APT , DUNDEE WHARF
Three Colt Street, London, E14

As Installed
Electrical Information

Electrical Contractor:

MBS Building Services
4 Lodge Lane
Chalfont St. Giles
Bucks HP8 4AQ
Tel : 01494 765870
Fax : 01494 765945

Main Contractor:

Ballymore Properties
41-43 Cheshire Street
LONDON E2 6EE
Tel : 0171 713 1983
Fax: 0171 713 1992

ELECTRICAL SERVICES

The electrical installation to your apartment was carried out by MBS Building Services, 4 Lodge Lane, Chalfont St. Giles, Buckinghamshire, HP8 4AQ. Telephone 01494 765870.

Supply and Distribution

The electricity supply enters your apartment through the electric meter, located on the stair landing, at each level. The meter and the cable leading into it belong to the electricity company and must not be tampered with in any way. All cables and equipment on the 'home side' of the meter are your responsibility.

The wires leading from the meter go first to the Customer Units, which you will find located at high level in the small storage cupboard in the hall of your apartment. The Consumer Unit contains the main on/off switches and a number of HRC's (High Rupturing Capacity fuses) which protect individual circuits. Written above each HRC is a description of its circuit - power, lighting, water heater, etc. HRC's have different current ratings suitable for the type of circuit; a cooker circuit will require 30 Amperes, but a lighting circuit only 5 Amps, etc.

Power Circuit

This is sometimes also referred to as the 'ring main' and it provides power to the wall socket outlets generally and the hood extract fan over the hob in your kitchen. You will have one or more circuits, depending upon the size of your apartment.

Lighting Circuit

As well as providing power to the fixed lights (portable lights can be plugged into wall sockets) this will include the bathroom extract fan which is operated when you switch the bathroom light on. You will have one or two circuits, depending upon the size of your apartment.

Smoke Detection

Mounted on the ceiling of the hall is a smoke detector/alarm. The hall is the route of escape out of the apartment in the event of a fire and the room which connects to all others. The smoke detector is on its own circuit for added protection. Should that circuit fail or your suffer a general power cut there is an in built battery inside the detector which will keep it operational for 3 hours. This battery will require replacing about every 12 months.

The detector is manufactured by Aico Ltd., Telephone : 01691 657466.

A RED LIGHT INDICATES THAT THE SMOKE DETECTOR IS OPERATIONAL BUT YOU SHOULD TEST THE FITTING REGULARLY AS DESCRIBED IN THE MANUFACTURER'S LEAFLET IN THE BACK OF THIS MANUAL

Space Heating

Panel heater are provided to heat your apartment and each apartment is insulated to the high standard required by modern regulations.

The panel heaters may be switched on and off as you need the heat, but also have a thermostatic control to enable you to leave them switched on maintaining a constant room temperature. You should consult the manufacturer's leaflet enclosed with the Manual for instructions on the various controls which alter the temperature settings and convectors boost. The heater manufacturer is Patterson Heating, Telephone - 0121 773 0114.

Water Heating

Your hot water is provided by 3 kW electric immersion heaters fitted to a factory insulated storage cylinder. Cylinder manufacturers are either Telford Copper Cylinders Ltd. Unit 22, Furrows Business park, Haybridge Road, Wellington, Telford, Shropshire, TF1 4JF, telephone - 01952 257963 or Heatrae Sadia Megaflow Ltd, Hurricane Way, Norwich, NR6 6EA, telephone - 01603 424144. Instructions for adjusting the water temperature are given in the manufacturer's leaflet enclosed with this Manual.

Fused Circuits

If a circuit fails, first disconnect (not just switch off) any appliance that you think might have caused the problem. It will be obvious on the Consumer Unit which circuit has been affected because the HRC will have fused. Replace the HRC fuse; it should restore the circuit. You can double check by reconnecting the appliance and seeing if it fuses the HRC again, if it does, this means there is still a faulty appliance somewhere and you should try to locate which by disconnecting all appliances and reconnecting them in turn and switching them on. If you still cannot find the fault, call an electrician as you may, for instance, have a fault inside a fitted socket or switch. Some faults are intermittent and you may find the circuit will work for a time with every thing as it was. Do not keep replacing the HRC. Correct the fault, calling in an electrician if necessary.

Fixed appliances such as the heaters, fans, etc. are wired to a fused spur as described above. A fault in these appliances will break the fuse in the spurt and this may happen without affecting the whole circuit. A small hinged flap in the front of the spur contains the fuse, a ceramic cased cartridge. Replacements are available from hardware stores. Always replace a fuse with one of the same ampere rating.

TELEPHONE PROVISION

Installing a line

Telephone cabling has been installed to a point in your lounge, and a connection can be made immediately upon application to British Telecom.

THE VIDEO ENTRY PHONE

The Handset Unit

Located by your front door, the handset unit is linked to the remotely operated lock on the external door to the common stair hall serving your apartment. The video in the phone unit is linked to the gate house entrance being the primary point of entry through which all visitors are obliged to be identified by their host before being allowed access to the hall entrance.

The system has been supplied and installed by MBS Building Services, Telephone 01494 765870. Instructions for operation are given in the manufacturer's leaflet in the back of this Manual.

Your Entry Phone System Functions

1. INCOMING CALL - Your phone will ring if the caller is at the outside gate and a picture will appear on your screen. To allow entry press key button.

2. To call your porter press the key button with the handset hung on the cradle. At this point the phone rings once - **wait** - when the phone rings again pick up the handset and speak. The system has a 'time out' which means that after 90 seconds the system will shut and you will have to speak to the porter again.

PRODUCT INFORMATION

Distribution Board:

Proteus Switchgear
Consumer Unit Division
Pipers Road
Park Farm Industrial Estate
Redditch
Worcestershire B98 0HU

Tel : 01527 517117
Fax : 01527 26873

Socket/Switch Equipment:

GET Plc
Unit 4
Brunswick Industrial Park
London N11 1JL

Tel : 0181 368 4555
Fax : 0181 368 5422

Extractor Fan for Bathroom:

Manrose Manufacturing Limited
8G Bedford Avenue
Slough
Berks SL1 4RA

Tel : 01753 691399
Fax : 01753 692294

Smoke Detection:

Aico Limited
Unit 14
Mile End Business Park
Maesbury Road
Oswestry
Shropshire SY10 8NN

Tel : 01691 657466
Fax : 01691 662933

Space Heating:

Paterson Heating Limited
Units 19 & 21 Small Heath Trading Estate
Armoury Road
Birmingham B11 2RJ

Tel : 0121 773 0114/
Fax : 0121 766 6589

Water Heating Controls:

Horstmann Timers and Controls
Newbridge Road
Bath BA1 3EF

Tel : 01225 421141
Fax : 01225 423070

Entry Phone Equipment:

Acet UK
Valley Line Industrial park
Station Road
Cheddar
Somerset BS27 3EE

Tel : 01934 744275
Fax : 01934 744304

MODULAR CONSUMER UNITS INSULATED AND METAL CLAD

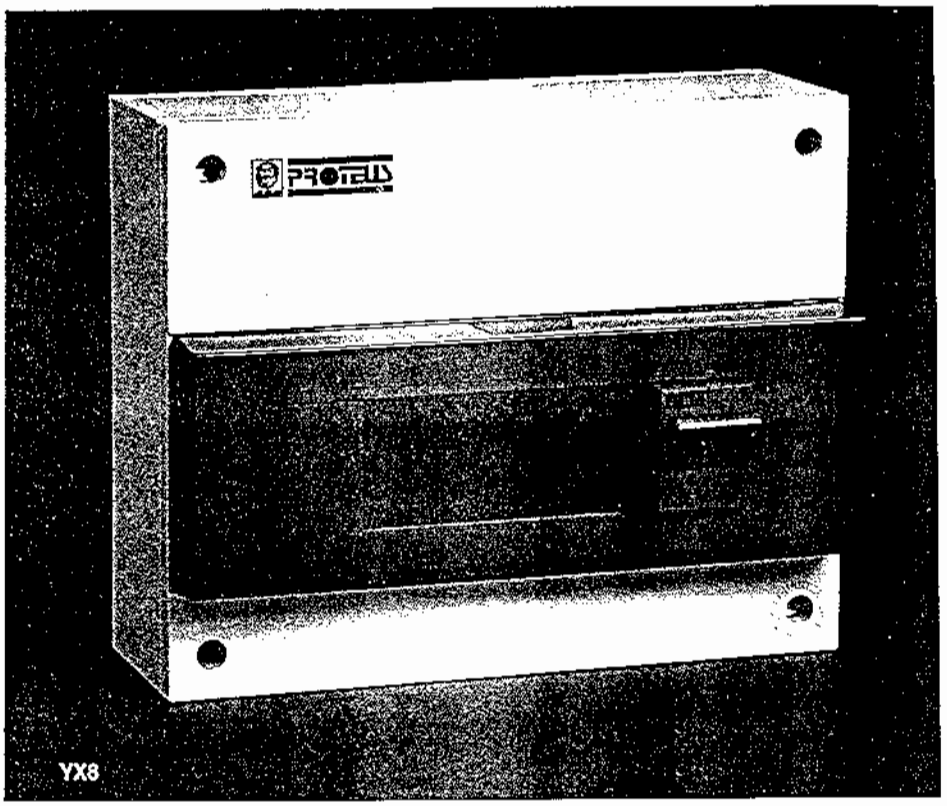
Manufactured in accordance with BS5486 Part 13

The most comprehensive and versatile range available.

ISOLATOR CONTROLLED UNITS

Available in 1 way to 40 way Insulated & Metalclad.

All units will accept 6KA & 10KA MCB's, RCBO's and DIN HRC carriers.

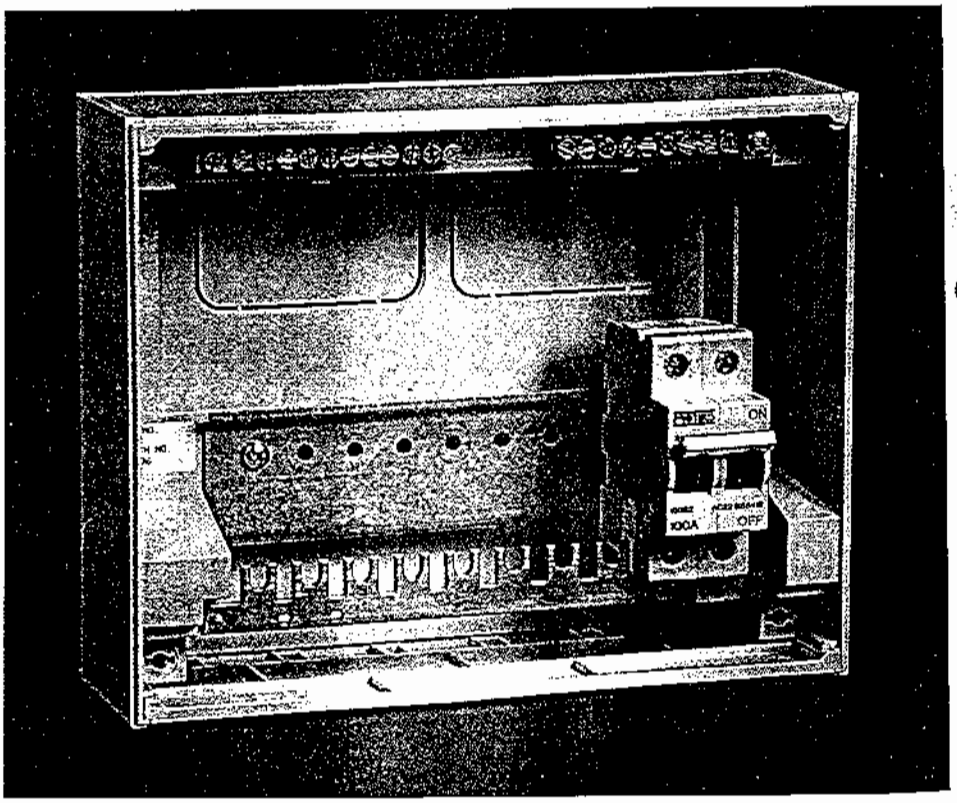


FEATURES

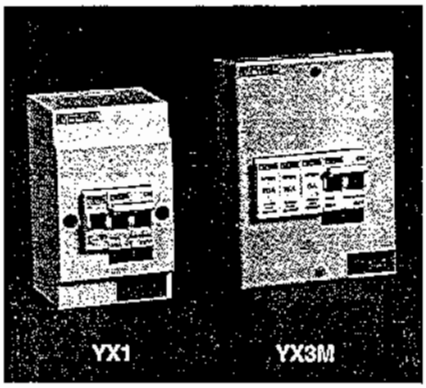
INSULATED ONLY

- Smoked front cover can be removed and inverted to provide hinging up or down.
- Four push down quarter turn screws provide easy removal of front lid.
- Removable top & bottom end plates aid wiring access.
- Removal of opposing end plates allows units to be banked together, offering almost limitless permutations.
- Additional units can be added to existing installations.
- Permits all electrical controlling systems to be accommodated in one housing.

The above does not apply to the 1, 2 & 3 way units.

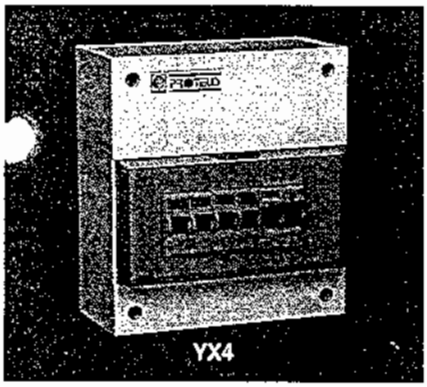


ISOLATOR CONTROLLED UNITS



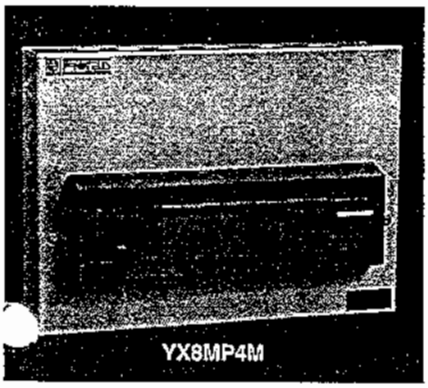
D.P. ISOLATOR 45A-63A

Ways	Isolator Rating A	Insulated Cat No.	Metal Clad Cat No.
1 Way	45A	YX1	YX1M
2 Way	63A	YX2	YX2M
3 Way	63A	YX3	YX3M



D.P. ISOLATOR 100A

Ways Units	Modules	Insulated Cat No.	Metal Clad Cat No.
4 - Single	6	YX4	YX4M
6 - Single	10	YX6	YX6M
8 - Single	10	YX8	YX8M
12 - Single	14	YX12	YX12M
18 - Single	20	YX18IL	YX18MIL
18 - 2 x banked	2 x 10	YX18	YX18M
26 - 2 x banked	2 x 14	YX26	YX26M
28 - 3 x banked	3 x 10	YX28	YX28M
40 - 3 x banked	3 x 14	YX40	YX40M



MULTI PURPOSE CENTRES

Part with full DIN rail to accommodate accessories, i.e. Timers, Contactors, Bell Transformers, RCD's etc.

MCB Ways SP	Module Ways SP	Insulated Cat No.	Metal Clad Cat No.
6	2	YX6MP2	YX6MP2M
4	4	YX4MP4	YX4MP4M
6	6	YX6MP6	YX6MP6M
8	4	YX8MP4	YX8MP4M
10	2	YX10MP2	YX10MP2M

FLUSH MOUNTING

Ways	Flush Met Clad Cat No.
4	YX4MFL
6	YX6MFL
8	YX8MFL
12	YX12MFL

Dimensions, see page 22

EXCLUSIVE

ALL PRODUCTS CARRY A 15 YEAR GUARANTEE
GET EXCLUSIVE RANGE

SOCKET OUTLETS – BS1363

CODE	DESCRIPTION
GSKT1G	13AMP 1 GANG UNSWITCHED SOCKET
GSKT2G	13AMP 2 GANG UNSWITCHED SOCKET
GSKTSW1G	13AMP 1 GANG SWITCHED SOCKET
GSKTSW2G	13AMP 2 GANG SWITCHED SOCKET

DIMENSIONS – 1 GANG 86x86mm 2 GANG 146x86mm
FIX SCREWS – M3.5x30mm
FIX CENTRE – 1 GANG 60.3mm
2 GANG 120.6mm
MINIMUM BOX DEPTH – 25mm

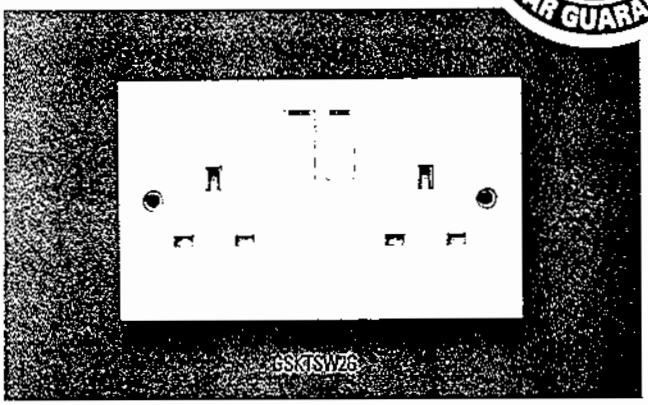
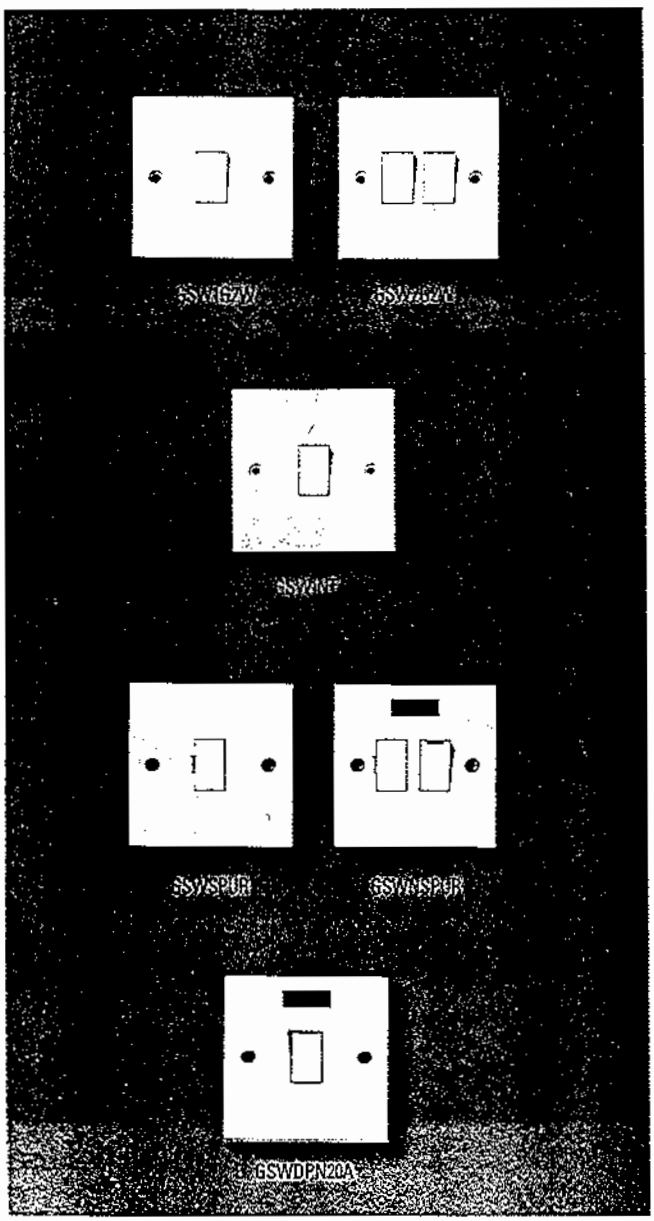


PLATE SWITCHES – BS3676

CODE	DESCRIPTION
GSW1G1W	6AMP 1 GANG 1 WAY SP SWITCH
GSW1G2W	6AMP 1 GANG 2 WAY SP SWITCH
GSW2G2W	6AMP 2 GANG 2 WAY SP SWITCH
GSW3G2W	6AMP 3 GANG 2 WAY SP SWITCH
GSW4G2W	6AMP 4 GANG 2 WAY SP SWITCH
GSW1SO	6AMP 3 POLE ISOLATOR SWITCH
GSWINT	6AMP 1 GANG INTERMEDIATE SWITCH

DIMENSIONS – 1,2&3 GANG 86x86mm 4 GANG 146x86mm
FIX SCREWS – M3.5x20mm
FIX CENTRE – 60.3mm
MINIMUM BOX DEPTH – 16mm



CONNECTION UNITS
BS5733 (WHERE APPLICABLE)

CODE	DESCRIPTION
GSPUR	13AMP FUSED CONNECTION UNIT
GNSPUR	13AMP UNSWITCHED FUSED CONNECTION UNIT + NEON
GSWSPUR	13AMP SWITCHED FUSED CONNECTION UNIT
GSWNSPUR	13AMP SWITCHED FUSED CONNECTION UNIT + NEON
GFOPLATE	20AMP FRONT ENTRY FLEX OUTLET PLATE
GSFOPLATE	25AMP SIDE ENTRY FLEX OUTLET PLATE

DIMENSIONS – 86x86mm
FIX SCREWS – M3.5x30mm
FIX CENTRE – 60.3mm
MINIMUM BOX DEPTH – 25mm

20AMP DOUBLE POLE SWITCHES BS3676

CODE	DESCRIPTION
GSWDP20A	20AMP + DP SWITCH
GSWDPN20A	20AMP + DP SWITCH WITH NEON
GSWDP20AFO	20AMP DP SWITCH WITH FLEX OUTLET
GSWDPN20AFO	20AMP DP SWITCH WITH FLEX OUTLET + NEON
GSWDPN20AFOWH	20AMP DP SWITCH WITH FLEX OUTLET (MARKED WATER HEATER)

DIMENSIONS – 86x86mm
FIX SCREWS – M3.5x30mm
FIX CENTRE – 60.3mm
MINIMUM BOX DEPTH – 25mm

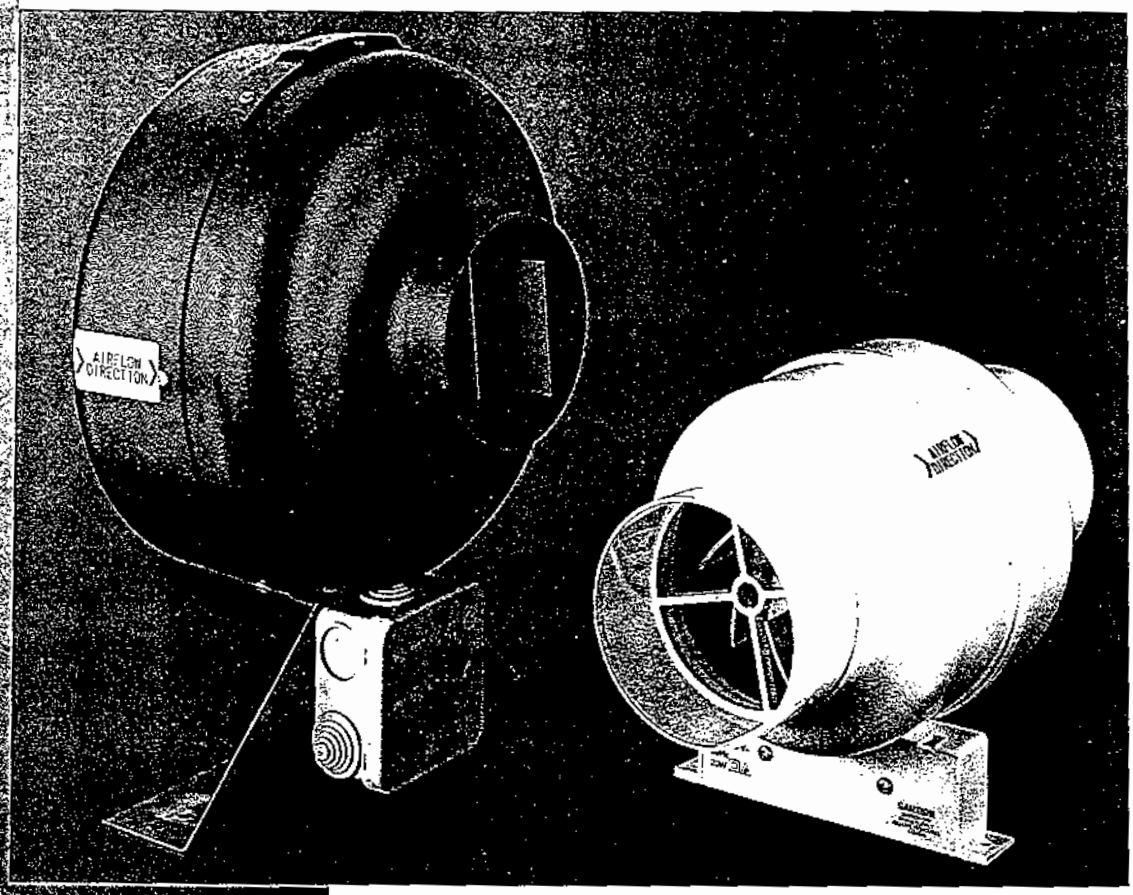
CE MARKED WHERE APPLICABLE

MANROSE

Leading the way

CFD200/400

RANGE OF 100MM IN-LINE CENTRIFUGAL FANS



- Extract rate: CFD200 110m³/hr, 31 litres per second
  CFD400 230m³/hr, 64 litres per second
- British made
- Designed to exceed the 1995 Building Regulations on Ventilation (F1)
- CFD200 fitted with a built-in spring operated non-return flap into the discharge spigot to prevent backdraughts
- Suitable for use with suspended ceiling systems
- Extensive range of ventilation accessories to cover most in-line ducting systems
- Two speed controller available
- 2 year no quibble guarantee
- Designed to comply with BS3456/HD280 Part 102:342 1988

This latest range of high performance centrifugal in-line duct fans covers a wide range of domestic, commercial and industrial applications including bathrooms, toilets, shower rooms, kitchens, utility rooms, offices, shops and factories.

Both units are designed for extraction through 100mm (4") ducting and are fitted with backward curved centrifugal impellers for a large airflow against the high pressures caused by longer lengths of ducting and resistance by grilles.

Suitable for use with suspended ceilings and as the fans are mounted in-line they are unobtrusive, quiet and effective in operation.

TECHNICAL DATA

LOGUE No.	TYPE
CFD200	Standard model without bracket
CFD200S	Standard model with bracket
CFD200T	Timer model with bracket
CFD400	Standard model with bracket

CONSTRUCTION

The CFD200 fans are moulded in impact resistant high gloss ABS thermoplastics for strength, durability and appearance. Fitted with a powerful backward centrifugal impeller. A spring operated non-return flap is built into the discharge spigot to prevent back-draughts and comes complete with mounting bracket.

The CFD400 fans are vacuum formed in 4mm thick PVC with a zinc plated mild steel internal motor support and built-in fixing bracket.

ELECTRICAL

...0-240V ~ A.C. 50Hz ⧈ ⚠. Single phase consuming 45 watts on the CFD200 and 70 watts on the CFD400. All wiring must comply with current IEE regulations. A double pole isolating switch, having a contact separation of at least 3mm in all poles, must be used with a 3 amp fuse fitted.

MOTOR

CFD200: Single phase induction motors with pre-oiled bearings fitted for a long maintenance free life and protected by an auto-reset thermal cut-out.

CFD400: 4 pole single phase induction motor with ball bearings fitted for a long maintenance free life and protected by a thermal auto-resetting cut-out. Totally enclosed for protection against dust and dirt. Motors are continually rated.

GUARANTEE

Two year 'no quibble' guarantee.

INSTALLATION

Induct fans suitable for in-line systems and designed for use with suspended ceiling systems.

PERFORMANCE

CFD200: -110m³/hr, 31 litres per second.

CFD400: -230m³/hr, 64 litres per second.

PACKAGING

CFD200: Boxed in cartons of 5 measuring 200mm x ...0mm x 240mm and weighs 8kgs.

CFD400: Boxed in cartons of 5 measuring 250mm x 365mm x 245mm and weighs 16kgs.

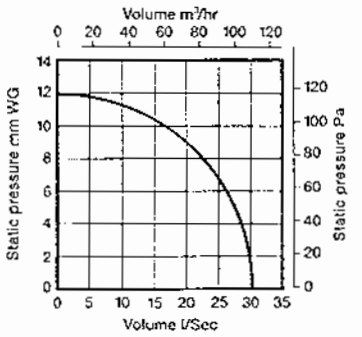
PACKAGING

CFD200: Maximum pressure: 130 p.a. Fan speed: 1400 r.p.m. Sound volume: 45 db(A). Maximum operating temperature: 40°C.

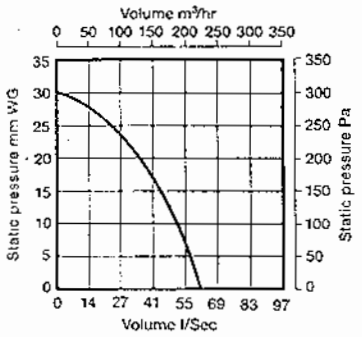
CFD400: Maximum pressure: 300 p.a. Fan speed: ...335 r.p.m. Sound volume: 58 db(A). Maximum operating temperature: 89°C.

PERFORMANCE GRAPH

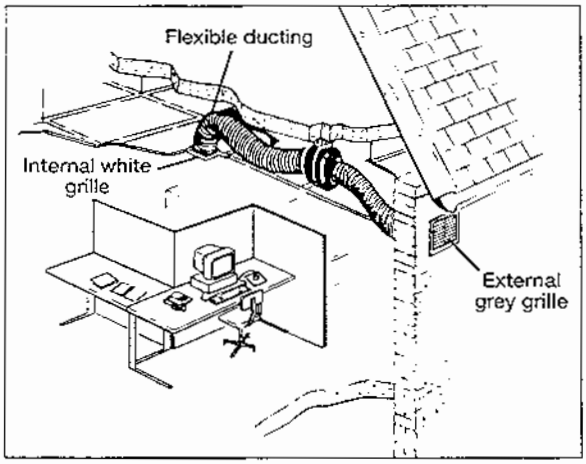
CFD200 SERIES PERFORMANCE GRAPH



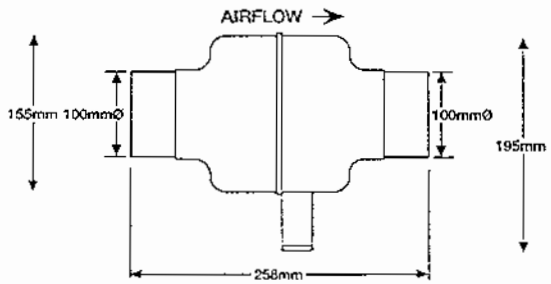
CFD400 SERIES PERFORMANCE GRAPH



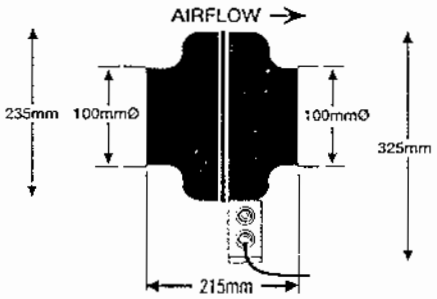
TYPICAL INSTALLATION



DIMENSIONS CFD200



DIMENSIONS CFD400



NOTE: In the interest of continuous product improvement, Manrose reserve the right to alter product specification where necessary.

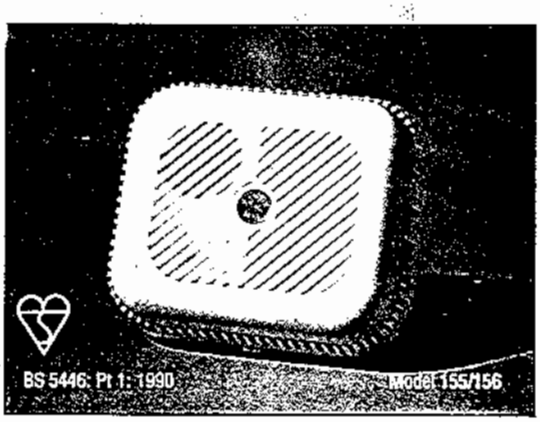
MAINS POWERED IONISATION SMOKE ALARMS

IONISATION alarms respond quickly to fast flaming fires, where little visible smoke may occur. They also respond to a wide range of fires, so they are suitable for general use. To address the problem of nuisance alarms, El Professional ionisation alarms are fitted with a "Hush" button which, when pressed, suppresses the alarm for approximately 8 minutes before automatically resetting. During this time the alarm remains sensitive to high smoke levels consistent with a fire, and bleeps to warn the occupants that it is in "Hush" mode.

- **Hush Button - can be overriden simply by pressing the test button.**
- **Manual Test Button - responds quickly when pressed and tests for correct functioning of the alarm.**
- **Interconnection - up to 12 units of any model in the mains powered range.**
- **AC mains indicator light.**
- **85 decibel alarm at 3 metres.**
- **Low battery warning - (Model 151)**
- **Tamper resistant construction- no user serviceable parts.**
- **Easy installation - detachable back plate with push fit pre wired mains connector.**
- **5 year guarantee.**
- **BS 5446: Pt1: 1990.**

Mains Powered Ionisation Smoke Alarm	Model 150
Mains Powered Ionisation Smoke Alarm with Built In Rechargeable Battery	Model 151

MAINS POWERED OPTICAL SMOKE ALARMS



OPTICAL (or photoelectronic) alarms sense only visible smoke particles and are particularly responsive to fires from foam filled furniture, bedding or overheated PVC wiring. To reduce the risk of false alarms, 2 pulses from the light source at 10 second intervals have to reach the sensor before the alarm is activated. The optical alarm is less vulnerable to false alarms from cooking vapours. They also respond to a wide range of fires, so they are suitable for general use.

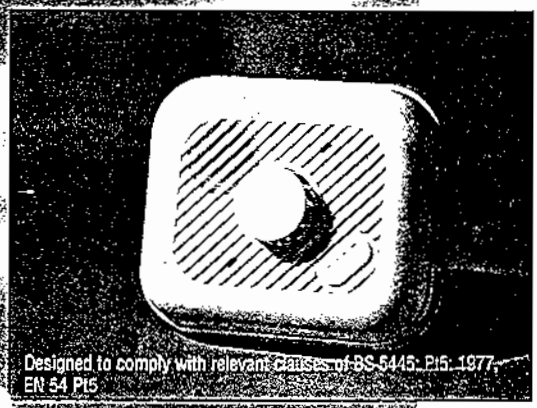
- **Advanced Optical Sensor - minimises nuisance alarms.**
- **Auto Self Test - circuitry is continually monitored and bleeps if there is a malfunction.**
- **Manual Test Button - responds quickly when pressed and tests for correct functioning of the alarm.**
- **Interconnection - up to 12 units of any model in the mains powered range.**
- **Insect resistant mesh.**
- **AC mains indicator light.**
- **85 decibel alarm at 3 metres.**
- **Low battery warning - (Model 156)**
- **Tamper resistant construction - no user serviceable parts.**
- **Easy installation - detachable back plate with push fit pre wired mains connector.**
- **5 year guarantee.**
- **BS 5446: Pt1: 1990.**

Mains Powered Optical Smoke Alarm	Model 155
Mains Powered Optical Smoke Alarm with Built in Rechargeable Battery	Model 156

aico®

SOLE U.K. DISTRIBUTOR

MAINS POWERED HEAT ALARMS



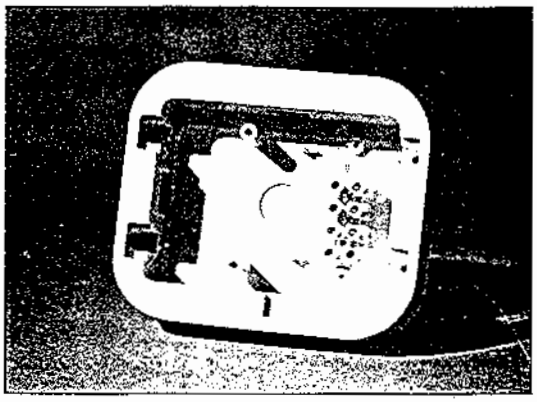
The Heat Alarm is a fixed temperature type, designed for use in areas where, due to high levels of dust or fumes, a conventional smoke alarm is not suitable. It is therefore ideal for kitchens (the source of 40% of domestic fires), garages or boiler rooms. A stand alone unit, it must be interconnected with other smoke alarms in our range in order to provide a more comprehensive warning system in the event of fire.

- **Thermistor Type Sensor - temperature range 54° to 62°C (129° to 144°F).**
- **Manual Test Button - responds quickly when pressed and tests for correct functioning of the alarm.**
- **Interconnection - up to 12 units of any model in the mains powered range.**
- **AC mains indicator light**
- **85 decibel alarm at 3 metres.**
- **Low Battery Warning - (Model 154)**
- **Tamper resistant construction - no user serviceable parts.**
- **Easy installation - detachable back plate with push fit pre wired mains connector.**
- **5 year guarantee.**
- **Designed to comply with relevant clauses of BS 5445: Pt 5: 1977, EN 54 Pt5.**

Any model of mains powered smoke or heat alarm in the range can be interconnected up to a total of 12 units. A flashing LED identifies the alarm that sensed the smoke or heat.

Mains Powered Heat Alarm	**Model 153**
Mains Powered Heat Alarm with Built in Rechargeable Battery	**Model 154**

SURFACE MOUNTING KITS



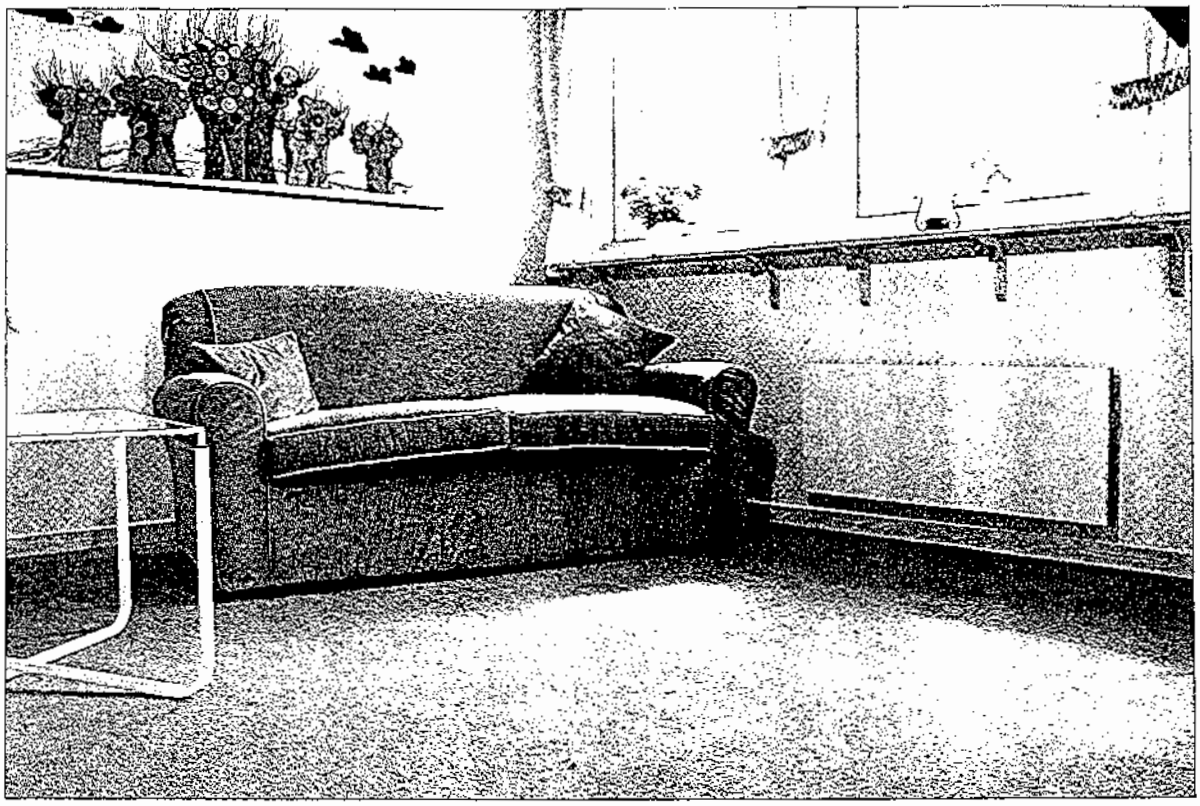
The 157 Surface Mount Kit, designed to fit all the alarms in the range, is for use on ceilings where mains wiring cannot be passed through. The Kit is supplied with a terminal block for looping in mains wiring **(Model 157)**, or a 16 amp relay **(Model 158CS)** with volt free contacts for connection to remote signalling devices such as a warden call system. A pulse relay is also available which activates the relay contacts for approximately 5 seconds. After this period the contacts automatically re-open. Useful in shared line applications as once the latching device has been activated, the line is left free for other uses. **(Model 158P)**

Surface Mount Kit	Model 157
Surface Mount Kit with 16 Amp Relay	Model 158CS
Surface Mount Kit with 16 Amp Relay and Pulse Feature	Model 158P

The importance of fitting mains powered smoke alarms in residential properties is now recognised in law, with the changes in the Building Regulations that came into effect in June 1992 in England and Wales and in July 1993 in Scotland.

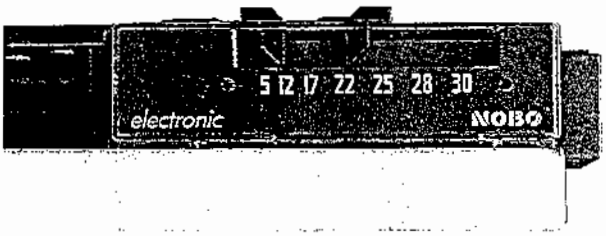
To provide the most comprehensive cover, many fire officers will recommended the **interconnection** of **optical, ionisation** and **heat** alarms all with a reliable back up power supply in the event of mains failure. Aico believe this to be sound advice, since the greater the range and number of alarms installed the greater the chance of early warning in the event of a fire.

GER Heaters



Completely Silent and Controllable

This well established range of Series 7 Panel Heaters comes in outputs from 500 watts to 2000 watts. All heaters have electronic thermostats, which will maintain room temperature to ±0.3 deg. C. giving ±0.5 deg. C. variation in surface temperature.



All heaters are pre-wired for easy installation and are manufactured from electrostatically stove enamelled steel, finished in pearl grey paint front and beige rear and are designed to harmonise with most interior colour schemes. An over-heat cut-out is fitted as standard.

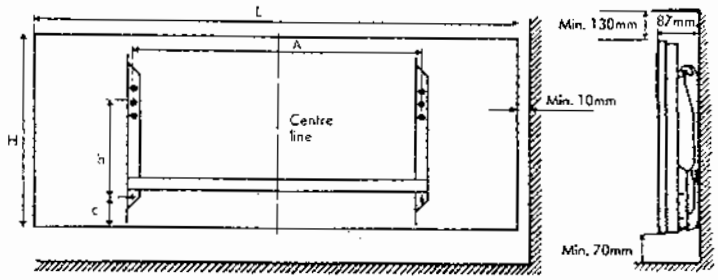
Green and Red pointers on the thermostat allow pre-setting of Set-back and Comfort level temperatures, switching between these two settings is available when plug-in timing options are used. A Green LED indicates which mode the heater is in and a Red LED indicates when the heater is using energy.

A reduced surface temperature is obtainable by using only stage 1 of the 2 stage on/off switch, which halves the output of the heater and substantially lowers superficial temperatures under constant heating requirements. A switch locking cover is available.

Specification

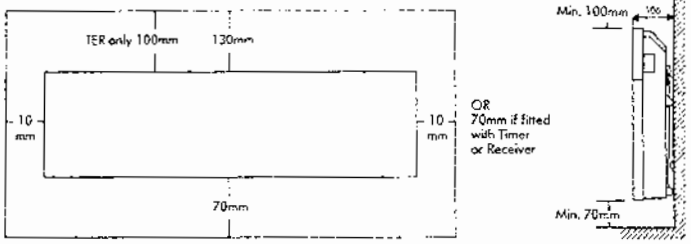
CONSTRUCTION

Element	Alluminium Alloy Finned Type	(TER – Hairpin Type)
Overheat Cut-out	Auto Re-set	(TER – Manual Re-set)
Casing	Mild Steel	
Colour	Pearl Grey and Beige	
Thermostat	Electronic, ±0.3 Differential. External Sensor operated by room return air temperature.	



Minimum Mounting Dimensions

TER



GER OPEN PANEL RADIATORS

Model	Output Watts	H mm	L mm	A mm	h mm	c mm	Weight Kg
GER 05 404	500	400	450	200	179	72	3.7
GER 07 406	750	400	600	340	179	72	4.6
GER 10 407	1000	400	750	340	179	72	5.7
GER 12 409	1250	400	950	680	179	72	6.7
GER 15 411	1500	400	1100	680	179	72	7.8
GER 20 415	2000	400	1500	1040	179	72	10.4

SKIRTING RADIATORS

Model	Output Watts	H mm	L mm	A mm	h mm	c mm	Weight Kg
GER 10 213	1000	200	1300	680	124	3	5.5
GER 12 215	1250	200	1500	1040	124	3	6.2

KER SPLASHPROOF RADIATORS

Specifications as above except casing galvanised before painting

Model	Output Watts	H mm	L m	A mm	h mm	c mm	Weight Kg
KER 03 204	300	200	450	200	124	3	3.0
KER 05 404	500	400	450	200	179	72	3.7
KER 07 406	750	400	600	340	179	72	4.6
KER 10 407	1000	400	750	340	179	72	5.7

GX OPEN CONSTRUCTION

Model	Output Watts	H mm	L mm	A mm	h mm	c mm	Weight Kg
GX 10 407	1000	400	750	340	179	72	5.7
GX 15 411	1500	400	1100	680	179	72	7.8
GX 20 415	2000	400	1500	1040	179	72	10.4

TER OPEN PANEL RADIATORS

Model	Output Watts	H mm	L mm	A mm	h mm	c mm	Weight Kg
TER 10 405	1000	450	525	320	234	75	4.5
TER 15 407	1500	450	725	520	234	75	5.5
TER 20 409	2000	450	925	720	234	75	6.6

GC OPEN PANEL RADIATORS

Model	Output Watts	H mm	L mm	A mm	h mm	c mm	Weight Kg
GCL 10 407	1000	400	750	340	179	72	5.7
GCL 12 409	1250	400	950	680	179	72	6.7
GCL 15 411	1500	400	1100	680	179	72	7.8
GCL 20 415	2000	400	1500	1040	179	72	10.4

GCB 10 407	1000	400	750	340	179	72	5.7
GCB 12 409	1250	400	950	680	179	72	6.7
GCB 15 411	1500	400	1100	680	179	72	7.8
GCB 20 415	2000	400	1500	1040	179	72	10.4

LST LOW TEMP. FRONT PANEL

Model	Output Watts	H mm	L mm	A mm	h mm	c mm	Weight Kg
LST 05 404	500	450	450	200	179	72	6.2
LST 10 407	1000	450	750	340	179	72	9.4
LST 15 411	1500	450	1100	680	179	72	12.6
LST 20 415	2000	450	1500	1040	179	72	17.3

LSK 05 404	500	450	450	200	179	72	6.5
LSK 10 407	1000	450	750	340	179	72	9.7

NB. LST LSK Total projection from wall 105mm.

Paterson Heating Limited

Head Office: UNITS 19 & 21, SMALL HEATH TRADING ESTATE, ARMOURY ROAD, BIRMINGHAM B11 2RJ.
Regd. Office: ALLEYSBANK ROAD, RUTHERGLEN, GLASGOW.

Tel: 021 773 0114/5
Fax: 021 766 6589

Tel: 041 647 8542 & 8549
Fax: 041 613 2084

P. 30909
Issue 3

HORSTMANN
TIMERS AND CONTROLS

ELECTRONIC 7

WATER HEATER CONTROLLER FOR ECONOMY 7 AND WHITE METER TARIFFS

USERS OPERATING INSTRUCTIONS

USERS INSTRUCTIONS

The Horstmann Electronic 7 Water Heater Controller has been specially developed to give you all the hot water you want as cheaply and as conveniently as possible.

During the night, the water in your tank will be heated by cheap night-rate electricity, so that you have a tank of hot water available for the morning.

Depending on the size of your tank and usage of hot water, this will usually last a day; you can obtain more hot water at any time by using the Boost button, to switch on the immersion heater to suit your requirements. Alternatively, if you know you will require extra hot water every day, you can programme the boost to come on each day at a set time.

1 THE CONTROLS

Open the flap which is hinged along the bottom edge, by inserting fingernails simultaneously behind the flap on both sides and gently levering forward.
The controls are shown on the back page of this leaflet. The bottom illustration shows the controller with the front panel open. In this position the clock time and boost time can be adjusted using the instructions set out in this leaflet.

NOTE: THE INSTALLER WILL HAVE USED THE SET BUTTON TO PROGRAMME THE OFF-PEAK SWITCHING TIMES TO MAKE THE BEST USE OF THE TARIFFS AVAILABLE.

THESE SWITCHING TIMES SHOULD NEED NO FURTHER ADJUSTMENT.

2 THE CLOCK

The time of day and off peak switching times will have been set by the installer. If the time of day needs to be adjusted press the ***HRS*** (Hours) and ***MINS*** (Minutes) buttons as required to change the time.

It is important when setting the time on the display that ***SUMMER*** should appear during British Summer Time (BST) and ***WINTER*** during the winter months (GMT)-see section 3 below.

By pressing and releasing the appropriate button you may advance by one hour or one minute at a time.

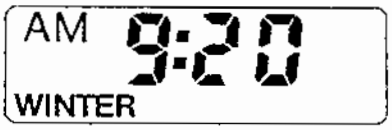
By pressing and holding the buttons for 3 seconds the display will move more rapidly. Release the buttons to stop the display.

3 SUMMER/WINTER BUTTON

IMPORTANT: IN SPRING AND AUTUMN WHEN ALTERING HOUSEHOLD CLOCKS DO NOT FORGET TO ALTER THE TIME DISPLAY ON THIS UNIT (SEE BELOW).

The ***SUMMER/WINTER*** push button is provided to alter the time by one hour when the clocks change in Spring and Autumn.

To change the hour press the ***SUMMER/WINTER*** button once, this will change the time on the display by one hour. At the same time the display will change to ***SUMMER*** or ***WINTER***-see below.



4 ISOLATOR SWITCH

This is the immersion heater Master Switch.

In the ***water heater off*** position the indicator lights, display and clock will operate, and maintain the programme, even though the supply to the heater is disconnected. In the ***timed*** position the over-night immersion heater will be switched **on** and **off** at the pre-set times, at other times the boost facility is available.

5 BOOST TIMER

When extra hot water is needed during the day the ***BOOST*** push button may be used to provide one hours additional heating of the top immersion heater.

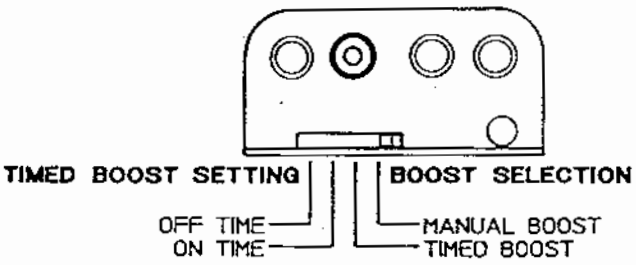
You can also have a timed boost which can be set to operate for a pre-set time period each day.

Note: The ***BOOST*** will not operate or will be cancelled during off-peak time periods.

Boost Selection

The ***BOOST SELECTOR SWITCH*** has 4 positions.

- ***OFF TIME (Timed boost setting)***
- ***ON TIME (Timed boost setting)***
- ***MANUAL BOOST (Boost selection)***
- ***TIMED BOOST (Boost selection)***



Manual Boost (1 Hour)

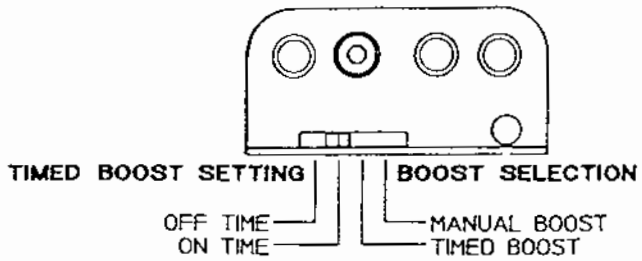
Set the boost selector switch to ***MANUAL BOOST.*** When the boost push button is pressed the boost immersion heater is switched **on** under the control of its thermostat, for a period of one hour. To cancel, press the boost again and release.

Timed Boost

This setting is not recommended for single element installations and is normally only used with twin or dual immersion heaters.

In the ***TIMED BOOST*** position the boost immersion heater will be switched **on** and **off** automatically at the same time each day.

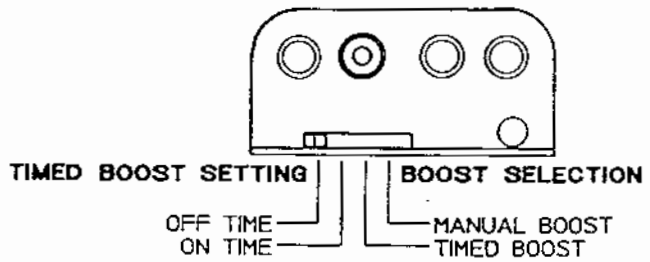
To set the switching times move the ***boost selector*** switch to the ***ON TIME*** position.



ON will appear on the display as shown below.

The time at which the boost is required to come on should now be set on the display by using the ***HRS*** and ***MINS*** buttons, noting the ***AM/PM*** indication on the display.

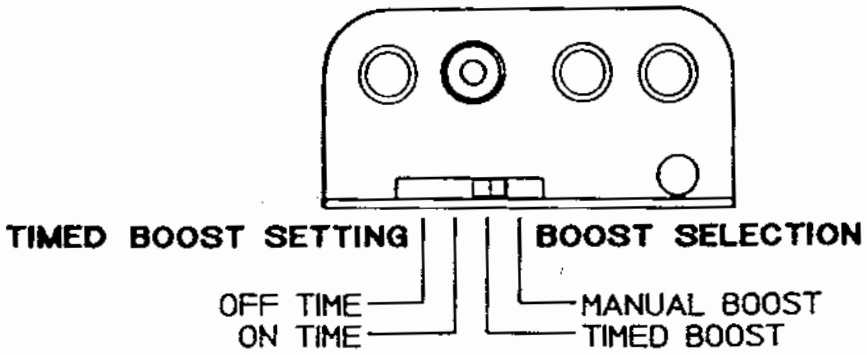
When the desired on has been displayed move the ***boost selector*** switch to the ***OFF TIME*** position.



OFF will appear on the display as shown below.

The time at which the boost period is to end should now be set on the display using the ***HRS*** and ***MINS*** buttons as before.

Now move the ***boost selector*** switch to the ***TIMED BOOST*** position. The boost immersion heater will now be switched on every day at the pre-set time.



NOTE: With the ***boost selector*** switch in the ***TIMED BOOST*** position, the boost push button will still produce a 1 hour manual boost on demand.

When the ***TIMED*** boost is no longer required the ***boost selector*** switch should be moved to the ***MANUAL BOOST*** position.

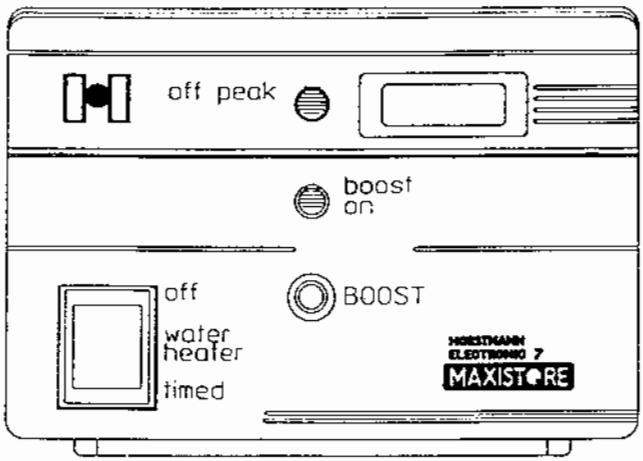
6 INDICATORS

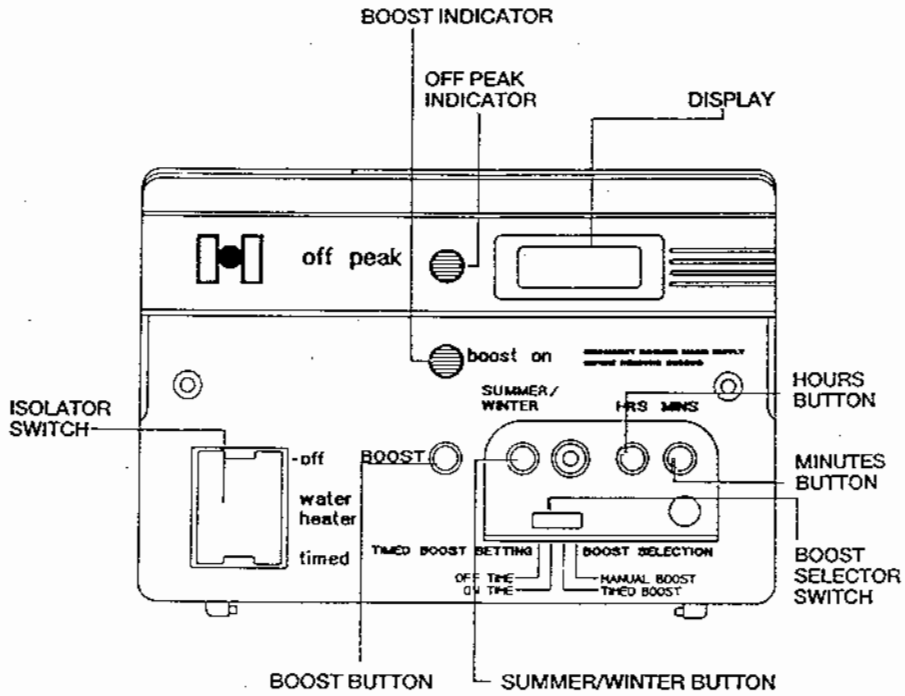
The indicator lights will still operate even with the isolator switch in the **off** position (see note 4). With the isolator switch in the **timed** position the off-peak indicator will glow whenever the Electronic 7 is supplying electricity to the immersion heater during the cheap rate period.
Similarly the ***boost on*** indicator will glow whenever the boost is in operation.

7 BATTERY

This unit has a non-rechargeable long-life battery which will maintain the display and switch time settings for approximately 2 years with the mains electricity supply disconnected.

(THIS IS MORE THAN SUFFICIENT TO COVER ALL THE EXPECTED POWER INTERRUPTIONS DURING THE LIFE OF THE PRODUCT).





HORSTMANN
TIMERS AND CONTROLS

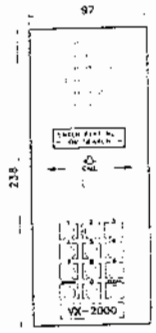
HORSTMANN TIMERS AND CONTROLS
Newbridge Road, Bath, BA1 3EF, England.
Telephone: Bath (01225) 421141 Fax (01225) 423070

SERIES VX 2000

The VX2000 is one of the most advanced digital system ever designed for intercom and videointercom systems. It is a totally new concept using latest microprocessor technology and based on bus connection to easily meet all requirements of medium and highly complex installations.
Main specifications:

- Direct call up to 1000 users using built in repertory name or individual code.
- Individual access code.
- Fully programmable by using outdoor keypad, Videx Programmer Unit or standard PC.
- Digital concierge facility.
- Standard hanset.
- Unlimited entrances.
- Full memory back up.

ART. 2002 Stainless steel outdoor station module with keypad plus search and calling buttons. Alpha numerical liquid cristal display.



Art. 2002

ART. 2004 4 way decoder PCB unboxed.
Dimensions (mm): 185 x 112

ART. 2004B As above boxed.
Dimensions (mm): 200 x 150

ART. 2005 External relay board for additional services.
Dimensions (mm): 125 x 130

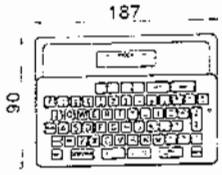
ART. 2005B As above boxed.
Dimensions (mm): 200 x 150

ART. 2006A CPU-Control unit for intercom systems. (Telephone type ART.924E-Back up battery 12V 2Ah max dimensions (mm.):178 x 34 x 65 not included).Dimensions (mm): 350 x 350 x 80
Weight: 7 Kg

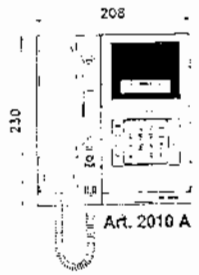
ART. 2006V As above but for videointercom systems. (Videophones type ART.901,901M or 901F-Back up battery not included).
Dimensions (mm): 350 x 350 x 80
Weight:7.2 Kg

ART. 2007 PC Interface complete with software support

ART.2008 VPU - Programmer unit (optional)

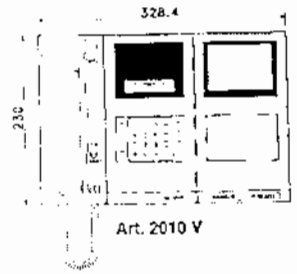


Art. 2008



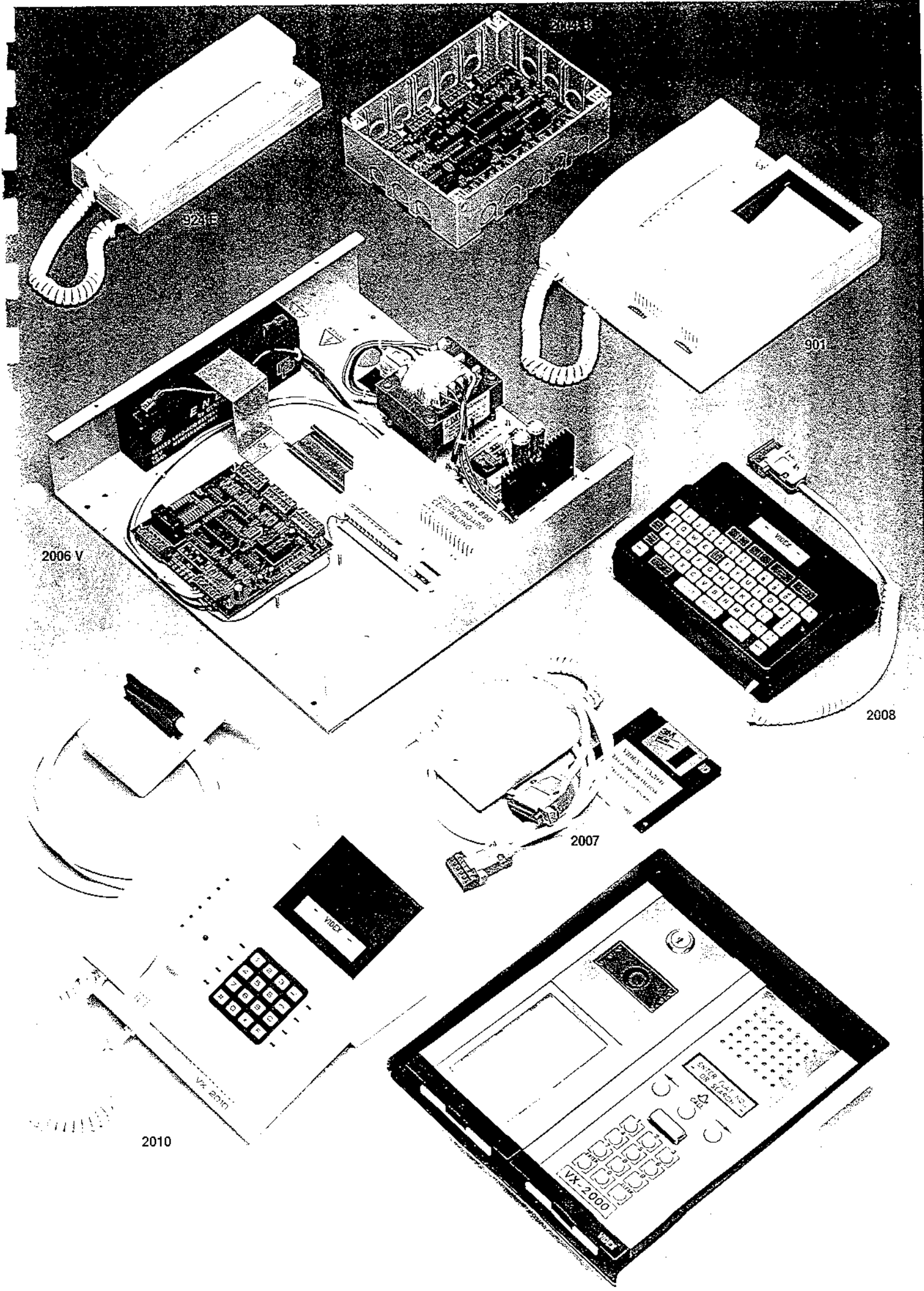
Art. 2010 A

ART. 2010 A Digital concierge - Audio only.



Art. 2010 V

ART. 2010 V As above but complete with videomonitor.


924E
2006 V
901
2008
2007
2010
VX-2000