FRIEDRICH

Floating Air™ Pro X The Insider®

DUCTLESS MINI-SPLIT SYSTEMS

CONCEALED DUCTED, SINGLE-ZONE

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

ITEM	PLAN DESIGNATION	QUANTITY	COOLING BTU/H	VOLTAGE	FRIEDRICH MODEL

Key Features

Indicates sustainability feature

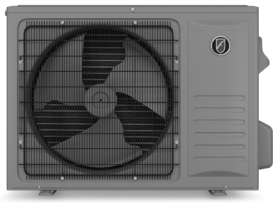
- All models ENERGY STAR® and ENERGY STAR® Cold Climate Heat Pump certified
- **Precision Inverter®** technology (variable speed compressor)*
- Soft-Start™ compressor
- BLDC motor
- Built-in Wi-Fi
- Sleep mode
- 3 fan speeds
- External static pressure range 0-.40 (Single-Zone)
- External static pressure 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

PRECISION INVERTER® | DIAMONDBLUE™ Advanced Corrosion Protection | ENERGY STAR | ENERGY STAR COLD CLIMATE

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

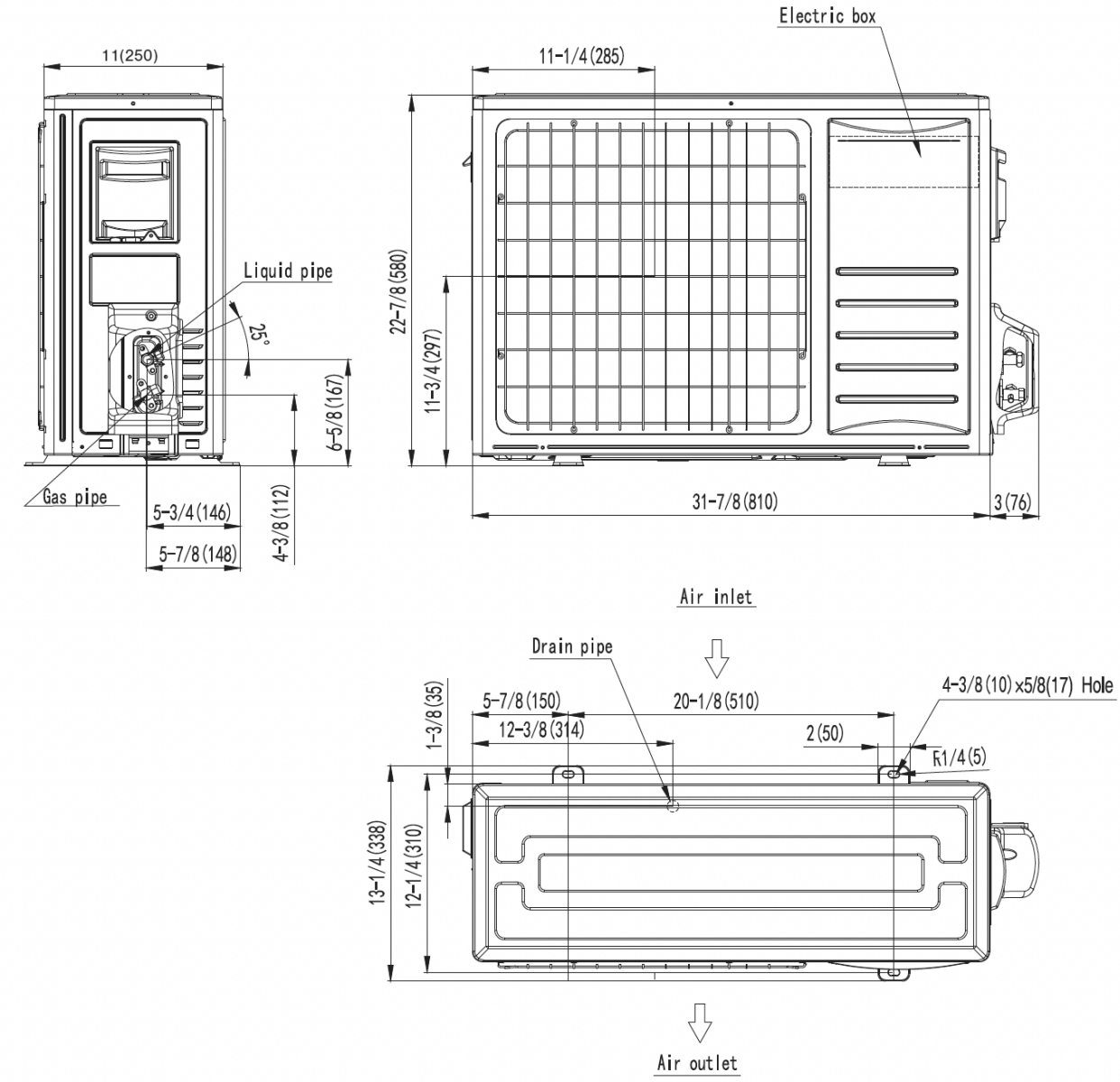
MODEL	**Model Set**	**Unit**	**FPHD093D**	**FPHD123D**	**FPHD183D**	**FPHD243D**	**FPHD363D**
	Indoor Model		**FPHFD09A3D**	**FPHFD12A3D**	**FPHFD18A3D**	**FPHFD24A3D**	**FPHSD36A3D**
	Outdoor Model		**FPHFR09A3D**	**FPHFR12A3D**	**FPHFR18A3D**	**FPHFR24A3D**	**FPHFR36A3D**
	Power Supply	V/Hz/ph	208V/230V~, 60Hz, 1P				
	ENERGY STAR® Standard	Y/N	Y	Y	Y	Y	Y
	ENERGY STAR – Cold Climate	Y/N	Y	Y	Y	Y	Y
COOLING	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
	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
HEATING	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)	ft^3 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 H_2O)	Rated With Filter	0.18	0.18	0.18	0.58	0.58
		Range With Filter	0–0.12	0–0.12	0–0.56	0–0.66	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	ft^3 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
	Communication Wire Size and Type		4 × 14AWG	4 × 14AWG	4 × 14AWG	4 × 14AWG	4 × 14AWG
REFRIGERATION (R-454B)	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
	Additional Refrigerant Charge per Foot After 25 ft.	oz./ft.	0.16	0.16	0.16	0.38	0.38
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

Standard **With Registration**

7YR. PARTS WARRANTY | 10YR. COMPRESSOR WARRANTY | 10YR. PARTS WARRANTY | 10YR. COMPRESSOR WARRANTY

DIMENSIONAL DRAWINGS: OUTDOOR HEAT PUMP

OUTDOOR UNITS/ FPHFR09A3D, FPHFR12A3D

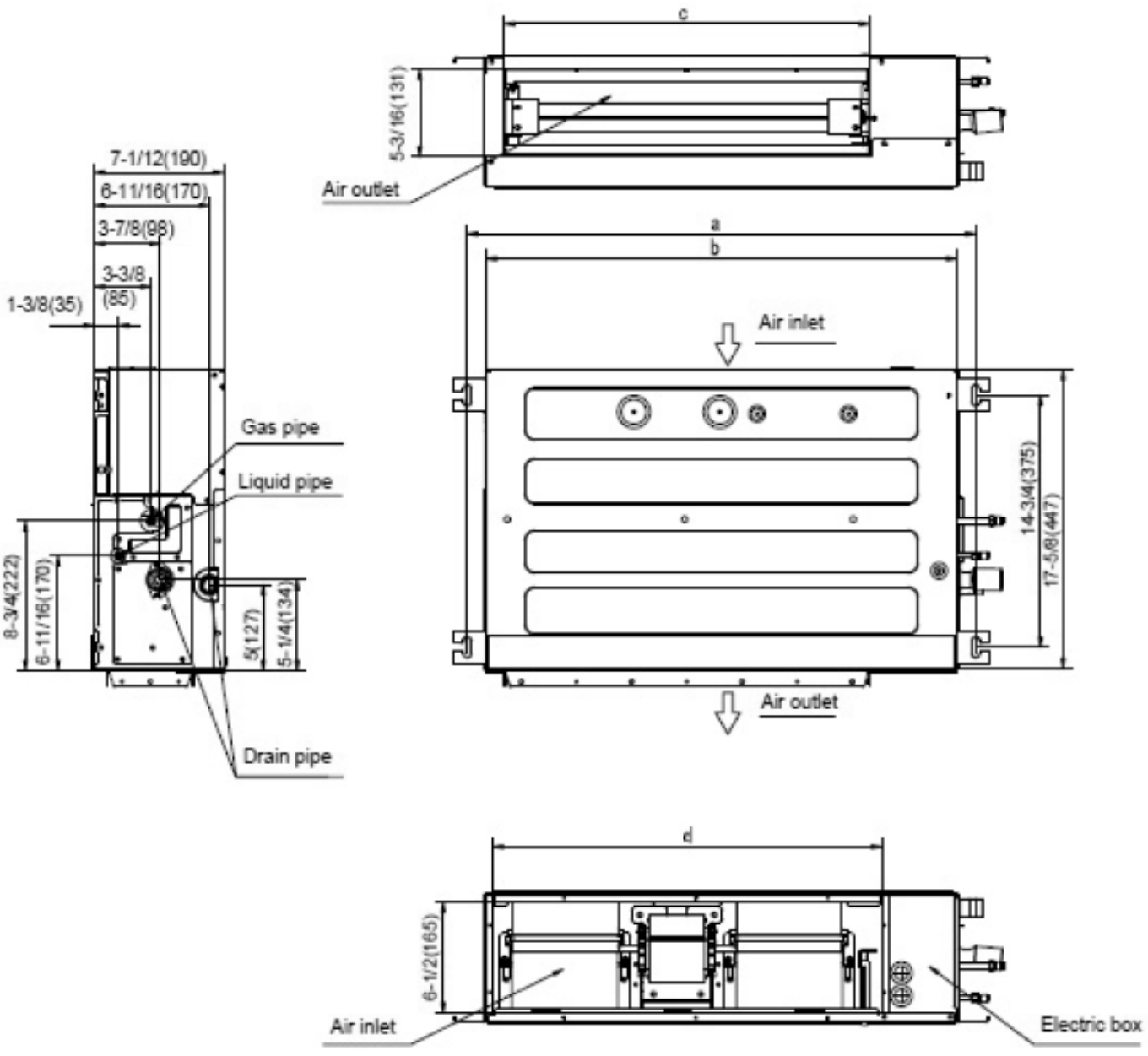


Model	W	H	D
FPHFR09A3D, FPHFR12A3D	31 7/8"	22 7/8"	12 2/8"

UNITS: INCHES

DIMENSIONAL DRAWINGS: CONCEALED DUCTED

OUTDOOR UNITS/ FPHFD09A3D, FPHFD12A3D

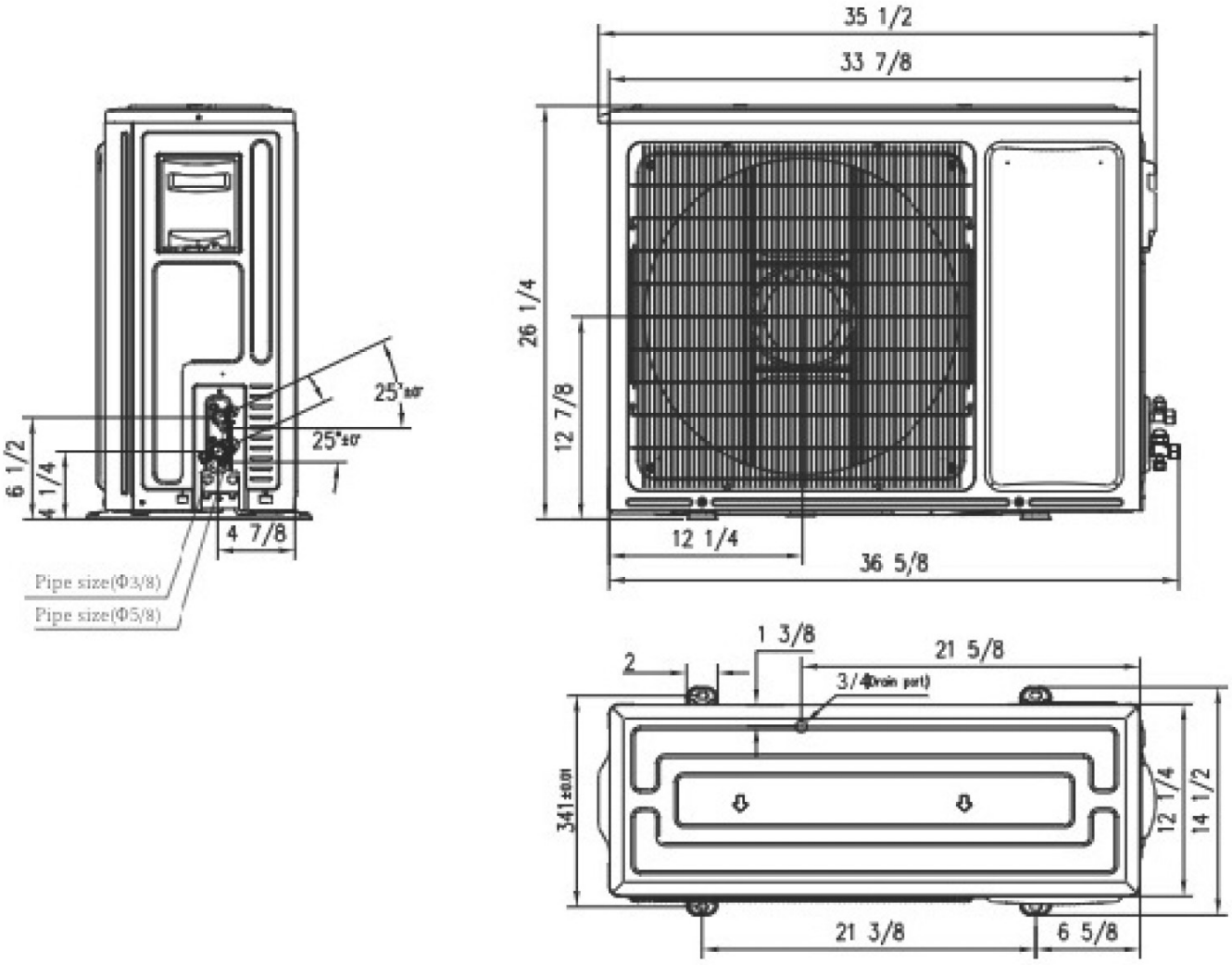


UNITS: INCHES (MM)

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

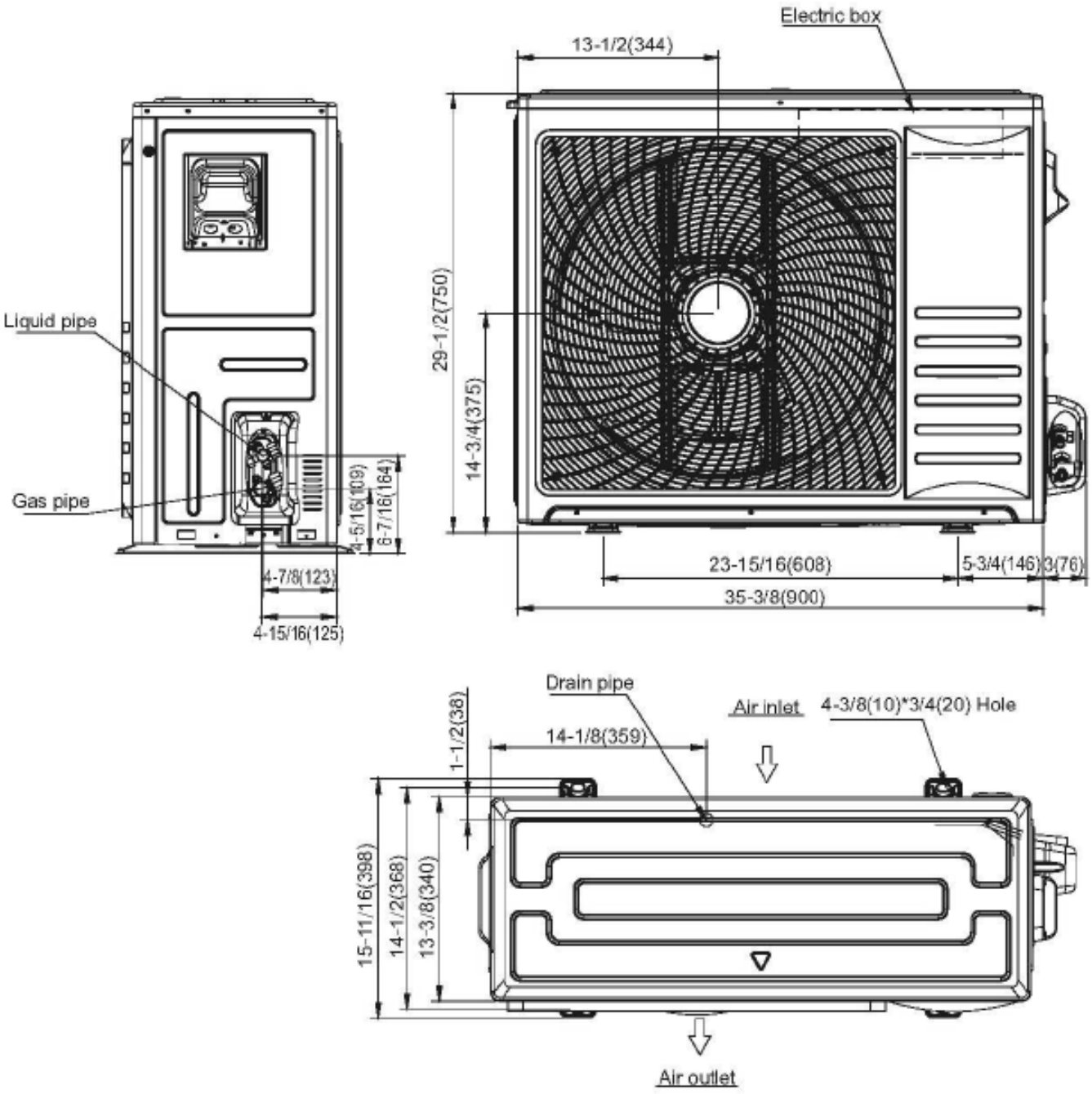


Model	W	H	D
FPHFR18A3D	33 7/8"	26 2/8"	12 2/8"

UNITS: INCHES

DIMENSIONAL DRAWINGS: OUTDOOR HEAT PUMP

OUTDOOR UNITS/ FPHFR24A3D

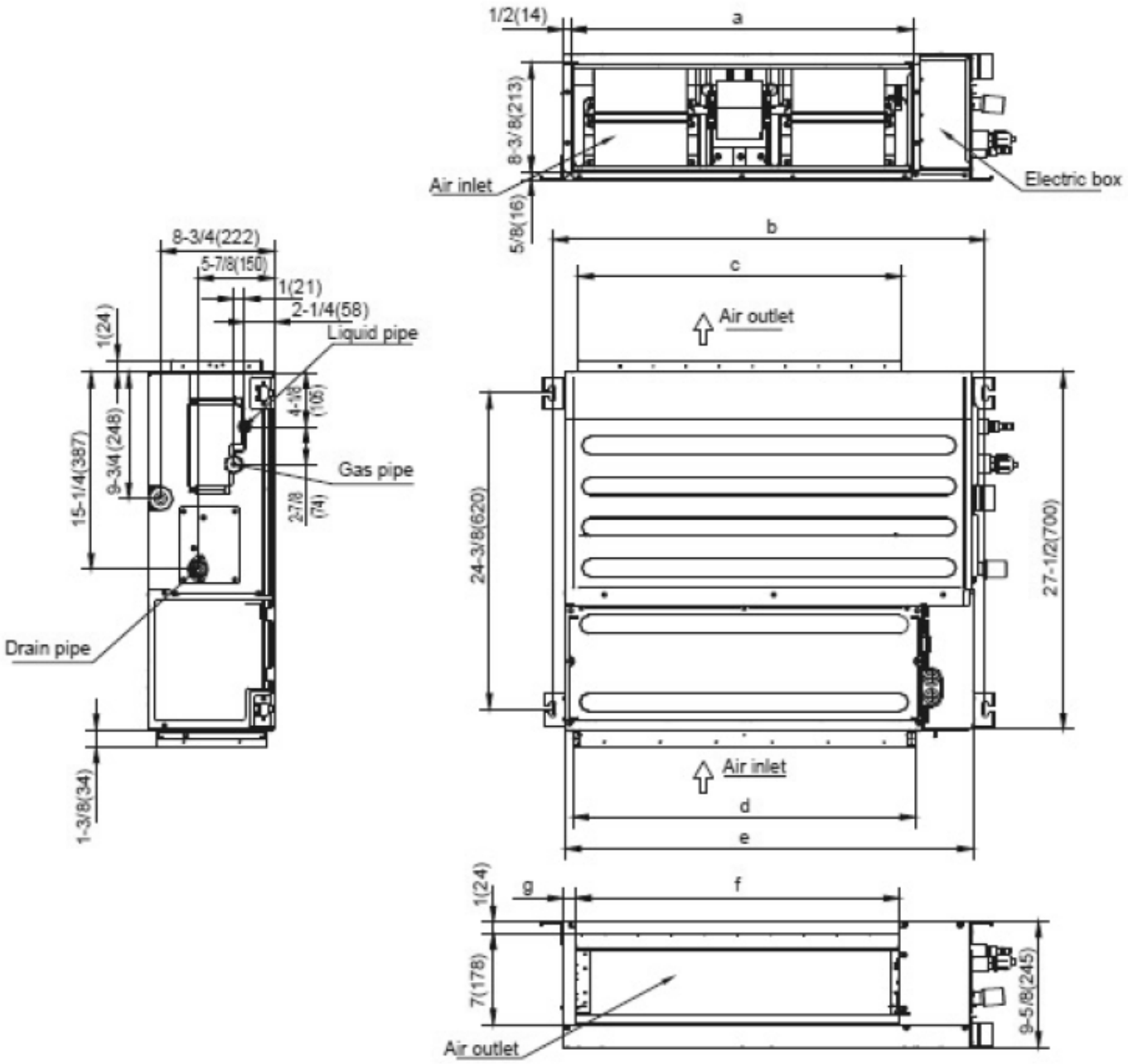


Model	W	H	D
FPHFR24A3D	35 5/8"	29 1/2"	13 3/8"

UNITS: INCHES

DIMENSIONAL DRAWINGS: CONCEALED DUCTED

OUTDOOR UNITS/ FPHFD18A3D, FPHFD24A3D

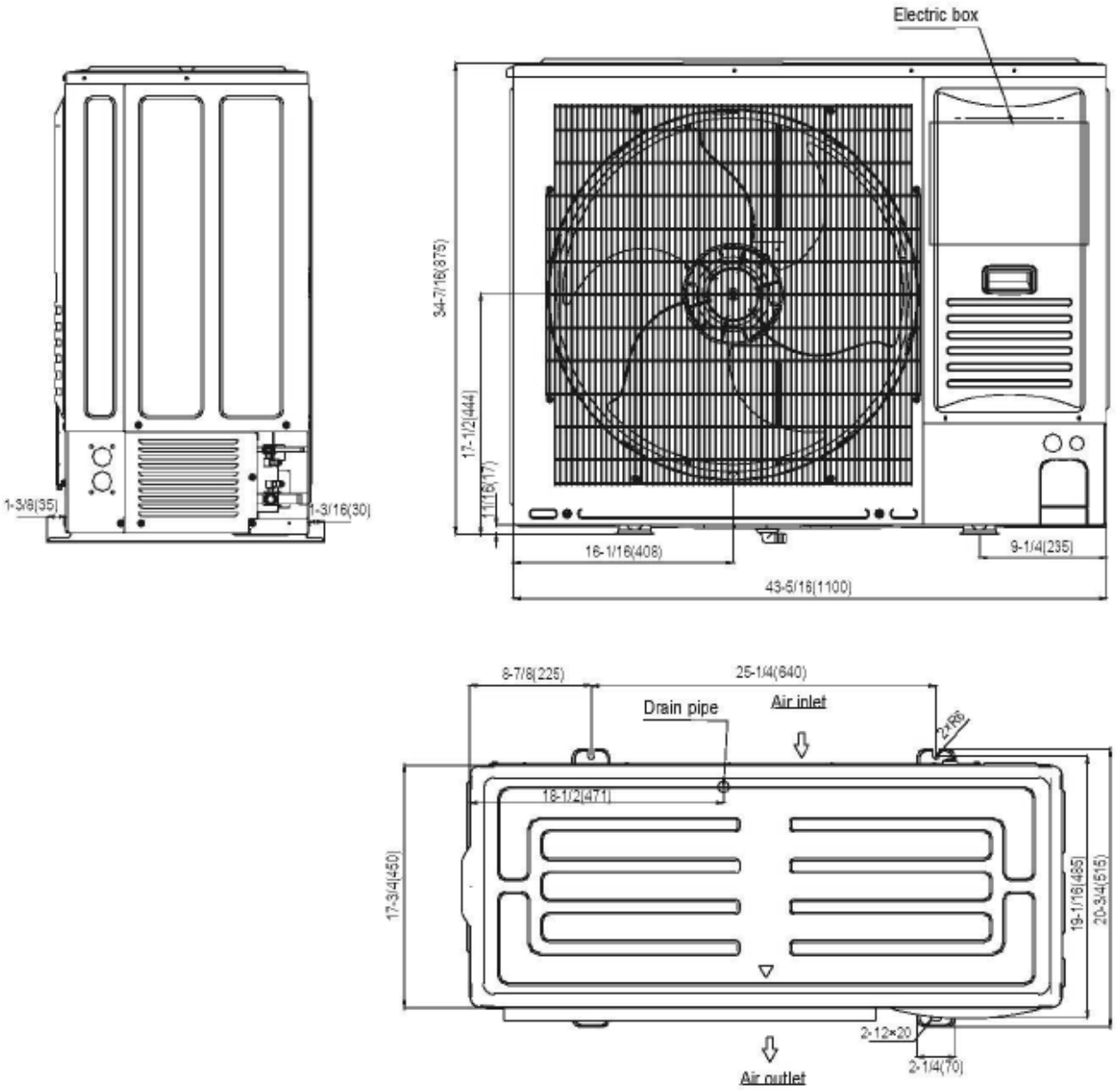


UNITS: INCHES (MM)

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

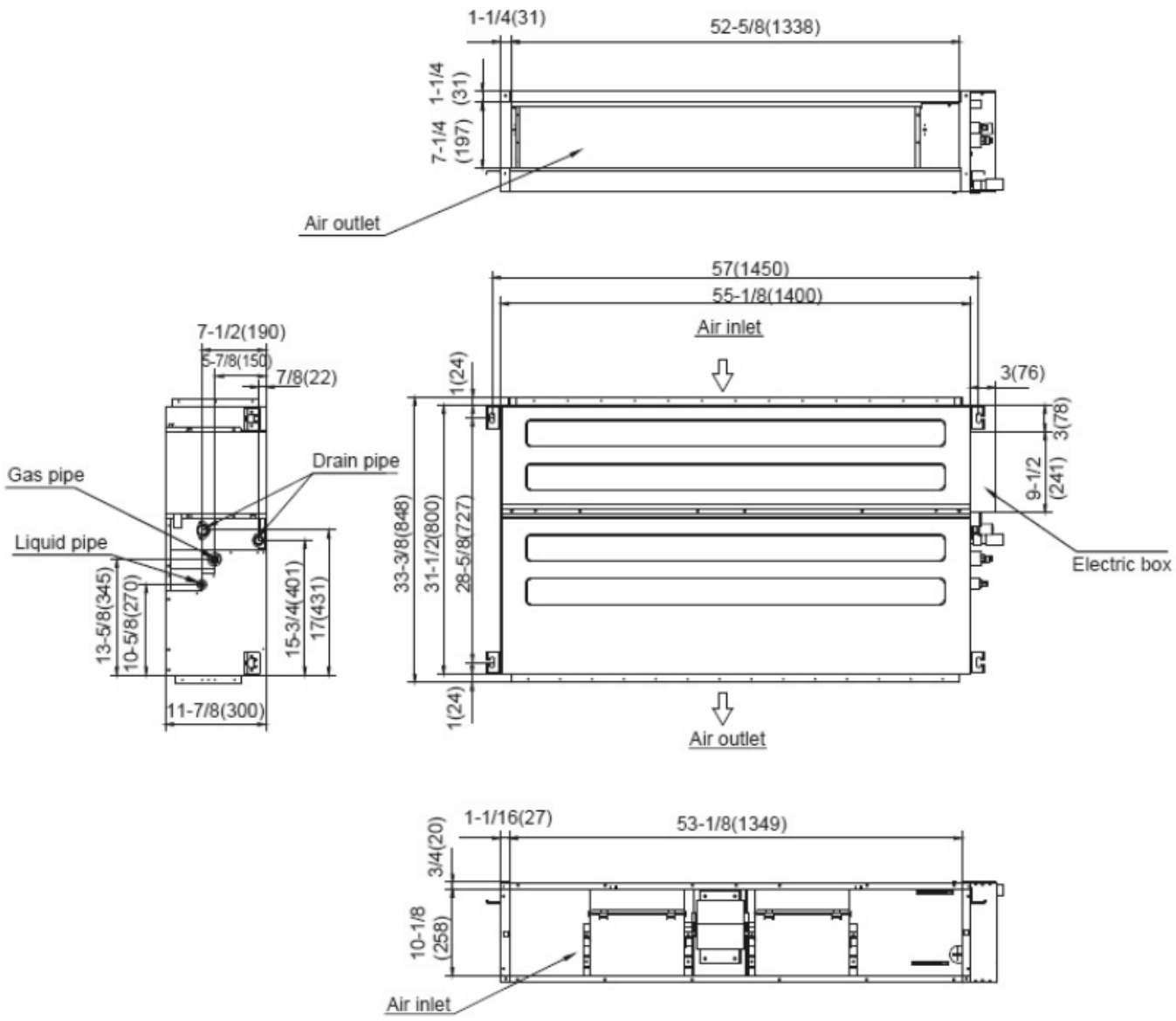


Model	W	H	D
FPHFR36A3D	43 5/16"	34 7/16"	19 1/16"

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 sysmets 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.