



LANDON KINGSWAY

SAFETY, CONTROL & ENERGY MANAGEMENT

Fire Protection Systems



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A Leader in Fire Protection Systems

Introduction to Landon Kingsway

Established in the 1960's Landon Kingsway is well recognised in providing quality products and systems to the safety equipment market. All products are made in full compliance to the relevant British & European standards. Landon Kingsway offers some of the most advanced technological safety application solutions available in the Fire Protection, Gas Detection, Ancillaries, Hydrostatic & Capacitance Level Equipment market.



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FREE FALL FIRE VALVE MKI

Advantages

- Positive rotary action
- Leak-tight
- Every item selected in the light of experience
- Can be fitted in either vertical or horizontal pipe runs
- Can be used either with fuel, oil, gas or water
- Special linkage available if required for low level application

Our free-fall valve equipment has been evolved for use where it is essential or desirable to have a safety device which will in the event of excessive temperature or a fire developing positively shut-off the supply of fuel to a piece of plant, whether it be liquid or gas. This equipment to BS 799, is necessary for oil & gas fired boilers, furnaces, generators etc. It may also be used as a dump valve.

When ordering please state:

- Any additional fusible links, pulleys, screws, hooks or screw eyes required
- Size of pipe for which required
- Whether valve to be screwed or flanged
- Additional length of cable if required



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FREE FALL FIRE VALVE

Equipment consists of:

1. A weight-operated, glandless cast iron rotary plug type screwed valve which is internally lubricated. The valve cannot leak, will not stick or jam, and is unaffected by the pressure in the system. Flanged valves are available when required. The valves are suitable for use with pressure up to $1379 \times 103 \text{ N/m}^2$ (200 lbs./sq.in.). Many valves are supplied for this purpose are of the gland type which are obviously unsuitable, as it is usually found that to prevent leakage they have to be tightened to a degree which inhibits free movement of the valve and thus destroys their usefulness.
2. A Kingsway special 'Free-fall' device. The valve is weight-operated and so arranged that the weight falls freely, doing no work during the first part of its travel. By the time the weight is called upon to move the valve it has accumulated sufficient momentum to overcome the inertia of the valve plug. Where pipe run is at low level, special linkage can be supplied to raise the lowest position of dead weight to pipe centre line.
3. 30 ft (9.1 metres) of easy to fit, non corrosive, carefully selected stranded stainless steel cable to hold the valve open. Many cables are too heavy and springy to run easily on the pulleys.
4. Three brass screw hooks with brass pulleys which automatically align themselves to suit the run of the cable. Two of these are wood screw thread, and one is $\frac{1}{4}$ " BSP thread for fitting to metal surfaces. Rigid pulleys are slow to install because alignment is a matter of adjustment which is difficult to arrange.
5. One turnbuckle or wire strainer for valves size 2" BSP and above
6. Five tube cable connectors. Where the cable has to be cut and a loop formed, these connectors are quick and effective. Simply thread the twin cables through the tube and pinch tight with a pair of pliers.
7. One fusible link specially made to break when the temperature reaches a pre-determined point. Normally the link is made to operate at 71°C (160°F) as BS 799 part 5 1975, but other temperatures can be catered for if required.
8. One heavy brass wood screw threaded eye to secure the far end of the cable to the wall or ceiling
9. One engraved warning notice to hang on the cable to prevent people walking into it

NOTE Extra or replacement links always available separately at short notice



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FREE FALL FIRE VALVE

Lubrication

If using a grease injection gun, connect to the grease nipple at the end of the lubricating screw.

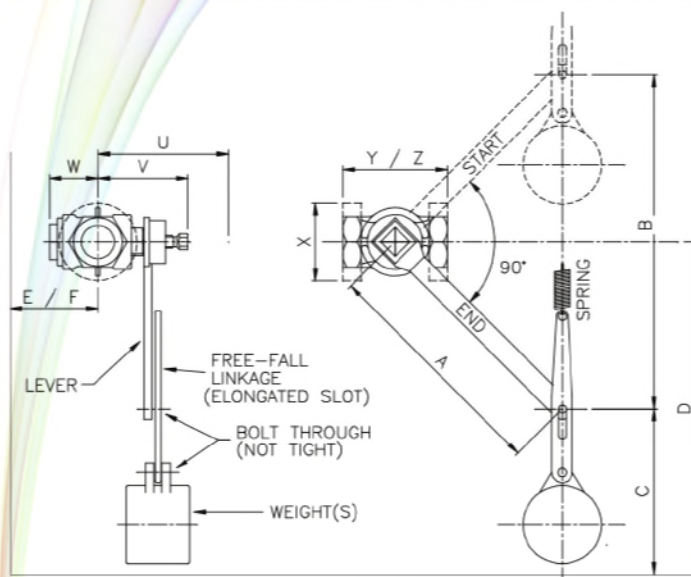
If lubricating by hand remove the lubricating screw from the end of the square shaft. Fill the reservoir inside the shaft with lubricant and replace the screw. Tighten the screw until a definite increase in resistance is felt, inserting further lubricant as necessary. 'Pump' the valve lever up and down several times to ensure the valve is free-moving. If you have any questions or need any help then please contact our sales office.

Important:

These valves must be checked for function and lubricated at least 3 times a year to maintain efficient operation

Dimensions

Valve Size	Lever	Z	Y	X	W	V	U	A	B	C	D	E	F	Weight
½"	A	108	95	95	38	60	110	241	343	178	349	152	51	1 x 5lb
¾"	A	114	105	102	44	64	114	241	343	178	349	165	58	1 x 5lb
1"	A	121	115	114	51	73	125	241	343	178	394	191	64	1 x 5lb
1¼"	B	111	140	121	62	83	135	305	432	178	394	229	76	1 x 10lb
1½"	B	117	150	133	68	90	144	305	432	229	444	254	76	1 x 15lb
2"	C	178	165	152	83	125	213	381	540	229	502	330	102	1 x 15lb
2½"	C	191	185	165	94	135	222	381	540	229	502	330	102	1 x 15lb
3"	D	203	200	184	111	167	275	775	1092	251	800	457	152	1 x 15lb
4†"	E	229	---	216	141	184	297	629	864	251	683	470	165	1 x 15lb
5†"	E	254	---	254	160	213	327	737	864	251	683	559	178	1 x 15lb
6†"	F	267	---	279	184	241	356	737	1041	276	813	660	205	1 x 15lb



Important dimensions

- E Min dist to remove plug with valve in-line
- F Min dist to wall
- U Clearance to remove lubricating screw
- X Flange diameter
- Y Length of screwed valve
- Z Length of flanged valve

† The 4", 5" and 6" valves are only available in flanged versions.



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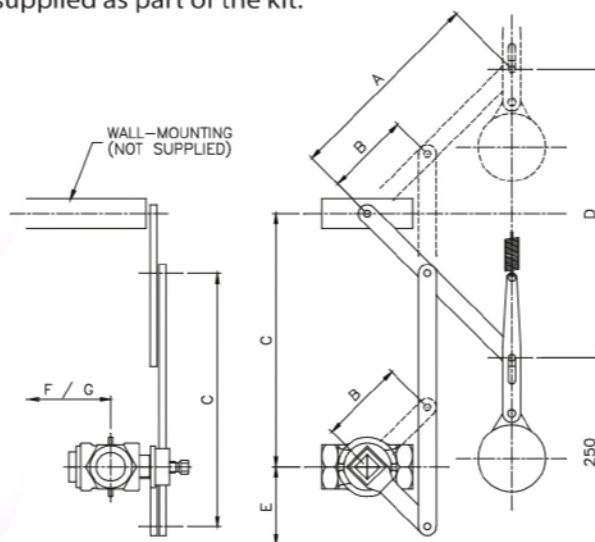


FREE FALL FIRE VALVE SPECIAL LINKAGE

The special linkage is used when the free-fall valve is mounted too low for a normal lever and weight arrangement. The linkage can be fitted to flanged or screwed valves from 1" to 6" in size. The linkage is constructed from cast iron and mild steel and is painted red in colour.

NOTE: The wall mounting bracket is not supplied as part of the kit.

Dimensions



Valve Size	A lever length	B lever length	C lever length	D drop	E min clearance	F min dist from wall	G min dist from wall to remove plug	Weight
1"	330	76	386	467	89	76	254	1x 5lb
1¼"	330	76	386	467	89	76	254	1x 5lb
1½"	330	76	386	467	89	76	254	1x 10lb
2"	394	94	419	548	108	102	330	1x 15lb
2½"	394	94	419	548	114	102	330	1x 15lb
3"	483	108	432	610	127	152	457	1x 15lb
4"†	610	137	546	610	127	165	470	2x 15lb
5"†	1067	238	779	1508	216	178	559	2x 15lb
6"†	1067	238	779	1508	216	203	660	4x 15lb

† The 4", 5" and 6" valves are only available in flanged versions



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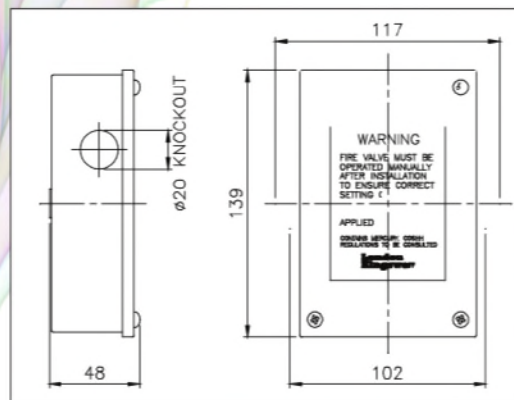


FREE FALL FIRE VALVE MERCURY SWITCH

The Free Fall Fire Valve Mercury Switch operates in conjunction with our free fall fire valves to set off an alarm, stop a burner or perform other operations in the event of a fire outbreak in the boiler house.

The device consists quite simply of a mercury switch mounted on the fire valve lever which is connected by electric cable to the equipment to be operated. It can be arranged to make or break a single connection or to make one connection and break another – for single or 3 phase supply – or even to utilise 3-phase on one side and single phase on the other. The three connections on the three-phase version could be used to control three single-phase devices. Both the single and 3 phase versions remain closed while the valve is in its' normal state (one contact on the single phase, 3 on the 3-phase) and a separate normally open contact that is suitable for sounding an alarm as it closes if the valve lever drops.

Dimensions



SAFETY INFORMATION

This device contains mercury inside a sealed glass vessel. Consult

COSHH regulations regarding mercury safety.

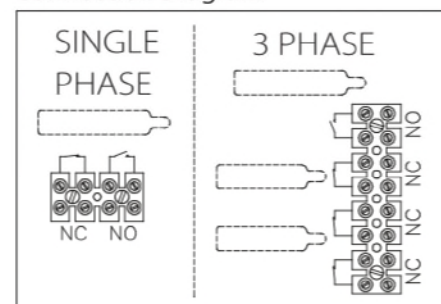


Free Fall Fire Valve with Mercury Switch



Mercury Switch

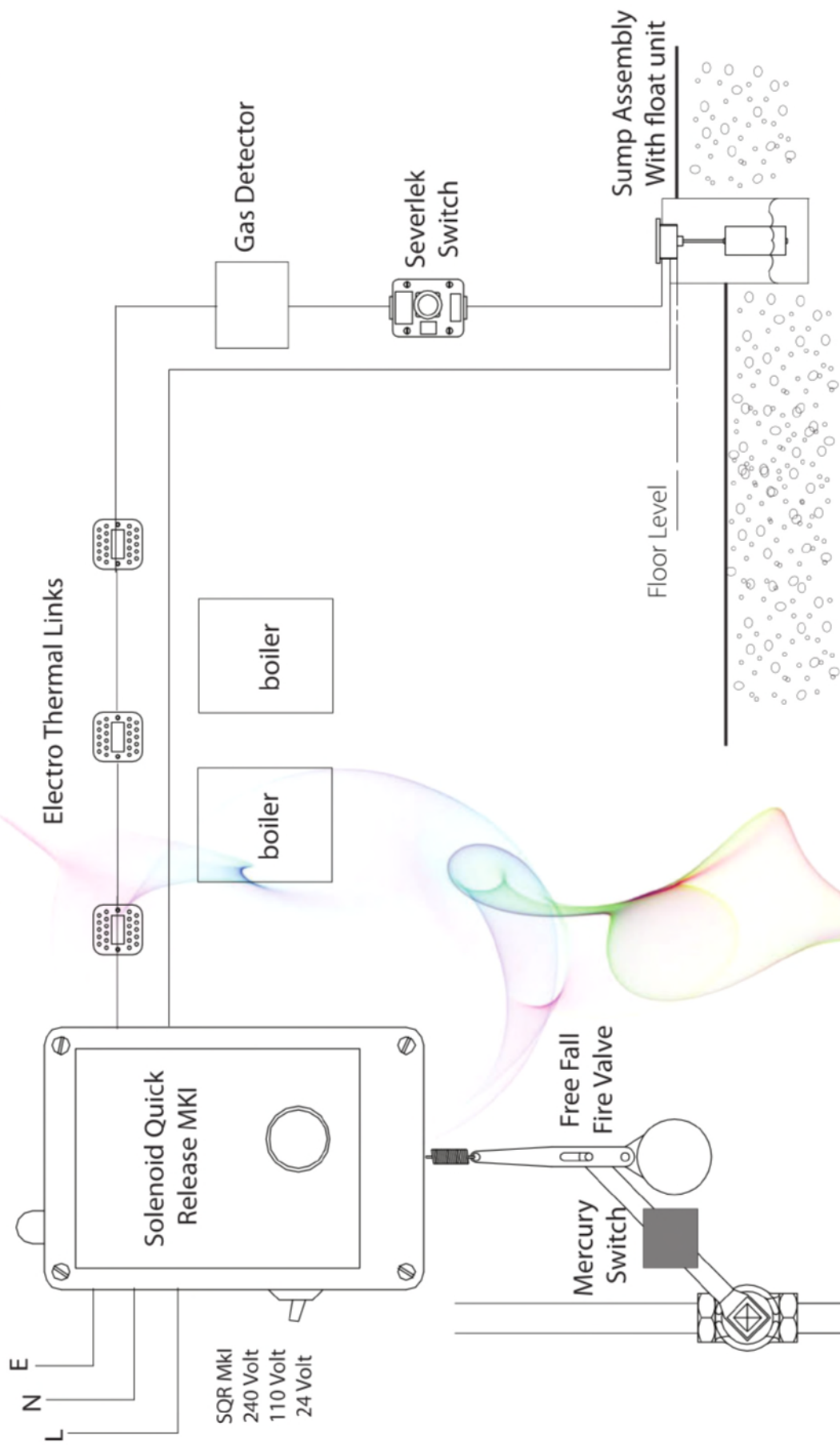
Connection Diagram



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REMOTELY OPERATED VALVE SCHEMATIC (A)



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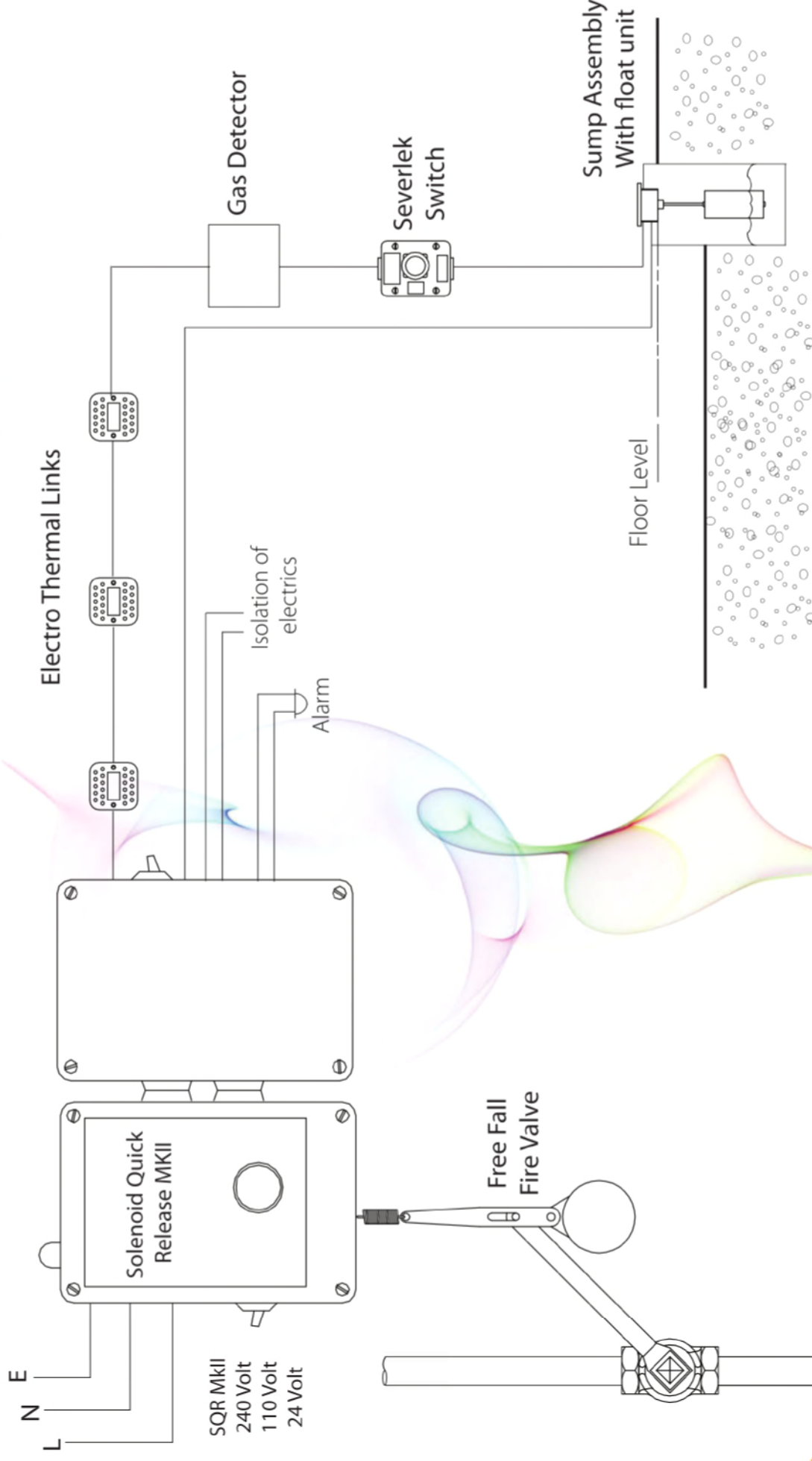


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FIRE PROTECTION

REMOTELY OPERATED VALVE SCHEMATIC (B)



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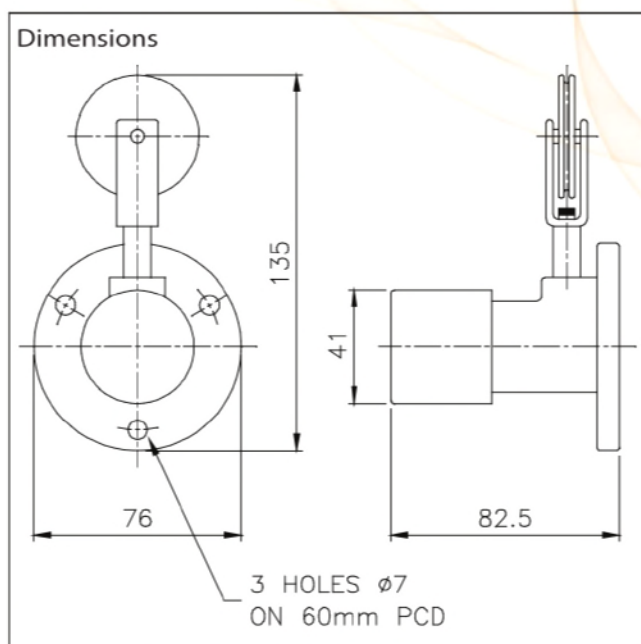


MANUAL QUICK RELEASE

There are occasions where it is desirable that some provision be made to enable the boiler house staff or anyone else to shut down the fire valve from the boiler house or some other point.

BS 799/53 recommends the use of a quick release mechanism.

To meet this requirement, we have produced a Manual Quick Release Mechanism of the wall-fixing type to which the fire valve cable is attached. If the button is firmly pressed or hit, the pin to which the cable is attached is released and tension on the cable is released at the same time. When the emergency is over, the pin can be re-set and the cable tension restored.



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ELECTROMEK MKII QUICK RELEASE MECHANISM

This is designed for use in conjunction with the free fall fire valve and other accessory equipment as an emergency button to sound alarms and render the equipment safe by a switching action. It is operated either as a mechanical switch actuated by the release of a fusible link network under tension, or by hand pressure, causing a two pole change-over switch operation, as well as mechanically releasing the fire valve by means of the fusible link arrangement. It can also be used in conjunction with the Manual Quick Release Mechanism, Solenoid Quick Release Mechanism and Sumpguard Equipment.

To operate, strike the red push button. The plunger situated in the top of the equipment will be ejected and the fire valve cable released, allowing the fire valve attached to the wire to fall, shutting off the fuel supply. At the same time this action will shut off the electrical supply to the burner, or other load, which is automatically disconnected and a further circuit made to indicate an alarm, either visually, audibly, or both, according to the design requirement. The mechanism will also actuate by means of the parting of the fusible links which allow the plunger normally under tension to be pulled down into the Electromek and thus repeat the same action.

To reset the mechanism, depress the red button and place the plunger into the hole in the top of the unit, set the centre shaft carrying the pulley to its fully extended position against the spring by operating the wire; then release the push button and the plunger will remain in this operating position.



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ELECTROMEK MKII QUICK RELEASE MECHANISM

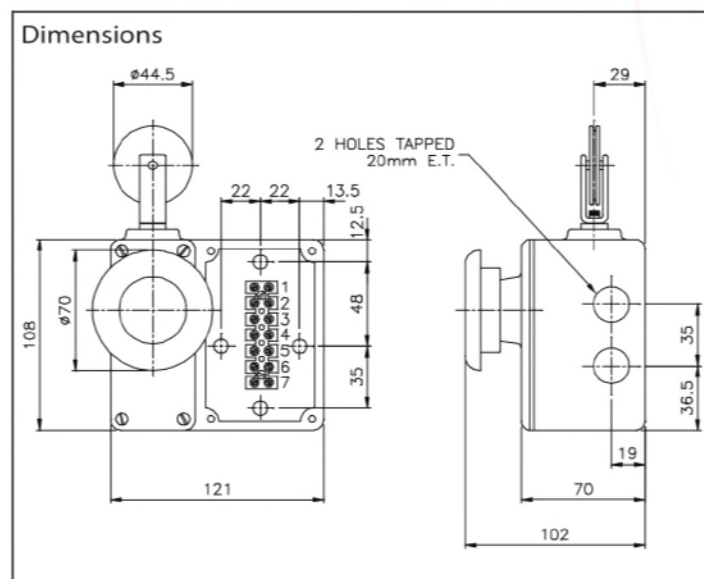
Electrical and Technical Data

Connection should be made using (1mm²) cable which should be connected to the terminal block in the connection housing which is located adjacent to the emergency button and near to the cable entries. This terminal block is internally wired to two automatic reset microswitches. These two microswitches are fixed in a separate compartment under the red push button and should not be disturbed. Within the microswitch compartment is also found the releasing lever and bridge which retains the spring loaded plunger. The releasing bracket is fixed to the red push button through the cover plate.

The spring loaded plunger is fitted with a running sleeve which, when placed in the hole in the top of the box and depressed, is located in the bridge piece attached to the red button. This action also sets or re-sets the microswitches and, if the plunger is not in position, the alarm circuit contacts will continue to be made i.e. changed over to the emergency position.

Rating: 230V at 5 amps maximum

Plunger Loading: The load to operate against the plunger spring should not be less than 5.5lbs (2.4kg)



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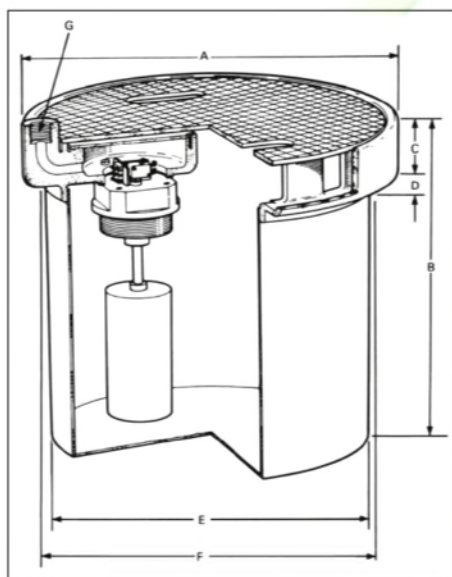
SUMP UNIT

The sump is designed to accept the Float Switch, and is also designed to be sunk in flush with the boiler house floor or the base of the oil line duct if one is provided. Oil can enter the sump through an annular space around the cover plate. The switch gear is housed in a waterproof terminal box with provision for a 20mm conduit entry. The unit is supplied with the new MKII float switch. The switch incorporates a diaphragm to eliminate the possibility of water seepage through the flat stem bush under conditions of complete flooding of the sump. Note: cable entry should be completely watertight.

Float Switch Operating Levels

	Density	Height	Volume (approx)
Water	1000 kg/m ³	3.58" (91mm)	8600 cm ³
Paraffin	800-850 kg/m ³	4.41" (112mm)	10725 cm ³
Gas Oil 35 sacs	800-850 kg/m ³	4.33"(110mm)	10400 cm ³

Dimensions



Sump Unit



	Inches	Millimetres
A	16½	419.1
B	14	355.6
C	1 13/16	46.0
D	½	6.3
E	13½	342.9
F	14 1/8	358.8
G	13/16	20.0



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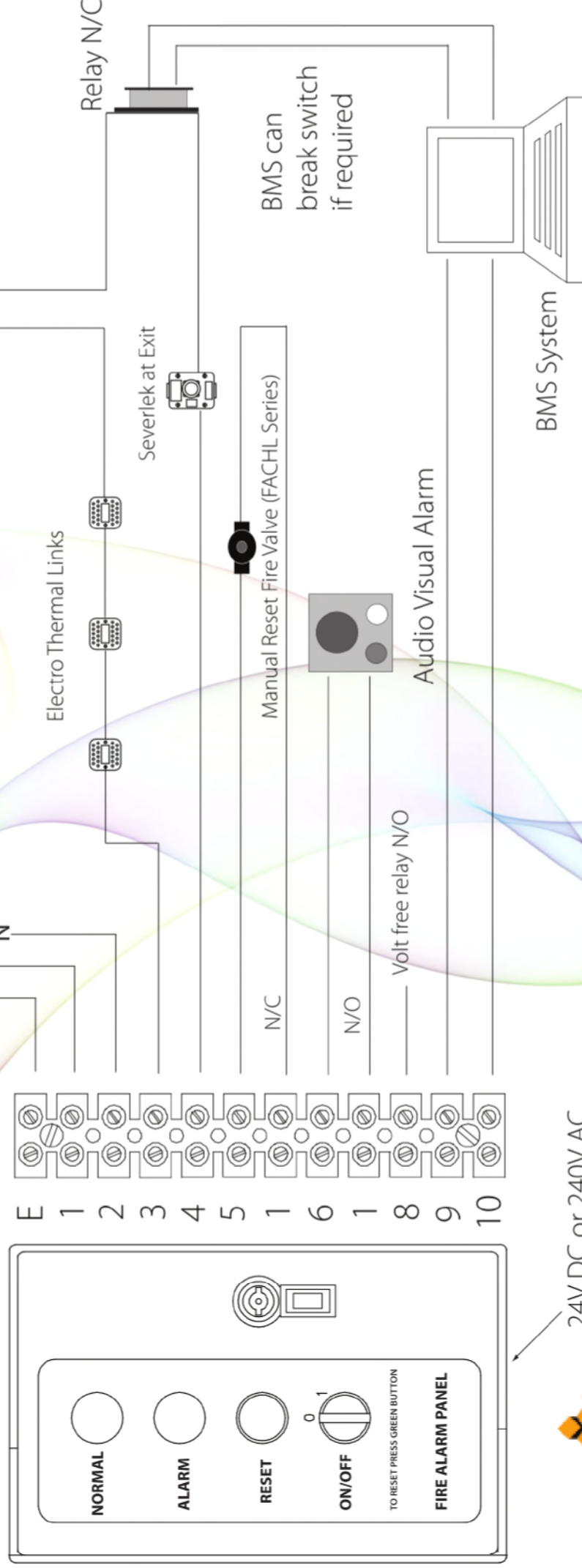


FIRE PROTECTION

FIRE CONTROL PANEL SCHEMATIC

24V DC or 240V AC

LKGSP4 Gas Detection Unit



24V DC or 240V AC



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SEVERLEK SWITCH

The Severlek Switch is for use in conjunction with a Landon Kingsway Fire Valve and Accessory Equipment as an emergency button to sound an alarm and render equipment safe by the operation of an electrical switch which must be actuated manually by hand pressure.

This causes a single pose change-over switch operation which disconnects the load circuit and connects the alarm or emergency circuit.

To operate the Severlek strike the red push button which has an automatic lock head. This action will cause the switch to change, and thus the supply will be changed from the load circuit to the alarm or emergency circuit. Any load circuit or emergency circuit can be attached to terminal No 14 providing the ratings mentioned under the electrical specifications are not exceeded.



To reset the mechanism turn the red push button in a clockwise direction and the spring will automatically return the switch reinstating the load circuit.

Construction and Installation

The boxes are made of die cast aluminium. Each unit is provided with a legend plate with instructions on how to release the push button. The box is provided with Pg 16 tapped holes top and bottom for conduit connection. One closing plug and one 20mm conduit adaptor are supplied with each unit. Mounting is by means of 4 fixing holes 5/16" (8mm) diameter located on the back plate. Terminals are screw type and suitable for a cable capacity of 2 x 0.5 to 2.5 mm.

Electrical Specification

A.C. Rating		D.C. Rating	
Volts	Amps	Volts	Amps
110	8	24	3
240	8	60	2
415	6	100	0.8
500	4	240	0.3



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FIRE PROTECTION

ELECTRO-THERMAL LINK

The Electro Thermal Link is for installation in a position where a fire hazard may occur, e.g. above the burner of a boiler between 0.3 and 1 metre. The fire will melt the fusible link and interrupt the switch wire causing a fire valve to close via the fire control panel or solenoid quick release mechanism and hence stop the fuel supply to the burner.

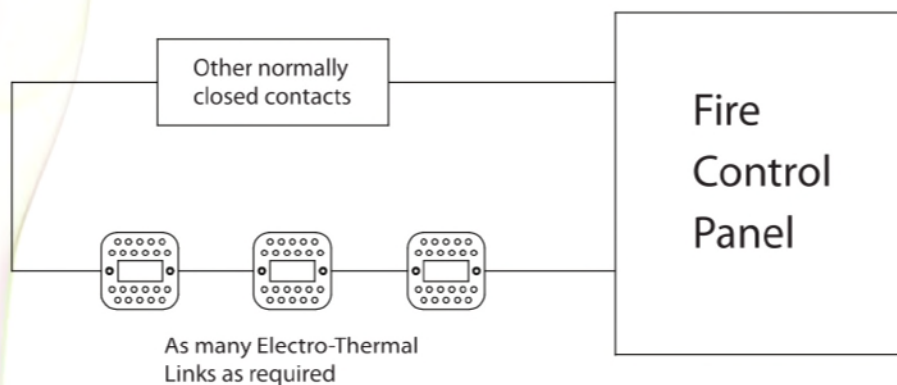
The link consists of a box with a perforated cover, having a temperature sensitive fuse. The unit should be mounted so that the perforated cover faces downwards and the ventilation holes in the back of the box must not be obstructed.

The link is electrically rated at 10 amps. max. on 250vAC maximum, single phase, and melts at 161.6°F (72°C). In accordance with BS799. (Other temps are available).

The box measures approximately 36mm x 63mm x 25mm.



Typical Installation



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SOLENOID QUICK RELEASE MECHANISM MKI

There are many instances when it is desirable that the oil/gas supply to a burner should be capable of being shut off by electrical means rather than purely mechanical means. For instance, it may be desirable that the fuel supply should be severed through the medium of an electrothermal link recording an excessive air temperature, or by a float switch indicating that an oil pipe has fractured allowing oil to flood into a boiler house. There are also cases where it is more convenient to use electrothermal links and electrical cable rather than tension cables and fusible links, which can be unsightly and difficult to run.

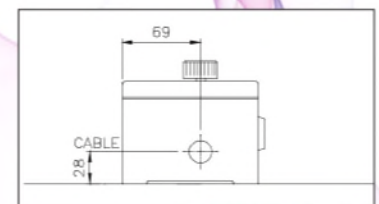
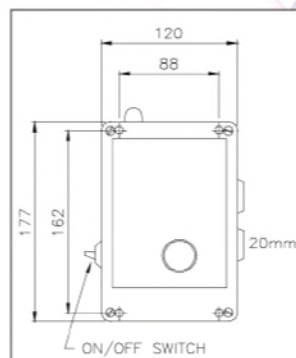
The **Solenoid Quick Release Mechanism MKI** holds open a weight-operated fire valve whilst current is flowing to the unit which releases the weight-operated fire valve, allowing it to fall into the closed position when the current to the unit is interrupted.

The solenoid-operated quick release mechanism consists in essence of cable wound onto a drum and the drum is attached to a toothed gear wheel. A solenoid within the box is fitted with an extension, so arranged that it will lock the toothed gear when the solenoid is energised. If the electrical supply to the solenoid is interrupted, the toothed gear and the drum are free to rotate which allows the weight-operated fire valve to shut and close the oil/gas supply to the boiler house. The maximum direct weight the unit will carry is 30lbs., but, of course, by using mechanical advantage far greater weights can be supported.



Immediate Advantages:

1. It is absolutely positive and immediate in its action
2. The device is considerably cheaper than the use of a solenoid valve directly in an oil/gas line
3. It fails 'safe' because any interruption in electrical supply will result in the oil/gas supply line being closed



Solenoid Quick Release MKI



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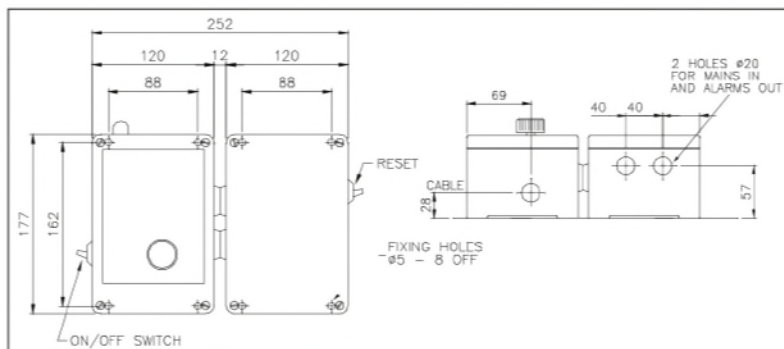


SOLENOID QUICK RELEASE MECHANISM MKII

Electrical supply

We also supply the Solenoid Quick Release Mechanism MKII. This is particularly recommended when the Solenoid Quick Release Mechanism is being used in conjunction with a sump switch. Should the float switch operate due to the sump being filled with either oil or water, it breaks the circuit of the solenoid allowing the fire valve to close. The self-holding relay is also de-energised, which breaks the feed to the sump switch. The relay has back contacts which break on de-energisation, enabling remote visual and audible alarms to be connected to the unit. If a self-holding relay is not used when employing a sump switch, it does mean that when the sump switch operates, a live line is still fed to the sump switch which could prove dangerous if the boiler house were to flood with water.

The additional relay can be used on other applications where it is necessary to have remote indication of the fire valve operating, or alternatively can be used to operate further solenoid quick releases which may close or open the fire prevention dampers.



Electrical Supply

MKI	
Supply	Amps
230/250V 50Hz.	.07
100/110V50Hz.	.16
24V DC	.62

MKII	
Supply	Amps
230/250V 50Hz.	.08
100/110V50Hz.	.19
24V DC	.73



Solenoid Quick Release MKII



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BATTERY TRICKLE CHARGER

The Battery Trickle Charger provides an uninterrupted power supply for electrical fire protection applications. It holds valves open while generators come on line.

Features

Integrated circuit regulator device for reliable operation and voltage accuracy;

- Battery circuit monitoring
- Charger fault monitoring
- Remote fault outputs
- LED indications of voltage
- Low voltage cut out relay for battery protection
- Battery charging current limiting
- Electronic fault indication
- Battery fault indication
- Battery disconnected indication
- Solid state construction

Technical Specification

- Battery charger unit
- BCU 24-50-2 preliminary technical specification
- Normal 24 volts DC 5 amps

Performance Characteristics

- Nominal charging voltage 27.6 volts (at 20°C)
- Low voltage cut out 23V DC
- Off load Voltage 27.6 DC
- Maximum continuous load 5 amps
- Maximum load maintainable for up to 4 hours
- Operating temperature range -10°C to +70°C

Temperature Compensation

To ensure maximum battery life, it is important that sealed lead acid batteries are charged at the correct voltage for the ambient temperature, the BTC 2003 MKII has this feature built in.



Cabinet Details

- 400mm high, 400mm wide, 200mm deep
- Space for up to 38 AHR sealed lead acid batteries
- 18 SWG mild steel cabinet, epoxy powder coated



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FIRE CONTROL PANEL

Application

The fire control panel can be used as the centre point of a comprehensive fire protection system incorporating all the components of our range. This includes thermal links, panic button, alarm bells and gas detectors. The panel contains an ON/OFF switch, a green power "ON" lamp, a red "ALARM" lamp and a reset button. When installed in a typical system as shown at the beginning of this section the panel operates as follows :

When power is supplied, the alarm lamp will illuminate and any external alarm fitted will sound. This is stopped by pressing the reset button. The panel is now armed and will be providing voltage to the fire safety valve (or other equipment). Immediately upon one of the external sensors detecting a hazardous condition the electrical supply to the fire safety valve will be disconnected, the external alarm (if fitted) will sound and the alarm lamp will illuminate. The panel will stay in this state until manually reset using the green button. The fire safety valve will need to be manually reset after the control panel has been reset.

Features

- Single control for fire valves, thermal links, panic buttons, audible alarms etc.
- Fully automatic
- Power "ON" AND "ALARM" lights
- Gas detection option
- Simple installation
- Voltage free NO and NC contacts for interface with building management systems
- Protected to IP55

Installation

The fire alarm panel can be mounted either by one hole in each corner, accessible from inside the box or by wall mounting brackets that are supplied with the unit. It is recommended that the box is only fitted indoors. A removable gland plate is fitted to the base of the box for easy cable entry. The panel should be installed according to the wiring diagram.



Tech Spec

Enclosure: Sheet metal epoxy powder coated

Electrical Connection: Removable gland plate with 68x196mm opening

Electrical Rating: 240V 50Hz 10 amps

Voltages: 240V 50Hz standard, 24V and 110V AC and 24V DC to special order

Contacts: One pair NC and one pair NO voltage free contacts

External Operators: Provision for connection to externally mounted fire valves, thermal links, panic buttons, audible alarms etc.

Warning Lights: Green "POWER ON" and red "ALARM" lamps

Dimensions: 300 x 250 x 174mm

Mounting Box: 260 x 210mm Ø7mm



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AUDIO VISUAL ALARM

This is an essential form of alarm where there is a need, for example, hearing and visually impaired people, where it can be both heard and seen. The Audible Visual Alarm Unit provides both an electronic sounder and a Xenon beacon unit, with a sounder 'mute' device. The Xenon beacon gives a flashing 'pulse' output and the electronic siren gives an intermittent tone @ 95dB.

The unit can be fitted in both 24V DC and 230V AC systems, covering a wide range of applications.



Audio Visual Alarm

INSTALLATION

The front of the unit is removable so ease of wiring can take place. Simple instructions are given on the inside of the unit so wiring can be completed quickly and efficiently. There are panel knockouts in the unit to provide a simple and neat method of cable entry. The unit is easily mounted using the bracket that comes fitted as standard. Only two holes need to be drilled into the mounting surface. Electrical connection is made via a terminal block at the base of the alarm unit. A full wiring diagram is supplied with the unit giving simple instructions.



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MANUAL SAFETY SHUT OFF SOLENOID VALVE

FACHL series (two way normally closed)

Application

Safety shut off for use with oil and gas giving on/off control with no voltage release safety feature for non-aggressive media compatible with the materials of construction.

Features

Heavy duty valve design

Lever reset operation.

No voltage release safety feature

AC version fitted with DC internal rectifier

Choice of seat material.



Pipe Size	Orifice mm	KV m ³ /hr	Max Bar Pressure OPD	P Max Bar	Power Watts	Media Temp	Seal Material	Weight Kg	Body	Valve Type
3/8"	16.0	1.92	8.6	16	14.5	-10°C to +80°C	Standard Nitrile (Buna N)	1.4	Brass	FACHL3
1/2"	16.0	2.88	8.6	16	14.5			1.4	Brass	FACHL4
3/4"	19.1	7.92	8.6	16	14.5			1.9	Bronze	FACHL6
1"	22.2	9.48	8.6	16	14.5			1.9	Bronze	FACHL7
1 1/4"	38.1	23.16	8.6	16	14.5			3.1	Bronze	FACHL8
1 1/2"	38.1	23.16	3.0	16	14.5			3.1	Bronze	FACHL9
2"	50.8	47.28	3.0	16	14.5			3.7	Bronze	FACHL10
2 1/2"	76.0	64.26	1.0	16	14.5			7.8	Bronze	FACHL11
3"	76.0	77.16	1.0	16	14.5			7.8	Bronze	FACHL12
4"	102.0	167.10	0.8	16	22			40.5	Bronze	FACHL13
6"	152.0	331.08	0.3	16	22			70.5	Cast Iron	FACHL15
8"	200.0	559.00	0.3	16	22			150.0	Cast Iron	FACHL17



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MANUAL RESET SOLENOID VALVE

Technical Specification

Function: Normally closed, energize and manually reset to open.

Ambient Temperature: -10°C to +50°C

Viscosity: Heavy oil 3500 sec Redwood.

Materials:

Body: Brass, Bronze, Cast Iron.

Internals: Stainless Steel,

Seals: Standard Nitrile (BunaN) **Options:** Viton

Coil Voltage: 12,24V DC: 24,110, 220/240V AC, 50/60Hz

Voltage Tolerance: ±10%

Duty Cycle: 100% continuously rated.

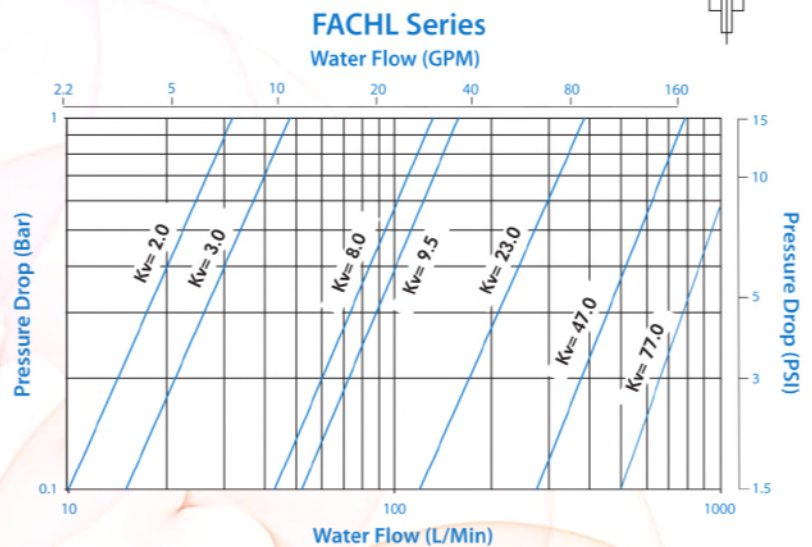
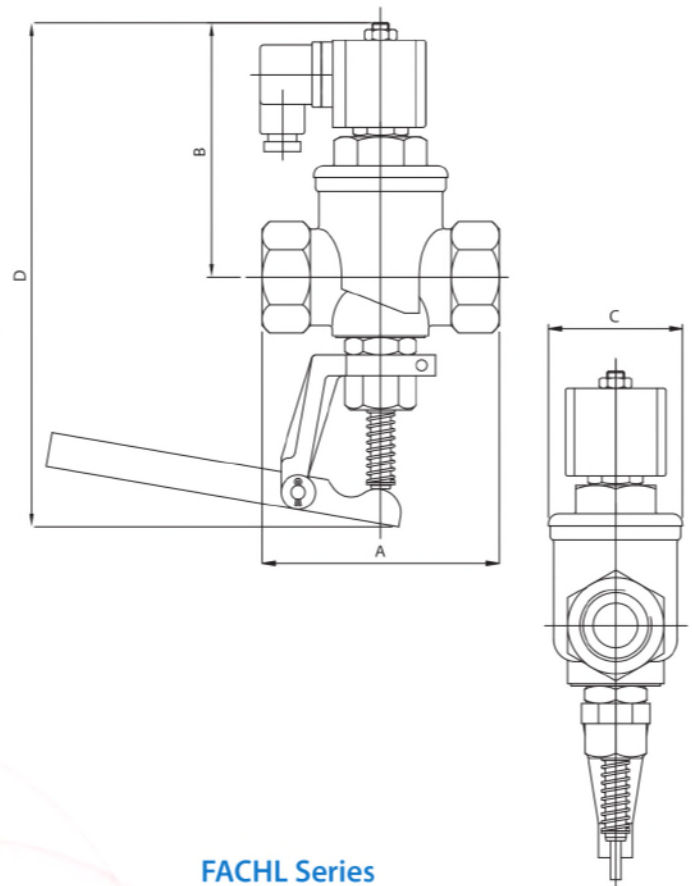
Pressure: 17.2 bar

Media: Oil, liquids, suitable for steam when fitted

with metal seals

Dimensions

Size	A	B	C	D
3/8" - 1/2"	70	100	75 inc plug	184
3/4" - 1"	44	70	75 inc plug	196
1 1/4" - 1 1/2"	63	76	75 inc plug	221
2"	63	76	75 inc plug	233
2 1/2"	260	137	75 inc plug	273
3"	197	137	75 inc plug	273
4"	292	285	190	577
6"	356	330	260	686
8"	495	355	310	716



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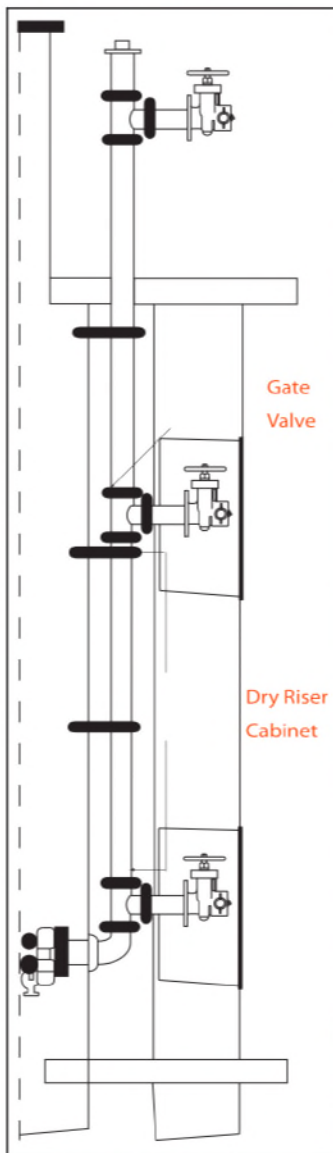


DRY RISER INLET AND OUTLET CABINETS

General

Dry riser equipment is used to provide efficient fire protection in multi – floor buildings generally from 18 to 60 metres high. Above 60 metres high a wet riser system is recommended. All cabinets are designed and manufactured to conform to BS5041.

Typical Installation



The system is called dry riser because the system stands dry and is charged with water in an emergency by fire fighters, via the inlet breeching. A typical system would comprise a vertical riser pipe of 4" or 6" nominal bore fitted into a staircase enclosure or other suitable position. Outlet landing valves would be provided on each floor and inlet breeching at ground floor level. The inlet breeching and outlet landing valves are usually housed in cabinets.

Construction

The cabinets are constructed from 16 SWG Mild Steel, coated with a protective aluminium finish. The door and frame are constructed from 3mm mild steel finished with an epoxy powder coat. The cabinets come complete with a wired glass window marked with the words 'DRY RISER INLET' and 'DRY RISER OUTLET'.

The dry riser inlet cabinets are supplied in either horizontal or vertical pattern for two way inlet breechings and square pattern for four way inlet breechings. Dry riser outlet cabinets are usually a vertical pattern. Locks can be supplied to local fire brigade requirements.



Models in the range	Dimensions
Horizontal Inlet	596 x 398 x 296mm
Vertical Inlet	398 x 596 x 296mm
Square Inlet	596 x 596 x 296mm
Vertical Outlet	460 x 610 x 326mm



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FOAM INLET CABINETS

General

These cabinets house the connections which allow fire fighters to pump foam down the foam circuit and onto a fire. They are required when it is known that the local fire brigade use mechanical foam generators. Foam Inlet Cabinets are designed and manufactured to conform to BS5041.

Construction

The cabinets are constructed from 16 SWG mild steel, coated with a protective aluminium finish. The door and frame are constructed from 3mm mild steel finished with an epoxy powder coat. The cabinets come complete with a wired glass window marked with the words 'FOAM INLET'. On request cabinets can be supplied with the same lock for each foam inlet or to local fire brigade requirements, i.e. standard lock number.



Positioning

They should be sited on the external wall of a building approximately 2ft above ground level. The position should be away from openings to the boilerhouse or tank chamber so that the glass can be broken by fire fighters and the door opened from the inside, if no keys are available.

Models In the Range	Dimensions
Single Point Inlet	305 x 305 x 203mm
Two Point Inlet	610 x 305 x 203mm
Three Point Inlet	813 x 305 x 203mm



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FOAM INLET EQUIPMENT

General

The standard system comprises a foam inlet box mounted on an outside wall of a building approximately 2ft from ground level. The box houses the inlet adaptors or instantaneous connectors, which feed the distribution pipework in the boilerhouse or tank room. The foam is sprayed onto the fire site via foam spreaders.



Right Angled
Foam Spreader

Pipe diameter should be 2½" or 3". The layout of the pipe should be as direct as possible and where changes in direction are necessary, long sweep elbows or springs must be fitted. It is important that elbows are not used in the design of the circuit. The length of pipe line should not exceed 60ft unless the local fire brigade have equipment capable of supplying foam for greater distances. There should be no more than three bends in a line. The pipe should terminate over the top of the tank via a spreader or, if discharging on the floor, using a cone pipe spreader.

Foam Inlet Adaptor

These are housed inside foam inlet boxes. They allow foam to be delivered to the site of a fire in a boilerhouse or plant room via the foam distribution pipework. They are available in two types both made from gunmetal. The taper foam inlet 2½"; or 3" BSP female outlet with inlets which are taper bore to accept foam branchpipes. Or instantaneous which has 2½" or 3" BSP female outlets and a 2½" instantaneous male inlet. Versions with flanged outlets are available on request.



Foam
Spreader

Foam Spreaders

These are sited at the end of the pipework above the tank or boiler to spray foam onto the fire site. There are two models; the straight foam spreader and the elbow foam spreader. Both models are available in 2½" or 3" BSP female connection to suit the distribution pipework.



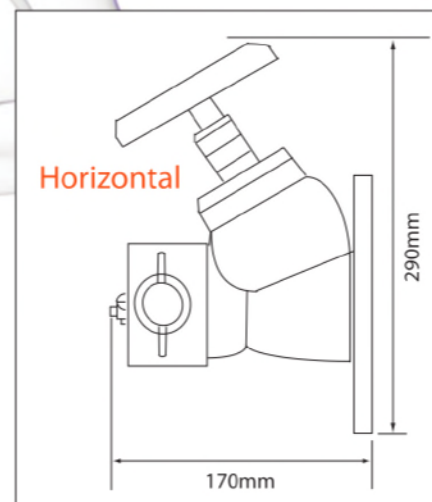
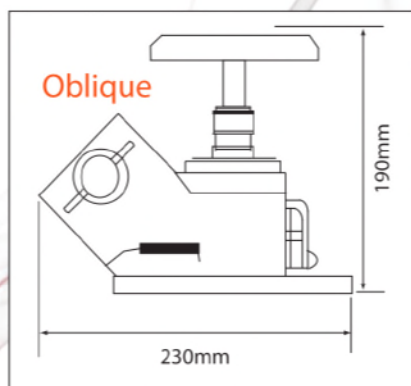
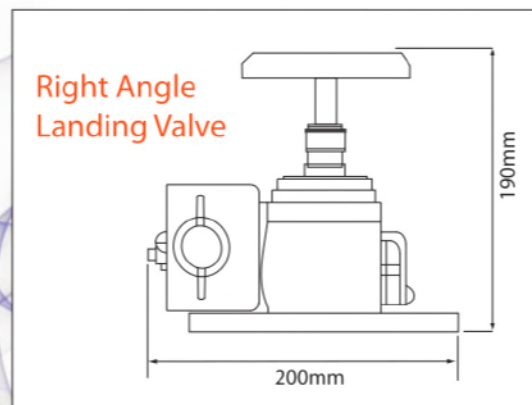
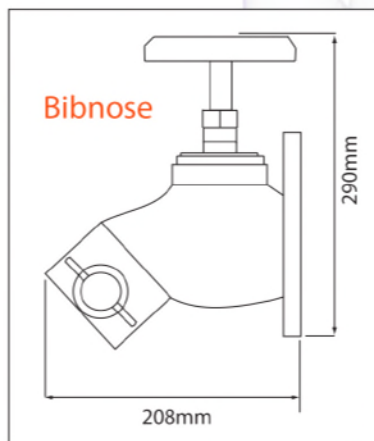
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LANDING VALVES

These valves enable a uniform fire fighting pressure to be maintained at any hydrant in a high rise building irrespective of its location in the system. Efficient pressure control is not affected by differences in inlet pressure which may occur on varying floor levels. The valve can be quickly adjusted to meet individual floor level pressure requirements. The valves are supplied in oblique and bib nose configuration, with a choice of two springs to give varying static outlet pressure; 4.1 to 5.5 bar or 5.5 to 8.3 bar.

Pressure regulating valves are made to BS5041, built from gunmetal and manganese bronze. The maximum connection pressure is 20 bar. Outlet pressures are 4.1 to 5.5 bar (60-80psi) or 5.5 to 8.3 bar (80-120psi). Inlet connections flanged 2½" ASA 150 or 3" ASA 150; others are available on request. Outlet connection is 2½" female instantaneous.



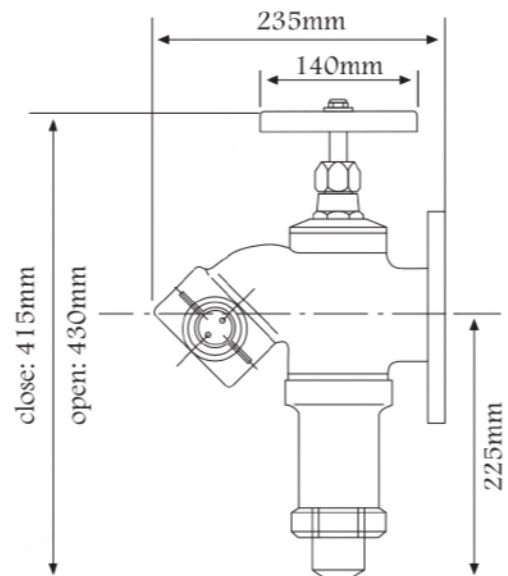
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PRESSURE REGULATING VALVES

Integral Type

For connection to a high pressure supply (generally up to 20 barg) to provide a constant reduced outlet pressure (set in situ) for fire-fighting. Design code: BS5041 Part 1. PRV-E is the standard model. Versions are available with a by-pass facility to provide regulated as well as non-regulated output (the latter is useful for supply to monitors and foam inductors). PRV-F has hydraulic by-pass (lever operated). PRV-G has a mechanical by-pass (main hand wheel operated). Standard construction material – gunmetal with inlet/outlet options. Other materials are available.



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FIRE FIGHTING

Hose Reels

All are BS5274 to suit 19mm ($\frac{3}{4}$ ") or 25mm (1") hose. They are either automatic, i.e. the water comes on as the hose is unreeled, or manual, i.e. a gate valve must be opened by hand. Hose reels may be fixed to the wall or supplied with swing fittings which allow them to be unreeled in any direction.

Two Braided Rubber Hose

To suit the above hose reels. There are two sizes 19mm and 25mm they come in the following lengths: 19mm x 18m/ 24m/ 20m/ 35m/ 45m or 25mm x 18m/ 24m/ 30m/ 36m and are finished in red.

Layflat Hose

2½" bore, can be purchased by the metre without couplings or in 23 metres lengths complete with couplings. The hose is rubber lined and has a polyester outer covering as standard which can be coated in polyurethane. The outer covering may also be in DVC Nitrile for more resistance to contaminants. We also do a full range of nozzles and couplings to suit this type of hose.

Underground Hydrants

Made in cast iron they are a type 2 to BS750 medium pattern with 80mm PN16 flanged inlet or 3" BST "D". Outlets are in gunmetal and are 2½" bsp round threads. The underground hydrant is also available with a "Belfast Pattern" outlet.



Underground
Hydrant Valve

Hose Reel Boxes

There are two types; surface mounting or recessed. Both are available with a solid or glass door. The door opens out to 180° allowing it to lie flat against the wall so as not to obstruct the hose reel or access to narrow passages. The dimensions of the box are 690mm x 690mm x 240mm. They are supplied complete with a 19mm manual recessed swinging hose reel, plus 30 metres of 19mm hose and a nozzle.

Nozzles

To suit the above hoses are available in both 19mm and 25mm sizes. There are three models nylon jet/spray nozzle, chrome jet/spray nozzle and chrome jet spray nozzle with on/off lever.



Chrome
Nozzle



Plastic
Nozzle

Standpipes

These are available in single or double headed versions and have a 2½" bsp round thread female inlet and 2½" instantaneous female outlets. They are manufactured in light alloy. We also supply contractors standpipes with 2½" bs round thread female inlet and ¾" bib tap outlet with or without double check valve.



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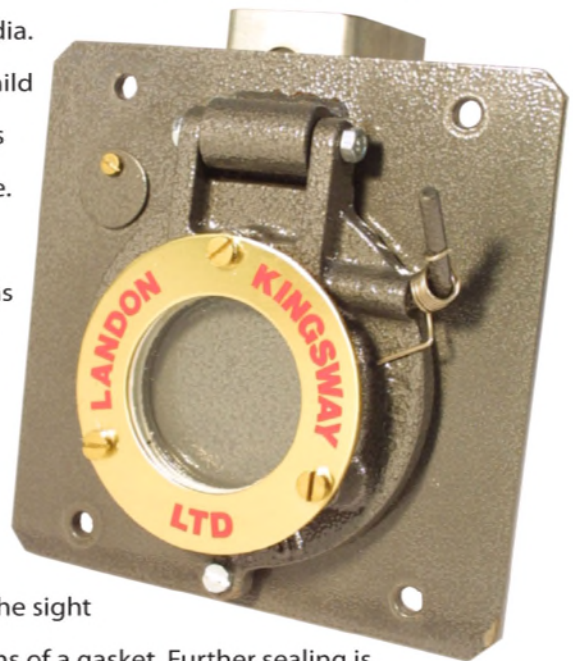
FURNACE INSPECTION WINDOW

Application

Kingsway furnace inspection windows can be used on boilers, air heaters, or furnaces which require an observation window and a test point with small opening for access of a flame mirror. It is supplied in two parts i.e. with or without backing plate.

Construction

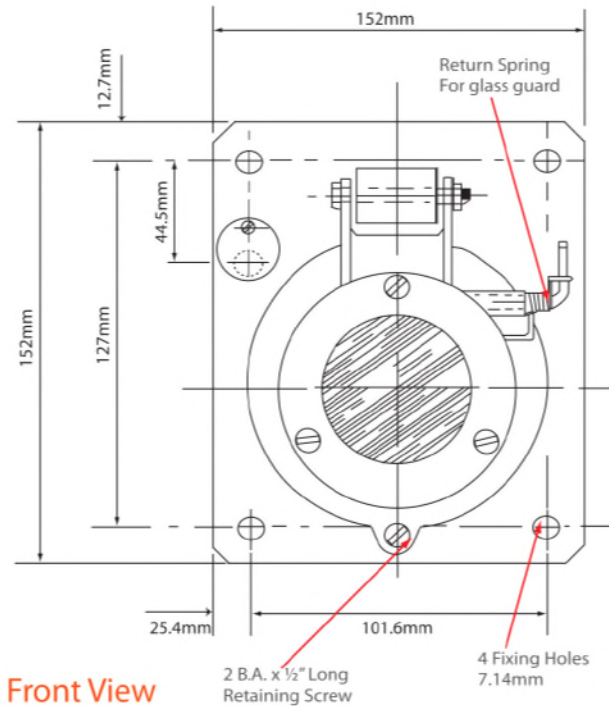
The window itself is $\frac{1}{4}$ " dia. armour plate heat resisting glass $\frac{1}{4}$ " thick, this being a replaceable item. The complete assembly consisting of inspection window with a backing plate may be bolted or screwed to the furnace front plate with $\frac{1}{4}$ " dia. bolts or screws. The backing plate is constructed of mild steel to EN1A $\frac{3}{16}$ " thick and has four clearance holes $\frac{9}{32}$ " dia. for fitting to the relevant furnace front plate. The main inspection window body is constructed in cast iron and is secured to the backing plate by means of a 2BA cheese head screw $\frac{1}{2}$ " long, the main hinge block being welded to the backing plate in such a position to accommodate correct alignment for the clearance hole in the backing plate and the whole window assembly being fitted to the hinge, then secured in position by a 2BA hexagon bolt and nut. The sight glass assembly is sealed to the backing plate by means of a gasket. Further sealing is accommodated by gasket rings each side of the glass, the glass being finally held clamped in position by the brass cover plate, thus preventing any possibility of rattling and extraneous air entry. In order to protect the glass from sooting up and continual subjection to heat, the inspection window is fitted with a glass guard plate made from mild steel to the EN1A, $\frac{1}{8}$ " thick, the complete assembly being hinged in the main casting of the inspection window with a spring loaded handle which keeps the guard normally closed until required for use.



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FURNACE INSPECTION WINDOW



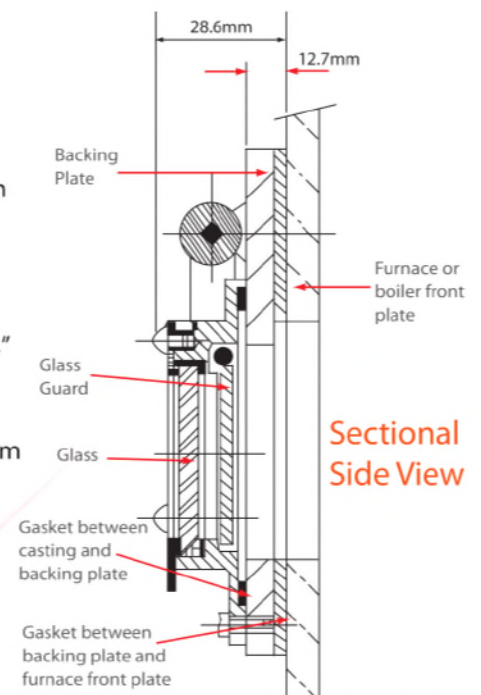
Front View

Operation

When the furnace inspection window is issued with the backing plate it provides a test hole 3/8" dia. which is covered by the test hole cover which can easily be swung aside to allow the sampling probe to be fitted. The complete sight glass assembly may be lifted on its hinge to allow access through the backing plate to the inside of the furnace, (clearance hole 2 1/4" dia.). Should however inspection be required without removing the sight glass assembly then the sight glass guard may merely be moved away from the back of the assembly by depressing the lever on the outside of the unit. When an inspection window is used without the backing plate then there is of course no sampling hole provided and inspection may be accommodated by depressing the lever on the sight glass guard to allow easy viewing of the inside of the furnace or by merely removing the 2BA screw securing it in position, the whole assembly may be lifted on its hinge and access gained to the inside by means of the clearance hole in the actual backing plate of the furnace itself.

Inspection Window Without Backing Plate

Should the inspection window be required for use on its own the hinge for the window casting should be welded to the boiler front plate in a suitable relative position to the clearance hole for the sight glass. An adequate seal is provided between the main casting and the boiler front plate with a 1/8" thick gasket. When the inspection window is used without the backing plate the sight glass guard is still assembled to it and held in position by means of its spring loaded lever. Standard temperature rating is 300°C, though other temperatures are available upon request.



Sectional Side View



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