

TOPAIRE

AIR CONDITIONER



TWCPS-FB Series 50 Hz

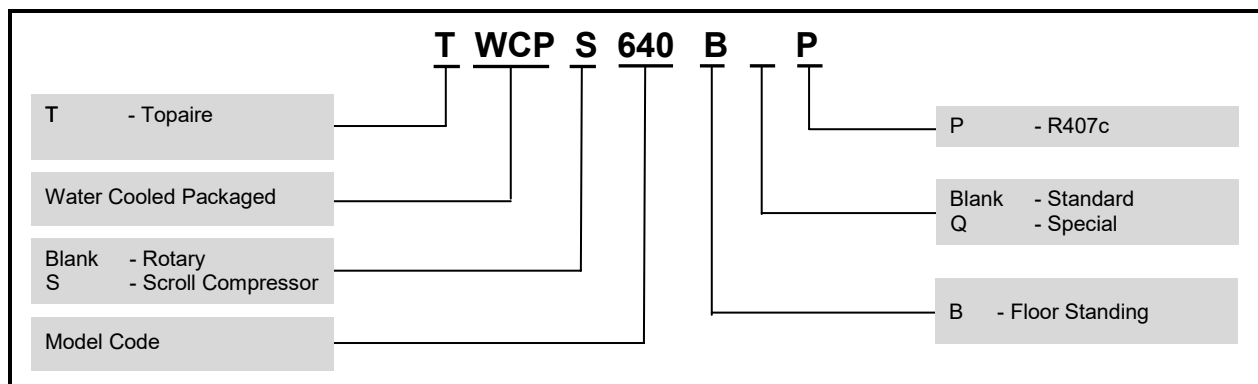
Water Cooled Package Units

Cooling Capacity : 62.4 to 1398 MBH (18.3 to 409.6 kw)



Innovation Beyond Comfort

NOMENCLATURE



UNIT FEATURES

GENERAL

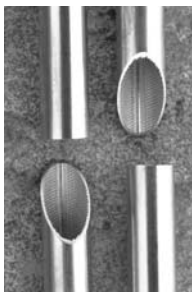
The TWCPs-B series with new features is suitable for hotel, office, hospital, schools, factory and supermarket applications. The unit is designed to meet the owners, consultants and contractors requirement of efficient, quiet and dependable performance. The low noise and compact series are completely leak tested, evacuated, dehydrated and pre-charged with refrigerant so that it is ready for connection when reached the site.

COMPRESSOR(S)

- ✱ Most reliable hermetic compact scroll
- ✱ No contact scroll design that minimizes friction, increases volumetric efficiency and reduces vibration, thus longer service life.
- ✱ Suction gas cooled motor.
- ✱ Compact and light with minimum wear and tear.
- ✱ Unique ability to handle slight liquid refrigerant.
- ✱ Built-in thermal protectors to prevent motor overheating, loss of phase and low refrigerant or oil charge.
- ✱ High EER.

Cleanable Shell and Tube Condenser

- ✱ Multiple 3/4" O.D. copper finned tubes with 25 to 30% more surface area ensure better heat transfer
- ✱ Integral subcooling circuit to maximize efficiency
- ✱ Provided with fusible plug for safety purpose
- ✱ Leak and pressure tested to 450 psig. The maximum water in temperature is 100°F. Select option for adjustable high



pressure switch for water in temperature 95-100°F. Consult factory for higher water in temperature

- ✱ Standard offering for all model except for 50Hz TWCPs68B-435B (Optional)

Brazed Plate Condenser

Compact and high efficiency brazed plate heat exchanger.

- ✱ Environment friendly with reduced refrigerant charged by its compact design
- ✱ Constructed with stainless steel plates
- ✱ Standard offering for 50Hz TWCPs68B-435B



Fully Leak Tested Refrigerant Circuit

- ✱ Leak and pressure tested at 450 psig
- ✱ Pressure ports are provided on the discharge, liquid and suction line
- ✱ Evacuated, dehydrated and charged with refrigerant

Efficient Evaporator Coil

- ✱ Independent thermal expansion valve with external equalizer for better refrigerant control and wider load condition
- ✱ Leak and pressure tested to 450 psig
- ✱ Evacuated, dehydrated and charged with refrigerant

Safety Components

(TWCPs-B Series)

- ✱ High-low pressure cutout for model to protect compressor from high discharge pressure and system leakage
- ✱ Liquid line sight glass and filter drier for refrigerant line components

UNIT FEATURES

Drive Package and Blowers

(TWCPS 108B and above)

- ✱ Belt driven drive package offers flexibility on various air flow rate and various static pressure applications
- ✱ Single large diameter double inlet double width blowers (AMCA certified) reduce the noise level and eliminates the need for common transition and eliminates air unbalance



Casing

- ✱ Constructed of electro galvanized steel sheet and insulated with 1/2" with closed cell Polyethylene (PE) foam insulation
- ✱ Aesthetically coated with powder paint to provide excellent finish, weatherability and corrosion resistance
- ✱ Removable panels on the left and right hand side of the unit to provide access to critical parts and components

Filters

Side loading 1" thick filters - from both sides-thus eliminates unnecessary duct opening at site.

Optional Accessories Features

- ✱ Factory wired starters
 - DOL for compressors and fan motors
 - Soft Starter for compressors (External control box may be required, please request GA from factory)
- ✱ Suction stop valve(s), discharge stop valve(s) and liquid stop valve(s)
- ✱ Thermostat
- ✱ Hydrophilic aluminum fins or copper fins or DB-Coat for better corrosion resistance
- ✱ Hot gas by pass for low load conditions
- ✱ Electric heaters (Unit dimension may be different, please request GA from factory)
- ✱ 24VAC control
- ✱ Indicating light
- ✱ Main incoming isolator
- ✱ Microprocessor controlled (Micro Vision)
- ✱ Pressure gauge for Suction & Discharge
- ✱ Liquid line solenoid valve
- ✱ SS304 Drain Pan
- ✱ Adjustable High & Low Pressure Switch (for water in temperature higher than 95°F)
- ✱ For other options, please refer Topaire Selection Software
- ✱ BMS Communication
- ✱ Closed cell Elastomer insulation (Evaporator Section)
- ✱ Replaceable Core Filter Drier
- ✱ UVR/Phase Failure Protect
- ✱ Door Interlock Main Incoming Isolator
- ✱ VFD for Evaporator Motor Nominal HP
- ✱ VFD for Evaporator Motor Max HP
- ✱ VFD Box

COOLING PORTFOLIO

TWCPS-B

Reference	Hz	Capacity	
		MBH	kW
TWCPS 68B	50	62.4	18.3
TWCPS 81B	50 / 60	72.0	21.1
TWCPS 95B	50 / 60	82.6	24.2
TWCPS 108B	50 / 60	95.9	28.1
TWCPS 125B	50 / 60	112.3	32.9
TWCPS 145B	50 / 60	131.7	38.6
TWCPS 160B	50 / 60	142.6	41.8
TWCPS 190B	50 / 60	166.2	48.7
TWCPS 220B	50 / 60	203.0	59.5
TWCPS 250B	50 / 60	232.0	68.0
TWCPS 290B	50 / 60	262.7	77.0
TWCPS 320B	50 / 60	290.7	85.2
TWCPS 380B	50 / 60	345.3	101.2

Reference	Hz	Capacity	
		MBH	kW
TWCPS 435B	50 / 60	400.2	117.3
TWCPS 480B	50 / 60	438.8	128.6
TWCPS 510B	50 / 60	466.8	136.8
TWCPS 570B	50 / 60	522.7	153.2
TWCPS 640B	50 / 60	601.6	176.3
TWCPS 700B	50 / 60	645.6	189.2
TWCPS 760B	50 / 60	697.8	204.5
TWCPS 800B	50 / 60	742.8	217.6
TWCPS 860B	50 / 60	783.1	229.4
TWCPS 950B	50 / 60	857.1	251.1
TWCPS 1140B	50 / 60	1074.1	314.7
TWCPS 1340B	50 / 60	1249.2	366.0
TWCPS 1520B	50 / 60	1398.0	409.6

Notes: 1.) Ratings Are Gross Capacities - For net capacities, deduct evaporator blower motor heat.
 2.) Cooling Mode: At 80 °F (DB), 67 °F (WB) Air on Evaporator And 95°F Ambient Condenser Water Leaving Temperature.
 3.) Performance data for 68-220FB (50Hz) can refer to 68-220B except for model 108B.

PHYSICAL SPECIFICATIONS

TWCPS-B (50Hz)

Model	Compressor					Condenser Min-Max Usqpm	Blower Section					Evaporator Coil		Air Filter Size l ches (Qty)	Approx. Refrigerant Charge Comp. Qty x lbs	Approx. Unit Weight lbs
	Qty	Nom. Power Supply	MRA	LRA	NRA		Standard Size (Qty)	Motor Max HP (Qty)	FLA	LRA	Fan Air Flow Min-Max CFM	Face Area ft ²	Row/ FPI			
TWCPS 68B	1	400V-3-50Hz	10.9	74.0	9.2	7 24	10x10 (1)	1.0(1)	7.6	-	-	5.2	3/12	16x25(1) 20x25(1)	1x7.7	635
TWCPS 81B	1	400V-3-50Hz	13.3	101.0	11.4	8 29	12x12 (1)	1.0(1)	7.6	-	-	5.7	3/12	16x25(1) 20x25(1)	1x8.8	762
TWCPS 95B	1	400V-3-50Hz	15.3	95.0	13.3	9 33	12x12 (1)	1.0(1)	7.6	-	-	6.1	3/12	16x25(1) 20x25(1)	1x12.1	840
TWCPS 108B	1	400V-3-50Hz	16.7	111.0	14.3	11 38	12x12 (1)	3.0(1)	4.8	38	1980 3630	6.6	3/12	16x16(2) 16x20(2)	1x13.2	975
TWCPS 125B	1	400V-3-50Hz	19.9	118.0	16.7	13 44	12x12 (1)	4.0(1)	6.8	40.6	2250 4125	7.6	3/12	16x16(2) 16x20(2)	1x14.3	1350
TWCPS 145B	1	400V-3-50Hz	22.0	118.0	18.4	15 55	12x12 (1)	4.0(1)	6.8	40.6	2380 4355	7.6	3/12	16x16(2) 16x20(2)	1x17.0	1368
TWCPS 160B	1	400V-3-50Hz	24.9	140.0	21.2	16 56	12x12 (1)	4.0(1)	6.8	40.6	2380 4355	11.3	3/13	16x25(2) 20x25(2)	1x19.6	1397
TWCPS 190B	1	400V-3-50Hz	31.6	1x174	27.3	19 67	15x15 (1)	7.5(1)	8.2	50.5	3970 7270	12.0	3/12	16x25(2) 20x25(2)	1x21.8	1750
TWCPS 220B	2	400V-3-50Hz	1x15.3 1x19.9	1x95 1x118	1x13.3 1x16.7	22 76	15x15 (1)	7.5(1)	8.2	50.5	4600 8440	14.9	3/12	16x20(2) 16x25(4)	1x13.2 1x14.3	1880
TWCPS 250B	2	400V-3-50Hz	2x19.9	2x118	2x16.7	25 88	15x15 (1)	7.5(1)	8.2	50.5	4960 9090	15.8	3/14	16x20(1) 16x25(2) 20x20(1) 20x25(2)	2x14.3	1980
TWCPS 290B	2	400V-3-50Hz	2x22.0	2x118	2x18.4	29 100	18x13 (1)	15(1)	19.9	129.1	6020 11040	19.5	3/13	20x20(1) 20x25(3) 25x25(2)	2x17.0	2375
TWCPS 320B	2	400V-3-50Hz	2x24.9	2x140	2x21.2	32 112	18x13 (1)	15(1)	19.9	129.1	6375 11690	20.5	3/14	20x20(1) 20x25(3) 25x25(2)	2x19.6	2700
TWCPS 380B	2	400V-3-50Hz	2x31.6	2x174	2x27.3	38 133	18x18 (1)	15(1)	19.9	129.1	6375 11690	20.5	4/12	20x20(1) 20x25(3) 25x25(2)	2x21.8	3150
TWCPS 435B	3	400V-3-50Hz	3x22.0	3x118	3x18.4	45 156	18x18 (1)	20(1)	37.2	176	7080 13000	23.6	4/12	20x25(2) 25x25(4)	3x17.0	3372
TWCPS 480B	3	400V-3-50Hz	3x24.9	3x140	3x21.2	48 168	500x500 (1)	20(1)	37.2	176	9000 16500	30.0	3/13	20x25(9)	1x19.6 1x39.2	4264
TWCPS 510B	3	400V-3-50Hz	2x24.9 1x31.6	2x140 1x174	2x21.2 1x27.3	51 178	560x560 (1)	20(1)	37.2	176	9000 16500	30.0	3/14	20x25(9)	1x21.8 1x39.2	4264
TWCPS 570B	3	400V-3-50Hz	3x31.6	3x174	3x27.3	57 200	560x560 (1)	20(1)	37.2	176	9000 16500	30.0	4/12	20x25(9)	1x21.8 1x43.6	4640
TWCPS 640B	4	400V-3-50Hz	4x24.9	4x140	4x21.2	64 224	560x560 (1)	30(1)	40.1	243.7	10800 19800	28.8	4/12	25x25(9)	2x39.2	6260
TWCPS 700B	4	400V-3-50Hz	2x24.9 2x31.6	2x140 2x174	2x21.2 2x27.3	70 245	560x560 (1)	30(1)	40.1	243.7	11500 21200	30.3	4/12	20x25(12)	1x39.2 1x43.6	6300
TWCPS 760B	4	400V-3-50Hz	4x31.6	4x174	4x27.3	76 266	630x630 (1)	30(1)	40.1	243.7	12200 32340	32.5	4/12	20x25(12)	2x43.6	6521
TWCPS 800B	5	400V-3-50Hz	5x24.9	5x140	5x21.2	80 280	630x630 (1)	40(1)	52.7	338.5	16150 29620	40.5	3/12	16x20(2) 16x25(6) 20x25(2) 25x25(6)	1x19.6 2x39.2	6972
TWCPS 860B	5	400V-3-50Hz	3x24.9 2x31.6	3x140 2x174	3x21.2 2x27.3	89 312	710x710 (1)	40(1)	52.7	338.5	16150 29620	30.0	3/12	16x20(2) 16x25(6) 20x25(2) 25x25(6)	1x19.6 1x39.2 1x43.6	7480
TWCPS 950B	5	400V-3-50Hz	5x31.6	5x174	5x27.3	96 336	710x710 (1)	40(1)	52.7	338.5	16150 29620	40.5	4/10	16x20(2) 16x25(6) 20x25(2) 25x25(6)	1x21.8 2x43.6	7750
TWCPS 1140B	6	400V-3-50Hz	6x31.6	6x174	6x27.3	114 399	560x560 (T)	50(1)	67.4	465	20000 36770	36.7	4/12	20x20(2) 20x25(10) 25x25(8)	3x43.6	8790
TWCPS 1340B	8	400V-3-50Hz	6x24.9 2x31.6	6x140 2x174	6x21.2 2x27.3	134 469	560x560 (T)	50(1)	67.4	465	21200 38870	26.7	4/11	20x20(12) 20x25(10) 25x25(2)	3x39.2 1x43.6	9122
TWCPS 1520B	8	400V-3-50Hz	8x31.6	8x174	8x27.3	152 532	560x560 (T)	50(1)	67.4	465	21200 38870	57.8	5/10	20x20(12) 20x25(10) 25x25(2)	4x43.6	9240

- Notes:**
- 1) LRA = Locked rotor ampere.
 - 2) NRA = Nominal running ampere.
 - 3) FLA = Full load ampere.
 - 4) MRA = Maximum running ampere.
 - 5) Minimum-maximum voltage is 400V ± 10%
 - 6) Filter is 1 inch thick.
 - 7) Blower for model TWCPS 68B to 95B as direct driven.
 - 8) For other power supply requirements, please contact Topaire sales office.

PHYSICAL SPECIFICATIONS

TWCPS-FB (50Hz)

Model TWCPS	Compressor					Cond.	Blower Section							Evaporator Coil		Filters		Comp. Ref. Charge Qty x lbs[kg]
	Qty	MRA	LRA	R22	R407C	Min-Max USgpm [m³/hr]	Blower			Motor			Fan Air Flow			Qty	Size inches[mm]	
				NRA (400V)	NRA (400V)		Type Of Drv.	Qty	Dia x Width inches	Max. HP	FLA EA.	LRA EA.		Min-Max cfm[m³/hr]				
68FB	1	1x14.0	1x74	1x7.8	1x8.2	7[1.6] 24[5.5]	Direct	1	9x9	0.5	3.5	-	2000[3398]	3	5.4[0.5]	2	20 7/8 x 18 1/8 x 1/2 [530x460x13]	1x8.3[3.8]
81FB	1	1x17.0	1x101	1x8.8	1x9.1	8[1.8] 29[6.6]	Direct	2	9x7	0.5	3.5	-	2400[4078]	3	7.0[0.7]	2	20 7/8 x 18 1/8 x 1/2 [530x460x13]	1x9.9[4.5]
95FB	1	1x23.0	1x95	1x12.0	1x13.0	9 [2.0] 33[7.5]	Direct	2	9x7	0.5	3.5	-	2800[4758]	4	7.0[0.7]	2	20 7/8 x 18 1/8 x 1/2 [530x460x13]	1x12.3[5.6]
125FB	1	1x26.9	1x125	1x14.1	1x14.7	13[3.0] 44[10.0]	Belt	2	10x10	1.0	2.0	10.4	4000[6797]	3	9.9[0.9]	2	27 3/4 x 18 1/8 x 1/2 [705x460x13]	1x17.6[8.0]
145FB	1	1x27.5	1x125	1x15.6	1x16.0	15[3.4] 51[11.6]	Belt	2	10x10	1.5	2.8	15.4	4400[7476]	4	9.9[0.9]	2	27 3/4 x 18 1/8 x 1/2 [705x460x13]	1x16.0[7.3]
160FB	1	1x34.0	1x167	1x18.0	1x18.9	16[3.6] 56[12.7]	Belt	2	10x10	1.5	2.8	15.4	4600[7816]	4	9.9[0.9]	2	27 3/4 x 18 1/8 x 1/2 [705x460x13]	1x23.8[10.8]
190FB	2	1x17.0 1x23.0	1x101 1x95	1x8.8 1x12.0	1x9.1 1x13.0	19[4.3] 67[15.2]	Belt	2	12x12	2.0	3.5	20.2	5800[9855]	3	13.1[1.2]	2	32 5/8 x 18 1/8 x 1/2 [829x460x13]	1x25.3[11.5]
220FB	1 1	1x23.0 1x26.9	1x95 1x125	1x12.0 1x14.1	1x13.0 1x14.7	22[5.0] 76[17.3]	Belt	2	12x12	2.0	3.5	20.2	6400[10875]	4	13.1[1.2]	2	32 5/8 x 18 1/8 x 1/2 [829x460x13]	2x13.2[6.0]

* Condenser type: Cleanable shell and tubes.

Notes: 1.) MRA = Maximum running ampere

2.) LRA = Locked rotor ampere.

3.) NRA = Nominal running ampere.

4.) FLA = Full load ampere.

5.) Minimum-maximum voltage is 360V-440V. All rating are based on 400V-3-50Hz.

6.) For TWCPS 68FB to 95FB, Blower fan motor shall be 240V-1-50Hz. For TWCPS 125FB to 220FB blower fan shall be 400V-3Ph-50Hz.

7.) For other power supply requirements, please contact the Topaire sales office.

BLOWER PERFORMANCE

TWCPS-B

RPM	CFM										Fan Model
	ESP	BHP	ESP	BHP	ESP	BHP	ESP	BHP	ESP	BHP	
TWCPS 108B											
	2600		2900		3200		3500		3800		12 / 12
800	0.53	0.82	0.46	0.95	0.41	1.11	0.33	1.27	0.23	1.45	
900	0.80	1.01	0.76	1.17	0.70	1.33	0.63	1.50	0.55	1.72	
1000	1.04	1.21	1.06	1.38	1.02	1.57	0.95	1.77	0.88	2.00	
1100	1.26	1.42	1.33	1.62	1.36	1.85	1.32	2.08	1.23	2.32	
TWCPS 125B											
	3000		3300		3600		3900		4200		12 / 12
850	0.65	1.10	0.58	1.26	0.53	1.45	0.45	1.63	0.35	1.85	
950	0.96	1.33	0.89	1.50	0.84	1.70	0.78	1.93	0.70	2.16	
1050	1.27	1.57	1.24	1.78	1.18	2.00	1.13	2.24	1.06	2.51	
1150	1.54	1.84	1.58	2.08	1.56	2.32	1.50	2.59	1.43	2.87	
TWCPS 145B											
	3100		3400		3700		4000		4300		12 / 12
900	0.70	1.26	0.64	1.45	0.56	1.65	0.47	1.85	0.35	2.08	
1000	1.03	1.51	0.96	1.70	0.88	1.92	0.80	2.16	0.71	2.41	
1100	1.34	1.77	1.32	2.00	1.24	2.24	1.16	2.49	1.08	2.77	
1200	1.62	2.05	1.66	2.30	1.64	2.60	1.55	2.87	1.47	3.16	
TWCPS 160B											
	3300		3600		3900		4200		4500		12 / 12
900	0.87	1.38	0.83	1.57	0.77	1.77	0.71	2.01	0.63	2.24	
1000	1.20	1.63	1.16	1.85	1.11	2.08	1.05	2.32	1.01	2.59	
1100	1.55	1.93	1.52	2.16	1.47	2.41	1.42	2.68	1.38	2.97	
1200	1.87	2.22	1.90	2.49	1.86	2.77	1.81	3.07	1.78	3.38	
TWCPS 190B											
	5000		5400		5800		6200		6600		15 / 15
800	0.82	2.17	0.78	2.47	0.72	2.73	0.45	3.08	0.02	3.50	
900	1.21	2.59	1.16	2.91	1.11	3.26	1.06	3.62	0.98	3.98	
1000	1.62	3.04	1.59	3.39	1.54	3.81	1.48	4.19	1.42	4.64	
1100	2.08	3.64	2.05	3.98	2.01	4.37	1.97	4.84	1.89	5.32	
TWCPS 220B											
	5600		6000		6400		6800		7200		15 / 15
850	0.99	2.84	0.94	3.16	0.80	3.50	0.38	3.94	-	-	
900	1.18	3.07	1.14	3.44	1.09	3.79	0.94	4.18	0.48	4.69	
1000	1.62	3.60	1.56	3.99	1.52	4.41	1.47	4.86	1.42	5.29	
1100	2.08	4.17	2.05	4.61	1.99	5.07	1.94	5.56	1.90	6.10	
TWCPS 250B											
	5600		6000		6400		6800		7200		15 / 15
850	1.02	2.84	0.97	3.16	0.83	3.50	0.43	3.94	-	-	
900	1.21	3.07	1.17	3.44	1.12	3.79	0.99	4.18	0.51	4.69	
1000	1.65	3.60	1.59	3.99	1.55	4.41	1.52	4.86	1.45	5.29	
1100	2.11	4.17	2.08	4.61	2.02	5.07	1.99	5.56	1.93	6.10	
TWCPS 290B											
	6200		6800		7400		8000		8600		18 / 13
800	1.55	3.60	1.44	4.10	1.33	4.64	1.23	5.15	0.84	5.78	
900	2.12	4.40	2.08	5.00	1.97	5.56	1.83	6.26	1.72	6.86	
1000	2.76	5.25	2.71	5.92	2.67	6.69	2.55	7.33	2.41	8.16	
1100	3.42	6.15	3.41	6.97	3.35	7.76	3.30	8.67	3.21	9.49	
TWCPS 320B											
	6600		7200		7800		8400		8800		18 / 13
850	1.81	4.34	1.69	4.89	1.58	5.51	1.48	6.06	1.32	6.51	
900	2.12	4.81	2.04	5.36	1.90	6.02	1.77	6.66	1.72	7.09	
1000	2.74	5.68	2.70	6.43	2.62	7.10	2.48	7.87	2.39	8.46	
1100	3.43	6.69	3.39	7.49	3.35	8.38	3.27	9.23	3.19	9.77	
TWCPS 380B											
	7600		8400		9200		10000		10800		18 / 18
700	0.86	3.52	0.75	4.11	0.53	4.77	0.21	5.45	-	-	
750	1.10	3.89	1.00	4.54	0.87	5.24	0.61	6.00	0.26	6.81	
800	1.36	4.33	1.27	4.98	1.15	5.76	1.00	6.55	0.69	7.45	
850	1.63	4.77	1.55	5.48	1.44	6.27	1.31	7.14	1.10	8.05	
TWCPS 435B											
	8600		9400		10200		11000		11800		18 / 18
700	0.77	4.26	0.55	4.94	0.22	5.67	-	-	-	-	
750	1.04	4.73	0.92	5.43	0.59	6.19	0.29	7.04	0.05	7.97	
800	1.31	5.17	1.21	5.94	1.01	6.77	0.70	7.66	0.37	8.64	
850	1.59	5.67	1.50	6.49	1.36	7.38	1.14	8.32	0.79	9.34	
TWCPS 480B											
	8000		9500		11000		12500		14000		20 / 20
550	0.68	2.64	0.56	3.34	0.39	4.17	0.19	5.11	-	-	
650	1.16	3.54	1.07	4.38	0.93	5.36	0.77	6.49	0.53	7.69	
750	1.68	4.64	1.63	5.64	1.51	6.75	1.38	8.03	1.19	9.50	
850	2.21	5.98	2.24	7.09	2.16	8.42	2.05	9.86	1.89	11.50	
TWCPS 510B											
	10000		11500		13000		14500		16000		22 / 22
500	0.66	3.34	0.57	4.03	0.42	4.79	0.24	5.67	0.03	6.62	
600	1.22	4.64	1.15	5.46	1.03	6.41	0.89	4.78	0.68	8.59	
700	1.79	6.29	1.80	7.21	1.73	8.33	1.59	9.58	1.42	10.92	
800	2.42	8.35	2.44	9.41	2.45	10.66	2.38	12.16	2.24	13.74	

Note: Data shown for Class 1 fan construction.

BLOWER PERFORMANCE

TWCPS-B

RPM	CFM										Fan Model
	ESP	BHP	ESP	BHP	ESP	BHP	ESP	BHP	ESP	BHP	
TWCPS 570B											
	11000		13500		15000		15800		16500		22 / 22
550	0.85	4.48	0.62	5.90	0.45	6.89	0.32	7.41	0.23	7.91	
650	1.45	6.01	1.29	7.73	1.13	8.86	1.03	9.58	0.95	10.17	
700	1.75	6.92	1.64	8.77	1.49	10.00	1.39	10.75	1.32	11.35	
800	2.40	9.03	2.39	11.17	2.31	12.57	2.22	13.55	2.16	14.30	
TWCPS 640B											
	14600		15400		16200		17000		17800		22 / 22
550	0.65	6.61	0.52	7.10	0.44	7.75	0.37	8.32	0.22	8.96	
650	1.32	8.58	1.22	9.18	1.13	9.89	1.08	10.61	0.94	11.90	
700	1.69	9.66	1.58	10.39	1.51	11.08	1.46	11.91	1.33	12.65	
750	2.08	10.94	1.98	11.67	1.91	12.46	1.87	13.33	1.75	14.15	
TWCPS 700B											
	15600		16400		17200		18000		18800		22 / 22
550	0.55	7.26	0.45	7.88	0.33	8.47	0.24	9.12	0.10	9.80	
600	0.89	8.27	0.79	8.95	0.67	9.57	0.60	10.34	0.46	11.05	
650	1.25	9.39	1.15	10.06	1.05	10.81	0.75	11.55	0.83	12.36	
700	1.63	10.64	1.53	11.23	1.45	12.71	1.37	12.93	1.25	13.88	
TWCPS 760B											
	13000		15000		17000		19000		21000		25 / 25
500	0.95	5.50	0.83	6.54	0.77	7.87	0.37	9.44	-	-	
550	1.29	6.59	1.18	7.72	1.06	9.11	0.87	10.68	0.48	12.64	
600	1.64	7.74	1.55	9.09	1.44	10.56	1.27	12.15	1.06	14.20	
650	1.94	8.99	1.94	10.55	1.84	12.15	1.69	13.92	1.52	15.95	
TWCPS 800B											
	15000		17000		19000		21000		23000		25 / 25
550	1.33	7.72	1.22	9.12	1.10	10.70	0.75	12.64	0.12	14.75	
600	1.70	9.09	1.59	10.52	1.50	12.20	1.33	14.20	0.91	16.50	
640	2.01	10.25	1.92	11.82	1.82	13.50	1.70	15.63	1.46	18.00	
680	2.33	11.40	2.26	13.21	2.16	15.03	2.05	17.14	1.89	19.62	
TWCPS 860B											
	17000		19000		21000		23000		25000		28 / 28
400	0.69	5.88	0.59	6.86	0.47	8.08	0.19	9.40	-	-	
450	1.05	7.18	0.98	8.31	0.87	9.55	0.72	10.98	0.52	12.64	
500	1.42	8.58	1.39	9.96	1.29	11.28	1.16	12.86	1.03	14.58	
600	2.22	12.17	2.23	13.61	2.20	15.42	2.11	17.30	2.02	19.32	
TWCPS 950B											
	19000		21000		23000		25000		27000		28 / 28
450	0.95	8.31	0.85	9.56	0.70	10.98	0.48	12.63	-	-	
500	1.35	9.92	1.27	11.29	1.14	12.86	1.00	14.59	0.81	16.47	
600	2.20	13.62	2.18	15.43	2.09	17.30	1.99	19.32	1.84	21.53	
650	2.66	15.94	2.66	17.66	2.60	19.87	2.52	22.11	2.39	24.46	
TWCPS 1140B											
	20000		22000		24000		26000		28000		2 x 22 / 22
500	0.60	6.71	0.55	7.58	0.45	8.55	0.36	9.69	0.26	10.83	
600	1.12	9.19	1.10	10.33	1.02	11.58	0.93	12.81	0.86	14.26	
700	1.65	12.35	1.69	13.71	1.64	15.06	1.59	16.70	1.52	18.37	
800	2.24	16.25	2.29	17.86	2.29	19.47	2.27	21.13	2.25	23.13	
TWCPS 1340B											
	25000		27000		29000		31000		33000		2 x 22 / 22
500	0.40	9.13	0.30	10.22	0.20	11.40	0.07	12.77	-	-	
600	0.96	12.15	0.90	13.57	0.80	14.94	0.67	16.52	0.55	18.17	
700	1.61	15.88	1.55	17.51	1.47	19.19	1.37	21.06	1.25	22.86	
800	2.28	20.33	2.27	22.19	2.22	24.16	2.12	26.29	2.03	28.54	
TWCPS 1520B											
	28000		30000		32000		34000		36000		2 x 22 / 22
500	0.25	10.83	0.13	12.09	-	-	-	-	-	-	
600	0.85	14.26	0.74	15.80	0.60	17.34	0.49	19.08	0.35	20.89	
700	1.51	18.37	1.41	20.10	1.31	22.00	1.20	23.99	1.07	26.16	
800	2.24	23.13	2.16	25.19	2.06	27.36	1.96	29.60	1.87	32.15	

Note: Data shown for Class 1 fan construction.

CORRECTION FACTORS

To correct for variation in air flow, use this multiplier

Air Flow Variation	Total Capacity	Sensible Capacity
0.8	0.960	0.900
0.9	0.980	0.950
1.0	1.000	1.000
1.1	1.015	1.045
1.2	1.025	1.090

To correct for altitude, use this multiplier

Altitude Above Sea Level - Ft	Cooling Capacity
0	1.00
2000	0.98
3000	0.97
4000	0.96
5000	0.95
6000	0.93
7000	0.92

To correct sensible capacity for varying dry bulb

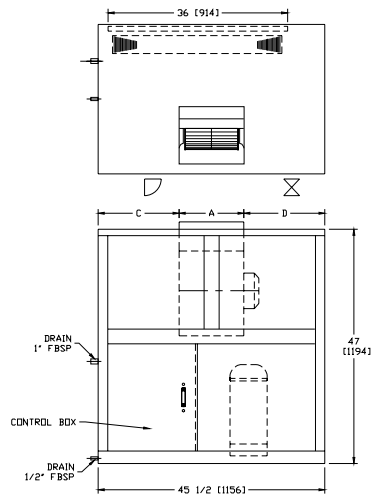
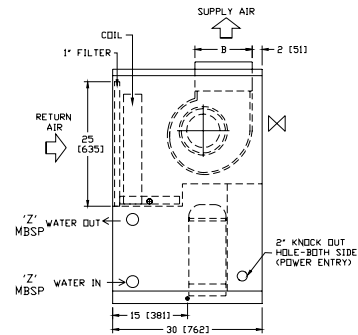
Dry Bulb	Wet Bulb			
	57	62	67	72
75	0.84	0.81	0.78	0.74
80	1.00	1.00	1.00	1.00
85	1.16	1.18	1.21	1.26

Note: If The Capacity After Multiplying The Sensible With The Correction Factor Exceed The Total Capacity, Then The Sensible Must Be Equal To The Total.

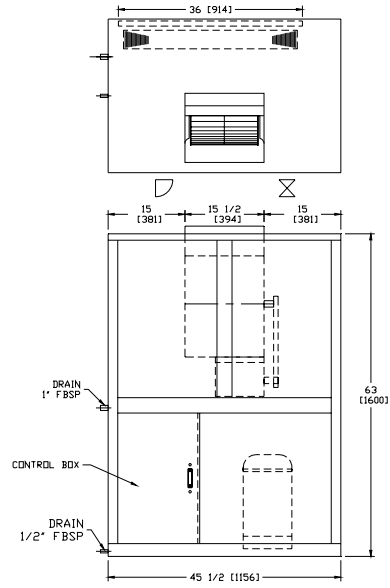
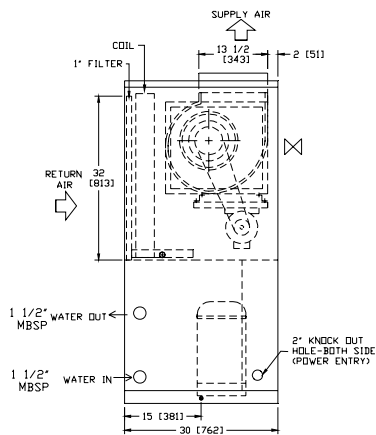
DIMENSIONAL DATA

50Hz : TWCPs 68B, 81B, 95B

Model	A	B	C	D	Z
TWCPs 68B	13[330]	11 1/2[292]	16 1/4[413]	16 1/4[413]	1 1/4"
TWCPs 81B	15 1/2[394]	13 1/2[343]	15[381]	15[381]	1 1/2"
TWCPs 95B	15 1/2[394]	13 1/2[343]	15[381]	15[381]	1 1/2"

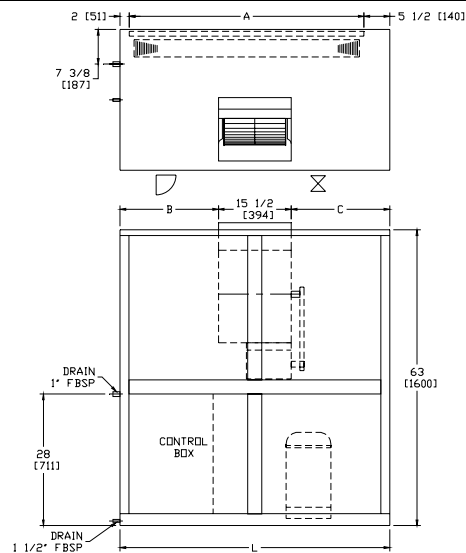
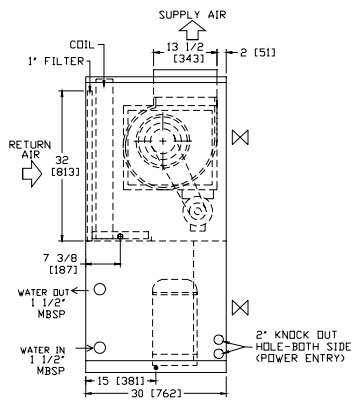


50Hz : TWCPs 108B, 125B



50Hz : TWCPs 145B, 160B

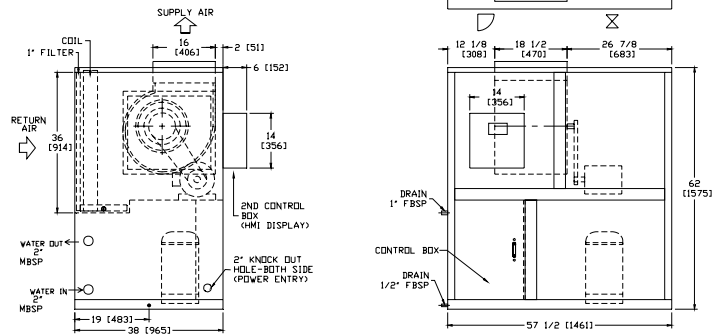
Model	A	B	C	L
TWCPs 145B	36[914]	18[381]	15[381]	45 1/2[1156]
TWCPs 160B	50[1270]	21[533]	21[533]	57 1/2[1461]



Note: All dimensions are in inches[mm].

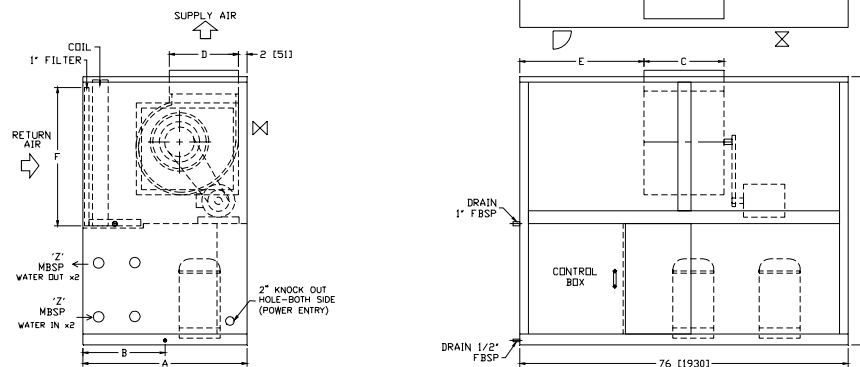
DIMENSIONAL DATA

50Hz : TWCPs 190B

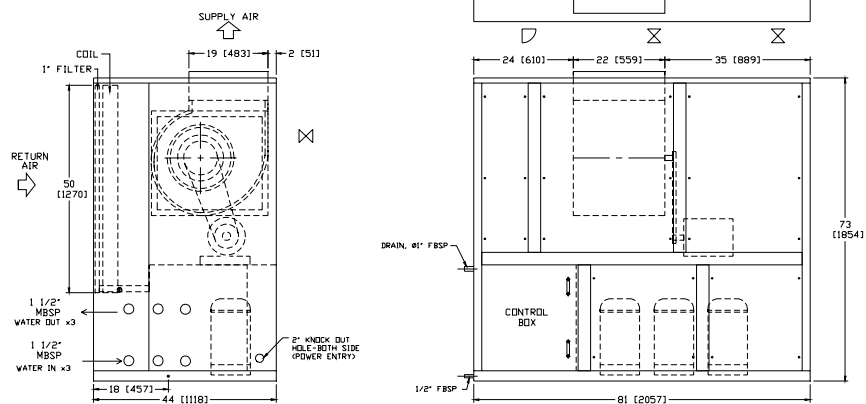


50Hz : TWCPs 220B, 250B, 290B, 320B, 380B

Model	A	B	C	D	E	F	H	Z
TWCPs 220B	38[965]	19[483]	18 1/2[470]	16[406]	28 3/4[730]	32[813]	62[1575]	1 1/2[38]
TWCPs 250B	38[965]	19[483]	18 1/2[470]	16[406]	28 3/4[730]	36[914]	62[1575]	1 1/2[38]
TWCPs 290B	41 1/2[1054]	21[533]	17[432]	19[483]	23[584]	45[1143]	68[1727]	1 1/2[38]
TWCPs 320B	41 1/2[1054]	21[533]	17[432]	19[483]	23[584]	45[1143]	68[1727]	1 1/2[38]
TWCPs 380B	41 1/2[1054]	21[533]	22[559]	19[483]	18[457]	45[1143]	68[1727]	2[51]



50Hz : TWCPs 435B

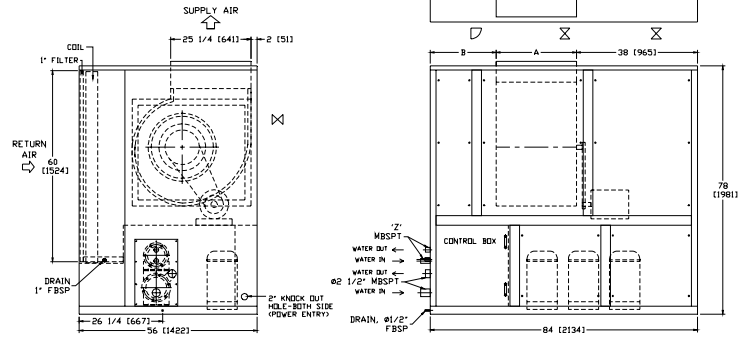


Note: All dimensions are in inches[mm].

DIMENSIONAL DATA

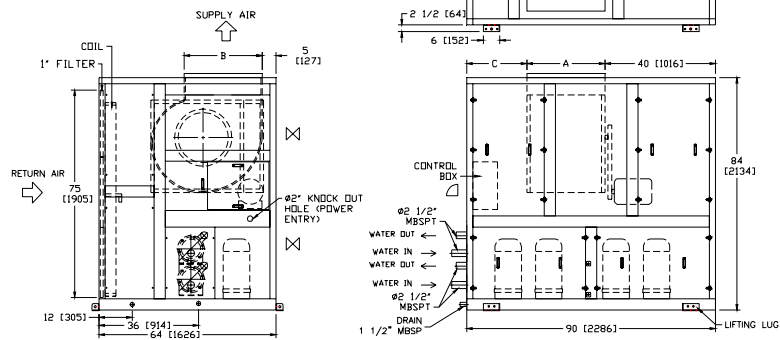
50Hz : TWCPS 480B, 510B, 570B

Model	A	B	P
TWCPS 480B	25 1/4[641]	20 3/4[527]	1 1/2[38]
TWCPS 510B	28 1/4[718]	17 3/4[451]	2[51]
TWCPS 570B	28 1/4[718]	17 3/4[451]	2[51]



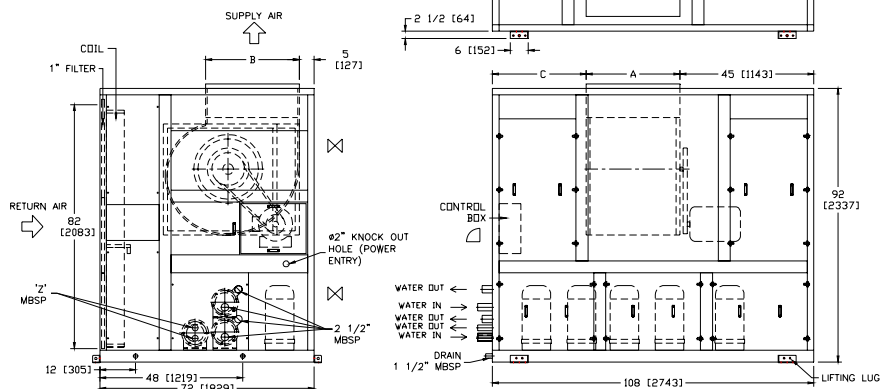
50Hz : TWCPS 640B, 700B, 760B

Model	A	B	C
TWCPS 640B	28 1/4[718]	28 1/4[718]	21 3/4[552]
TWCPS 700B	28 1/4[718]	28 1/4[718]	21 3/4[552]
TWCPS 760B	31 1/2[800]	31 1/2[800]	18 1/2[470]



50Hz : TWCPS 800B, 860B, 950B

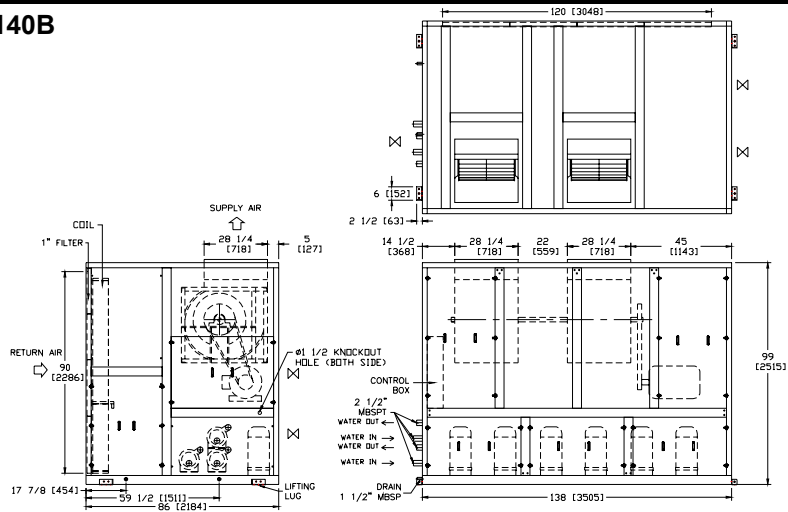
Model	A	B	C	Z
TWCPS 800B	31 1/2[800]	31 1/2[800]	31 1/2[800]	1 1/2[38]
TWCPS 860B	35 1/2[902]	35 1/2[902]	27 1/2[699]	1 1/2[38]
TWCPS 950B	35 1/2[902]	35 1/2[902]	27 1/2[699]	2[51]



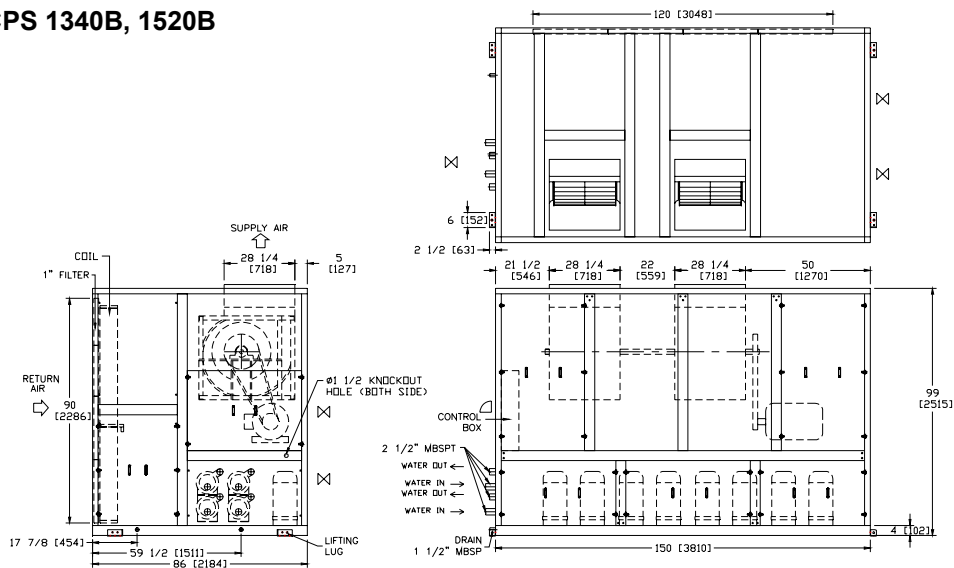
Note: All dimensions are in inches[mm].

DIMENSIONAL DATA

50Hz : TWCPs 1140B



50Hz : TWCPs 1340B, 1520B

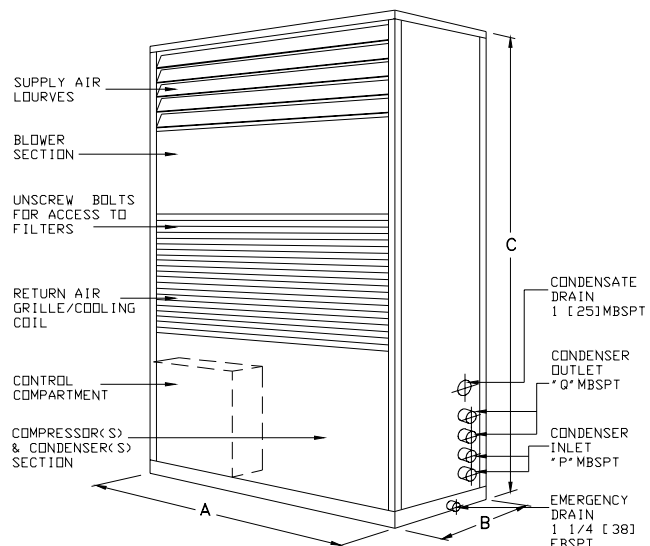


50 Hz : TWCPs-FB (FREE-BLOW TYPE)

Model	A	B	C	P	Q
TWCPS 68 FB	48[1219]	22[559]	79[2007]	1 1/4[32]	-
TWCPS 81 FB	48[1219]	22[559]	79[2007]	1 1/2[38]	-
TWCPS 95 FB	48[1219]	22[559]	79[2007]	1 1/2[38]	-
TWCPS 125 FB	61[1549]	24[610]	81[2057]	1 1/2[38]	-
TWCPS 145 FB	61[1546]	24[610]	81[2057]	1 1/2[38]	-
TWCPS 160 FB	61[1549]	30[762]	86[2184]	1 1/2[38]	-
TWCPS 190 FB	72[1829]	30[762]	86[2184]	1 1/2[38]	1 1/2[38]
TWCPS 220 FB	72[1829]	30[762]	86[2184]	1 1/2[38]	1 1/2[38]

Note: For access to internal components

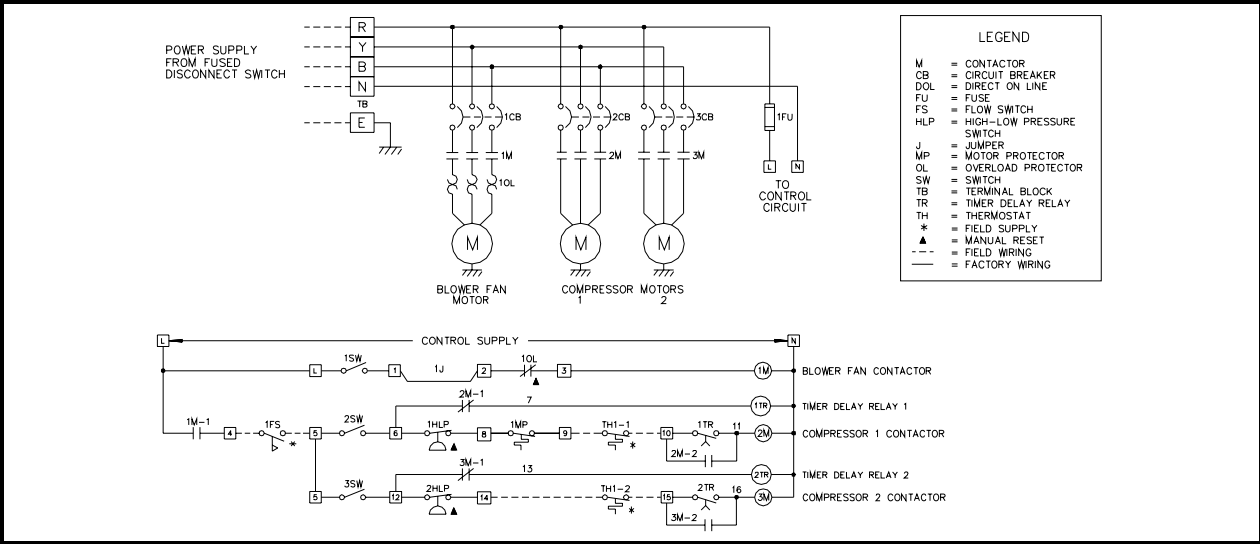
- 1.) Unscrew bolts at return air grille, remove grille and access to filters and coil.
- 2.) Unscrew bolts for blower section panel, push panel up and remove panel for access to blower and drive assembly.
- 3.) Unscrew bolts for bottom panel, push panel up and access to compressor(s), condenser(s) and controls.
- 4.) Add 10" to the unit's height if autotransformer were required.



Note: All dimensions are in inches[mm].

ELECTRICAL

TYPICAL WIRING DIAGRAM





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