Equipment typically found on business premises, such as computer servers, telecoms equipment, networking devices and audio/video equipment, require a constant and unhindered access to cool air.

This cool air is required to keep the components inside the equipment operating at their optimum.

Failure to maintain this will lead to shorter equipment life-span and higher maintenance levels.

With the advent of trends such as Cloud Computing and Co-Location, it is increasingly becoming interesting for businesses to look at new, more efficient & flexible solutions for deploying IT equipment on premises, compared to traditional server rooms & wiring closets.

The NetShelter CX is a soundproofed mini computer room which allows for IT deployment wherever and whenever it is needed, while saving space, cost and deployment time.

The NetShelter CX silences noisy equipment, allowing it to sit quietly in the office environment. To achieve this, the CX provides the equipment with sufficient cool air to allow it to function normally. Here’s how the CX does it:

1. Ambient office air is drawn in to the soundproofed air-intake chambers on either side of the NetShelter CX.
2. Air travels through these air chambers and enters the inner equipment space through long vertical slots at the front.
3. All air is pulled to the rear of the enclosure and in to the soundproofed exhaust chambers by the built-in ventilation fans.
4. The exhaust air is pushed out of the enclosure sideward in to the office to mix with the large volume of air in the space.
The NetShelter CX Mini is a scaled-down version of the CX enclosure, designed this time, around upright standing tower servers typically found in small office spaces such as small businesses or branch offices.

As with its bigger brother, the CX Mini provides a constant flow of fresh cool air to the front of the equipment it houses.

Here’s how it does it:

1. Ambient office air is drawn in to the air-intake chamber on the left side of the CX Mini.
2. The air travels up and forward inside the chamber, entering the inner equipment space through a vertical slot at the front.
3. Fans on the rear right of the cabinet pull the air diagonally from the front to the back and push the air into the air outlet chamber on the right side.
4. The air is pushed forward, down and out. A brush strip barrier on the underside ensures the exhaust air does not re-circulate to the left side.
NetShelter CX How It Works

Ventilation & Airflow

Additional Information

Air Exhausting

This is the soundproof exhaust chamber on the rear of the NetShelter CX. The 18, 24 & 38U CX models have 1, 2 or 3 of these units. These units exchanging the air inside the Cabinet approx. 4-8 times per minute depending on equipment density. These modules hinge open individually starting at the bottom, are lockable & can lift off easily, starting with the top unit. Each one is capable of handing the thermal energy from IT or AV equipment rated to 1200 watts of power consumption.

Tips for best performance:
• Separate & spread-out the heat generating equipment (typically Servers) ensuring a balanced distribution of the ‘thermal load’.
• Use the rack for a mix of equipment types (Servers, UPS, Networking, Telecoms)
• Leave 6” of space on either side of the CX.
• Place CX in an air-conditioned office or large well ventilated space.
• Use the available Dust Filters to protect equipment, lengthen equipment life-time and reduce maintenance (Part codes AR4701 & AR4702)

Notes
• The CX exhaust air is ejected into the open office space. This air disperses in to the large volume of air in the space.
• Place the CX near cool spots in the environment or near exhaust points so ejected air can be more readily removed.
• It is advisable not to exceed the recommended load of the on-site environment air-conditioning system.
• The rear vents are positioned sideward so the Cabinet can be pushed back against a wall.
• Use thermal sensors to monitor & manage the environment
• Putting IT equipment in the fast-moving front-to-back flow of ambient air in the NetShelter CX ensures Servers and other IT devices benefit from ‘assisted-ventilation’ and operate at temperatures conducive to normal performance.
• Use the rack for a mix of equipment types (Servers, UPS, Networking, Telecoms)
• Leave 6” of space on either side of the CX. You MAY push the CX back against a wall.
• Place CX in an air-conditioned office or large well ventilated space.
• Use the available Dust Filters to protect equipment, lengthen equipment life-time and reduce maintenance (Part codes AR4701 & AR4702)

Remote Monitoring

Users who wish to monitor the performance of the CX can do so by utilizing the features of the APC Network Management Card for Smart UPS or Switched PDU.

With APC environmental management solutions, the integrated devices can be programmed to monitor & report on temperatures, humidity, device status, security issues such as access, and can be used to monitor and control power to the IT equipment inside, enhancing the reliability & usefulness of the solution.

When combined with a Network Management Card in an APC UPS or Switched PDU, also with Metered PDUs & NetBotz devices, the NetShelter CX becomes a remotely manageable IT hub for branch offices.

To learn more about this and other solutions for Small IT Spaces, visit APC.com

The NetShelter CX is designed to balance ventilation with soundproofing, achieving a harmony between ventilating IT equipment and preventing noise from escaping.

As these results show, the NetShelter CX makes it possible for IT equipment to be placed in the working space, without being heard.