

ServShield

**Dust, dirt, and moisture are
the enemy. Protect yourself
with the ServShield.
Now at a lower price!**



FEATURES

- » Resists circulating dust and moisture.
- » 36" deep to accommodate servers.
- » Bottom section is 17U with M6 Rails; top section is 14U.
- » The perfect choice for dependable hardware protection in manufacturing environments and other industrial areas subject to harsh conditions.
- » Guaranteed for life!
- » Three fans generate a cool 225 cfm to keep your hardware healthy.
- » Includes vented, fixed shelf for mounting your monitor.
- » Bottom door has a separate key to keep your hardware safe and secure.
- » Casters and leveling legs included!
- » Gasketed doors and filtered air intake system provide the highest level of resistance to circulating dust and water.
- » Includes a finger latch and magnetic strip on the keyboard drawer.

OVERVIEW

How do you keep servers, process controllers, and other high-end network hardware in tip-top shape when your workspace circulates more dust than an F5 tornado? Answer: the ServShield Cabinet from Black Box.

Dust: a processor's worst nightmare.

What happens when a processor finally gives in to dust? Maybe you'll have to call a certified technician to service it at \$50 an hour—if you're lucky. If you're not, maybe the subsequent heat buildup will completely destroy your equipment. Either way, you're looking at costly downtime and an easily avoided expense.

But with the ServShield's unique air filtering system, you don't have to worry.

The lower door has a vent with an attached air filter. The rear door is also fitted with air filters as well as three 75-cfm fans. When the fans operate, air is drawn through the front filter, cleaned thoroughly, and expelled through the rear. This design creates a constant flow of circulating, filtered air that keeps your equipment operating efficiently. The total 225-cfm circulation is more than sufficient to keep your equipment cool.

Moisture vs. electronics—which one wins?

In a harsh industrial environment, you must ask yourself this question—unless you have the ServShield Cabinet.

Each door is fitted with water-resistant gaskets and compression latches that provide superior protection from dripping water and airborne moisture. In addition to the fans and filters, the rear door has twin compression latches to make an extra strong, water-resistant seal. Just close the doors and tighten the latches. It's that simple!

Rackmounting equipment? No problem!

You have hardware that's different sizes? No problem. The ServShield's upper and lower compartments each include two pairs of adjustable 19" EIA mounting rails with square M6 holes for cage nuts. The rails in the upper compartment are spaced at 14U, and the rails in the lower compartment are spaced at 17U, so you won't have any trouble fitting your network components.

You can also get the 19" Rackmount, Sliding, Adjustable Tower Shelf with Fins. At 19" (48.3 cm) wide and 22" (55.9 cm) deep, it holds network hardware weighing up to 110 pounds (49.9 kg).

Easy to level, easy to move.

The ServShield includes leveling legs and casters so you don't have trouble leveling it or moving it when you add equipment or reorganize your facility.

The RM470A-R3 includes a finger latch and magnetic strip on the keyboard drawer.

So remember, you don't have to tolerate dust or moisture wreaking havoc on your hardware. The ServShield is your best line of defense.



NOTE: Custom colors are available—contact our FREE Tech Support.

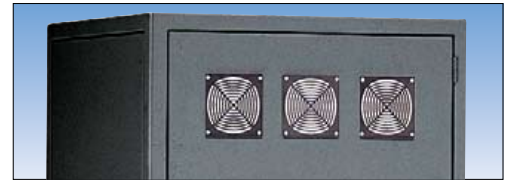
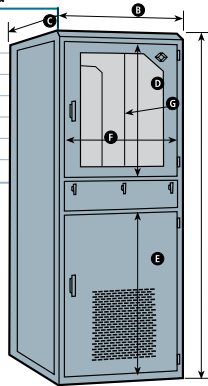
NOTE: Shipping is via motor freight.



RM470A-R3: Front view, open

Buyer's Guide | ServShield

A	Exterior Height	73.6"
B	Exterior Width	30"
C	Exterior Depth	36"
D	Rack Unit, Top	14U
E	Rack Unit, Bottom	17U
F	Interior Width	19"
G	Interior Depth	32.5"
	Weight	340 lb.



Three rear fans generate a cool 225 cfm to keep your hardware healthy. Filters keep the air clean.

What's included

- ◆ ServShield
- ◆ Casters
- ◆ Leveling legs

TECH SPECS

Frame — 12-gauge side panels
 Size — 73.6"H x 30"W x 36"D (186.9 x 76.2 x 91.4 cm)
 Weight — 340 lb. (154.2 kg)

Item	Code
ServShield	RM470A-R3
You may also need...	
19"W Rackmount, Sliding, Adjustable Tower Shelf with Fins, 22"D	RM471
Replacement Filters	
Rear Fan (Order One per Fan)	RM475
Front Door	RM476
To control two PCs from a single workstation, order...	
ServSwitch DT Basic, 2-Port	KV7002A

Why Buy From Black Box? Exceptional Value.
 Exceptional Tech Support. Period.

Recognize any of these situations?

- You wait more than 30 minutes to get through to a vendor's tech support.
- The so-called "tech" can't help you or gives you the wrong answer.
- You don't have a purchase order number and the tech refuses to help you.
- It's 9 p.m. and you need help, but your vendor's tech support line is closed.

According to a survey by *Data Communications* magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best support. You can even consult our Technical Support Experts before you buy if you need help selecting just the right component for your application. Don't waste time and money—call Black Box today.



RM470A-R3: Back view

Technically Speaking

Choosing cabinets and racks.

Why cabinets? Why racks?

A cabinet is an enclosure with a door (or doors); a rack is an open frame. There are several things you should consider when you're deciding whether you need an enclosed cabinet or a rack.

First, what equipment will you be putting in it? The extra stability of a cabinet might be important if you're installing large, heavy equipment like servers. But if you need frequent access to all sides of the equipment, an open rack might be more convenient. And if your equipment needs a lot of ventilation, you'll have to be more careful about the air supply if you enclose it in a cabinet.

Second, in what environment will you be installing it? If the environment is open or dusty, for example, you might need the extra protection of an enclosed cabinet. On the other hand, a rack might be perfectly adequate in a well-maintained data center.

Don't neglect aesthetics. Will customers or clients see your installation? A cabinet with a door looks much neater than an open rack.

When you're trying to create a professional image, everything counts.

Finally, there's security. An enclosed cabinet can be locked with a simple lock and key.

On the other hand, there are advantages to open racks, too. It's easier to get at all sides of the equipment. But you'll have to take other steps to keep the equipment secure—keeping it in a locked room, for example.

Both cabinets and racks come in all sizes and in many different installation styles. Some are freestanding; some are designed to be mounted on a wall. Others sit on the floor but attach to the wall for more stability.

If you need to set up your installation in a hurry, you can order a preassembled cabinet. You're ready to load your equipment as soon as the cabinet arrives.

Choosing the right server cabinet.

Consider this quick checklist of features when choosing a server cabinet:

- High-volume airflow. The requirements for additional airflow increase as more servers are mounted in a cabinet. Additionally, manufacturers are making servers narrower to increase available space. But with more servers in the same amount of space, heat buildup is frequently a problem.
- Extra depth to accommodate newer, deeper servers.
- Adjustable rails.
- Rails with M6 square holes. Although 10-32 tapped and drilled holes are sometimes still required, newer hardware has M6 square holes. Know which type of mounting equipment you'll need.
- Front and/or rear accessibility.

NEMA 12 certification.

The National Electrical Manufacturers' Association (NEMA) specifies guidelines for cabinet certifications. NEMA 12 cabinets are constructed for indoor use to provide protection against certain contaminants that might come in contact with the enclosed equipment. The NEMA 12 designation means a particular cabinet has met the guidelines, which include protection against falling dirt, circulating dust, lint, fibers, and dripping or splashing liquids. Protection against oil and coolant seepage is also a prerequisite for NEMA 12 certification.

Organizations with mission-critical equipment benefit from a NEMA 12 cabinet. Certain environments put equipment at a higher risk than others. For example, equipment in industrial plants is subject to varying degrees of extreme temperature. Even office buildings generate lots of dust and moisture, which is detrimental to equipment. NEMA 12 enclosures help to ensure that your operation suffers from as little downtime as possible.

Choosing the right rack.

Before you choose a rack, you have to determine what equipment you need to house. This list can include CPUs, monitors, keyboards, modems, servers, switches, hubs, routers, and UPSs. Consider the size and weight of all your equipment as well. The rack must be large and strong enough to hold everything you have now, and you'll also want to leave extra room for growth.

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Technically Speaking (Continued)

Most racks are designed to hold equipment that's 19" (48.3 cm) wide. But height and depth may vary from rack to rack. Common rack heights range from 39" (99.1 cm) to 87" (221 cm).

Another measurement you should know about is the rack unit. One rack unit, abbreviated as U, equals 1.75" (4.4 cm). A rack that is 20U, for example, has 20 rack spaces for equipment, or is 35" high (88.9 cm).

Understanding cabinet and rack measurements.

The main component of a cabinet or rack is a set of vertical rails with mounting holes to which you attach your equipment or shelves. When you consider the width or height of the rack, clarify whether they are inside or outside dimensions.

The first measurement you need to know is the width between the rails. The most common size is 19 inches with hole-to-hole centers measuring 18.3 inches. But there are also 23-inch and 24-inch cabinets and racks. Most rackmount equipment is made to fit 19-inch rails but can be adapted to fit wider rails.

After the width, the most important specification is the number of rack units, abbreviated "U." It's a measurement of vertical space available on the rails. Because the width is standard, the amount of vertical space is what determines how much equipment you can actually install. Remember that this measurement of usable vertical space is smaller than the external height of the cabinet or rack.

One rack unit (1U) is 1.75 inches of usable vertical space. So, for example, a rackmount device that's 2U high will take up 3.5 inches of rack space. A rack that's 20U high will have 35 inches of usable space.

Because both racks and the equipment that fit in them are usually measured in rack units, it's easy to figure out how much equipment you can fit in a given cabinet or rack.

Do you need a fan?

Even if your cabinet or rack is in a climate-controlled room, the equipment in it can generate a lot of heat. You may want to consider adding a fan to help keep your equipment from overheating. It's especially important to have adequate ventilation in an enclosed cabinet.

Getting power to your equipment.

Unless you want to live in a forest of extension cords, you'll need one or more power strips. Some cabinets come with power

strips built in.

If you need to order a power strip, consider which kind will be best for your installation. Rackmount power strips come in versions that mount either vertically or horizontally. Some have outlets that are spaced widely to accommodate transformer blocks—a useful feature if your equipment uses bulky power transformers.

Surge protection is another important issue. Some power strips have built-in surge protection; some don't. With all the money you have invested in rackmount equipment, you'll certainly want to make sure it's protected.

Any mission-critical equipment should also be connected to an uninterruptible power supply (UPS). A UPS keeps your equipment from crashing during a brief blackout or brownout and gives you enough time to shut down everything properly in an extended power outage. You can choose a rackmount UPS for the most critical equipment, or you can plug the whole rack into a standalone UPS.

Managing the cables.

Your equipment may look very tidy when it's neatly stacked in a cabinet. But you still have an opportunity to make a mess once you start connecting it all. Unless you're very careful with your cables, you can create a rat's nest you'll never be able to sort out.

There are many cabinet and rack accessories that can simplify cable organization. We have Cable Management Guides, Rackmount Cable Raceways, Horizontal Covered Organizers, Vertical Cable Organizers, Horizontal Wire Ring Panels, and Cable Manager Hangers—all designed to help you manage your cables more easily.

Plotting your connections in advance helps you to decide how to organize the cables. Knowing where the connectors are on your equipment tells you where it's most efficient to run cables horizontally and where it's better to run them vertically.

The important thing is to have a plan. Most network problems are in the cabling, so if you let your cables get away from you now, you're sure to pay for it down the road.

Asking for help.

When you're setting up a cabinet or rack, you have a lot of different factors to consider. Black Box Tech Support is always happy to help you figure out what you need and how to put it together. For cabinet and rack solutions, call our Connectivity Group at 724-746-5500, press 1, 2, 2.