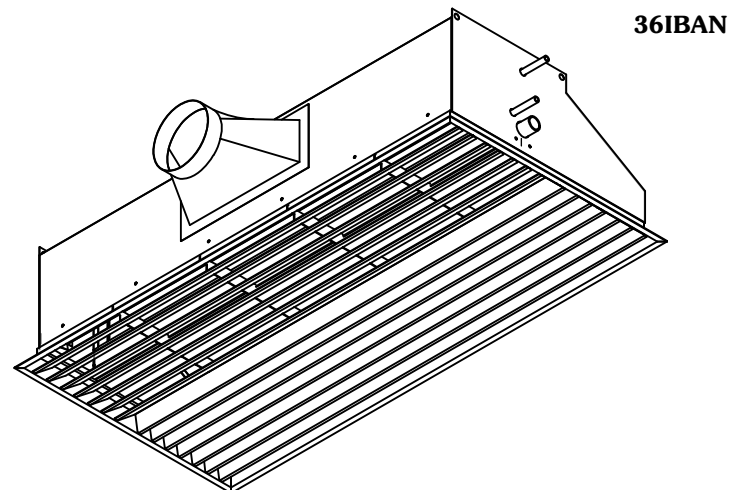
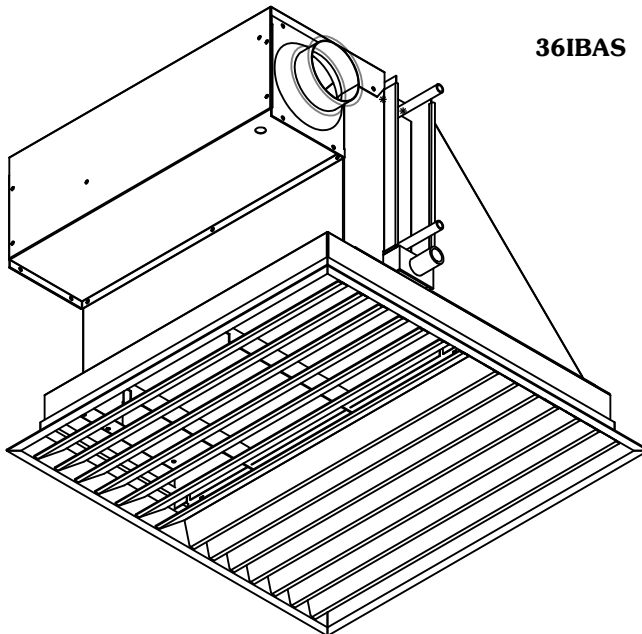




Product Data

36IBAC,N,R,S,M,L,J Series Induction Beams

60 to 1,285 cfm



Induction beam systems provide individual temperature control and increased system energy efficiency, which may contribute to meeting the requirements of the LEED green building certification program.¹

Carrier induction beam units offer:

- Higher capacities than chilled beams
- Sensible and latent cooling and heating options
- Full drain pans meeting IBC (International Building Code) requirements
- Independent testing by ETL Intertek
- AHRI (Air-Conditioning, Heating, and Refrigeration Institute) certified coil performance

Induction beam systems

An induction beam takes a source of primary air at an inlet static pressure ranging from 0.4 to 0.8 in. wg. It distributes this air through a bank of specially designed aerodynamic nozzles and discharges the air at a high velocity into a mixing chamber. This creates a differential pressure which enables a draw of room air across a coil. This imparts either cooling or heating to the air as it passes over the coil. The primary air and induced air are mixed and discharged through a grille in a Coanda effect air distribution at the ceiling. This air circulates throughout the room and is gently drawn back up through the return section of the induction beam grille. Because the return air to the terminal is located at the ceiling

and is moving so gently, dirt is not carried along with it and filters are not required to protect the coils. This eliminates the cost and labor required for this routine maintenance.

Induction beams are extremely flexible and enhance the savings and effectiveness of primary air systems such as those using dedicated outside air. When using our induction beams, the primary air system, which includes the dedicated outside air unit and the supply and exhaust ductwork, can be sized to handle only the required ventilation air. This reduces the size of the equipment and ductwork making it easier to fit into a building space. This also reduces the energy required to supply the ventilation to the building. The total room air circulation is created solely by the induction principle within the terminal; therefore, there is no electric motor requiring an electric power source or maintenance for a fan and motor. As a result, the induction beam is a very quiet and efficient way to provide comfort in a space.

36IB Series induction beams

The model 36IBAC is a ceiling-mounted induction beam that supplies air in all four directions and provides the very best in air distribution. These units are available in 2x2 ft or 4x4 ft with a concentric supply/return diffuser, and fit neatly into a standard ceiling grid. This model is a perfect fit for classrooms and conference rooms.

The model 36IBAS is a ceiling-mounted square induction beam that supplies air in one direction. This unit is 2x2 ft in size with a 2-way grille that discharges on one side and returns on the other. This model is a perfect fit for office spaces, dormitory rooms, patient rooms, hallways, corridors, etc.

The model 36IBAM is a one-way blow, ceiling-mounted square induction beam

with reversible primary air inlet arrangement. This unit is available in 2x2 ft with a 2-way grille that discharges on one side and returns on the other. This model is a perfect fit for hallways, corridors, office space, dormitory rooms, labs, etc.

The model 36IBAN is a one-way blow, ceiling-mounted induction beam that is linear in dimension. These units are available in 1x4 ft or 2x4 ft with a 2-way grille that discharges on one side and returns on the other. This model is a perfect fit for office spaces, dormitory rooms, labs, etc.

The model 36IBAR is a one-way blow, ceiling-mounted induction beam that is linear in dimension, with reversible primary air inlet arrangement. This unit is available in 2x4 ft with a 2-way grille that discharges on one side and returns on the other. This model is a perfect fit for perimeter walls, office space, dormitory rooms, labs, etc.

Models 36IBAL (2-way) and 36IBAJ (one-way) blow, ceiling-mounted induction beams are linear in dimension. The unit is available in 2x2 ft, 2x4 ft, 2x6 ft and 2x8 ft (2-way blow design only), with perforated return air grille and slot opening on the supply air side. This model is a perfect fit for office space, labs and other spaces where architects are looking for linear layout.

1. LEED is a registered trademark of the U.S. Green Building Council.

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Model number nomenclature



36IB	A	C	C	B	4	F	D	C	Y	A	A	4	Y	Y
<div> 36IB – Induction Beam </div> <div> Design Revision A – Current Design </div> <div> Product Style C – All Way Discharge Cassette J – 1-Way Linear L – 2-Way Linear M – 1-Way Reversible PA Inlet Square N – 1-Way Discharge Narrow S – 1-Way Discharge Square R – 1-Way Reversible PA Inlet Linear </div> <div> Unit Size - Footprint (in.) A – 48 x 12 (36IBAN) B – 48 x 24 (36IBAL, J, N, R) C – 24 x 24 (36IBAC, L, J, S, M) D – 48 x 48 (36IBAC) E – 72 x 24 (36IBAL, J) F – 96 x 24 (36IBAL) (ETO) </div> <div> Nozzle Type A – 1-Row, 24-Capacity B – 2-Row, 24-Capacity C – 1-Row, 31-Capacity D – 2-Row, 31-Capacity E – 1-Row, 38-Capacity F – 2-Row, 38-Capacity G – 1-Row, 18-Capacity H – 2-Row, 18-Capacity </div> <div> System Type 2 – 2-Pipe 4 – 4-Pipe </div> <div> Primary Air Configuration R – Right Hand L – Left Hand F – Front Face B – Back Face T – Top </div> <div> Piping Configuration A – Front Face (2-Pipe) B – Right Hand (2-Pipe) C – Left Hand (2-Pipe) D – Front Face CW and HW (4-Pipe) E – Right CW and Left HW (4-Pipe) F – Left CW and Right HW (4-Pipe) </div> <div> Unit Finish A – White Painted Cabinet B – Off White Painted Cabinet C – Black Painted Cabinet X – Special Y – Galvanized Steel </div> <div> Insulation A – Exterior Closed Cell B – Collar Closed Cell Y – None </div> <div> Height Extension Collar 3 – 3 in. Extension 4 – 4 in. Extension 5 – 5 in. Extension 6 – 6 in. Extension Y – None </div> <div> Grille Finish A – White B – Aluminum C – Mill D – Alkyd Enamel E – Urethane Coating F – Off White G – Black X – Special </div> <div> Grille A – Lay-In Grille with Egg Crate Face B – Surface Mount Grille with Egg Crate Face C – Lay-In Grille with Perforated Face D – Surface Mount Grille with Perforated Face E – Lay-In Grille with Louver Face F – Surface Mount Grille with Louver Face G – Slot Supply with Hinged Perforated Return Plate X – Special </div> <div> Lint Filter A – Disposable Filter B – Washable Filter X – Special Y – No Filter </div> <div> Drain Pan Options A – Galvanized with Copper Connection B – Stainless Steel with CPVC Connection C – Stainless Steel with Copper Connection D – Antimicrobial with CPVC Connection E – Antimicrobial with Copper Connection X – Special Y – Galvanized with CPVC Connection </div>														

LEGEND

CPVC	— Chlorinated Polyvinyl Chloride
CW	— Chilled Water
ETO	— Engineered to Order
HW	— Hot Water
PA	— Primary Air

36IBAC UNIT PHYSICAL DATA

36IBAC UNIT SIZE	C	D
Weight, Dry (lb)	70	130
Weight, Operating (lb)	90	150
Length (in.)	24	48
Width (in.)	24	48
Height (in.)	12	18
Coil Connection (in.)		
2-Pipe	3/4 OD	3/4 OD
4-Pipe Cooling Coil	3/4 OD	3/4 OD
4-Pipe Heating Coil	1/2 OD	1/2 OD
Drain Connection (in.)	3/4	3/4

36IBAN UNIT PHYSICAL DATA

36IBAN UNIT SIZE	A	B
Weight, Dry (lb)	33	41
Weight, Operating (lb)	41	49
Length (in.)	48	48
Width (in.)	12	24
Height (in.)	11-1/2	12-1/2
Coil Connection (in.)		
2-Pipe	1/2 OD	1/2 OD
4-Pipe Cooling Coil	1/2 OD	1/2 OD
4-Pipe Heating Coil	1/2 OD	1/2 OD
Drain Connection (in.)	3/4	3/4

36IBAS UNIT PHYSICAL DATA

36IBAS UNIT SIZE	C
Weight, Dry (lb)	42
Weight, Operating (lb)	47
Length (in.)	24
Width (in.)	24
Height (in.)	16-1/2
Coil Connection (in.)	
2-Pipe	1/2 OD
4-Pipe Cooling Coil	1/2 OD
4-Pipe Heating Coil	1/2 OD
Drain Connection (in.)	3/4

36IBAR UNIT PHYSICAL DATA

36IBAR UNIT SIZE	B
Weight, Dry (lb)	71
Weight, Operating (lb)	73
Length (in.)	48
Width (in.)	24
Height (in.)	11-1/2
Coil Connection (in.)	
2-Pipe	1/2 OD
4-Pipe Cooling Coil	1/2 OD
4-Pipe Heating Coil	1/2 OD
Drain Connection (in.)	3/4

36IBAM UNIT PHYSICAL DATA

36IBAM UNIT SIZE	C
Weight, Dry (lb)	47
Weight, Operating (lb)	49
Length (in.)	24
Width (in.)	24
Height (in.)	15
Coil Connection (in.)	
2-Pipe	1/2 OD
4-Pipe Cooling Coil	1/2 OD
4-Pipe Heating Coil	1/2 OD
Drain Connection (in.)	3/4

36IBAL,BAJ UNIT PHYSICAL DATA

36IBAL,BAJ UNIT SIZE	B	C	E	F* (ETO)
Weight, Dry (lb)	60	40	80	108
Weight, Operating (lb)	84	56	112	124
Length (in.)	48	24	72	96
Width (in.)	24	24	24	24
Height (in.)	14	14	14	14
Coil Connection (in.)				
2-Pipe	3/4	3/4	3/4	3/4
4-Pipe Cooling Coil	3/4	3/4	3/4	3/4
4-Pipe Heating Coil	3/4	3/4	3/4	3/4
Drain Connection (in.)	3/4	3/4	3/4	3/4

LEGEND

ETO — Engineered to Order

* Available in 2-way blow design only.

Factory-installed options

Induction nozzles are available in various sizes to match capacity requirements.

Coils are available in 2-pipe and 4-pipe configurations.

Grilles are available in various colors, and can be lay-in or surface mounted type with egg-crate, perforated, or louver face. The standard grille finish consists of a baked-on acrylic enamel that is corrosion resistant to 100 hours in a salt spray test. The optional alkyd enamel finish is a glossy, mar-resistant baked-on finish with a salt spray resistance to 175 hours. The optional urethane coating provides superior surface durability and resists a salt spray test for 300 hours.

Insulation on the unit exterior is recommended when the entering chilled water temperature to the unit is below

55°F. Insulation on the unit and collar exterior is recommended when the primary air temperature supplied to the unit is below 55°F. The optional insulation used is a closed cell elastomeric foam that prevents moisture intrusion, inhibits mold and mildew, is fiber-free, formaldehyde-free, and low in VOCs for indoor air quality.

Height extension collars are available from 3 in. to 6 in. height to facilitate gravity drainage from drain pan.

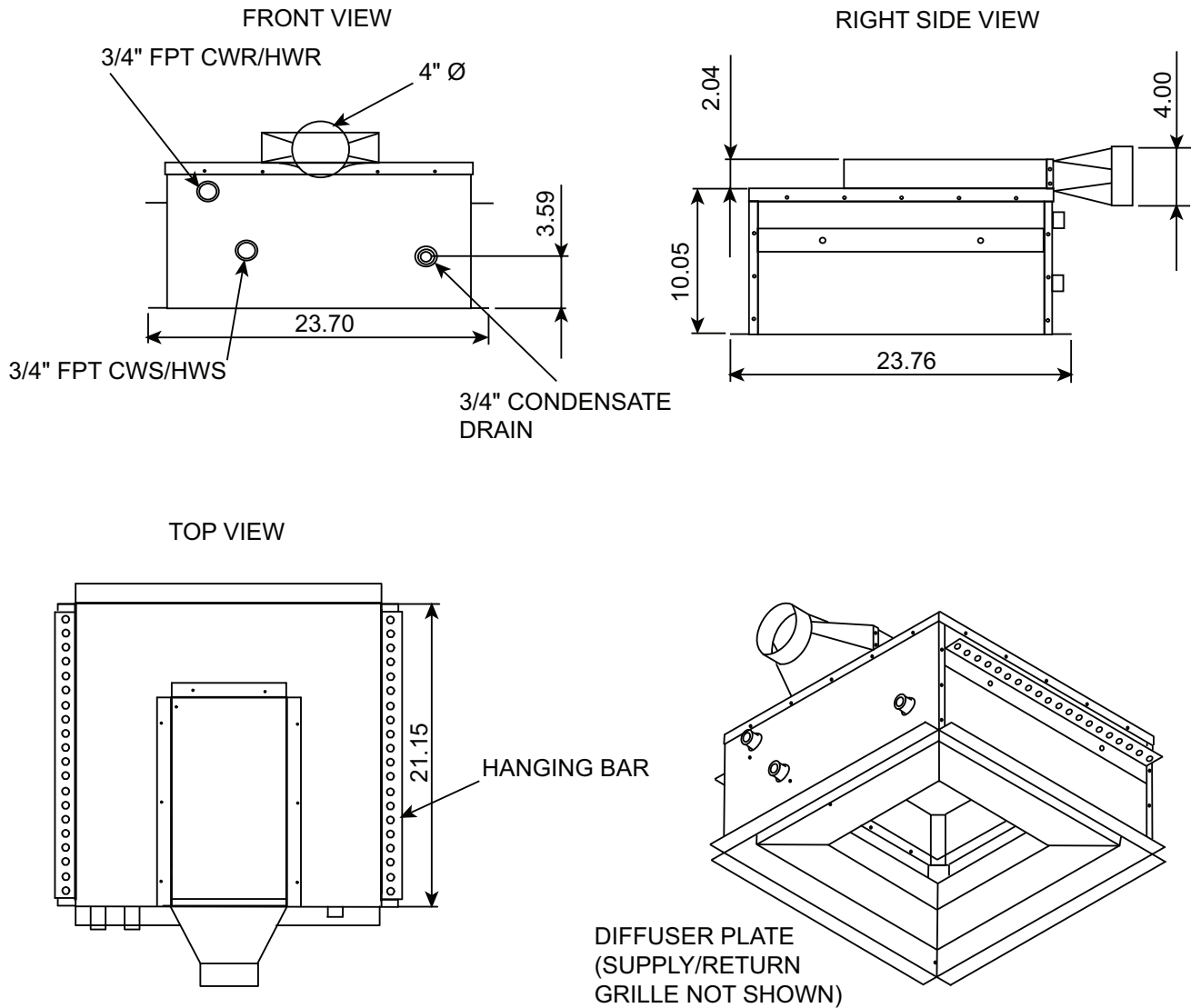
Field-installed accessories

Drain pan accessories, including float safety switches, traps, or plugs can be supplied for field installation.

Washable or disposable filters are available for applications where codes require filtration.

ITEM	FACTORY-INSTALLED OPTIONS	FIELD-INSTALLED ACCESSORIES
Induction Nozzles	X	
Coils	X	
Grilles	X	
Washable or Disposable Filters	X	X
Drain Pan Accessories		X
Height Extension Collars	X	
Insulation	X	

36IBAC 2 x 2, ALL-WAY BLOW, 2-PIPE UNIT DIMENSIONS



LEGEND

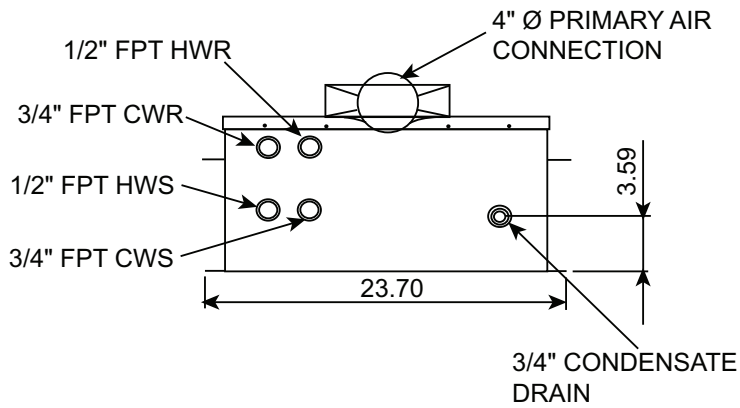
CWR	— Chilled Water Return
CWS	— Chilled Water Supply
FPT	— Female Pipe Thread
HWR	— Hot Water Return
HWS	— Hot Water Supply

NOTES:

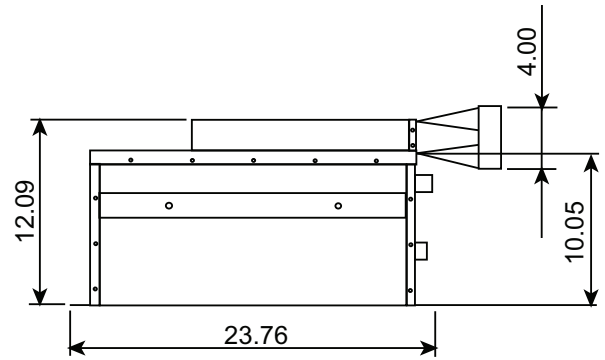
1. Dimensions shown in inches.
2. Drawing shows 2-pipe arrangement.

36IBAC 2 x 2, ALL-WAY BLOW, 4-PIPE UNIT DIMENSIONS

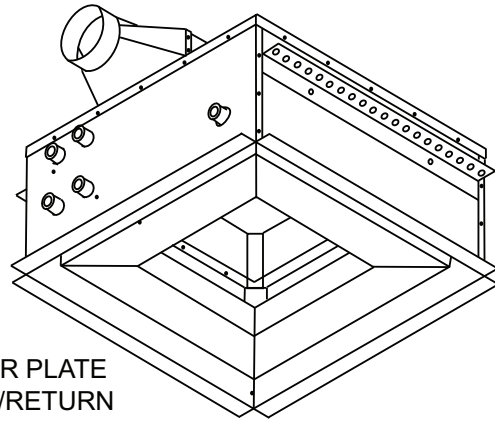
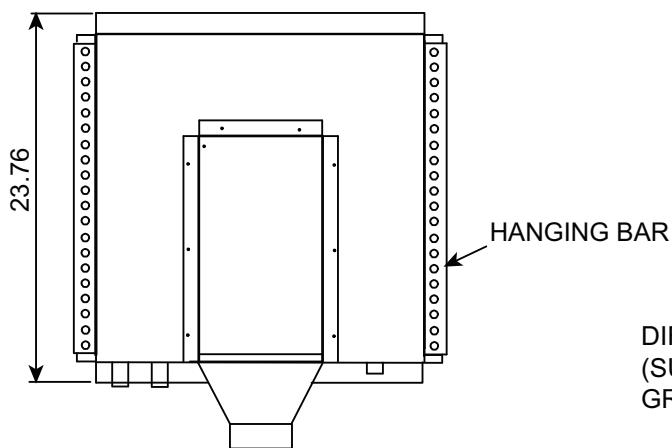
FRONT VIEW



RIGHT SIDE VIEW



TOP VIEW



DIFFUSER PLATE
(SUPPLY/RETURN
GRILLE NOT SHOWN)

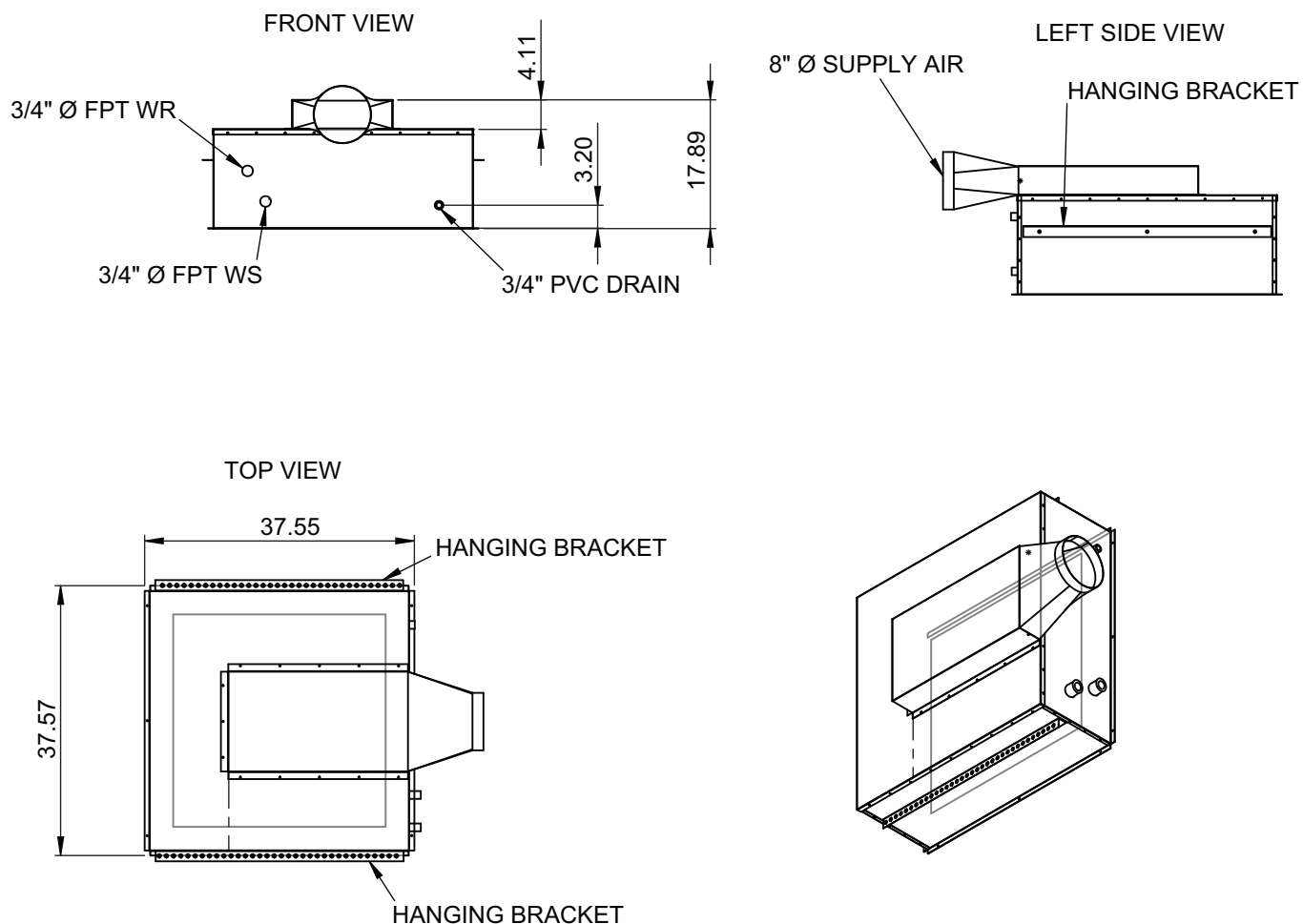
LEGEND

CWR	— Chilled Water Return
CWS	— Chilled Water Supply
FPT	— Female Pipe Thread
HWR	— Hot Water Return
HWS	— Hot Water Supply

NOTES:

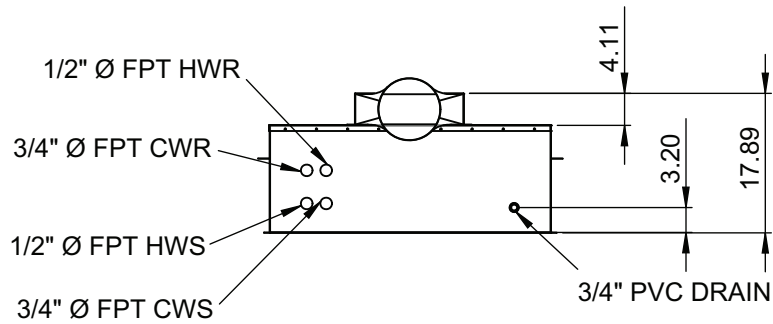
1. Dimensions shown in inches.
2. Drawing shows 4-pipe arrangement.

36IBAC 4 x 4, ALL-WAY BLOW, 2-PIPE UNIT DIMENSIONS

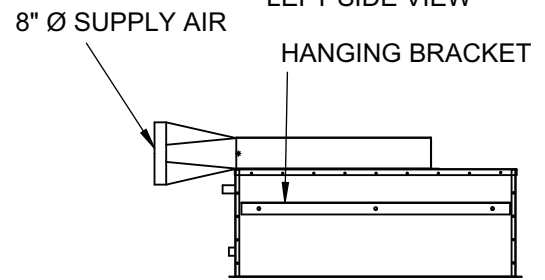


36IBAC 4 x 4, ALL-WAY BLOW, 4-PIPE UNIT DIMENSIONS

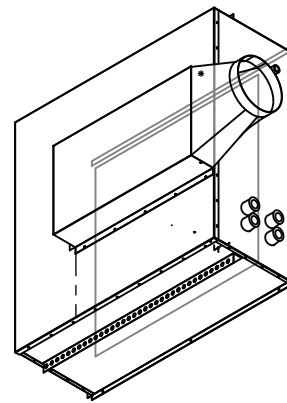
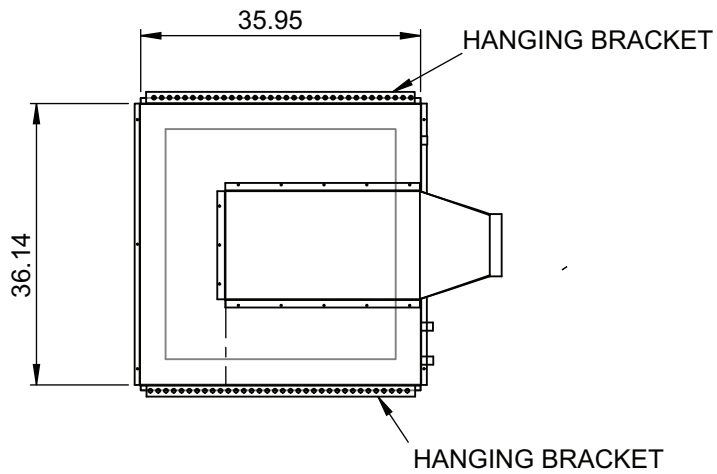
FRONT VIEW



LEFT SIDE VIEW



TOP VIEW



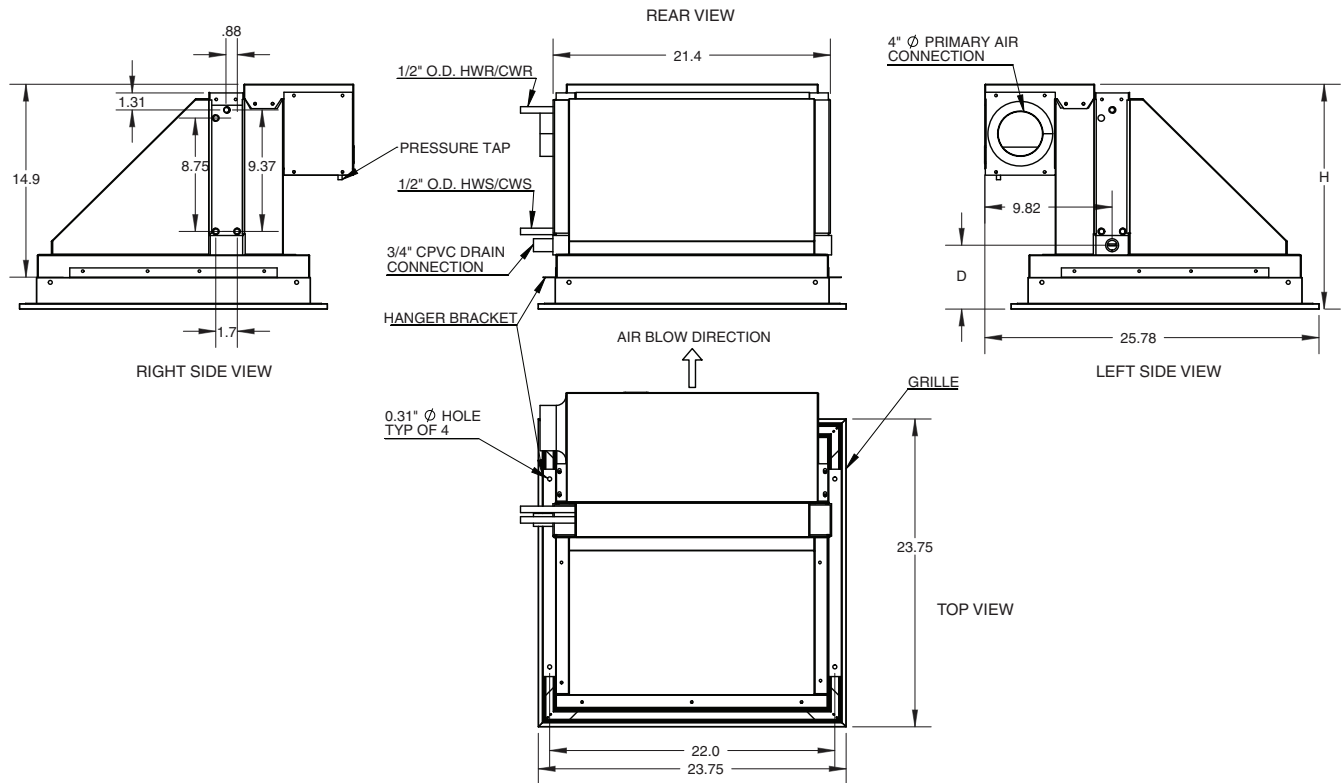
LEGEND

CWR	— Chilled Water Return
CWS	— Chilled Water Supply
FPT	— Female Pipe Thread
HWR	— Hot Water Return
HWS	— Hot Water Supply

NOTES:

1. Dimensions shown in inches.
2. Drawing shows 4-pipe arrangement.

36IBAS 2 x 2, 1-WAY BLOW, 2-PIPE LH UNIT DIMENSIONS



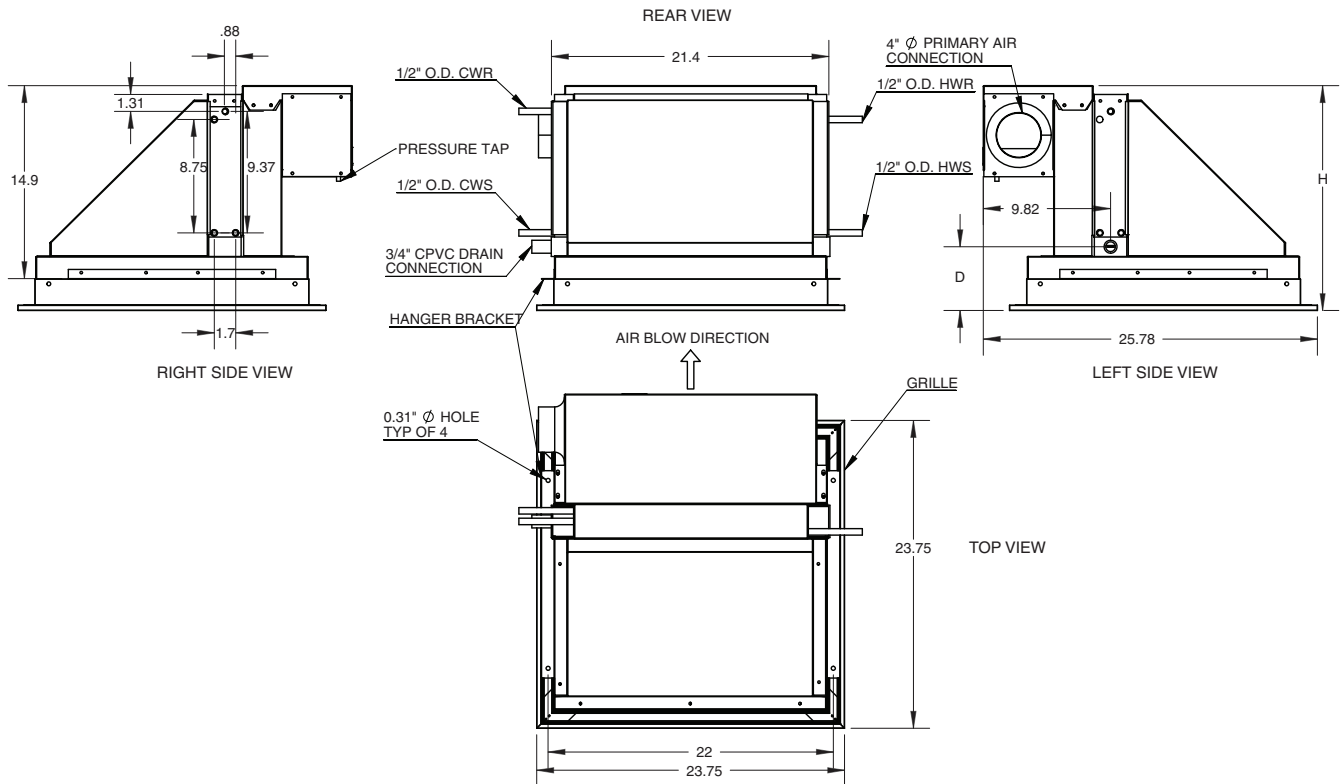
LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply
HWR — Hot Water Return
HWS — Hot Water Supply

NOTES:

1. Dimensions shown in inches.
2. Drawing shows 2-pipe arrangement, left-hand piping connection; right hand connection would be opposite.
3. Hand is determined by standing on the front side of the unit with the supply air blowing against the back of your head.
4. Front face of the unit is determined by the nozzle side (supply air) side of the unit.

36IBAS 2 x 2, 1-WAY BLOW, 4-PIPE, LH UNIT DIMENSIONS



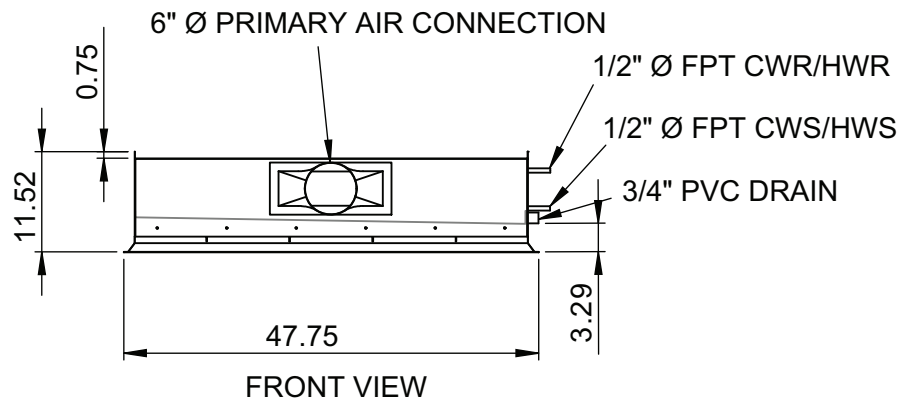
LEGEND

CWR	— Chilled Water Return
CWS	— Chilled Water Supply
HWR	— Hot Water Return
HWS	— Hot Water Supply

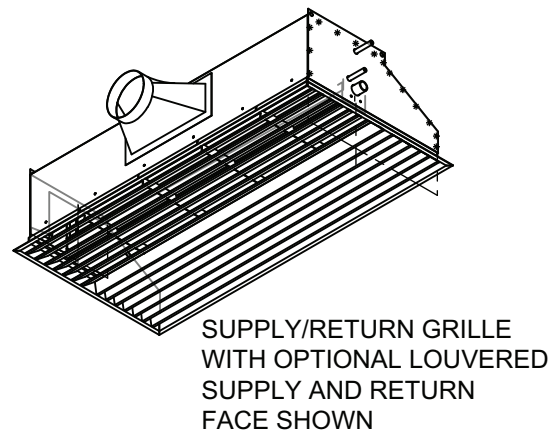
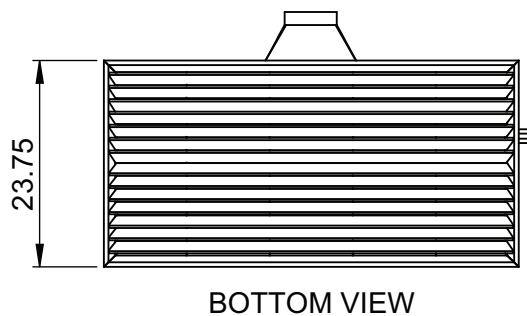
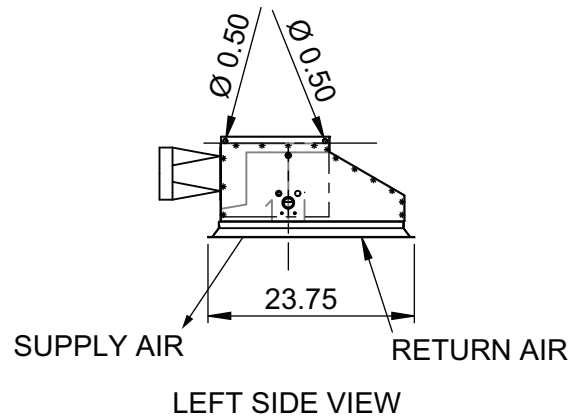
NOTES:

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2. Drawing shows 4-pipe arrangement, left-hand piping connection; right hand connection would be opposite.
3. CW piping connection determines the hand of the unit.
4. Hand is determined by standing on the front side of the unit with the supply air blowing against the back of your head.
5. Front face of the unit is determined by the nozzle side (supply air) side of the unit.

36IBAN 2 x 4, 1-WAY BLOW, 2-PIPE, LH UNIT DIMENSIONS



HANGING BRACKET



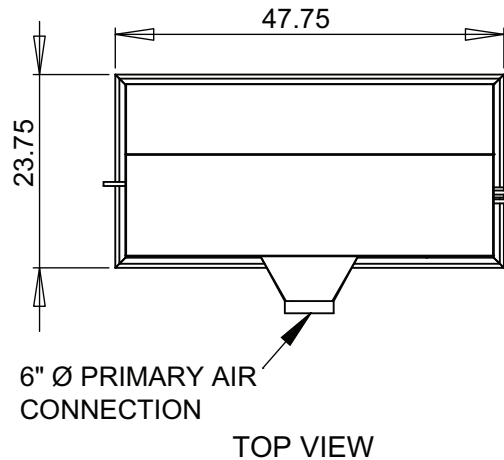
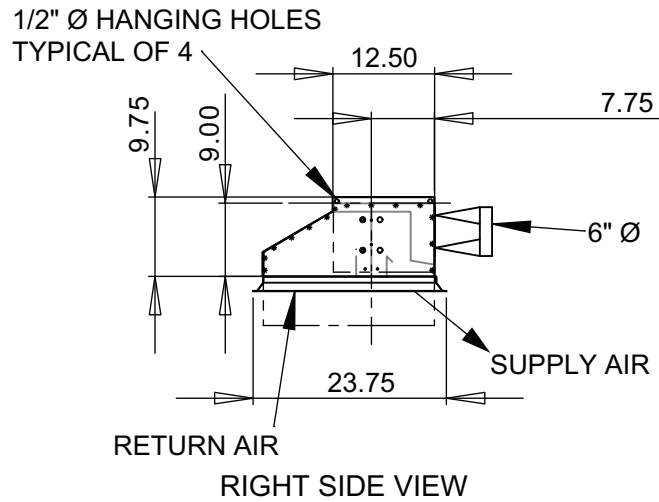
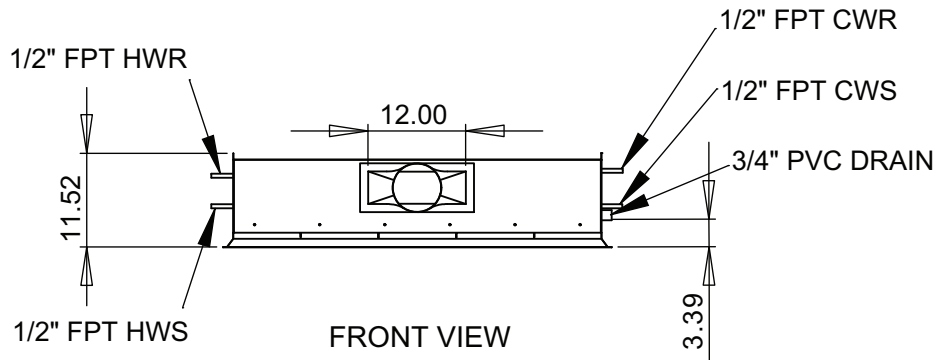
LEGEND

CWR	— Chilled Water Return
CWS	— Chilled Water Supply
FPT	— Female Pipe Thread
HWR	— Hot Water Return
HWS	— Hot Water Supply

NOTES:

1. Dimensions shown in inches.
2. Drawing shows 2-pipe arrangement, left-hand piping connection; right hand connection would be opposite.
3. CW piping connection determines the hand of the unit.
4. Hand is determined by standing on the front side of the unit with the supply air blowing against the back of your head.
5. Front face of the unit is determined by the nozzle side (supply air) side of the unit.

36IBAN 2 x 4, 1-WAY BLOW, 4-PIPE, LH UNIT DIMENSIONS



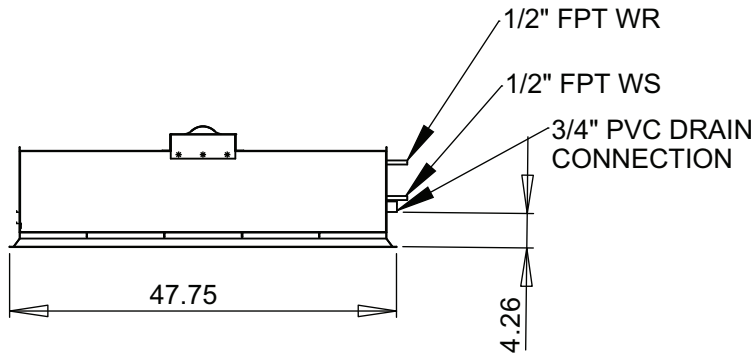
LEGEND

CWR	— Chilled Water Return
CWS	— Chilled Water Supply
FPT	— Female Pipe Thread
HWR	— Hot Water Return
HWS	— Hot Water Supply

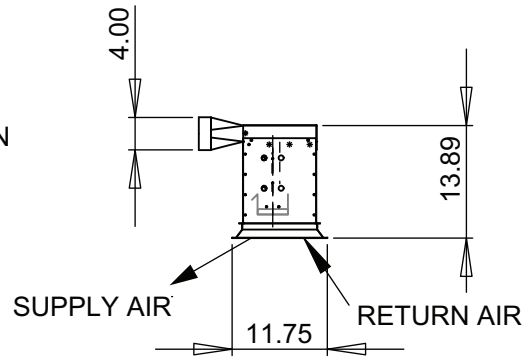
NOTES:

1. Dimensions shown in inches.
2. Drawing shows 4-pipe arrangement, left-hand piping connection; right hand connection would be opposite.
3. CW piping connection determines the hand of the unit.
4. Hand is determined by standing on the front side of the unit with the supply air blowing against the back of your head.
5. Front face of the unit is determined by the nozzle side (supply air) side of the unit.

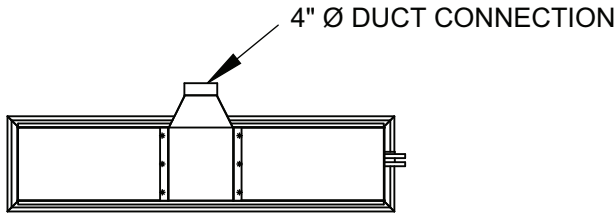
36IBAN 1 x 4, 1-WAY BLOW, 2-PIPE, RH UNIT DIMENSIONS



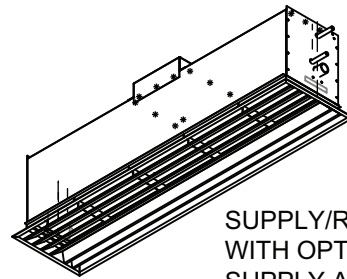
REAR VIEW



LEFT SIDE VIEW



TOP VIEW



SUPPLY/RETURN GRILLE
WITH OPTIONAL LOUVERED
SUPPLY AND RETURN
FACE SHOWN

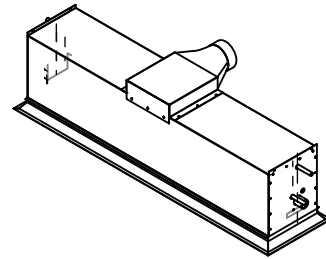
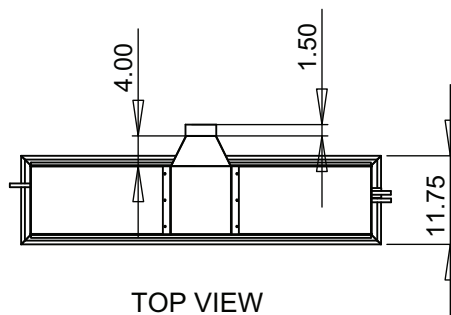
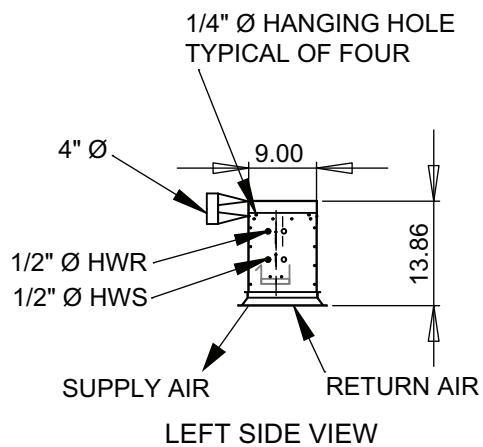
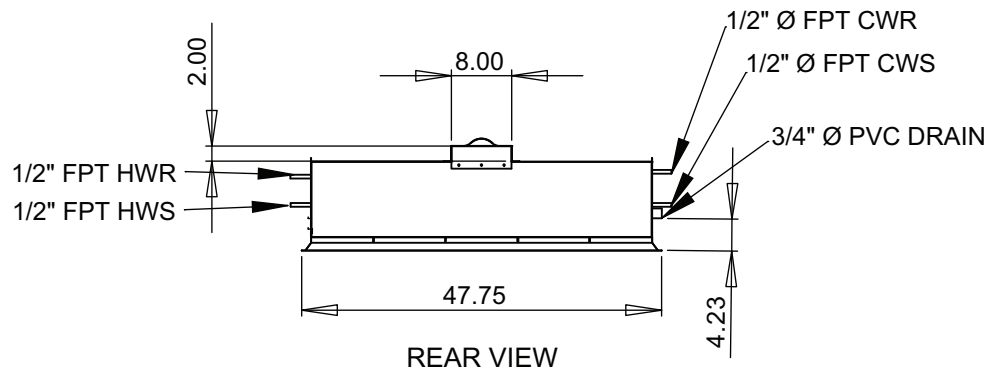
LEGEND

FPT — Female Pipe Thread
WR — Water Return
WS — Water Supply

NOTES:

1. Dimensions shown in inches.
2. Drawing shows 2-pipe arrangement, right-hand piping connection; left hand connection would be opposite.
3. Hand is determined by standing on the front side of the unit with the supply air blowing against the back of your head.
4. Front face of the unit is determined by the nozzle side (supply air) side of the unit.

36IBAN 1 x 4, 1-WAY BLOW, 4-PIPE, RH UNIT DIMENSIONS



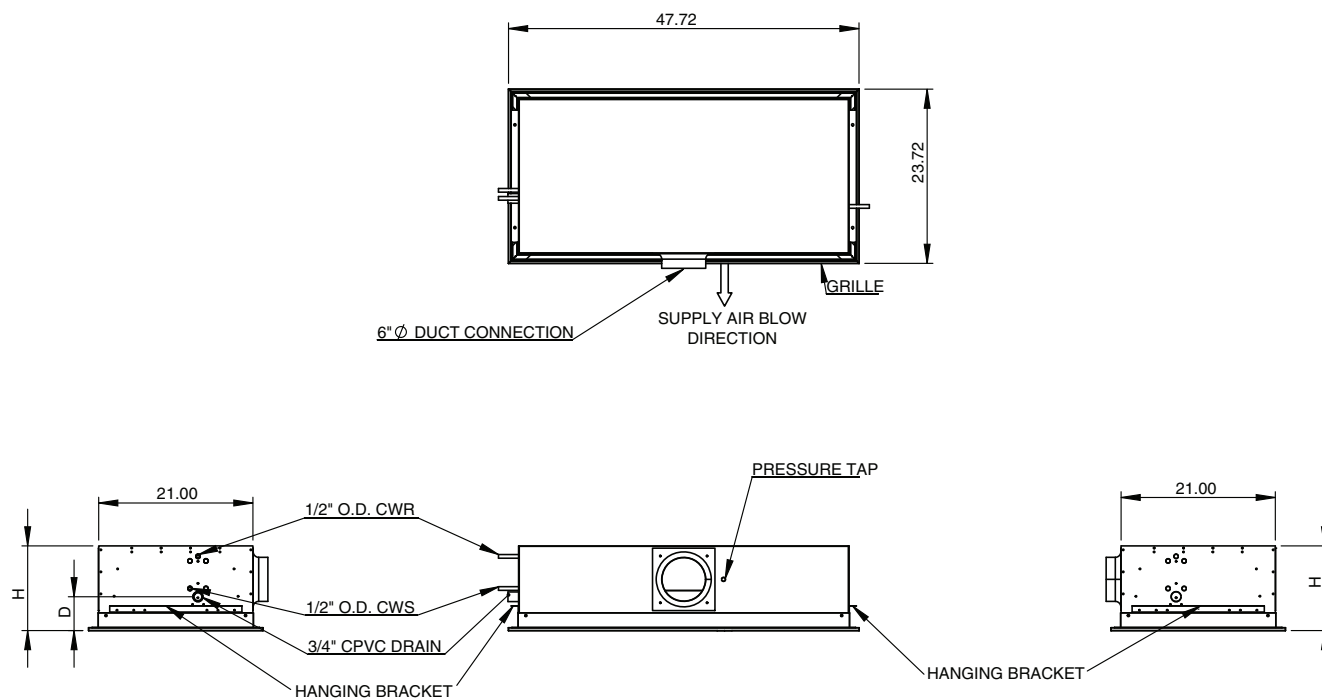
LEGEND

CWR	— Chilled Water Return
CWS	— Chilled Water Supply
FPT	— Female Pipe Thread
HWR	— Hot Water Return
HWS	— Hot Water Supply

NOTES:

1. Dimensions shown in inches.
2. Drawing shows 4-pipe arrangement, right-hand piping connection; left hand connection would be opposite.
3. CW piping connection determines the hand of the unit.
4. Hand is determined by standing on the front side of the unit with the supply air blowing against the back of your head.
5. Front face of the unit is determined by the nozzle side (supply air) side of the unit.

36IBAR 2 x 4, 1-WAY BLOW, 2-PIPE, RH UNIT DIMENSIONS



COLLARS	H DIMENSION (in.)	D DIMENSION (in.)
None	11.53	4.6
3 in.	14.53	7.6
4 in.	15.53	8.6
5 in.	16.53	9.6
6 in.	17.53	10.6

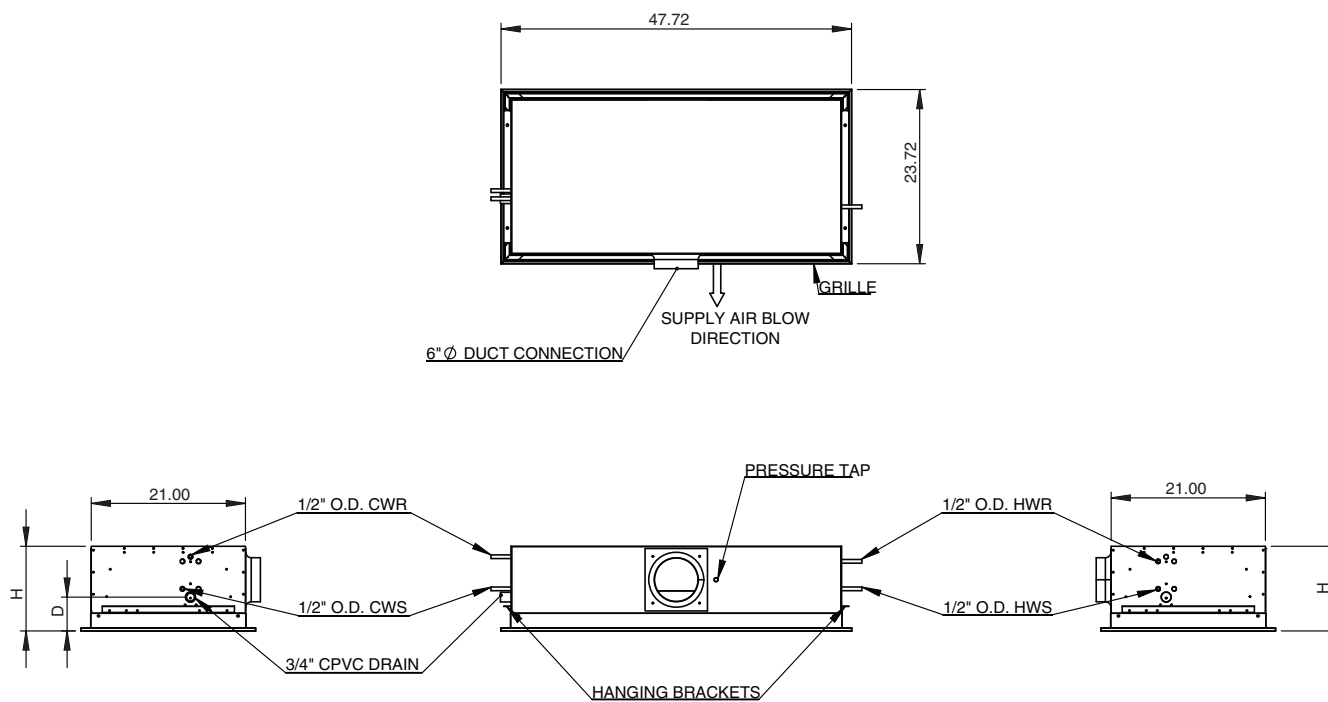
LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply

NOTES:

1. Dimensions shown in inches.
2. Drawing shows 2-pipe arrangement, right-hand piping connection; left hand connection would be opposite.
3. Hand is determined by standing on the front side of the unit with the supply air blowing against the back of your head.
4. Front face of the unit is determined by the nozzle side (supply air) side of the unit.

36IBAR 2 x 4, 1-WAY BLOW, 4-PIPE, RH UNIT DIMENSIONS



COLLARS	H DIMENSION (in.)	D DIMENSION (in.)
None	11.53	4.6
3 in.	14.53	7.6
4 in.	15.53	8.6
5 in.	16.53	9.6
6 in.	17.53	10.6

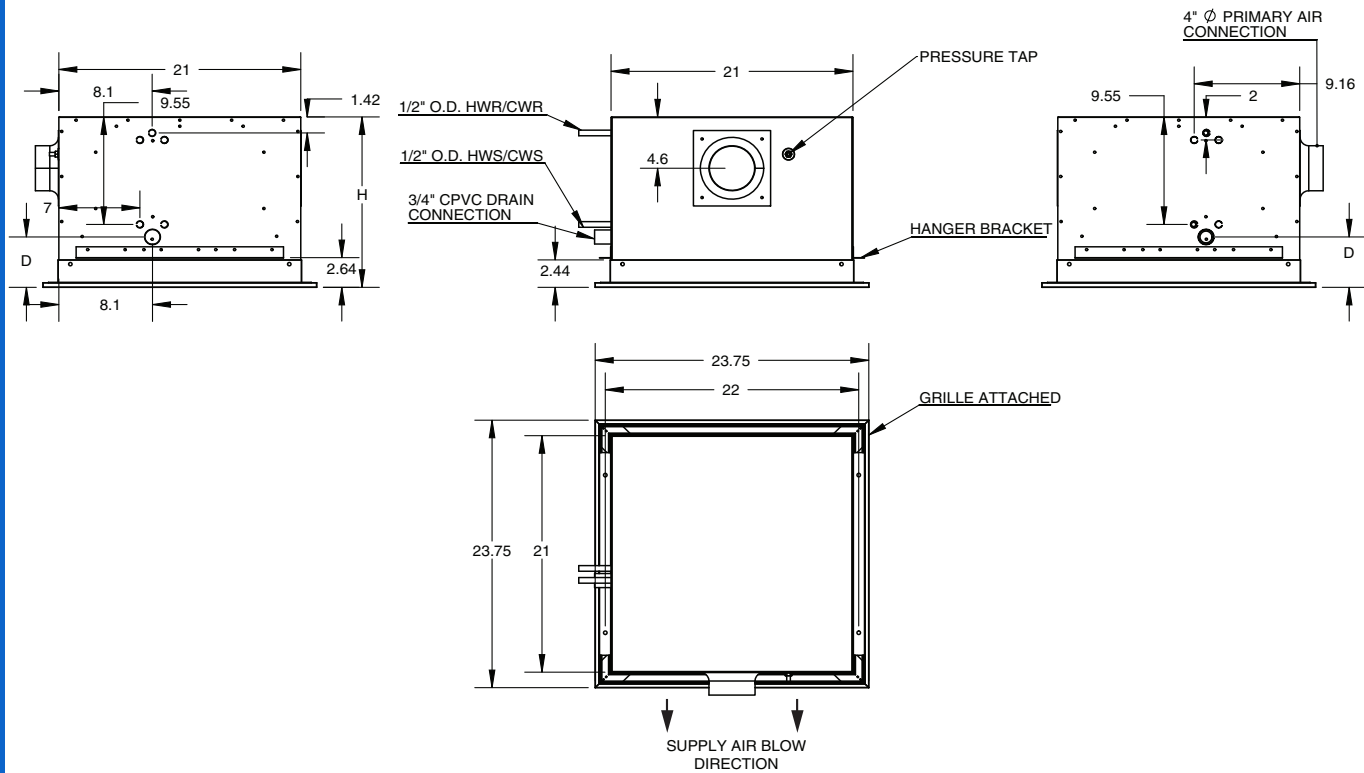
LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply
HWR — Hot Water Return
HWS — Hot Water Supply

NOTES:

1. Dimensions shown in inches.
2. Drawing shows 4-pipe arrangement, right-hand piping connection; left hand connection would be opposite.
3. CW piping connection determines the hand of the unit.
4. Hand is determined by standing on the front side of the unit with the supply air blowing against the back of your head.
5. Front face of the unit is determined by the nozzle side (supply air) side of the unit.

36IBAM 2 x 2, 1-WAY BLOW, 2-PIPE, RH UNIT DIMENSIONS



COLLARS	H DIMENSION (in.)	D DIMENSION (in.)
None	15.1	4.5
3 in.	18.1	7.5
4 in.	19.1	8.5
5 in.	20.1	9.5
6 in.	21.1	10.5

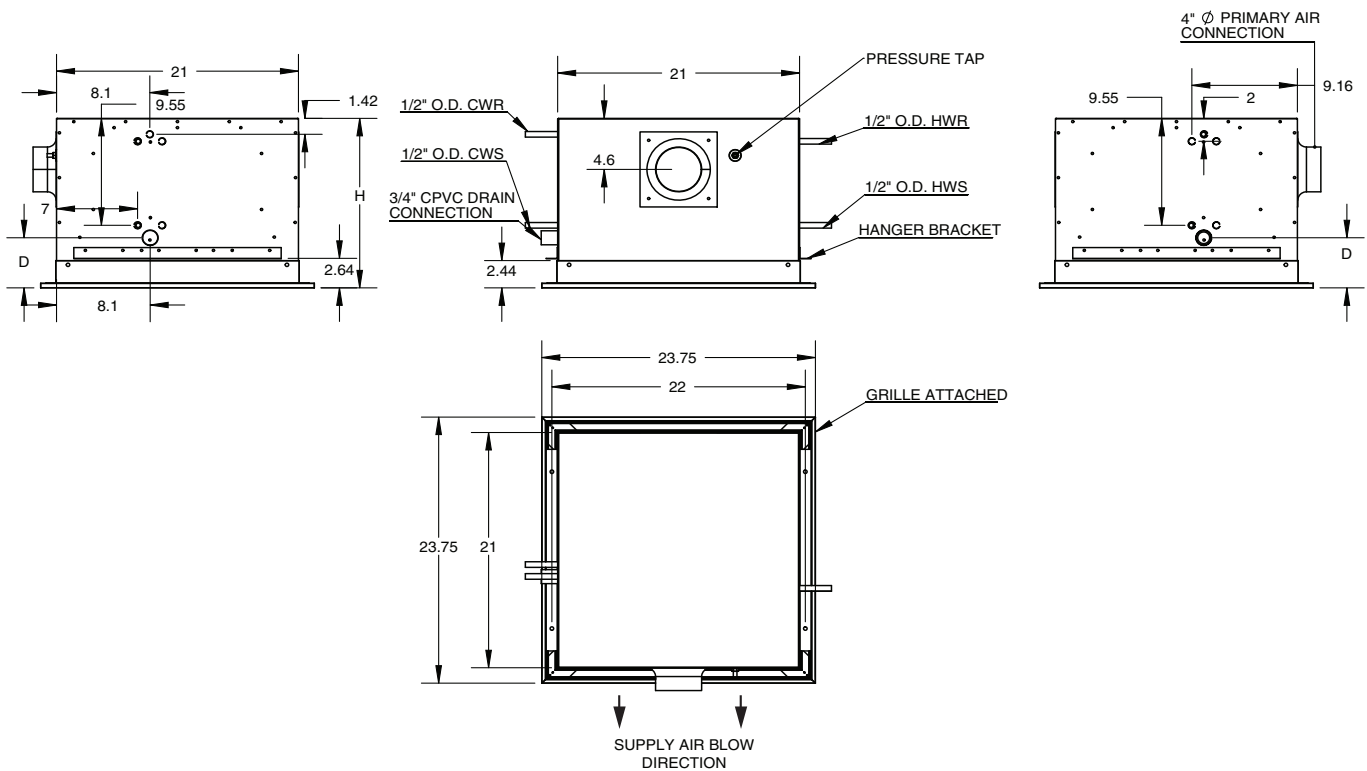
LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply
HWR — Hot Water Return
HWS — Hot Water Supply

NOTES:

1. Dimensions shown in inches.
2. Drawing shows 2-pipe arrangement, right-hand piping connection; left hand connection would be opposite.
3. Hand is determined by standing on the front side of the unit with the supply air blowing against the back of your head.
4. Front face of the unit is determined by the nozzle side (supply air) side of the unit.

36IBAM 2 x 2, 1-WAY BLOW, 4-PIPE, RH UNIT DIMENSIONS



COLLARS	H DIMENSION (in.)	D DIMENSION (in.)
None	15.1	4.5
3 in.	18.1	7.5
4 in.	19.1	8.5
5 in.	20.1	9.5
6 in.	21.1	10.5

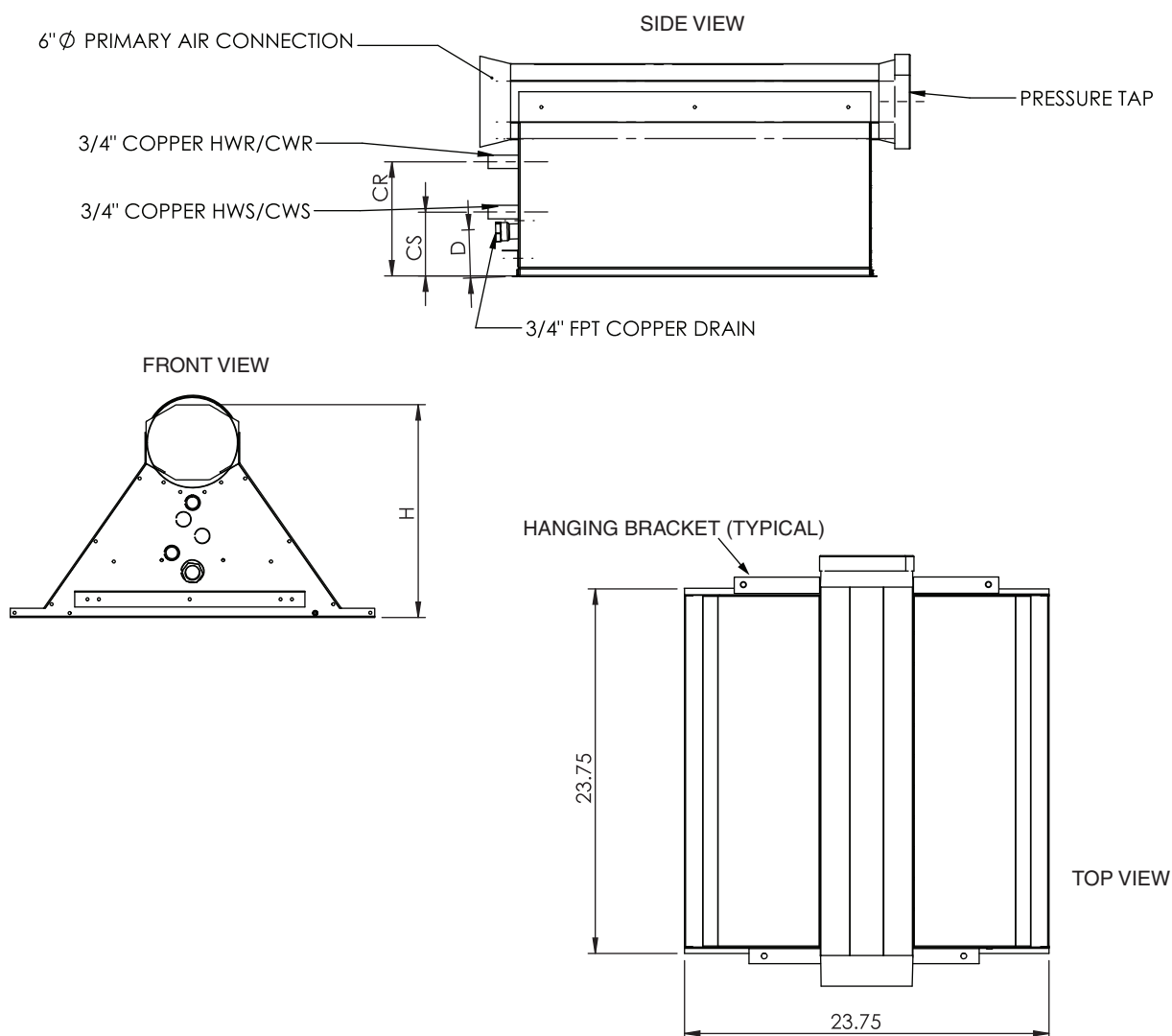
LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply
HWR — Hot Water Return
HWS — Hot Water Supply

NOTES:

1. Dimensions shown in inches.
2. Drawing shows 4-pipe arrangement, right-hand piping connection; left hand connection would be opposite.
3. CW piping connection determines the hand of the unit.
4. Hand is determined by standing on the front side of the unit with the supply air blowing against the back of your head.
5. Front face of the unit is determined by the nozzle side (supply air) side of the unit.

36IBAL 2 x 2, 2-WAY BLOW, 2-PIPE UNIT DIMENSIONS



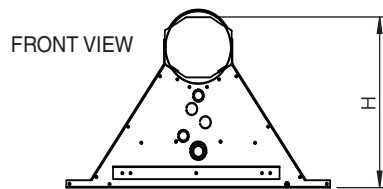
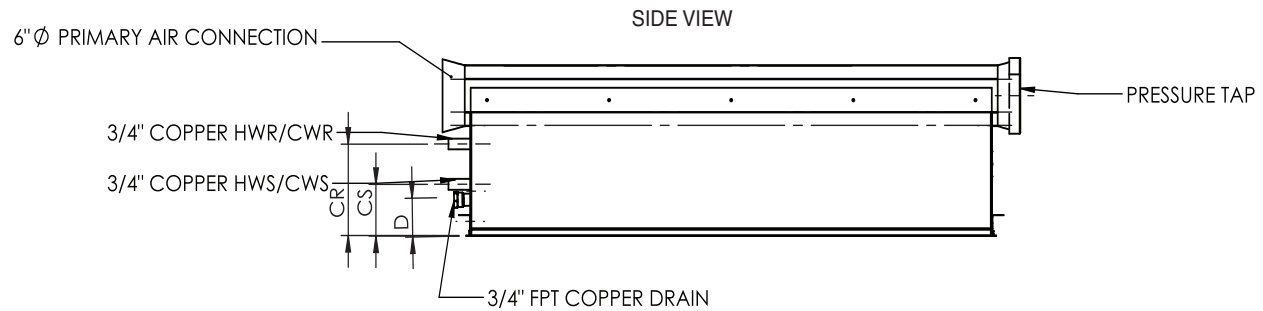
DIMENSION	H (in.)	D (in.)	CS	CR
Standard	14	3.15	4.15	7.5
Extended Version	17	6.15	7.15	10.5

LEGEND

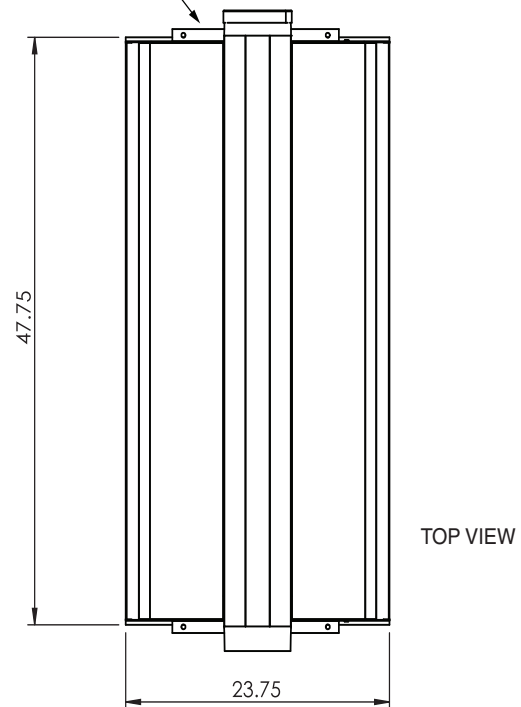
CWR — Chilled Water Return
CWS — Chilled Water Supply
HWR — Hot Water Return
HWS — Hot Water Supply

NOTE: Dimensions shown in inches.

36IBAL 4 x 2, 2-WAY BLOW, 2-PIPE UNIT DIMENSIONS



HANGING BRACKET (TYPICAL)



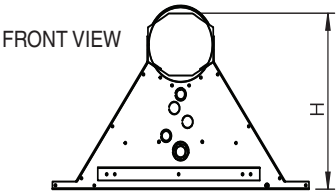
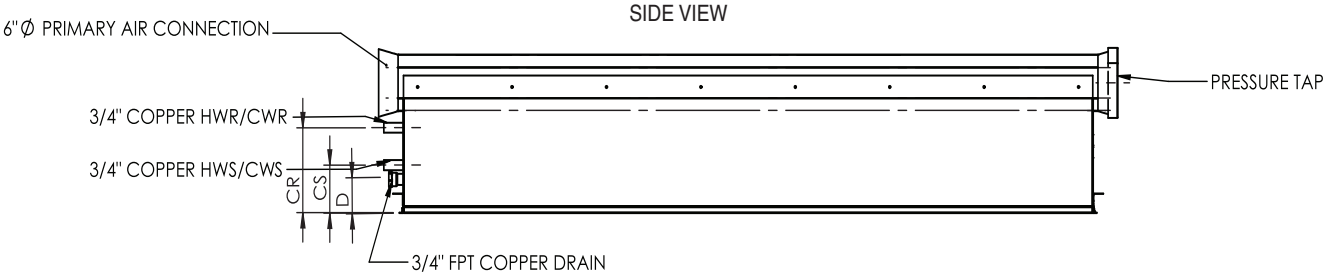
DIMENSION	H (in.)	D (in.)	CS	CR
Standard	14	3.15	4.15	7.5
Extended Version	17	6.15	7.15	10.5

LEGEND

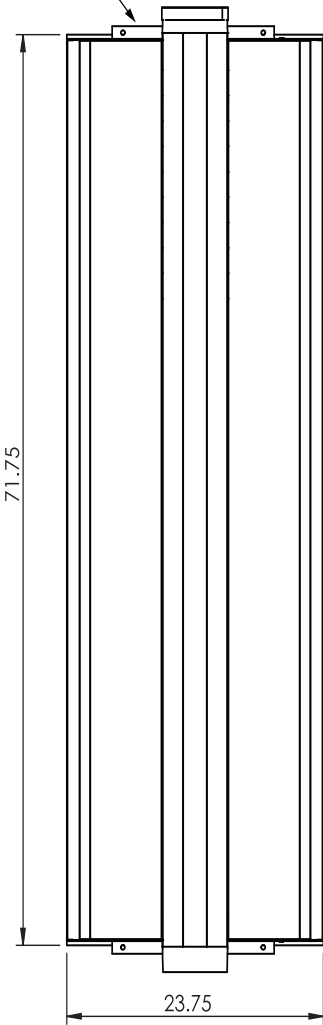
CWR — Chilled Water Return
CWS — Chilled Water Supply
HWR — Hot Water Return
HWS — Hot Water Supply

NOTE: Dimensions shown in inches.

36IBAL 6 x 2, 2-WAY BLOW, 2-PIPE UNIT DIMENSIONS



HANGING BRACKET (TYPICAL)



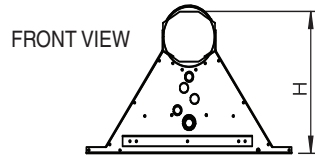
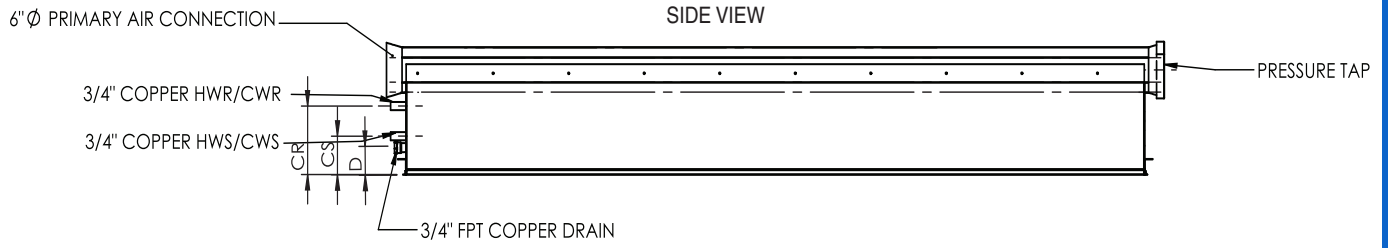
TOP VIEW

DIMENSION	H (in.)	D (in.)	CS	CR
Standard	14	3.15	4.15	7.5
Extended Version	17	6.15	7.15	10.5

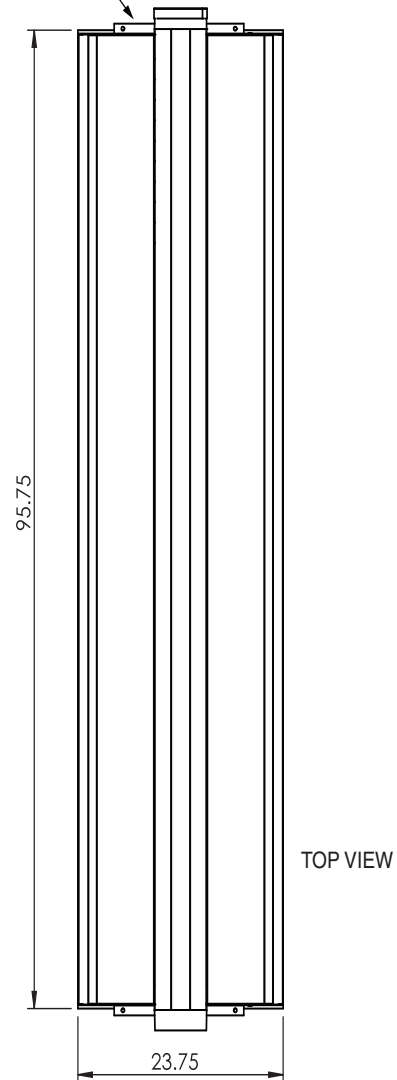
- LEGEND
- CWR — Chilled Water Return
 - CWS — Chilled Water Supply
 - HWR — Hot Water Return
 - HWS — Hot Water Supply

NOTE: Dimensions shown in inches.

36IBAL 8 x 2, 2-WAY BLOW, 2-PIPE UNIT DIMENSIONS



HANGING BRACKET (TYPICAL)



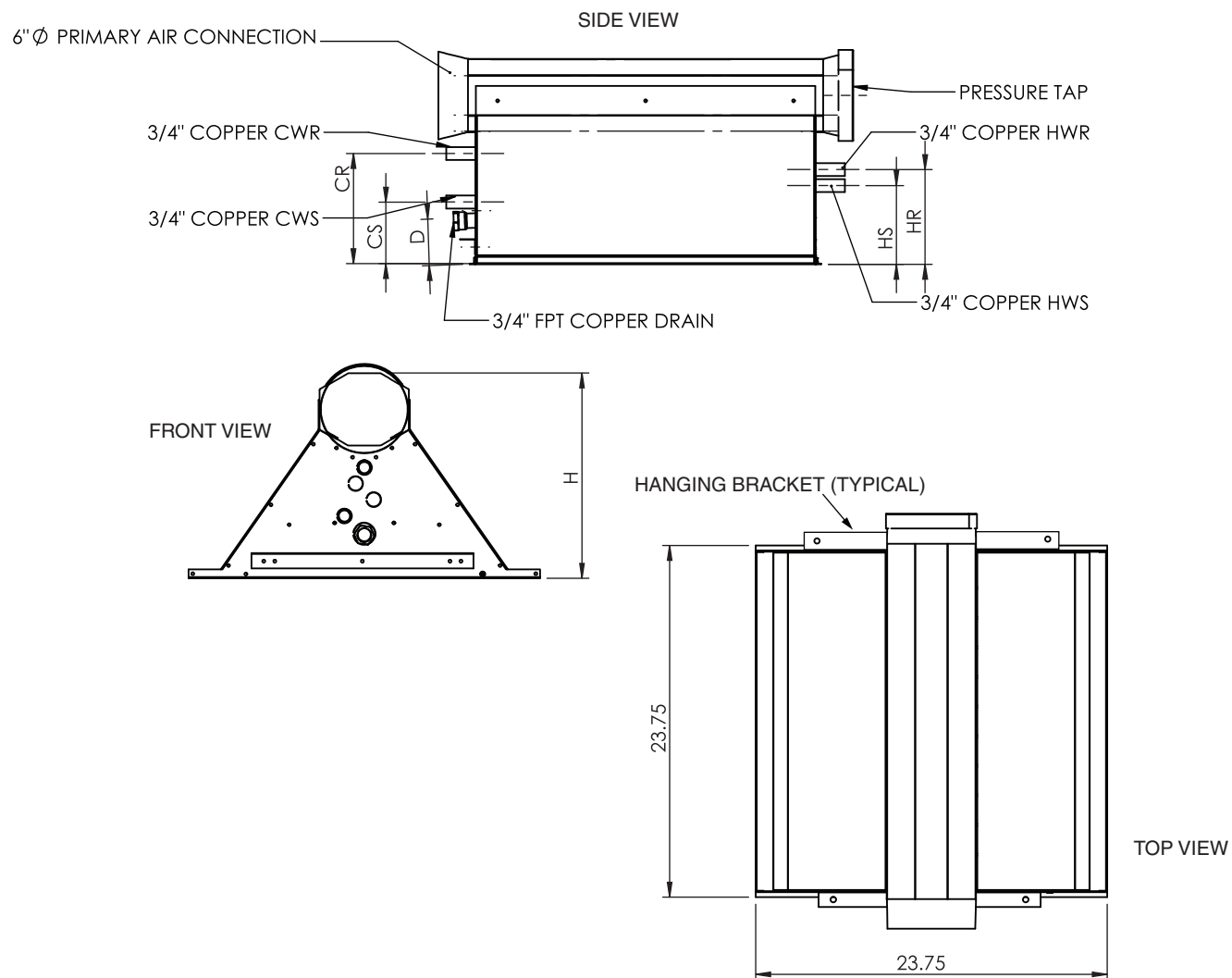
DIMENSION	H (in.)	D (in.)	CS	CR
Standard	14	3.15	4.15	7.5
Extended Version	17	6.15	7.15	10.5

LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply
HWR — Hot Water Return
HWS — Hot Water Supply

NOTE: Dimensions shown in inches.

36IBAL 2 x 2, 2-WAY BLOW, 4-PIPE UNIT DIMENSIONS



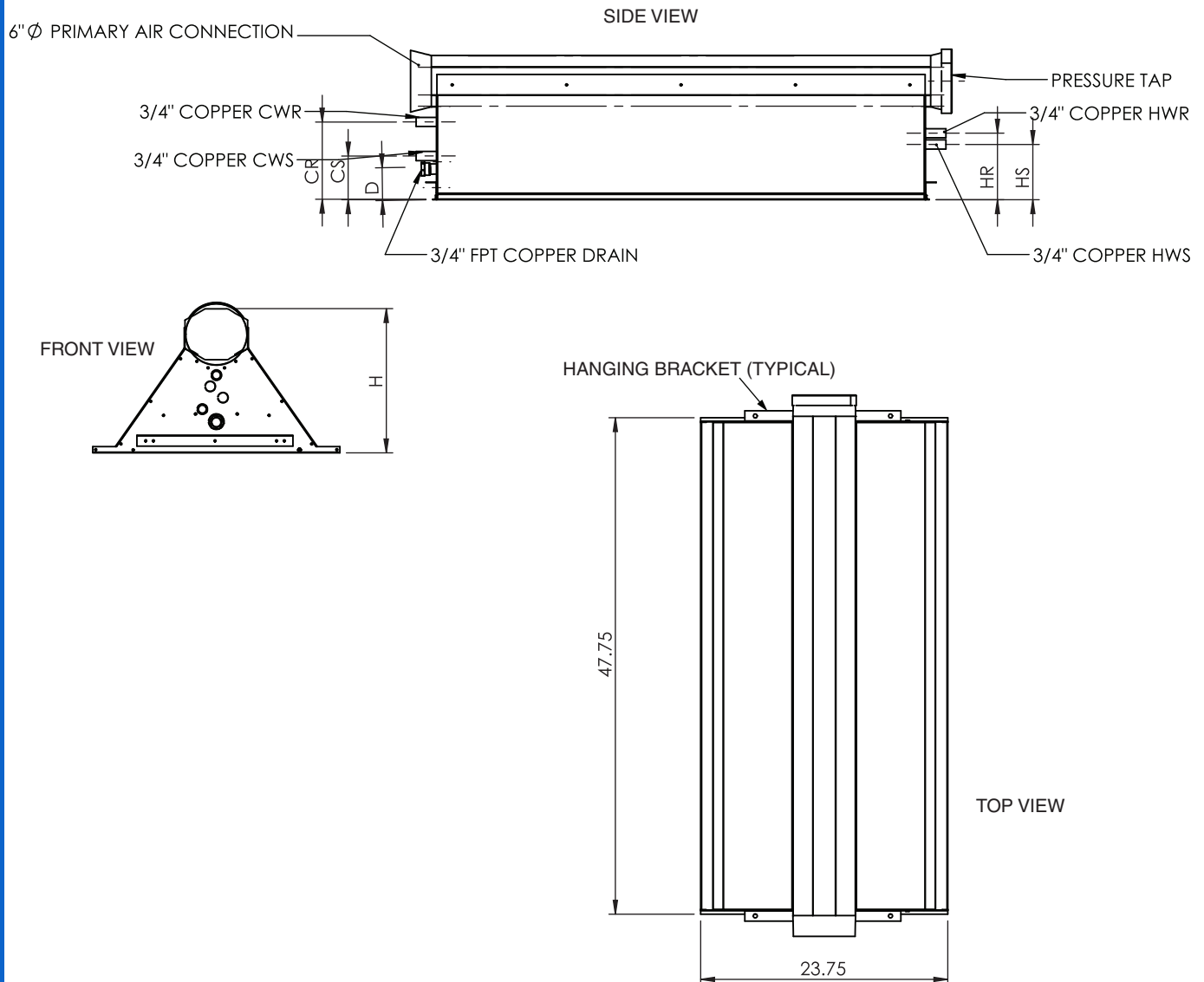
DIMENSION	H (in.)	D (in.)	CS (in.)	CR (in.)	HS (in.)	HR (in.)
Standard	14	3.15	4.15	7.5	5.3	6.4
Extended Version	17	6.15	7.15	10.5	8.3	9.4

LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply
HWR — Hot Water Return
HWS — Hot Water Supply

NOTE: Dimensions shown in inches.

36IBAL 4 x 2, 2-WAY BLOW, 4-PIPE UNIT DIMENSIONS



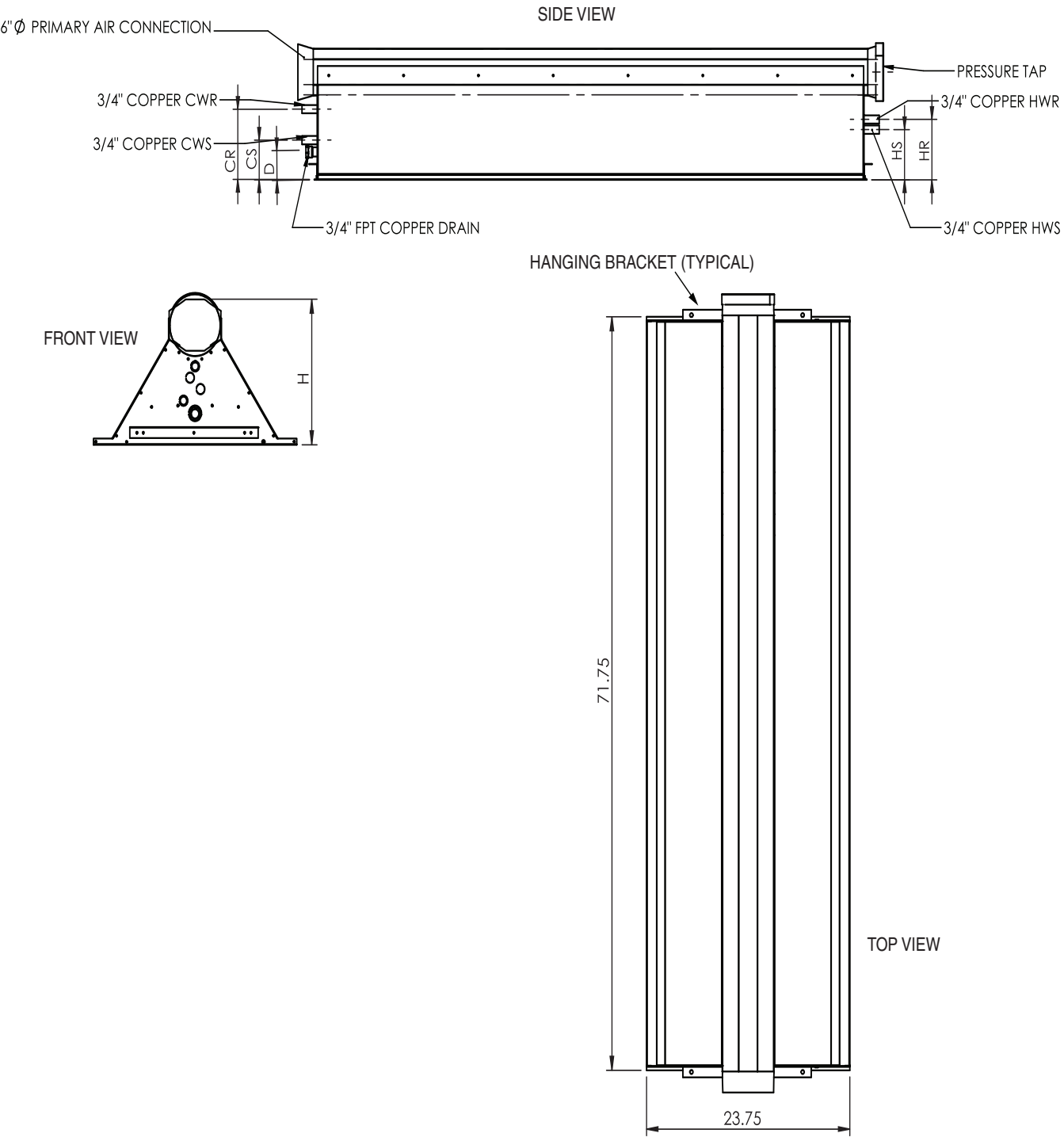
DIMENSION	H (in.)	D (in.)	CS (in.)	CR (in.)	HS (in.)	HR (in.)
Standard	14	3.15	4.15	7.5	5.3	6.4
Extended Version	17	6.15	7.15	10.5	8.3	9.4

LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply
HWR — Hot Water Return
HWS — Hot Water Supply

NOTE: Dimensions shown in inches.

36IBAL 6 x 2, 2-WAY BLOW, 4-PIPE UNIT DIMENSIONS



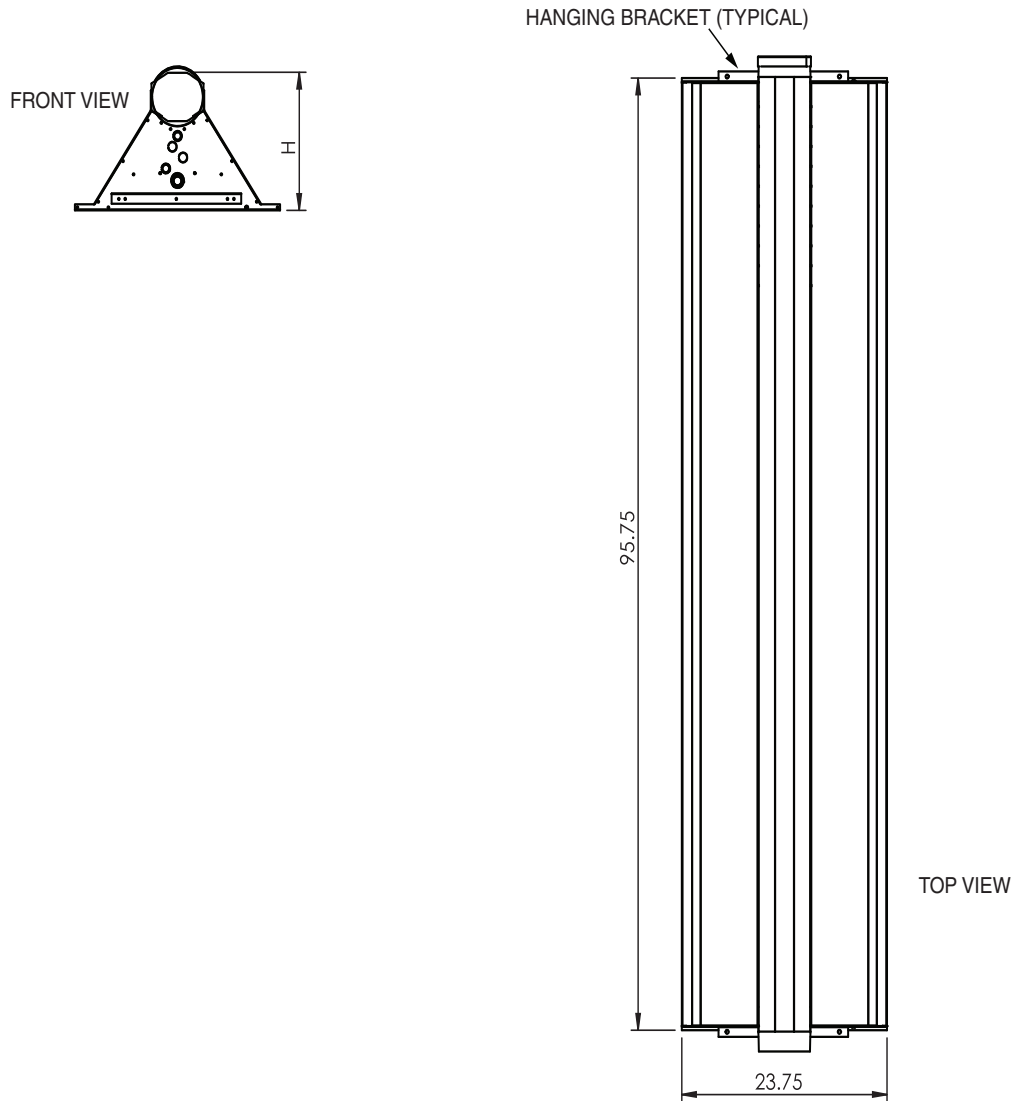
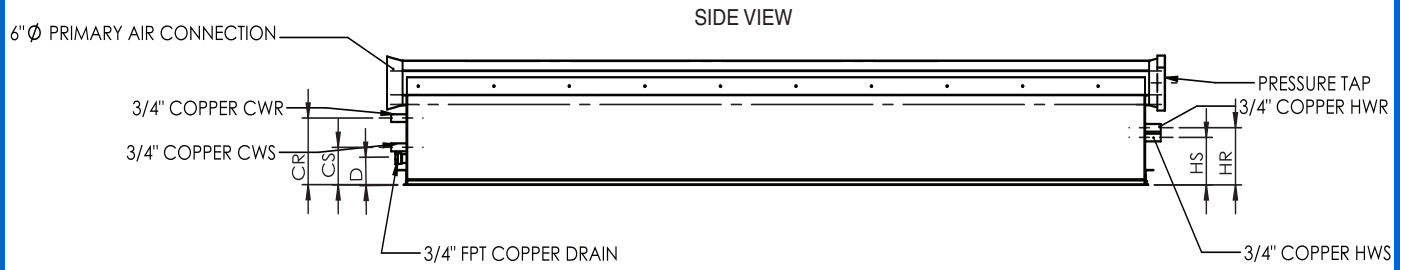
LEGEND

- CWR** — Chilled Water Return
- CWS** — Chilled Water Supply
- HWR** — Hot Water Return
- HWS** — Hot Water Supply

NOTE: Dimensions shown in inches.

DIMENSION	H (in.)	D (in.)	CS (in.)	CR (in.)	HS (in.)	HR (in.)
Standard	14	3.15	4.15	7.5	5.3	6.4
Extended Version	17	6.15	7.15	10.5	8.3	9.4

36IBAL 8 x 2, 2-WAY BLOW, 4-PIPE UNIT DIMENSIONS



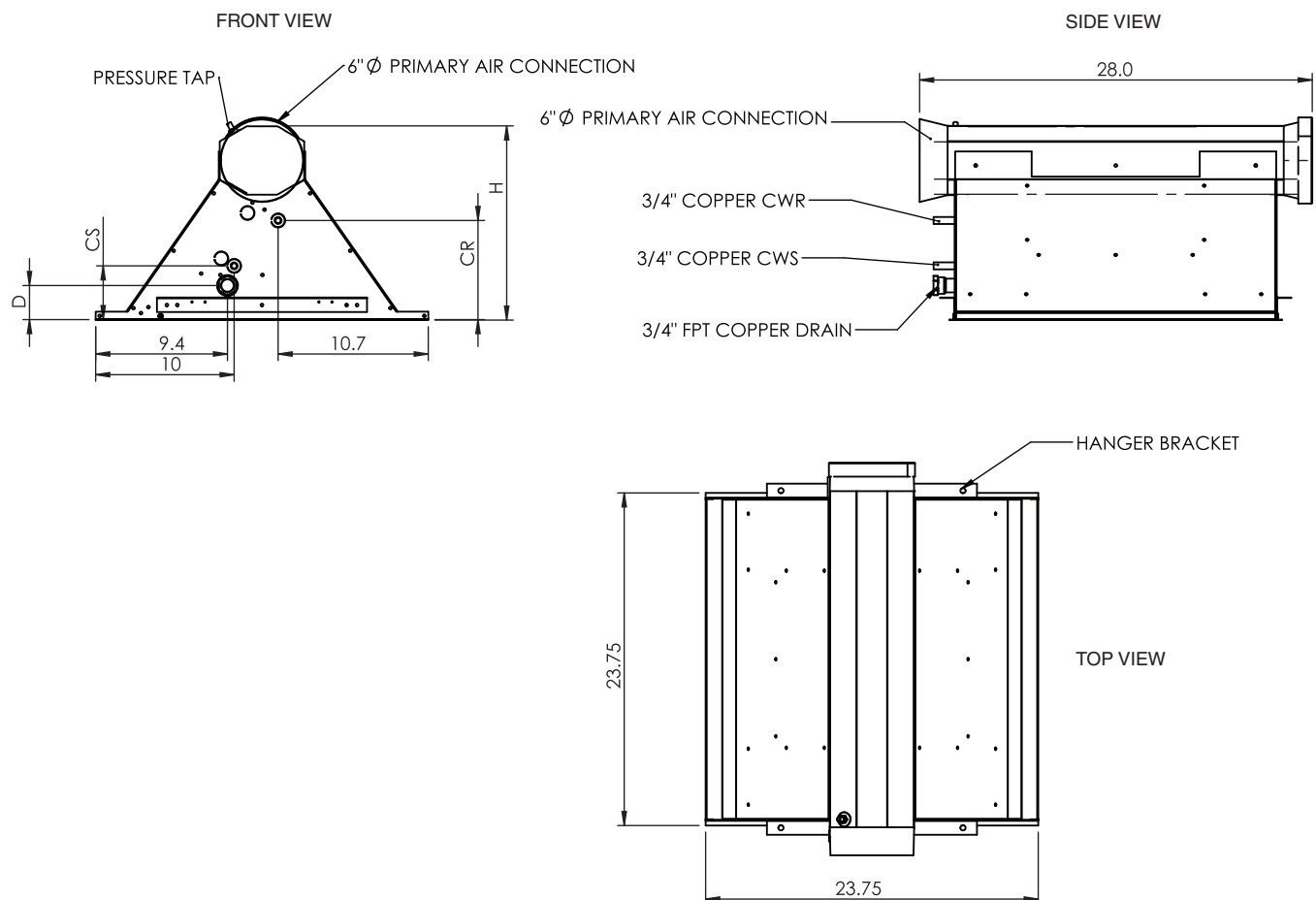
LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply
HWR — Hot Water Return
HWS — Hot Water Supply

DIMENSION	H (in.)	D (in.)	CS (in.)	CR (in.)	HS (in.)	HR (in.)
Standard	14	3.15	4.15	7.5	5.3	6.4
Extended Version	17	6.15	7.15	10.5	8.3	9.4

NOTE: Dimensions shown in inches.

36IBAJ 2 x 2, 1-WAY BLOW, 2-PIPE UNIT DIMENSIONS



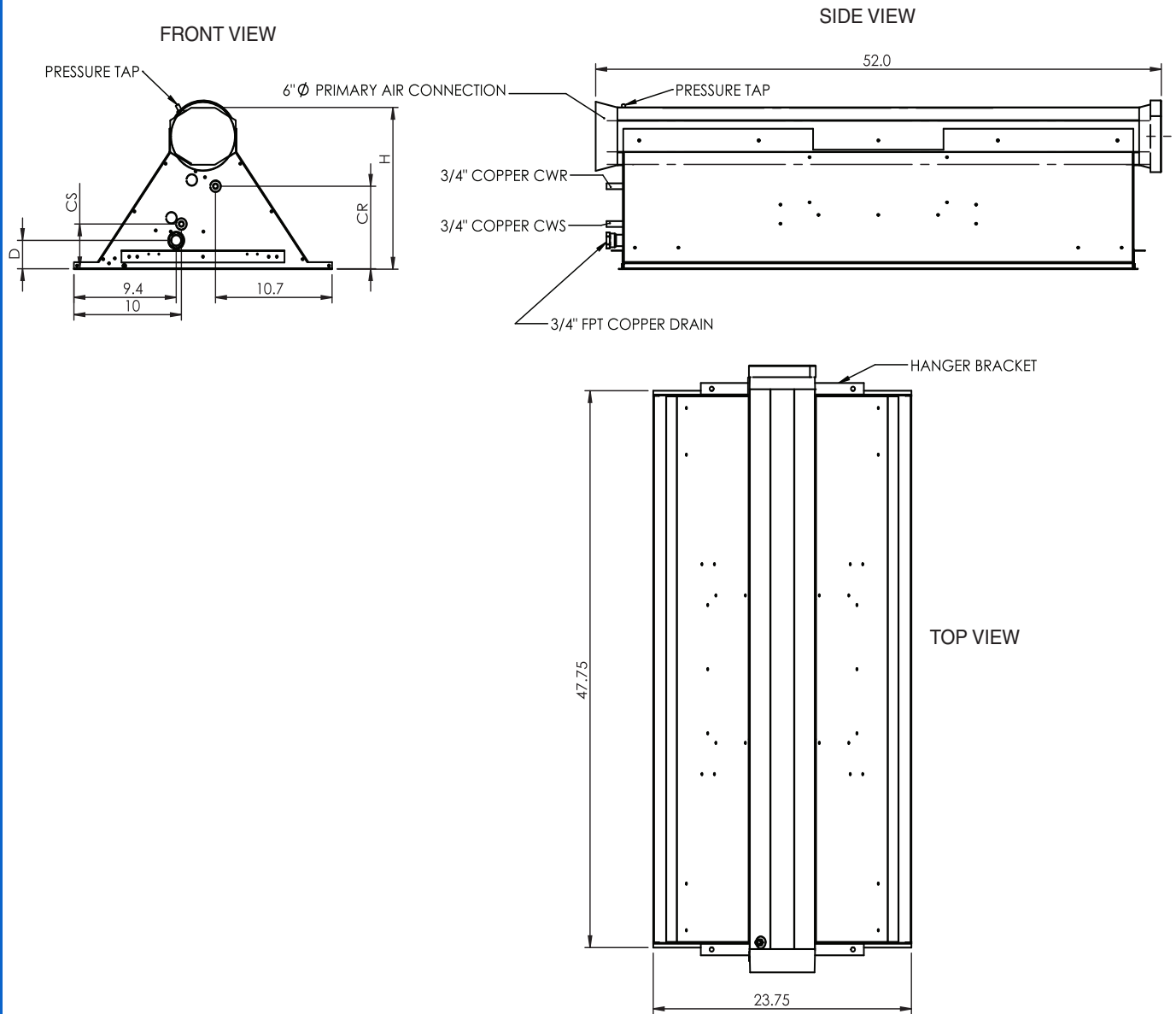
DIMENSION	H (in.)	D (in.)	CS (in.)	CR (in.)
Standard	14	2.6	4	7.25
Extended Version	17	5.6	7	10.25

LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply

NOTE: Dimensions shown in inches.

36IBAJ 4 x 2, 1-WAY BLOW, 2-PIPE UNIT DIMENSIONS



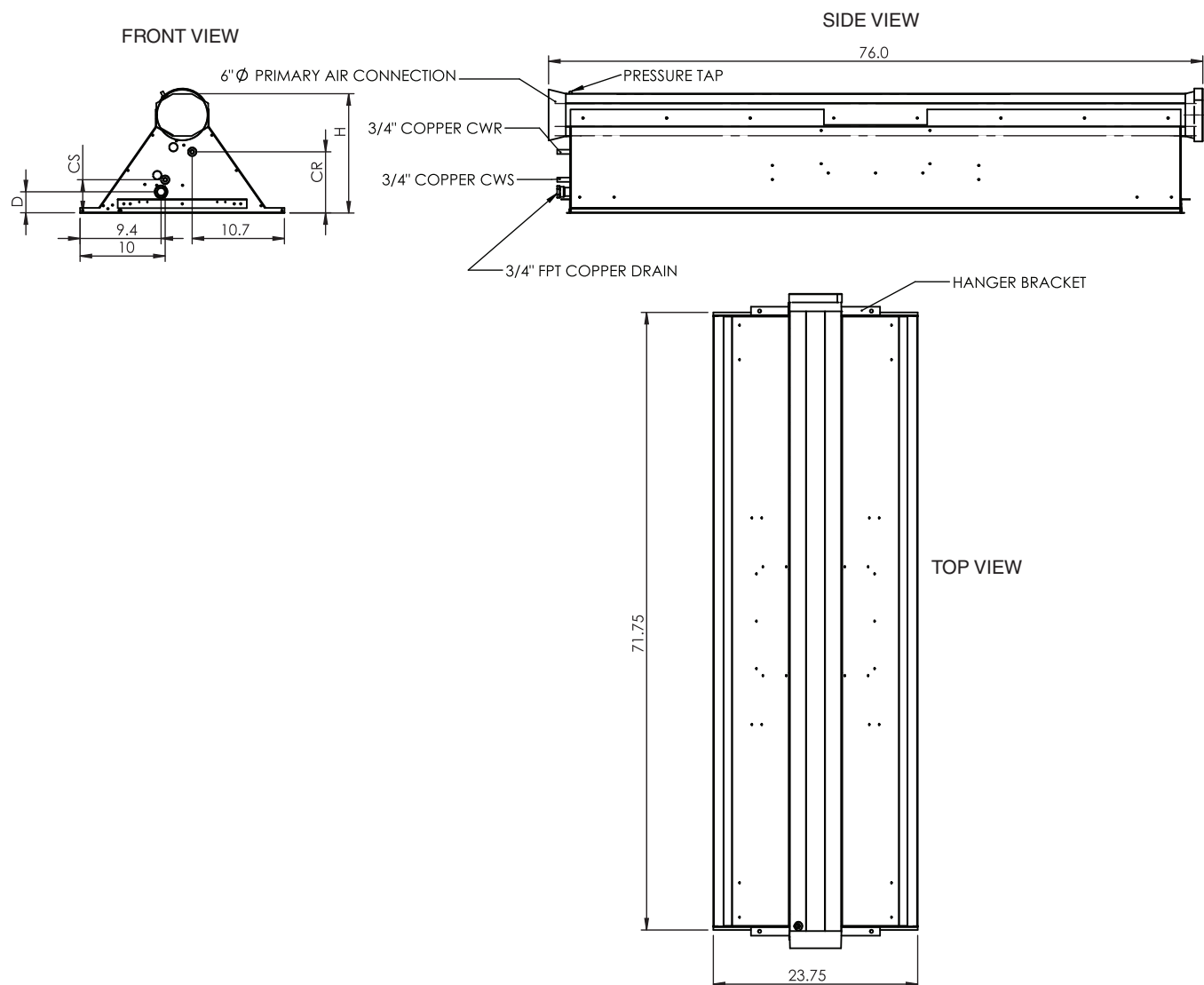
DIMENSION	H (in.)	D (in.)	CS (in.)	CR (in.)
Standard	14	2.6	4	7.25
Extended Version	17	5.6	7	10.25

LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply

NOTE: Dimensions shown in inches.

36IBAJ 6 x 2, 1-WAY BLOW, 2-PIPE UNIT DIMENSIONS



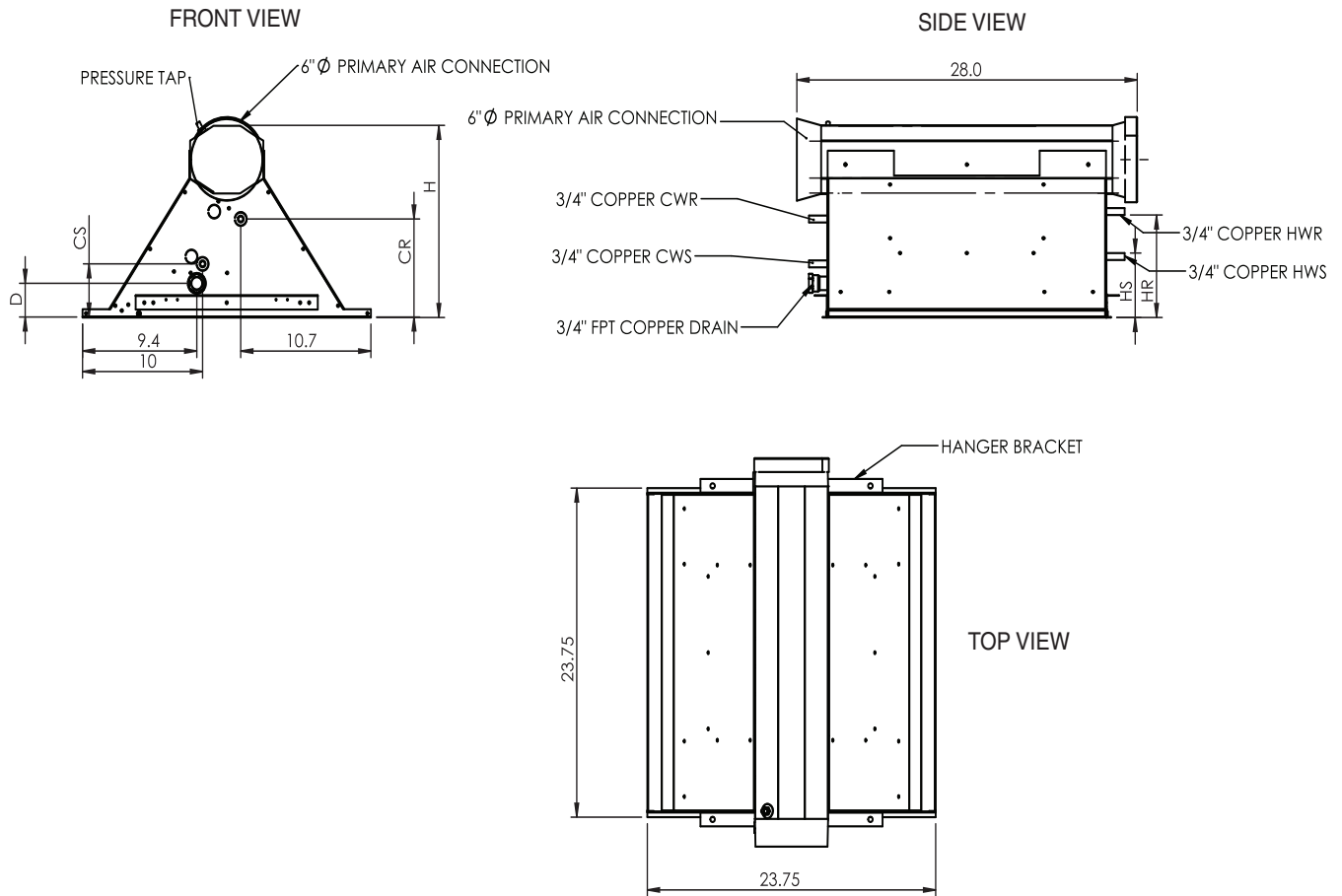
DIMENSION	H (in.)	D (in.)	CS (in.)	CR (in.)
Standard	14	2.6	4	7.25
Extended Version	17	5.6	7	10.25

LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply

NOTE: Dimensions shown in inches.

36IBAJ 2 x 2, 1-WAY BLOW, 4-PIPE UNIT DIMENSIONS



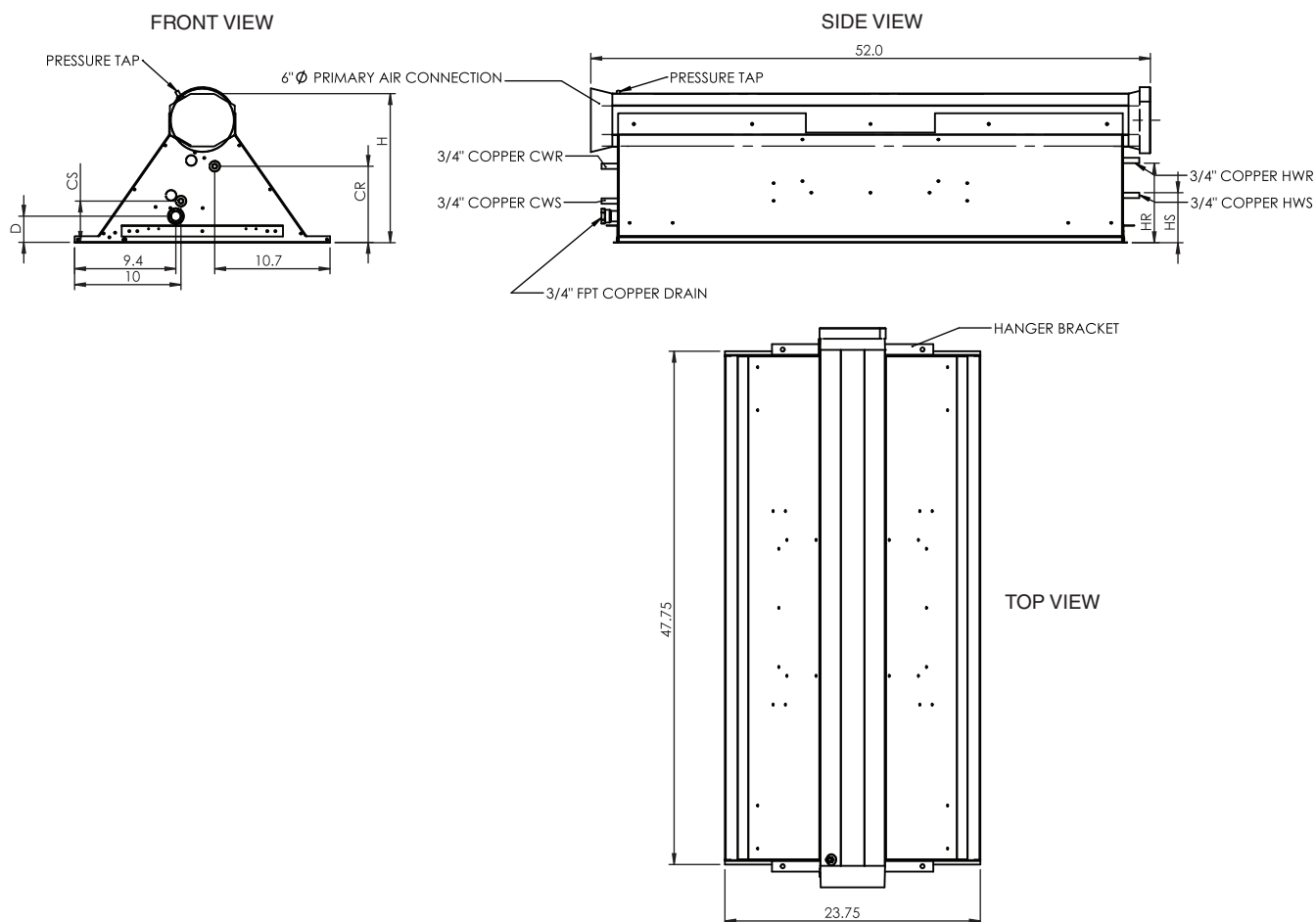
DIMENSION	H (in.)	D (in.)	CS (in.)	CR (in.)	HS (in.)	HR (in.)
Standard	14	2.6	4	7.25	4.85	7.6
Extended Version	17	5.6	7	10.25	7.85	10.6

LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply
HWR — Hot Water Return
HWS — Hot Water Supply

NOTE: Dimensions shown in inches.

36IBAJ 4 x 2, 1-WAY BLOW, 4-PIPE UNIT DIMENSIONS



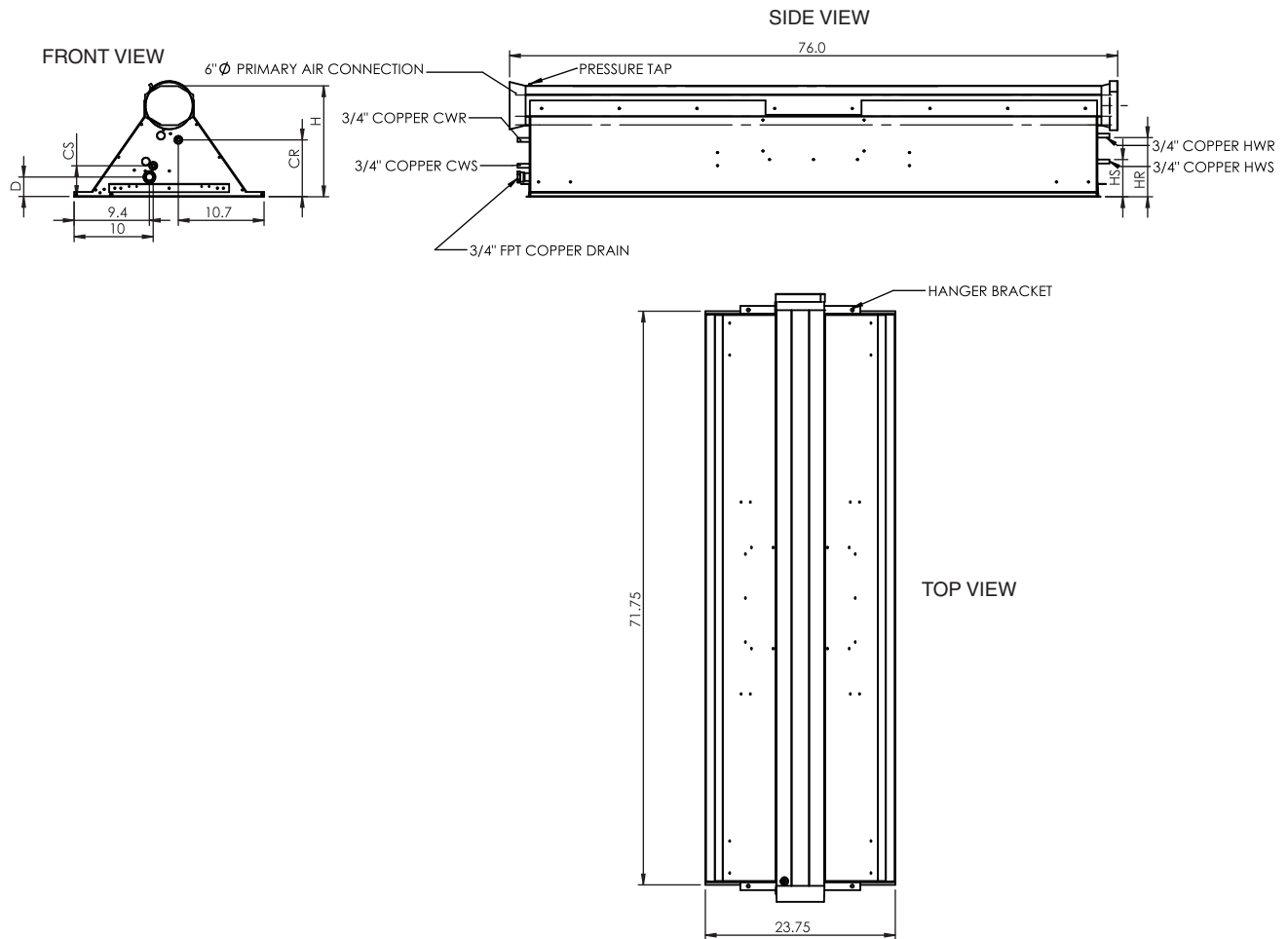
DIMENSION	H (in.)	D (in.)	CS (in.)	CR (in.)	HS (in.)	HR (in.)
Standard	14	2.6	4	7.25	4.85	7.6
Extended Version	17	5.6	7	10.25	7.85	10.6

LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply
HWR — Hot Water Return
HWS — Hot Water Supply

NOTE: Dimensions shown in inches.

36IBAJ 6 x 2, 1-WAY BLOW, 4-PIPE UNIT DIMENSIONS



DIMENSION	H (in.)	D (in.)	CS (in.)	CR (in.)	HS (in.)	HR (in.)
Standard	14	2.6	4	7.25	4.85	7.6
Extended Version	17	5.6	7	10.25	7.85	10.6

LEGEND

CWR — Chilled Water Return
CWS — Chilled Water Supply
HWR — Hot Water Return
HWS — Hot Water Supply

NOTE: Dimensions shown in inches.

Refer to Carrier Electronic Selection Program or contact your Carrier representative to determine unit size for your application.

Performance data

For sound and throw data, refer to the Induction Terminal Builder Program or contact your Carrier representative.

CAPACITY RANGE

UNIT	SIZE	INLET AIR STATIC PRESSURE (in. wg)	PRIMARY AIRFLOW (Cfm)	TOTAL AIRFLOW (Cfm)	SENSIBLE COOLING CAPACITY (Btuh)	TOTAL COOLING CAPACITY (Btuh)	HEATING CAPACITY (Btuh)
36IBAC	C	0.4 to 1.0	60 to 155	223 to 448	1,812 to 6,181	1,812 to 9,479	5,971 to 21,949
	D	0.4 to 1.0	186 to 476	502 to 1,285	3,341 to 15,960	3,341 to 22,549	10,967 to 56,679
36IBAN	A	0.4 to 1.0	26 to 102	103 to 371	1,121 to 6,221	1,121 to 9,284	3,683 to 23,326
	B	0.4 to 1.0	30 to 203	120 to 548	1,267 to 7,185	1,267 to 10,227	4,162 to 27,387
36IBAS	C	0.4 to 1.0	39 to 100	105 to 270	750 to 3,793	750 to 5,856	2,505 to 12,670
36IBAR	B	0.4 to 1.0	25 to 164	99 to 459	1,085 to 6,585	1,085 to 9,638	3,567 to 24,799
36IBAM	C	0.4 to 1.0	22 to 70	82 to 210	881 to 3,240	881 to 5,063	1,834 to 13,678
36IBAL	C	0.4 to 0.8	11 to 60	81 to 250	1,950 to 3,696	2,189 to 4,998	2,581 to 4,362
	B	0.4 to 0.8	22 to 120	163 to 499	3,764 to 6,453	4,242 to 9,057	4,948 to 7,810
	E	0.4 to 0.8	33 to 180	244 to 749	5,400 to 8,718	6,116 to 12,624	7,018 to 10,247
	F (ETO)	0.4 to 0.8	44 to 240	326 to 998	6,873 to 10,472	7,827 to 15,680	8,828 to 11,908
36IBAJ	C	0.4 to 0.8	11 to 59	60 to 191	1,372 to 2,650	1,610 to 3,930	2,049 to 3,699
	B	0.4 to 0.8	22 to 118	120 to 381	2,697 to 4,936	3,175 to 7,496	4,067 to 6,979
	E	0.4 to 0.8	33 to 177	180 to 572	3,690 to 6,708	4,407 to 10,549	5,872 to 12,021

LEGEND

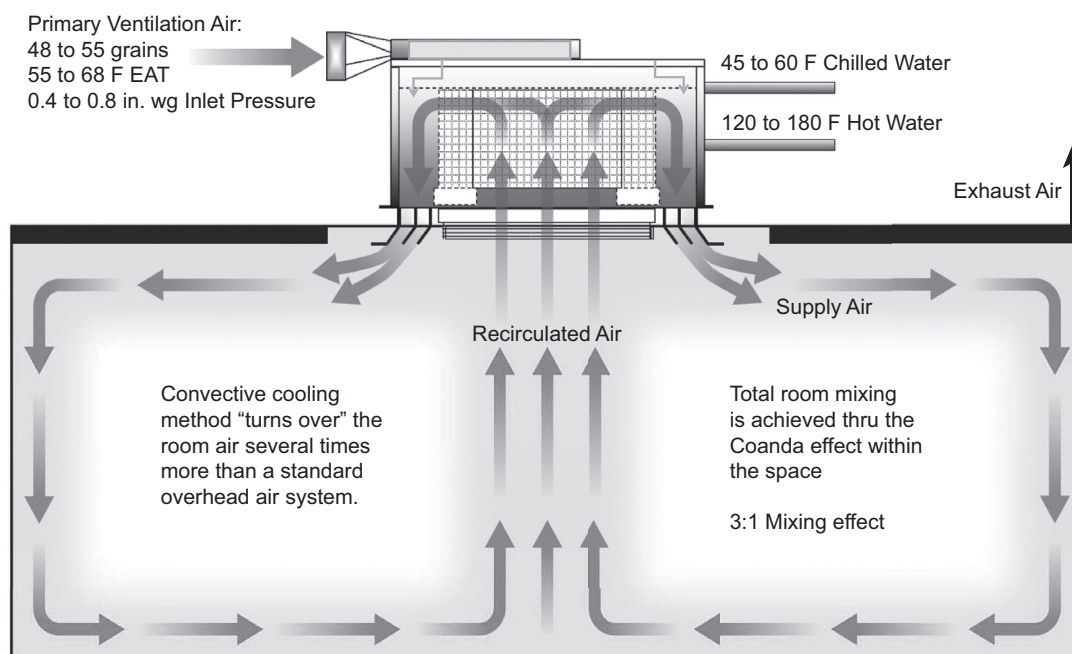
ETO — Engineered to Order

NOTES:

- Units tested by ETL Intertek in general accordance with AHRI-410-2001 standard "Forced-Circulation Air-Cooling and Air-Heating Coil" and ASHRAE 70-2006 standard "Method of Testing for Rating the Performance of Air Outlets and Inlets."

- The above cooling and heating capacities do not include the capacity of the primary air. For total unit cooling and heating capacity, including coil and primary air capacities, use the Carrier Electronic Selection Program (induction terminal builder).
- Chilled Water Range = 42°F to 60°F
- Hot Water Range = 120°F to 180°F

36IBAC OPERATION



LEGEND

EAT — Entering Air Temperature

Induction Beams HVAC Guide Specifications

Size Range: **2 to 4 ft**

Carrier Model Number: **36IBAC**

Part 1 — General

1.01 SYSTEM DESCRIPTION

- A. Integrated induction beam system for ventilation, cooling, and heating.
- B. Induction terminal unit shall be constant volume primary airflow units designed to induce a secondary airflow within the conditioned space using the primary conditioned air supply. Capacities and characteristics as listed in the schedule and the guide specifications that follow.

1.02 QUALITY ASSURANCE

- A. Unit coils shall be tested in general accordance with the AHRI 410, latest edition, standard "Forced-Circulation Air-Cooling and Air-Heating Coil."
- B. Units shall be tested by ETL, an independent nationally recognized testing laboratory, for performance, throws, and sound levels, in accordance with the ASHRAE 70-2006 standard "Method of Testing for Rating the Performance of Air Outlets and Inlets."

Part 2 — Product

2.01 EQUIPMENT

A. General:

- 1. The induction beam unit shall be designed for flush mounting in a false ceiling and shall be sized to match a standard 2 ft false ceiling module.
- 2. Unit shall be provided with hanging brackets. Hanger rods or other approved hanging system to be field supplied and installed in the field by installing contractor.
- 3. Units shall be equipped with round duct primary air intake, one air plenum and air induction nozzle plate, one chilled/hot water coil, a supply and a return chilled water piping connection, a supply and return hot water piping connection, one $\frac{3}{4}$ -in. condensate drain connection, and one combination supply/return air grille for a full 360-degree Coanda effect room air distribution. The grille shall have a removable center core to provide full access to the return air side of the coil. The unit shall be capable of inducing the secondary airflow within the conditioned space using the velocity pressure of the primary airflow. This secondary air must flow directly from the room to the unit and shall not use the ceiling as a return air plenum. Induction units using the ceiling plenum as a return air path are not acceptable.
- 4. Latent conditioning of the air supplied to the space shall be performed at the dedicated outdoor air unit and controlled by exhaust air humidity sensors. Humidity within the building

envelope is to be controlled to not exceed 55% relative humidity.

- 5. All units shall include a condensate drain pan. This drain pan must be 2 inches in depth and sloped in the direction of the condensate connection.
- 6. Unit shall include a built in pressure tap on the primary air inlet for air static pressure measurement and balancing.

B. Unit Casing:

- 1. The entire unit shall be constructed of 20 gage galvanized sheet metal. The primary air plenum and nozzles shall be designed and configured to provide uniform air distribution with low noise operation to all nozzles.
- 2. The air diffuser shall be removable for access to the interior coil area for cleaning.

C. Induction Nozzles:

Induction nozzles shall be aerodynamically designed and made of LDPE Petrothene¹ food grade plastic having a tapered discharge to minimize noise.

D. Water Coil Assembly:

- 1. Coils shall be of the hot and chilled water type utilizing aluminum fins and copper tubes. Copper tube wall shall be a minimum 0.033 in. thickness. Coils shall be factory leak tested at 350 psig water. Coil connections shall be as indicated on the drawings.
- 2. Coil must be one continuous assembly to minimize leakage.
- 3. The water coil assembly shall consist of a two-row copper tube and aluminum fin coil for cooling and one-row coil for heating. A drainable condensate pan shall be provided to collect any condensate that might form.
- 4. Control valve for cooling and heating can control one or more induction beam units in a given zone. Control valves for the units shall be supplied by the Automatic Temperature Control Contractor.

E. Insulation:

Insulation on the unit exterior shall be provided when the entering chilled water temperature to the unit is below 55°F. Insulation on the unit and collar exterior shall be provided when the primary air temperature supplied to the unit is below 55°F. The unit and collar exterior insulation shall be a closed cell elastomeric foam that prevents moisture intrusion, inhibits mold and mildew, is fiber-free, formaldehyde-free, and low in VOCs.

F. Grille Finish:

- 1. The standard grille finish shall consist of a baked on acrylic enamel that is corrosion resistant to 100 hours in a salt spray test.

1. Registered trademark of Equistar Chemicals, a wholly owned subsidiary of LyondellBasell Industries.

2. The optional alkyd enamel finish shall be provided consisting of a glossy, mar-resistant baked-on finish with a salt spray resistance to 175 hours.
3. The optional urethane coating shall be provided with superior surface durability and resistance to a salt spray test for 300 hours.

G. Lint Filter:

Washable wire mesh filter shall be provided.

Disposable filter provided shall be UL Class II in accordance with standard UL 900.

H. Drain Pan:

1. Drain pan shall be constructed of galvanized steel with a 3/4 in. CPVC drain connection.
2. Drain pan shall be constructed of galvanized steel with a 3/4 in. copper drain connection.
3. Drain pan shall be constructed of stainless steel with a 3/4 in. CPVC drain connection.

4. Drain pan shall be constructed of stainless steel with a 3/4 in. copper drain connection.
5. Drain pan shall be constructed of galvanized steel with an antimicrobial coating and a 3/4 in. CPVC drain connection.
6. Drain pan shall be constructed of galvanized steel with an antimicrobial coating and a 3/4 in. copper drain connection.

I. Drain Pan Accessories:

1. A float switch shall be provided consisting of a potted (electrically water sealed) reed/magnet switch design that is UL 508 compliant.
2. A plenum rated electronic condensate overflow sensor switch shall be provided that is UL 508 and UL 2043 compliant.
3. A combination trap and condensate switch shall be provided consisting of a plenum rated electronic condensate overflow sensor switch that is UL 508 and UL 2043 compliant, 3/4 in. PVC pipe, 3/4 in. PVC trap, and 3/4 in. PVC tee.

Induction Beams HVAC Guide Specifications

Size Range: **2 to 4 ft**

Carrier Model Number: **36IBAN,S,R,M**

Part 1 — General

1.01 SYSTEM DESCRIPTION

- A. Integrated induction beam system for ventilation, cooling, and heating.
- B. Induction terminal unit shall be constant volume primary airflow units designed to induce a secondary airflow within the conditioned space using the primary conditioned air supply. Capacities and characteristics as listed in the schedule and the guide specifications that follow.

1.02 QUALITY ASSURANCE

- A. Unit coils shall be tested in general accordance with the AHRI 410, latest edition, standard "Forced-Circulation Air-Cooling and Air-Heating Coil."
- B. Units shall be tested by ETL, an independent nationally recognized testing laboratory, for performance, throws, and sound levels, in accordance with the ASHRAE 70-2006 standard "Method of Testing for Rating the Performance of Air Outlets and Inlets."

Part 2 — Product

2.01 EQUIPMENT

A. General:

- 1. The induction beam unit shall be designed for flush mounting in a false ceiling and shall be sized to match a standard 2 ft false ceiling module.
- 2. Unit shall be provided with hanging brackets. Hanger rods or other approved hanging system to be field supplied and installed in the field by installing contractor.
- 3. Units shall be equipped with round low velocity pressure primary air inlet transition, one air plenum and air induction nozzle plate, one chilled/hot water coil, a supply and a return chilled water piping connection, a supply and a return hot water piping connection, one 3/4 in. condensate drain connection, and one combination supply/return air grille for a full one-way Coanda effect room air distribution. The grille shall have a removable center core to provide full access to the return air side of the coil. The unit shall be capable of inducing secondary airflow within the conditioned space using the velocity pressure of the primary airflow. This secondary air must flow directly from the room to the unit and shall not use the ceiling as a return air plenum. Induction units using the ceiling plenum as a return air path are not acceptable.
- 4. Latent conditioning of the air supply to the space shall be performed at the dedicated outdoor air unit and controlled by exhaust air humidity sensors. Humidity within the building

envelope is to be controlled to not exceed 55% relative humidity.

- 5. All units shall include a condensate drain pan. This drain pan must be 2 inches in depth and sloped in the direction of the condensate connection.
- 6. Unit shall include a built in pressure tap on the primary air inlet for air static pressure measurement and balancing.

B. Unit Casing:

- 1. The entire unit shall be constructed of 20 gage galvanized G90 sheet metal. The primary air plenum and nozzles shall be designed and configured to provide uniform air distribution with low noise operation to all nozzles.
- 2. Units shall be supplied with a supply/return diffuser to evenly distribute the mixed primary air in a linear one way coanda effect air distribution pattern. The diffuser design shall incorporate multiple louvers spaced at 1.5 in. centers to create a more positive return airflow effect within the room. Single slot linear diffusers are not acceptable.

C. Induction Nozzles:

Induction nozzles shall be aerodynamically designed and made of DuPont Hytrel 4069 Engineering Polymers with a temperature range of -40 to 122°F and tested and rated by test method UL94 and UL746. Each nozzle shall incorporate a tapered design allowing the airflow to enter the nozzle more effectively and perform more efficiently without dirt build-up.

D. Water Coil Assembly:

- 1. Coils shall be of the hot and chilled water type utilizing aluminum fins and copper tubes. Coils shall be factory leak tested at 300 psig water. Coil connections shall be indicated on the drawings.
- 2. Coils must be one flat plate assembly with no interconnecting joints to minimize leakage. Each coil shall be of the fin plate design surrounding the copper tube wall.
- 3. The water coil assembly shall consist of a two-row or three-row copper tube and aluminum fins for cooling and one-row coil for heating. The heating coil row shall be mounted on the return side of the cooling coil, thus not allowing a reheat concept to be used. All return air will see the one-row heating coil on its first run through the coil. A drainable condensate pan shall be provided to collect any condensate that might form. Drip trays are unacceptable as a drain pan.
- 4. Control valves for cooling and heating can control one or more induction units in a given zone. Control valves for the units shall be supplied by the Automatic Temperature Control Contractor.

E. Insulation:

Insulation on the unit exterior shall be provided when the entering chilled water temperature to the unit is below 55°F. Insulation on the unit and collar exterior shall be provided when the primary air temperature supplied to the unit is below 55°F. The unit and collar exterior insulation shall be a closed cell elastomeric foam that prevents moisture intrusion, inhibits mold and mildew, is fiber-free, formaldehyde-free, and low in VOCs.

F. Grille Finish:

1. The standard grille finish shall consist of a baked on acrylic enamel that is corrosion resistant to 100 hours in a salt spray test.
2. The optional alkyd enamel finish shall be provided consisting of a glossy, mar-resistant baked on finish with a salt spray resistance to 175 hours.
3. The optional urethane coating shall be provided with superior surface durability and resistance to a salt spray test for 300 hours.

G. Lint Filter:

1. Washable wire mesh filter shall be provided.
2. Disposable filter provided shall be UL Class II in accordance with standard UL 900.

H. Drain Pan:

1. Drain pan shall be constructed of galvanized steel with a 3/4 in. CPVC drain connection (36IBAN,R,M units only).
2. Drain pan shall be constructed of galvanized steel with a 3/4 in. copper drain connection (36IBAN,R,M units only).

3. Drain pan shall be constructed of stainless steel with a 3/4 in. CPVC drain connection (36IBAN,R,M units only).

4. Drain pan shall be constructed of stainless steel with a 3/4 in. copper drain connection (36IBAN,R,M units only).

5. Drain pan shall be constructed of galvanized steel with an antimicrobial coating and a 3/4 in. CPVC drain connection (36IBAN,R,M units only).

6. Drain pan shall be constructed of galvanized steel with an antimicrobial coating and a 3/4 in. copper drain connection (36IBAN,R,M units only).

7. Drain pan shall be constructed of injection molded polymer with a 3/4 in. drain connection (36IBAS units only).

I. Drain Pan Accessories:

1. A float switch shall be provided consisting of a potted (electrically water sealed) reed/magnet switch design that is UL 508 compliant.
2. A plenum rated electronic condensate overflow sensor switch shall be provided that is UL 508 and UL 2043 compliant.
3. A combination trap and condensate switch shall be provided consisting of a plenum rated electronic condensate overflow sensor switch that is UL 508 and UL 2043 compliant, 3/4 in. PVC pipe, 3/4 in. PVC trap, and 3/4 in. PVC tee.

J. Primary Air Inlet Arrangement:

Unit shall be constructed with reversible primary air inlet arrangement which can be rotated in the field by 180 degrees (36IBAM,R units only).

Induction Beams

HVAC Guide Specifications

Size Range: **2, 4, 6, and 8 ft**

Carrier Model Number: **36IBAL,J**

Part 1 — General

1.01 SYSTEM DESCRIPTION

- A. Integrated induction beam system for ventilation, cooling, and heating.
- B. Induction terminal unit shall be constant volume primary airflow unit designed to induce a secondary airflow within the conditioned space using the primary conditioned air supply. Capacities and characteristics as listed in the schedule and the guide specifications that follow.

1.02 QUALITY ASSURANCE

- A. Unit coils shall be tested in general accordance with the AHRI 410, latest edition, standard "Forced-Circulation Air-Cooling and Air-Heating Coil."
- B. Units shall be factory-tested for performance data, including coil capacity and pressure drop, airflow and sir-side pressure drop, sound levels, and throw.

Part 2 — Product

2.01 EQUIPMENT

A. General:

- 1. The induction beam unit shall be designed for flush mounting in a false ceiling and shall be sized to match a standard 2 ft false ceiling module.
- 2. Unit shall be provided with hanging brackets. Hanger rods or other approved hanging system to be field supplied and installed in the field by installing contractor.
- 3. Units shall be equipped with round low velocity pressure primary air inlet transition, one air plenum and air induction nozzle plate, one chilled/hot water coil, a supply and a return chilled water piping connection, a supply and a return hot water piping connection, one 3/4 in. condensate drain connection, and one or two-slot supply opening with return air grille for a full one-way or 2-way Coanda effect room air distribution. The grille shall have a hinged core to provide full access to the return air side of the coil. The unit shall be capable of inducing secondary airflow within the conditioned space using the velocity pressure of the primary airflow. This secondary air must flow directly from the room to the unit and shall not use the ceiling as a return air plenum. Induction units using the ceiling plenum as a return air path are not acceptable.
- 4. Latent conditioning of the air supply to the space shall be performed at the dedicated outdoor air unit and controlled by exhaust air humidity sensors. Humidity within the building

envelope is to be controlled to not exceed 55% relative humidity.

- 5. All units shall include a condensate drain pan. This drain pan must be 1-1/2 inches in depth and sloped in the direction of the condensate connection.
 - 6. Unit shall include a built-in pressure tap on the primary air inlet for air static pressure measurement and balancing.
- B. Unit Casing:
- 1. The entire unit shall be constructed of 20 gage galvanized G90 sheet metal. The primary air plenum and nozzles shall be designed and configured to provide uniform air distribution with low noise operation to all nozzles.
 - 2. Units shall be supplied with slot supply openings to evenly distribute the mixed primary air in a linear one-way or 2-way Coanda effect air distribution pattern.

C. Induction Nozzles:

Induction nozzles shall be aerodynamically designed and made of DuPont Hytrel 4069 Engineering Polymers with a temperature range of -40 to 122°F and tested and rated by test method UL94 and UL746. Each nozzle shall incorporate a tapered design allowing the airflow to enter the nozzle more effectively and perform more efficiently without dirt build-up.

D. Water Coil Assembly:

- 1. Coils shall be of the hot and chilled water type utilizing aluminum fins and copper tubes. Coils shall be factory leak tested at 350 psig water. Coil connections shall be indicated on the drawings.
- 2. Coils must be one flat plate assembly with no interconnecting joints to minimize leakage. Each coil shall be of the fin plate design surrounding the copper tube wall via fin spacing of 8 fins per inch. The coil tubes shall be designed with 0.016 thick copper wall.
- 3. The water coil assembly shall consist of a two-row copper tube and aluminum fins for cooling and heating on each side. The heating row shall be mounted on the return side of the cooling coil, thus not allowing a reheat concept to be used. Return air will see the row for heating on its first run through the coil. A drainable condensate pan shall be provided to collect any condensate that might form. Drip trays are unacceptable as a drain pan.
- 4. Control valves for cooling and heating can control one or more induction units in a given zone. Control valves for the units shall be supplied by the Automatic Temperature Control Contractor.

E. Insulation:

Insulation on the unit exterior shall be provided when the entering chilled water temperature to the unit is below 55°F. Insulation on the unit and collar exterior shall be provided when the primary air temperature supplied to the unit is below 55°F. The unit and collar exterior insulation shall be closed-cell elastomeric foam that prevents moisture intrusion, inhibits mold and mildew, and is fiber-free, formaldehyde-free, and low in VOCs.

F. Grille Finish:

The standard grille finish shall consist of baked-on acrylic enamel.

G. Lint Filter (Optional):

1. Lint filter shall be supplied by the beam manufacturer as washable or disposable type.
2. Washable filter shall have 1/2 in. depth and aluminum frame with woven nylon mesh media.
3. Disposable panel filter shall have 1/2 in. depth and fiberglass media. Disposable filter must comply with UL 217V.

H. Drain Pan:

Drain pan shall be constructed of galvanized steel with a 3/4 in. CPVC or copper drain connection.

I. Drain Pan Accessories:

1. A float switch shall be provided consisting of a potted (electrically water sealed) reed/magnet switch design that is UL 508 compliant.
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