

DIRECT EXPANSION COMMERCIAL PACKAGED AIR-HANDLING UNITS, 6-30 TONS, 60 HZ, BUILT TO LAST, EASY TO INSTALL AND SERVICE

FAX/FAS air-handling units are the best choice for packaged air handlers. FAX/FAS units have direct-expansion coils, and FAX units come with X-Vane Fan Technology. All models offer excellent fan performance, a unique combination of indoor air quality features, and easy installation. Their versatility and state-of-the-art features provides economical performance.

Our easy-to install and economical FAX/FAS units provide reliable service and versatile packaged air-handling units satisfy design requirements with:

- Multi-position design for horizontal or vertical installation without modification.
- Standard sloped drain pans and cleanable insulation treated with an immobilized anti-microbial agent to inhibit the growth of bacteria and fungi on the insulation.
- High-static design meets a wider range of applications than competitive packaged air handler lines.
- Ultra Low Leak Economizer accessory provides ventilation air and “free” cooling with built in Fault Detection and Diagnostic (FDD) capabilities.
- Cooling coils with mechanically bonded fins provide peak heat transfer.
- Hot water coil, steam coil, and electric heat accessories are available.
- Standard factory-installed thermo-static expansion valves (TXV) with removable power element on FAX/FAS units.
- Die-formed galvanized steel casings provide durability and structural integrity. Optional paint is available.
- Upgraded unit control board with intuitive indoor fan adjustment.
- Standard 2-Speed Indoor Fan Motor system.

Easier installation and service

With the new X-Vane Axial fan system, there is no longer a need to adjust belts or pulleys as in past designs. This frees up maintenance and installation time.

The multi-position design and component layout allow for quick unit installation and operation. The DX coils have factory-installed TXVs with matching distributor nozzles. Units can be converted from horizontal to vertical operation by simply repositioning the unit. There are simple, fast plug-in connections to the standard integrated unit control board (UCB). The UCB has clearly labeled connection points to reduce installation time. Also, a large control box provides room to work and mount accessory controls.

Drain pan connections are duplicated on both sides of the unit. The filters, motor, drive, TXVs, and coil connections are easily accessed by removing a single side panel.

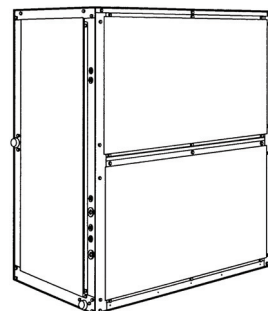
Easy to use

Our newly re-designed Unit Control Board puts all connections and troubleshooting points in one convenient place. Most low voltage connections are made to the same board and make it easy to access it. Setting up the fan is simple by an intuitive switch and rotary dial arrangement.

X-Vane Fan Technology

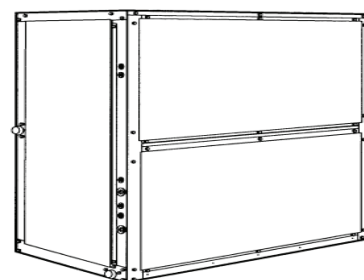
The direct drive X-Vane Fan Technology indoor fan system on FAX units uses a Vane Axial fan design and electronically commutated motors.

This new Vane Axial design over past belt drive systems has 75% fewer moving parts, uses up to 40% less energy and has no fan belts, blower bearings and shaft.



FAX072-120 unit shown

X-Vane Fan



FAS150-336 unit shown

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Features/Benefits

Rugged dependability

Die-formed galvanized steel panels ensure structural integrity under all operating conditions. Mechanically bonded coil fins provide improved heat transfer. For FAS units, galvanized steel fan housings are securely mounted to a die-formed galvanized steel deck. Rugged pillow-block bearings (FAS) are securely fastened to the solid steel fan shaft with split collets and clamp locking devices. FAX units have spider-type bearings.

This air handling unit has thermal insulation containing an immobilized anti-microbial agent to inhibit the growth of bacteria and fungi on the insulation.

Coil flexibility

FAX/FAS air handling units have galvanized steel casings; inlet and outlet connections are on the same end.

Direct-expansion (DX) coils are designed for use with R-410A refrigerant and have copper tubes mechanically bonded to aluminum sine-wave fins. DX coils include matched, factory-installed thermostatic expansion valves (TXVs) with matching distributor nozzles.

Indoor air quality features

The unique combination of features in the FAX/FAS Series air handlers ensures that clean, fresh, conditioned air is delivered to the occupied space.

Cooling coils prevent the build-up of humidity in the room, even during part-load conditions. Unit sizes 10 tons and above feature dual-circuit face-split coils.

2 in. (51 mm) disposable filters remove dust and airborne particles from the occupied space.

Pitched drain pan can be adjusted for a right-hand or left-hand connection to provide positive drainage and prevent standing condensate.

Economizer accessory precisely controls the blend of outdoor air and room air to achieve comfort levels. When the outside air is suitable, outside air dampers can fully open to provide “free” cooling. Economizer is an Ultra Low Leak design that includes return and outside air damper leakage that meets California Title 24 section 140.4 requirements. Controller meets California Title 24 Section 120.2 Fault Detection and Diagnostic (FDD) requirements.

Economy

The FAX/FAS packaged air handlers have low initial costs, and they continue to save money by providing reduced installation expense and energy-efficient performance.

Quick installation is ensured by the multi-position design. Units can be installed in either the horizontal or vertical (upflow) configuration without modifications. All units have drain-pan connections on both sides, and pans can be pitched for right-hand or left hand operation with a simple adjustment.

Fan motors and contactors are pre-wired and TXVs are factory-installed on FAX/FAS models.

High-efficiency, precision balanced fans minimize air turbulence, surging, and unbalanced operation, thereby cutting operating expenses.

2-Speed Indoor Fan Motor System

Our 2-Speed Indoor Fan Motor system units will automatically adjust the indoor fan motor speed in sequence with the unit's cooling operation. Per ASHRAE 90.1 2010 standard section 6.4.3.10.b, during the first stage of cooling operation the fan motor (either ECM or controlled by VFD) will adjust to provide two-thirds of the total cfm established for the unit. When a call for the second stage of cooling is required, the fan motor will allow the total cfm (100%) established for the unit. During the heating mode the fan motor will allow total design cfm (100%) operation and during the ventilation mode the fan motor will allow operation to two-thirds of total cfm.

Model number nomenclature

FAX Model Number Nomenclature

MODEL SERIES	F	A	X	0	9	1	H	2	A	A	0	A	U	A
Position Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14
F = R-410A Fan Coil Unit														
A = Air Conditioning (Cooling Only) H = Heat Pump														
Type														
X = X-Vane Vane Axial Fan (VAF)														
Efficiency														
072 = 6 Tons (1 circuit) 091 = 7.5 Tons (1 circuit) 120 = 10 Tons (2 circuit)														
Nominal Tonnage														
H = 208/230-3-60 L = 460-3-60 S = 575-3-60														
Voltage¹														
2 = Standard Efficiency / Medium Static Motor 3 = Standard Efficiency / High Static Motor														
Fan Motor Options														
A = Al/Cu														
Coil Options														
A = Standard DX Coil														
Type of Coil														
0 = X-Vane Two-Speed Fan														
Fan Motor Speed Controller														
A = Standard — Unpainted B = Painted Cabinet														
Painted Cabinet Options														
U = Unit Control Board (UCB) Electromechanical Controls														
Controls														
A = Standard														
Packaging														

¹ There are no multi-voltage units with the 2-Speed Vane Axial Fan (VAF), as the motors are dedicated voltage.

Model number nomenclature (cont)

FAS Model Number Nomenclature

MODEL SERIES	F	A	S	1	5	0	H	A	A	A	2	A	U	A
Position Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14
F = R-410A Fan Coil Unit														
A = Air Conditioning (Cooling Only) H = Heat Pump (size 180 only)														
S = Standard Efficiency														
150 = 12.5 Tons (2 circuit) (FAS units only) 180 = 15 Tons (2 circuit)														
H = 208/230-3-60 L = 460-3-60 S = 575-3-60														
A = Standard Static Standard Efficiency Motor / Standard Drive B = High (Alternate) Static Standard or High Efficiency Motor / High Drive ²														
A = Al/Cu														
A = Standard Coil (FAS, DX (Direct Expansion) coil; FHS, heat pump coil)														
2 = Two Speed Fan Controller (VFD)														
A = None (unpainted) B = Painted cabinet														
U = Electromechanical Unit Control Board														
A = Standard														

¹ There are no multi-voltage units with the optional 2-speed indoor fan motor / VFD controller. VFD controllers are dedicated voltage devices for 208/230v, 460v, and 575v.

² For FAS, standard efficiency on size 150, voltages 208-230v and 460v. High efficiency on size 180, as well as size 150, 575v. For FHS, high efficiency only.

MODEL SERIES	F	A	S	2	4	0	H	A	A	A	2	A	U	A
Position Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14
F = R-410A Fan Coil Unit														
A = Air Conditioning (Cooling Only) H = Heat Pump (size 240 only)														
S = Standard Efficiency														
240 = 20 Tons (2 circuit) 300 = 25 Tons (2 circuit; FAS units only) 336 = 30 Tons (2 circuit; FAS units only)														
H = 208/230-3-60 L = 460-3-60 S = 575-3-60														
A = Standard Static High Efficiency Motor / Standard Static Drive B = High Static Standard or High Efficiency Motor / High Static Drive ²														
A = Al/Cu														
A = Standard Coil (DX for FAS; Heat Pump for FHS)														
2 = Two-Speed Indoor Fan Motor Controller (VFD)														
A = Standard, Unpainted B = Painted Cabinet														
U = Electromechanical Unit Control Board														
A = Standard														

¹ There are no multi-voltage units with the 2-speed indoor fan motor / VFD controller. VFD controllers are dedicated voltage.

² For FAS, size 336 is designated standard motor, high static drive. Not offered on 575v. For FHS, size 240 is offered with standard motor, high static drive.

Model number nomenclature (cont)

FAX — 2-Speed Motors

POSITION 8	MOTOR DESCRIPTION	VOLTAGE	UNIT SIZE		
			072	091	120
2	Standard/Medium Static (X-Vane)	All	X	X	X
3	High Static (X-Vane)	All	X	X	X

FAS — 2-Speed Motors

POSITION 8	MOTOR DESCRIPTION	VOLTAGE	UNIT SIZE				
			150	180	240	300	336 ^a
A	Standard Efficiency Motor / Standard Static	All	X	X	—	—	—
	High Efficiency Motor / Standard Static	All	—	—	X	X	X
B	Standard Efficiency Motor / High Static	208/23-3-60 460-3-60	X	—	—	—	—
	High Efficiency Motor / High Static	208/230-3-60 460-3-60	—	X	X	X	X
		575-3-60	X	X	X	X	X

NOTE(S):

a. Size 336 is designated standard motor and high static drive.

Physical data

FAX/FAS 6-30 Ton Direct Expansion with R-410A Refrigerant Units

UNIT	FAX072	FAX091	FAX120	FAS150	FAS180	FAS240	FAS300	FAS336
NOMINAL CAPACITY (Tons)	6	7-1/2	10	12-1/2	15	20	25	30
OPERATING WEIGHT (lb)								
Base Unit with TXV (4 Row)	399	404	425	695	713	730	1050	1062
Plenum	175	175	175	225	225	225	325	325
Economizer	185	185	185	340	340	340	340	340
Hot Water Coil ^a	195	195	195	285	285	285	345	345
Steam Coil ^a	215	215	215	340	340	340	405	405
FANS								
Qty...Diam. (in.)	1...23	1...23	1...23	2...15	2...15	2...15	2...18	2...18
Nominal Airflow (cfm)	2,400	3,000	4,000	5,000	6,000	8,000	10,000	12,000
Airflow Range (cfm)	1,800-3,000	2,250-3,750	3,000-5,000	3,750-6,250	4,500-7,500	6,000-10,000	7,500-12,500	9,000-15,000
Nominal Motor hp (Standard Motor) ^{b,c}								
208/230-3-60 and 460-3-60	2.4	2.4	2.4	2.9	3.7	5.0	7.5	10.0
575-3-60	2.4	2.4	2.4	3.0	3.0	5.0	7.5	10.0
Motor Speed (rpm)								
208/230-3-60 and 460-3-60	2000	2000	2000	1725	1725	1760	1760	1755
575-3-60	2000	2000	2000	1725	1725	1745	1755	1755
REFRIGERANT ^d	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
Shipping Charge (lb)	Nitrogen Purge	Nitrogen Purge	Nitrogen Purge	Nitrogen Purge	Nitrogen Purge	Nitrogen Purge	Nitrogen Purge	Nitrogen Purge
Metering Device	TXV	TXV	TXV	TXV	TXV	TXV	TXV	TXV
Operating Charge (lb) (approx per circuit)	3.0	3.0	1.5/1.5	2.0/2.0	2.5/2.5	3.5/3.5	4.5/4.5	5.0/5.0
DIRECT-EXPANSION COIL	Enhanced Copper Tubes, Aluminum Sine-Wave Fins							
Max Working Pressure (psig)	650	650	650	650	650	650	650	650
Material	Al / Cu	Al / Cu	Al / Cu	Al / Cu	Al / Cu	Al / Cu	Al / Cu	Al / Cu
Coil Type	RTPF	RTPF	RTPF	RTPF	RTPF	RTPF	RTPF	RTPF
Face Area (sq ft)	6.67	8.33	10.01	13.25	17.67	19.88	24.86	29.83
No. of Splits	1	1	2	2	2	2	2	2
Split Type...Percentage	—	—	Face...50/50	Face...50/50	Face...50/50	Face...50/50	Face...50/50	Face...50/50
No. of Circuits per Split	12	15	9	12	16	18	20	24
Rows...Fins/in.	4...15	4...15	4...15	4...15	4...15	4...15	4...15	4...15
STEAM COIL ^a								
Max Working Press. (psig at 260°F)	20	20	20	20	20	20	20	20
Total Face Area (sq ft)	6.67	6.67	6.67	13.33	13.33	13.33	15.0	15.0
Rows...Fins/in.	1...9	1...9	1...9	1...10	1...10	1...10	1...10	1...10
HOT WATER COIL ^a								
Max Working Pressure (psig)	150	150	150	150	150	150	150	150
Total Face Area (sq ft)	6.67	6.67	6.67	13.33	13.33	13.33	15.0	15.0
Rows...Fins/in.	2...8.5	2...8.5	2...8.5	2...8.5	2...8.5	2...8.5	2...12.5	2...12.5
Water Volume								
(gal)	8.3	8.3	8.3	13.9	13.9	13.9	14.3	14.3
(ft ³)	1.1	1.1	1.1	1.85	1.85	1.85	1.90	1.90
PIPING CONNECTIONS								
Quantity...Size (in.)								
DX Coil — Suction (ODF)	1...1-1/8	1...1-1/8	2...1-1/8	2...1-1/8	2...1-1/8	2...1-1/8	2...1-3/8	2...1-3/8
DX Coil — Liquid Refrig (ODF)	1...5/8	1...5/8	2...5/8	2...5/8	2...5/8	2...5/8	2...5/8	2...5/8
Steam Coil, In (MPT)	1...2-1/2	1...2-1/2	1...2-1/2	1...2-1/2	1...2-1/2	1...2-1/2	1...2-1/2	1...2-1/2
Steam Coil, Out (MPT)	1...1-1/2	1...1-1/2	1...1-1/2	1...1-1/2	1...1-1/2	1...1-1/2	1...1-1/2	1...1-1/2
Hot Water Coil, In (MPT)	1...1-1/2	1...1-1/2	1...1-1/2	1...2	1...2	1...2	1...2	1...2
Hot Water Coil, Out (MPT)	1...1-1/2	1...1-1/2	1...1-1/2	1...2	1...2	1...2	1...2	1...2
Condensate (PVC)	1...5/8 ODM / 1-1/4 IDF	1...5/8 ODM / 1-1/4 IDF	1...5/8 ODM / 1-1/4 IDF	1...5/8 ODM / 1-1/4 IDF	1...5/8 ODM / 1-1/4 IDF	1...5/8 ODM / 1-1/4 IDF	1...5/8 ODM / 1-1/4 IDF	1...5/8 ODM / 1-1/4 IDF
FILTERS	Throwaway — Factory-Supplied	Throwaway — Factory-Supplied	Throwaway — Factory-Supplied	Throwaway — Factory-Supplied	Throwaway — Factory-Supplied	Throwaway — Factory-Supplied	Throwaway — Factory-Supplied	Throwaway — Factory-Supplied
Quantity...Size (in.)	4...16 x 24 x 2	4...16 x 24 x 2	4...16 x 24 x 2	4...16 x 20 x 2 4...16 x 24 x 2	4...16 x 20 x 2 4...16 x 24 x 2	4...16 x 20 x 2 4...16 x 24 x 2	4...20 x 24 x 2 4...20 x 25 x 2	4...20 x 24 x 2 4...20 x 25 x 2
Access Location	Right or Left Side	Right or Left Side	Right or Left Side	Right or Left Side	Right or Left Side	Right or Left Side	Right or Left Side	Right or Left Side

NOTE(S):

- Field-installed accessory only.
- FAX units are medium static option.
- Refer to Alternate Fan Motor Data table for alternate motor data (page 7).
- Units are shipped without refrigerant charge.

Physical data (cont)

**FAX Fan Motor Data
Standard Motor — Direct Drive Two Speed Motor**

UNIT	FAX072	FAX091	FAX120
230-3-60, 460-3-60, and 575-3-60			
Speed (rpm)	2000	2000	2000
Hp	2.4	2.4	2.4

**Motor Efficiency FAX —
Direct Drive Two Speed Motor**

MOTOR hp	MOTOR EFFICIENCY	
2.4	85.0%	
3.0	85.0%	
WEIGHTS	MEDIUM	HIGH
Motor hp	2.4	3.0
Motor Weight (lb)	23.8	53.7
Assembly Weight (lb)	56.4	85.6

FAS Fan Motor Data — Two Speed Standard Motor

UNIT	FAS150	FAS180	FAS240	FAS300	FAS336
208/230-3-60 and 460-3-60					
Speed (rpm)	1735	1750	1755	1760	1755
Hp	2.9	3.7	5.0	7.5	10.0
Frame (NEMA)	56HY	56HY	184T	S213T	S215T
Shaft Dia (in.)	7/8	7/8	1-1/8	1-3/8	1-3/8
575-3-60					
Speed (rpm)	1710	1710	1755	1750	1755
Hp	3.7	3.7	5.0	7.5	10.0
Frame (NEMA)	56HY	56HY	184T	S213T	S215T
Shaft Dia (in.)	7/8	7/8	1-1/8	1-3/8	1-3/8

LEGEND

NEMA — National Electrical Manufacturers Association (U.S.A.)

FAS Fan Motor Data — Two Speed Alternate Motor

UNIT	FAS150	FAS180	FAS240	FAS300	FAS336
208/230-3-60 and 460-3-60					
Speed (rpm)	1750	1755	1760	1755	1755
Hp	3.7	5.0	7.5	10.0	10.0
Frame (NEMA)	56HY	184T	S213T	S215T	S215T
Shaft Dia (in.)	7/8	1-1/8	1-3/8	1-3/8	1-3/8
575-3-60					
Speed (rpm)	1755	1755	1750	1755	1755
Hp	5.0	5.0	7.5	10.0	10.0
Frame (NEMA)	184T	184T	S213T	S213T	S215T
Shaft Dia (in.)	1-1/8	1-1/8	1-3/8	1-3/8	1-3/8

LEGEND

NEMA — National Electrical Manufacturers Association (U.S.A.)

Motor Efficiency FAS — Two Speed Motor

MOTOR hp	EPACT MINIMUM	MOTOR EFFICIENCY
2.9	—	86.5%
3.7	—	83.6%
5.0	89.5%	89.5%
7.5	91.7%	91.7%
10.0	91.7%	91.7%

LEGEND

EPACT — Energy Policy and Conservation Act of 1992 (U.S.A.)

Physical data (cont)

Standard Static Data, 60 Hz

UNIT	FAS150	FAS180	FAS240	FAS300	FAS336
MOTOR DRIVE					
Motor Pulley Pitch Diameter (in.)	2.8-3.8	2.8-3.8	3.7-4.7	4.3-5.3	4.3-5.3
Pulley Factory Setting Full Turns Open	2.5	2.5	3.0	3.0	3.0
FAN DRIVE					
Pulley Pitch Dia (in.)	9.0	9.0	9.4	11.0	11.0
Pulley Bore (in.)	1-7/16	1-7/16	1-7/16	1-15/16	1-15/16
Belt No. — Section	1—A	1—A	1—B	2—B ^a	2—B ^a
Belt Pitch (in.)	42.3	42.3	41.8	(2) 42.8 (2) 43.8	(2) 42.8 (2) 43.8
FAN SPEEDS (rpm)					
Factory Settings	632	632	771	752	752
Range	537-728	537-728	679-863	682-841	674-831
Max Allowable Speed (rpm)	1200	1200	1200	1100	1100
Change per 1/2 turn of Movable Motor Pulley Flange	19.1	19.1	15.3	13.1	13.1
MAX FULL TURNS FROM CLOSED POSITION	5	5	6	6	6
SHAFTS CENTER DISTANCE (in.)	10.44-12.32	10.44-12.32	9.12-10.99	6.67-9.43	6.67-9.43

NOTE(S):

a. Four belts shipped with unit. Use correct set of 2 belts sized according to the pulley setting.

High Static Data, 60 Hz

UNIT	FAS150	FAS180	FAS240	FAS300	FAS336
MOTOR DRIVE					
Motor Pulley Pitch Diameter (in.)	3.7-4.7	4.3-5.3	4.3-5.3	4.3-5.3	4.3-5.3
Pulley Factory Setting Full Turns Open	3.0	3.0	3.0	3.0	3.0
FAN DRIVE					
Pulley Pitch Dia (in.)	7.4	7.9	7.4	8.6	8.6
Pulley Bore (in.)	1-7/16	1-7/16	1-7/16	1-15/16	1-15/16
Belt No. — Section	1—B	1—B	2—B	2—B	2—B
Belt Pitch (in.)	39.8	39.8	36.8	37.8	37.8
FAN SPEEDS (rpm)					
Factory Setting	979	1060	1118	1024	1024
Range	873-1096	950-1171	1014-1200 ^a	873-1075	873-1075
Max Allowable Speed (rpm)	1200	1200	1200	1100	1100
Change per 1/2 Turn of Movable Motor Pulley Flange	19.4	18.4	19.4	16.7	16.7
MAX FULL TURNS FROM CLOSED POSITION	6	6	6	6	6
SHAFTS CENTER DISTANCE (in.)	10.44-12.32 ^b	9.16-10.99	8.16-10.02	6.67-9.43	6.67-9.43

NOTE(S):

a. It is possible to adjust drive so that fan speed exceeds maximum allowable. DO NOT exceed 1200 rpm.

b. 575-v unit has a center distance of 9.16-10.99.

Options and accessories

ITEM	FACTORY- INSTALLED OPTION	FIELD- INSTALLED ACCESSORY
Alternate Drive (FAS only)	X	
Alternate Fan Motor (FAS only)	X	
CO ₂ Sensors		X
Condensate Drain Trap		X
Discharge Duct Adapter (FAX only)		X
Discharge Plenum		X
EconoMi\$er IV Standard Leak		X
EconoMi\$er X Ultra Low Leak — FDD		X
Electric Heater		X
Hot Water Heating Coils (2 row)		X
Optional VFD Display Kit (FAS only)		X
Overhead Suspension Package		X
Pre-Painted Units	X	
Return Air Grille		X
Steam Heating Coil (1 row)		X

Factory-installed options

Alternate fan motors and drives (FAS only)

Alternate fan motors and drives are available to provide the widest possible range of performance.

Pre-painted steel units

Pre-painted units are available from the factory for applications that require painted units. Units are painted with American Sterling Gray color.

Field-installed accessories

Optional VFD display Kit (FAS only)

There is an optional VFD display kit offered (as an accessory) for FAS units to allow the user to troubleshoot any VFD faults in the field after start-up.

NOTE: Do not use the VFD display kit to adjust the frequency and voltage in the VFD to required performance requirements. This could lead to decreased life of the motor and VFD.

Two-row hot water coils

Two-row hot water coils have copper tubes mechanically bonded to aluminum plate fins and non-ferrous headers.

One-row steam coil

One-row steam coils have copper tubes and aluminum fins.

The Inner Distributing Tube (IDT) design provides uniform temperatures across the coil face. The steam coil has a broad operating pressure range; up to 20 psi (138 kPag) at 260°F (126°C). The IDT steam coils are especially suited to applications where sub-freezing air enters the unit.

Electric heater

Electric heaters are available as factory-supplied, field-installed accessories for nominal 240v, 480v, and 575v, 3-phase, 60 Hz units. Electric heaters are ETL (U.S.A.) and ETL, Canada, agency-approved. They have single-point power wiring. The heater assembly includes contactors with 24-v coils, power wiring, 24-v control wiring

terminal blocks, and a hinged access panel. Electric heaters should not be used with an air discharge plenum.

Economizers — temperature dry bulb controlled

Ultra Low Leak — EconoMi\$er X

This economizer accessory comes with solid-state W7220 controller, gear-driven, modulating damper, and spring return actuator. It is supply/outdoor air sensors, and CO₂ sensor compatible, for use in electro-mechanical controls only. It also includes return and outside air damper leakage that meets California Title 24 section 140.4 requirements. Controller meets California Title 24 Section 120.2 Fault Detection and Diagnostic (FDD) requirements. Also meets AMCA Class 1A economizer damper test standards and labeling.

Standard — EconoMi\$er IV

The standard economizer accessory comes with gear driven damper blades and a W7212 controller (use p/n 1176668 sensor for enthalpy control).

Discharge plenum

Discharge plenum directs the air discharge directly into the occupied space; integral horizontal and vertical louvers enable redirection of airflow. This accessory is available unpainted or painted. Field assembly is required (only applicable for vertical application).

Return-air grille

The return-air grille provides a protective barrier over the return-air opening and gives a finished appearance to units installed in the occupied space. This accessory is available unpainted or painted.

Overhead suspension package

The overhead suspension package includes necessary brackets to support units in horizontal ceiling installations.

CO₂ sensors

CO₂ sensors can be used in conjunction with the economizer accessory to help meet indoor air quality requirements. The sensor signals the economizer to open when the CO₂ level in the space exceeds the set point. A field-installed programmable thermostat can be used to override the sensor if the outside-air temperature is too high or too low.

Condensate drain trap

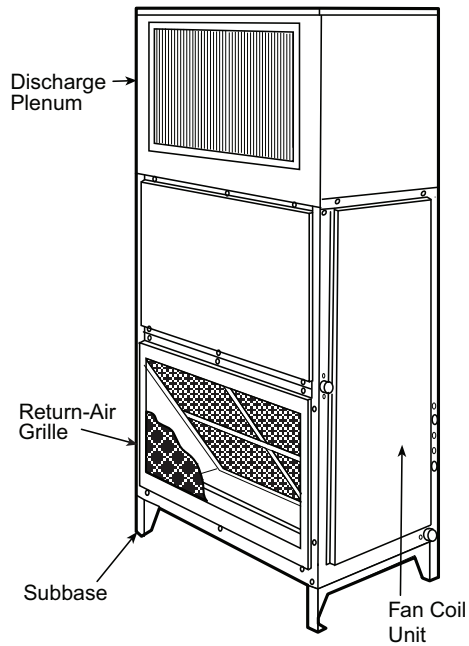
The condensate drain trap includes an overflow shutoff switch that can be wired to turn off the unit if the trap becomes plugged. Kit also includes a wire harness that can be connected to an alarm if desired. The transparent trap is designed for easy service and maintenance.

Discharge duct adapter

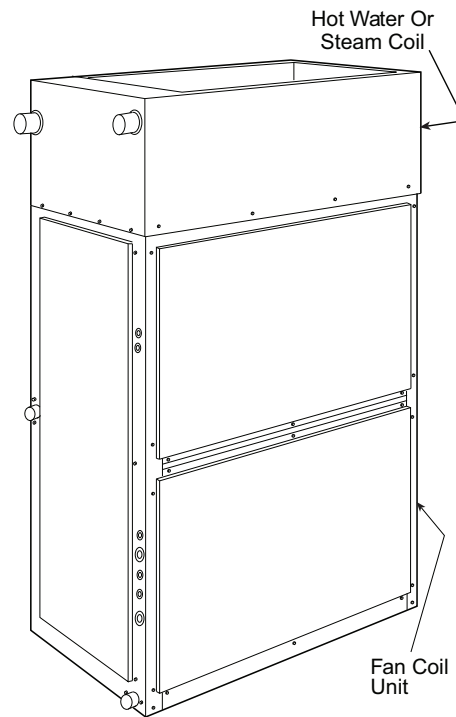
This accessory is required for replacements using FAX units with or without electric heat. It is not required for new installations or when using steam coil, hot water coil, or discharge plenum accessories.

Options and accessories (cont)

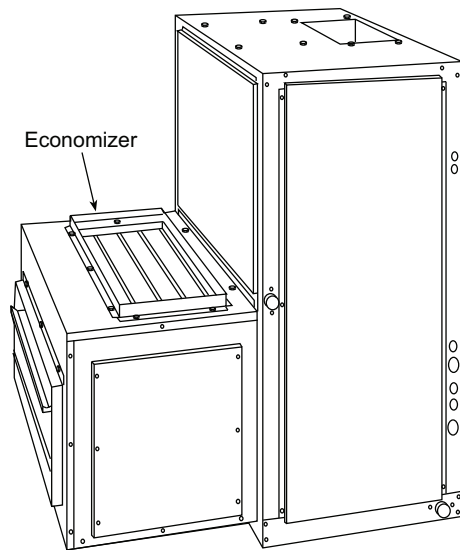
**FAX/FAS with Discharge Plenum
Return-Air Grille and Subbase**



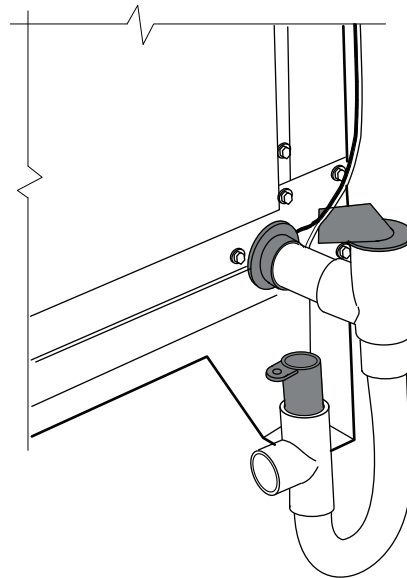
FAX/FAS with Hot Water or Steam Coil



FAX/FAS with Economizer



FAX/FAS with Condensate Trap



FAX072-120



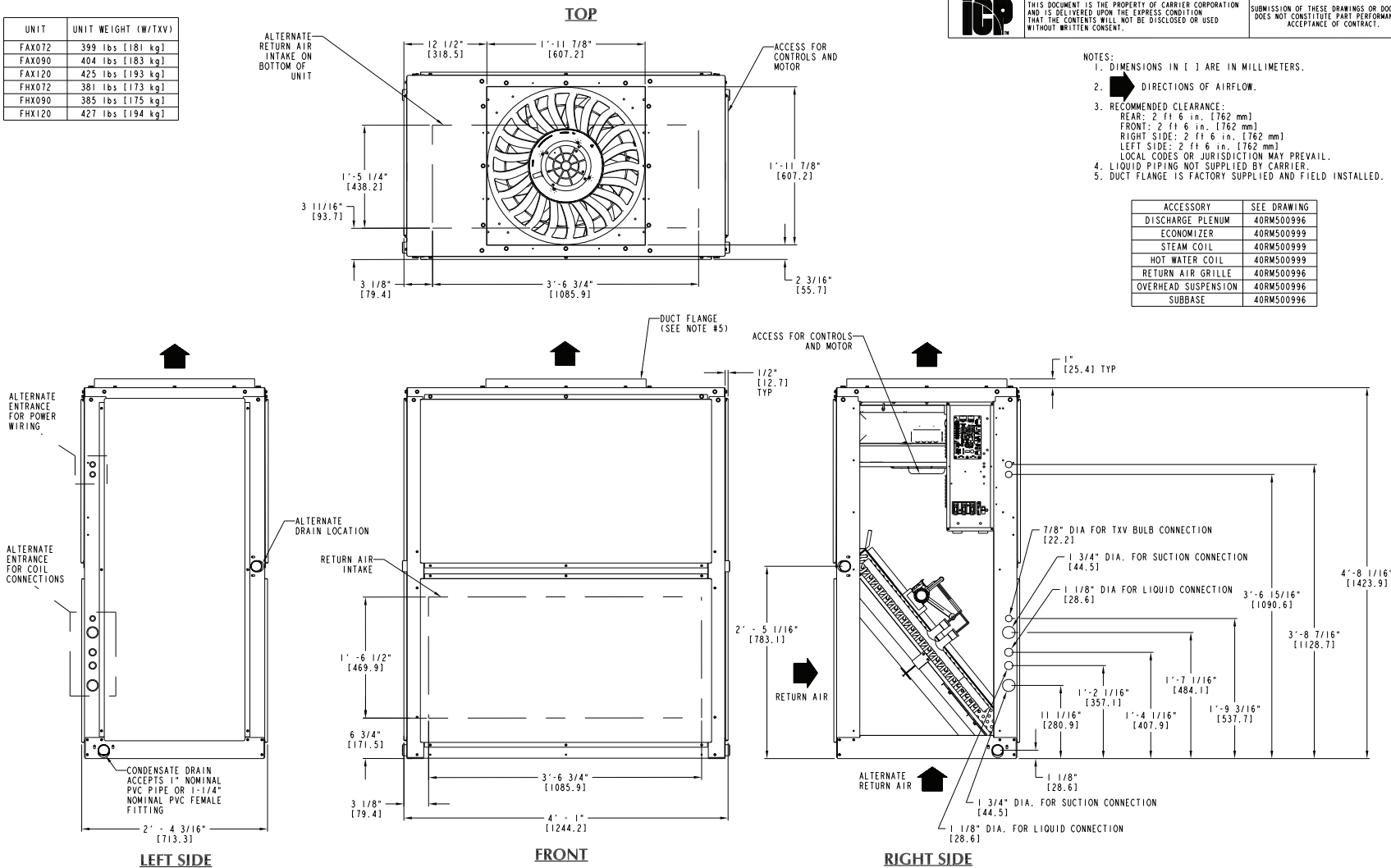
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SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT.

UNIT	UNIT WEIGHT (W/TXV)
FAX072	399 lbs [181 kg]
FAX090	404 lbs [183 kg]
FAX120	425 lbs [193 kg]
FHX072	381 lbs [173 kg]
FHX090	385 lbs [175 kg]
FHX120	427 lbs [194 kg]

- NOTES:
1. DIMENSIONS IN () ARE IN MILLIMETERS.
 2. DIRECTIONS OF AIRFLOW.
 3. RECOMMENDED CLEARANCE:
REAR: 2 ft 6 in. [762 mm]
FRONT: 2 ft 6 in. [762 mm]
RIGHT SIDE: 2 ft 6 in. [762 mm]
LEFT SIDE: 2 ft 6 in. [762 mm]
LOCAL CODES OR JURISDICTION MAY PREVAIL.
 4. LIQUID PIPING NOT SUPPLIED BY CARRIER.
 5. DUCT FLANGE IS FACTORY SUPPLIED AND FIELD INSTALLED.

ACCESSORY	SEE DRAWING
DISCHARGE PLENUM	40RM500996
ECONOMIZER	40RM500999
STEAM COIL	40RM500999
HOT WATER COIL	40RM500999
RETURN AIR GRILLE	40RM500996
OVERHEAD SUSPENSION	40RM500996
SUBBASE	40RM500996



ITC CLASSIFICATION U.S. ECCN: NSR	SHEET 1 OF 2	DATE 10/31/22	SUPERCEDES -	FAN COIL UNITS FAX / FHX -072 / 090 / 120	40RU000675	REV -
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FAS150-240

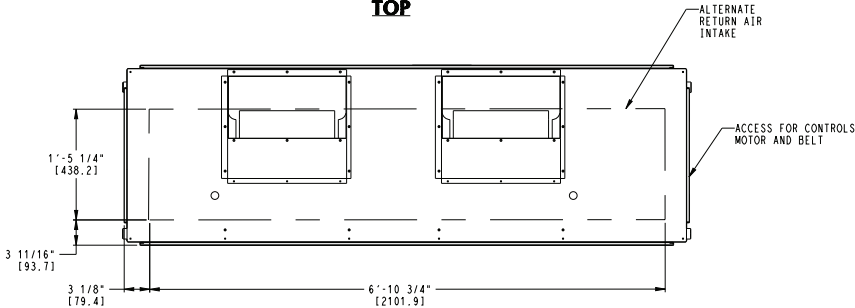


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SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT.

UNIT	UNIT WEIGHT (W/TXV)
FAS150	695 lbs (316 kg)
FAS180	713 lbs (323 kg)
FAS240	730 lbs (332 kg)
FHS180	713 lbs (323 kg)
FHS240	720 lbs (327 kg)

TOP

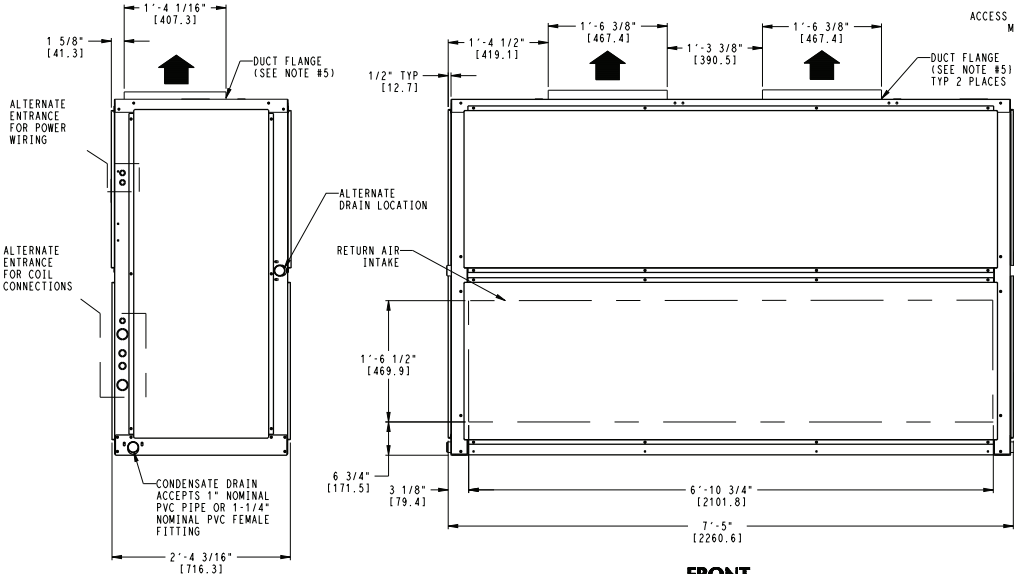


- NOTES:
1. DIMENSIONS IN [] ARE IN MILLIMETERS.
 2. DIRECTIONS OF AIRFLOW.
 3. RECOMMENDED CLEARANCE:
REAR: 2 ft 6 in. [762 mm]
FRONT: 2 ft 6 in. [762 mm]
RIGHT SIDE: 2 ft 6 in. [762 mm]
LEFT SIDE: 2 ft 6 in. [762 mm]
LOCAL CODES OR JURISDICTION MAY PREVAIL.
 4. LIQUID PIPING NOT SUPPLIED BY CARRIER.
 5. DUCT FLANGE IS FACTORY SUPPLIED AND FIELD INSTALLED.

ACCESSORY	SEE DRAWING
DISCHARGE PLENUM	40RMS00997
ECONOMIZER	40RMS01000
STEAM COIL	40RMS01000
HOT WATER COIL	40RMS01000
RETURN AIR GRILLE	40RMS00997
OVERHEAD SUSPENSION	40RMS00997
SUBBASE	40RMS00997
ELECTRIC HEAT	40RMS01002

UNRELEASED DATA

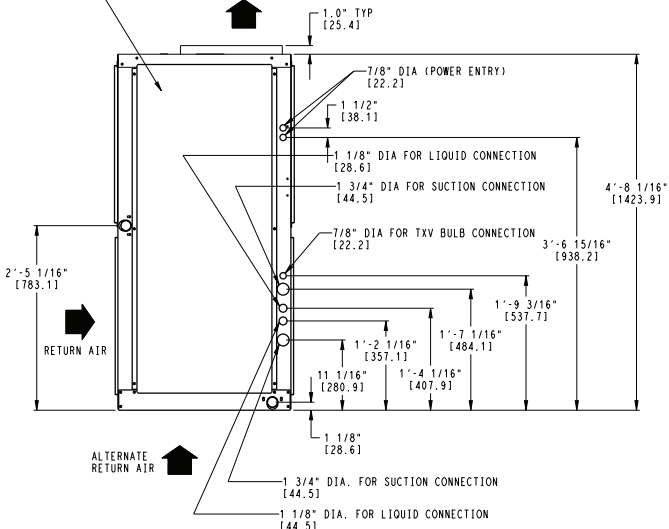
FRONT



LEFT SIDE



ACCESS FOR CONTROLS, MOTOR AND BELT



RIGHT SIDE

ITC CLASSIFICATION	SHEET	DATE	SUPERCEDES	FAN COIL UNITS	40RU500100	REV
U.S. ECCN:NSR	1 OF 2	07/14/21	03/16/18	FAS / FHS - 150 / 180 / 240		E

FAS300/336



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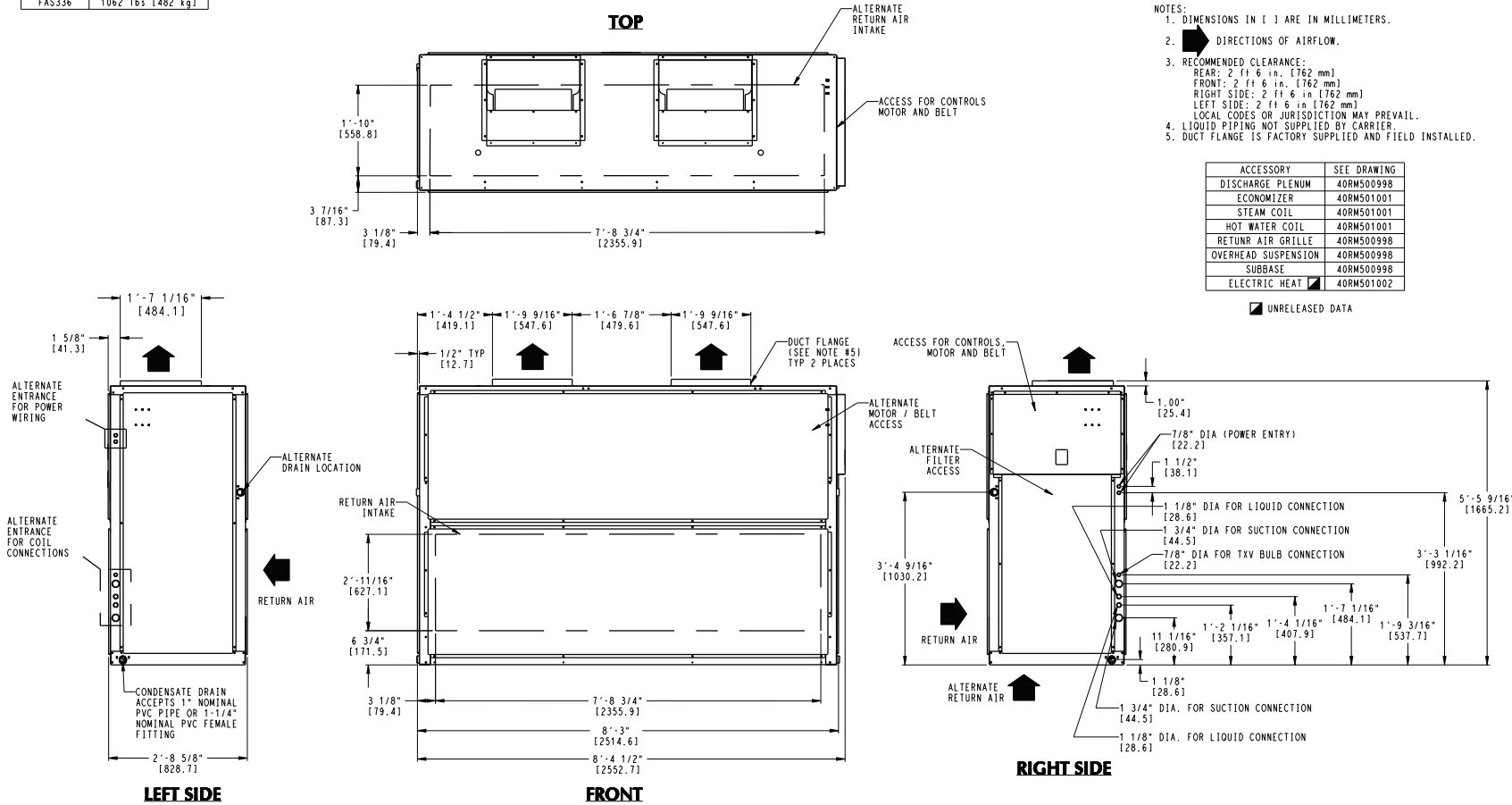
SUBMISSION OF THESE DRAWINGS OR DOCUMENTS DOES NOT CONSTITUTE PART PERFORMANCE OR ACCEPTANCE OF CONTRACT.

UNIT	UNIT WEIGHT (W/TXV)
FAS300	1050 lbs [477 kg]
FAS336	1062 lbs [482 kg]

- NOTES:
1. DIMENSIONS IN [] ARE IN MILLIMETERS.
 2. DIRECTIONS OF AIRFLOW.
 3. RECOMMENDED CLEARANCE:
REAR: 2 ft 6 in. [762 mm]
FRONT: 2 ft 6 in. [762 mm]
RIGHT SIDE: 2 ft 6 in. [762 mm]
LEFT SIDE: 2 ft 6 in. [762 mm]
LOCAL CODES OR JURISDICTION MAY PREVAIL.
 4. LIQUID PIPING NOT SUPPLIED BY CARRIER.
 5. DUCT FLANGE IS FACTORY SUPPLIED AND FIELD INSTALLED.

ACCESSORY	SEE DRAWING
DISCHARGE PLENUM	40RMS00998
ECONOMIZER	40RMS01001
STEAM COIL	40RMS01001
HOT WATER COIL	40RMS01001
RETURN AIR GRILLE	40RMS00998
OVERHEAD SUSPENSION	40RMS00998
SUBBASE	40RMS00998
ELECTRIC HEAT	☒ 40RMS01002

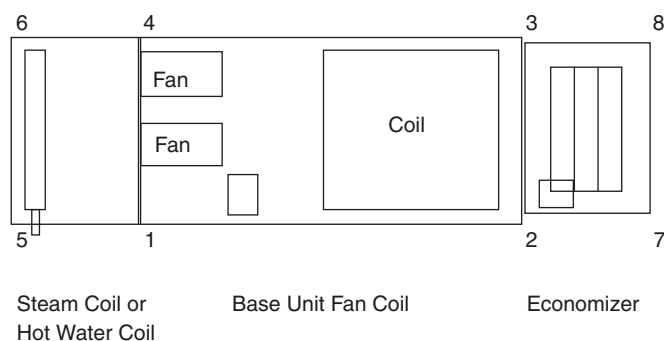
☒ UNRELEASED DATA



ITC CLASSIFICATION U.S. ECCN:NSR	SHEET 1 OF 2	DATE 07/14/21	SUPERCEDES 03/16/18	FAN COIL UNITS FAS - 300 / 336	40RU500101	REV E
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Base unit dimensions (cont)

Corner Weights — Horizontal Position



FAX/FAS Horizontal Position

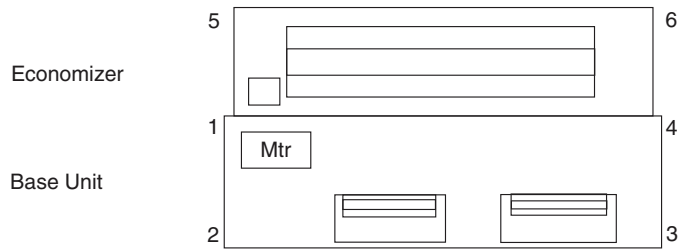
UNIT SIZE	UNIT OR ACCESSORY NAME		UNIT OR ACCESSORY WEIGHT (lb)	CORNER NUMBER (Weight in lb)							
				1	2	3	4	5	6	7	8
FAX072	Fan Coil Base Unit		399	109.3	106.1	90.6	93.4	—	—	—	—
FAX091	Fan Coil Base Unit		404	110.7	107.5	91.7	94.5	—	—	—	—
FAX120	Fan Coil Base Unit		425	116.4	113.0	96.5	99.4	—	—	—	—
FAX 072, 091, 120	Steam Coil	Add	215	40.2	—	—	40.6	66.5	67.5	—	—
	Hot Water Coil	Add	195	35.9	—	—	36.7	60.4	62.0	—	—
	Economizer	Add	185	—	36.8	35.7	—	—	—	56.8	55.1
	Eco + Steam Coil	Add	400	38.8	38.6	37.4	39.2	64.2	65.2	59.5	57.7
	Eco + Hw Coil	Add	380	36.9	35.8	34.6	37.7	62.1	63.8	55.1	53.4
FAS150	Fan Coil Base Unit		695	224.0	177.7	129.8	163.7	—	—	—	—
FAS180	Fan Coil Base Unit		713	229.8	182.3	133.2	167.9	—	—	—	—
FAS240	Fan Coil Base Unit		730	235.6	186.4	136.5	171.5	—	—	—	—
FAS 150-240	Steam Coil	Add	340	61.4	—	—	62.0	107.8	108.8	—	—
	Hot Water Coil	Add	285	51.7	—	—	51.3	91.5	90.6	—	102.0
	Economizer	Add	340	—	66.9	62.0	—	—	—	109.8	97.1
	Eco + Steam Coil	Add	680	64.4	63.7	59.0	65.0	113.0	114.1	104.5	87.8
	Eco + Hw Coil	Add	625	60.0	57.6	53.4	59.5	106.2	105.1	94.6	—
FAS300	Fan Coil Base Unit		1050	338.4	268.5	196.1	247.2	—	—	—	—
FAS336	Fan Coil Base Unit		1062	342.4	271.6	198.3	249.7	—	—	—	—
FAS 300, 336	Steam Coil	Add	405	73.2	—	—	73.8	128.4	129.6	—	—
	Hot Water Coil	Add	345	62.6	—	—	62.1	110.7	109.6	—	—
	Economizer	Add	450	—	88.5	82.0	—	—	—	145.3	134.2
	Eco + Steam Coil	Add	855	80.6	80.1	74.1	81.6	142.0	143.4	131.3	122
	Eco + Hw Coil	Add	795	76.8	73.7	68.2	75.7	135.0	133.6	120.3	111.7

LEGEND

ECO — Economizer
HW — Hot Water

Base unit dimensions (cont)

Corner Weights — Vertical Position



NOTE: Steam, Hot Water and Plenum on top of positions 1, 2, 3, 4

FAX/FAS Vertical Position

UNIT SIZE	UNIT OR ACCESSORY NAME		UNIT OR ACCESSORY WEIGHT (lb)	CORNER NUMBER (Weight in lb)					
				1	2	3	4	5	6
FAX072	Fan Coil Base Unit		399	100.5	114.9	98.0	85.8	—	—
FAX091	Fan Coil Base Unit		404	101.7	116.3	99.1	86.9	—	—
FAX120	Fan Coil Base Unit		425	107.6	122.3	108.0	87.1	—	—
FAX 072-120	Steam Coil	Add	215	54.1	54.1	53.4	53.4	—	—
	Hot Water Coil	Add	195	49.4	49.4	48.1	48.1	—	—
	Plenum	Add	175	50.8	36.7	36.7	50.8	—	—
	Economizer	Add	195	38.9	—	—	37.1	59.9	58.3
	Eco + Steam Coil	Add	410	93.0	53.4	52.6	91.1	61.0	59.1
	Eco + Hw Coil	Add	390	88.9	52.3	50.9	86.5	56.7	54.9
FAS150	Fan Coil Base Unit		695	191.2	210.5	153.8	139.5	—	—
FAS180	Fan Coil Base Unit		713	196.2	216.0	157.8	143.1	—	—
FAS 150, 180	Steam Coil	Add	340	85.4	85.4	84.6	84.6	—	—
	Hot Water Coil	Add	285	70.9	70.9	71.6	71.6	—	—
	Plenum	Add	225	72.5	40.0	40.0	72.5	—	—
	Economizer	Add	340	66.5	—	—	62.0	109.5	102.0
	Eco + Steam Coil	Add	680	153.0	89.1	88.7	147.7	104.5	97.0
	Eco + Hw Coil	Add	625	139.9	82.5	83.3	136.7	94.7	87.9

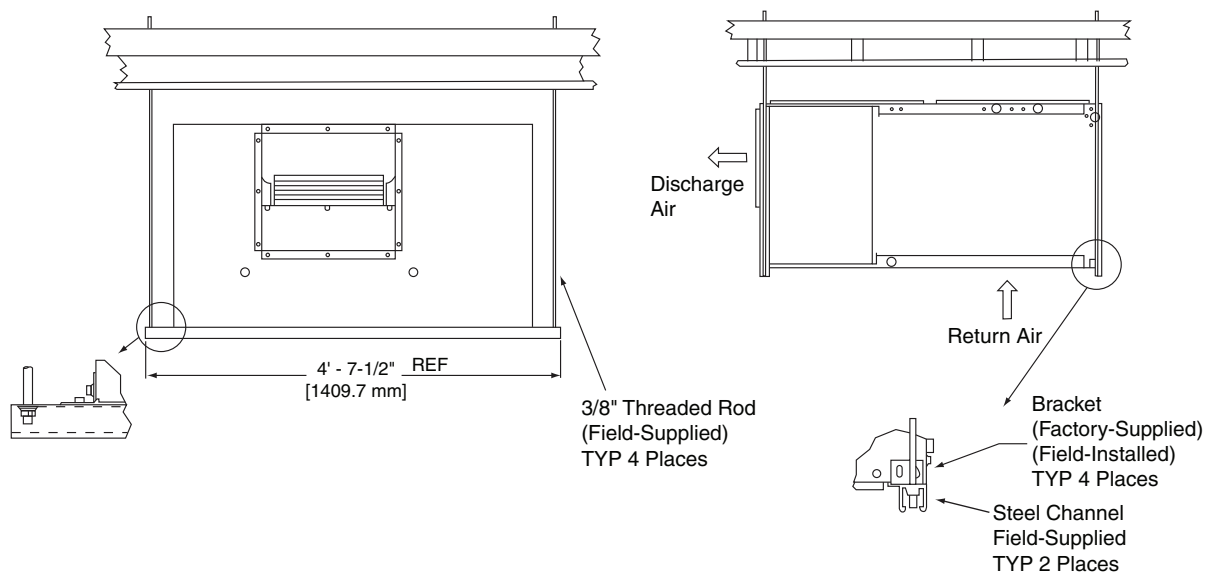
LEGEND

ECO — Economizer
HW — Hot Water

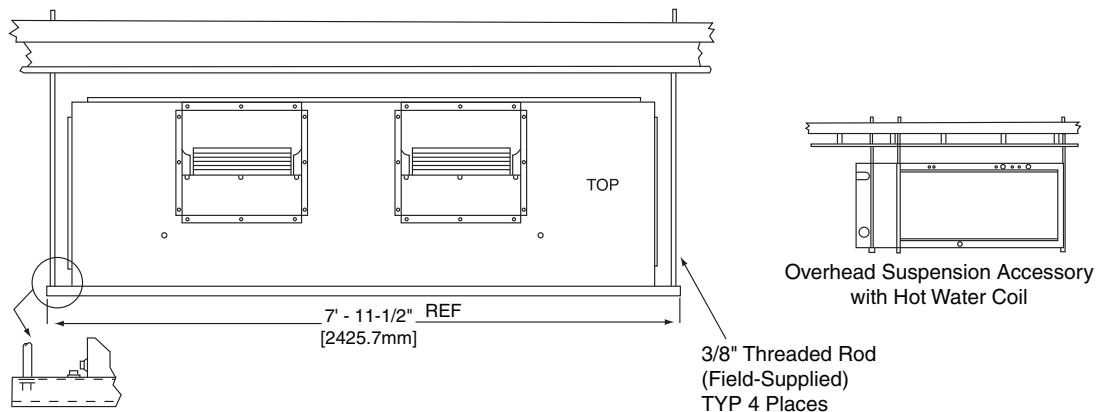
Accessory dimensions

Overhead Suspension Accessory

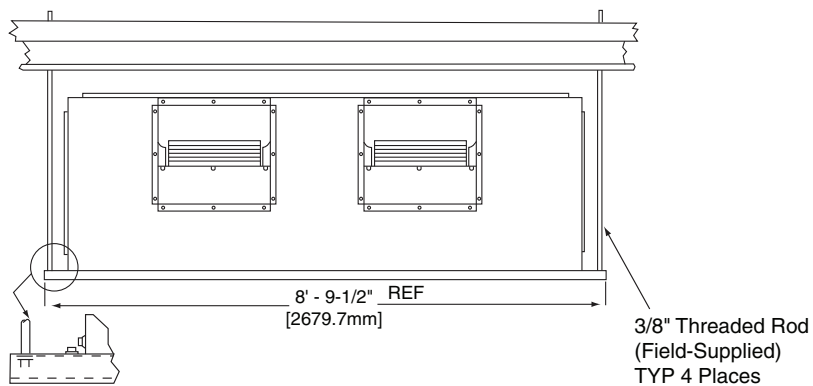
6-10 Ton Units (Front)



12.5-20 Ton Units (Front)



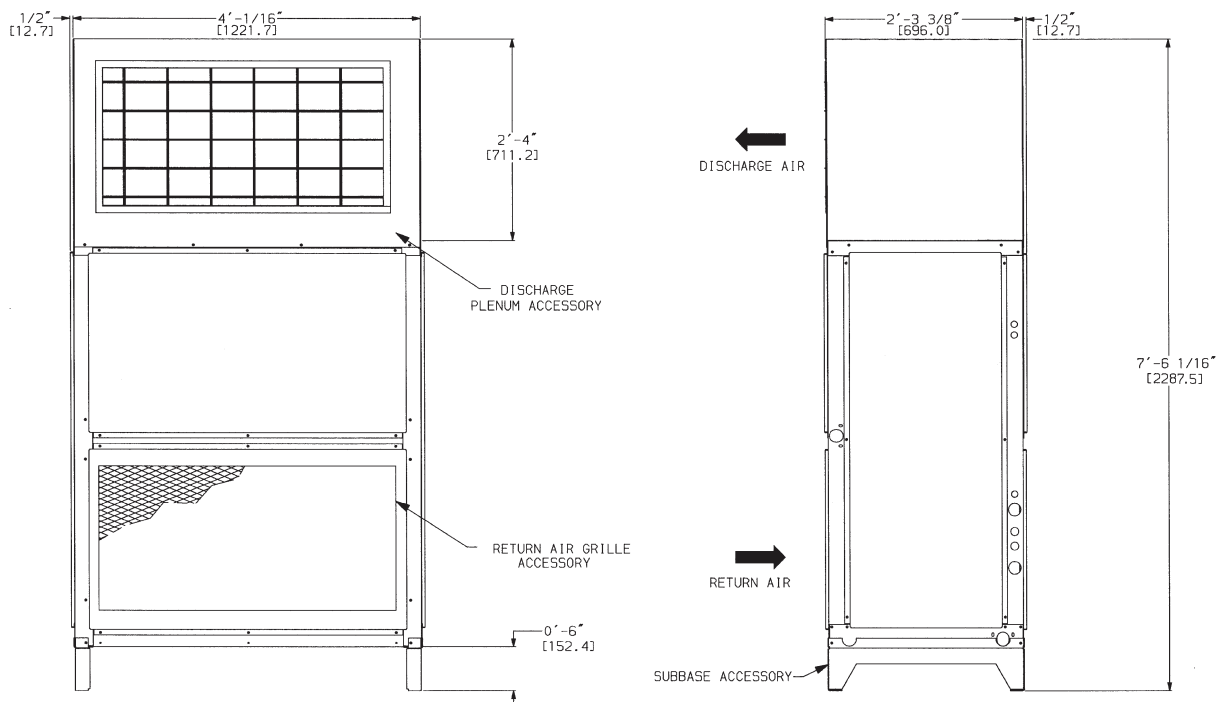
25-30 Ton Units (Front)



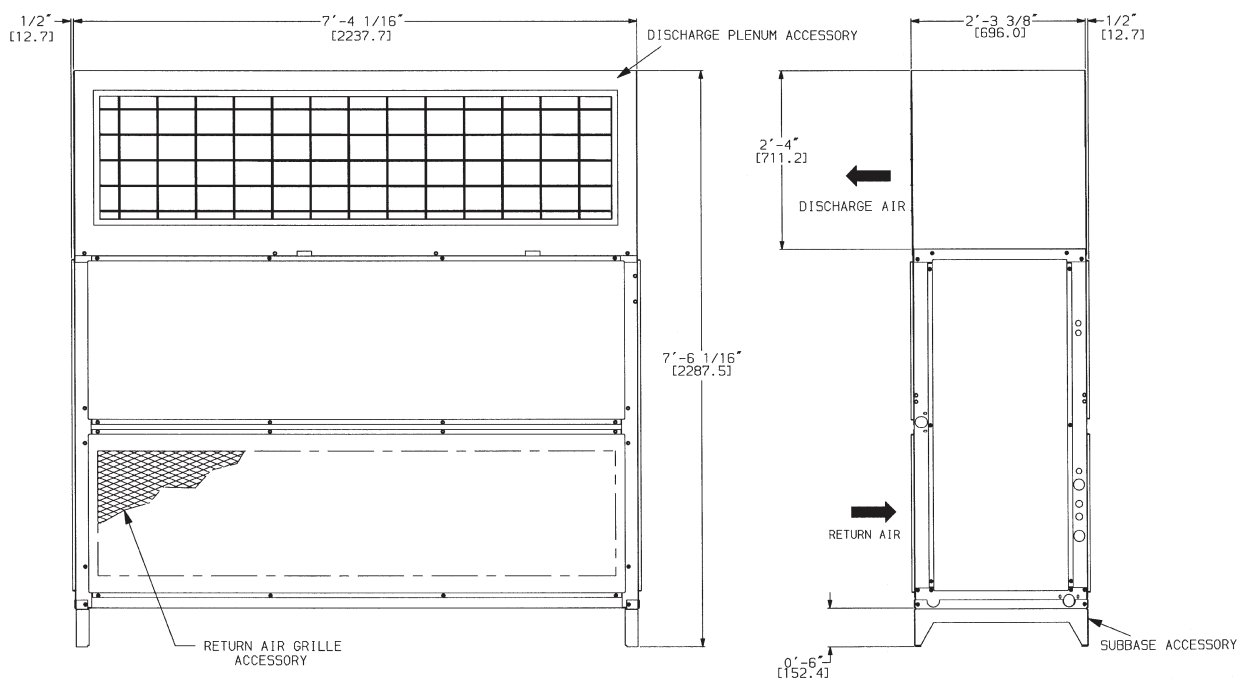
Accessory dimensions (cont)

Plenum, Return-Air Grille, and Subbase Accessories — FAX072-120, FAS150-240

6-10 Ton Units



12.5-20 Ton Units

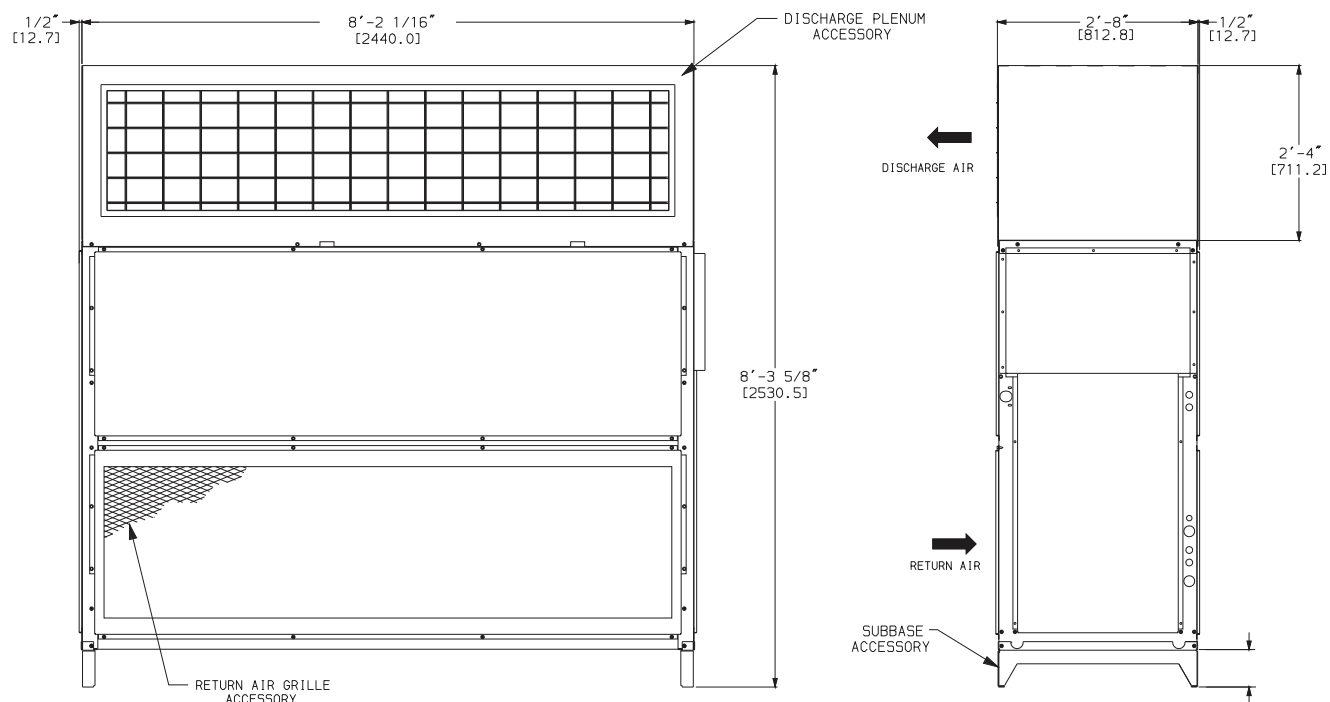


NOTE: Dimensions in [] are millimeters.

Accessory dimensions (cont)

Plenum, Return-Air Grille, and Subbase Accessories — FAS300/336

25-30 Ton Units

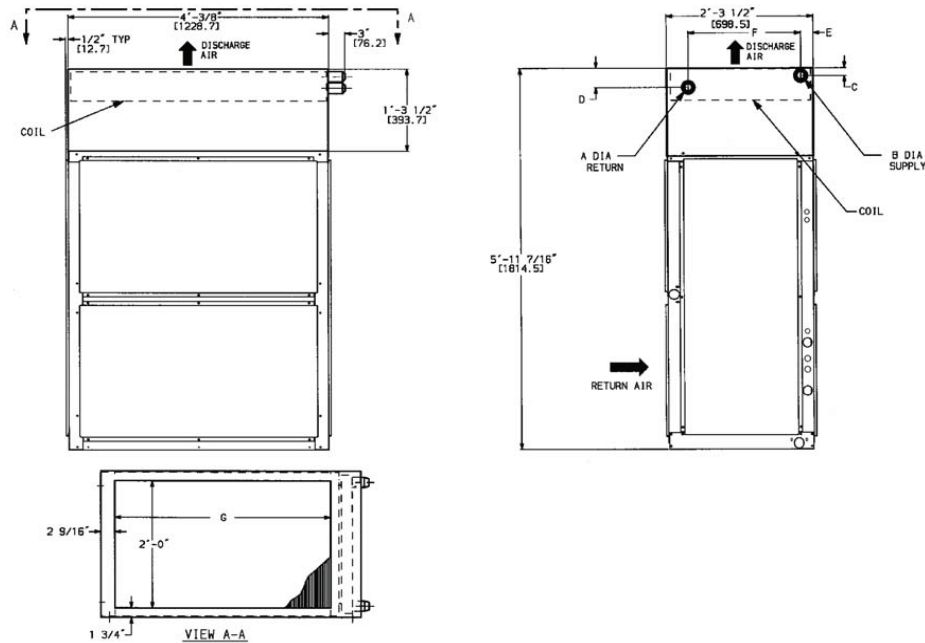


NOTE: Dimensions in [] are millimeters.

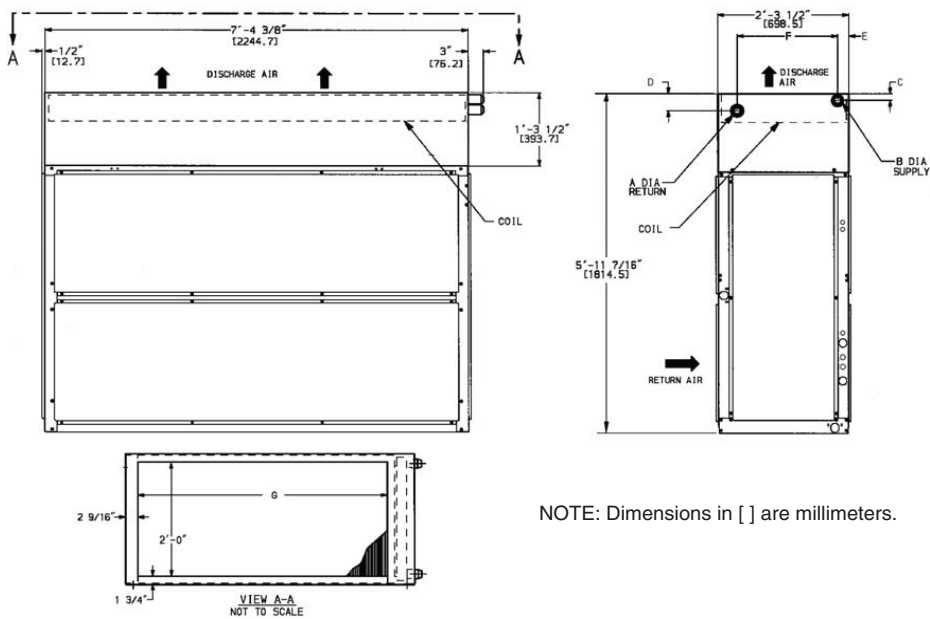
Accessory dimensions (cont)

Hot Water and Steam Coil Accessories — FAX072-120, FAS150-240

6-10 Ton Units



12.5-20 Ton Units



FAX072-120

DIMENSIONS	HOT WATER COIL	STEAM COIL
A	1-1/2" MPT [38.1]	1-1/2" MPT [38.1]
B	1-1/2" MPT [38.1]	2-1/2" MPT [63.5]
C	2-3/8" [60.3]	3-1/8" [79.4]
D	4-7/8" [123.8]	3-1/8" [79.4]
E	2-1/8" [54.0]	4-9/16" [115.8]
F	1'-11-1/4" [590.6]	1'-9" [584.2]
G	3'-4" [1016.0]	3'-4" [1016.0]

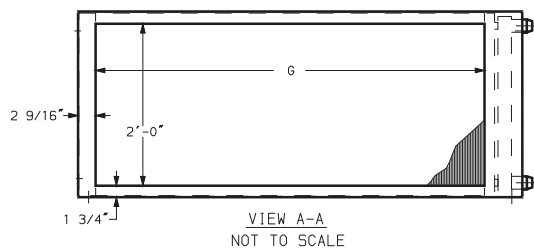
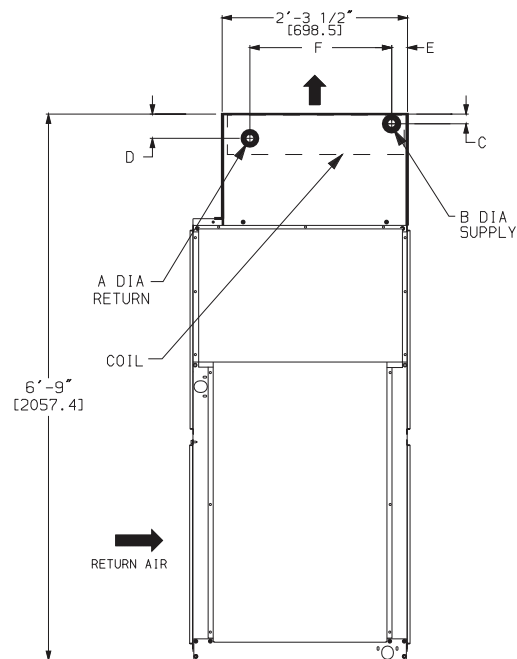
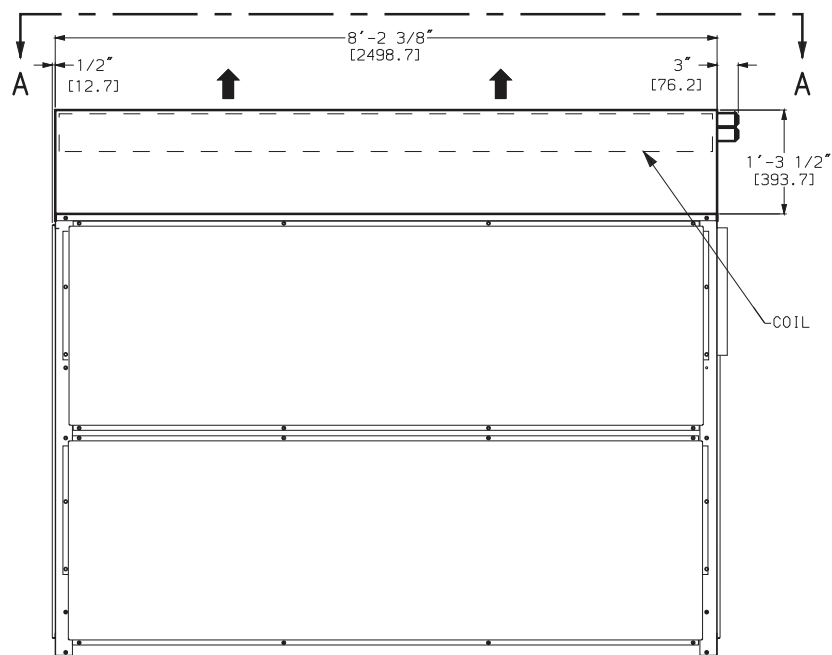
FAS150-240

DIMENSIONS	HOT WATER COIL	STEAM COIL
A	2" MPT [50.8]	1-1/2" MPT [38.1]
B	2" MPT [50.8]	2-1/2" MPT [63.5]
C	2-3/8" [60.3]	3-1/8" [79.4]
D	4-7/8" [123.8]	3-1/8" [79.4]
E	2-1/8" [54.0]	4-9/16" [115.8]
F	1'-11-1/4" [590.6]	1'-9" [584.2]
G	6'-8" [2032.0]	3'-4" [1016.0]

Accessory dimensions (cont)

Hot Water and Steam Coil Accessories — FAS300-336

25-30 Ton Units



NOTE: Dimensions in [] are millimeters.

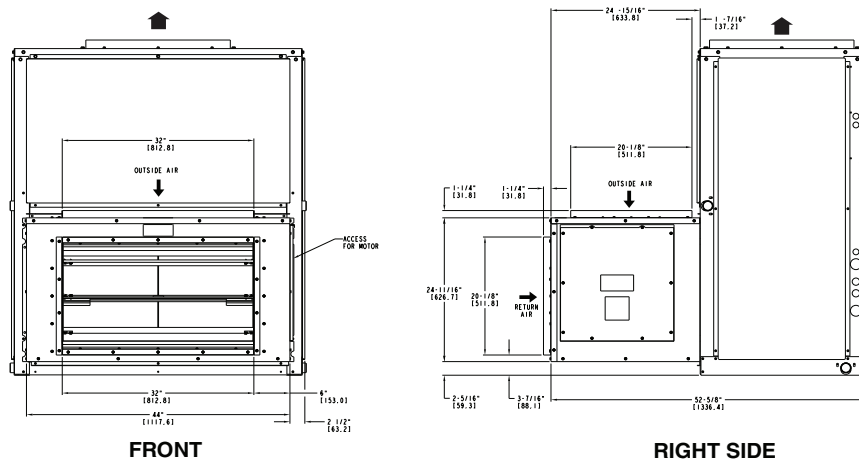
FAS300-336

DIMENSIONS	HOT WATER COIL	STEAM COIL
A	2" MPT [50.8]	1-1/2" MPT [38.1]
B	2" MPT [50.8]	2-1/2" MPT [63.5]
C	2-3/8" [60.3]	3-1/8" [9.4]
D	4-7/8" [123.8]	3-1/8" [79.4]
E	2-1/8" [54.0]	4-9/16" [115.8]
F	1'-11-1/4" [590.6]	1'-9" [584.2]
G	7'-6" [2286.0]	7'-6" [2286.0]

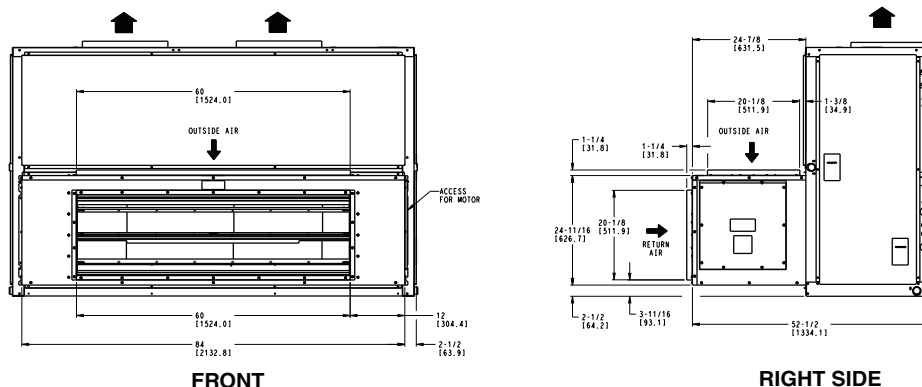
Accessory dimensions (cont)

Economizer Accessory — FAX072-120, FAS150-336

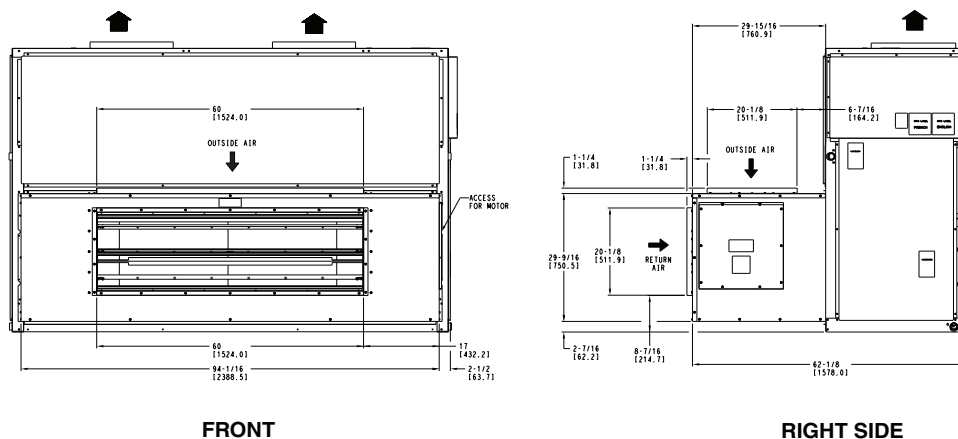
6-10 Ton Units



12.5-20 Ton Units



25-30 Ton Units



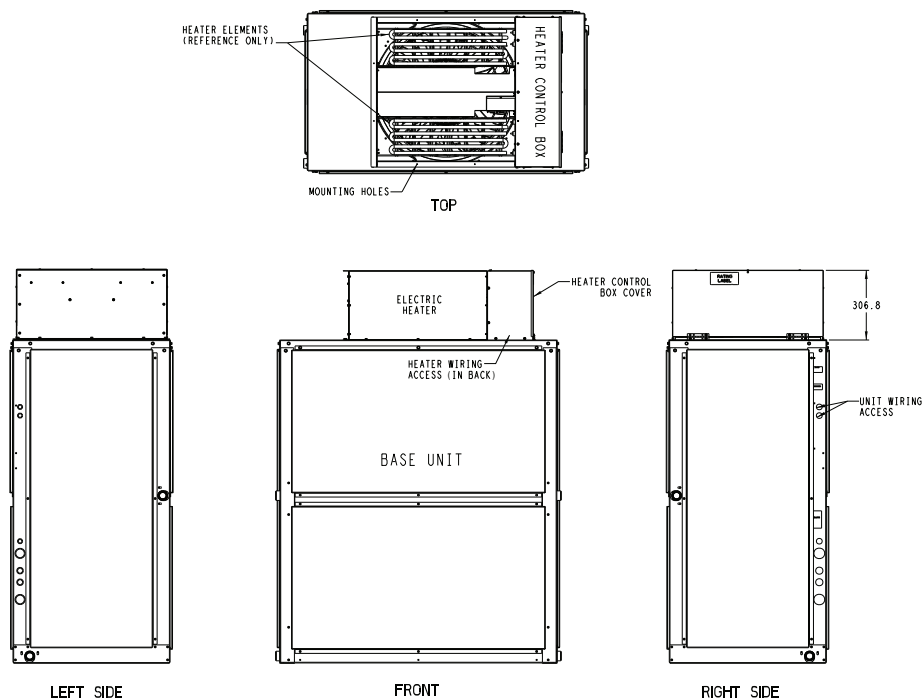
NOTES:

1. For horizontal unit applications, economizer can be attached to end of unit opposite duct connections.
2. Dimensions in [] are in millimeters.

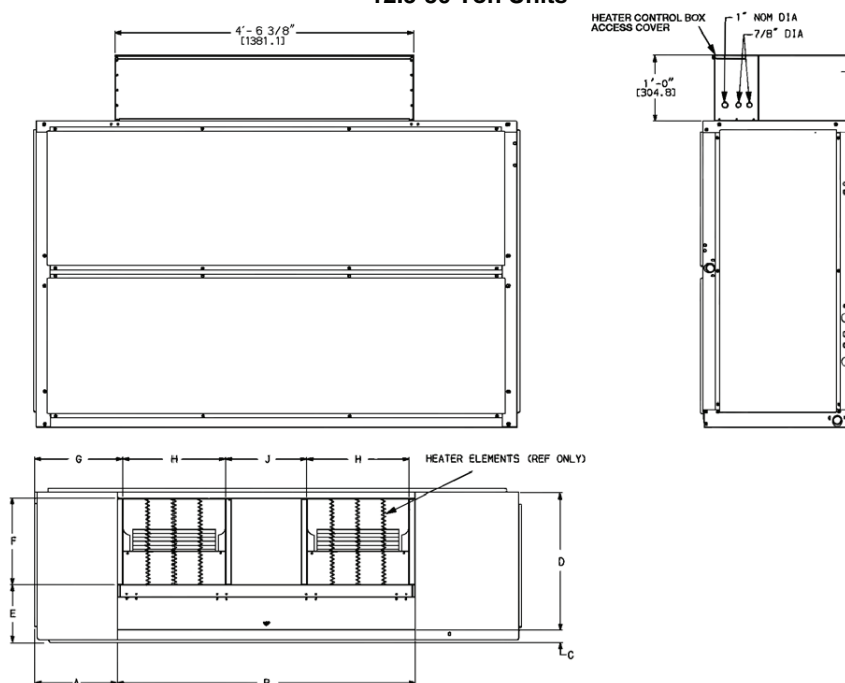
Accessory dimensions (cont)

Electric Heater Accessory — Sizes 072-336

6-10 Ton Units



12.5-30 Ton Units



FAS UNIT SIZE	A	B	C	D	E	F	G	H	J
150-240	1' - 3-1/4" [387.4]	4' - 6" [1381.1]	2-5/16" [58.7]	2' - 1-1/4" [641.4]	10-5/8" [269.9]	1' - 4" [406.4]	1' - 4-5/16" [414.3]	1' - 6-3/4" [476.3]	1' - 7/8" [327.0]
300, 336	1' - 3-3/8" [390.5]	5' - 4-7/8" [1636.8]	2-1/16" [52.4]	2' - 6-3/16" [766.8]	1' - 1/4" [311.2]	1' - 7" [482.6]	1' - 4-5/16" [414.3]	1' - 10" [558.8]	1' - 4-7/16" [417.1]

NOTE: Dimensions in [] are in millimeters.

Performance data

FAX072-120 Cooling Capacities^{a,b,c,d,e}

UNIT FAX	EVAPORATOR AIR		COIL REFRIGERANT TEMP (°F) ^f									
	Airflow (cfm)	Ewb (°F)	30		35		40		45		50	
			TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
072	1,800	72	124	60	113	55	101	49	87	43	71	37
		67	104	64	93	59	81	53	67	47	52	40
		62	86	68	75	62	63	56	49	49	42	42
	2,400	72	143	69	131	64	117	58	101	52	83	44
		67	121	76	108	70	94	64	78	57	60	50
		62	101	83	88	76	73	69	60	60	51	51
	3,000	72	158	77	144	71	129	65	111	58	92	51
		67	134	86	121	80	105	73	87	66	67	58
		62	113	95	98	88	82	80	70	70	59	59
091	2,250	72	155	75	141	68	126	61	108	54	89	46
		67	130	80	116	73	101	66	83	59	64	51
		62	108	85	94	78	78	70	62	62	52	52
	3,000	72	179	86	164	80	146	72	126	64	103	56
		67	151	95	136	88	118	80	98	71	75	62
		62	126	103	110	95	92	86	76	76	64	64
	3,750	72	197	96	180	89	161	82	139	73	115	63
		67	168	108	151	100	131	92	109	82	84	72
		62	141	119	122	110	103	100	87	87	74	74
120	3,000	72	200	96	182	88	161	79	138	70	113	60
		67	168	104	150	96	130	86	107	76	83	66
		62	140	112	121	102	101	92	82	82	69	69
	4,000	72	228	111	208	102	185	93	159	83	130	71
		67	194	124	174	114	150	104	124	93	96	81
		62	162	135	141	124	119	113	99	99	84	84
	5,000	72	250	123	228	114	204	105	175	94	143	81
		67	214	140	192	130	166	119	138	107	106	94
		62	179	155	156	143	133	130	113	113	96	96

NOTE(S):

- a. Ratings based on approximately 15°F superheat leaving coil.
- b. Direct interpolation is permissible. Do not extrapolate.
- c. Dashes indicate coil loading limits are exceeded.
- d. Evaporator fan heat not deducted from ratings.
- e. See dry and wet bulb formulas below.
- f. SHC is based on 80°F db temperature of air entering evaporator coil.

Dry and Wet Bulb Formulas:

$$\text{Leaving db} = \text{entering db} - \frac{\text{sensible heat capacity (Btuh)}}{1.1 \times \text{cfm}}$$

$$\text{Leaving wb} = \text{wet-bulb temperature corresponding to enthalpy of air leaving coil (h}_{\text{wb}}\text{)}$$

$$h_{\text{wb}} = h_{\text{ewb}} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

$$\text{where } h_{\text{wb}} = \text{enthalpy of air entering coil}$$

LEGEND

- db** — Dry Bulb Temperature (°F)
- SHC** — Sensible Heat Capacity (1000 Btuh)
- TC** — Total Capacity (1000 Btuh)
- wb** — Wet Bulb Temperature (°F)

Performance data (cont)

FAS150-336 Cooling Capacities^{a,b,c,d,e}

UNIT FAS	EVAPORATOR AIR		COIL REFRIGERANT TEMP (°F) ^f									
	AIRFLOW (cfm)	Ewb (°F)	30		35		40		45		50	
			TC	SHC	TC	SHC	TC	SHC	TC	SHC	TC	SHC
150	3,750	72	251	121	228	110	202	99	173	87	140	74
		67	210	129	187	118	161	106	133	94	102	81
		62	174	138	150	126	125	113	100	100	84	84
	5,000	72	289	139	263	128	233	116	200	103	162	88
		67	244	154	218	141	188	128	155	114	119	99
		62	203	167	176	153	146	138	121	121	102	102
180	6,250	72	319	155	290	143	258	131	221	116	180	101
		67	271	174	242	161	209	147	172	132	133	115
		62	226	192	196	177	164	160	139	139	118	118
	4,500	72	310	150	281	136	249	122	214	108	174	92
		67	260	160	231	145	199	131	165	116	127	100
		62	215	169	186	154	154	138	121	121	102	102
180	6,000	72	361	175	329	161	292	145	250	128	205	110
		67	304	191	271	175	235	159	194	141	149	122
		62	254	206	220	189	183	170	149	149	125	125
	7,500	72	401	196	366	181	325	164	280	146	229	127
		67	340	218	304	201	263	183	218	164	167	143
		62	285	239	247	220	206	197	172	172	145	145
240	6,000	72	408	197	372	180	331	162	272	141	232	123
		67	344	213	307	195	266	176	220	156	169	135
		62	286	227	248	208	207	188	164	164	139	139
	8,000	72	470	228	429	210	382	191	329	170	269	147
		67	399	253	357	233	309	212	256	189	197	166
		62	333	275	290	254	242	230	202	202	170	170
240	10,000	72	516	253	471	235	421	215	363	192	297	168
		67	440	287	395	266	343	244	284	219	220	193
		62	369	317	322	294	271	266	232	232	196	196
	7,500	72	470	226	428	208	379	187	328	167	270	144
		67	395	246	354	227	307	205	255	183	197	159
		62	329	265	287	244	240	221	193	193	163	163
300	10,000	72	535	260	487	240	434	219	376	196	310	171
		67	454	291	407	269	354	246	295	221	228	194
		62	380	320	332	296	279	268	235	235	199	199
	12,500	72	583	287	531	267	475	245	412	221	341	194
		67	499	329	448	306	390	282	325	255	252	225
		62	420	367	367	341	310	310	269	269	228	228
336	9,000	72	564	271	513	249	456	225	394	200	324	173
		67	476	296	425	272	368	246	306	220	236	191
		62	395	319	344	293	288	265	231	231	195	195
	12,500	72	642	312	584	288	521	263	451	235	372	205
		67	545	349	489	323	425	295	353	265	273	233
		62	456	383	398	355	334	322	281	281	238	238
336	15,000	72	699	345	637	320	570	294	495	265	410	233
		67	598	394	537	367	468	338	390	306	303	270
		62	503	440	440	409	371	371	322	322	273	273

NOTE(S):

- Ratings based on approximately 15°F superheat leaving coil.
- Direct interpolation is permissible. Do not extrapolate.
- Dashes indicate coil loading limits are exceeded.
- Evaporator fan heat not deducted from ratings.
- See dry and wet bulb formulas below.
- SHC is based on 80°F db temperature of air entering evaporator coil.

Dry and Wet Bulb Formulas:

$$\text{Leaving db} = \text{entering db} - \frac{\text{sensible heat capacity (Btuh)}}{1.1 \times \text{cfm}}$$

$$\text{Leaving wb} = \text{wet-bulb temperature corresponding to enthalpy of air leaving coil (h}_{\text{wb}}\text{)}$$

$$h_{\text{wb}} = h_{\text{ewb}} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

$$\text{where } h_{\text{wb}} = \text{enthalpy of air entering coil}$$

LEGEND

- db** — Dry Bulb Temperature (°F)
SHC — Sensible Heat Capacity (1000 Btuh)
TC — Total Capacity (1000 Btuh)
wb — Wet Bulb Temperature (°F)

Performance data (cont)

Hydronic Heating Capacities^{a,b,c}

UNIT	AIRFLOW	1-ROW STEAM ^d		2-ROW HOT WATER COIL ^e			
		Cap.	Ldb	Cap.	Ldb	Water Flow (Gpm)	PD
FAX072	1,800	146	134	156.0	140	15.6	3.4
	2,400	173	126	183.0	131	18.3	4.3
	3,000	209	123	206.0	124	20.6	5.2
FAX091	2,250	168	129	174.0	133	17.4	4.0
	3,000	209	123	206.0	124	20.6	5.2
	3,750	240	117	238.0	118	23.8	6.5
FAX120	3,000	209	123	299.0	152	29.9	5.0
	4,000	243	115	275.0	124	27.5	6.6
	5,000	279	111	316.0	119	31.6	8.2
FAS150	3,750	370	150	362.0	149	36.2	4.2
	5,000	425	137	409.0	136	40.9	5.1
	6,250	465	128	456.0	128	45.6	6.0
FAS180	4,500	402	141	412.0	145	41.2	4.5
	6,000	458	129	471.0	133	47.1	5.5
	7,500	479	118	529.0	125	52.9	6.6
FAS240	6,000	458	129	506.0	138	50.6	5.1
	8,000	487	115	584.0	128	58.4	6.3
	10,000	499	105	652.0	120	65.2	7.5
FAS300	7,500	511	122	649.0	140	64.9	5.7
	10,000	575	112	752.0	130	75.2	7.1
	12,500	626	106	842.0	122	84.2	8.5
FAS336	9,000	560	117	735.0	136	73.5	6.2
	12,000	621	107	850.0	126	85.0	7.8
	15,000	670	101	950.0	119	95.0	9.3

NOTE(S):

- Maximum operating limits for heating coils: 20 psig at 260°F.
- See leaving dry bulb formula below.
- See Heating Correction Factors table.
- Based on 5 psig steam, 60° F entering-air temperature. All steam coils are non-freeze type.
- Based on 200° F entering water, 20° F water temperature drop, 60° F entering-air temperature.

Leaving dry bulb formula:

$$\text{Leaving db} = \text{ent db (°F)} + \frac{\text{Capacity (Btuh)}}{1.1 \times \text{cfm}}$$

LEGEND

Cap. — Capacity (Btuh in 1000)
Ldb — Leaving Air Dry Bulb Temp (°F)
PD — Pressure Drop (ft water)

Heating Correction Factors

HOT WATER COIL						
Water Temp Drop (°F)	Entering Water Temp (°F)	Entering Water Temp (°F)				
		40	50	60	70	80
10	140	0.72	0.64	0.57	0.49	0.41
	160	0.89	0.81	0.74	0.66	0.58
	180	1.06	0.98	0.90	0.83	0.75
	200	1.22	1.15	1.07	1.00	0.92
	220	1.39	1.32	1.24	1.17	1.09
20	140	0.64	0.57	0.49	0.41	0.33
	160	0.81	0.74	0.66	0.58	0.51
	180	0.98	0.91	0.83	0.75	0.68
	200	1.15	1.08	1.00	0.93	0.85
30	220	1.32	1.25	1.17	1.10	1.02
	140	0.56	0.49	0.41	0.33	0.24
	160	0.74	0.66	0.58	0.51	0.43
	180	0.91	0.83	0.76	0.68	0.60
	200	1.08	1.00	0.93	0.85	0.78
	220	1.25	1.18	1.10	1.03	0.95

STEAM COIL

STEAM PRESSURE (psig)	Entering-Air Temperature (°F)				
	40	50	60	70	80
0	1.06	0.98	0.91	0.85	0.78
2	1.09	1.02	0.95	0.89	0.82
5	1.13	1.06	1.00	0.93	0.87

NOTE: Multiply capacity is given in the Hydronic Heating Capacities table by the correction factor for conditions at which unit is actually operating. Correct leaving-air temperature using formula in Note b of Hydronic Heating Capacities table.