



I-TEC® I36Z-I60Z 2-Stage Compressor High Efficiency Air Source Heat Pumps

Cooling Capacities: 25,000 to 54,000 Btuh Heating Capacities: 22,800 to 54,000 Btuh

The Bard I-TEC Indoor Heat Pump system is designed for classrooms and other similar applications demanding high efficiency and the lowest possible sound levels that are practical and achievable, and also accommodates the over-the-window sill requirement for many replacement projects on older school buildings. The I-TEC Series meets that challenge with many innovative design features resulting in a highly refined appearance while at the same time improving on the very important maintenance and serviceability features needed by the facilities maintenance and service staffs.

I-TEC Standard Features

- Double wall construction, 20-ga. exterior skin, no visible fasteners
- Non fiberglass insulation
- Hinged, lockable, removable doors
- Removable sides and modularized construction for transporting through standard doors or in elevators allows installation on second and third floor
- Can be installed in left or right corners with no modifications
- Non-corrosive drainpans with no standing water
- 2-Stage scroll compressors with discharge muffler, double floating isolation mounting system, and sound muffling cover
- R-410A Green Refrigerant
- Heating and cooling thermostatic expansion valves
- Extra large full width control panel for easy access to all controls
- All 230/208V units with or without electric heat have circuit breaker. All 460V units have Toggle Disconnect. Option for 460V circuit breaker on OKW models only.
- Evaporator coils constructed with hydrophilic fin stock w/the following advantages:
 - Acrylic coating
 - Wetttable surface with low contact angle – no bead-up condensate, lower wet-coil air-side pressure drop, improved draining & lower re-entrainment of moisture back into the air stream in continuous blower operating modes
 - Antimicrobial properties provide microbial resistance to fungicidal growth
 - Resistant to Mold and Mildew, ASTM D3273 – no growth
 - Seals fin surface against aluminum oxide formation
- 24VAC 75VA control transformer with circuit breaker
- 24VAC low-voltage terminal strip for thermostat or DDC control
- ECM indoor and outdoor motors
- Modulating outdoor fan motor and low ambient control
- Modulating indoor fan motor for constant CFM in different operating modes up to 0.50" ESP
- High and Low Pressure switches with lockout circuit
- Electronic heat pump control board with diagnostics
- Liquid line filter/drier
- Readily accessible service ports located behind locking hinged doors
- Pleated 2" MERV 8 filter
- Designed for over-the-window sill wall penetration and has 3" vertical adjustment for wall sleeve attachment
- Units designed to be flush to a smooth interior wall and not require trim kits by use of adjustable wall sleeves; Trim Kits available where required
- Low sound levels are achieved by numerous system design innovations including special acoustical insulation



- Installation flexibility. Can be installed in corner applications with one side against a wall.
- Condensate overflow detection system with diagnostics monitors equipment and shuts down compressor to prevent condensate overflow.
- Freezestat on indoor coil safeguards against indoor coil freeze up by shutting down the compressor.

I-TEC Optional Features & Accessories

Ventilation Option:

CRV has ECM motor, filter system, and positive shut-off.

Commercial Room Ventilator (CRV) is a fan powered ventilation package to manage intake & exhaust air at fixed rates but without energy recovery capability.

- The rates are: 300-375-450, are independently selectable, and has positive shutoff on intake and exhaust sides when unoccupied.
- Requires control system that has a dedicated ventilation control output to be ON during Occupied and OFF during Unoccupied. CO2 controller with ON/OFF output relay can be used.
- Factory setting is 375 CFM balanced to meet pressurization requirements of ASHRAE.

Accessories:

- Outdoor louver grilles: Clear, Medium Bronze, Dark Bronze
- Telescoping Wall Sleeves
- Wall Sleeve Ranges (wall thickness): 5.5" to 8.5", 8" to 13.5", 13" to 23.5"
- 3" and 6" Riser Platforms available if required
- Electric heat packages factory installed within the basic unit cabinet
- Accessories for Duct-Free and Ducted installations

Other Options:

- Low Ampacity Models available

Specifications - 3, 4 & 5 Ton

MODELS	I36Z1-A	I36Z1-B	I36Z1-C	I48Z1-A	I48Z1-B	I48Z1-C	I60Z1-A	I60Z1-B	I60Z1-C
ELECTRICAL RATING--60 HZ	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3
Operating Voltage Range	197-253		414-506	197-253		414-506	197-253		414-506
COMPRESSOR									
Volts	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3	230/208-1	230/208-3	460-3
Rated Load Amps (230/208)	11.1/13	8.5/9.9	4.9	15.6/17.5	10.4/11.6	5.4	22/23.4	13.4/14.3	6.3
Branch Circuit Selection Current	15.3	11.7	5.8	19.9	11.6	6.4	27.2	16.6	7.2
Locked Rotor Amps	83	73	38	104.0	83.1	41	152.9	110.0	52.0
ENERGY RECOVERY VENTILATOR									
Volts	230/208-60-1			230/208-60-1			230/208-60-1		
Full Load Amps (3-motors)	2.2			2.2			2.2		
FAN MOTOR – ECM									
Horsepower	1/3			1/2			1/2		
Volts	230/208-60-1			230/208-60-1			230/208-60-1		
Full Load Amps	2.6			3.2			3.2		
+ CFM	2300			2600			2600		
BLOWER MOTOR – ECM									
Horsepower	1/2			1/2			3/4		
Volts	230/208-60-1			230/208-60-1			230/208-60-1		
Full Load Amps	2.5			3.2			4.4		

+ CFM @ rating points, will modulate based upon O.D. ambient.

- Complies with efficiency requirements of ASHRAE/IESNA 90.1-2013.
- Certified to ARI Standard 390-2003 for SPVU (Single Package Vertical Units).
- Intertek ETL Listed to Standard for Safety Heating and Cooling Equipment ANSI/UL 1995/CSA 22.2 No. 236-05, Fourth Edition.
- Commercial Product - Not intended for Residential application.

* The AHRI Certified® mark indicates Bard Manufacturing Company participation in the AHRI Certification program. For verification of individual certified products, go to www.ahridirectory.org.



Indoor Blower Performance

Model	Rated ESP	Max. ESP	② Continuous CFM	Rated 2nd Stage CFM	Rated 1st Stage CFM	③ 4-10 KW CFM	④ 15-20 KW CFM
I36Z1	0.15	0.50	600	1150	850	700	1050
I48Z1	0.20	0.50	700	1400	1050	700	1400
I60Z1	0.20	0.50	800	1600	1100	700	1400

- ① Motor will deliver consistent CFM through voltage supply range with no deterioration.
 ② Continous fan CFM is the total air being circulated during continuous fan mode.
 ③ Will operate @ rated Full Load Airflow when operating with Heat Pump.
 ④ Will occur automatically with a call for "W3" or "Emergency Heat" signal from thermostat (Heat Pump Operation is terminated @ this condition).

Capacity & Efficiency Ratings (Stage 2) Full Load Operation

MODELS	I36Z1	I48Z1	I60Z1
Cooling BTUH, Full Load Capacity, 95-80/67	35,000	47,000	54,000
EER ①	12.0	11.8	11.0
Rated CFM	1150	1400	1600
IPLV (Integrated Full & Part Load) ② 80-80/67	16.5	16.1	15.2
Heating BTUH, Full Load Capacity 47/43-70	31,800	44,500	54,000
COP ③	3.7	3.7	3.5
Rated CFM	1150	1400	1600

Capacity & Efficiency Ratings (Stage 1) Part Load Operation

MODELS	I36Z1	I48Z1	I60Z1
Cooling BTUH, Part Load Capacity, 95-80/67	25,000	32,500	37,000
EER ①	12.7	12.0	11.0
Rated CFM	850	1050	1200
Heating BTUH, Part Load Capacity 47/43-70	23,100	30,500	36,500
COP ③	3.6	3.6	3.4
Rated CFM	850	1050	1200

- ① EER = Energy Efficiency Ratio - BTU/WATT efficiency
- ② IPLV = Integrated Part Load Value - BTU/WATT efficiency (combines full and part load performance)
- ③ COP = Coefficient of Performance - BTU/WATT efficiency

Unit Weights

MODELS	NO VENT	CRV
I36Z1-A	990	1080
I36Z1-B	990	1080
I36Z1-C	1025	1115
I48Z1-A	1030	1120
I48Z1-B	1030	1120
I48Z1-C	1065	1155
I60Z1-A	1075	1165
I60Z1-B	1075	1165
I60Z1-C	1110	1200

Deduct 65# from all values for installed weight.

Unit Charge Rates

UNIT	Std. Unit - Lbs.	Dehum. Units - Lbs.
I36Z1 - High Efficiency Step Capacity Indoor HP	10.5625	N/A
I48Z1 - High Efficiency Step Capacity Indoor HP	14.1875	N/A
I60Z1 - High Efficiency Step Capacity Indoor HP	12.8750	N/A

Factory Built-in Electric Heat Table

Model	Voltage	Phase	KW		Amps		BTUH	
			240V	208V	240V	208V	240V	208V
-A04	240/208	1	4	3	16.7	14.4	13,652	10,239
-A05	240/208	1	5.00	3.75	20.8	18.0	17,065	12,799
-A10	240/208	1	10.00	7.50	41.7	36.1	34,130	25,598
-A15	240/208	1	15.00	11.25	62.5	54.1	51,195	38,396
-A20	240/208	1	20.00	15.00	83.3	72.1	68,260	51,195
-B06	240/208	3	6.00	4.50	14.4	12.5	20,478	15,359
-B09	240/208	3	9.00	6.75	21.7	18.7	30,717	23,038
-B15	240/208	3	15.00	11.25	36.1	31.2	51,195	38,396
-B18	240/208	3	18.00	13.50	43.3	37.5	61,434	46,076

Model	Voltage	Phase	KW		Amps		BTUH	
			480V	460V	480V	460V	480V	460V
-C06	480	3	6.00	5.52	7.2	6.9	20,478	18,840
-C09	480	3	9.00	8.28	10.8	10.4	30,717	28,260
-C15	480	3	15.00	13.80	18.0	17.3	51,195	47,099
-C18	480	3	18.00	16.56	21.7	20.8	61,434	56,519

NOTE: Not all KW's available in all models. See Minimum Circuit Ampacity and Maximum Overcurrent Protection table on following page.

Minimum Circuit Ampacity & Maximum Overcurrent Protection – Standard

MODEL	Rated Volts, Hertz & Phase	Single Circuit					Dual Circuit							
		No. Field Power Circuits	Minimum Circuit Ampacity	Maximum External Fuse or Ckt. Brkr.	Field Power Wire Size	Ground Wire	Minimum Circuit Ampacity		Maximum External Fuse or Ckt. Breaker		Field Power Wire Size		Ground Wire Size	
							Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B
I36Z1-A0Z A05 A10 ① A15	230/208-1	1 1 1 or 2 1 or 2	26 52 78 84	40 60 80 90	8 6 4 4	10 10 8 8	26 26	52 52	40 40	60 60	8 8	6 6	10 10	10 10
I36Z1-B0Z B06 B09 ① B15	230/208-3	1 1 1 1	22 40 49 51	30 45 50 60	10 8 8 6	10 10 10 10								
② I36Z1-C0Z C06 C09 ① C15	460-3	1 1 1 1	11 20 24 28	15 20 25 30	14 12 10 10	14 12 10 10								
③ I36Z1-C0C	460-3	1	11	15	14	14								
I48Z1-A0Z A04 A05 A10 ① A15 ① A20	230/208-1	1 1 1 or 2 1 or 2 1 or 2 1 or 2	34 54 59 85 85 110	50 60 70 90 90 110	8 6 6 3 3 2	10 10 8 8 8 6	35 35 35 59	26 52 52	45 45 45 60	30 60 60 60	8 8 8 6	10 6 6 6	10 10 10 10	10 10 10 10
I48Z1-B0Z B06 B09 ① B15 ① B18	230/208-3	1 1 1 1 1	26 44 53 53 53	35 50 60 60 60	8 8 6 6 6	10 10 10 10 10								
② I48Z1-C0Z C06 C09 ① C15 ① C18	460-3	1 1 1 1 1	12 21 26 28 33	15 30 30 30 35	14 10 10 10 8	14 10 10 10 10								
③ I48Z1-C0C	460-3	1	15	20	12	12								
I60Z1-A0Z A05 A10 ① A15 ① A20	230/208-1	1 1 or 2 1 or 2 1 or 2 1 or 2	44 70 96 96 112	60 80 100 100 120	8 4 3 3 2	10 8 8 8 6	44 44 44 60	26 52 52	60 60 60 60	30 60 60 60	8 8 8 6	10 6 6 6	10 10 10 10	10 10 10 10
I60Z1-B0Z B06 B09 ① B15 ① B18	230/208-3	1 1 1 1 1 or 2	31 49 58 58 63	45 60 60 60 70	8 8 6 6 6	10 10 10 10 8	31	54	45	60	8	6	10	10
② I60Z1-C0Z C06 C09 ① C15 ① C18	460-3	1 1 1 1 1	15 25 29 29 33	20 30 30 30 35	12 10 10 10 8	12 10 10 10 10								
③ I60Z1-C0C	460-3	1	15	20	12	12								

These “Minimum Circuit Ampacity” values are to be used for sizing the field power conductors. Refer to the National Electric Code (latest revision), Article 310 for power conductor sizing.

Caution: When more than one field power conductor circuit is run through one conduit, the conductors must be derated. Pay special attention to note 8 of table 310 regarding Ampacity Adjustment Factors when more than three (3) current carrying conductors are in a raceway.

Maximum size of the time delay fuse or HVAC type circuit breaker for protection of field wiring conductors.

Based on 75°C copper wire. All wiring must conform to the National Electrical Code and all local codes.

Maximum KW that can operate with the heat pump is 10KW for 1-Phase and 9KW for 3-Phase.

- ① Represents Electric Heat only. Electric Control Circuit will lock-out Heat Pump Operation.
- ② These models have Toggle Disconnect switch.
- ③ This Model has 460V Circuit Breaker. Available for 0KW only.

Cooling Full Load Application Data ①

Model	D.B. / W.B. ②	COOLING CAPACITY	60°F	65°F	70°F	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F	120°F	125°F
136Z1	75/62	Total Cooling	37,050	36,400	35,750	35,100	34,450	33,800	33,150	32,500	31,281	30,063	28,844	27,625	26,406	25,188
		Sensible Cooling	28,631	28,388	28,144	27,900	27,656	27,413	27,169	26,925	26,418	25,911	25,404	24,897	24,390	23,883
	80/67	Total Cooling	41,956	40,963	39,969	38,975	37,981	36,988	35,994	35,000	33,688	32,375	31,063	29,750	28,438	27,125
		Sensible Cooling	30,444	29,888	29,331	28,775	28,219	27,663	27,106	26,550	26,050	25,550	25,050	24,550	24,050	23,550
	85/72	Total Cooling	45,100	44,350	43,600	42,850	42,100	41,350	40,600	39,850	38,356	36,861	35,367	33,873	32,378	30,884
		Sensible Cooling	30,219	29,613	29,006	28,400	27,794	27,188	26,581	25,975	25,486	24,997	24,507	24,018	23,529	23,040
148Z1	75/62	Total Cooling	50,982	49,773	48,564	47,355	46,145	44,936	43,727	42,518	40,901	39,284	37,667	36,049	34,432	32,815
		Sensible Cooling	38,895	38,266	37,636	37,007	36,378	35,748	35,119	34,490	33,804	33,119	32,434	31,748	31,063	30,378
	80/67	Total Cooling	55,969	54,688	53,406	52,125	51,000	49,719	48,281	47,000	45,213	43,425	41,638	39,850	38,063	36,275
		Sensible Cooling	38,188	37,675	37,163	36,650	35,875	35,363	35,113	34,600	33,913	33,225	32,538	31,850	31,163	30,475
	85/72	Total Cooling	51,877	51,699	51,522	51,344	51,167	50,989	50,811	50,634	48,708	46,782	44,857	42,931	41,005	39,080
		Sensible Cooling	37,889	37,293	36,697	36,101	35,505	34,909	34,312	33,716	33,046	32,376	31,706	31,036	30,367	29,697
160Z1	75/62	Total Cooling	40,231	41,463	42,694	43,925	45,156	46,388	47,619	48,850	47,063	45,277	43,490	41,703	39,917	38,130
		Sensible Cooling	29,706	31,038	32,369	33,700	35,031	36,363	37,694	39,025	38,215	37,405	36,595	35,785	34,975	34,166
	80/67	Total Cooling	44,113	45,525	46,938	48,350	49,763	51,175	52,588	54,000	52,025	50,050	48,075	46,100	44,125	42,150
		Sensible Cooling	29,044	30,488	31,931	33,375	34,819	36,263	37,706	39,150	38,338	37,525	36,713	35,900	35,088	34,275
	85/72	Total Cooling	47,981	49,438	50,894	52,350	53,806	55,263	56,719	58,175	56,047	53,920	51,792	49,664	47,537	45,409
		Sensible Cooling	28,919	30,238	31,556	32,875	34,194	35,513	36,831	38,150	37,358	36,567	35,775	34,983	34,191	33,400

Cooling Part Load Application Data ①

Model	D.B. / W.B. ②	COOLING CAPACITY	60°F	65°F	70°F	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F	120°F	125°F
136Z1	75/62	Total Cooling	28,500	27,700	26,900	26,100	25,300	24,500	23,700	22,900	21,973	21,045	20,118	19,190	18,263	17,335
		Sensible Cooling	22,794	22,388	21,981	21,575	21,169	20,763	20,356	19,950	19,502	19,054	18,607	18,159	17,711	17,263
	80/67	Total Cooling	30,731	29,913	29,094	28,275	27,456	26,638	25,819	25,000	23,988	22,975	21,963	20,950	19,938	18,925
		Sensible Cooling	22,456	22,113	21,769	21,425	21,081	20,738	20,394	20,050	19,600	19,150	18,700	18,250	17,800	17,350
	85/72	Total Cooling	32,119	31,613	31,106	30,600	30,094	29,588	29,081	28,575	27,418	26,260	25,103	23,946	22,789	21,631
		Sensible Cooling	21,500	21,300	21,100	20,900	20,700	20,500	20,300	20,100	19,649	19,198	18,747	18,296	17,844	17,393
148Z1	75/62	Total Cooling	36,489	35,477	34,465	33,453	32,441	31,429	30,417	29,405	28,404	27,403	26,402	25,401	24,400	23,399
		Sensible Cooling	27,440	26,922	26,404	25,886	25,369	24,851	24,333	23,815	23,512	23,210	22,907	22,604	22,302	21,999
	80/67	Total Cooling	40,380	39,255	38,129	37,003	36,000	34,874	33,626	32,500	31,394	30,288	29,181	28,075	26,969	25,863
		Sensible Cooling	27,189	26,712	26,234	25,756	25,241	24,763	24,323	23,845	23,542	23,239	22,936	22,633	22,330	22,027
	85/72	Total Cooling	37,194	36,987	36,780	36,573	36,366	36,159	35,952	35,745	34,529	33,312	32,095	30,879	29,662	28,445
		Sensible Cooling	26,876	26,403	25,930	25,457	24,984	24,511	24,038	23,565	23,265	22,966	22,666	22,367	22,067	21,768
160Z1	75/62	Total Cooling	42,006	40,788	39,569	38,350	37,131	35,913	34,694	33,475	32,203	30,930	29,658	28,386	27,114	25,841
		Sensible Cooling	30,931	30,363	29,794	29,225	28,656	28,088	27,519	26,950	26,339	25,727	25,116	24,505	23,893	23,282
	80/67	Total Cooling	46,494	45,138	43,781	42,425	41,000	39,644	38,356	37,000	35,594	34,188	32,781	31,375	29,969	28,563
		Sensible Cooling	30,631	30,113	29,594	29,075	28,500	27,981	27,519	27,000	26,388	25,775	25,163	24,550	23,938	23,325
	85/72	Total Cooling	50,981	49,513	48,044	46,575	45,106	43,638	42,169	40,700	39,153	37,606	36,059	34,513	32,966	31,419
		Sensible Cooling	30,306	29,788	29,269	28,750	28,231	27,713	27,194	26,675	26,070	25,465	24,860	24,254	23,649	23,044

① Below 50°F, unit requires a factory or field installed low ambient control.

② Return air temp. °F Rated CFM.

Heating Full Load Application Data

Model	Indoor	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°F	
136Z1	①	BTUH	13,525	15,450	17,375	19,300	21,225	23,150	25,075	27,000	29,200	31,400	33,360	35,320	37,280
		WATTS	2233	2263	2288	2308	2325	2339	2351	2361	2462	2556	2579	2600	2619
		COP	1.78	2.00	2.23	2.45	2.68	2.90	3.13	3.35	3.48	3.60	3.79	3.98	4.17
148Z1	①	BTUH	24,450	25,800	27,150	28,500	29,850	31,200	32,550	33,900	38,900	43,900	46,880	49,860	52,840
		WATTS	3065	3117	3166	3212	3254	3294	3332	3367	3454	3524	3596	3661	3722
		COP	2.34	2.43	2.51	2.60	2.69	2.78	2.86	2.95	3.30	3.65	3.82	3.99	4.16
160Z1	①	BTUH	30,113	31,075	32,038	33,000	33,963	34,925	35,888	36,850	45,425	52,800	56,360	59,920	63,480
		WATTS	3815	3834	3851	3868	3883	3898	3913	3926	4293	4484	4618	4742	4859
		COP	2.31	2.38	2.44	2.50	2.56	2.63	2.69	2.75	3.10	3.45	3.58	3.70	3.83

Heating Part Load Application Data

Model	Indoor	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°F	
136Z1	①	BTUH	9,125	10,550	11,975	13,400	14,825	16,250	17,675	19,100	21,100	21,400	23,350	25,300	27,250
		WATTS	1999	1963	1936	1915	1899	1886	1875	1865	1917	1817	1842	1864	1883
		COP	1.34	1.58	1.81	2.05	2.29	2.53	2.76	3.00	3.23	3.45	3.71	3.98	4.24
148Z1	①	BTUH	15,963	17,225	18,488	19,750	21,013	22,275	23,538	24,800	27,650	29,100	31,760	34,420	37,080
		WATTS	2478	2492	2505	2516	2526	2535	2542	2550	2512	2368	2468	2560	2643
		COP	1.89	2.03	2.16	2.30	2.44	2.58	2.71	2.85	3.23	3.60	3.77	3.94	4.11
160Z1	①	BTUH	20,325	21,650	22,975	24,300	25,625	26,950	28,275	29,600	32,700	35,800	38,815	41,830	44,845
		WATTS	2966	2985	3002	3017	3030	3043	3054	3065	3101	3131	3277	3414	3542
		COP	2.01	2.13	2.24	2.36	2.48	2.60	2.71	2.83	3.09	3.35	3.47	3.59	3.71

I36Z, I48Z, I60Z Indoor Sound Data at 10 Feet

1. dBA @ 10 feet, Values recorded in Bard Manufacturing Company, Inc. Sound Lab Facility.
2. Actual field results may vary with classroom design and construction.
3. Integrated values calculated per ANSI/ASA S12.60-2009 / Part 2, Section 5.2.2.1, Table 2 Triple Mode Type 3 HVAC System Duty Cycles: Ventilation 58%, Part Load 25%, Full Load 17%
4. Integrated values calculated per ANSI/ASA S12.60-2009/Part 2, Section 5.2.2.1. Integrated Sound Values are also applicable for use in learning spaces for LEED schools; EQ Prerequisite 3 - Minimum Acoustical Performance, OPTION 1. Using methods prescribed in ANSI S12.60, classroom must achieve a maximum background noise level of 45 dBA. Results referenced were recorded in The Bard Manufacturing Company, Inc. Sound Lab Facility. Actual field application results may vary with classroom design and construction methods.

Vent: CRV		IPBDFZ-12 Duct Free 12" Plenum Box				IPBDFZ-18 Duct Free 18" Plenum Box				Ducted @ 0.20" ESP at Full Load Rated CFM			
Model	Operation	CRV Off	CRV @ 300	CRV @ 375	CRV @ 450	CRV Off	CRV @ 300	CRV @ 375	CRV @ 450	CRV Off	CRV @ 300	CRV @ 375	CRV @ 450
I36Z	<i>Integrated</i>	37.5	36.8	37.2	37.3	35.3	35.9	36.0	36.3	36.1	36.5	36.6	36.9
I48Z	<i>Integrated</i>	36.9	37.0	37.0	37.4	36.7	36.9	37.2	37.1	37.4	37.5	37.4	37.8
I60Z	<i>Integrated</i>	39.0	39.3	39.2	39.4	39.0	39.0	39.1	39.2	38.0	38.4	38.3	38.5

Factory Setting(s) shaded in Gray

Outdoor Sound Data at 10 Feet

Model	I36Z	I48Z	I60Z
	66.6	67.9	67.8

I-TEC Accessory Model Numbers

Wall Sleeves (Required Option – Select One)

Model #:	Description:
IWS-A	Wall Sleeve adjustable 5.5 to 8.5" total depth of wall system
IWS-B	Wall Sleeve adjustable 8.0 to 13.5" total depth of wall system
IWS-C	Wall Sleeve adjustable 13.0 to 23.5" total depth of wall system

Outdoor Louver Grilles (Required Option – Select One)

Model #:	Description:
ILG-10	Clear anodized aluminum
ILG-20	Medium bronze anodized aluminum
ILG-30	Dark bronze anodized aluminum

I-TEC Accessories — Optional per Job Requirement

Duct-Free Plenum Boxes

Model #:	Description:
IPBDFZ12-X	12" high — Beige. White linear slot grilles, side w/shutoff damper
IPBDFZ12-1	12" high — White. White linear slot grilles, side w/shutoff damper
IPBDFZ12-4	12" high — Gray. White linear slot grilles, side w/shutoff damper
IPBDFZ18-X	18" high — Beige. White linear slot grilles, side w/shutoff damper
IPBDFZ18-1	18" high — White. White linear slot grilles, side w/shutoff damper
IPBDFZ18-4	18" high — Gray. White linear slot grilles, side w/shutoff damper

Cabinet Extensions

Model #:	Description:
ICXZ28-X	28" extension for ceilings up to 10'2", beige paint
ICXZ28-1	28" extension for ceilings up to 10'2", white paint
ICXZ28-4	28" extension for ceilings up to 10'2", gray paint

NOTE 1: Use of Riser Platforms will increase maximum ceiling height by riser height.

NOTE 2: Cabinet Extensions can be used with ducted systems to enclose ductwork or piping, and can also be used with Duct-Free Plenum Boxes to enclose to ceiling if desired. Extensions can be trimmed to height as needed.

Riser Platforms

Model #:	Description:
IRPZA-3-X	Riser platform 3" with trim kit, beige paint
IRPZA-3-1	Riser platform 3" with trim kit, white paint
IRPZA-3-4	Riser platform 3" with trim kit, gray paint
IRPZA-6-X	Riser platform 6" with trim kit, beige paint
IRPZA-6-1	Riser platform 6" with trim kit, white paint
IRPZA-6-4	Riser platform 6" with trim kit, gray paint
IRRZ-3-X	Rail replacement kit (3" Riser) with trim kit, beige paint
IRRZ-3-1	Rail replacement kit (3" Riser) with trim kit, white paint
IRRZ-3-4	Rail replacement kit (3" Riser) with trim kit, gray paint

NOTE: Use of Riser Platforms will increase maximum ceiling height by riser height.

Wall Curbs

Model #:	Description:
ICURB740	7" Deep Curb to allow sleeve installation with a 40" window sill height

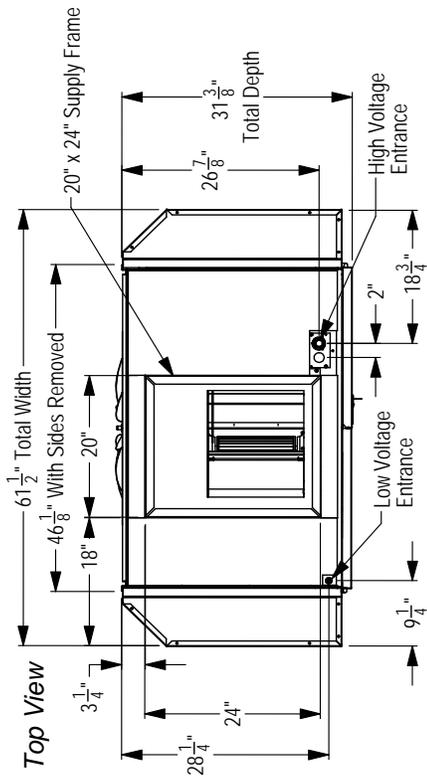
Side Trim Kit

Model #:	Description:
ISTZ4-X	4" Side Trim Kit, beige paint, adaptable for up to 12' ceilings
ISTZ4-1	4" Side Trim Kit, white paint, adaptable for up to 12' ceilings
ISTZ4-4	4" Side Trim Kit, gray paint, adaptable for up to 12' ceilings

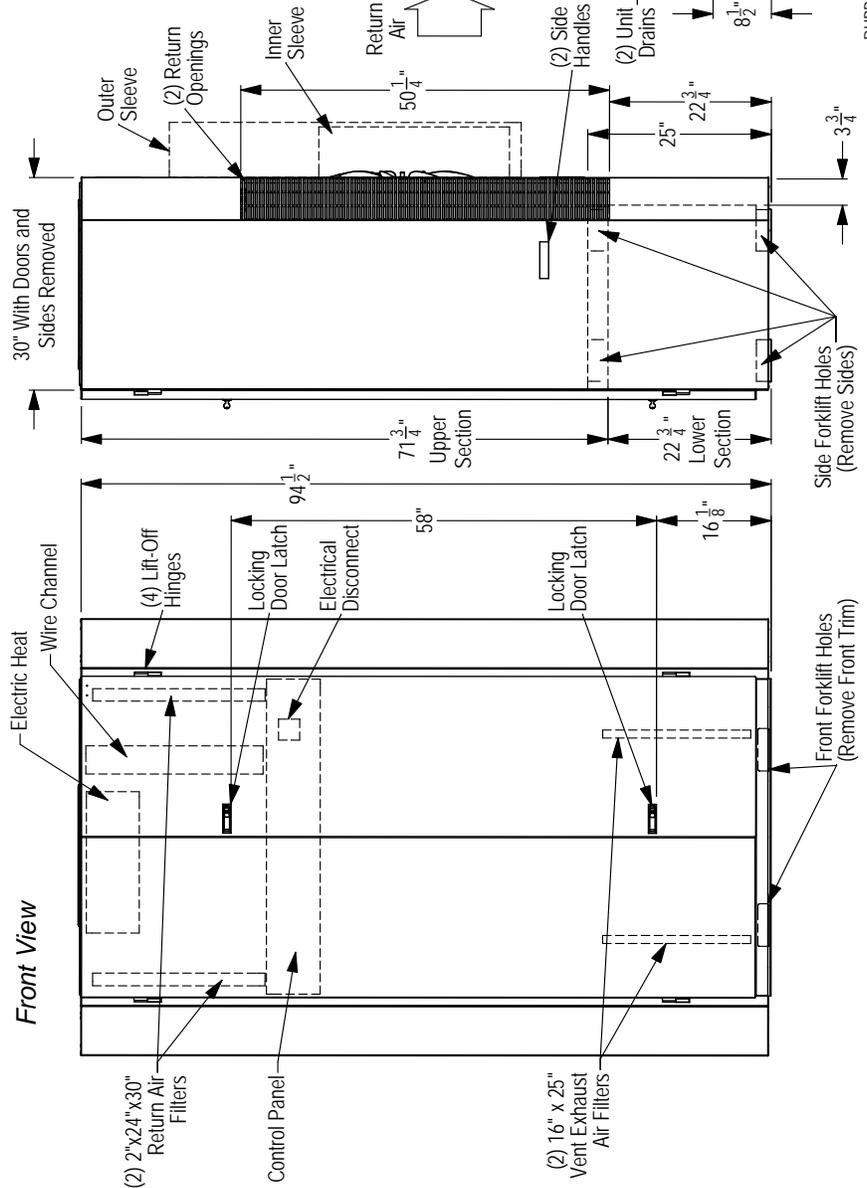
Other Optional Accessories

Model #:	Description:
AHCK-2	Anti-Huffing Locking Refrigerant Caps (2) with Key
SK111	Hard Start Kit for 1-Phase Models (I36Z1-A) Only
SK118	Hard Start Kit for 1-Phase Models (I48Z1-A & I60Z1-A) Only

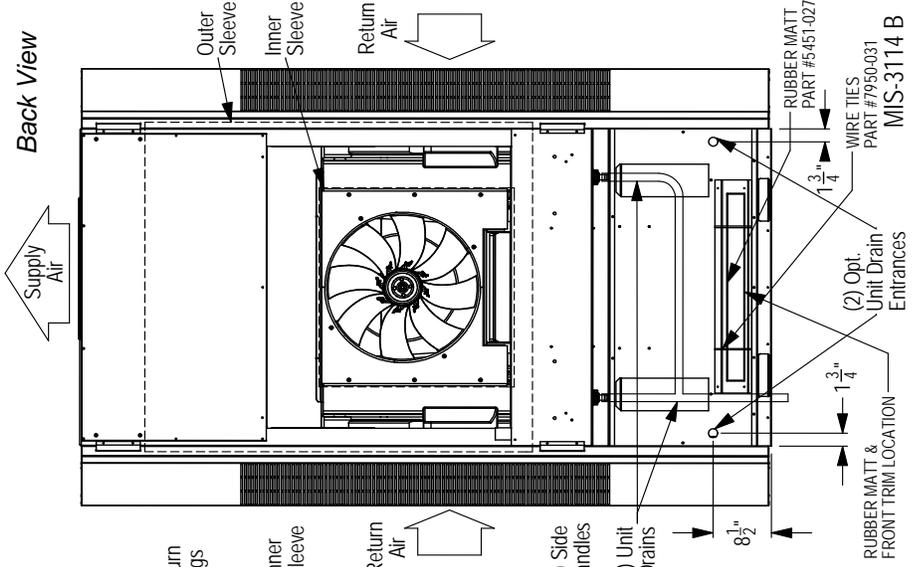
Unit Specification Sheet



Right Side View

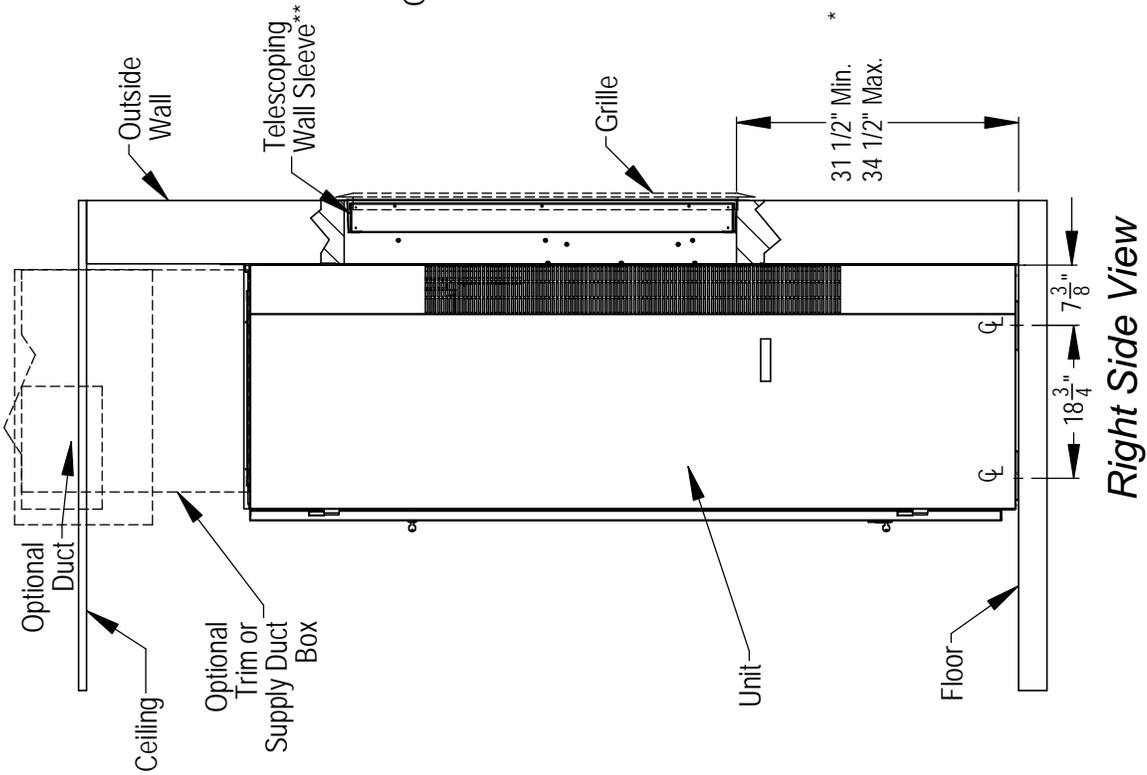


Front View

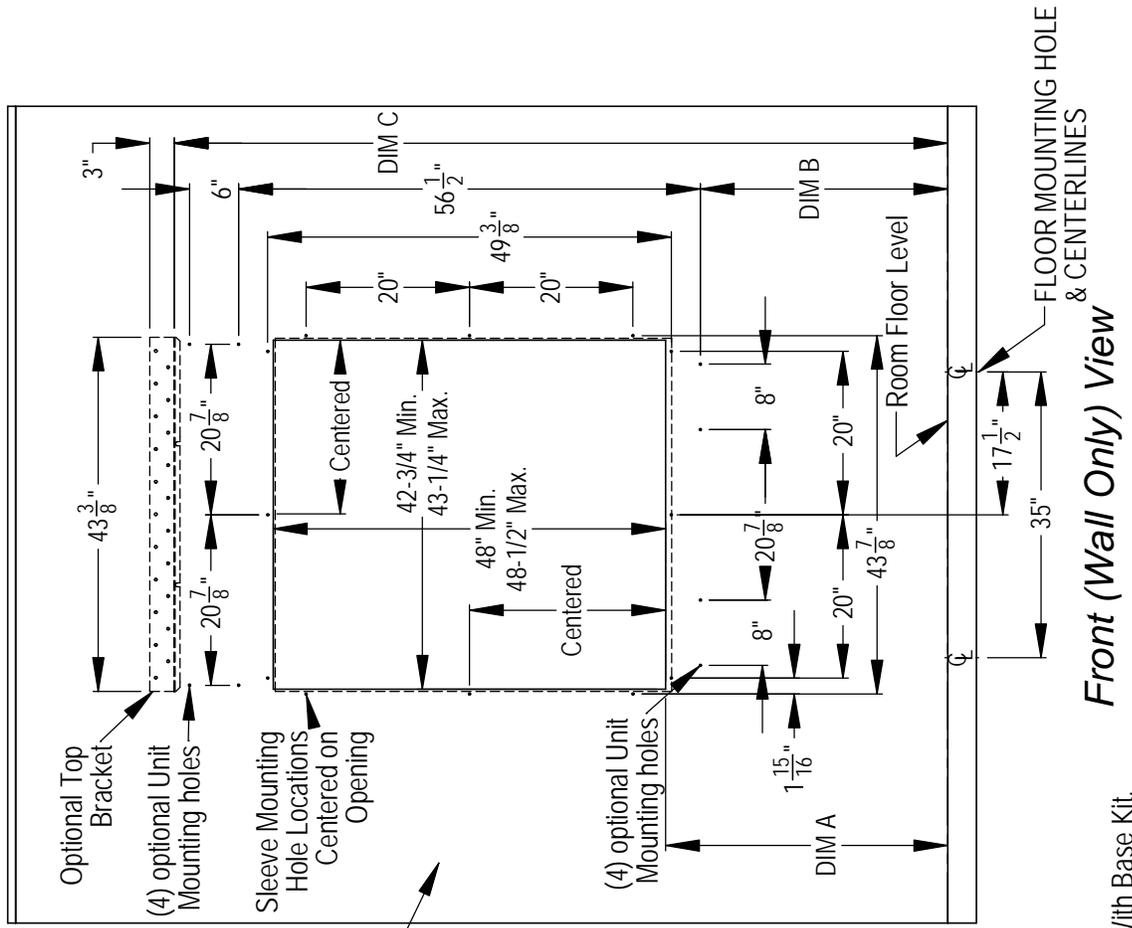


Wall Section View

IRPZ RISER KIT	DIM A	DIM B	DIM C
NONE	31 1/2" - 34 1/2" MAX	30 1/32"	94 5/8"
IRPZA-3 (3") & IRRZ-3 (3")	34 1/2" - 37" MAX	33 1/32"	97 5/8"
IRPZA-6 (6")	37 1/2" - 40 1/2" MAX	36 1/32"	100 5/8"



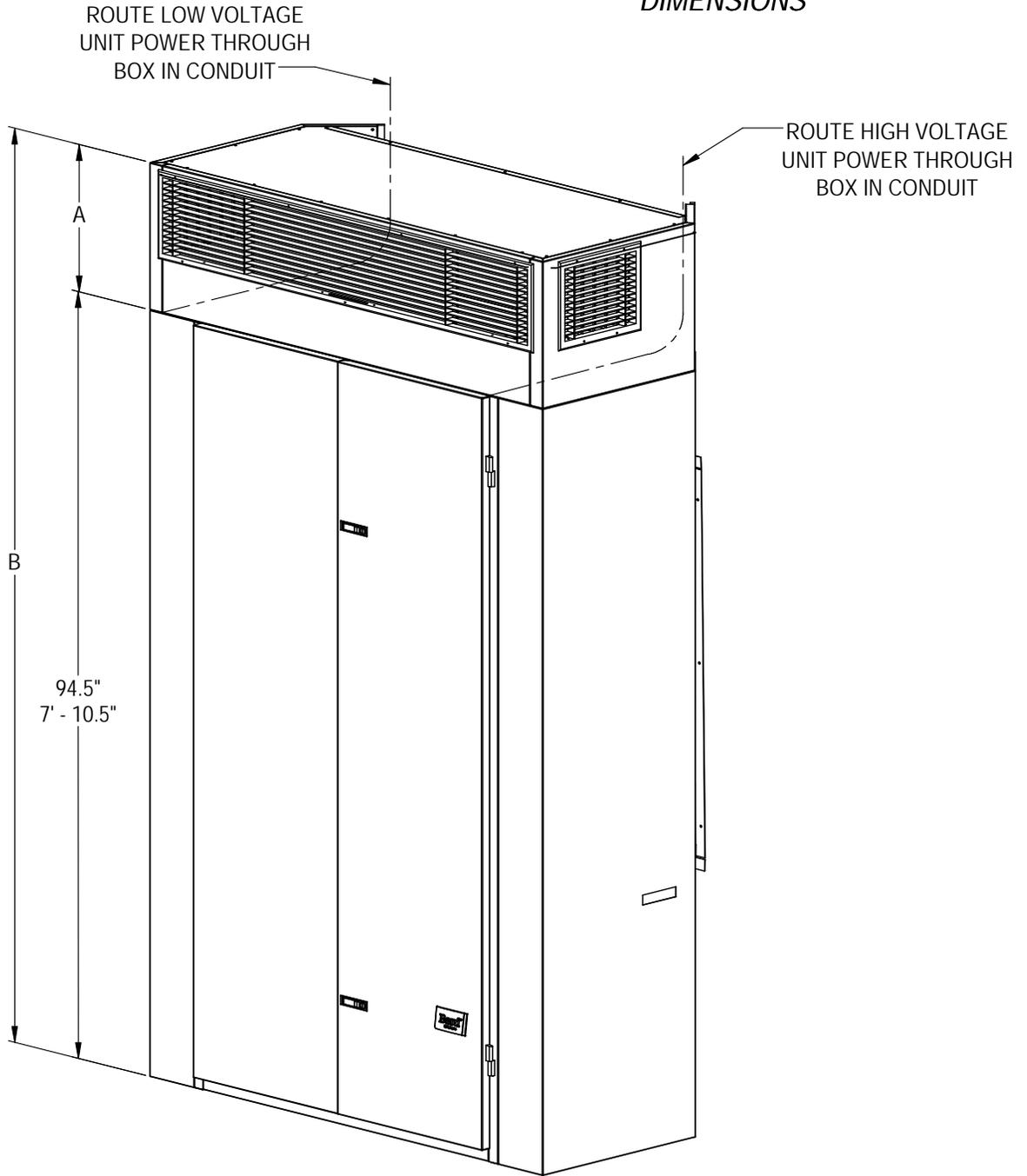
Right Side View



Front (Wall Only) View

* Higher Sill Heights Achievable With Base Kit.
 *** Separate telescoping sleeves available for different wall thicknesses.

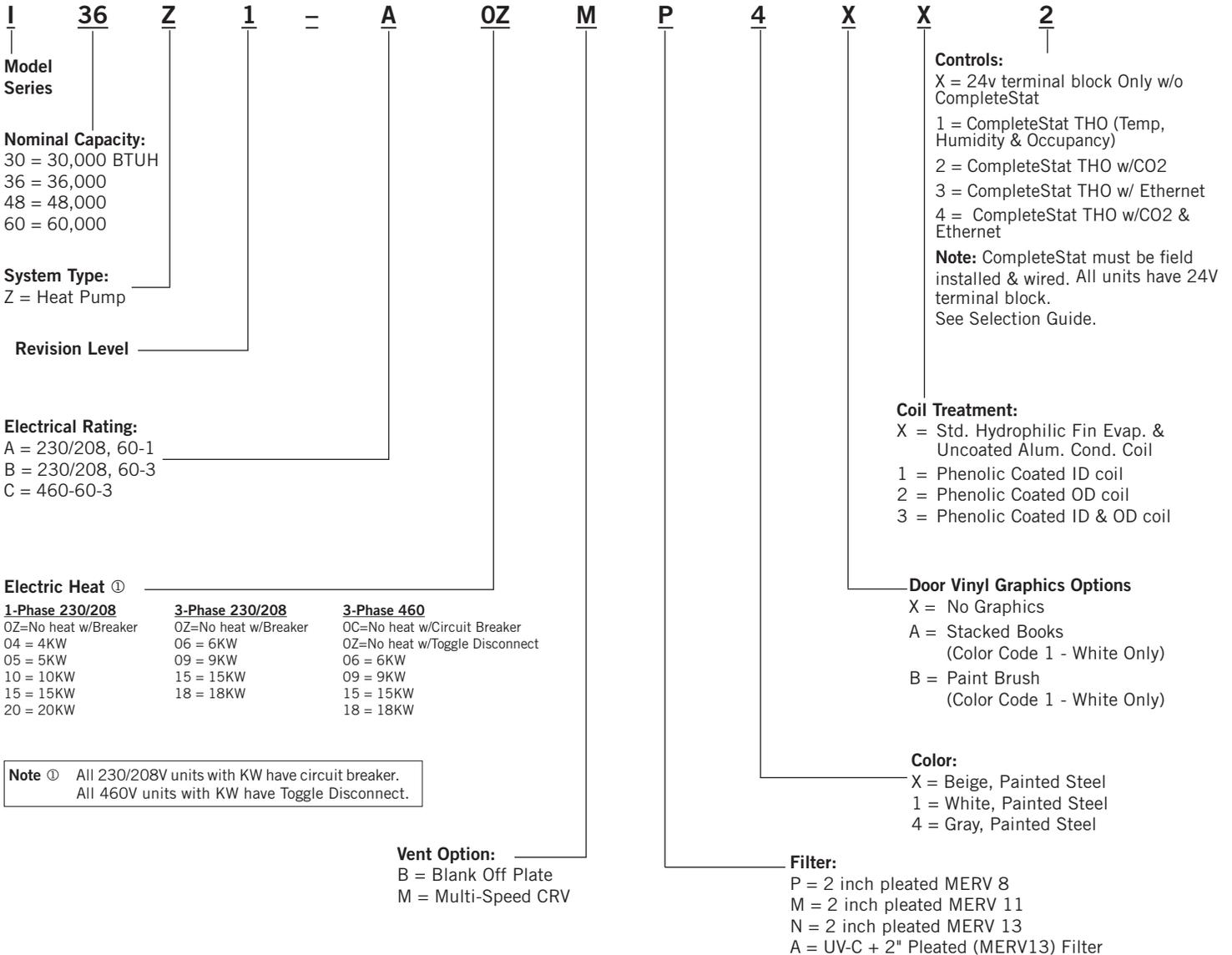
**IPBDFZ12 AND IPBDFZ18
DUCT-FREE PLENUM BOX
DIMENSIONS**



DIMENSIONAL CHART		
MODEL NO.	DIM. A	DIM B.
IPBDFZ12	12"	106.5" (8'-10.5")
IPBDFZ18	18"	112.5" (9'-4.5")

MIS-3168 A

I-TEC 2-Stage Air Source Heat Pumps Model Number Nomenclature



CompleteStat™ Selection Guide						
Vent Type	Type of Vent Control	BACnet ① Communication	Ethernet ② Connection	Control Code	Description	CompleteStat Part Number
None	N/A	Yes	No	1	CompleteStat THO (Temp, Humidity & Occupancy)	CS9B-THO
	N/A	Yes	Yes	3	CompleteStat THO w/Ethernet	CS9BE-THO
CRV	On/Off	Yes	No	1	CompleteStat THO (Temp, Humidity & Occupancy)	CS9B-THO
	Demand ③	Yes	No	2	CompleteStat THO w/CO2	CS9B-THOC
	On/Off	Yes	Yes	3	CompleteStat THO w/Ethernet	CS9BE-THO
	Demand ③	Yes	Yes	4	CompleteStat THO w/CO2 & Ethernet	CS9BE-THOC

- ① BACnet is standard - all versions, shielded twisted pair.
- ② These models also have CAT 5 port for ease of networking in addition to twisted pair terminals.
- ③ Demand control for ventilation is ON/OFF based on CO2 set-point.



Bard Manufacturing Company, Inc.
Bryan, Ohio 43506
www.bardhvac.com

Due to our continuous product improvement policy,
all specifications subject to change without notice.

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