







| | | |
|--------------|--------------|---------------|
| PURCHASER | P.O. # | DATE |
| PROJECT | LOCATION | |
| ENGINEER | ARCHITECT | |
| SUBMITTED BY | FOR APPROVAL | FOR REFERENCE |

| ITEM | PLAN DESIGNATION | QUANTITY | COOLING BTU/H | VOLTAGE | FRIEDRICH MODEL |
|------|------------------|----------|---------------|---------|-----------------|
| | | | | | |
| | | | | | |
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| | | | | | |
| | | | | | |

Key Features

 Indicates sustainability feature

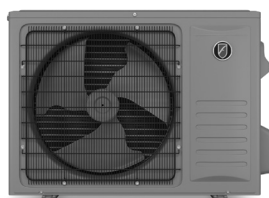
-  All models ENERGY STAR® and ENERGY STAR® Cold Climate Heat Pump certified
-  **Precision Inverter®** technology (variable speed compressor)*
-  Soft-Start™ compressor
-  BLDC motor
-  Built-in Wi-Fi
-  Sleep mode
- 3 fan speeds
- External static pressure range 0-.40 (Single-Zone)
- External static pressure range 9K/12K/18K/24K 0-.40 (Multi-Zone)
- Built-in drain lift
- Wall Controller included (FPWC1)
- Control lock function on controller



FPHFD09A3D, FPHFD12A3D,
FPHFD18A3D, FPHFD24A3D,
FPHSD36A3D



FPWC1



FPHFR09A3D, FPHFR12A3D



FPHFR18A3D, FPHFR24A3D,
FPHFR36A3D

HIGH EFFICIENCY HEATING & COOLING

- Low ambient heat pump operation down to -22°F
- Low ambient cooling operation down to 5°F
- Low temperature compressor start-up protection

FLOATING AIR™ PRO X | SINGLE-ZONE | THE INSIDER® CONCEALED DUCTED HEAT PUMPS

| MODEL | Model Set | Unit | FPHD093D | FPHD123D | FPHD183D | FPHD243D | FPHD363D |
|-----------------------------------|--|--|----------------------|----------------------|----------------------|----------------------|-----------------------|
| | Indoor Model | | FPHFD09A3D | FPHFD12A3D | FPHFD18A3D | FPHFD24A3D | FPHSD36A3D |
| | Outdoor Model | | FPHFR09A3D | FPHFR12A3D | FPHFR18A3D | FPHFR24A3D | FPHFR36A3D |
| | Power Supply | | 208V/230V~, 60Hz, 1P | | | | |
| COOLING | ENERGY STAR® Standard | Y/N | Y | Y | Y | Y | Y |
| | ENERGY STAR – Cold Climate | Y/N | Y | Y | Y | Y | Y |
| | Rated Capacity @ 95°F | Btu/h | 9,000 | 12,000 | 18,000 | 24,000 | 33,000 |
| | Cooling Capacity Range (Min.–Max.) | Btu/h | 4,300–14,500 | 4,300–14,500 | 6,500–25,000 | 9,000–31,500 | 12,000–45,000 |
| | EER2 @ 95°F | Btu/h/W | 11.70 | 11.71 | 11.69 | 11.71 | 11.70 |
| HEATING | SEER2 | Btu/h/W | 19.50 | 19.50 | 19.00 | 19.00 | 18.50 |
| | Cooling Operating Range | °F | 5–125 | 5–125 | 5–125 | 5–125 | 5–125 |
| | Rated Capacity @ 47°F | Btu/h | 9,000 | 12,000 | 18,000 | 24,000 | 36,000 |
| | Heating Capacity Range (Min.–Max.) | Btu/h | 5,300–18,000 | 5,300–18,000 | 5,700–30,000 | 7,600–37,500 | 11,000–45,000 |
| | COP @ 47°F | W/W | 3.52 | 3.52 | 3.43 | 3.52 | 3.64 |
| | COP @ 5°F | W/W | 1.80 | 1.80 | 2.00 | 2.00 | 2.00 |
| | HSPF2 | Btu/h/W | 9.50 | 9.50 | 9.00 | 9.50 | 9.00 |
| | Rated Capacity Heating @ 17°F (-8.3°C) | Btu/h | 8,700 | 8,700 | 13,200 | 15,800 | 25,500 |
| | Maximum Heating Capacity @ 5°F (-15°C) | Btu/h | 12,000 | 12,000 | 18,000 | 24,000 | 36,000 |
| | Maximum Heating Capacity @ -13°F (-25°C) | Btu/h | 8,400 | 8,400 | 12,600 | 16,000 | 25,200 |
| | Heating Operating Range | °F | -22–75 | -22–75 | -22–75 | -22–75 | -22–75 |
| INDOOR AIRFLOW | Air Circulation (Max./H/M/L) | ft³ CFM | 324/324/294/235 | 324/324/294/235 | 530/530/471/412 | 735/735/647/559 | 1,118/1,118/1,000/883 |
| | Sound Rating – Indoor (High) | dB(A) | 52 | 52 | 50 | 53 | 60 |
| | ESP (in H₂O) | Rated With Filter Range With Filter | 0.18 0–0.12 | 0.18 0–0.12 | 0.18 0–0.56 | 0.58 0–0.66 | 0.58 0–0.71 |
| INDOOR FAN MOTOR | Output | W | 57 | 57 | 75 | 75 | 106 |
| | Speed (High/Med/Low) | r/min | 1,110/1,000/800 | 1,110/1,000/800 | 920/820/720 | 1,400/1,250/1,100 | 1,260/1,150/1,020 |
| OUTDOOR AIRFLOW | Air Circulation (High) for Outdoor | ft³ CFM | 1,354 | 1,354 | 1,853 | 2,235 | 3,350 |
| | Sound Rating – Outdoor | dB(A) | 64.0 | 64.0 | 68.0 | 71.0 | 74.0 |
| OUTDOOR FAN MOTOR | Output | W | 40 | 40 | 60 | 102 | 250 |
| | Speed (High) | r/min | 880 | 880 | 880 | 870 | 850 |
| ELECTRICAL | Rated Current | Cooling (A) | 3.10 | 4.50 | 6.70 | 9.40 | 13.40 |
| | | Cooling (W) | 769 | 1,025 | 1,540 | 2,050 | 2,820 |
| | | Heating (A) | 2.86 | 4.30 | 6.78 | 9.20 | 13.80 |
| | | Heating (W) | 750 | 1,000 | 1,540 | 2,050 | 2,900 |
| | MOP (Rating of Overcurrent Protective Device) | A | 20 | 20 | 25 | 30 | 50 |
| | MCA (Minimum Circuit Ampacity) | A | 12 | 12 | 16 | 22 | 30 |
| REFRIGERATION (R-454B) | Communication Wire Size and Type | | 4 × 14AWG | 4 × 14AWG | 4 × 14AWG | 4 × 14AWG | 4 × 14AWG |
| | Moisture Removal | pints/hr | 2.35 | 3.66 | 4.26 | 4.31 | 9.55 |
| | Refrigerant Charge Volume | oz. | 38.1 | 38.1 | 56.4 | 74.1 | 112.8 |
| | Liquid Pipe | in. | 1/4 | 1/4 | 1/4 | 3/8 | 3/8 |
| | Gas Pipe | in. | 3/8 | 3/8 | 1/2 | 5/8 | 5/8 |
| | Max. Pipe Length (Total) | ft. | 130 | 130 | 150 | 165 | 164 |
| | Max. Elevation (Indoor Units Higher Than Outdoor Unit) | ft. | 50 | 50 | 80 | 100 | 98 |
| | Pre-charge Pipe Length | ft. | 25 | 25 | 25 | 25 | 25 |
| INDOOR UNIT DIMENSIONS & WEIGHTS | Dimension (W×H×D) | in. | 35-7/8×7-1/2×17-5/8 | 35-7/8×7-1/2×17-5/8 | 31-1/2×9-5/8×27-1/2 | 43-1/4×9-5/8×27-1/2 | 55-1/8×11-3/4×31-1/2 |
| | | mm | 910×190×447 | 910×190×447 | 800×245×700 | 1,100×245×700 | 1,400×300×800 |
| | Packing (L×W×H) | in. | 42-1/2×22-1/4×11-1/4 | 42-1/2×22-1/4×11-1/4 | 38-5/8×12-3/8×31-7/8 | 50-3/8×12-3/8×31-7/8 | 62-1/4×15×36-1/4 |
| | | mm | 1,080×565×285 | 1,080×565×285 | 980×315×810 | 1,280×315×810 | 1,580×380×920 |
| | Net Weight | lbs. | 44.1 | 44.1 | 58.4 | 73.9 | 112.4 |
| | | kg | 20.0 | 20.0 | 26.5 | 33.5 | 51.0 |
| | Shipping Weight | lbs. | 51.8 | 51.8 | 58.4 | 73.9 | 125.7 |
| | | kg | 23.5 | 23.5 | 31.0 | 38.5 | 57.0 |
| OUTDOOR UNIT DIMENSIONS & WEIGHTS | Dimension (W×H×D) | in. | 31-7/8×22-7/8×11 | 31-7/8×22-7/8×11 | 33-7/8×26-3/8×12-1/4 | 35-3/8×29-1/2×13-3/8 | 43-1/4×34-1/2×17-3/4 |
| | | mm | 810×580×280 | 810×580×280 | 860×670×310 | 900×750×340 | 1,100×875×450 |
| | Packing (L×W×H) | in. | 37×16-1/2×25-1/4 | 37×16-1/2×25-1/4 | 39×17-3/4×28-3/4 | 41×32-5/8×18-1/8 | 45-7/8×39-1/2×21-1/4 |
| | | mm | 940×420×640 | 940×420×640 | 990×450×730 | 1,040×830×460 | 1,165×1,005×540 |
| | Net Weight | lbs. | 79.4 | 79.4 | 103.6 | 123.4 | 185.2 |
| | | kg | 36.0 | 36.0 | 47.0 | 56.0 | 84.0 |
| | Shipping Weight | lbs. | 86.0 | 86.0 | 111.3 | 132.3 | 209.4 |
| | | kg | 39.0 | 39.0 | 50.5 | 60.0 | 95.0 |

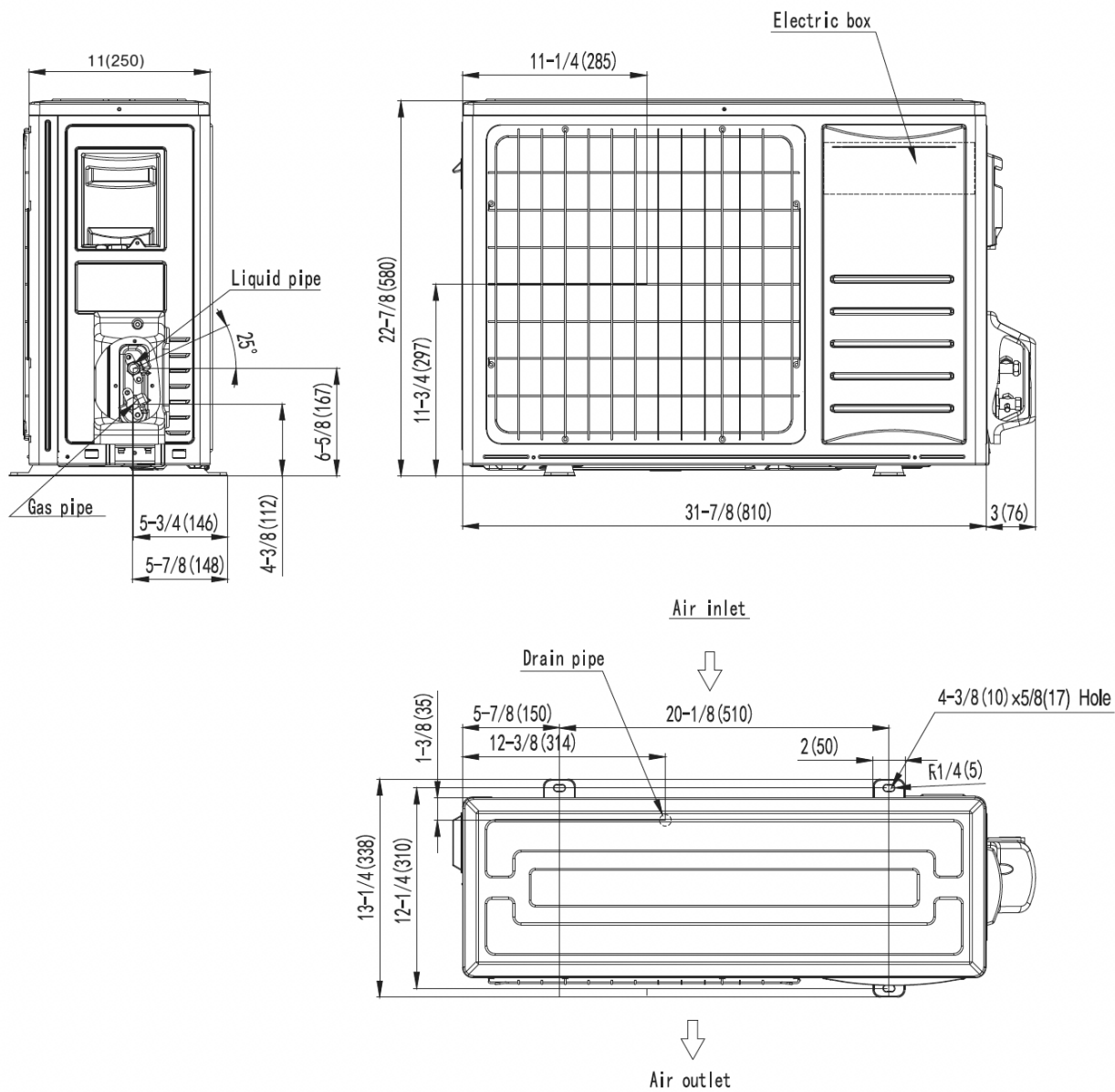


With Registration



DIMENSIONAL DRAWINGS: OUTDOOR HEAT PUMP

OUTDOOR UNITS/ FPHFR09A3D, FPHFR12A3D

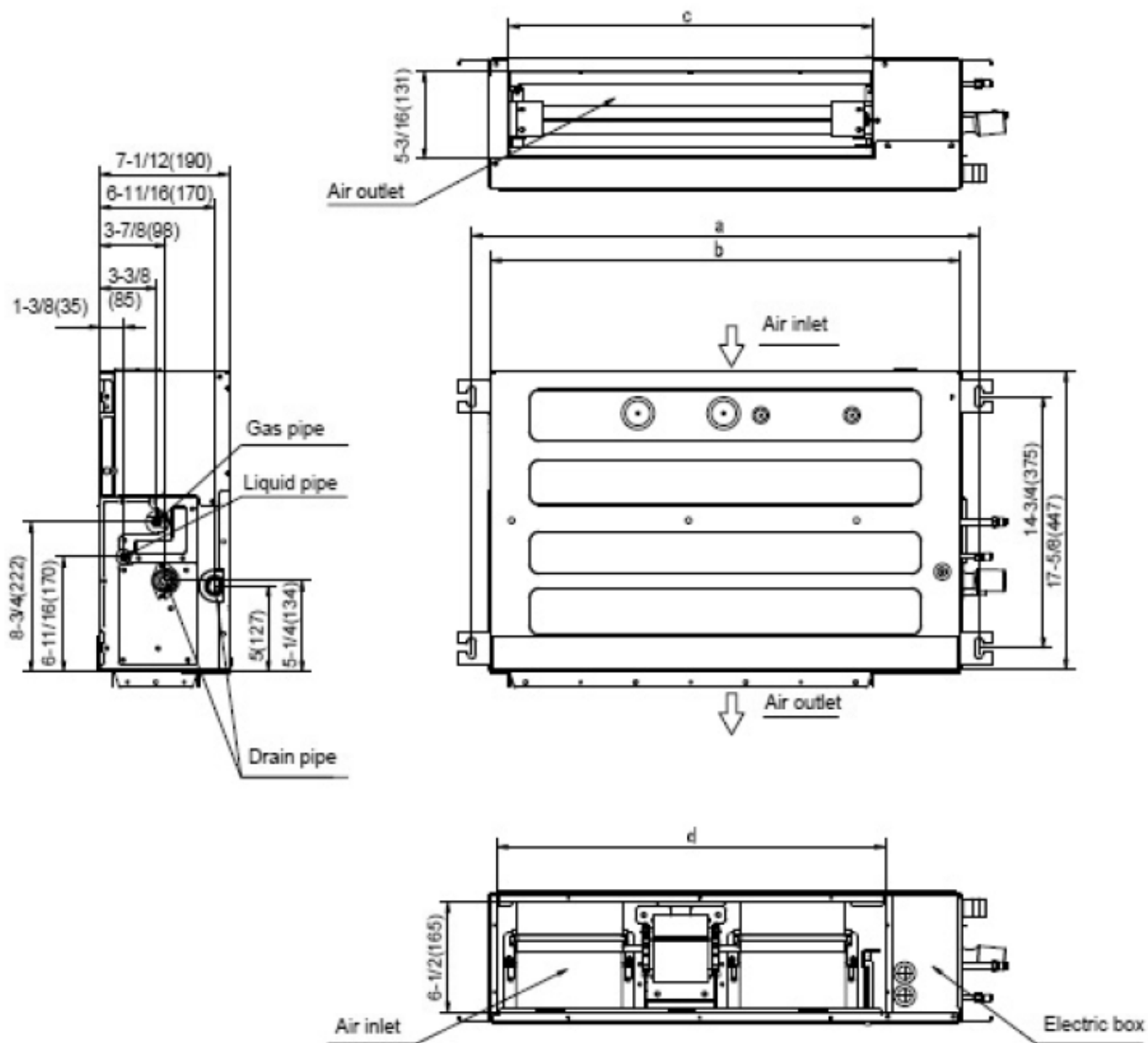


| Model | W | H | D |
|-------------------------------|---------|---------|---------|
| FPHFR09A3D, FPHFR12A3D | 31 7/8" | 22 7/8" | 12 2/8" |

UNITS: INCHES

DIMENSIONAL DRAWINGS: CONCEALED DUCTED

OUTDOOR UNITS/ FPHFD09A3D, FPHFD12A3D

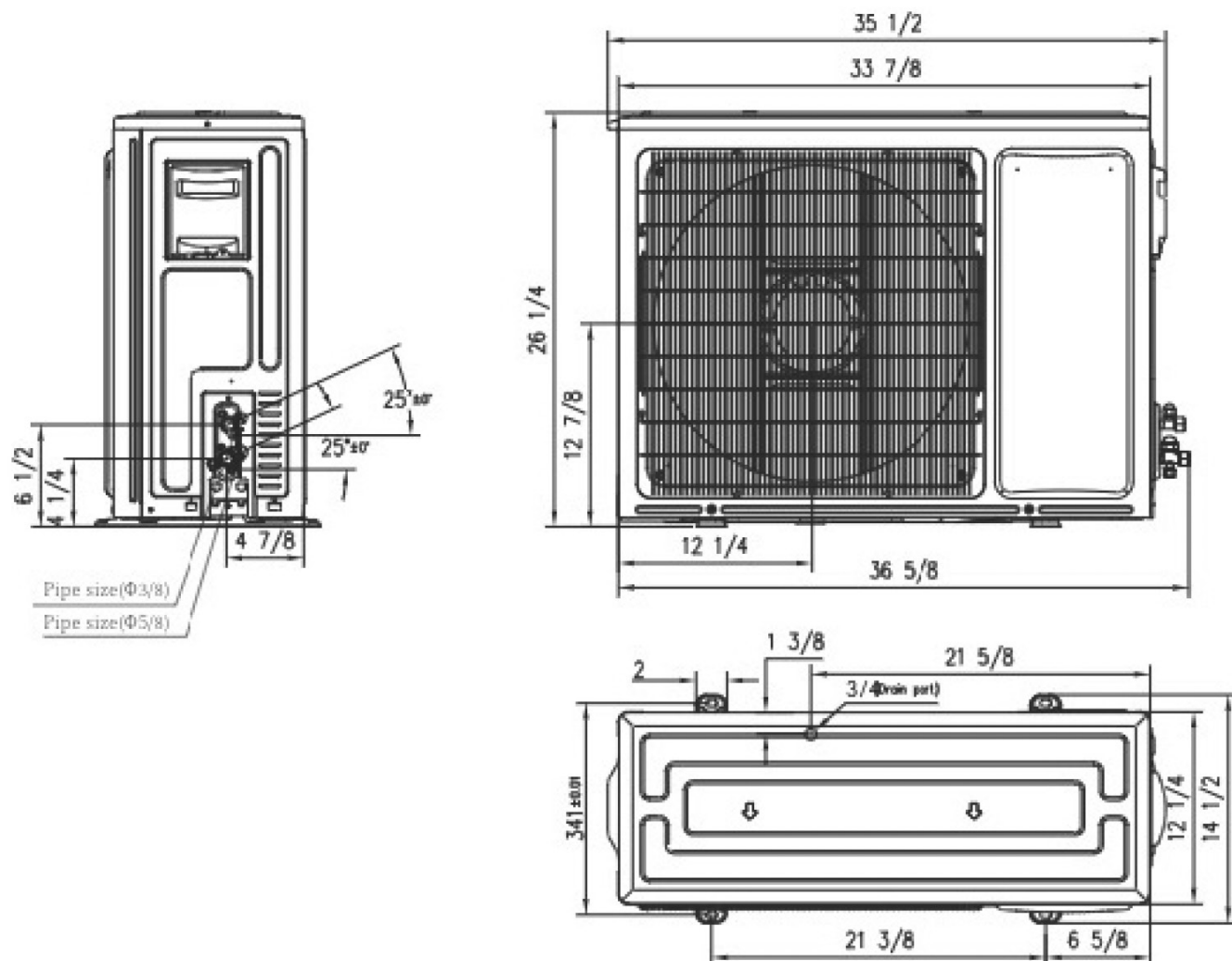


UNITS: INCHES (MM)

| Model (Btu/h) | a | b | c | d |
|---------------|----------------|----------------|--------------|----------|
| 9K/12K | 37-13/16 (961) | 35-13/16 (910) | 29-1/2 (749) | 30 (786) |

DIMENSIONAL DRAWINGS: OUTDOOR HEAT PUMP

OUTDOOR UNITS/ FPHFR18A3D

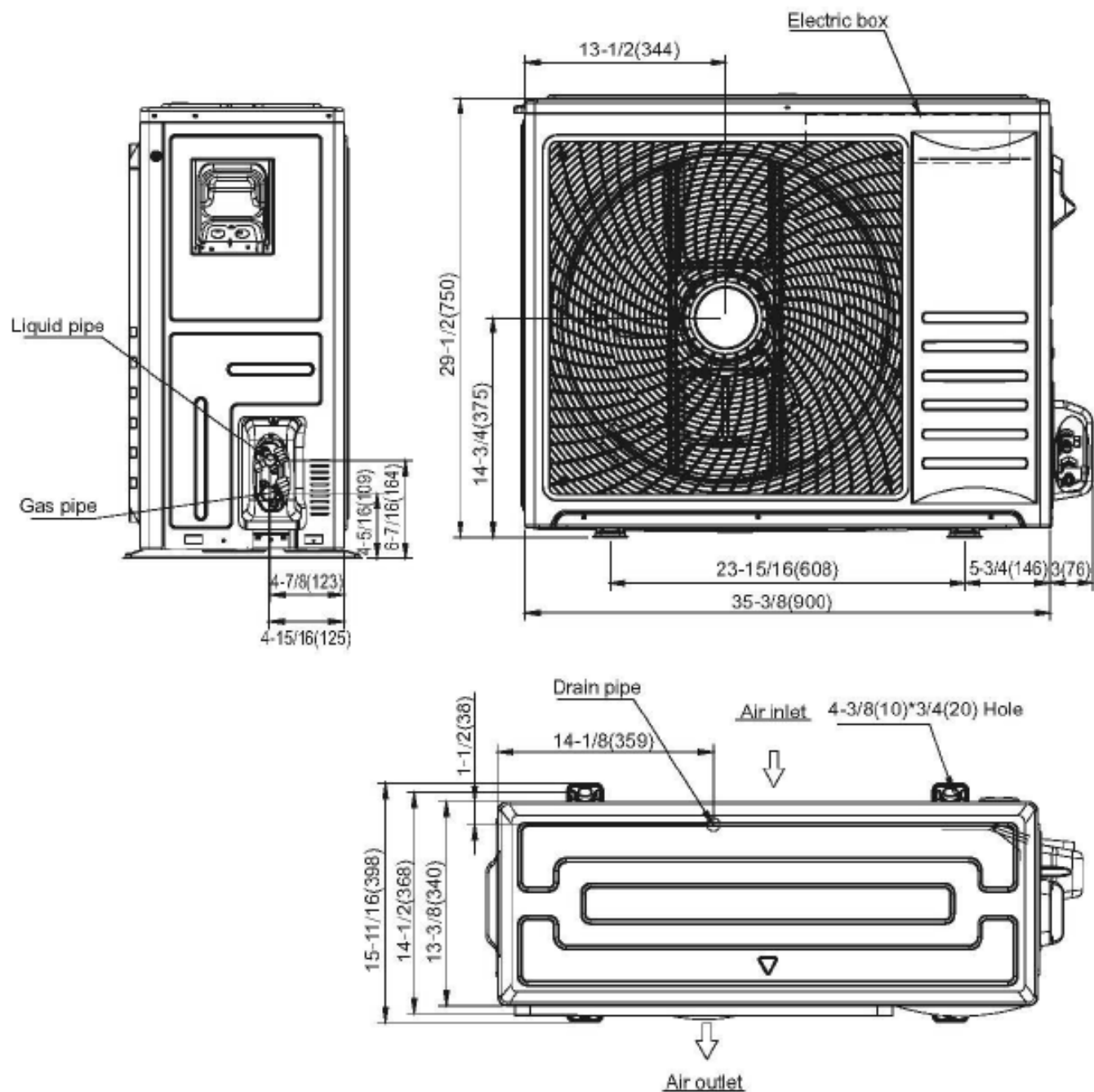


| Model | W | H | D |
|-------------------|---------|---------|---------|
| FPHFR18A3D | 33 7/8" | 26 2/8" | 12 2/8" |

UNITS: INCHES

DIMENSIONAL DRAWINGS: OUTDOOR HEAT PUMP

OUTDOOR UNITS/ FPHFR24A3D

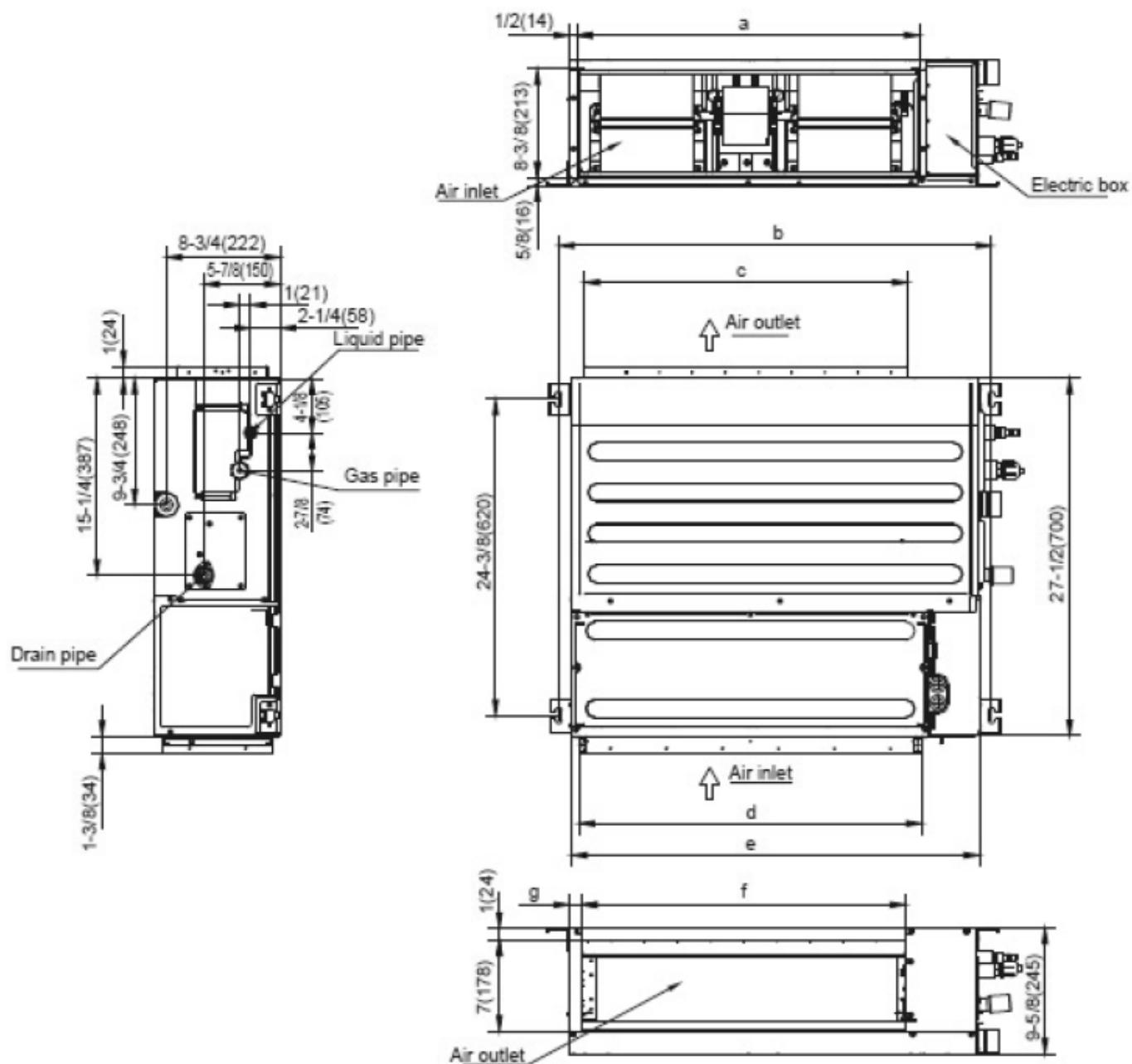


| Model | W | H | D |
|-------------------|---------|---------|---------|
| FPHFR24A3D | 35 5/8" | 29 1/2" | 13 3/8" |

UNITS: INCHES

DIMENSIONAL DRAWINGS: CONCEALED DUCTED

OUTDOOR UNITS/ FPHFD18A3D, FPHFD24A3D

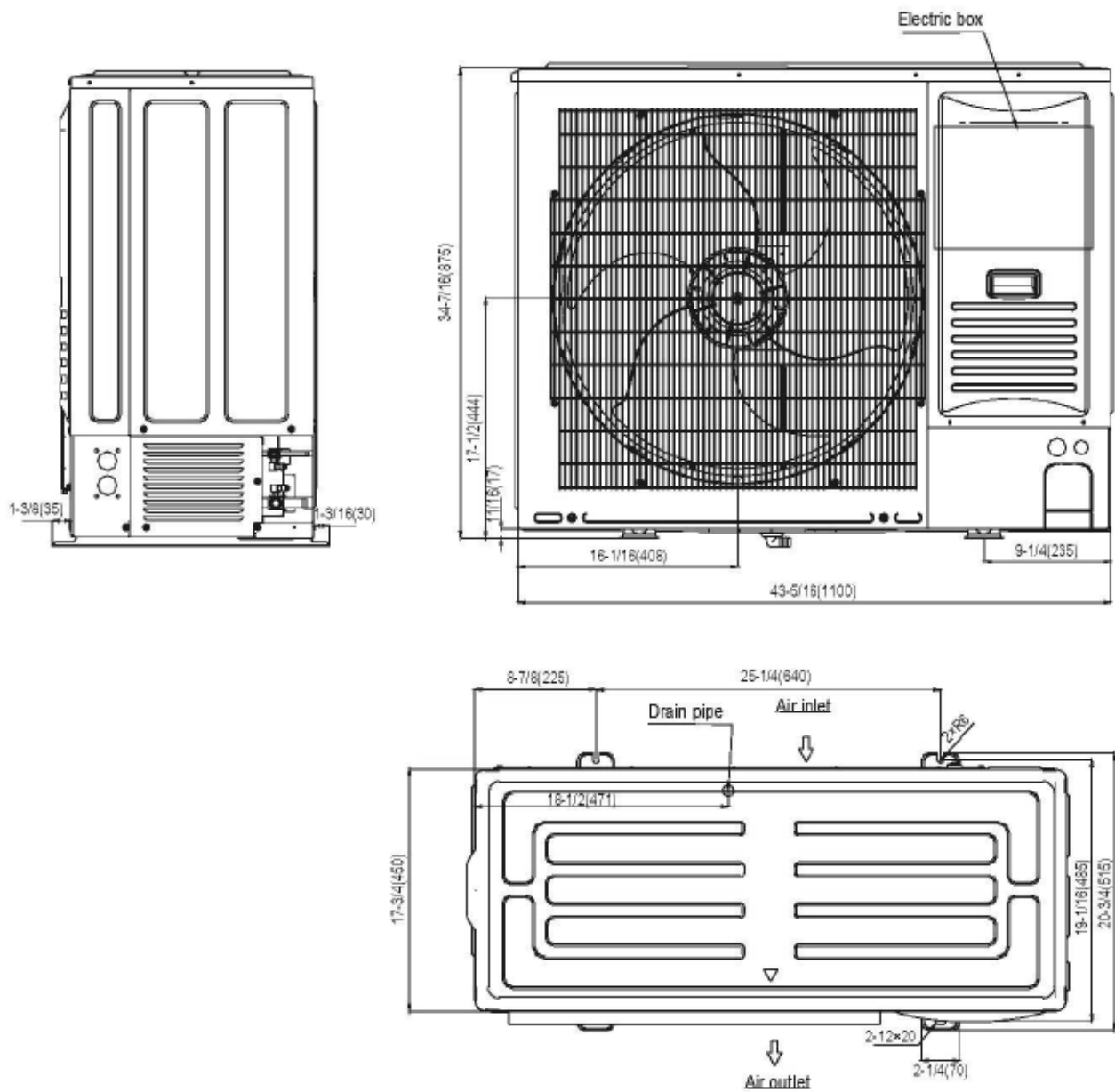


UNITS: INCHES (MM)

| Model (Btu/h) | a | b | c | d | e | f | g |
|---------------|--------------|----------------|--------------|--------------|--------------|--------------|------------|
| 18K | 26-1/2 (674) | 33-1/2 (850) | 25 (636) | 26-1/2 (673) | 31-1/2 (800) | 25 (636) | 1 (24) |
| 24K | 38-3/4 (974) | 45-1/4 (1,150) | 35-7/8 (912) | 38-1/4 (973) | 43-1/4 (973) | 35-7/8 (912) | 1-7/8 (49) |

DIMENSIONAL DRAWINGS: OUTDOOR HEAT PUMP

OUTDOOR UNITS/ FPHFR36A3D

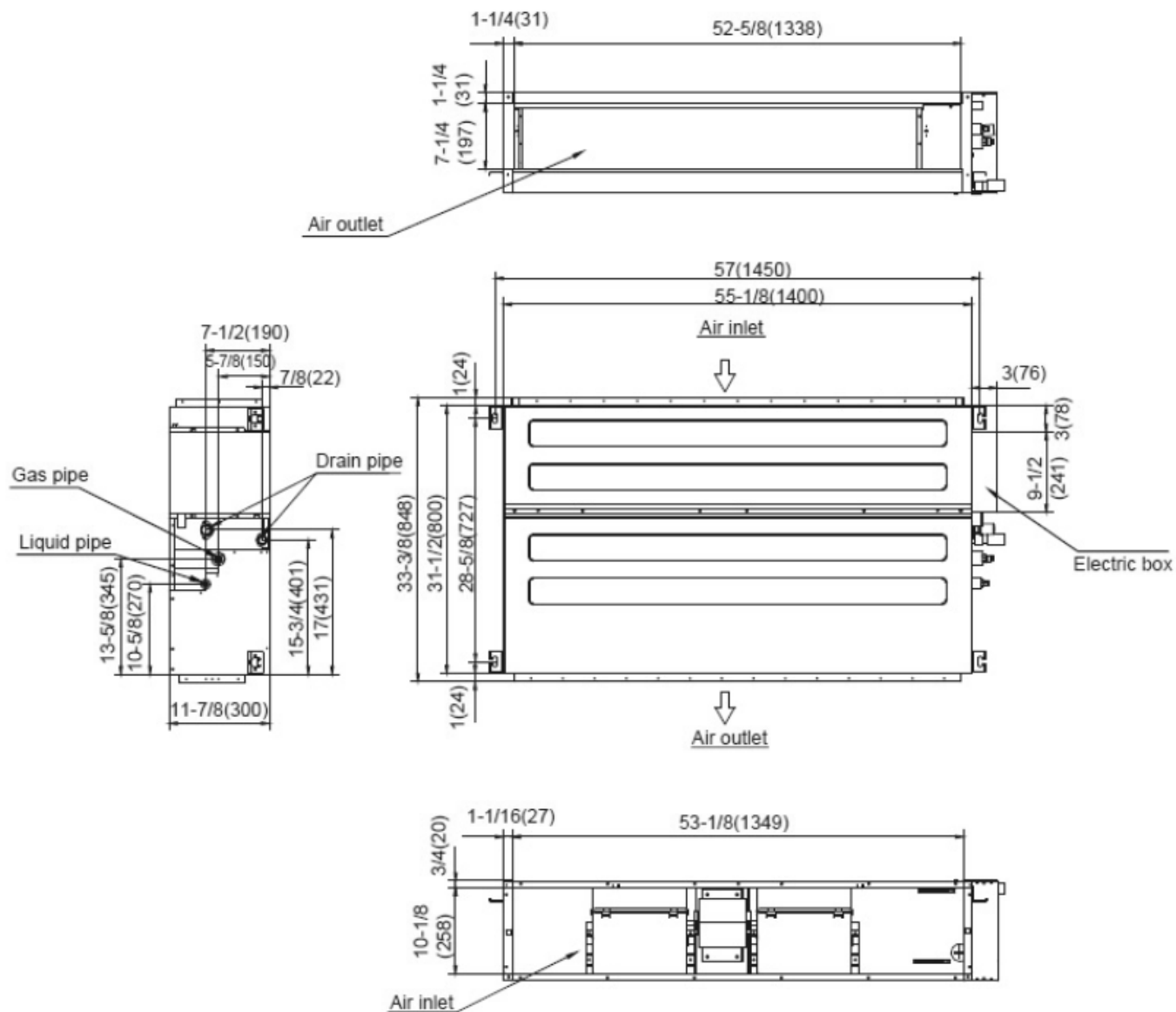


| Model | W | H | D |
|-------------------|----------|----------|----------|
| FPHFR36A3D | 43 5/16" | 34 7/16" | 19 1/16" |

UNITS: INCHES

DIMENSIONAL DRAWINGS: CONCEALED DUCTED

OUTDOOR UNITS/ FPHSD36A3D



| Model | W | H | D |
|-------------------|---------|---------|---------|
| FPHSD36A3D | 52 5/8" | 33 3/8" | 11 7/8" |

UNITS: INCHES

REFRIGERATION LINE SETS*

| Kit# | Length (ft.) | Liquid | Suction | System Model |
|--------|--------------|--------|---------|--------------------|
| T32150 | 15' | 1/4" | 3/8" | FPHD093D, FPHD123D |
| T32350 | 35' | 1/4" | 3/8" | |
| T41250 | 15' | 1/4" | 1/2" | FPHD183D |
| T42250 | 25' | 1/4" | 1/2" | |
| T52350 | 25' | 3/8" | 5/8" | FPHD243D |
| T53350 | 35' | 3/8" | 5/8" | |
| T63500 | 50' | 3/8" | 3/4" | FPHD363D |

*Insulated line sets are available for all Friedrich split systems in 15 ft. and 35 ft. lengths. Each line set is equipped with flare nuts on both ends. Both liquid and suction lines are insulated. Line sets can be joined together with field supplied double male connectors. Each system requires one line set for each indoor unit installed.

REFRIGERATION LINE SETS MIN./MAX. LENGTHS

| System Model | Min. (ft.) | Max. (ft.) |
|--------------|------------|------------|
| FPHD093D | 25 | 82 |
| FPHD123D | 25 | 82 |
| FPHD183D | 25 | 82 |
| FPHD243D | 25 | 164 |
| FPHD363D | 25 | 164 |

TORQUE WRENCH SETTINGS

| Outside Diameter | | Torque | |
|------------------|------|----------|-------------|
| mm | inch | ft.-lbs. | N-m |
| 6.35 | 1/4 | 13 - 18 | 17.6 - 24.5 |
| 9.52 | 3/8 | 25 - 30 | 33.3 - 41.2 |
| 12.7 | 1/2 | 40 - 47 | 53.9 - 64.7 |
| 15.88 | 5/8 | 45 - 59 | 61.7 - 80.4 |

ACCESSORIES



FPWC1 – Optional hard-wired controller for Floating Air wall-mounted and cassette indoor models. Included with concealed ducted models. Not compatible with AHU indoor models. See your Friedrich representative for options.



DSSXEMWRTA4 – Optional wireless energy management thermostat with occupancy sensor. For Floating Air Pro, single- and multi-zone models. See your Friedrich representative for options.