

Cooline[®]

AIR CONDITIONERS

from  **Zamil**



Concealed Chilled Water Fan Coil Units

DWL Series
DWL02 thru DWL20
200 CFM thru 2000 CFM



Higher quality of indoor living

Our product line ...



Room ACs & Mini-Split Units



Free Standing & Cassette Units



Ducted Split Units



Condensing & Packaged Units



Chillers & Double Skin AHU's



Mobile AC



Controls

Company Business

Zamil Air Conditioners was founded in 1974 as one of the first air conditioning business to be established in Saudi Arabia and today is a leading international manufacturer of air conditioning systems and is No. 1 in the Middle East.

Zamil Air conditioners manufactures both consumer and central air conditioners and has sales operations in over 55 countries in the Middle East, Europe, Africa and Asia.

The company's operations are structured into four Strategic Business Units (SBUs) supporting five in-house product and service brands as well as a number of international brands under the OEM sales.

The five in-house brands are Classic, Cooline, CoolCare, Clima Tech and Geoclima.

The four SBUs are:

1. Consumer Business Unit supporting Classic, Cooline, GE and OEM brands for consumers.
2. Unitary & Applied Business Unit supporting Classic, Cooline, GE and OEM brands for commercial and industrial customers.
3. Zamil CoolCare providing engineering & project management services, HVAC maintenance, retrofit services and parts.
4. Geoclima srl is an independent business supporting other SBUs for their requirement of Chillers & Double skin AHU's.

The first three SBUs - Consumer Products, Unitary & Applied Products and CoolCare Service direct their business operations from the corporate headquarters at Dammam, Saudi Arabia.

Geoclima has its engineering & production departments located at Monfalcone, Italy and has a design center in Austria.

All the four SBUs, while operating independently, supplement each other's activities in a way that makes synergy work at its best and achieve the corporate goals of maximizing customer satisfaction.

Factories and Productions

Zamil Air Conditioners has two manufacturing plants in Dammam, Saudi Arabia and has one speciality production facility in Italy operated by Geoclima.

The company can produce up to 550,000 Room Air Conditioners, 300,000 Mini-Split systems and 50,000 Central Air Conditioning systems per year.

Quality & Product Certificates

The Quality systems and policies at Zamil Air Conditioners comply with the required ISO 9001:2000 certification.

Zamil Air Conditioners is the first company in Saudi Arabia to receive the SASO (Saudi Arabia's Standard Organization) Certificate for Room Air Conditioners. ZAC's products are also certified with:

1. CE (Council of European Community)
2. UL (Underwriters Laboratory)
3. Eurovent
4. DEMKO
5. ETL

Other awards include the prestigious Engineering Excellence Award of General Electric and the inaugural Prince Mohammed bin Fahd Al Saud Award for Factory Safety.

Our Products

In addition to the consumer products such as the Room Air Conditioners (RAC) and the Mini Splits, Zamil Air Conditioners manufacturers a host of residential, commercial and industrial air conditioners. This broad range extends from the Concealed Units up to 5 tons, the Ducted Splits up to 30 tons, the Packaged Units up to 90 tons, the Single and Double Skin Air Handling Units up to 70,630 CFM and the Water Chillers up to 660 tons cooling capacity.

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*CONTINUING RESEARCH RESULTS IN STEADY IMPROVEMENTS.
THEREFORE, THESE SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.*

MODEL DECODING

1, 2 & 3 BASIC (SERIES)	4 & 5 SIZE (x 100 CFM)	6 ELECTRICAL SUPPLY (V-Ph-Hz)	7 COIL	8 HEATER	9 ACCESSORIES	10 FIN	11 COIL CONNECTION	12 FILTER	13 OPTION
DWL COOLINE CHILLED WATER FAN COIL UNIT	02	B : 220/240-1-50	A : 3 ROW CHILLED WATER	N : NO HEATER	N : STANDARD B : 3D VALVE PACKAGE (COOL ONLY) K : 4D VALVE PACKAGE (HEAT & COOL)	A : ALUMINUM FIN B : COATED ALUMINUM FIN C : COPPER FIN	R : RH SIDE, STANDARD (FACING AIR DIS- CHARGE) L : LH SIDE, OPTIONAL (FACING AIR DIS- CHARGE)	N : NONE A : ALUMINUM (1/2" THICK)	N : STANDARD UNIT
	03		B : 4 ROW CHILLED WATER	D : 2 kW					
	04		J : 3 ROW CHILLED WATER + 1 ROW HEAT	E : 3 kW					
	06			G : 5 kW					
	08			N : NO HEATER					
	10			E : 3 kW					
	12			G : 5 kW					
	14		B : 4 ROW CHILLED WATER	J : 7 kW					
	16		L : 5 ROW CHILLED WATER	M : 10 kW					
	18								
20	K : 4 ROW CHILLED WATER + 1 ROW HEAT								

UNIT FEATURES

COMPACT DIMENSIONS

Ideal to fit into tight spaces.

EASY MAINTENANCE / ONE SIDE ACCESS

Filters can be easily removed by lifting/sliding. Piping and controls are on one side for easy access.

QUIET, PULSE FREE AIR DELIVERY

Centrifugal fans that are statically and dynamically balanced, handle up to 0.5" w.g. external static pressure allowing you to keep the unit away from your comfort zone.

STANDARD SPECIFICATIONS

UNIT CONSTRUCTION

These ducted indoor fan coil units consists of a coil, motor/blower assembly and a drain pan securely mounted on heavy gauge galvanized steel housing. Steel sheet panels are zinc coated and galvanized by the hot dip process of lock-forming quality conforming to ASTM A 653 commercial weight G-90.

This unit is designed for those concealed overhead installations which require supply ductwork. A 1.5" duct collar is provided into the front panel for supply air duct connection. Return air is from the rear side.

Access to the blower assembly is provided through the removable bottom panel from where the complete fan/motor deck can be removed for servicing. The panels are insulated with 5/16" thick (density 0.033 g/cm³) polyethylene acoustic and thermal insulation. 1/2" thick permanent washable type aluminum filter is provided. Units are rated in accordance with ARI 440.

BLOWER ASSEMBLY

The direct drive blower motor assembly is easily accessible for complete servicing after removal of fan deck from the unit. The aluminum blower wheels are large in diameter and are of the forward curved design. Constructed of galvanized steel, they are statically and dynamically balanced for quiet and smooth performance.

MOTORS

Motors are permanent split capacitor type with three speed windings. The bearings are of sleeve type.

COILS

Coils are 3/8" OD copper tubing with aluminum fins mechanically bonded to the tubes. Manual air vents are provided on all chilled water coils (auto air vents are available as an option). The standard coil is 3 rows (for sizes 02 to 12) & 4 rows (for size 14 and above) provide adequate capacity for most applications designed for 12° F water temperature rise. A 4 pipe coil consisting of 3 rows of cooling coil and 1 row of heating coil (for sizes 02 to 12) & 4 rows of cooling coil and 1 row of heating coil (for size 14 and above) is also offered as an optional item. Each coil is pressure tested in the factory at not less than 300 psi (2070 kpa) air pressure.

DRAIN PAN

The condensate drain pan is fabricated of 18 gauge galvanized steel. The drain pan is powder coat painted. The outer surface is thermally insulated.

DRIP LIP

The purpose of a 'drip-lip' is to capture any condensate from the valve packages and direct it to the drain pan. It is fabricated of a single metal formed to fit on the side of the drain pan. They may be installed in the field and should always be pitched towards the drain pan to assure proper drainage. This will be supplied loose for field installations along with valve packages.

OPTIONS

ELECTRIC HEATERS

The heater element is of the resistance open coil type. Thermal overheat cut-outs and fusible links are provided to shut-off power to heaters in case of airflow failure. The complete heater assembly is sliding type and easy to remove for maintenance.

FILTERS

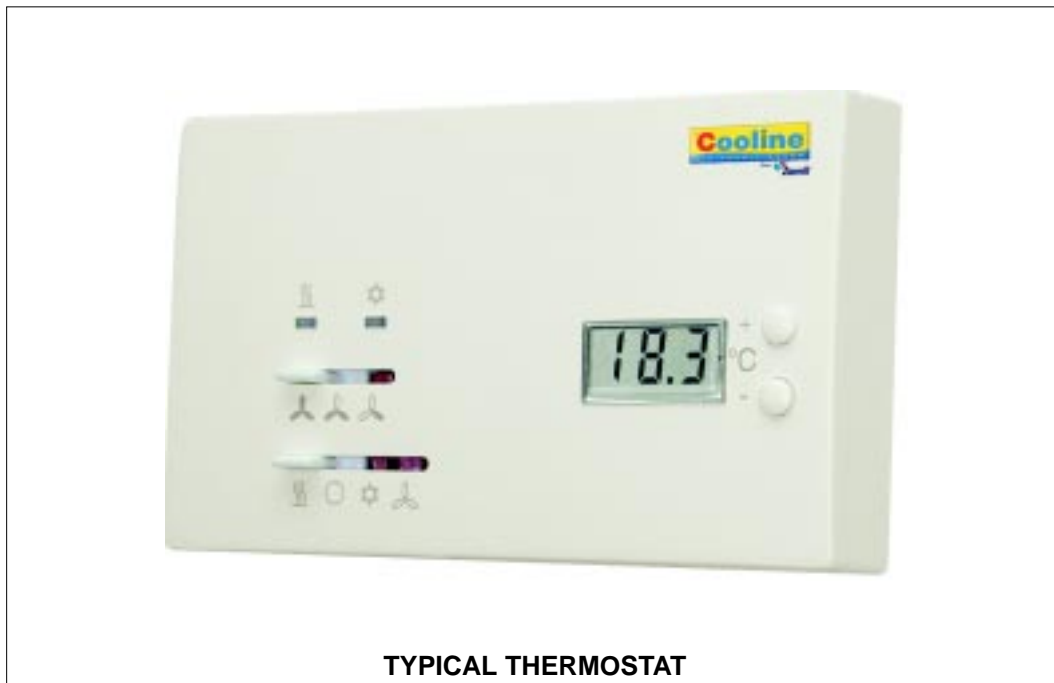
All models are furnished with 1/2" thick permanent washable type aluminum filters as standard. One inch thick aluminum filters can be provided as an option.

VALVE PACKAGES

A variety of valve packages, as a set are available as an option (3D for two pipe system and 4D for four pipe systems). These valves can be factory installed or shipped loose for field installation.

THERMOSTAT

An attractive wall mount three speed thermostat with all required functions and features for safe and smooth operation which can be used for cooling & heating. This thermostat can be supplied loose through separate Kit number.



TYPICAL THERMOSTAT

PHYSICAL DATA

MODEL NUMBER	DWL02	DWL03	DWL04	DWL06	DWL08	DWL10	DWL12	DWL14	DWL16	DWL18	DWL20
POWER SUPPLY, V-Ph-Hz	220/240-1-50										
SOUND PRESSURE LEVEL (high/med./low), dBA @ 9ft., 0.15 ESP	32/31/30	33/32/30	35/32/30	36/34/33	42/36/35	44/40/37	44/40/37	46/44/40	37/33/30	40/37/33	42/39/36
BLOWER	Forward Curved										
Type											
Size (mm)	146x196	146x196	146x196	146x240	146x240	180x240	180x240	180x240	200x216	200x216	200x216
Quantity	2	2	2	2	2	2	2	2	2	2	2
Quantity	1	1	1	1	1	1	1	1	1	1	1
FLA	0.66	0.66	0.66	1.2	1.2	2.5	2.5	2.5	4.2	4.2	4.2
Watts @ 0.0 ESP, high speed	80	88	95	120	140	290	322	395	480	530	563
COOLING COIL	Corrugated Fin & Tube										
Type											
Tube dia. - Rows - FPI (STD.)	3/8 - 3 - 12	3/8 - 3 - 12	3/8 - 3 - 12	3/8 - 3 - 12	3/8 - 3 - 12	3/8 - 3 - 12	3/8 - 3 - 12	3/8 - 4 - 12	3/8 - 4 - 14	3/8 - 4 - 14	3/8 - 4 - 14
Tube dia. - Rows - FPI (Option)	3/8 - 4 - 12	3/8 - 4 - 12	3/8 - 4 - 12	3/8 - 4 - 12	3/8 - 4 - 12	3/8 - 4 - 12	3/8 - 4 - 12	3/8 - 5 - 12	3/8 - 5 - 14	3/8 - 5 - 14	3/8 - 5 - 14
Face area, Sq. ft. (Sq. m.)	1.75 (0.16)	1.75 (0.16)	1.75 (0.16)	2.22 (0.2)	2.22 (0.2)	3 (0.28)	3 (0.28)	3 (0.28)	4.37 (0.4)	4.37 (0.4)	4.37 (0.4)
HOT WATER COIL	Corrugated Fin & Tube										
Type											
Tube dia. - Rows - FPI	3/8 - 1 - 14	3/8 - 1 - 14	3/8 - 1 - 14	3/8 - 1 - 14	3/8 - 1 - 14	3/8 - 1 - 14	3/8 - 1 - 14	3/8 - 1 - 14	3/8 - 1 - 14	3/8 - 1 - 14	3/8 - 1 - 14
Face area, Sq. ft. (Sq. m.)	1.75 (0.16)	1.75 (0.16)	1.75 (0.16)	2.22 (0.2)	2.22 (0.2)	3 (0.28)	3 (0.28)	3 (0.28)	4.37 (0.4)	4.37 (0.4)	4.37 (0.4)
COIL CONNECTIONS											
Chilled water, Inlet - Outlet (inch)	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8
Hot water, Inlet - Outlet (inch)	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8	5/8 - 5/8
RETURN AIR FILTER											
Size (inch)	7.5x14.6	7.5x14.6	7.5x14.6	8x16.5	8x16.5	9.5x18.5	9.5x18.5	9.5x18.5	11x22.75	11x22.75	11x22.75
Quantity	2	2	2	2	2	2	2	2	2	2	2
SHIPPING WEIGHT											
kg. (approx.)	34	34	34	40	40	52	52	55	65	65	65

HOT WATER CAPACITIES

MODEL NUMBER	EWT - 150°F (65°C)		EWT - 180°F (82°C)	
	GPM (LPS)		GPM (LPS)	CAPACITIES MBH (kW)
DWL02	1.10 (0.069)	11.4 (3.33)	1.71 (0.107)	17.1 (5.0)
DWL03	1.21 (0.076)	12.0 (3.51)	1.8 (0.113)	18.05 (5.3)
DWL04	1.3 (0.081)	12.6 (3.7)	2.0 (0.126)	19.23 (5.63)
DWL06	1.6 (0.10)	16.0 (4.7)	2.45 (0.154)	24.4 (7.14)
DWL08	1.7 (0.107)	16.3 (4.8)	2.55 (0.16)	25.0 (7.32)
DWL10	2.3 (0.144)	22.5 (6.6)	3.5 (0.22)	34.72 (10.16)
DWL12	2.4 (0.151)	23.2 (6.8)	3.6 (0.226)	36.0 (10.5)
DWL14	2.5 (0.157)	23.55 (6.9)	3.7 (0.233)	36.31 (10.6)
DWL16	3.4 (0.214)	33.5 (9.86)	5.24 (0.33)	52.12 (15.26)
DWL18	3.5 (0.22)	34.35 (10.05)	5.41 (0.34)	53.7 (15.7)
DWL20	3.6 (0.23)	34.83 (10.2)	5.51 (0.347)	54.7 (16.0)

NOTE: Capacities @ 70°F (21°C) Entering Air Temperature & 20°F (11°C) Water Temperature Drop.

LEGEND:

EWT - Entering Water Temperature

MBH - 1000 BTUH

GPM - Gallons Per Minute

LPS - Liters Per Second

CHILLED WATER COOLING CAPACITIES (ENGLISH UNITS)

ENTERING AIR TEMP. = 76°F DB/63°F WB (@ HIGH SPEED)

WTR (°F)	UNIT SIZE	40°F EWT			45°F EWT			50°F EWT		
		TC	SC	GPM	TC	SC	GPM	TC	SC	GPM
8	02	10.60	7.40	2.64	8.10	6.20	2.01	5.95	5.43	1.49
	03	11.65	8.26	2.91	9.00	7.10	2.25	6.65	6.26	1.66
	04	12.92	9.29	3.23	10.13	8.10	2.53	7.46	7.19	1.86
	06	16.91	12.24	4.23	13.32	10.73	3.33	9.81	9.55	2.45
	08	17.67	12.83	4.42	13.90	11.25	3.47	10.23	10.01	2.56
	10	25.62	18.69	6.40	20.12	16.37	5.03	14.76	14.57	3.69
	12	27.71	20.30	6.93	21.72	17.78	5.43	15.89	15.83	3.97
	14	33.95	24.36	8.48	26.50	21.13	6.62	19.50	18.75	4.87
	16	47.75	34.20	11.94	37.22	29.63	9.30	27.42	26.24	6.85
	18	50.34	36.17	12.58	39.39	31.47	9.85	28.98	27.93	7.24
20	52.00	37.45	13.00	40.78	32.67	10.19	29.97	28.99	7.49	
10	02	9.93	6.96	1.99	7.83	6.04	1.57	5.80	5.33	1.16
	03	11.11	7.92	2.22	8.77	6.90	1.75	6.46	6.12	1.29
	04	12.52	9.04	2.50	9.84	7.91	1.97	7.22	7.01	1.44
	06	16.46	11.95	3.29	12.95	10.47	2.59	9.50	9.30	1.90
	08	17.18	12.51	3.43	13.50	10.96	2.70	9.88	9.74	1.98
	10	24.86	18.19	4.97	19.49	15.93	3.90	14.23	14.15	2.85
	12	26.83	19.65	5.37	21.00	17.28	4.20	15.28	15.28	3.06
	14	32.75	23.59	6.55	25.73	20.62	5.14	18.87	18.26	3.77
	16	45.99	33.06	9.20	36.18	28.90	7.24	26.57	25.62	5.32
	18	48.68	35.12	9.73	38.25	30.71	7.65	28.04	27.20	5.61
20	50.39	36.42	10.08	39.56	31.85	7.91	28.97	28.20	5.80	
12	02	9.72	6.83	1.62	7.53	5.92	1.28	5.67	5.23	0.95
	03	10.89	7.78	1.81	8.52	6.79	1.43	6.29	5.99	1.05
	04	12.23	8.85	2.04	9.59	7.74	1.60	7.00	6.83	1.17
	06	16.09	11.70	2.68	12.62	10.24	2.10	9.20	9.06	1.53
	08	16.77	12.25	2.79	13.15	10.71	2.19	9.56	9.47	1.60
	10	24.23	17.78	4.04	18.95	15.55	3.16	13.73	13.73	2.29
	12	26.11	18.73	4.35	20.37	16.83	3.40	14.71	14.71	2.45
	14	31.97	23.10	5.33	25.08	20.17	4.18	18.29	17.80	3.05
	16	44.95	32.41	7.49	35.30	28.31	5.88	25.79	25.00	4.30
	18	47.52	34.38	7.92	37.27	30.04	6.21	27.17	26.51	4.53
20	49.16	35.65	8.19	38.52	31.13	6.42	28.05	27.46	4.68	

ENTERING AIR TEMP. = 80°F DB/67°F WB (@ HIGH SPEED)

WTR (°F)	UNIT SIZE	40°F EWT			45°F EWT			50°F EWT		
		TC	SC	GPM	TC	SC	GPM	TC	SC	GPM
8	02	16.86	10.11	4.22	14.23	8.71	3.56	11.65	7.95	2.91
	03	18.92	11.50	4.73	15.88	10.17	3.97	12.92	9.08	3.23
	04	21.33	13.10	5.33	17.80	11.58	4.45	14.38	10.33	3.59
	06	27.71	17.10	6.93	23.16	15.18	5.79	18.71	13.58	4.68
	08	28.93	17.91	7.23	24.13	15.89	6.03	19.45	14.20	4.86
	10	41.95	26.09	10.49	34.88	23.09	8.72	28.07	20.67	7.02
	12	45.38	28.32	11.34	37.60	25.04	9.40	30.38	22.52	7.59
	14	56.06	34.34	14.01	46.78	30.34	11.69	37.79	27.03	9.45
	16	78.44	48.00	19.61	65.59	42.44	16.40	53.09	37.86	13.27
	18	83.20	51.06	20.80	69.42	45.11	17.35	56.05	40.19	14.01
20	86.26	52.99	21.56	71.88	46.80	17.97	57.94	41.69	14.48	
10	02	16.07	9.68	3.21	13.53	8.55	2.70	11.01	7.60	2.20
	03	17.88	10.93	3.58	14.95	9.66	2.99	12.15	8.63	2.43
	04	19.98	12.34	3.99	16.59	10.89	3.32	13.70	9.93	2.74
	06	25.99	16.14	5.20	21.62	14.29	4.32	18.01	13.16	3.60
	08	27.05	16.86	5.41	22.59	15.00	4.52	18.80	13.82	3.76
	10	39.02	24.43	7.80	32.76	21.87	6.55	27.23	20.15	5.44
	12	41.97	26.37	8.39	35.45	23.77	7.09	29.41	21.93	5.88
	14	52.48	32.36	10.50	43.59	28.55	8.72	35.85	25.90	7.17
	16	73.66	45.36	14.73	61.30	40.04	12.26	50.32	36.23	10.06
	18	77.86	48.06	15.57	64.65	42.40	12.93	53.28	38.59	10.66
20	80.56	49.82	16.11	66.79	43.93	13.36	55.18	40.07	11.03	
12	02	15.40	9.32	2.57	12.89	8.20	2.15	10.62	7.38	1.77
	03	16.99	10.43	2.83	14.27	9.27	2.38	11.90	8.49	1.98
	04	18.84	11.71	3.14	16.09	10.61	2.68	13.38	9.74	2.23
	06	24.75	15.44	4.12	21.15	14.02	3.52	17.61	12.92	2.93
	08	25.85	16.18	4.31	22.08	14.70	3.68	18.37	13.55	3.06
	10	37.48	23.26	6.25	31.96	21.40	5.33	26.55	19.73	4.42
	12	40.53	25.56	6.75	34.52	23.22	5.75	28.63	21.44	4.77
	14	49.41	30.64	8.23	42.09	27.69	7.01	35.01	25.40	5.83
	16	69.54	43.03	11.59	59.09	38.77	9.85	49.20	35.59	8.20
	18	73.27	45.49	12.21	62.56	41.22	10.43	52.04	37.83	8.67
20	75.94	47.24	12.66	64.78	42.78	10.80	53.85	39.26	8.97	

ENTERING AIR TEMP. = 84°F DB/71°F WB (@ HIGH SPEED)

WTR (°F)	UNIT SIZE	40°F EWT			45°F EWT			50°F EWT		
		TC	SC	GPM	TC	SC	GPM	TC	SC	GPM
8	02	23.58	12.68	5.89	20.77	11.37	5.19	18.03	10.25	4.51
	03	26.71	14.45	6.67	23.44	12.99	5.86	20.27	11.76	5.07
	04	30.41	16.56	7.60	26.59	14.89	6.65	22.89	13.50	5.72
	06	39.35	21.51	9.84	34.47	19.43	8.62	29.73	17.67	7.43
	08	41.23	22.58	10.31	36.06	20.39	9.02	31.06	18.56	7.76
	10	60.15	33.01	15.04	52.49	29.79	13.12	45.09	27.09	11.27
	12	65.49	36.02	16.37	57.00	32.46	14.25	48.84	29.51	12.21
	14	80.07	43.51	20.02	69.94	39.08	17.48	60.19	35.38	15.05
	16	111.58	60.61	27.90	97.63	54.49	24.41	84.16	49.37	21.04
	18	118.84	64.66	29.71	103.82	58.08	25.95	89.33	52.61	22.33
20	123.53	67.25	30.88	107.81	60.40	26.95	92.67	54.69	23.17	
10	02	22.48	12.11	4.50	19.81	10.90	3.96	17.19	9.85	3.44
	03	25.27	13.72	5.05	22.19	12.37	4.44	19.17	11.22	3.83
	04	28.54	15.60	5.71	24.96	14.07	4.99	21.47	12.77	4.29
	06	37.07	20.34	7.41	32.45	18.40	6.49	27.93	16.76	5.58
	08	38.72	21.29	7.74	33.86	19.26	6.77	29.09	17.55	5.82
	10	56.22	30.99	11.24	49.04	28.02	9.81	42.02	25.51	8.40
	12	60.88	33.38	12.17	52.97	30.39	10.59	45.26	27.66	9.05
	14	75.04	40.95	15.01	65.60	36.89	13.12	56.41	33.45	11.28
	16	104.93	57.23	20.98	91.86	51.59	18.37	79.11	46.82	15.82
	18	111.38	60.83	22.27	97.35	54.84	19.47	83.70	49.74	16.74
20	115.53	63.17	23.11	100.89	56.90	20.18	86.64	51.62	17.33	
12	02	21.63	11.68	3.60	19.04	10.51	3.17	16.50	9.50	2.75
	03	24.15	13.15	4.02	21.18	11.86	3.53	18.25	10.75	3.04
	04	27.09	14.86	4.51	23.65	13.40	3.94	20.26	12.16	3.38
	06	35.24	19.40	5.87	30.77	17.54	5.13	26.36	15.95	4.39
	08	36.73	20.26	6.12	32.02	18.32	5.34	27.51	16.73	4.59
	10	53.10	29.35	8.85	46.18	26.54	7.70	39.91	24.40	6.65
	12	57.25	31.78	9.54	49.65	28.68	8.27	43.18	26.56	7.20
	14	71.18	38.99	11.86	62.13	35.14	10.35	53.24	31.85	8.87
	16	99.78	54.58	16.63	87.21	49.23	14.53	74.85	44.67	12.47
	18	105.63	57.89	17.60	92.17	52.19	15.36	78.96	47.33	13.16
20	109.39	60.03	18.23	95.36	54.11	15.89	81.59	49.02	13.60	

NOTE:

- Capacities are with 3 row coil for models DWL02 - DWL12 & 4 row coil for models DWL14 & above.
- For any other conditions, please use selection software for fan coil units. Apart from capacities, this software provides;
 - Sensible heat ratio
 - Leaving air temperature (DB/WB) - °F
 - Leaving water temperature - °F
 - Leaving water velocities (FPM)
 - Water pressure drop (feet of water)

LEGEND:

- TC** - Total Capacity (MBH)
- SC** - Sensible Heat Capacity (MBH)
- WTR** - Water Temperature Rise (°F)
- EWT** - Entering Water Temperature (°F)
- GPM** - Water flow (Gallons Per Minute)

CHILLED WATER COOLING CAPACITIES (METRIC UNITS)

ENTERING AIR TEMP. = 25°C DB/17°C WB (@ HIGH SPEED)

WTR (°C)	UNIT SIZE	4°C EWT			7°C EWT			10°C EWT		
		TC	SC	LPS	TC	SC	LPS	TC	SC	LPS
5	02	2.90	2.13	0.14	2.30	1.90	0.11	1.58	1.58	0.08
	03	3.24	2.43	0.15	2.50	2.10	0.12	1.76	1.76	0.09
	04	3.65	2.80	0.17	2.80	2.40	0.13	1.96	1.96	0.10
	06	4.80	3.67	0.23	3.68	3.18	0.18	2.58	2.58	0.12
	08	5.01	3.84	0.24	3.84	3.34	0.18	2.69	2.69	0.13
	10	7.25	5.59	0.35	5.54	4.85	0.26	3.87	3.87	0.19
	12	7.84	6.07	0.37	5.97	5.26	0.29	4.16	4.16	0.20
	14	9.55	7.25	0.46	7.31	6.27	0.35	5.13	5.13	0.25
	16	13.41	10.15	0.64	10.28	8.79	0.49	7.22	7.22	0.35
	18	14.20	10.79	0.68	10.87	9.34	0.52	7.62	7.62	0.36
	20	14.70	11.19	0.70	11.24	9.69	0.54	7.88	7.88	0.38
	6	02	2.80	2.05	0.11	2.20	1.82	0.09	1.54	1.54
03		3.17	2.39	0.13	2.40	2.00	0.10	1.71	1.71	0.08
04		3.65	2.72	0.14	2.70	2.30	0.11	1.90	1.90	0.09
06		4.69	3.60	0.19	3.60	3.12	0.14	2.50	2.50	0.10
08		4.89	3.76	0.19	3.74	3.27	0.15	2.60	2.60	0.10
10		7.07	5.47	0.28	5.39	4.74	0.21	3.74	3.74	0.15
12		7.63	5.93	0.30	5.80	5.13	0.23	4.01	4.01	0.16
14		9.33	7.10	0.37	7.13	6.14	0.28	4.98	4.98	0.20
16		13.11	9.96	0.52	10.03	8.61	0.40	7.02	7.02	0.28
18		13.86	10.56	0.55	10.60	9.14	0.42	7.39	7.39	0.29
20		14.35	10.95	0.57	10.96	9.47	0.44	7.63	7.63	0.30
7		02	2.70	2.00	0.10	2.10	1.72	0.07	1.50	1.50
	03	3.07	2.30	0.11	2.30	1.92	0.08	1.67	1.67	0.07
	04	3.49	2.67	0.12	2.60	2.25	0.09	1.85	1.85	0.073
	06	4.60	3.53	0.16	3.51	3.06	0.12	2.40	2.40	0.08
	08	4.79	3.70	0.16	3.65	3.20	0.12	2.52	2.52	0.09
	10	6.92	5.36	0.24	5.26	4.63	0.18	3.61	3.61	0.12
	12	7.45	5.80	0.25	5.64	5.01	0.19	3.85	3.85	0.13
	14	9.14	6.97	0.31	6.97	6.02	0.24	4.83	4.83	0.16
	16	12.85	9.78	0.44	9.81	8.45	0.33	6.81	6.81	0.23
	18	13.58	10.37	0.46	10.35	8.95	0.35	7.17	7.17	0.24
	20	14.05	10.75	0.48	10.70	9.28	0.37	7.40	7.40	0.25

ENTERING AIR TEMP. = 27°C DB/19.5°C WB (@ HIGH SPEED)

WTR (°C)	UNIT SIZE	4°C EWT			7°C EWT			10°C EWT		
		TC	SC	LPS	TC	SC	LPS	TC	SC	LPS
5	02	5.00	3.02	0.24	4.17	2.64	0.20	3.36	2.34	0.16
	03	5.58	3.42	0.27	4.63	3.00	0.22	3.71	2.66	0.18
	04	6.27	3.88	0.30	5.17	3.41	0.25	4.12	3.02	0.20
	06	8.15	5.07	0.39	6.73	4.47	0.32	5.41	4.00	0.26
	08	8.50	5.30	0.41	7.00	4.66	0.33	5.65	4.20	0.27
	10	12.30	7.71	0.59	10.10	6.76	0.48	8.19	6.14	0.39
	12	13.27	8.35	0.63	10.86	7.32	0.52	8.86	6.68	0.42
	14	16.47	10.17	0.79	13.59	8.92	0.65	10.79	7.88	0.52
	16	23.07	14.23	1.10	19.08	12.49	0.91	15.18	11.05	0.73
	18	24.44	15.12	1.17	20.16	13.26	0.96	16.02	11.74	0.77
	20	25.32	15.68	1.21	20.86	13.74	1.00	16.60	12.20	0.79
	6	02	4.79	2.91	0.19	4.00	2.55	0.16	3.20	2.25
03		5.32	3.27	0.21	4.40	2.87	0.18	3.57	2.58	0.14
04		5.93	3.69	0.24	4.89	3.24	0.19	4.02	2.96	0.16
06		7.72	4.83	0.31	6.43	4.29	0.26	5.29	3.93	0.21
08		8.03	5.03	0.32	6.71	4.49	0.27	5.52	4.13	0.22
10		11.56	7.29	0.46	9.73	6.55	0.39	7.99	6.01	0.32
12		12.46	7.88	0.50	10.52	7.12	0.42	8.63	6.54	0.34
14		15.58	9.68	0.62	12.79	8.46	0.51	10.53	7.73	0.42
16		21.89	13.56	0.87	18.00	11.87	0.72	14.78	10.82	0.59
18		23.12	14.37	0.92	19.03	12.61	0.76	15.65	11.51	0.62
20		23.91	14.89	0.95	19.71	13.09	0.78	16.20	11.95	0.64
7		02	4.62	2.81	0.16	3.83	2.46	0.13	3.13	2.21
	03	5.09	3.14	0.17	4.26	2.79	0.15	3.51	2.54	0.12
	04	5.67	3.54	0.19	4.80	3.19	0.16	3.94	2.92	0.13
	06	7.44	4.67	0.25	6.31	4.22	0.22	5.19	3.87	0.18
	08	7.77	4.89	0.27	6.58	4.42	0.22	5.41	4.06	0.18
	10	11.27	7.12	0.38	9.53	6.43	0.33	7.82	5.91	0.27
	12	12.18	7.72	0.42	10.29	6.98	0.35	8.43	6.42	0.29
	14	14.83	9.25	0.51	12.55	8.33	0.43	10.32	7.60	0.35
	16	20.81	12.97	0.71	17.62	11.66	0.60	14.50	10.65	0.49
	18	22.04	13.76	0.75	18.65	12.39	0.64	15.33	11.32	0.52
	20	22.83	14.28	0.78	19.31	12.85	0.66	15.87	11.75	0.54

ENTERING AIR TEMP. = 29°C DB/21.5°C WB (@ HIGH SPEED)

WTR (°C)	UNIT SIZE	4°C EWT			7°C EWT			10°C EWT		
		TC	SC	LPS	TC	SC	LPS	TC	SC	LPS
5	02	6.72	3.68	0.32	5.85	3.28	0.28	5.01	2.94	0.24
	03	7.58	4.18	0.36	6.58	3.74	0.31	5.61	3.36	0.27
	04	8.59	4.77	0.41	7.43	4.26	0.35	6.30	3.84	0.30
	06	11.14	6.21	0.53	9.65	5.57	0.46	8.19	5.05	0.39
	08	11.65	6.51	0.56	10.08	5.84	0.48	8.54	5.29	0.41
	10	16.96	9.50	0.81	14.62	8.52	0.70	12.36	7.70	0.59
	12	18.41	10.34	0.88	15.83	9.26	0.76	13.34	8.37	0.64
	14	22.60	12.53	1.08	19.52	11.18	0.93	16.55	10.07	0.79
	16	31.55	17.49	1.51	27.30	15.62	1.30	23.19	14.08	1.11
	18	33.54	18.61	1.60	28.98	16.63	1.38	24.56	14.97	1.17
	20	34.82	19.35	1.66	30.05	17.27	1.44	25.45	15.55	1.22
	6	02	6.46	3.55	0.26	5.63	3.17	0.22	4.82	2.84
03		7.25	4.01	0.29	6.29	3.59	0.25	5.35	3.23	0.21
04		8.16	4.55	0.32	7.05	4.07	0.28	5.96	3.67	0.24
06		10.60	5.94	0.42	9.17	5.33	0.36	7.76	4.82	0.31
08		11.07	6.21	0.44	9.55	5.57	0.38	8.07	5.04	0.32
10		16.04	9.02	0.64	13.81	8.09	0.55	11.62	7.31	0.46
12		17.34	9.78	0.69	14.88	8.76	0.59	12.52	7.92	0.50
14		21.44	11.93	0.85	18.52	10.67	0.74	15.66	9.61	0.62
16		30.02	16.69	1.20	25.96	14.93	1.03	22.00	13.46	0.88
18		31.83	17.73	1.27	27.48	15.86	1.09	23.24	14.29	0.93
20		32.99	18.39	1.31	28.45	16.44	1.13	24.03	14.82	0.96
7		02	6.25	3.44	0.21	5.44	3.07	0.19	4.64	2.75
	03	6.97	3.87	0.24	6.04	3.46	0.21	5.12	3.11	0.17
	04	7.80	4.36	0.27	6.72	3.90	0.23	5.69	3.53	0.19
	06	10.15	5.70	0.35	8.74	5.10	0.30	7.47	4.67	0.26
	08	10.57	5.95	0.36	9.09	5.33	0.31	7.81	4.90	0.27
	10	15.26	8.61	0.52	13.09	7.71	0.45	11.32	7.14	0.39
	12	16.43	9.20	0.56	14.17	8.38	0.48	12.24	7.77	0.42
	14	20.49	11.44	0.70	17.66	10.22	0.60	14.89	9.21	0.51
	16	28.75	16.03	0.98	24.81	14.34	0.85	20.93	12.90	0.71
	18	30.41	16.99	1.04	26.19	15.19	0.89	22.14	13.71	0.76
	20	31.48	17.61	1.07	27.08	15.73	0.92	22.93	14.24	0.78

NOTE:

- Capacities are with 3 row coil for models DWL02 - DWL12 & 4 row coil for models DWL14 & above.
- For any other conditions, please use selection software for fan coil units. Apart from capacities, this software provides;
 - Sensible heat ratio
 - Leaving air temperature (DB/WB) - °C
 - Leaving water temperature - °C
 - Leaving water velocities (m/s)
 - Water pressure drop (kPa)

LEGEND:

- TC** - Total Capacity (kW)
- SC** - Sensible Heat Capacity (kW)
- WTR** - Water Temperature Rise (°C)
- EWT** - Entering Water Temperature (°C)
- LPS** - Water flow (Liters Per Second)

FAN PERFORMANCE DATA (ENGLISH UNITS)

MODEL NUMBER	BLOWER MOTOR SPEED	CFM @ EXTERNAL STATIC PRESSURE (Inches of water)								
		0.0	0.05	0.1	0.15	0.2	0.25	0.3	0.4	0.5
DWL02	HIGH	290	268	246	217	188	175	140	110	-
	MEDIUM	229	198	168	145	122	80	-	-	-
	LOW	185	138	106	83	60	-	-	-	-
DWL03	HIGH	375	359	343	304	266	229	215	134	-
	MEDIUM	290	268	246	217	188	153	136	110	-
	LOW	229	198	168	145	122	80	-	-	-
DWL04	HIGH	472	439	407	378	350	303	250	160	-
	MEDIUM	446	414	382	351	320	275	220	130	-
	LOW	375	359	343	304	266	229	190	110	-
DWL06	HIGH	650	594	562	523	484	434	383	285	138
	MEDIUM	579	547	515	474	433	338	242	227	135
	LOW	525	495	465	435	400	350	305	190	130
DWL08	HIGH	700	653	618	580	541	490	439	338	168
	MEDIUM	650	594	562	523	484	434	383	285	138
	LOW	579	547	515	474	433	338	242	227	133
DWL10	HIGH	1058	1020	983	942	901	862	824	705	586
	MEDIUM	867	858	850	812	774	736	698	608	497
	LOW	733	711	690	671	652	613	575	497	398
DWL12	HIGH	1193	1162	1132	1074	1017	966	915	797	676
	MEDIUM	1058	1020	983	942	901	862	824	705	586
	LOW	867	858	850	812	774	736	698	608	497
DWL14	HIGH	1212	1192	1173	1088	1044	1001	993	844	710
	MEDIUM	1130	1110	1090	1027	965	928	876	753	628
	LOW	1037	995	954	915	876	836	797	683	560
DWL16	HIGH	1673	1625	1577	1525	1472	1413	1354	1223	1084
	MEDIUM	1518	1475	1432	1386	1339	1279	1218	1108	970
	LOW	1304	1266	1228	1188	1147	1101	1055	943	828
DWL18	HIGH	1824	1758	1692	1622	1552	1503	1454	1296	1188
	MEDIUM	1673	1625	1577	1525	1472	1413	1354	1223	1084
	LOW	1518	1475	1432	1386	1339	1279	1218	1108	970
DWL20	HIGH	1920	1870	1820	1765	1710	1655	1600	1500	1300
	MEDIUM	1840	1800	1769	1720	1680	1625	1570	1380	1270
	LOW	1790	1750	1700	1650	1610	1560	1500	1320	1210

NOTE: 1. Values include losses for dry coil (3 row for DWL02 - DWL12 & 4 row for DWL14 - DWL20) and filters.
 2. For additional hot water row, add 0.1" WG to the ESP.

FAN PERFORMANCE DATA (METRIC UNITS)

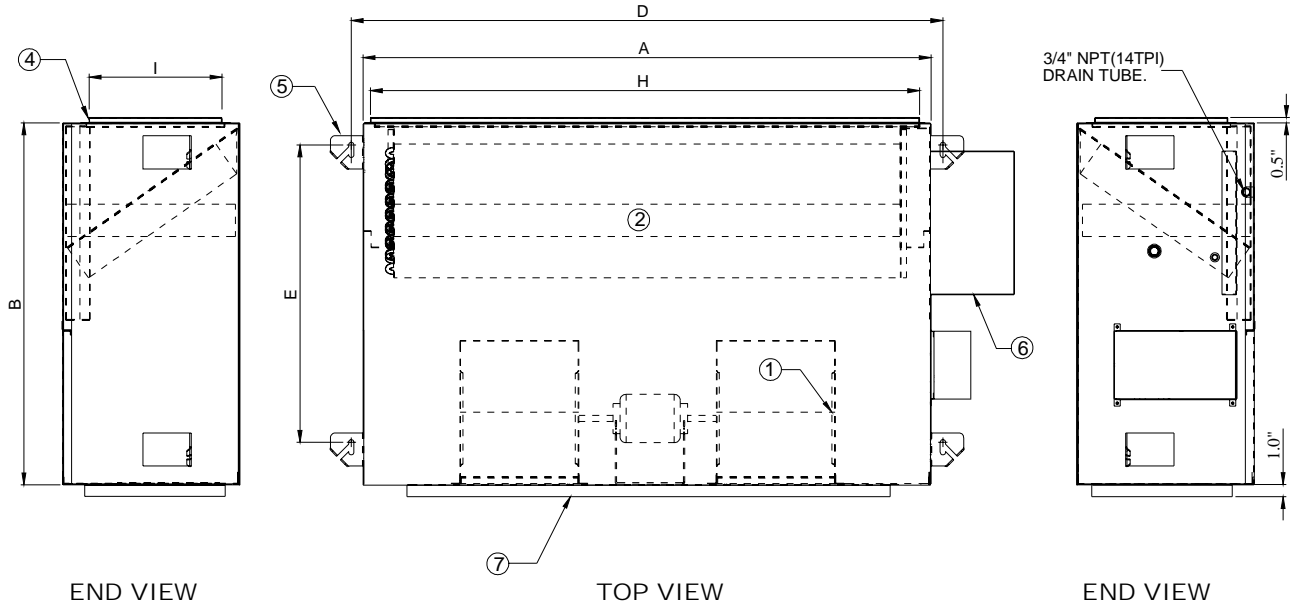
M E T R I C U N I T S

MODEL NUMBER	BLOWER MOTOR SPEED	LITERS PER SECOND @ EXTERNAL STATIC PRESSURE (Pascal)								
		0.0	12.5	25	37.5	50	62.5	75	100	125
DWL02	HIGH	137	126	116	102	89	72	66	52	-
	MEDIUM	108	93	79	68	58	38	-	-	-
	LOW	80	65	50	39	28	-	-	-	-
DWL03	HIGH	177	169	162	143	126	108	100	63	-
	MEDIUM	137	126	116	102	89	72	136	52	-
	LOW	108	93	79	68	58	38	-	-	-
DWL04	HIGH	223	207	192	178	165	143	118	76	-
	MEDIUM	210	195	180	166	151	130	104	61	-
	LOW	177	169	162	143	126	108	90	52	-
DWL06	HIGH	307	280	265	247	228	205	181	134	65
	MEDIUM	273	258	243	224	204	160	114	107	64
	LOW	248	234	219	205	189	165	144	90	61
DWL08	HIGH	330	308	292	274	255	231	207	160	79
	MEDIUM	307	280	265	247	228	205	181	134	65
	LOW	273	258	243	224	204	160	114	107	63
DWL10	HIGH	499	481	464	445	425	407	389	333	277
	MEDIUM	409	405	401	383	365	347	329	287	235
	LOW	346	336	326	317	308	289	271	235	188
DWL12	HIGH	563	548	534	507	480	456	432	376	319
	MEDIUM	499	481	464	445	425	407	389	333	277
	LOW	409	405	401	383	365	347	329	287	235
DWL14	HIGH	572	562	553	513	493	472	468	398	335
	MEDIUM	533	524	514	485	455	438	413	355	296
	LOW	489	470	450	432	413	395	376	322	264
DWL16	HIGH	789	767	744	720	695	667	639	577	512
	MEDIUM	716	696	676	654	632	604	575	523	458
	LOW	615	597	579	561	541	520	498	445	391
DWL18	HIGH	861	830	798	765	732	709	686	612	561
	MEDIUM	789	767	744	720	695	667	639	577	512
	LOW	716	696	676	654	632	604	575	523	458
DWL20	HIGH	906	882	859	833	807	781	755	708	613
	MEDIUM	868	849	835	812	793	767	741	651	599
	LOW	848	830	805	780	769	740	710	625	573

NOTE: 1. Values include losses for dry coil (3 row for DWL02 - DWL12 & 4 row for DWL14 - DWL20) and filters.
 2. For additional hot water row, add 25 pascal to the ESP.

DIMENSIONS

MODELS: DWL02 - DWL20



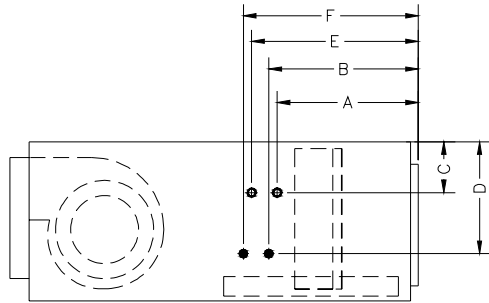
- 1. Blower & motor assembly
- 2. Cooling coil
- 3. Control box
- 4. Filter rack
- 5. Unit mounting brackets
- 6. Drip lip
- 7. Duct connector

NOTE: 1. All dimensions are in mm (dimensions in brackets are in inches).
 2. Single blower for DWL02 - DWL04.

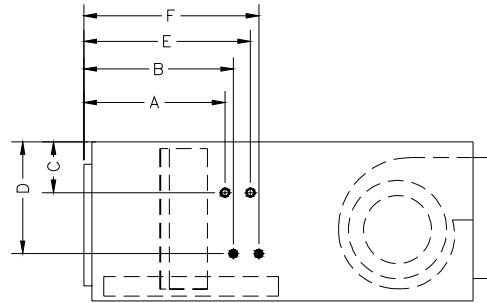
MODEL	DIMENSIONS									NO. OF MOTORS	NO. OF BLOWERS
	A	B	C	D	E	F	G	H	I		
DWL02	805 (31.7)	520 (20.5)	246 (9.7)	863 (34)	444 (17.5)	696 (27.4)	183 (7.2)	736 (29)	208 (8.2)	1	1
DWL03	805 (31.7)	520 (20.5)	246 (9.7)	863 (34)	444 (17.5)	696 (27.4)	183 (7.2)	736 (29)	208 (8.2)	1	1
DWL04	805 (31.7)	520 (20.5)	246 (9.7)	863 (34)	444 (17.5)	696 (27.4)	183 (7.2)	736 (29)	208 (8.2)	1	1
DWL06	904 (35.6)	610 (24)	244 (9.6)	960 (37.8)	521 (20.5)	769 (30.3)	183 (7.2)	841 (33.1)	206 (8.1)	1	2
DWL08	904 (35.6)	610 (24)	244 (9.6)	960 (37.8)	521 (20.5)	769 (30.3)	183 (7.2)	841 (33.1)	206 (8.1)	1	2
DWL10	1011 (39.8)	762 (30)	318 (12.5)	1067 (42)	640 (25.2)	858 (33.8)	241 (9.5)	945 (37.2)	259 (10.2)	1	2
DWL12	1011 (39.8)	762 (30)	318 (12.5)	1067 (42)	640 (25.2)	858 (33.8)	241 (9.5)	945 (37.2)	259 (10.2)	1	2
DWL14	1011 (39.8)	762 (30)	318 (12.5)	1067 (42)	640 (25.2)	858 (33.8)	241 (9.5)	945 (37.2)	259 (10.2)	1	2
DWL16	1194 (47)	762 (30)	368 (14.5)	1245 (49)	625 (24.6)	894 (35.2)	266 (10.5)	1155 (45.5)	292 (11.5)	1	2
DWL18	1194 (47)	762 (30)	368 (14.5)	1245 (49)	625 (24.6)	894 (35.2)	266 (10.5)	1155 (45.5)	292 (11.5)	1	2
DWL20	1194 (47)	762 (30)	368 (14.5)	1245 (49)	625 (24.6)	894 (35.2)	266 (10.5)	1155 (45.5)	292 (11.5)	1	2

DIMENSIONAL DATA - COIL CONNECTIONS

MODELS: DWL02, 03 & 04 (VERTICAL COIL)



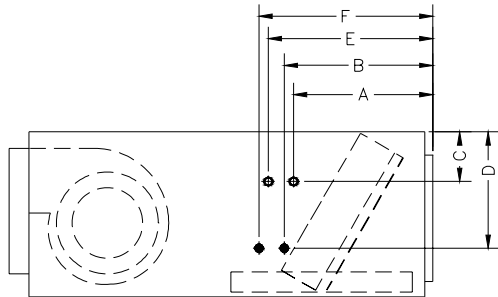
RH SIDE



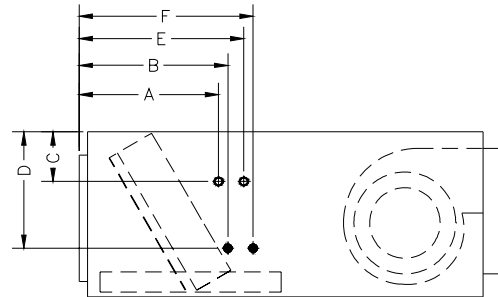
LH SIDE

- INLET
- OUTLET

MODELS: DWL06 - DWL20 (INCLINED COIL)



RH SIDE



LH SIDE

- INLET
- OUTLET

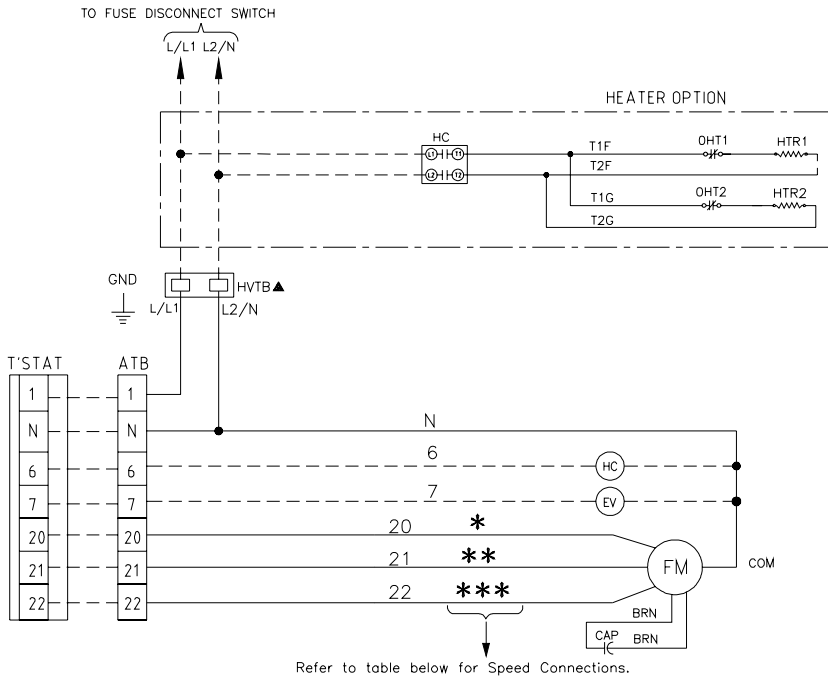
MODEL	CHILLED WATER COIL					HOT WATER COIL		
	A	B	C	D	No. OF ROWS	E	F	No. OF ROWS
DWL02	225 (8.9)	237 (9.3)	32 (1.3)	176 (6.9)	3	264 (10.4)	275 (10.8)	1
DWL03	225 (8.9)	237 (9.3)	32 (1.3)	176 (6.9)	3	264 (10.4)	275 (10.8)	1
DWL04	225 (8.9)	237 (9.3)	32 (1.3)	176 (6.9)	3	264 (10.4)	275 (10.8)	1
DWL06	313 (12.3)	324 (12.8)	32 (1.3)	178 (7)	3	351 (13.8)	362 (14.3)	1
DWL08	313 (12.3)	324 (12.8)	32 (1.3)	178 (7)	3	351 (13.8)	362 (14.3)	1
DWL10	313 (12.3)	324 (12.8)	83 (3.3)	227 (8.9)	3	351 (13.8)	362 (14.3)	1
DWL12	313 (12.3)	324 (12.8)	83 (3.3)	227 (8.9)	3	351 (13.8)	362 (14.3)	1
DWL14	319 (12.6)	330 (13)	83 (3.3)	227 (8.9)	4	357 (14)	368 (14.5)	1
DWL16	376 (14.8)	389 (15.3)	129 (5)	273 (10.8)	4	414 (16.3)	427 (16.8)	1
DWL18	376 (14.8)	389 (15.3)	129 (5)	273 (10.8)	4	414 (16.3)	427 (16.8)	1
DWL20	376 (14.8)	389 (15.3)	129 (5)	273 (10.8)	4	414 (16.3)	427 (16.8)	1

NOTE: All dimensions are in mm (dimensions in brackets are in inches).

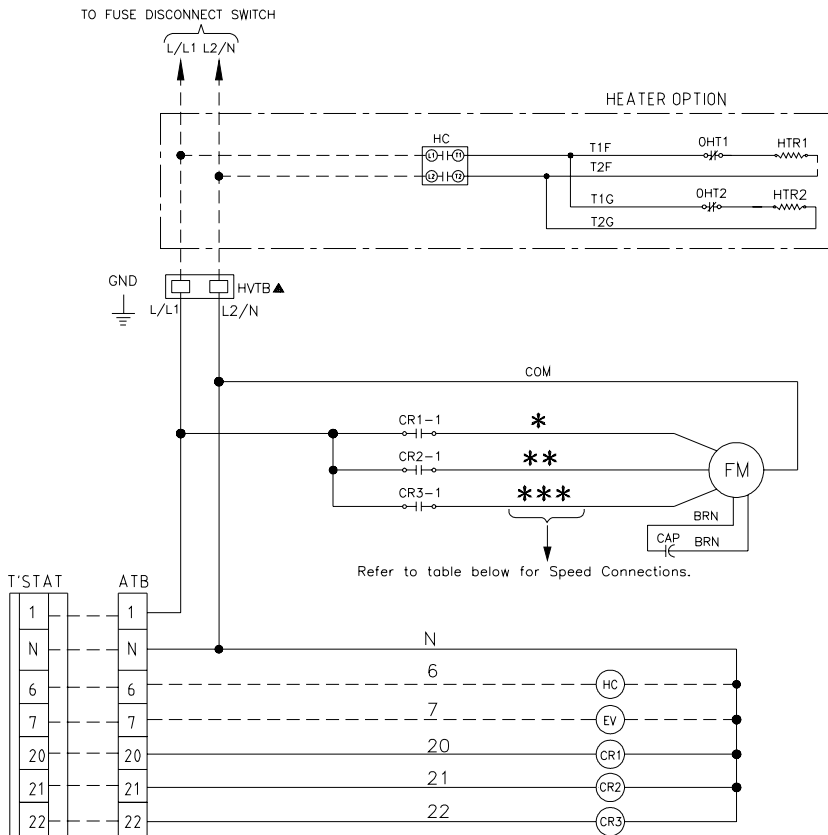
TYPICAL SCHEMATIC WIRING DIAGRAM

HEAT/COOL MODELS - ELECTRIC HEATER

MODELS: DWL02 - DWL14



MODELS: DWL16 - DWL20



LEGEND

ATB	AUXILIARY TERMINAL BLOCK
CAP	CAPACITOR
CR	CONTROL RELAY
EV	ELECTRIC VALVE (COOLING)
FM	FAN MOTOR
GND	LUG GROUND
HC	HEATER CONTACTOR
HTR	HEATER
HVTB	HIGH VOLTAGE TERMINAL BLOCK
L/L1	LINE OR LINE 1
L2/N	LINE 2 OR NEUTRAL
OHT	OVER HEAT THERMOSTAT
---	FIELD WIRING
—	FACTORY WIRING

NOTES

1. POWER SUPPLY, 220/240V-1PH-50Hz.
2. MOTORS THERMALLY PROTECTED.
3. ▲ HVTB IS NOT REQUIRED FOR HEATER MODELS.
4. USE HEATER AS PER OPTION REQUIRED. IF EV & HEATERS ARE FACTORY INSTALLED, PLEASE READ DASHED LINE AS CONTINUOUS LINE.
5. USE COPPER CONDUCTORS ONLY.

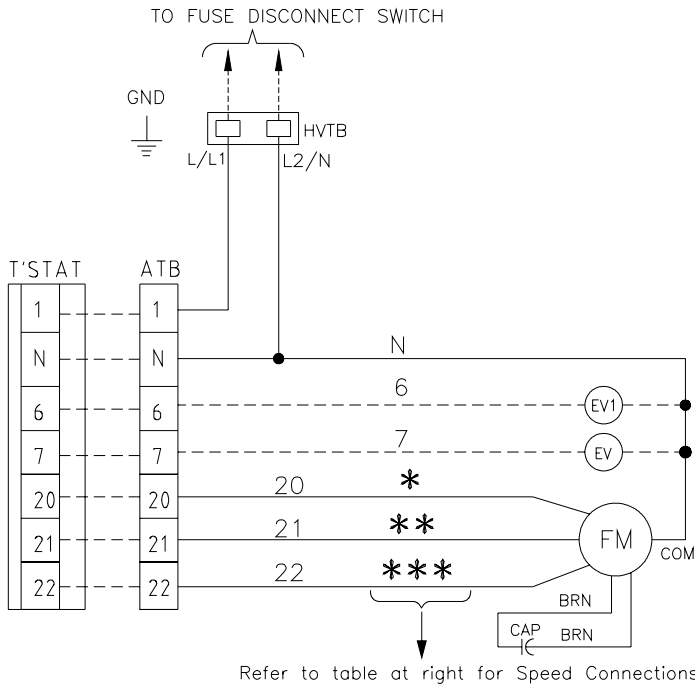
FM SPEED CONNECTIONS

MODEL	SPBBD	HI	MED-HI	MED	LOW	LOWEST	COM	APPLICABLE FREQUENCY IN HERTZ
	WIRB COLOR	BLK	BLU	RED	YBL	ORG	WHT	
DWL 02	---	---	---	***	**	*	---	50
DWL 03	---	---	***	**	*	---	---	50
DWL 04	---	***	**	*	---	---	---	50
DWL 06	---	---	***	**	*	---	---	50
DWL 08	---	***	**	*	---	---	---	50
DWL 10	---	---	***	**	*	---	---	50
DWL 12	---	***	**	*	---	---	---	50
DWL 14	---	***	**	*	---	---	---	50
DWL 16	---	---	---	***	**	*	---	50
DWL 18	---	---	***	**	*	---	---	50
DWL 20	---	***	**	*	---	---	---	50

TYPICAL SCHEMATIC WIRING DIAGRAM

HEAT/COOL MODELS - HOT WATER

MODELS: DWL02 - DWL14



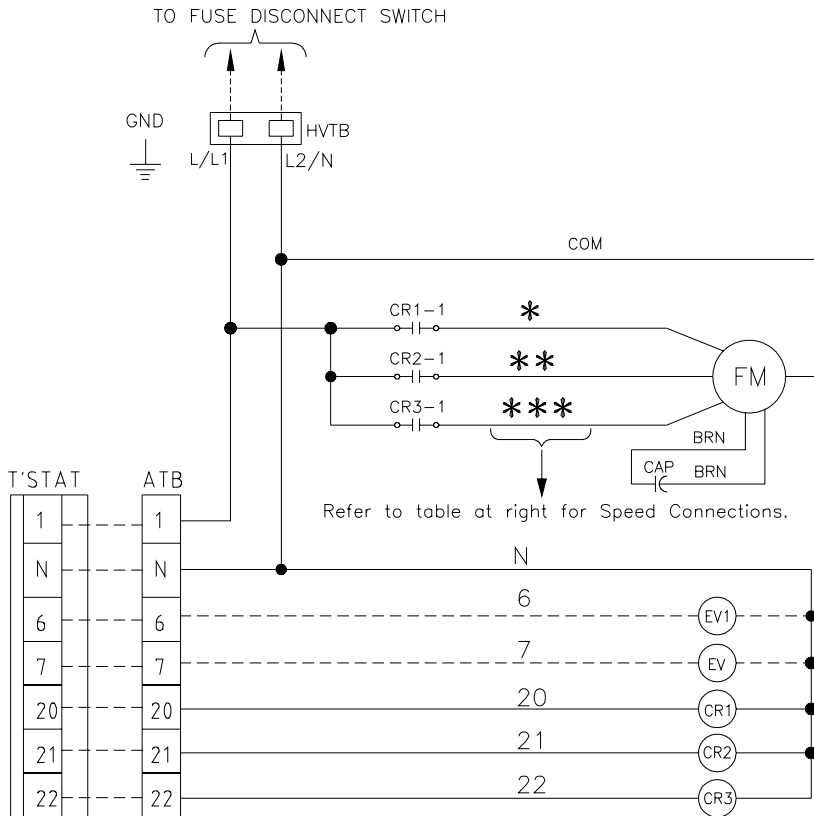
LEGEND

ATB	AUXILIARY TERMINAL BLOCK
CAP	CAPACITOR
CR	CONTROL RELAY
EV	ELECTRIC VALVE (COOLING)
EV1	ELECTRIC VALVE (HEATING)
FM	FAN MOTOR
GND	LUG GROUND
HVTB	HIGH VOLTAGE TERMINAL BLOCK
L/L1	LINE OR LINE 1
L2/N	LINE 2 OR NEUTRAL
---	FIELD WIRING
—	FACTORY WIRING

NOTES

1. POWER SUPPLY, 220/240V-1PH-50Hz.
2. MOTORS THERMALLY PROTECTED.
3. USE COPPER CONDUCTORS ONLY.
4. IF EV & EV1 ARE FACTORY INSTALLED, PLEASE READ DASHED LINE AS CONTINUOUS LINE.

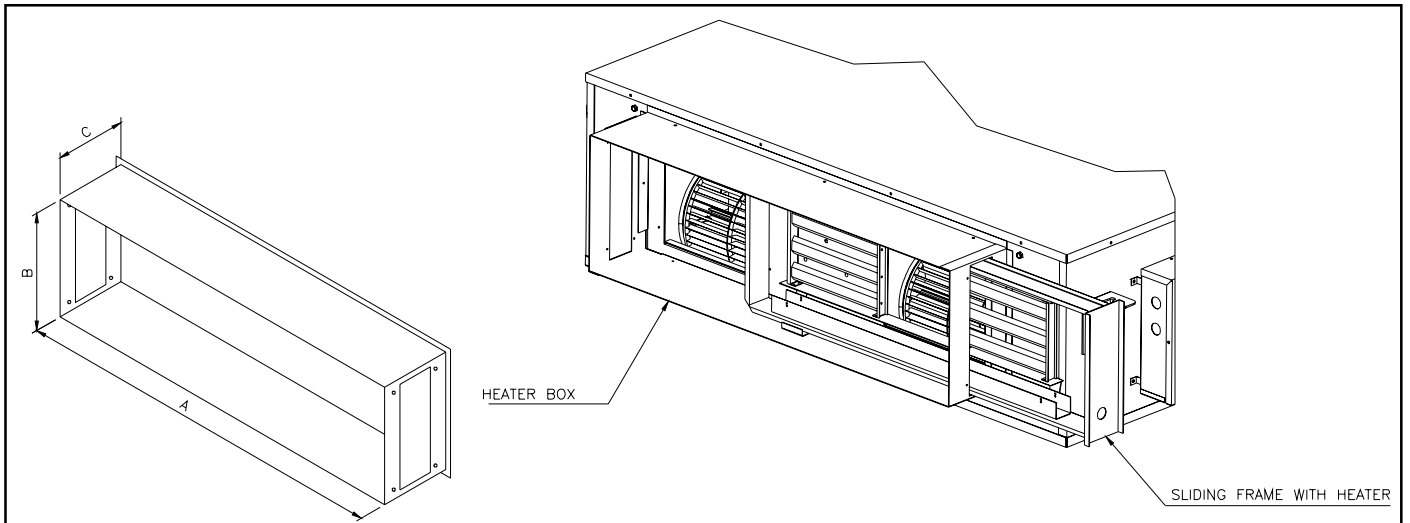
MODELS: DWL16 - DWL20



FM SPEED CONNECTIONS

SPEED	HI	MED-HI	MED	LOW	LOWEST	COM	APPLICABLE FREQUENCY IN HERTZ
	BLK	BLU	RED	YEL	ORG	WHT	
MODEL							
DWL 02	—	—	***	**	*	—	50
DWL 03	—	***	**	*	—	—	50
DWL 04	***	**	*	—	—	—	50
DWL 06	—	***	**	*	—	—	50
DWL 08	***	**	*	—	—	—	50
DWL 10	—	***	**	*	—	—	50
DWL 12	***	**	*	—	—	—	50
DWL 14	***	**	*	—	—	—	50
DWL 16	—	—	***	**	*	—	50
DWL 18	—	***	**	*	—	—	50
DWL 20	***	**	*	—	—	—	50

HEATER ARRANGEMENTS



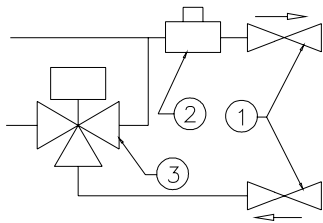
DIMENSIONS - HEATER BOX

MODEL	DIMENSIONS		
	A	B	C
DWL 02/03/04	696 (27.4)	228 (9)	216 (8.5)
DWL 06/08	769 (30.3)	228 (9)	216 (8.5)
DWL 10/12/14	858 (33.8)	241 (9.5)	147 (5.8)
DWL 16/18/20	894 (35.2)	266 (10.5)	147 (5.8)

NOTE: All dimensions are in mm (dimensions in brackets are in inches).

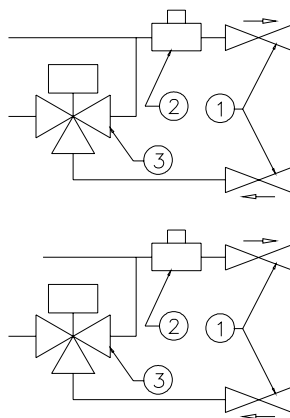
VALVE PACKAGES

VALVE PACKAGE 3-D (for 2-pipe)



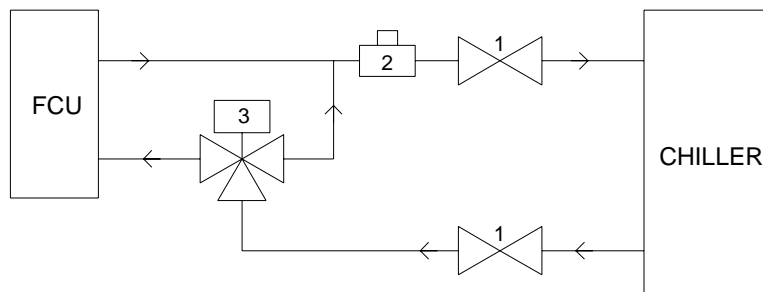
- ① Two gate shut off valves
- ② One balancing valve
- ③ One 3-way motor valve

VALVE PACKAGE 4-D (for 4-pipe)



- ① Four gate shut off valves
- ② Two balancing valves
- ③ Two 3-way motor valves

- ① Two gate valves
- ② One balancing valve
- ③ One 3-way motor valve



INSTALLATION

The complete shipment should be inspected for damage. Any damage, visible or concealed, should be reported immediately to the delivery man or driver and noted on the shipping invoice.

Place unit in position and make sure that unit is level. This is important to assure proper drainage and operation. Slots provided in the mounting brackets should be used for installing the units.

ELECTRICAL

Please ensure power supply (V-Ph-Hz) to the unit is as per unit nameplate requirements.

Caution: Operation of the unit on improper power supply will result in damage to the unit.

Warning: Before installation or servicing, always TURN OFF all power to the unit. There may be more than one disconnect switch. Ensure all of them are turned off.

GROUND & POWER WIRES

Connect power wires as per wiring diagram. Connect ground wire to the ground lug inside the control box.

MAINTENANCE

COIL

Coil may be cleaned by removing and brushing between fins with a stiff wire brush. Brushing should be followed by cleaning with vacuum cleaner. The coil may also be cleaned by using a high pressure air, if compressed air source is available. It should be pointed out that if air filters are used and periodically cleaned, the coils will not be clogged up prematurely.

DRAIN PIPE

Drain pipe should be checked before summer operation of unit. If it is clogged, steps should be taken to clear the debris so that condensate will flow out easily. A standard pipe cleaner for 1/2" ID pipe may be used. Periodic checks of the drain pipe should be taken during summer operation, as there is a possibility of it becoming clogged with dirt.

FILTER CLEANING

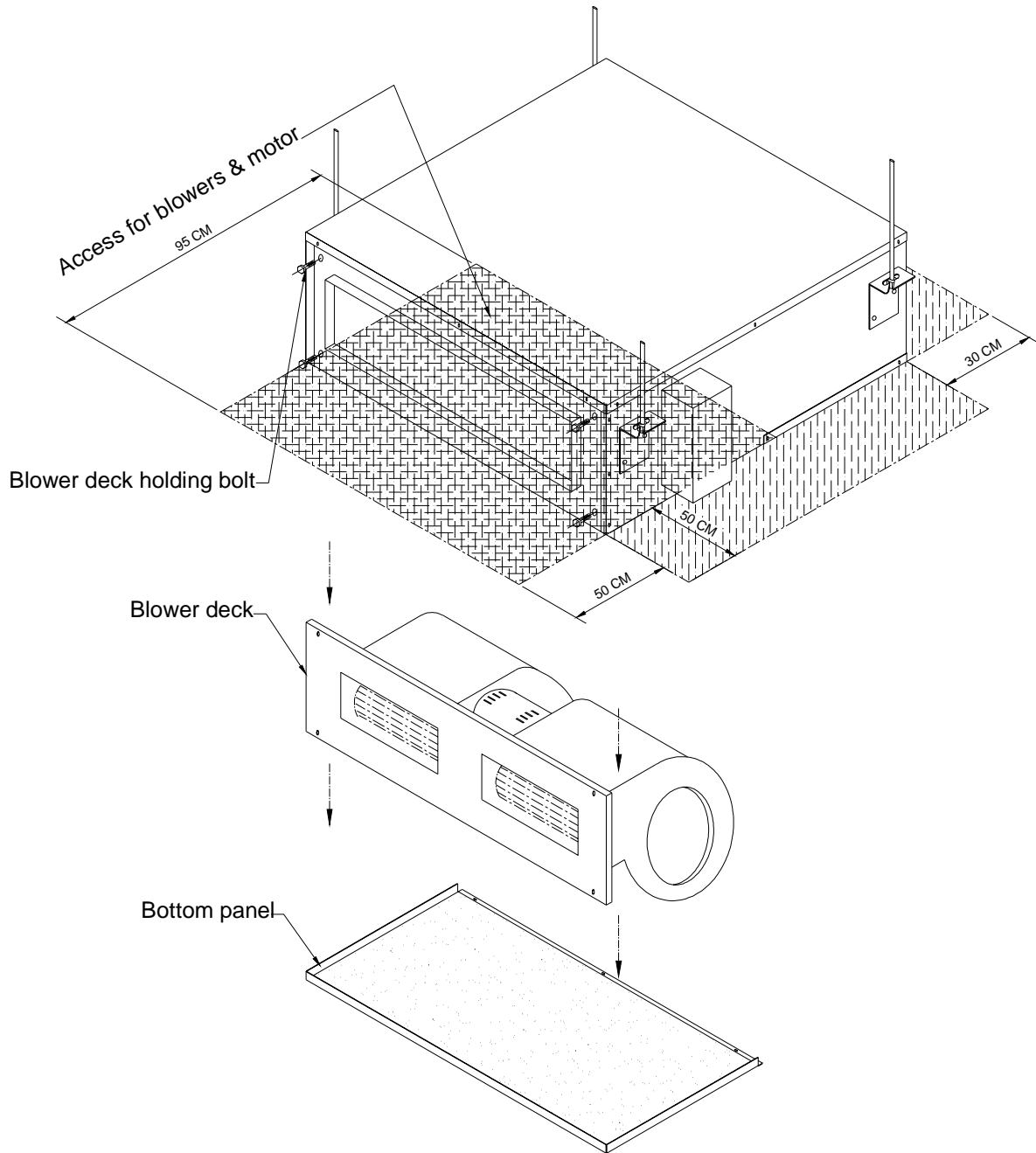
Remove access panel, slide filter out of filter rack, and clean as follows:

Tap filter on solid surface to dislodge heavy particles. Wash under stream of hot water. If filter has been put to exceptional service, a mild solution of Sal-Soda, Tri-Sodium Phosphate or any other commercial solvent can be used. Set filter on end with slots in frame down, which allows it to drain. Filters should dry thoroughly before reuse.

REPLACEMENT PARTS

When writing for replacement parts, refer to model number and serial number on the nameplate of the unit.

SERVICING INSTRUCTIONS



NOTES:

- 1) Required indoor unit access clearances are shown as hatched area.
- 2) Free service access should be available from the bottom of the unit for removing & servicing the blower/motor deck.
- 3) Servicing instructions:
 - a) Remove the bottom panel.
 - b) Support the blower deck while unscrewing the 4 blower deck holding bolts and bring down the blower deck.

PARTS LIST

DESCRIPTION	MODEL NUMBER				
	DWL02/03/04	DWL06/08	DWL10/12/14	DWL16/18	DWL20
BLOWER MOTOR	800-827-17	800-547-65	800-547-66	800-547-67	800-547-67
BLOWER WHEEL	800-711-50	800-711-51	800-711-52	800-711-53	800-711-53
VALVE PACKAGE (3D)	700-364-81	700-364-81	700-364-81	700-364-81	700-364-81
RETURN AIR FILTERS	800-249-43	800-249-39	800-249-38	800-249-36	800-249-36
THERMOSTAT	800-646-20	800-646-20	800-646-20	800-646-20	800-646-20

NOTE: For 4D type valve package, order 2 x 3D valve packages.



from  **Zamil**

In 1989, Zamil Air Conditioners (ZAC), one of the sector business of Zamil Industrial and the Number 1 Middle East manufacturer of air conditioning systems, introduced its international brand – Cooline, to the growing world market. Today, Cooline supplies air conditioners to more than 55 countries worldwide with major markets in GCC, Middle East, North Africa, Europe and Asia. In addition to the Head Office in Saudi Arabia, five regional offices handles Cooline's overall operations including more than 25 international distributors.

All ZAC Products are available under the Cooline brand. Cooline Products include an array of central air conditioners for residential, commercial and industrial use, including concealed units up to 5 tons, ducted splits up to 30 tons, packaged units up to 80 tons, single and double skin air handling units up to 70,630 CFM and water chillers up to 550 tons cooling capacity. New products include High Efficiency Ratio (EER) units which comply with the more demanding international codes and heat pump units with increased overall Coefficient of Performance (COP).

Cooline is the first brand from the Middle East to receive Eurovent for its air movement systems - a capacity/performance certification that has been made mandatory in Europe and is fast becoming a requirement in all regions. With the addition of the state-of-the-art testing facility, Ikhtebar, a 3rd party air conditioners testing facility built by Intertek Testing Services (ITS) and certified by Electrical Testing Labs (ETL) and accredited by the Saudi Accreditation Committee (SASO) for compliances with the international testing standards, Cooline is the only brand in the Middle East capable of guaranteeing product performance in compliance with local and international standards. It's no surprise that in 2003, Cooline received the Best GCC Brand of the Decade Award.

For more information, please visit our website www.cooline.com



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