

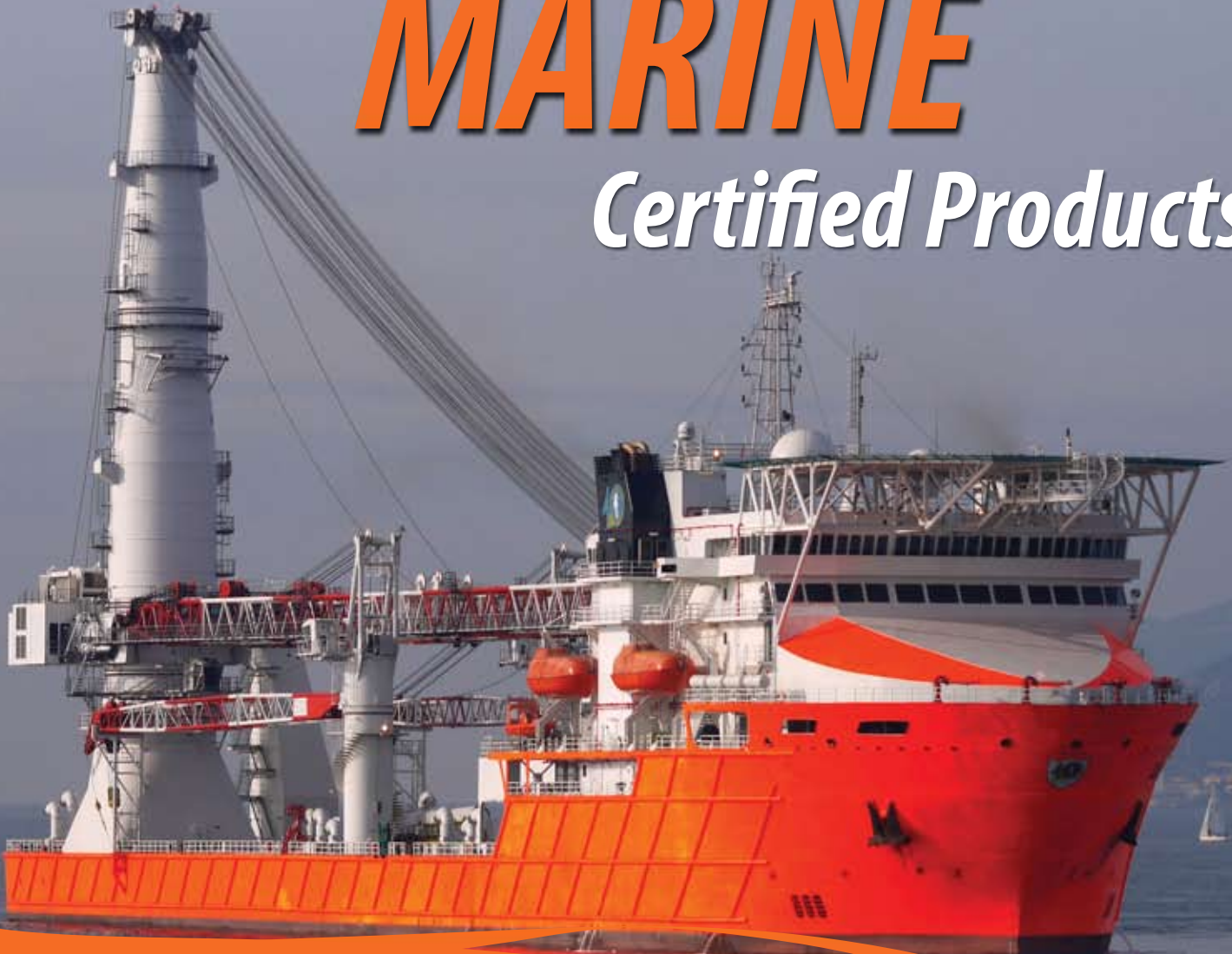


# MOTORTRONICS™

*Solid State AC Motor Control*

# MARINE

## *Certified Products*



## Applications

- Propulsion Systems
- Bow Thrusters
- Azimuth Pods
- Fluid Pumps
- Water Pumps
- Ballast Pumps
- Compressors
- Chillers

## Product Certifications



ABS Marine and Offshore Classification



Bureau Veritas



Lloyd's Register  
Quality Assurance



International Certification  
ISO 9001

# MVC Plus

Input Voltage: 2300 - 7200, 11 - 15 kV

Current Rating: up to 1500 Amps

Motor Power: up to 15MW / 20,000HP

## Medium Voltage Soft Starter

### Marine Applications

Propulsion Systems, Bow Thrusters, Azimuth Pods, Fluid Pumps, Water Pumps, Ballast Pumps, Compressors and Chillers

### The Power of Performance for the toughest Marine Applications

With the MVC Plus, motor and starter protection are taken to a new level by combining a high-end motor protection relay with a heavy duty starter with flexible control features and selectable ramping profiles to match any application... no need to compromise performance.

High level circuit isolation via fiber optics (standard on all units) for safety and power quality immunity and sealed NEMA 12 enclosures are standard equipment, not an expensive option.



#### Soft start & protect any AC motor

the **MVC Plus Series** starter is designed to start AC motors in any fixed speed application. It provides maximum protection with "True Thermal Modeling," while allowing smooth, stepless control of acceleration and deceleration. The MVC Plus Series guarantees power control and protection for your most important assets.

#### Heavy-duty attitude

Highest rated power devices for maximum current carrying capacity. Rated at 500% for 60 seconds, the MVC Plus Series starter will never be the limiting factor in your application. Powerful sustained gate pulse insures reliable SCR firing without reactors (unlike "wimpy" pulse train designs that require a reactor to prevent SCR and motor damage).

#### Experience where it counts

With over 500,000 low voltage and medium voltage soft starters in operation, Motortronics has the application expertise you need. No other soft starter manufacturer takes this product more seriously or has as much experience applying solid state starters. The **MVC Plus Series** is the pinnacle of product development and is recognized by users and OEMS around the world as the best Medium Voltage Soft Starter on the market today.

**Lower Your Maintenance Cost and Reduce Mechanical Stress**



# VMX Series

Low Voltage Soft Starter

Input Voltage: 200 ~ 600VAC

Current Rating: 18 to 1250A

Motor Power: up to 900kW / 1200HP

## Marine Applications

Fluid Pumps, Water Pumps, Ballast Pumps  
Compressors and Chillers

## Digital Soft Starter with built-in bypass contactor

**Integral Bypass Contactors** are standard on all sizes and provide maximum efficiency of panel space while maintaining the Motortronics reputation for being able to soft start most any load. The VMX Series is the only fully integrated, compact, world-class design offering uncompromised power and control capabilities.

### Pump Applications

**Eliminate the damaging effects of "Water Hammer"** A gradual reduction in the output torque of your pump motor is provided when a stop signal is initiated. When the motor output reaches a point where the check valve can be safely and gently closed, the Pump-Flex™ circuit automatically turns itself off.

Since no two pumps or pump applications are exactly the same, the flexible settings of Pump-Flex™ decel control allow you to tailor the output to precisely match your application requirements. No need for external timers or auxiliary controls.

**Minimize maintenance costs & downtime** By gradually reducing motor torque using Pump-Flex™ decel control, the potentially destructive pump output pressure is allowed to slowly dissipate in the system during the stopping process. Check valves close gently and other fluid system components including pipes, valves, flanges, couplings and hangers are no longer subjected to the shock and destructive potential of water hammer.

### The VMX Series also includes...

#### Built-in Functions

Process Control Timer, Operator Interface, Ramp Control Choices (4)  
Dual Ramps, Jog Function, Kick Start Function  
Pump-Flex™ Deceleration Ramp, Restart Delay Timer  
24 hour / 7 day Time Clock Controller  
Batch Process Timer Run for a set time after starting even after power outage.  
RS-485 Serial Communications  
Metering Elapsed time meter, run cycle counter, remaining lock-out time  
and fault history for maximum control and status of your pumps or processes.

### Compressor and Chiller Applications

#### Current Current Ramp

This function provides a linear increase in output current during acceleration.

#### Closed Loop Torque /Current (CLT™)

This function provides a linear increase in output torque during acceleration. It maximizes the available torque using an internal PID feedback loop, insuring a smooth, linear ramp up to full speed.



ABS

Lower Your Maintenance Cost and Reduce Mechanical Stress

# MARINE Certified Products

## World Class Products & Service

Other products available from Motortronics



### VMX "Configured" Soft Starter

- Combination starter with built-in circuit breaker
- NEMA 12 (IP54) enclosure
- "Smart Door" operator panel
  - Programming
  - Diagnostics
  - Metering
  - Pilot lights, pushbuttons and switches
- Control power transformer
- Terminal strip for customer interface



### MT Series Drive

- High Performance Drive
- 0.5 - 800 HP
- English Display
- DC Braking
- Built in "Macro"



### VCM Series

- Vector AC Drive
- 0.5 - 75 HP
- Built-in Speed Pot
- PID Function
- 150% Starting Torque



### RX Motor Protection Relay

- Monitors:
- Line Power
  - Thermal Overload
  - Current Imbalance
  - Over/Under Voltage
- Real-time Clock  
RS485



### TE-RTD12 Relay

- Motor RTD Monitoring (12 Inputs)
  - Differential Current Monitoring
  - 3 Programmable Relay Outputs
  - 3 Isolated Inputs
  - 1 Isolated Analog Output
- Real-time Clock  
RS485

### CORPORATE HEADQUARTERS

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Solid State AC Motor Control

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