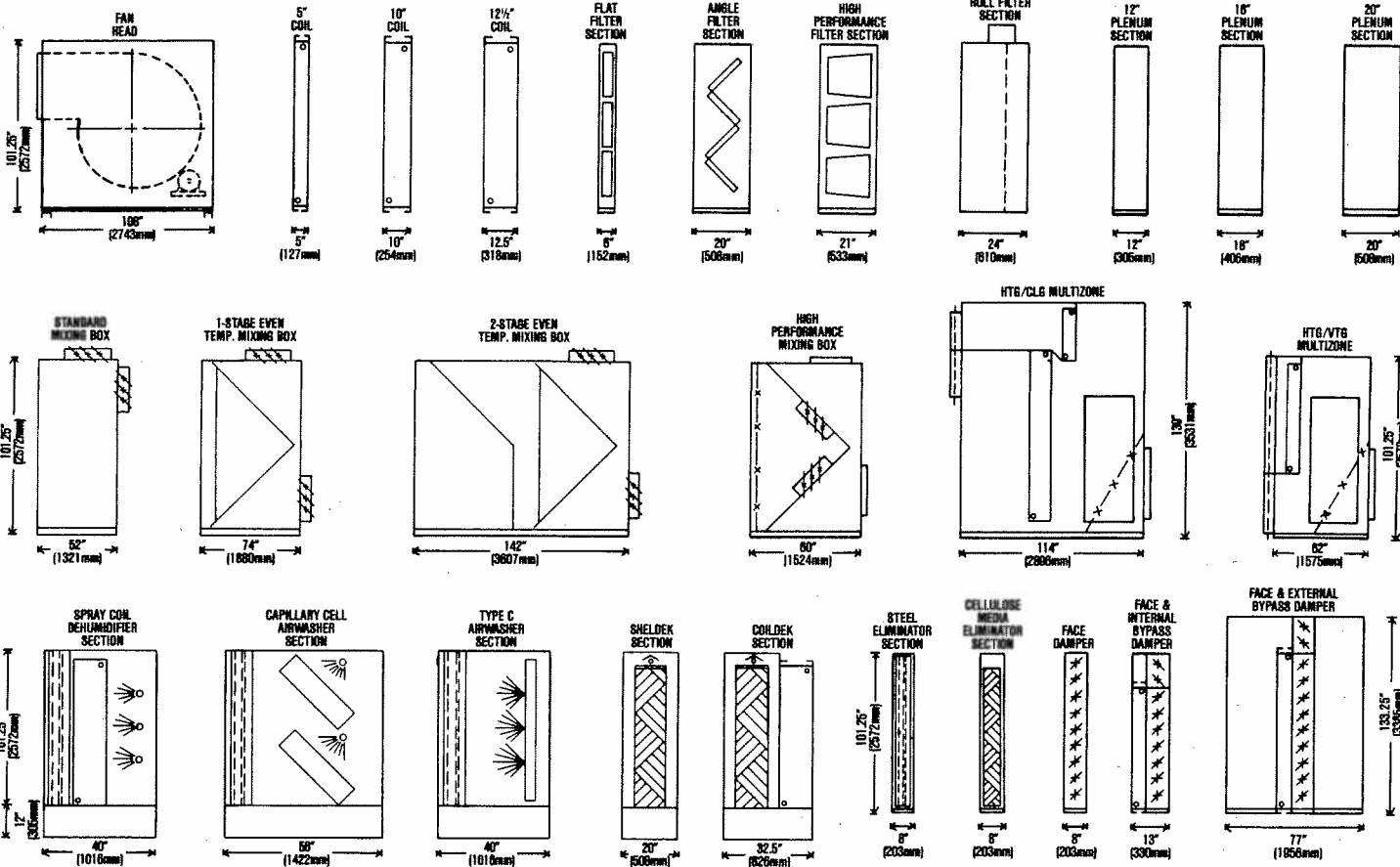
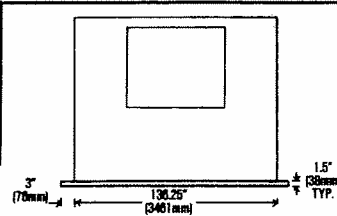
FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE -- in. wg (kPa)														
			2.5 (0.623)			3.0 (0.747)			3.5 (0.872)			4.0 (1.00)			4.5 (1.12)		

SIZE 402 ULTRAFoil FAN

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE -- in. wg (kPa)																				
			2.5 (0.623)			3.0 (0.747)			3.5 (0.872)			4.0 (1.00)			4.5 (1.12)			5.0 (1.25)					
24000	11.33	1396	7.09	331	1.68	638	12.0	9.0	694	14.7	11.0	749	17.7	13.2	798	20.6	15.4	843	23.6	17.6	887	26.7	19.9
26000	12.27	1513	7.68	358	1.82	649	13.1	9.8	698	15.6	11.7	750	18.6	13.8	800	21.7	16.2	847	24.9	18.6	890	28.1	21.0
28000	13.22	1629	8.27	386	1.96	664	14.3	10.7	707	16.8	12.6	754	19.7	14.7	801	22.8	17.0	849	26.1	19.5	894	29.6	22.1
30000	14.16	1745	8.87	414	2.10	680	15.6	11.6	722	18.3	13.7	762	21.0	15.7	806	24.1	17.9	850	27.4	20.4	895	30.9	23.1
32000	15.10	1862	9.46	441	2.24	697	17.0	12.7	738	19.9	14.8	777	22.7	17.0	815	25.6	19.1	855	28.8	21.5	897	32.3	24.1
34000	16.05	1978	10.05	469	2.38	715	18.6	13.9	754	21.4	16.0	792	24.5	18.3	829	27.5	20.6	864	30.6	22.8	902	34.0	25.4
36000	16.99	2094	10.64	496	2.52	734	20.4	15.2	772	23.2	17.3	808	26.3	19.6	844	29.6	22.1	878	32.8	24.5	912	36.0	26.9
38000	17.94	2211	11.23	524	2.66	754	22.2	16.6	790	25.3	18.9	825	28.3	21.1	860	31.6	23.6	894	35.1	26.2	926	38.5	28.7
40000	18.88	2327	11.82	551	2.80	774	23.9	17.8	809	27.4	20.5	843	30.6	22.8	877	33.8	25.2	910	37.3				

SHELDONS SERIES 2000 CENTRAL STATION AIR HANDLING UNITS

**SIZES 430 LP
430 MP
430 HP**



NOTE: 1. FOR CONSTRUCTION PURPOSES ADD 6 in. (152mm) TO UNIT WIDTH AND 3 in. (76mm) TO UNIT HEIGHT FOR LUGS, FLANGES, CONNECTIONS, ETC. 2. MINIMUM 16 in. (406mm) ACCESS SPACE MUST BE PROVIDED FOR SERVICING OF MEDIA, ELIMINATORS, NOZZLES, ETC. ON SPRAY COIL DEHUMIDIFIERS, CAPILLARY CELL AIRWASHERS, TYPE C AIRWASHERS, SHELDEK AND COILDEK SECTIONS AND ON STEEL AND CELLULOSE MEDIA ELIMINATORS.

FAN HEAD

LOW PRESSURE	MEDIUM PRESSURE	HIGH PRESSURE
32BT	40AT	44AT

Fan performance ratings are based on standard air and include fan draw through box loss. To establish the unit internal static pressure use the air friction table on page 44 and add for coil losses where applicable. After determining the BHP (kW) add for drive losses (page 11) and check start time to ensure the appropriate motor horsepower selection.

STEAM GRID DEHUMIDIFIER

STEAM PRESSURE	OUTPUT STEAM PER HOUR
psi	lb/hr
2	13.8
5	34.5
10	68.9

COILS

COIL	SECTION	MAXIMUM FLOW		FACE AREA		NOMINAL TUBE LENGTH		CABING HEIGHT		NO. OF COILS	
		CFM	m ³ /s	ft ²	m ²	in.	mm	in.	mm		
STD. COIL	HEATING COIL SECT.	65000	30.88								
	COOLING COIL SECT.	46000	21.71								
	HTB/CLB COLD MULTIZONE DECK			93.82	7.79	132	3353	99%	2534	2	
	SPRAY COIL DEHUM.	56000	28.43								
	COILDEK	60000	28.32								
	FACE & EXTERNAL BYPASS DAMPER			80.82	5.65			74%	1902	2	
	HTB/NTB MULTIZONE	65000	30.88								
	FACE & INTERNAL BYPASS DAMPER										
	SMALL COIL	HTB/CLB MULTIZONE	46000	21.71	41.91	3.89			49%	1267	1

FILTERS

FILTER SECTION	MAX. FLOW		FACE AREA		FILTER QUANTITY AND SIZE
	CFM	m ³ /s	ft ²	m ²	
FLAT FILTER	48000	22.85	87.07	8.08	2-20" x 18" x 2", 5-20" x 20" x 2" 6-25" x 16" x 2", 15-25" x 20" x 2"
ANGLE FILTER	65000	30.88	128.33	11.92	35-20" x 20" x 2", 14-20" x 16" x 2"
HIGH PERFORMANCE FILTER	48000	22.85	80.00	7.43	20-24" x 24" x 12"
HORIZONTAL ROLL FILTER	48000	22.85	79.74	7.41	

MIXING BOXES

MIXING BOX	AIR INTAKE WIDTH		AIR INTAKE HEIGHT	
	in.	mm	in.	mm
STANDARD MIXING BOX				
1-STAGE EVEN TEMP. MIXING BOX	132	3333	46	1168
2-STAGE EVEN TEMP. MIXING BOX				
HIGH PERFORMANCE MIXING BOX				

MULTIZONES

MULTIZONE	MAXIMUM FLOW		OUTLET WIDTH		OUTLET HEIGHT		MAXIMUM NUMBER OF ZONES
	CFM	m ³ /s	in.	mm	in.	mm	
HEATING/COOLING MULTIZONE	46000	21.71	132	3333	84	2134	16
HEATING/VENTILATING MULTIZONE	65000	30.88	132	3333	100	2540	16

WET SECTIONS

WET SECTION	MAXIMUM FLOW		EFFECTIVE FACE AREA		WATER FLOW		WATER HEAD	
	CFM	m ³ /s	ft ²	m ²	gpm	L/s	ft	m
SPRAY COIL DEHUMIDIFIER	56000	28.43	83.82	7.79	82.2	5.82	34.6	103.2
CAPILLARY CELL AIRWASHER	56000	28.43	113.89	10.59	159.4	10.66	24.7	73.7
TYPE C AIRWASHER	56000	28.43	86.36	8.02	224.0	14.13	57.6	171.8
SHELDEK SECTION								
COILDEK SECTION	60000	28.32	79.75	7.41	16.5	1.04	12.6	37.8

ELIMINATORS

ELIMINATOR SECTION	MAXIMUM FLOW		FACE AREA	
	CFM	m ³ /s	ft ²	m ²
STEEL ELIMINATORS	65000	30.88	86.36	8.02
CELLULOSE MEDIA ELIMINATORS	60000	28.32	79.75	7.41

DAMPERS

DAMPER SECTION	FACE AREA	
	ft ²	m ²
FACE DAMPER	93.06	8.64
FACE AND INTERNAL BYPASS DAMPER	68.86	6.40
FACE AND EXTERNAL BYPASS DAMPER	FACE	24.20
	FACE	93.06
BYPASS	27.78	

OPERATING WEIGHTS (APPROX.)

SECTION	NOTES	WEIGHT	
		LB	KG
FAN HEAD	1	3543	1607
BASE PLENUM		N.A.	N.A.
FILTER SECTIONS	FLAT FILTER SECTION	320	145
	ANGLE FILTER SECTION	657	298
	HIGH PERFORMANCE FILTER SECTION	1027	466
	HORIZONTAL ROLL FILTER SECTION	840	381
PLENUM SECTIONS	12 IN. PLENUM SECTION	152	69
	16 IN. PLENUM SECTION	203	92
	20 IN. PLENUM SECTION	254	115
	STANDARD MIXING BOX	1368	633
MIXING BOXES	1-STAGE EVEN TEMP. MIXING BOX	1873	850
	2-STAGE EVEN TEMP. MIXING BOX	3000	1361
	HIGH PERFORMANCE MIXING BOX	2273	1078
MULTIZONES	HEATING/COOLING MULTIZONE	3	3556
	HEATING/VENTILATING MULTIZONE	3	1295
	SPRAY COIL DEHUMIDIFIER	4	4869
	CAPILLARY CELL AIRWASHER	2	5639
WET SECTIONS	TYPE C AIRWASHER	2	4869
	SHELDEK SECTION	2	1000
	COILDEK SECTION	4	1067
	STEEL ELIMINATORS	2650	1202
ELIMINATOR SECTIONS	CELLULOSE MEDIA ELIMINATORS	216	98
	FACE DAMPER	580	263
DAMPERS	FACE AND INTERNAL BYPASS DAMPER	3	638
	FACE AND EXTERNAL BYPASS DAMPER	3	1917

NOTES: 1- Add for weight of motor
2- Add for weight of water
3- Add for weight of coils
4- Add for weight of coils and water

PERFORMANCE RATINGS

SIZE 430

LOW PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																				
			0.25 (0.062)			0.5 (0.125)			1.0 (0.249)			1.5 (0.374)			2.0 (0.496)			2.5 (0.623)					
			CFM	m ³ /s	fpm	m/s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW
SIZE 490 ULTRAFOIL FAN																							
FAN OUTLET: WIDTH = 68 1/2 in (1740mm), HEIGHT = 53 1/2 in (1359mm), AREA = 25.45 ft ² (2.38m ²)																							
FAN WK ² = 2099 LB-ft ² (88.4 kg-m ²)																							
30000	14.16	1193	6.06	359	1.82	276	2.7	2.0	306	3.9	2.9	362	6.4	4.8	414	9.1	6.8	466	12.2	9.1	520	15.8	11.8
32500	15.34	1293	6.57	389	1.98	295	3.3	2.4	322	4.5	3.4	375	7.2	5.4	424	10.0	7.5	471	13.0	9.7	521	16.6	12.4
35000	16.52	1392	7.07	419	2.13	314	3.9	2.9	339	5.2	3.9	388	8.1	6.1	435	11.0	8.2	479	14.1	10.5	524	17.6	13.1
37500	17.70	1492	7.58	449	2.28	333	4.6	3.4	356	6.0	4.5	407	9.0	6.7	447	12.1	9.0	490	15.4	11.5	529	18.8	14.0
40000	18.88	1591	8.08	479	2.43	352	5.4	4.0	374	6.8	5.1	417	9.9	7.4	460	13.4	10.0	501	16.7	12.4	539	20.3	15.1
42500	20.06	1691	8.59	509	2.59	371	6.3	4.7	391	7.7	5.8	433	11.0	8.2	473	14.7	11.0	512	18.1	13.5	550	21.9	16.3
45000	21.24	1790	9.09	539	2.74	391	7.3	5.4	410	8.8	6.5	449	12.3	9.2	487	16.0	12.0	525	19.7	14.7	561	23.5	17.5
47500	22.42	1889	9.60	569	2.89	411	8.4	6.2	428	9.9	7.4	466	13.7	10.2	502	17.3	12.9	538	21.5	16.0	573	25.3	18.8
50000	23.60	1989	10.10	599	3.04	431	9.6	7.2	447	11.2	8.4	483	15.1	11.3	517	18.8	14.1	552	23.3	17.4	585	27.3	20.4
52500	24.78	2088	10.61	629	3.19	451	10.9	8.2	466	12.6	9.4	500	16.6	12.4	533	20.6	15.4	566	25.0	18.7	598	29.5	22.0
55000	25.96	2188	11.11	659	3.35	471	12.4	9.3	486	14.2	10.6	517	18.2	13.6	550	22.5	16.8	580	26.8	20.0	612	31.8	23.7
57500	27.14	2287	11.62	688	3.50	491	14.0	10.5	505	15.8	11.8	535	19.9	14.9	566	24.6	18.3	596	28.8	21.5	626	33.9	25.3
60000	28.32	2387	12.12	718	3.65	511	15.8	11.8	525	17.6	13.2	553	21.8	16.3	583	26.7	19.9	612	31.1	23.2	640	36.1	26.9
62500	29.50	2486	12.63	748	3.80	531	17.7	13.2	544	19.6	14.6	571	23.8	17.8	600	28.8	21.5	628	33.6	25.1	655	38.4	28.6
65000	30.68	2586	13.13	778	3.95	551	19.7	14.7	564	21.7	16.2	590	26.0	19.4	617	31.1	23.2	645	36.3	27.1	670	41.0	30.6

MEDIUM PRESSURE

FLOW	FAN OUTLET VELOCITY	STD. COIL VELOCITY	STATIC PRESSURE — in. wg (kPa)																				
			2.5 (0.623)			3.0 (0.747)			3.5 (0.872)			4.0 (1.00)			4.5 (1.12)			5.0 (1.25)					
			CFM	m ³ /s	fpm	m/s	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP	kW	RPM	BHP
SIZE 445 ULTRAFOIL FAN																							
FAN OUTLET: WIDTH = 62 1/2 in (1581mm), HEIGHT = 48 1/2 in (1238mm), AREA = 21.07 ft ² (1.98m ²)																							
FAN WK ² = 1310 LB-ft ² (55.2 kg-m ²)																							
30000	14.16	1424	7.23	359	1.82	579	15.0	11.2	628	18.3	13.6	677	21.9	16.3	723	25.6	19.1	764	29.3	21.8	803	33.1	24.7
32500	15.34	1542	7.84	389	1.98	591	16.4	12.3	633	19.5	14.5	679	23.1	17.2	724	26.9	20.1	767	31.0	23.1	806	34.9	26.1
35000	16.52	1661	8.44	419	2.13	605	18.0	13.5	644	21.1	15.8	684	24.5	18.3	726	28.3	21.1	768	32.4	24.2	809	36.8	27.4
37500	17.70	1780	9.04	449	2.28	620	19.6	14.6	658	23.1	17.2	694	26.4	19.7	731	30.0	22.4	770	34.1	25.4	809	38.3	28.6
40000	18.88	1898	9.64	479	2.43	636	21.5	16.0	672	24.9	18.6	708	28.6	21.3	741	32.1	24.0	776	35.9	26.8	813	40.2	30.0
42500	20.06	2017	10.25	509	2.59	653	23.6	17.6	688	27.0	20.1	722	30.8	23.0	755	34.6	25.8	786	38.4	28.6	819	42.4	31.6
45000	21.24	2136	10.85	539	2.74	671	25.9	19.3	705	29.4	21.9	737	33.1	24.7	769	37.2	27.7	800	41.2	30.8	830	45.2	33.7
47500	22.42	2254	11.45	569	2.89	690	28.1	20.9	722	32.0	23.9	754	35.8	26.7	784	39.7	29.6	815	44.1	32.9	844	48.4	36.1

AIR FRICTION — in. wg.

SECTION	NOTES	STANDARD COIL VELOCITY — fpm													
		300	350	400	450	500	550	600	650	700	750	800	850	900	
FLAT FILTER SECTION	1	0.10	0.12	0.13	0.15	0.17	0.18	0.20							
ANGLE FILTER SECTION		0.06	0.07	0.08	0.10	0.11	0.12	0.13	0.14	0.15	0.16	0.17	0.18	0.19	
HIGH PERFORMANCE FILTER SECTION		0.05	0.08	0.10	0.13	0.15	0.18	0.20	0.23	0.25					
HORIZONTAL ROLL FILTER SECTION		0.09	0.11	0.12	0.14	0.15	0.17	0.18	0.20	0.22					
STANDARD MIXING BOX	2	0.02	0.02	0.03	0.04	0.05	0.06	0.07	0.09	0.10	0.11	0.13	0.15	0.16	
1-STAGE EVEN TEMP MIXING BOX		0.09	0.12	0.16	0.20	0.25	0.31	0.36	0.43	0.50	0.57	0.65	0.73	0.82	
2-STAGE EVEN TEMP MIXING BOX		0.16	0.22	0.29	0.37	0.45	0.55	0.65	0.76	0.89	1.02	1.16	1.31	1.46	
HIGH PERFORMANCE MIXING BOX		0.04	0.06	0.07	0.09	0.11	0.14	0.16	0.19	0.22	0.26	0.29	0.33	0.37	
HEATING/COOLING MULTIZONE	2,3	0.07	0.10	0.12	0.16	0.19	0.23								
HEATING/VENTILATING MULTIZONE		0.03	0.03	0.05	0.06	0.07	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.23	
SPRAY COIL DEHUMIDIFIER	2	0.16	0.21	0.28	0.35	0.43	0.52	0.62	0.73	0.85					
CAPILLARY CELL AIRWASHER		0.17	0.23	0.30	0.38	0.47	0.56	0.67	0.79	0.91					
TYPE C AIRWASHER	2	0.15	0.20	0.26	0.33	0.41	0.49	0.58	0.69	0.79					
SHELDEK (12" MEDIA)		0.09	0.12	0.16	0.20	0.25	0.30	0.35	0.42	0.48	0.55				
COILDEK (12" MEDIA)		0.09	0.12	0.16	0.20	0.25	0.30	0.35	0.42	0.48	0.55				
STEEL ELIMINATOR SECTION	2	0.07	0.09	0.12	0.16	0.19	0.23	0.28	0.32	0.38	0.43				
CELLULOSE MEDIA ELIMINATOR SECTION		0.04	0.06	0.08	0.10	0.12	0.15	0.17	0.21	0.24	0.27				
FACE DAMPER		0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.12	0.13	
FACE AND INTERNAL BYPASS DAMPER		0.03	0.03	0.05	0.06	0.07	0.09	0.10	0.12	0.14	0.16	0.18	0.20	0.23	
FACE AND EXTERNAL BYPASS DAMPER	2	0.01	0.02	0.03	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.11	0.12	0.13	

SECTION	FAN OUTLET VELOCITY — fpm							
	1000	1500	2000	2500	3000	3500	4000	4500
BLOW THROUGH FAN HEAD	0.05	0.12	0.21	0.32	0.47	0.64	0.83	1.05
VARIABLE INLET VANES (100% OPEN)	0.03	0.07	0.12	0.19	0.27	0.37	0.48	0.61

AIR FRICTION — kPa

SECTION	NOTES	STANDARD COIL VELOCITY — m/s													
		1.50	1.75	2.00	2.25	2.50	2.75	3.00	3.25	3.50	3.75	4.00	4.25	4.50	
FLAT FILTER SECTION	1	0.025	0.029	0.033	0.037	0.041	0.045	0.049							
ANGLE FILTER SECTION		0.015	0.018	0.021	0.023	0.026	0.028	0.031	0.034	0.036	0.039	0.041	0.044	0.046	
HIGH PERFORMANCE FILTER SECTION		0.012	0.018	0.024	0.031	0.037	0.043	0.049	0.055	0.061	0.068				
HORIZONTAL ROLL FILTER SECTION		0.023	0.026	0.030	0.034	0.038	0.041	0.045	0.049	0.053	0.056				
STANDARD MIXING BOX	2	0.004	0.006	0.008	0.010	0.012	0.015	0.018	0.021	0.024	0.028	0.031	0.035	0.040	
1-STAGE EVEN TEMP MIXING BOX		0.022	0.030	0.039	0.049	0.061	0.074	0.088	0.103	0.119	0.137	0.156	0.176	0.197	
2-STAGE EVEN TEMP MIXING BOX		0.039	0.053	0.070	0.088	0.109	0.131	0.156	0.184	0.213	0.244	0.278	0.314	0.352	
HIGH PERFORMANCE MIXING BOX		0.010	0.014	0.018	0.022	0.028	0.033	0.040	0.047	0.054	0.062	0.071	0.080	0.089	
HEATING/COOLING MULTIZONE	2,3	0.017	0.023	0.030	0.038	0.047	0.056								
HEATING/VENTILATING MULTIZONE		0.006	0.008	0.011	0.014	0.017	0.021	0.025	0.029	0.033	0.038	0.044	0.049	0.055	
SPRAY COIL DEHUMIDIFIER	2	0.037	0.051	0.067	0.084	0.104	0.126	0.150	0.176	0.204					
CAPILLARY CELL AIRWASHER		0.040	0.055	0.072	0.091	0.112	0.135	0.161	0.189	0.219					
TYPE C AIRWASHER	2	0.035	0.048	0.062	0.079	0.098	0.118	0.141	0.165	0.191					
SHELDEK (305 mm MEDIA)		0.021	0.029	0.038	0.048	0.059	0.072	0.085	0.100	0.116	0.133	0.151			
COILDEK (305 mm MEDIA)		0.021	0.029	0.038	0.048	0.059	0.072	0.085	0.100	0.116	0.133	0.151			
STEEL ELIMINATOR SECTION	2	0.017	0.023	0.030	0.037	0.046	0.056	0.067	0.078	0.091	0.104	0.118			
CELLULOSE MEDIA ELIMINATOR SECTION		0.011	0.014	0.019	0.024	0.029	0.035	0.042	0.049	0.057	0.066	0.075			
FACE DAMPER		0.004	0.005	0.006	0.008	0.010	0.012	0.014	0.017	0.020	0.022	0.026	0.029	0.032	
FACE AND INTERNAL BYPASS DAMPER		0.006	0.008	0.011	0.014	0.017	0.021	0.025	0.029	0.033	0.038	0.044	0.049	0.055	
FACE AND EXTERNAL BYPASS DAMPER	2	0.004	0.005	0.006	0.008	0.010	0.012	0.014	0.017	0.020	0.022	0.026	0.029	0.032	

SECTION	FAN OUTLET VELOCITY — m/s							
	5.00	7.50	10.00	12.50	15.00	17.50	20.00	22.50
BLOW THROUGH FAN HEAD	0.013	0.028	0.050	0.078	0.113	0.153	0.200	0.253
VARIABLE INLET VANES (100% OPEN)	0.007	0.016	0.029	0.045	0.065	0.088	0.115	0.146

NOTES

1. Filter air frictions are based on clean filters.
2. Coil air friction must be added.
3. Blow through fan head air friction must be added.

Unit Design

Supply and install at locations shown on mechanical drawings, Sheldons SERIES 2000 Central Station Air Handling Units. Sizes and capacities to be in accordance with the equipment schedule.

Units are to be factory assembled to minimize jobsite labour and are to be complete with lifting lugs to facilitate easy installation on site. When it is necessary to ship units in sections due to size, flanged connections shall be provided for site assembly.

Units are to be manufactured using panels fabricated from 16 gauge flanged galvanized sheets. The exterior of the units shall be painted with a flat reactive vinyl primer. Cooling units are to be internally insulated with 1 in. (25 mm), coated insulation and are to have drain pans treated with a minimum 1/16 in. (1.66 mm) synthetic polymer insulation coating to prevent sweating. Insulating materials used shall comply with NFPA-90A. Insulation and drain pans shall be supplied on all sections downstream of the cooling coil.

Fan Heads

Fan heads shall be externally isolated and are to have a minimum of two structural steel channel cross-members welded to the underside of the unit. They are to be supplied complete with bearing inspection panels.

Centrifugal (Forward Curved/Unifoil/Ultrafoil) fans shall be supplied and are to be of the sizes, discharges and rotation listed in the schedule. They shall be double width, double inlet, arrangement #3 fans constructed of heavy gauge steel and are to be supplied with welded structural steel bracing and bearing chair assemblies, spun steel inlets and scroll drain. Fan wheels are to be statically and dynamically balanced before shipment.

Fan shafts are to be machined from bar stock to close tolerances for accurate bearing fit and shall not have speeds greater than 80% of their first critical speed in their rated pressure range. Bearings are to be the grease lubricated, permanently sealed type and shall have an average operating life of not less than 150,000 hours at maximum rated RPM for their pressure range.

Motors shall be open drip proof of the rpm and voltage listed in the schedule. Motor HP's shall be based on fan BHP (kW) and include for drive and box losses, and where applicable, for inlet vane losses. Motor start times shall not exceed (10 seconds/15 seconds). On motors 7.5 HP (5.6 kW) and under, adjustable V-belt drives shall be supplied. When motors over 7.5 HP (5.6 kW) are used fixed V-belt drives shall be supplied. Drives shall have a minimum 1.2 service factor based on rated motor HP (kW).

Heating and Cooling Coils

Units shall be provided with bolt-on heating and cooling coils with copper tubes and (aluminum/copper) fins mounted in galvanized steel frames. Coils are to be guaranteed for a working pressure of 200 psi (1380 kPa) unless removable headers are specified, in which case, a working pressure of 100 psi (690 kPa) is to be guaranteed.

Coil sizes, number of rows and fin spacing shall be as listed in the schedule.

For cooling, coils shall be:

1. Chilled water c/w drains in supply and return headers
2. Chilled water c/w drains in supply and return headers and non-ferrous drain headers connected to intermediate rows of tubes
3. Chilled water c/w removable headers at both ends of the coil
4. Chilled water c/w removable headers at the connection end of the coil
5. Direct expansion

For heating, coils shall be:

1. Hot water
2. Non-freeze steam coils
3. Flexible tube steam coils

Cooling coils are to be supplied with a treated drain pan and drain connection for condensate run-off.

Filter Sections

Filter sections are to be shipped from the factory with filters installed ready for operation. Flat, angle and high performance filter sections shall include channel racks for each row of filters, and an access door for side removal of filters. Horizontal roll filter sections shall be supplied complete with enclosed roll cases at the side of the filter section with access doors for servicing. Roll filters are to be bolted to the unit and are to include a remote control panel to be mounted and wired by others.

Filters shall be:

1. 2 in. (51 mm) thick glass fibre disposable type for flat and angle filter sections
2. 12 in. (305 mm) deep bag type for high performance filter sections
3. 2 in. (51 mm) thick glass fibre media rolls for horizontal roll filter sections