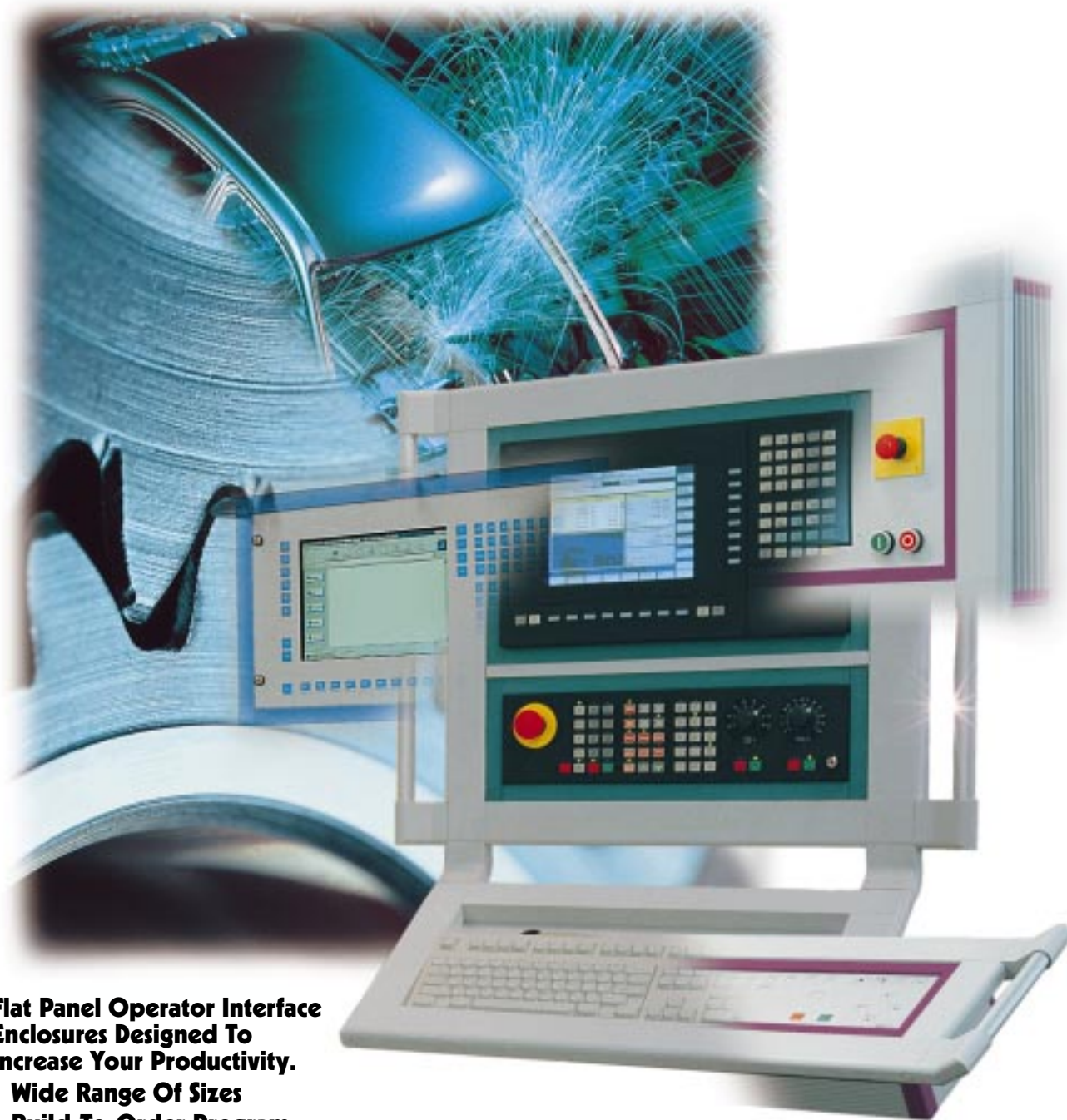


Ergonomically Designed Operator Interface Systems...

VIP 6000 SOLUTIONS.



Flat Panel Operator Interface Enclosures Designed To Increase Your Productivity.

- Wide Range Of Sizes
- Build-To-Order Program
- Versatile Solutions.

***Switch to perfection* RITTAL**

ERGONOMICS ARE KEY BETWEEN OPERATOR AND MACHINE.

The interface between operator and machine can play a decisive role in your overall productivity.

That is why Rittal specifically addresses this key area of industrial control. Our goal is to provide protection for programming, operating and monitoring systems. In addition, we aim to create optimum ergonomic conditions for operating personnel that can be adapted to each individual situation.

In addition to the VIP 6000 system, Rittal offers a wide range of enclosure solutions for operator interface applications, which together with support arm systems and a wide range of accessories, provides an unlimited number of customer-specific solutions.

Versatile solutions to suit any technical requirement.

Three different support arm systems for mobility at the operator level.

Cost-effective, specific solutions achieved with standard accessories.

Customer-oriented advice and customer-specific modifications direct from Rittal.



A stainless steel support arm system, together with stainless steel operator enclosures, provides a smart solution for environments that require high standards of corrosion protection and hygiene.



Universal consoles in steel or stainless steel, Rittal's one-piece consoles and the AP modular console system have become the standard in the field of machine control.



PC housings with mobile pedestals provide an ideal solution for remote applications.



PC enclosure systems feature a monitor compartment, various keyboard options, and they offer ample space for CPU and printer.



The VIP 6000 equipment shelf, with mouse pad and keyboard bracket, can be adapted to suit any operator with the height-adjustable panel lift.



19" CP Series operator enclosures are available in many versions and stand out through their design and versatile, yet simple, component installation.



The complete selection of operator interface enclosures and support arm systems can be found in Rittal Handbook 29 under the heading "CP Control Panel Systems."



VIP 6000 – custom designed to your specifications – Rittal's Build-to-Order Program allows our customers to pick and choose from numerous options to custom design the perfect solution.



The stainless steel CP enclosure unit is based on Rittal's AE enclosure and is ideal for the food and beverage industry.



CP 6000 with control panel front is based on Rittal's popular AE enclosure system, combined with an aluminum control panel.



CP 6500, based on the Rittal AE enclosure. This new, versatile solution is described in detail on page 50 .

SMART SOLUTIONS FOR A VARIETY OF APPLICATIONS.

Rittal's operator interface enclosures are designed for a wide variety of applications.

With their unlimited individual versatility, Rittal VIP 6000 operator interface enclosures are produced and assembled to your specifications. Take a close look at the models described on the following pages, and you will see how easy it is to design your own specific solution.



- **Customized assembly for practically any control panel.**
- **Cost-effective heat dissipation via cooling fins, air conditioners or filter fans on the enclosure.**
- **Fast, flexible component installation with all-round screw channels.**
- **Modular versatility with Rittal system accessories.**



Example 1

- Red trim
- Support arm connection at the bottom for a CP 6500 pendant arm system
- Vertical handles
- Keyboard housing



Example 2

- Aluminum front panel with cutout for a touch screen
- The width of the machine control panel in the keyboard housing determines the overall width of the unit
- Support arm connection at the bottom for a CP 6500 pendant arm system
- Horizontal handles on the keyboard housing
- Integrated storage module for hand control housing



Example 3

- Without trim
- Support arm connection at the top for a CP 6500 pendant arm system
- Vertical handles
- Deep rear wall to accommodate color monitor

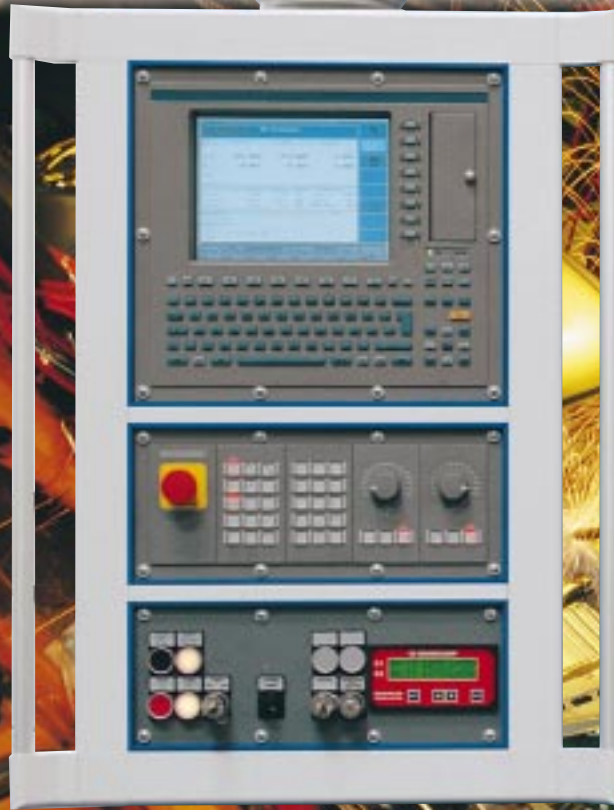


Example 4

- Teal trim
- Support arm connection at the top for a CP 6500 support arm system
- Vertical handles with clipboard
- Molding for indicator light
- Keyboard housing with horizontal handles and industrial mouse holder

Example 5

- With two cross members
- Pale blue trim
- Support arm connection at the top with adaptor for a CP 6000 pendant arm system
- Vertical handles



Example 8

- With one cross member
- Teal trim
- Support arm connection at the bottom for a CP 6500 pendant arm system
- With mobile pedestal
- With keyboard housing and horizontal handles



Example 6

- Aluminum front panel with installation cutout for touch screens
- Teal trim
- Support arm connection at the bottom for a CP 6500 pendant arm system
- Vertical handles



Example 7

- Aluminum front panel, finished to order
- Teal trim
- Support arm connection at the bottom with adaptor for a CP 6000 support arm system
- Vertical handles
- Keyboard housing with ergonomically designed mouse box

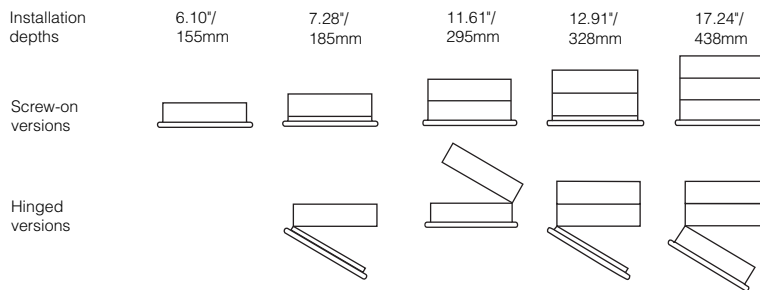
UNLIMITED VIP 6000 OPERATOR INTERFACE POSSIBILITIES.

Achieve versatile solutions with the VIP 6000 operator enclosures, available in a wide range of sizes and depths.

The VIP 6000 is offered in five depths and screw-on or hinged versions. In addition, Rittal's standard VIP 6000 package provides for customer-specific configurations and custom assembly of accessories, such as aluminum front panels, handles, cross members and trim.



- **Five enclosure depths to accommodate virtually all types of control components.**
- **Hinged enclosure version for optimum access during assembly and maintenance work.**
- **Rigid and adjustable frame couplings between the operator panel and the keyboard housing satisfy any ergonomic requirement.**
- **Can be combined with the CP 6000 and CP 6500 support arm systems. Support arm connection can be at the top, bottom or top and bottom.**



Example 9

- With one sealing bar
- Teal trim
- Support arm connection at the bottom for a CP 6500 pendant arm system
- Vertical handles with clipboard
- Keyboard housing with horizontal handles



Example 10

- AE control panel with VIP 6000 frame
- Aluminium front panel, built-to-order, with built-in keyboard drawer
- Interface box fitted at the side and micro air conditioner fitted in the rear door
- Support arm connection at the bottom for a CP 6000 pendant arm system



Example 11

- Control panel and keyboard housing with adaptor plate for panel installation between pale blue trim
- Support arm connection at the bottom for a CP 6500 pendant arm system
- Vertical and horizontal handles



Example 12

- Vertical sealing bar in the control panel/keyboard housing
- Horizontal and vertical teal trim
- Support arm connection at the top with adaptor for a CP 6000 pendant arm system
- Control panel with vertical handles and clipboard
- Keyboard housing with horizontal handle

Example 13

- Teal trim
- Support arm connection at the bottom with a CP 6500 system
- With cooling fins



Example 16

- Purple trim
- Support arm connection at the bottom for a CP 6500 pendant arm system
- Pedestal platform
- Keyboard housing with vertical handles and storage for hand control housing



Example 14

- Blue trim
- Support arm connection at the bottom for a CP 6500 pendant arm system
- VIP air conditioner installed
- 155mm deep

■ □ □ □ □ Rittal VIP 6000 Operator Interface Systems



Example 15

- Teal trim
- Support arm connection at the top for a CP 6500 pendant arm system
- Vertical handles
- Keyboard housing with horizontal handle

VIP — The Right Frame.

Rittal's VIP 6000 operator interface system offers modular solutions for countless flat panel applications. Its contemporary design showcases control technology in an attractive package that provides:

- Optimum ergonomics for the operator
- Protection for heat-sensitive electronic components
- Special installation kits for easy mounting of practically any type of control equipment
- A variety of sizes and versions that can be adapted to your requirements.

The VIP 6000 system has the following approvals:

- UL
- TÜV
- Lloyd's Register of Shipping
- VDE



German Patent No. 195 25 876

German Patent No. 195 25 880

German Patent No. P 41 09 695

European Patent No. 0 505 681

with validity for CH, DE, FR, GB, IT

German Registered Design

No. M 94 08 533

Austrian Registered Design No. 17467



Panel mounting screws are infinitely adjustable.



Plastic trim strips cover unsightly screw heads.



The system also accommodates panels with studs.

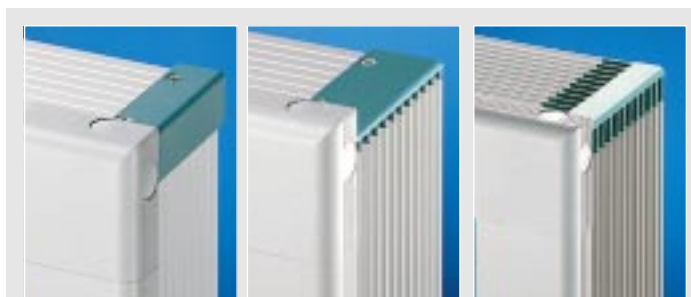
Every Installation Point Is Easy To Reach, From All Sides!

Ideally, the operator panel is screwed onto the enclosure from outside so that the entire unit can be easily mounted from the front.

Clip-in clamps with cage nuts provide fastening points around the perimeter that are infinitely adjustable (edge to center) from .28" to .51"/7 to 13mm, while screw heads are neatly covered by a trim strip.

Panels with studs (minimum .80"/20mm long) can also be installed.

There is no need for a special mounting frame, ever!

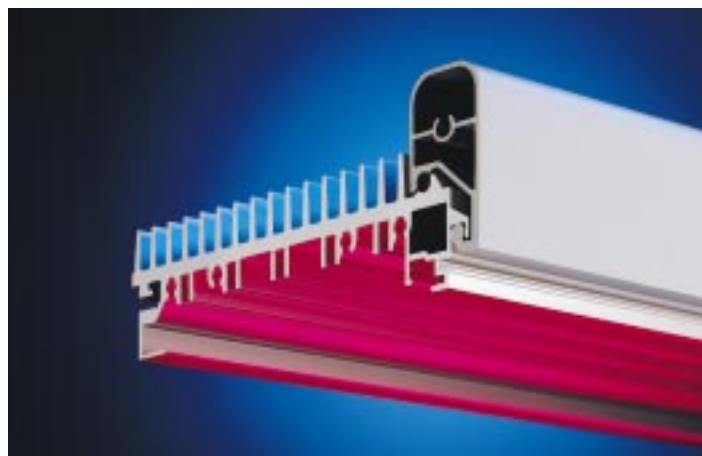


Example: Heat loss* dissipating capacity for an enclosure with a 19" x 7U (H x W) front panel

- | | | |
|----------------------------------|--|-------------------------------------|
| 1. VIP 6000 without fins: 30.6 W | 2. VIP 6000 fins on left and right sides: 50.2 W | 3. VIP 6000 fins all around: 69.4 W |
|----------------------------------|--|-------------------------------------|

** Pv (W) for DT = 20 K (calculation based on: DIN VDE 0660, part 507)*

Heat Dissipation – Without Expensive Climate Control Components!



A standard VIP 6000 already has a very good heat removal coefficient. Adding cooling fins can more than double heat dissipation! This is accomplished not only through the fins, but also through mounting channels that act as internal cooling

fins to provide optimum heat absorption and dissipation.

For many applications this feature means extra cost and energy savings because there is no need to install expensive climate control components.

VIP 6000 OPERATOR INTERFACE SYSTEM



VIP 6000 Frame Profile

- 1 Built-to-order**
The frame is custom made to fit the panel.
- 2 Easy to maneuver**
with or without handles.
- 3 Optional handle grips**
let you customize your design.
- 4 Optional clip board**
displays manuals and drawings at eye level.
- 5 Optional cross members**
partition front of enclosure and allow installation of various control components.
- 6 Colored trim strips**
– five different colors, in three styles.
- 7 Frame coupling**
– rigid or adjustable – allows installation of keyboard housings and trays.

VIP 6000 Operator Housing

- 8 Optimum heat dissipation**
Three versions: without fins, cooling fins on sides only, or cooling fins all around. The version with cooling fins on all sides dissipates twice as much heat as the version without fins. Also available is a 920BTU air conditioner for aggressive cooling requirements.
- 9 Mounting channels**
around the sides are threaded to allow flexible component installation. They also promote heat absorption and dissipation.
- 10 Rear walls**
are screwed on or can be hinged. Extra deep rear walls are available for easy installation of deep components.
- 11 Corner protection**
is impact resistant and matches color of trim.

VIP 6000 Keyboard Housing

- 12 Keyboard housing**
is deep enough to accept large components. Other versions include a keyboard housing for standard keyboards and a flat housing for key pads.
- 13 Mounting channels**
on the inside walls are threaded for flexible component installation.
- 14 Cabling protection**
through flexible or rigid cable ducts with a diameter large enough to route cables (even with plugs) from the housing to the keyboard.
- 15 Corner protection**
is impact resistant and matches color of trim.

1. VIP 6000 PANEL DESIGN

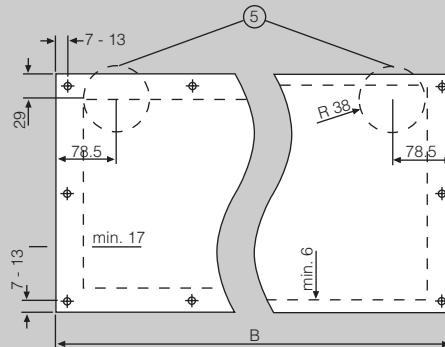
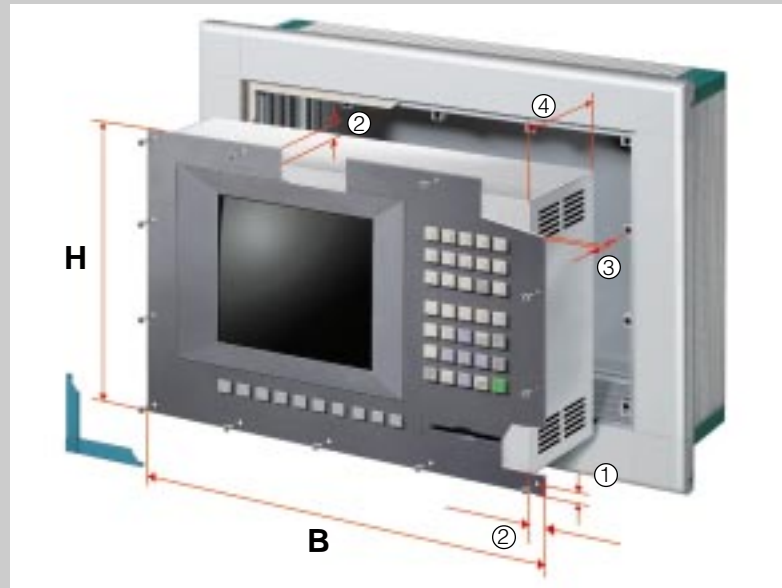
All Components Fit. . .

. . . in the operator or keyboard housing when they meet the following criteria:

- ① Mounting bolts are at least 0.79"/20mm long and are spaced between 0.28" to 0.51"/7 to 13mm (edge to center).
- ② Front panel clearance on sides with installation holes 0.67"/17mm, on sides without installation holes 0.24"/6mm.
- ③ Front panel thickness variable depending on type of trim strip.
- ④ Installation depths:
 - standard operator enclosures:
6.10", 7.28", 11.61", 12.91", 17.24"
(155, 185, 295, 328, 438mm)
 - operator enclosures with
1.77" (45mm) deep rear wall*:
7.87", 9.06", 13.39", 14.69", 19.02"
(200, 230, 340, 373, 483mm)
 - operator enclosures with
9.65" (245mm) deep rear wall*:
15.75", 16.93", 21.26", 22.56",
26.89" (400, 430, 540, 573, 683mm)
- ⑤ When a hinged rear door is used, the maximum installation depth in the area of the cam latch is reduced by 1.1"/27mm.

The above applies to most standard control panels and keyboards. When they do not fit, a special solution such as a deeper rear wall or an additional installation frame can be used.

* Other depths are available on special request.



B= Width
T= Depth

Any Size — Built To Your Specifications!

Let Rittal know the dimensions of your control panels and the accessories you require, and we will fabricate an operator enclosure to your exact specifications.

The following pages demonstrate how to determine your installation criteria or, ask your Rittal representative for our special VIP 6000 order form to make it even easier.

Modular accessories such as aluminum front panels, handles, and cross members are also made to your exact specifications.



Rittal's VIP 6000 system accommodates virtually any mounting format.

VIP 6000 OPERATOR INTERFACE SYSTEM



Specifications:

Page 10 – 17

More accessories

Page 22 – 34

Material:

Housing and front frame:
extruded aluminum

Frame corner pieces:
die-cast zinc

Corner protection pieces:
self-extinguishing plastic

Trim strips:
flexible plastic

Finish:

Housing frame:
natural anodized

Front frame and frame corner pieces:
textured enamel, light grey (RAL 7035)

Plastic parts:
color per customer specification, see page 10

Ratings:

NEMA 12
IP 65



Pedestal/platform
provides ideal base for remote applications.
Part No. see page 26.



CP 6500 support arm system
for ideal ergonomics and design.
Part No. see pages 41 – 43.



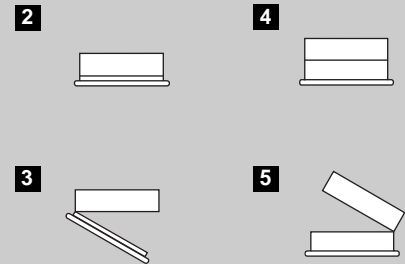
Interface box
can be mounted in your VIP 6000.
Part No. see page 33.

2. VIP 6000 OPERATOR ENCLOSURE

2.1 Operator Enclosure

Installation depth:

- 1** 6.10"/155mm
- 2** 7.28"/185mm – screw-on
- 3** 7.28"/185mm – hinged
- 4** 11.61"/295mm – screw-on
- 5** 11.61"/295mm – hinged
- 6** 12.91"/328mm – screw-on
- 7** 12.91"/328mm – hinged
- 8** 17.24"/438mm – screw-on
- 9** 17.24"/438mm – hinged



2.2 Cross Member/Sealing Bar

- 0** Without cross member or sealing bar
- 1** With one cross member
- 2** With one sealing bar
- 3** With two cross members
- 4** With two sealing bars
- 5** With one cross member and one sealing bar



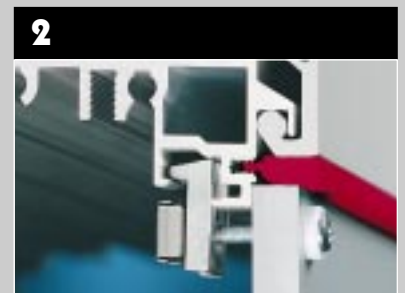
2.3 Cooling Fins

- 1** No fins
- 2** Fins on sides only
- 3** Fins all around
- 4** For aggressive cooling requirements - please reference the "Special Modifications" section on the Rittal VIP Order Form insert.



2.4 Types Of Trim Strips

- 1** Cover trim
- 2** End trim
- 3** Spacer trim



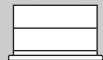
2.5 Trim Colors

- 1** Teal (similar to RAL 5018)
- 2** Light blue (similar to RAL 5012)
- 3** Bright red (similar to RAL 3001)
- 4** Purple (similar to RAL 4006)
- 5** Dark grey (similar to RAL 7030)



DESIGN

6



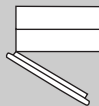
8



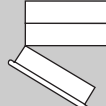
View from the top.
Other hinges available, if required.

Detailed dimensions Pages 18/19

7



9



Example

The colored numbers identify the version we've selected for our example.



2



Detailed dimensions Pages 20/21

3



Detailed dimensions Pages 18/19

For units with installation depths of 7.28" and 12.91"/185 and 328mm, the housing part that is attached to the front frame (approximately 35mm) is available without fins only.

3



Detailed dimensions Pages 20/21

5

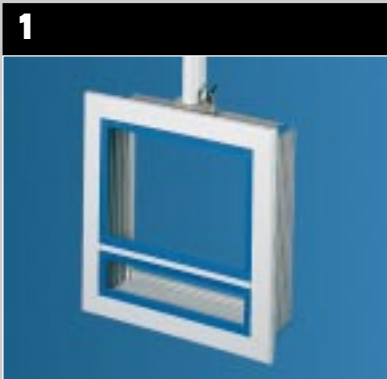


2.6 Support Arm Connection

- 0 Without connection
- 1 Connection at top
- 2 Connection at bottom
- 3 Connection at top and at bottom, (Includes one cover panel)

Two different support arm systems are available (see pages 37 – 43):

- CP 6500 is designed for enclosures with installation depths of 6.10", 7.28", and 11.61"/155, 185, and 295mm.
- CP 6000 is designed for enclosures with installation depths 12.91" and 17.24"/328 and 438mm.



2.7 Cable Duct Connection

- 0 Without cable duct connection
- 1 With cable duct connection

This opening allows routing of keyboard cable or connecting the operator enclosure to the keyboard housing via a rigid or flexible cable duct (see pages 16, 22 or "Technical Details" pages 18/19).



2.8 Rear Wall

- 1 Screw-on, natural anodized aluminum.
- 2 Hinged, on longest side, natural anodized aluminum; lock with double bit insert (similar to SZ 2520.000 – see Rittal Handbook 29, page 702).
- 3 Expansion back plus 1.77"/45mm* sheet steel, light grey (RAL 7035), hinged, integral screw lock.
- 4 Expansion back plus 9.64"/ 245mm* aluminum, light grey (RAL 7035), screw-on.

*Other depths and designs on request.
Review the "Special Modifications" section on the VIP 6000 Order Form insert.



As you can see, enclosure specifications for the VIP can be determined quickly and easily. Similarly, you can determine your keyboard housing and specifications.

- Dimensions for the components you select can be found on pages 18-21.
- Accessories such as handles, keyboard drawers, clip boards and interface boxes are available to complete your design (pages 22-34).

Example

The sequence of illustrations on the far right side shows you how our operator enclosure is built up.

The large illustration shows the complete solution with all relevant numbers. The table below details the individual specification numbers of our example:

Specification number	Design of operator enclosure
1	1 operator enclosure (installation depth 6.10"/155mm)
1	1 cross member
2	fins on sides only
1	cover trim
2	trim color: light blue (similar to RAL 5012)
2	support arm connection at bottom
1	with cable duct connection
2	rear wall, hinged, with double bit insert



Part No.: CP 6392.009
Specification Numbers
For Operator Enclosure

1 1 2 1 2 2 1 2

3. VIP 6000 KEYBOARD HOUSING DE

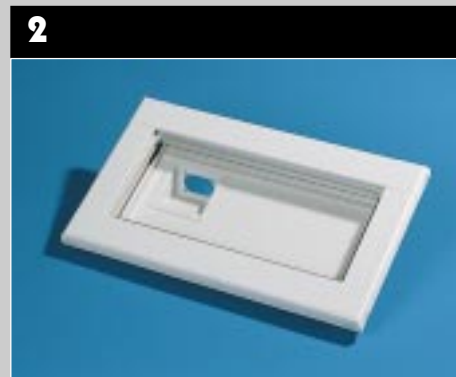
3.1 Keyboard Enclosure

- 1** Installation depth: 4.13"/105mm
- 2** Installation depth: 1.73"/44mm
- 3** Keyboard lay-in tray, depth: 1.06"/27mm
- 4** Keyboard lay-in tray, depth 1.06"/27mm, with flexible cable tube connector

For standard keyboards. Without trim.

All keyboard housings are custom made per your component dimensions and depending on your operator enclosure specifications – see page 8.

Note: The width of the keyboard housing/ tray must correspond with the width of the operator enclosure.



3.2 Types Of Trim Strips*

- 1** **Cover trim**
covers installation screws of front panel – for front panels ≤ .14"/3.5mm thick.
- 2** **End trim**
covers gap between front panel and frame profile – for all front panel thicknesses.
- 3** **Spacer trim**
For components that must be flush with frame profile.
For front panels with a thickness of appr. 0.14"/3.5mm.

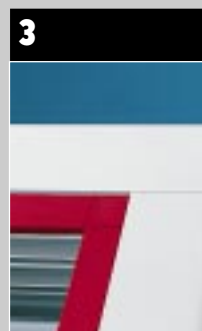


* No selection is available for keyboard enclosure **3** and **4**. Please indicate with an X in this case.

3.3 Trim Colors*

- 1** Teal (similar to RAL 5018)
- 2** Light blue (similar to RAL 5012)
- 3** Red (similar to RAL 3001)
- 4** Purple (similar to RAL 4006)
- 5** Dark grey (similar to RAL 7030)

Enclosure corner protection pieces will also be supplied in the specified color.
Other colors are available on special request.



* No selection is available for keyboard enclosure **3** and **4**. Please indicate with an X in this case.

DESIGN



Detailed dimensions Page 20/21



Example

The colored numbers identify the version we've selected for our example.



3.4 Frame Connector

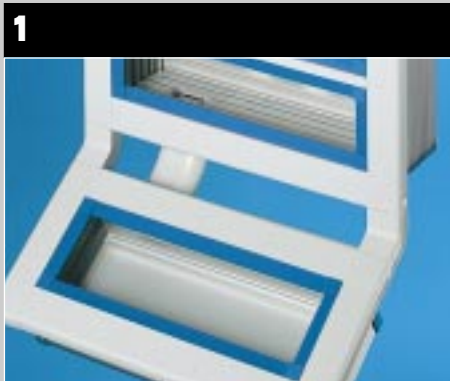
- 1 Rigid, 120° angle
 - 2 Adjustable from 75° to 210°, adjustable in 7.5° increments.
- Allows optimum ergonomic adjustment for each user.



3.5 Cable Duct*

- 1 Rigid, light grey (RAL 7035) aluminum – for use with rigid frame coupling between operator enclosure and keyboard housing.
 - 2 Flexible, light grey (RAL 7035) plastic – for use with rigid and flexible frame coupling between operator enclosure and keyboard housing.
- Installation depth: 4.13"/105mm
- Installation depth: 4.13"/105mm, 1.73"/44mm or 1.06"/27mm

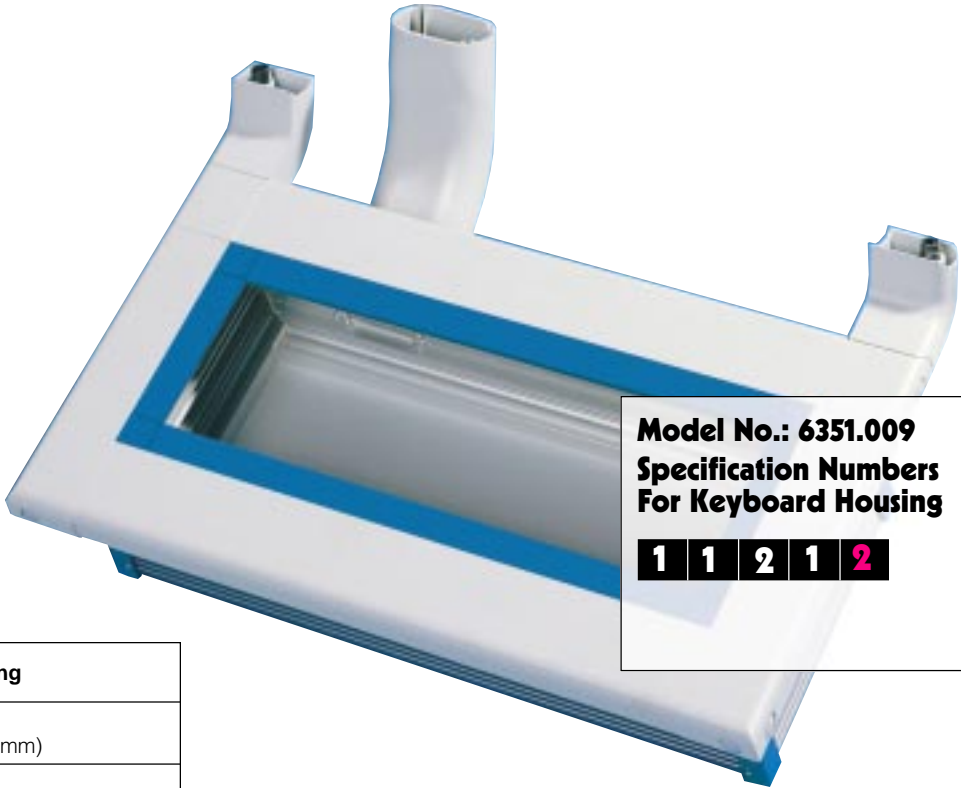
*No selection is available for keyboard enclosure 3.
Please indicate with an X in this case.



Example

The sequence of illustrations on the far right side shows you how our keyboard housing is built up. The large illustration shows the complete solution with all relevant numbers. The table below details the individual specification numbers of our example:

Specification number	Design of keyboard housing
1	keyboard housing (installation depth 4.13"/105mm)
1	cover trim
2	trim color: light blue (similar to RAL 5012)
1	frame connector, rigid
1	cable duct, rigid



Model No.: 6351.009
Specification Numbers
For Keyboard Housing

1 1 2 1 2

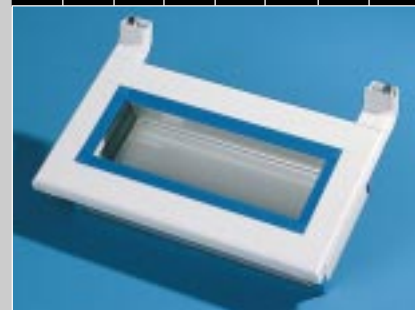
Just as with the operator enclosure, only a few steps are necessary to specify the dimensions and accessories for your keyboard housing.

Detailed dimensions Page 20/21

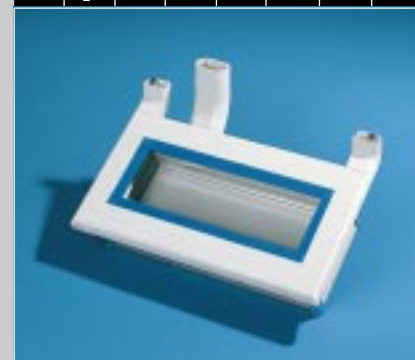
Example

The colored numbers identify the version we've selected for our example.

1 1 2 1



1 1 2 1 1



Detailed dimensions Page 20/21



Model No.: 6392.009 Specification Numbers For Operator Enclosure

1 1 2 1 2 2 1 2

Model No.: 6351.009 Specification Numbers For Keyboard Housing

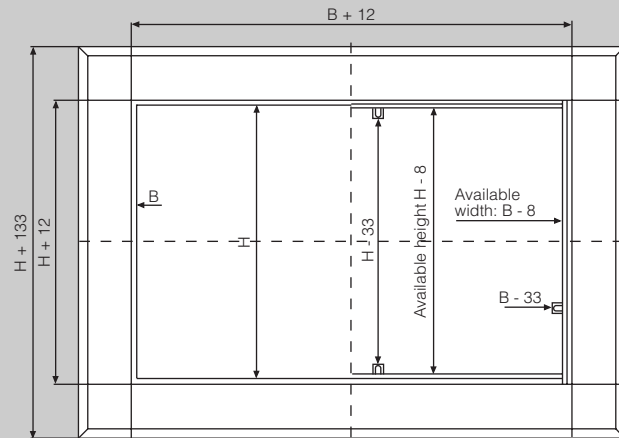
1 1 2 1 1

You can easily specify your complete VIP 6000 operator interface system just as we have demonstrated in our example.

- Detailed dimensions for the components selected can be found on pages 18-21.
- Accessories such as handles, keyboard drawers, clip boards and mounting angles can be found on pages 22-34.

Technical Details

Operator enclosure



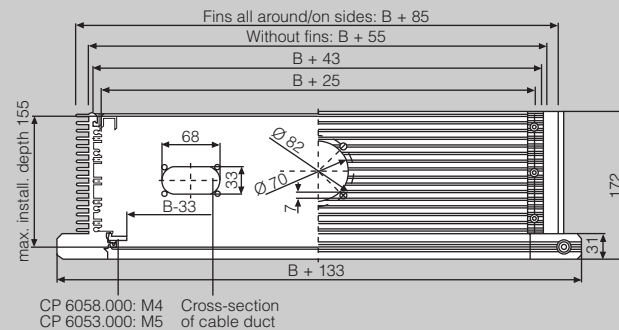
Height dimensions:

- H = height of front panel
- H-8 = available space between enclosure profiles
- H+133 = overall height
- H-33 = available space between brackets
- H+12 = available space between front frame posts

Width dimensions:

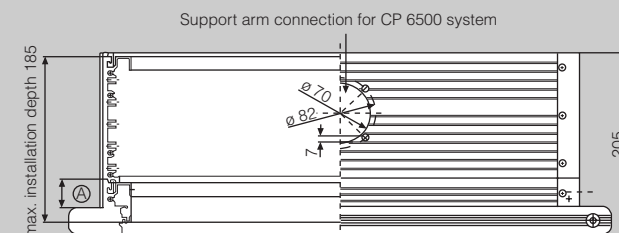
- B = width of front panel
- B-8 = available space between enclosure profiles
- B+133 = overall width
- B-33 = available space between brackets
- B+12 = available space between front frame posts

1 Max. installation depth 6.10"/155mm



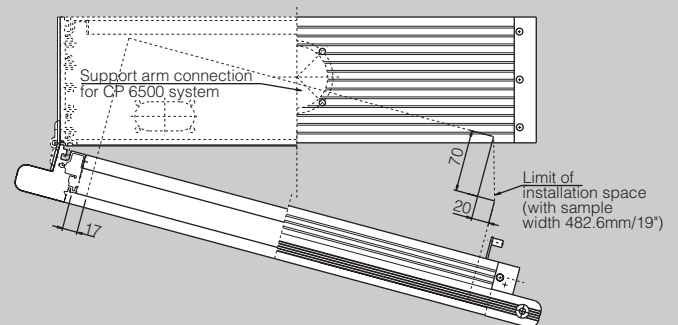
2 Max. installation depth 7.28"/185mm

Screw-on

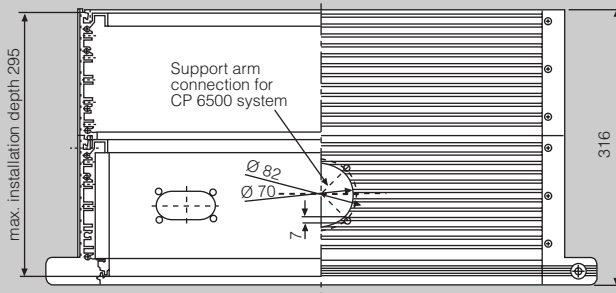


A= Mounting section without fins only in this area

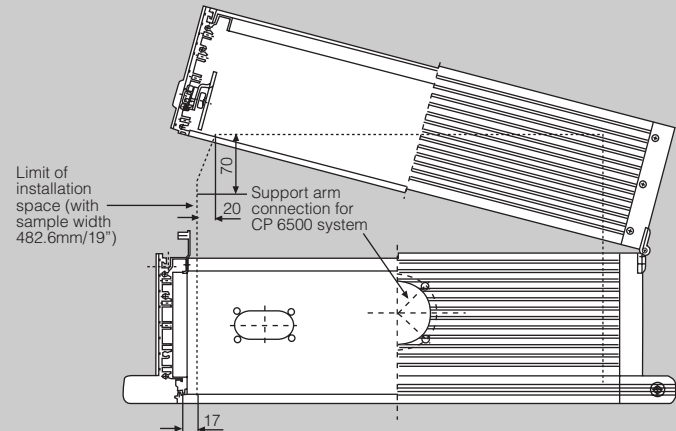
3 Hinged



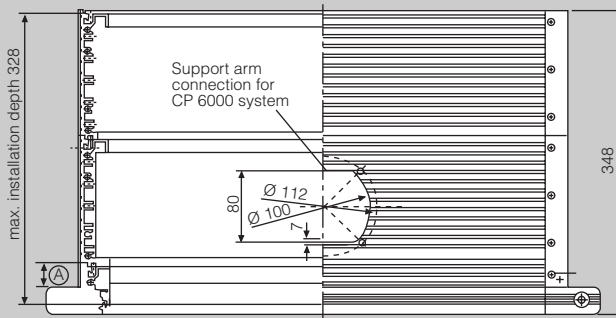
4 Max. installation depth 11.61"/295mm
Screw-on



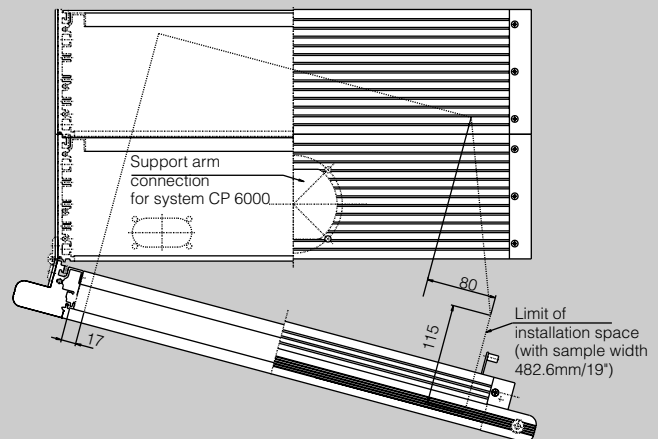
5 Hinged



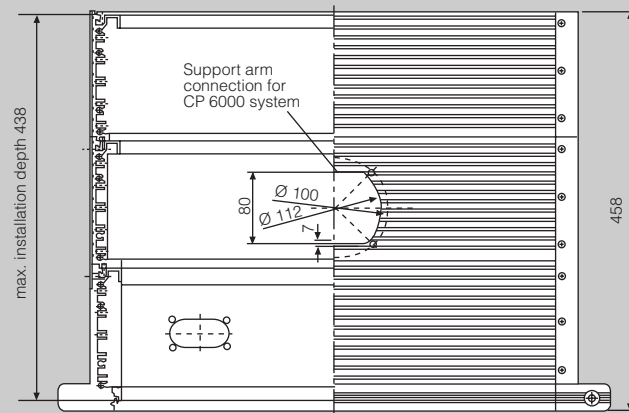
6 Max. installation depth 12.91"/328mm
Screw-on



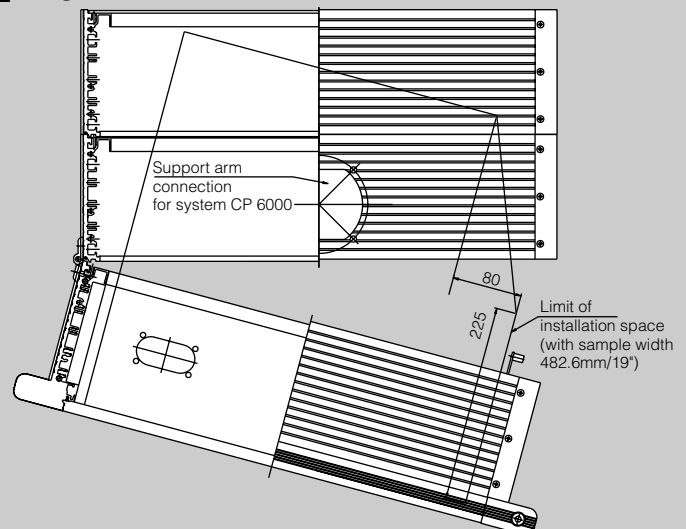
7 Hinged



8 Max. installation depth 17.24"/438mm
Screw-on



9 Hinged



A= Mounting section
without fins only in this area

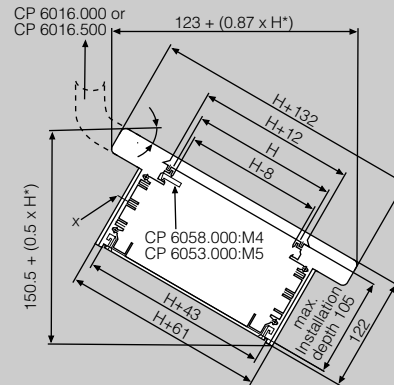
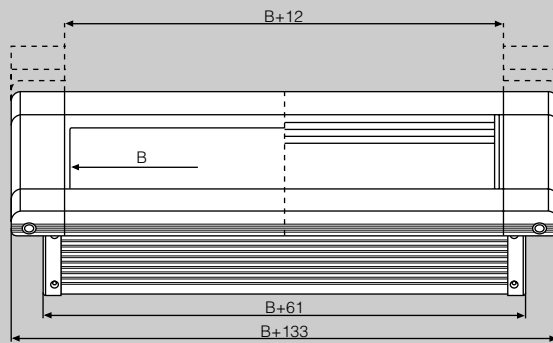
Technical Details

1 Keyboard housing: 4.13"/105mm inst. depth

H = Height of front panel

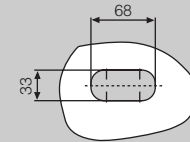
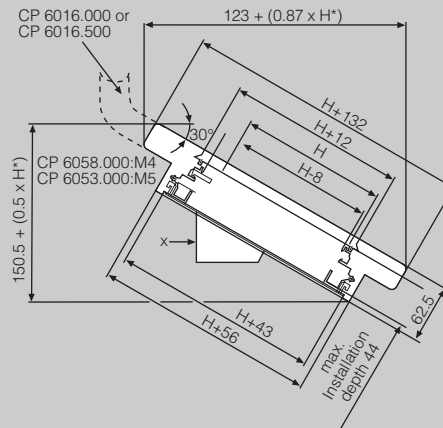
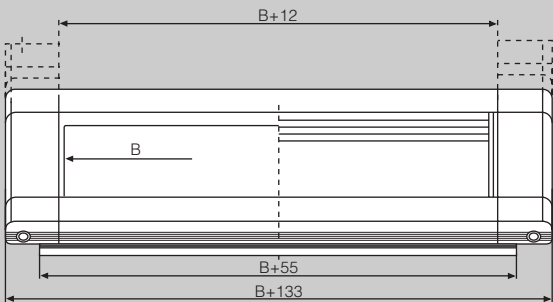
B = Width of front panel

* valid for 30° angle to horizontal



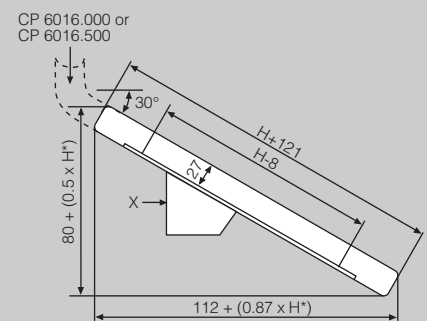
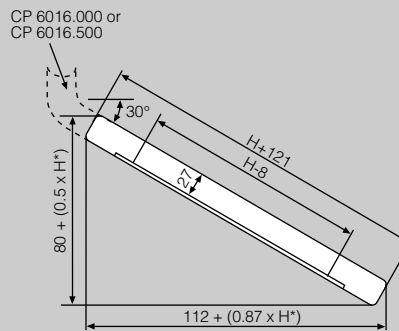
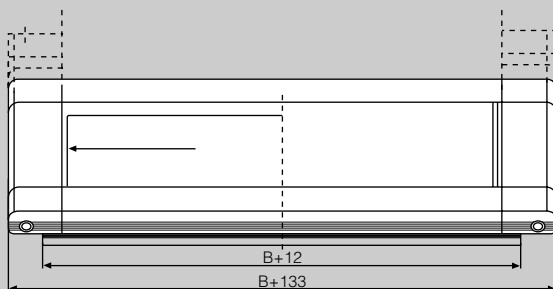
2 Keyboard housing: 1.73"/44mm inst. depth

X = Cross-section of cable duct



3 Keyboard housing: 1.06"/27mm deep

4

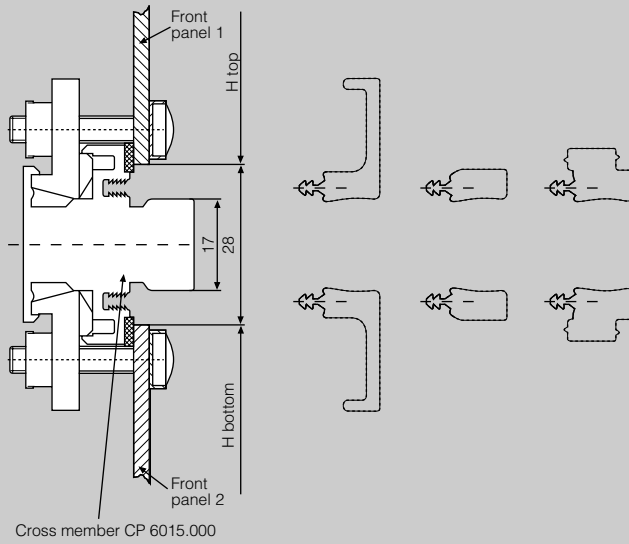


H = Height of keyboard retaining frame

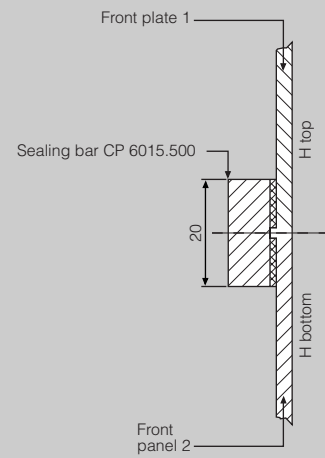
B = Width of keyboard retaining frame

* valid for 30° angle to horizontal

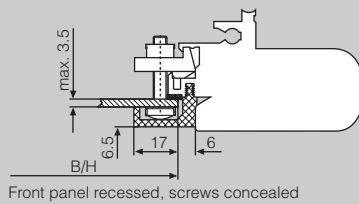
Cross member



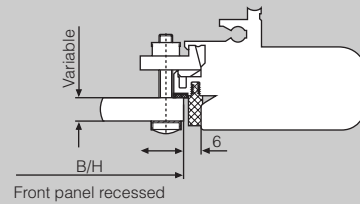
Sealing bar



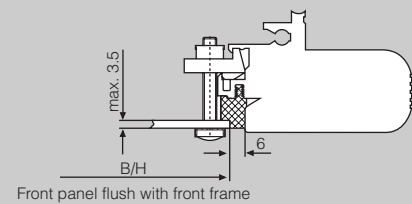
Cover trim strip



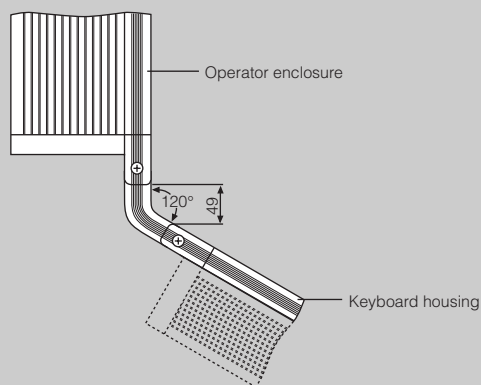
End trim strip



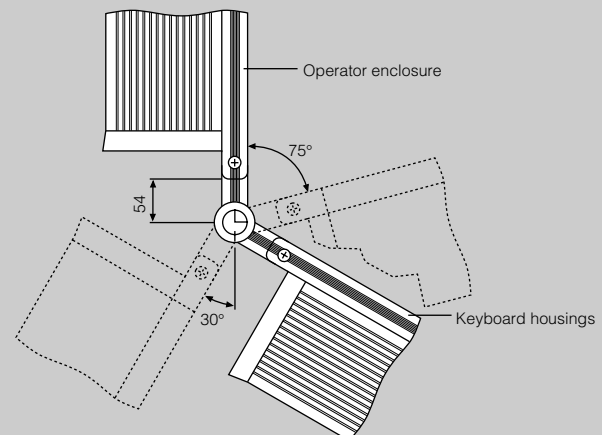
Spacer trim strip



Frame coupling, rigid



Frame coupling, adjustable



VIP 6000 Accessories



Adjustable Frame Coupling

allows optimum ergonomic adjustment for each user; adjustable from 75° to 210° in 7.5° increments for accurate adjustment and secure locking.

(Also for AE with VIP frame)

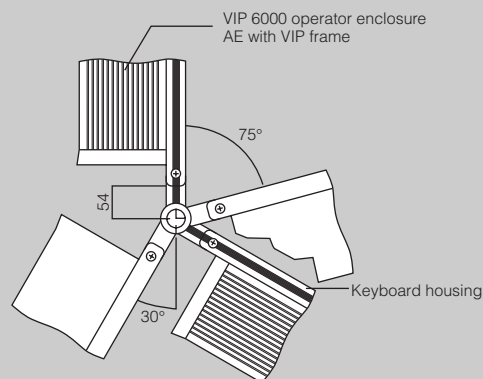
Especially suitable in conjunction with the CP 6527.000 10° tilting adaptor and the CP 6529.000 tilting adaptor (see page 43).

Material: die-cast zinc

Color:
light grey (RAL 7035)

Configuration:
2 frame couplings, installation hardware

Packs of	Part No. CP
1 set	6016.000



Flexible Cable Duct

protects cables when CP 6016.000 adjustable frame coupling is used. Can also be used to replace standard rigid cable duct. Also required for 1.73"/44mm deep keyboard housings.

Material:
plastic

Color:
light grey (RAL 7035)

Configuration:
cable duct, installation hardware

Packs of	Part No. CP
1	6017.000



Flexible Cable Duct

is a longer version of the CP 6017.000 cable duct for VIP 6000 operator housings with an installation depth of 7.28"/185mm

(Version **2** and **3**) and 12.91"/328mm

(Version **6** and **7**).

Is included in configuration of keyboard housing.

Material:
plastic

Color:
light grey (RAL 7035)

Configuration:
cable duct, installation hardware

Packs of	Part No. CP
1	6017.100



Rigid Frame Coupling

alternative to adjustable frame coupling, allows rigid, 120° connection of keyboard housings (see page 16).

(Also for AE with VIP frame)

Material:
die-cast zinc

Color:
light grey (RAL 7035)

Configuration:
2 frame couplings,
installation hardware

Packs of	Part No. CP
1 set	6016.500



Rigid Cable Duct

provides cable protection between operator enclosure and 4.13"/105mm deep keyboard housing (see page 16).

Material:

aluminum

Color:

light grey (RAL 7035)

Configuration:

cable duct, installation hardware

Packs of	Part No. CP
1	6017.500



Cross Member

for partitioning front of operator enclosure. Each side features a mounting channel for a CP 6058.000 or CP 6053.000 mounting kit.

Material:

extruded aluminum, powder coated, textured, light grey (RAL 7035)

Configuration:

1 cross member, 2 clip-in clamps, 2 screws with washers, 2 trim strips

Specify type and color of trim as indicated on page 10.

For front panel width	Part No. CP
19" (482.6mm)	6015.000
per specification*	6015.009

* Please indicate width of front panel.

See pages 20/21 for technical details.



Sealing Bar Trim Strip

partitions front of operator enclosure to provide support for two adjoining panels.

Material:

aluminum profile .31" x .79"/8 x 20mm

Configuration:

1 trim strip with installation hardware

For front panel width	Part No. CP
19" (482.6mm)	6015.500
per specification*	6015.009

* Please indicate width of front panel.

See pages 20/21 for technical details.



Rear Wall, 1.75"/45mm Deep

increases installation depth of operator enclosure from 6.10" to 7.87"/155 to 200mm. Especially suitable for control installations with built-in 3.5" drives or cables on rear.

Material:

sheet steel

Finish:

powder coated, light grey (RAL 7035)

Configuration:

Hinged on side and fastened with hidden screws. Special depths and versions available on request.

Suitable for housings with front panel	Part No. CP
19"/7U	6014.000
per specification*	6014.009

* Please indicate:

- number and dimensions of front panels
 - number of cross members and/or sealing bar trim strips
 - rear panel depth
- or:
- depth of rear wall and your order No.



Rear Wall, 9.64"/245mm Deep

offers additional 9.64"/245mm installation space. By increasing installation depth of 19"/ 7U operator enclosures from 6.10" to 15.75"/155 to 400mm, deep components such as standard monitors can be easily installed.

Material:

aluminum

Finish:

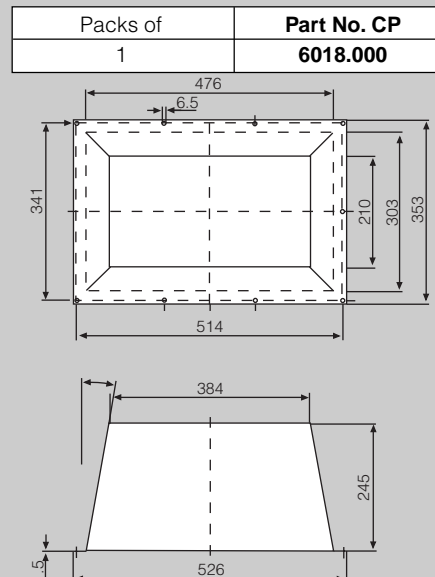
powder coated, light grey (RAL 7035)

Configuration:

Screw-on

Note:

Special designs and sizes for rear walls are available on request.



Aluminum Front Panel

for panel mounting of control components that cannot be mounted directly to the mounting channels.

Requires a CP 6058.000 installation kit.

Special sizes and versions available on request.

Material:

29 ga/3.0mm, natural anodized aluminum

Note:

See pages 10/11 for cross members that are required for partitioning the front of VIP 6000 operator enclosures.

Height	Width	P. of	Part No. CP
3.5U/ 155.0mm	19"/ 482.6mm	1	6027.000
4U/ 177.0mm	19"/ 482.6mm	1	6019.000
7U/ 310.3mm	19"/ 482.6mm	1	6028.000
11U/ 493.8mm	19"/ 482.6mm	1	6029.000*

* Can also be used instead of a combination of CP 6027.000, CP 6028.000 and cross members.

Front panel thickness maximum 0.14"/3.5mm



Installation Kit

for mounting:

- aluminum front panels
- control panels
- keyboards

on operator enclosures and in keyboard housings.

For front panels	Thread	Part No. CP
Rittal and others	M4	6058.000
Others	M5	6053.000

Packs of = 30 sets of: clip-in clamps, cage nuts, screws, and washers.

Installation of control panels with studs requires only clip-in clamps.



Handle Kit

mounts to pre-drilled corner pieces of housing frame.

Material:

Handle grip: natural anodized aluminum

Handle grip brackets: die-cast zinc

For horizontal mounting on:

- operator enclosure
- keyboard housing

For enclosure width	Part No. CP
19"/482.6mm	6101.000

Configuration:

2 brackets, 1 handle grip, 2 screws

Can easily be shortened, if required.

Special lengths are also available.

For vertical mounting on side of:

- operator enclosure
- keyboard housing

For enclosure height	Part No. CP
7U	6102.000
7 + 3.5U*	6103.000
3.5U	6104.000
H = 240mm	6105.000
4U	6106.000

* divided by CP 6015.000 cross member

Configuration:

4 brackets, 2 handle grips, 4 screws

Accessories:

CP 6514.500 keyboard bracket, see page 29.

1U=1.75"

natural anodized aluminum

A CP 6102.000 or CP 6103.000 handle is required for installation.
Special sizes available on request.



4 installation brackets, 12 self-tapping
M5 x 10mm screws

[illegible]

For DIN rails, please reference Rittal Handbook 29 page 733.

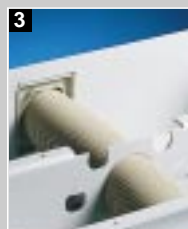
Technical drawing of a rectangular plate with the following dimensions and features:

- Overall width: 110
- Overall height: 60
- Inner width (excluding side flanges): 100
- Distance from inner edge to first hole center: 4.6
- Distance between hole centers: 6
- Distance from top edge to first hole center: 25
- Distance between hole rows: 12.5
- Plate thickness: $t = 1.5$
- Number of holes: 6 (5x)
- Distance from bottom edge to first hole center: 10.5
- Distance from right edge to first hole center: 12.5
- Distance from right edge to last hole center: 40



Screws, BZ 5.5 x 13

For enclosure depth	Packs of	Part No. PS
16"/400 mm	20	4694.000
20"/500 mm	20	4695.000
24"/600 mm	20	4696.000
31"/800 mm	20	4697.000



Pedestal/Platform

provides good line of site for remote applications.

Standard configuration includes:

- 1** knockouts for PG strain connector inserts (EL 2235.010 to EL 2235.080) or cable conduit adaptors up to Ø 70mm for perfect cable routing
- 2** integrated cable collecting angle
- 3** knockout for concealed mounting of cable conduit adaptors up to PG 36 or M 50

The pedestal can be customized for any environment with the following accessories:

- 4** DK 7495.000 twin wheel castors
- 5** PS 4611.000 castors
- 6** PS 4612.000 levelling feet
- 7** KL 1580.000 or 1590.000 wallmounting bracket

Material:
sheet steel

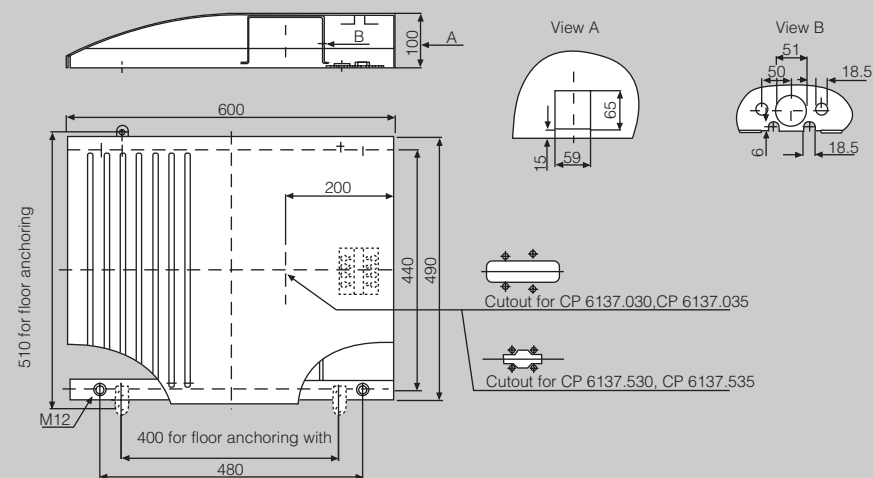
Finish:
powder painted, textured, stone grey (RAL 7030) or light grey (RAL 7035)

Configuration:
pedestal/floor plate with integrated reinforcement and installation cutout for CP 6000 or CP 6500 support arms; includes installation hardware for support arms

For support arm	Color RAL	Part No. CP
CP 6500	7030	6137.530
CP 6500	7035	6137.535
CP 6000	7030	6137.030
CP 6000	7035	6137.035

Note:

For CP 6000 and 6500 accessories, please reference pages 37-43.





Pedestal

Enclosure is installed by means of:

- fixed CP 6525.500 enclosure coupling
- rotating CP 6525.000 enclosure coupling

See Handbook 29, page 160.

Height	Footprint Width x Depth	Installation cutout for cable duct adaptor	Part No. CP
39.37" 1000mm	23.62" x 27.56" 600 x 700mm	no	6141.000
		yes	6141.100

Pedestal for PC housings

for direct, fixed mounting.

Height	Footprint Width x Depth	Installation cutout for cable duct adaptor	Part No. CP
39.37" 1000mm	27.56" x 31.50" 700 x 800mm	yes	6142.100



1 2 Foot rest

Packs of 2 connection braces,
1 round pipe

3 4 Trim panel

can be mounted in front or rear.

For pedestal	Packs of	Part No. CP
CP 6141.100 CP 6141.100	1 set	6145.100

For pedestal	Packs of	Part No. CP
CP 6141.000 CP 6141.100	1	6144.100



5 6 Cable duct adaptor

for CP 6141.000*, CP 6141.100
and CP 6142.000*, CP
6142.100 pedestals.

- * Requires drilling in pedestal.
- Will accept cable ducts up to
d = 2.75"/70mm.
- Angled at 55° to allow large
bending radius for cable duct.

Technical details:

Die-cast feet with installation holes for:

- bolting to floor.
- twin castors:
DK 7495.000
(see Handbook 29, p. 668).
- levelling feet PS 4612.000
(see Handbook 29, p. 668).

Steel cross bar:

- other widths available upon request
- bottom cable entry opening.

Pedestal column:

- welded to steel cross bar
- oval, two-part casing can be easily
opened to permit easy cable
access.





Panel Lift

can be adapted to each operator's height requirements and ensures a comfortable operating position.

- Height adjustment up to 17.32"/440mm
- Self-braking action, which prevents sliding – even under high loads
- Accepts CP 6500 couplings and brackets (CP 6000 requires a CP 6528.000 connection adaptor)
- Can be installed horizontally or vertically

Technical specifications:

Electric version:

- 230 V, 50 Hz
- 110 – 120 V, 60 Hz also available
- Control unit with 3'/1 m coiled cable

Manual version:

- Operated by hand crank

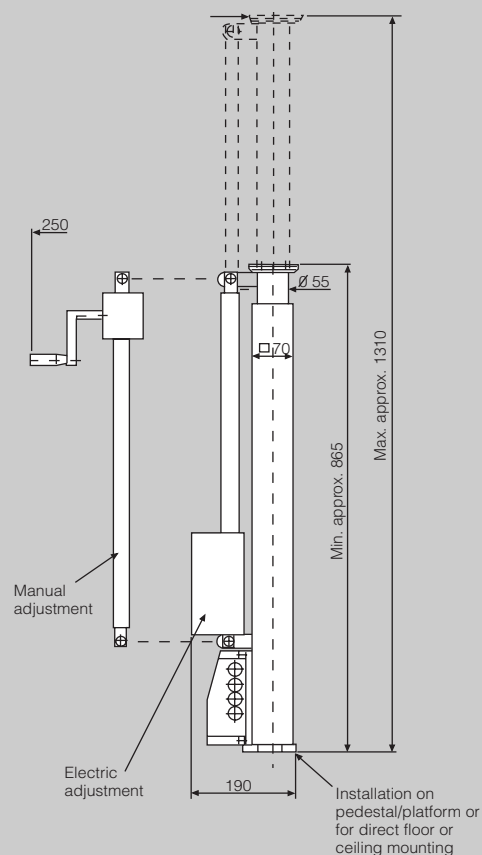
Color:

light grey (RAL 7035)

Configuration:

Tube with screw gear – electric or with hand crank; includes installation hardware for pedestal/platform

Panel lift	Part No. CP
electric	6138.000
manual	6139.000



Mobile Pedestal For CP 6000 And CP 6500

offers operator friendliness and installation flexibility for CP operator enclosure applications. All CP and similar operator enclosures can be mounted on the special coupling plate of the CP 6136.000 mobile pedestal. Large castors facilitate easy movement, even on uneven floors; the front castors feature brakes. The base allows for easy cable entry while cables can be routed through the support pillar.

Color:

Castors: black (RAL 9005)

Pedestal: grey (RAL 7030/7035)

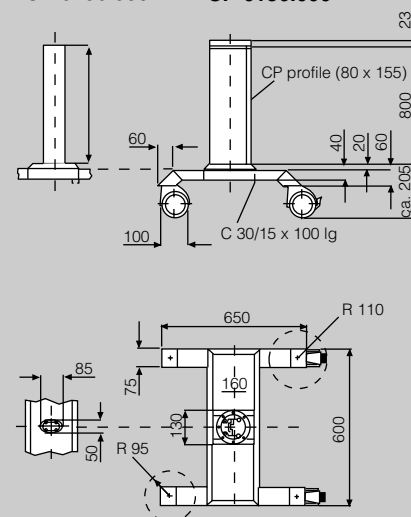
Configuration:

Mobile base with 4 castors, including two with integral brake; support pillar. Only for CP 6136.000: special coupling; installation hardware.

Pedestal with mounting plate	Part No. CP
CP 6000	6136.000
CP 6500	6136.500

CP 6136.500

CP 6136.000





VIP 6000 Equipment Shelf

flexible alternative for fast and easy placement of monitors or measuring instruments or just to set down manuals or other paper work.

- Monitor shelf has slots to fix equipment in place
- No-slip pad
- Reinforced sides allow high loads
- Accepts all VIP 6000 system components (keyboard housing, handles, etc.)
- Can be mounted directly to a CP 6500 support arm system (and to a CP 6000 support arm system with a CP 6528.000 adaptor)
- Special holes accept SZ 2597.000 cable ties
- Cable entry via 2 holes with rubber cable entry bushings (Ø 2.36"/60mm), one on each side
- Optional mouse pad and keyboard cradle

	Part No. CP
Equipment shelf	6512.000

Material:

Frame: aluminum

Monitor panel: sheet steel, 14 ga/2.0mm

Color:

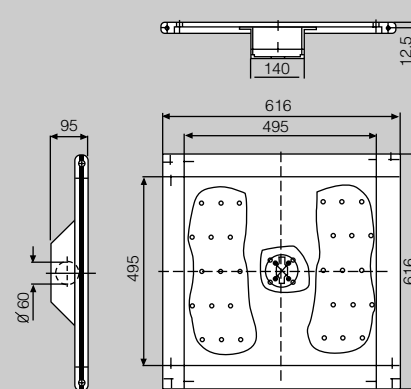
Monitor shelf: light grey (RAL 7035)

Pad: stone grey (similar to RAL 7030)

Frame: light grey (RAL 7035)

Configuration:

Equipment shelf with no-slip pad, 2 rubber cable entry bushings, installation kit for mounting equipment



Mouse Pad For VIP 6000 Equipment Shelf

can be mounted on left or right side of equipment shelf and slides out for use.

Material:

sheet steel with no-slip surface

Color:

light grey (RAL 7035)

Configuration:

mouse pad, installation hardware

	Part No. CP
Mouse pad	6516.000



Keyboard Cradle

accepts standard keyboards.

1. Can be mounted directly to:

- VIP 6000 equipment shelf

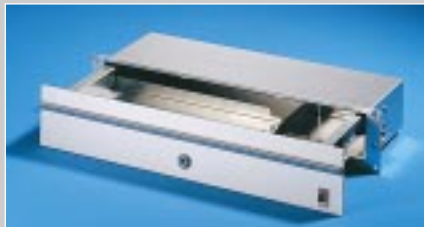
or

2. can be mounted in conjunction with horizontal handle (CP 6101.000) to:

- keyboard housing
- VIP 6000 operator enclosure (by simply bending bracket)

Max. keyboard depth	Part No. CP
9.06"/230mm	6514.000

Max. keyboard depth	Part No. CP
8.27"/210mm	6514.500



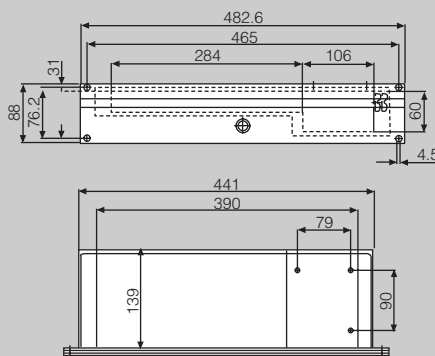
Keyboard Drawer 19"/2U

can be mounted in all VIP 6000 enclosures and 19" systems or on any sufficiently large surface (door, side wall, etc.). Its low weight (5.5 lb/2.5 kg) makes it ideal for use in support arm systems because adequate room remains for cabling, even when the support arm is connected from below. It can also be locked with a 3524 E lock.

High mechanical protection and shielding is maintained, even when the drawer is open.

Technical data:

- **Total available space:**
15.35" x 1.26" x 5.47"/390 x 32 x 139mm.
- Drawer has 2.36"/60mm high space on right for a mouse or trackball or for a 3 1/2" disk drive.
- When a mouse is used or when a 3 1/2" drive is installed, only enough space remains for an 11.2"/284mm wide keyboard.



Height	Width	Depth	Part No. CP
2U	19"/ 482.6mm	5.90"/ 150mm	6002.000

Material:

Frame:

sheet steel, zinc-plated, chromated

Drawer housing and drawer:
aluminum

Front panel and handle:

aluminum, natural anodized

Configuration:

Drawer housing with drawer, includes slides with stops for 'open' position, front panel with handle, gasket and installation hardware.

Note:

For installation in VIP 6000 operator enclosures we recommend cross members that are required for partitioning (see pages 10/11).



Keyboard Drawer With Mouse Pad

with 19", 3U front panel for installation on VIP 6000 operator enclosures and all sufficiently large surfaces (door, side wall, etc.).

Technical data:

- Accepts keyboards up to
H x W x D = 1.65" x 18.11" x 6.69"
460 x 42 x 170mm.
- Storage area for mouse under side of keyboard.
- Front pull-out mouse pad.
- Front panel:
 - reversible, for track-ball,
 - lockable, No. 3524E insert,
 - features grip.
- High protection rating and EMC shielding is maintained, even when drawer is open.

Height	Width	Depth	Part No. CP
3U	19"/ 482.6mm	232mm	6003.000

Material:

Mounting frame:

steel, zinc-coated, chromated

Keyboard housing and tray:
aluminum

Front panel and grip:

aluminum, natural anodized



Mouse, Mouse Pad IP 67

offers ideal input equipment for all applications in very dirty environments or in areas that require a high degree of hygiene such as the food and pharmaceutical industries. Because the mouse operates in an inductive manner, the ball can be omitted and the housing can be completely sealed with a protective film which results in an extremely high NEMA 6 and 6P/IP 67 protection rating. The mouse operates in conjunction with the IP 67 inductive mouse pad and is available with either COM or PS/2 interfaces.

Material:

Mouse pad: PBT plastic
Mouse: ABS plastic

Color:

Mouse pad: grey (similar to RAL 7035)
Mouse: grey (similar to RAL 7032)

Technical details:

NEMA 4/IP67 mouse

7-pin DIN connector

Mouse pad with COM interface

Mouse pad – PC connection:
9-pin D-SUB connector,
5-pin DIN connector

Mouse pad with PS/2 interface

Mouse pad – PC connection:
PS/2 connector

Temperature range:

32°F to +131°F / 0°C to +55°C

Rated current: < 20 mA

Pad dimensions (H x W x D):

8.07" x 9.84" x .59"/205 x 250 x 15 mm

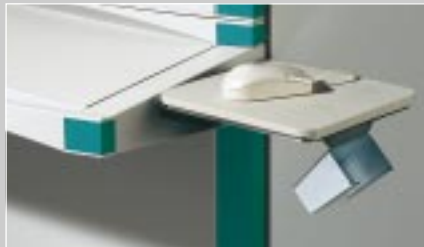
Cable length: 6.9 ft. / 2000 mm

Runs under DOS, Windows 3.1/3.11,
Windows 95/ 98, Windows NT

Accessories:

SZ 2400.500 cable flange

	H x W x D	Packs of	Part No. SM
P 67 inductive mouse pad COM interface	8.07" x 9.84" x .59"/ 205 x 250 x 15 mm	1	6444.000
P 67 inductive mouse pad PS/2 interface	8.07" x 9.84" x .59"/ 205 x 250 x 15 mm	1	6444.500
IP 67 mouse for both COM and PS/2 interface	—	1	6445.000



Mouse Pad Tray For Desk Consoles

can be mounted on operator interface enclosures with a desk console (ie PC) or on other AP Series consoles for accommodation of SM 6444.000 and SM 6444.500 IP 67 mouse pads. The slope of the mouse pad tray can be infinitely adjusted. Installation requires drilling two installation holes in the console.

Material:

sheet steel, chromated

Configuration:

mouse pad tray, installation hardware

For	Packs of	Part No. SM
PC 4610.503 PC 4603.704 AP Series consoles	1	2380.000



Mouse Pad Tray

is mounted on vertical handles of VIP 6000 operator and keyboard housings for accommodation of SM 6444.000 and SM 6444.500 IP 67 mouse pads. The slope of the mouse pad tray is infinitely adjustable. Installation requires drilling two installation holes in the handle grip brackets.

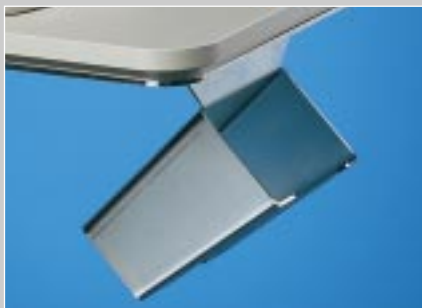
Material:

sheet steel, chromated

Configuration:

mouse pad tray, installation hardware

For	Packs of	Part No. SM
VIP 6000 with handles on sides	1	2381.000



Mouse Holder

fits Rittal mouse pad trays to ensure safe storage of a standard mouse or the Rittal SM 6445.000 IP 67 mouse.

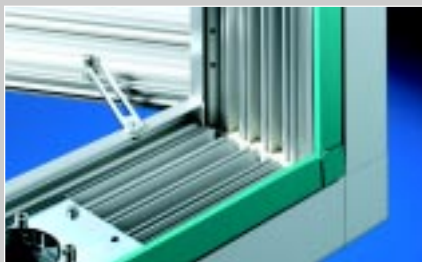
Material:

sheet steel, chromated

Configuration:

mouse holder, installation hardware

Packs of	Part No. SM
1	2382.000



Hinged Door Stop

- To secure open panel.
- Bottom mount.
- Takes up only .4"/10mm of installation height.
- Opening angle adjustable up to 120°.

Material:

sheet steel, zinc-coated, chromated

Packs of	Part No. CP
1	6045.000

1 Pack = 1 door stop, installation hardware



Interface Box

accommodates secure installation of computer ports, 3 1/2" drives, and sockets. The lockable, hinged, metal cover ensures a high load capacity, protection against unauthorized access, and provides a high degree of shielding against built-in components.

Customers can specify the following modifications:

- different dimensions
- acrylic door
- cutouts for plugs

Material:

casing: extruded aluminum
housing: sheet steel, 16 ga/1.5mm
cover: aluminum, 29 ga/3.0mm

Finish:

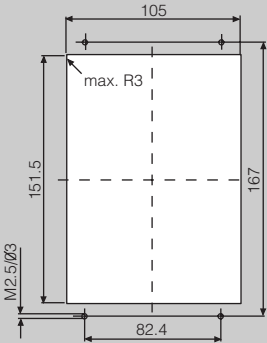
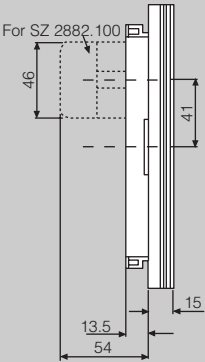
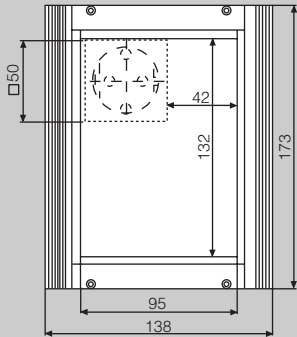
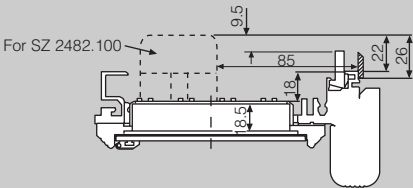
casing and housing:
powder painted, light grey (RAL 7035)
cover: natural anodized

	Part No. SZ
No socket	2482.000
With 220 V socket	2482.100

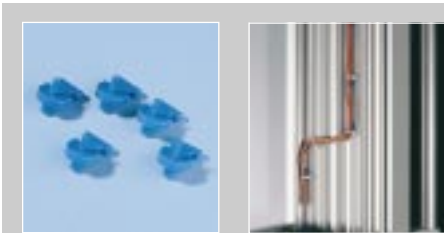
Configuration:

casing with hinged cover, cam/latch lock with 3524 E security insert, housing, gasket, installation hardware

Installation example for VIP 6000



Installation cutout



Cable Tie Fastener

for all standard cable ties up to a width of 3/16"/4.8mm. The fastener is inserted in a mounting channel and fixed in place by striking the split-rivet.

Material:

polyamide 6.6

Packs of	Part No. CP
100	6059.000



Mounting Kit For Threaded Bolts

for fastening

- aluminum front panels
- control panels
- keyboards

to VIP 6000 operator and keyboard housings with threaded bolts.

Thread	Part No. CP
M4	6058.500
M5	6053.500

1 Pack = 10 retainers, 10 socket screws



Cable Collecting Angle For Operator Enclosures

fits CP 6000 and CP 6500 support arm cutouts.

- Cable fastening via: cable clamps (see Handbook 29, page 676)
- or
- quick-fix cable ties SZ 2597.000 (see Handbook 29, page 754) standard cable ties.

Angle height:

= .98"/25mm for 1.57"/40mm C-rail.

Material:

sheet steel, zinc-coated, chromated

Packs of	Part No. CP
1	6052.000

1 Pack = 1 cable collecting angle,
1 C-rail,
self-tapping M5 x 10mm
screws



Connection Adaptor: VIP 6000 To CP 6000 Support Arm

Depth (mm)	For control panel	Part No. CP Connection adaptor
155, 295	1 4 5	6528.500
185	2 3	6528.000*
328, 438	6 7 8 9	not required

* see Handbook 29, page 161.

Note: housings with cooling fins on all sides require the CP 6528.500 adaptor.

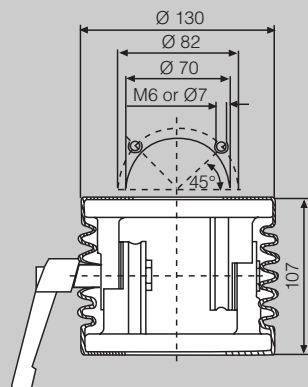
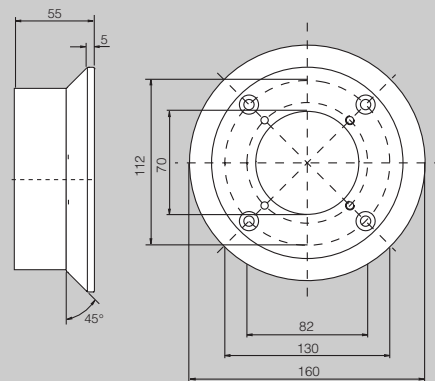
Color:

stone grey (RAL 7030)

Configuration:

cast aluminum, includes gaskets and installation hardware.

Weight	Part No. CP
1.5 lb/0.7 kg	6528.500



45° Tilting Adaptor

can be used instead of 30° tilting adaptor (see Handbook 29, page 161).

Internal gear allows adjustments in 7.5° increments.

Mounted directly to CP 6500 support arm system with:

- CP 6525.000 enclosure coupling
- CP 6525.500 enclosure coupling
- CP 6526.000 90° enclosure coupling

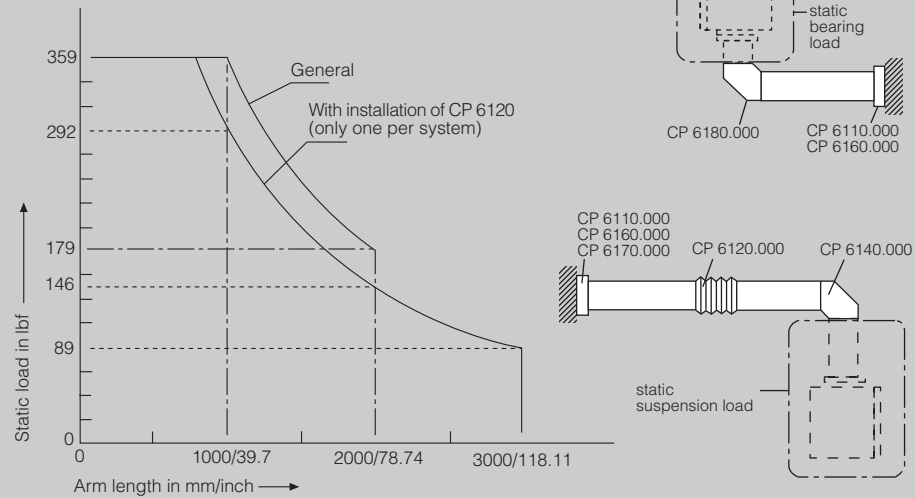
Configuration:

cast aluminum, includes gaskets and installation hardware. Cannot be used as a support base bracket.

Weight	Part No. CP
2.2 lb/1.0 kg	6529.500

CP 6000 Pendant Arm System

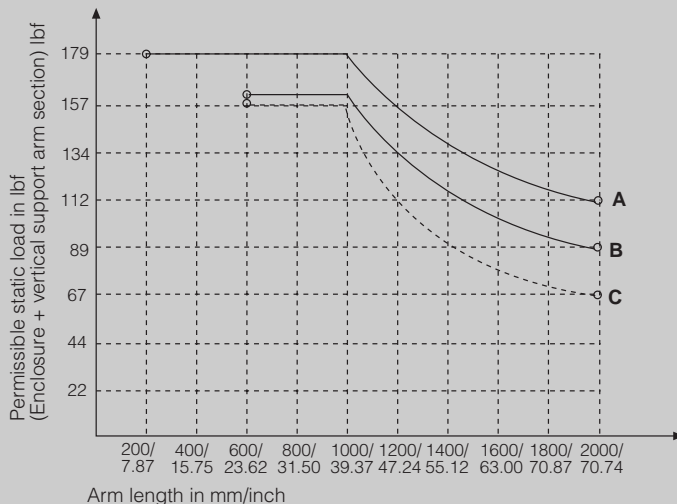
Rittal's flexible CP 6000 pendant arm system offers many advantages over conventional support arm systems. With its extensive range of support arms, journals, and couplings, it offers a sophisticated solution for virtually every application.



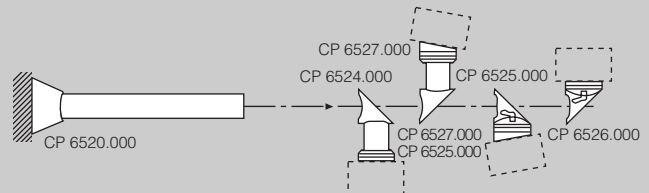
CP 6500 Pendant Arm System

Rittal's CP 6500 pendant arm system has been designed for small control panels and enclosures. It offers a complete program of ducts, brackets, and couplings for a wide variety of applications.

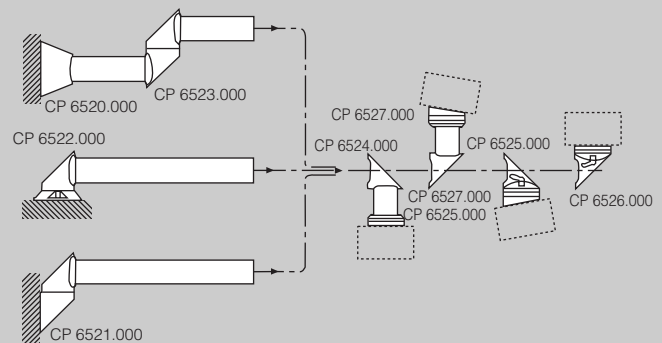
Permissible load depending on system configuration
Only one CP 6523.000 swivel coupling per system!



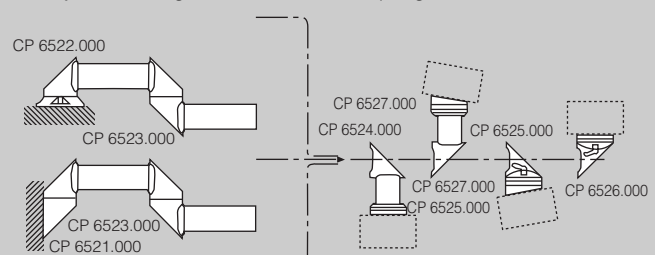
A: System configuration without coupling



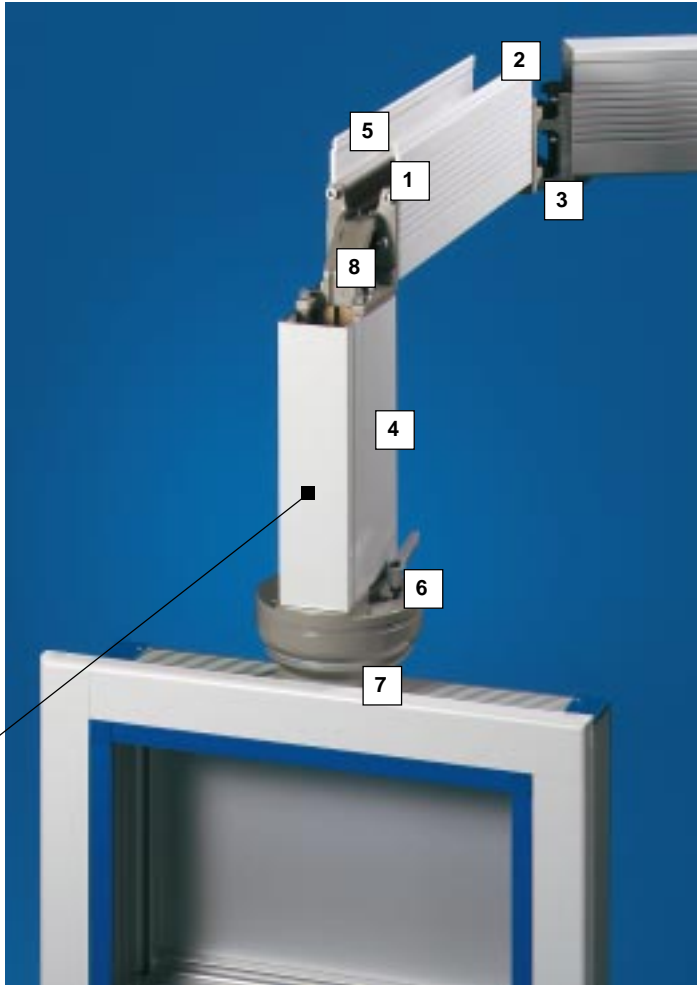
B: System configuration with one coupling



C: System configuration with two couplings

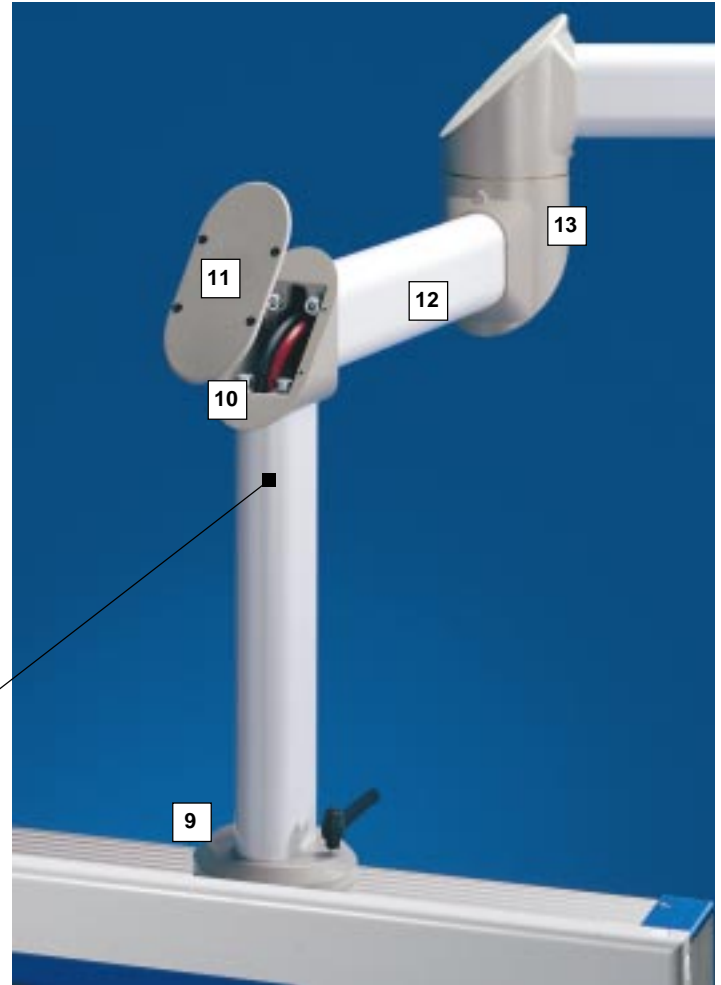


PENDANT ARM SYSTEMS



CP 6000

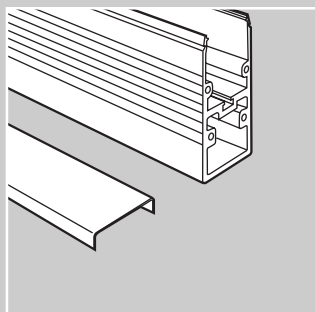
- 1** Self-tapping screws for easy and fast installation of the pendant arm system.
- 2** Cover (included) clips easily into extruded slot.
- 3** Swivel coupling connects horizontal support arms.
- 4** Torsion resistant extruded aluminum support arms have high load-bearing capacity and attractive styling.
- 5** Cable routing before and after system installation is easy because one side of the support arm is open.
- 6** Enclosures can swivel continuously up to 350° depending on coupling.
- 7** Adaptor VIP 6000 to CP 6000 support arm.
- 8** 90° angle piece secures stable connection between support arms and allows easy routing of pre-manufactured cables.



CP 6500

- 9** Enclosure coupling can be used for top or bottom installation of an enclosure to a support arm system.
- 10** Self-tapping screws for easy and fast installation of the pendant arm system.
- 11** Plastic covers with gaskets are easily removed for access to cables.
- 12** Torsion-resistant extruded aluminum support arms can be cut to size.
- 13** Swivel coupling connects horizontal support arms.

CP 6000 Accessories



Support Arm

the basic component of a CP 6000 support arm system. Connection components are attached with self-tapping screws and make combinations of any desired length possible.

Configuration:

bend- and torsion-resistant extruded aluminum complete with clip-on cover. Available in three different lengths.

Color:

RAL 7035-light grey

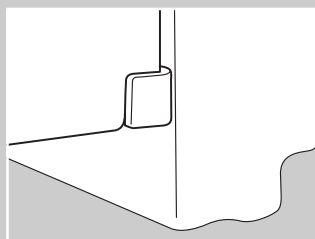
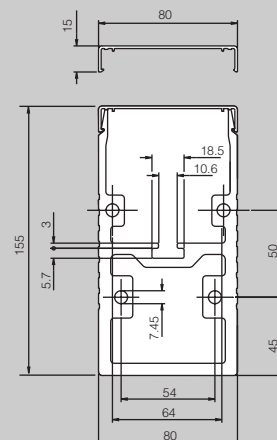
Weight:

support arm: 6.0 lb./ft. /9.05 kg/m

Cover:

.3lb./ft. / .45 kg/m

Length	Packs of	Part No. CP
19.69"/500mm	1	6050.000
39.37"/1000mm	1	6100.000
78.74"/2000mm	1	6200.000



Adjustment Shim

allows adjustment of CP support arms after installation.

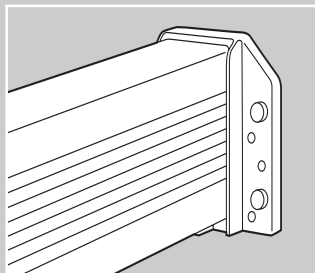
Configuration:

bend- and torsion-resistant extruded aluminum complete with clip-on cover. Available in three different lengths.

Material:

sheet steel, zinc coated, yellow chromate.

Packs of	Part No. CP
10	6205.000



Wall/Base Bracket

allows rigid mounting of the support arm system to vertical or horizontal surfaces.

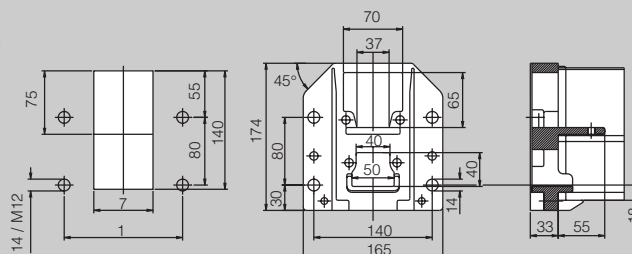
Material:

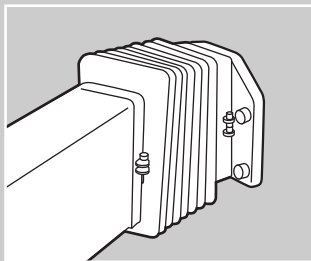
spheroidal graphite iron, includes gaskets and installation hardware.

Color:

RAL 7030-stone grey

Weight	Packs of	Part No. CP
7.9 lb/3.6 kg	1	6160.000





Vertical Hinge

for installation of a swiveling support arm system to vertical surfaces.

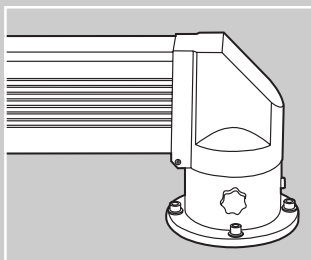
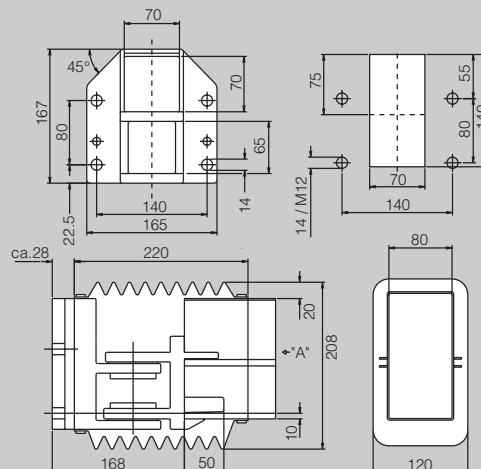
Material:

spheroidal graphite iron; rotates 180°, includes bellows, gaskets, and installation hardware.

Color:

RAL 7030-stone grey

Weight	Packs of	Part No. CP
18.5 lb/8.4 kg	1	6110.000



Horizontal Hinge

for installation of a swiveling support arm system to horizontal surfaces.

Material:

steel and cast iron with plastic cover; maintenance free bearing, rotates 350°, with safety stop; includes gaskets and installation hardware.

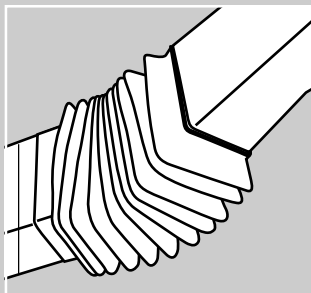
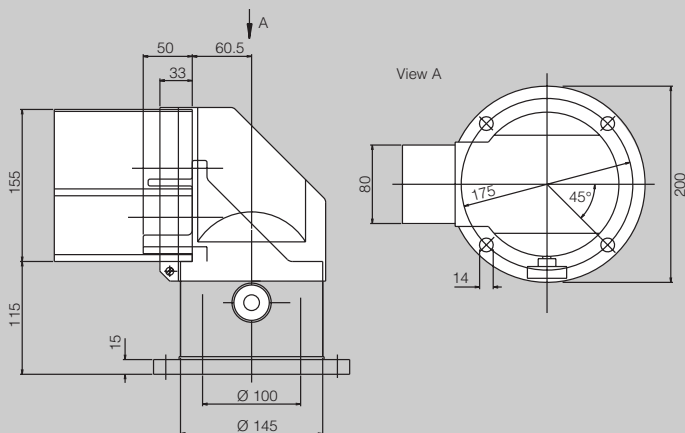
Note:

Not to be used as an enclosure coupling.

Color:

RAL 7030-stone grey

Weight	Packs of	Part No. CP
24.2 lb/11.0 kg	1	6170.000



Intermediate Hinge

connects horizontal support arms in a pendant arm system.

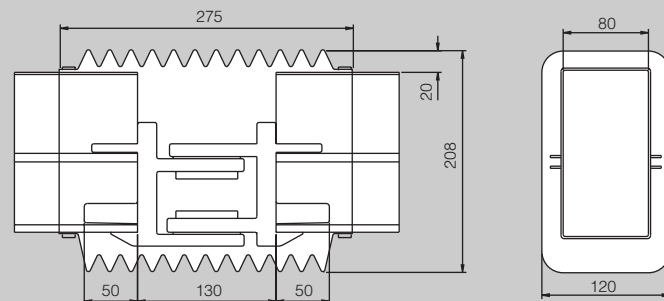
Material:

spheroidal graphite iron; rotates 180°, includes bellows with zip fasteners for easy access to cable duct; gaskets, and installation hardware.

Color:

RAL 7030-stone grey

Weight	Packs of	Part No. CP
13.4 lb/6.1 kg	1	6120.000





90° Arm Coupling

connects vertical (hanging) support arms to horizontal support arms.

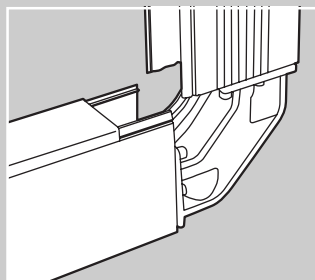
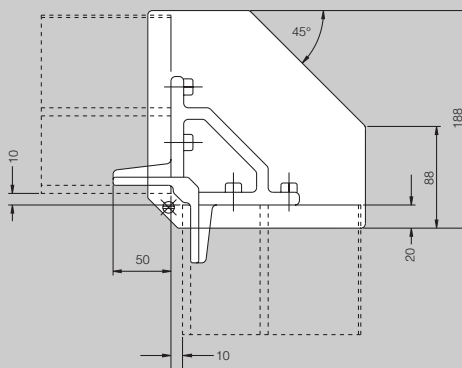
Material:

spheroidal graphite iron with protective plastic; gaskets and installation hardware.

Color:

RAL 7030-stone grey

Weight	Packs of	Part No. CP
4.2 lb/1.9 kg	1	6140.000



90° Arm Coupling

(for inverted mounting)

allows vertical support arm to be directed upwards from a lower horizontal support arm.

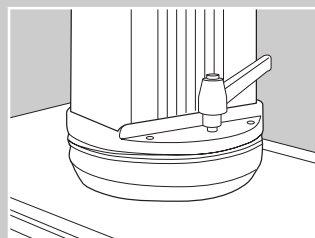
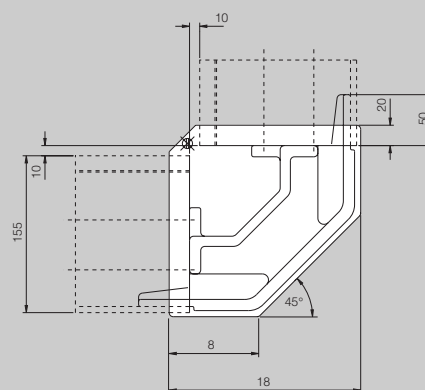
Material:

spheroidal graphite iron with protective plastic cover; gaskets and installation hardware.

Color:

RAL 7030-stone grey

Weight	Packs of	Part No. CP
7.0 lb/3.2 kg	1	6180.000



Enclosure Coupling, Rotating

for top or bottom mounting of enclosures to vertical support arms.

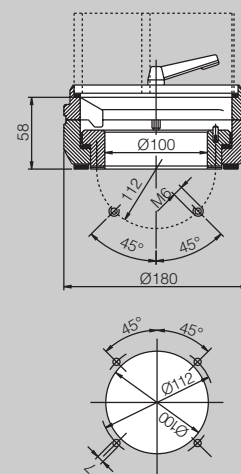
Material:

zinc die-cast; enclosure rotates infinitely through 350° and adjustable; maintenance-free bearing; includes gaskets and installation hardware. Not to be used as a support arm base bracket.

Color:

RAL 7030-stone grey

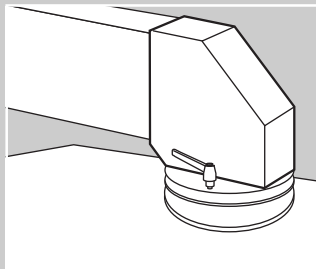
Weight	Packs of	Part No. CP
7.7 lb/3.5 kg	1	6130.000



Enclosure Coupling, Fixed

for rigid top or bottom mounting of enclosures to vertical support arms.

Weight	Packs of	Part No. CP
3.1 lb/1.4 kg	1	6130.500



Enclosure Coupling, 90°

for top or bottom mounting of enclosures to horizontal support arms without having to install an extra vertical support arm.

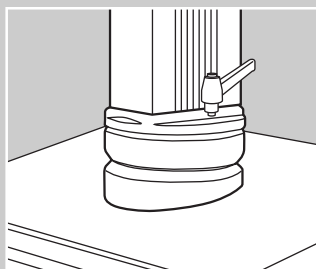
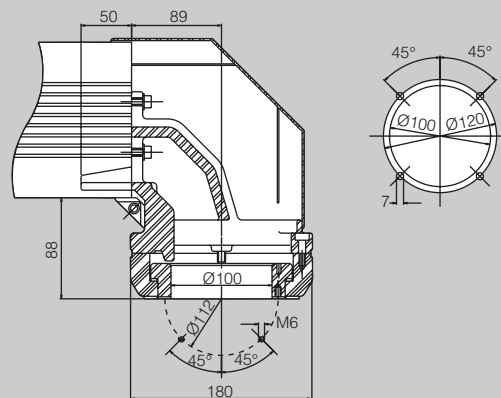
Material:

spheroidal graphite iron and zinc die-cast; rotates 180° and can be locked in place; maintenance-free bearing; plastic cover; gaskets and installation hardware. Not to be used as a support arm base bracket.

Color:

RAL 7030-stone grey

Weight	Packs of	Part No. CP
12.1 lb/5.5 kg	1	6040.000



Tilting Adaptor, 10°

tilts enclosure for increased ease of operation. Installs between enclosure and enclosure coupling or 90° arm coupling.

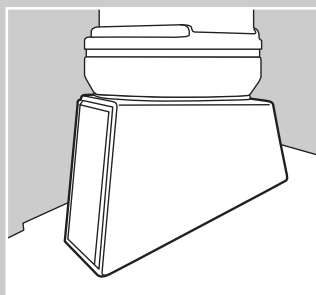
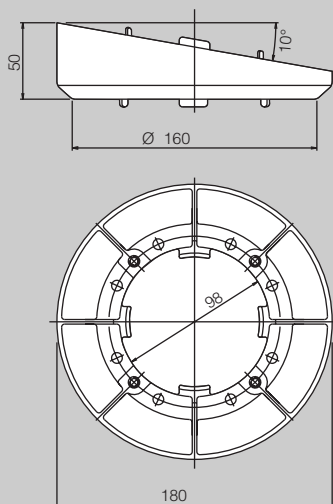
Material:

zinc diecast; comes with gaskets and installation hardware.

Color:

RAL 7030-stone grey

Weight	Packs of	Part No. CP
2.6 lb/1.2 kg	1	6023.000



Tilting Adaptor, 25°/60°

tilts 25° or 60° and installs between an enclosure and CP 6130.000 enclosure coupling.

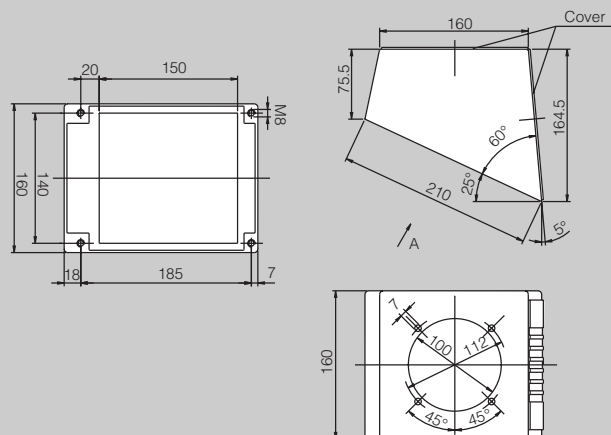
Material:

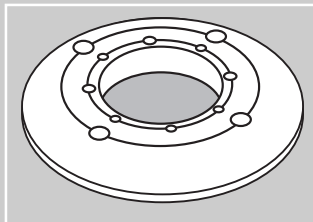
zinc die-cast; comes with gaskets and installation hardware.

Color:

RAL 7030-stone grey

Weight	Packs of	Part No. CP
8.4 lb/3.8 kg	1	6150.000





Connection Adaptor CP 6000/CP 6500

makes the following, interchangeable connection options possible (in combination with an enclosure coupling):

CP 6528.000

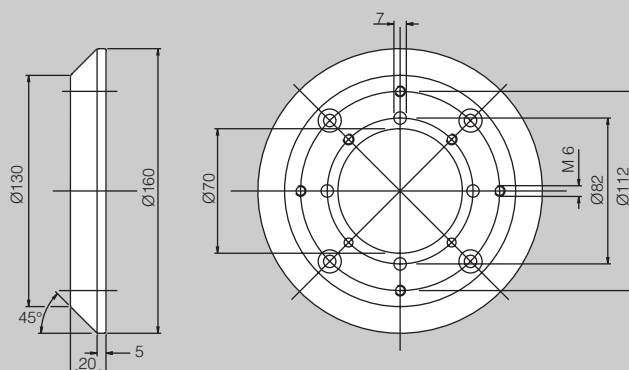
- Connect CP 6000 enclosures to a CP 6500 support arm system.
- Connect CP 6500 enclosures to a CP 6000 support arm system.

CP 6528.500

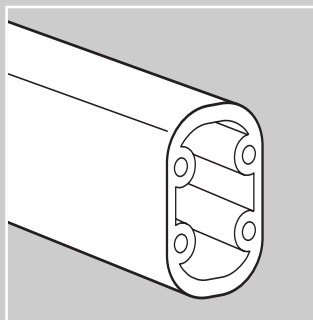
- For connecting VIP 6000 operator enclosures **1**, **4** and **5** to CP 6000 support arm system.

* Not for VIP 6000 command panels **1**, **4** and **5**

Weight	Packs of	Part No. CP
1.1 lb/0.5 kg	1	6528.000
1.5 lb/0.7 kg	1	6528.500



CP 6500 Accessories



Support Arm

the basic component of a CP 6500 support arm system. Connection components are attached with self-tapping screws and make combinations of any desired length possible.

Material:

Bend-and torsion-resistant extruded aluminum.

Color:

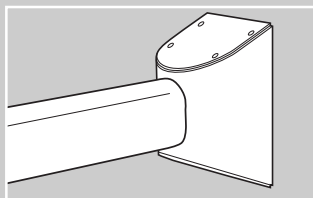
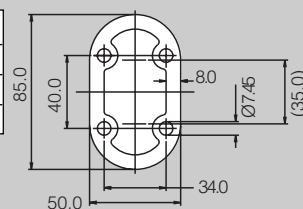
RAL 7035-light grey

Weight:

3.16 lb./ft./4.7 kg./m

* Adjustment shim included with the support arm system

Length	Packs of	Part No. CP
19.69"/500mm	1	6511.000
39.37"/1000mm	1	6513.000
78.74"/2000mm	1	6515.000



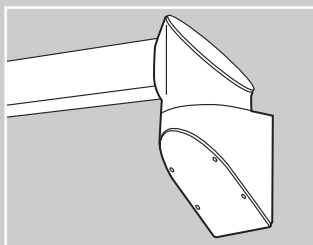
Wall/Base Bracket

allows rigid mounting of the support arm system to vertical or horizontal surfaces.

Color:

RAL 7030-stone grey

Weight	Packs of	Part No. CP
3.5 lb/1.6 kg	1	6520.000



Vertical Hinge

for installation of a swiveling support arm system to vertical surfaces.

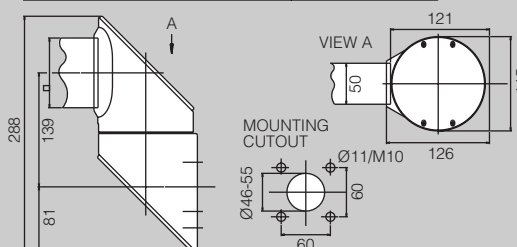
Configuration:

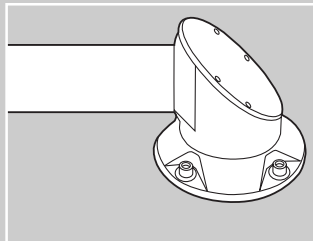
maximum rotation 350°, can be locked in place.

Color:

RAL 7030-stone grey

Weight	Packs of	Part No. CP
6.2 lb/2.8 kg	1	6521.000





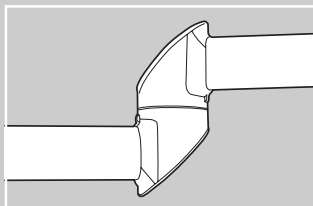
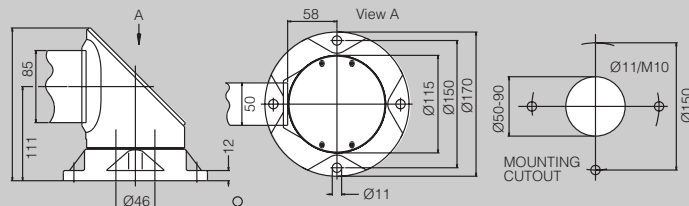
Horizontal Hinge

for installation of a swiveling support arm system to horizontal surfaces.

Configuration:
maximum rotation 350°. Not to be used as a coupling for enclosures.

Color:
RAL 7030-stone grey

Weight	Packs of	Part No. CP
5.5 lb/2.5 kg	1	6522.000



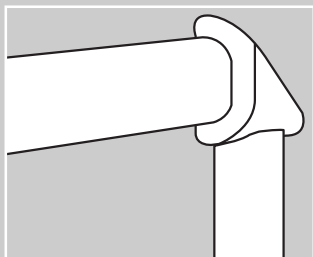
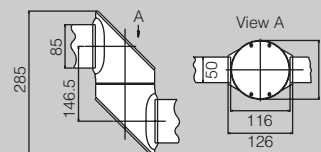
Intermediate Hinge

connects horizontal support arms in a pendant arm system.

Configuration:
maximum rotation 350°.

Color:
RAL 7030-stone grey

Weight	Packs of	Part No. CP
5.5 lb/2.5 kg	1	6523.000



90° Arm Coupling

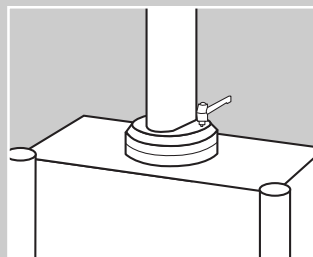
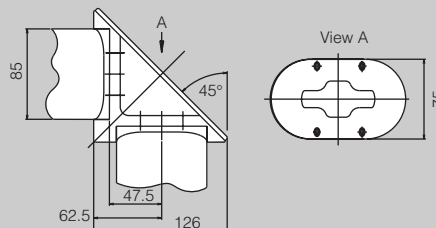
(for inverted mounting)

allows vertical support arm to be directed upwards from a lower horizontal support arm.

Configuration:
maximum rotation 350°. Not to be used as a base mounting bracket.

Color:
RAL 7030-stone grey

Weight	Packs of	Part No. CP
1.1 lb/0.5 kg	1	6524.000



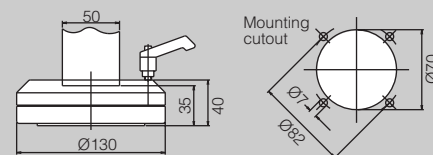
Enclosure Coupling, Rotating

for top or bottom mounting of enclosures to vertical support arms.

Configuration:
maximum rotation 350°. Not to be used as a base mounting bracket.

Color:
RAL 7030-stone grey

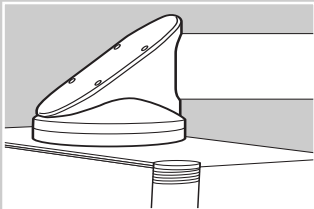
Weight	Packs of	Part No. CP
3.3 lb/1.5 kg	1	6525.000



**Enclosure Coupling,
Fixed**

for rigid top or bottom mounting
of enclosures to vertical
support arms.

Weight	Packs of	Part No. CP
1.8 lb/0.8 kg	1	6525.500



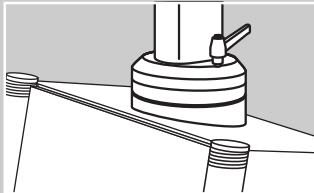
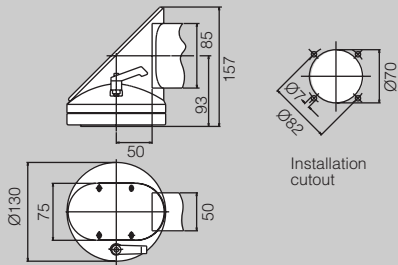
**Enclosure Coupling,
90°**

for top or bottom mounting
of enclosures to horizontal
support arms without having
to install an extra vertical
support arm.

Configuration:
maximum rotation 350°. Not to
be used as a base mounting
bracket.

Color:
RAL 7030-stone grey

Weight	Packs of	Part No. CP
3.3 lb/1.5 kg	1	6526.000



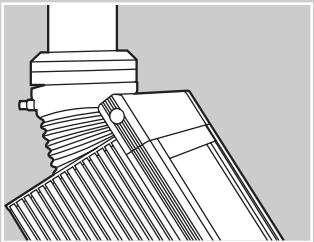
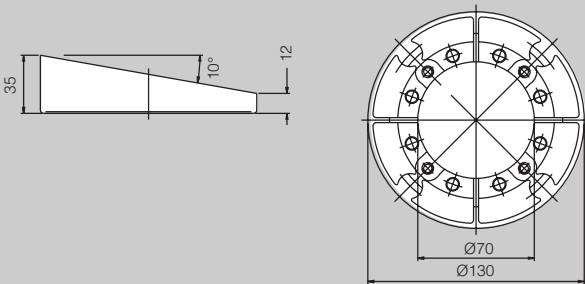
Tilting Adaptor, 10°

tilts enclosure for increased ease
of operation. Installs between
enclosure and enclosure
coupling or 90° coupling.

Material:
zinc die-cast; comes with gaskets
and installation hardware.

Color:
RAL 7030-stone grey

Weight	Packs of	Part No. CP
1.3 lb/0.6 kg	1	6527.000



Tilting Adaptor, 30°

can be infinitely adjusted (up to 30°)
for optimum viewing position. Installs
between support arm and:

- CP 6525.000 enclosure coupling
- CP 6525.500 enclosure coupling
- CP 6526.000 90° enclosure coupling

Weight	Packs of	Part No. CP
2.4 lb/1.1 kg	1	6529.000

Cooling Solutions

Cooling Solutions Sizing Guidelines

Ambient Temperatures				
Monitor Heat Dissipation	Up to 77°F	78-87°F	88-97°F	97-113°F
30-50W	Fins on sides	Fins all around	A/C or filter fan	A/C
51-70W	Fins all around	A/C or filter fan	A/C or filter fan	A/C
71-170W	A/C or filter fan	A/C or filter fan	A/C or filter fan	A/C
171-250W	A/C or filter fan	A/C	A/C	A/C

Note: 1. assumes maximum monitor operating temp=45°C (113°F). Contact Rittal for other conditions.
2. NEMA 12 filter fan configuration requires fine filter and sealing gasket.

Monitor Depth	VIP Configuration	A/C Part #	Filter Fan Part #
Up to 6.9" (172.5mm)	2.1 config 4	3201.100 or 3202.100	3323.100 or 3323.115
7.0-8.2" (175-205mm)	2.1 config 6	3201.100 or 3202.100	3323.100 or 3323.115
8.3-12.5" (207.5-312.5mm)	2.1 config 8	3201.100 or 3202.100	3323.100 or 3323.115

Note: 1. A/C requires screw-on configuration, filter fan can use hinged configuration

VIP Series Small Air Conditioners



These new VIP Series small air conditioners were specifically developed for cooling VIP 6000 operator enclosures. They also offer a space and money saving solution for small enclosures with relatively low cooling requirements.

Configuration:

- Fully wired - ready for connection.
- Air conditioner is mounted on 7U high rear wall of a VIP 6000 operator enclosure.
- Multi-lingual assembly instructions.

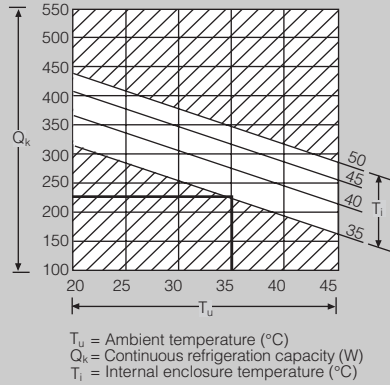
Technical description:

- Useful cooling capacity 920 BTU/270 W at 60 Hz per DIN 3168 L35 L35.
- Specifically designed for VIP 6000 operator enclosures.
- Two models are available for optimum space utilization inside the VIP 6000 enclosure - one model has the condensor on the left side, the other on the right side.
- Customer specific solutions for other types of small enclosures are available on request.
- Optimum ratio between useful cooling capacity and unit size.
- Internal electronic temperature control.
- Over temperature monitoring inside enclosure via potential-free contact on the terminal block.

Part No. SK			3201.100 condensor/terminal block on left side	3202.100 condensor/terminal block on right side
Rated voltage V/Hz*	230/50/60*			
Dimensions (H x W x D)	H	7U		
	W	19"/482.6 mm		
	D	4.13"/105 mm		
Useful cooling capacity Q _k per DIN 3168	L35	L35	770/920 BTU / 225/270 W 550/680 BTU / 160/200 W	
	L35	L50		
Rated current, max.			1.5 A/1.5 A	
Starting current			1.9 A/2.0 A	
Pre-fuse T			4 A/4 A	
Power consumption P _{el} per DIN 3168	L35	L35	285 W/300 W	
	L35	L35	315 W/325 W	
Cooling coefficient= Q _k /P _{el}	L35	L35	0.8/0.9	
Refrigerant			R134 a, 6 oz/170 g	
Temperature range			+ 68°F to + 113°F/+ 20°C to + 45°C	
Ratings per EN 60 529/10.91			external circuit NEMA 2 (IP 34)/internal circuit NEMA 12/13 (IP 54)	

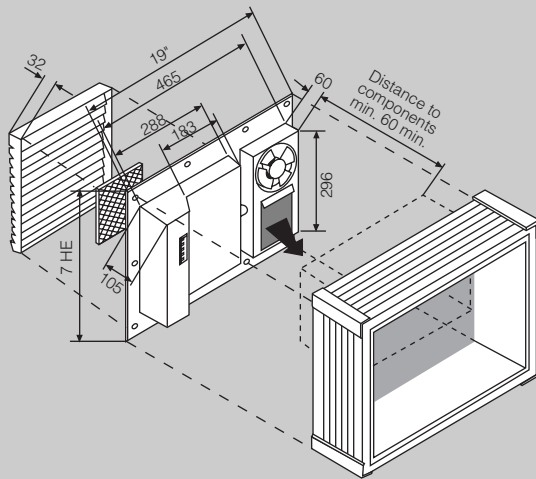
* Other voltages available upon request. 115V available late 1999.

**Performance diagram
SK 3201.100 / SK 3202.100
(DIN 3168) (50 Hz)**

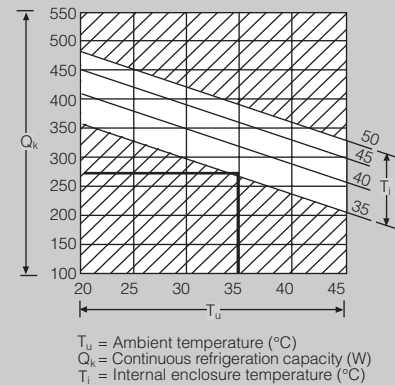


SK 3201.100

(Version with condensor/terminal block LEFT)

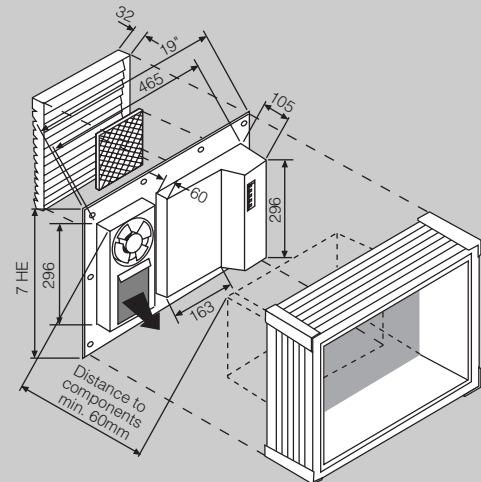


**Performance diagram
SK 3201.100 / SK 3202.100
(DIN 3168) (60 Hz)**



SK 3202.100

(Version with condensor/terminal block RIGHT)



New Design Filter Fans



**Super flat filter fans in new design:
95 to 465cfm/160 to 770 m³/h**

Configuration:










- Filter fan, complete, ready for installation; drilling template; filter.

Color:

- pebble grey (RAL 7032) or light grey (RAL 7035)

Technical description:

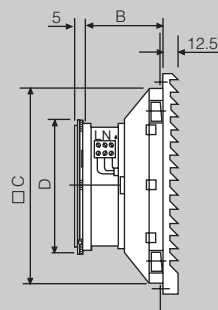
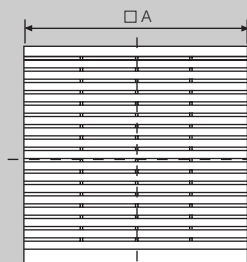
- Optimized air flow.
- Extremely flat design.
- Low noise.
- Air direction can be changed from blowing to drawing by simply turning the fan motor.
- 24 V DC models prevent interference e.g. to monitors.
- Protection rating can be increased up to NEMA 3R (IP 55).
- RPM's can be regulated.
- Housings are made of self-extinguishing (per UL 94-VO) heat-resistant plastic.
- Polyester filter provides 83% dust arrestance.
- UL/CUL recognized, CE marked.

Part No. for filter fan SK - pebble grey (RAL 7032)	 3321.100	 3321.115	 3321.024	 3322.100	 3322.115	 3322.024	 3323.100	 3323.115	 3323.024
- light grey (RAL 7035)	3321.107	3321.117	3321.027	3322.107	3322.117	3322.027	3323.107	3323.117	3323.027
Rated voltage V/Hz	230/50/60	115/50/60	24 (DC)	230/50/60	115/50/60	24 (DC)	230/50/60	115/50/60	24 (DC)
Air displacement at 60 Hz (unimpeded air flow)	15cfm/25 m³/h			40cfm/66 m³/h			70cfm/120 m³/h		
Air displacement at 60 Hz with standard exhaust filter	1 x 3321.200: 11cfm/18m³/h			1 x SK 3322.200: 30cfm/50 m³/h 2 x SK 3322.200: 33cfm/55 m³/h 1 x SK 3323.200: 33cfm/55 m³/h			1 x SK 3323.200: 50cfm/82 m³/h 2 x SK 3323.200: 60cfm/98 m³/h 1 x SK 3325.200: 55cfm/90 m³/h		
Air displacement at 60 Hz (with water-guard hood)				33cfm/55 m³/h (with SK 3322.800)			60cfm/97 m³/h (with SK 3323.800)		
Axial fan with	shaded pole motor		DC motor	shaded pole motor		DC motor	shaded pole motor		DC motor
Rated current	69 mA	138 mA	86 mA	0.12 A	0.24 A	0.15 A	0.12 A	0.24 A	0.15 A
	58 mA	115 mA		0.11 A	0.23 A		0.11 A	0.23 A	
Power consumption	12.5/10.3 W		2.0 W	19 W/18 W		3.5 W	19 W/18 W		3.5 W
Noise level	41/46 dB (A)			46/49 dB (A)			46/49 dB (A)		
Temperature range	+ 14°F to + 131°F/- 10°C + 55°C								
A (mm)	116.5			148.5			204		
B (mm)	42			52			77.5		
C (mm)	90			122.5			176		
D (mm)	90			122.5			120		
E (mm)	92			124			177		
F (mm)	—			—			185		
G (mm)	—			—			92.5		
Ratings per EN 60 529/10.91	IP 43 standard. NEMA 3R/IP 55 when used with a fine filter in combination with a water-guard hood.						IP 43 standard. NEMA 12/IP 54 when used with a fine filter in combination with a filter fan sealing frame. NEMA 3R/IP 55 when used with a fine filter in combination with a water-guard hood.		

Part No. for filter fan SK - pebble grey (RAL 7032)	3324.100	3324.115	3324.024	3325.100	3325.115	3325.024	3326.100	3326.115
- light grey (RAL 7035)	3324.107	3324.117	3324.027	3325.107	3325.117	3325.027	3326.107	3326.117
Rated voltage V/Hz	230/50/60	115/50/60	24 (DC)	230/50/60	115/50/60	24 (DC)	230/50/60	115/50/60
Air displacement at 60 Hz (unimpeded airflow)	105cfm/180 m³/h			160cfm/265 m³/h			330cfm/560 m³/h	
Air displacement at 60 Hz (with standard exhaust filter)	1 x SK 3325.200: 55cfm/95 m³/h 2 x SK 3325.200: 80cfm/140 m³/h 1 x SK 3326.200: 75cfm/130 m³/h			1 x SK 3325.200: 120cfm/205 m³/h 2 x SK 3325.200: 135cfm/230 m³/h 1 x SK 3326.200: 125cfm/215 m³/h			1 x SK 3326.200: 230cfm/390 m³/h 2 x SK 3326.200: 260cfm/495 m³/h	
Air displacement at 60 Hz (with water-gaurd hood)	85cfm/149 m³/h (with SK 3324.800)			140cfm/238 m³/h (with SK 3324.800)			190cfm/334 m³/h (with SK 3326.800)	
Axial fan with shaded pole motor	self-starting-shaded pole motor		DC motor	self-starting shaded pole motor		DC motor	permanent split capacitor motor	
Rated current	0.19 A	0.38 A	0.3 A	0.28 A	0.53 A	0.58 A	0.29 A	0.58 A
	0.20 A	0.40 A		0.24 A	0.49 A		0.35 A	0.70 A
Power consumption	30 W/35 W	30 W/35 W	7.2 W	41 W/38 W	41 W/38 W	14 W	64 W/80 W	64 W/80 W
Noise level	52/48 dB (A)			54/56 dB (A)			59/61 dB (A)	
Temperature range	+14°F to + 131°F/- 10°C to + 55°C							
A (mm)	255			255			323	
B (mm)	100			100			124	
C (mm)	222			222			290	
D (mm)	Ø 150			Ø 150			□ 225	
E (mm)	224			224			292	
F (mm)	234			234			302	
G (mm)	(117)			(117)			(151)	
Ratings per EN 60 529/10.91	IP 43 standard NEMA 12/IP 54 when used with a fine filter in combination with a filter fan sealing frame. NEMA 3R/IP 55 when used with a fine filter in combination with a water-guard hood.							

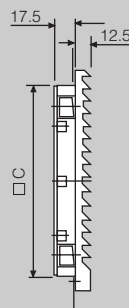
Filter fan

SK 3321.... / SK 3322.... / SK 3323.... / SK 3324....
SK 3325.... / SK 3326.... / SK 3327



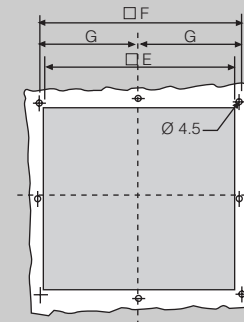
Exhaust filter

SK 3323.200
SK 3325.200
SK 3326.200

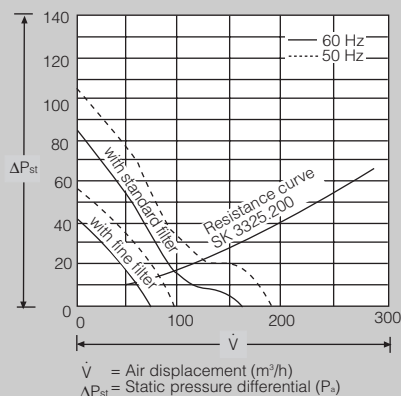


Installation cutout

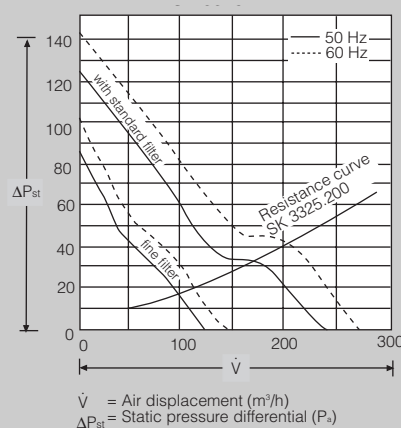
SK 3321.... SK 3324....
SK 3322.... SK 3325....
SK 3323.... SK 3326....



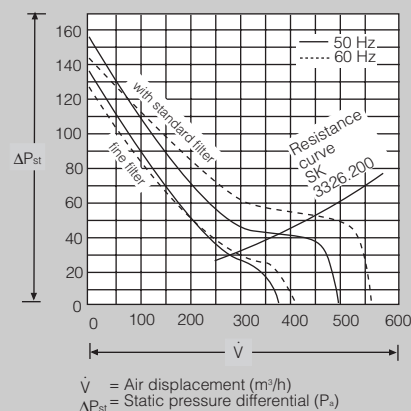
Performance diagram
SK 3324....



Performance diagram
SK 3325....



Performance diagram
SK 3326....



Panel Heaters









Rittal's small, powerful and sturdy panel heaters can help prevent malfunctions, corrosion and frost build-up in enclosures.

Configuration:

- Heater, ready for mounting, with attached 1 ft./3 m power cord or terminal block. (SK 3102.000 includes integral fan).

Technical description:

- To achieve exact temperature management inside an enclosure, installing an SK 3110.000 thermostat is recommended.
- PTC heating element limits surface temperature.
- The efficiency of the SK 3107.000 heater can be increased by adding an SK 3108.000 axial fan.
- All heaters can be easily and quickly installed with screws (included) on mounting panels, or snapped into 35 mm deep DIN EN 50 022 rails.
- Maximum efficiency can be achieved when panel heaters are installed vertically with cable entry from below.
- To develop the required convection, heaters need at least 2"/50 mm clearance at the top or bottom. Distance from steel side walls should be no less than .4"/10 mm, from thermoplastic materials at least 1.5"/35 mm.
- In general, installation of a panel heater is recommended to prevent build up of condensation, even when heat exchangers and air conditioners are used.
- The heater housings are made of sturdy, black anodized aluminum.

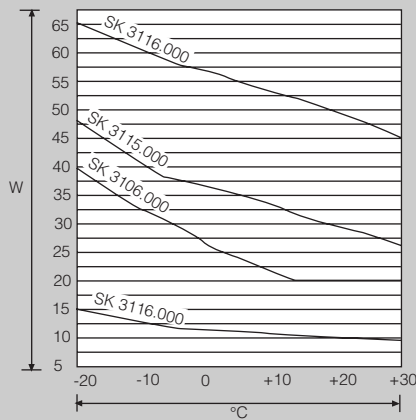
							
Part No. SK	3105.000	3106.000	3115.000	3116.000	3107.000	3107.000** +3108.110** 3107.000*** +3108.000***	3102.110** (incl. fan) 3102.000*** (incl. fan)
Rated voltage Volt/Hz	110 - 240 V AC/DC					115/50/60** 230/50/60***	115/50/60** 230/50/60***
Continuous heat output at Tu =20°C	10 W	20 W	30 W	50 W	130 W	200 W*	300 W*
Pre-fuse T	2 A	2 A	4 A	4 A	4 A	8 A**/4 A**	8 A**/4 A**
Special voltage available on request. Specifications subject to change.							

* performance for heater with fan.

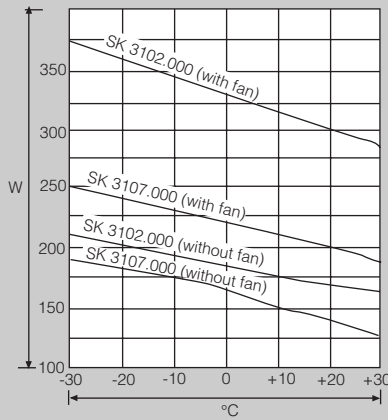
** 115/50/60

*** 230/50/60

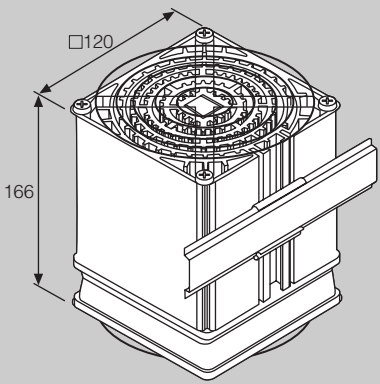
Performance diagram SK 3105.000 / SK 3106.000 / SK 3115.000 / SK 3116.000



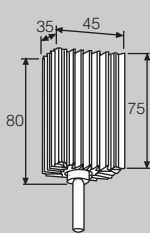
Performance diagram SK 3102.000 / SK 3107.000



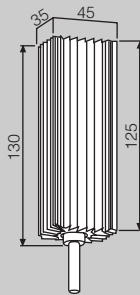
SK 3102.000



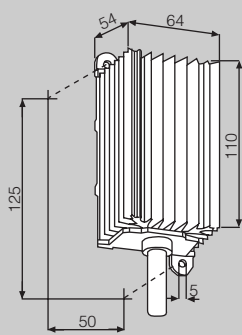
SK 3105.000



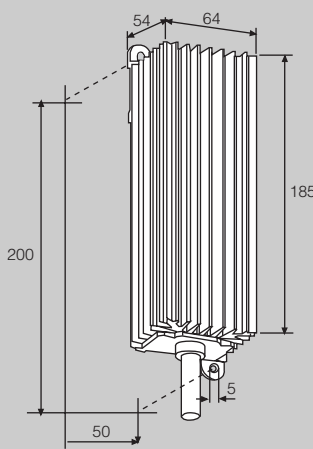
SK 3106.000



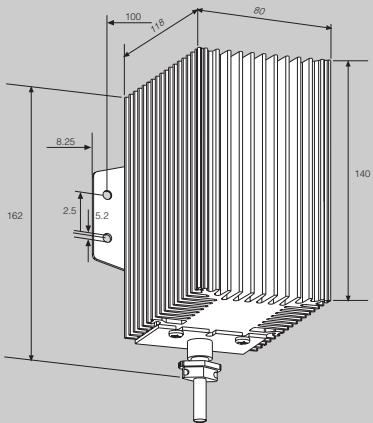
SK 3115.000



SK 3116.000



SK 3107.000



CP 6500 CONTROL PANEL ENCLOSURES... SIMPLY PERFECT!

These new control panel enclosures are based on Rittal's proven AE Series and are ready for installation on a CP 6500 support arm system. Their features include aluminum front panels and handles, reinforced roof, rear door, and installation rails welded to the inside side walls.



- **NEMA 12/IP 55.**
- **Double protection against corrosion:**
E-coat primer plus powder coat.
- **Rear door for easy maintenance and service.**
- **Unlimited component installation options.**



Example 17 and 18

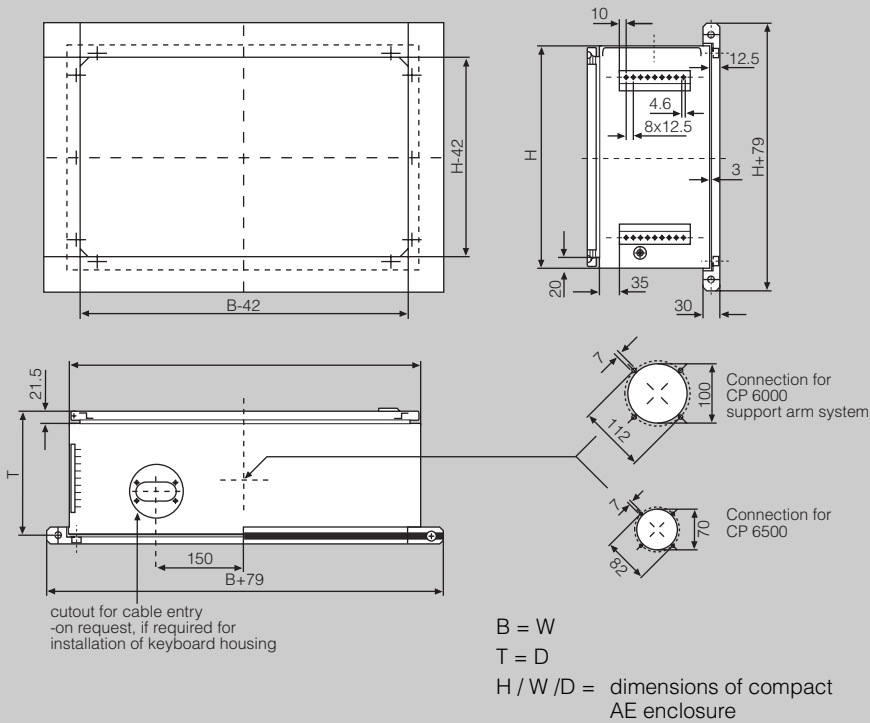
- Control panel enclosures based on AE
- Aluminum front panels finished per customer specification
- Integrated handles on the sides
- Ready for mounting to CP 6500 support arm system hanging or upright (by turning the housing).

CP 6500 control panel enclosure	
Dimensions H x W x D mm	Part No. CP
380 x 380 x 210	6530.200
300 x 380 x 210	6531.200
500 x 500 x 210	6532.200
380 x 600 x 210	6530.200

**AE Series Operator Enclosure
With VIP 6000 Frame**

The right frame when more depth is required.

Every compact AE enclosure can be fitted with a modular VIP 6000 frame. The large AE door provides extra room for service and maintenance.



	Part No. CP
Operator enclosure with VIP 6000 frame	6541.009*

Configuration	Part No. CP	Specification number
Housing with integrated roof or bottom reinforcement, rear door, aluminum front panel and VIP 6000 front frame. Mounting profiles on sides inside enclosure.	6 5 4 1 . 0 0 9	

Connection for support arm system

none	6 5 4 1 . 0 0 9	0	
CP 6000 at top	6 5 4 1 . 0 0 9	1	
CP 6000 at bottom	6 5 4 1 . 0 0 9	2	
CP 6500 at top	6 5 4 1 . 0 0 9	3	
CP 6500 at bottom	6 5 4 1 . 0 0 9	4	

Connection for cable duct

none	6 5 4 1 . 0 0 9	X	0	
at bottom	6 5 4 1 . 0 0 9	X	1	

Dimensions

Standard dimensions as for AE...	6 5 4 1 . 0 0 9	X	X	
Other dimensions (Height x Width x Depth)	6 5 4 1 . 0 0 9	X	X	

* Special Order

Order example 1
Order example 2

6 5 4 1 . 0 0 9	1	0	AE 1050.6000
6 5 4 1 . 0 0 9	4	1	HWD 352 x 537 x 350mm

Order example 1

Part No. CP 6541.009 10 AE 1050.600 = enclosure with integrated roof reinforcement, rear door, aluminum front panel and VIP 6000 front frame.
Includes mounting profiles on side inside enclosure.
With CP 6000 support arm connection at top, no cable duct connection, with standard dimensions of AE 1050.600
(H x W x D = 500 x 500 x 210mm).

Order example 2

Part No. CP 6541.009 41
H x W x D 352 x 537 x 350mm = enclosure with integrated bottom reinforcement, rear door, aluminum front panel and VIP 6000 front frame.
Includes mounting profiles on side inside enclosure.
With CP 6500 support arm connection at bottom and cable duct connection at bottom, with following special dimensions
H x W x D 352 x 537 x 350mm.

Note:
When enclosure W = 21.14"/537mm, the following VIP 6000 accessories can be installed:
19" keyboard housing with installation depth:
• 1.73"/44mm,
Part No. see pages 8/9, 14/15.
• 4.13"/105mm,
Part No. see pages 8/9, 14/15.
19" keyboard housing with depth of:
• 1.06"/27mm,
Part No. see pages 8/9, 14/15.

Special, adapted accessories are available for other heights and widths.

AE SERIES OPERATOR ENCLOSURE

With VIP 6000 Frame



Configuration:

Operator enclosure with:

- integrated roof- or bottom-reinforcement
- connection for CP 6000 or CP 6500
- support arm system
- aluminum panel
- front frame (included – not mounted)
- rear door

Approvals:



Material:

Enclosure and rear door:
sheet steel

Front panel (.12"/3mm) and frame profile:
aluminum

Frame corner pieces:
die-cast zinc

Finish:

Enclosure and door:
E-coat and powder painted, light grey (RAL 7035), textured

Front panel:
natural anodized

Frame profile and frame corner pieces:
powder painted, light grey (RAL 7035), textured



Clip board

displays manuals, drawings, etc. at eye level.

Part No. CP 6013.000



Complete system solutions per your specifications . . .



. . . including special colors.



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19" Electronic Components



Enclosure Climate Control



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