



sales@amarinth.com

18/07/2005 15:52

To: support@amarinth.com, amarithh@claridgeassociates.net

cc:

cc:

Subject: Amarithh Order - Order ref123 - Order acknowledged

Original message Sent to: username@customer.com & CC'd to .
Dear Customer (on behalf of SPI0002)

Thank you very much for your order received on 15 July 2005, which is currently being processed. IF YOU WISH TO CANCEL ANY PART OF THIS ORDER PLEASE CONTACT US IMMEDIATELY to avoid cancellation costs.

Your order status is currently:- Order acknowledged.

You will receive a further email the night we send out your order.

You can check your order details at any time by entering your order reference 'Order ref 123' in the 'Track order number' box at the top of our web page (www.amarithh.com). Alternatively, the following link will take you directly to the relevant web page;

<http://www.amarithh.com/tracking/index.php?orderID=Order%ref%123>

Here are the details of your order:

Customer name:	A good customer
Your order no:	Order ref 123
Our order reference:	AS00507036
Order Value:	£2,312.40 Gross
Delivery date (ex-works required):	12 August 2005
Delivery instructions:	Destination: UK Mainland (Excl Scotland & Ireland).
	Service: Next day.
	Product: Pump (1 off)

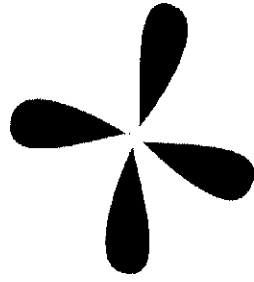
Should you have any difficulty with your user name, password, or ordering pages either call us on +44 (0)1394 462 120 or e-mail us on <mailto:enquiries@amarinth.com>

Once again, thank you very much for choosing Amarithh Ltd and we hope to serve you again in the future.

Best Regards

Internet Sales
Amarinth Ltd

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**INSTALLATION, OPERATING AND
MAINTENANCE INSTRUCTIONS**

C Series - End Suction Pumps

FOREWORD

This manual provides instructions for the Installation, Operation and Maintenance of Amarinth C Series Pumps and **must be read before installation and start-up.**

The manual covers several different pump models. For supplementary and specific details for your pump model, please also refer to the following documents supplied as part of the package:

- Pump Data Sheet
- General Arrangement Drawing
- EC Declaration of Conformity / Incorporation (as appropriate)
- Component instructions (motor, bearings, seals, etc...)

The design, materials and workmanship used in the construction of Amarinth pumps ensures they are capable of a long and trouble-free service. The life of these pumps is enhanced and extended by correct application, installation, periodic inspection and maintenance. It has been compiled to assist operators in understanding the construction as well as the correct method of installing, operating and maintaining these pumps.

Amarinth Ltd will not be liable for physical injury, damage or delays caused by failure to observe the instructions for installation, operation and maintenance contained in this manual.

The manual was issued by Amarinth for the purchaser's use only, and should not be reproduced to a third party without our written consent. Further copies of this manual can be obtained at a nominal cost from the address below. Further information regarding any aspect of the manual should be obtained from the Technical Department of Amarinth Ltd.

These parts can be obtained by contacting:-

Amarinth Ltd
Bentwaters Parks
Rendlesham
Woodbridge
Suffolk IP12 2TW
Fax: 01394 462130
Tel: 01394 462120

E Mail: sales@amarinth.com

Or sign on to our web site, www.amarinth.com

Using your own individual Log-On Name and Password provided by Amarinth Ltd.

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Amarinth Ltd provides a warranty of 18 months from date of delivery or 12 months from date of commissioning, whichever is soonest.

Warranty is only valid if genuine Amarinth parts are used.

NOTE!

The warranty is considered null and void if the pump is dismantled during the warranty period by anyone other than Amarinth personnel or their official agents, unless written approval has been given by Amarinth Ltd.

Also the use of the equipment on any other service other than which it was sold will nullify the warranty, unless written approval is obtained in advance from Amarinth Ltd.

Any bought-in proprietary items not of our manufacture are expressly excluded from our warranty. We will however, give warranty equivalent to the warranty (if any) which we may have received from the supplier of such parts.

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enquiries@amarinth.com
www.amarinth.com

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ec declaration of conformity

Your order no. S1683M135
Consignee Alderley Systems Ltd

Our Order no. ASO0505060
Consignor Amarinth Ltd.
Bentwaters Parks
Rendlesham
Woodbridge
Suffolk, IP12 2TW
United Kingdom

Item	Quantity	Part Number	Description
1	4	FBAC401004N-A2402	Bearing A/C
2	2	FBDB401006N-A2402	Bearing Ball
3	2	FGCN401012N-A9009	Gasket
4	2	FGCC401824AAC9006	Gasket
5	2	FIHC4010831AAC2500	Impeller Hub Cap

Remarks Complies with Type of Inspection Documents BS EN 10204 : 2.1

I hereby declare that the whole of the supplies detailed hereon have been inspected, tested & unless otherwise stated above conform in all respects with the requirements of the contract or order relative hereto.

Signed:

Technical Manager

Name: David C Driver
Position: Technical Manager

Date: 20/06/2005

Doc code: ACC0302001
Form issue no: 1 ; Date: 08/03



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ec declaration of conformity (ATEX)

Your order no. 111032PD
Consignee Petrochem Carless Ltd

Our Order no. ASO0412047
Consignor Amarith Ltd.
Bentwaters Parks
Rendlesham
Woodbridge
Suffolk, IP12 2TW
United Kingdom

Item	Quantity	Part Number	Description
1	1	APUC501092ATD9908ZZZ	Pump Assembly CF-040x025x175-SB2H; Unit No. 603410101
Remarks Complies with The Machinery Directive - 98/37/EC (BS EN ISO 12100 Pt1&2:2003; BS EN 953:1998; BS EN 349:1993), Low Voltage Directive - 73/23/EEC (BS EN 60204 Pt1:1998), Electromagnetic Compatibility Directive - 89/336/EEC (BS EN 61000-6-4:2001; BS EN 61000-6-2:2001) & ATEX Directive 94/9/EC (BS EN 13463-1:2001; BS EN 13463-5:2003; BS EN 13463-8:2003)			

I hereby declare that the whole of the supplies detailed hereon have been inspected, tested & unless otherwise stated above conform in all respects with the requirements of the contract or order relative hereto.

The ATEX non electrical technical file document reference is PD-CX-080 and is registered and held by a notified body.

Signed:


Name: D Driver
Position: Technical Manager

Date: 01/09/2003

Doc code: ACA0308001
Form issue no: 1 ; **Date:** 08/03



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hydrostatic test certificate

Customer Alderley Systems Ltd

Your order no. SI683M005 **Our Order no.** ASO0409066

Pump Number 602990102 **Designation** AC-080 x 050 x 325-AA4A

Pump Tag # P 1770 A

Test date	25 March 2005
Tested by	Andy Knights
Test medium	Demin Water
Test pressure	77 barg
Duration	30 Minutes
Max allowable working pressure	51 barg @ 20 deg.C
Assembly description	Seal Pipework
Gauge Number	PG4

Remarks

Signed:

Name: David C Driver
Position: Technical Manager

Date: 08 April 2005

Doc code: AHT0302001
Form issue no: 1 ; Date: 08/03

pump performance test certificate

Customer	Alderley	Impeller diameter	290 mm
Customer reference	SI683M005	Hydro test pressure	76.5 bar g
Sales order no	ASO0409066	Orifice size	31.5 mm
Pump designation	AC-080x050x325-SB4A	Test date	08/04/2005
Pump serial no	602990102		
Pump tag	P1770 A		

DUTY	Specified	On water	MOTOR	Fitted	For test
Output	35.00 m3/h	m3/h	Power	30.0 kW	kW
Differential head	105.00m	m	Supply	400/3/50	
NPSHa	7.95 m	m	Full load speed	2946 rpm	rpm
NPSHr	m	m	Full load current	54.00 A	A
Fluid	Produced Water	Fresh water	Make	ABB	
Temperature	20 - 65 deg C	20 deg C	Serial number	0504-010281328	
Specific gravity	0.998	1.00	Method of drive	Direct Coupled	
Viscosity (t)	0.711 cSt	1.0 cSt			
Suction pressure	barg	barg			
Suction flooded	m	0.45 m			

Results of measurement	Unit	1	2	3	4	5	6	7
Frequency	Hz	50.00	50.00	50.00	50.00	50.00	50.00	50.00
Pump speed	rpm	2982	2979	2975	2969	2964	2950	2950
Rate of flow	Rated output	m3/h	0.00	12.00	23.00	35.00	45.00	60.00
Suction	Vacuum	m	0.45	0.41	0.33	0.18	0.02	-0.17
78.00(mm)	Position	m	0.00	0.00	0.00	0.00	0.00	0.00
Vs /2g	Vs /2g	m	0.00	0.02	0.09	0.21	0.35	0.52
	Hs	m	0.45	0.43	0.42	0.39	0.37	0.35
Delivery	Gauge	m	116.28	115.77	113.22	105.06	94.86	79.56
52.50(mm)	Gauge position	m	0.45	0.45	0.45	0.45	0.45	0.45
Vd /2g	Vd /2g	m	0.00	0.12	0.44	1.03	1.70	2.54
	Hd	m	116.73	116.34	114.11	106.54	97.01	82.55
	Total head	m	116.28	115.91	113.70	106.14	96.64	82.20
Motor	Volts	V	395	393	393	391	390	388
	Amps	A	27.80	33.00	37.00	42.30	46.70	51.50
	Input power	kW	15.00	18.00	21.00	24.50	27.50	30.20
	Efficiency	%	92.80	93.30	93.60	93.80	93.90	93.90
Pump	Power absorbed	kW	13.92	16.79	19.66	22.98	25.82	28.36
	Pump efficiency	%	0.0	22.6	36.2	44.0	45.9	43.4

Remarks :
Signed:

Date:08/04/2005



Amarinth

quotation

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To	Simon Hudson	From	John Barker
Company	NW Pump & Valve	Direct line	+44 (0) 1394 462 124
Fax no.	01229 812000	e-mail	john.barker@amarinth.com
Your ref		Date	4 August 2005
Our ref	ASQ0504144	Subject	

Pump Type: CF-040 x 025 x 225 SB2H
Serial No: 603150101

OPERATING & COMMISSIONING SPARE PARTS

Part #		Description	Qty	£ Each	£ Total	Dely (wks)
Commissioning Spares						
FBAC400477N-A2402	3013	Bearing a/c	2	67.00	134.00	2
FBDB400534N-A2402	3011	Bearing Ball	1	18.00	18.00	2
FGCN400504N-A9009	4542	Gasket	1	21.00	21.00	2
FSCA401696N-A6056		Mechanical Seal	1	1084.00	1084.00	6
FGCC400514N-A9070	4520	Gasket -ptfe	1	32.00	32.00	4
Operating Spares						
FBAC400477N-A2402	3013	Bearing a/c	2	67.00	134.00	2
FBDB400534N-A2402	3011	Bearing Ball	1	18.00	18.00	2
FGCN400504N-A9009	4542	Gasket	1	21.00	21.00	2
FSFT400657N-A2500	2100	Shaft	1	413.00	413.00	4
FSLP400576N-A9103	4301	Lipseal	1	16.00	16.00	2
FSLP400577N-A9103	4302	Lipseal	1	16.00	16.00	2
FSVE400506N-A9104	2540	V Seal	1	11.00	11.00	1
FLCN400489N-A2500	3719	Bearing Locknut	1	16.00	16.00	2
FWAL400493N-A9211	3713	Bearing Lockwasher	1	16.00	16.00	2
FISC400786AAD2002AAX	2200	Impeller	1	993.00	993.00	10
FIHC400658N-A2020	2914	Impeller Hubcap	1	33.00	33.00	4
FSCA401696N-A6056		Mechanical Seal	1	1084.00	1084.00	6
FGCC400514N-A9070	4520	Gasket -ptfe	1	32.00	32.00	4

Best Regards

John Barker

John Barker
Sales Engineer – Spares & Services



CERTIFICATE OF CONFORMITY

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TEST CERTIFICATE

No. A00118736

Furniss & White (Foundries) Ltd.
 Unit 17, Abbey Way,
 North Anston Trading Estate,
 North Anston,
 Sheffield S25 4JL. Tel 01909 568831, FAX 01909 569322

CUSTOMER AMARINTH LTD

Pattern No.	Description	Quantity	Order No.	Works No.
AM-1046 (LC) -SS13	CASING	1	APO0501093	3372/P

Specification ASTM A351 CF8M - 00 Melt Number 36475

CHEMICAL ANALYSIS

Element	C	Si	Mn	S	P	Ni	Cr	Mo	Fe
Result	0.06	0.91	0.96	0.005	0.030	10.55	19.80	2.20	

HEAT TREATMENT Heated to 1040°C - Water Quench

BS EN 10204.3.1.B.

VISUAL INSPECTION TO MSS SP15 ACCEPTABLE

MECHANICAL TESTS

	Hardness Brinell	Tensile N/mm ²	0.2% Proof N/mm ²	Elongation %	Reduction of Area	Charpy J @- °C
Result	143	495		58		1
						2
						3
						Mean

NACE MR-01-75-03

For Furniss & White (Foundries) Ltd.

Date....19/04/05.....

Signed..........

J. Isherwood... Quality Engineer
 Unit 17, North Anston Trading Estate, Abbey Way, North Anston, Sheffield S25 4JL
 Tel: Dinnington (01909) 568831 Fax: Dinnington (01909) 569322