FRIEDRICH

Floating Air™ Pro X
DUCTLESS MINI-SPLIT SYSTEMS
CEILING CASSETTE HEAT PUMPS

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
- Ultra quiet operation
- Precise 4-way air distribution
- Evaporator frost control
- Built-in drain lift
- Flexible installation
- Clean modern look
- Wireless remote control included

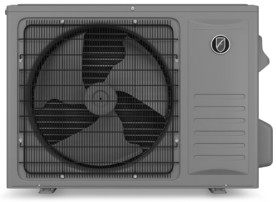




FPHFC09A3D, FPHFC12A3D



FPHFC18A3D, FPHFC24A3D, FPHSC36A3D



FPHFR09A3D, FPHFR12A3D



FPHFR18A3D, FPHFR24A3D, FPHFR36A3D

Ceiling Cassette Grilles (Required)



FPCG0912A



FPCG182436A

DECORATIVE GRILLE	
FPCG0912A	FPCG182436A
FITS FPHFC09A3D, FPHFC12A3D	FITS FPHFC18A3D, FPHFC24A3D, FPHFC36A3D

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

works with Google Home

works with alexa

PRECISION INVERTER® | ComfortPRO MOBILE APP | DIAMONDBLUE™ Advanced Corrosion Protection | FreshAire® IAQ READY | ENERGY STAR*

*Applies to FSHW091C and FSHW183D model sets.

FLOATING AIR™ PRO X | SINGLE-ZONE | CEILING CASSETTE HEAT PUMPS

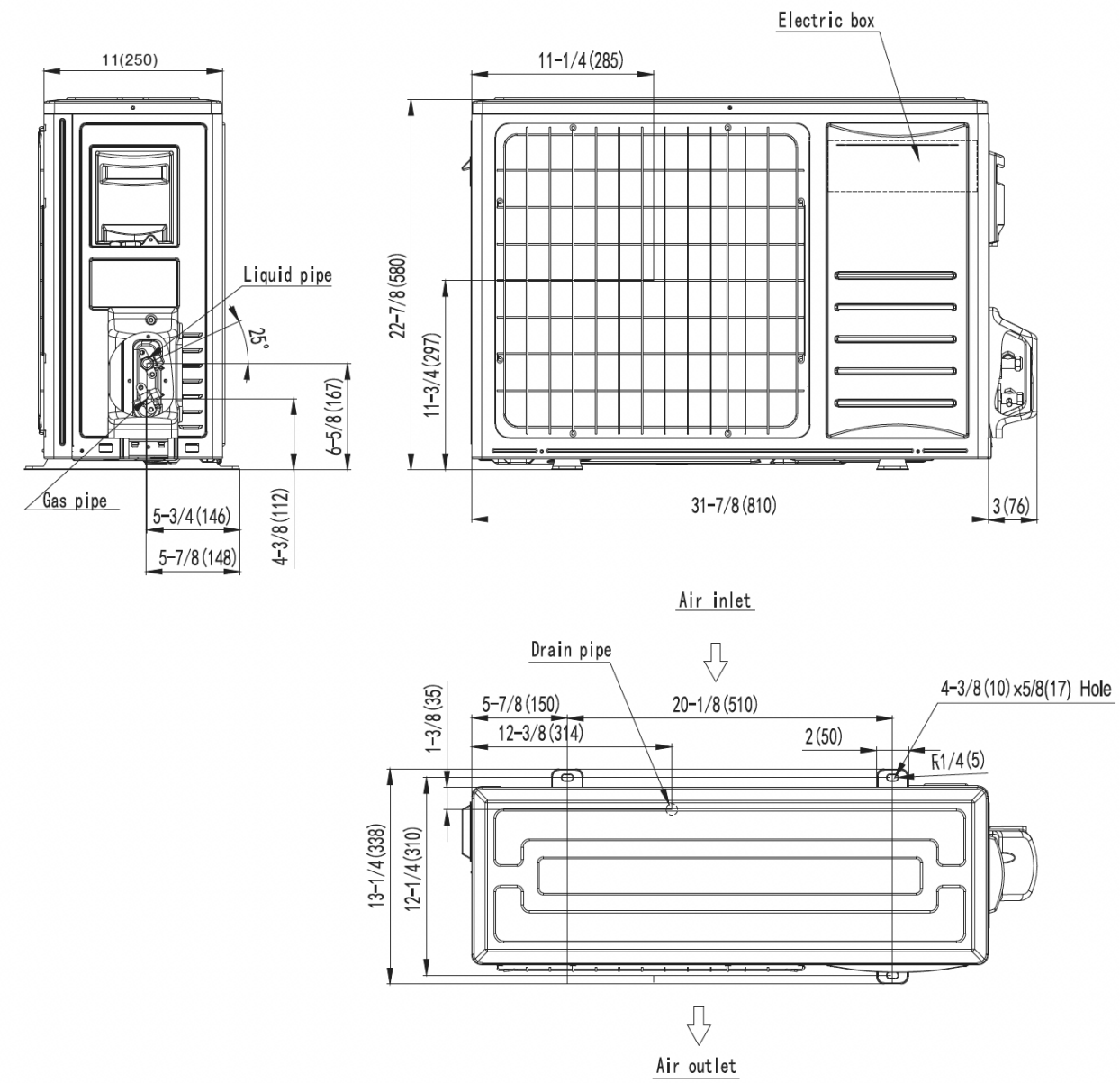
MODEL	**Model Set**	**Unit**	**FPHC093D**	**FPHC123D**	**FPHC183D**	**FPHC243D**	**FPHC363D**
	Indoor Model		**FPHFC09A3D**	**FPHFC12A3D**	**FPHFC18A3D**	**FPHFC24A3D**	**FPHSC36A3D**
	Outdoor Model		**FPHFR09A3D**	**FPHFR12A3D**	**FPHFR18A3D**	**FPHFR24A3D**	**FPHFR36A3D**
	Power Supply	V/Hz/ph	208V/230V~, 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	36,000
	Cooling Capacity Range (Min.–Max.)	Btu/h	4,300–14,500	4,300–14,500	7,800–24,000	9,000–30,000	12,000–45,000
	EER2 @ 95°F	Btu/h/W	12.00	12.00	12.00	12.00	12.00
	SEER2	Btu/h/W	20.00	20.00	20.00	20.00	19.50
	Cooling Operating Range (Min.–Max.)	°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	5,500–18,000	5,500–18,000	8,500–24,000	7,500–34,000	11,000–45,000
	COP @ 47°F	W/W	3.52	3.52	3.38	3.52	3.70
	COP @ 5°F	W/W	1.80	1.80	2.00	2.00	2.00
	HSPF2	Btu/h/W	9.50	9.50	10.00	10.50	9.50
	Rated Capacity Heating @ 17°F (-8.3°C)	Btu/h	8,900	8,900	14,100	19,100	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	16,200	25,200
	Heating Operating Range (Min.–Max.)	°F	-22–75	-22–75	-22–75	-22–75	-22–75
INDOOR AIRFLOW	Air Circulation (Max./H/M/L)	ft^3 CFM	341/341/294/235	341/341/294/235	643/643/554/465	706/706/588/494	1,030/1,030/883/736
	Sound Rating – Indoor (High)	dB(A)	52	52	50	53	60
INDOOR FAN MOTOR	Output	W	57	57	75	75	106
	Speed (High/Medium/Low)	r/min	700/600/500	700/600/500	420/380/320	470/400/340	660/560/480
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	110	250
	Speed (High)	r/min	880	880	880	870	850
ELECTRICAL	Rated Current	Cooling (A)	3.00	4.30	6.30	8.50	14.20
		Cooling (W)	750	1,000	1,500	2,000	3,000
		Heating (A)	3.00	4.25	6.78	8.50	13.50
		Heating (W)	750	1,000	1,560	2,000	2,850
	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	1.96	3.14	4.22	6.26	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.	22-1/2×8-1/2×22-1/2	22-1/2×8-1/2×22-1/2	33-1/8×9-1/4×33-1/8	33-1/8×9-1/4×33-1/8	33-1/8×10-3/4×33-1/8
		mm	570×215×570	570×215×570	840×236×840	840×236×840	840×272×840
	Packing (L×W×H)	in.	28-3/4×26-1/4×11-1/2	28-3/4×26-1/4×11-1/2	37-3/8×12-5/8×37-3/8	37-3/8×12-5/8×37-3/8	37-3/8×14-1/8×37-3/8
		mm	730×668×292	730×668×292	950×320×950	950×320×950	950×360×950
	Net Weight	lbs.	34.2	34.2	52.9	52.9	57.3
		kg	15.5	15.5	24.0	24.0	26.0
	Shipping Weight	lbs.	40.8	40.8	63.9	63.9	70.6
		kg	18.5	18.5	29.0	29.0	32.0
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	990×730×450	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
GRILLE DIMENSIONS & WEIGHTS	Dimension (W×H×D)	in.	24-3/8×1-5/8×24-3/8	24-3/8×1-5/8×24-3/8	37-3/8×2×37-3/8	37-3/8×2×37-3/8	37-3/8×2×37-3/8
		mm	620×40×620	620×40×620	950×50×950	950×50×950	950×50×950
	Packing (L×W×H)	in.	27-1/8×26-3/4×4-1/2	27-1/8×26-3/4×4-1/2	40-1/8×39-3/8×4-1/8	40-1/8×39-3/8×4-1/8	40-1/8×39-3/8×4-1/8
		mm	690×680×115	690×680×115	1,020×1,000×105	1,020×1,000×105	1,020×1,000×105
	Net Weight	lbs.	5.7	5.7	14.3	14.3	14.3
		kg	2.6	2.6	6.5	6.5	6.5
	Shipping Weight	lbs.	9.9	9.9	19.8	19.8	19.8
		kg	4.5	4.5	9.0	9.0	9.0

Standard **With Registration**

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

DIMENSIONAL DRAWINGS: OUTDOOR HEAT PUMP

OUTDOOR UNITS/ FPHFR09A3D, FPHFR12A3D

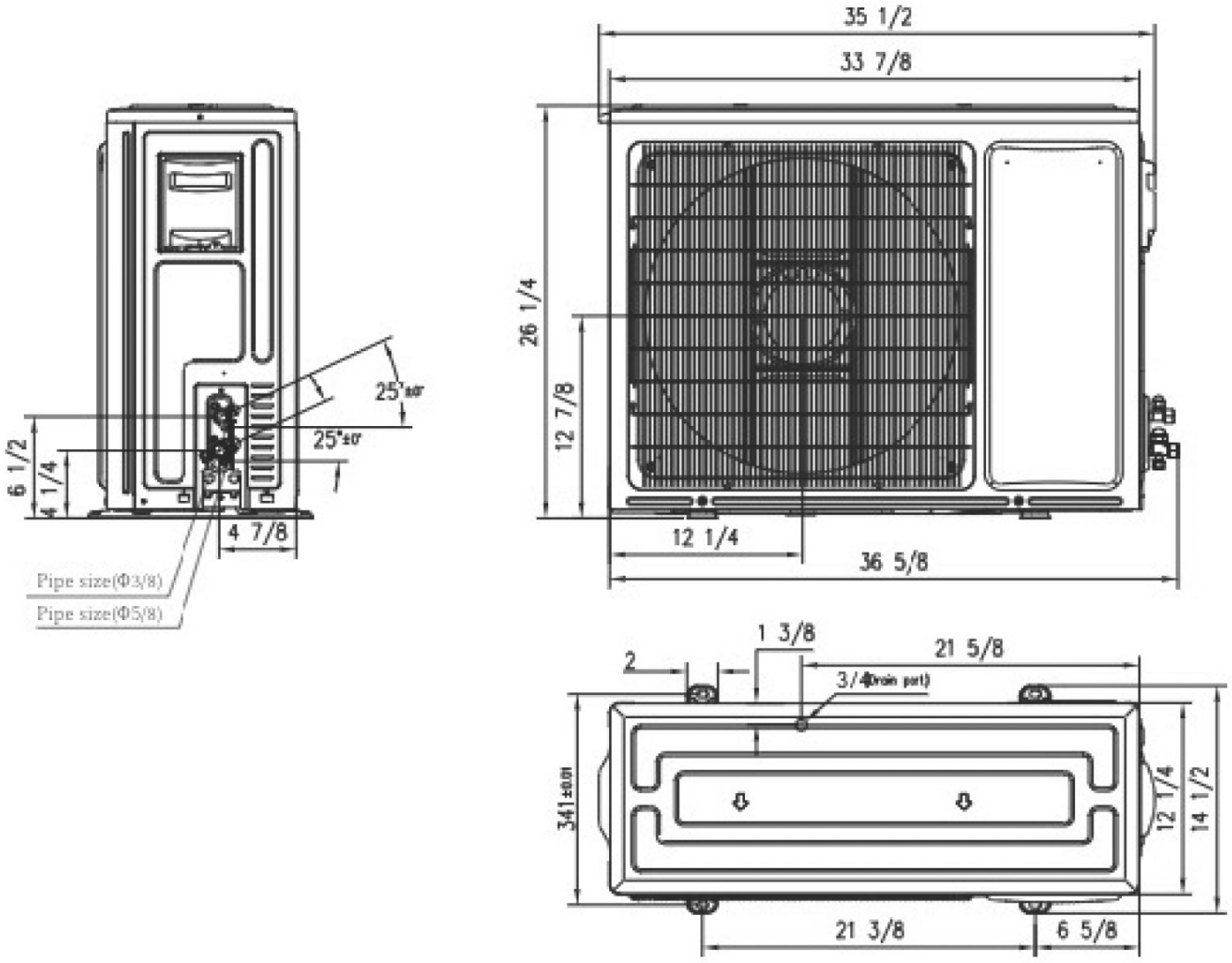


Model	W	H	D
FPHFR09A3D, FPHFR12A3D	31 7/8"	22 7/8"	12 2/8"

UNITS: INCHES

DIMENSIONAL DRAWINGS: OUTDOOR HEAT PUMP

OUTDOOR UNITS/ FPHFR18A3D

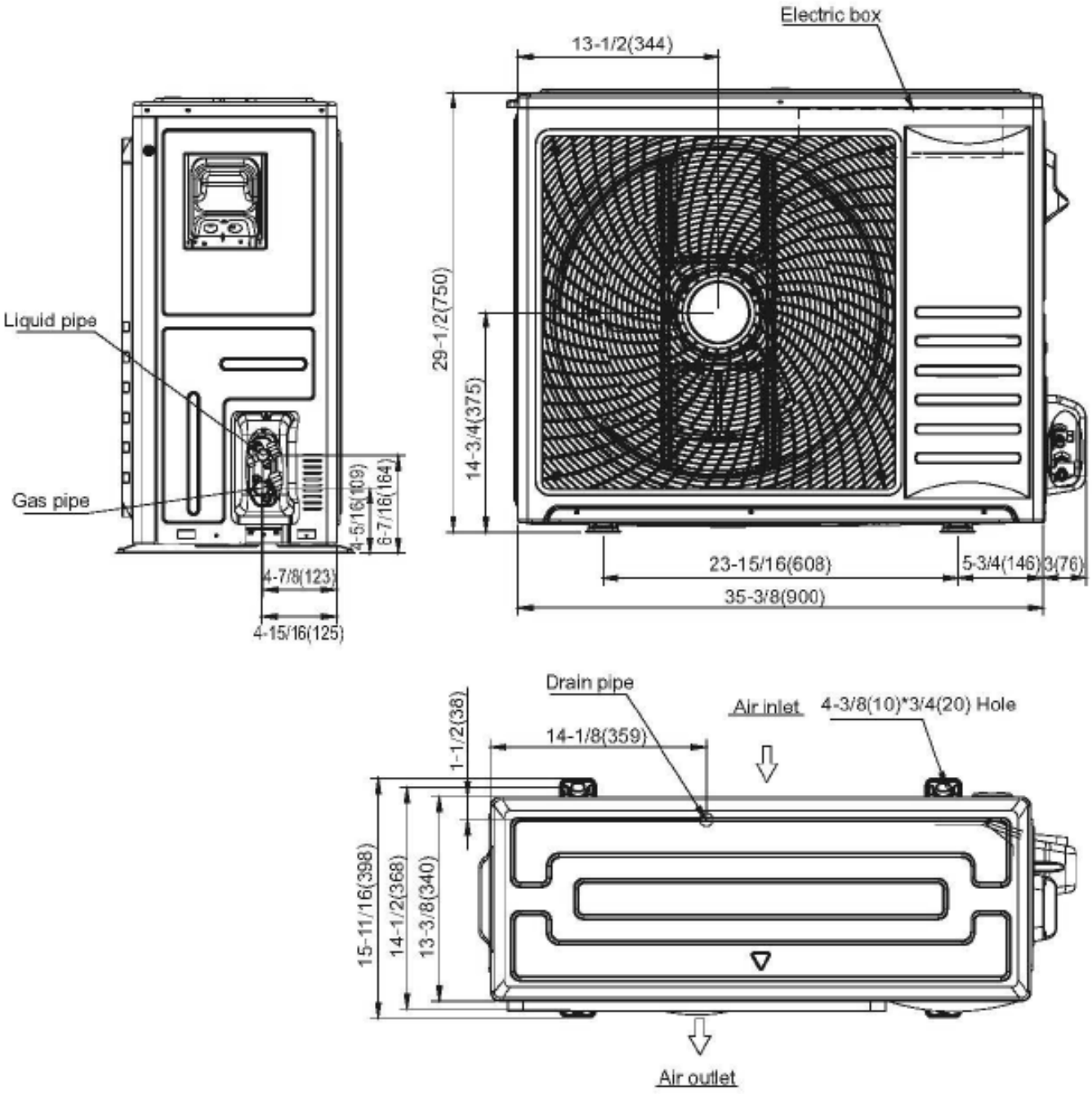


Model	W	H	D
FPHFR18A3D	33 7/8"	26 2/8"	12 2/8"

UNITS: INCHES

DIMENSIONAL DRAWINGS: OUTDOOR HEAT PUMP

OUTDOOR UNITS/ FPHFR24A3D

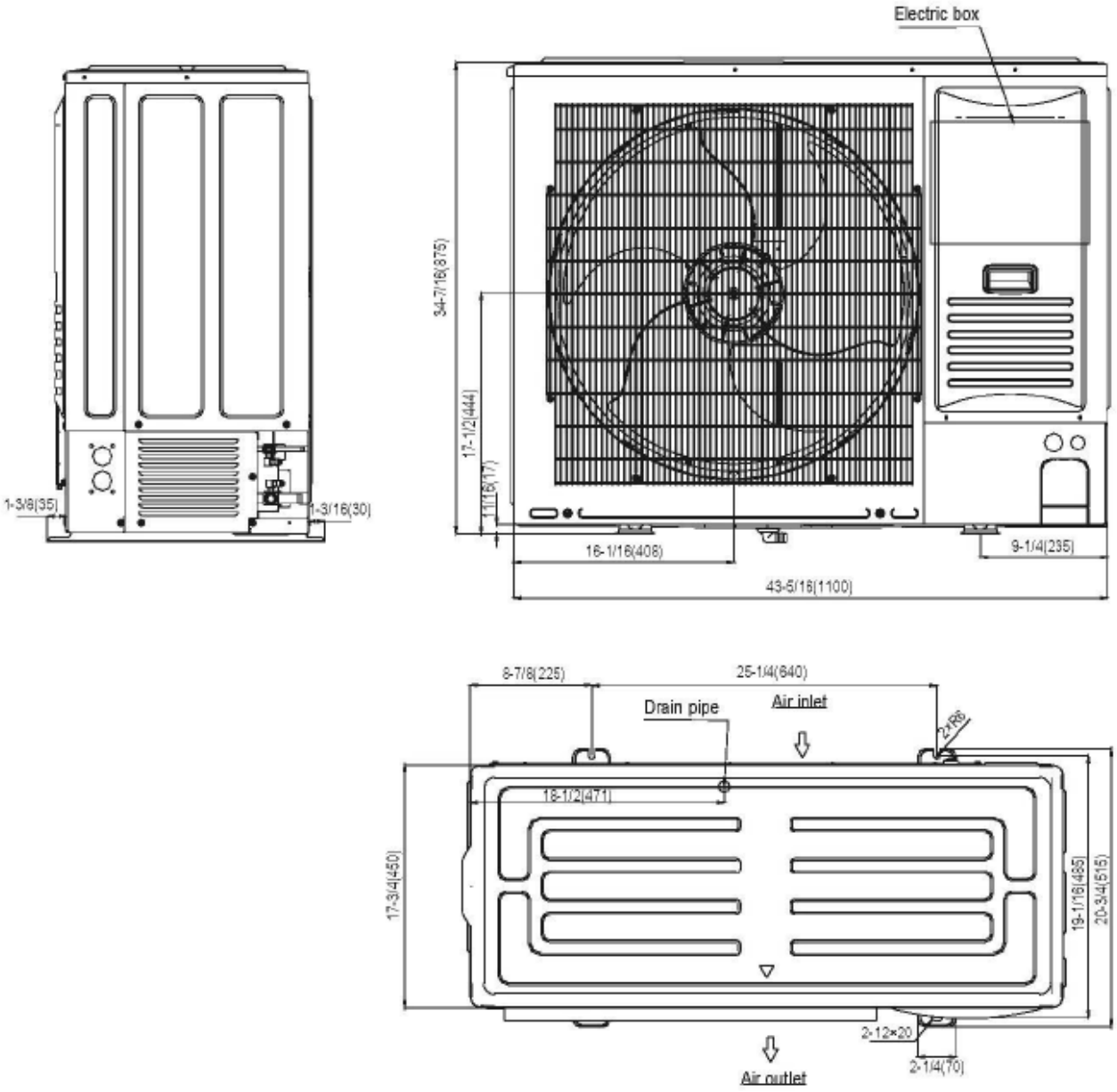


Model	W	H	D
FPHFR24A3D	35 5/8"	29 1/2"	13 3/8"

UNITS: INCHES

DIMENSIONAL DRAWINGS: OUTDOOR HEAT PUMP

OUTDOOR UNITS/ FPHFR36A3D

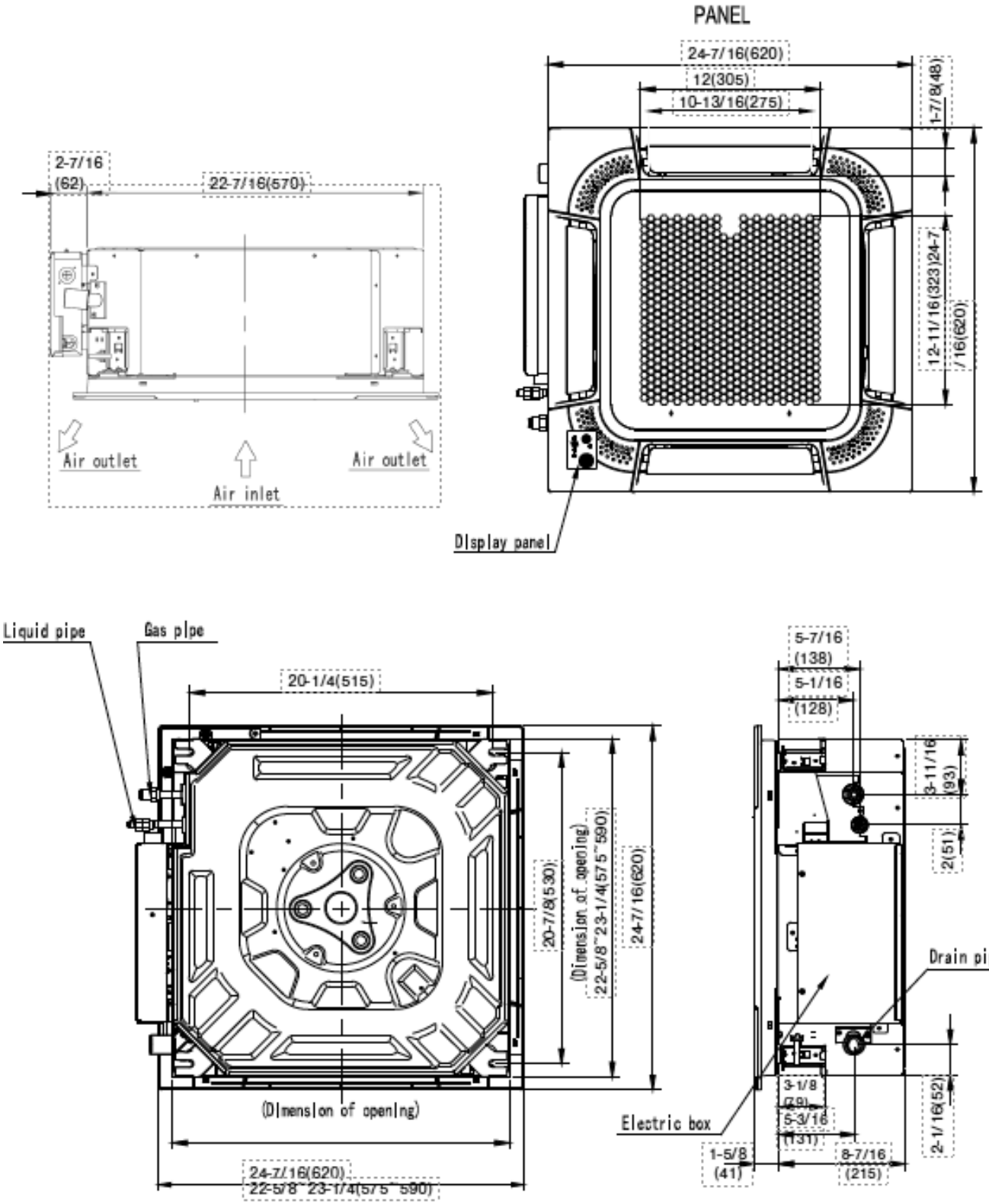


Model	W	H	D
FPHFR36A3D	43 5/16"	34 7/16"	19 1/16"

UNITS: INCHES

DIMENSIONAL DRAWINGS: CEILING CASSETTE

INDOOR UNITS/ FPHFC09A3D, FPHFC12A3D

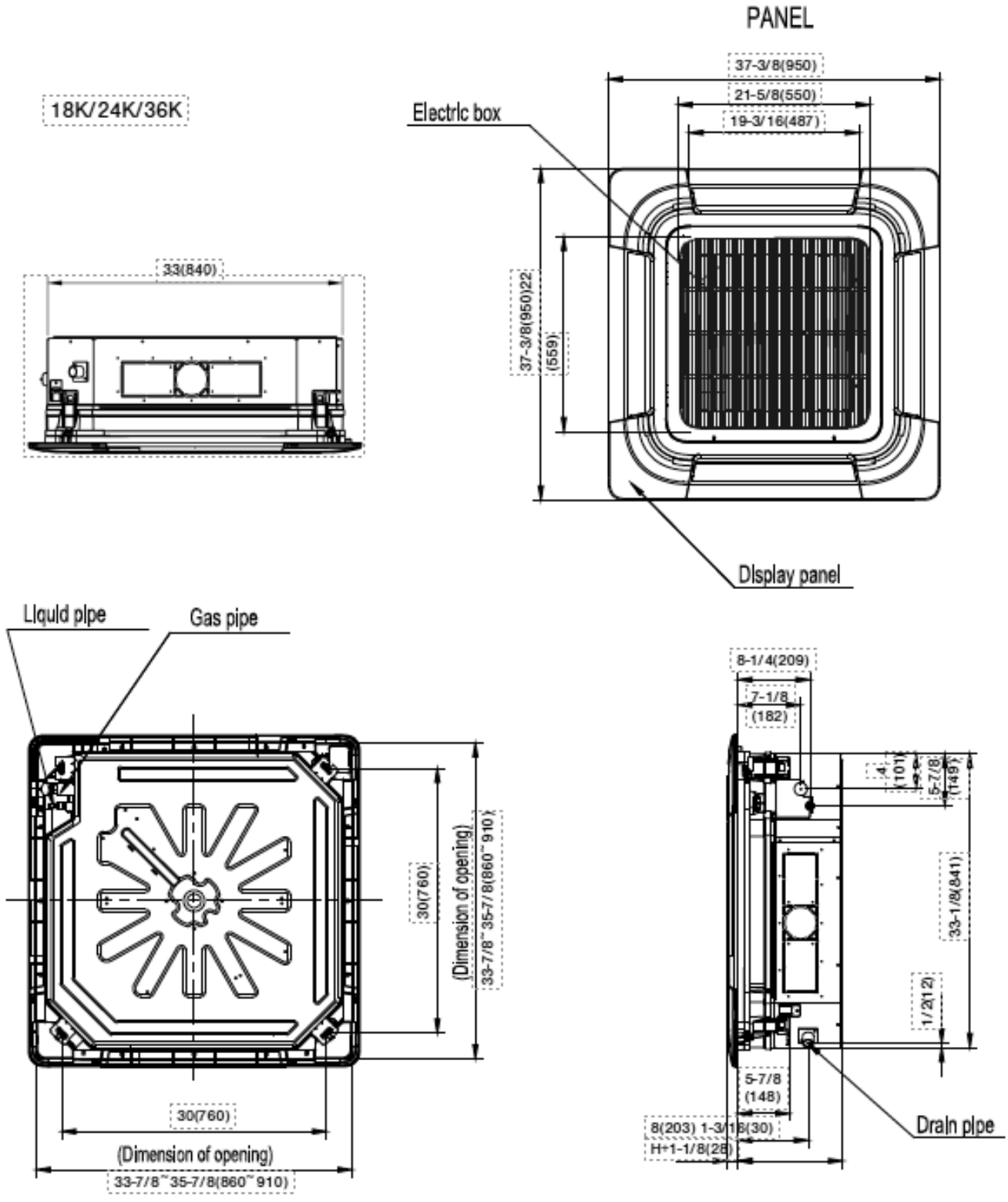


Model	W	H	D
FPHFC09A3D, FPHFC12A3D	24 7/16"	24 7/16"	8 7/16"

UNITS: INCHES

DIMENSIONAL DRAWINGS: CEILING CASSETTE

INDOOR UNITS/ FPHFC18A3D, FPHFC24A3D, FPHSC36A3D



Model	W	H	D
FPHFC18A3D, FPHFC24A3D, FPHSC36A3D	24 7/16"	24 7/16"	8 7/16"

UNITS: INCHES

REFRIGERATION LINE SETS*

Kit#	Length (ft.)	Liquid	Suction	System Model
T32150	15'	1/4"	3/8"	FPHC093D, FPHC123D
T32350	35'	1/4"	3/8"	
T41250	15'	1/4"	1/2"	FPHC183D
T42250	25'	1/4"	1/2"	
T52350	25'	3/8"	5/8"	FPHC243D
T53350	35'	3/8"	5/8"	
T63500	50'	3/8"	3/4"	FPHC363D

*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.)
FPHC093D	25	82
FPHC123D	25	82
FPHC183D	25	82
FPHC243D	25	164
FPHC363D	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.