VEROTEC
Electronics Packaging

KM6-HD Subracks

KM6-HD Subracks – Value Added Services from Verotec...

CUSTOM KM6-HD SUBRACKS

TecServ+ is the vehicle by which Verotec delivers its value added services. These fall within 5 main categories and are described below. When it comes to KM6-HD subracks, we've worked with many customers in the past to design, manufacture and help bring to market modified and custom versions of our standard products – a small selection of these are pictured below. If you have any special KM6-HD subrack requirements, please contact our sales office

ENGINEERING SERVICES:

- Complete review of commercial, electro-mechanical, environmental and regulatory product requirements with customer.
- Import of STEP, IGES, DWG & DXF file formats
- Mechanical and electrical design using latest CAD software
- 3D Modelling to allow conceptual testing before production
- Component selection from a vast library of parts

MANUFACTURING SERVICES:

- Prototype / pre-production samples using small batch shop
- Modification of standard catalogue products (including machining, CNC punching, laser cutting, painting & silk-screening)
- Manufacture of custom / bespoke products (including fabrication, machining, CNC punching, plating, painting & silk-screening)
- Assembly & kitting of components
- Integration & mechanical / electrical testing of complex systems

Integrated 6U x 84HP x 180mm KM6-HD IEC sub-rack , wired with VMEbus backplane & custom H15 power supplies - simulation application.

COMPLIANCE SERVICES:

- Validation of product design and/or specification
- Advice on environment legislation (RoHS, Reach, Weee etc.)
- In-house pre-compliance testing for CE marking (Safety, EMC)
- Supply of product technical construction file
- Testing & certification of a product at an approved test house (for EMC, shock & vibration, altitude, temperature, humidity etc.)

LOGISTICAL SERVICES:

- Express manufacturing service for quick turnaround of urgent orders
- Special / bespoke packaging for safe transport of goods
- Scheduled orders (including JIT and KAN BAN systems)
- Stock holding & distribution
- Exporting (including export packaging, land/sea/air transportation, freight forwarding, customs documentation & shipping manifests)

Custom 6U x 40HP KM6-HD IEEE Subracks with metal card guides and gold chem film finish - military application.

PROJECT MANAGEMENT SERVICES:

- Initial project consultation
- Capability and feasibility study
- Estimation of project cost and leadtime
- Management of design process (specification to validation)
- Management of manufacturing process (prototype to production)
- Cost reduction programmes throughout product life cycle

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INTRODUCTION

The KM6-HD (Heavy Duty) subrack system, although primarily designed for military and railway use, would suit any rugged application where a high resistance to shock and vibration is required. Built to meet MIL-STD-167, its features include positive guide locking / retention, heavy two-screw fixing tiebar extrusions, 3mm thick side plates / rack angles and a conductive finish throughout.

Accuracy is maintained by the use of counter sunk holes in the side plates which ensure correct alignment of the tiebars via the M4 screw fixings.

Electro Magnetic Compatibility (EMC) is assured with the use of RFI gaskets in the 19" rack mounting angles and closing angles, providing a seal to adjacent panels in the front and rear apertures. Side plates are solid whilst optional top and bottom covers may be fitted either plain or with an EMC vent pattern for cooling purposes. All metal parts are conductively finished, ensuring electrical continuity.

The KM6-HD subrack accepts standard Eurocards in 3U, 6U and 9U heights and depths of up to 400mm in both IEC60297 and IEEE1101.10/11 standards. This makes the card frames suitable for housing popular backplane types such as VMEbus, VXI, VME64 Extensions, VPX, VXS, CompactPC, PXI and also DIN connectors with the use of a connector mounting extrusion.

KM6-HD subracks are supplied in kit form as standard but can be shipped fully assembled upon request. They are compatible with the comprehensive range of KM6-II accessories including; front panels, plug-in units and peripheral mounting assemblies.

For IEC 60297 & IEEE 1101.10/11 subrack & front panel dimensional criteria,refer to pages 1.05-1.11.

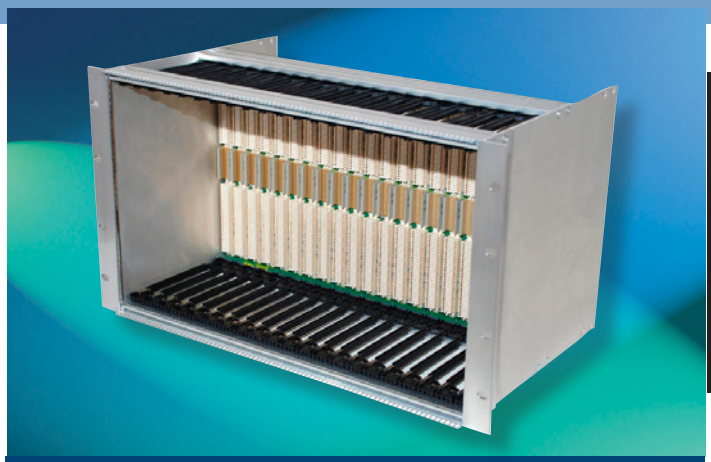
FEATURES

- Designed and built to meet Military Standard (MIL STD) 167
- IEC60297 and IEEE1101.10/11 compliant versions
- EMC (Electro-Magnetic Compatibility) through RFI Shielding and a conductive finish throughout.
- Heavy duty tiebars, side plates and rack angles
- Positive guide locking
- Accurate tiebar location
- Optional heavy duty handles
- 3U, 6U & 9U heights
- 160mm & 220mm guide depths
- Optional 80mm rear transition area on IEEE version
- KM6-II compatible accessories
- Supplied in kit form (assembled upon request)
- Available as separate piece parts

ORDERING

KM6-HD subracks can be ordered as kits or as individual piece parts. If ordering a kit, chose first from either an IEC 60297 subrack (page 1.44) or an IEEE 1101.10/11 subrack (page 1.45 & 1.46). The extended IEEE version includes an injector/extractor front tiebar (see below picture), options for rear plug-in boards (see right picture) and no centre rear tiebar extrusion on 6U varients; as VME64x & CPCI backplanes do not use them. The basic kits include side plates, tiebars, tapped strips, 19" rack angles, gasket and fixings. Versions with rear transition area include additional tiebars, tapped strips, gasket and rear closing angles. The below items should be ordered separately:

- Rear closing angles & gasket (for basic kits)
- Card guides, retention screws, ESD clips & coding keys
- Top and bottom covers
- DIN connector mounting adapters
- Backplane spacers
- Front and rear panels
- Accessories

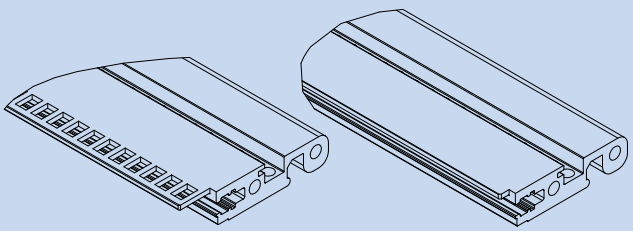


KM6-HD Cardframe with VME64x Backplane

Heavy Duty, Twin-Screw Fixing Tiebars / 19" Rack Angle

IEEE1101.10 /11 KM6-HD Subrack with Rear Transition Area

FRONT EXTRUSION OPTIONS



IEEE1101.10 (Injector/extractor)

Conventional IEC60297-3

IEEE front tiebar includes an extended lip with cutouts to aid the insertion / extraction of boards when a suitable ejector handle is used.

BACKPLANE MOUNTING SUBRACK KITS – IEC 60297
(For Eurocard backplanes, VMEbus, VXI etc.)

The below basic kits include side plates, tiebars, tapped strips, 19" rack angles, gasket and fixings – as shown in the exploded views to the right.

ORDERING INFORMATION – BASIC KITS:

Height	Depth (mm)	Width (HP)	Ordercode (Without Handles)	Ordercode (With Handles)
3U	173	42	**900-4003823**	**900-4003835**
		84	**900-4003824**	**900-4003836**
	233	42	**900-4003825**	**900-4003837**
		84	**900-4003826**	**900-4003838**
	293	84	**900-4003827**	**900-4003839**
	353	84	**900-4003828**	**900-4003840**
6U	173	42	**900-4003829**	**900-4003841**
		84	**900-4003830**	**900-4003842**
	233	42	**900-4003831**	**900-4003843**
		84	**900-4003832**	**900-4003844**
	293	84	**900-4003833**	**900-4003845**
	353	84	**900-4003834**	**900-4003846**

Notes:
1) *In order to maintain the correct geometry between the front panels and Backplane connectors, a suitable backplane spacer is required. Either insulating or conductive types (1mm thick) may be used, and must be located between the rear tiebar and the backplane – refer to page 1.50*
2) *Backplane mounting tiebars can be converted to accept DIN 41612 connectors by fitting an adapter rail – refer to page 1.50*
3) *The conductive finish gives excellent electrical conductivity but is more easily marked than anodising. During assembly, care should therefore be taken to avoid the deposition of grease and oil, particularly on the visible surfaces*

CONTENTS OF KIT

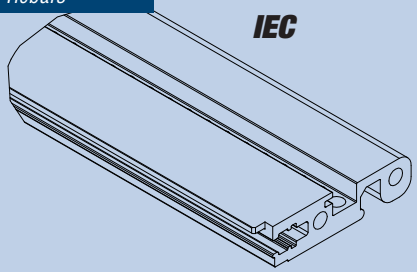
Description	Qty	Material / Finish
Front IEC Tie Bar	2	Extruded aluminium alloy Iridite NCP
Rear Tie Bar	2	Extruded aluminium alloy Iridite NCP
Centre Rear Tie Bar	0 (3U) 1 (6U)	Extruded aluminium alloy, Iridite NCP
Side Plates	2	3mm aluminium, Iridite NCP
19" Rack Angles	2	Extruded aluminium alloy Iridite NCP
EMC Gasket	1	Stainless steel
Tapped Strips	6 (3U) 8 (6U)	Mild Steel, zinc passivate
All Fixings		

ORDER SEPERATELY:

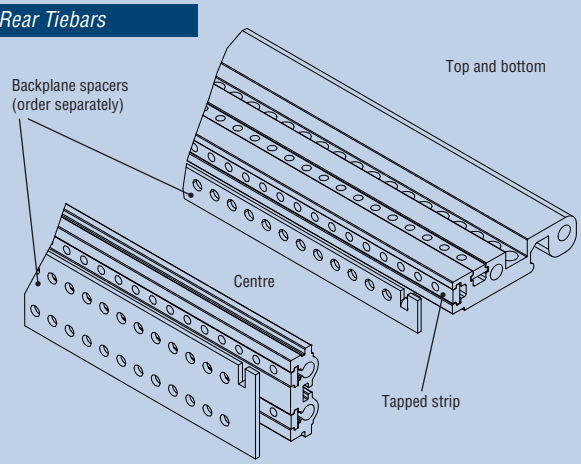
Description	Page Number
Rear Closing Angles	1.48
Backplane Spacers	1.50
DIN 41612 Connector Adapter Rail	1.50
Card Guides	1.51
ESD Clips	1.52
Coding Keys	1.52
Top & Bottom EMC Covers	1.54
Front & Rear EMC Closing Panels	1.54
Chassis Mounting Kit	1.55
Fixing Screws	1.55

Backplane Extrusions

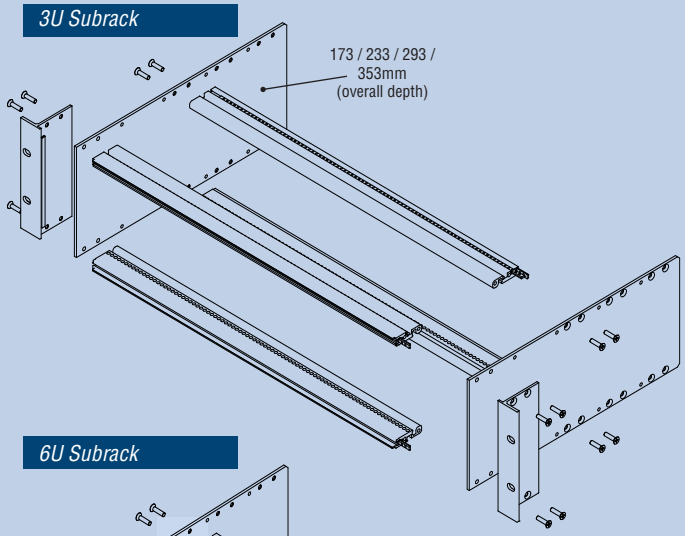
Front Tiebars



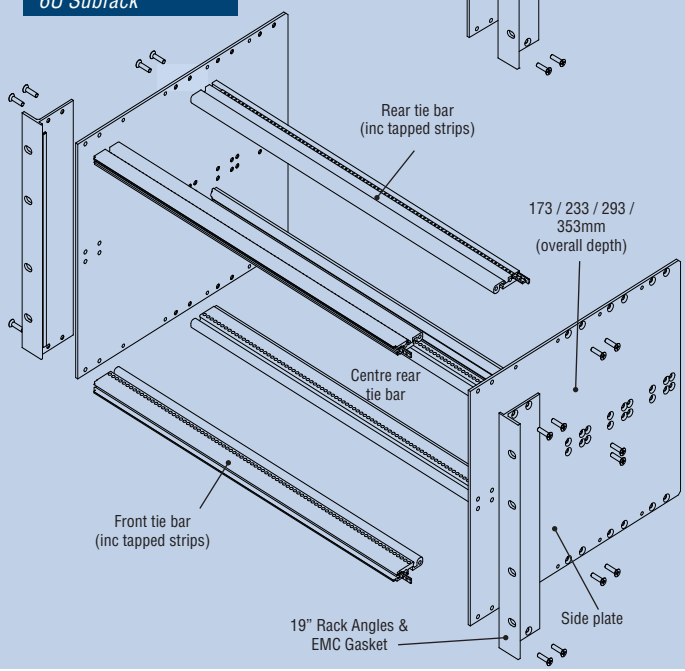
Rear Tiebars



3U Subrack



6U Subrack



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BACKPLANE MOUNTING SUBRACK KITS – IEEE 1101.10/11

(For VME64 Extensions, VPX, CompactPCI, PXI etc.)

The below basic kits include side plates, tiebars, tapped strips, 19" rack angles, gasket and fixings – see exploded view right.

ORDERING INFORMATION – BASIC KITS

Height	Depth (mm)	Width (HP)	Ordercode (Without Handles)	Ordercode (With Handles)
3U	173	42	900-4003847	900-4003859
		84	900-4003848	900-4003860
	233	42	900-4003849	900-4003861
		84	900-4003850	900-4003862
	293	84	900-4003851	900-4003863
	353	84	900-4003852	900-4003864
6U	173	42	900-4003853	900-4003865
		84	900-4003854	900-4003866
	233	42	900-4003855	900-4003867
		84	900-4003856	900-4003868
	293	84	900-4003857	900-4003869
	353	84	900-4003858	900-4003870

Notes:

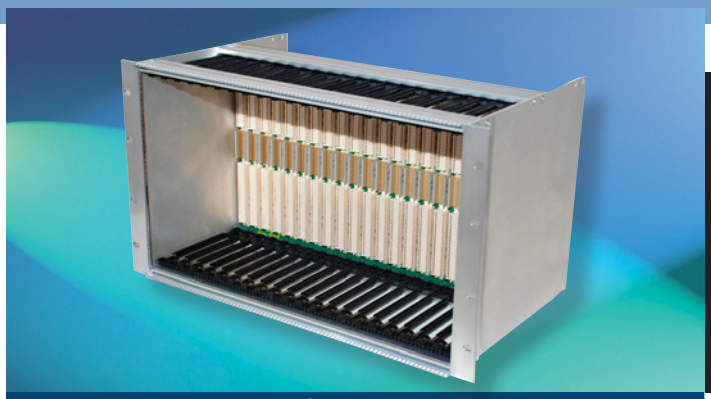
1) *In order to maintain the correct geometry between the front panels and Backplane connectors, a suitable backplane spacer is required. Either insulating or conductive types (1mm thick) may be used, and must be located between the rear tiebar and the backplane – refer to page 1.50*
2) *Backplane mounting tiebars can be converted to accept DIN 41612 connectors by fitting an adapter rail – refer to page 1.50*
3) *The conductive finish gives excellent electrical conductivity but is more easily marked than anodising. During assembly, care should therefore be taken to avoid the deposition of grease and oil, particularly on the visible surfaces.*

CONTENTS OF KIT

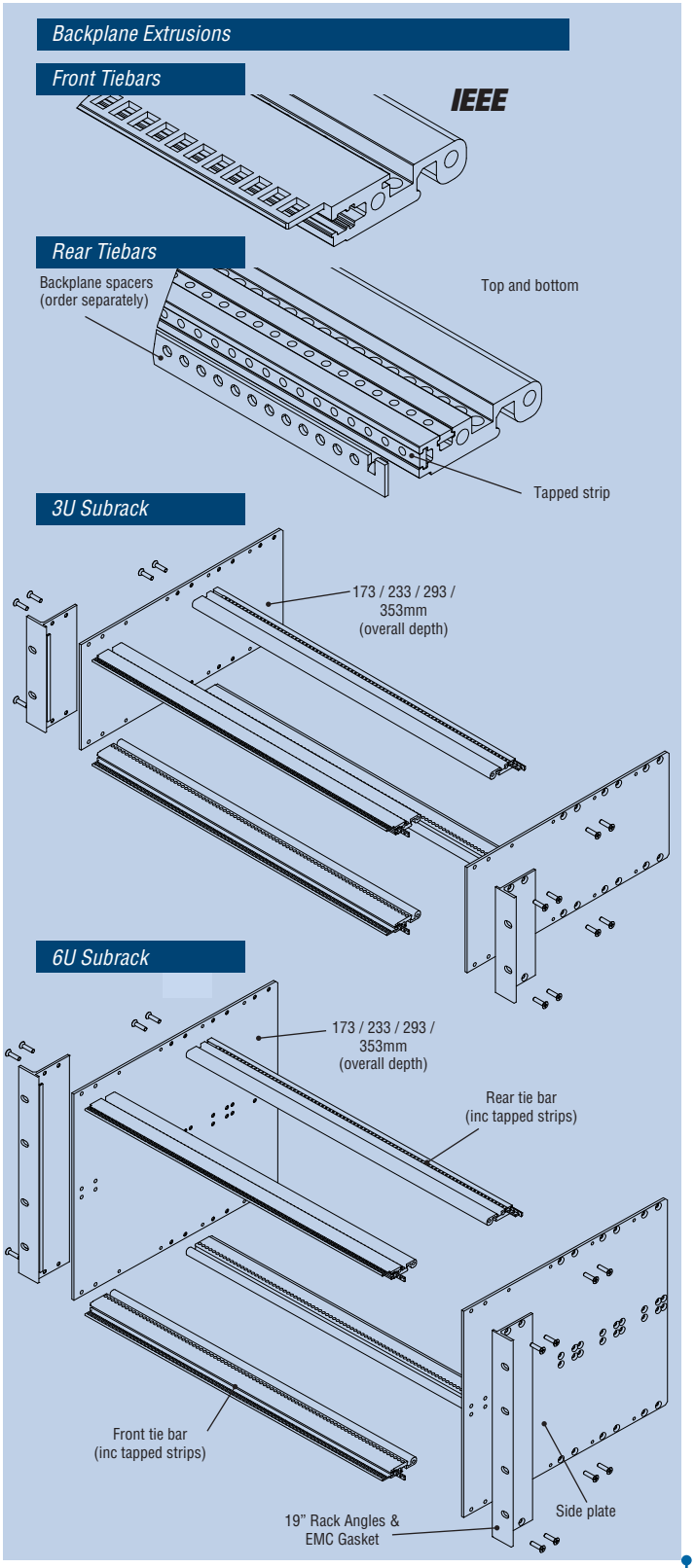
Description	Qty	Material / Finish
Front IEEE Tie Bar	2	Extruded Aluminium Alloy, Iridite NCP
Rear Tie Bar	2	Extruded Aluminium Alloy Iridite NCP
Side Plates	2	3mm Aluminium, Iridite NCP
19" Rack Angles	2	Extruded Aluminium Alloy Iridite NCP
EMC Gasket	1	Stainless steel
Tapped Strips	6	Mild Steel, Zinc passivate
All Fixings		

ORDER SEPERATELY:

Description	Page Number
Rear Closing Angles	1.48
Backplane Spacers	1.50
DIN 41612 Connector Adapter Rail	1.50
Card Guides	1.51
ESD Clips	1.52
Coding Keys	1.52
Top & Bottom EMC Covers	1.54
Front & Rear EMC Closing Panels	1.54
Chassis Mounting Kit	1.55
Fixing Screws	1.55



6U, 84HP, IEEE 1101.10 KM6-HD Subrack



BACKPLANE MOUNTING SUBRACK KITS – IEEE 1101.10/11 WITH REAR TRANSITION AREA

(For VME64 Extensions, VPX, CompactPCI, PXI etc.)

These kits include side plates, tiebars, tapped strips, 19" rack angles, rear closing angles, gasket and fixings – see exploded view right.

Although the IEEE specification defines a number of different card depths, by far the most common IEEE 1101.10/11 subrack configuration is a 160mm front card area and an 80mm rear transition card area and this is what is therefore offered below.

ORDERING INFORMATION – WITH REAR TRANSITION AREA:

Height	Depth (mm)	Width (HP)	Ordercode (Without Handles)	Ordercode (With Handles)
3U	160+80	42	900-4003871	900-4003875
		84	900-4003872	900-4003876
6U	160+80	42	900-4003873	900-4003877
		84	900-4003874	900-4003878

Notes:

1) *In order to maintain the correct geometry between the front panels and Backplane connectors, a suitable backplane spacer is required. Either insulating or conductive types (1mm thick) may be used, and must be located between the rear tiebar and the backplane – refer to page 1.50) Backplane mounting tiebars can be converted to accept DIN 41612 connectors by fitting an adapter rail – refer to page 1.50*

3) *The conductive finish gives excellent electrical conductivity but is more easily marked than anodising. During assembly, care should therefore be taken to avoid the deposition of grease and oil, particularly on the visible surfaces.*

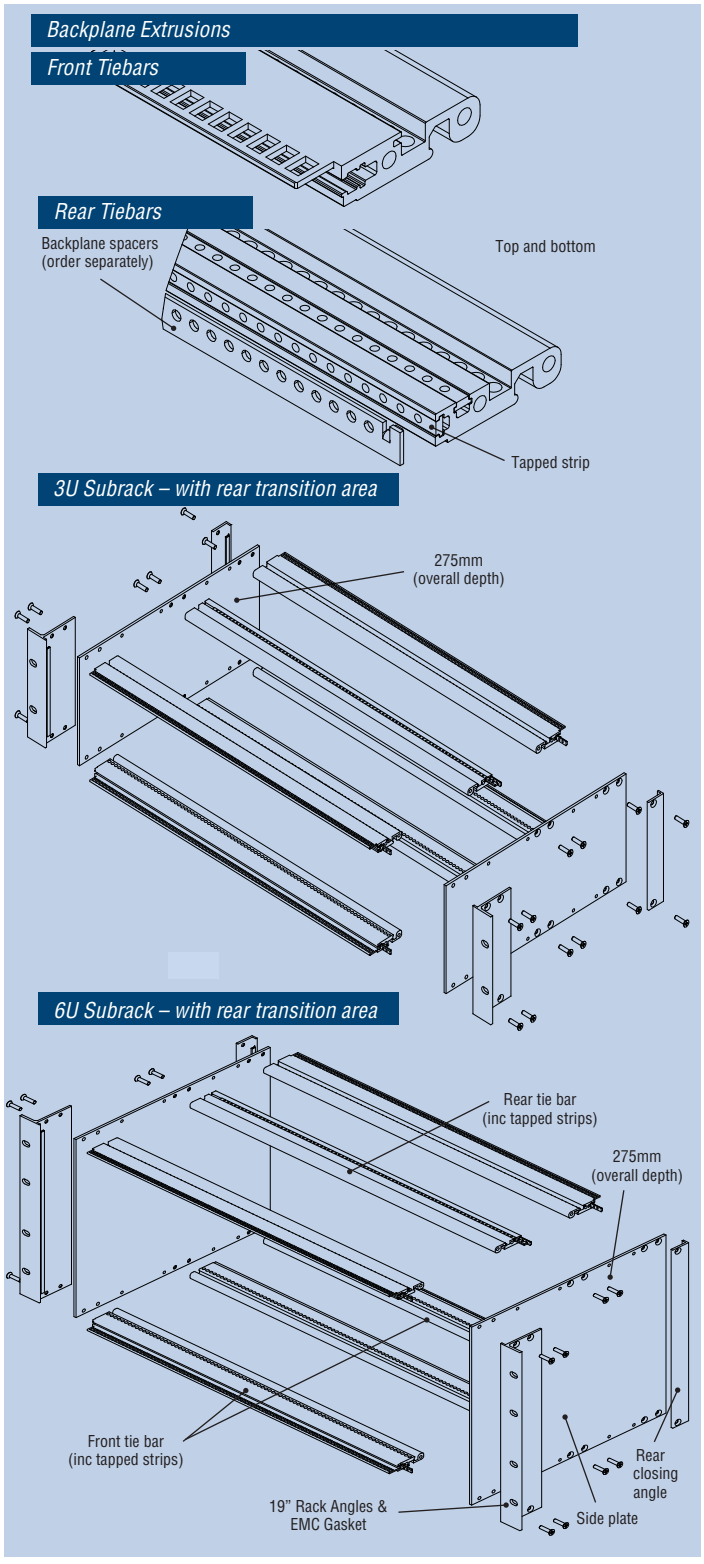
CONTENTS OF KIT

Description	Qty	Material / Finish
Front IEEE Tie Bar	4	Extruded Aluminium Alloy, Iridite NCP
Rear Tie Bar	2	Extruded Aluminium Alloy, Iridite NCP
Side Plates	2	3mm Aluminium, Iridite NCP
19" Rack Angles	2	Extruded Aluminium Alloy, Iridite NCP
Rear Closing Angles	2	Extruded Aluminium Alloy, Iridite NCP
EMC Gasket	2	Stainless steel
Tapped Strips	8	Mild Steel, Zinc passivate
All Fixings		

ORDER SEPERATELY:

Description	Page Number
Rear Closing Angles	1.48
Backplane Spacers	1.50
DIN 41612 Connector Adapter Rail	1.50
Card Guides	1.51
ESD Clips	1.52
Coding Keys	1.52
Top & Bottom EMC Covers	1.54
Front & Rear EMC Closing Panels	1.54
Chassis Mounting Kit	1.55
Fixing Screws	1.55

6U, 84HP, 160+80mm KM6-HD Cardframe for Rear Plug-Up Applications



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SIDE PLATES

KM6-HD side plates are manufactured from 3mm thick aluminium for additional strength and rigidity. Tiebar fixing positions are punched on the Eurocard pitch of 60mm along the length of the side plates, allowing various subrack configurations to be assembled. Countersunk holes are used to ensure accurate alignment of tiebar extrusions and a conductive finish is applied throughout.

** 160+80 depth side plates are designed for rear plug-up applications and meet the requirements of IEEE 1101.10/11.These provide for a 160mm front card area and 80mm rear card area.*

FEATURES

- 3mm thick for extra strength
- Conductive finish
- Counter sunk tiebar fixing positions for accuracy
- 3U, 6U & 9U heights
- 173, 233, 293, 353, 413mm depths
- 3U & 6U rear plug-up versions

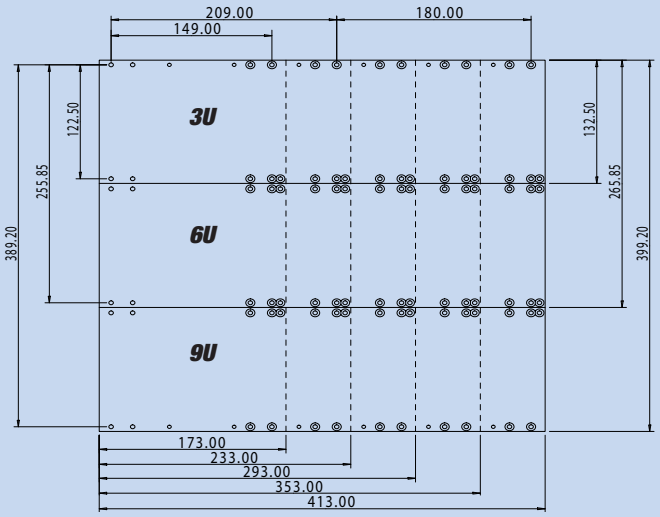
CONTENTS OF KIT

Description	Qty	Material / Finish
Side Plate	1	3mm Aluminium, conductive (Iridite NCP)

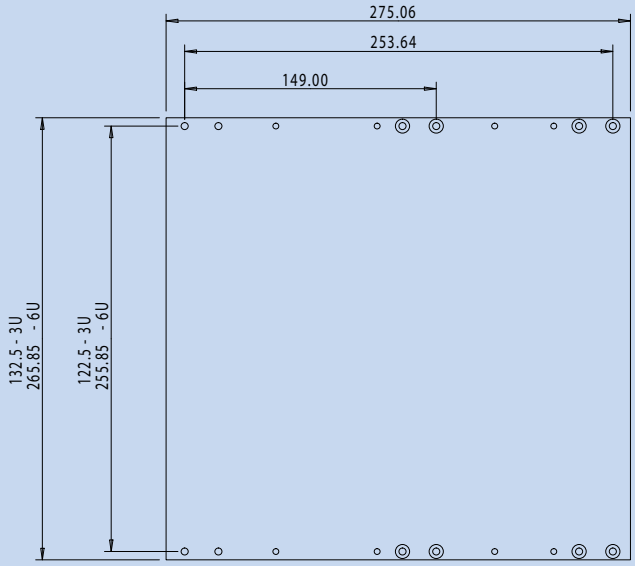
ORDERING INFORMATION

Height	Depth (mm)	Qty	Ordercode
3U	173	1	900-4003924
	233	1	900-4003879
	293	1	900-4003880
	353	1	900-4003881
	160+80 *	1	900-4003882
6U	173	1	900-4004945
	233	1	900-4003883
	293	1	900-4003884
	353	1	900-4003885
	413	1	900-4003886
	160+80 *	1	900-4003887
9U	173	1	900-4004942
	233	1	900-4003888
	293	1	900-4003889
	353	1	900-4003890
	413	1	900-4003891

3U/6U/9U BASIC SIDE PLATE



3U/6U RPU SIDE PLATE (160+80MM)



19" RACK ANGLES

Rack angles are available with handle holes to accept the heavy duty bar handles shown on page 1.90 – these should be ordered seperately. A special 6U rack angle is also available for situations where a front horizontally divided subrack is required; they are machined / punched to provide 2 x tibar positions in the 3U position.

FEATURES

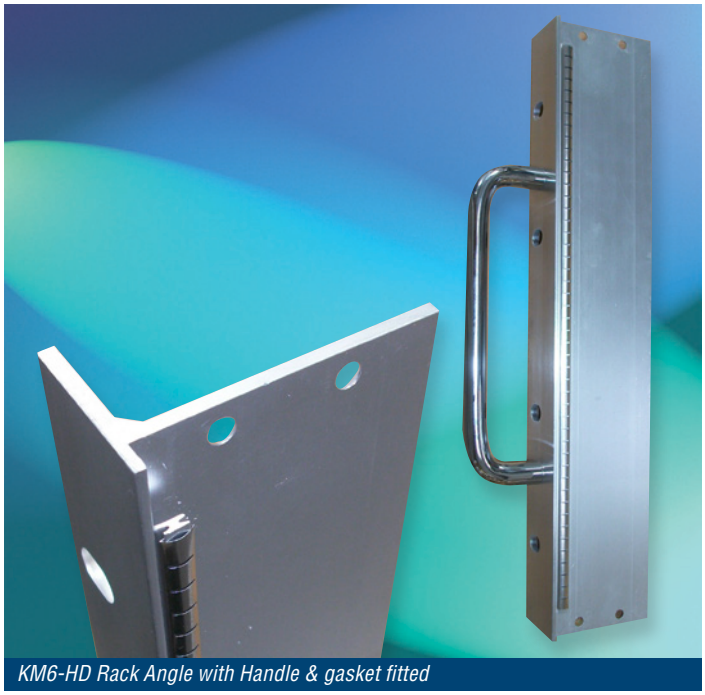
- IEC 60297 & IEEE 1101.10 geometry
- 3U, 6U, 9U heights, with or without handle holes
- Accepts slide on, EMC gasket (not supplied)
- Conductive finish

CONTENTS OF KIT

Description	Qty	Material / Finish
19" Rack Angle	1	Aluminium extrusion, conductive (Iridite NCP)

ORDERING INFORMATION

Height	Qty	Ordercode (Without Handle holes)	Ordercode (With Handle Holes)
3U	1	900-4002118	900-4003892
6U	1	900-4002119	900-4003893
9U	1	900-4002120	900-4003894
6U Div	1	900-4004943	900-4004944



KM6-HD Rack Angle with Handle & gasket fitted

CLOSING ANGLES

KM6-HD closing angles are normally fitted to the rear of a subrack to interface with a rear panel or IEEE 1101.10/11 panels / modules in rear plug-up applications. They can also be positioned at the front if 19" rack angles are not fitted. The extrusions accept a slide-on metal gasket (not included) which forms an EMC tight seal between it and the adjacent front / rear panel in a subrack.

FEATURES

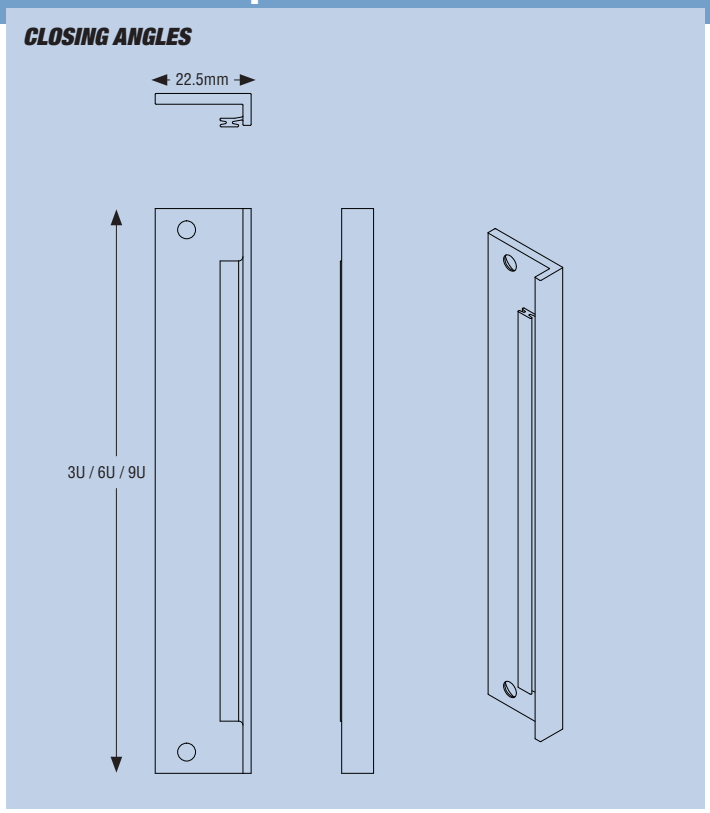
- IEEE 1101.10 geometry
- 3U, 6U & 9U
- Accepts slide-on, EMC gasket (not supplied)
- Conductive finish

CONTENTS OF KIT

Description	Qty	Material / Finish
Closing Angle	1	Aluminium extrusion, conductive (Iridite NCP)

ORDERING INFORMATION

Height	Qty	Ordercode
3U	1	**900-4002121**
6U	1	**900-4002122**
9U	1	**900-4002123**



VERTICAL EMC GASKET

These gaskets fit to the 19" rack angles and closing angles and maintain EMC integrity by providing electrical contact to adjacent panels mounted in the subrack. The double swipe design ensures cards do not snag on the gasket when they are inserted or extracted.

FEATURES

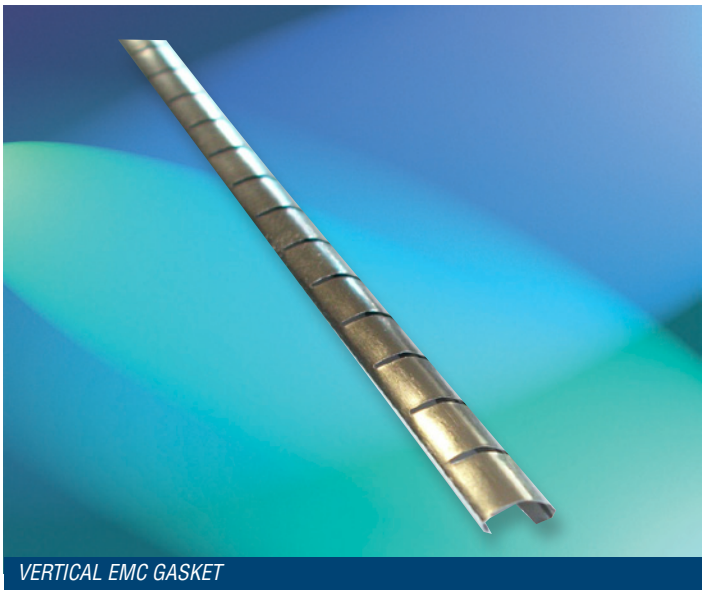
- Slide-on application
- Double swipe action
- 3U, 6U & 9U

CONTENTS OF KIT

Description	Qty	Material / Finish
Vertical EMC gasket	10	Stainless steel

ORDERING INFORMATION

Height	Qty	Ordercode
3U	10	**900-4004946**
6U	10	**900-4004947**
9U	10	**900-4004948**


VERTICAL EMC GASKET

SUBRACK BAR HANDLE

Heavy duty bar handles aid the safe handling of a subrack and are secured to the 19" rack angles with M5 screw fixings. Supplied as a pair. (Note: 19" rack angle with handle fixing holes must be used)

FEATURES

- Heavy duty 10mm steel bar
- Aesthetic polished chrome finish

CONTENTS OF KIT

Description	Qty	Material / Finish
Bar Handle & fixings	2	Mild steel, polished chrome

ORDERING INFORMATION

Height	Qty	Ordercode
3U (101.6mm centres)	2	**900-4004856**
6U (152.4mm centres)	2	**900-4004857**
9U (203.2mm centres)	2	**900-4004858**


SUBRACK BAR HANDLE

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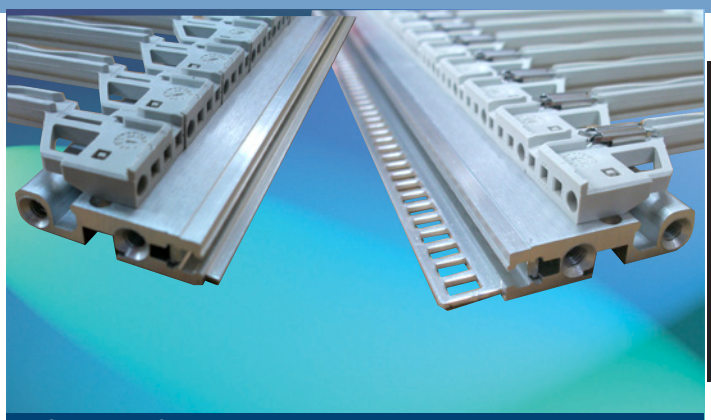
FRONT TIEBARS

KM6-HD front tiebars feature a heavy, extruded profile and twin screw fixing method to ensure strength and rigidity in demanding applications. Provision is made for card guides to be placed at 1HP (5.08mm) increments and positively retained with 2 screws, increasing their resistance to shock and vibration. For EMC applications, a slot is included in the extrusion for covers to be located without the need for additional seals.

IEEE 1101.10 versions have an extended front lip with rectangular cut outs to aid compliant Injector / extractor handle functionality, often used in CompactPCI, PXI, VME64 Extensions, VPX etc. applications.

IEC 60297-3 versions are similar to the above but without the extended lip. These are normally used for panels which do not carry the injector / extractor to IEEE 1101.10.



FRONT TIE BARS

FEATURES

- IEC 60297 & IEEE 1101.10 geometry
- Heavy profile for extra rigidity
- 42HP & 84HP widths
- Screw fixing positions for positive guide retention
- Provision for EMC covers to be fitted
- Two screw fixing design for added strength
- Guide location in 1HP (5.08mm) increments.
- Conductive finish

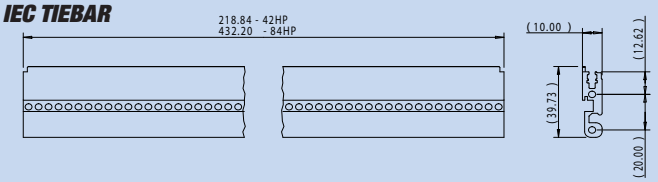
CONTENTS OF KIT

Description	Qty	Material / Finish
Front Tiebar	1	Aluminium extrusion, conductive (Iridite NCP)

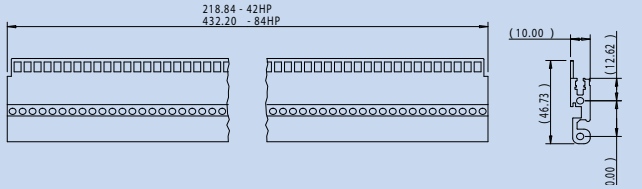
ORDERING INFORMATION

Type	Length (mm)	Qty	Ordercode
IEC 60297	42HP	1	**900-4003820**
IEC 60297	84HP	1	**900-4003821**
IEEE 1101.10/11	42HP	1	**900-4002065**
IEEE 1101.10/11	84HP	1	**900-4002064**

IEC TIEBAR



IEEE TIEBAR



REAR TIEBARS (BACKPLANE MOUNTING)

KM6-HD rear tiebars include similar features to the front tiebars detailed above. They require a 1mm spacer to be fitted in order to maintain the correct geometry of the reference face of a backplane. This would normally be an insulator but a conductive version is also available. A second tapped strip position in the top of the extrusion is used to secure an EMC cover down.

Rear backplane tie bars can be converted to DIN 41612 connector mounting tiebars by means of a connector mounting adaptor – see page 1.50.

REAR TIE BARS (Backplane Mounting)

FEATURES

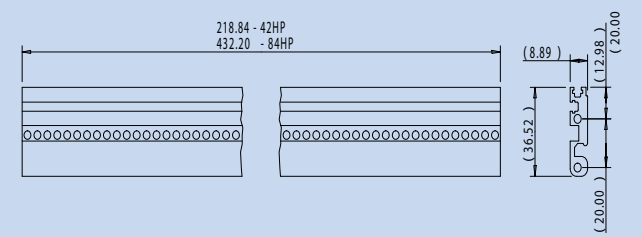
- Heavy profile for extra rigidity
- 42HP & 84HP widths
- Screw fixing positions for positive guide retention
- Provision for EMC covers to be fitted
- Two screw fixing design for added strength
- Guide location in 1HP (5.08mm) increments.
- DIN 41612 connector mounting conversion possible
- Conductive finish

CONTENTS OF KIT

Description	Qty	Material / Finish
Rear Tiebar	1	Aluminium extrusion, conductive (Iridite NCP)

ORDERING INFORMATION

Length (mm)	Qty	Ordercode
42HP	1	**900-4002067**
84HP	1	**900-4002066**



CENTRE REAR TIEBARS

When fitted with tapped strips these tiebars are used as centre rear backplane supports / mountings. In order to maintain correct connector geometry it is necessary to fit a spacer, either conductive or insulating between extrusion and backplane.

Rear backplane tie bars can be converted to DIN 41612 connector mounting tiebars by means of a connector mounting adaptor – see below.

FEATURES

- Heavy profile for extra rigidity
- 42HP & 84HP widths
- Two screw fixing design for added strength
- Conductive finish

CONTENTS OF KIT

Description	Qty	Material / Finish
Centre Tiebar	2	Aluminium extrusion, conductive (Iridite NCP)

ORDERING INFORMATION

Length	Qty	Ordercode
42HP	2	900-4003905
84HP	2	900-4003906

DIN41612 CONNECTOR ADAPTER RAILS

Supplied in pairs in various lengths with M2.5mm pre-tapped holes on a 1HP (5.08mm) pitch, these extrusions are used to convert backplane mounting tiebars to suit DIN 41612 connectors. A 6HP version is of particular use for mounting one connector to mate with a power supply for example.

CONTENTS OF KIT

Description	Qty	Material / Finish
DIN Adapter extrusion	2	Aluminium extrusion, conductive (Iridite NCP)
Fixings		

ORDERING INFORMATION

Length	Qty	Ordercode
6HP	2	900-4003907
42HP	2	900-4003908
84HP	2	900-4003822

TAPPED STRIPS

Supplied pre-tapped with an M2.5mm thread on a 1HP (5.08mm) pitch, tappedstrips are used extensively in extruded tie bars to provide accurate, adjustment free assembly fixing locations for standard front panels, backplanes, EMC covers and other accessories. They can easily be cut down for non-standard lengths.

CONTENTS OF KIT

Description	Qty	Material / Finish
Tapped strip	1	Mild steel, zinc plate and clear passivate

ORDERING INFORMATION

Length	Qty	Ordercode
42HP	1	950-202739
84HP	1	950-202001

BACKPLANE SPACERS

Backplane spacers must be used with all KM6-HD mid/rear tiebars to maintain correct connector geometry between extrusion and backplane. They are available in insulating and conducting versions depending on the application.

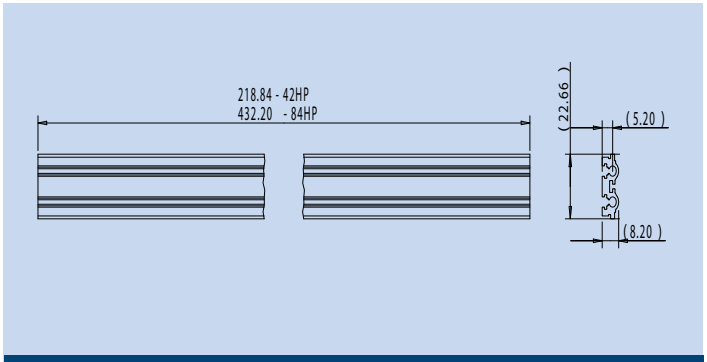
CONTENTS OF KIT

Description	Qty	Material / Finish
Insulating Spacer	1	1mm grey PVC (UL94-V0)
Conductive spacer	1	0.9mm steel, zinc plate and clear passivate

ORDERING INFORMATION

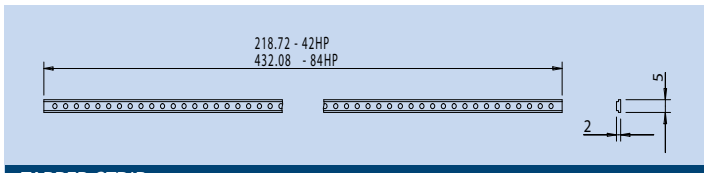
Type	Length	Qty	Ordercode
Single, Insulating	84HP	1	950-10014
Double, Insulating	84HP	1	950-10015
Single, Conductive	42HP	1	173-60788

CENTRE REAR TIEBAR

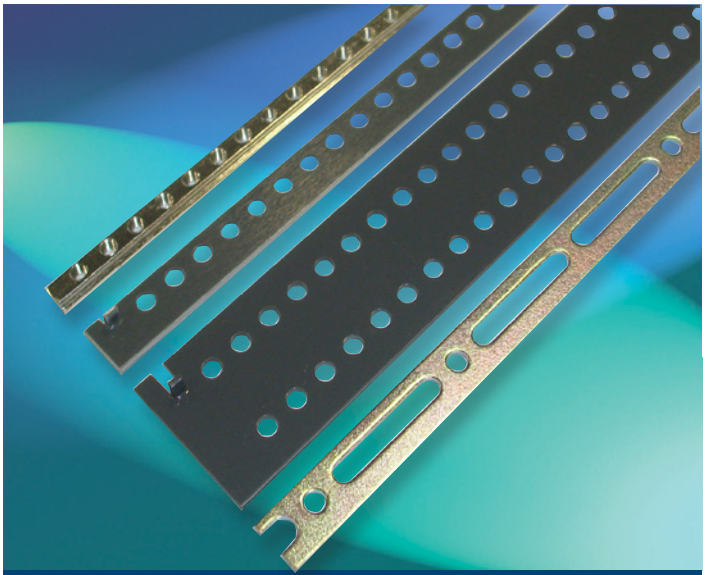


CENTRE REAR TIE BAR

DIN 41612 ADAPTER RAILS



TAPPED STRIP



Tapped Strip, Single and Double Insulating Backplane Spacers & Single Conductive Spacer

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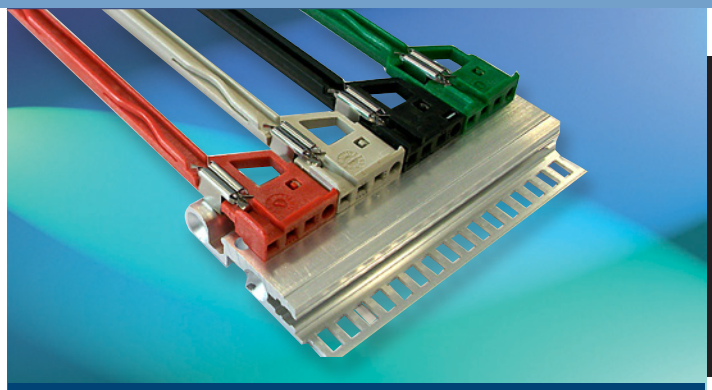
CARD GUIDES

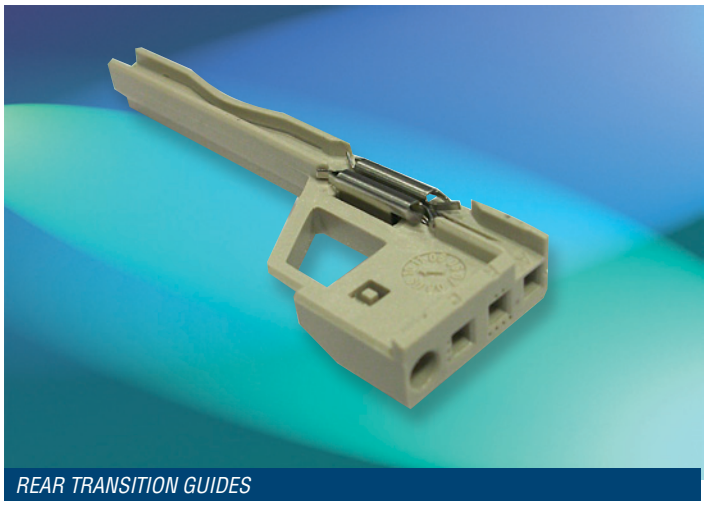
KM6-HD card guides serve to support, guide, earth and code PCBs in a subrack. They are easily snapped into place between the front and mid/rear tiebar extrusions but can also be screwed front and back to improve resistance to shock and vibration. Screws should be ordered separately as should grounding clips, ESD springs and coding keys. The range of guides available can cater for board depths of up to 400mm in both 1.6mm & 2.4mm thicknesses. The underside of the guide has been designed to be aerodynamic so as to aid the flow of air and not impede it. A green coloured version with a 0.5HP offset guide position is available for plug-in CompactPCI power supplies (conforming to PICMG 2.11) whilst a red coloured version is available to identify CPU slots in CompactPCI systems.



SINGLE PART GUIDES

FEATURES

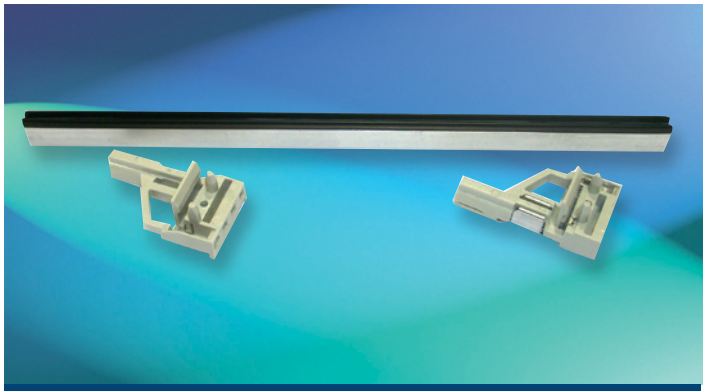
- IEC 60297 & IEEE 1101.10 compliant
- Bolt down facility for added strength (order screws separately)
- 80mm, 160mm & 220mm single part versions
- 3-Part versions for other lengths
- Accommodates 1.6mm and 2.4mm PCB thicknesses
- UL94-V0 rated material
- 0.5HP off set version for PICMG 2.11 power supplies
- Red version for CompactPCI system slots
- PCB grounding clip position (order clips separately)
- ESD spring position (order springs separately)
- Integrated coding device to IEEE 1101.10/11
- Aerodynamic underside design to aid airflow



REAR TRANSITION GUIDES

CONTENTS OF KIT

Description	Qty	Material / Finish
Single part guide	10 x guides	Glass filled poly carbonate
Single part guide	5 x upper guides	Glass filled poly carbonate
(for rear plug-up)	5 x lower guides	Glass filled poly carbonate
Three part guide	10 x front guide ends	Glass filled poly carbonate
	10 x rear guide ends	Glass filled poly carbonate
	10 x guide extrusions	Aluminium extrusion



THREE PART GUIDES

ORDERING INFORMATION- SINGLE PART

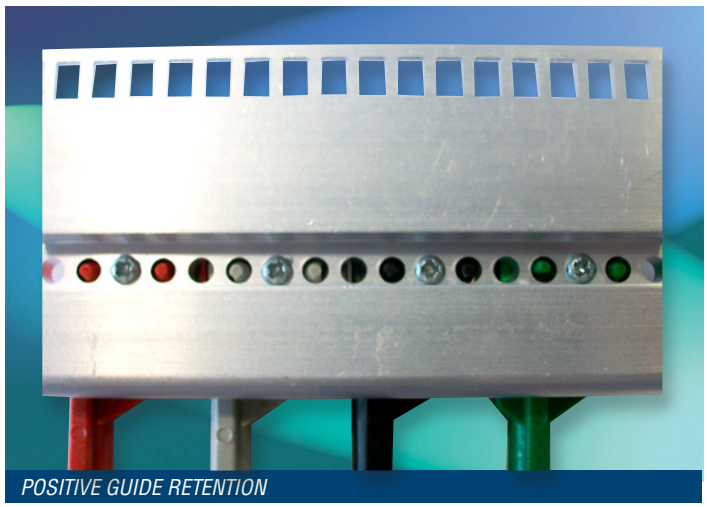
Type (single part)	Length (mm)	Qty	Ordercode
Grey	220	Pack 10	**900-4003909**
Grey	160	Pack 10	**900-4003910**
Black	160	Pack 10	**900-4003911**
Red (CPCI CPU Slot)	160	Pack 10	**900-4003912**
Green (1/2 HP offset)	160	Pack 10	**900-4003913**

ORDERING INFORMATION- SINGLE PART (REAR PLUG-UP)

Type (single part)	Length (mm)	Qty	Ordercode
Grey (For rear plug-up)	80	Pack 5 pairs	**900-4003914**
Black (For rear plug-up)	80	Pack 5 pairs	**900-4003915**

ORDERING INFORMATION - THREE PART

Type (three part)	Length (mm)	Qty	Ordercode
Grey	280	Pack 10	**900-4003916**
	340	Pack 10	**900-4003917**
	400	Pack 10	**900-4003918**



POSITIVE GUIDE RETENTION

CARD GUIDE FIXING SCREWS

Supplied in packs of 100, these 8mm (No.2 x 5/16) self-tapping screws are used to positively retain card guides to the tiebar extrusions. Two scrrews are required per guide.

ORDERING INFORMATION

Description	Qty	Ordercode
Guide fixing screws	Pack 100	**900-4003919**

PCB GROUNDING CLIP

Inserting this grounding clip into the front of a KM6-HD card guide allows PCBs to be grounded before engagement of connectors occurs, thus protecting sensitive electronic components from ESD (electrostatic discharge).
Contacts on the clip provide electrical continuity between a suitable equipped eurocards and the front tiebar extrusion, via a spring under the clip. A unique double-action spring design means both 1.6mm and 2.4mm thick PCBs are catered for.

FEATURES

- IEEE 1101.10 compliant
- Provides electrostatic protection
- 1.6mm or 2.4mm thick PCB compatibility

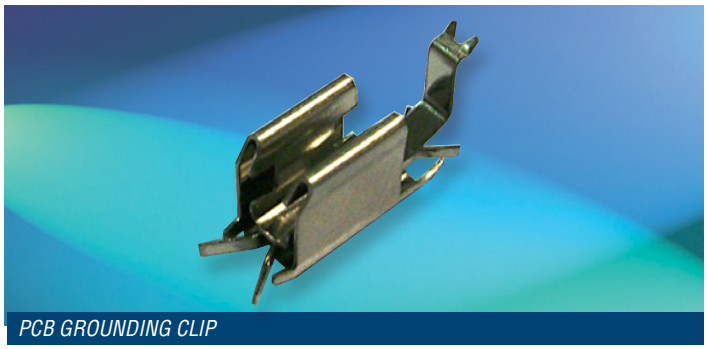
CONTENTS OF KIT

Description	Qty	Material / Finish
PCB grounding clip	10	Stainless steel

ORDERING INFORMATION

Type	Qty	Ordercode
PCB Grounding Clip	Pack 10	**900-4003920**

PCB Guide Accessories



PCB GROUNDING CLIP

FRONT PANEL ESD CLIP

For grounding the pre-location / ESD pin of an injector / extractor handle, a separate clip is available. The spring clip is inserted into a cavity behind the round hole in the coding section of the guide and ensures front panels are grounded before engagement of connectors occurs, thus protecting sensitive electronic components from ESD (electrostatic discharge).

FEATURES

- IEEE 1101.10 compliant
- Provides electrostatic protection

CONTENTS OF KIT

Description	Qty	Material / Finish
Front panel ESD clip	10	Stainless steel

ORDERING INFORMATION

Type	Qty	Ordercode
Front panel ESD clip	Pack 10	**900-4003921**

FRONT PANEL ESD CLIP

CODING KEYS

Should the application require it, front panels can be coded to ensure PCBs can only be fitted in certain slot positions. Coding keys are inserted into the square holes in the front section of the guide and can be rotated in 90 degree increments to give many unique keying combinations. They should also be fitted to the corresponding (opposite) locations in the injector / extractor handle casting.

FEATURES

- IEEE 1101.10 compliant
- 64 possible keying combinations on 3U card
- 4096 possible keying combinations on a 6U card

CONTENTS OF KIT

Description	Qty	Material / Finish
Coding keys	Pack 100	Plastic, UL94-V0 (grey)

ORDERING INFORMATION

Type	Qty	Ordercode
Grey Coding Key	Pack 100	**959-277031**

CODING KEY

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EMC FILLER STRIP

Normally, the 19" rack angle provides the correct geometry between the side of the subrack and the left (or right) most front panel edge. Therefore, in applications where a cardframe is recessed from the front, it is necessary to fit a filler strip to the side plate. The filler strip is extruded and includes provision for the vertical slide-on metal gasket to be fitted. In EMC applications, this ensures the side plate is electrically interfaced with front panel in the left most slot. The gasket should be ordered separately. (page 1.48)

FEATURES

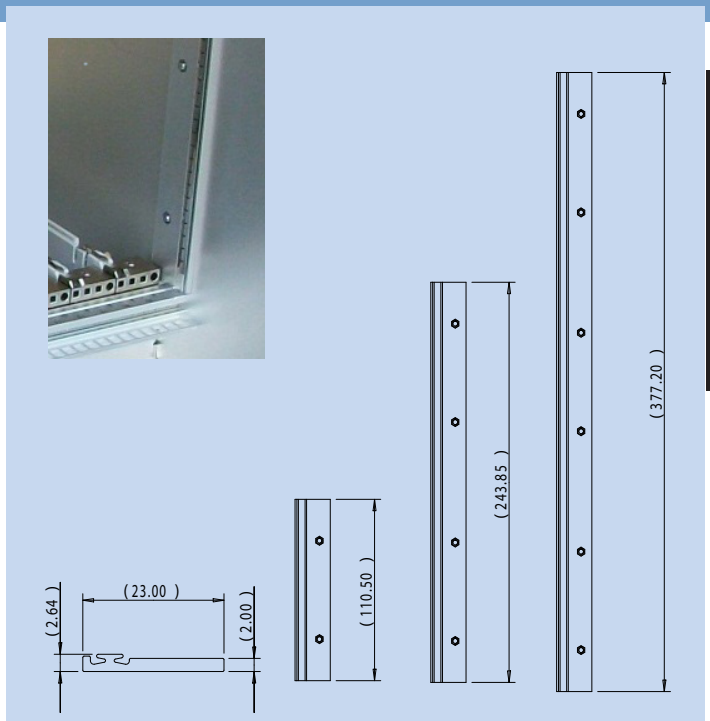
- IEC 60297 & IEEE 1101.10/11 geometry
- 3U, 6U, 9U lengths
- Conductive finish

CONTENTS OF KIT

Description	Qty	Material / Finish
Filler strip	1	Aluminium extrusion, conductive (iridite NCP)

ORDERING INFORMATION

Type	Qty	Ordercode
3U filler strip	1	172-2212269
6U filler strip	1	172-2212271
9U filler strip	1	172-2212273



EMC FILLER STRIP

FABRIC SEAL

Used to improve all round EMC performance of a subrack, this Nickel plated Copper over closed cell foam material is self-adhesive and easily cut to length making it simple to use. It should be fitted along lengths of adjacent panels / plates / extrusions such us between covers and tiebars or covers and side plates. It is supplied in 430mm lengths.

FEATURES

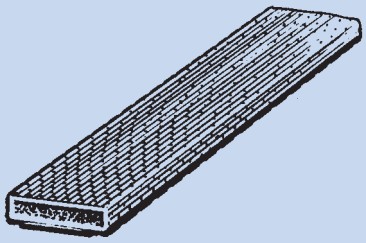
- Self-adhesive
- Improves EMC performance

CONTENTS OF KIT

Description	Qty	Material / Finish
Fabric seal (430mm)	10	CuNi fabric over closed cell foam

ORDERING INFORMATION

Type	Qty	Ordercode
Fabric seal	Pack 10	959-266525



Fabric Seal

HORIZONTAL FRONT PANEL SEAL

Supplied in 430mm lengths, this self-adhesive seal fits to the inside face of the front tiebar extrusions to maintain electrical contact between the front panels and the extrusion front face. It is of particular relevance on wider panels where it serves to close off long slots which might be disadvantageous to EMC performance.

FEATURES

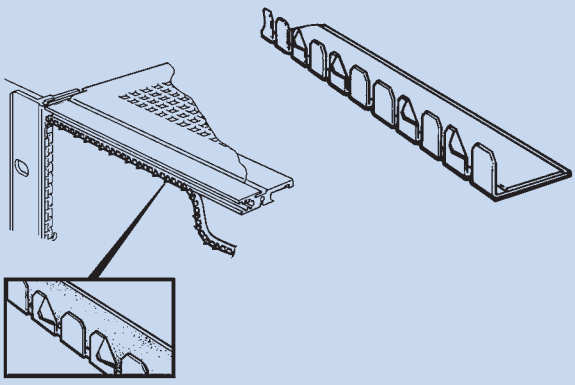
- Self-adhesive
- Improves EMC performance

CONTENTS OF KIT

Description	Qty	Material / Finish
Horizontal seal (430mm)	Pack 10	Stainless steel

ORDERING INFORMATION

Type	Qty	Ordercode
Horizontal seal	Pack 10	959-262225



Horizontal Seal

KM6-HD (Heavy Duty) Subracks – Accessories

KM6-HD subracks can be retrospectively closed & EMC screened by the addition of covers and suitable front and rear panels.

TOP & BOTTOM EMC COVERS

Supplied in a pair, the ventilated top and bottom covers come in two versions; (1) front PCB area covers and (2) rear area covers. The specific vent pattern of 5mm square holes on a 6.35mm pitch provides the maximum open-area for cooling whilst maintaining a high level of electro-magnetic compatibility (EMC).

Covers are designed to maintain intimate contact with the end plates by means of screws and internal flanges. At the interface with the front extrusions, a slot in the tiebar captures each cover, providing an EMC tight, interference fit. A tapped strip position in the centre-rear extrusion allows each covers to be screwed down, meaning they can thus be fitted after the subrack has been assembled and easily removed for access.

Notes:

(a) When specifying front and rear covers, make sure the combined depth is equal to the depth of the side plate being used.

(b) When fitting rear covers to basic subrack kits, rear tiebars & tapped strips should also be ordered

(c) Be sure to specify the correct rear area covers for rear plug-up style (IEEE 1101.10/11) subracks

FEATURES

- IEC 60297 & IEEE 1101.10/11 geometry
- 2-part design allowing easy install & access
- Optimized EMC vented hole pattern

CONTENTS OF KIT

Description	Qty	Material / Finish
Top & bottom covers	2	1mm steel, zinc & clear passivate
All fixings		

ORDERING INFORMATION

Description	Card Depth	Qty	Ordercode
42HP front (PCB area) covers	160mm	2	900-4003895
	220mm	2	900-4003896
84HP front (PCB area) covers	160mm	2	900-4003897
	220mm	2	900-4003898

Description	Rear Depth	Qty	Ordercode
42HP rear area covers (for standard subracks)	73mm	2	900-4003899
	133mm	2	900-4003900
84HP rear area covers (for standard subracks)	73mm	2	900-4003901
	133mm	2	900-4003902
	193mm	2	900-4003903
	253mm	2	900-4003904
42HP rear area covers (for 80mm rear plug-up subracks)	115mm	2	900-4003922
84HP rear area covers (for 80mm rear plug-upsubracks)	115mm	2	900-4003923

FRONT & REAR EMC CLOSING PANELS

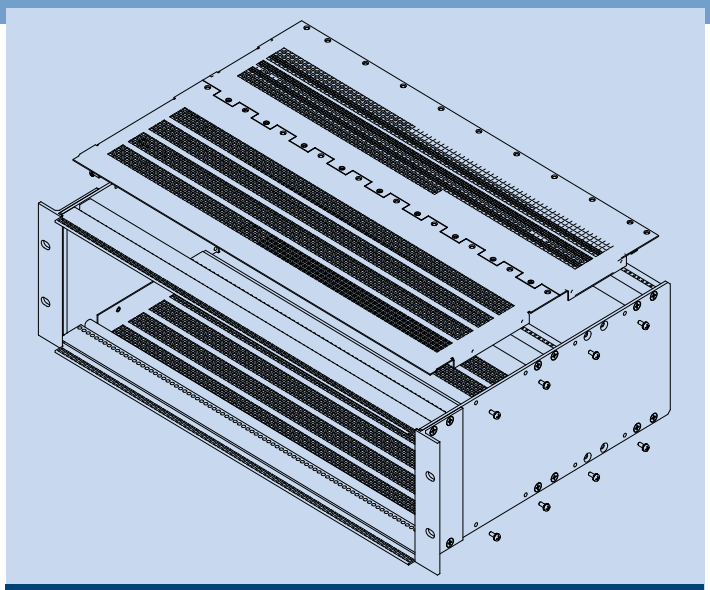
These full width (84HP) closing panels can be used at the front or rear of the subrack. Plain types are secured using 12 x captive screws and are therefore suited to applications where access is seldom required. Hinged types are useful when frequent access to the subrack is required. Both types use beryllium copper fingers along their edges to maintain contact with side plates & tie bar extrusions.

FEATURES

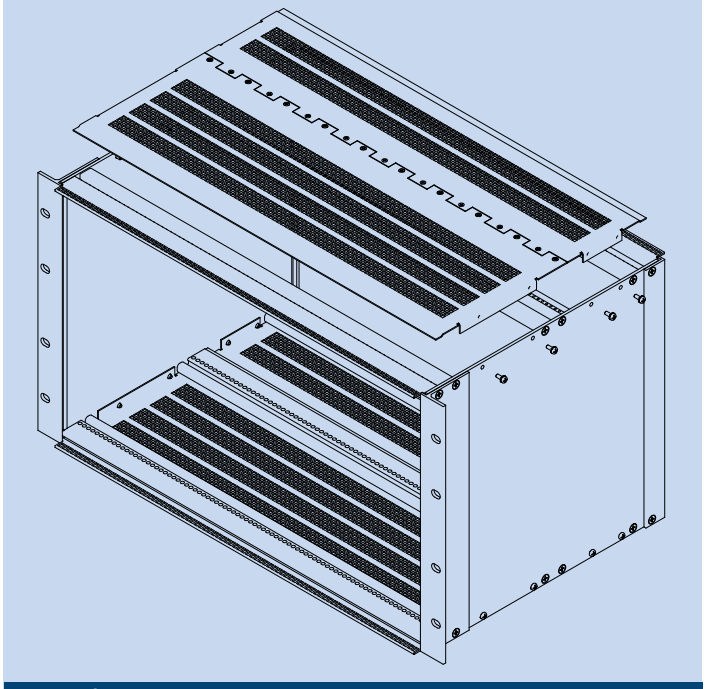
- Plain and hinged EMC versions

CONTENTS OF KIT

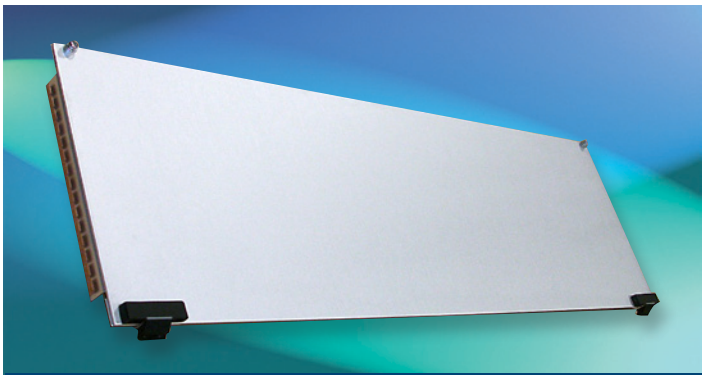
Description	Qty	Material / Finish
Closing panel	1	Front facia panel: 1.5mm Aluminium, clear anodise Inner panel: 1mm Aluminium, conductive iridite NCP
All fixings		



Front PCB cover with standard rear cover



Front PCB cover with RUP rear cover



3U, 84HP hinged EMC closing panel

ORDERING INFORMATION

Height	Width	Qty	Ordercode
3U Plain	84HP	1	950-202694
6U Plain	84HP	1	950-202695
9U Plain	84HP	1	950-202696
3U Hinged	84HP	1	951-242960
6U Hinged	84HP	1	951-242961
9U Hinged	84HP	1	951-242962

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CHASSIS SYSTEM

The chassis system offers a method of mounting simple plates into subracks. They can be used for carrying additional components such as power supplies, for supporting bespoke circuit boards or for securing cable looms.

The components of the chassis system are designed for maximum versatility.

The extrusion profile consists of two main sections; it has an M4 section which will accept M4 hex nuts and screws directly, and a section which will accept a standard tapped strip or M2.5 hex nuts and screws directly. The ends of the extrusion are drilled and tapped M4 for fixing into the subrack side plates.

CHASSIS SYSTEM

FEATURES

- Versatile chassis mounting kit
- 42 & 84HP lengths
- Conductive finish

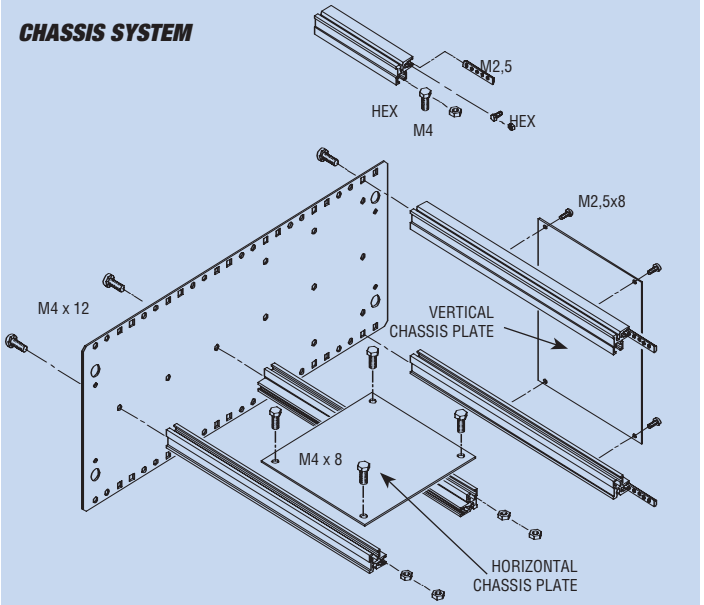
CONTENTS OF KIT

Description	Qty	Material / Finish
Extrusion	1	Aluminium extrusion, conductive (iridite NCP)

ORDERING INFORMATION

Length (mm)	Qty	Ordercode
Chassis extrusion, 42HP	1	**956-242701**
Chassis extrusion, 84HP	1	**956-242703**
M2.5mm tapped strip, 42HP	1	**950-202739**
M2.5mm tapped strip, 84HP	1	**950-202001**
Screws, M2.5x8 hex head	100	**956-243262**
Screws, M4x8 hex head	100	**956-243263**
Nuts, M2.5 hex	100	**27-1319**
Nuts, M4 hex	100	**956-243264**
Extrusion fixing screw, M4 x 16 pan head	100	**900-4003925**

CHASSIS SYSTEM



FIXING SCREWS

When KM6-HD components are purchased individually, relevant fixing screws should be ordered as described below and shown in the illustrations to the right.

ORDERING INFORMATION

Key	Function	Type	Qty	Ordercode
❶	Side plate to tiebar	M4 x 16 csk.	Pk 100	**900-4003925**
❷	Connector to DIN adapter	M2.5 x 6	Pk 100	**173-12530**
❸	Backplane to tiebar	M2.5 x 5	Pk 100	**173-202579**
❹	Card guide to tiebar	No.2 x 5/16	Pk 100	**900-4003919**
❺	Backplane to tiebar	M2.5 x 8	Pk 100	**41-227257**

KM6-HD FIXING SCREWS