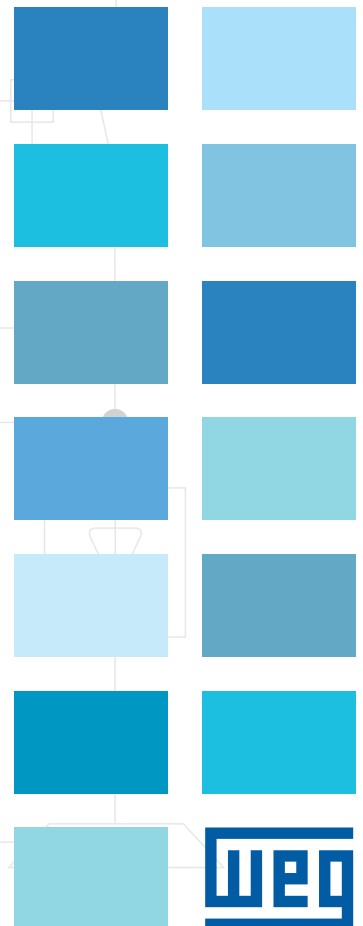
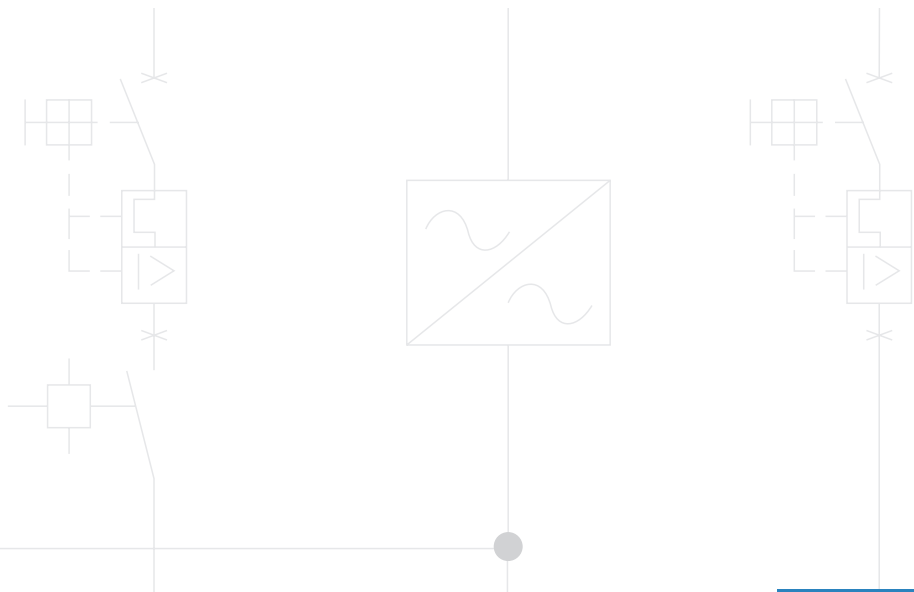


# SSW06

## Soft Starter

- Tough
- Reliable
- Durable
- Quality



M  
USASSW06 10/2012

M  
3





**WEG Motors and Drives**, the proven leader in AC motor control, maintains their leadership role in Soft Starter technology with the release of the 3rd generation SSW06 Soft Starter Product Line. Many of the advantages that have proven successful in WEG's CFW09 Variable Frequency Drive are now integrated into the SSW06 Soft Starter.

**ADVANTAGES – A Dual Readout Digital Copy Keypad** allows maximum ease of operation by providing a high visibility red LED display and a 2-line by 16-character alpha-numeric display that virtually eliminates the need for an instruction manual during set-up and operation. The alpha-numeric readout can display in English, Spanish, German or Portuguese. The copy keypad function allows the storage of two unique sets of User Parameters for easy recall. This can also be used to download these parameters to other SSW06's for easy set-up and "cloning" of multiple soft starters.

**"Oriented Start-Up"** is a WEG exclusive technology that simplifies the initial start-up of the SSW06. The SSW06 asks for operational and motor information via the keypad, thereby assuring correct operation.

The **Built-in Bypass Contactor** (Frames 1 – 6) will automatically put the AC motor "across the line" once the SSW06 has smoothly accelerated the motor up to speed. The bypass contactor will minimize power losses and heat dissipation by removing the SCR's from the motor circuit this also allows a smaller overall soft starter package. The user can mount the SSW06 inside of a more protective enclosure, NEMA1, NEMA3R, NEMA12, NEMA4 and NEMA4X with minimal cooling requirements.

**Universal Source Voltage** allows a single unit to be used in applications with voltages ranging from 220 to 575V AC three phase, 50/60Hz. The appropriate soft starter would be selected by the full load Amps of the AC motor.



## Soft Starters SSW06

The SSW06 is WEG's third generation Soft Starter line. The keypad, with dual display, has red LED digits which provide visibility and make programming easier. Integral bypass contacts eliminate heat dissipation once the motor is at full voltage, which makes it extremely compact and allows for simple integration into non ventilated enclosures and replacement of electro-mechanical starters in Motor Control Centers.



### Applications

- Pumps
- Fans
- Blowers
- Compressors
- Crushers
- Saws
- Grinders
- Mixers

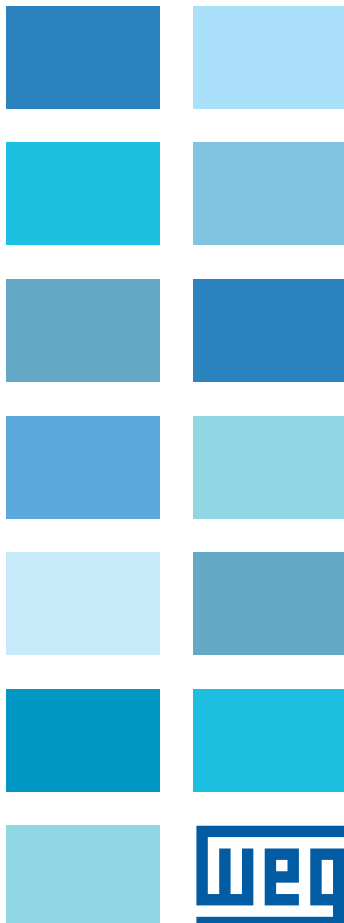
### Optional Features

- RS-485 serial interface
- Remote keypad cables and mounting frame
- PC programming software

### Standard Features

- 200 - 600V, 50/60Hz input power supply
- Built-in run rated (AC1) bypass contactor\*
- Duty cycle: 300% full load amps for 30 seconds, 10 starts per hour
- Voltage ramp or current limit start modes
- Detachable keypad with dual display (LCD and LED) and copy function
- 90 - 250Vac auxiliary control voltage
- Single 32 bit RISC processor based control board
- IP00 protected chassis enclosure
- Six isolated 24Vdc programmable digital inputs
- Three programmable relay outputs (2 Amp - 250V)
- One 0 - 10Vdc programmable analog output
- One 4 - 20mA programmable analog output
- Motor PTC thermistor input
- RS-232 serial interface
- Adjustable acceleration and deceleration ramps (1 - 299 seconds)
- Adjustable pedestal voltage (25 - 90% of line voltage)
- Diagnostic features: Motor overload, over current and phase loss, motor immediate over and under current, SCR over temperature and fault, line phase loss and phase sequence, line over and under voltage
- Display readings: Motor current, voltage, kW and power factor, line voltage and frequency, four last fault trips, run and power-up timers
- Ambient: 32°F (0°C) to 131°F (55°C), 3300 ft (1000m) altitude, 90% non-condensing humidity

\* Up to 700 HP





# Soft Starters

## SSW06

### IP00 Protected Chassis Enclosure



Motor Volts	Motor HP	Soft Starter AMPS	Catalog Number	Frame Size	Dimensions (in.) H x W x D	App. Shpg. Wt. (lbs.)	Multiplier Symbol
230V	<b>INPUT POWER SUPPLY: THREE-PHASE - 230V</b>						
	3	10	<a href="#">SSW060010T2257ESZ</a>	1	10 x 5 x 7	7	E1
	5	16	<a href="#">SSW060016T2257ESZ</a>	1	10 x 5 x 7	7	E1
	7.5	23	<a href="#">SSW060023T2257ESZ</a>	1	10 x 5 x 7	7	E1
	10	30	<a href="#">SSW060030T2257ESZ</a>	1	10 x 5 x 7	7	E1
	15	45	<a href="#">SSW060045T2257ESZ</a>	2	14.6 x 5.2 x 9.6	19	E1
	20	60	<a href="#">SSW060060T2257ESZ</a>	2	14.6 x 5.2 x 9.6	19	E1
	25 / 30	85	<a href="#">SSW060085T2257ESZ</a>	2	14.6 x 5.2 x 9.6	19	E1
	50	130	<a href="#">SSW060130T2257ESZ</a>	2	14.6 x 5.2 x 9.6	19	E1
	60	170	<a href="#">SSW060170T2257ESZ</a>	3	17.3 x 8.8 x 11	41	E1
	75	205	<a href="#">SSW060205T2257ESZ</a>	3	17.3 x 8.8 x 11	41	E1
	100	255	<a href="#">SSW060255T2257ESZ</a>	4	21.6 x 14.6 x 12.3	87	E1
	125	312	<a href="#">SSW060312T2257ESZ</a>	4	21.6 x 14.6 x 12.3	87	E1
	150	365	<a href="#">SSW060365T2257ESZ</a>	4	21.6 x 14.6 x 12.3	87	E1
	150	412	<a href="#">SSW060412T2257ESZ</a>	5	26 x 15 x 14	122	E1
	200	480	<a href="#">SSW060480T2257ESZ</a>	5	26 x 15 x 14	122	E1
	250	604	<a href="#">SSW060604T2257ESZ</a>	5	26 x 15 x 14	122	E1
	250	670	<a href="#">SSW060670T2257ESZ</a>	6	32 x 22 x 15	265	E1
	350	820	<a href="#">SSW060820T2257ESZ</a>	6	32 x 22 x 15	265	E1
	400	950	<a href="#">SSW060950T2257ESH1Z</a>	7	36 x 23 x 14	336	E1
400	950	<a href="#">SSW060950T2257ESH2Z</a>	7	36 x 23 x 14	336	E1	
450	1100	<a href="#">SSW061100T2257ESH2Z</a>	8	49 x 27 x 18	480	E1	
550	1400	<a href="#">SSW061400T2257ESH2Z</a>	8	49 x 27 x 18	480	E1	
460V	<b>INPUT POWER SUPPLY: THREE-PHASE - 460V</b>						
	5	10	<a href="#">SSW060010T2257ESZ</a>	1	10 x 5 x 7	7	E1
	10	16	<a href="#">SSW060016T2257ESZ</a>	1	10 x 5 x 7	7	E1
	15	23	<a href="#">SSW060023T2257ESZ</a>	1	10 x 5 x 7	7	E1
	20	30	<a href="#">SSW060030T2257ESZ</a>	1	10 x 5 x 7	7	E1
	30	45	<a href="#">SSW060045T2257ESZ</a>	2	14.6 x 5.2 x 9.6	19	E1
	40	60	<a href="#">SSW060060T2257ESZ</a>	2	14.6 x 5.2 x 9.6	19	E1
	50 / 60 / 75	85	<a href="#">SSW060085T2257ESZ</a>	2	14.6 x 5.2 x 9.6	19	E1
	100	130	<a href="#">SSW060130T2257ESZ</a>	2	14.6 x 5.2 x 9.6	19	E1
	125	170	<a href="#">SSW060170T2257ESZ</a>	3	17.3 x 8.8 x 11	41	E1
	150	205	<a href="#">SSW060205T2257ESZ</a>	3	17.3 x 8.8 x 11	41	E1
	200	255	<a href="#">SSW060255T2257ESZ</a>	4	21.6 x 14.6 x 12.3	87	E1
	250	312	<a href="#">SSW060312T2257ESZ</a>	4	21.6 x 14.6 x 12.3	87	E1
	300	365	<a href="#">SSW060365T2257ESZ</a>	4	21.6 x 14.6 x 12.3	87	E1
	350	412	<a href="#">SSW060412T2257ESZ</a>	5	26 x 15 x 14	122	E1
	400	480	<a href="#">SSW060480T2257ESZ</a>	5	26 x 15 x 14	122	E1
	500	604	<a href="#">SSW060604T2257ESZ</a>	5	26 x 15 x 14	122	E1
	550	670	<a href="#">SSW060670T2257ESZ</a>	6	32 x 22 x 15	265	E1
	700	820	<a href="#">SSW060820T2257ESZ</a>	6	32 x 22 x 15	265	E1
	800	950	<a href="#">SSW060950T2257ESH1Z</a>	7	36 x 23 x 14	336	E1
800	950	<a href="#">SSW060950T2257ESH2Z</a>	7	36 x 23 x 14	336	E1	
900	1100	<a href="#">SSW061100T2257ESH2Z</a>	8	49 x 27 x 18	480	E1	
1200	1400	<a href="#">SSW061400T2257ESH2Z</a>	8	49 x 27 x 18	480	E1	

**Notes:** 1) "HP" rating based on Table 430-150 of the NEC. Use as a guide only. Motor FLA may vary with speed and manufacturer. ALWAYS compare motor FLA to Nominal AMPS of starter.  
 2) 120V or 240V Control Power Supply required  
 3) For other technical data please refer to WEG product manual.



## Soft Starters

## SSW06

## IP00 Protected Chassis Enclosure



Motor Volts	Motor HP	Soft Starter AMPS	Catalog Number	Frame Size	Dimensions (in.) H x W x D	App. Shpg. Wt. (lbs.)	Multiplier Symbol
575V	<b>INPUT POWER SUPPLY: THREE-PHASE - 575V</b>						
	7.5	10	<a href="#">SSW060010T2257ESZ</a>	1	10 x 5 x 7	7	E1
	15	16	<a href="#">SSW060016T2257ESZ</a>	1	10 x 5 x 7	7	E1
	20	23	<a href="#">SSW060023T2257ESZ</a>	1	10 x 5 x 7	7	E1
	30	30	<a href="#">SSW060030T2257ESZ</a>	1	10 x 5 x 7	7	E1
	40	45	<a href="#">SSW060045T2257ESZ</a>	2	14.6 x 5.2 x 9.6	19	E1
	60	60	<a href="#">SSW060060T2257ESZ</a>	2	14.6 x 5.2 x 9.6	19	E1
	75	85	<a href="#">SSW060085T2257ESZ</a>	2	14.6 x 5.2 x 9.6	19	E1
	125	130	<a href="#">SSW060130T2257ESZ</a>	2	14.6 x 5.2 x 9.6	19	E1
	150	170	<a href="#">SSW060170T2257ESZ</a>	3	17.3 x 8.8 x 11	41	E1
	200	205	<a href="#">SSW060205T2257ESZ</a>	3	17.3 x 8.8 x 11	41	E1
	250	255	<a href="#">SSW060255T2257ESZ</a>	4	21.6 x 14.6 x 12.3	87	E1
	300	312	<a href="#">SSW060312T2257ESZ</a>	4	21.6 x 14.6 x 12.3	87	E1
	350	365	<a href="#">SSW060365T2257ESZ</a>	4	21.6 x 14.6 x 12.3	87	E1
	450	412	<a href="#">SSW060412T2257ESZ</a>	5	26 x 15 x 14	122	E1
	500	480	<a href="#">SSW060480T2257ESZ</a>	5	26 x 15 x 14	122	E1
	650	604	<a href="#">SSW060604T2257ESZ</a>	5	26 x 15 x 14	122	E1
	750	670	<a href="#">SSW060670T2257ESZ</a>	6	32 x 22 x 15	265	E1
	850	820	<a href="#">SSW060820T2257ESZ</a>	6	32 x 22 x 15	265	E1
	1050	950	<a href="#">SSW060950T2257ESH1Z</a>	7	36 x 23 x 14	336	E1
1050	950	<a href="#">SSW060950T2257ESH2Z</a>	7	36 x 23 x 14	336	E1	
1200	1100	<a href="#">SSW061100T2257ESH2Z</a>	8	49 x 27 x 18	480	E1	
1500	1400	<a href="#">SSW061400T2257ESH2Z</a>	8	49 x 27 x 18	480	E1	

Notes: 1) "HP" rating based on Table 430-150 of the NEC. Use as a guide only. Motor FLA may vary with speed and manufacturer.  
 ALWAYS compare motor FLA to Nominal AMPS of starter.  
 2) 120V or 240V Control Power Supply required.  
 3) For other technical data please refer to WEG product manual.

## SSW06 – Accessories



	Description	Catalog Number	Multiplier Symbol
Keypads & Keypad Cables	Standard Keypad with LED & LCD	<a href="#">HMI-SSW06-LCD</a>	E1
	Remote Keypad FRAME KIT	<a href="#">KMR-SSW06</a>	E1
	3.3 ft. Remote Keypad Cable	<a href="#">CAB-HMI-SSW06-1</a>	E1
	6.6 ft. Remote Keypad Cable	<a href="#">CAB-HMI-SSW06-2</a>	E1
	10 ft. Remote Keypad Cable	<a href="#">CAB-HMI-SSW06-3</a>	E1
	16 ft. Remote Keypad Cable	<a href="#">CAB-HMI-SSW06-5</a>	E1
Communication	Profibus DP Communication Kit	<a href="#">KFD-PD-SSW06</a>	E1
	Profibus DP-PV1 Communication Kit	<a href="#">KFD-PDPV1-SSW06</a>	E1
	DeviceNet Communication Kit	<a href="#">KFB-DN-SSW06</a>	E1
	SuperDrive Kit	<a href="#">KSDG2-SSW06</a>	E1
	Interface for RS-485 Communication	<a href="#">KRS-485-SSW06</a>	E1
IP20 Kits	SSW06 IP20 Kit - Size 2 (85-130A)	<a href="#">KIT IP20 SSW06 M2</a>	E1
	SSW06 IP20 Kit - Size 3 (170-205A)	<a href="#">KIT IP20 SSW06 M3</a>	E1
	SSW06 IP20 Kit - Size 4 & 5 (255-604A)	<a href="#">KIT IP20 SSW06 M4</a>	E1
	SSW06 IP20 Kit - Size6 (670-820A)	<a href="#">KIT IP20 SSW06 M6</a>	E1



# Soft Starters

## SSW06

### Technical Data

<b>Power Supply</b>	Main Voltage	Three-phase 220 - 575VAC (+10%, -15%)		
	Control Voltage	Single-phase 110 - 230 VAC (+10%, -15%), Fan: 110 or 230 VAC only for frame size 4		
	Frequency	50 / 60 Hz (+/- 10 %)		
<b>Enclosure</b>	Metallic Cabinet	IP-00 Degree of Protection		
	Color	Cover: Opaque Gray, Cabinet: Opaque Blue		
<b>Control</b>	Method	Voltage ramp, Current Limit and Pump Control		
	Power Supply	Switched mode		
	CPU	32 bit RISC Microprocessor		
<b>Starting Duty Cycle</b>	Normal	300 % (3 x Rated) for 30 seconds, 10 starts per hour		
	Heavy	450 % (4.5 x Rated) for 30 seconds with 33% current derating		
<b>Control Inputs</b>	Digital	5 X 24 VDC programmable isolated inputs 1 X Motor PTC thermistor		
<b>Control Outputs</b>	Relay	2 programmable outputs 250 VAC / 1A Form A Contact (NO)		
		1 programmable output 250 VAC / 1A Form C Contact (NO+NC)		
	Analog	1 Programmable Output (11 bits): 0 - 10 VDC 1 programmable output (11 bits) 0 - 20mA or 4 - 20mA		
<b>Safety</b>	Protections	Under voltage, phase fault or phase imbalance	Excess current limit time	
		Over temperature	Motor locked rotor	
		Motor overload – I 2 t	Motor over current and under current	
		External Fault	Phase sequence	
		Copy function error	Control under voltage	
		Motor not connected	Opened bypass contactor	
		Over voltage	Over current before bypass	
		Programming error	Immediate over current during bypass	
		Communication errors	Current imbalance	
		Keypad connection error	Power supply frequency out of range	
		Motor over current	Under current before bypass	
		Motor over temperature (via thermistor Input)	Bypass contacts not opened	
		Self Diagnosis error		
<b>Functions / Features</b>	Standard	Built-in operator interface, detachable with dual display LED + LCD		
		Programming enabling password		
		LCD display Language selection: English, Spanish, German and Portuguese		
		Local / Remote operation selection		
		PUMP CONTROL function (Water hammer protection for pumps)		
		COPY function (Soft-Starter to Keypad or Keypad to Soft-Starter)		
		Soft starter integral bypass contactor		
		FWD / REV Feature via Digital Input (Needs External Contactor)		
		RS-232 Serial Interface		
		Motor PTC thermistor input		
		Programmable line voltage	220 ... 575 VAC	
		Programmable initial (pedestal) voltage	25 ... 90% of Rated Input Voltage	
		Programmable acceleration ramp	1 ... 999 seconds	
		Programmable deceleration ramp	OFF, 1 ... 299 seconds	
		Programmable step down voltage for deceleration	100 ... 40 % of line voltage	
		Programmable starting current limit	OFF, 150 ... 500 % of motor rated current	
		Programmable immediate motor over current	0 ... 99 % above rated current	
		Programmable immediate over current time	OFF, 1 ... 99 seconds	
		Programmable immediate motor under current	0 ... 99 % below rated current	
		Programmable immediate under current time	OFF, 1 ... 99 seconds	
		Programmable starting torque boost, voltage or current (KICK-START)	Level: 70 ...90% of line voltage	
			Level: 300 ... 700% of soft starter rated current	
			Duration: 0.1 ...2 seconds	
		Programmable fault auto-reset	OFF, 1 ... 600 seconds	
	Programmable motor thermal memory auto-reset	OFF, 1 ... 600 seconds		
	Motor thermal overload protection class	0 (disabled); 5; 10; 15; 20; 25; 30; 35; 40; 45		
	Motor Service Factor	0 (disabled); 0.01 ... 1.50		
Optional	Cable for remote keypad connection (3 to 15ft)			
	Remote keypad mounting frame			



# Soft Starters – SSW06

## Technical Data

<b>Keypad</b>	Programming / Commands	Start / Stop, Reset and Programming
		Increase and decrease parameters and their content
	Display readings	Soft-Starter Output current (% of soft starter rated current)
		Motor current (Amps)
		Motor current (% of motor rated current)
		Line frequency (0 ... 99 Hz)
		Line Voltage (0 ... 999VAC)
		Soft starter output voltage (0 - 999VAC)
		Motor active power (kW)
		Motor apparent power (kVA)
		Soft starter status
		Digital and analog I/Os status
		Motor power factor (0.00 - 0.99)
		Time Powered
		Time Enabled
		Four last faults back-up
		Soft starter firmware version
		Motor thermal protection (0 - 250)
	Motor current indication in each phase R-S-T	
	Line voltage indication R-S / S-T / T-R	
<b>Ambient</b>	Temperature	0...131 °F (0 ... 55°C): standard operation at rated current
	Humidity	20 ... 90%, non condensing
	Altitude	0...3300 ft (0 ... 1000 m): standard operation at rated current
		Up to 13300 ft (4000 m): with 10% / 1000 m Output Current De-rating
<b>Conformities</b>	Safety	UL 508 Standard - Industrial Control Equipment
	Low Voltage	EN 60947-4-2 Standard; LVD 73/23/EEC – Low Voltage Directive
	EMC	EMC directive 89 / 336 / EEC - Industrial Environment
	UL (USA) / cUL (Canada)	Underwriters Laboratories Inc. - USA
	CE (EUROPE)	Phoenix Test-Lab / Germany
	C-Tick (Australia)	Australian Communications Authority



WEG Electric Corp. offers the following products, and more! With a full range of IEC/NEMA Global Certifications and a full line of products, WEG can supply the right solution for your needs anywhere in the world. To learn more about WEG's products and solutions or to locate a Distributor near you, please call **1-800-ASK-4WEG** or visit **www.weg.net/us**.

#### Low Voltage Motors,

##### Single and 3-Phase, 1/8 – 700HP

General Purpose Motors  
Explosion Proof Motors  
Crusher Duty Motors  
IEC Tru-Metric Motors  
Pump Motors including JP/JM  
P-Base Pump Motors  
Oil Well Pumping Motors  
Pool & Spa Motors  
Brake Motors  
Compressor Duty Motors  
Farm Duty Motors  
Poultry Fan Motors  
Auger Drive Motors  
IEEE 841 Motors  
Stainless Steel Wash Down Motors  
Saw Arbor Motors  
Cooling Tower Motors  
Commercial HVAC Motors  
Pad Mounted Motors  
Vector Duty Motors

#### Large Electric Motors

Low Voltage 3-phase motors up to 2,500HP  
  
Motors up to 70,000HP and 13,200V  
Wound Rotor Systems (including starters) up to 70,000HP and 13,200V  
  
Synchronous Motors up to 70,000HP and 13,200V  
  
Explosion proof motors (Ex-d) up to 1,500kW and 11kV  
  
Ex-n, Ex-e, Ex-p motors

#### Variable Frequency Drives

Low Voltage 1/4 to 2500HP, 230V – 480V  
Medium Voltage 500-8000HP  
Multi-pump systems  
NEMA 4X  
Dynamic braking resistors  
Line and load reactors  
Plug and play technology  
Network communications: Profibus-DP, DeviceNet, Modbus-RTU  
  
PLC functions integrated  
Complete line of options and accessories

#### Soft Starters

3-1500HP  
Oriented start-up  
Built-in bypass contactor  
Universal source voltage (230-575V, 50/60Hz)  
  
Network communications: Profibus-DP, DeviceNet, Modbus-RTU  
  
Complete Line of options and accessories  
MV Soft-starter 3.3kV, 4.16kV: up to 3500HP, Withdrawable Power Stacks, & 8x PT100 Temperature monitoring

#### Controls

Mini – Contactors  
IEC Contactors  
Thermal Overload Relays  
Manual Motor Protectors  
Molded Case Circuit Breakers  
Smart Relays  
Enclosed Starters: combination & non-combination,  
  
Pushbuttons & Pilot Lights  
Timing & Motor Protection Relays  
Terminal Blocks

#### Custom Panels

Custom configured to your specification.  
NEMA 1, 12, 3R, 4 and 4X cabinets  
Quick delivery of preconfigured drives and soft starters  
UL 508 certified  
Low Voltage (230-460)  
Made in the U.S.A.

#### Generators

Brushless Synchronous Generators for diesel gen-sets up to 4,200kVA  
  
Hydro-generators up to 25,000kVA  
Turbo-generators up to 62,500kVA

#### Power Transformers

Built and engineered in North America  
Voltages < 500kV  
Ratings 5-300MVA  
Station class, oil filled, round core, copper windings  
  
Special configurations and designs available!  
  
Ask your WEG Sales Representative for details.  
  
Designed, built, and engineered to ANSI standards.

#### Custom Solution Package Sales

WEG can package any of its products for ease of sale! Enjoy a single point of contact for the entire package of products and assistance from quote through after-sales support. Ask your WEG Sales Representative for details.



WEG Electric Corp.  
6655 Sugarloaf Parkway  
Duluth, GA 30097  
Phone: 1-800-ASK-4WEG  
Fax: 1-770-338-1632  
[info-us@weg.net](mailto:info-us@weg.net)  
[www.weg.net/us](http://www.weg.net/us)

Please contact your authorized distributor: