

Powerflor®

CABLE MANAGEMENT SYSTEM



Custom Products & Services, Inc.

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"Your source for workplace solutions"

POWERFLOR USA,
INCORPORATED
CABLE MANAGEMENT SYSTEMS

CALL TOLL FREE: 888-444-1202

What is a

Powerplant

System ?



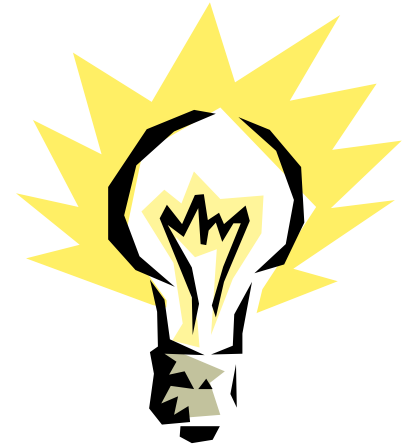
The Powerflor System is....

- **A completely integrated, Plug & Play Cable Management System.**
- **A means of providing the utility services (i.e. Power, Voice, Data, Video, etc.) to the workstation, with total flexibility in outlet location and total accessibility to the cabling.**
- **An alternative way of providing the horizontal cabling infra-structure in commercial and educational building environments.**

The Powerflor System is as much a **CONCEPT** as it is a **PRODUCT**.

The Concept is

**a Totally Flexible,
Completely Accessible,
Easily Re-Useable,
Horizontal Building Cabling System
that happens to be provided
with a floor.**



A System that allows you,

- to relocate any outlet to exactly where you want to put it, without replacing it or re-wiring it.
- complete access to the entire cable run for service or upgrade replacement without any tools.
- to relocate and reuse the entire cabling system.

How are these services provided now ?

Your service cabling is currently located within your space in one or more of the following spaces,

- Building Voids (Ceilings, Walls, Chases, etc.)
- Power Poles
- Core Drilled through the Slab
- Floor Duct Systems
- Systems Furniture Raceways
- Modular Furniture Pacs

The problem is that all of these means offer little to no flexibility or accessibility !

Today's Businesses Require Change !

In order for today's businesses to be successful they must be able to **CHANGE !!!**

Change Staff, **Change** Resources, **Change** Technologies, & **Change Quickly & Frequently.**

Now, more than ever, your environments must adapt to meet the current needs and change to meet the new need.

These changes usually require Communication Cabling Installers, Electricians, Furniture Installers, Designers,

and Lets Not Forget your company's Facility staff's time and Down Time for the staff's area that is being changed.

Just Suppose

You were able to deliver
POWER and **CONNECTIVITY**
to your Staff's work space,

When they need it,
How they need it, and
Where they need it,

without any **Tradesmen** or **Tools**,
in **Minutes** instead of **Days**.



Lets Look at the

Powerfloor Solution

Its Components and
How it works :

The Powerflor System is....

- **Loose laid and not attached to the building.**
- **Standard Panel Assemblies except for edge pieces.**
- **Edge Pieces are “ Field Cut to Fit “.**
- **Provided Complete with**
 - **Finished Carpet Surface**
 - **All Electrical Power Outlets & Cabling**
 - **All Data Outlets & Cabling**
 - **All Phone Outlets & Cabling**
 - **All Intermediate Wiring Closets**

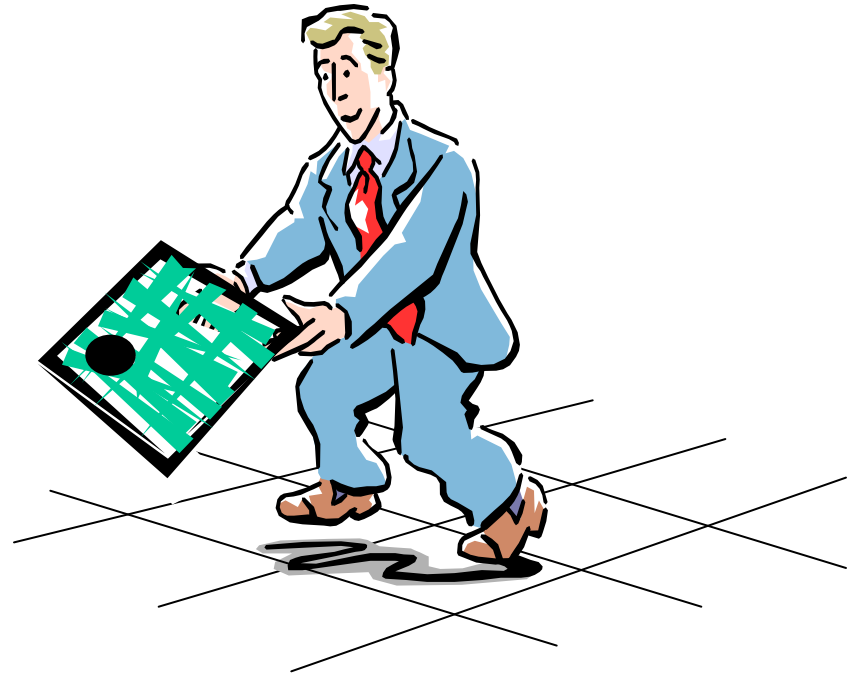
It works because....

Since all of the panel assemblies are the same size, they can be interchanged with any other panel assembly. So panels with outlets in them can be changed with solid panels anywhere in the system.

And since all of the cabling is Plug & Play, Outlets can be disconnected and re-connected at will, without any tools.

But in most instances outlet relocations can occur without disconnection.

And cabling is completely accessible by simply removing the panel assemblies that cover them.



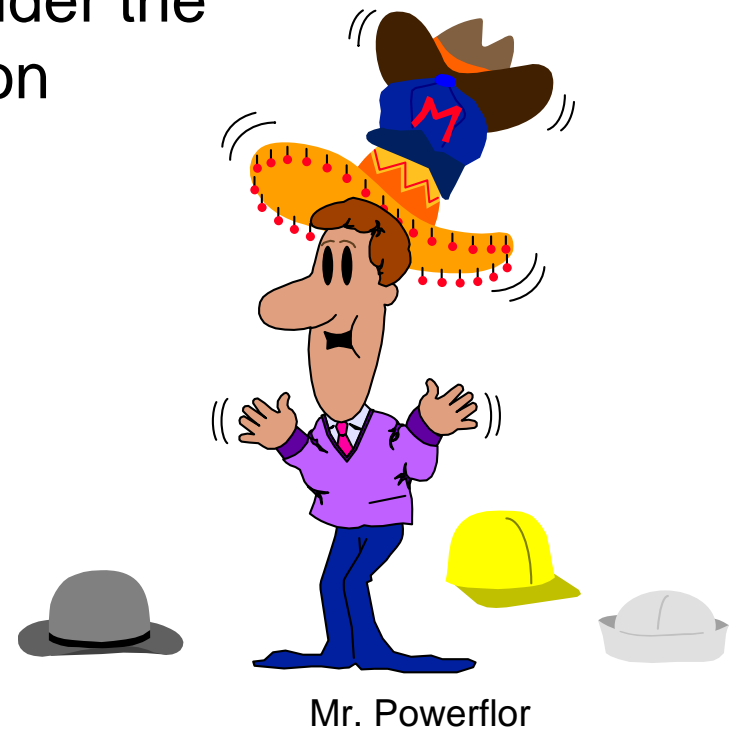
How much does it Cost ?

This is the best part, the **Powerflor Solution** usually **costs less** than the cost of traditional means of providing the same products and services.

Even if it doesn't, when you consider the **Cost** of all the changes, this option **Saves you money !!!**

Because the Powerflor Option provides a system that spans what has been many different construction / vendor areas.....

When comparing costs we have to wear many different hats.



Return on Investment ?

When comparing the cost of the Powerflor Solution, you need to consider the traditional costs of

- **Design, Planning, & Change Orders**
- **Carpeting**
- **Electrical, Data, & Communication Outlets and cabling**
- **Raceways / Conduits**
- **Plenum Rated Cabling**
- **Fire Protection Costs.**
- **Square Footage & Lifetime Costs of Wiring Closets.**
- **Testing Costs.**
- **Formalized Depreciation Savings.**

And what will you need to spend to keep the space usable over the life of the space !

“CHURN RATE COSTS”

The Elements of the Powerflor System

Flooring

Components



- Poly Carbonate Pedestals
- Carpeted Panel Assembly
- Poly Carbonate Perimeters
- Powerport Outlet Grommet
- Z Trim
- Ramps & Rails

Powerflor Pedestals & Panel Assembly



The **Pedestals** are manufactured from a polycarbonate material that is PVC free.

They have been independent laboratory tested for a concentrated load of **1140 pounds per square inch.**

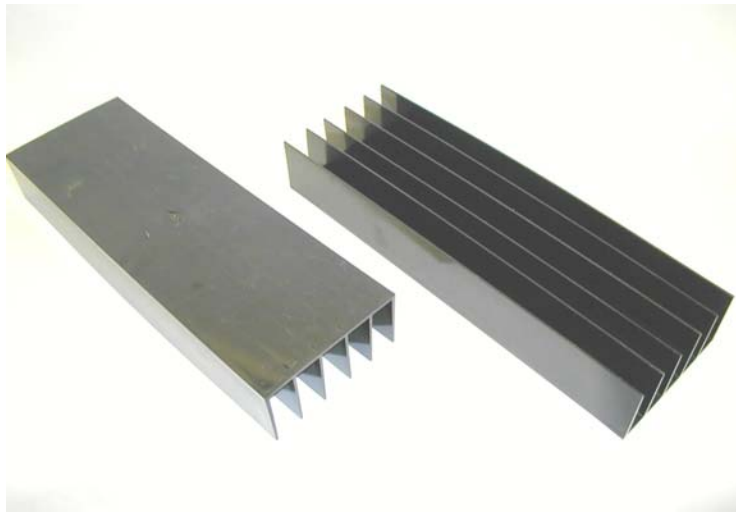
They are **Class A Fire Rated** under UL94 listing.

The pedestals are attached to a **standard 18" or 50 cm carpet tile** using pressure sensitive adhesive.

The panels are installed loose laid over **Volara Foam.**

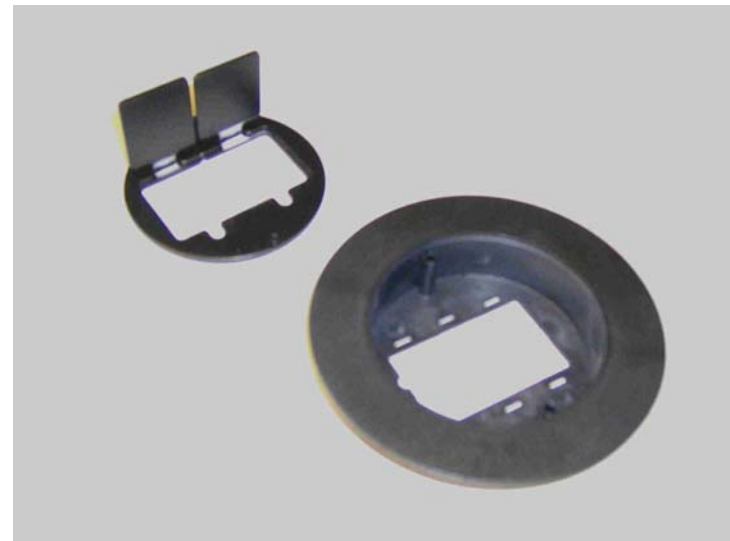


Powerflor Perimeters & Power Ports



The **Perimeters** are manufactured from the same polycarbonate material as the pedestal and are designed to be field cut to fill in odd dimensions, radius' or angles.

The **Power Port** is our universal outlet mounting grommet. It can be located in the center of any pedestal and used for either Electrical or Voice Data type outlets. You can have a maximum of four outlets per panel.



Powerflor Ramps, Rails, & Trim

The Flooring components are completed with elements that provide access and or, trim the floor where needed.

The system includes a full selection of both **Non-ADA & ADA Ramps**. Our Non-ADA Ramp is a 1/6 Slope and is 18" long. Our ADA Ramps are 1/12 Slope and 36" long & 1/20 Slope and 52" long respectively.

Z Trim for edging the system when it is not being stopped at a wall.

The system also includes **Railings** for protecting access areas. They are available in 2' & 3' lengths and can be attached end to end, and at angles. With finished ends or wall mount ends.



The Elements of the Powerflor System

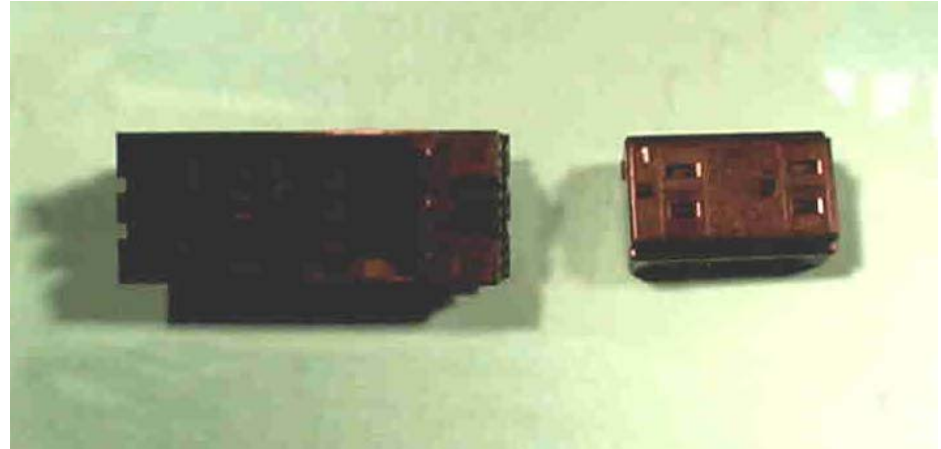
Electrical Components



- Junction Box
- Duplex Outlet Insert
- Cable Harnesses

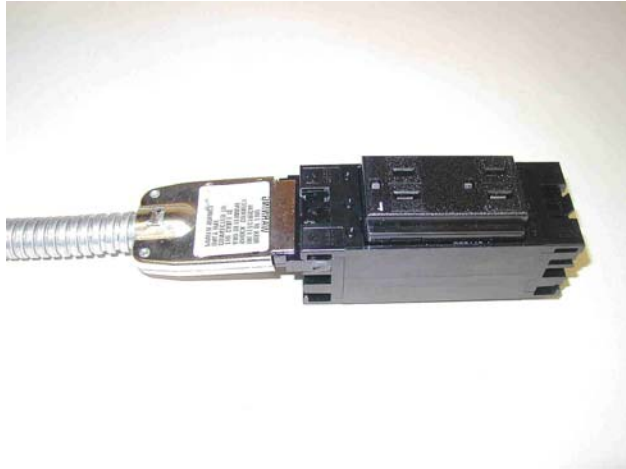
Powerflor Electrical System

The Electrical system consists of four basic parts, the **Junction Box & Duplex Insert...**



And the inter-connecting cable harnesses. The cable harnesses are available in various lengths and are provided as **power input whips** or **double ended** for connecting two junction boxes.

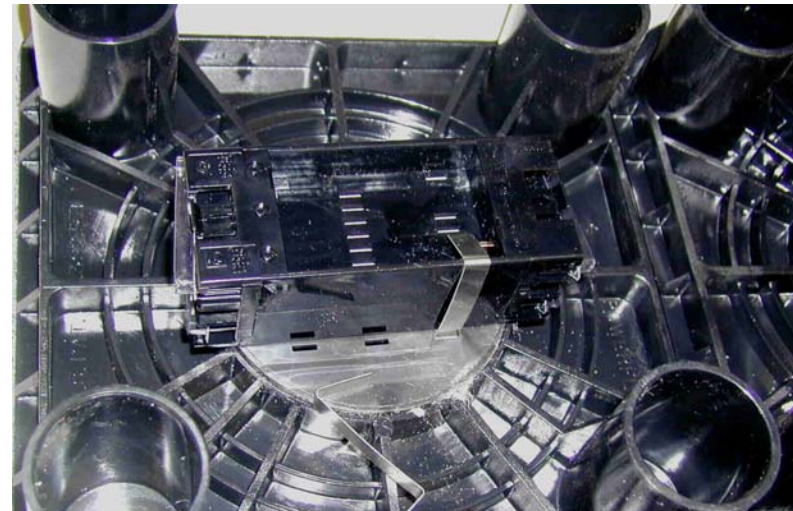
Powerflor Electrical System



The total system is **Plug & Play** with no hard wiring required. The components just snap together and cannot be connected incorrectly.

The **Duplex Inserts** are numbered to identify which circuit is being used.

The Electrical Outlets clip into the back of the Power Port using **Spring Tension Clips** and provides an easily accessible and very flexible electrical system.



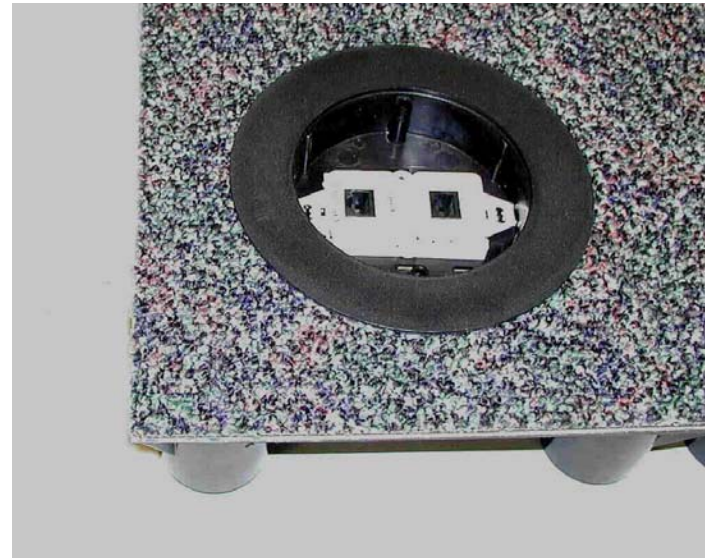
Some Technical Stuff

- The Standard Powerflor Electrical System is as manufactured by Tyco/AMP and is their, 8 Wire “ Innergy “ system.
- This system provides four 20 ampere circuits per building feed.
- Standard Powerflor System provides 20 ampere duplex outlet inserts.
- Standard System provide three standard circuits (shared neutrals & grounds) and one isolated circuit.
- Each outlet location is powered with all four circuits so Inserts can be easily changed for alternate circuit feed without rewiring.
- Optional system configurations include two isolated circuits per building feed and isolated grounding for all circuits.
- Standard Electrical System is completely shielded from Data/Comm cabling.

The Elements of the Powerflor System

Data / Communication

Components



- Angled Adaptor Plate
- Pre-Terminated Cable
- LDS Utility Center

Powerflor Data / Comm System



The standard Data Outlet consists of an **Angled Adaptor Plate** suitable for the mounting of the RJ 45 Jack..



And **Pre-Terminated Category 5e or Cat 6, 4pr. UTP Copper Cables**. These cables are provided with a RJ 45 Jack connector on one end for connection into the back of the Angled Adaptor Plate and an RJ 45 on the other end for connection into a standard patch panel.



Powerflor Data / Comm System



The Angled Adaptor Plate is screw mounted into the top of the Power Port and the pre-terminated cabling is attached to the kit, from the bottom.

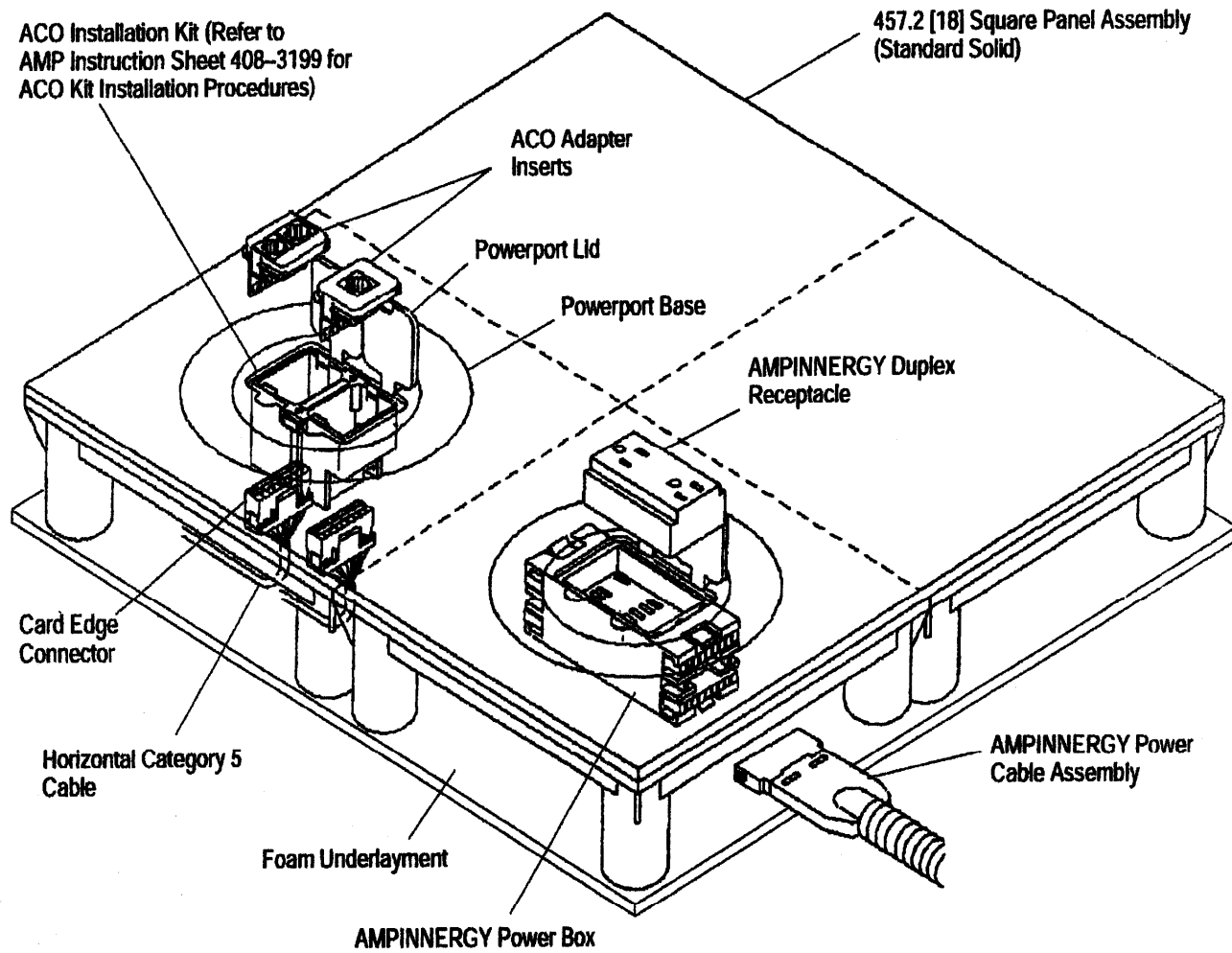
The total system is **Plug & Play** with no field punch down wiring required. The components just snap together. And are easily changed or relocated.



Some more Technical Stuff

- Standard Powerflor Data/Comm System is an Enhanced Category 5 or Category 6 EIA/TIA rated system.
- Standard Powerflor system includes pre-terminated 4 UTP copper cabling.
- Powerflor also offers Fiber Optic Cabling and Outlets for use in its flooring components.

Complete Powerflor Panel Assembly

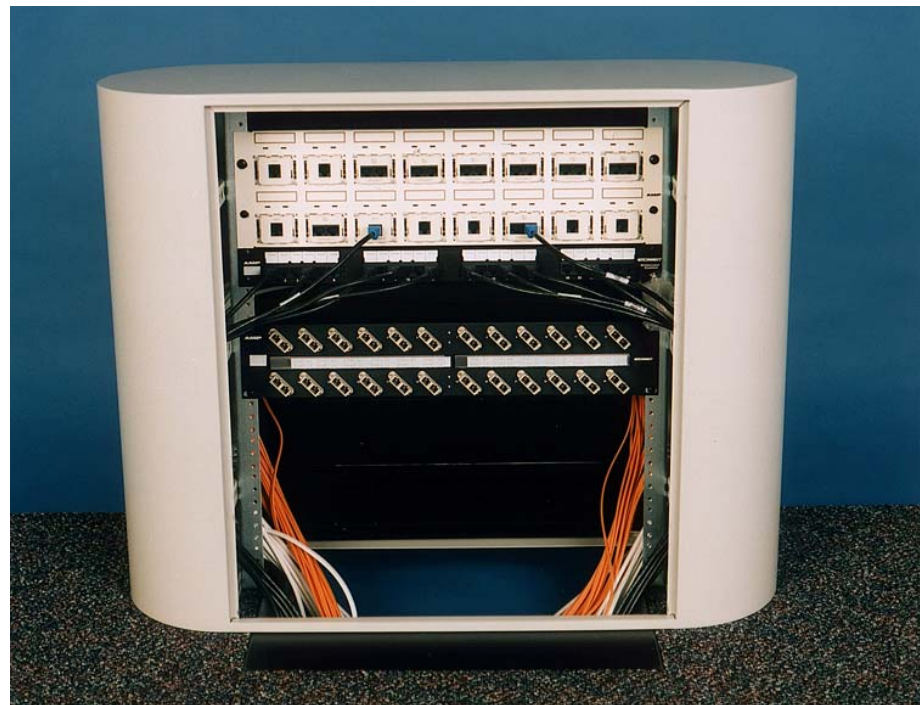


Powerflor Data / Comm System

Local Distribution System

Standard Powerflor
Local Distribution
System, Utility Center
provides the most
flexible and cost
effective means of
providing

“ Zone Distribution “ .



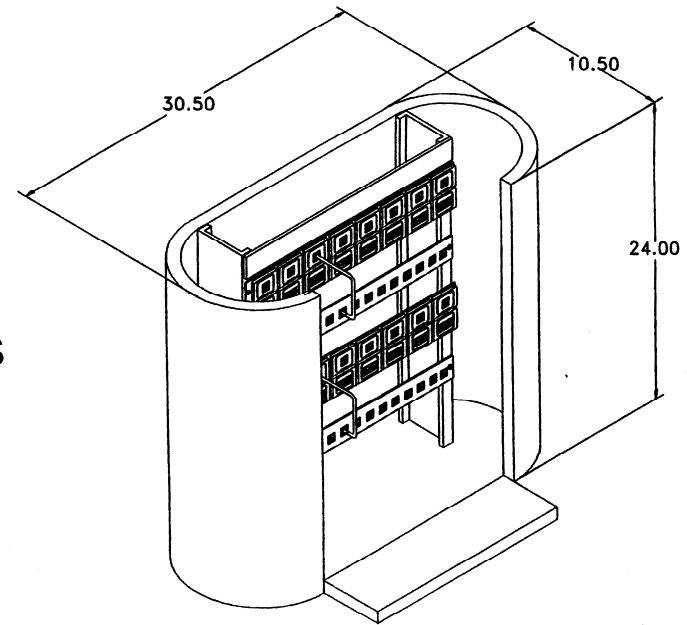
Powerflor Data / Comm System

The **LDS Utility Center** is totally **Plug & Play** with no field punch down connections required. The Utility Center is integrated with the Powerflor Cable Management System and provides a mini-wiring closet for use as a consolidation or distribution point.



Powerflor Data / Comm System

The **LDS Utility Center** is provided with an open base that allows for it to be installed in the Cable Management System in place of any full panel. This allows for **full cable access** from under the flooring components to within the Utility Center.



The **LDS Utility Center** provides a **standard 19" wire rack mounting** and can be used for mounting **patch panels or any required electronic devices** (I.e. Hubs, Routers, Muses, Muxs, etc.)

The Utility Center functions as the control point for up to 64 output service connections and can easily be changed or re-located.

About the Carpet Tile,

Powerflor uses as a standard all 18" x 18" or 50 cm x 50 cm Carpet Tile selections available from any carpet tile manufacturer.

Most manufacturers offer both a Hardback Tile, which contains PVC's and a Soft / Cushionback, which is usually PVC free.

PVC free backing material allows us to use " Pressure Sensitive Adhesive " in mounting our pedestals to the carpet tile. This provides the client with the opportunity to change carpet tiles at some time in the future, with greater ease.

Hardback Carpet Tile with a PVC content can be used, but usually requires use of permanent adhesive.

System Features & Benefits..

- **Completely Integrated Cabling System** that includes complete and versatile Electrical, Data, and Communication systems, provided in a user friendly, floor located, carpet finished environment.
- **Total Flexibility** in **Outlet locations** and **Re-Locations**.
- **Total Accessibility** to all cabling for **changes, upgrades, or servicing**.
- **Minimum Building Construction** impact. **Lower Planning Costs, Quicker install Timeframes, Elimination of Change Order Activities.**
- **Entire System** can be **Relocated** and **Re-Used**.
- **7 Year Depreciation** vs. 39 Year for permanent Building Items.
- **Entire System** is protected with a **10 Warranty**.

Installation Review

Installation is where the
Powerflor Cable Management System
Really shines...

Its **very fast and very easy.....**
And its when you can really start to
see what the system can do for you.

Lets take a quick look at the **steps of
an installation.**



Sub-Floor Preparation

Sub-Floor needs to be prepped as if carpeting was to be installed. All severe irregularities should be Flash Patched.



Sub-Floor needs to be clean and free of debris. Broom swept is usually acceptable, but vacuum assures a clean area and reduces dust.

Install Volara Foam



The Volara Foam is rolled out over the area, cut around obstacles and kept as flat as possible.

The foam is rolled out edge to edge and spot taped as required. It's a good idea to start laying panels on the foam as you go.



Install Full Panels

Start placing full panel assemblies against one wall or other fixed border. Remember to place and bump to hand tight.



Place full panel assemblies first, holding the panels square and working around obstacles, leaving cuts to last.

Install Perimeters



After all full panels are set you need to fill in the odd size / shaped areas using perimeters.

Making sure full panels are tight, measure from last panel to wall. Cutting a cardboard template will be helpful on radius cuts.



Install Edge Carpet Tiles

Cutting Perimeters with an appropriate saw is important for accurate cuts.



Place all cut perimeters along edging as required.



Measure, Cut, and Apply pre-glued carpet tiles on perimeters along edge.

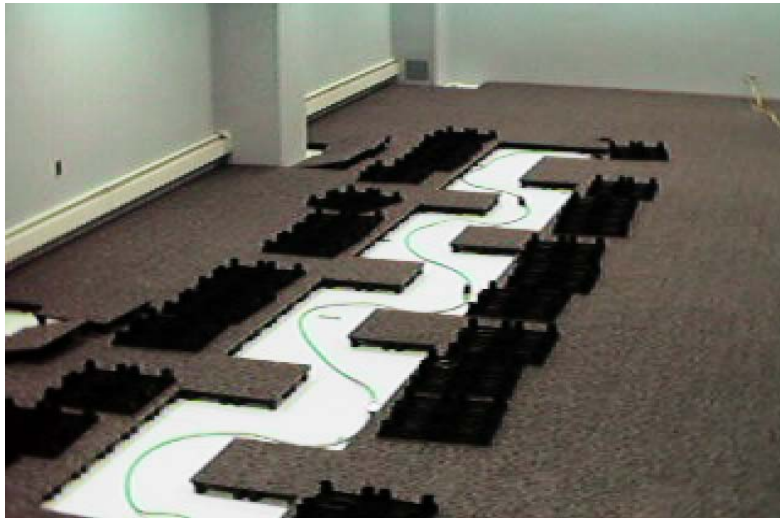
Review Completed Floor

With all flooring components installed, check drawing for Power Port locations and correct any mis-placed panels.



Install Electrical

All Electrical
Duplex Inserts, Junction boxes
and **Cable harnesses** can be
sorted, laid out, and snapped
together, on top of floor.
And placed under floor
afterwards.



Install Electrical

Turn Panel up side down and snap junction box into Power Port, and install tension clips by clipping over edge of box.

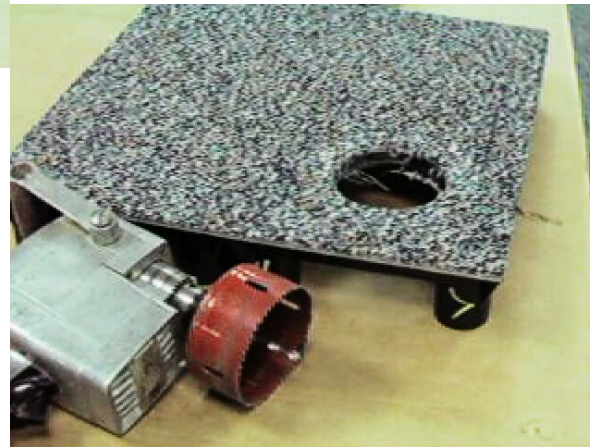


Single Ended, Power Input Whips need to be installed into building power source by licensed electrician. These power cables can be installed directly into a Electrical Panel or a building junction box.

Add an Outlet



Adding a Power Port for an outlet is easy as 1 – 2 – 3. Drill from back with 4" hole saw.

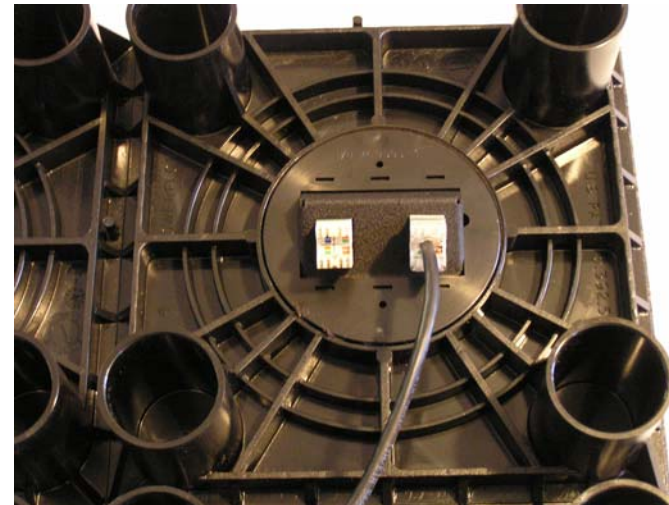


And tap in Power Port from top.



Install Data / Comm

Again all Data / Comm cable assemblies can be sorted and laid out on top of floor. Cable routing can be determined and cables bundled. Then you open the appropriate row of panels and place the cable bundles on the sub-floor and replace the panels. Feed cable ends thru the Power Port, snap the connector into the angled adaptor plate, mount the plate into the powerport, and replace panel in floor.



Install LDS Utility Center



Remove and Replace Panels over cables making sure panel leg is not sitting on cable.

Feed other end of cable back through the floor to LDS.



Cables run under the floor and up into the LDS, connecting to the internal components of the center.

Install Ramp



With floor installed up to access point, locate Ramp as per drawing. Drill ramp and bolt into sub-floor.



Place pre-glued carpet tiles over ramp to bottom. When possible do not allow carpet tile seam to occur at top or bottom of ramp.



Completed Installation

Vacuum area
and remove
all debris.

Do not be
concerned
about the
visibility of
the seams,
they will knit
as the floor is
used.



I am interested in a
Powerflor
Solution
For my space.

What do I do Next ?



The Budgetary Estimate

Once a potential project has been identified, we need to provide you with an estimate of cost.

This is easily accomplished with our **Budgetary Estimate Sheet**.

All we need to know is the **Total Square Feet** to be served with Powerflor and the **Total Number of Workstations**.

We can immediately provide you with the **Budgetary Estimate**.

<i>PLEASE NOTE: This is an Estimate Only, Do not Order from this Document</i>			
Authorized Dealer	Tek Connect, Inc. 1106 Emerald Drive Bel Air, Maryland 21014 Phone: (410) 893-2020 * Fax (410) 893-0486 e-mail : TCTEKCON@aol.com		
2000 40	Est. SF No. of W/S		
10/19/99	PROJECT:	Sample Project Name Sample Project Address City, State - Zip Code Division / Building / Room	
QTY	PART	DESCRIPTION	
<u>POWERFLOR COMPONENTS/MILLIKEN CARPET (MIDNIGHT SPARKLE / COLORWEAVE)</u>			
972	P-184	PANEL ASSEMBLY	
1	RA-3512-53	RAMP-1/12 SLOPE /35 Long x 0 to 3 high x Up o 53"	
1	Z-TRIM	Z-TRIM EDGING (72 long)	
1	RAIL -S36	RAIL STRAIGHT, 36" Long	
<u>VOICE/DATA-LDS PRETERMINATED-COPPER TO COPPER</u>			
40	TC-40609-1	ACO Base Kit	
40	TC-5611-1	ACO Single Insert -RJ11 / CAT3	
40	TC-8908-1	ACO Single Insert -RJ45 / CAT3 / 568A	
2	TC-LDS-1	LDS UTILITY CENTER	
7	TC-7870-1	PATCH PANEL / 24 Port / CAT5 / 110 to MOD.	
80	TC-8426-4	Preterm.4PR CAT5 Copper Mod / Plug 100' Green (FEEDER CABLE NOT INCLUDED)	
<u>AMPINERGY COMPONENTS</u>			
80	TC-6116-1	Duplex Outlet Insert - CIRCUIT #1	
80	TC-6888-1	JUNCTION BOX-EIGHT WIRE	
5	TC-6148-8	8 Wire Cable Assm. Single End / 96"	
80	TC-1-6127-1	8 Wire Cable Assm. Double End / 104"	
5	TC-2-6127-3	8 Wire Cable Assm. Double End / 264"	
Product Only / GSA Net Cost Estimate			\$74,694.44
PRICING IS GOOD FOR (90) DAYS			

Project Proposal

Once we receive the completed **Project Site Survey**, we can then proceed with the final development of the project.

We will then provide you with a formal **Proposal & CADD Drawing** for your review.

Powerflor Proposal		Date :	August 2,1999	
		Proposal Number :	991015C	
Sold To :		Ship To :		
A. T. & T.		President's Council for Y2K Conversion		
2020 K Street, N.W. Suite 550		1800 G Street, NW		
Washington, D.C. 20006		Washington, D.C.		
Att: Ms. Linda Remick				
We respectfully submit the following proposal for your review and consideration. To provide all products and services in accordance with the following specifications, terms, conditions, and costs.				
Quantity	Model Number	Product Description	Net Each	Amount
2529	P-184	Panel 18x18x3 / 4 Cell	\$50.49	\$127,689.21
35	P-185	Panel 18x18x3 / 2 Cell - 3 Perimeter	\$55.70	\$1,949.50
189	P-186	Panel 18x18x3 / 6 Perimeter	\$66.36	\$12,542.04
30	P-184-01	Panel 18x18x3 / 4 Cell / # 1 Powerport	\$77.82	\$2,334.60
36	P-184-02	Panel 18x18x3 / 4 Cell / # 2 Powerport	\$77.82	\$2,801.52
31	P-184-03	Panel 18x18x3 / 4 Cell / # 3 Powerport	\$77.82	\$2,412.42
38	P-184-04	Panel 18x18x3 / 4 Cell / # 4 Powerport	\$77.82	\$2,957.16
35	P-184-012	Panel 18x18x3 / 4 Cell / # 1 & 2 Powerport	\$105.14	\$3,679.90
13	P-184-013	Panel 18x18x3 / 4 Cell / # 1 & 3 Powerport	\$105.14	\$1,366.82
2	P-184-023	Panel 18x18x3 / 4 Cell / # 2 & 3 Powerport	\$105.14	\$210.28
27	P-184-024	Panel 18x18x3 / 4 Cell / # 2 & 4 Powerport	\$105.14	\$2,838.78
24	P-184-034	Panel 18x18x3 / 4 Cell / # 3 & 4 Powerport	\$105.14	\$2,523.36
3	RS-186-18	Ramp 1/6 Slope / 18x18x 0 to 3 High	\$49.45	\$148.35
2	RA-3512-39	Ramp 1/12 Slope / 35 long x 0 to 3 high x Up to 39" wide	\$566.56	\$1,133.12
1	RA-3512-53	Ramp 1/12 Slope / 35 long x 0 to 3 high x Up to 53" wide	\$893.70	\$893.70
2	RA-3512-60	Ramp 1/12 Slope / 35 long x 0 to 3 high x Up to 60" wide	\$1,232.02	\$2,464.04
1	ZTRIM	Z Trim Edging - 72 long	\$53.87	\$53.87
208	TC-40609-1	ACO Base Kit	\$5.20	\$1,081.60
208	TC-8909-1	ACO Single Insert - RJ45 / Cat. 5 - T568B	\$4.94	\$1,027.52
102	TC-5645-1	ACO Insert - 75 Ohm F Series BKHD. Splice	\$1.95	\$198.90
102	TC-5644-1	ACO Blank Insert	\$1.30	\$132.60
208	TC-8425-4	Preterm.4pr Copper UTP Cat.5 Mod/Plug - 100' Blue	\$98.37	\$20,460.96
135	TC-6888-1	Junction Block - 8 wire	\$23.94	\$3,231.90
58	TC-6116-1	Duplex Outlet Insert - Circuit # 1	\$6.64	\$385.12
58	TC-6123-1	Duplex Outlet Insert - Circuit # 4 Isolated Ground	\$6.64	\$385.12
35	TC-7011-1	8 Wire Cable Assm. Single End / 216"	\$156.15	\$5,465.25
6	TC-6127-5	8 Wire Cable Assm. Double End / 38"	\$37.21	\$223.26
6	TC-2-6127-0	8 Wire Cable Assm. Double End / 60"	\$53.09	\$318.54
15	TC-6127-9	8 Wire Cable Assm. Double End / 80"	\$61.42	\$921.30
29	TC-1-6127-1	8 Wire Cable Assm. Double End / 104"	\$71.31	\$2,067.99
24	TC-6127-4	8 Wire Cable Assm. Double End / 140"	\$86.66	\$2,079.84
13	TC-3-6127-3	8 Wire Cable Assm. Double End / 180"	\$104.10	\$1,353.30
40	TC-2-6127-3	8 Wire Cable Assm. Double End / 264"	\$142.62	\$5,704.80
13	YKB4000	GROMMET PASS-THRU OPEN MARKET	\$7.50	\$97.50
			\$0.00	\$0.00
Sub Total :			\$213,134.17	
Less Quantity Discount of : 4%				\$8,525.37
Total Product GSA Net Price :				\$204,608.80
Project Installation Cost :				\$22,000.00
Total Amount :				\$226,608.80
We appreciate the opportunity to offer our products and services and look forward to assisting you with the completion of your project.				
Sincerely yours,				
Edward H. Franz				

For More Information.....

Check out Our WEBSITE

www.custom-products.com



Custom Products & Services, Inc.

6140 Claude Way E.

Inver Grove Heights, MN. 55076

PH: 888-444-1202 (Toll Free) or 651-452-0113 FAX: 651-452-2264

E-MAIL: info@custom-products.com

WEBSITE: www.custom-products.com

"Your source for workplace solutions"

In closing.....

**THANK YOU FOR YOUR TIME
& INTEREST !**

**AND WE LOOK FORWARD TO
ASSISTING YOU WITH ANY OF
YOUR SPACE DEVELOPMENT
REQUIREMENTS.**