

THE BRACKETS CATALOGUE



ISSUE 8B JUNE 2013

WELCOME TO THE LUNDS BRACKET CATALOGUE

Having worked on a sub-contracting basis for the giants in the transportation business for many years, Lunds recognised the need for a range of standard brackets to interface with the more common pieces of equipment used throughout the London Underground System. The Bracket catalogue was launched in 2005 and has gained popularity, as time and Lunds reputation for being able to produce the right bracket at the right time, has developed.

Now on it's eighth issue the Brackets Catalogue has matured as an aid for engineers to specify a strong and versatile bracket solution for most circumstances at a reasonable cost.

Lunds recognise that cost is an issue today and have modified the designs of our best selling brackets to drive down prices. Some of our brackets are cheaper now than when we started five years ago, quite an achievement in the present economic climate. We feel confident that our new range of Brackets will offer the same integral strength at a lower cost.

What happens if you can't find a suitable bracket from our standard range? We offer a full bespoke service and can design a bracket solution for practically any circumstance. Using state of the art 3D Cad systems our skilled designers can quickly produce fully detailed 3D models that are viewable in Adobe Acrobat Reader.

We can also offer a full survey and supply service if required using a fully qualified Structural Engineer to specify the correct bracket solution.

Lunds can also produce any sheet metal items that you may require. At our production facility in Rustington, West Sussex we have made some considerable investment in the latest and fastest production plant. We have on site state of the art punching machines, Lasers and Robotic folding machines. We feel that we can compete with anyone in the world on price and have a rock solid reputation for quality.

Quality has always been important to us and we have invested in cutting edge quality management systems. We have full ISO 9001 accreditation and all our products are RoHS &



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Terms & Conditions

All the brackets in this catalogue have been designed to interface with L.U.L. specified equipment commonly used throughout the London Underground and Rail Networks. Please note that Lund Bros. & Co. Ltd. do not supply any of this equipment.

The designs of these brackets are the intellectual copyright of Lund Bros. & Co. Ltd. and should not be copied or reproduced in anyway.

While Lund Bros. & Co. Ltd. use the finest quality materials in the design of their products and although we feel that each design is fit for purpose, we must stress that Structural Calculations have not always been commissioned on every variation of these brackets and each location and situation should be assessed by the client for structural integrity. The fixing of these structures to existing masonry or structural steel work is the sole responsibility of the client.

We now offer the services of a fully qualified Structural Engineering Company and Structural Calculations can be purchased at a reasonable cost. Site visits can be arranged for full structural surveys if required, charged at an hourly rate. Copies of the Structural Engineers Reports for our standard range of brackets can be purchased at a small cost to cover our initial outlay and any administration costs.

All the brackets in this catalogue are surface treated with either a zinc & passivated plating or hot dipped galvanised or are manufactured from pre zinc coated steel sheet before powder painting. DuPont ALESTA paint, a low smoke / zero halogen mix, to comply with the London Underground Safety requirements is applied as standard.

Please quote Part Numbers and paint codes when ordering as this will aid our staff to ensure that the correct assembly will be delivered. Our payment terms are strictly 30 days nett.

Some of the brackets are specific to equipment supplied by either the Metronet Alliance or Tubelines. Although the general construction of the brackets are the same in both cases the interface arrangement to the equipment will vary.

if you need more detailed information on our standard bracket range, Data Sheets are available on request.

Remember, Lunds can also offer sheet metal fabrications for all your projects. Further information of our products and services can be found on our web site at www.lunds.co.uk



CONTENTS

SECTION ONE—DROP BRACKETS

1 METRE STANDARD DROP BRACKET Part No.151105-501.....	6
2 METRE STANDARD DROP BRACKET Part No.151105-601.....	6

DROP BRACKET ACCESSORIES

DOUBLE CAMERA BRACKET Part No. 151105-036.....	8
SINGLE COLUMN SPEAKER BRACKET Part No. 151105-020.....	8
DOUBLE COLUMN SPEAKER BRACKET Part No. 151105-021.....	9
FOUR WAY COLUMN SPEAKER BRACKET Part No. 151105-022.....	9
SINGLE SPEAKER STRUT FOR MSP-5 & PAC5 SERIES SPEAKER Part No. 151105-050.....	10
DOUBLE SPEAKER STRUT FOR MSP-5 & PAC 5 SERIES SPEAKER Part No. 151105-051.....	10
4 WAY SPEAKER STRUT FOR MSP-5 & PAC5 SERIES SPEAKER Part No. 151105-052.....	11
5 WAY SPEAKER STRUT FOR MSP-5 & PAC5 SERIES SPEAKER Part No. 151105-053.....	11
FIXING CHANNEL FOR A WHARTON ELECTRONICS 401A.10LUL L.E.D. CLOCK Part No. 151105-312.....	12
VESA 100 OR PASSENGER AWARENESS MONITOR ADJUSTABLE ADAPTOR BRACKET Part No. 281105-200.....	12
VESA 200 ADAPTOR BRACKET Part No. 151105-302.....	13
TUBELINES THID ADAPTOR BRACKET Part No. 131106-260.....	13
THVID SINGLE ADAPTOR PLATE (METRONET VARIANT) Part No. 301105-001.....	14
THVID DOUBLE ADAPTOR PLATE (METRONET VARIANT) Part No. 301105-100.....	14
TRAIN MASS DETECTOR (Mark 4) INTERFACE PLATE Part No. 131006-010.....	15
SPREADERPLATE Part No. 151105-055.....	15
ADAPTOR & COVER PLATE Part No.211105-500 (200mm) & Part No.211105-510 (300mm).....	16

SECTION TWO—WALL BRACKETS

SINGLE PAM WALL MOUNTED BRACKET Part No. 281105-250 (METRONET VARIANT).....	17
DOUBLE PAM WALL MOUNTED BRACKET Part No. 281105-300 (METRONET VARIANT).....	18
SINGLE THVID WALL MOUNTED BRACKET Part No. 301105-250 (METRONET VARIANT).....	18
DOUBLE THVID WALL MOUNTED BRACKET Part No. 301105-300 (METRONET VARIANT).....	19
DOUBLE THVID WALL MOUNTED BRACKET Part No. 171209-500 (METRONET VARIANT).....	19
SINGLE THID WALL MOUNTED BRACKET Part No. 131006-250 (TUBELINES VARIANT).....	20
DOUBLE THID WALL MOUNTED BRACKET Part No. 131006-350 (TUBELINES VARIANT).....	20
SINGLE CAMERA EXTENDED WALL BRACKET Part No. 040506-400.....	21

CONTENTS

DOUBLE CAMERA EXTENDED WALL BRACKET Part No. 040506-450	21
THREE WAY CAMERA EXTENDED WALL BRACKET Part No. 040506-500	22

SECTION THREE—STANDARD POST CLAMP BRACKETS

3 INCH POST CLAMP BRACKETS Part No. 231105-200	24
3½ INCH POST CLAMP BRACKETS Part No. 231105-210	24
3 INCH POST CLAMP BRACKETS FOR THE MSP-5 SERIES SPEAKER Part No. 231105-250	25
3½ INCH POST CLAMP BRACKETS FOR THE MSP-5 SERIES SPEAKER Part No. 231105-260	25
3 INCH POST CLAMP BRACKETS FOR THE DENNARD 2010 CAMERA Part No. 231105-310	26
3½ INCH POST CLAMP BRACKETS FOR THE DENNARD 2010 CAMERA Part No. 231105-320	26

SECTION FOUR—ADJUSTABLE VEID BRACKETS

SHORT DROP ADJUSTABLE VEID BRACKET (METRONET VARIANT) Part No. 070709-400	28
SHORT DROP ADJUSTABLE VEID BRACKET (TUBELINES VARIANT) Part No. 070709-450	28
1000mm ADJUSTABLE DROP NARROW WIDTH VEID BRACKETS Part No. 070709-300	29
2000mm ADJUSTABLE DROP NARROW WIDTH VEID BRACKETS Part No. 070709-350	29
1000mm ADJUSTABLE DROP VEID BRACKETS Part No. 070709-500 (METRONET VARIANT)	30
2000mm ADJUSTABLE DROP VEID BRACKETS Part No. 070709-600 (METRONET VARIANT)	30
1000mm ADJUSTABLE DROP VEID BRACKETS Part No. 070709-550 (TUBELINES VARIANT)	31
2000mm ADJUSTABLE DROP VEID BRACKETS Part No. 070709-650 (TUBELINES VARIANT)	31
TUNNEL RING FIXING OF ADJUSTABLE DROP VEID BRACKET (INFORMATION ONLY)	32

SECTION FIVE—GANTRY STRUCTURES

SINGLE GANTRY STRUCTURE FOR VEID UNIT Part No. 180505-500 (METRONET VARIANT)	34
SINGLE GANTRY STRUCTURE FOR VEID UNIT Part No. 180505-600 (TUBELINES VARIANT)	35
DOUBLE GANTRY STRUCTURE FOR VEID UNIT Part No. 180505-510 (METRONET VARIANT)	36
DOUBLE GANTRY STRUCTURE FOR VEID UNIT Part No. 180505-610 (TUBELINES VARIANT)	36

SECTION ONE STANDARD DROP BRACKETS

The Drop Bracket is our most popular model. Designed initially to suspend the Dennard Security Camera from tunnel rings and canopies. It has since developed into a versatile all rounder.

With adaptor brackets to interface with most communication and security equipment this bracket can be suspended with a drop of up to 2 metres from roof height.

Being manufactured from square hollow section the bracket can be easily cut down on site, this will require the addition of an 11 mm hole drilled to suit.

The pre-treatment is a zinc plate for protection against knocks and corrosion and the final finish is a powder coating in a low smoke, zero halogen to comply with LUL safety regulations.

All fixings used are 8.8 grade, high tensile BZP. Structural Analysis has proven the load rating on the standard 1 metre bracket is in excess of 450 Kg.

Please Note that we do not specify the fixings required to attach the bracket to existing metalwork / brickwork. This is the sole responsibility of the contractor.



FOR A PDF COPY PLEASE VISIT OUR WEB SITE

www.lunds.co.uk/downloads

1 METRE STANDARD DROP BRACKET Part No.151105-501

2 METRE STANDARD DROP BRACKET Part No.151105-601

The new Standard Drop Bracket has been designed to be a low cost replacement to our previous Standard Drop Bracket. The new design replaces the machined cone with a fully fabricated assembly that reduces the manufacturing cost. There are two lengths available at one metre and two metres.

The pivoting head now offers up to 180° of movement allowing fixing to vertical surfaces if required. The locking mechanism gives the Drop Bracket it's required rigidity. We have allowed for an additional safety lock to prevent slippage of the pivot.

The base attachment plate is designed to fit directly to the Standard Security Camera (Dennard DD504-200) and attachments are available to take variations of Camera & Speaker arrangements.

Wiring runs are again accommodated at the top and bottom of the bracket with tapped holes for 25mm conduit fixing. These conduit holes will be capped as standard.

The Drop Rod may be cut down on site to suit—an 11mm hole will need to be drilled to re-attach to the top section.

This bracket is lighter than previous—the 1 Metre Drop Bracket has a gross weight of approximately 6.5 Kg and the 2 metre Bracket 10 Kg. The maximum dead load carrying capacity is still 450 Kg. It is advised to perform structural calculations on the bracket, to include load and environmental conditions to comply with L.U.L. safety regulations.

The bracket is usually supplied in White (RAL 9016—Traffic White) to match the Security Camera and Speaker or Grey (NCS 6502-R) to match most other equipment, alternate colours are available on application. The bracket is zinc plated before powder painting to give good protection against corrosion.

A low smoke / zero halogen powder paint mix (DuPont ALESTA) is used as standard to comply with the London Underground Safety requirements.

The bracket, when correctly fixed complies to the IP54 standard BS EN 60529 for water and dust ingress.

ACCESSORIES FOR THE STANDARD DROP BRACKET

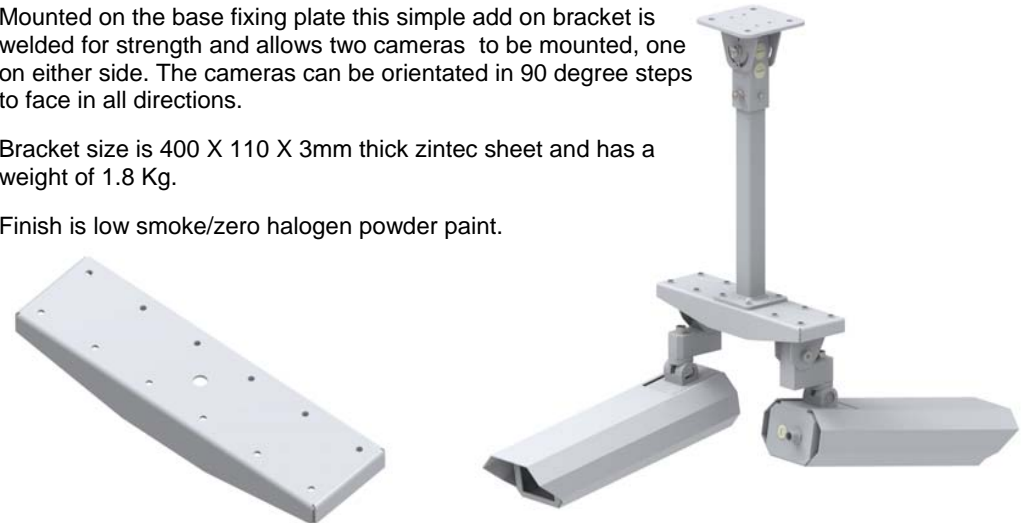
DOUBLE CAMERA BRACKET Part No.151105-036

Need to suspend two cameras from one drop bracket? Then you need the Double Camera Bracket.

Mounted on the base fixing plate this simple add on bracket is welded for strength and allows two cameras to be mounted, one on either side. The cameras can be orientated in 90 degree steps to face in all directions.

Bracket size is 400 X 110 X 3mm thick zintec sheet and has a weight of 1.8 Kg.

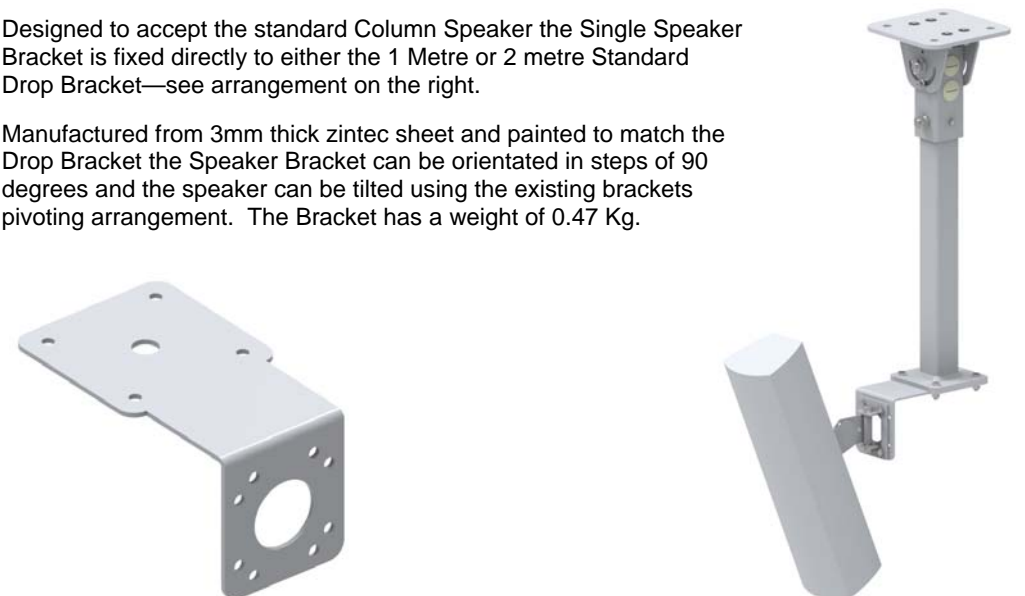
Finish is low smoke/zero halogen powder paint.



SINGLE COLUMN SPEAKER BRACKET Part No. 151105-020

Designed to accept the standard Column Speaker the Single Speaker Bracket is fixed directly to either the 1 Metre or 2 metre Standard Drop Bracket—see arrangement on the right.

Manufactured from 3mm thick zintec sheet and painted to match the Drop Bracket the Speaker Bracket can be orientated in steps of 90 degrees and the speaker can be tilted using the existing brackets pivoting arrangement. The Bracket has a weight of 0.47 Kg.



ACCESSORIES FOR THE STANDARD DROP BRACKET

DOUBLE COLUMN SPEAKER BRACKET Part No. 151105-021

The Double Speaker Bracket will fit directly to the Drop Bracket fixing plate allowing for a low cost alternative for adapting the bracket to use two column speakers.

Manufactured from 3mm thick zintec the bracket has a weight of 0.76 Kg.

The Speaker can be orientated in 90 degree steps. This Bracket will also interface with the Post Clamp Bracket.

Finish is powder paint to match the Drop Bracket.

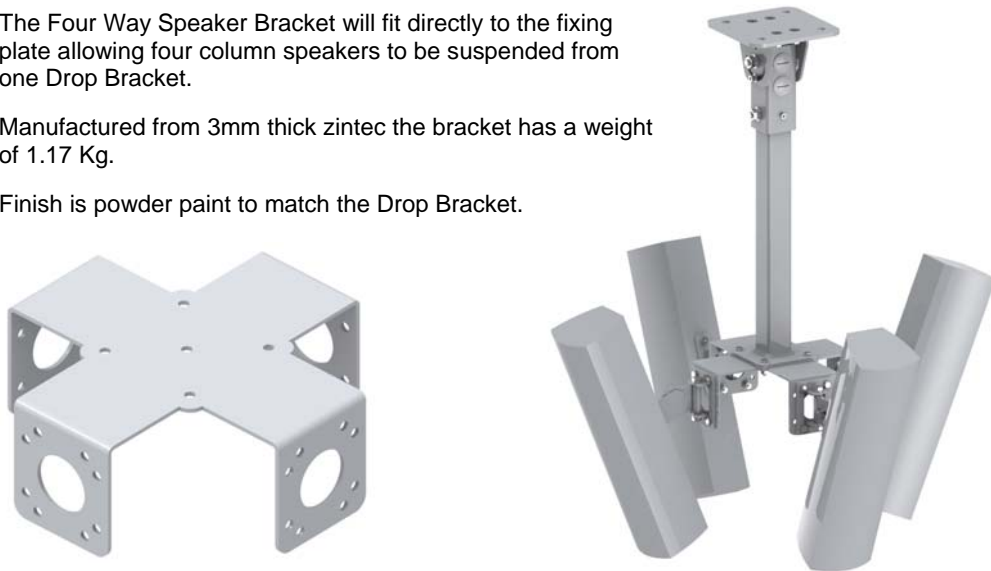


FOUR WAY COLUMN SPEAKER BRACKET Part No. 151105-022

The Four Way Speaker Bracket will fit directly to the fixing plate allowing four column speakers to be suspended from one Drop Bracket.

Manufactured from 3mm thick zintec the bracket has a weight of 1.17 Kg.

Finish is powder paint to match the Drop Bracket.

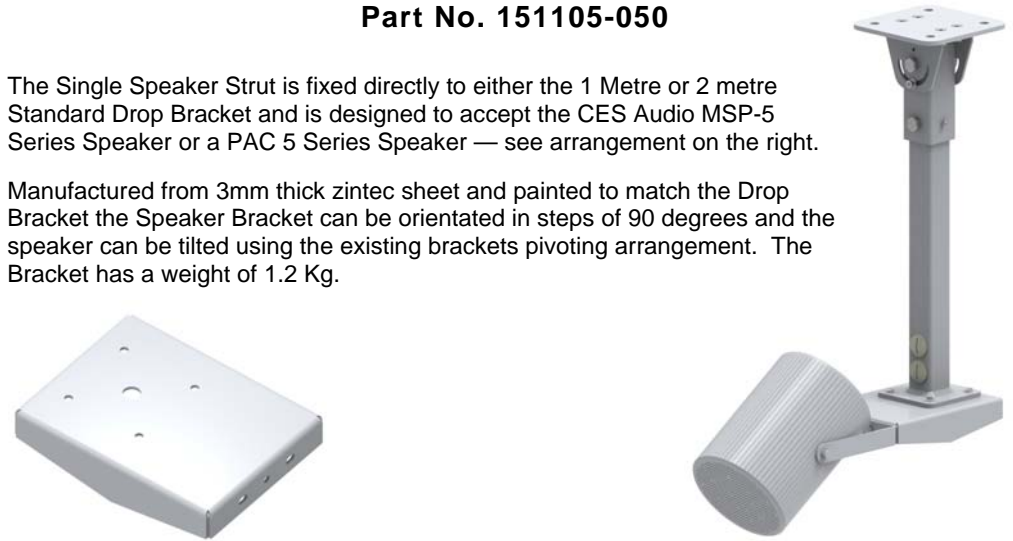


ACCESSORIES FOR THE STANDARD DROP BRACKET

SINGLE SPEAKER STRUT FOR MSP-5 & PAC5 SERIES SPEAKER Part No. 151105-050

The Single Speaker Strut is fixed directly to either the 1 Metre or 2 metre Standard Drop Bracket and is designed to accept the CES Audio MSP-5 Series Speaker or a PAC 5 Series Speaker — see arrangement on the right.

Manufactured from 3mm thick zintec sheet and painted to match the Drop Bracket the Speaker Bracket can be orientated in steps of 90 degrees and the speaker can be tilted using the existing brackets pivoting arrangement. The Bracket has a weight of 1.2 Kg.



DOUBLE SPEAKER STRUT FOR MSP-5 & PAC 5 SERIES SPEAKER Part No. 151105-051

The Double Speaker Strut is fixed directly to either the 1 Metre or 2 metre Standard Drop Bracket and is designed to accept the CES Audio MSP-5 Series or the Next 2 PAC 5 Speaker —see arrangement on the right

Manufactured from 3mm thick zintec sheet and painted to match the Drop Bracket the Speaker Bracket can be orientated in steps of 90 degrees and the speaker can be tilted using the existing brackets pivoting arrangement. The Bracket has a weight of just over 1.64 Kg.



ACCESSORIES FOR THE STANDARD DROP BRACKET

4 WAY SPEAKER STRUT FOR MSP-5 & PAC5 SERIES SPEAKER Part No. 151105-052

The 4 Way Speaker Strut is fixed directly to either the 1 Metre or 2 metre Standard Drop Bracket and is designed to accept the CES Audio MSP-5 Series or the Next 2 PAC 5 Speaker — see arrangement on the right.

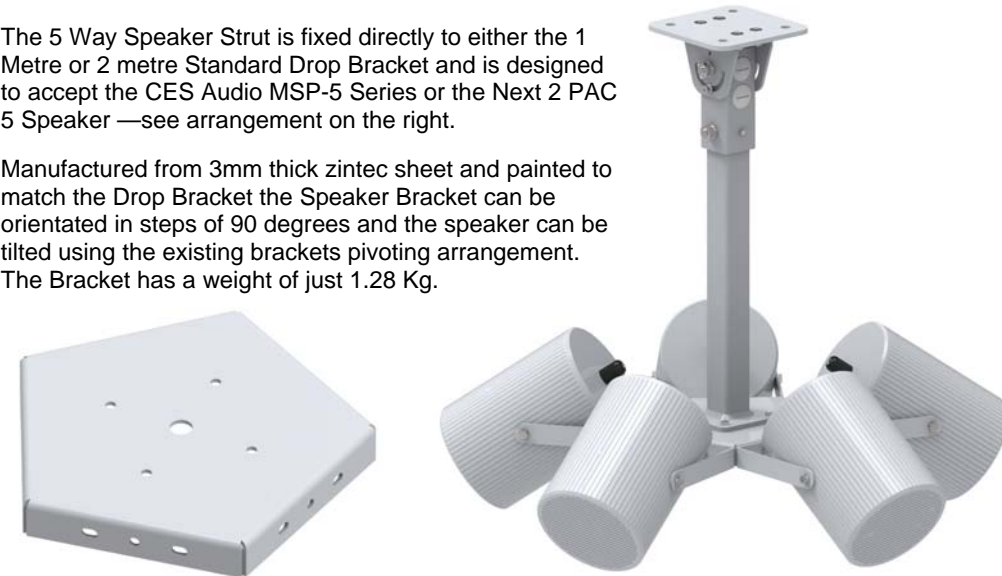
Manufactured from 3mm thick zintec sheet and painted to match the Drop Bracket the Speaker Bracket can be orientated in steps of 90 degrees and the speaker can be tilted using the existing brackets pivoting arrangement. The Bracket has a weight of just 1.8 Kg.



5 WAY SPEAKER STRUT FOR MSP-5 & PAC5 SERIES SPEAKER Part No. 151105-053

The 5 Way Speaker Strut is fixed directly to either the 1 Metre or 2 metre Standard Drop Bracket and is designed to accept the CES Audio MSP-5 Series or the Next 2 PAC 5 Speaker — see arrangement on the right.

Manufactured from 3mm thick zintec sheet and painted to match the Drop Bracket the Speaker Bracket can be orientated in steps of 90 degrees and the speaker can be tilted using the existing brackets pivoting arrangement. The Bracket has a weight of just 1.28 Kg.



ACCESSORIES FOR THE STANDARD DROP BRACKET

FIXING CHANNEL FOR A WHARTON ELECTRONICS 401A.10 LUL L.E.D. CLOCK Part No. 151105-312

Designed to interface with a Wharton Electronics 401A.10LUL L.E.D. Clock this bracket combination will allow overhead mounting with the Standard Drop Bracket to suspend the clock up to 2 metres from roof height.

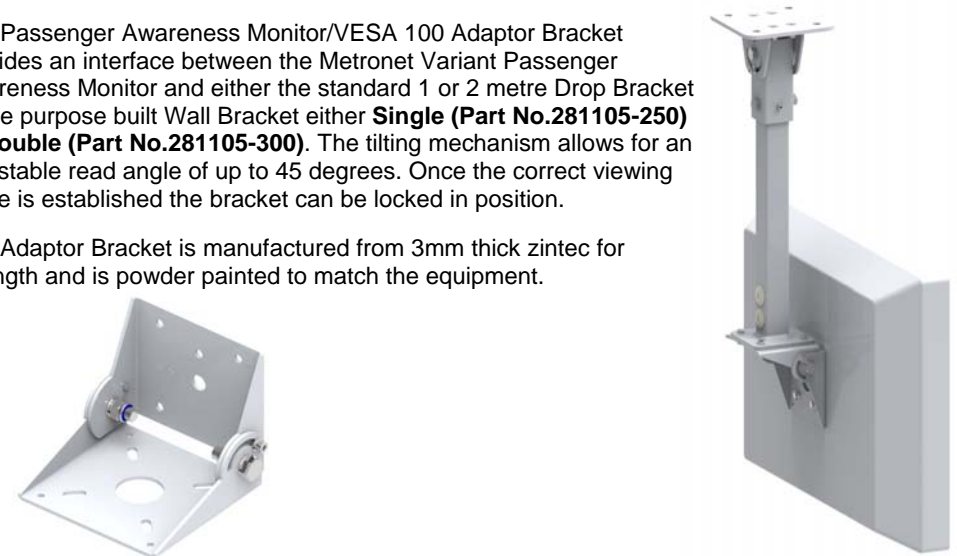
Manufactured from 4mm thick steel sheet and painted to match the Drop Bracket the Clock Bracket can be orientated in steps of 90 degrees. The Bracket has a weight of 2.3 Kg.



VESA 100 OR P.A.M. (METRONET) ADJUSTABLE ADAPTOR BRACKET Part No. 281105-200

The Passenger Awareness Monitor/VESA 100 Adaptor Bracket provides an interface between the Metronet Variant Passenger Awareness Monitor and either the standard 1 or 2 metre Drop Bracket or the purpose built Wall Bracket either **Single (Part No.281105-250)** or **Double (Part No.281105-300)**. The tilting mechanism allows for an adjustable read angle of up to 45 degrees. Once the correct viewing angle is established the bracket can be locked in position.

The Adaptor Bracket is manufactured from 3mm thick zintec for strength and is powder painted to match the equipment.



ACCESSORIES FOR THE STANDARD DROP BRACKET

VESA 200 ADAPTOR BRACKET Part No.151105-302

The VESA 200 Adaptor Bracket is designed to adapt the **Vesa 100 /PAM Adjustable Adaptor Bracket. Part No.281105-200** to a full VESA 200 compliant configuration.

With the four M8 slots this bracket will accept either M6 or M8 fixings.



The Adaptor Bracket is manufactured from 3mm thick zintec for strength and is powder painted to match the equipment.



TUBELINES TICKET HALL DISPLAY (THID) ADAPTOR BRACKET Part No.131106-260

The Tubelines THID Adaptor Bracket is designed to adapt the **Vesa 100 /PAM Adjustable Adaptor Bracket. Part No.281105-200** to interface with the Tubelines THID.

With the four M10 slots this bracket will accept the standard 310 X 310 M10 fixing pattern.

The Adaptor Bracket is manufactured from 3mm thick zintec for strength and is powder painted to match the equipment.



ACCESSORIES FOR THE STANDARD DROP BRACKET

THVID SINGLE ADAPTOR PLATE Part No. 301105-001 (Metronet Variant)

A cost effective way of fitting a THVID Monitor to the Standard or Contract Drop Bracket by use of a THVID Single Adaptor Plate.

Manufactured from 6 mm thick mild steel plate the bracket has a nett weight of just under 1 Kg.

The Bracket can be orientated in steps of 90 degrees. The finish is Zinc Plate and Powder Paint to match the Drop Bracket..



The existing tilting mechanism on the THVID allows for an adjustable read angle of up to 45 degrees.

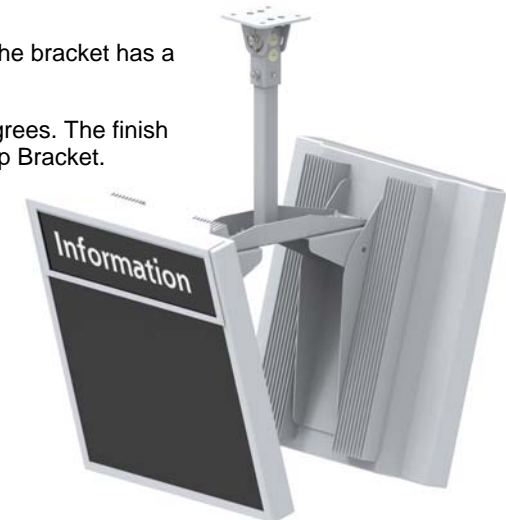


THVID DOUBLE ADAPTOR CHANNEL Part No. 301105-100 (Metronet Variant)

Another cost effective solution for fitting two THVID Monitors to the Standard or Contact Drop Bracket by use of the THVID Double Adaptor Channel.

Manufactured from 4 mm thick mild steel sheet the bracket has a nett weight of 2.9 Kg.

The Bracket can be orientated in steps of 90 degrees. The finish is Zinc Plate and Powder Paint to match the Drop Bracket.

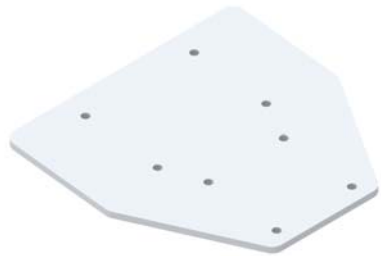


ACCESSORIES FOR THE STANDARD DROP BRACKET

TRAIN MASS DETECTOR (Mark 4) INTERFACE PLATE Part No. 131006-010

The Interface Plate, manufactured from 6mm steel plate, provides a stable fixing point to mount the Train Mass Detector to the Standard Drop Bracket. The tilting mechanism is part of the existing TMD bracket kit and allows for an adjustable angle.

Weighing in at just under 2Kg the load is spread over a large surface area to improve stability.



The assembly is Zinc plated and powder painted to match the Drop



SPREADER PLATE Part No. 151105-055

The Spreader Plate, manufactured from 6mm steel plate has drillings to interface with our Standard or Contract Drop Brackets, our VEID Brackets or mount a standard Dennard Security Camera direct.

The plate has 12.5mm slots for fixing with Lindapters or direct to concrete.

Weighing in at just under 3Kg the load is spread over a large surface area to improve stability.

The assembly is Zinc plated and powder painted to match the Drop Bracket.



ACCESSORIES FOR THE STANDARD DROP BRACKET

ADAPTOR & COVER PLATE Part No.211105-500 (200mm) & Part No.211105-510 (300mm)

The Adaptor & Cover allows for any Unistrut fixings to be concealed. The Adaptor Plate screws directly to the Unistrut Zebedees and the cover fits between the Adaptor Plate and any further brackets or equipment.

The drillings in the Adaptor Plate allow for Cameras, Speaker Brackets and the Standard Drop Bracket or VEID Bracket to be suspended.

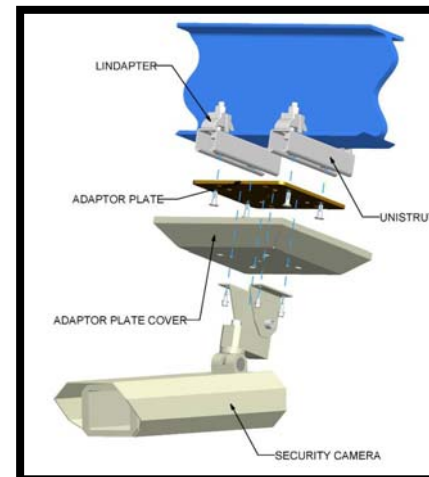
Two sizes are available.

200mm Square Part No. 211105-500 &

300mm Square Part No. 211105-510

Prices quoted are for the Adaptor Plate & Cover.

The Adaptor Plate is Zinc Plated and the Aluminium Cover is painted to match the equipment.



SECTION TWO

STANDARD WALL FIXING BRACKETS

The Wall Fixing Brackets are designed to be securely mounted to sound walls and structures.

The materials used are steel section, sheet or plate and will either be zinc plated or galvanised. The final finish is a powder coating in a low smoke, zero halogen to comply with LUL safety regulations.

All fixings used are 8.8 grade, high tensile BZP. It is recommended that Kemibolts are used to fix these brackets to wall structures

SINGLE PAM WALL MOUNTED BRACKET Part No.281105-250



The Single Passenger Awareness Monitor Wall Mounted Bracket has been shortened to allow the display to sit closer to the wall. It still allows 45 degrees of rotational movement and approximately 30 degrees of vertical movement (Viewing Angle).

The Wall Bracket is a fully welded fabrication and has an approximate weight of 3.2 Kg.

Recommended wall mounting is by M12 Kemfix Bolts or equivalent. The assembly is Zinc Plated and powder painted to suit.

This bracket interfaces with the **PAM Adaptor Bracket Part No. 281105-300** (purchased separately).



DOUBLE PAM WALL MOUNTED BRACKET Part No.281105-300

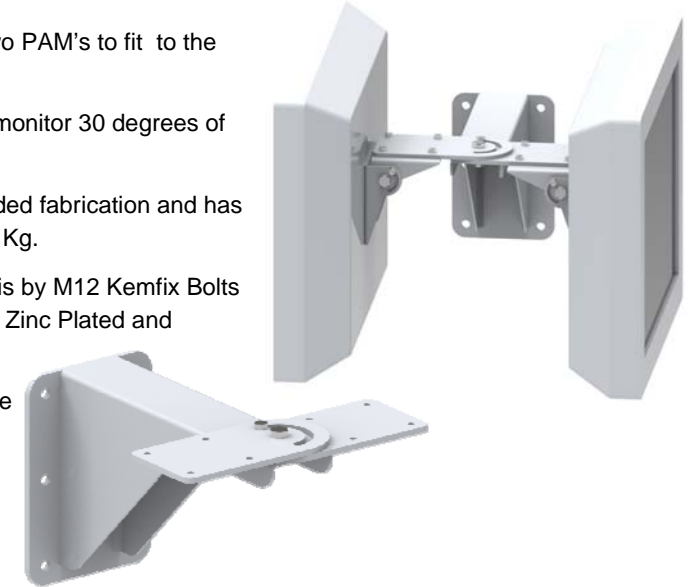
This arrangement allows for two PAM's to fit to the Wall Mounting Bracket

The Swivel Plate allows each monitor 30 degrees of rotation.

The Wall Bracket is a fully welded fabrication and has an approximate weight of 4.75 Kg.

Recommended wall mounting is by M12 Kemfix Bolts or equivalent. The assembly is Zinc Plated and powder painted to suit.

This bracket interfaces with the **PAM Adaptor Bracket Part No. 281105-300** (purchased separately).



SINGLE THVID MONITOR WALL MOUNTED BRACKET Part No. 301105-250 (Metronet Variant)

The existing tilting mechanism on the THVID unit allows for an adjustable read angle of up to 45 degrees and the Swivel Plate allows the monitor 90 degrees of rotation.

The Wall Bracket has an approximate weight of 4.5 Kg.

Recommended wall mounting is by M12 Kemfix Bolts or equivalent.

The assembly is Zinc Plated and powder painted to suit.



DOUBLE THVID MONITOR WALL MOUNTED BRACKET Part No. 301105-300 (Metronet Variant)



This Bracket allows two THVID units to be mounted, back to back. The existing tilting mechanism on the THVID units allow for an adjustable read angle of up to 45 degrees and the Swivel Plates allows each monitor 30 degrees of rotation.

The Wall Bracket has an approximate weight of 14 Kg. Recommended wall mounting is by M12 Kemfix Bolts or equivalent. The assembly is Zinc Plated and powder painted to suit.



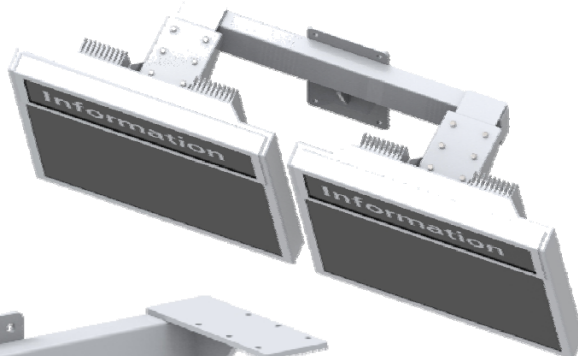
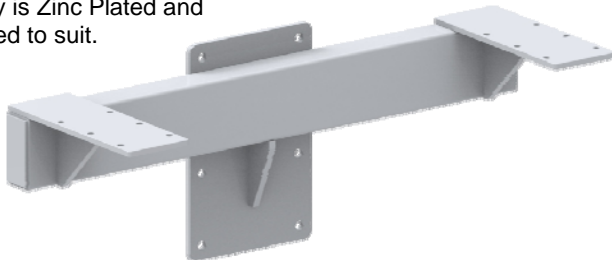
DOUBLE THVID MONITOR WALL MOUNTED BRACKET Part No. 171209-500 (Metronet Variant)

This Bracket allows two THVID units to be mounted, side by side. The existing tilting mechanism on the THVID units allow for an adjustable read angle of up to 45 degrees.

The Wall Bracket has an approximate weight of 16 Kg.

Recommended wall mounting is by M12 Kemfix Bolts or equivalent.

The assembly is Zinc Plated and powder painted to suit.



THID WALL MOUNTED BRACKET Part No. 131006-250 (Tubelines Variant)

The adjustable swivel plate allows the monitor 90 degrees of lateral rotation and the **THID/PAM Adaptor Bracket (281105-200)** along with the **THID Adaptor Bracket (131106-260)** provides vertical movement to adjust for the correct read angle.

Both these auxiliary brackets need to be purchased separately.

The Wall Bracket has an approximate weight of 3 Kg. Recommended wall mounting is by M12 Kemfix bolts or equivalent.

The assembly is Zinc Plated and powder painted to suit. All fixings used will be high Tensile steel.



THID DOUBLE WALL MOUNTED BRACKET Part No. 131006-400 (Tubelines Variant)



This Bracket allows two THID units to be mounted, side by side. The **2 off THID/PAM Adaptor Bracket (281105-200)** along with the **2 off THID Adaptor Bracket (131106-260)** provides vertical movement to adjust for the correct read angle.

Both these auxiliary brackets need to be purchased separately.

The Wall Bracket has an approximate weight of 20 Kg.

Recommended wall mounting is by M12 Kemfix Bolts or equivalent. The assembly is Zinc Plated and powder painted to suit.



SINGLE CAMERA EXTENDED WALL BRACKET **Part No. 040506-400**

The Single Camera Extended Wall Bracket has been designed to give a clear field of vision in even the most cluttered of environments.

The Bracket can be cut down from it's maximum 1000mm length to a minimum of 350mm.

The Wall Bracket has an approximate weight of 14 Kg. Recommended wall mounting is by M12 Kemfix bolts or equivalent.

The assembly is Zinc Plated and powder painted to suit. All fixings used will be high tensile steel.



DOUBLE CAMERA EXTENDED WALL BRACKET **Part No. 040506-450**



The Double Camera Extended Wall Bracket has been designed to give a clear field of vision for two security cameras in even the most cluttered of environments.

The Bracket can be cut down from it's maximum 1000mm length to a minimum of 350mm.

The Wall Bracket has an approximate weight of 15.75 Kg. Recommended wall mounting is by M12 Kemfix bolts or equivalent.

The assembly is Zinc Plated and powder painted to suit.. All fixings used will be high tensile steel.

THREE WAY CAMERA EXTENDED WALL BRACKET **Part No. 040506-500**



The Three Way Camera Extended Wall Bracket has been designed to give a clear field of vision for three cameras in even the most cluttered of environments.

The Bracket can be cut down from it's maximum 1000mm length to a minimum of 350mm.

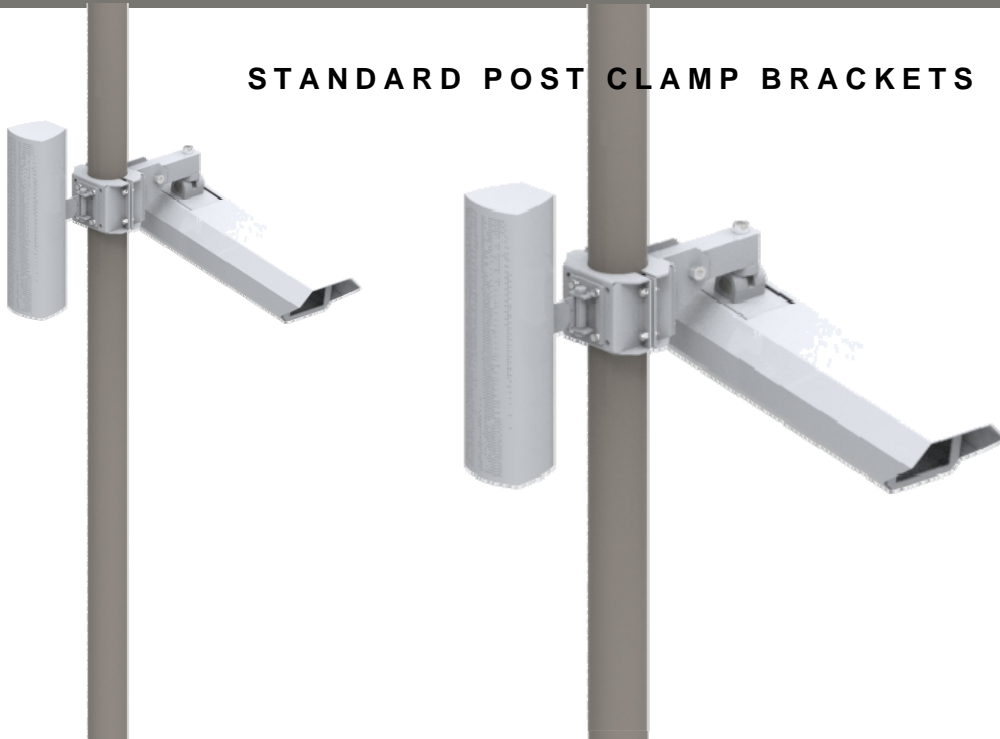
The Wall Bracket has an approximate weight of 15.75 Kg. Recommended wall mounting is by M12 Kemfix bolts or equivalent.

The assembly is Zinc Plated and powder painted to suit. All fixings used will be high tensile steel.

S E C T I O N T H R E E

STANDARD POST CLAMP BRACKETS

STANDARD POST CLAMP BRACKETS



The Post Clamp Bracket has been designed to use existing Lighting Poles to suspend Security Cameras and Speakers.

Most 'Overground' Stations are lit by Lighting Poles that usually fall into the two main diameters of either 3 inch or 3½ inch. Other diameters can be catered for but will fall into our bespoke category.

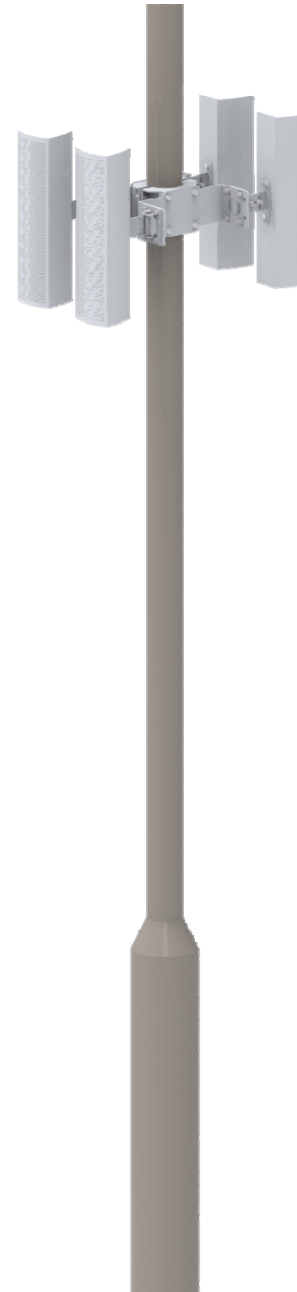
We have versions that take the Dennard DD504-200 or the Dennard 2010 Security Cameras and versions that support the standard Column Speakers or the MSP-5 or PAC-5 Series Speakers.

The Unique Sheet Metal design is light to install and bites into the pole to give more grip the heavier the load. This bracket design has a high resistance to vertical slippage.

The material used is 'Zintec', a pre-treated steel that is hot zinc sprayed during the manufacturing cycle and offers excellent protection against knocks and corrosion. The final finish is a powder coating in a low smoke, zero halogen to comply with LUL safety regulations.

All fixings used are 8.8 grade, high tensile BZP. The bushed threaded inserts are zinc plated and the threads are masked before painting.

3 INCH POST CLAMP BRACKETS Part No. 231105-200 3 ½ INCH POST CLAMP BRACKETS Part No. 231105-210



The Post Clamp Bracket is a low cost fixing solution that clamps to existing lighting poles.

Manufactured from sheet steel with a zinc coating (zintec) each half of the clam construction is drilled and bushed to accept either the standard Dennard Security Camera or a standard Column Speaker Unit.

Weighing only 1.33 Kg for the complete assembly it is light enough for single person installation. We have standardised on the two most popular Lighting Pole sizes of **3 inch (76.2mm) - Part No. 231105-200** and **3.5 inch (88.9mm) - Part No. 231105-210**. Both of these sizes fit into the same footprint, the only difference being the cut-out diameter. Please state clearly pole diameter and correct part number when ordering.

The assembly is powder coated with a low smoke zero halogen mix to comply with LUL regulations.

The **Double Speaker Bracket Part No.151105-021** will fit directly to the fixing plate allowing for a low cost alternative for adapting the bracket to use up to four speakers. See the illustration below.



3 INCH POST CLAMP BRACKETS Part No. 231105-250
3 ½ INCH POST CLAMP BRACKETS Part No. 231105-260

This version of the popular Post Clamp is designed to accept the MSP-5 Series Speaker.

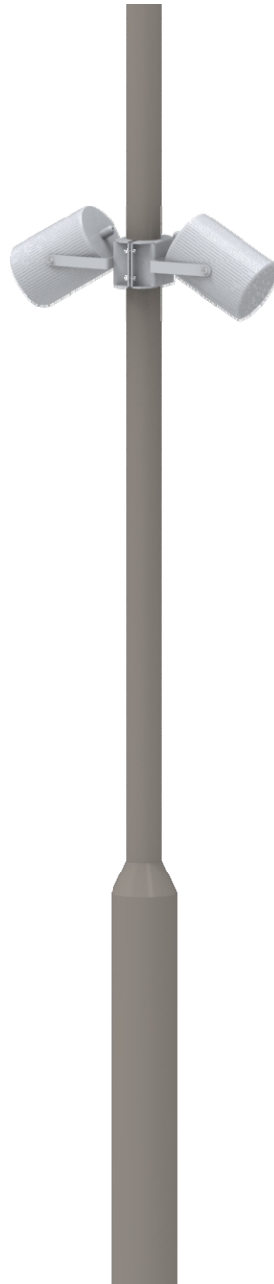
The speakers fit directly to the Post Clamp without any need for auxiliary brackets.

Again, we have standardised on the two most popular Lighting Pole sizes of **3 inch (76.2 mm) - Part No. 231105-250** and **3.5 inch (88.9 mm) - Part No. 231105-260**.

Please state clearly pole diameter and correct part number when ordering.

The assembly is powder coated with a low smoke zero halogen mix to comply with LUL regulations.

The illustration below shows a double speaker arrangements, if the requirement was for 4 speakers then two Post Clamps will be needed.



3 INCH POST CLAMP BRACKETS FOR THE DENNARD 2010 SECURITY CAMERA Part No. 231105-310
3 ½ INCH POST CLAMP BRACKETS FOR THE DENNARD 2010 SECURITY CAMERA Part No. 231105-320

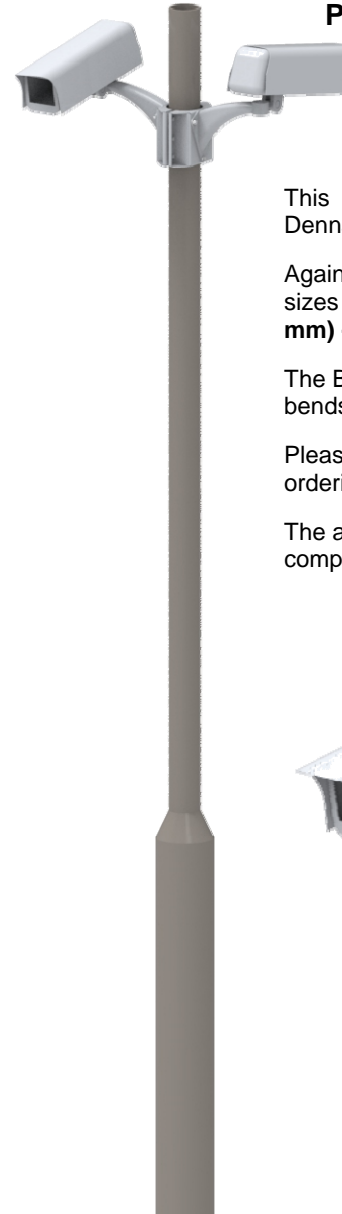
This version of the popular Post Clamp is designed to accept the Dennard 2010 Security Camera.

Again, we have standardised on the two most popular Lighting Pole sizes of **3 inch (76.2 mm) - Part No. 231105-310** and **3.5 inch (88.9 mm) - Part No. 231105-320**.

The Bracket is higher than normal so we have introduced additional bends to stiffen the bracket at the clamping points.

Please state clearly pole diameter and correct part number when ordering.

The assembly is powder coated with a low smoke zero halogen mix to comply with LUL regulations.



SECTION FOUR

STANDARD VEID DROP BRACKETS



The VEID Drop Brackets have been subject to extensive analysis by our structural engineers and we think that we have come up with a versatile design that can cope with most situations and wind loads.

The materials used are steel section and will either be zinc plated or galvanised. The final finish is a powder coating in a low smoke, zero halogen to comply with LUL safety regulations.

All fixings used are 8.8 grade, high tensile BZP.



SHORT DROP ADJUSTABLE VEID BRACKET

Part No.070709-400 (Metronet Variant)
Part No.070709-450 (Tubelines Variant)



Designed specially for Canopy Fixing, this versatile bracket can be cut down on site to allow a minimum drop of 200mm and a maximum of 350mm. The Top Fixing Plate can pivot laterally to compensate for uneven or sloping fixing conditions .

The Bracket Assembly consists of two adjustable drop arms and a horizontal bar. The drop arms can be positioned anywhere along the horizontal bar and the bracket is designed to interface with a **Data Display Video Display (LED) VID2563205** which has an approximate weight of 150Kg.

We also manufacture a Tubelines Variant that interfaces with either a **2 Line or 3 Line Single or Double Sided Video Display (LED) COM-DRW-00044 to COM-DRW-0047**. Please state the correct variant when ordering.

The design of the bracket allows the VID Unit to be hooked on to aid assembly on site and to give an added degree of security.

The main structure will be of 50mm X 50mm X 4mm Structural Hollow Section to BS EN 10210 or equivalent. All Plates and Brackets will be Mild Steel Plate or Bar to EN3 or equivalent.

The assembly is zinc plated and powder painted to suit.



**1000mm ADJUSTABLE DROP NARROW WIDTH VEID BRACKETS
Part No.070709-300**
**2000mm ADJUSTABLE DROP NARROW WIDTH VEID BRACKETS
Part No.070709-350**

This Bracket Assembly is designed to interface with a **Data Display Video Display (LED) 1740 Wide 256 X 24 Pixels X 6mm Pitch Variable Display.**

The supplied drop length will be either 1000mm or 2000mm to the top of the VEID unit and may be cut down to suit on site to a minimum of 500mm. The Standard Top Fixing Plate with its unique pivoting head is ideal if using the standard unistrut fixing method or direct fixing to the steelwork with Lindapters. It is also suitable for tunnel ring fixing .

The assembly has laser cut transitions and is allowed to pivot with air movement and will be stable enough not to require any further bracing.

The vertical arms can be moved along the bottom crossbar to allow convenient positioning on the roof substrate.

The main structure is manufactured from 50mm X 50mm X 4mm Hot Finished Structural Hollow Section to BS EN 10210 or equivalent. All Plates and Brackets will be Mild Steel Plate or Bar to EN3 or equivalent. The one metre drop assembly has a nett weight of 31 Kg and the two metre assembly 42 Kg

Cable runs are through the top and bottom conduit points on the uprights.

The assembly is zinc plated and powder coated (Low Smoke, Zero Halogen) to suit.



METRONET VERSION

**1000mm ADJUSTABLE DROP VEID BRACKETS
Part No.070709-500**
**2000mm ADJUSTABLE DROP VEID BRACKETS
Part No.070709-600**



Our latest version of the Adjustable Drop VEID Bracket Assembly is designed to interface with a **Data Display Video Display (LED) VID2563205** which has an approximate weight of 150Kg.

The supplied drop length will be either 1000mm or 2000mm to the top of the VEID unit and may be cut down to suit on site to a minimum of 500mm. The Standard Top Fixing Plate with its unique pivoting head is ideal if direct fixing to steelwork with Lindapters.

With it's unique vertical rotating pivot designed to absorb torsional twist it is ideally suited for tunnel ring fixing. The assembly has laser cut transitions and is allowed to pivot with air movement and will be stable enough not to require any further bracing. The vertical arms can be moved along the bottom crossbar to allow convenient positioning on the roof substrate.

The main structure is manufactured from 50mm X 50mm X 4mm Hot Finished Structural Hollow Section to BS EN 10210 or equivalent. All Plates and Brackets will be Mild Steel Plate or Bar to EN3 or equivalent. The one metre drop assembly has a nett weight of 31 Kg and the two metre assembly 42 Kg. Cable runs are through the top and bottom conduit points on the uprights.

The assembly is zinc plated and powder coated (Low Smoke, Zero Halogen) to suit. All fixings used will be Grade 8 High Tensile BZP.

TUBELINES VERSION

1000mm Adjustable Drop VEID Brackets

Part No.070709-550

2000mm Adjustable Drop VEID Brackets

Part No.070709-650

Our latest version of the Adjustable Drop VEID Bracket Assembly is designed to interface with with either a **2 Line or 3 Line Single or Double Sided Video Display (LED) COM-DRW-00044 to COM-DRW-0047** which has an approximate weight of 150Kg.

The supplied drop length will be either 1000mm or 2000mm to the top of the VEID unit and may be cut down to suit on site to a minimum of 500mm. The Standard Top Fixing Plate with its unique pivoting head is ideal if direct fixing to steelwork with Lindapters.

With it's unique vertical rotating pivot designed to absorb torsional twist it is ideally suited for tunnel ring fixing. The assembly has laser cut transitions and is allowed to pivot with air movement and will be stable enough not to require any further bracing. The vertical arms can be moved along the bottom crossbar to allow convenient positioning on the roof substrate .

The main structure is manufactured from 50mm X 50mm X 4mm Hot Finished Structural Hollow Section to BS EN 10210 or equivalent. All Plates and Brackets will be Mild Steel Plate or Bar to EN3 or equivalent. The one metre drop assembly has a nett weight of 31 Kg and the two metre assembly 42 Kg. Cable runs are through the top and bottom conduit points on the uprights.

The assembly is zinc plated and powder coated (Low Smoke, Zero Halogen) to suit. All fixings used will be Grade 8 High Tensile BZP.



TUNNEL RING FIXING OF THE STANDARD ADJUSTABLE DROP VEID

This is where our latest version of the Adjustable Drop VEID Bracket Assembly scores over our previous bracket

Suited to both the Metronet and Tubelines variants and also the new Narrow Width VEID Bracket. We have developed this design in conjunction with our structural engineers to produce a bracket that is capable of withstanding the unique stresses that a tunnel ring configuration causes.

The oncoming train pushes air through the underground tunnels and when it reaches a station the force of air causes a severe draught that would put undue pressure on a static drop bracket. This is why our brackets are allowed to pivot freely to reduce the stresses.

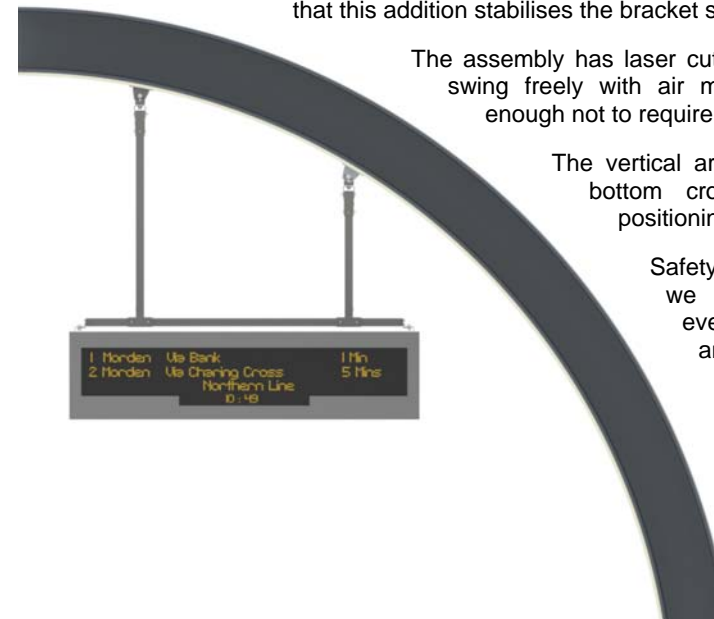
We have also established that when the drop arms are cut down to suit this arrangement that the uneven arms cause a lateral twist through the vertical drop arms. This could result in buckling at the top plate fixing points and potential failure of the bracket. To overcome this we placed an additional pivot through the vertical drop arms and our calculations show that this addition stabilises the bracket sufficiently.

The assembly has laser cut transitions and is allowed to swing freely with air movement and will be stable enough not to require any further bracing.

The vertical arms can be moved along the bottom crossbar to allow convenient positioning on the tunnel ring.

Safety is our main consideration and we believe that we have done everything possible to eliminate any cause of failure.

Lindapter have developed a tunnel ring fixing that interfaces directly with our top fixing plates. These can be purchased directly from Lindapter International.



SECTION FIVE

SELF STANDING GANTRIES FOR VID'S



The Free Standing Gantries are designed to suspend VEID Units safely on open platforms. They should be securely mounted to new concrete foundations.

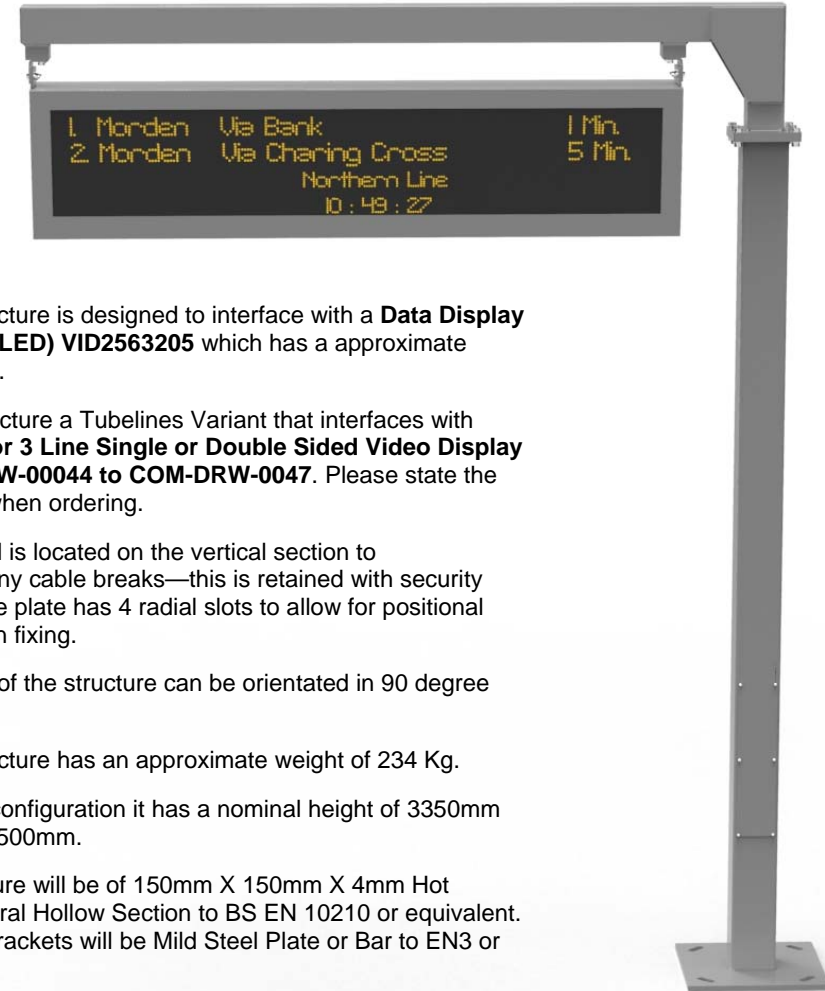
We can, within reason, produce these to a height and span to suit the conditions. Please specify heights and spans when placing orders. Structural Calculations should be undertaken on any modified dimensions. We can also add ancillary brackets to fix security cameras and speakers etc. making them very flexible.

The materials used are steel section and will be galvanised prior to painting. The final finish is a powder coating in a low smoke, zero halogen (DuPont ALESTA) to comply with LUL safety regulations.

All fixings used are 8.8 grade, high tensile BZP.



SINGLE GANTRY STRUCTURE FOR VID UNIT Part No.180505-500 (Metronet Variant) Part No.180505-600 (Tubelines Variant)



The Gantry Structure is designed to interface with a **Data Display Video Display (LED) VID2563205** which has a approximate weight of 150Kg.

We also manufacture a Tubelines Variant that interfaces with either a **2 Line or 3 Line Single or Double Sided Video Display (LED) COM-DRW-00044 to COM-DRW-0047**. Please state the correct variant when ordering.

An access panel is located on the vertical section to accommodate any cable breaks—this is retained with security fixings. The base plate has 4 radial slots to allow for positional adjustment when fixing.

The top section of the structure can be orientated in 90 degree steps.

The Gantry Structure has an approximate weight of 234 Kg.

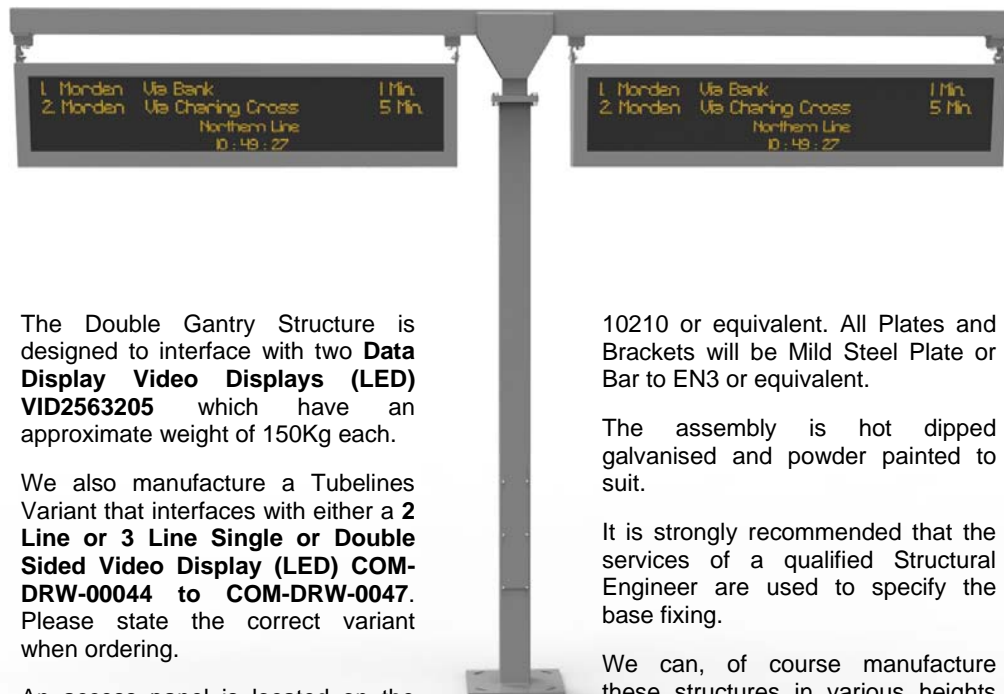
In it's standard configuration it has a nominal height of 3350mm and a Span of 2500mm.

The main structure will be of 150mm X 150mm X 4mm Hot Finished Structural Hollow Section to BS EN 10210 or equivalent. All Plates and Brackets will be Mild Steel Plate or Bar to EN3 or equivalent.

The assembly is hot dipped galvanised and powder painted to suit.

It is strongly recommended that the services of a qualified Structural Engineer are used to specify the base fixing.

DOUBLE GANTRY STRUCTURE FOR VID UNIT
Part No.180505-510 (Metronet Variant)
Part No. 180505-610 (Tubelines Variant)



The Double Gantry Structure is designed to interface with two **Data Display Video Displays (LED) VID2563205** which have an approximate weight of 150Kg each.

We also manufacture a Tubelines Variant that interfaces with either a **2 Line or 3 Line Single or Double Sided Video Display (LED) COM-DRW-00044 to COM-DRW-0047**. Please state the correct variant when ordering.

An access panel is located on the vertical section to accommodate any cable breaks, this is retained with security fixings. The base plate has 4 radial slots to allow for positional adjustment when fixing. The top section of the structure can be orientated in 90 degree steps.

In it's standard configuration the Gantry Structure has an approximate weight of 250 Kg. It has a nominal height of 3350mm and a Span of 5000mm total.

The main structure will be of 150mm X 150mm X 4mm Hot Finished Structural Hollow Section to BS EN

10210 or equivalent. All Plates and Brackets will be Mild Steel Plate or Bar to EN3 or equivalent.

The assembly is hot dipped galvanised and powder painted to suit.

It is strongly recommended that the services of a qualified Structural Engineer are used to specify the base fixing.

We can, of course manufacture these structures in various heights and spans. We can also add brackets for security cameras, PA systems and train detection systems.

Please call 01903 784242 for pricing or e-mail sales@lunds.co.uk and request a quotation.

All our Gantry structures have been scrutinised by our structural engineers with applied wind loadings. If a bespoke structure is required we would need to obtain further structural analysis to ensure that the assembly can withstand the appropriate environmental conditions. The cost of this service will be added to the quote.