



**SUBMITTAL DATA: DUCT24HP230V1BD 24000 BTU/H Slim Duct (HS) Heat Pump System**

Job Name	Location	Date
Purchaser	Engineer	
Submitted To	For	
Unit Designation	Schedule No.	

**YT1F / XK76                      DUCT24HP230V1BD                      3VIR24HP230V1AO**



**GENERAL FEATURES**

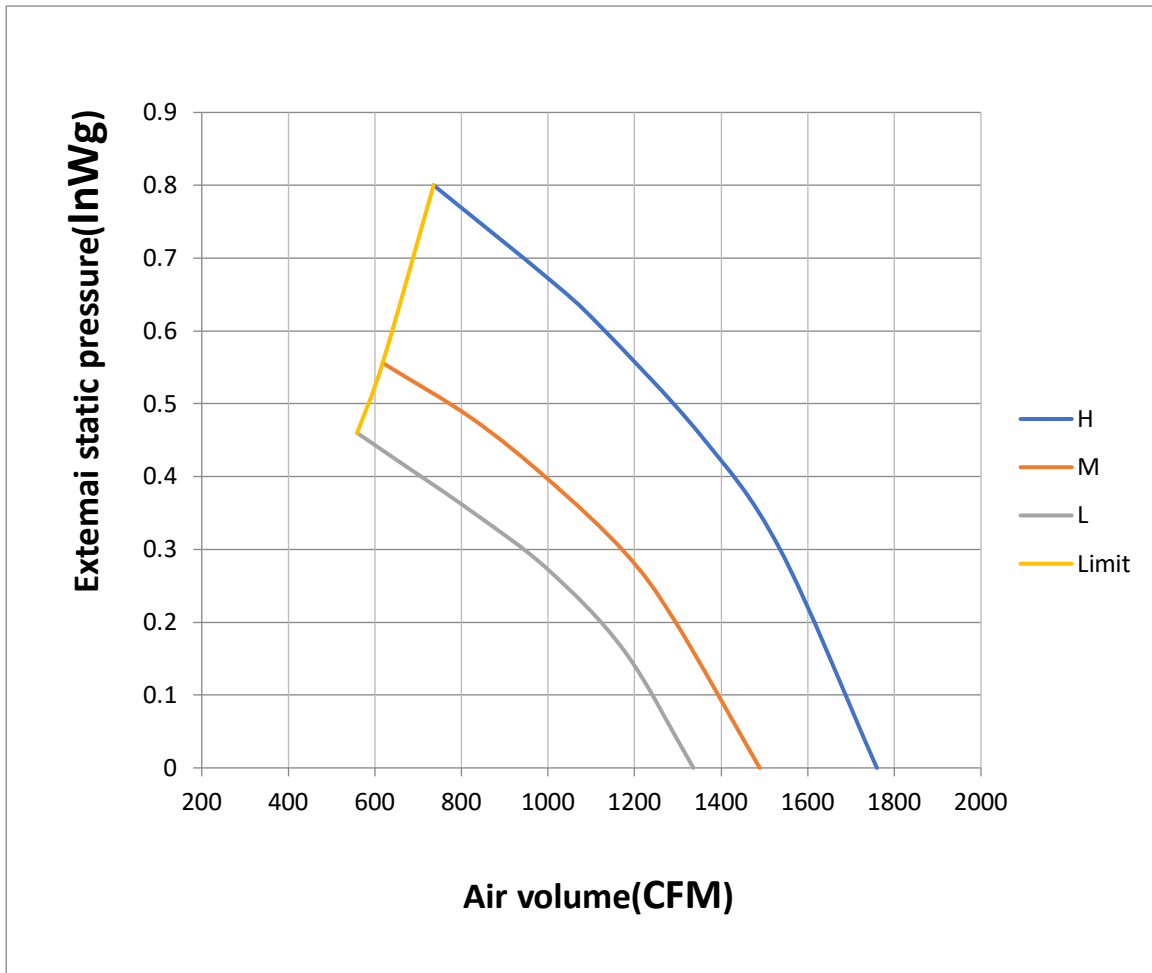
- AHRI Certificate: 207201633**
- High Efficiency DC Inverter Technology**
- Compact and Quiet Design**
- Slim Line Construction 11 7/8" high**
- High Static E.S.P Capability -Adjustable**
- Internal Condensate Drain Pump**
- Flexible Return Air From Bottom Or Rear**
- Wireless Remote with LCD Display Included**
- XK76 Wired Controller Included**
- Low Ambient Cooling down to -20°F (Range -20°F to 122°F)**
- Low Ambient Heating down to -22°F (Range -22°F tp 86°F)**
- Coil (Indoor and Outdoor) Copper Tube / Aluminum Fin\*☒**
- \* (Blue Fin) 500 Hrs Salt Spray Tested**

**5 Year Limited Compressor & Parts Warranty (Residential Only)**

SPECIFICATIONS		3VIR24HP230V1AO / DUCT24HP230V1BD	
System Type		HEAT PUMP	
SYSTEM PERFORMANCE			
Cooling	Rated Capacity @ 95°F	Btu/h	22000
	Min-Max Capacity	Btu/h	3200 - 28000
Heating	Rated Capacity @ 47°F	Btu/h	24000
	Rated Capacity @ 17°F	Btu/h	14900
	Min-Max Capacity	Btu/h	4000 - 29000
SEER / EER		20 / 12.5	
HSPF / COP		10 / 3.81	
Energy Star®		YES	
Cooling Temperature Range		°F	-20 - 122
Heating Temperature Range		°F	-22 - 86
INDOOR UNIT		DUCT24HP230V1BD	
Fan Motor Output Power		W	200
Fan Motor FLA		amps	0.7
Air Flow (Min - Max)		CFM	406 / 736
External Static Pressure (Rated)		InWC	0.8
Sound Pressure Level (Cooling / Heating)		dB(A)	28 - 42
Dehumidification		pt/hr	5.3
Condensate Drain Size (OD)		in	1
Unit Dimension (WxHxD)		in	44 1/2 X 11 7/8 X 29 3/4
Package Dimension (WxHxD)		in	47 5/16 X 13 5/8 X 32 X 13 5/8
Weight (Net / Gross)		lbs	93 / 107
OUTDOOR UNIT		3VIR24HP230V1AO	
Compressor Type		G-10 / 1-Stage Inverter	
Compressor RLA		amps	10.68
Fan Motor Output Power		W	90
Fan Motor RLA		amps	0.7
Sound Pressure Level (Cooling / Heating)		dB(A)	59
Unit Dimension (WxHxD)		in	39 1/2 X 31 1/8 X 16 7/8
Package Dimension (WxHxD)		in	42 5/8 X 33 1/8 X 19 1/8
Weight (Net / Gross)		lbs	124.6 / 135.6
Refrigerant Charge - R410A		oz	63.5
Coil Type		Aluminum Fin / Copper Tube	
REFRIGERANT PIPING			
Indoor Line Set Size (Liquid - Gas)*		in	3/8 - 5/8
Outdoor Service Valve Size (Liquid - Gas)		in	1/4 - 5/8
Pre-Charge Lengh		ft	25
Pipe Length (Min - Max)		ft	10 / 98
Max. Pipe Elevation		ft	66
ELECTRICAL			
Power Supply (Voltage Operating Range)		208-230V / 1Ph / 60Hz	
Rated Current (Cooling / Heating)		amps	7.5 / 14.5
MCA / MOCP		amps	16 / 25
Main Power Wire Size		AWG	Size Per Local Code
Interconnecting Wire Size		AWG	14 / 4
LIMITED WARRANTY		5 Years Parts and Compressor - Residential	

\* Size Line set to indoor unit connection size - requires 1/4 x 3/8 adapter (field supplied)

Rated External Static Pressure - .2 InWc  
 External Static Pressure Range- 0 - .4 InWc



**Note:**

During installation there are 9 dip switches in the control box used set static pressure from 0" to .4". You can select P01, P02, P03, P04, P05, P06, P07, P08, P09 in fan mode of indoor fan motor, which means different fan mode combinations are corresponding to different static pressure.

Ex-factory defaulted mode is P05. You can set the mode through wired controller. S01, S02, S03.....S12, S13 means the rotation speed of indoor unit is from low to high.

**EXTENDED RATINGS**

**DUCT24HP230V1BD**

COOLING PERFORMANCE					HEATING PERFORMANCE					
Outdoor Ambient Temperature (DB)		Return Air Temperature				Outdoor Ambient Temperature (DB)		Return Air Temperature		
		80°F (DB)						70°F (DB)		
		TC (Btu/h)	SHR	EER	Power Input (W)			TC (Btu/h)	COP	Power Input (W)
<b>MAX OUTPUT</b>	-20°F	8853	7217	1.80	1442	<b>MAX OUTPUT</b>	-22°F	11056	1.70	1909
	-15°F	9338	7937	1.99	1375		-20°F	11836	1.78	1948
	-10°F	9980	8121	2.03	1442		-15°F	13212	1.95	1987
	-5°F	10963	8791	2.05	1564		-10°F	15139	2.19	2028
	0°F	12249	8935	2.08	1724		-5°F	15965	2.26	2069
	5°F	14698	10796	2.39	1801		0°F	16516	2.29	2111
	10°F	15571	11567	2.44	1873		5°F	18351	2.50	2155
	15°F	16059	11878	2.58	1827		10°F	19268	2.57	2199
	20°F	16457	12101	2.50	1929		15°F	22021	2.88	2243
	25°F	16604	12364	2.52	1929		17°F	24223	3.10	2289
	30°F	17148	12855	2.50	2007		20°F	26150	3.28	2336
	35°F	18230	13494	2.56	2084		25°F	26975	3.32	2384
	40°F	18781	14174	2.67	2058		30°F	27526	3.32	2432
	45°F	19829	14744	2.70	2149		35°F	27801	3.25	2505
	50°F	20414	15509	2.74	2187		40°F	28077	3.19	2580
	55°F	21503	16445	2.78	2264		45°F	28902	3.19	2658
	60°F	22152	16920	2.78	2335		47°F	29728	3.18	2737
	65°F	22320	17181	2.79	2341		50°F	29890	3.18	2751
	70°F	24437	19250	2.88	2484		55°F	30025	3.12	2820
	75°F	25858	20036	3.01	2521		60°F	30322	3.06	2904
	80°F	26732	20927	3.05	2570		65°F	31214	3.06	2992
	85°F	27269	21651	3.02	2650		70°F	32106	3.05	3081
	90°F	27446	21400	3.09	2606		75°F	32998	3.05	3173
	95°F	27219	21364	3.10	2573		80°F	34187	3.07	3269
100°F	25289	20093	3.13	2372	86°F	34622	3.06	3313		
105°F	24225	19135	3.14	2264						
110°F	23808	18318	3.16	2206						
115°F	22592	17959	3.18	2084						
120°F	21390	16526	3.19	1966						
122°F	19870	15895	3.21	1814						

**LEGEND:** W - Watts  
 DB - Dry Bulb  
 TC - Total Capacity  
 SHR - Sensible Heat Ratio  
 COP - Coefficient of Performance

## FEATURES & FUNCTIONS SUMMARY

3VIR24HP230V1AO / DUCT24HP230V1BD

### SYSTEM FEATURES

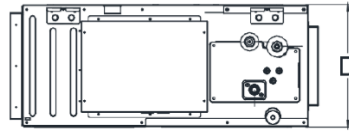
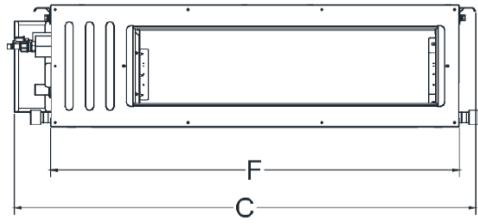
Inverter Type	G10
Ultra Low Frequency Torque Control	Yes
Power Factor Correction	Yes
Compressor Type	High Efficiency Rotary
Basepan With Electric Heater	Yes
Indoor & Outdoor Fin Coating	Yes
Intelligent Defrosting	Yes
Intelligent Preheating	Yes
Low Voltage Startup	Yes
Memory/Power Failure Recovery	Yes
Self Diagnosis	Yes
Wired Controller Interface	Yes
WiFi Included	No
Indoor Fan Type	Centrifugal
Multi Fan Speeds	4 Speeds
Indoor Unit Display	Yes
Auxiliary Electrical Heater	No
Ventilation (Outdoor Air)	Yes

### REMOTE CONTROLLER FUNCTIONS

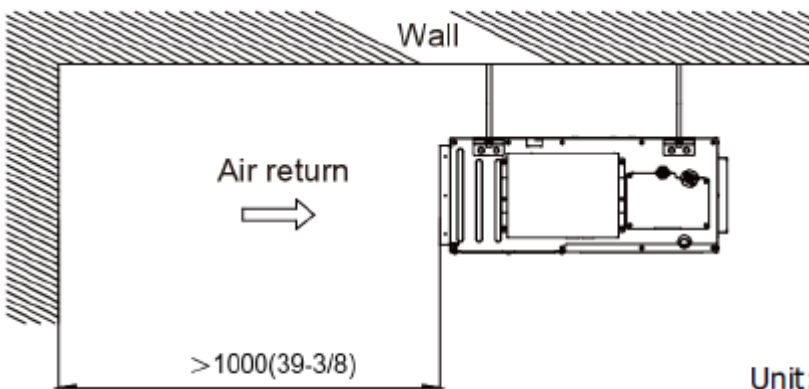
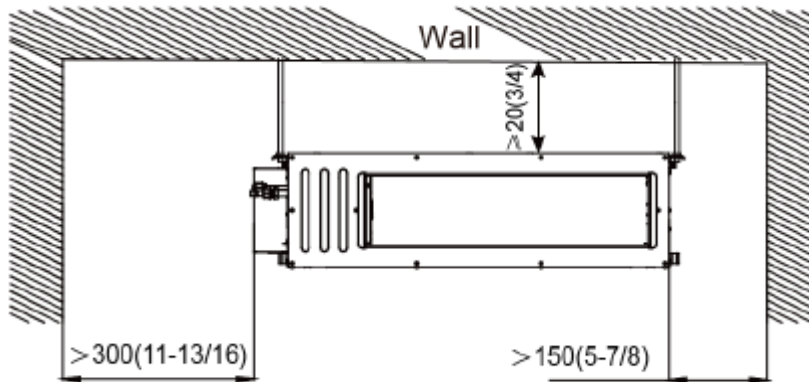
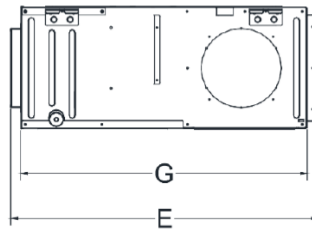
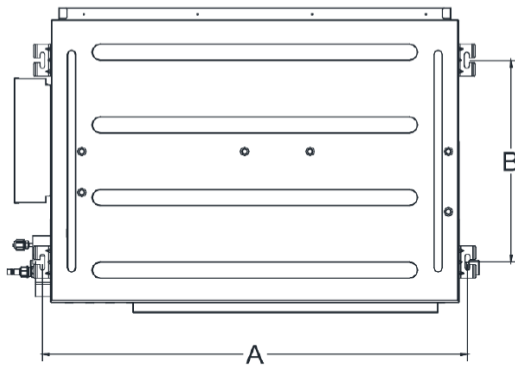
Auto Mode	Yes
Auto Fan	Yes
Auto Swing (Horizontal Auto Swing)	No
Auto Swing - 180° (Vertical Auto Swing)	No
Clock	Yes
Dry Mode	Yes
Dry Anti-Mildew (X-Fan) Mode	Yes
Energy Saving Mode	Yes
Dirty Filter Alert	No
Fan Speed Control (7 Speeds)	Yes
I Feel Function	Yes
Privacy Lock	Yes
Quiet Mode	Yes
Room Temperature Display	No
Sleep Mode	Yes
4 Sleep Mode Options	No
Timer Mode	Yes
Turbo Mode	Yes
Display On/Off Control	No
Freeze Guard Mode	Yes
Power Failure Mode	Yes

# DIMENSIONS & CLEARANCES

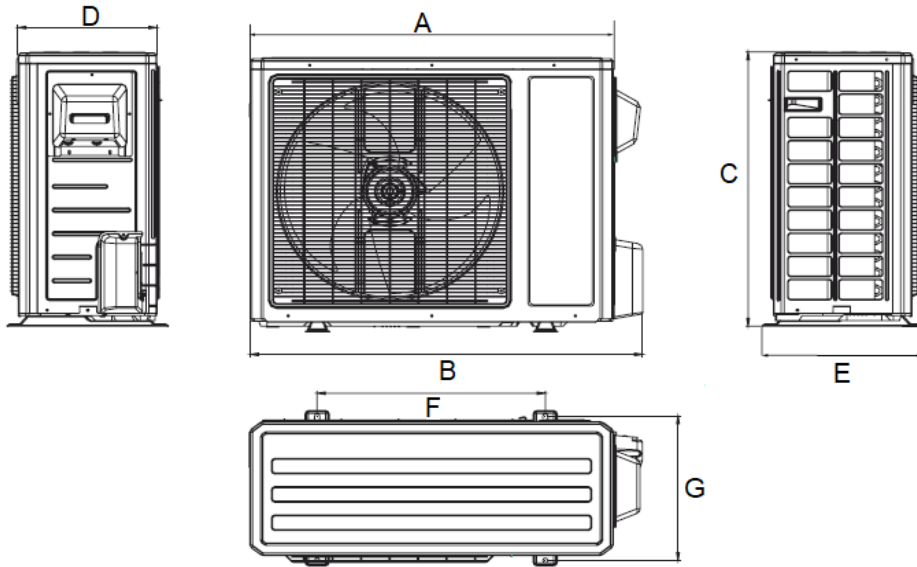
# DUCT24HP230V1BD



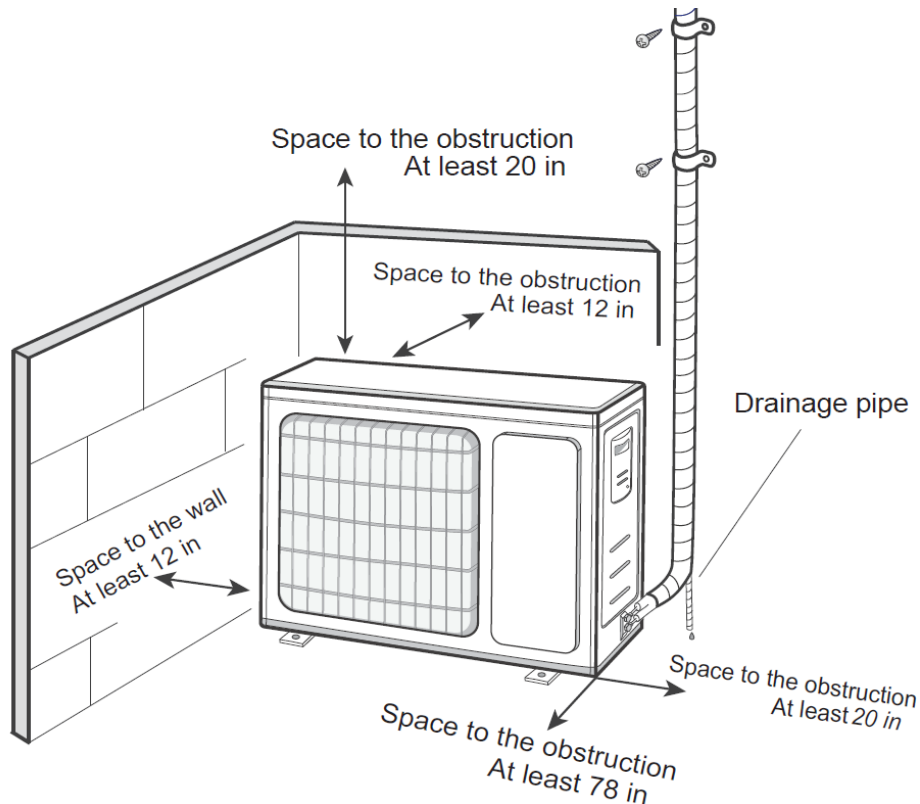
Dimensions	
A	41
B	19 3/4
C	44 1/2
D	11 7/8
E	29 3/4
F	39 3/8
G	27 5/8



Unit: mm(in.)



Dimensions	
A	36 1/4
B	39 1/2
C	31 1/8
D	14 9/16
E	16 7/8
F	24
G	15 9/16



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