

▶ Dealer Desk Cooling Systems ▶▶



Patent Application 0613581.8

TROX[®] AITCS
Advanced IT Cooling Systems



For almost 60 years TROX have been manufacturing and marketing components and systems for indoor air-conditioning and ventilation. Due to the extensive research and development facilities it is considered to be a pioneer in this market throughout the world.

TROX Advanced IT Cooling Systems (AITCS) offers specialised cooling systems for data centers and dealer desks on trading floors.

TROX AITCS Offers the market the choice of their patented "electrically benign" liquid CO₂ systems or a more traditional chilled water (CHW) alternative. Floor mounted or desk mounted drop-in cooling provides the user with all possible options, and TROX AITCS can also take care of the plant, pipe work and installation.

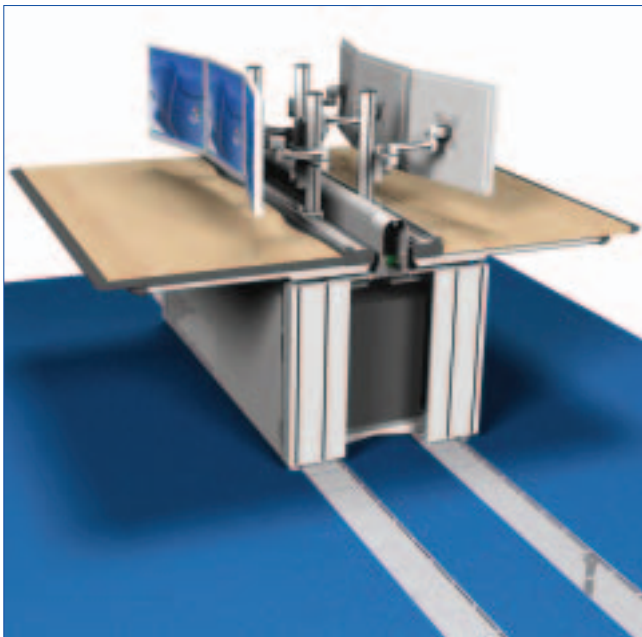
► Dealer Desk Cooling ►►

Financial institutions, along with other users of high performance IT, are continually striving to improve the performance of both the IT technology and the users. In a business where seconds can make all the difference, new, faster and more powerful PC's are required.

With this increase in the numbers, and performance of PC's comes a greatly increased heat load, risking the performance of both man and machine. With conventional office air conditioning systems unable to cope there will be a rise in over heating PC's; with potential for these PC's to fail completely.

In addition, traders, designers or control room staff are unable to perform to their peak if they are working in uncomfortably hot conditions with excessive under desk temperatures or high airflows from overworked air conditioning systems.

TROX AITCS manufactures IT cooling systems capable of adsorbing PC heat loads and allowing users to work in comfortable and therefore productive conditions.



Considerations:

- Each trader generates up to 1500 W
- PC processing power is increasing
- Trader densities are also increasing
- Overhead cooling alone may be inadequate for PC heat loads

► User Comfort ►►

The TROX Group has been involved in providing components and systems to improve the comfort of buildings and the users for almost 60 years. In this time the TROX group has built a reputation as experts in providing comfortable working conditions, and with the dealer desk cooling systems from TROX AITCS this reputation is enhanced further.

The heat generated by the latest advance in performance of IT equipment is too high for conventional air conditioning systems to cope with. This can lead to uncomfortably high office temperatures, or worse still, cold draughts from overhead vents as the air conditioning system does its best to cope.

TROX AITCS understands these problems and has designed the Dealer Desk cooling systems to provide a cost effective and effective solution, as you would expect from the experts in comfort engineering.



TROX AITCS

- *Part of TROX GROUP*
- *Extensive R&D laboratories*
- *Experts in comfort engineering*
- *Systems compatible with new or existing installations and any desk manufacturer*
- *Complete turnkey solution, supplied & installed*

► Peak Performance ►►

It's not only the users that suffer when a trading floor, control room or design office overheats, the IT equipment can also be affected.

With up to 6 high performance PC's per twin desk unit the temperature before cooling can easily reach 60°C or higher. This can seriously slow the PC, and will also shorten the operational life. With banking and other businesses a 24 hour concern often these PC's are never switched off, further exacerbating the problem

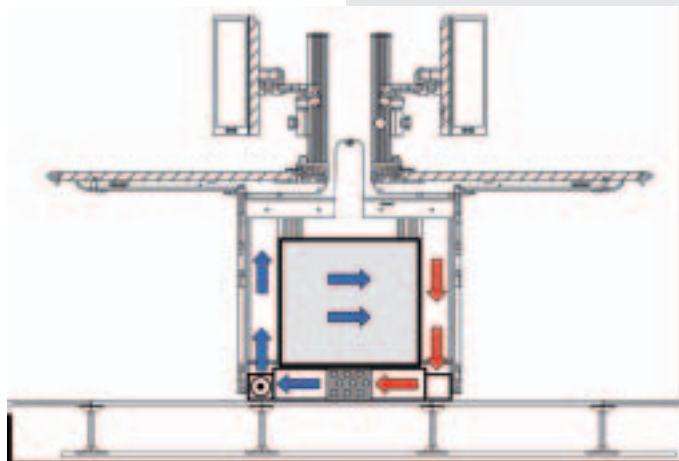
With a TROX AITCS desk cooling system the PC's will see a air temperature of 22°C, maintaining peak performance and extending product life.



► How It Works ►►

TROX AITCS desk cooling systems work by absorbing the heat produced by PC's at source, ensuring that the heat is not released into the office or working space maintaining both user comfort levels and IT equipment performance.

The TROX AITCS desk cooling systems uses either liquid CO₂ or chilled water (CHW) to absorb the heat generated by the PC's. This liquid is then returned to the chiller plant.



*Air circulation of
CO₂OLdesk™ and AQUAdesk*

► Floor Mounted ►►

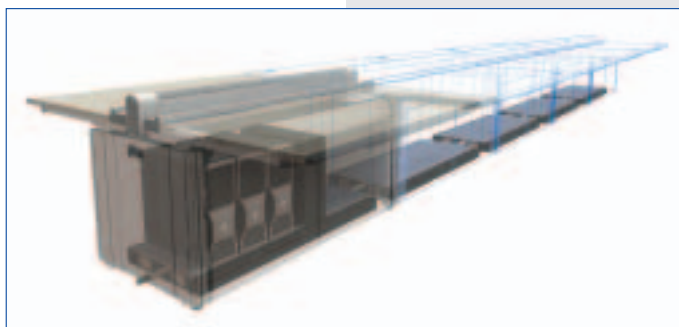
Both CO₂OLdesk™ and AQUAdesk are usually supplied as floor mounted units. Air is circulated by centrifugal fans along the edge of the unit. This air is drawn through the PC, adsorbing heat as it circulates. The air then passes over the integral coil, where the heat is absorbed and the air temperature falls. This cooled air is then returned to the front of the PC.

This “closed loop” cooling method means that the heat is absorbed by the CO₂ or CHW at source and no heat is allowed to escape into the room.



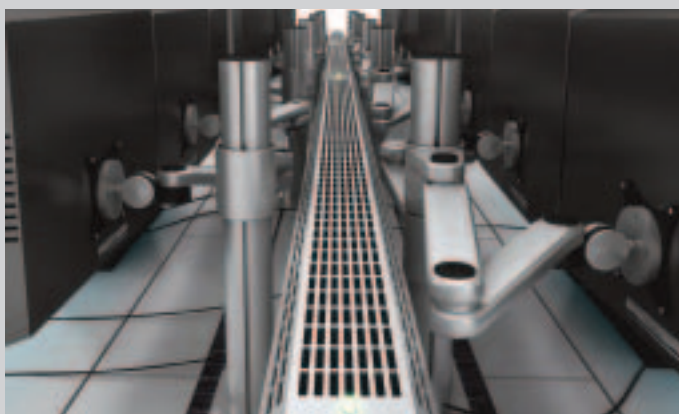
► Any Desk ►►

The slim design of both the floor cooling systems and the drop-in cassette means that all of the desk cooling systems supplied by TROX AITCS are compatible with new or existing installation for any desk manufacturer.



► Drop-in Cassette ►►

AQUAdesk drop-in enables desk cooling with minimal disruption. The AQUAdesk drop-in sits at desk height and utilises a single centrifugal fan to draw air through the ventilated doors of the PC enclosure, over the PC's absorbing the heat. The air then continues past the cooling coils and this cool air is exhausted into the room.



► Quiet & Effective Cooling ►►

TROX AITCS' floor mounted cooling units are capable of providing 1600 W of PC cooling. The low noise fans and slim construction makes the CO₂OLdesk™ and AQUAdesk unobtrusive and effective. Twin centrifugal fans move air across coils to provide efficient cooling.

Each CO₂OLdesk™ caters for up to 6 PC's, 3 facing one way and 3 reversed. In the unlikely event of a fan failure the second fan has the capacity to cool all 6 PC's until the fault is rectified.

► Complete System ►►

In addition to supplying the cooling units, TROX AITCS provide the complete system.

From chiller plant to provide the cooling liquid, to the alarms, displays and outputs demanded by the building management system TROX AITCS provide a complete integrated system.

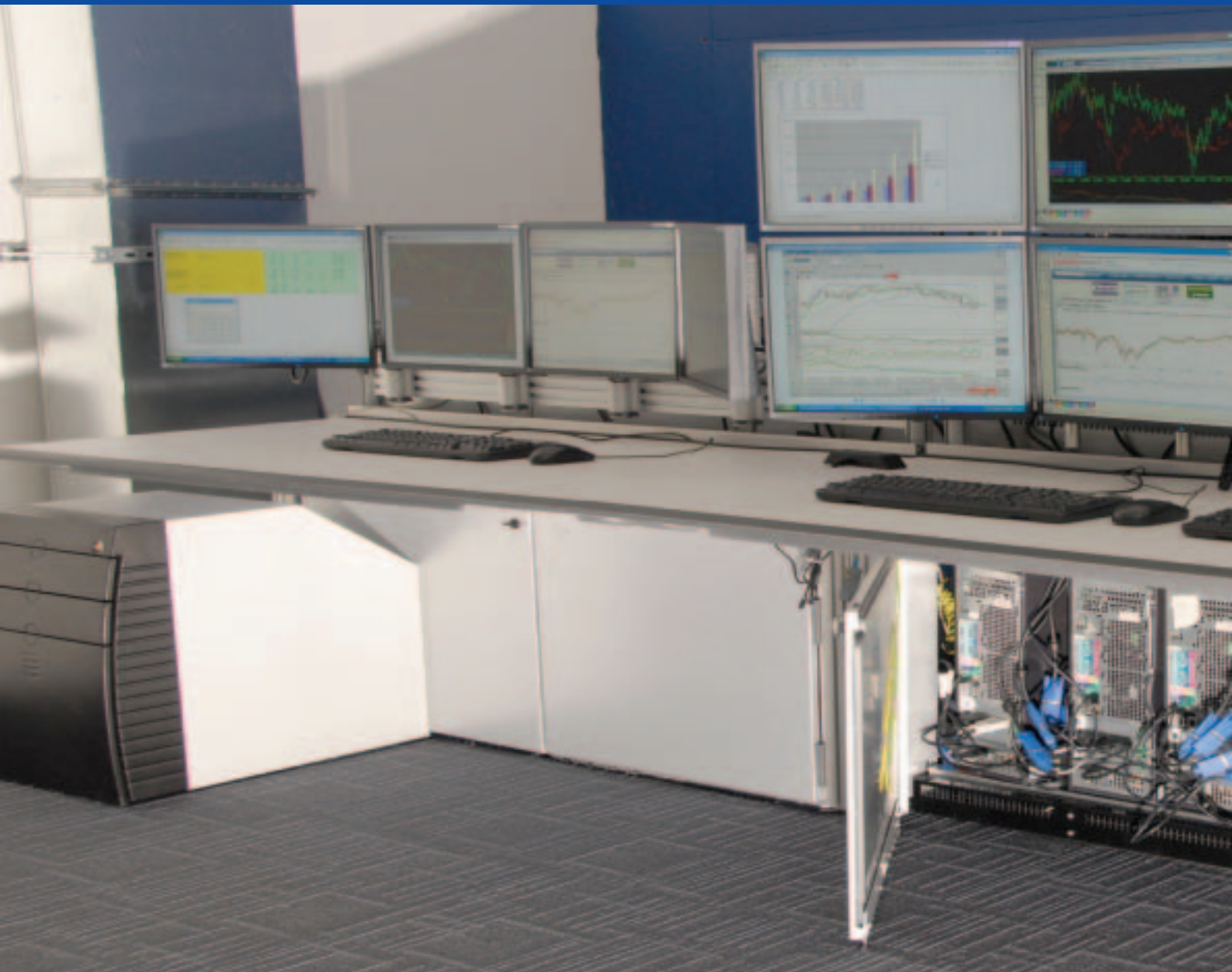
► Reliable and Resilient ►►

Each system supplied by TROX AITCS is designed to protect the comfort of the user and the IT equipment in all circumstances. Each desk cooler is supplied by two separate 24Vdc power supplies, providing. A fan failure alarm provides instantaneous indication of a problem, while performance is still maintained with just one working fan per unit.

► Installation ►►

With experience of more than 30 systems installations behind us TROX AITCS are more than happy to offer our systems on a design, supply, install and service basis. From the initial site survey to final handover TROX AITCS' experienced and qualified engineers will oversee the process, tailoring the system to meet the customer requirements and any constraints imposed by the building.





TROX AITCS Desk Cooling Systems

Features & Benefits

- *Cooling capacity up to 1600 W*
- *Dual centrifugal fans*
- *Fan status alarms*
- *Dual power supply*
- *PC temperature display and alarm*
- *Outputs to BMS*
- *Integral PC mounting platform*
- *CO₂ or chilled water cooling*
- *Floor mounted or drop-in design*
- *Suitable for new or existing installations*
- *Compatible with any desk manufacturer*
- *Heat absorbed at source*
- *Fan failure and leak alarms*
- *Complete system supplier*
- *Installation and commissioning*
- *High cooling capacity*
- *Completely flexible system design*
- *Reliable and resilient*
- *Quiet and unobtrusive*





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