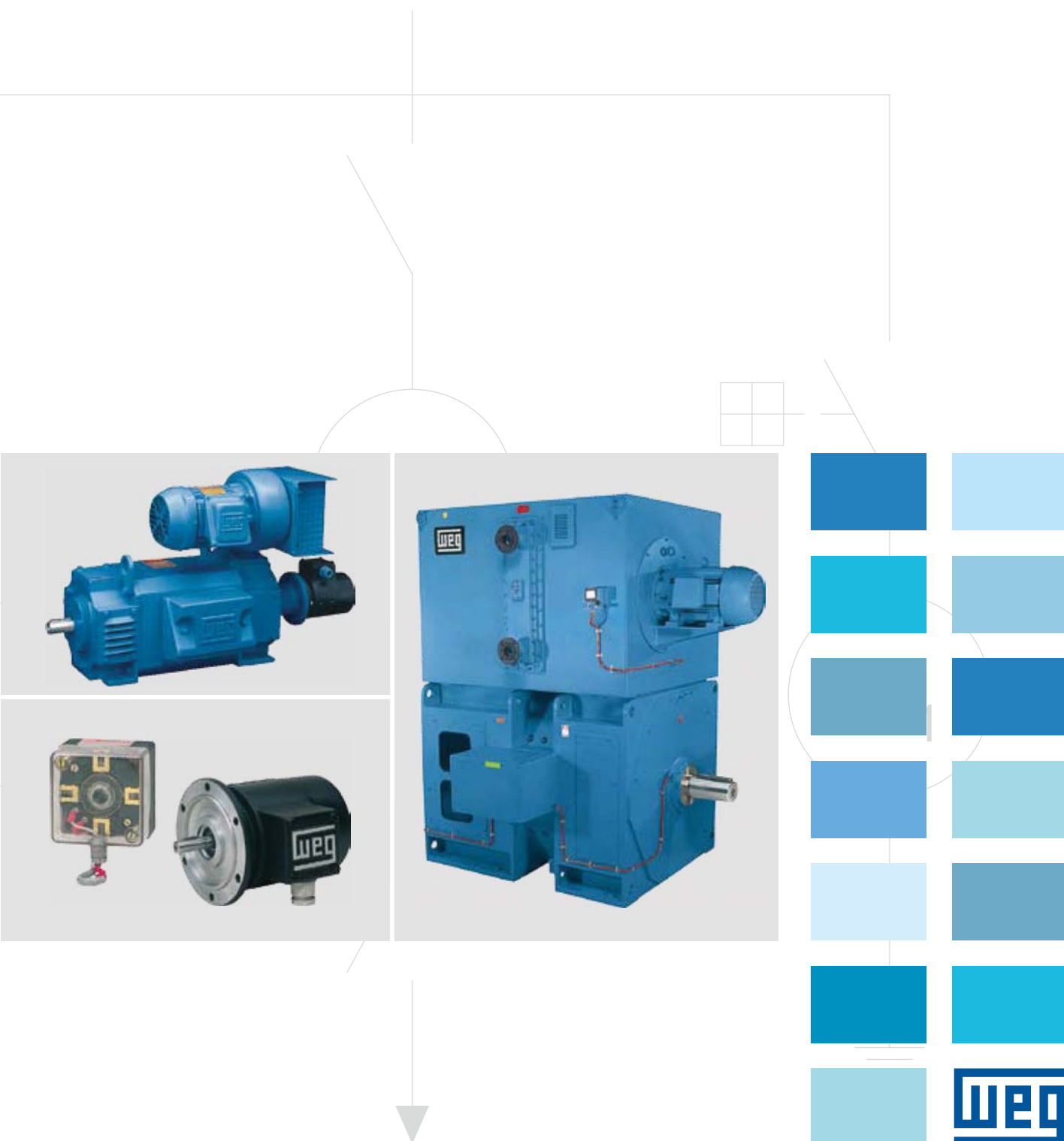


DC Motors



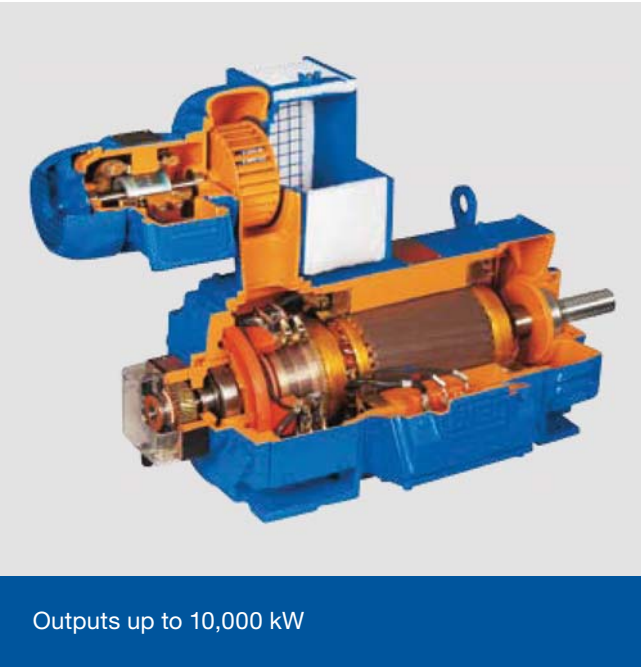
DC Motors

WEG DC motors are designed with the application of modern technology resulting in compact machines featuring excellent dynamic properties, meeting the most severe application in areas that include automation and process control.

Technical Characteristics

The WEG DC motor lines are offered in outputs up to 10,000 kW, with torques ranging from 2 to 200,000Nm, and are applied in the most diverse industrial applications, including paper, plastic industries, among others.

Designed for tiristorized drive application, WEG DC motors allow a wide range of voltages from 110 to 800 V, and are manufactured in frames sizes 71 to 1800 (IEC).



Outputs up to 10,000 kW

Nomenclature

D	N	F	190 .	160	S
					Non-drive endshield length
					Frame 90 to 132 : S - short endshield (single size)
					Frame 160 to 450:
					S - Short endshield
					M - Medium endshield
					L - Long endshield
					Frame 560 to 900: A,B,C (different endshield sizes)
					Lamination core length in mm
					IEC frame
					Cooling Types
					F - independent forced ventilation
					D - Forced ventilation by ducts
					S - Self-ventilated
					E - Without ventilation
					X - Independent axial forced ventilation
					A - Air-air heat exchanger ventilation
					W - Air-water heat exchanger ventilation
					N - Non-compensated machines
					C - Compensated machines
					Indicates a DC machine

Constructive Characteristics

Frame

Manufactured with high quality rectangular, hexagonal or octagonal steel lamination, allowing powering through static converters under high dynamic service duties, quick torque and current variations.

Rotor and Stator Winding

These are wound with class H enamel copper wire, and impregnated with class F insulation system.

Endshields

Built in cast iron or steel fabricated, allowing coupling of WEG tachogenerators model 1R or TCW as well as other accessories and other tachogenerators and encoders, upon request.

Commutators

Manufactured with copper and high quality materials allowing perfect brush contact to ensure excellent commutation conditions.

Brush Holders

Manufactured with high technology, brush holders are built to proper dimensions, tolerances and pressures for each specific application ensuring extend life time to the mechanical system.

Brushes

Electrographite, natural graphite is the normal material used, but special brushes are offered based on the driven load operating conditions so as to provide longer brush lifetime.

Bearings

Based on the motor application, ball or roller bearing are usually applied. Oil lubricated sleeve bearings are used on specific applications.



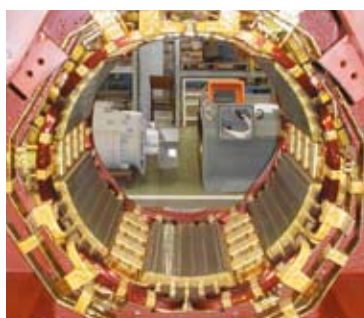
Rotors



Stator



Commutator Centrifugal



DNF or DCF

*Independent forced ventilation
Degree of Protection IP23S
Cooling IC 06*



DNS

*Self-ventilated
Degree of Protection IP23S
Cooling IC 01*



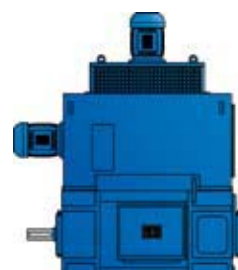
DNX

*Independent axial forced ventilation
Degree of Protection IP23S
Cooling IC 06*



DNE

*Without ventilation
Degree of Protection IP44 to IP55(W)
Cooling IC 410*



DNA or DCA

*Air-air heat exchanger ventilation
Degree of Protection IP44 to IP55(W)
Cooling IC 666*



DNW or DCW

*Air-water heat exchanger ventilation
Degree of Protection IP44 to IP55(W)
Cooling IC 87W*

Advantages

Besides offering reliability and high performance, which will guarantee long operating periods without requiring any maintenance, the WEG DC motors present relevant characteristics which include:

- Wide speed variation range
- Dimensions as per ABNT and IEC Standards
- Low weight/output ratio
- High efficiency
- Low noise level
- Low moment of inertia
- High capacity to dynamic loads
- Rugged construction
- High vibration resistance
- Excellent commutation quality

Complete Solutions

With the progress in electronics for large power circuit and control systems, the application of the converter, control and DC motor combination is a viable and economical alternative.

DC motors offer a wide range of speed variation without affecting the driven machine performance.

Consisting of AC/DC converters and motor, the DC drives feature excellent control and regulation properties which result in:

- Precise speed regulation;
- Constant and long acceleration under any load condition;
- Controlled acceleration and/or deceleration;
- Constant torque under wide speed range with armature control.



Applications

Due to its versatility, this product is suitable for a wide variety of applications on the electric motor industry, including:

- General purpose machines
- Piston pumps
- Friction torques
- Advance machines
- Lath machines
- Winding machines
- Drilling Machine
- Grinding machines
- Textile machines
- Chemical and petrochemical industry
- Furnaces, exhausters, separators and conveyor belts for cement industry and others
- Hoists and cranes
- Overhead cranes
- Traction vehicles
- Presses
- Paper machines
- Steel plants



Customer: USIMINAS

Country: Brazil

Supplies: DC motors of 325KW

Application: Tensioning roller



Customer: HEATLAND STEEL

Country: USA

Supplies: DC motors from 448 to 1119KW

Application: Cold steel laminators



Customer: UNI SYSTEMS

End user: Monte Rosa Mill

Country: Nicaragua

Supplies: DC motors of 746KW

Application: Sugar mills



Customer: MINERAÇÕES BRASILEIRAS REUNIDAS

Country: Brazil

Supplies: DC motors of 350KW

Application: Conveyor belts

Tacho-generators

WEG also offers a line of Tacho-generators intended for control of numerical control machines and textile machines as well as other applications that require continuous speed control and acceleration or deceleration of fixed programs.

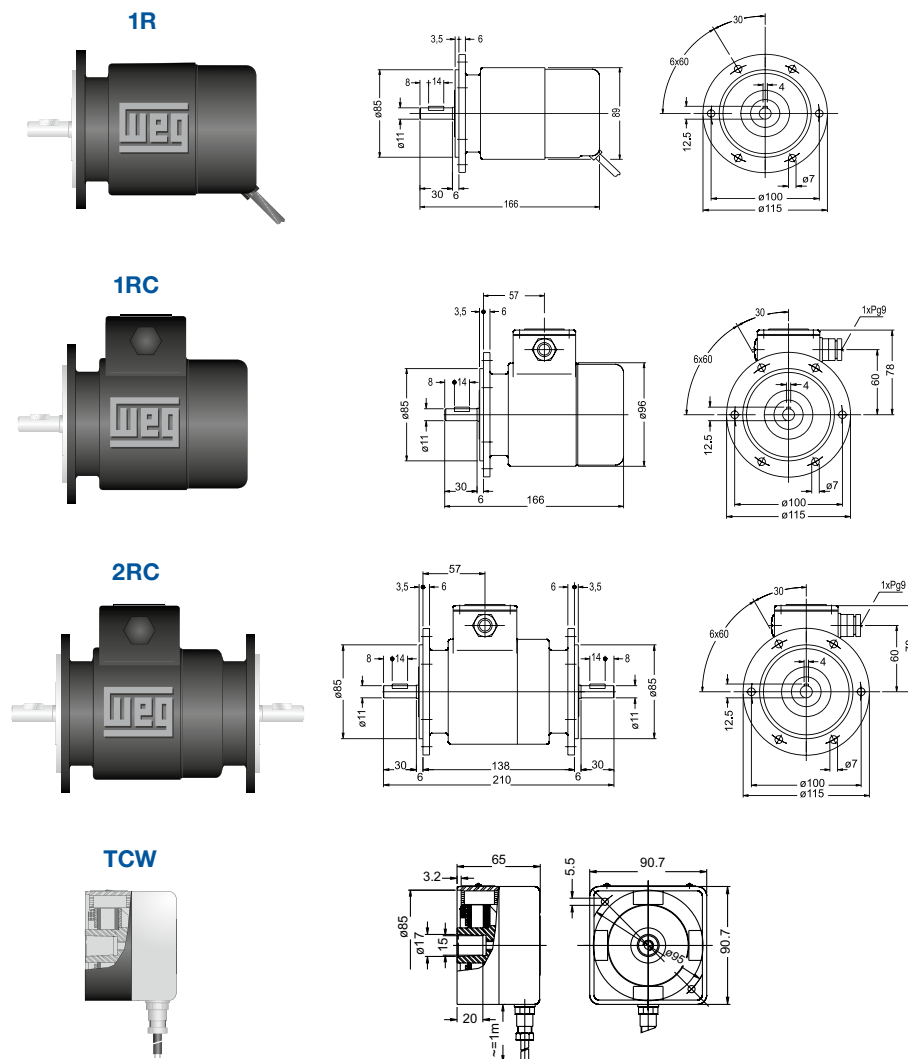
Models: 1R/20, 1R/60, 1R/100, 1RC/20, 1RC/60, 1RC/100, 1RCP/20, 1RCP/60, 1RP/100, 2RC20, 2RC/60, 2RCP/100, 3RP/20, 3RP/60, 3RP/100, TCW20, TCW40.

TCW

Flange mounting directly to the motor non-drive endshield, allowing either vertical or horizontal mounting; providing high mechanical strength.

R

Flange or foot mounting, allowing either vertical or horizontal mounting; supplied with terminal box or connection leads.



Note: Dimensions of other models under request.

Technical Characteristics

MODELS	_R_/20	_R_/60	_R_/100	TCW20_	TCW40_
Voltage at 1.000 rpm	20V*	60V*	100V*	20V*	40V*
Maximum speed	8000 rpm	8000 rpm	6000 rpm	8000 rpm	4000 rpm
Direction of rotation	Reversible	Reversible	Reversible	Reversible	Reversible
Max. Required current	550mA	250mA	160mA	30mA	20mA
Max. Required voltage	160V	480V	600V	165V	165V
Armature resistance	9 Ohm + 3%	59 Ohm + 3%	165 Ohm + 3%	60 Ohm + 3%	196 Ohm + 3%
Max. Linearity error	0,50%	0,50%	0,50%	0,50%	0,50%
Max. Reversing error	1%	1%	1%	1%	1%
Ripple	1%	1%	1%	1%	1%
Temperature Coefficient for voltage percent variation	0.01% / °	0.01% / ° C	0.01% / ° C	0.01% / ° C	0.01% / ° C
Isulation resistance at 600 Vcc and thermal duty of 120° C	2 M0hm	2 M0hm	2 M0hm	2 M0hm	2 M0hm
Dielectric strength between each terminal and frame	1700 V/60Hz for 30°	1701 V/60Hz for 30°	1702 V/60Hz for 30°	1703 V/60Hz for 30°	1704 V/60Hz for 30°
Max. Reletive ambient moisture	90%	90%	90%	90%	90%
Protection as per IEC - 34 and NBR 6146	IP44 or IP55**	IP44 or IP55**	IP44 or IP55**	IP55	IP55
Isulation class	B	B	B	B	B
Max. Radial strenght	10 Kgf	10 Kgf	10 Kgf	-	-
Max. Axial strength	10 Kgf	10 Kgf	10 Kgf	-	-
Numbers of poles	2	2	2	4	4
Number of brushes	4	4	4	4	4
GD2	8450g. Cm2	8450g. Cm2	8450g. Cm2	5370g cm2	5370g cm2
Ambient Temperature	- 15 up to 60° C	- 15 up to 60° C	- 15 up to 60° C	- 15 up to 60° C	- 15 up to 60° C
Approx. Weight model without connection box	2.20 Kg	2.20 Kg	2.20 Kg	-	-
Aprox. Weight model with connection box	2.40 kg	2.40 Kg	2.40 Kg	-	-
Aprox. Weight model TCW	-	-	-	1.50 Kg	1.50 Kg

* Other voltages, on request.

** Without connection box (model R): IP44 .
With connection box (model RC): IP55.

WEG Worldwide Operations

ARGENTINA

WEG EQUIPAMIENTOS
ELECTRICOS S.A.
(Headquarters San
Francisco-Cordoba)
Sgo. Pampiglione 4849
Parque Industrial San Francisco
2400 - San Francisco
Phone(s): +54 (3564) 421484
Fax: +54 (3564) 421459
info-ar@weg.net
www.weg.net/ar

AUSTRALIA

WEG AUSTRALIA PTY. LTD.
3 Dalmore Drive
Carribean Park Industrial Estate
Scoresby VIC 3179 - Melbourne
Phone(s): 61 (3) 9765 4600
Fax: 61 (3) 9753 2088
info-au@weg.net
www.weg.net/au

BELGIUM

WEG EUROPE S.A.
Rue de l'Industrie 30 D,
1400 Nivelles
Phone(s): + 32 (67) 88-8420
Fax: + 32 (67) 84-1748
info-be@weg.net
www.weg.net/be

CHILE

WEG CHILE S.A.
Los Canteros 8600
La Reina - Santiago
Phone(s): (56-2) 784 8900
Fax: (56-2) 784 8950
info-cl@weg.net
www.weg.net/cl

CHINA

WEG (NANTONG) ELECTRIC
MOTOR MANUFACTURING Co., Ltd.
No. 128 - Xinkai Nan Road,
Nantong Economic and
Technological Development Area
Jiangsu Province, China PC226010
Phone(s): 86 513 8598 9329
Fax: 86 513 8592 1310
info-cn@weg.net
www.weg.net/cn

COLOMBIA

WEG COLOMBIA LTDA
Calle 46A N82 - 54
Porteria II - Bodega 7 - San
Cayetano II - Bogotá
Phone(s): (57 1) 416 0166
Fax: (57 1) 416 2077
info-co@weg.net
www.weg.net/co

FRANCE

WEG FRANCE SAS
ZI de Chenes - Le Loup
13 Rue du Morellon - BP 738
38297 Saint Quentin Fallavier
Phone(s): +33 (0) 4 74 99 11 35
Fax: +33 (0) 4 74 99 11 44
info-fr@weg.net
www.weg.net/fr

GERMANY

WEG GERMANY GmbH
Alfred-Nobel-Str. 7-9
D-50226 Frechen
Phone(s): +49 (2234) 9 5353-0
Fax: +49 (2234) 9 5353-10
info-de@weg.net
www.weg.net/de

INDIA

WEG Electric (India) Pvt. Ltd.
#38, Ground Floor, 1st Main
Road, Lower Palace Orchards,
Bangalore - 560 003
Phone(s): +91-80-4128 2007
+91-80-4128 2006
Fax: +91-80-2336 7624
info-in@weg.net
www.weg.net/in

ITALY

WEG ITALIA S.R.L.
V.le Brianza 20 - 20092 - Cinisello
Balsamo - Milano
Phone(s): (39) 02 6129-3535
Fax: (39) 02 6601-3738
info-it@weg.net
www.weg.net/it

JAPAN

WEG ELECTRIC MOTORS
JAPAN CO., LTD.
Matsumoto Bldg. 2F, 3-23-7
Kamata, Ohta-ku,
Tokyo, Japan 144-0052
Phone(s): (81) 3 3736-2998
Fax: (81) 3 3736-2995
info-jp@weg.net
www.weg.net/jp

MEXICO

WEG MEXICO, S.A. DE C.V.
Carretera Jorobas-Tula Km. 3.5,
Manzana 5, Lote 1
Fraccionamiento Parque
Industrial - Huehuetoca,
Estado de México - C.P. 54680
Phone(s): + 52 (55) 5321 4275
Fax: + 52 (55) 5321 4262
info-mx@weg.net
www.weg.net/mx

NETHERLANDS

WEG NETHERLANDS
Sales Office of
WEG Europe S.A.
Keulenstraat 4E
7418 ET Deventer
Phone(s): +31 (0) 570-620550
Fax: +31 (0) 570-620560
info-nl@weg.net
www.weg.net/nl

PORTUGAL

WEG EURO - INDÚSTRIA
ELÉCTRICA, S.A.
Rua Eng. Frederico Ulrich
Apartado 6074
4476-908 - Maia
Phone(s): +351 229 477 705
Fax: +351 229 477 792
info-pt@weg.net
www.weg.net/pt

RUSSIA

WEG RUSSIA
17, Pochainskaya Str.
Nizhny Novgorod
603001 - Russia
Phone(s): +7-831-2780424
Fax: +7-831-2780425
info-ru@weg.net
www.weg.net/ru

SPAIN

WEG IBERIA S.L.
Avenida de la Industria, 25
28823 Coslada - Madrid
Phone(s): (34) 916 553 008
Fax: (34) 916 553 058
info-es@weg.net
www.weg.net/es

SINGAPORE

WEG SINGAPORE PTE LTD
159, Kampong Ampat,
#06-02A KA PLACE.
Singapore 368328.
Phone(s): +65 6858 9081
Fax: +65 6858 1081
info-sg@weg.net
www.weg.net/sg

SWEDEN

WEG SCANDINAVIA AB
Box 10196
Verkstadgatan 9
434 22 Kungsbacka
Phone(s): (46) 300 73400
Fax: (46) 300 70264
info-se@weg.net
www.weg.net/se

UK

WEG ELECTRIC
MOTORS (U.K.) LTD.
28/29 Walkers Road
Manorside Industrial Estate
North Moons Moat - Redditch
Worcestershire B98 9HE
Phone(s): 44 (01527) 596-748
Fax: 44 (01527) 591-133
info-uk@weg.net
www.weg.net/uk

UNITED ARAB EMIRATES

WEG MIDDLE EAST FZE
JAFZA - JEBEL ALI FREE ZONE
Tower 18, 19th Floor,
Office LB181905
Dubai - United Arab Emirates
info-ae@weg.net
www.weg.net/ae

USA

WEG ELECTRIC
MOTORS CORP.
1327 Northbrook Parkway,
Suite 490
Suwanee 30024
Phone(s): 1-770-338-5656
Fax: 1-770-338-1632
info-us@weg.net
www.weg.net/us

VENEZUELA

WEG INDUSTRIAS
VENEZUELA C.A.
Parcela T-4-A Transversal 9 Urb.
Industrial Carabobo Catastral
79-101 Edf. ELIMECA Loc.
ELIMECA, Zona Postal 2003,
Valencia, Edo. Carabobo
Phone(s): 58 (241) 838 9239
Fax: 58 (241) 838 9239
info-ve@weg.net
www.weg.net/ve



WEG Equipamentos Elétricos S.A.
International Division
Av. Prefeito Waldemar Grubba, 3000
89256-900 - Jaraguá do Sul - SC - Brazil
Phone: 55 (47) 3276-4002
Fax: 55 (47) 3276-4060
www.weg.net