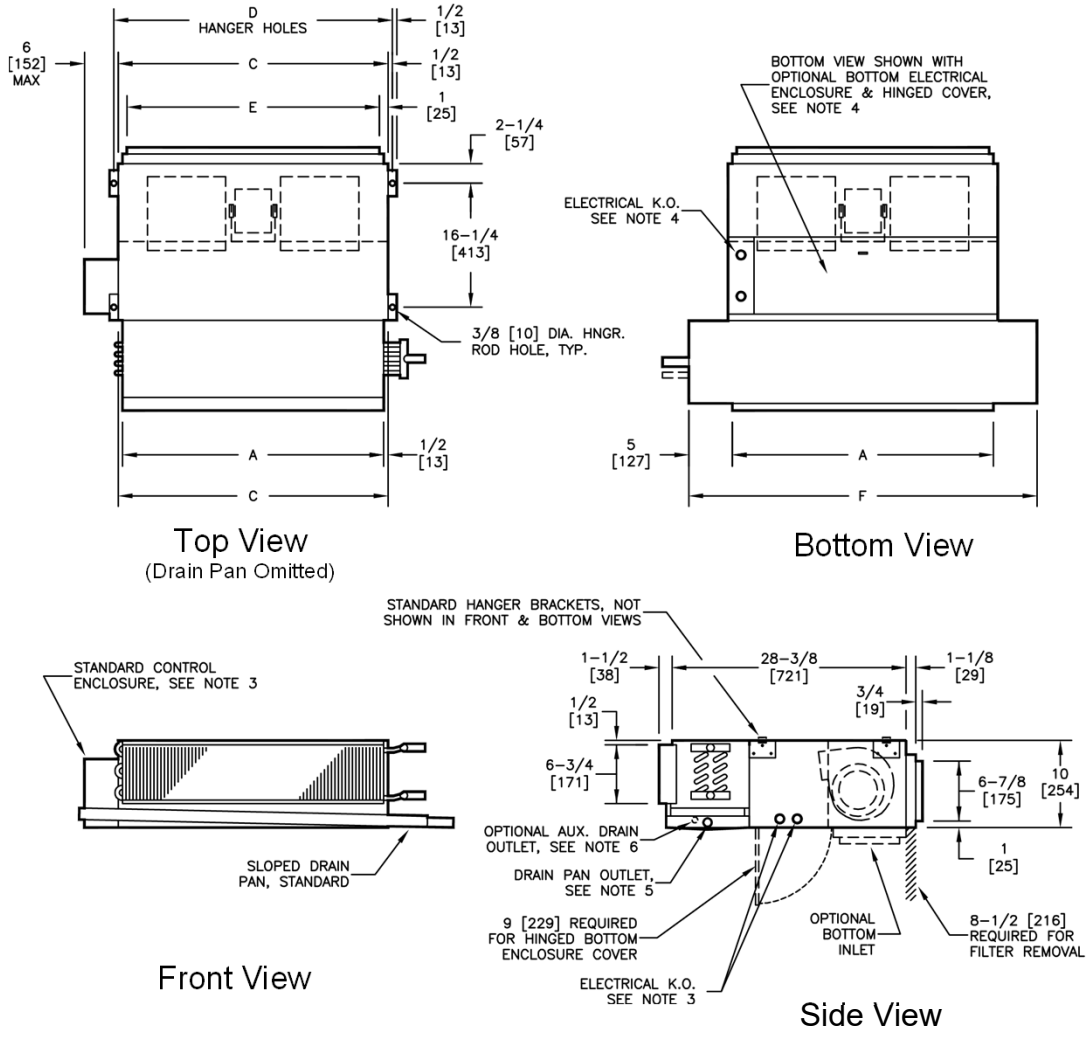
THBP

Horizontal Low Profile Plenum Return



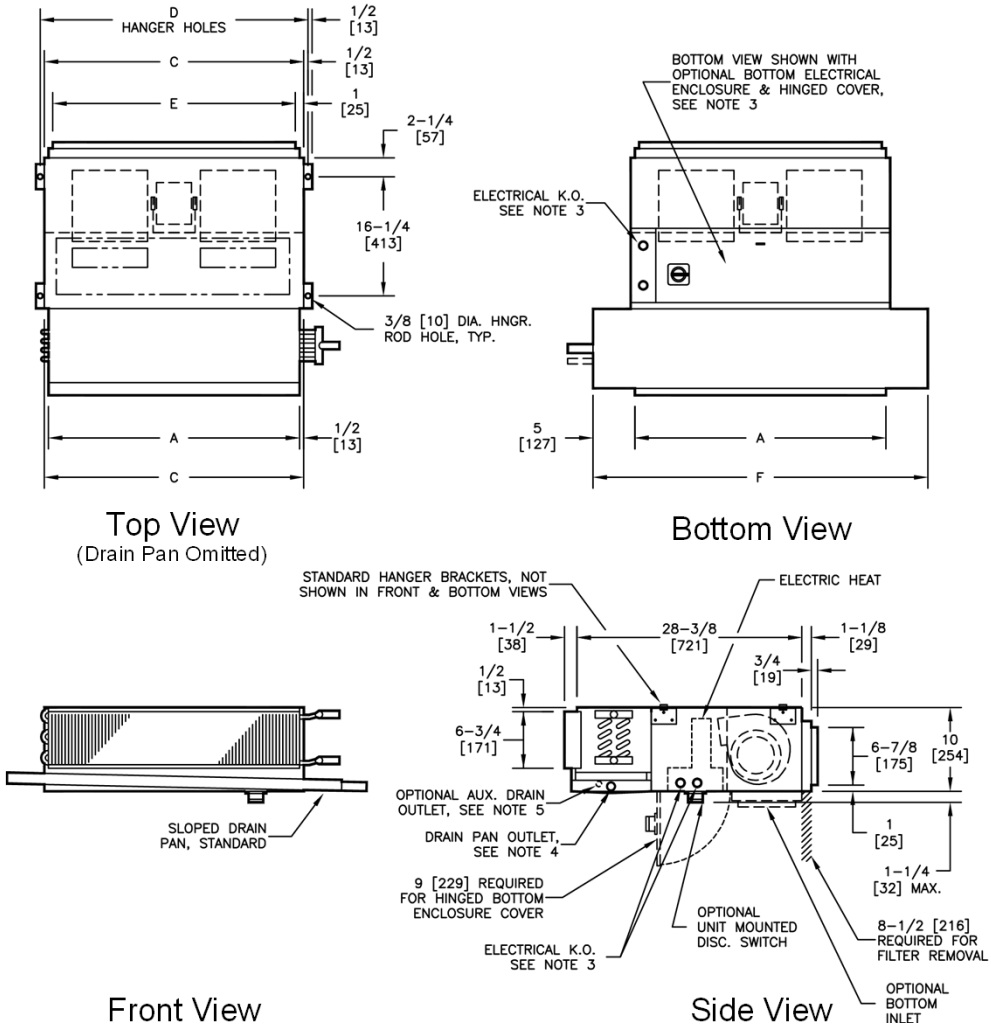
Left hand unit shown. All dimensions are inches [millimeters].

Unit Size	A	C	D	E	F
20	20 [508]	21 [533]	22 [559]	19 [483]	30 [762]
25	26 [660]	27 [686]	28 [711]	25 [635]	36 [914]
30	30 [762]	31 [787]	32 [813]	29 [737]	40 [1016]
40	40 [1016]	41 [1041]	42 [1067]	39 [991]	50 [1270]
50	50 [1270]	51 [1295]	52 [1321]	49 [1245]	60 [1524]
60	60 [1524]	61 [1549]	62 [1575]	59 [1499]	70 [1778]

Notes:
1. All dimensions are Inches [millimeters]. All dimensions ± ¼" [6mm]. Metric values are soft conversion.
2. Left hand unit shown, right hand unit opposite.
3. Standard control enclosure is mounted on unit side opposite cooling coil connections. Unit casting includes (2) knockouts on each side. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
4. Optional bottom control enclosure with hinged cover replaces standard side mounted enclosure and includes (2) additional knockouts on bottom of unit, on left side.
5. Standard externally foam coated galvanized steel drain pan has 7/8" ODM copper outlet. Stainless steel drain pan has ¾" MPT galvanized steel outlet.
6. Aux. drain outlet is 5/8" ODM copper or 3/8" MPT galvanized steel respectively.
7. See coil connection drawings for coil connection sizes and locations

THBP

Horizontal Low Profile Plenum Return with Electric Heat



Left hand unit shown. All dimensions are inches [millimeters].

Unit Size	A	C	D	E	F
20	20 [508]	21 [533]	22 [559]	19 [483]	30 [762]
25	26 [660]	27 [686]	28 [711]	25 [635]	36 [914]
30	30 [762]	31 [787]	32 [813]	29 [737]	40 [1016]
40	40 [1016]	41 [1041]	42 [1067]	39 [991]	50 [1270]
50	50 [1270]	51 [1295]	52 [1321]	49 [1245]	60 [1524]
60	60 [1524]	61 [1549]	62 [1575]	59 [1499]	70 [1778]

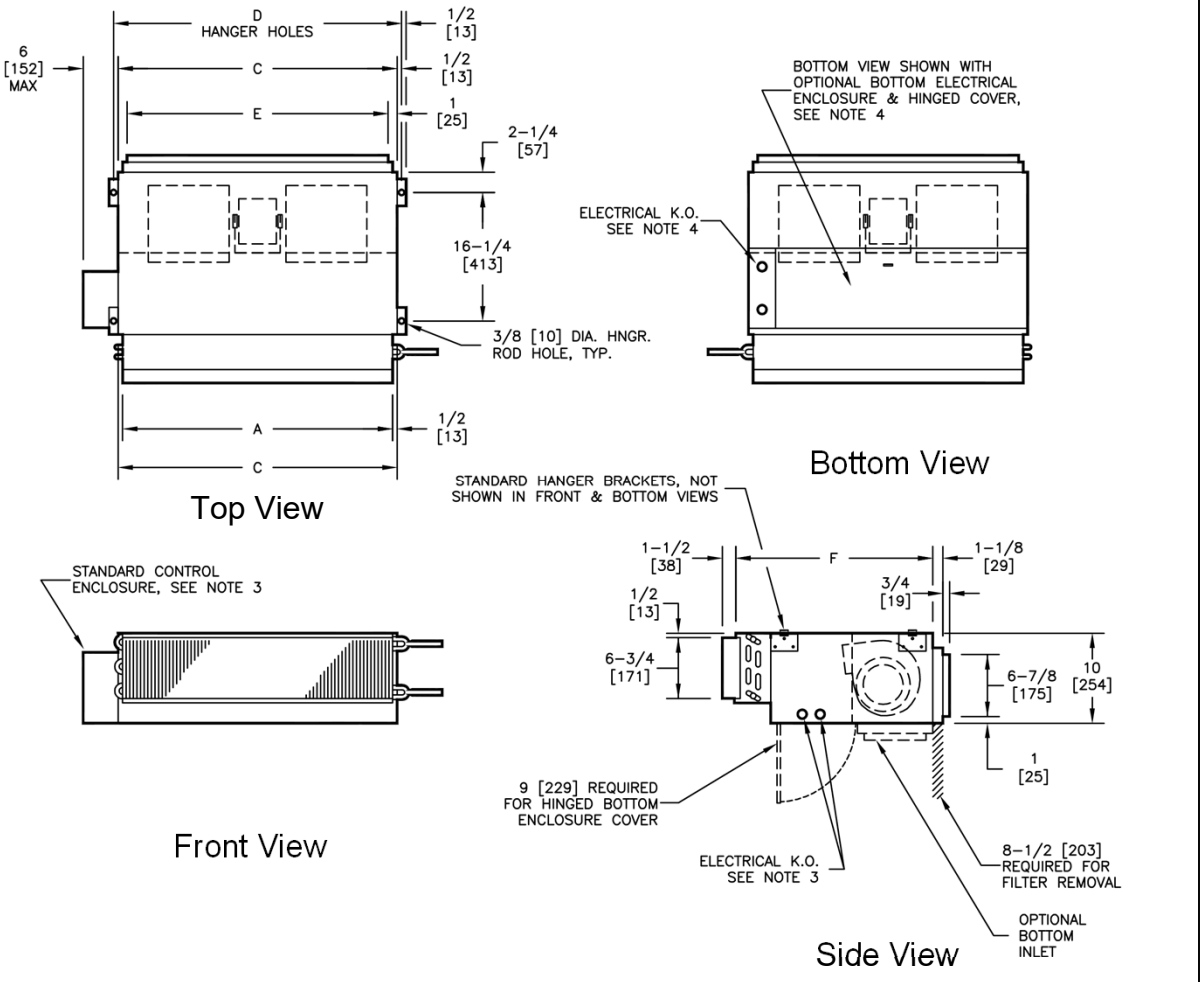
Notes:
1. All dimensions are Inches [millimeters]. All dimensions ± ¼" [6mm]. Metric values are soft conversion.
2. Left hand unit shown, right hand unit opposite.
3. Standard control enclosure is mounted on unit side opposite cooling coil connections. Unit casting includes (2) knockouts on each side. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
4. Standard externally foam coated galvanized steel drain pan has 7/8" ODM copper outlet. Stainless steel drain pan has ¾" MPT galvanized steel outlet.
5. Aux. drain outlet is 5/8" ODM copper or 3/8" MPT galvanized steel respectively.
6. See coil connection drawings for coil connection sizes and locations

THBP

Horizontal Low Profile Plenum Return

❑ THBP - Heating Only Option

- ❑ 1R Coil
- ❑ 2R Coil
- ❑ 3R Coil
- ❑ 4R Coil



Left hand unit shown. All dimensions are inches [millimeters].

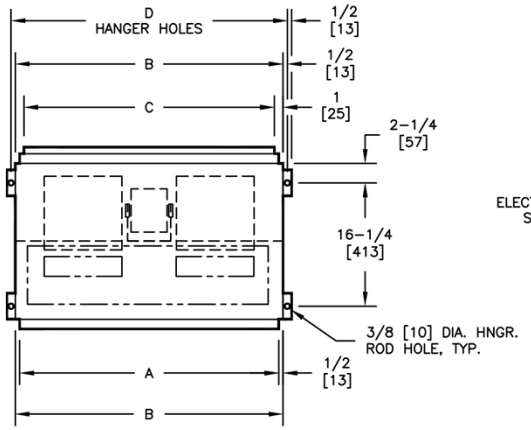
Unit Size	A	C	D	E	F
20	20 [508]	21 [533]	22 [559]	19 [483]	28 3/8 [721]
25	26 [660]	27 [686]	28 [711]	25 [635]	28 3/8 [721]
30	30 [762]	31 [787]	32 [813]	29 [737]	28 3/8 [721]
40	40 [1016]	41 [1041]	42 [1067]	39 [991]	28 3/8 [721]
50	50 [1270]	51 [1295]	52 [1321]	49 [1245]	28 3/8 [721]
60	60 [1524]	61 [1549]	62 [1575]	59 [1499]	28 3/8 [721]

Notes:
1. All dimensions are Inches [millimeters]. All dimensions ± ¼" [6mm]. Metric values are soft conversion.
2. Left hand unit shown, right hand unit opposite.
3. Standard control enclosure is mounted on unit side opposite cooling coil connections. Unit casting includes (2) knockouts on each side. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
4. Optional bottom control enclosure with hinged cover replaces standard side mounted enclosure and includes (2) additional knockouts on bottom of unit, on left side.
5. See coil connection drawings for coil connection sizes and locations

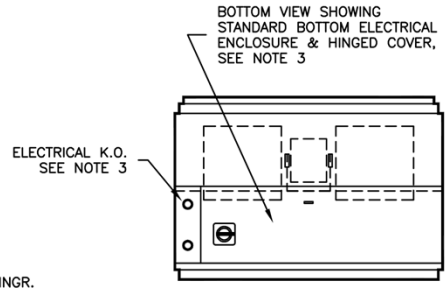
THBP

Horizontal Low Profile Plenum Return

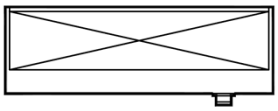
❑ THBP with Electric Heat Only



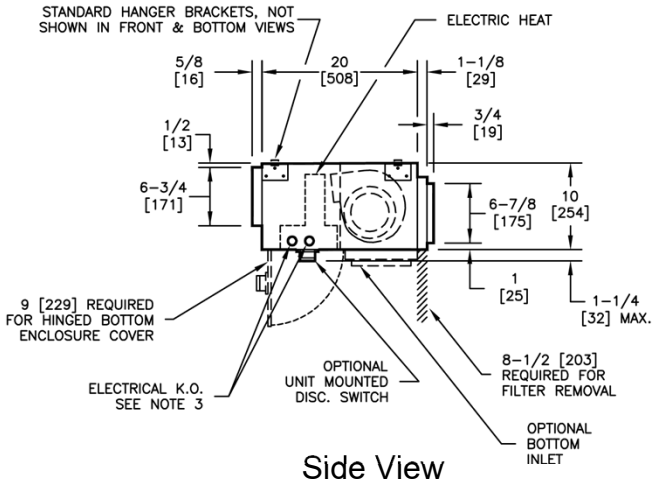
Top View



Bottom View



Front View



Side View

Left hand unit shown. All dimensions are inches [millimeters].

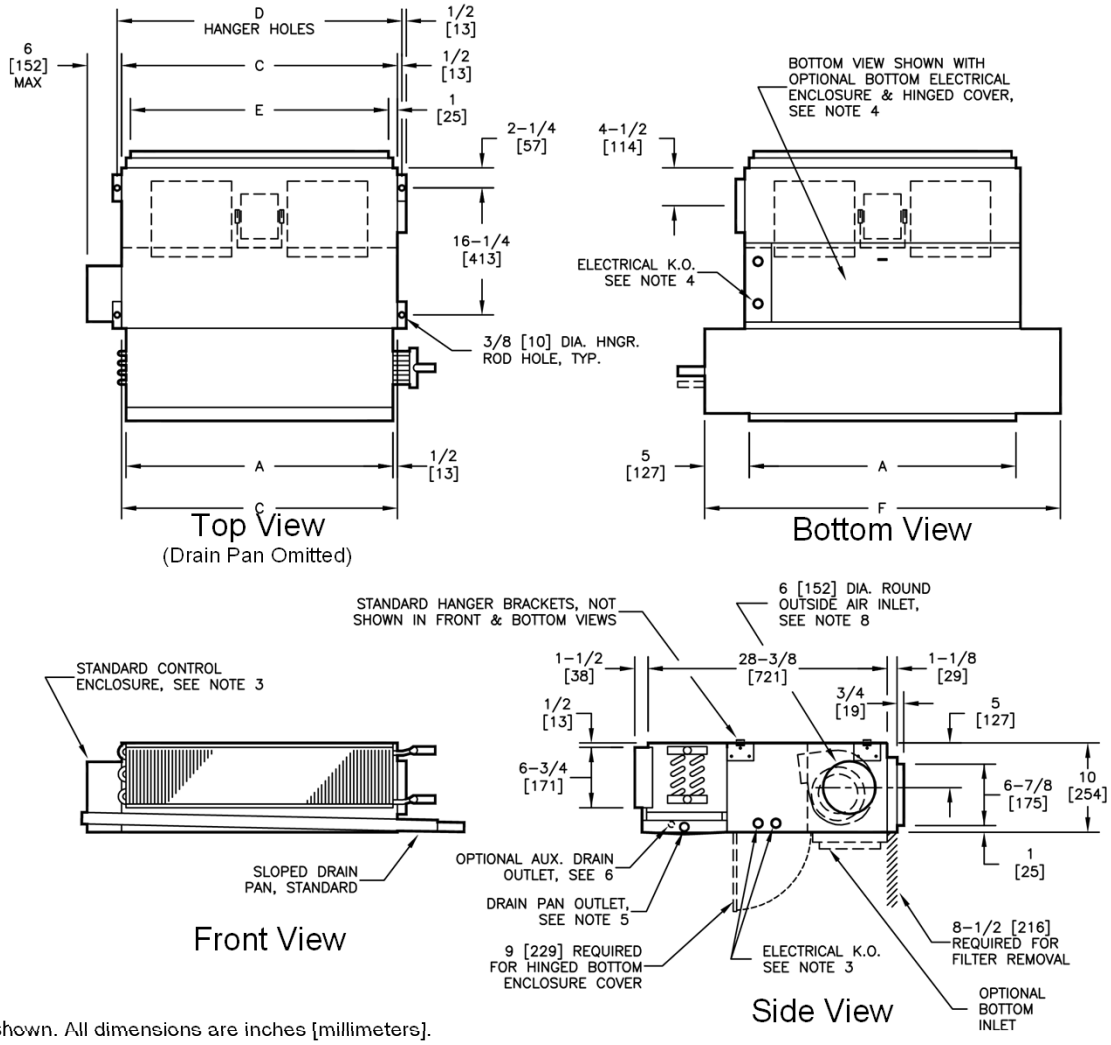
Unit Size	A	B	C	D
20	20 [508]	21 [533]	19 [483]	22 [559]
25	26 [660]	27 [686]	25 [635]	28 [711]
30	30 [762]	31 [787]	29 [737]	32 [813]
40	40 [1016]	41 [1041]	39 [991]	42 [1067]
50	50 [1270]	51 [1295]	49 [1245]	52 [1321]
60	60 [1524]	61 [1549]	59 [1499]	62 [1575]

Notes:
1. All dimensions are Inches [millimeters]. All dimensions ± ¼" [6mm]. Metric values are soft conversion.
2. Left hand unit shown, right hand unit opposite.
3. Standard control enclosure is mounted on unit side opposite cooling coil connections. Unit casting includes (2) knockouts on each side. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.

THBP

Horizontal Low Profile Plenum Return

❑ THBP – with 6" Round Outside Air



Left hand unit shown. All dimensions are inches [millimeters].

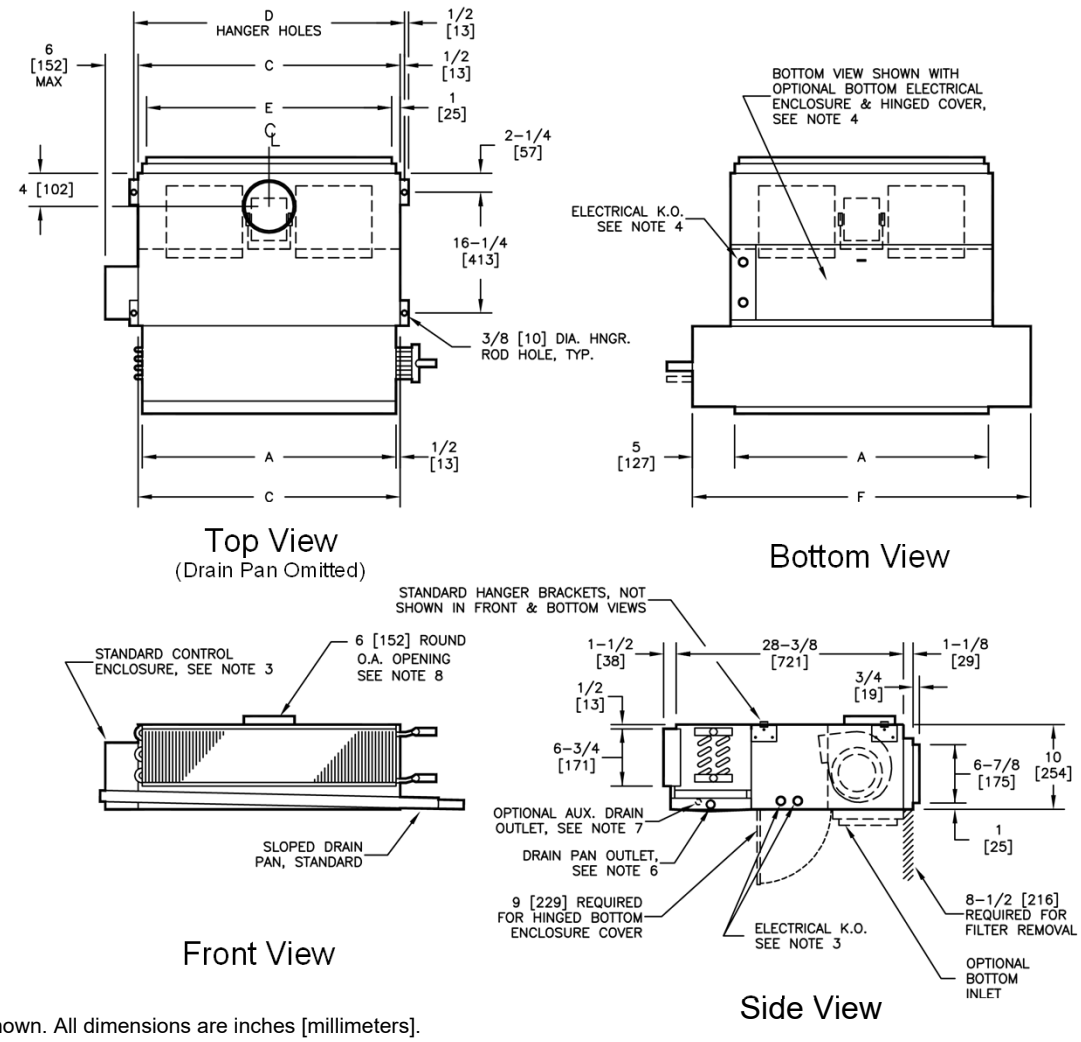
Unit Size	A	C	D	E	F
20	20 [508]	21 [533]	22 [559]	19 [483]	30 [762]
25	26 [660]	27 [686]	28 [711]	25 [635]	36 [914]
30	30 [762]	31 [787]	32 [813]	29 [737]	40 [1016]
40	40 [1016]	41 [1041]	42 [1067]	39 [991]	50 [1270]
50	50 [1270]	51 [1295]	52 [1321]	49 [1245]	60 [1524]
60	60 [1524]	61 [1549]	62 [1575]	59 [1499]	70 [1778]

Notes:
1. All dimensions are Inches [millimeters]. All dimensions ± ¼" [6mm]. Metric values are soft conversion.
2. Left hand unit shown, right hand unit opposite.
3. Standard control enclosure is mounted on unit side opposite cooling coil connections. Unit casting includes (2) knockouts on each side. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
4. Optional bottom control enclosure with hinged cover replaces standard side mounted enclosure and includes (2) additional knockouts on bottom of unit, on left side.
5. Standard externally foam coated galvanized steel drain pan has 7/8" ODM copper outlet. Stainless steel drain pan has ¾" MPT galvanized steel outlet.
6. Aux. drain outlet is 5/8" ODM copper or 3/8" MPT galvanized steel respectively.
7. See coil connection drawings for coil connection sizes and locations
8. Outside air inlet is unfiltered, and may be located on left or right side of unit.

THBP

Horizontal Low Profile Plenum Return

❑ THBP – with 6" Round top O.A. Inlet



Left hand unit shown. All dimensions are inches [millimeters].

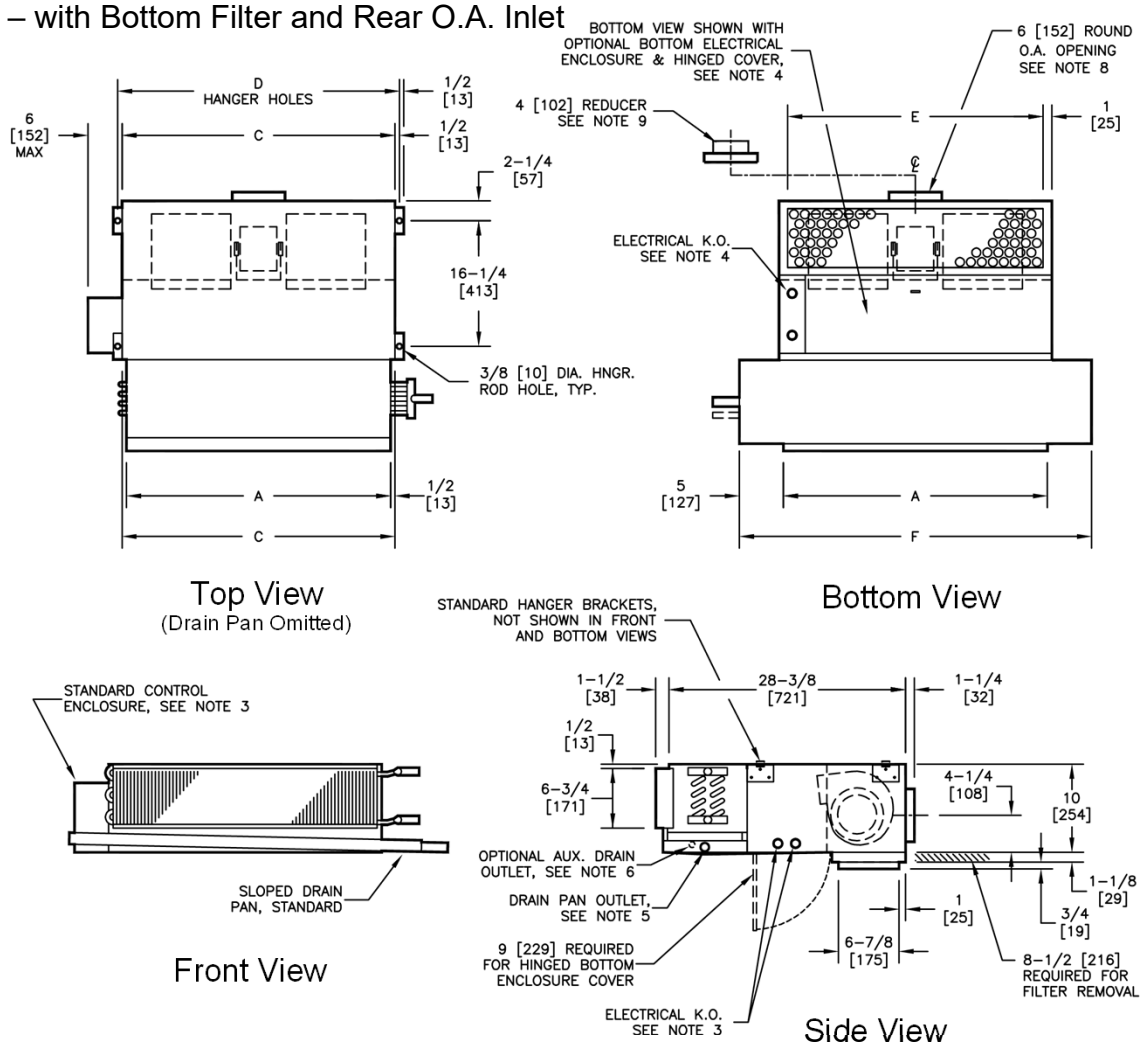
Unit Size	A	C	D	E	F
20	20 [508]	21 [533]	22 [559]	19 [483]	30 [762]
25	26 [660]	27 [686]	28 [711]	25 [635]	36 [914]
30	30 [762]	31 [787]	32 [813]	29 [737]	40 [1016]
40	40 [1016]	41 [1041]	42 [1067]	39 [991]	50 [1270]
50	50 [1270]	51 [1295]	52 [1321]	49 [1245]	60 [1524]
60	60 [1524]	61 [1549]	62 [1575]	59 [1499]	70 [1778]

Notes:
1. All dimensions are Inches [millimeters]. All dimensions ± ¼" [6mm]. Metric values are soft conversion.
2. Left hand unit shown, right hand unit opposite.
3. Standard control enclosure is mounted on unit side opposite cooling coil connections. Unit casting includes (2) knockouts on each side. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
4. Optional bottom control enclosure with hinged cover replaces standard side mounted enclosure and includes (2) additional knockouts on bottom of unit, on left side.
5. Standard externally foam coated galvanized steel drain pan has 7/8" ODM copper outlet. Stainless steel drain pan has ¾" MPT galvanized steel outlet.
6. Aux. drain outlet is 5/8" ODM copper or 3/8" MPT galvanized steel respectively.
7. See coil connection drawings for coil connection sizes and locations
8. 6" [152] round O.A. inlet is unfiltered.

THBP

Horizontal Low Profile Plenum Return

❑ THBP – with Bottom Filter and Rear O.A. Inlet

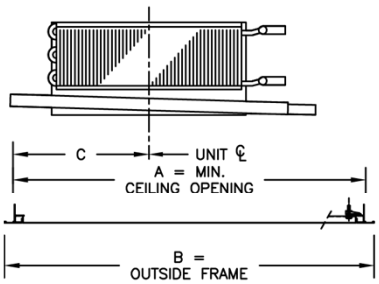


Left hand unit shown. All dimensions are inches [millimeters].

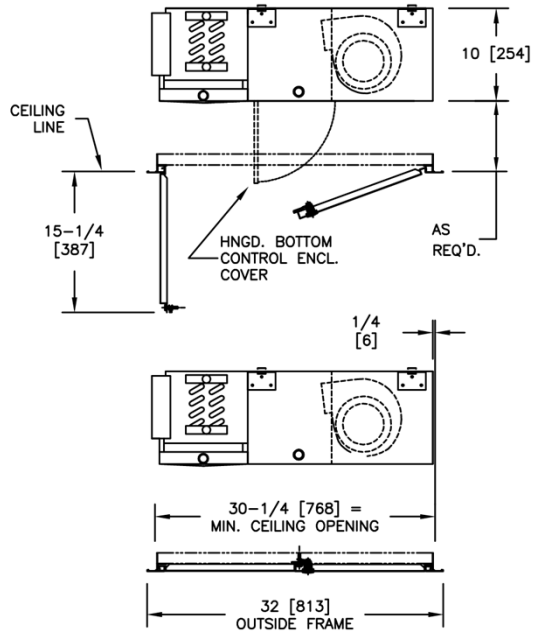
Unit Size	A	C	D	E	F
20	20 [508]	21 [533]	22 [559]	19 [483]	30 [762]
25	26 [660]	27 [686]	28 [711]	25 [635]	36 [914]
30	30 [762]	31 [787]	32 [813]	29 [737]	40 [1016]
40	40 [1016]	41 [1041]	42 [1067]	39 [991]	50 [1270]
50	50 [1270]	51 [1295]	52 [1321]	49 [1245]	60 [1524]
60	60 [1524]	61 [1549]	62 [1575]	59 [1499]	70 [1778]

Notes:
1. All dimensions are Inches [millimeters]. All dimensions ± ¼" [6mm]. Metric values are soft conversion.
2. Left hand unit shown, right hand unit opposite.
3. Standard control enclosure is mounted on unit side opposite cooling coil connections. Unit casting includes (2) knockouts on each side. Provide sufficient clearance to access electrical controls and comply with applicable codes and ordinances.
4. Optional bottom control enclosure with hinged cover replaces standard side mounted enclosure and includes (2) additional knockouts on bottom of unit, on left side.
5. Standard externally foam coated galvanized steel drain pan has 7/8" ODM copper outlet. Stainless steel drain pan has ¾" MPT galvanized steel outlet.
6. Aux. drain outlet is 5/8" ODM copper or 3/8" MPT galvanized steel respectively.
7. See coil connection drawings for coil connection sizes and locations
8. 6" [152] round O.A. inlet is unfiltered.
9. Optional reducer for applications with a 4" [102] round O.A. requirement.

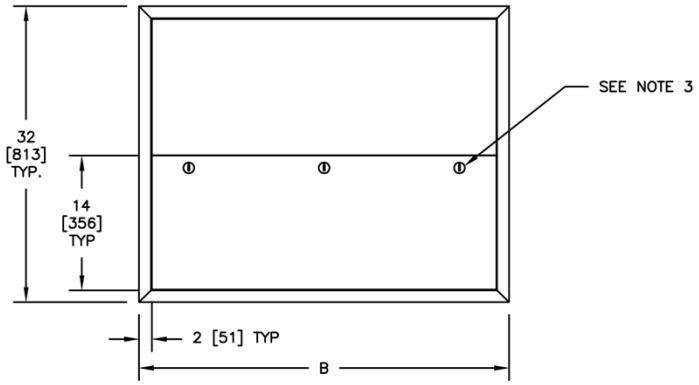
☐ THBP, with Solid Bottom Access Panel



Front View



Side Views

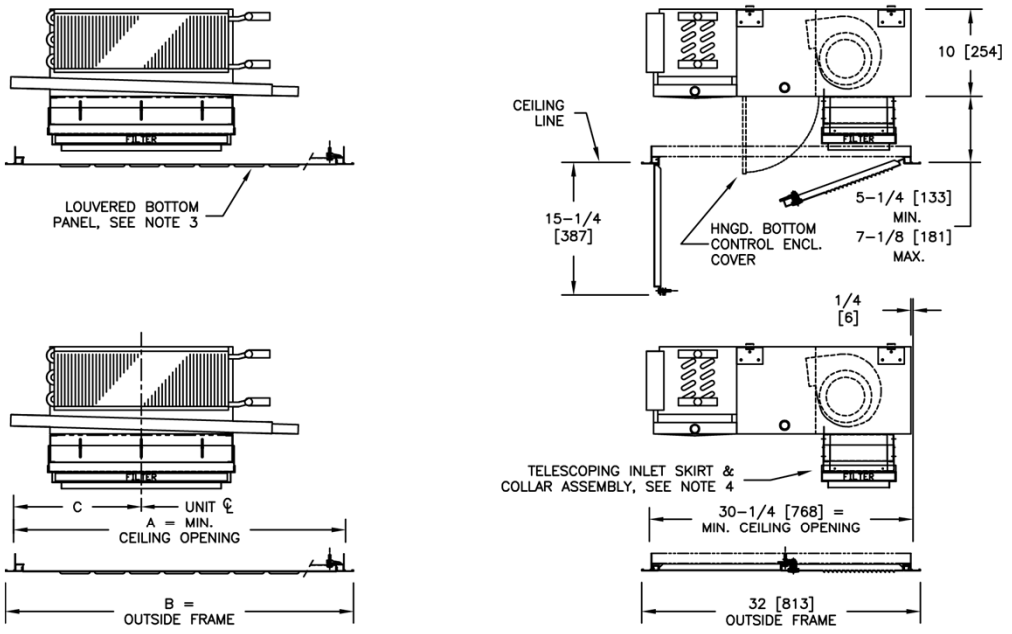


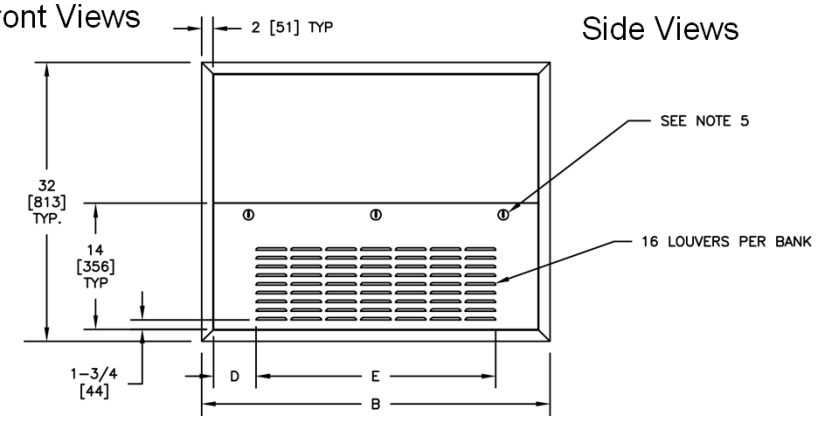
Bottom View

Unit Size	STANDARD PANEL		
	A	B	C
20	38 1/8 [968]	40 [1016]	14 ½ [368]
25	44 1/8 [1121]	46 [1168]	17 ½ [445]
30	48 1/8 [1222]	50 [1270]	19 ½ [368]
40	58 1/8 [1476]	60 [1524]	24 ½ [622]
50	68 1/8 [1730]	70 [1778]	29 ½ [749]
60	78 1/8 [1984]	80 [2032]	34 ½ [876]

Notes:
1. All dimensions are Inches [millimeters]. All dimensions ± ¼" [6mm]. Metric values are soft conversion.
2. Left hand unit shown, right hand unit opposite.
3. ¼ Turn latch, (2) qty for standard sizes, (3) qty for sizes 40-60.

❑ THBP – Telescoping Bottom Panel Assembly

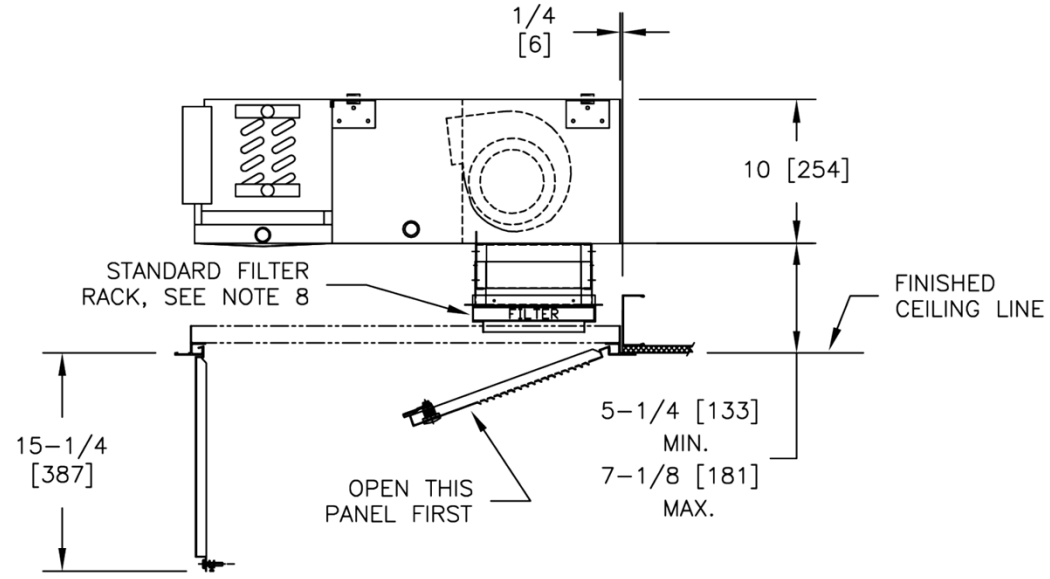




Unit Size	STANDARD PANEL				
	A	B	C	D	E
20	38 1/8 [968]	40 [1016]	14 ½ [368]	4 ¼ [108]	27 ½ [699]
25	44 1/8 [1121]	46 [1168]	17 ½ [445]	3 ¼ [83]	35 ½ [902]
30	48 1/8 [1222]	50 [1270]	19 ½ [368]	3 ¼ [83]	39 ½ [1003]
40	58 1/8 [1476]	60 [1524]	24 ½ [622]	4 ¼ [108]	47 ½ [1207]
50	68 1/8 [1730]	70 [1778]	29 ½ [749]	3 ¼ [83]	59 ½ [1511]
60	78 1/8 [1984]	80 [2032]	34 ½ [876]	4 ¼ [108]	67 ½ [1715]

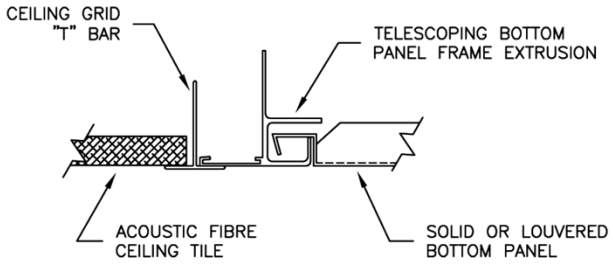
Notes:
1. All dimensions are Inches [millimeters]. All dimensions ± ¼" [6mm]. Metric values are soft conversion.
2. Left hand unit shown, right hand unit opposite.
3. Portion of the inlet louver not directly below unit inlet may require covering in the field on applications where infiltration of ceiling plenum air into space is undesired.
4. Telescoping skirt and collar assembly must be field adjusted to assure a proper fit between filter frame and louvered inlet panel assembly.
5. ¼ Turn latch, (2) qty for standard sizes, (3) qty for sizes 40-60.

❑ THBP, Telescoping Bottom Panel Typical Installation Instructions



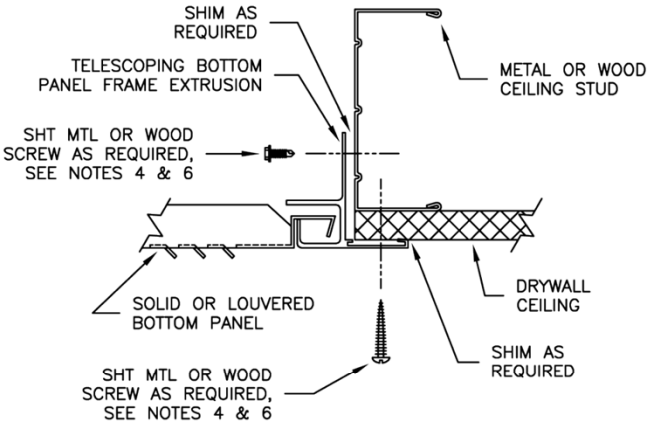
Side View

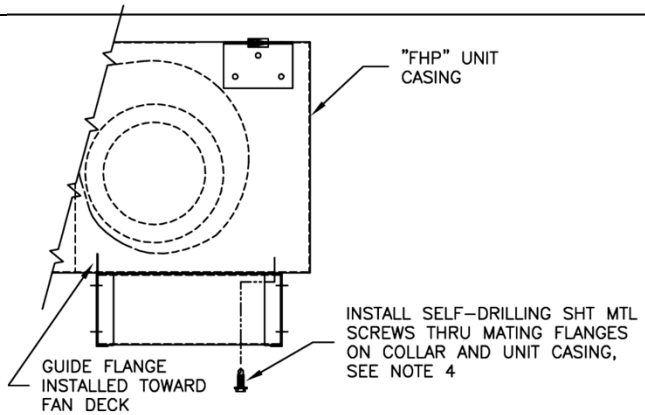
Suspended Grid/Tile Ceiling System



NOTE: CEILING "T" BAR GRID MAY NOT SUPPORT TELESCOPING BOTTOM PANEL ASSEMBLY. BOTTOM PANEL ASSEMBLY MAY REQUIRE INDEPENDENT SUPPORT.

Stud/Drywall Ceiling System





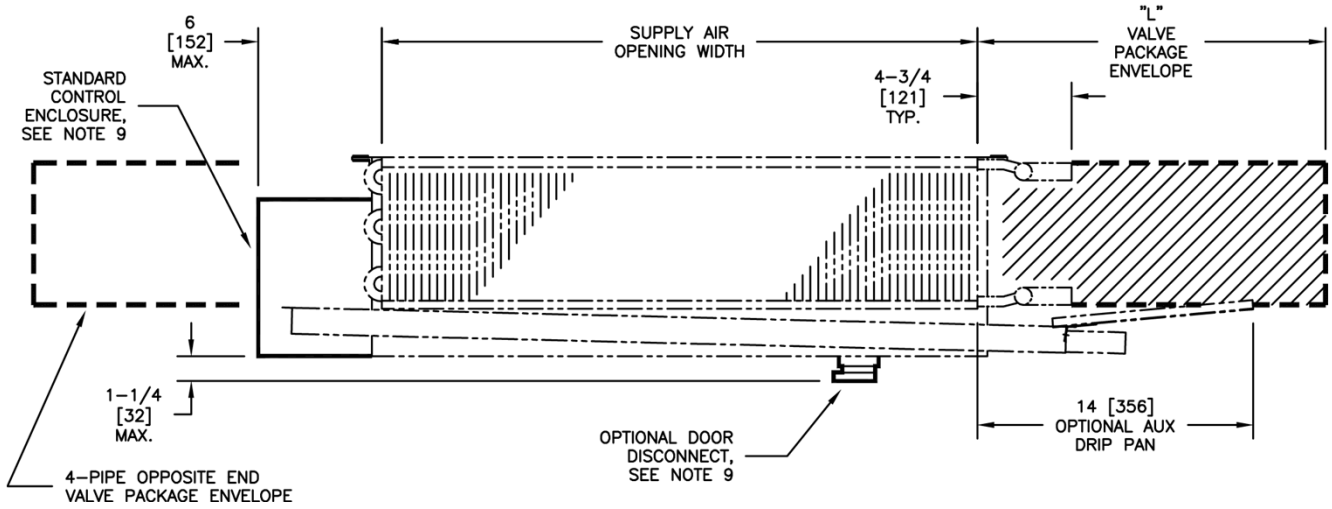
Inlet Collar Installation

Notes:
1. All dimensions are Inches [millimeters]. All dimensions ± ¼" [6mm]. Metric values are soft conversion.
2. All drawing subject to change without prior notice.
3. Left hand unit shown, right hand unit opposite.
4 .Mounting hardware not provided. Mounting holes must be located and drilled to suit individual job requirements.
5. Remove solid louvered bottom panels before mounting frame assembly.
6. Frame assembly must be installed flat and square. Failure to do so may result in poor bottom panel fit and improper airflow pattern. Shim frame to support as required.
7. Telescoping skirt assembly must be field adjusted to assure close fit of filter rack to louvered bottom panel.
8. Attach standard filter rack assembly to bottom of telescoping skirt, after final adjustment of skirt location. Filter removal direction is optional.
9. Portion of the inlet louver not directly below unit inlet may require covering in the field on applications where infiltration of ceiling plenum air into space is undesired.

THBP

Horizontal Low Profile Plenum Return

❑ External Feature Space Requirements



Left hand unit shown. All dimensions are inches [millimeters].

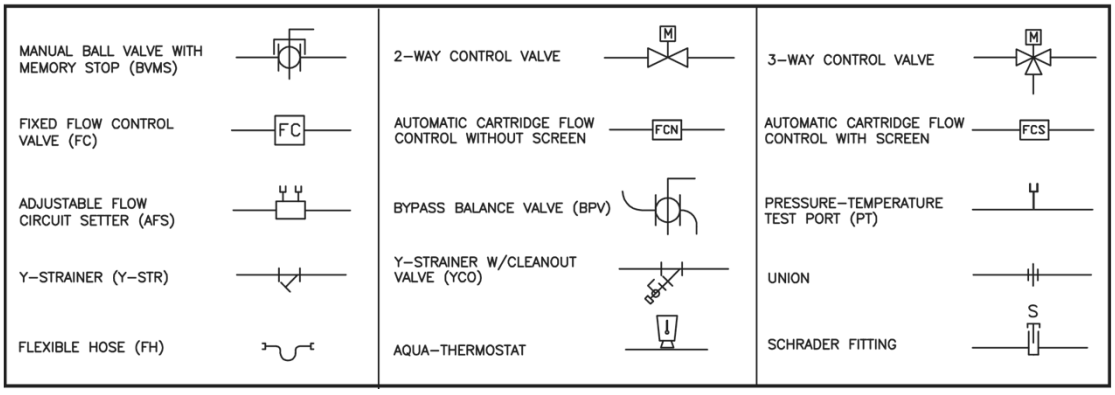
VA. PKG. SIZE	2-WAY VALVE PKG. CODES			3-WAY VALVE PKG. CODES			
	24	25	29	36	37	41, 53	50
½"	15 ½ [394]	19 7/8 [505]	17 [432]	13 ¼ [336]	17 ¾ [451]	15 [381]	13 1/8 [333]
¾"	12 [304]	20 ¾ [527]	18 ¼ [463]	14 ¼ [362]	18 7/8 [479]	16 5/8 [397]	14 ¼ [362]

Notes:
1. All chilled water piping that projects beyond the condensate pan or the optional auxiliary drip pan must be field insulated by others.
2. Auxiliary drip pan shown above is optional, and is mounted on the outlet end of the drip pan.
3. Drain pan is installed with the outlet tube(s) on cooling coil connection end of coil on 4-pipe units with optional opposite end connection.
4. Dimensions shown on this drawing apply to standard CW and HW valve packages. Refer to the Piping Package Catalog for valve package code details. Contact factory for details on valves packages using non-standard or customer furnished components.
5. Some valve package appurtenances may extend slightly above top of unit.
6. Dimension “L” is ±1" [25mm] due to multiple source components dimensional variations. Dimensions shown above should be used to approximate space requirements only, and should not be used for piping “rough in” purposes.
7. Unions and/or adapter couplings add up 1" [25mm] to dimension “L”.
8 Valve packages with optional strainer will interfere with the optional auxiliary drip pan. Strainer cleanout valve may extend below the bottom of the unit slightly.
9. Provide sufficient clearance to access electrical components and comply with all applicable codes and ordinances. Standard side mounted control enclosure is replaced by the bottom hinged control enclosure on units with optional door interlocking disconnect switch.

General Notes - Piping Packages

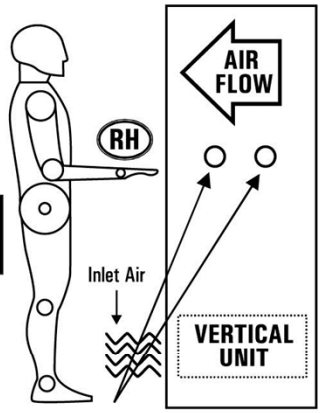
1. All the packages and components described in this brochure are optional, extra cost features. Consult your Titus sales representative for details. Not all components are available on all unit models. See valve package code charts.
2. All standard valve packages and piping components described in this catalog are for chilled and hot water applications. They may also be used with ethylene and propylene glycol solutions up to 50% concentration.
3. THB, THH, and TVB fan coil unit packages – are factory assembled and shipped loose for field installation and wiring. All TVS fan coil unit packages are factory assembled, installed, and wired.
4. THB, THH and TVB unit valve packages are designed to mount directly onto the coil connections.
5. Control valve actuators are removable, and may be serviced or replaced without removal of the valve body.
6. Control valves are piped normally closed to the coil. For hot water coils, control valves are available normally open.
7. 3-Way control valves are piped as mixing valves.
8. All ball isolation valves are furnished with an adjustable memory stop feature and may be used as a balancing valve.
9. When ordered, unions are installed at the water coil, and are available on all fan coil units except TVS. Unions must be ordered on both coils of 4-pipe units. Unions are not available separately.
10. All TVS units include two flexible stainless steel braided hoses and ball isolation valves per coil. This hose/valve combination provides a "union" type connection to allow coil removal.
11. Pressure/temperature (P/T) ports are located to monitor the pressure and temperature across the coil.
12. Automatic fixed flow controls (FC, FCN, FCS) are available in flow (GPM) ratings as follows:
    1/2" = 0.5 to 4.0 GPM in 0.5 GPM increments
    >4.0 to 9.0 GPM in 1.0 GPM increments
    3/4" = 3.0 to 4.0 GPM in 0.5 GPM increments
    >4.0 to 12.0 GPM in 1.0 GPM increments
    1" = 5.0 to 10.0 GPM in 1.0 GPM increments
    >10.0 to 20.0 GPM in 2.0 GPM increments
    Individual coil GPM requirements must be specified at time of order.
13. Component performance ratings such as Cv, maximum close-off pressure, operating temperature and pressure, are shown in Component Specifications.
14. Valve and component performance ratings shown are maximum values. Appearance and actual ratings may vary with individual vendor and component size.
15. Adjustable flow setter (AFS) is rated for full shut-off and replaces the return line ball isolation valve on all products except the TVS fan coil unit.
16. 2-Pipe "change-over" units using a 2-way control valve and factory thermostat must be ordered with a E" "bleed" line to assure proper changeover thermostat (aquastat) operation. The E" "bleed" line is optional on 2-pipe "changeover" units with field provided thermostats.
17. Some piping packages may extend beyond the unit drain pan and/or factory auxiliary drip pan. Requirements for field furnished and installed valve package and piping insulation must be determined by others on an individual application basis.
    The valve package piping and component details shown in this catalog are for standard valves and components. The suitability of all valve packages and components must be determined by others based on individual application requirements. Titus **assumes no responsibility for selection and/or application of valve packages and components. Modulating cooling valve control can increase part load space relative humidity.** Titus **does not encourage or endorse modulating valve control for fan coil cooling systems, and is not liable for high humidity problems that may result. Modulating heating valve control may result in low leaving air temperatures while the valve reduces flow and as setpoint is approached.**
    Contact Titus for any requirements not shown in this catalog.

CONTROL DEVICE LEGEND



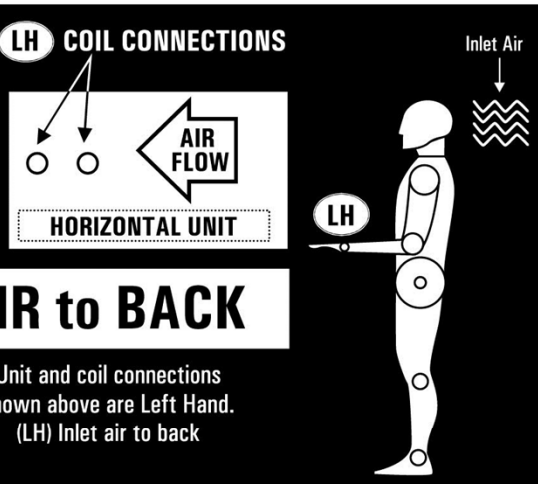
Coil Handing

COIL/UNIT HANDING GUIDE



AIR to BACK

Unit and coil connections shown above are Right Hand. (RH) Inlet air to back



AIR to BACK

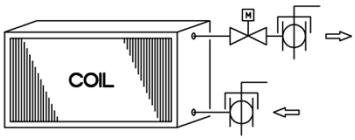
Unit and coil connections shown above are Left Hand. (LH) Inlet air to back

Vertical Largo Units are handed as "Inlet Air to Back"	Horizontal Largo Units are handed as "Inlet Air to Back"
TVB	THH
TVS	THB
TBL/TBS	TBH/TBV
	TBM

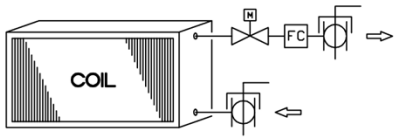
Note: The industry standard to determine handing of an HVAC unit is with Inlet Air to Back.

THBP, Piping Packages

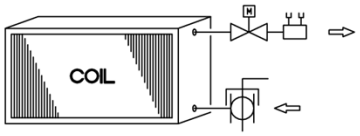
2-WAY PIPING PACKAGE												
Package Code	Components			Valve Size			Unions			P/T Ports	1/4" Bleed Line	Y-STR w/ BDV
	BVMS	FC	AFS	1/2"	3/4"	1"*	1/2"	3/4"	1"*			
24	x			x	x	x	x	x	x	x	x	x
25	x	x								x	x	x
29	x		x							x	x	x



☐ **Code 24**
2-Way Control Valve and Ball Valves With Memory Stop

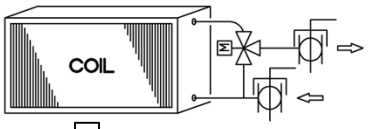


☐ **Code 25**
2-Way Control Valve, Ball Valves with Memory Stop, and Fixed Flow Control

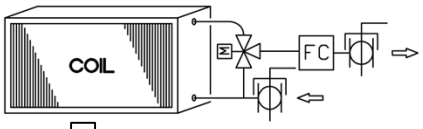


☐ **Code 29**
2-Way Control Valve, Ball Valve with Memory Stop, and Adjustable Flow Setter

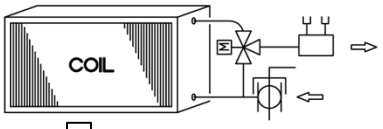
3-WAY PIPING PACKAGE											
Package Code	Components			Valve Size			Unions			P/T Ports	Y-STR w/ BDV
	BVMS	FC	AFS	1/2"	3/4"	1"*	1/2"	3/4"	1"*		
36	x			x	x	x	x	x	x	x	x
37	x	x								x	x
41	x		x							x	x



☐ **Code 36**
3-Way Control Valve and Ball Valves With Memory Stop

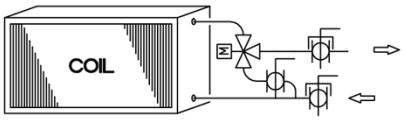


☐ **Code 37**
3-Way Control Valve, Ball Valves with Memory Stop, and Fixed Flow Control

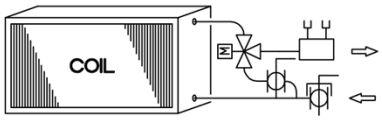


☐ **Code 41**
3-Way Control Valve, Ball Valve With Memory Stop, and Adjustable Flow Setter

3-WAY PACKAGE WITH BALANCE BYPASS VALVE										
Package Code	Components			Valve Size			Unions			P/T Ports
	BVMS	FC	AFS	1/2"	3/4"	1"*	1/2"	3/4"	1"*	
50	x			x	x	x	x	x	x	x
53	x		x							x



☐ **Code 50**
3-Way Control Valve, Ball Valve in Bypass, and Ball Valves With Memory Stop



☐ **Code 53**
3-Way Control Valve, Ball Valve in Bypass, Ball Valve With Memory Stop, and Adjustable Flow Setter

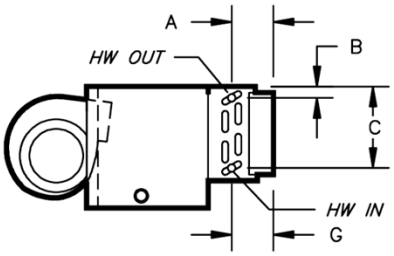
LEGEND, COMPONENT PRESSURE RATI NGS

BVMS:	Manual Ball Valves w/Memory Stop, 600 PSIG
FC:	Fixed Flow Control, Device A = 600 PSIG; Device B = 500 PSIG
AFS:	Adjustable Flow Circuit Setter, 300 PSIG
P/T Port:	Pressure/Temperature Test Port, 400 PSIG
Union:	125 PSIG (contact factory for 600 PSIG)
Control Valve:	300 PSIG
BPV:	Balance Bypass Valve, 400 PSIG
Y-STR W/ BDV:	Y-Strainer

NOTES:

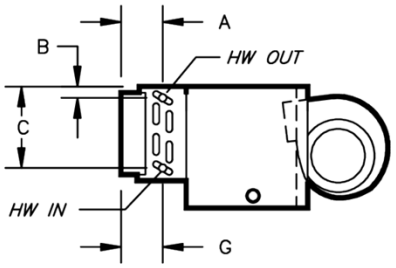
1. All drawings subject to change without prior notice.
2. Diagrams show component position in relation to fluid flow. Actual valve package configuration varies with unit type, hand connection, pipe size and options.
3. 1/4" bleed line is required on 2-pipe cool and heat auto changeover systems with factory provided thermostats; optional for thermostats by others.
4. Unions provided as standard on all FW piping packages.

THBP, Hydronic Coil Connections

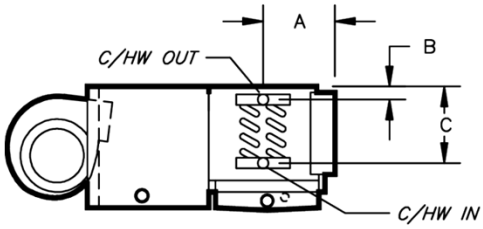


Right Hand

2 Pipe - Heating Only

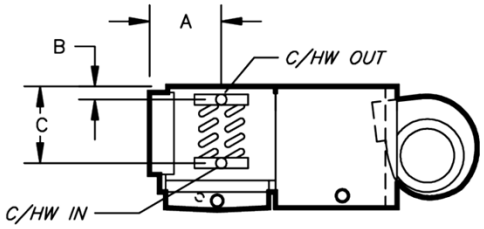


Left Hand

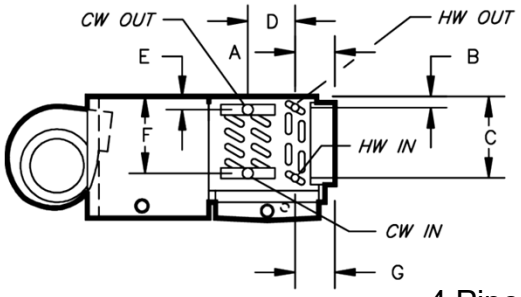


Right Hand

2 Pipe – Heating and/or Cooling

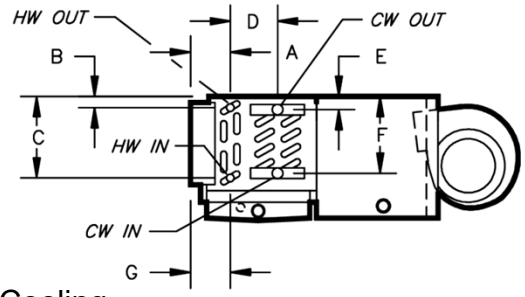


Left Hand

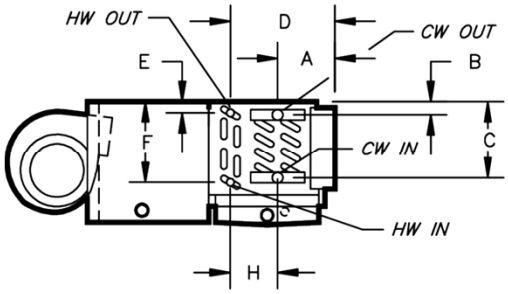


Right Hand

4 Pipe – Heating & Cooling
HW Coil in Re-Heat

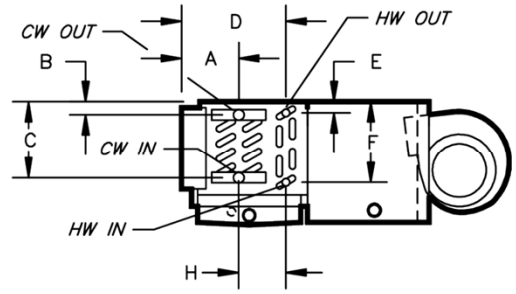


Left Hand

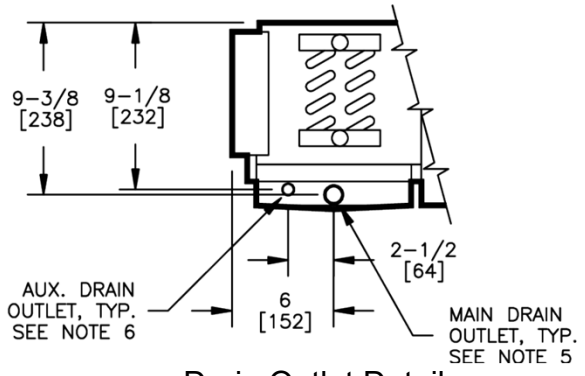


Right Hand

4 Pipe – Heating + Cooling
HW Coil in Pre-Heat



Left Hand



Drain Outlet Detail

NOTES:
1. All dimensions ± ½" [13mm]. See page 16 for dimension values. Metric valves are soft conversion.
2. All drawings subject to change without prior notice.
3. Model THBC unit shown, typical for THBP units. Connections shown are internal on THBE units.
4. Inlet and outlet connections are aligned vertically on each coil.
5. Standard externally foam coated galvanized steel drain pan has 7/8" ODM copper outlet. Stainless steel drain pan has ¾" MPT galvanized steel outlet.
6. Aux. drain outlet is 5/8" ODM cooper or 3/8" MPT galvanized steel respectively. Aux drain outlet is always on viewer's left when facing outlet end of drain pan, regardless of unit hand.

THBP, Hydronic Coil Connection Sizes

2-Pipe Heating Only															
Unit Size	HW Conn.		A				B		C		G				
	inches	mm	1-row		2-row		inches	mm	inches	mm	1-row		2-row		
			inches	mm	inches	mm					inches	mm	inches	mm	
20	5/8	16	2.56	65	3.10	79	0.50	13	6.75	171	2.56	65	3.10	79	
25	5/8	16	2.56	65	3.10	79	0.50	13	6.75	171	2.56	65	3.10	79	
30	5/8	16	2.56	65	3.10	79	0.50	13	6.75	171	2.56	65	3.10	79	
40	5/8	16	2.56	65	3.10	79	0.50	13	6.75	171	2.56	65	3.10	79	
50	5/8	16	2.56	65	3.10	79	0.50	13	6.75	171	2.56	65	3.10	79	
60	5/8	16	2.56	65	3.10	79	0.50	13	6.75	171	2.56	65	3.10	79	

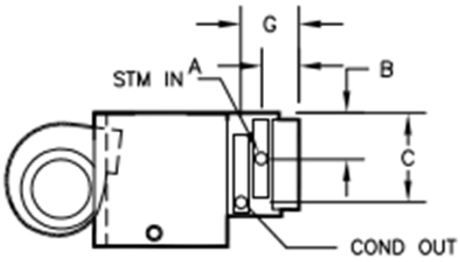
2-Pipe Heating and/or Cooling												
Unit Size	Coil Conn.		A						B		C	
	inches	mm	3-row		4-row		5-row		inches	mm	inches	mm
			inches	mm	inches	mm	inches	mm				
20	7/8	22	3.64	92	4.18	106	4.34	110	0.50	13	6.75	171
25	7/8	22	3.64	92	4.18	106	4.34	110	0.50	13	6.75	171
30	7/8	22	3.64	92	4.18	106	4.34	110	0.50	13	6.75	171
40	7/8	22	3.64	92	4.18	106	4.34	110	0.50	13	6.75	171
50	7/8	22	3.64	92	4.18	106	4.34	110	0.50	13	6.75	171
60	7/8	22	3.64	92	4.18	106	4.34	110	0.50	13	6.75	171

4-Pipe Heating + Cooling (HW Coil in Re-heat Position)																									
Unit Size	CW Conn.		HW Conn.		A				B		C		D						E		F		G			
	inches	mm	inches	mm	1-row		2-row		inches	mm	inches	mm	3-row		4-row		5-row		inches	mm	inches	mm	1-row		2-row	
					inches	mm	inches	mm					inches	mm	inches	mm	inches	mm					inches	mm	inches	mm
20	7/8	22	5/8	16	2.56	65	3.10	79	0.50	13	6.75	171	2.16	55	2.70	69	3.24	82	1.00	25	7.25	184	2.56	65	3.10	79
25	7/8	22	5/8	16	2.56	65	3.10	79	0.50	13	6.75	171	2.16	55	2.70	69	3.24	82	1.00	25	7.25	184	2.56	65	3.10	79
30	7/8	22	5/8	16	2.56	65	3.10	79	0.50	13	6.75	171	2.16	55	2.70	69	3.24	82	1.00	25	7.25	184	2.56	65	3.10	79
40	7/8	22	5/8	16	2.56	65	3.10	79	0.50	13	6.75	171	2.16	55	2.70	69	3.24	82	1.00	25	7.25	184	2.56	65	3.10	79
50	7/8	22	5/8	16	2.56	65	3.10	79	0.50	13	6.75	171	2.16	55	2.70	69	3.24	82	1.00	25	7.25	184	2.56	65	3.10	79
60	7/8	22	5/8	16	2.56	65	3.10	79	0.50	13	6.75	171	2.16	55	2.70	69	3.24	82	1.00	25	7.25	184	2.56	65	3.10	79

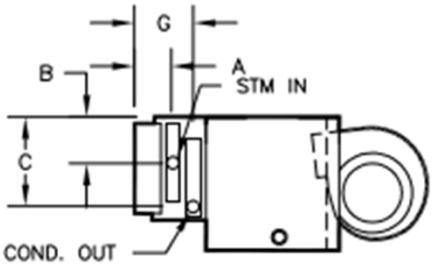
4-Pipe Heating + Cooling (HW Coil in Pre-heat Position)																									
Unit Size	HW Conn.		CW Conn.		A						B		C		D				E		F		H			
	inches	mm	inches	mm	3-row		4-row		5-row		inches	mm	inches	mm	1-row		2-row		inches	mm	inches	mm	1-row		2-row	
					inches	mm	inches	mm	inches	mm					inches	mm	inches	mm					inches	mm	inches	mm
20	5/8	16	7/8	22	3.64	92	4.18	106	4.34	110	1.00	25	7.25	184	2.16	55	2.70	69	1.00	25	7.25	184	2.16	55	2.70	69
25	5/8	16	7/8	22	3.64	92	4.18	106	4.34	110	1.00	25	7.25	184	2.16	55	2.70	69	1.00	25	7.25	184	2.16	55	2.70	69
30	5/8	16	7/8	22	3.64	92	4.18	106	4.34	110	1.00	25	7.25	184	2.16	55	2.70	69	1.00	25	7.25	184	2.16	55	2.70	69
40	5/8	16	7/8	22	3.64	92	4.18	106	4.34	110	1.00	25	7.25	184	2.16	55	2.70	69	1.00	25	7.25	184	2.16	55	2.70	69
50	5/8	16	7/8	22	3.64	92	4.18	106	4.34	110	1.00	25	7.25	184	2.16	55	2.70	69	1.00	25	7.25	184	2.16	55	2.70	69
60	5/8	16	7/8	22	3.64	92	4.18	106	4.34	110	1.00	25	7.25	184	2.16	55	2.70	69	1.00	25	7.25	184	2.16	55	2.70	69

Notes:
1. All drawings subject to change without prior notice.
2. Inlet and outlet connections are aligned vertically on each coil.

THBP, Steam Coil Connections

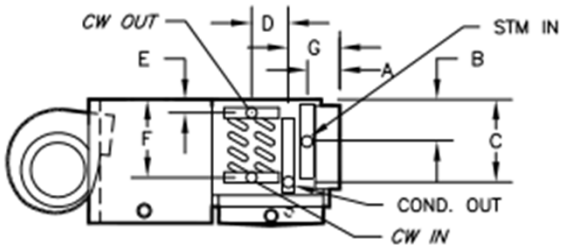


Right Hand

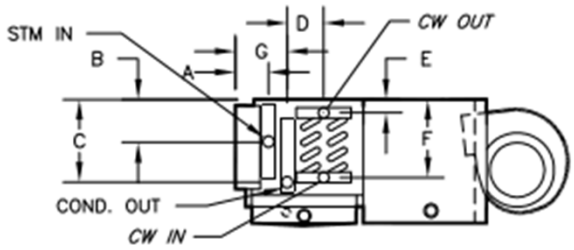


Left Hand

2 Pipe - Steam Only

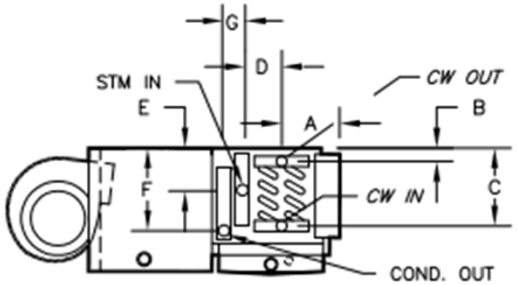


Right Hand

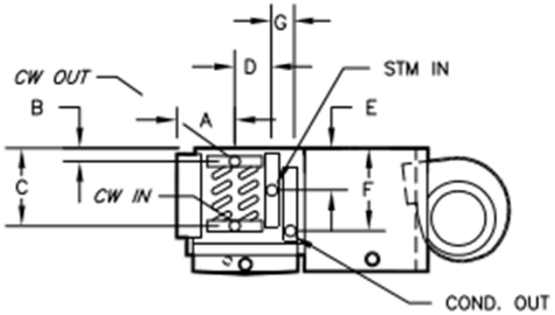


Left Hand

4 Pipe – Steam & Cooling Steam Coil in Re-Heat

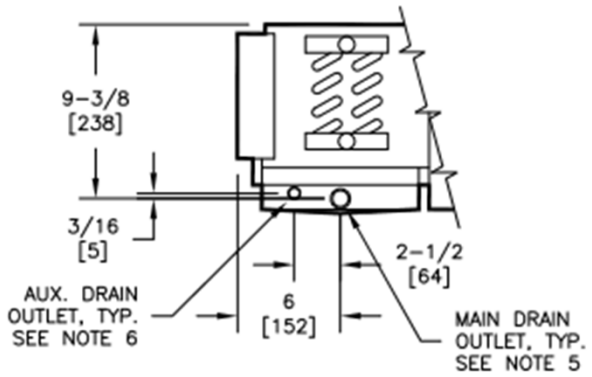


Right Hand



Left Hand

4 Pipe – Steam + Cooling Steam Coil in Pre-Heat



Drain Outlet Detail

NOTES:
1. All dimensions ± ½" [13mm]. See page 18 for dimensional values. Metric valves are soft conversion.
2. All drawings subject to change without prior notice.
3. Model THBC unit shown, typical for THBP units. Connections shown are internal on THBE units.
4. Inlet and outlet connections are aligned vertically on each coil.
5. Standard externally foam coated galvanized steel drain pan has 7/8" ODM copper outlet. Stainless steel drain pan has ¾" MPT galvanized steel outlet.
6. Aux. drain outlet is 5/8" ODM cooper or 3/8" MPT galvanized steel respectively. Aux drain outlet is always on viewer's left when facing outlet end of drain pan, regardless of unit hand.

THBP, Steam Coil Connection Sizes

2-Pipe Heating Only																				
Unit Size	Steam Connection								A				B		C		G			
	1-Row In		1-Row Out		2-Row In		2-Row Out		1-row		2-row		inches	mm	inches	mm	1-row		2-row	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm					inches	mm	inches	mm
20	7/8	22	5/8	16	7/8	22	7/8	22	1.68	43	2.56	65	3.93	100	7.43	189	2.56	65	3.64	92
25	7/8	22	5/8	16	7/8	22	7/8	22	1.68	43	2.56	65	3.93	100	7.43	189	2.56	65	3.64	92
30	7/8	22	5/8	16	7/8	22	7/8	22	1.68	43	2.56	65	3.93	100	7.43	189	2.56	65	3.64	92
40	7/8	22	5/8	16	7/8	22	7/8	22	1.68	43	2.56	65	3.93	100	7.43	189	2.56	65	3.64	92
50	7/8	22	5/8	16	7/8	22	7/8	22	1.68	43	2.56	65	3.93	100	7.43	189	2.56	65	3.64	92
60	7/8	22	5/8	16	7/8	22	7/8	22	1.68	43	2.56	65	3.93	100	7.43	189	2.56	65	3.64	92

4-Pipe Steam +Cooling (Steam Coil in Re-heat Position)																												
Unit Size	CW Conn		Steam Connection								A				B		C		D				E		F		G	
			1-Row In		1-Row Out		2-Row In		2-Row Out		1-row		2-row		inches	mm	inches	mm	3-row		4-row		inches	mm	inches	mm	1-row		2-row	
	inche	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm					inches	mm	inches	mm					inches	mm	inches	mm
20	7/8	22	7/8	22	5/8	16	7/8	22	7/8	22	1.68	43	2.56	65	3.93	100	7.43	189	2.16	55	2.70	69	1.00	25	7.25	184	2.56	65	3.64	92
25	7/8	22	7/8	22	5/8	16	7/8	22	7/8	22	1.68	43	2.56	65	3.93	100	7.43	189	2.16	55	2.70	69	1.00	25	7.25	184	2.56	65	3.64	92
30	7/8	22	7/8	22	5/8	16	7/8	22	7/8	22	1.68	43	2.56	65	3.93	100	7.43	189	2.16	55	2.70	69	1.00	25	7.25	184	2.56	65	3.64	92
40	7/8	22	7/8	22	5/8	16	7/8	22	7/8	22	1.68	43	2.56	65	3.93	100	7.43	189	2.16	55	2.70	69	1.00	25	7.25	184	2.56	65	3.64	92
50	7/8	22	7/8	22	5/8	16	7/8	22	7/8	22	1.68	43	2.56	65	3.93	100	7.43	189	2.16	55	2.70	69	1.00	25	7.25	184	2.56	65	3.64	92
60	7/8	22	7/8	22	5/8	16	7/8	22	7/8	22	1.68	43	2.56	65	3.93	100	7.43	189	2.16	55	2.70	69	1.00	25	7.25	184	2.56	65	3.64	92

4-Pipe Steam +Cooling (Steam Coil in Pre-heat Position)																												
Unit Size	Steam Connection								CW Conn.		A				B		C		D				E		F		G	
	1-Row In		1-Row Out		2-Row In		2-Row Out		inches	mm	3-row		4-row		inches	mm	inches	mm	1-row		2-row		inches	mm	inches	mm	1-row		2-row	
	inches	mm	inches	mm	inches	mm	inches	mm			inches	mm	inches	mm					inches	mm	inches	mm					inches	mm	inches	mm
20	7/8	22	5/8	16	7/8	22	7/8	22	5/8	16	3.64	92	4.18	106	1.00	25	7.25	184	2.16	55	2.70	69	3.93	100	7.43	189	0.88	22	1.08	27
25	7/8	22	5/8	16	7/8	22	7/8	22	5/8	16	3.64	92	4.18	106	1.00	25	7.25	184	2.16	55	2.70	69	3.93	100	7.43	189	0.88	22	1.08	27
30	7/8	22	5/8	16	7/8	22	7/8	22	5/8	16	3.64	92	4.18	106	1.00	25	7.25	184	2.16	55	2.70	69	3.93	100	7.43	189	0.88	22	1.08	27
40	7/8	22	5/8	16	7/8	22	7/8	22	5/8	16	3.64	92	4.18	106	1.00	25	7.25	184	2.16	55	2.70	69	3.93	100	7.43	189	0.88	22	1.08	27
50	7/8	22	5/8	16	7/8	22	7/8	22	5/8	16	3.64	92	4.18	106	1.00	25	7.25	184	2.16	55	2.70	69	3.93	100	7.43	189	0.88	22	1.08	27
60	7/8	22	5/8	16	7/8	22	7/8	22	5/8	16	3.64	92	4.18	106	1.00	25	7.25	184	2.16	55	2.70	69	3.93	100	7.43	189	0.88	22	1.08	27

Notes:
1. All drawings subject to change without prior notice.
2. Inlet and outlet connections are aligned vertically on each coil.

STANDARD FEATURES (High Performance Fan Coils)

Construction

All Units

• AHRI 440 certified and labeled
• Galvanized steel construction
• 1/2” thick fiberglass insulation
• 1 1/2” duct discharge collar
• Holes are provided at four points for hanging units

*Plenum units **(THBP)***

• Integral filter rack with 1” throwaway filter
• Integral rear ducted return

*Exposed units **(THBE)***

• Stamped louver supply and return air grilles
• Durable powder coat paint
• 18 gauge cabinet construction

Coils

Cooling - 3 to 5 row chilled water or 3 & 4 row DX, heat pump compatible
• Heating - 1 or 2 row hot water or steam – reheat or preheat position
• 6 total rows of cooling and heating coils maximum
• 3/8" coil tube diameter
• 10 or 12 fins per inch
• High efficiency aluminum fin surface for optimizing heat transfer and air pressure drop
• Left or right hand, same or opposite side connections on four pipe systems
• Access to entering and leaving air sides for cleaning
• Removable for service
• Manual air vents

Drain Pans

• Single wall, galvanized steel, externally insulated – fire retardant and antimicrobial closed cell foam
• Double sloped to drain connection
• Removable
• 7/8” O.D. primary drain connection

Fan Assemblies

• Forward curved, DWDI centrifugal type
• 115 volt, single phase, three tap PSC motors
• Quick disconnect motor connections
• Removable fan(s)/motor(s) for service

Electrical

• cETLus listed for safety compliance
• Electrical junction box for field wiring terminations
• Bottom hinged electrical enclosure

Electric Heat

• cETLus listed as an assembly for safety compliance
• Integral electric heat assembly with removable elements for easy service
• Automatic reset primary and back-up secondary thermal limits
• Single point power connection

OPTIONAL FEATURES (High Performance Fan Coils)

Construction

All units

• Foil faced fiberglass insulation
• Elastomeric closed cell foam insulation
• Eco-Shield or Foil faced Eco-shield insulation

*Plenum units **(THBP)***

• Bottom return
• Rear Ducted return
• 1" Pleated filter (Merv 8)
• Spare 1” throwaway filters
• Telescoping Bottom Panels

*Exposed units **(THBE)***

• 1" Pleated filter (Merv 8)
• Single deflection bottom return grille
• Ducted supply and/or rear return

Coils

• 1/2” O.D. seamless copper tubes
• 0.025” tube wall thickness
• Automatic air vents
• Stainless steel coil casings

Drain Pans

• Stainless steel with external insulation
• 5/8” O.D. secondary drain connection
• Auxiliary drip pans, galvanized or stainless steel

Fan Assemblies

• 208-230 & 277 volt, single phase, three speed PSC motors
• 115, 208-230 & 277 volt, single phase, three speed EC motors (THBP, THBE)
• 115, 208-230 & 277 volt, single phase, variable speed EC motors (THBE)

Electrical

• SCR fan speed controller
• Fan relay packages / Silent solid state fan relays
• Toggle disconnect switch
• Condensate overflow switch (drain pan)
• Main fusing
• Unit and remote mounted three speed fan switches

Electric Heat

• Manual reset secondary thermal limits
• Door interlocking disconnect switches
• Main fusing
• Silent relay/contactors

Piping Packages

• Factory assembled – shipped loose for field installation
• 1/2" and 3/4", 2 and 3 way normally closed, two position electric motorized valves
• Isolation ball valves with memory stop
• Fixed and adjustable flow control devices
• Unions and P/T ports
• Y- Strainers
• Floating point modulating control valves
• High pressure close-off actuators (1/2" = 50 PSIG; 3/4" = 25 PSIG)

Thermostats

• Remote mounted analog, digital display or programmable
• 2 and 4 pipe control sequences
• Automatic and manual changeover
• Integral three speed fan switches