



QUALITY
ISO 9001:2015
NSAI Certified



HEALTH
& SAFETY
ISO 45001:2018
NSAI Certified



ENVIRONMENT
ISO 14001:2015
NSAI Certified



Planning | Sustainability | Health & Safety

www.oes.ie

October 20th , 2022

Mr Jason Carroll
Senior OEE Inspector
EPA Regional Inspectorate
McCumiskey House
UCD Richview
Clonskeagh
Dublin 14
D14 YR62

Our Ref: **1135_42**
Re: **P0811-02 Dawn Meats Ireland – Slane**
Condition 1.4 Change Request
Notification of Boiler Upgrade

Dear Adrian,

Dawn Meats Ireland wish to notify the Agency of the intention to replace the current boiler at the Slane installation with a new 2500 kW hot water boiler.

The proposed works will allow the site to meet current operational and technical requirements and will provide increase in efficiency through replacement of the older unit with a new modern MCP compliant package.

Background

The proposal relates to an upgrade to the existing package boiler at the site. A comparison between the existing boiler against the proposed new boiler is tabulated below:

Item	Old Boiler	New Boiler *
Make/Model	Unical EEL	Cochran HW29 Hot Water Boiler
Fuel	LPG	LPG
Rating (kW)	2844	2500

There is no change in the fuel used and therefore no change to Condition 3.16.

The replacement boiler will exhaust via the existing stack at A1-1. Minor changes only to pipe and ductwork are required within the boiler house to facilitate connecting the new boiler, as the unit will be repositioned slightly on the boiler house floor. The new unit will be connected to the existing LPG fuel supply.



The boiler meets the requirements of the Medium Combustion Plant Regulations and will be subject to external combustion efficiency testing as per the combustion plant regulations, with records maintained accordingly onsite as per Condition 5.6. As the boiler is MCP Compliant, it has low NO₂ combustion and meets the MCP emission limit value of 200mg/m³ (@ 3% O₂).

A specification for the new boiler is included as attachment A.

We have undertaken a screening of the proposed installation of the new steam boiler against the criteria set out in changes/alterations to licences on EDEN and are notifying to the Agency as per Condition 1.4 requirement.

I trust that the above information is adequate to enable a proper assessment of our request and please do not hesitate to contact me should you require any further information in respect of the above.

Yours Sincerely,

Kind Regards



Peadar O'Loughlin

For and on behalf of OES Consulting

Attached Boiler Specification

Attachment A

Boiler Specification

HW29 Hot Water Boiler

1200-4100 kW

Cochran's HW29 horizontal three pass reverse flame hot water boiler is constructed in compliance with BS EN 12953, and when fitted with compliant combustion equipment, the boiler meets the latest European environmental legislation and the Medium Combustion Plant Directive (MCPD). This model is suitable for both low and high temperature applications.

The boiler is designed to meet the current UK building regulations with gross seasonal efficiency of over 86% and complies with the requirements of the Factories Act (1961) and with HSE and UK Inspection Authority requirements. In addition, the Boiler is UKCA, UKNI+CE or CE marked to meet the requirements of the Pressure Equipment; Low Voltage; Electro-Magnetic Compliance; and Machinery Safety Directives. Throughout the manufacturing process, this boiler is subject to inspection by a leading Independent Insurance Company, in addition to Cochran's own ISO 9001-compliant quality procedures.

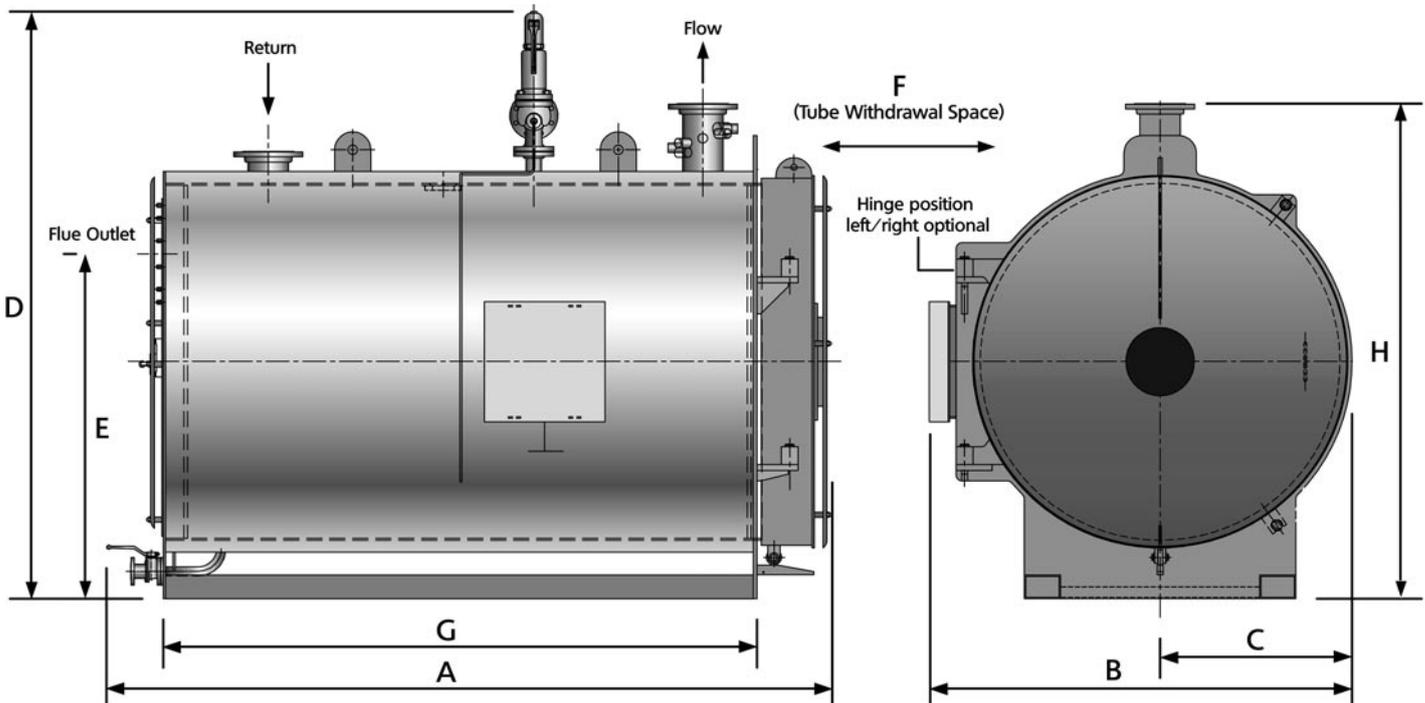
Cochran's HW29 packaged hot water boiler offers the following key features and optional upgrades:

- A compact, fully wet-back hot water boiler range, developed to meet today's demands for higher operational efficiencies and lower emissions.
- Provides energy saving, low emissions solutions for commercial and industrial applications.
- Normal operating pressure is 5.25 Barg, with options up to 10 Barg.
- Wide range of combustion, control packages and economiser options.
- Turndown of up to 6:1.
- Variable speed drives for FD Fan motor helps deliver low noise levels and reduce power consumption.



HW29 Hot Water Boiler

1200-4100 kW



HW29 Boiler Model		HW29-1	HW29-2	HW29-3	HW29-4	HW29-5	HW29-6	HW29-7	HW29-8
Output	kW	1200	1400	1650	2000	2500	3000	3500	4100
Length	A mm	2674	2799	2977	3209	3505	3785	4055	4316
Width	B mm	1835	1835	1997	2100	2233	2283	2177	2305
	C mm	795	795	860	925	925	950	950	1028
	D mm	2398	2398	2583	2713	2713	2893	2893	3048
	E mm	1440	1440	1505	1695	1695	1705	1705	1855
Boiler Tube Withdrawal	F mm	2080	2205	2380	2605	2905	3185	3455	3719
	G mm	2233	2358	2535	2760	3060	3340	3610	3874
	H mm	2068	2068	2198	2328	2328	2378	2378	2533
Rec. Chimney Dia	mm	275	300	325	375	405	450	475	500
Flow Connection Dia	mm	125	125	125	150	150	200	200	200
Return Connection Dia	mm	125	125	125	150	150	200	200	200
Safety Valve Size	mm	40	40	50	50	50	65	65	80
Safety Valve Outlet Dia	mm	65	65	80	80	80	100	100	125
Drain Valve Dia	mm	25	25	25	25	25	25	25	25
Weight Empty	Tonnes	4.1	4.1	5.0	5.7	5.9	7.5	8.2	8.9
Weight Full	Tonnes	6.2	6.2	7.3	8.6	9.2	11.0	11.4	13.8

Notes:

1. All dimensions and weights are approximate only and are based on a boiler with a working pressure of 5.25 BarG.
2. The weights include an allowance for the combustion equipment.

+44(0) 1461 202 111 www.cochran.co.uk

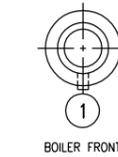
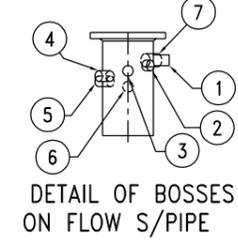
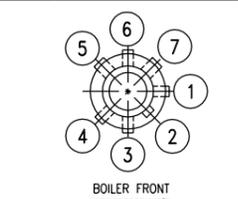
Newbie Works, Annan, Dumfries & Galloway, UK DG12 5QU.

Whilst this information is given in good faith, no warranty or representation is given concerning such information which must not be taken as establishing any contractual or other commitment binding upon Cochran Group Ltd Company or any of its subsidiary associated companies. ©2021 Cochran Ltd. Version 2 02/21



BOILER RATING		MINIMUM INSIDE DIAMETER
2500kW (8.54 x 10 ⁸ Btu/h)		425 mm
ELECTRICAL SUPPLY		415V, 50Hz, 3PH
CONTROL VOLTAGE		240V

REF	SIZE	DESCRIPTION	MATERIAL
A	DN50 PN40	SINGLE SPRING SAFETY VALVE (BOP 8.50 BARG)	CAST STEEL
B	DN25 PN40	DRAIN VALVE	(VB503) CARBON STEEL
C	100mm	FLOW TEMP GAUGE 0-150°C	(CG095)
D	100mm	PRESSURE GAUGE 0-16 BARG	(CG018)
E	10mm	INSPECTOR'S TEST COCK	(VC048) BRONZE
F	100mm	RETURN TEMP GAUGE 0-150°C	(CG095)
G	1/4" BSP	PRESSURE STAT ISOLATION VALVE	(VED45) BRONZE
H		BURNER CONTROL & TEMP CUT OUT (RIELLO SUPPLY)	
J		TEMPERATURE EXCESS SWITCH	(CS044)
K		LOW LEVEL LIMITER	(EH005)
L		EXCESS PRESSURE SWITCH (20-300 PSI)	(CS011)



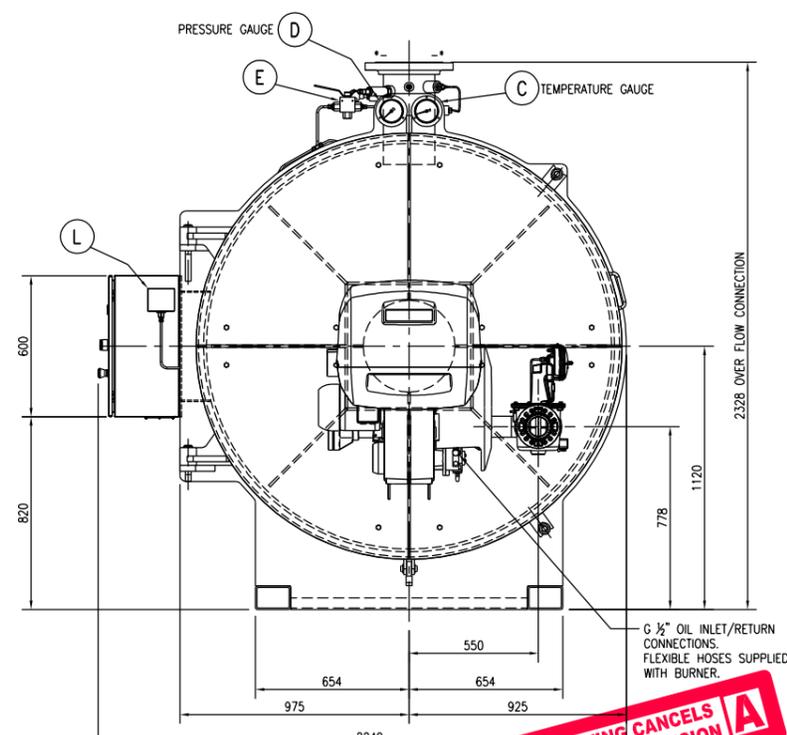
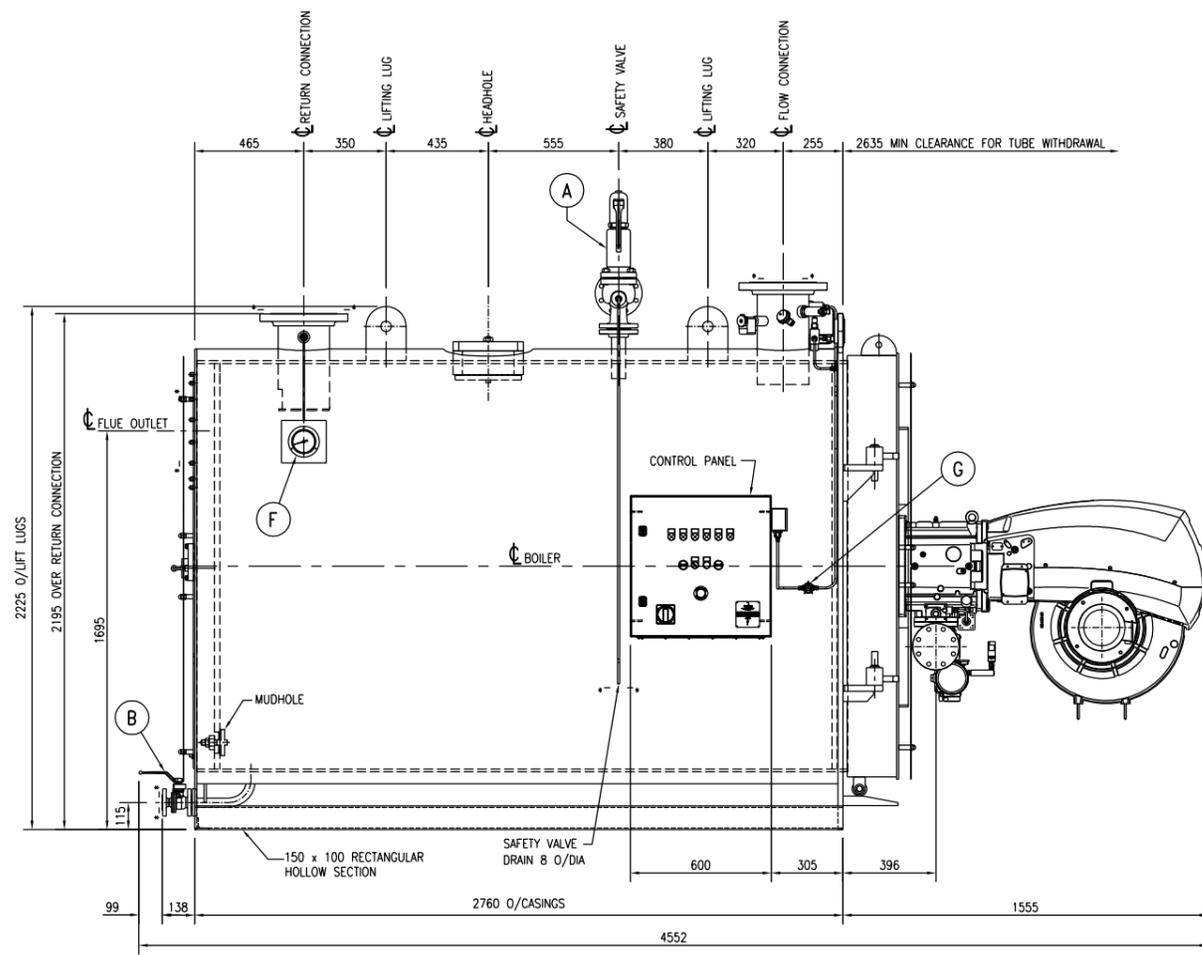
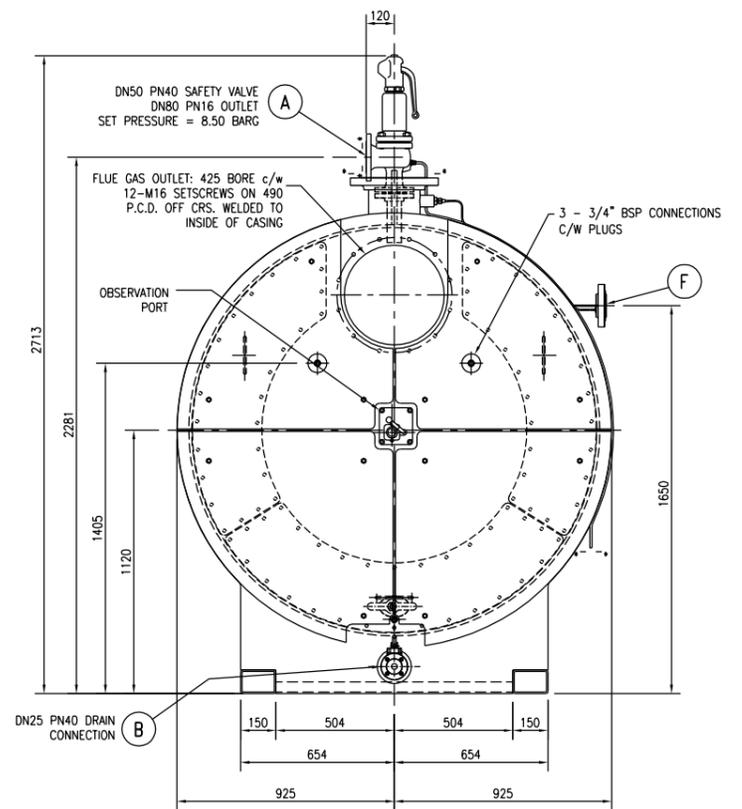
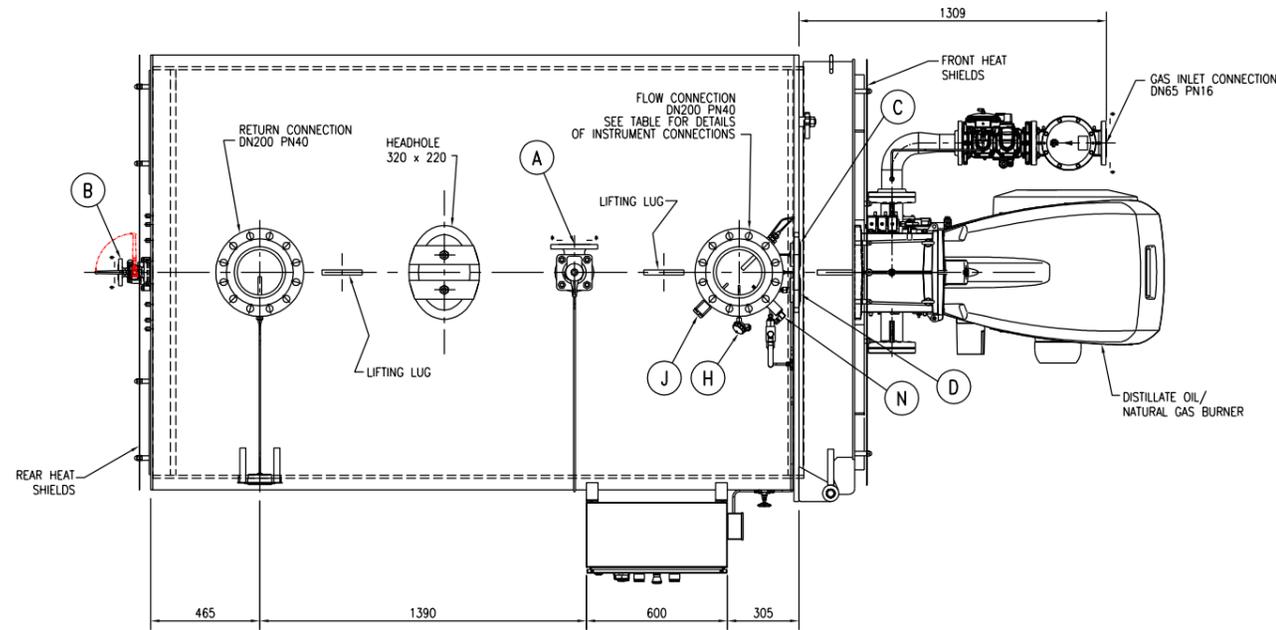
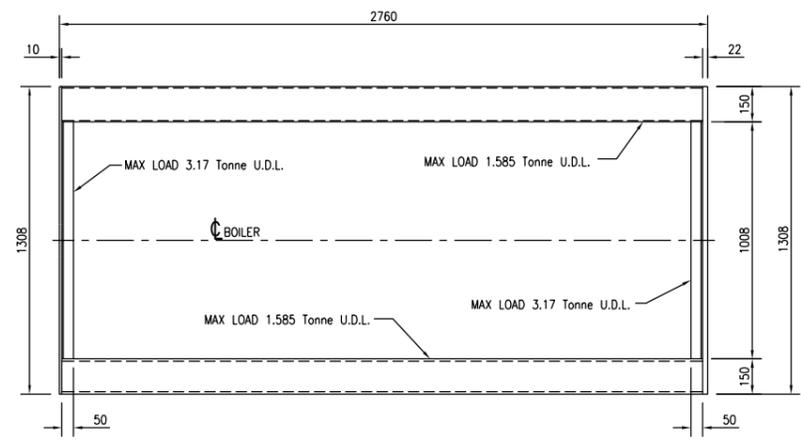
REF	DESCRIPTION	SIZE
1	PRESSURE GAUGE	3/8" BSP
2	LOW LEVEL LIMITER	3/4" BSP
3	BURNER CONTROL STAT	1/2" BSP
4	TEMPERATURE EXCESS SWITCH	1/2" BSP
5	SPARE (PLUGGED)	3/4" BSP
6	SPARE (PLUGGED)	1/2" BSP
7	TEMPERATURE GAUGE	3/4" BSP

REF	DESCRIPTION	SIZE
1	TEMPERATURE GAUGE	3/4" BSP

GENERAL NOTES:-
 WORKING PRESSURE6.00 bar g
 BOILER DESIGN PRESSURE13.30 bar g
 HYDRAULIC TEST PRESSURE19.02 bar g
 WEIGHT OF BOILER EMPTY6.07 Tonnes
 WEIGHT OF BOILER FULL9.51 Tonnes
 MINIMUM TRANSPORT HEIGHT2328 mm
 MINIMUM TRANSPORT WIDTH1900 mm
 FLOW TEMPERATURE = 110°C
 RETURN TEMPERATURE = 80°C

NOTE: ALL FLANGES TO BSEN1092-1 UNLESS OTHERWISE STATED
 * - * REPRESENTS COCHRAN TERMINATION POINTS

SAFETY VALVE ESCAPE PIPEWORK:
 THE DISCHARGE PIPEWORK MUST NOT BE SMALLER IN DIAMETER THAN THE VALVE OUTLET. DISCHARGE PIPEWORK MUST BE SIZED IN SUCH A WAY THAT BUILT-UP BACK PRESSURE DOES NOT EXCEED 10% OF THE SET PRESSURE OF THE VALVE. INSTALLATION & MAINTENANCE INSTRUCTIONS SHOULD BE CONSULTED PRIOR TO INSTALLATION. IF A RISE IN DISCHARGE PIPEWORK CANNOT BE AVOIDED THEN A SMALL BORE DRAIN SHOULD BE PROVIDED AT THE LOWEST POINT WHERE WATER COULD COLLECT.



INT	
DATE	
CHKD	
INT	
DATE	
CHKD	

B	
INT	PJW
DATE	23/02/17
CHKD	KD
1st Issue	
A	
INT	PJW
DATE	10/01/17

BOILER WORKING PRESSURE WAS 12.0 BARG. SAFETY VALVE SET PRESSURE WAS 13.2 BARG.
 Copyright © 2017 by Cochran Ltd. All rights reserved. This drawing must not be used, copied, reproduced or disclosed to a third party without the written consent of Cochran Ltd.
 Main Office: Newbie Works, Annon, Dumfries & Galloway, DG12 5DU, Scotland
 Tel: +44(0)1461 202111 Fax: +44(0)1461 205511
 Email: engineering@cochran.co.uk www.cochran.co.uk
 Also at: 1st Floor, 105 Sadler Road, Dodington Road, Lincoln, LN6 3RS, England.
 Tel: +44(0)1522 510510 Fax: +44(0)1522 509 837
 Email: engsp@cochran.co.uk

GENERAL NOTES:
 ALL DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES. TOLERANCE ON UNLIMITED FABRICATION DIMENSIONS IS ±5mm. REMOVE ALL BURRS AND SHARP EDGES. SURFACE FINISH ACCEPTED AS CAST, FORGED, WELDED, FLAME CUT, ETC UNLESS OTHERWISE STATED. MACHINED SURFACES DENOTED BY: WHERE A PARTICULAR FINISH IS REQUIRED MAXIMUM ROUGHNESS IS INDICATED THUS:

DRAWN	P.WILKINSON	10/01/17
CHECKED	K.DOUGLAS	11/01/17
ISSUED		
SCALE	1:15	DO NOT SCALE IF IN DOUBT ASK
DIMENSIONS IN mm UNLESS OTHERWISE STATED		



Title	GENERAL ARRANGEMENT 2500 KW HOT WATER BOILER	
Used On:	29/6742	
Drawing Number	V122777	SHT 1 OF 1
Rev	B	

THIS DRAWING CANCELS & SUPERSEDES REVISION A



Three Pass Reverse Flame
COCHRAN HW29
Package Hot Water Boiler

Technical Specification

COCHRAN HW29 HOT WATER BOILER SPECIFICATION

The **COCHRAN HW29 HOT WATER BOILER** is built to BSEN 12953 with independent inspection by British Engineering Services (BES) and UKCA or UKNI marked as appropriate (**see footnote**).

This model has an output range of **1200 to 4100kw** and is suitable for both low and high temperature applications.

It is of horizontal three pass reverse flame type design developed for higher operational efficiencies and lower emissions to meet the requirements of the Medium Combustion Plant Directive (**MCPD**).

It is designed to meet the current UK building regulations with gross seasonal efficiency above 86% and complies with the requirements of the Factories Act (1961) and with HSE and UK Inspection Authority requirements. In addition, it meets the requirements of the:

- Pressure Equipment Directive
- Low Voltage Directive
- Electro-Magnetic Compliance Directive
- Machinery Safety Directive

Throughout the manufacturing process, in addition to the inspection carried out by BES, **COCHRAN** apply their own quality procedures that comply with the requirements of **ISO 9001**.

The following schedules detail the specification of the Boiler proposed in our tender.

Schedule Number	Description	Page Number
1	Boiler - Pressure Parts	3
2	Casings, Insulation/Sheeting and Supports	4
3	Mountings	5
4	Combustion Equipment/Control Panel/Wiring	6
5	Painting	6
6	Terminal Points	7
7	Tools/Documents	7

Note – Boilers destined for markets within the EU will be CE marked as appropriate.

Schedule 1: Boiler Pressure Part

General

All plate used in the construction of the boiler is cut and profiled by computer controlled equipment. Shell plates and furnace are then rolled, assembled, welded and inspected in accordance with the Construction Codes.

Tube plates are drilled by computer controlled equipment to ensure correct ligaments are maintained and accuracy of tube hole finish and weld preparation for welded tubes.

Boiler Shell

The Boiler shell, dependent on Boiler size, is constructed in suitable sections. Following the rolling process, longitudinal and circumferential seams are machine welded and subjected to X-Ray and NDT Inspection to comply with the latest standard requirements.

Furnace

The furnace is constructed in suitable sections dependent on furnace size. Following the rolling process, longitudinal and circumferential seams are machine welded and subjected to X-Ray and NDT Inspection to comply with the Construction code requirements.

Convection Tubes

The Boiler incorporates one pass of convection tubes fitted with purpose made turbulators. The required number of stay tubes and stay bars are fitted.

Access Doors

Access to the front tubeplate and furnace are by means of a large hinged door that incorporates a flame sight glass. Access to the rear tubeplate is by means of removable lift off doors. Waterside access is provided by a manhole or headhole as appropriate on the top of the boiler and a muddoor on the rear tubeplate.

Seatings

Mountings and controls are fitted to pads, standpipes and bosses welded to boiler shell. The Materials Specification for the Shell and Shell Attachments are:

Shell, Furnace & Tubeplates:	BS EN 10025-2 P265 GH
Stay Bars:	BS EN 10273 P235 GH
Play & Stay Tubes:	BS EN 10216-1-TR2
	BS EN 10216-2
	BS EN 10217-1-TR2
	BS EN 10217-2
Mandoor, Head holes, Muddoor & Lifting Lugs:	BS EN 10025-2 P265 GH
Pads (Valves):	BS EN 10025-2 P265 GH
Standpipes:	ASTM A106 GR B

Schedule 2: Boiler Mounted Fabrication – Casings; insulation & Supports

Rear Casing

The rear casing incorporates a horizontal flue gas outlet and is made from mild steel plate, welded to the rear of the boiler shell. Lift-off doors for access to the convection tubes are provided.

Front Casing

The front casing is made from mild steel plate, welded to the front of the boiler shell. A hinged insulation lined door supports the combustion equipment and provides access to the boiler furnace, convection tubes and turbulators.

Insulation and Sheeting

The boiler shell is insulated with 50mm thick high density insulation to reduce radiation loss then clad in 0.7mm thick Embossed Aluzinc sheeting. Tubeplates, pads and standpipe penetrations are finished with Aluzinc collars.

To aid access for inspection purposes inspection doors and valves are not provided with insulation, if this is required then this is available on request as an option.

Support

The boiler supports are an integral part of the front and rear casings. The front and rear supports are connected together using tie sections to provide rigidity and assist in installation.

Jacking points are provided on the support structure to assist in offloading, positioning and manoeuvring the boiler. The boiler supports are designed with integral jacking points

Schedule 3: Boiler Mountings

General

Depending on the flow temperature of the system we offer valves and gauges to comply with EN12828 or EN12953 which are fitted to the boiler with suitable joints and flanges drilled to BS EN 1092. Standard valves and fitting are tabulated below:

Qty	Description	Manufacturer	Material
1	Single Spring High Lift Safety Valve sized to provide 100% discharge capacity	Ari Armaturen	SG Iron
1	Manual Blowdown Valve, ball type	RTK Control	Carbon steel
1	Compact Vibrating fork low level switch (HT Only)	Emerson	-
1	Flush mounted Flow Temperature gauge	Stewart Buchanan	Aluminium
1	Excess Temperature Switch	Honeywell	-

Standard Connections on Boiler Pressure Part

- 1 Flow Connection, excluding Control/Isolating Valve
- 1 Return Connecting, excluding Control/Isolating Valve

Optional Equipment

We can provide optional equipment including

- 1 Vibrating Fork low level switch
- 1 Flash Trap Replacement Kit
- 1 Backend Protection system
- 1 Flue gas economiser solutions

Notes

- Valve materials provided are suitable for the rating, pressure and temperature requirements.
- Please refer to tender for additional mountings offered.

Schedule 4: Combustion Equipment; Control Panel & Wiring

Combustion Equipment

If required the Boiler can be fitted with a pressure jet burner matched to the Boiler furnace configuration and suitable for the fuel(s) specified in our tender. The burner can be provided as a complete unit pre-wired and fitted prior to leaving our factory. In the case of gas fired units a matched gas train is supplied.

Boiler / Burner Controls

The burner controls would be mounted on the combustion equipment. In addition we provide a panel enclosure mounted on the boiler to house the boiler controls included

Electrical Wiring

Heat resistant cabling is used for wiring between water level controls and the control panel, all other wiring is in P.V.C. covered wiring carried in flexible conduit. Colour Coding to BS EN 60204-1:2006.

Functional Testing

An electrical functional test of the boiler safety and control system is carried out and witnessed by the Cochran Q.A. Department Inspectors.

Schedule 5: Painting

Surfaces are degreased prior to painting and one coat of primer, one coat of undercoat and one finishing coat is applied.

Standard Colours are as follows:-

All Valves	Blue
Front and Rear Casings	Blue
Screen Plates	Blue
Sheeting	Embossed Aluzinc sheeting
Burner	Manufacturer's Standard
Control Panel	Manufacturer's Standard

Schedule 6: Terminal Points

Flanges to BS EN 1092 except where stated otherwise.
Screwed connections BSP except where stated otherwise.

Description

Safety Valve (Outlet)	Flanged/Screwed
Drain Valve (Outlet)	Flanged
Drain Pipework (Outlets)	Screwed
Flue Gas (Outlet)	Horizontal
Oil Flow (Connection)	Screwed
Oil Return (Connection)	Screwed
Gas (Inlet)	Flanged
Pilot Gas (Inlet)	Screwed
Flow Connection	Flanged
Return Connection	Flanged
Low Water Level Limiter Connection	Screwed

Schedule 7: Tools & Documentation

Tools

Tube cleaning brushes and rod handle are provided.

Documentation

General Arrangement Drawing and Electrical Wiring Diagrams are provided.
Certificate of Compliance is provided, certified by an independent Inspection Authority.
Operating and Maintenance Manual is provided.

Notes:

Cochran reserve the right to amend or alter this Specification during the tender validity period or the manufacturing stage of any subsequent order to comply with any alteration or amendment to applicable Standards, Safety Codes, Guidance Notes or Revisions in Manufacturing Techniques.