

Ref: Tomintoul Croft 050814

Adylinn
Newton Street
Blairgowrie
Perthshire
PH10 6HT

5th October 2014

Dear Mr Innes

Ground Source Heat Pump quote (valid for 30 days)

Please find below your quote for supply and installation of a Nibe Fighter 1145-10 single phase heat pump.

This is a highly efficient system that uses a relatively small amount of electricity to extract solar energy stored underground and turn it into a higher temperature for use inside your house. The heat pump has sophisticated controls including a weather compensation system that aligns the heating output with external weather conditions. This ensures a stable temperature in your property while optimising heating efficiency.

The heat pump output has been based on the design requirements of MCS MIS3005 3.1a. This includes a room-by-room heat loss calculation in compliance with BS EN 12831 -see *attached*. From this the Heat Emitter Guidance and Seasonal Performance Figure (SPF) is calculated -see *Section 1*, below.

Section 2 provides key compatibility if design data to match the heat pump to your distribution system. A schematic of the specified system design is attached.

For details of the Ground Heat Exchanger design please attached for collector loop sizing and layout. In order to keep costs to a minimum and avoid handling fees, ground works are excluded from our quote, though we will of course liaise with contractors to ensure the works are correctly specified. For boreholes we will arrange for a contractor to provide a quote.

A summary of the overall system performance is also attached.

If you like more information on the heat pump please visit the Nibe website (www.nibe.co.uk) or request a brochure from me.

Thank you very much for your interest. If you have any further questions please do not hesitate in contacting us, otherwise, please read through and check the quote details, and then advise me as to how you wish to proceed.

Yours sincerely,

Jamie Adams
Sales Director

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E: sales@glendevonenergy.co.uk

glendevonenergy.co.uk

Head Office
Glendevon Energy Company Ltd,
Tullibole Mill Farm,
Kinross KY13 0UL

North East Office
Glendevon Energy Company Ltd,
Studio Four, 4 John Street,
Montrose DD10 8LY



Heat Pump Costs (Valid for 30 days)

Product MCS Code: MCS HP0003/42
Company MCS Code: NAP 21313

Boiler	
Nibe Fighter 1245-10 heat pump <ul style="list-style-type: none"> • Controls for 1 x DHW and 1 x Heating circuit • UKV 200L Buffer • Brine filling unit • RG10 room sensor • Ground collector 40mm x 400m • 40mm straight fusion fittings x 2 • Bio-degradable antifreeze 6 x 25L • Delivery* <p style="text-align: right;"><i>Sub Total</i></p>	£10,196.27
Installation	
Sundry Pipes, Fixings, Insulation, Inhibitor, Cable and Ducts	£545.00
2 x 12m heat main and potable hot water connections (tbc)	£954.52
Labour	
<ul style="list-style-type: none"> • Installation of heat pump, buffer and connection to heating distribution tails • Ground pipe, flushing, filling and pressure testing but excluding trench preparation, installation and backfilling 	£2,500.00
Commissioning	
Commissioning by Nibe authorised engineer – One visit including wiring in cables, testing and commissioning Hand over and user instruction Project administration including MCS registration and on-going user support	£370.00
<i>Sub Total Ex-VAT</i>	£14,565.79
Total including VAT @ 0%	£14,565.79

Please note VAT has been charged at listed building rate of 0%.

Delivery will be to main road end/suitable site for artic. Delivery to site location ie up farm track by others.

Works by others

Please note the following works have been excluded from the costs:

- Trench digging, pipe installation, and back filling
- Building works
- Switched fused spur installation/electrical sign off
- Heat pump positioned in utility room

Permissions and Approvals

Where required, planning and/or building control approval shall be obtained before work is commenced. Some elements of your installation may be covered by standard permitted development rules and others may require specific approval, depending on this particular installation.

The following permissions and approvals must be sought prior to the installation of your heating system:

- Planning application for listed building consent.

1. Heat Emitter Guidance

The heat pump output has been based on a room-by-room heat loss calculation, as per the requirements of MCS MIS 3005 3.1a. and in compliance with BS EN 12831 and to an external design temperature of -10°C.

Room	W/m ²	Current Heat Emitter	Heating Circuit Flow Temp (DegC)	Current Star Rating	Best Achievable Star Rating ie UFH*	Max UFH spacing CC (mm)	Floor covering	Final Star Rating
Kitchen	138	UFH	55	0	6	150	Tile	0
Living RM 1	93	UFH	55	0	6	150	Tile	4
Hall	60	UFH	55	0	6	150	Wood	3
WC-Bath	97	UFH	55	0	6	150	Wood	2
Bed 1 - Downstairs	85	UFH	55	0	6	150	Wood	2
Utility	145	UFH	55	0	6	150	Tile	0

Design emitter temperature based on worst performing room	55	deg C
Current Star Rating	0	
Maximum achievable Star Rating	6	
SPF	2.5	

Before you confirm your order our Representative must have:

- a) Shown you the relevant extract of the Heat Emitter Guide;
- b) Explained the Heat Emitter Guide, including how it is possible to achieve a higher system SPF (Seasonal Performance Factor);
- c) Explain how the design emitter temperature will be achieved using the type of emitter selected.

Your hot water heating will be via a heat pump compatible hot water cylinder. The heat exchanger required for a heat pump is different from that of a standard boiler (it must be larger), as is the storage volume. For these reasons we have selected a mains pressurised (unvented) integral hot water cylinder build into the heat pump unit.

2. Compatibility of Distribution Design - to be confirmed prior to installation

Project Reference	Tomintoul Croft				
Heat Pump Manufacturer	Nibe				
Heat Pump Model	Fighter 1245 -10				
Max Design Output	kW	9.81			
Circle Yes/No as Appropriate or Write N/A + No or N/A Reason eg 'By Others' or 'Not Installed'					
Distribution Systems Installed by Contractor					
UFH			Yes		
Rads				No	
DHW			Yes		
Compatibility with distribution					
Heat Pump Max Flow Rate to total Space Heating	L/s	0.22	Yes		
Heat Pump Max Flow Rate to DHW heating	L/s	0.22	Yes		
Heat Pump System Pump specification (buffer Loading)	-	low energy	Yes		integral
Heat Pump Distribution Pump specification (post buffer)	-		Yes		
Maximum Flow Temperature -Space Heating	°C	55	Yes		
Variable Flow temperature (weather compensated)	-	-	Yes		
Maximum Flow Temperature -DHW	°C	60	Yes		
Legionella Protection	-		Yes		Heat Pump controlled pasteurisation via cylinder immersion. Min. 60°Cx 30 mins/ week.
DHW Cylinder Manufacturer					
Model	Integral to heat pump				
Heat Pump Compatible, including Heat Exchanger.	-		Yes		
Coil/HE Rating	m ²	N/A	Yes		
	Bar	N/A	Yes		
DHW Cylinder Volume	L	180	Yes	No	
DHW volume equivalent of direct flow system	L	N/A			N/A
Max Flow Rate at 55°C/duration	L/s / Mins	tbc	Yes		As per cold supply pressure
Distribution pipe work suitable	mm	22	Yes		
DHW -Pumped/2ndry Return				No	Not include in heat pump design specification

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Order Form

Quote Reference: Tomintoul Croft 050814

On behalf of the organisation/person named below I accept the accompanying terms and conditions **REF HP180913** of my quote and agree to make the following payments for the options selected.

- Deposit** - On placing the order - 25% of total [£3,641.45] including VAT
- Advance Payment** - Due on delivery - 55% of total [£8,011.19] including VAT
- Final Balance** - On Commissioning of the system - 20% of total [£2,913.16] including VAT
- I agree an appropriate individual will be present on the day the system is commissioned to receive a handover and user instruction.
- I have received and understood the relevant details of the Heat Emitter Guidance as per Section 1 of my quote.

For Domestic Customers with an order value under £30,000

I agree to having my details registered for the REAL *Deposit and Advance Payment Insurance Scheme* (see information sheet), at no extra cost.

Payment Method

- Cheque made payable to Glendevon Energy Company Ltd
- Electronic transfer:
Sort Code: 08-92-50 Account No: 68182834 Account Name: Glendevon Energy Company Ltd

My property is available from: ___ / ___ / ___	
Name:	Signature:
Organisation (if appropriate):	
Date:	
Full Address	Installation / delivery address & contacts (if different)
Adylinn Newton Street Blairgowrie Perthshire PH10 6HT	Tomintoul Croft Braemar
Daytime phone number (during installation hours):	
Home Phone:	
Mobile: 07909 978 643	
Email: calum.innes@ckdgalbraith.co.uk	jackie@edinburgh-vacation-apartments.co.uk

Cancellation Rights and Form

Under the Supply of Goods and Services Act 1982 (as amended) and related consumer protection legislation, you (the client and signatory) have certain rights to cancellation of your contract. Glendevon Energy are happy to stand by these terms in the unlikely event that you decide to cancel your order.

Cooling off period

You have 14 working days from signing the order form to cancel the contract without penalty. Glendevon Energy will not commence any works (including the ordering of parts) during this cooling-off period unless specifically requested to do so by you.

If you cancel the contract within the 14 days but having requested we commence works you may incur costs such as, but not limited to, paying for non-recoverable parts, installation and decommissioning labour, making good the property, delivery and collection charges, administration costs. We will make all reasonable attempts to keep these costs to a minimum.

These terms also apply if cancelling after the seven day cooling off period.

If you wish to cancel your contract please complete the details below **in full** and send to the address at the bottom of the page -marked **URGENT on the envelope**. Please also alert us **immediately** by telephone so we may cancel any deliveries and minimize any costs to you.

Please complete in CAPITALS and black ink

Order Reference: _____

Full Name: _____

Full Address: _____

Postcode _____

Telephone _____

Reason for cancellation: (if you require more space please use reverse of page)

Signed: _____

Date: _____