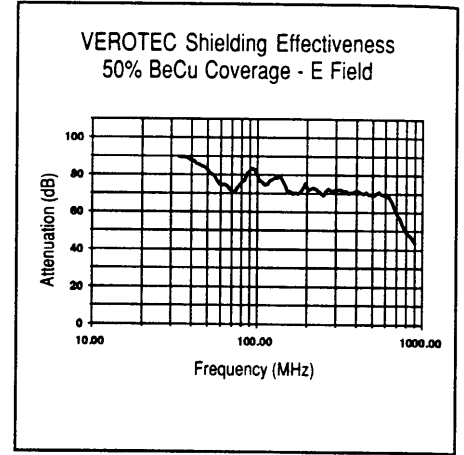
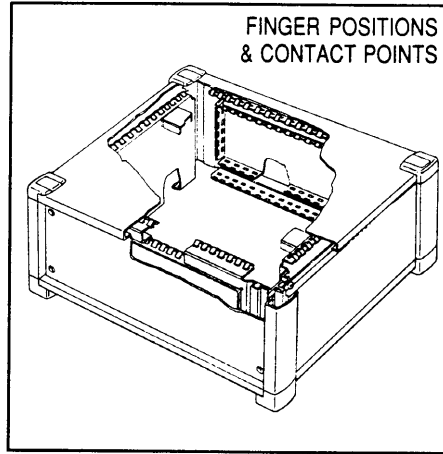


TECHNICAL SPECIFICATIONS

335 083

EMC PROTECTION

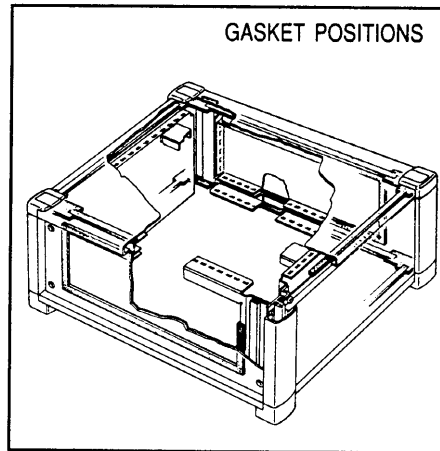
The VEROTEC cases have been designed to offer inherent EMC/RFI protection and, with the addition of tinned copper fingers, will provide high level attenuation figures across a broad frequency range. EMC front and rear panels are available as standard options from stock, a separate shortform catalogue entitled 'The Science of Compliance' gives a comprehensive designers guide to EMC issues (VE No. 654/95).



IP PROTECTION

As the diversity of application environment increases, so does the requirement to protect electronic equipment from the ingress of dust and moisture. IP55 gives a good level of protection within most industrial environments.

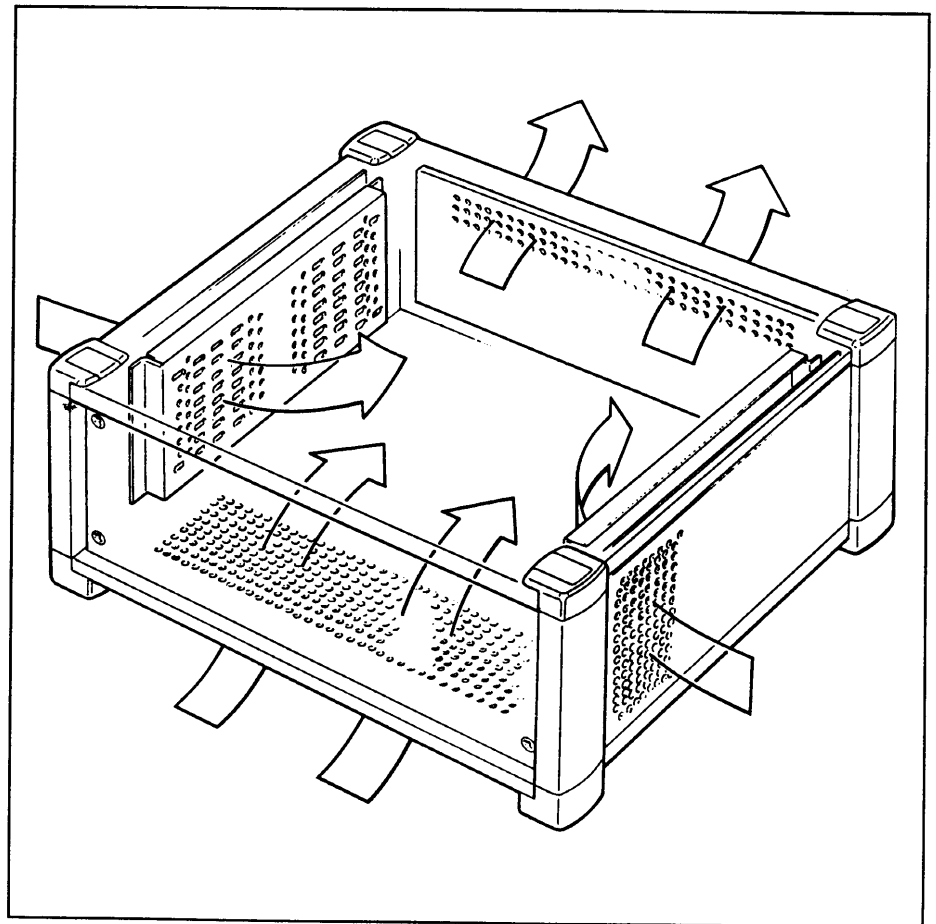
Once again the design of the VEROTEC cases allows you to choose this option as an upgrade path.

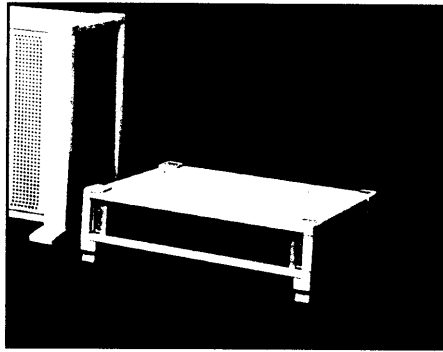
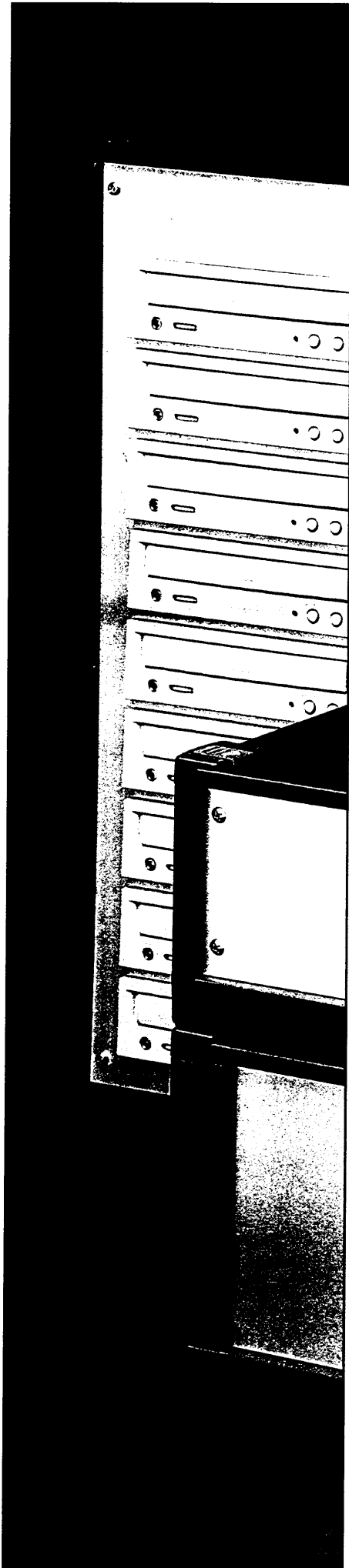


IP	INDEX OF PROTECTION
5	DUST PROTECTION 1st index 5 Limitation of ingress of dust Total protection of persons from touching voltage-carrying or internal moving parts. Protection of the object from harmful deposit of dust. Although ingress is not completely prevented, dust will not enter in sufficient quantity to impair the operation or safety of the apparatus.
	WATER PROTECTION 2nd index 5 Protection against jet water A jet of water projected from a standard nozzle at 12.5 litres per minute against the object from all directions must not have any harmful effect.

THERMAL MANAGEMENT

Vented side panels, bottom covers and rear panels as standard options offer many opportunities for effective thermal management. All vent hole patterns have been designed to minimise the degradation in RFI/EMI shielding effectiveness and, with the addition of fans forced air cooling solutions can also be achieved.



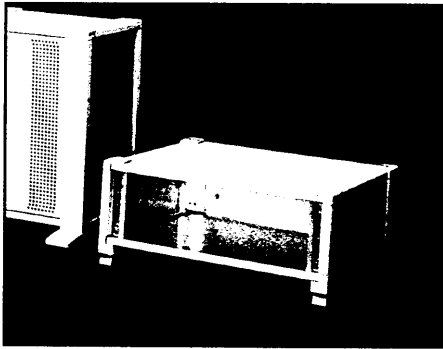


PAGE 6 - 7

1U CASES

These units offer 1U (44.45mm) of front panel space and are available in two depths and two widths. They are also supplied as standard, in a choice of two colours.

Accessories see p. 14 - 20



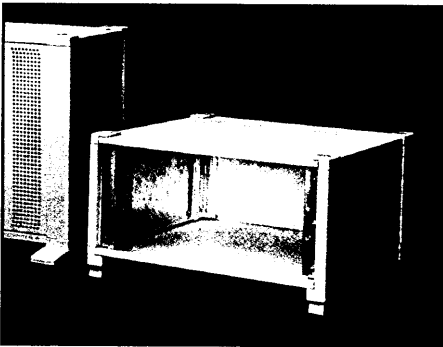
PAGE 8 - 9

2U CASES

These units offer 2U (88.9mm) of front panel space and are available in two depths and two widths.

They are also supplied as standard, in a choice of two colours

Accessories see p. 14 - 20



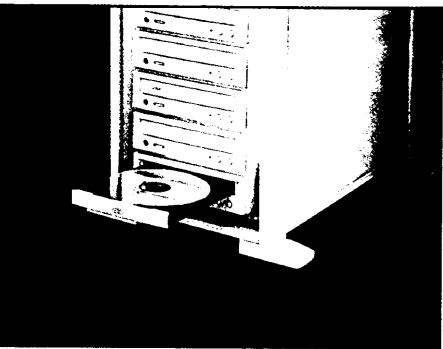
PAGE 10 - 11

3U CASES

These units offer 3U (133.35mm) of front panel space and are available in two depths and two widths.

Horizontal and vertical versions are supplied as standard in a choice of two colours

Accessories see p. 14 - 20



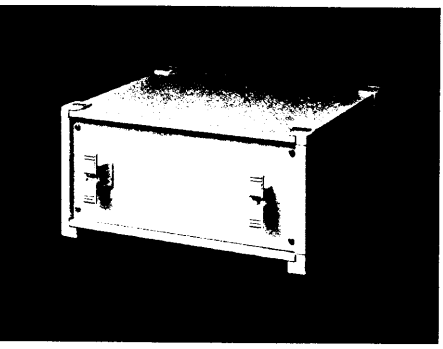
PAGE 12 - 13

CD CASES

These vertical units offer front panel mounting space for 5.25" drives (floppy/optical).

They are also supplied as standard, in a choice of two colours

Accessories see p. 14 - 20



PAGE 14 - 20

ACCESSORIES

A comprehensive range of accessories for the VEROTEC range, allows you to adapt your enclosure more closely to the application.

2U CASES

INTRODUCTION

These units offer an excellent combination of technical competence and aesthetic design.

Equipment can be housed in a standard 2U envelope and benefit from a stacking facility as standard.

There are no visible fixings so your product can be secure and visually clean.

The main assembly screws are hidden discretely beneath clip-in mouldings, which may be removed for internal access.

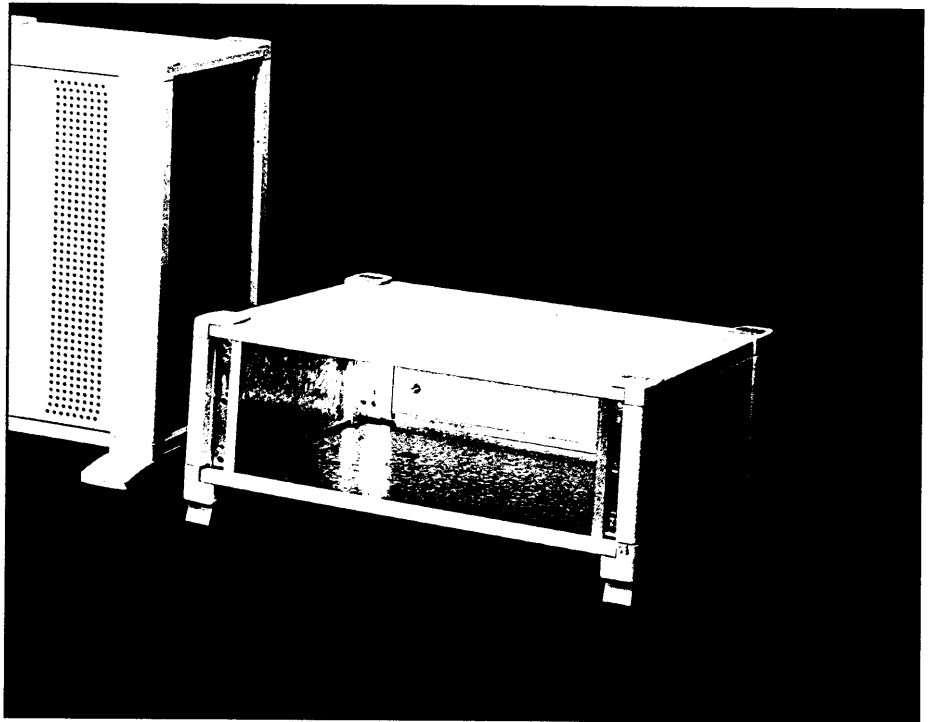
2U cases are available in both horizontal and vertical versions.

CONTENTS OF KIT

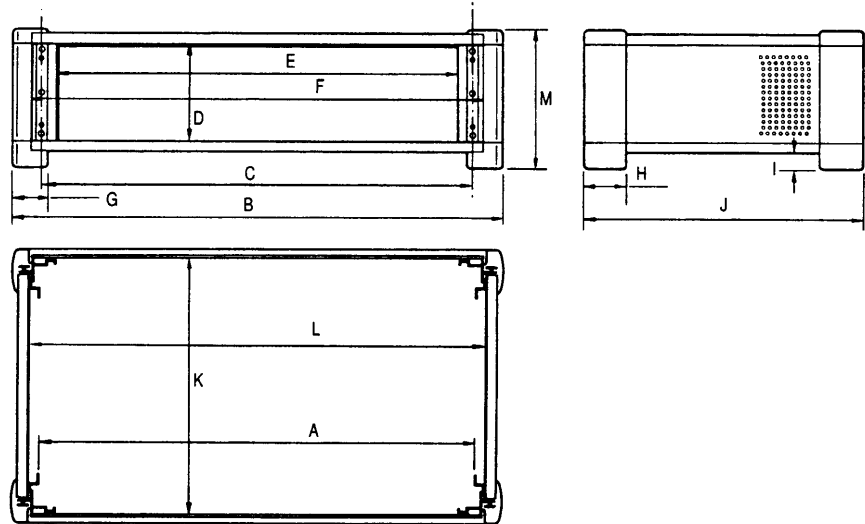
- 1 top cover
- 1 bottom cover
- 2 side panels (vented / non-vented)
- 4 corner extrusions (internal)
- 4 corner extrusions (external)
- 4 feet mouldings
- 2 tilt feet
- 4 cover mouldings
- 1 set of fixings
- 4 vertical feet (Vertical cases)

MATERIAL SPECIFICATION

- Covers and side panels : 0.9mm CR4 mild steel zinc and clear passivated
- Corner extrusions : Anodised aluminium extrusion
- Plastic Mouldings : ABS UL94 - VO
- Fixings: M4 x 16 LG CSK (DIN 7500)
M4 x 6 LG -CH HD (DIN 84)
- Paint : RAL 7035 light grey epoxy powder coat covers and side panels
or RAL 7016 anthracite epoxy powder coat covers and side panels
- Plastic mouldings : RAL 7035 light grey
or RAL 7016 anthracite
- Covers & tilt legs : Pantone 270 lilac or RAL 5018 turquoise blue



DIMENSIONS



Note: Vertical case total width includes vertical foot moulding x 2 (69mm)

COLOUR RAL 7016 ANTHRACITE

Ordering information

Height	Width	A	B	C	D	E	F	G	H	I	J	K	L	M	Order codes	
															Vented	Non-vented
2U	10.5"	298.80	342.80	295.30	91	268.36	311.82	30	40	16	260/300	260 = 241.60 300 = 281.60	313.72	128	70-133203H	70-133103B
2U	19"	514.80	558.80	511.30	91	484.36	527.82	30	40	16		529.72	128	70-133204E	70-133104K	
2U	10.5" (v)	121.80	234.80	118.30	268.8	91.36	134.82	30	40	16	260	241.60	136.72	305.80	70-133205B	70-133107A

V = Vertical cases

2U BASIC CASES

A basic case is supplied as standard. This can be fitted with standard front and rear panels to give a basic low EMC packaging solution. When choosing an upgrade path, simply select the relevant accessories to achieve high level EMC screening IP sealing or both. These units are supplied assembled.

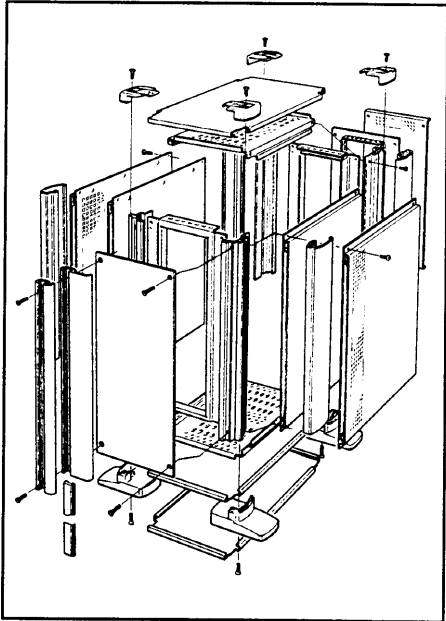
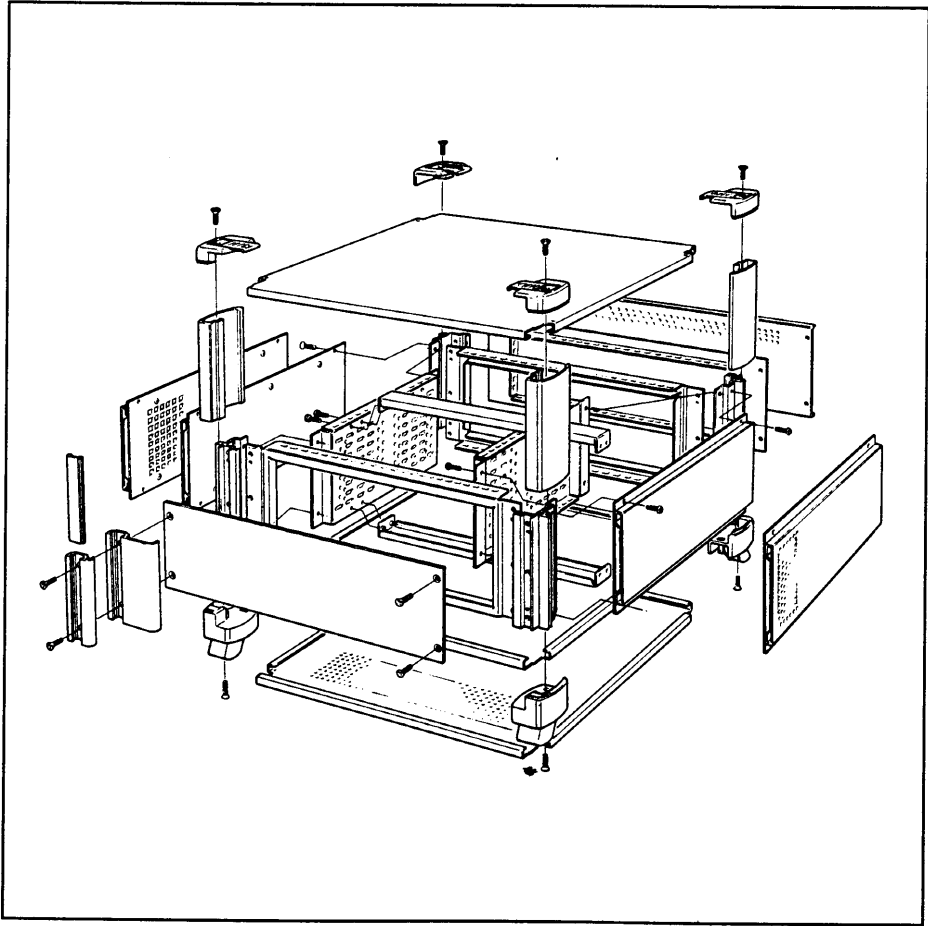
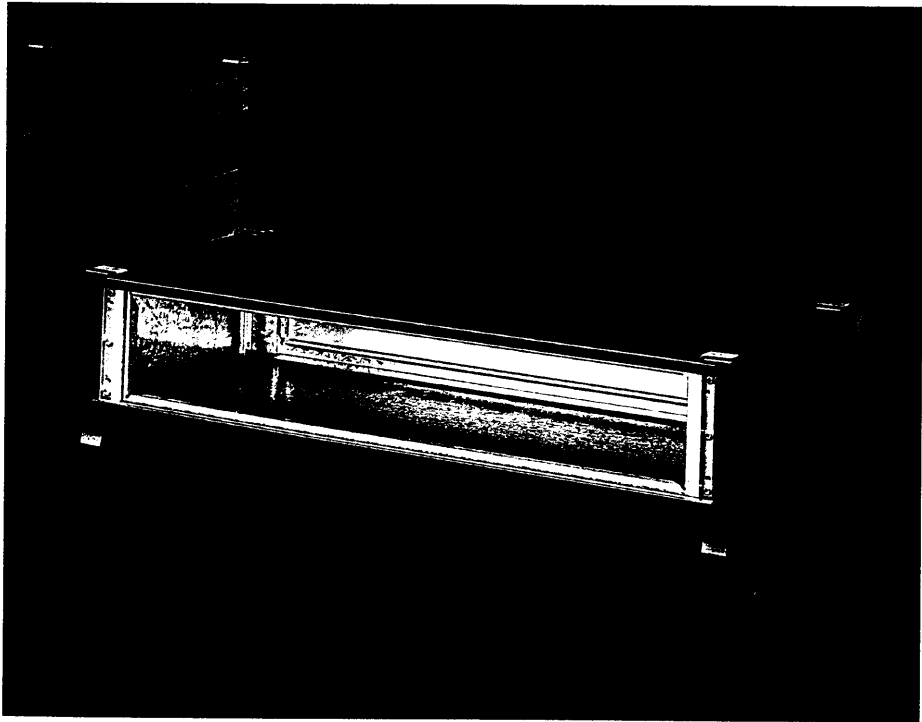
EMC PROTECTION

This is achieved using tinned copper fingers which can be clipped into pre-selected positions according to the level of shielding required. An interior front and rear frame ensures contact to the top and bottom covers.

IP SEALING

IP sealing is achieved by the inclusion of PVC/nitrile seals (top & bottom covers) and rubber gaskets at the corner joints.

In order to achieve IP55 it is necessary to order IP/ EMC front and rear panels as accessories see page 14 & 15.



COLOUR RAL 7016 ANTHRACITE

Ordering information

Height	Width	A	B	C	D	E	F	G	H	I	J	K	L	M	Order codes	
															Vented	Non-vented
2U	10.5"	298.80	342.80	295.30	91	268.36	311.82	30	40	16	260/300	260 = 241.60 300 = 281.60	313.72	128	70-133403J	70-133303C
2U	19"	514.80	558.80	511.30	91	484.36	527.82	30	40	16					529.72	128
2U	10.5" (v)	121.80	234.80	118.30	268.8	91.36	134.82	30	40	16	260	241.60	136.72	305.80	70-133405C	70-133307B

V = Vertical cases

ACCESSORIES

SELECTING REAR PANELS

There is a choice of rear panels available for the VEROTEC case range according to the level of ventilation, EMC or IP

1. VENTED REAR PANELS

These are complete with an EMC vent pattern for convectional cooling. These panels do not provide EMC contact to the case.

2. EMC / IP REAR PANELS

These should be used in conjunction with EMC / IP cases. Both IP sealing and EMC are achieved by the same panel and this can be achieved simultaneously.

CONTENTS OF KIT

- 1 rear panel (plain, vented or EMC / IP)
- 4 fixing screws

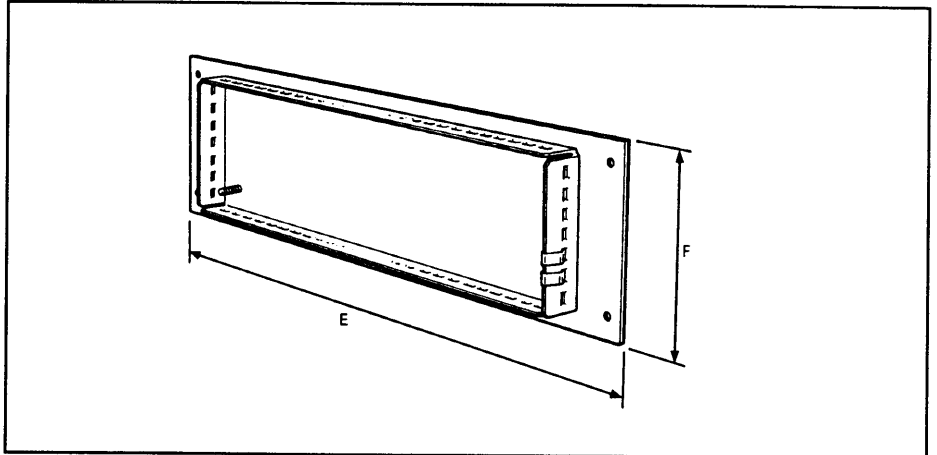
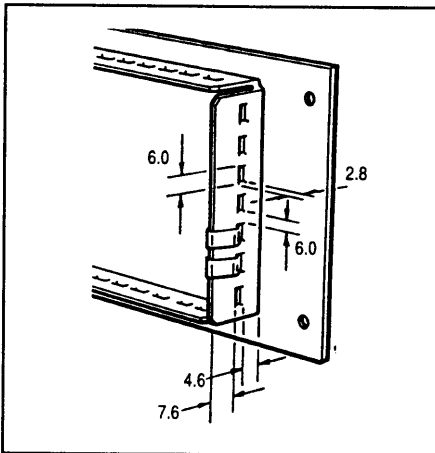
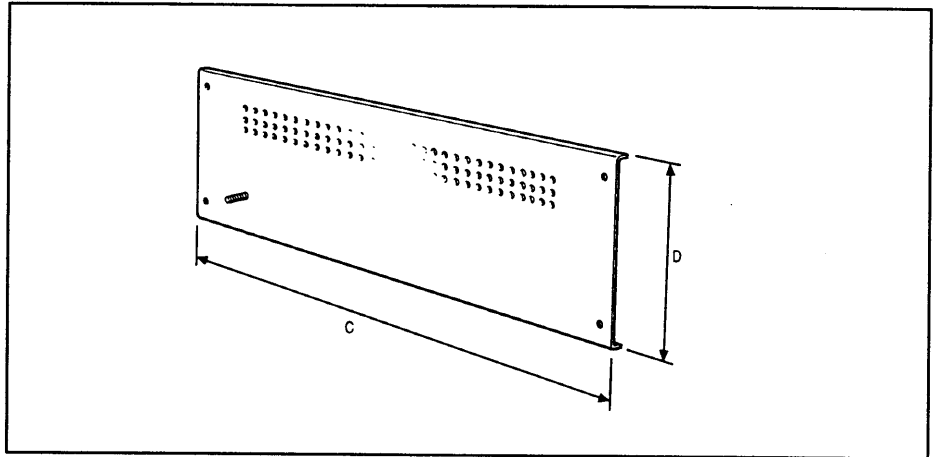
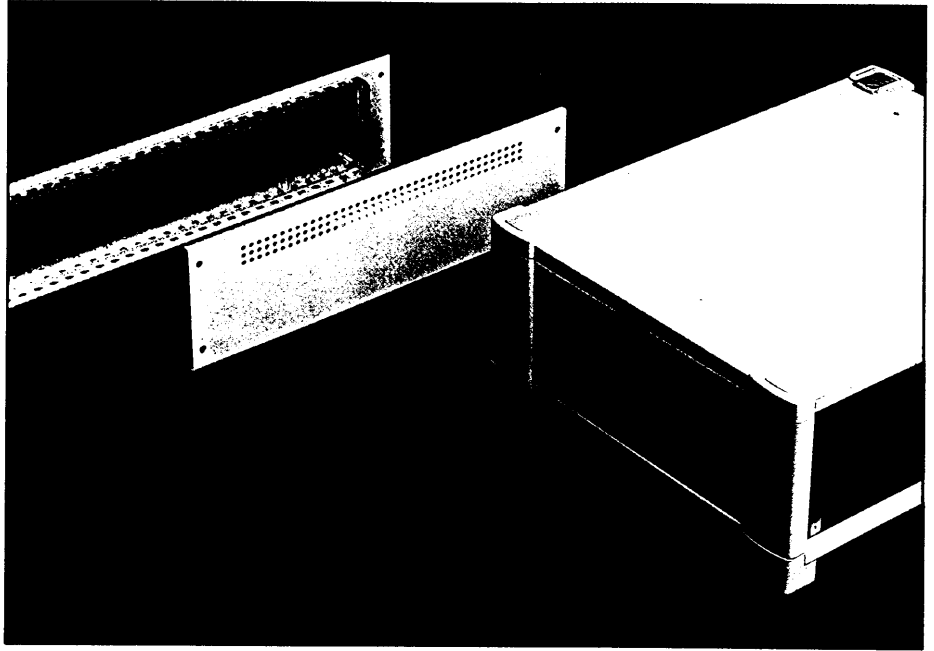
Please note: vertical versions of vented and EMC rear panels are shown in the table below marked with a (V).

MATERIAL SPECIFICATION

Rear panels 0.9mm zintec steel.

For contact strips see page 16

- A = Anthracite RAL 7016
- G = Light grey RAL 7035



V = Vertical cases

Ordering information

Height (A)	Width (B)	C	D	E	F	EMC / IP Panels		Standard rear panel	
						Order code	Order code	Order code	Order code
						A	G	A	G
1U	10.5"	311.20	46.05	311.20	46.05	70-258470D	70-258441B	70-134601K	70-258429H
1U	19"	527.20	46.05	527.20	46.05	70-258471A	70-258442K	70-134602G	70-258430J
2U	10.5"	311.20	90.50	311.20	90.50	70-258472J	70-258443G	70-134603D	70-258431F
2U	19"	527.20	90.50	527.20	90.50	70-258473F	70-258444D	70-134604A	70-258432C
3U	10.5"	311.20	134.95	311.20	134.95	70-258474C	70-258445A	70-134605J	70-258433L
3U	19"	527.20	134.95	527.20	134.95	70-258475L	70-258446J	70-134606F	70-258434H
2U (v)	10.5"	134.40	268.40	134.40	268.30	70-258476H	70-258447F	70-134607C	70-258435E
3U (v)	19"	178.85	493.30	178.85	493.30	70-258477E	70-258448C	70-134608L	70-258436B
CD (v)	10.5"	189.70	268.30	189.70	268.30	70-258478B	70-258449L	70-134609H	70-258437K
CD (v)	19"	189.70	493.30	189.70	493.30	70-258479K	70-258450A	70-134610J	70-258438G

SELECTING FRONT PANELS

There is a choice of front panels to suit EMC, IP and standard VEROTEC cases.

1. PLAIN FRONT PANELS

These are anodised aluminium front panels which offer an aesthetic facia for component mounting and silk screening.

2. EMC / IP FRONT PANELS

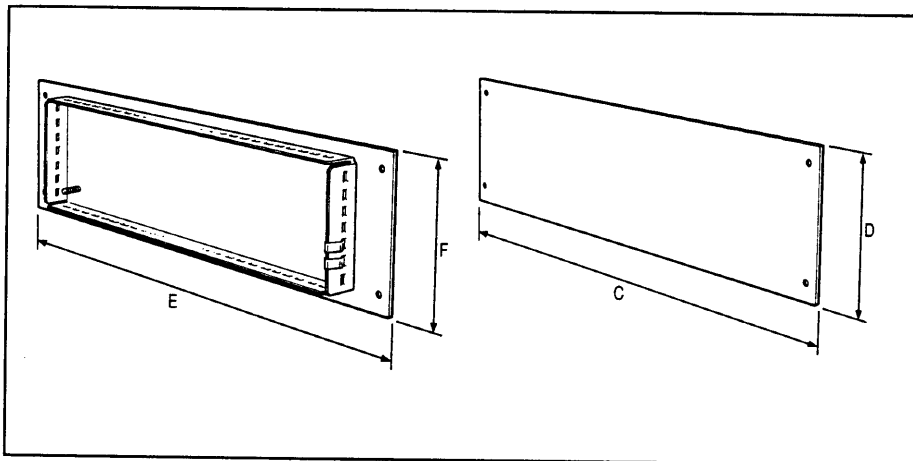
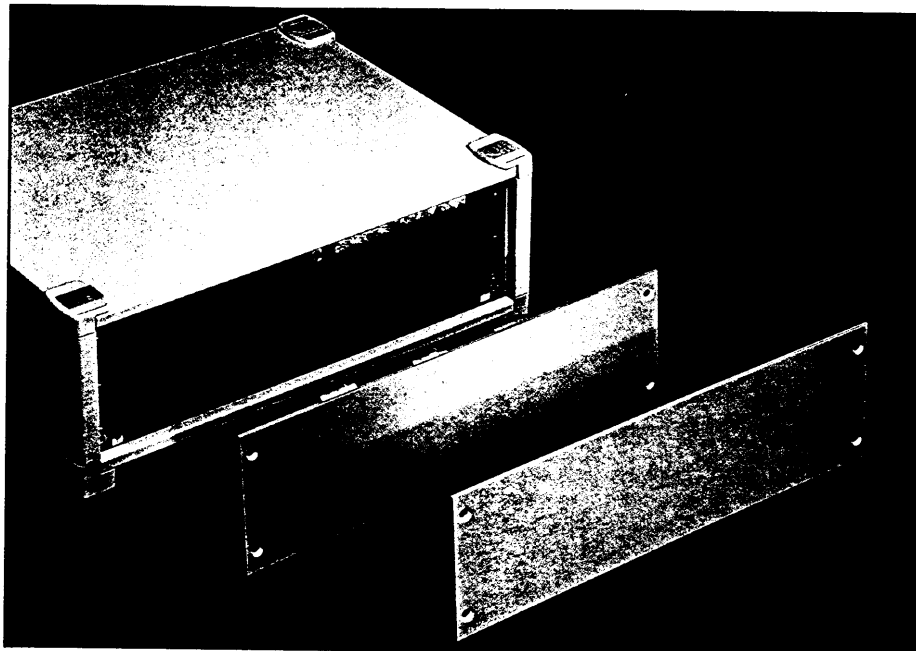
This is a two part construction, consisting of an aluminium panel with an interior panel attached. This gives an aesthetic appearance and good conduction inside the case.

CONTENTS OF KIT

1 front panel (plain or EMC / IP)
4 fixing screws

MATERIAL SPECIFICATION

Front panel : 2.5mm 5251 - H26 anodised aluminium
Backing plate : 0.9 5251 - H12 anodised aluminium



Ordering information

Height	Width (B)	C	D	E	F	Order code	Order code
						Plain	EMC / IP
1U	10.5"	311.20	46.05	311.20	46.05	70-258409E	70-258386J
1U	19"	527.20	46.05	527.20	46.05	70-258410F	70-258387F
2U	10.5"	311.20	90.50	311.20	90.50	70-258411C	70-258388C
2U	19"	527.20	90.50	527.20	90.50	70-258412L	70-258389L
3U	10.5"	311.20	134.95	311.20	134.95	70-258413H	70-258390A
3U	19"	527.20	134.95	527.20	134.95	70-258414E	70-258391J
2U (v)	10.5"	134.40	268.40	134.40	268.30	70-258415B	70-258392F
3U (v)	19"	178.85	493.30	178.85	493.30	70-258416K	70-258393C
CD (v)	10.5"	189.70	268.30	189.70	268.30	70-258417G	70-258394L
CD (v)	19"	189.70	493.30	189.70	493.30	70-258418D	70-258395H

FRONT PANEL TRIMS

These can be added in order to preserve a clean frontal appearance. The addition of front trims conceals either the 19" panel mounts or the corner screw fixings.

This gives both aesthetics and security for equipment mounted in VEROTEC cases.

CONTENTS OF KIT

1 pair of trims (Type 1)
1 pair cover extrusions
Fixings

MATERIAL SPECIFICATION

Aluminium extrusion 6063 - T6

A = Anthracite RAL 7016

G = Light grey RAL 7035

Type 1 = Corner trims

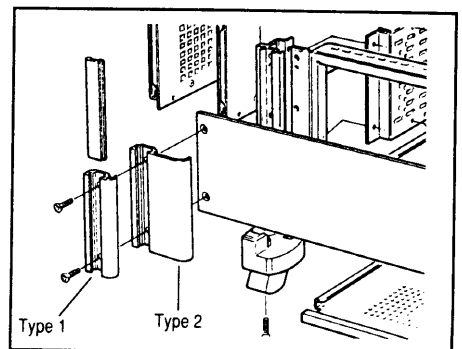
Type 2 = 19" cover trims

FRONT PANEL TRIMS

Ordering information

Height	Width	Order code	Order code	Order code	Order code
		A Type 1	G Type 1	A Type 2	G Type 2
1U		70-132201J	70-132501E	70-132301D	70-132401K
2U		70-132202F	70-132502B	70-132302A	70-132402G
3U		70-132203C	70-132503K	70-132303J	70-132403D
CD	10.5" (v)	70-132204L	70-132504G	-	-
CD	19" (v)	70-132205H	70-132505D	-	-

V = Vertical cases



ACCESSORIES

TRANSPARENT FRONT DOORS

VEROTEC cases can be fitted with these stylish and attractive transparent doors, giving both security and aesthetics.

2U and 3U doors are horizontally hinged, making them ideal for both horizontal and vertical cases. CD doors are vertically hinged giving an approximate opening angle of 110°.

CONTENT OF KIT

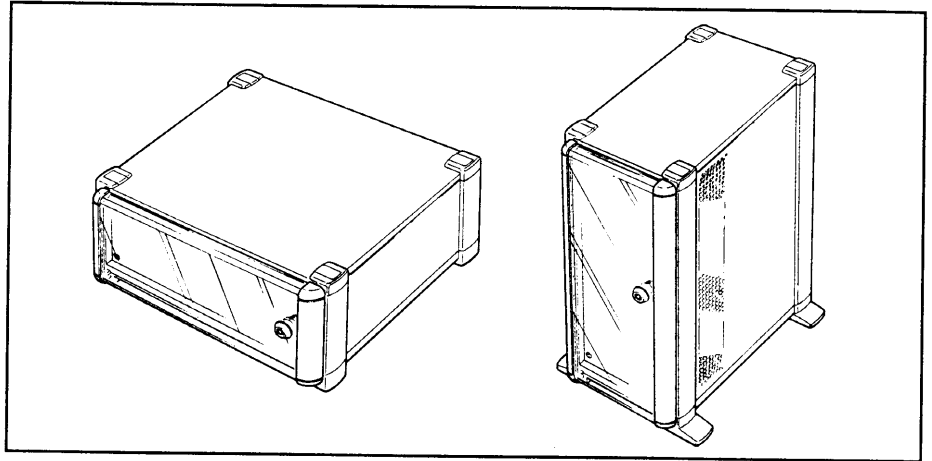
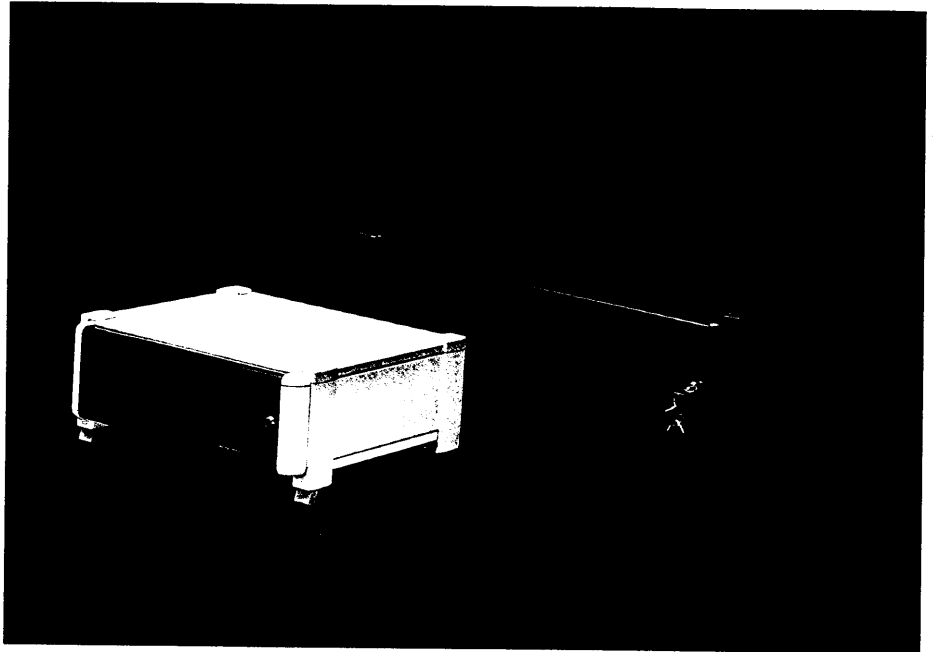
- 1 transparent door
- 1 fixing kit

MATERIAL SPECIFICATION

- Mouldings : ABS UL94 VO
- Extrusion : 6062 - T6
- Panel : Acrylic 3mm

Ordering information

Size		Order code	
		RAL 7016	RAL 7035
2U	10.5"	70-135401C	70-134401J
2U	19"	70-135402L	70-134402F
3U	10.5"	70-135403H	70-134403C
3U	19"	70-135404E	70-134404L
2U	10.5" (v)	70-135405B	70-134405H
3U	19" (v)	70-135406K	70-134406E
CD	10.5" (v)	70-135407G	70-134407B
CD	19" (v)	70-135408D	70-134408K



EMC CONVERSION KIT

These items allow the conversion of a basic VEROTEC case into an EMC unit, giving a typical attenuation of 50 dB at 100 MHz (unit test was a 2U half width with 50% coverage of contact fingers). The attenuation figures may be increased or decreased according to the number of clip-in contact fingers added.

CONTENT OF KIT

- 1 pair of front inner frames
- 1 set of contact strips

MATERIAL SPECIFICATION

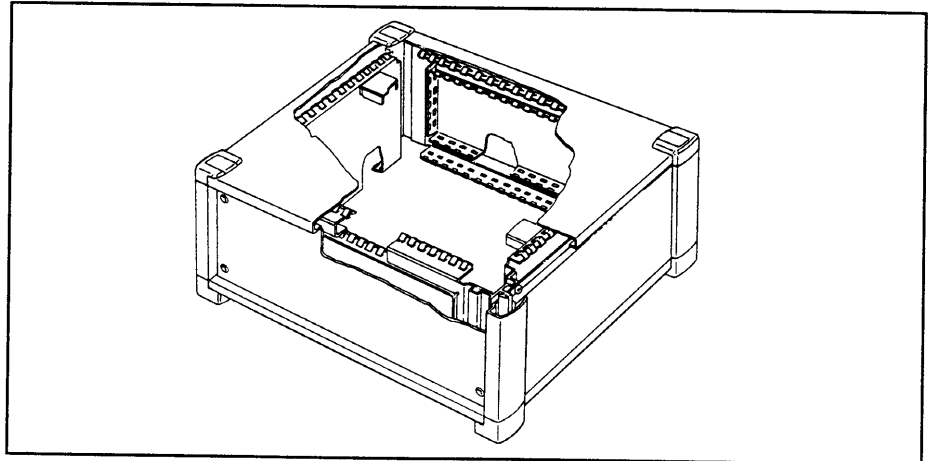
- 0.9mm Galvatite
- Beryllium or tinned
- Beryllium copper fingers

Note: Side inner frames need to be selected in order to provide contact areas along the sides of the case. See page 19.

V = Vertical cases

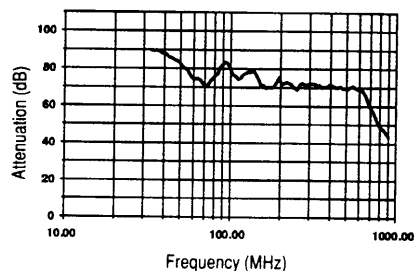
Ordering information

Size		Order code	
		Tinned copper	Copper
1U	10.5"	70-136101A	70-134701E
1U	19"	70-136102J	70-134702B
2U	10.5"	70-136103F	70-134703K
2U	19"	70-136104C	70-134704G
3U	10.5"	70-136105L	70-134705D
3U	19"	70-136106H	70-134706A
2U	10.5" (v)	70-136107E	70-134707J
3U	19" (v)	70-136108B	70-134708F
CD	10.5" (v)	70-136109K	70-134709C
CD	19" (v)	70-136110L	70-134710D



Description	Size	Pack	Order code
Tinned fingers	405mm	1	70-259620H
Copper fingers	405mm	1	70-259616E

VEROTEC Shielding Effectiveness
50% BeCu Coverage - E Field



IP55 SEALING KITS

Prevention of the ingress of dust and moisture in an enclosure is particularly relevant in an industrial environment. Typically IP55 will offer this type of protection. This is achieved by the addition of corner gasketing sealed panels and covers.

Note: CD IP kits available by custom order.

CONTENTS OF KIT

- 1 pair of front inner frames
- 1 set of strips, gaskets and sealing

MATERIAL SPECIFICATION

- 0.9mm Galvalite
- PVC/Nitrile
- Rubber corner gaskets

Ordering information

Size		Order code
1U	10.5"	70-134801L
1U	19"	70-134802H
2U	10.5"	70-134803E
2U	19"	70-134804B
3U	10.5"	70-134805K
3U	19"	70-134806G
2U	10.5" (v)	70-134807D
3U	19" (v)	70-134808A

Note: If the unit is to provide both IP55 sealing and EMC protection, then you need to order a set of contact strips found on page 16 as well as the IP kit above.

Inner frames are the same in EMC and IP55 sealing kits.

SIDE CARRY HANDLES

These handles offer a comfortable and ergonomic method of carrying the VEROTEC cases. These handles are both lightweight and strong.

CONTENT OF KIT

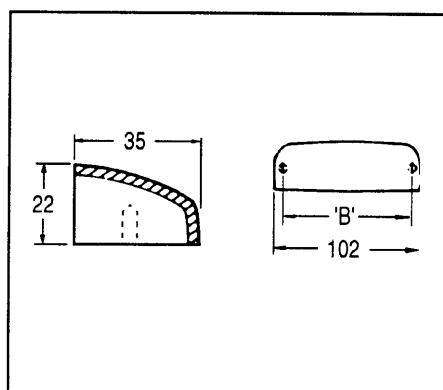
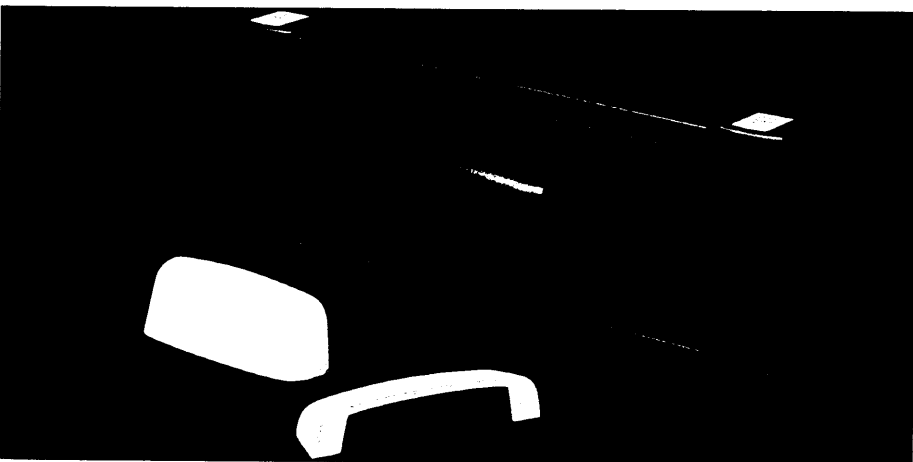
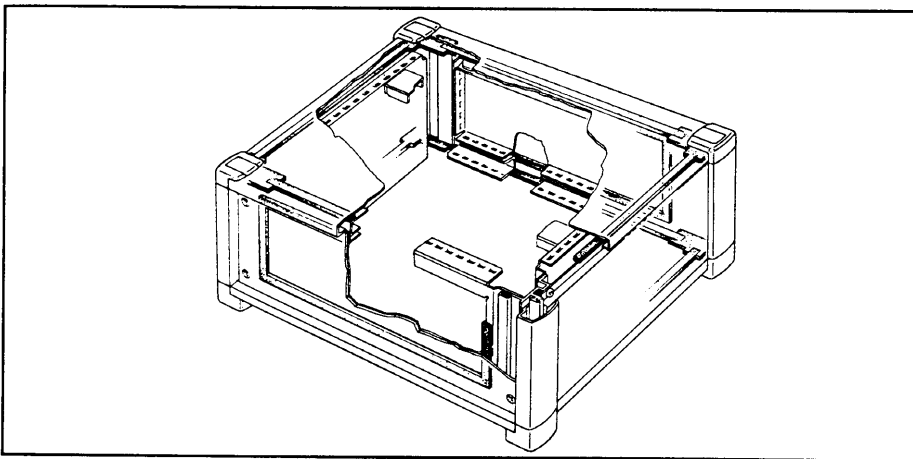
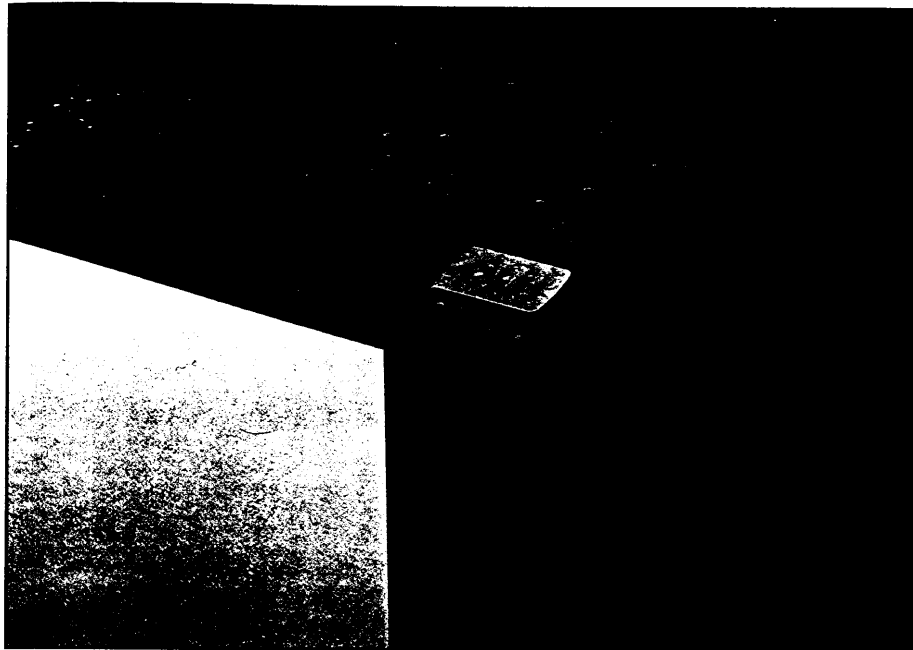
- 2 carry handles
- Fixings
- Sealing plugs

MATERIAL SPECIFICATION

- Painted die-cast aluminium

Ordering information

Size	Order code	
1 pair of handles	RAL 7016	RAL 7035
	70-134902C	70-134901F



ACCESSORIES

CHASSIS TRAYS AND SUPPORTS

Chassis supports are available to provide additional support for 19" chassis or cardframes within the enclosures. Each kit comprises two runners and all necessary fixings.

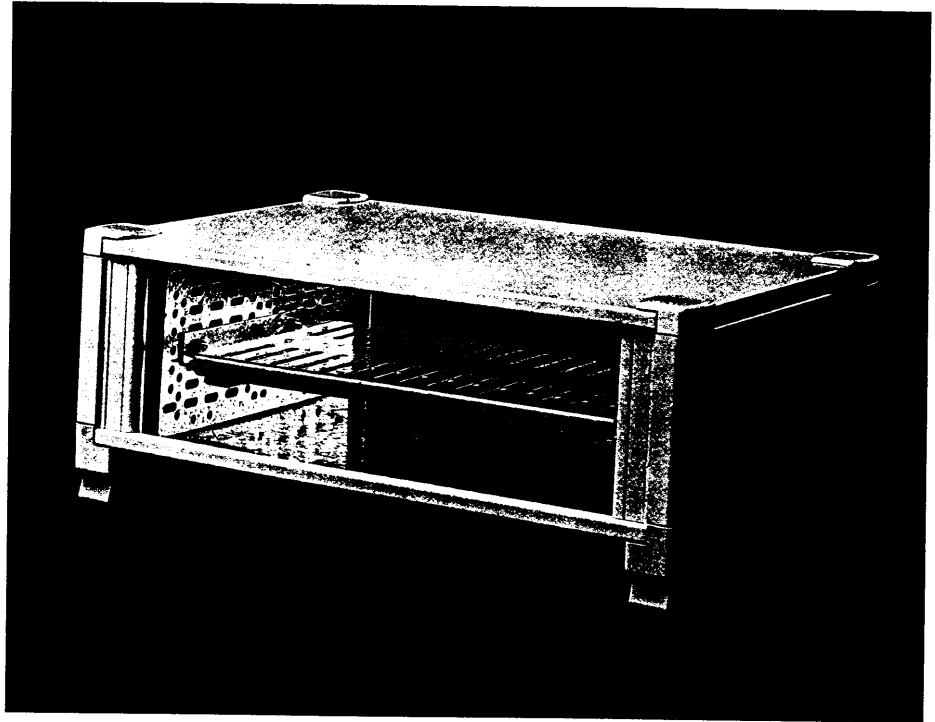
A range of chassis trays are available for mounting processor boards or other components.

CONTENTS OF KIT

Supports 2 supports plus fixings
 Tray 1 tray

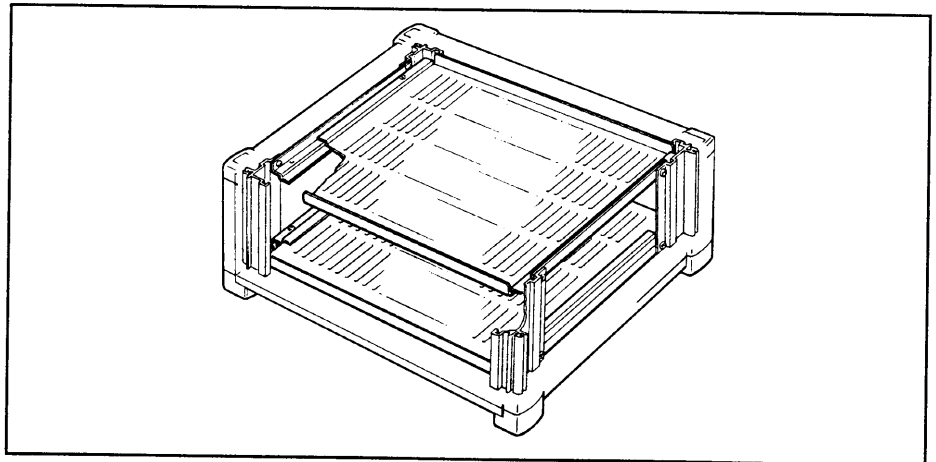
MATERIAL SPECIFICATION

Supports : 0.9mm Galvatite
 Tray : 0.9mm Galvatite



Ordering information

Size	Description	Order code
10.5"	200 Tray	70-134501D
19"	260 Tray	70-134502A
10.5"	300 Tray	70-134503J
19"	300 Tray	70-134504F
19"	400 Tray	70-134505C
260mm	Supports	70-134506L
300mm	Supports	70-134507H
400mm	Supports	70-134508E



REAR CABLE TIDY

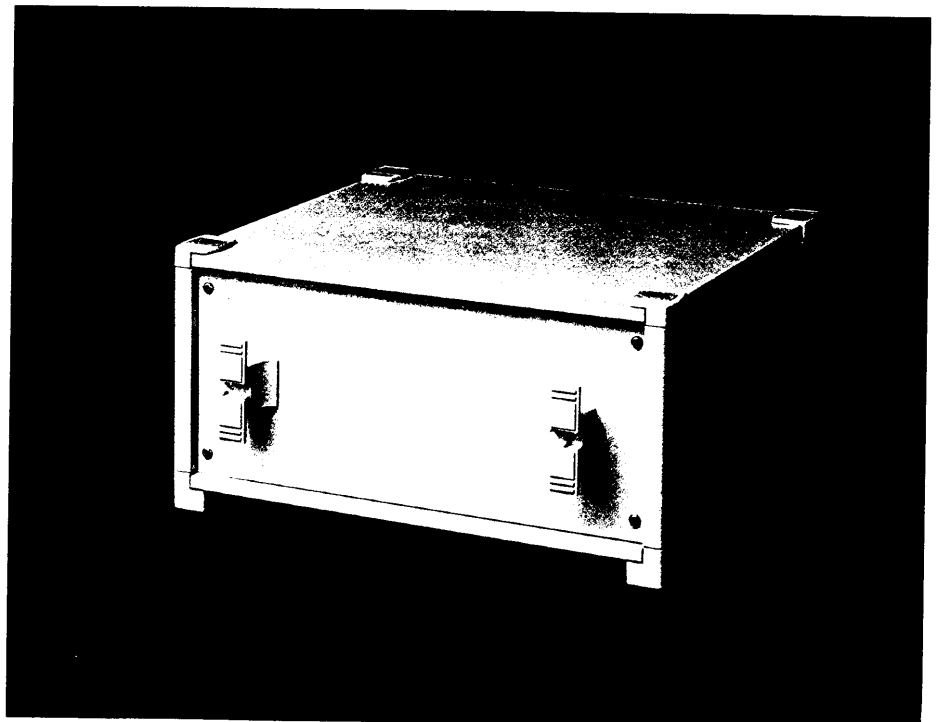
The rear cable tidy allows power cables to be conveniently and tidily stored. It is supplied as a kit of two mountings which can be attached directly to the rear panels. The choice of location on the rear panel is a function of other component locations and the length of cable to be stored.

MATERIAL SPECIFICATION

RAL 7035 ABS or RAL 7016 ABS

Ordering information

Description	Order code
Anthracite RAL 7016	70-258833B
Light Grey RAL 7035	70-258834K



EURO INNER FRAME

This inner frame arrangement will allow double eurocard pcbs to be fitted directly to half width cases.

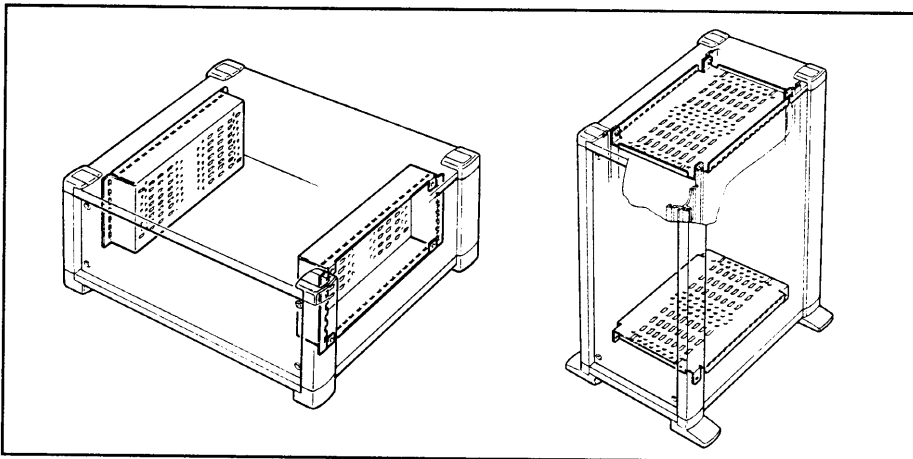
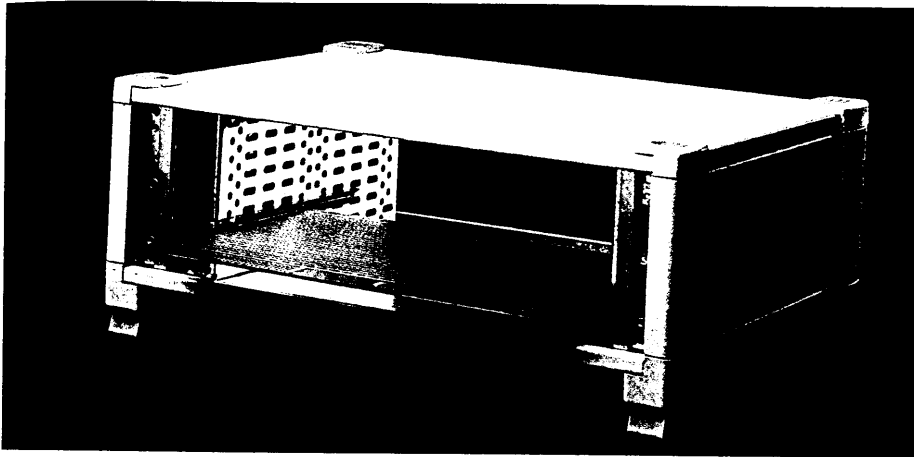
Using snap in guides attached to the inner frame, pcbs can be mounted horizontally on a 2HP (2 x 5.08mm) pitch within the height of each of the half width cases.

CONTENTS OF KIT

- 2 side plates
- 1 set of fixings

MATERIAL SPECIFICATION

Side plate : 0.9mm Galvatite



Ordering information

Size	Order code
1U	70-258509L
2U	70-258511J
3U	70-258513C
2U (v)	70-258519G
3U (v)	70-258520H

19" PANEL MOUNTS AND METRIC INNER FRAME

This inner frame may be used in conjunction with the adjustable 19" mounting angles, to facilitate standard 19" equipment mounting, in full and half width cases.

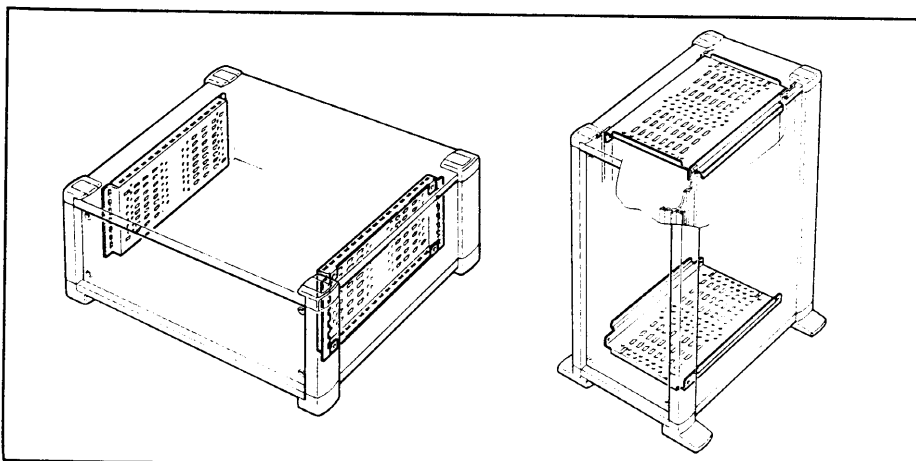
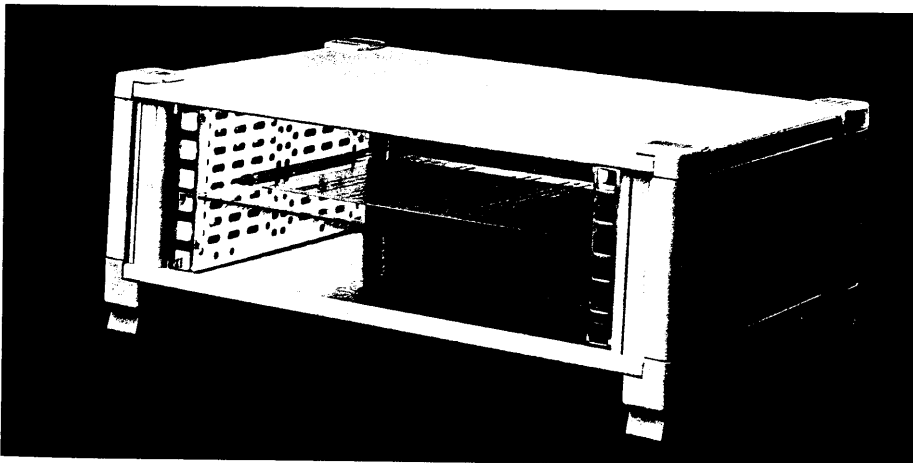
When used in half width cases, metric cards may be plugged in directly.

CONTENTS OF KIT

- 2 side plates
- 2 19" mounting angles
- 1 set of fixings

MATERIAL SPECIFICATION

Side plate : 0.9mm Galvatite
 Fixings : 0.9mm Galvatite



Ordering information

Size		Order code
1U	260	70-258498E
1U	300	70-258499B
2U	260	70-258500E
2U	300	70-258501B
3U	300	70-258502K
3U	400	70-258503G
2U V	260	70-258516E
3U V	300	70-258517B

ACCESSORIES

5.25 DRIVE SUPPORTS

These side plates are to be used in conjunction with the CD tower units. These allow CD ROM drives to be stacked in an array of 4 high in the half height tower and 9 high in the full height tower. If an increased array density is required then do not use the front panel kit, and stack drives directly above each other.

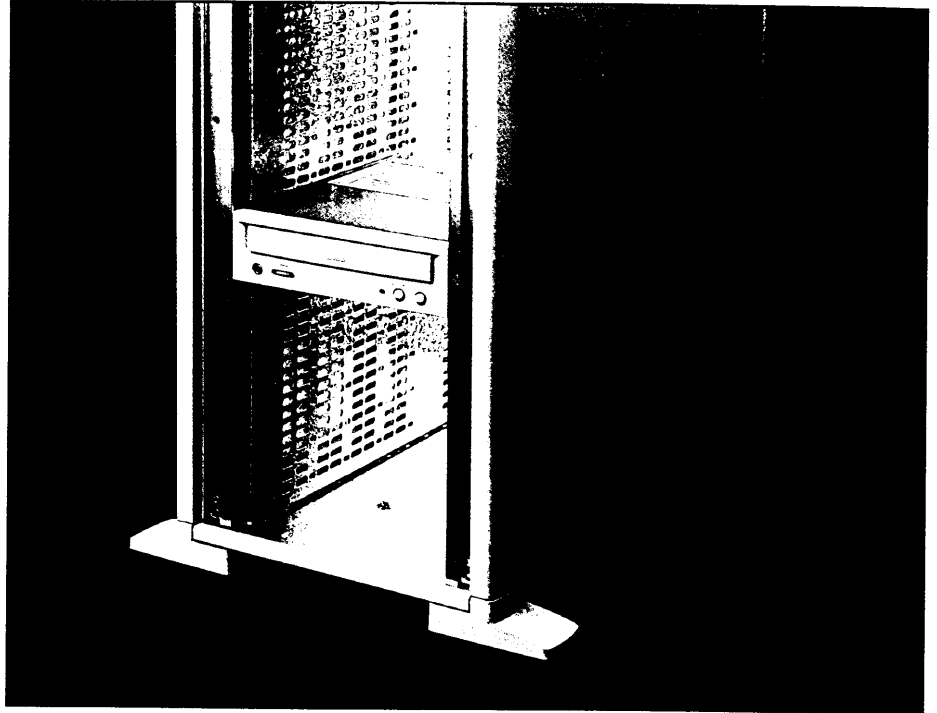
When an aperture in the front panel is not required, then a blanking plate is provided to maintain a good visual appearance.

CONTENTS OF KIT

2 side plates
Fixings

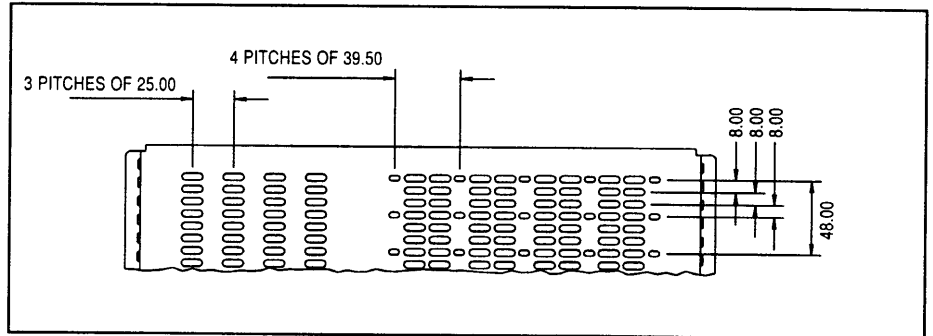
MATERIAL SPECIFICATION

0.9mm galvatite
Fixings M4 x 6 LG CH HD

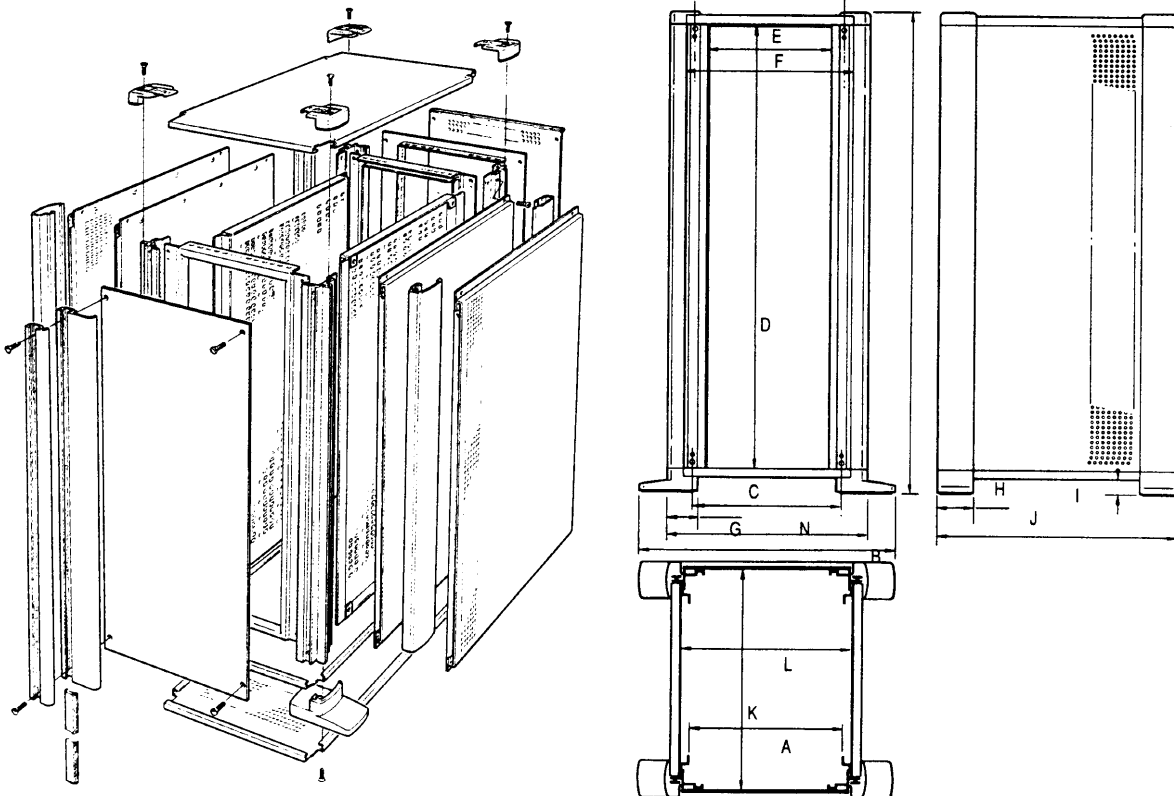


Ordering information

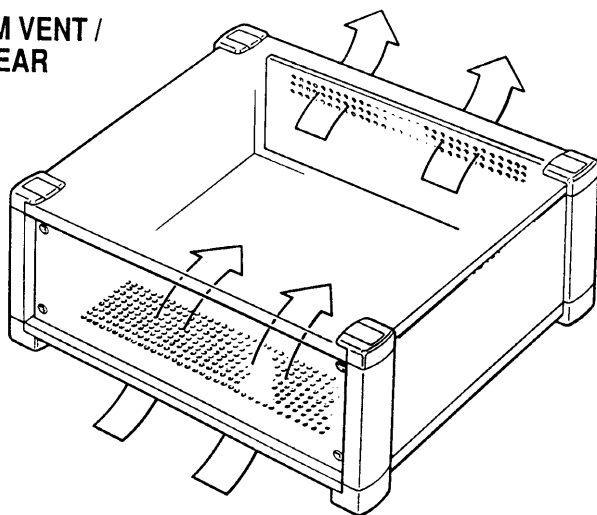
Size	Description	Order code
CD 10.5"	Drive supports	70-258514L
CD 19"	Drive supports	70-258515H
CD 10.5"	Front panel	70-259334G
CD 19"	Front panel	70-259335D
CD	Blanking plate	174-10204K



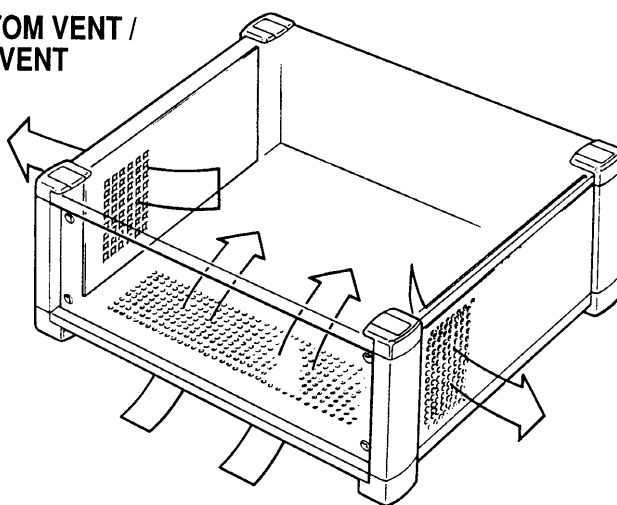
DIMENSIONS (see page 12 & 13 for dimension tables)



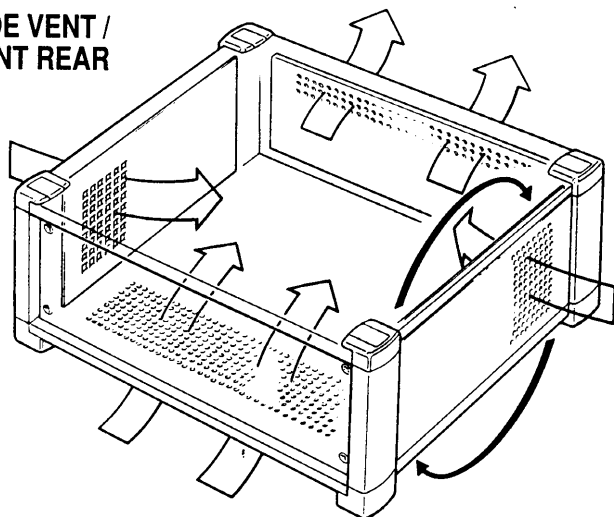
**BOTTOM VENT /
VENT REAR**



**BOTTOM VENT /
SIDE VENT**



**SIDE VENT /
VENT REAR**



**TOWER SIDE AND
BASE VENT**

