Carrier Air Conditioning



Unit 10, Kettles Wood Drive Bartley Green Business Centre Bartley Green Birmingham B32 3DB



Equipment Proposal : 30RQ-090

DATE:	9 th March 2012	OUR REF:	8399-11-02 (30RQ-090)
TO:	Gwilym Still Max Fordham	PHONE: FAX:	
FROM:	Andy Briars	PHONE: FAX: E-MAIL:	07785 774 157 0116 2866 500 andy.briars@carrier.utc.com

PROJECT RE: FRIENDS HOUSE (AIR SOURCE HEAT PUMPS)

Further to your recent enquiry please find attached our quotation for the equipment required at the above site.

For convenience, our quote is divided into sections, as follows:

- Selection Criteria
- Carrier 30RBS Hydronic Aquasnap chiller solution
- Pricing / Commercial
- Comments on specification
- Equipment data sheets
- Standard terms and conditions of sale

We trust the foregoing meets with your approval, but should you have any queries, please do not hesitate to contact the undersigned.

Assuring you of our continued and diligent attention to your further instructions.

Yours faithfully Carrier Air Conditioning A Division of Toshiba Carrier (UK) Ltd

Andy Briars Senior Sales Engineer

For further assistance on this quotation please contact Mobile number is : 07785 774 157

Selection Criteria

The following data has been used to determine the size of the equipment proposed:



Heating load per ASHP: Hot water leaving temperature: Hot water entering temperature: Water / glycol mixture Ambient air temperature: Noise Level 51 dB(A) @ 10m	69.9 40.0 35.0 0 -5.0	kW (53.9 in defrost cycle) °C °C % °C
External Pump pressure available	85	kPa

Pricing / Commercial					
No. off	Model number	Description	Total Nett Cost		
2	30RQS-090	Air Cooled Liquid Chiller	£31,500.00 + VAT		

With the AQUASNAPTM chiller, everything is provided to simplify the installation. The hydronic module (if included see options below) incorporates a water circulating pump, expansion tank, water flow switch, pressure gauges, purge valve and throttle valve (available on sizes 262 to 522). The PRO-DIALOG Plus control system is auto-adaptive and in most cases **eliminates the need for a buffer tank.** The chiller utilizes Puron 410a refrigerant and is suitable for external location. The AQUASNAPTM chiller utilises multiple scroll compressors arranged in two independent refrigeration circuits (sizes 262 to 522). Designed, manufactured and tested in a facility with ISO9001 accreditation, the chiller would come complete with the following major features:

- Single power supply point
- PRO-DIALOG Plus control system
- Clear and easy-to-use user interface
- 24 Volt control system
- Remote stop / start & dual set point
- Operation down to -0 °C outside air
- Full R410a refrigerant charge
- Low noise FLYING BIRD IV fans
- Optional Hydronic module
- Condenser coil protection guards
- One step demand limit control
- CWE temp reset based on ambient
- Factory run tested prior to shipment
- Eurovent certified performance
- Maintenance free compressors
- UK wide service and parts network

Included in the above nett cost, are the following options: -

- 2 OPT_015LS Low noise option
- 2 OPT_042 Hydronic module water piping cables heaters (anti-freeze protection)
- 2 OPT_116G Hydronic module, fixed speed Dual low pressure pump
- 4 OPT_148C CCN BacNet (Open Protocol BMS Gateway)
- 2 AA_M Mounts
- 2 SER_004 Commissioning

SAVINGS

-£1,800.00 Omit integral hydronic modules

Features and Benefits of the 30RQS Aquasnap Puron chiller



The new generation of Aquasnap Puron liquid chillers/air to-water heat pumps was designed for commercial (air conditioning of offices, hotels etc.) or industrial (low temperature process units etc.) applications.

The new Aquasnap Puron integrates the latest technological innovations:

- 1. ozone-friendly refrigerant R410A
- 2. scroll compressors
- 3. low-noise fans made of a composite material
- 4. auto-adaptive microprocessor control
- 5. electronic expansion valve
- 6. variable-speed pump (option)

The Aquasnap can be equipped with a hydronic module integrated into the unit chassis, limiting the installation to straightforward operations like connection of the power supply and the chilled water supply and return piping

Quiet operation

Compressors

Low-noise scroll compressors with low vibration level The compressor assembly is installed on an independent chassis and supported by anti-vibration mountings

Dynamic suction and discharge piping support, minimising vibration transmission (Carrier patent) Condenser (30RB)/air evaporator/condenser (30RQ) section

Vertical condenser coils Protection grilles on anti-vibration mountings to protect the heat exchanger against possible shocks.

Low-noise latest-generation Flying Bird IV fans, made of a composite material (Carrier patent) are now even quieter and do not generate intrusive low-frequency noise Rigid fan installation for reduced start-up noise (Carrier patent)



Easy and fast installation

Integrated hydronic module (option) Centrifugal low or high-pressure water pump (as required), based on the pressure loss of the hydronic installation

Hydronic module

Single or dual water pump with operating time balancing and automatic changeover to the back-up pump if a fault develops Water filter protects the water pump against circulating debris Pressure measurement, using two pressure transducers and allowing indication of water flow rate, water pressure and lack of water.

High-capacity membrane expansion tank ensures pressurisation of the water circuit Overpressure valve, set to 4 bar Speed variator on the pumps (option) to ensure the correct flow rate, based on the system requirements Thermal insulation and frost protection down to -20°C, using an electric resistance heater (see table of options) Physical features





The unit has a small footprint and a low height (1330 mm) allowing it to blend in with any architectural styles. The unit is enclosed by easily removable panels, covering all components (except air heat exchangers and fans). Simplified electrical connections A single power supply point without neutral, Main disconnect switch with high trip capacity Transformer for safe 24 V control circuit supply included fast commissioning Systematic factory operation test before shipment Quick-test function for step-by-step verification of the instruments, electrical components and motors

Economical operation

Optional variable-speed pump for economical operation the control algorithm adjusts the water flow rate based on the actual system requirements and obsoletes the need for the control valve at the unit outlet.

Increased energy efficiency at part load the refrigerant circuit includes several compressors connected in parallel. At part load, around 99% of the operating time, only the compressors that are absolutely necessary operate. At these conditions the compressors operating are more energy efficient, as they use the total condenser and evaporator capacity.

The electronic expansion device (EXV) allows operation at a lower condensing pressure (EER, COP and ESEER optimisation).

Dynamic superheat management for better utilisation of the water heat exchanger surface. Defrost cycle optimisation (30RQ)

Superior reliability

State-of-the-art concept

Cooperation with specialist laboratories and use of limit simulation tools (finite element calculations) for the design of the critical components, e.g. motor supports, suction/discharge piping etc.

Auto-adaptive control

Control algorithm prevents excessive compressor cycling and permits reduction of the water quantity in the hydronic circuit (Carrier patent) Hydronic module with integrated pressure transducers allowing measurement of the water pressure at two points, as well as measurement of the water flow rate and detection of lack of water and pressure. This considerably reduces the risk of problems such as frost accumulation on the water heat exchanger. Automatic compressor unloading in case of abnormally high condensing pressure. If an anomaly occurs (e.g. fouled air heat exchanger coil, fan failure) Aquasnap continues to operate, but at reduced capacity. Exceptional endurance tests

Corrosion resistance tests in salt mist in the laboratory Accelerated ageing test on components that are submitted to continuous operation: compressor piping,

fan supports Transport simulation test in the laboratory on a vibrating table.

Pro-Dialog+ control

Pro-Dialog+ combines intelligence with operating simplicity. The control constantly monitors all machine parameters and precisely manages the operation of compressors, expansion devices, fans and of the water heat exchanger water pump for optimum energy efficiency.

Pro-Dialog+ interface



Seven-day internal time schedule clock: permits unit on/off control and operation at a second set point Set point reset based on the outside air temperature or the return water temperature or on the water heat exchanger delta T Master/slave control of two units operating in parallel with operating time equalisation and automatic changeover

in case of a unit fault (accessory).

Change-over based on the outside air temperature Integrated features Night mode: capacity and fan speed limitation for reduced noise level With hydronic module: water pressure display and water flow rate calculation

Ease-of-use

The new backlighted LCD interface includes a manual control potentiometer to ensure legibility under any lighting conditions.

The information is displayed clearly in English, French, German, Italian and Spanish (for other languages please consult Carrier)

The Pro-Dialog+ navigation uses intuitive tree-structure menus, similar to the Internet navigators. They are user friendly and permit quick access to the principal operating parameters: number of compressors operating, suction/discharge pressure, compressor operating hours, set point, air temperature, entering/leaving water temperatur

Remote operating mode with volt-free contacts (standard)

A simple two-wire communication bus between the RS485 port of the Aquasnap and the Carrier Comfort Network offers multiple remote control, monitoring and diagnostic possibilities. Carrier offers a vast choice of control products, specially designed to control, manage and supervise the operation of an air conditioning system. Please consult your Carrier representative for more information on these products.

Start/stop: opening of this contact will shut down the unit

Dual set point: closing of this contact activates a second set point (example: unoccupied mode) Water pump 1 and 2 control (contacts supplied with the hydronic module option)*: these outputs control the contactors of one or two water heat exchanger water pumps

Alarm indication: this volt-free contact indicates the presence of a major fault that has led to the shut-down of one or two refrigerant circuits

Demand limit 1 and 2: closing of these contacts limits the maximum unit capacity to three predefined values

User safety: this contact can be used for any customer safety loop, closing of the contact generates a specific alarm

Out of service: this signal indicates that the unit is completely out of service

Remote interface (accessory)

This interface allows access to the same menus as the unit interface and can be installed up to 300 m away. This accessory includes a box that can be mounted inside the building. The power supply is provided via a 220 V/24 V transformer supplied.

Price Fluctuations

Whilst our quotation is fixed for manufacturing costs for the validity of our offer, our quoted prices are based upon the current exchange rate between the pound Sterling and the Euro at the close of trading on the date of the quote and could fluctuate with the rate of exchange. Our prices do not allow for the influence, if any, of factors such as import surcharge or value added tax. We reserve, therefore, the right to adjust the quoted prices to allow for such unavoidable price increases affecting the production, sale and/or shipment of these goods.

Programme

Actual delivery periods will be confirmed in our acknowledgement of your official order. However, for your guidance, based on current production schedules, stock position and order backlog, we estimate that delivery of your equipment will be as follows:



Air Cooled Scroll Chillers: 6-7 Weeks

Please note that additional time will be required to carry out any factory testing. The time taken will vary depending upon the number of chillers tested and the extent of the testing required. Where prices are quoted as including delivery to site, we reserve the right to charge for part deliveries and for special deliveries outside normal working hours.

Unless specifically referred to in the above quotation, we exclude the following:-

- a) deliveries before 08:30 or after 17:30 Monday to Friday or anytime at the weekend
- b) timed deliveries
- c) offloading or positioning
- d) specific vehicle type (e.g. Flatbed or Hyab)
- e) storage or indirect delivery

Warranty / Maintenance

As shown in Clause 11 of our terms and conditions of sale, please note that the warranty period ends 12 months after commissioning or 18 months after despatch from the factory. By commissioning we mean initial start-up of the equipment; this is not necessarily the same as handover or completion.

Our warranty is valid only if the equipment is maintained according to our recommendations. If during the warranty period the above equipment is maintained by us we will replace or repair, free of charge, every Carrier part which proves to be defective in material and workmanship under normal use and service.

Validity Period

Our offer is open to acceptance for a period of 30 days, after which it is subject to revision.

Terms of Payment

Unless expressly agreed otherwise in writing, settlement in full of our invoices is required within 30 days of the dates of invoices, in accordance with Clause 6 of our Terms and Conditions of Sale. Please note that our quoted prices do not include for any retention's whatsoever. Should you wish us to waive our terms of payment in special circumstances, by mutual written agreement, we reserve the right to adjust our quoted prices accordingly.

Exclusions

- 1. Any offloading and/or positioning of equipment on site.
- 2. Any provision of lifting tackle required for site offloading.
- 3. Any scaffolding.
- 4. Any builder's work or allied tradesman's work.
- 5. Any preparation of foundations, sub-bases or making good.
- 6. Any plumbing work, condensate water or drain connections; chilled water pipe work, condenser water pipe work, supply or return air ductwork, pumps or insulation thereon.
- 7. Any electrical wiring or isolating switchgear not included as part of the unit.
- 8. Any system sensors for recording chilled and condenser water temperatures.
- 9. Any commissioning of equipment unless otherwise stated above.
- 10. Any item not specifically mentioned in our quotation and/or specification.
- 11. Any deviation from equipment performance data when accessories are used with **Carrier** equipment but without our prior consultation.
- 12. Any liability for the construction and performance of equipment/parts stipulated by contractor/client but not designed by a company within the **Carrier** Organisation.

Comment on the Specification

1. Eurovent Testing

Carrier chillers are tested to EN12055, EN255, ISO3744, Eurovent 8/1, ISO9614-1. These standards detail the tolerances at full-load conditions. Below is a summary of these tolerances:-

Cooling or heating capacity :	5	%
Effective power input :	5	%
Water pressure drop :	15	%
Overall sound power level :	3	dB(A)

All factory tests are conducted according to these conditions. However when ambient temperatures are less than 10 degC, the ability to carry out accurate acoustic tests becomes an issue. Under these circumstance the tolerance for acoustic measurement will increase to 5dB(A).

2. Minimum System Water Content

Please refer to the Carrier product specific literature for the requirements of minimum system water content, failure to ensure there is sufficient water content within the system will result in operational problems and possible damage to the chiller.

3. The inclusion of some optional accessories can affect the standard performance data and / or unit weight / dimensions. Should you wish to incorporate any of the above extras or other available accessories, please contact the writer to establish if there would be any change in the capabilities of the equipment quoted.

Technical Data

Individual sheets giving a full description of the equipment offered along with the detailed technical data are attached and form part of this quotation.

Commissioning

Please note that the quoted prices include for commissioning of the equipment offered. If for any reason we are unable to run the machine at full capacity it may be necessary for us to attend site again, at cost, to carry out a full run test.

Terms and Conditions of Sale

The Toshiba Carrier Terms and Conditions of Sale detailed overleaf forms the basis of this quotation.

Acceptance of our quotation shall be construed as acceptance of our terms and conditions of sale unless we expressly agree otherwise in writing.

Validity Period

Our offer is open to acceptance for a period of 30 days, after which it may be subject to revision. Please do not hesitate to contact us if you have any queries or require additional information.

This proposal should not be disclosed outside Customer's organisation and shall not be duplicated, used or disclosed -in whole or in part - for any purpose other than to evaluate this offer and for determining the terms of any resulting contract.



TOSHIBA CARRIER UK LTD

TERMS AND CONDITIONS OF SALE

THIS AGREEMENT sets forth the terms and conditions under which Toshiba Carrier UK Limited ("TCUK") and Customer agree that Customer shall have the right to purchase and use Goods supplied by TCUK as may be specifically described in one or more separate Quotations or Tenders. This Agreement and any schedule or amendment hereto is subject to final review and signed acceptance by TCUK. This Agreement shall include the Terms and Conditions of Sale set forth below.

1. DEFINITIONS

In these Terms of Sale the following meanings shall apply:

"TCUK" means Toshiba Carrier UK Limited and its internal divisions and Trading Names or Business Names and shall include Carrier Air Conditioning, Carrier Service and Toshiba Air Conditioning. "Customer" means the person named above and includes their employees or agents seeking to

purchase Goods and/or Services from TCUK under the terms of this Agreement. "Goods" means the goods described in the Quotation or other Schedule which TCUK have agreed in writing to supply to Customer.

"Quotation" means the written quotation, proposal or tender signed by an authorized employee of TCUK and shall detail the Goods and/or Services to be provided for the Contractual Sum stipulated. All such Quotations are invitations to treat and shall be confirmed by Orders from Customer within 30 days of the Quotation date. In the event that there is no confirmation by way of an order, the Quotation shall be considered to have expired after 30 days.

"Contractual Sum" means the price quoted by TCUK within the Quotation or such other sum as may have been confirmed in writing by an authorised signatory for TCUK

"Order" means the Customer's purchase order or other document sent by Customer confirming that Customer wishes to order the goods and/or services detailed within the Quotation. Customer understands and agrees that the terms and conditions detailed on any Customer's Order shall be

invalid unless expressly accepted and agreed in writing and counter-signed by an authorised signatory of TCUK.

"Services" means the work described in the Quotations or Tenders or other Schedule which TCUK have agreed in writing to supply to Customer which shall be subject to the TCUK Terms and Conditions of Service.

"authorised signatory for TCUK" means a manager employed by TCUK who has authority to bind TCUK.

"Agreement " means these terms and conditions of this document and shall include any special terms including quotations, specifications and drawings agreed in writing and signed by the authorised signatory for TCUK.

"Consumer" means a person acting for purposes outside their trade, business or profession or as may otherwise be defined by the Unfair Contract Terms Act 1977 and/or the Unfair Terms in Consumer Contracts Regulations 1999, and shall not include any reseller of the Goods and Services. "Normal Working Hours" means 8.30 am to 5.30 pm Monday to Friday excluding weekends, public,

"Normal Working Hours" means 8.30 am to 5.30 pm Monday to Friday excluding weekends, public bank and statutory holidays for the United Kingdom

"Commissioning" shall mean that once the product has been installed, TCUK shall attend the site to start up the product and provide the services defined in section 8

"**insolvent**" means Customer becoming unable to pay Customer debts within the meanings of Section 123 (Company) or Section 268 (Individual) of the Insolvency Act 1986. Customer ceasing to pay their debts in the ordinary course of business or being unable to pay their debts as they become due or Customer ceasing or threatening to cease to carry on their business.

"Associated Company" means Customer subsidiary or holding company as defined in Section 736 and Section 736A of the Companies Act 1985 or a subsidiary of such holding company, or any company over which Customer's directors or shareholders have control as defined in Section 840 of the Income and Corporation Taxes Act 1988.

"SOGA" means the Sale of Goods Act 1979.

2. THE CONTRACT

2.1 All orders for Goods are accepted by TCUK only under these Terms and Conditions of Sale and any orders for Services are accepted by TCUK only under the TCUK Terms and Conditions of Service. The Terms and Conditions of Sale and the Terms and Conditions of Service may not be altered except with the written and signed agreement of an authorised signatory for TCUK. Any contrary or additional terms unless so agreed in writing and counter-signed are excluded.

2.2 Quotations must be accepted in writing and is valid for a period of 30 days after which it may be withdrawn at the sole option of TCUK. 7.1

2.3 Any typographical, clerical or other error or omission in any sales literature, quotation, tender, price list, acceptance of offer, invoice or other document or information issued by TCUK shall be subject to correction without liability on TCUK's part.

2.4 TCUK shall not be liable for any representation made by TCUK employees or agents to Customer as to the condition of the Goods, their fitness for any purpose or as to quantity measurements, drawings or specification unless such representation is made or confirmed in writing by an authorised signatory for TCUK.

2.5 TCUK brochures and other literature are for Customer guidance only and shall not constitute representations by TCUK. If Customer requires advice in relation to the Goods a specific request for advice should be made and any advice given in writing and signed by an authorised signatory for TCUK in response to such a request shall amount to a representation and TCUK shall be liable accordingly. 2.6 TCUK may make changes to the specification of the Goods necessary to conform to any

applicable statutory or EC requirements or to improve the design. TCUK reserves the right to alter the specifications of any Goods ordered by Customer where the specifications do not materially affect the quality or performance of the Goods ordered by Customer.

2.7 Once an Order has been placed it may not be cancelled by Customer unless TCUK agrees in writing to such cancellation and Customer agrees to any cancellation charges and/or any other conditions required by TCUK.

Customer understands and agrees that once Goods are delivered, the price of any Goods (used or unused) shall not be refundable nor will the Goods be accepted for return to TCUK.
 PRICE

3.1 The price of the Goods shall be as stated on the Quotation and is exclusive of VAT. Any discounts deductions or rebates may only apply if agreed in writing and provided that the price is fully paid by the due date.

3.2 Prices stated or quoted are applicable to the quantity specification, site details, delivery dates and information provided by Customer. If the order placed is varied or delay is caused by Customer instructions or lack of Customer instructions TCUK reserves the right to adjust the price.

4.1 The price shall be invoiced on or before delivery of Goods or upon provision of a discrete portion of the agreed goods and/or services or as defined more specifically on the Quotation. Unless TCUK have specifically agreed otherwise in writing all invoices are due and payable without deduction, retention, set-off or claim within 30 days of date of invoice.

4.2 Interest at an annual rate not exceeding 8% per cent above the Bank of I Carrier shall be assessed on late payments

4.3 Credit may be granted at TCUK's sole discretion and may be reviewed at any time. TCUK reserves the right to withdraw a Quotation or to refuse to execute any order or contract if the arrangements for payment or Customer credit rating is not satisfactory to TCUK.

4.4 Customer may not withhold payment of any invoice or other amount due to TCUK by reason of any right of set off or counterclaim which Customer may have or allege to have for any reason.
 5. DELIVERY

5.1 Delivery shall occur when the Goods arrive at the delivery address within the United Kingdom provided by the Customer and if no address is provided, Delivery shall be deemed to have occurred at the end of the second working day after delivery or collection is offered whether verbally or in writing to Customer.

5.2 If Customer specifies that Delivery shall be made to a site not belonging to or not occupied by Customer, then delivery to Customer shall be deemed to have taken place upon delivery by TCUK to the site stated on the Quotation or detailed on the Order or on any other verbal or written communication sent by Customer.

5.3 If Customer fails to take delivery or make arrangements to accept delivery or collect the Goods or if TCUK are unable to deliver because of inadequate access or instructions or inadequate site surface conditions or inadequate unloading conditions. Delivery shall be deemed to have taken place in accordance with the provisions of Section 5.1 above and TCUK shall charge a minimum rate of £50 for each day of delayed delivery. This charge could be increased to cover additional charges for failed delivery and/or storage charges at Customer's risk and cost and/or any insurance charges In addition to the charges levied as detailed above, TCUK shall be entitled to the rights and remedies detailed below:

invoice Customer for the Goods from the initial agreed delivery date and/or

terminate this contract without liability on TCUK's part and/or

recover from Customer all costs and losses incurred by TCUK

5.4 Delivery dates are given in good faith but are estimates only. Time for delivery shall not be of the essence in this Agreement. Customer shall make suitable arrangements for delivery to be acknowledged in writing at the site.

5.5 Time estimates will be revised on receipt of the Customer order and any time estimate will not run until TCUK are in receipt of all information required from Customer or in relation to Customer's order including Customer written approvals as requested by TCUK or any receipt of any credit checks made in relation to Customer.

5.6 TCUK shall not be liable for any damages whatsoever whether direct or indirect (including for the avoidance of doubt any liability to any third party) resulting from any delay by TCUK or its agents in delivery of the Goods or failure to deliver the Goods within a reasonable time whether such delay or failure is caused by TCUK's negligence or otherwise.

5.7 TCUK reserves the right to make delivery by instalments and upon such delivery TCUK shall invoice Customer separately for the quantity of Goods actually delivered. Any claim which Customer may have in respect of any individual instalment shall not affect Customer's liability in respect of any other instalment(s).

5.8 Customer shall indemnify TCUK in respect of all losses damages costs and expenses incurred as a result of delivery in accordance with Customer instructions. This indemnity will be reduced in proportion to the extent that such losses damages costs or expenses are due to TCUK's negligence.
6. INSPECTION

6.1 Customer shall inspect the Goods at the place and time of unloading but nothing in these Terms shall require Customer to break packaging and/or unpack Goods which are intended to be stored before use.

6.2 Customer shall notify TCUK of any loss damage or short delivery by telephone immediately upon receipt of the delivery and shall endorse details on the delivery note. Thereafter Customer shall, within 3 working days of delivery confirm the loss damage or short delivery in writing to TCUK. In the event that Customer fails to follow the procedure above, Customer shall be deemed to have received full delivery of undamaged Goods and shall be deemed to have waived any right to reject the Goods.
6.3 TCUK shall only be liable for any breach of any terms agreed in writing and Customer's remedies shall be subject to Clause 9.

7. TITLE AND RISK

Risk in the Goods shall pass to Customer upon delivery by TCUK to the site address within the United Kingdom specified by Customer.

7.2 The title to the Goods shall remain with TCUK until TCUK has received in full (in cash or cleared funds) (i) the full price of the Goods and/or Services and (ii) all other sums which are or which become due to TCUK from the Customer on any account. TCUK reserves the right to hold a lien in respect of the goods in relation to any other payments due to TCUK by Customer whether in respect of the specific Order against which the Goods and/or Services were delivered or any other Order made by Customer subject to the terms below. Until title passes to Customer:-

7.2.1 Customer shall hold the Goods as TCUK's fiduciary agent and bailee;

7.2.2 the Goods shall be stored, at no extra cost to TCUK, separately from any other goods of the Customer or any third party, in such a way that they remain readily identifiable as TCUK's property and Customer shall not interfere with any identification marks labels batch numbers or serial numbers on the Goods:

7.2.3 TCUK may agree that Customer may use or agree to sell the Goods as principal and not as TCUK agents in the ordinary course of Customer's business. If such agreement is made this shall be in writing and shall be subject to one or more of the following express conditions:

• Customer shall pay TCUK the full Contractual Sum prior to Customer delivering or passing any title to the goods to any prospective purchaser; and/or

 that Customer shall notify their purchaser that TCUK remains the legal owner of the Goods until TCUK receives full payment of the Contractual Sum and TCUK reserve the right to label the Goods accordingly; and/or

• that Customer will at TCUK's request and at Customer's expense assign to TCUK all rights Customer may have against their purchaser;

7.2.4 if Goods are to become affixed to any land or building Customer must ensure that they are capable of removal without material injury to the land or building or damage to the Goods and Customer shall take all necessary steps to prevent title to the Goods from passing to the owner or landlord of such land or building until payment in full shall be made to TCUK; and

7.2.5 the Goods shall be maintained in satisfactory condition and be insured on TCUK's behalf (and at the Customer's cost) for their full price against all risks to the reasonable satisfaction of TCUK and, on request, the Customer shall produce the policy of insurance to TCUK.

7.3 The Customer's right to possession of the Goods shall terminate immediately if:

7.3.1 the Customer has a bankruptcy order made against him or makes an arrangement or composition with his creditors, or otherwise takes the benefit of any statutory provision for the time

being in force for the relief of insolvent debtors, or (being a body corporate) convenes a meeting of creditors (whether formal or informal), or enters into liquidation (whether voluntary or compulsory) except a solvent voluntary liquidation for the purpose only of reconstruction or amalgamation, or has a receiver and/or manager, administrator or administrative receiver appointed of its undertaking or any part thereof, or documents are filed with the court for the appointment of an administrator of the Customer or notice of intention to appoint an administrator is given by the Customer or its directors or by a qualifying floating charge holder (as defined in paragraph 14 of Schedule B1 to the Insolvency Act 1986), or a resolution is passed or a petition presented to any court for the customer, or any proceedings are commenced relating to the insolvency or possible insolvency of the Customer; or

7.3.2 the Customer suffers or allows any execution, whether legal or equitable, to be levied on his/its property or obtained against him/it, or fails to observe or perform any of his/its obligations under the Agreement or any other contract between TCUK and the Buyer, or is Insolvent or the Buyer ceases to trade; or

7.3.3 the Customer encumbers or in any way charges any of the Goods.

7.4 TCUK shall be entitled at any time to recover any or all of the Goods to which TCUK have title and for that purpose TCUK employees or agents may with such transport as is necessary enter upon any premises occupied by Customer or to which Customer has access and where the Goods may be or are believed to be situated.

7.5 TCUK shall be entitled to recover payment for the Goods notwithstanding that title to any of the Goods has not passed from TCUK.

7.6 Where TCUK is unable to determine whether any Goods are the goods in respect of which the Customer's right to possession has terminated, the Customer shall be deemed to have sold all goods of the kind sold by TCUK to the Customer in the order in which they were invoiced to the Customer.
7.7 On termination of the Agreement, howsoever caused, TCUK's (but not the Customer's) rights

contained in this Clause 7 shall remain in effect.

8. COMMISSIONING

8.1 Any agreement by TCUK to commission the Goods is a separate contract item from the sale of the goods and commission is subject to these Terms and to the Terms of TCUK's Terms and Conditions of Service.

8.2 Any agreement by TCUK to retrofit, service or maintain the Goods supplied by TCUK is a separate contract from the sale of the goods and commissioning and is subject to TCUK's Terms and Conditions of Service copies of which are available to Customer upon request.

8.3 TCUK obligations on commissioning only includes physical inspection of the product, inspection of external services or connections, supervision of start-up and testing in accordance with the manufacturer's requirements.

8.4 TCUK agreement to commission the Goods is subject to Customer ensuring that:
 (a) suitable buildings, foundations, scaffolding and lifting tackle are provided to enable commissioning to take place

(b) the site, the Goods and other services including sufficient labour and equipment are ready at the agreed time for commissioning and all preparatory work is completed including masonary brickwork, carpentry, plumbing and wiring and the supply of any other materials necessary not supplied by TCUK.

(c) continuous and suitable access to the site is available at all times necessary to complete commissioning

(d) the programme of works allows for commissioning to be completed within Normal Working Hours.

(e) TCUK commissioning will not be delayed or interrupted.

(f) the Goods are correctly fitted to the required utilities including water and electricity

(g) suitable lighting heating and power supplies are provided

(h) a safe and appropriate working environment is provided in accordance with the British Standard Code of Practice for safe working in occupied and unoccupied parts of the site for TCUK employees and agents.

(i) the Goods are subject to a suitable and sustainable duty load of greater than 40 per cent design duty.

(j) Customer fills the pre-commissioning checklist at least 15 working days prior to TCUK attending the site for commissioning

8.5 If any of the above conditions is not met TCUK shall be entitled (without prejudice to any other right or remedy TCUK may have) to:

(a) suspend TCUK obligations to commission the Goods without liability on TCUK's part and if the conditions are not met within 6 months cancel TCUK's obligation to commission the Goods and recover from Customer all losses and costs incurred including any claims by any Third Party or

(b) charge Customer for additional costs incurred in completing the commissioning including but not limited to travel costs, storage and re-delivery charges and additional and/or overtime rates for labour.

8.6 Customer shall not be entitled to raise any issue with regard to delay in commissioning unless they have satisfied the criteria set out in section 8.4 above.

9. WARRANTY AND LIMITATION OF LIABILITY

9.1 TCUK warrants that the Goods detailed under the Quotation shall comply with TCUK's Warranty Policy. Full details of TCUK's Warranty Policy are available to Customer upon request. TCUK makes no other warranties, conditions or representations, written, oral, express or implied, in fact or in law, including without limitation any implied warranties, conditions or representations of design, satisfactory quality, fitness for any specific or general purpose, title or non-infringement, all of which are, to the extent permissable by law, hereby expressly excluded and disclaimed.

9.2 Customer shall notify TCUK in writing of any defect or damage or loss within three (3) working days after delivery of Goods or of non-conformance of any services or within three (3) working days of performance of such Services. Provided that TCUK has received notice of such defect or non-conformance as required above, and provided that TCUK accepts that such damage or loss is due solely to a breach by TCUK, TCUK may, at its sole discretion provide to Customer one of the following remedies, namely:- (a) repair the goods at TCUK's sole expense; or (b) supply replacement Goods or re-commission the Goods at no additional charge to Customer (and if so any Goods or components so replaced shall be returned to TCUK and become TCUK property); or (c) refund a discrete portion of any monies paid relating to those Goods (or parts of such Goods) that are non-conforming or defective or in the case of commissioning or services to re-perform or correct any non-conforming Services to the extent due solely to errors on the part of TCUK,

9.3 TCUK's total liability to Customer (whether such liability arises from breach of warranty , breach of contract, liability in tort including negligence or otherwise) shall be as detailed above and in no event shall any remedy or damages exceed the amount of the Contractual Sum payable by Customer for the discrete portion of the Goods and/or the Services that are non-conforming or defective.

9.4 TCUK shall not, in any event, be liable for any consequential or special damages or loss of profit or for any other indirect damages or losses such as but not limited to exemplary or punitive damages, even if TCUK has been advised of the possibility of such damages.

9.5 Nothing in these Terms and Conditions shall exclude or restrict TCUK's liability for death or personal injury resulting from TCUK's negligence or to limit TCUK's liability for fraudulent misrepresentation.

9.6 Save where the Customer is a Consumer, the provisions of sections 13, 14 and 15 of SOGA shall not apply to this Agreement and any terms and/or conditions otherwise implied by those sections shall not be incorporated in this Agreement. For the avoidance of doubt, the statutory rights of any Consumer under SOGA shall not be affected by this Clause.

9.7 The limitations, exclusions and disclaimers set forth in this section 9 will not apply only if and to the extent that a court of competent jurisdiction requires liability under applicable law beyond and despite these limitations, exclusions and disclaimers.

9.8 Any proposal or other documentation including any drawing, design, measurement or specification provided by way of tender shall not be binding unless such terms are specifically incorporated within a written and contract executed by an authorised signatory for TCUK. TCUK shall not be under any liability for damages whatsoever except in the proportion and to the extent that such damages have resulted solely from TCUK's breach of contract or negligence.

9.9 TCUK will not be liable under Clause 9.8 if any material information has been withheld concealed or misrepresented by Customer.

9.10 Customer will unconditionally fully and effectively indemnify TCUK against all losses, damages, penalties and costs on an indemnity basis and expenses awarded against or incurred by TCUK in connection with or paid or agreed to be paid by TCUK in settlement of any claim by any third party arising from the supply or use of the Goods which has been sold or assigned by Customer to any such third party. This indemnity will be reduced in proportion to the extent that such losses, damages, penalties, costs and expenses are due solely to TCUK's negligence.

9.11 Without prejudice to any other provisions of these Terms in any event TCUK's total liability for any one claim or for the total of all claims arising from any one act of default on TCUK's part (whether arising from TCUK's negligence or otherwise) shall not exceed the limit of liability laid down by TCUK insurers in respect of such claim.

9.12 SAFETY INFORMATION ABOUT THE USE OF THE GOODS IS PROVIDED AND IT IS CUSTOMER'S RESPONSIBILITY TO ENSURE COMPLIANCE WITH SUCH INFORMATION AND/OR ANY STATUTORY REGULATIONS AND INDUSTRY GOOD PRACTICE. CUSTOMER SHOULD ALSO ENSURE THAT THE SAFETY INFORMATION IS BROUGHT TO THE ATTENTION OF THE USER OF THE GOODS. TCUK SHALL NOT BE RESPONSIBLE FOR ANY BREACH BY CUSTOMER OR THE USER OF SUCH SAFETY INFORMATION OR REGULATIONS.

10. DEFAULT & TERMINATION

10.1 If Customer fails to pay any invoice or any Contractual Sum due to TCUK under any contract on the due date or Customer's credit limit is exceeded or Customer or their Associated Company becomes Insolvent or there is a material change in Customer or their Associated Company's constitution or either Customer or their Associated Company commits a material breach of this contract and fail to remedy that breach after being requested to do so, all sums outstanding between Customer and TCUK under this and any other contract shall become immediately due and payable and TCUK shall be entitled to do any one or more of the following remedies (without prejudice to any other legal right or remedy that TCUK may have):-

(a) require payment in cleared funds in advance of further deliveries of Goods

(b) charge interest on the monies outstanding at the rate of 8 per cent above the Bank of England Official Dealing Rate in force from time to time calculable from the due date until date of actual payment in cleared funds.

(c) suspend or cancel any further deliveries of Goods to Customer under any contract without liability on TCUK's part

 (d) suspend or cancel any obligation to commission Goods whether under this or any other contract

(e) without prejudice to the generality of any of these Terms exercise any TCUK rights pursuant to the Agreement; and/or

(f) terminate this or any other contract with Customer or any Associated Company without liability on TCUK's part.

10.2 Customer shall reimburse TCUK costs (including legal costs) on an indemnity basis which TCUK incur in enforcing TCUK's rights under this contract including but not limited to recovery of any sums due.

11. GENERAL

11.1 This Agreement, the written TCUK Quotations or TCUK Tenders and any Schedules or Addenda which are signed by an authorised signatory for TCUK constitute the entire agreement between TCUK and Customer and supersede all other agreements, proposals, purchase orders, or representations, whether written or oral, relating to the subject matter hereof. The terms and conditions of any Order or other instrument issued by Customer in connection with this Agreement that are in addition to or inconsistent with the terms and conditions of this Agreement are null and void and shall not be binding on TCUK. Neither party shall have any remedy in respect of any untrue statement made to it in entering into this Agreement unless such untrue statement was made in writing and signed by an authorised signatory of the party against whom the statement is asserted. The only remedies shall be for breach of contract as provided in this Agreement. No alterations or modifications of this

Agreement will be valid unless made in writing and signed by both parties. 11.2 This contract shall be governed and interpreted according to the Law of England and Wales and

LL2 This contract shall be governed and interpreted according to the Law of england and wales and Customer agrees to submit to the exclusive jurisdiction of the English Courts. LL3 Any reference in these Terms to any Statute or Statutory Provision includes a reference to that

11.3 Any reference in these terms to any statute or statutory provision includes a reference to that Statute or Statutory Provision as from time to time amended extended or re-enacted.

11.4 The headings in these Terms are for convenience only and shall not affect their interpretation. 11.5 Except as provided otherwise in these Terms TCUK shall not be deemed to be in breach of contract nor liable for any delays or failures to perform any of TCUK's obligations under this contract due to any cause beyond TCUK's reasonable control including but not limited to industrial action, import or export regulations or embargoes, difficulties in obtaining materials, parts, components, labour or fuel, power failure or breakdown in machinery. If TCUK are relieved under this Clause of TCUK's obligations under the contract for a continuous period in excess of 3 months, either Customer or TCUK may terminate this contract by providing the other party with not less than 10 working days prior written notice. Upon such termination Customer shall pay to TCUK, taking account of any prepayments made by Customer, a fair proportion of the Contractual Sum allocated to the supply of goods and/or services performed up to the date of expiry of the notice as well as any and all costs and expenses TCUK may have incurred directly or indirectly relating to the contract.

11.6 Customer acknowledge that the Goods are or may be subject to export or import control restrictions under English or foreign laws. Customer will not do or omit to do anything that would place TCUK or any subsidiary, holding or associated company of TCUK in breach of the said laws.

Customer shall obtain all necessary licences authorisations and consents for the export or import of the Goods.

11.7 In the event that Customer wishes the Goods to be shipped to a country outside the United Kingdom, Customer shall undertake all shipment costs and arrangements and shall undertake to meet any export and/or import certification or other requirements.

11.8 The waiver by TCUK of any breach or default of these Terms shall not be construed as a continued waiver of that breach nor as a waiver of any subsequent breach of the same or any other provision.

11.9 If any clause or sub-clause of these Terms is held by a competent authority to be invalid or unenforceable the validity of the other clauses and sub-clauses of these Terms shall not be affected and they shall remain in full force and effect.

11.10 This contract is personal to Customer and it may not be assigned.

11.11 Termination of this contract shall not affect rights and obligations which have already accrued at the time of termination.

ACCEPTED AND AGREED BY CUSTOMER:

Customer Name:

Signature By: _____

Print name:

Title: _____