UNDERFLOOR DUCTING SYSTEM

Floor Distribution Systems

Honeywell

MK

UNDERFLOOR DUCTING SYSTEM

Introduction

The Honeywell MK Underfloor Ducting System is designed to enclose power, telephone and ancillary system service cables, facilitating distribution in commercial and other similar establishments.

Current commercial environments require multiple electrical circuitry for secretarial, accounting and complex communication facilities. Open plan office layouts and modern building methods need a versatile arrangement of services for easy installation and flexibility in use.

The Honeywell MK Underfloor Ducting System is a solution for such cable management needs.

The system comprises four basic groups of equipment which can be used together to provide the desired underfloor configuration: underfloor ductings, service outlet boxes, junction boxes and vertical access units.

Facilities for wiring accessories to British Standard are offered although the outlet boxes can be adapted to accommodate either European or American accessories.

The system is intended for laying on the structural slab prior to the screed being poured. Screeding levels of between 65mm and 90mm can be accommodated and a minimum screed cover of 25mm is recommended over the ducting.

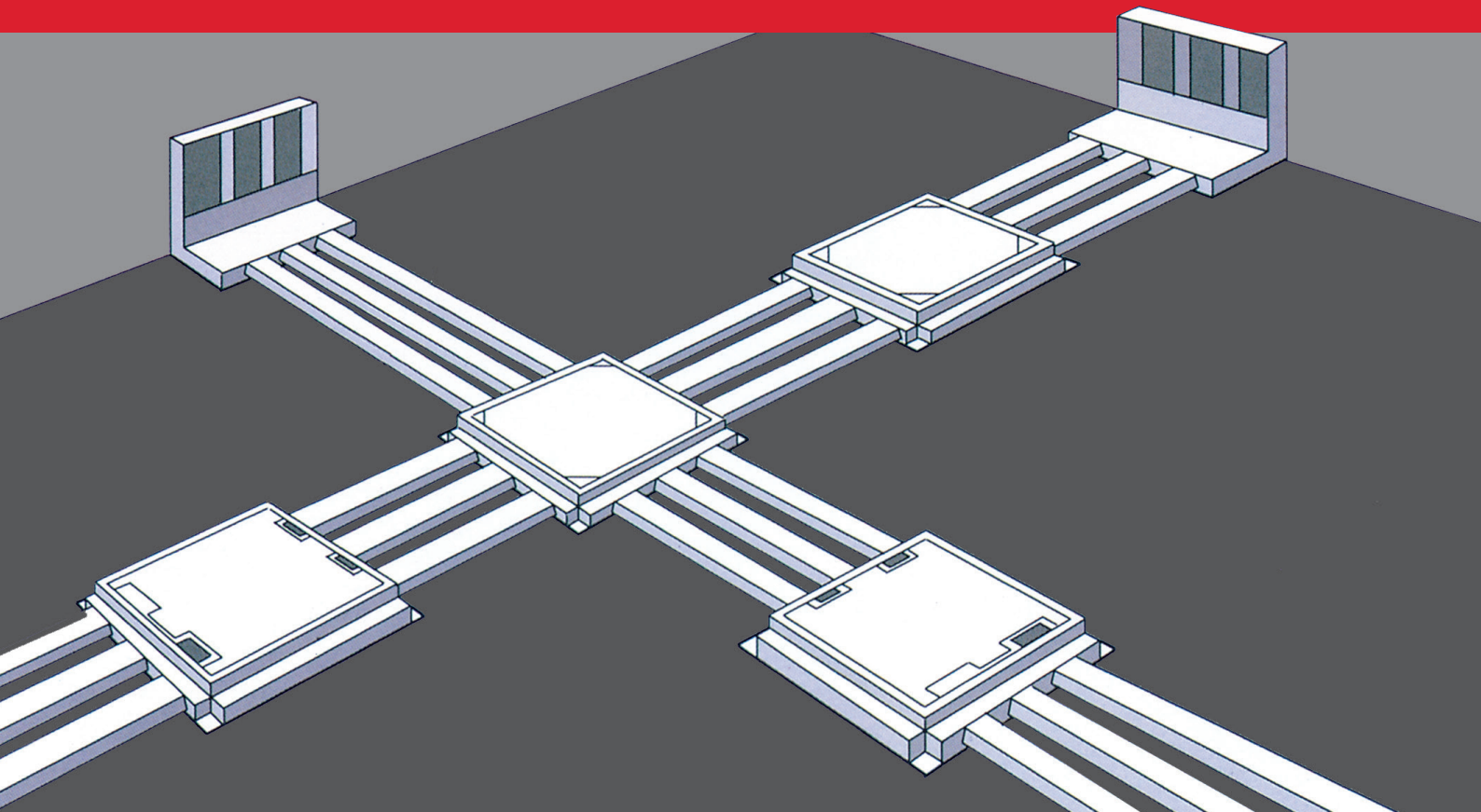
All junction and service boxes in the Honeywell MK Underfloor Ducting Systems are manufactured from G.I sheet metal (zinc coated). Disposable casting lids are also supplied with all boxes. The trap cover for the service boxes are retained by hinges and grommets are supplied to prevent cable damage at exit positions.

Authority

Honeywell MK products enable full compliance with the requirements of the current IEE regulations.

Important note

Where 65 mm deep boxes are utilized, it is recommended to use slim pattern accessory plugs, with a maximum projection of 25mm to ensure that the box lid will close flat when the services are in use.



PLANNING AND LAYOUT

Two parameters must be known before starting to design the system. Depending on the services to be installed, (1) whether a two or three duct system is required and (2) the depth of screed into which the system is to be installed. The minimum screed depth for Honeywell MK Underfloor Ducting System is 65mm.

Layout

In order that the installation may exhibit the desired flexibility, the ducting is usually laid out on a grid, fishbone or comb pattern of single, double or triple runs.

A grid pattern is widely used in areas where the occupants require a good degree of flexibility in reorganising work areas. Capacity can be increased by returning individual ring mains through different runs of ducting which in itself makes for easier installation.

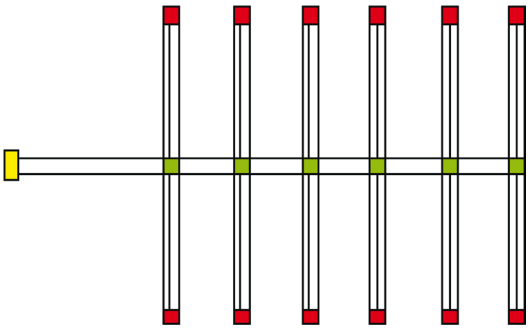
The fishbone pattern is ideal for a medium size area where lesser boxes are required.

The comb pattern is the most economical way of installation wherein less ducting is used. It offers an extremely cost effective solution.

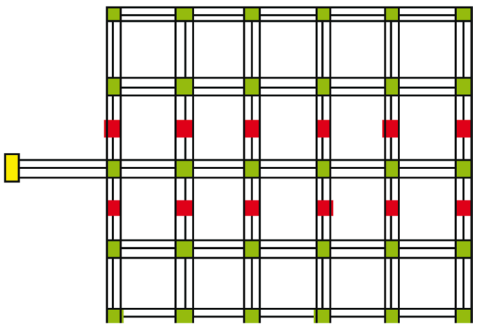
Planning

In designing the underfloor ducting system, it is essential to take into account the following:

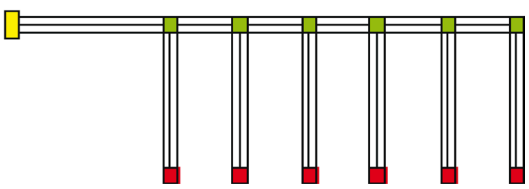
- Introduction of ducting begins at the distribution board of the floor concerned.
- Determine the services, capacity of ducting and the junction boxes to be laid.
- Ducting should be laid onto level of structural slab and it requires minimum 25mm screed to cover the ducting.
- In long runs of ducting, access should be provided by using junction boxes as draw-in boxes. It is recommended that the distance between two junction boxes must not exceed 6 metres.
- The extent to which a service outlet box can be equipped with facilities is limited by its dimensions. Our standard service outlet boxes are designed to meet the requirements of a normal workplace.



A typical Fishbone Pattern



A typical Grid Pattern



A typical Comb Pattern

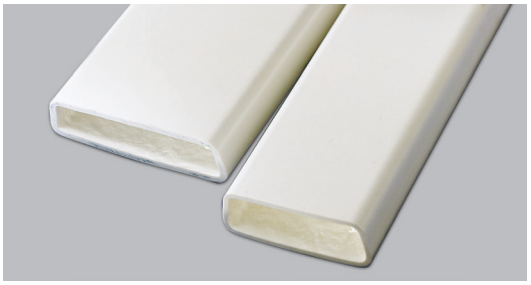
Junction Box

Service Box

Vertical Access Box

uPVC DUCTING AND ACCESSORIES

- Material: Heavy gauge high impact uPVC
- Standard length: 2.9 metres



uPVC Ducting

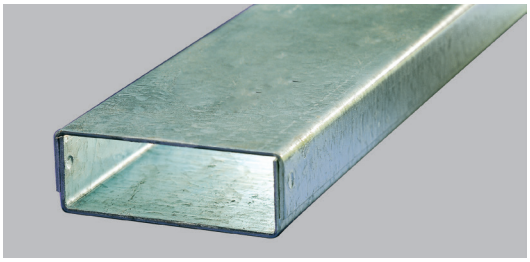
LIST NO.	DESCRIPTION
UFD 232 W	75 X 25 X 3.2 mm
UFD 332 W	100 X 25 X 3.2

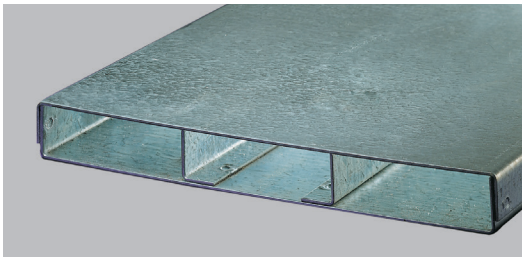
Jointing Sleeve

LIST NO.	DESCRIPTION
UJ 232 W	75 X 25 X 3.2 mm
UJ 332 W	100 X 25 X 3.2

METAL DUCTING AND ACCESSORIES

- Material: Pre-galvanished sheet steel (zinc coated)
- Standard thickness: 1.2 ~ 1.5mm
  Standard lengths: 2.44 metres
- Single, twin or triple compartments
- Standard depths: 25mm, 32mm and 38mm
- Coupler has to be ordered separately
- Pre-cut lengths can be arranged, subject to price confirmation and availability





Metal Ducting

LIST NO.	DESCRIPTION
UMD 200/2/2	200 x 25 x 1.2mm, 2 Compartments
UMD 225/3/2	225 x 25 x 1.2mm, 3 Compartments
UMD 275/2/2	275 x 25 x 1.2mm, 2 Compartments
UMD 275/3/2	275 x 25 x 1.2mm, 3 Compartments

LIST NO.	DESCRIPTION
UMDX 200/2/5	200 x 38 x 1.5mm, 2 Compartments
UMDX 225/3/5	225 x 38 x 1.5mm, 3 Compartments
UMDX 275/2/5	275 x 38 x 1.5mm, 2 Compartments
UMDX 275/3/5	275 x 38 x 1.5mm, 3 Compartments

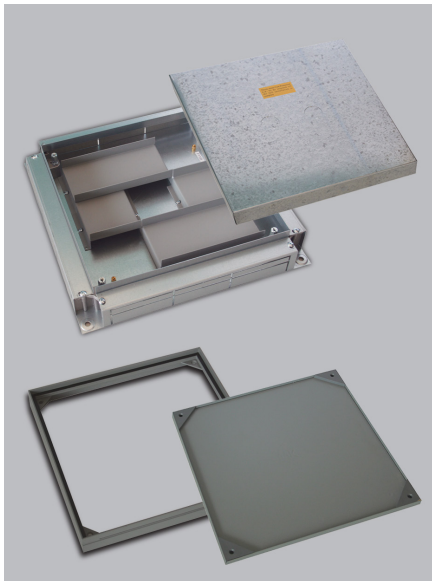
JUNCTION BOX

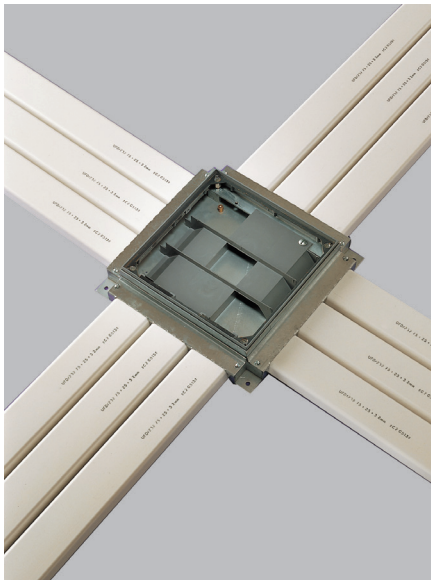
- Honeywell MK underfloor junction box pillar supports are manufactured from for good mechanical strength and rust resistant.
- The base plate and side blanks are all made from pre-galvanised steel (zinc coated) which has good protection against rust.
- The trap frame and trap cover are epoxy coated to give a good protection on the visible parts.
- The flyover is fabricated from ABS materials for plastic type or galvanised sheet steel (zinc coated) with epoxy coating for the steel type.

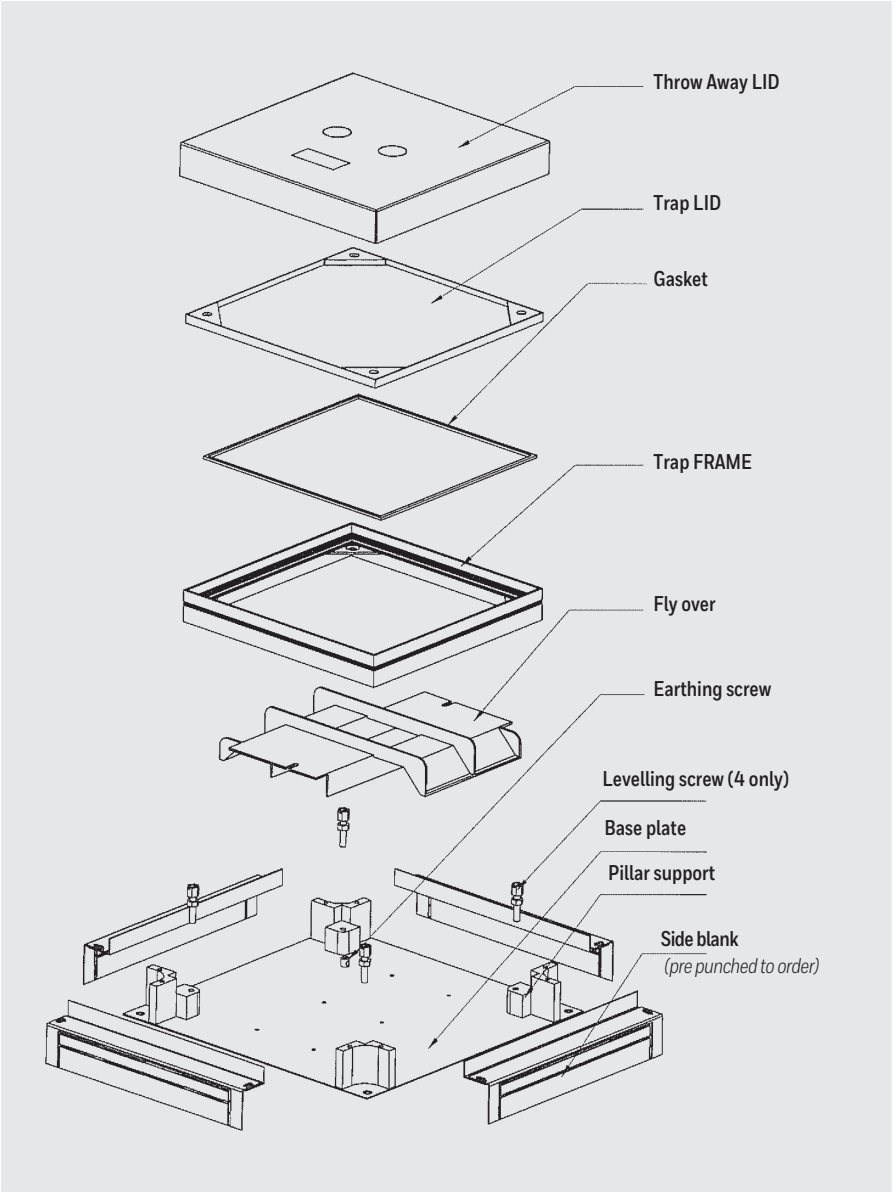
Junction Box for 25mm, 32mm & 38mm Depth Ductings

LIST NO.	DESCRIPTION
LZJB 250/3	250 x 250 x 65-75mm, 3 Compartments Consist of LBBJ 250/3-s1 & LJFT 250/3-s1
*LZJB 300/3	300 x 300 x 60-75mm, 3 Compartments Consist of LBBJ 300/3-s1 & LJFT 300/3-s1

Note: 6mm Recess for vinyl or carpet title
12mm Recess for ceramic tile

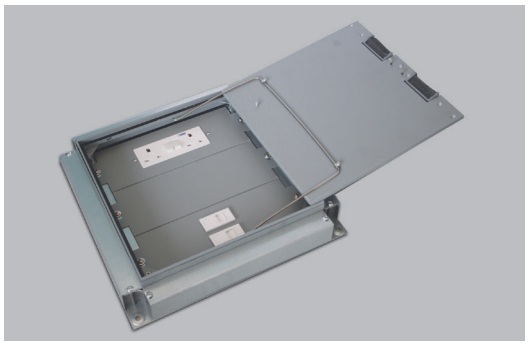


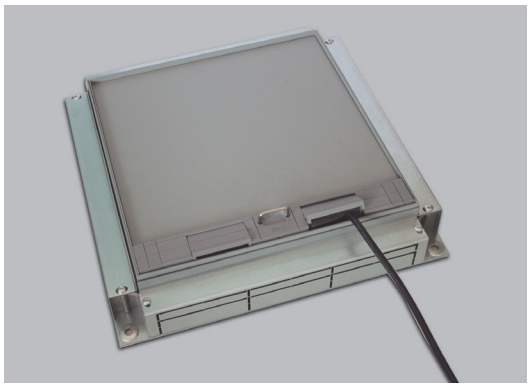


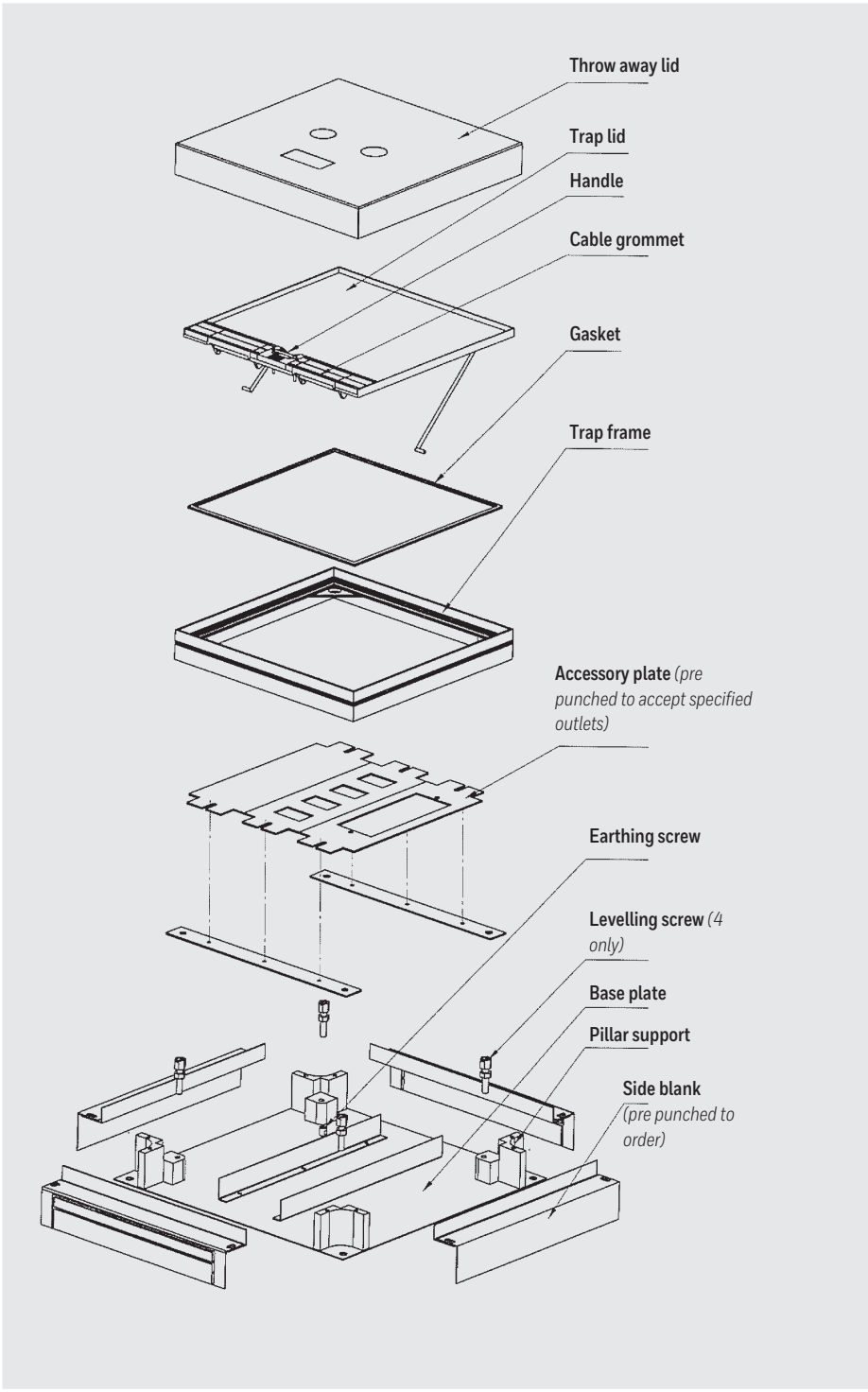


SERVICE OUTLET BOX

- Honeywell MK underfloor service outlet box pillar supports, the base plate and side blanks are all made from pre-galvanised steel (zinc coated) which has good protection against rust.
- The trap frame and trap cover are epoxy coated to give a good protection on the visible parts.





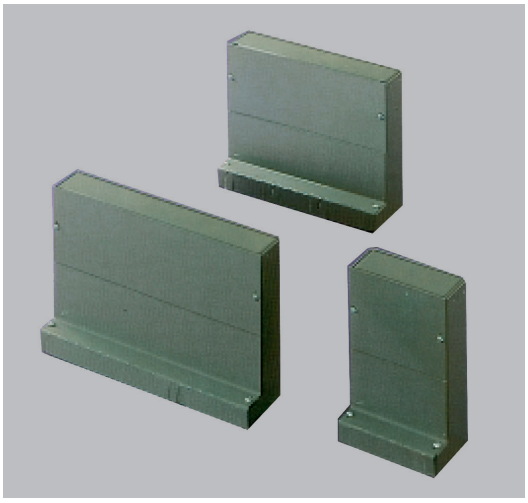


Service Box for 25mm, 32mm & 38mm Depth Ductings

LIST NO.	DESCRIPTION
LZSB 250/3	250 x 250 x 60-75mm, 3 Compartments, 1 Trap Consist of LBBS 250/3 & LSFT 250/3
*LZSB 300/3	300 x 300 x 60-75mm, 3 Compartments, 1 Trap Consist of LBBS 300/3 & LSFT 300/3

VERTICAL ACCESS BOXES

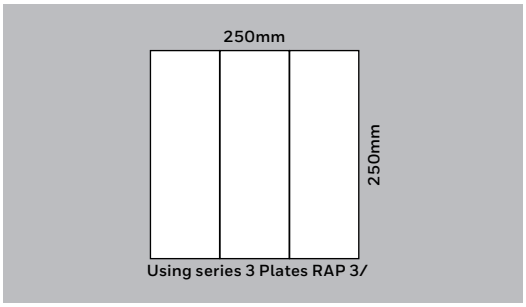
The vertical access box helps to facilitate easy accessibility from floor ducts to wall ducts. This is for connections to distribution boards or other floors.

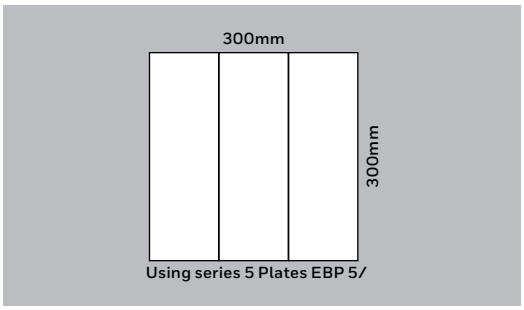


Vertical Access Box for Max. 25mm, 32mm & 38mm Depth Ductings

LIST NO.	DESCRIPTION	
	Measurement	Compartment
EXVB 250/3	250 x 200 x 50mm	3 Compartments,
EXVB 300/3	300 x 200 x 50mm	3 Compartments,

FLOOR BOXES





	FOR 250 X 250 MM 3 COMPARTMENTS BOXES	FOR 300 x 300 MM 3 COMPARTMENTS BOXES
Accessories Description and List No.	Series 3 Plate List No.	Series 5 Plate List No.
Blank Plates		
Blank plate for use with LZSB 125/1		
Blank plate for use with LZSB 250/2/1 or LZSB 375/2/2 or LZSB 375/3/3		
Blank plate for use with LZSB 250/3	RAP 3/01	
Blank plate for use with LZSB 300/2		
Blank plate for use with LZSB 300/3		RAP 5/01
Plates For 13A Power Accessories		
For one 2531WHI (1 gang panel mounting 13A switch socket)	RAP 3/10	EBP 5/02
For two 2531WHI (1 gang panel mounting 13A switch socket)	RAP 3/27	EBP 5/27
For one 2532WHI (2 gang panel mounting 13A switch socket)	RAP 3/03	EBP 5/03
For one 1 gang LOGIC accessory	RAP 3/09/S	EBP 5/43
For two 1 gang LOGIC accessories	RAP 3/09	EBP 5/41
For one E2939WHI (2 gang 13A switchsocket outlet)	RAP 3/05	EBP 5/05R
Combination Plates for 13A Power with Telecom Accessories		
For one MK 2531WHI (1 gang panel mounting 13A switch socket) and one 2917WHI (1 gang MINI LOGIC American telephone socket)	EBP 3/34	EBP 5/34
Plates for Telecom/Data accessories		
For one SX5453WHI & SX5456 WHI (1 gang MINI LOGIC telephone data computer outlet)		EBP 5/73 ACC
Cutout for 2 nos data/tel adaptor (for SX5456 WHI)	RAP 3/72	EBP 5/72

SPECIFIER'S GUIDE

MK Underfloor Ducting System

General

The underfloor ducting system suitable for the distribution of telephone, power and computer services within floor screed should be provided in accordance with the layouts as show on the specification drawings. The system should comprise of single or multi-way extruded trapezoidal form ducts made of rigid, noncorroding, heavy gauge uPVC (unplasticised polyvinyl chloride) with minimum wall thickness of 3.2mm thickness for 75mm width and above.

To form the whole system. Rectangular shape, pre-galvanised steel (zinc coated) metal ducts with minimum sheet thickness of 1.2~1.5mm must be used. Junction boxes, service outlets, duct outlets should be fabricated from G.I Sheet Steel (zinc coated). Accessories shall consist of mounting plates, vertical access boxes, jointing sleeves, fixing clips and flyovers. The system should be proprietary named "Honeywell MK Underfloor Ducting System"

The power cable for power socket outlets should not be drawn into the same single compartment duct as the telephone cables or computer cables for computer services. Multi-compartments ducting and junction boxes with flyovers (cross-over bridges) should be provided to ensure segregation of these three services.

The system comprise of the following components:

1. Junction Boxes and Service Outlet Boxes

The junction boxes and service outlet boxes pillar supports should be constructed from die cast aluminium materials. It should be riveted onto a 1.2mm thick pre-galvanised steel (zinc coated) base plate. An earth wire connector must be provided for all the boxes.

2. Trap Frames and Covers

The trap frames and covers should be constructed from pre-galvanised (zinc coated) material. It should be further protected by an electrostatically coated high temperature oven baked epoxy powder coating to protect all visible parts from stains as well as to add aesthetics to the units. Covers for junction boxes should be secured by countersunk stainless steel screws and designed with different access to accommodate a variety of floor finishes. Covers for service outlet boxes should be provided with suitable hinges designed to open through 180 degrees, giving access always to the power, telephone and data outlets. It should have a 6mm recess to receive vinyl tiles or carpets. A casting cover (disposable screeding lid) should be provided to keep the actual cover clean and undamaged during installation. All boxes shall be adjustable in height independently with hexagonal head nickel plated brass bolts for easy adjustment and to take account of difference in floor thickness. Adequate segregation should be provided between service runs within junction boxes by using flyovers (cross over bridges). Cables emerging from service boxes should be protected against damages by means of PVC cable exit grommets and should be reversible to 'close' position when not in use. All covers must be provided with a stud for earth wire connection.

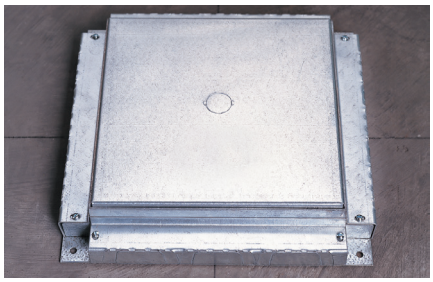
3. uPVC Ductings

uPVC ducting should be rigid and extruded from super high impact, heavy gauge uPVC (unplasticised polyvinyl chloride) into trapezoidal shape with height not more than 25mm and width of 75mm or 100mm. The ducting wall thickness should be 2.5mm and 3.2mm respectively.

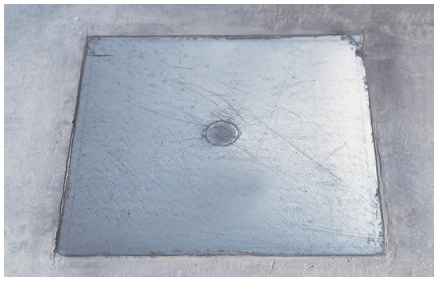
4. Metal Ductings

Rectangular formed metal ductings should be fabricated between 1.2~ 1.5mm thick pre-galvanised steel sheets (zinc coated). The top and bottom plates should be double folded and spot welded together to the full height of the ductings to give the required rigidity and at the same time to prevent seepage of concrete or screed water. Metal jointing sleeves with locking screws for grounding purpose must be provided.

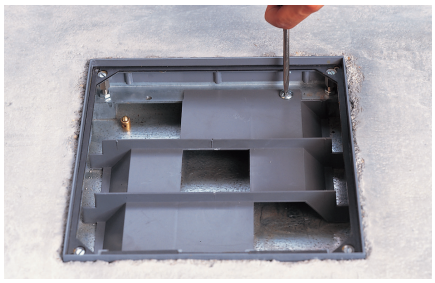
INSTALLATION GUIDE



1. Determine floor box location and then fasten with bolts and nuts



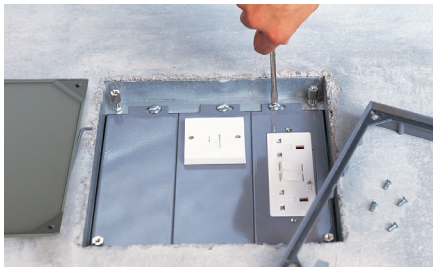
6. After screeding has cured



11. To convert a junction box to a service outlet box, remove trap cover, trap frame and flyover.

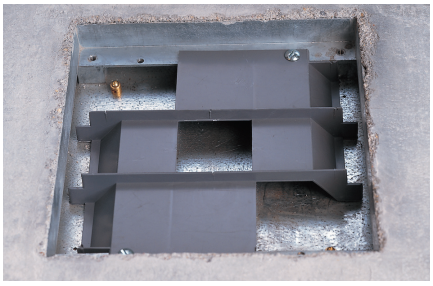
2. Peel off the pre punched knock-outs at the side blank plate before laying the ductings

7. Use hammer to knock and loosen the disposable lid before hooking it out



12. Install accessory plates

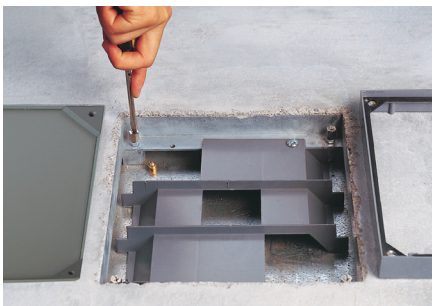
3. Fasten the side blank plate



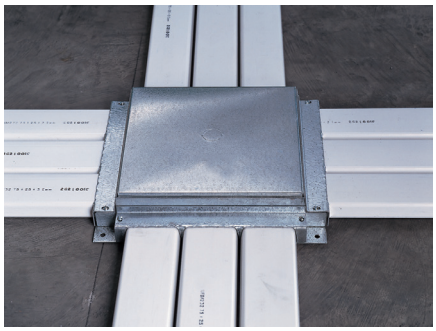
8. Clean the base box before laying of cable

13. Mount trap frames

4. Use steel fixing clips to secure the ductings



9. To adjust the 4 levelling screws to meet the finished level



5. The Underfloor Ducting System ready for screeding

10. Mount the trap frame (Junction Box)

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