

Versa™ Rack Non-Automatic Power Factor Improvement

VERSATEX POWER FACTOR IMPROVEMENT CAPACITOR ASSEMBLIES provide electrical systems with relief from utility company power factor penalties, and also improve system operating efficiency. Featuring industrial grade capacitor cells and components, they meet the highest standards for quality and reliability.

A Metallized Dielectric System furnishes the capacitor cells with the toughness today's harsh electrical environments require. *Electrodes are aluminum foil, and a kraft paper substrate with aluminum metallized on both sides.* These are combined with polypropylene film to give the system its superior durability and outstanding performance capabilities.

Self-clearing characteristic is another benefit the system offers. Should a fault occur, the material around the fault is vaporized. This process clears the fault and allows the capacitor cell to continue in service without an appreciable loss of KVAR.

An Environmentally-Safe Impregnant, totally free of PCB, further enhances the dielectric strength of the system. This gives Versatex capacitor cells a higher voltage withstand capability, especially when compared to capacitor cells with "dry" systems or metallized polypropylene film dielectrics.

A Pressure Activated Disconnect delivers built-in protection against capacitor cell case rupture. The PAD mechanism automatically disconnects the cell from all three phases of the power circuit at end-of-life without influencing the operation of the other cells in the capacitor assembly.

Broad Performance Ranges allow capacitor cells to operate in ambient temperatures of -40°C to 50°C (-40°F to 122°F), at 110 percent of their rated voltage, and at 135 percent of their rated KVAR resulting from frequency variation, or overloads generated by overvoltages and/or harmonics.

Safe Handling Features include discharge resistors inside each cell to drop residual voltage to 50 Volts or less within one minute after power is disconnected.

VERSA RACK: One three-phase, 60-Hertz, capacitor assembly in a NEMA-rated enclosure. Designed for economical, non-automatic power factor improvement for groups of motors, transformers and other inductive loads.



The exclusive Versatex **KVAR Monitor** is standard on all Versa Rack styles. Its LED's report when:

- normal performance is being maintained.
- a low current condition exists due to an open fuse or Pressure Activated Disconnect (PAD).
- a high current condition exists due to the effects of harmonics on the capacitor assemblies.
- high internal enclosure temperatures are being registered due to a high current condition, or high ambient.

With its multiple operating status indicators, the KVAR Monitor makes conventional "blown fuse" alarm lights obsolete.

As a bonus, two output relays allow remote installation of the indicators. Or, they can be used to link the KVAR Monitor with computer-directed performance tracking and maintenance devices.

ORDERING GUIDE

PRODUCT NUMBERS for **VERSA RACK** are easily developed by arranging data as follows:

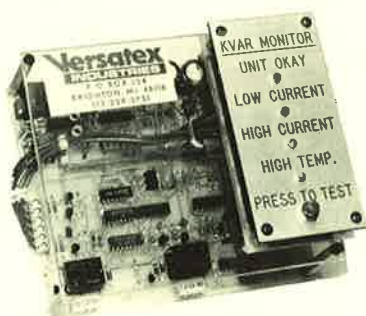
STYLE/SERIES/KVAR/FEATURES

STYLE Determine Code from chart below.

Available 480VAC KVAR Ratings	Available 240VAC KVAR Ratings	Code
100	50	VR2
125	—	VR4
150	75	VR4
175	—	VR4
200	100	VR4
225	—	VR6
250	125	VR6
275	—	VR6
300	150	VR6
325	—	VR8
350	175	VR8
375	—	VR8
400	200	VR8
425	—	VR10
450	225	VR10
475	—	VR10
500	250	VR10
525	—	VR12
550	275	VR12
575	—	VR12
600	300	VR12

SERIES Code
 480VAC, 3-phase, 60Hz **43M**
 240VAC, 3-phase, 60Hz **23M**
 For 600VAC, and uncommon voltages and frequencies, contact Versatex Industries.

KVAR Show specific amount required.



FEATURES

Versa Rack capacitor assemblies are **UL Listed** and have **PAD** protection in every cell. Other features, both standard and optional, include the following:

- Enclosures** Code
 NEMA 12, oil-tight, dust-tight. (Standard) **N**
 NEMA 3R, rain-tight, outdoor. (Optional) **N3R**
- Fusing** (Standard)
 Three-phase, branch circuit protection **F3**
- KVAR Monitor** (Standard) **KM**
- Special Components** (Optional)
 Safety Disconnect* with door interlock **SD**
 Floor Mount Legs, plus removable Lifting Eyes, for Styles VR2, VR4, and VR6 **FM**
 *Required component, but may be supplied by others. If not supplied by Versatex, do not include Code in Product Number.

BUILDING A PRODUCT NUMBER

A wall mounted Versa Rack unit is specified for a 480 VAC, 3-phase, 60Hz system. 300 KVAR is needed. A Safety Disconnect with door interlock is another requirement.

The **STYLE** code for a 480VAC Versa Rack providing 300 KVAR is **(VR6)**. A 480VAC, 3-phase, 60Hz system calls for **SERIES (43M)** capacitor cells. Adding the KVAR figure of **(300)**, the **STYLE/SERIES/KVAR** portion of the Product Number becomes:

VR6/43M/300/+++++

Standard design features on this – and all Versa Rack models – are a NEMA 12 enclosure (**N**), 3-phase branch circuit protection fusing (**F3**), and the Versatex KVAR Monitor (**KM**). Adding the Safety Disconnect (**SD**) option, the **FEATURES** segment reads:

N F3 KM SD

Arranging all code designations in proper sequence, the following Product Number results:

VR6/43M/300/N F3 KM SD

PRICING INFORMATION

Once a Product Number has been developed, contact your Versatex Sales Representative, or the Customer Service Department at the factory, to obtain prices.

PHYSICAL CHARACTERISTICS

■ LOCKING DOOR

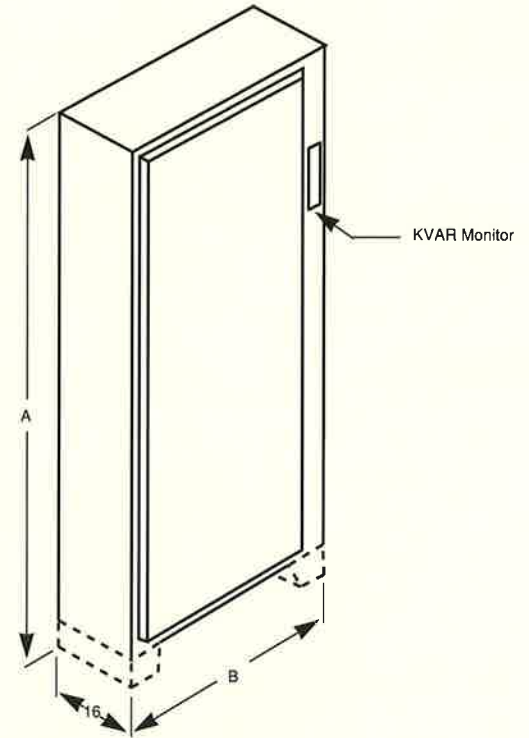
Standard continuous hinged door(s) with locking handle mechanism.

■ GASKETING

Closed-cell neoprene gaskets are used on all the access door(s) to provide required protection against defined environmental conditions.

■ INCOMING POWER TERMINAL

Units are furnished with a three-phase, UL recognized power distribution block as standard, except when a Safety Disconnect (SD) is furnished with the unit as an option.



Dimensional and Weight Data

VERSA RACK – SERIES 43M					VERSA RACK – SERIES 23M				
STYLE	Height Dimension A (inches)		Width Dim. B (in.)	Ship Weight (lbs.)	STYLE	Height Dimension A (inches)		Width Dim. B (in.)	Ship Weight (lbs.)
	Without SD Option	With SD Option				Without SD Option	With SD Option		
VR2	45*	51*	22	250	VR2	45*	51*	22	250
VR4	45*	51*	28	500	VR4	45*	51*	28	500
VR6	45*	54*	40	750	VR6	45*	54*	40	750
VR8	70**	80**	28	1000	VR8	70**	80**	28	1000
VR10	70**	N/A	40	1200	VR10	70**	N/A	40	1200
VR12	70**	N/A	40	1500	VR12	70**	N/A	40	1500

* When ordered with Floor Mount (FM) option, Dimension A is 62 inches.
 ** Floor Mount Legs and removable Lifting Eyes are standard.

NOTE: For other than listed Versa Rack Styles, consult Versatex Industries.

DELIVERY: Versatex produces and ships all Versa Racks in 4-8 weeks. For other than normal delivery, contact Versatex.

TERMS OF SALE: Net due within 30 days with approved credit, FOB, Brighton, Michigan.

EXPERIENCE

Power factor improvement is our only business. In fact, solving power factor problems has been the primary focus at Versatex Industries since 1974. As a result, we have the background and experience it takes to satisfy the toughest application requirements – even those involving harmonics.

SERVICE

Helpful service is another advantage. Our sales representatives and factory sales engineers thrive on developing cost-effective answers to power factor improvement needs. They are eager and capable problem-solvers. Give them a call whenever you require assistance.

PRODUCT LINE DIVERSITY

Our power factor improvement capacitor assemblies provide a broad range of application options. In addition to the assemblies described in this Product Data Sheet, Versatex also offers the following power factor improvement equipment:

AT-THE-LOAD

When requirements call for at-the-load power factor improvement, **Versa Mount** and **Versa Pak** capacitor assemblies are the answer.



Available KVAR ratings range from 2 through 100.

All models feature unit cell construction and NEMA-rated enclosures. They are UL Listed and meet automotive industry specifications.

Complete details and information on other benefits are provided in the Versa Mount-Versa Pak *Product Data Sheet*.

AUTOMATIC

K*Pak Control Centers eliminate power factor penalties by supplying required KVAR while automatically keeping power factor within a specified range.



The **Versatex Microcontroller** is the key. It combines precise power factor measurement with operating status indicators and diagnostic functions. Performance is easily monitored and potential problems can be detected before they become serious concerns.

K*Pak models are available with KVAR values range from 100 through 1200. For additional details, see the **K*Pak Product Data Sheet**.

HARMONIC TRAPS AND HARMONIC POWER FILTERS

Versatex Harmonic Traps and Harmonic Power Filters are the answer to power factor improvement in harmonic-rich environments. The following styles are available:

HTVM Harmonic Traps for at-the-load applications with KVAR requirements from 10 through 100.

HVR Non-Automatic Harmonic Power Filters for applications with KVAR requirements from 100 through 320.

H*Pak Automatic Harmonic Power Filters for automatic control applications with KVAR requirements from 100 through 960.

All harmonic traps and harmonic power filters are engineered to satisfy the specific requirements of the system on which they are to be installed. For additional information, contact your Versatex Sales Representative.



Versatex INDUSTRIES

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