

**IPC-6806**  
**6-slot Node IPC Chassis**

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# Chapter 1 General Information

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## Introduction

Specially designed for the factory floor and other harsh industrial environments, the IPC-6806 wallmount IPC chassis is ideal for system integrators or users who require a compact, rugged PC/AT-compatible system. The IPC-6806 features a 6-slot passive backplane and a 150-watt power supply. The chassis is only 6.5" wide and can be easily mounted on panels or walls with the supplied brackets.

## Specifications

- **Construction:** Heavy-duty steel
- **Disk drive capacity:** One 3½" FDD and one 3½" HDD
- **Indicators:** LEDs for power On/Off and HDD
- **Controls:** Reset switch on front panel
- **Cooling fan:** One 49-CFM fan on front panel with air filter
- **Weight:** 5.6 kg (12.3 lbs)
- **Dimensions (W x D x H):** 166 x 170 x 393 mm (6.5" x 6.7" x 15.5")
- **Paint color:** Pantone 415C

### Passive backplane (PCA-6106)

- **Slots:** 6 ISA-bus, full-size
- **PC board:** 4-layer PCB with ground and power planes for reduced noise and low power-supply impedance
- **Indicators:** LEDs for +5 V, +12 V, -5 V and -12 V

### Passive backplane (PCA-6106P3)

- **Slots:** 2 ISA / 3 PCI / 1 PICMG slots
- **PC board:** 4-layer PCB with ground and power planes for reduced noise and low power-supply impedance
- **Indicators:** LEDs for +5 V, +12 V, -5 V and -12 V

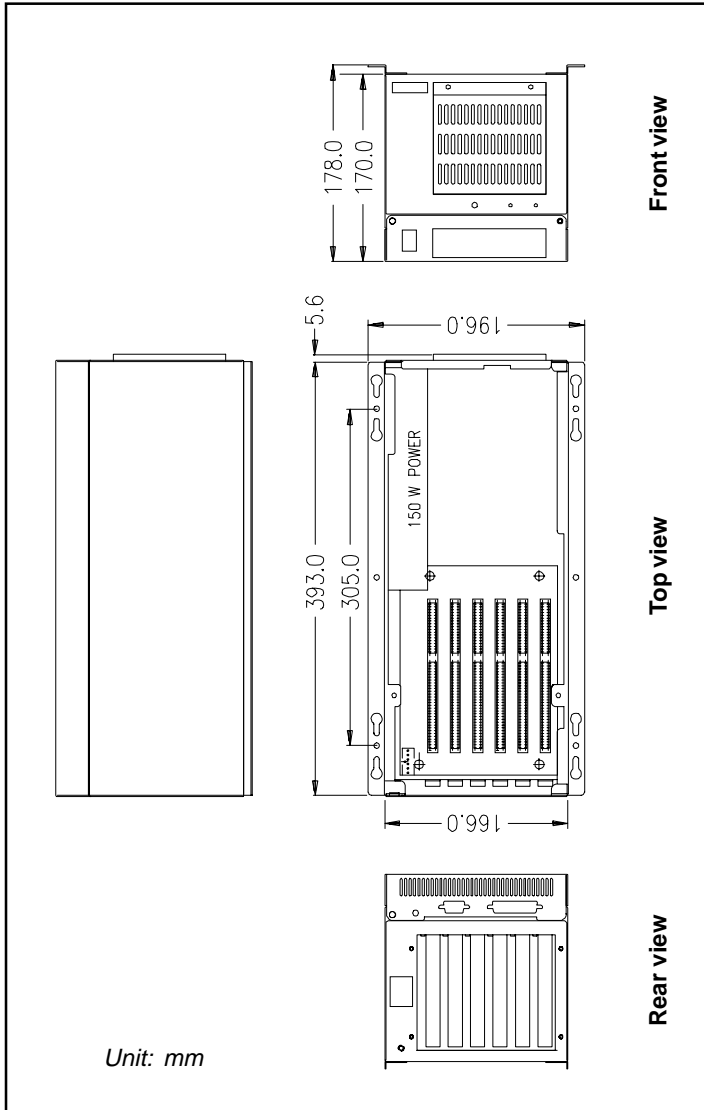
### **Power supply (PS-150)**

- **Output rating:** 150 watts max.
- **Input voltage:**  
90 ~ 132 V<sub>AC</sub> or 180 ~ 264 V<sub>AC</sub> @ 47 ~ 63 Hz, autoranging
- **Output voltage:** +5 V @ 15 A, -5 V @ 1 A, +12 V @ 5 A, -12 V @ 1 A
- **Min load:** +5 V @ 3 A, -5 V @ 0.2 A, +12 V @ 1 A, -12 V @ 0.2 A
- **MTBF:** 50,000 hrs. at 70% load
- **Safety:** UL/CSA/TÜV approved
- **EMI:** Meets FCC/VDE Class A

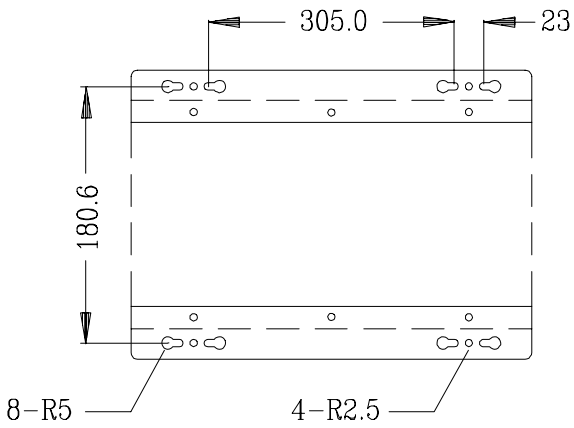
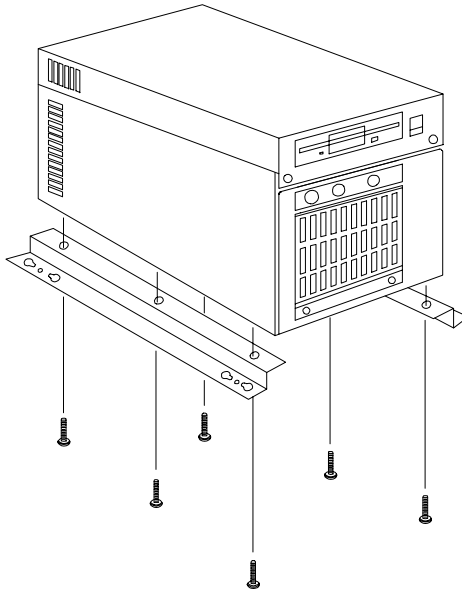
### **Environmental specifications**

- **Operating temperature:** 0 ~ 50° C (32 ~ 122°F)
- **Relative humidity:** 10 ~ 95% @ 40° C, non-condensing
- **Vibration (operating):**  
5 ~ 17 Hz, 0.1" double-amplitude displacement  
17 ~ 500 Hz, 1.5 G acceleration peak to peak
- **Shock (operating):** 10 G acceleration peak (11 msec. duration)
- **Safety:** Meets UL/CSA/TÜV
- **EMI:** Meets FCC/VDE Class A
- **CE compliant**

## Dimensions



# Installation



Unit: mm

## Chapter 2 System Setup

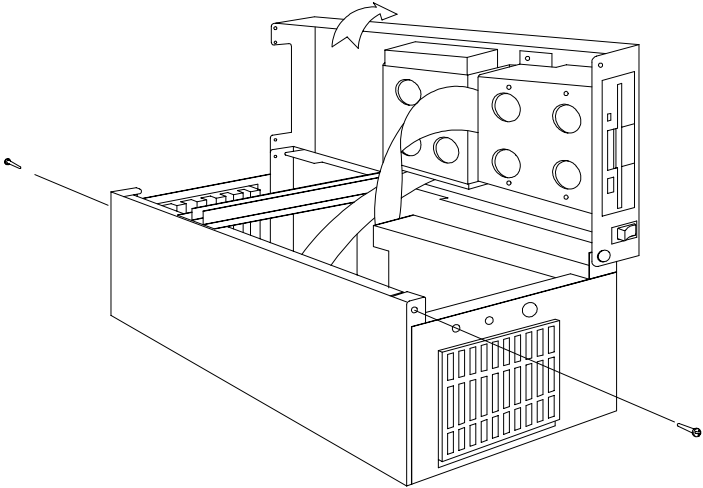
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The following procedures are provided to assist you in installing drives, plug-in cards and the hold-down clamp into the IPC-6806.

### Removing the cover

To remove the cover, proceed as follows:

1. Remove the two screws (one on each side) which secure the cover to the card cage (see Fig. 2-1). Lift the lid to expose the interior of the chassis.



**Figure 2-1: Removing the cover**



## Adding disk drives

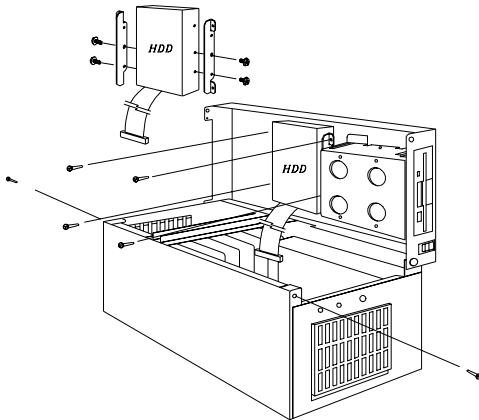
To install an HDD or FDD, refer to Fig. 2-2 and proceed as follows:

### 1. Hard disk drive:

- a. Open the top cover of the chassis.
- b. Detach the flat panel mounting bracket by removing the four retaining screws.
- c. Align the holes on the bottom of the HDD with those of the flat-panel mounting bracket.
- d. Attach the HDD to the flat-panel mounting bracket with the four screws removed in step (a) above.
- e. Connect the 40-pin flat cable and power cable to the HDD, and attach the flat-panel mounting bracket to the chassis with the four retaining screws.

### 2. Floppy disk drive:

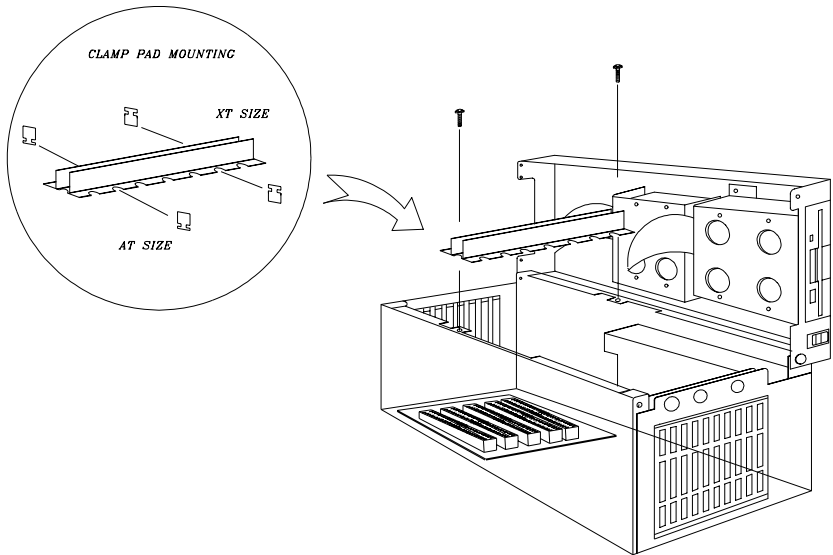
- a. Open the top cover of the chassis.
- b. Remove the cover of the floppy disk drive.
- c. Insert the FDD into the mounting bracket with its base facing inward.
- d. Connect a 34-pin flat cable and power cable to the FDD, and attach the FDD to the bracket with four screws.



**Figure 2-2: Installing the drives**

## Hold-down clamp

1. Insert the rubber buffers (provided in your kit) into the hold-down clamp (see Fig. 2-3). These buffers cushion the plug-in cards from shock and vibration. They have two settings:
  - a. For XT-size cards, the narrow end should face upward.
  - b. For AT-size cards, the wide end should face upward.
2. When you have finished inserting the rubber buffers, fasten the hold-down clamp to the card cage with the two screws provided (see Fig. 2-3).

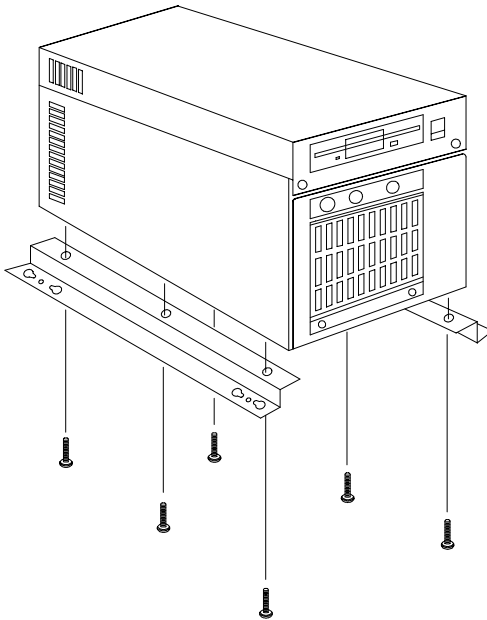


**Figure 2-3: Hold-down clamp installation**

## Wall mounting

The IPC-6806 may be mounted on a wall, allowing more efficient use of space. To wall-mount your chassis, proceed as follows:

1. Attach the brackets to the chassis by inserting the six screws (provided in your kit) as shown in Fig. 2-4.
2. Attach the chassis to the wall with the four screws provided. Make sure that the chassis is mounted securely.

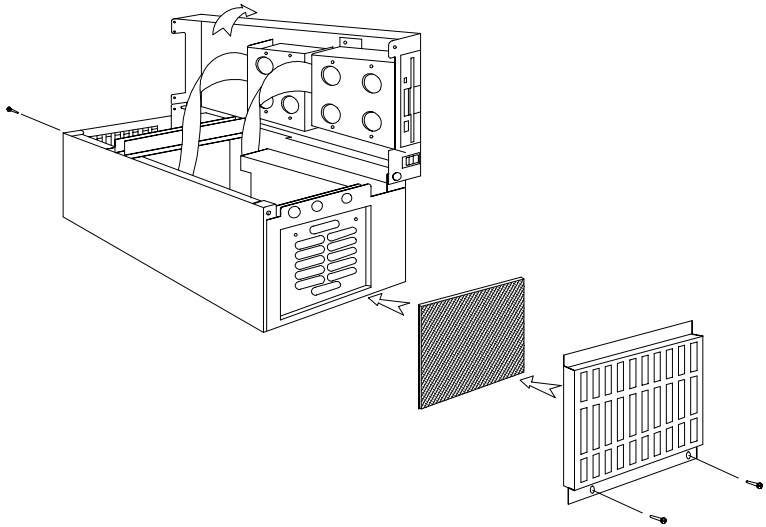


**Figure 2-4: Wall-mounting the unit**

## Replacing the filter

To change the filter, located at the front end of the chassis, see Fig. 2-5 and proceed as follows:

1. Remove the two screws located at the bottom of the filter cover. Gently but firmly pull the cover free from the chassis.
2. Remove the filter and replace it with a new one.
3. Reinsert the filter and replace the cover on the chassis.

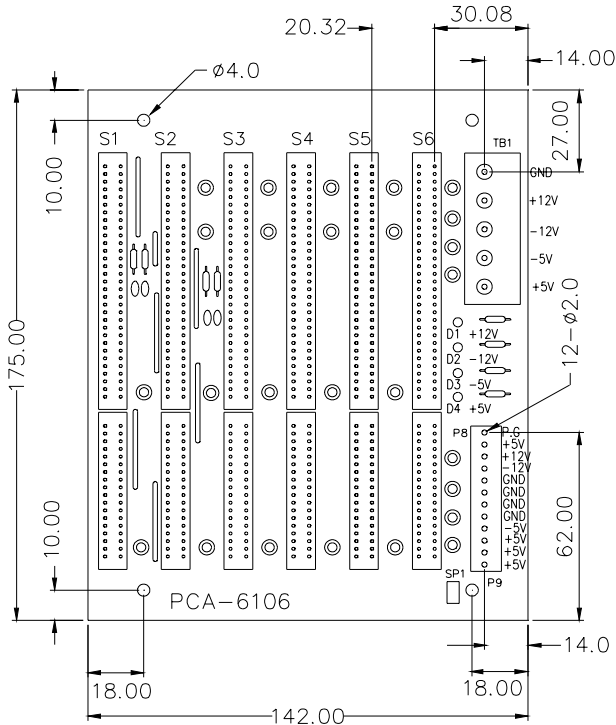


**Figure 2-5: Changing the filter**



# Appendix A Passive Backplanes

## PCA-6106: 6-slot ISA-bus backplane

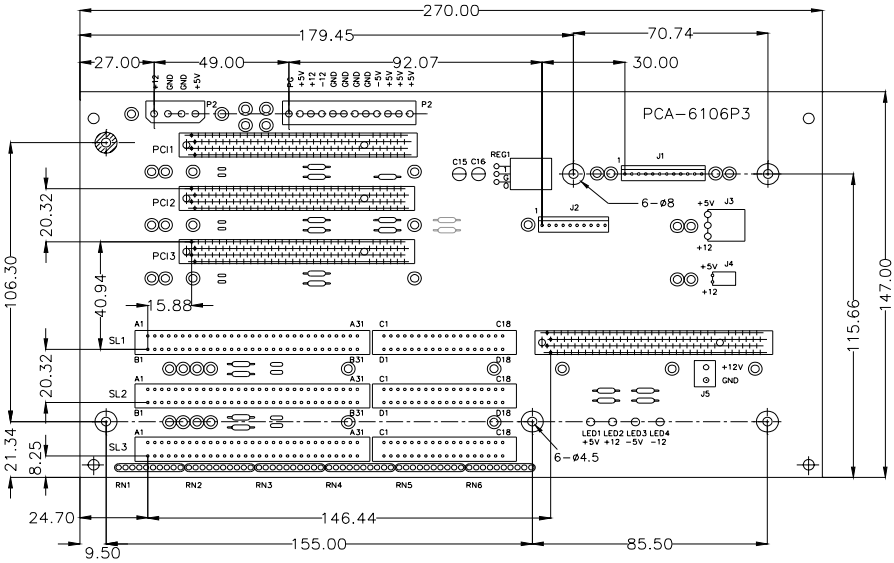


### Bus termination:

Resistor ..... Signals  
 RP5 ..... SA7-SA0  
 RP4 ..... SA15-SA8  
 RP1 ..... SD7-SD0  
 RP7 ..... SD8-SD15

Resistor ..... Signals  
 RP2 ..... SMEMW, SMEMR, IOW, IOR  
 RP6 ..... SBHE, LA23-LA17  
 RP3 ..... LA19-LA16

# PCA-6106P3: 2 ISA / 3 PCI / 1PICMG-slot backplane



## Bus termination:

Resistor ..... Signals

RN4 ..... SA7-SA0

RN3 ..... SA15-SA8

RN2 ..... SD7-SD0

RN6 ..... SD8-SD15

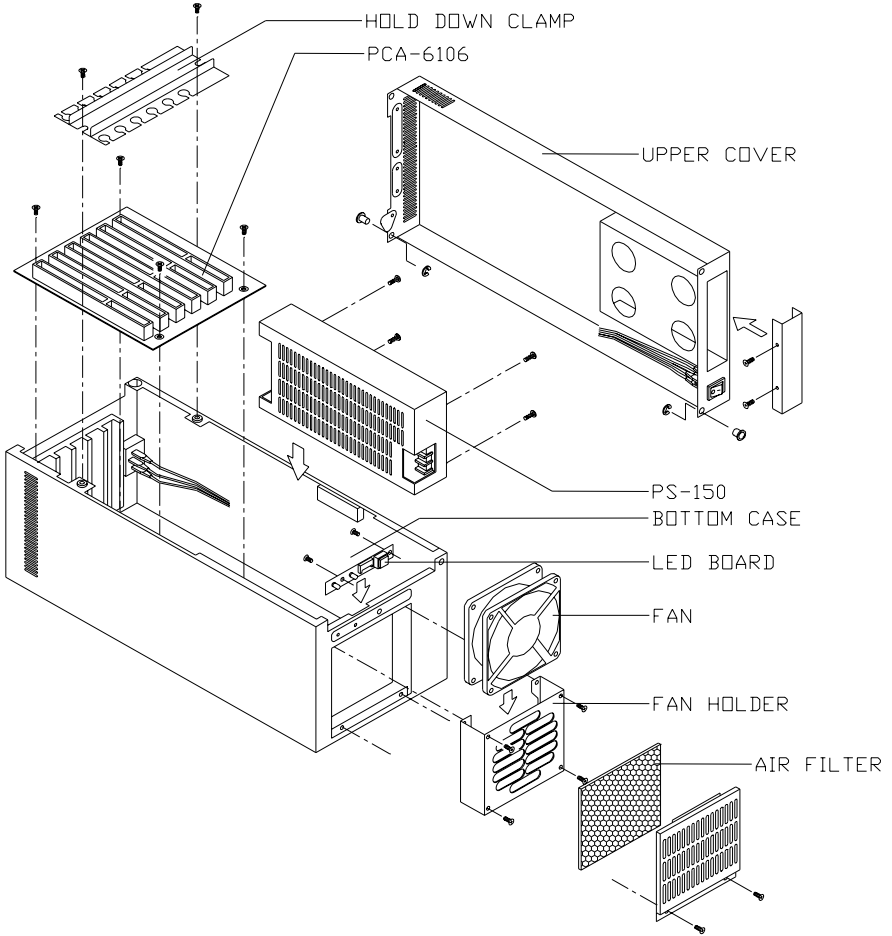
Resistor ..... Signals

RP1 ..... SMEMW, SMEMR, IOW, IOR

RN5 ..... SBHE, LA23-LA17

RN1 ..... LA19-LA16

# Appendix B Exploded Diagram







## Appendix C Safety Instructions

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1. Read these safety instructions carefully.
2. Keep this installation reference guide for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. Before connecting the equipment to a power outlet, make sure the voltage of the power source is correct.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
12. Never pour any liquid into an opening. This could cause fire or electrical shock.
13. Never open the equipment. For safety reasons, the equipment should be opened only by qualified service personnel.
14. If any of the following situations arises, get the equipment checked by service personnel:
  - a. The power cord or plug is damaged.
  - b. Liquid has penetrated into the equipment.
  - c. The equipment has been exposed to moisture.
  - d. The equipment does not work well, or you cannot get it to work according to the installation reference guide.
  - e. The equipment has been dropped and damaged.
  - f. The equipment has obvious signs of breakage.
15. **DO NOT LEAVE THIS EQUIPMENT IN AN UNCONTROLLED ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4° F) OR ABOVE 60° C (140° F). THIS MAY DAMAGE THE EQUIPMENT.**

The sound pressure level at the operator's position according to IEC 704-1:1982 is equal to or less than 70 dB(A).

**DISCLAIMER:** This set of instructions is given according to IEC 704-1.

Advantech disclaims all responsibility for the accuracy of any statements contained herein.

## Wichtige Sicherheitshinweise

1. Bitte lesen sie Sich diese Hinweise sorgfältig durch.
2. Heben Sie diese Anleitung für den späteren Gebrauch auf.
3. Vor jedem Reinigen ist das Gerät vom Stromnetz zu trennen. Verwenden Sie Keine Flüssig-oder Aerosolreiniger. Am besten dient ein angefeuchtetes Tuch zur Reinigung.
4. Die Netzanschlußsteckdose soll nahe dem Gerät angebracht und leicht zugänglich sein.
5. Das Gerät ist vor Feuchtigkeit zu schützen.
6. Bei der Aufstellung des Gerätes ist auf sicheren Stand zu achten. Ein Kippen oder Fallen könnte Verletzungen hervorrufen.
7. Die Belüftungsöffnungen dienen zur Luftzirkulation die das Gerät vor überhitzung schützt. Sorgen Sie dafür, daß diese Öffnungen nicht abgedeckt werden.
8. Beachten Sie beim Anschluß an das Stromnetz die Anschlußwerte.
9. Verlegen Sie die Netzanschlußleitung so, daß niemand darüber fallen kann. Es sollte auch nichts auf der Leitung abgestellt werden.
10. Alle Hinweise und Warnungen die sich am Geräten befinden sind zu beachten.
11. Wird das Gerät über einen längeren Zeitraum nicht benutzt, sollten Sie es vom Stromnetz trennen. Somit wird im Falle einer Überspannung eine Beschädigung vermieden.
12. Durch die Lüftungsöffnungen dürfen niemals Gegenstände oder Flüssigkeiten in das Gerät gelangen. Dies könnte einen Brand bzw. elektrischen Schlag auslösen.
13. Öffnen Sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von autorisiertem Servicepersonal geöffnet werden.
14. Wenn folgende Situationen auftreten ist das Gerät vom Stromnetz zu trennen und von einer qualifizierten Servicestelle zu überprüfen:
  - a - Netzkabel oder Netzstecker sind beschädigt.
  - b - Flüssigkeit ist in das Gerät eingedrungen.
  - c - Das Gerät war Feuchtigkeit ausgesetzt.
  - d - Wenn das Gerät nicht der Bedienungsanleitung entsprechend funktioniert oder Sie mit Hilfe dieser Anleitung keine Verbesserung erzielen.
  - e - Das Gerät ist gefallen und/oder das Gehäuse ist beschädigt.
  - f - Wenn das Gerät deutliche Anzeichen eines Defektes aufweist.

Der arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 Teil 1000 beträgt 70 dB(A) oder weiger.

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