



# Close Control Air Cooled Twin Circuit Range



**Engineering Data Manual 50/60Hz**

## Index

Description	Page
YORK Company Profile	3
This Product Range	3
Other YORK Close Control Products	3
Equipment Nomenclature	4
Indoor Units - Dimensions and Weights	4
Air Cooled Condensers - Dimensions and Weights	5
Guide Specifications	6
General Engineering Details	10
Air Cooled System Schematic	11
Air Cooled Units - Cooling Capacities 50Hz & 60Hz	12
Electrical Details – 50Hz & 60Hz	13
Generic Dimensional Drawing	14
Generic Electrical Drawing	15

While every precaution has been taken to ensure accuracy and completeness in this manual, YORK assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

Document Reference: Y 4.19-01-03-1

## **YORK COMPANY PROFILE**

YORK – a Johnson Controls company, designs, manufactures, sells and services: heating and air conditioning systems and compressors for residential, commercial and industrial markets, gas compression equipment for industrial processing, industrial and commercial refrigeration equipment.

The company manufactures a wide range of air conditioning products including fan coil units, close control units, under-floor air distribution systems, telecom shelter units, variable air volume systems, air handling units, mini split systems, packaged air conditioners, roof top units, water cooled and air cooled chillers, heat pumps and absorption chillers. We also manufacture a variety of compressors including hermetic, scroll, reciprocating, screw and centrifugal types.

YORK products are installed in nuclear submarines operating deep in the ocean and in South African gold mines in the depth of the earth. Eurotunnel, which has the world's largest chilled water system, is served by YORK chillers as does the world's tallest building the twin tower Petronas complex in Malaysia.

Other notable global installations are the Sydney Opera House, Charles de Gaulle and Jeddah Airports, most of the commercial buildings dominating the Hong Kong skyline, the Islamic University in Riyadh, the UK Houses of Parliament, the Kremlin, the United States Capitol and the Pentagon in Washington DC, the Eiffel Tower restaurant and the Prophets Mosque in Medina: all these and numerous installations world-wide. In our own way YORK influences the weather by providing snow on demand at the world's major ski resorts.

## **THIS PRODUCT RANGE**

### **CLOSE CONTROL AIR COOLED TWIN CIRCUIT UNITS**

The Close Control Twin Circuit range comprises 3 sizes providing nominal capacities of 30, 40, 50, 60, 70 & 80 in 10kW increments. Units are twin circuit in a single frame and are available in Upflow and Downflow configurations with top, bottom, front and rear return options. As standard the Twin Circuit Air Cooled range units are equipped with: Scroll Compressors, Electrode Steam Boiler Humidifiers, Stainless Steel Tubular Finned Electric Reheat Elements, EU4 Filtration, belt driven forward curved Centrifugal Fans, R407C Refrigerant and the latest Delta range of microprocessor controllers which have a full Windows networking capability. All units have built in pressure activated fan speed control as standard and all air cooled condensers are single split circuit for 30 & 35°C ambient while two number condensers are utilised for 40 & 45°C ambient, 1 per refrigerant circuit. Cooling media available is air cooled direct expansion only.

## **OTHER YORK CLOSE CONTROL PRODUCT RANGES**

### **CLOSE CONTROL MODULAR UNITS**

Modular units for computer room and telecom applications with capacities from 10 to 120kW. Units are available in Upflow and Downflow configurations with top, bottom, front and rear return options. Cooling media available are direct expansion using Air or Water/Glycol and Chilled Water.

### **CLOSE CONTROL PLUG FAN UNITS**

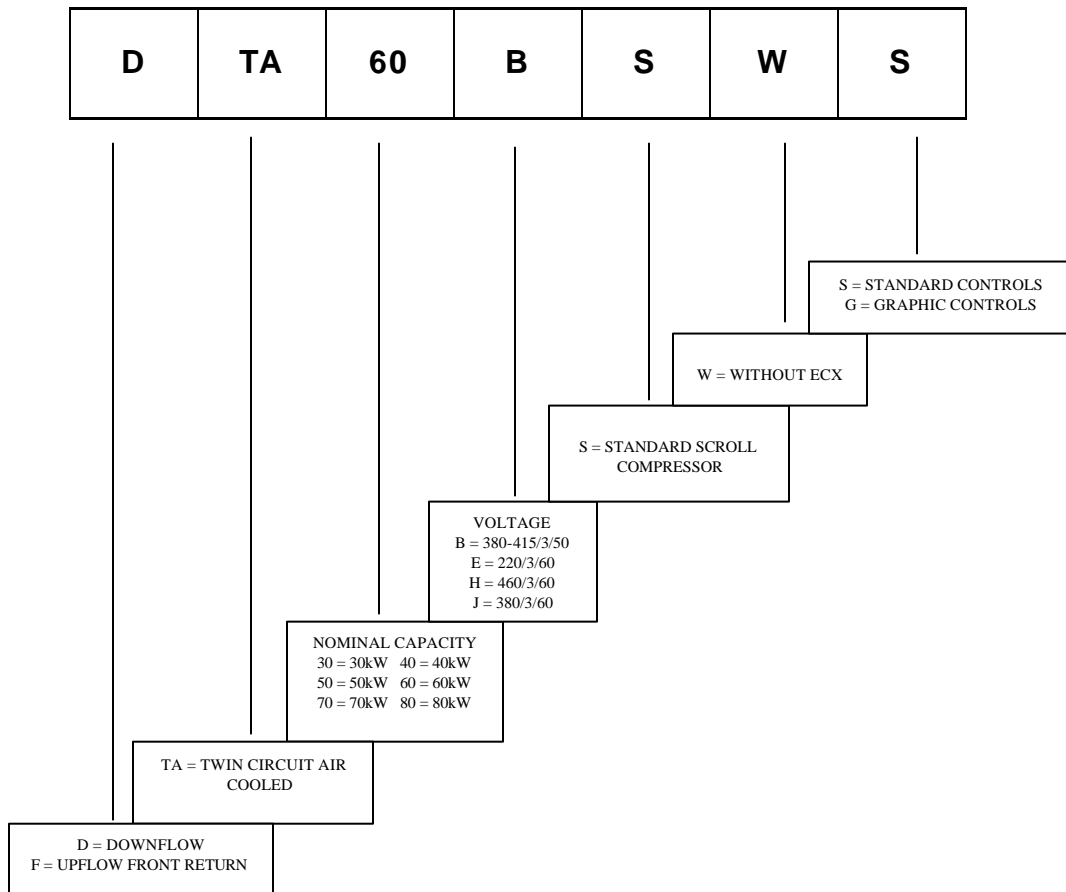
The Close Control Plug Fan Range comprises 3 sizes providing nominal capacities of 15-100kW in 8 models in the Chilled Water version and 15-80kW in 7 models in the DX version.

### **DCS / FCS CHILLED WATER UNITS**

The DCS / FCS range of Close Control Chilled Water units comprises 3 sizes providing nominal capacities of 60, 80 & 100 kW. Units are available in Upflow and Downflow configurations.

## EQUIPMENT NOMENCLATURE

The Close Control Twin circuit range of equipment is comprised of Twin Circuit Air Cooled Units with cooling capacities from 30 - 80kW in 10kW increments. Units are available in Upflow and Downflow versions and are supplied with matching Air Cooled Condensers to suit your local ambient conditions. Air Cooled Condensers in this manual are selected for 30°C, 35°C, 40°C & 45°C ambients. For other conditions please refer to your local distributor or the EDPAC Applications Engineering department.



## CLOSE CONTROL TWIN CIRCUIT - DIMENSIONS AND WEIGHTS

### CLOSE CONTROL TWIN CIRCUIT UNITS

#### Dimensions (mm)

Model	30	40	50	60	70	80
W x D x 1980H	1660 x 875	1660 x 875	2000 x 875	2000 x 875	2500 x 875	2500 x 875

#### Weight ( kgs )

Model	30	40	50	60	70	80
Air Cooled	675	675	905	905	1095	1095
Return Air Acoustic Plenum	50	50	60	60	70	70
Top Discharge Plenum	60	60	70	70	80	80

## AIR COOLED CONDENSERS - DIMENSIONS AND WEIGHTS

### 30° C Ambient Selection

Model	30	40	50	60	70	80
Condenser Model x 2 No.	ACS402A	ACS402A	ACS402B	ACS403A	ACS403B	ACS502A
Condenser Input Power (kW)	0.4	0.4	0.4	0.6	0.6	1.6
Freefield SPL @ 10m dBA	48	48	48	50	50	56
Airflow (m <sup>3</sup> /hr)	6431	6431	5819	9645	8732	14568
Fan No. x Diameter (mm)	2 x 400	2 x 400	2 x 400	3 x 400	3 x 400	2 x 500
Condenser Inlet/Outlet (mm)	20/18	20/18	22/20	24/22	28/22	35/28
Dimensions W x D (mm)	1380 x 555	1380 x 555	1380 x 555	1980 x 555	1980 x 555	2042 x 828
Weight (kgs)	30	30	33	45	49	81

### 35° C Ambient Selection

Model	30	40	50	60	70	80
Condenser Model x 2 No.	ACS402A	ACS402B	ACS403A	ACS403B	ACS502A	ACS502B
Condenser Input Power (kW)	0.4	0.4	0.6	0.6	1.6	1.6
Freefield SPL @ 10m dBA	48	48	50	50	56	56
Airflow (m <sup>3</sup> /hr)	6431	5819	9645	8732	14568	13692
Fan No. x Diameter (mm)	2 x 400	2 x 400	3 x 400	3 x 400	2 x 500	2 x 500
Condenser Inlet/Outlet (mm)	20/18	22/20	24/22	28/22	35/28	35/28
Dimensions W x D (mm)	1380 x 555	1380 x 555	1980 x 555	1980 x 555	2042 x 828	2042 x 828
Weight (kgs)	30	33	45	49	81	89

### 40° C Ambient Selection

Model	30	40	50	60	70	80
Condenser Model x 2 No.	ACS402B	ACS403A	ACS502A	ACS502B	ACS502C	ACS503A
Condenser Input Power (kW)	0.4	0.6	1.6	1.6	1.6	2.4
Freefield SPL @ 10m dBA	48	50	56	56	56	58
Airflow (m <sup>3</sup> /hr)	5819	9645	14568	13692	12930	21852
Fan No. x Diameter (mm)	2 x 400	3 x 400	2 x 500	2 x 500	2 x 500	3 x 500
Condenser Inlet/Outlet (mm)	22/20	24/22	35/28	35/28	35/28	42/35
Dimensions W x D (mm)	1380 x 555	1980 x 555	2042 x 828	2042 x 828	2042 x 828	2942 x 828
Weight (kgs) 1No. / 2No.	43/86	55/110	91/182	99/198	107/214	118/236

### 45° C Ambient Selection

Model	30	40	50	60	70	80
Condenser Model x 2 No.	ACS403A	ACS502A	ACS502C	ACS503A	ACS503B	ACS503C
Condenser Input Power (kW)	0.6	1.6	1.6	2.4	2.4	2.4
Freefield SPL @ 10m dBA	50	56	56	58	58	58
Airflow (m <sup>3</sup> /hr)	9645	14568	12930	21852	20538	19395
Fan No. x Diameter (mm)	3 x 400	2 x 500	2 x 500	3 x 500	3 x 500	3 x 500
Condenser Inlet/Outlet (mm)	24/22	35/28	35/28	42/35	42/35	42/35
Dimensions W x D (mm)	1980 x 555	2042 x 828	2042 x 828	2942 x 828	2942 x 828	2942 x 828
Weight (kgs) 1No. / 2No.	55/110	91/182	107/214	118/236	135/270	146/292

#### Notes:

- Standard Air Cooled Condensers have 4 Pole motors. For 6 Pole & 8 Pole low noise versions, consult factory.
- All Condensers are shipped with mounting feet. When mounted in a horizontal, Condenser models ACS 401 – 403 are 712mm high and Condenser models ACS 501- 503 are 948mm high.
- For all models, 2 no. condensers are required, 1 per refrigerant circuit.
- All Condenser data is per Condenser.

## STANDARD FEATURES

### Cabinet

The cabinet frames shall be constructed of formed 2.0mm Zintec electroplated steel sections. Paint finish is Epoxy Powder Coated with an "Orange Peel" textured finish. Interior panels to be manufactured from galvanised steel in all cases. Exterior panels are to be as cabinet except in 1.2mm Zintec. Paint Colour to be RAL 9018. The front panels shall be fastened to the frame using quarter turn fasteners. Side panels shall be secured to the frame using steel chrome plated screws. All panels shall be flush fitting, sealed to the frame sections with closed cell foam and insulated with a non-shedding material, which shall be non-combustible, when tested in accordance with B.S. 476 Part 6, 7 and UL 94. The units shall be fully accessible and serviceable from the front.

### Cooling Coil

The cooling coils shall be multi-row constructed from  $\frac{3}{8}$ " O/D copper tubes with aluminium fins. Large surface areas shall ensure high sensible heat ratios and low airside pressure drops, resulting in reduced fan power requirements and noise levels. All DX coils shall be tested to 25 bar.

### DX Units

Each unit shall have 2 independent refrigerant circuits, each with a liquid distributor, expansion valve, solenoid valve, sight glass and filter drier. Pumpdown is standard on Air Cooled Units.

### Fans

Large, low speed, double inlet, double width fans with forward curved impellers and "sealed for life" self aligning bearings shall be used to minimise noise levels. Fans are twin belt driven with a TEFC motor. The motor shall be IP54 rated and insulated to Class F.

### Electric Heaters

Electric heaters shall have stainless steel sheathed elements with stainless steel finning, balanced over three phases and rated to operate at 'black heat'. Control shall be in two stages. Protection is by a high temperature safety cut-out thermostat. The thermostat shall be mounted in the airstream and resettable from the control section of the electrical panel.

### Filtration

The filters shall have an atmospheric dust spot efficiency of 30 - 40% in accordance with Ashrae 52/76. This equates to a Eurovent 4/5 rating of EU4/G4. They shall be fitted in the return air stream and be accessible from the front of an Upflow unit and the top of a Downflow unit.

### Compressors

Compressors shall be high efficiency hermetically sealed scroll type. Back seating service/isolating valve, high and low pressure switches, motor overload protection and crankcase heaters shall be provided. The compressors shall be mounted on resilient neoprene mountings for vibration isolation.

### Humidification

The humidifier shall be of the electrode-boiler type. Features shall include selectable steam output and microprocessor control with alarms and diagnostic facilities. The humidifier control system shall allow the use of a wide range of mains water conditions namely: inlet mains water pressure of 1-10 bars, total hardness of 15-30 French degrees & water inlet electrical conductivity of 400-800 micro siemens. Unit shall optimise drain down frequency for maximum operational economy.

### Electrical Panel

The electrical panel shall be constructed and assembled in compliance with IEC standards with all components VDE approved. All sub circuits are protected by MCB's. The high and low voltage sections shall be segregated and all high voltage electrical components shall be touch safe.

### Microprocessor Controls

All Units shall be fitted as standard with the latest Delta range of DIN rail mounted Microprocessor Controls. The Control System utilises a main Microprocessor Interface Board equipped with a set of terminals necessary to connect the Board to the controlled devices (e.g. valves, compressors, fans, reheats, sensors and humidifiers).

All software is permanently stored in flash RAM and is therefore protected even in the event of a power failure. Unit software is uploaded to the Microprocessor using a RAM key. On multi unit sites, this quickens unit commissioning. The software can also easily be changed or upgraded on site by qualified service personnel. The Microprocessor also has optional built in Modbus & Bacnet communications and full Windows networking capability. When communicating in Modbus or Bacnet, the protocol converter is in the software & there is no need for external Gateways.

The User Interface is complete with LCD Display, keypad and LED Indicators allowing the user to easily set the main control parameters (setpoints, differentials and alarm thresholds) and carry out the main working operations (on/off and displaying controlled variables). The User Interface Terminal also performs the following functions:

- Initial programming procedure with access protected by a password.
- Possibility of changing the basic operation parameters any time, without stopping the program.
- Indication of any alarm condition via audible and visual signals (buzzer sounds and alarm messages appear on the display).
- Visualisation of the active functions by means of LED indicators.
- Visualisation of the measured variables.

### OPTIONAL FEATURES

#### Delta Graphical Controls

An optional Graphical Terminal Unit is also available. This is a graphical display, LED Backlit with 128 x 64 pixel graphical resolution. This graphical screen allows:

- Configurability of character fonts to represent any alphabet type (Chinese, Arabic etc.).
- Creation of graphic objects for more vivid alarm visualisation.
- Display of graphical trends of temperature and humidity.

#### Floor Stand

Floorstands are shipped flat-pack and need to be assembled on site. They are suitable for raised floor heights of 150mm to 600mm. The legs are notched at 50mm intervals for cutting on site. There is also a final adjustment on the foot of  $\pm 50$ mm. Scoops are also available as an option with the floorstand. Floorstands and scoops are painted and finished to match the unit colour.

#### Air Discharge Plenum

For Upflow units which are to be installed in a freeblow situation. Plenum consists of an insulated sheet metal assembly with 3 discharge grilles. Grilles are double deflector type. Plenum colour will match unit colour.

#### High Efficiency Filters

Higher specification filtration can be provided in addition to the EU4/G4 filters. These filters are of the rigid bag type and have an efficiency of 80% ASHRAE 52/76 (Eurovent EU7/F7). These filters are fitted in the return air side of the unit on a Downflow type and on the supply air side of the unit on an Upflow type.

#### Fresh Air Kit and Filter

Units can be supplied with a fresh air inlet connection and disposable EU4/G4 filter element. This will admit approximately 3-5% of the recirculated air volume.

#### Special Colours

Special Colours must be specified when placing orders (quote BS or RAL number or other if known).

#### Double Skin Panels

To reduce the casing radiated "Break Out Noise", these panels consist of an inner solid steel sheet. The inner skins are painted and finished in unit colour.

#### Fire/Smoke Detector

A fire/smoke detector can be mounted in the return air path to interface with the unit controls and generate an alarm.

#### Firestat

A firestat can be located in the return air path within the unit to interface with the unit controls and indicate an alarm.

#### Hot Water Reheat

Units may be fitted with a Low Pressure Hot Water (LPHW) heating coil in place of the standard electrical resistance heating. Water flow through the coil is controlled by a 2 or 3 way on/off valve. Duties of these coils are nominally the same as standard electric heating, based on flow and return hot water temperatures of 82°C and 71°C respectively.

#### Upsized Fan Motors

For applications where fan power requirements exceed the capacity of the standard motors, an upsized motor can be fitted. Standard unit ESP is 75 Pa. Units can normally be upgraded to 300 Pa. In these instances please consult the factory.

### **Water Detection**

A Water Sensor Module is connected to the Unit Microprocessor Control System and supplied with 10m of cable for underfloor water detection. When water is detected the unit's alarm system is activated.

### **Condensate Pump**

Where, due to location, it is not possible to gravity drain units, a condensate pump can be fitted to collect any condensate and pump it to the nearest convenient drain point (pump duty is 6 l/min Vs 6m head). For units fitted with humidifiers or units requiring a lift in excess of 6m equivalent head, a larger capacity sump pump is available, (Pump duty is 6 l/min Vs 10m head).

### **Top Entry Pipework**

The unit pipework can be modified to allow entry/connection of services through the top of the unit.

### **Reverse Fan Deck**

For applications where the air should be discharged "backward" from the unit, the fan deck can be reversed to ease the airflow pattern and reduce pressure drop.

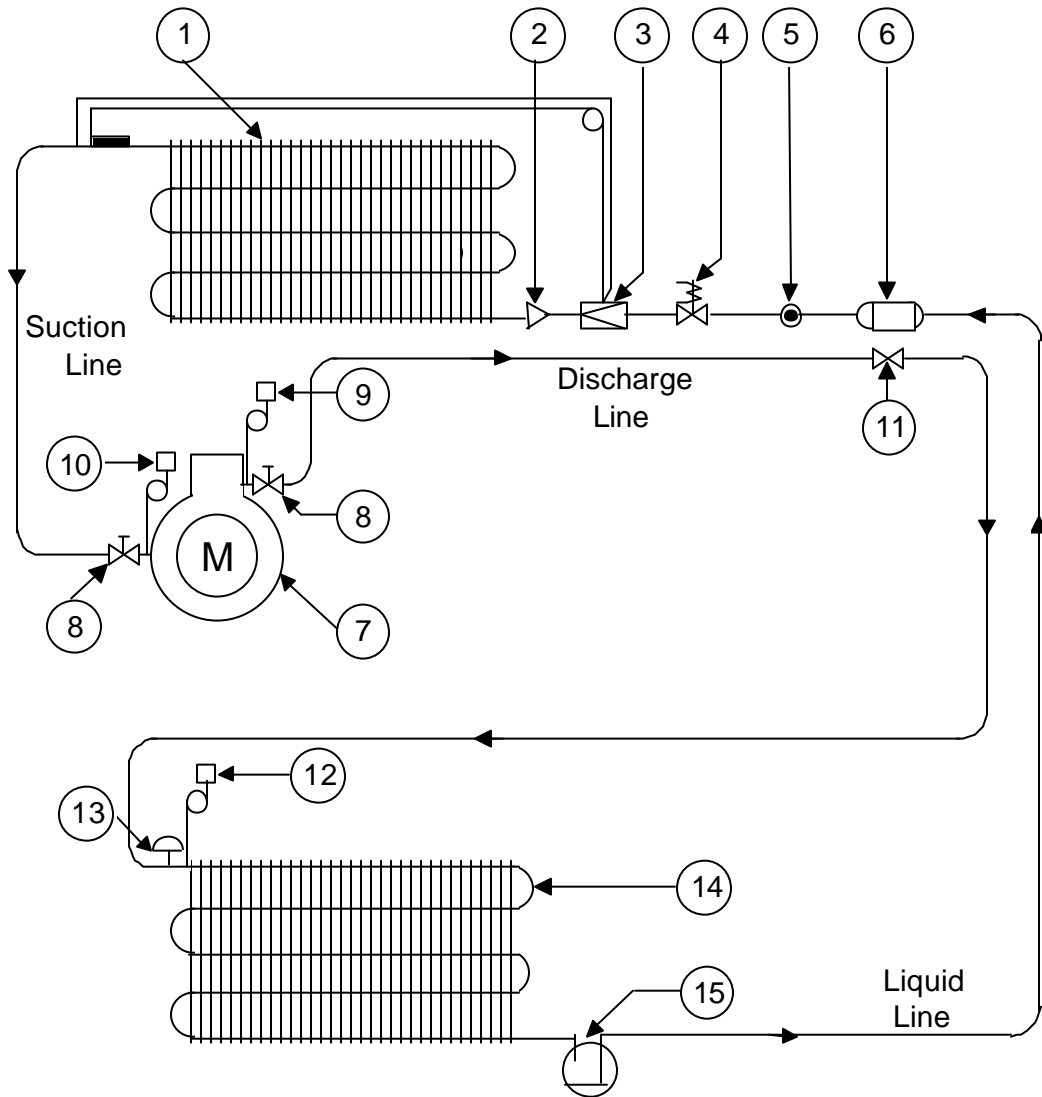
## GENERAL ENGINEERING DETAILS

Downflow or Upflow Unit							
Unit Size		30	40	50	60	70	80
<b>Coil Data</b>							
Coil Face Area - DX type	m <sup>2</sup>	1.52	1.52	1.89	1.89	2.42	2.42
Circuit Quantity	No.	2	2	2	2	2	2
Rows	-	3	3	4	4	4	4
Coil Drain Connection	BSPF	1	1	1	1	1	1
<b>Air Side Data</b>							
No. of Fans	-	1	1	2	2	2	2
Air Volume	m <sup>3</sup> /s	2.29	3.06	3.82	4.31	5.00	5.69
	m <sup>3</sup> /hr	8,250	11,000	13,750	15,500	18,000	20,500
External Static Pressure ESP	Pa	75	75	75	75	75	75
Fan Motor	kW	1.5	2.2	4.0	5.5	4.0	5.5
<b>Filter Data</b>							
Downflow Filter Size Code	-	1	1	2	2	3	3
Downflow Filter Quantity	No.	6	6	6	6	8	8
Upflow Filter Size Code	-	1	1	2	2	3	3
Upflow Filter Quantity	No.	4	4	4	4	4	4
<b>Humidifier Data</b>							
Inlet Connection	BSPM	¾"	¾"	¾"	¾"	¾"	¾"
Drain Connection	BSPF	¾"	¾"	¾"	¾"	¾"	¾"
Water Feed Pressure	Bar	1-10	1-10	1-10	1-10	1-10	1-10
French Degrees Water Hardness	-	15-30	15-30	15-30	15-30	15-30	15-30
<b>Noise Data</b>							
Freefield SPL	dBA	53	52	58	59	57	56
<b>Compressor Data</b>							
Scroll Compressor - 50Hz	-	ZR72K	ZR81K	ZR11M	ZR12M	ZR16M	ZR19M
Compressor Quantity	No.	2	2	2	2	2	2
Scroll Compressor - 60Hz	-	ZR61K	ZR72K	ZR90K	ZR11M	ZR12M	ZR16M
Compressor Quantity	No.	2	2	2	2	2	2
<b>Piping Data</b>							
Discharge Connection Size	inch	5/8"	7/8"	7/8"	7/8"	7/8"	7/8"
Liquid Connection Size	inch	1/2"	1/2"	1/2"	5/8"	5/8"	5/8"
Condenser Connections Inlet/Outlet 30°C	mm	20/18	20/18	22/20	24/22	28/22	35/28
Condenser Connections Inlet/Outlet 35°C	mm	20/18	22/20	24/22	28/22	35/28	35/28
Condenser Connections Inlet/Outlet 40°C	mm	20/18	24/22	35/28	35/28	35/28	42/35
Condenser Connections Inlet/Outlet 45°C	mm	24/22	35/28	35/28	42/35	42/35	42/35

### Notes

1. Indoor unit Freefield SPL dBA levels are measured at 3m.
2. Downflow Filter Size Code: 1 = 495mm x 545mm, 2 = 545mm x 622mm, 3 = 545mm x 595mm.
3. Upflow Filter Size Code: 1 = 445mm x 622mm, 2 = 545mm x 622mm, 3 = 545mm x 895mm.
4. All filters are 100mm thick and have an efficiency rating of G4 in accordance with EU Standard EN779.
5. Water feed electrical conductivity for the humidifier should be in the range of 400 - 800 microsiemens.
6. For correct installation pipe sizes refer to Refrigerant pipe sizing tables.

## AIR COOLED SYSTEM SCHEMATIC



### System Components (per circuit)

1. Evaporator Coil.
2. Liquid Distributor.
3. Thermostatic Expansion Valve (externally equalised).
4. Liquid Line Solenoid Valve(optional).
5. Liquid Sight Glass (including moisture indicator).
6. Filter Drier.
7. Compressor.
8. Compressor Service Valves.
9. High Pressure Switch (manual reset).
10. Low Pressure Switch (automatic reset).
11. Check Valve (See Note).
12. Fan speed Controller (pressure operated head pressure control, if fitted).
13. Pressure relief Valve (See Note).
14. Air Cooled Condenser.
15. Liquid Receiver (See Note).

#### Notes:

1. Items 11, 13 and 15 are supplied by others and field fitted by others.
2. All units are Twin Circuit Air Cooled.

**AIR COOLED UNITS - COOLING CAPACITIES 50 Hz**

<b>Model: DTA / FTA</b>		<b>30</b>	<b>40</b>	<b>50</b>	<b>60</b>	<b>70</b>	<b>80</b>
Air On: 22°C, 50% RH							
Total Capacity	kW	31.8	37.2	51.7	59.7	72.2	86.3
Sensible Capacity	kW	27.0	32.7	44.9	51.2	61.1	71.8
Air On: 24°C, 50% RH							
Total Capacity	kW	33.8	39.4	55.0	63.0	76.7	91.7
Sensible Capacity	kW	28.2	34.3	47.3	53.1	63.9	74.1
Scroll Compressor	-	ZR72K	ZR81K	ZR11M	ZR12M	ZR16M	ZR19M
Compressor Input Power	kW	4.9	5.3	7.6	8.6	10.8	13.0
Compressor Quantity	No.	2	2	2	2	2	2
Airflow	m <sup>3</sup> /s	2.29	3.06	3.82	4.31	5.00	5.69
No. of Fans	No.	1	1	2	2	2	2
Fan Motor	kW	1.5	2.2	4.0	5.5	4.0	5.5
No. of Motors	No.	1	1	1	1	1	1
Electric Reheat	kW	15.0	15.0	15.0	15.0	24.9	24.9
No. of Steps	No.	2	2	2	2	2	2
Humidifier Capacity	kg/hr	8.0	8.0	8.0	8.0	8.0	8.0
Humidifier Power	kW	5.8	5.8	5.8	5.8	5.8	5.8

**AIR COOLED UNITS - COOLING CAPACITIES 60Hz**

<b>Model: DTA / FTA</b>		<b>30</b>	<b>40</b>	<b>50</b>	<b>60</b>	<b>70</b>	<b>80</b>
Air On: 22°C, 50% RH							
Total Capacity	kW	32.2	38.5	50.6	60.3	70.7	84.6
Sensible Capacity	kW	27.2	33.5	44.3	51.6	60.3	70.8
Air On: 24°C, 50% RH							
Total Capacity	kW	34.3	40.8	53.7	64.1	75.1	89.9
Sensible Capacity	kW	28.5	35.1	46.8	53.6	63.1	73.2
Scroll Compressor	-	ZR61K	ZR72K	ZR90K	ZR11M	ZR12M	ZR16M
Compressor Input Power	kW	4.8	5.8	7.3	8.8	10.0	12.4
Compressor Quantity	No.	2	2	2	2	2	2
Airflow	m <sup>3</sup> /s	2.29	3.06	3.82	4.31	5.00	5.69
No. of Fans	No.	1	1	2	2	2	2
Fan Motor	kW	1.5	2.2	4.0	5.5	4.0	5.5
No. of Motors	No.	1	1	1	1	1	1
Electric Reheat	kW	15.0	15.0	15.0	15.0	24.9	24.9
No. of Steps	No.	2	2	2	2	2	2
Humidifier Capacity	kg/hr	8.0	8.0	8.0	8.0	8.0	8.0
Humidifier Power	kW	5.8	5.8	5.8	5.8	5.8	5.8

**Notes**

1. Capacities are based on R407C refrigerant.
2. For capacities at other conditions, please refer to the Factory.
3. All units are R22 compatible.
4. Units are also available for R134A applications, please contact the factory.

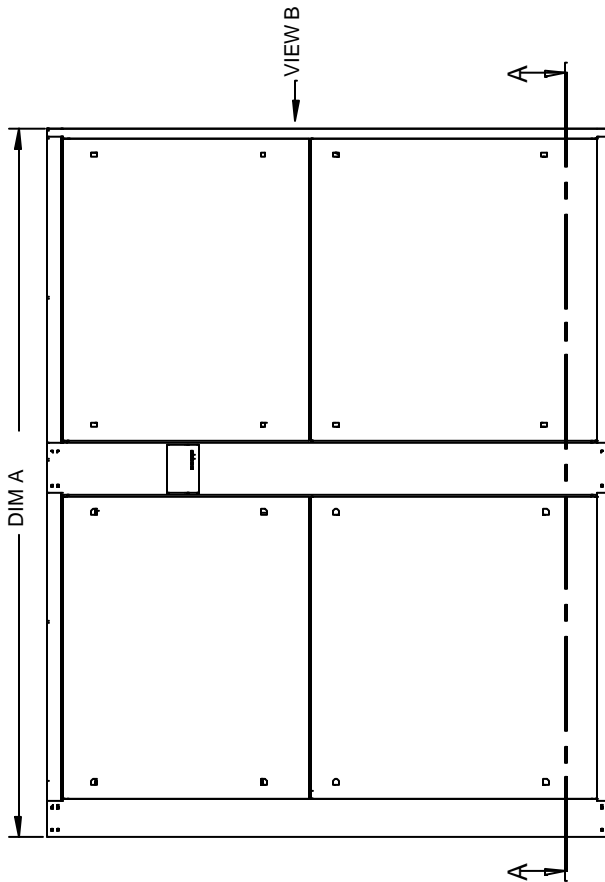
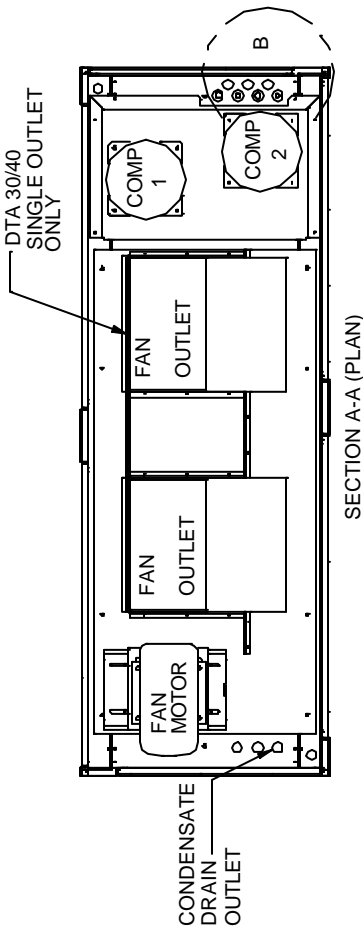
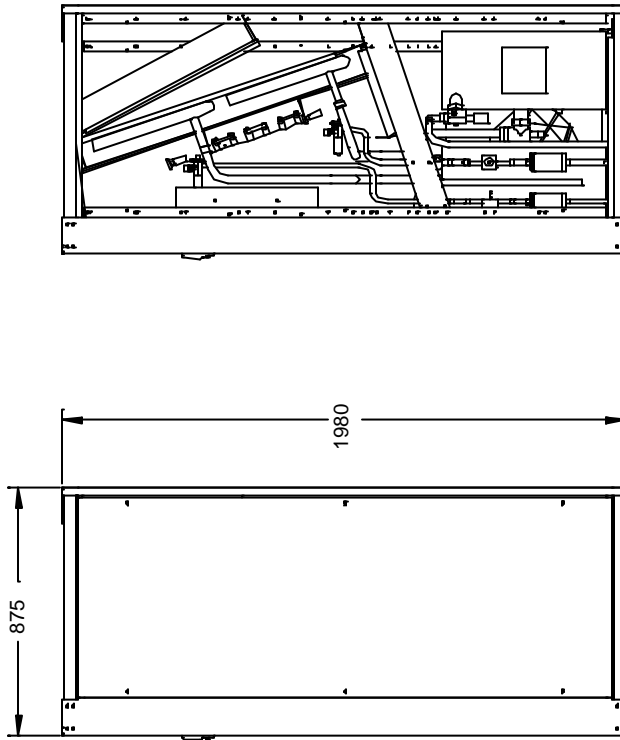
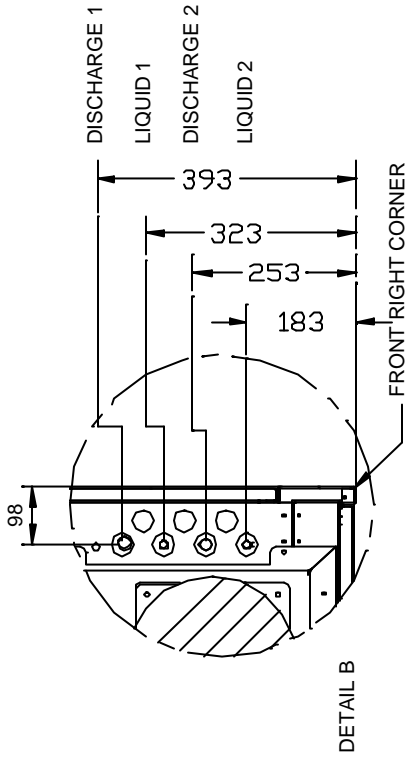
## ELECTRICAL DETAILS

	30	40	50	60	70	80
<b>400V/3PH/50Hz</b>						
Fans FLA	4.2	5.3	9.1	11.4	9.1	11.4
Reheat FLA	21.7	21.7	21.7	21.7	35.9	35.9
Humidifier FLA	8.4	8.4	8.4	8.4	8.4	8.4
Scroll Compressor FLA	17.4	23.4	29.8	31.6	37.0	25.2
Condenser FLA @ 30°C	2.8	2.8	2.8	4.2	4.2	13.6
Condenser FLA @ 35°C	2.8	2.8	4.2	4.2	13.6	13.6
Condenser FLA @ 40°C	2.8	4.2	13.6	13.6	13.6	20.4
Condenser FLA @ 45°C	4.2	13.6	13.6	20.4	20.4	20.4
<b>220V/3PH/60Hz</b>						
Fans FLA	7.6	9.6	16.6	20.7	16.6	20.7
Reheat FLA	39.5	39.5	39.5	39.5	65.3	65.3
Humidifier FLA	15.3	15.3	15.3	15.3	15.3	15.3
Scroll Compressor FLA	16.3	15.8	22.7	27.1	28.7	33.6
Condenser FLA @ 30°C	2.8	2.8	2.8	4.2	4.2	13.6
Condenser FLA @ 35°C	2.8	2.8	4.2	4.2	13.6	13.6
Condenser FLA @ 40°C	2.8	4.2	13.6	13.6	13.6	20.4
Condenser FLA @ 45°C	4.2	13.6	13.6	20.4	20.4	20.4
<b>380V/3PH/60Hz</b>						
Fans FLA	4.4	5.6	9.6	12.0	9.6	12.0
Reheat FLA	22.8	22.8	22.8	22.8	37.8	37.8
Humidifier FLA	8.8	8.8	8.8	8.8	8.8	8.8
Scroll Compressor FLA	9.4	9.2	13.2	15.7	16.6	19.5
Condenser FLA @ 30°C	2.4	2.4	2.4	3.6	3.6	8.4
Condenser FLA @ 35°C	2.4	2.4	3.6	3.6	8.4	5.4
Condenser FLA @ 40°C	2.4	3.6	8.4	8.4	8.4	12.6
Condenser FLA @ 45°C	3.6	8.4	8.4	12.6	12.6	12.6
<b>460V/3PH/60Hz</b>						
Fans FLA	3.7	4.6	7.9	9.9	7.9	9.9
Reheat FLA	18.9	18.9	18.9	18.9	31.2	31.2
Humidifier FLA	7.2	7.2	7.2	7.2	7.2	7.2
Scroll Compressor FLA	7.8	7.6	10.9	13.0	13.7	16.1
Condenser FLA @ 30°C	3.2	3.2	3.2	4.8	4.8	8.4
Condenser FLA @ 35°C	3.2	3.2	4.8	4.8	8.4	8.4
Condenser FLA @ 40°C	3.2	4.8	8.4	8.4	8.4	12.6
Condenser FLA @ 45°C	4.8	8.4	8.4	12.6	12.6	12.6

### Notes

1. FLA = Full Load Amps.
2. Unit maximum FLA is the total of the components, which operate during maximum electrical load conditions. For full function units with humidifier & electric reheat the maximum FLA would be in dehumidification mode ie. cooling + reheat or in cooling and humidification mode ie. cooling + humidifier.
3. In dehumidification mode, calculate the max FLA based on single compressor FLA as only one compressor operates in this mode. Tabulated values for compressors above are for two compressors.
4. In cooling and humidification mode, calculate the max FLA based on dual compressor FLA as both compressors and the humidifier operate in this mode.
5. For 30°C and 35°C ambient (except models 70 and 80 at 35°C ambient), all Air Cooled Condensers have split headers with 2 sets of inlet/outlet connections.
6. For, models 70 and 80 at 35°C ambient and for all models at 40°C and 45°C ambient, 2 no. condensers are required, 1 per refrigerant circuit.

**GENERIC DIMENSIONAL DRAWING**

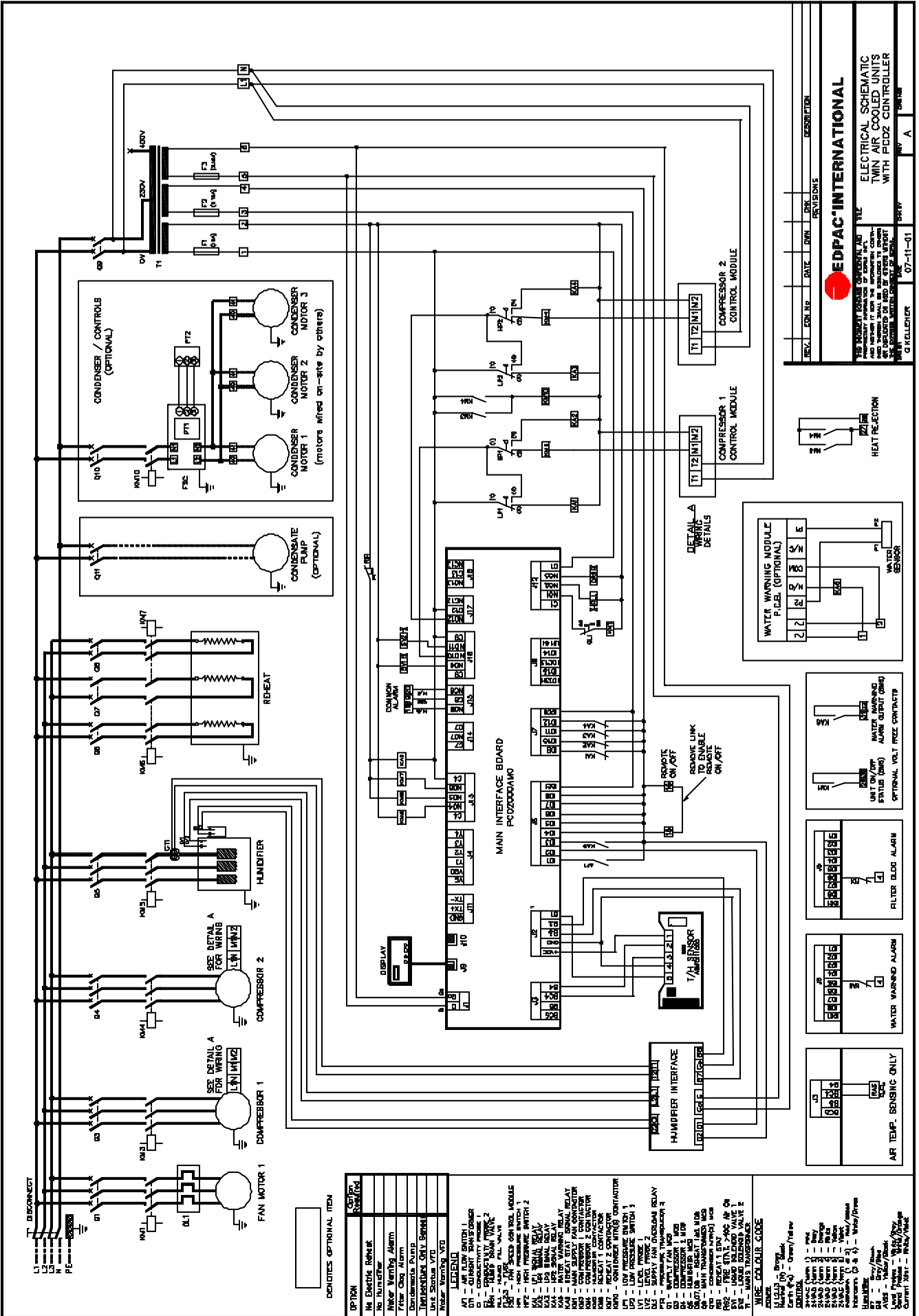


UNIT DTA 30/40 DIM A = 1650mm  
 UNIT DTA 50/60 DIM A = 2000mm  
 UNIT DTA 70/80 DIM A = 2500mm

REV	DATE	BY	CHK	APP	DESCRIPTION
REVISIONS					
<b>EDPAQ INTERNATIONAL</b>					
SUBMITTAL DETAILS					
DTA 30/40/ 50/60 70/80 UNITS					
J. GUNELL		16-01-02		REV	A

THIS DOCUMENT CONTAINS CONFIDENTIAL AND PROPRIETARY INFORMATION OF EDPAQ INT'L LTD. AND SHOULD BE KEPT UNDER STRICT CONTROL. IT IS TO BE USED ONLY BY PERSONS AUTHORIZED BY EDPAQ INTERNATIONAL. THE APPLICABLE PATENT RIGHTS OF EDPAQ INT'L LTD. ARE HEREBY ACKNOWLEDGED.

# GENERIC ELECTRICAL DRAWING



REV.	CON. NO.	DATE	OWN.	CHK.	DESCRIPTION

**EDPAC INTERNATIONAL**

ELECTRICAL SCHEMATIC  
TWIN AIR COOLED UNITS  
WITH FC02 CONTROLLER

REV. A

**DETAIL A**  
WATER WARNING MODULE  
FILES (OPTIONAL)

**DETAIL B**  
HUMIDIFIER INTERFACE

**DETAIL C**  
REPEAT

**DETAIL D**  
CONDENSER / CONTROLS (OPTIONAL)

**DETAIL E**  
CONDENSER MOTOR 1, 2, 3

**DETAIL F**  
CONDENSATE PUMP (OPTIONAL)

**DETAIL G**  
FAN MOTOR 1

**DETAIL H**  
COMPRESSOR 1

**DETAIL I**  
COMPRESSOR 2

**DETAIL J**  
CONTROL MODULE

**DETAIL K**  
CONTROL MODULE

**DETAIL L**  
HEAT REJECTION

**DETAIL M**  
WATER WARNING ALARM

**DETAIL N**  
FILTER BLOC ALARM

**DETAIL O**  
WATER WARNING ALARM

**DETAIL P**  
AR TEMP. SENSING ONLY

**DETAIL Q**  
UNIT ON/OFF

**DETAIL R**  
WATER WARNING ALARM OUTPUT (WMO)

**DETAIL S**  
OPTIONAL VOLT FREE CONTACT

**DETAIL T**  
HEAT REJECTION

**DETAIL U**  
WATER WARNING ALARM

**DETAIL V**  
WATER WARNING ALARM

**DETAIL W**  
WATER WARNING ALARM

**DETAIL X**  
WATER WARNING ALARM

**DETAIL Y**  
WATER WARNING ALARM

**DETAIL Z**  
WATER WARNING ALARM