



Data Centre Solutions

edp

Engineered Data Products



KOLDLOK®



HOTLOK®



PLENAFILL®



PLENAFORM®



stable**Air**

Solutions To Cut Cooling Energy Costs

DATA centre WORLD

CONFERENCE & EXPO

2-3 MARCH 2011 • OLYMPIA • LONDON

KoldLok® Raised Floor Grommets

KoldLok® offer a range of specially designed raised-floor grommets designed to seal cutouts within the raised-floor and stop cold air from escaping, whilst still allowing cables to pass through. By sealing cutouts within the raised-floor, the effectiveness of your cooling system is drastically improved.



46-1000-1010
Integral KoldLok®



46-1000-3030
Split Integral KoldLok®



46-2000-2020
Surface KoldLok®



46-2000-2030
Surface L KoldLok®



46-2000-2040
Surface XL KoldLok®



KoldLok® Mini

Features of KoldLok®

- Double layer of static dissipative filaments, where the thicker under layer filaments support the top layer.
- The grommets integrate with the raised floor static dissipation system, providing 1 GigaOhm of resistance.
- The grommets contain no loose or partially fastened parts, which can become separated or fall through the raised floor.
- The grommets are impact resistant and durable.

Cost-effective Benefits of KoldLok®

- Increases existing cooling unit capacity.
- Reduces the need to purchase additional cooling units.
- Improves equipment reliability and extends equipment life.
- Increases static pressure under the raised floor and improves cool air delivery through perforated tiles and floor grates.
- Facilitates Cold Aisle / Hot Aisle best practices.

KoldLok® Integral Raised Floor Grommets are designed to seal openings in new raised floor cutouts prior to the installation of communications or power cabling.

KoldLok® Surface Raised Floor Grommets are designed to seal a variety of existing raised floor tile cutouts and allow flexibility of removing tiles without capturing cables. The Surface L and Surface XL feature additional metal plates that allows them to seal larger openings



46-4000-10013
6" (152mm) Extended KoldLok®



46-4000-10012
3" (76mm) Extended KoldLok®

KoldLok® Extended Raised Floor Grommets are designed to seal a variety of existing perimeter openings, with the added flexibility of modification for large and unique openings

Extended Grommet Features

- Two models available: One with 3" (76mm) filaments, the other with 6" (152mm) filaments.
- Universal design fits both 24" and 600mm tiles.
- Black anodized aluminium alloy filament holder that can be disassembled for custom modification.

KoldLok® Mini Raised Floor Grommets are designed to seal small, 4"x6" (102mm x 152mm) cable openings. The KoldLok® mini is the first fire-rated KoldLok® and is positioned at a lower price point. Its single angled brush filaments provide between 95% and 98% effective sealing from bypass airflow, at a static pressure of up to 0.10 inches of water column, and are available with or without static dissipation.



Triad High Plume Floor Grilles

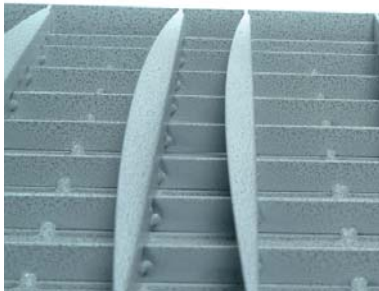
The Triad ICE™ Airflow Panel is a specially designed floor grille that features a unique Hi-Plume Stratification Fin. This fin increases cooling capacity and lowers server temperatures by 5 - 15 degrees Fahrenheit. The effect of this temperature decrease is an energy consumption drop of 4% for every degree Fahrenheit lowered!



The Triad ICE™ Airflow panel has been created to efficiently direct air to the servers. This cooling tile is designed to cool with as little wasted air as possible. The Uptime Institute tested traditional raised floor cooling and found only 28% of the air coming out of the tile actually goes through the servers. Triad Airflow panels redirect and concentrate the air to the server. This leads to better cooling with less air.

Triad has three performance parameters that can be captured in this temperature testing:

- Removes the short cycle that is prevalent in flat bottom tiles. This lowers the temperature of air coming out of the tile by 2 degrees celsius.
- Disperses the air into the server. This improves the mass flow rate through the server.
- Stratifies to 2.1m / 7' enabling you to cool the upper servers.

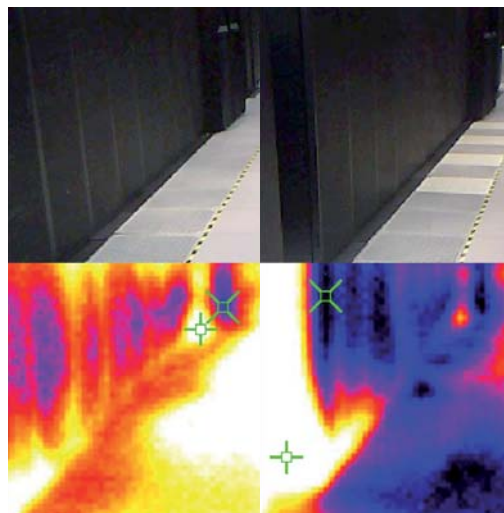


The Triad Airflow Panel is Different

The Hi-Plume Stratification Fin is scientifically designed to not only create positive airflow across the entire tile; the curved shape also creates a dispersed pattern of airflow out of the top of the tile. The effect "bends" the air outwardly allowing it to flow into the servers and reach servers at the top of the racks.

Before Installation

This thermal image of a row of racks, shows the amount of heat radiating from the servers despite a full row of 56% open floor grilles.



2 Minutes After Installation

In this thermal image just three Triad ICE™ Airflow Panels have been inserted into the row, the results are drastic. After just two minutes the cooling dispersion from the three panels creates a 360° dispersion pattern and a balanced stratification level that reaches the top of the rack.

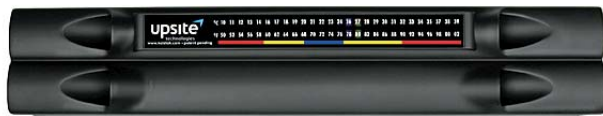
Features & Benefits

- 600mm x 600mm Heavy duty steel airflow panel with TopSat Leveler.
- Level can be adjusted both vertically and horizontally to allow a flush mount to the existing raised floor.
- Load rating of 680Kg (1,500lbs).
- Dual Lift-n-Lock integrated handles eliminate the need for suction cup lifters.





HotLok® Blanking Panels



The HotLok® Blanking Panel is Upsite's latest cost-effective green solution for energy consumption savings and carbon footprint reduction in data centers. It is a next-generation, patent-pending blanking panel that provides a 99+ percent effective seal for both 1U and 2U openings in IT equipment cabinets.

Both 1U and 2U versions, with or without a mounted Upsite™ Temperature Strip, help control hotspots and bypass airflow for optimized cooling effectiveness by preventing hot exhaust air or hot-aisle air from migrating to the air-intake stream at the front of the cabinet. Depending on placement in the cabinet, HotLok® Blanking Panels help deliver more cool air to the upper third of the cabinet, which is typically the hottest section and most prone to hotspots and equipment reliability problems.

The lightweight plastic unit is ergonomically designed to facilitate fast, easy, safe, tool-free installation and removal. Snap the Blanking Panel into any 19-inch EIA-310-E standard rack opening using the ample, inboard finger grips, designed to prevent injury to fingernails and knuckles. Removal is just as simple.

HotLok® Blanking Panels can be used in most cabinets with the following mounting rail openings:

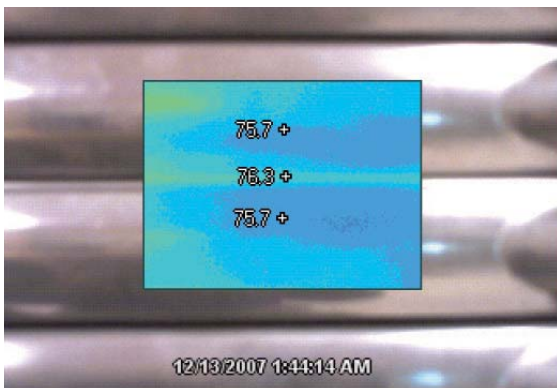
- o Square 9.5mm – 3/8th
- o Round M5 or 10-32
- o Round M6 or 12-24

The Blanking Panels neatly stack 10 high (for 1U openings) and 20 high (for 2U openings) anywhere in the server room, making them readily available for rapid equipment reconfiguration and eliminating the need for particulate-emitting storage containers.

The energy-efficient cantilevered sealing vanes eliminate the gap between adjoining HotLok® Blanking Panels or with installed equipment, providing a snug seal and no air leaks.

Priced competitively against available blanking plates, HotLok® Blanking Panels offer a cost-effective airflow control solution. Tool-free installation and removal saves on labour costs and energy costs.

All HotLok® Blanking Panels are fire-retardant, made of 100 percent recyclable ABS plastic, and RoHS compliant.



In a data centre with a conditioned airflow temperature of 72°F (22°C), a series of HotLok® Blanking Panels are installed. The consistent temperatures shown on the face and gaps between the panels reveal the highly effective sealing technology.



In a data centre with a conditioned airflow temperature of 72°F (22°C), and a series of non-HotLok Blanking Panels installed, the measured temperature of the heat radiating through the horizontal gaps is 91.5°F (33°C), which is much higher than the ASHRAE - recommended 77°F (25°C).

PlenaFill® Blanking Panels



Good practice in the Data Centre requires that unused U space is sealed to prevent hot exhaust air from finding its way to the air intake area at the front of the cabinet. PlenaFill® Blanking Panels are supplied in 27U sheets and can be cut to any required size, avoiding the need to store several sizes of traditional blanking panel. PlenaFill® is a proven solution to eliminate Hot Spots and reduce overall cabinet temperatures.

Features

- Pack of 10 PlenaFill® Blanking Panels equals 270 1.75" (44mm) rack mount U's.
- Fits all 19" EIA server racks with fixings available for square, round or threaded hole rails.
- Fire rated material: ULVO class 94.
- Quickly and easily fill large sections of unoccupied rack space, stopping bypass airflow.
- No more guessing at how many blanking panels are needed.
- Scalable / Less Storage Space / Less Freight Cost.
- Installs in seconds - no tools required!

Part Number: 49-PF-27U-10
 Includes: 10 **PLENAFill™** Blanking panels
 Dimension: 47.25" x 19.25" x .040"
 1200mm x 489mm x 1mm
 Weight: Approx. 1.40lbs (0.63Kg) each

49-PF-27U-10 does not include any attachment fasteners, which should be ordered additionally.

Server rack manufacturer EIA rail types vary: Square hole, Round hole, 10/32 threaded, etc.

Total shipping weight per pack of 10 = 17.5lbs (8Kgs)



Blanks Less Than 1U!



PlenaFill® is extremely flexible and can be adapted to fill awkward rack spaces, where traditional Blanking Panels simply cannot be installed. For Example, where there is a gap of less than 1U.



49-PF-PT:
 PlenaTool rivet remover designed for removing 49-PF-BR



49-PF-BR:
 Pack of 50 Black Snap Rivets for square hole rails.

PlenaFill® is Now Available in White

Features

- Same characteristics as standard PlenaFill®.
- Some improvement in light levels, due to reflectiveness of white material.
- Instantly identify areas of unused rack space.
- Looks better in light coloured racks, compared to standard PlenaFill®.



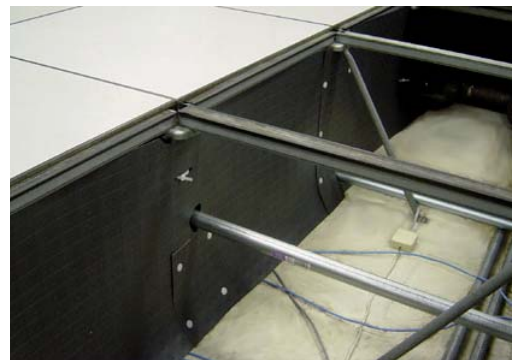
PlenaForm® Airflow Baffle System



PlenaForm® is a flexible, snap together, airflow baffle system which helps to solve dynamic thermal imbalances in Data Centres. It is scored both vertically and horizontally so sections can be removed or added onto to meet any height or width requirement. All angles of bend radius may be attained, including inside and outside mounting to raised floor pedestals.

The continuous punch out hole pattern allows attachment to any style raised floor pedestal at any height or width location with cable ties.

PlenaForm® is die cut from a flame retardant polypropylene compound that is inert, non-conductive, and non-hygroscopic.



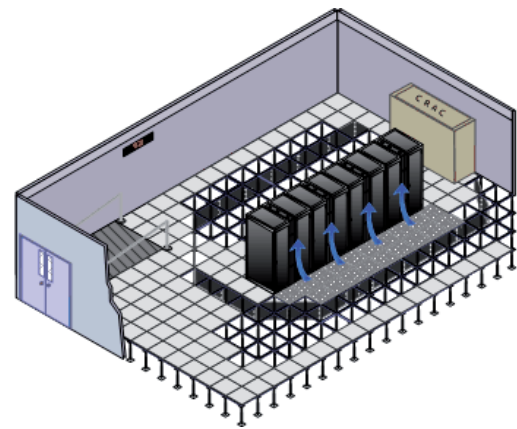
Today's high density server farms are requiring more power and cooling than ever before. The Data Centre evolution of an all air-cooled environment has become a real challenge for Facility Managers to deal with these heat related issues, cooling inefficiencies and increased server densities.

PlenaForm® is a passive and contributory holistic solution that can be easily installed as an effective "VUF" or Vertical Under Floor partitioning system, to direct airflow within the plenum space. PlenaForm® directs the source of the cold air from the CRAC units to where the air is needed. So instead of flooding the entire plenum with cold air you can, in effect, create rivers of cold air.

Velocity is the time rate of motion, therefore velocity pressure is the pressure caused by air in motion. When air from a CRAC unit is forced through a partitioned airflow space, static pressure is created. Without dedicated partitioning, as the air moves further away from a CRAC unit, the air velocity decreases.

To keep velocity pressure to particular 'hot zones', PlenaForm® helps maintain the static pressure further away from a CRAC unit and is a simple solution to cool thermal hot spots in Data Centres.

It is of utmost importance for today's Data Centre Facility Manager and Design Engineer to develop a master plan when laying out equipment in relationship to the CRAC placements. The ideal objective should be to create un-obstructed dedicated airflow paths to the equipment. Open floor penetrations must also be sealed to manage airflow more effectively.



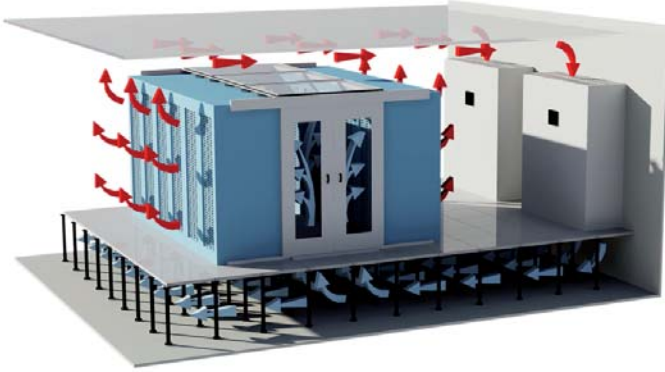
Easy to Install - Right Out of the Box!

- Control and Balance Data Center Airflow
- Separate Hot Aisles from Cold Aisles
- No Installation Tools Required
- On-Site Configurable (Width and Height)
- Fits ANY Raised Floor Pedestal
- Reduces Energy Consumption and Operating Costs
- An Inert, Non-Conductive and Non-Hygroscopic Material
- Flammability rating of UL V-0 per UL94
- RoHS and WEEE Compliant
- An Energy Saving and Thermal Tuning Tool

49-PF-2448-12

Pack of 12 PlenaForm® Baffles, 88 Cable Ties and 44 Snap / Screw Rivets

stableAir Cold Aisle Containment



stableAir Cold Aisle Containment is a non-intrusive, bespoke retrofit to Data Centres, whereby the cold aisle is contained to maximise cooling efficiency. By preventing the recirculation of air back to the CRAC units it significantly improves the efficiency of your building's cooling system and helps reduce your carbon footprint. By creating a positive pressure in the cold aisle, air is directed straight into the servers, making them run more efficiently and reducing the risk of failure. Also, in the event of a total cooling shutdown, stableAir Cold Aisle Containment stops a heat outage for 35 minutes, giving you more time to react. Being able to regulate the airflow enables better control of the

room's temperature. Increasing the temperature of CRAC units by 1°C, provides a typical saving in the region of 4% of cooling power bills. In addition, the chiller units will make greater use of natural air temperature (free cooling), further enhancing energy savings. 74% of server failures occur in the top third of the rack where the temperature is traditionally hotter. stableAir Cold Aisle Containment provides temperature equilibrium across all servers, no matter where they are positioned in the rack.

Features

- Retrofits to existing cabinets no matter what their height
- Light weight roof panels that are easily demounted for maintenance access to the top of a cabinet. The panels also have a high light transmission
- Tailor-made centre roof support bracket with a choice of fire protection options. A release mechanism allows the release of the panels at 58°C to allow sprinklers to distribute water to the source of the combustion
- Gas fire protection system also available, where roof panels feature a rubber seal to prevent gas leakage
- Doors are self closing with the option to keep aisle entry at floor level clear of obstruction
- Top and bottom door guide system ensures smooth running while maintaining door rigidity when closed
- Cost effective solution without reduction in quality

Benefits

- Cost savings of between 10% and 30% of current building cooling systems
- Power savings on room hardware (servers, switches, routers, etc.)
- Control of room temperatures, humidity, airflow and balancing
- Improved U-space utilisation
- Reduces the building's carbon emissions, improving eco friendly status
- Typical payback within less than 12 months

Optional Extras

Security locks range from stand alone to fully integrated building management systems, giving you access control. Systems include: HID Swipe Cards, Key Pad and Keyed Lock.



Monitoring the room's temperature is a priority when trying to control the Data Centre environment, with the majority of failures associated to temperature and humidity. For this reason temperature and humidity sensors, amongst others, are available to monitor the environment and send warning alerts when thresholds are met.



Geist Environmental Monitoring

With IT equipment continuing to increase its demand for both power consumption and cooling, understanding where and when these environmental conditions impact Data Centre dynamics, and reacting to adverse conditions can be a daunting task. Geist Environmental Monitoring products relieve this pressure and with a range of models available, finding a solution has never been easier. Geist make it easy to monitor the environmental conditions because all their monitors are viewable via a web browser. With simple Plug & Play installation, the monitor can be up and running in minutes, and with monitoring and alarm notification by e-mail and SNMP trap you'll know when there is an issue. Geist products can be integrated with network management software and are secured by password access.

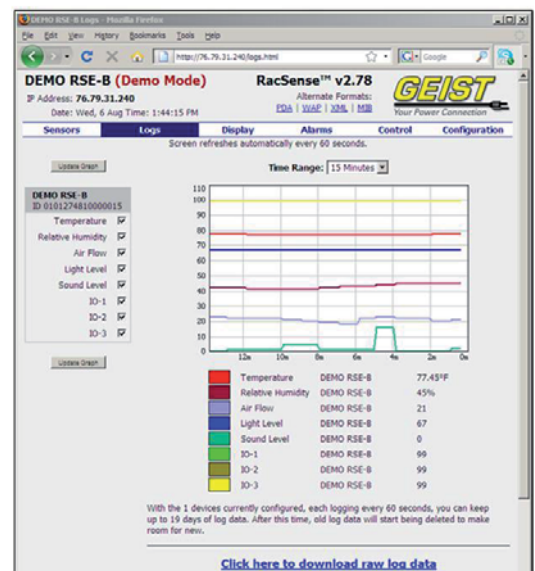


47-G1172 - Micro Monitor

- Small form factor that allows unit to be mounted in tight locations such as wall mounted cabinets.
- One Internal temperature & humidity sensor provides real-time status and trend data for temperature and humidity conditions.
- POE enabled, so does not require power outlet access.
- Threshold alarms - Convenient notification via e-mail, SNMP traps and / or XML.
- Accessible via any web browser. Easy installation and maintenance with no external software. View data graphs and analyse historical logs.

47-G1045

- 1U Rack mount form factor.
- Five internal sensors that provide current status and trend data for environmental conditions including temperature, humidity, airflow, light and sound.
- Five RJ12 ports for additional remote sensors or sensor port splitters.
- Three I/O ports for contact closure sensors.
- On board scrolling display, that provides local reading of user selected critical data.
- Threshold alarms provided by e-mail, SNMP traps and / or XML.
- Accessible via any web browser, for simple installation and maintenance.
- Interfaces with IP web cameras to enable monitoring of a cabinet or computer room.
- Range of additional sensors and accessories.



Intelligent Power Solutions



Raritan Dominion PX

Raritan's Dominion PX remote power management devices provide IT administrators with a solution to securely reboot and power on / off servers and other network devices from a remote location.

In addition, users can monitor power usage down to the outlet level, enabling highly accurate power metering. The Dominion PX can be used as a standalone unit or integrated with Raritan access solutions. The PX offers flexible and secure access, as well as user-configurable power sequencing. There are also environmental monitoring options available.

Models include a 1U 8 outlet 16 Amp unit, a 12 outlet vertical Zero U 16 Amp strip and 20 outlets in both vertical Zero U and horizontal 2U 16 or 32 Amp formats.



PDU Expert SL Series

The SL switched PDU series from PDU Expert, provides a secure power management solution with AC current monitoring. Access can be gained via TCP/IP networks or via serial interface. The SL series features Autonomous Auto Ping for each power outlet, using an ICMP ping package, and if required can automatically reboot locked-up IT equipment. Outlets can be remotely turned on / off or cycled. Current metering provides real-time, remote monitoring of connected loads, with user-defined alarms to warn of potential circuit overloads. The SL series also provides power sequencing that allows users to define the order in which to power on /off the attached equipment to prevent power in-rush. You can also schedule outlets for power cycling either periodically or weekly. Advanced software ensures that should a socket become overloaded only the affected socket will be shut down, not the complete bar.

The SL series also features capacity for temperature and humidity monitoring, and alerts can be sent via e-mail notification or via trap methods. The SL is also available with built-in modem that provides DTMF support.



intelliAmp

2bm iMeter

The iMeter is the solution to provide power monitoring to legacy Data Centres. It has been designed to help IT & Facilities Managers quickly and easily monitor Data Centre energy usage for analysis. Energy saving options can then be reviewed and implemented to maximise Data Centre efficiency.

The iMeter can be supplied with a voltage sensor (intelliVolt) or a current sensor (intelliAmp), or both. The unique design of the intelliAmp means it can be installed on any 16Amp or 32Amp cable without disruption to the network or downtime. The system allows up to 600 intelliAmps to be monitored from a single IP address, via web browser or SNMP. Alarms can be delivered via e-mail or SNMP alerts when high / low thresholds are breached.



The intelliAmps connect to an iMeter Master unit, which in turn can have Slave units cascaded from it to allow maximum expansion. These also support Go-Probe environmental sensors which include: temperature / humidity, airflow, water leak, smoke detection, security and motion sensors.

Russ Bassett Media Storage Solutions



Gemtrac

The Gemtrac high density storage system from Russ Bassett has an enclosed design for greater protection and security. Gemtrac has shelving sections that pull out like vertical drawers, supported on overhead tracks. Aisles are left clear as no floor mounted tracks are required. This cuts down on installation costs and makes relocation easier. Each drawer section features adjustable shelving in 1/2" (13mm) increments. For data tapes, shelves can include "discrete-slot" Media Racs (one tape p/slot) for "media-specific" collections. For added security optional security locks are available.

Unit Features

- Enclosed Design - Protects valuable media collections
- Optional Locks - Provides positive security and controlled access
- Two Case Heights - 81" (2057mm) and 90" (2286mm)
- Five Drawer Widths - 5" (127mm), 5 1/2" (140mm), 6" (153mm), 7" (178mm) and 8" (204mm)
- Heavy Gauge Welded Construction
- Powder Coat Finish
- Leveling Glides
- Easy Ganging - For multiple unit installations



ProMedia Cabinets

Russ Bassett ProMedia Cabinets are a range of 6 different sized cabinets with 5 different drawer heights, specifically designed to store a complete range of media cartridges. The drawers are configurable to store a mix of media with the use of flat steel dividers which can be adjusted in 1/4" (6mm) increments. Optional wire racks provide individual slot storage when required.



7-drawer Overfile connects onto 48" (1219mm) wide cabinets and stores data media formats vertically on shelves, with stop-lock connectors that are adjustable in 1/2" (13mm) increments (without tools or additional hardware) for maximum flexibility.

Micrographics Cabinets

The Classic collection of media cabinets from Russ Bassett are the original cabinets that set the standard for media storage. The cabinets are quickly recognised by their centre-mounted, chrome flush drawer pull. Each cabinet is configured with all the same drawer heights and available in 3 styles, Vertical, Lateral and the high capacity Extra Deep Lateral. Each of these styles is then available in 3 heights. When you combine all of this with 3 drawer heights, you have a huge selection to choose from. Available for Microfiche and 16mm / 35mm Roll Film.



Other Solutions From EDP Europe:



19" Cabinets



Air Conditioned Cabinets



Water Cooled Cabinets



Soundproof Cabinets



Cabinet Access Control



KVM Console Drawers



EZ-Path Fire Stop Cable Barrier



Battery or Manual Server Lifters



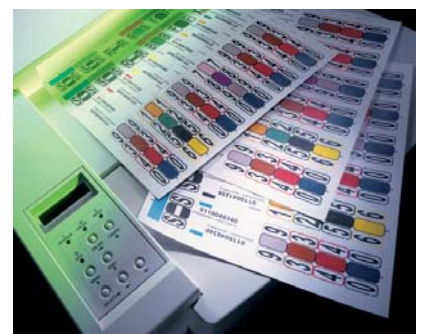
Computer Crash Carts



Open Rack Media Storage



Media Labels



Colorflex Filing Solutions



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