



THOUSANDS OF SOLUTIONS.
ONE MATCHED **PERFECTLY**
TO **YOUR** NEEDS.



PRODUCT QUICK REFERENCE GUIDE



THOUSANDS OF MOTOR AND CONTROL SOLUTIONS. ONE MATCHED PERFECTLY TO YOUR NEEDS.

The LEESON® brand spans more than 6,000 stock AC and DC motors, gearmotors and variable-speed control solutions. All are built for rugged commercial and industrial applications. Whether you need thousands of motors for OEM applications or a single replacement motor, count on our twenty-three stocking warehouses in the USA to get it there right when you need it. Whether you need a motor that withstands extreme temperatures, utilizes a unique mount or other requirement, we have solutions. Look to LEESON brand motors for innovative custom solutions, and personalized service through your local sales office.

To turn ideas into reality, contact your local LEESON sales office or visit leeson.com



AC & DC MOTORS OF ALL TYPES

- Sub-fractional to 5,000 HP
- Permanent Magnet AC & DC
- General Purpose 1- & 3-Phase
- Agricultural Duty
- Explosion Proof
- IEC Metric Motors
- Severe Duty and IEEEE841
- Washdown Duty
- Inverter Duty
- HVAC—Fan Motors
- AC & DC Gearmotors
- Brakemotors
- Definite Purpose Motors
- Special Voltage

ADJUSTABLE SPEED DRIVES

SCR, PWM, Regenerative & Low Voltage DC Controls.

AC Control Families include:

Micro Series

- 115 Volt, 230 Volt and 460 Volt input options
- 1/4–150 HP ratings
- IP20, IP31 & IP65 enclosure protection
- English readout display

SM & SM-Plus Series

- 115 Volt, 230 Volt and 460 Volt input options
- 1/4–25 HP ratings
- IP20 enclosure protection
- Three digit LED display

SM2 & SM4 Vector Series

- 115 Volt, 230 Volt and 460 Volt input options
- 1/3–60 HP ratings
- IP31 and IP65 enclosure protection
- Four digit LED display

Platinum VSD & Platinum VSD-Plus Series

- 230 Volt and 460 Volt input options
- 1/3–30 HP ratings
- IP20 enclosure protection
- Permanent magnet AC & Induction AC motor capable



**23 SALES OFFICES
AND WAREHOUSES
ACROSS THE U.S.**

ALLENTOWN, PA
ATLANTA, GA
BOSTON, MA
CHARLOTTE, NC
CHICAGO, IL
CINCINNATI, OH
CLEVELAND, OH
DALLAS, TX
DENVER, CO
DES MOINES, IA
GRAND RAPIDS, MI
HOUSTON, TX
INDIANAPOLIS, IN

KANSAS CITY, MO
LOS ANGELES, CA
MIAMI, FL
MILWAUKEE, WI
MINNEAPOLIS, MN
SALT LAKE CITY, UT
SAN FRANCISCO, CA
SEATTLE, WA
ST. LOUIS, MO
TAMPA, FL



THOUSANDS OF CUSTOM MOTORS & GEARMOTORS

As a leading designer and manufacturer of application-specific AC and DC motors and gearmotors (sub-fractional, fractional and integral horsepower sizes), our experienced engineering teams ensure the best, most cost-effective solution.

Custom Multi-Speed & Low-Speed Motors

The LEESON® PDQ Modular Production Program utilizes a component system to configure custom NEMA® frame motors—fast.

- Two, three and four-speed motors
- Speed ranges: 900, 720, 600, 450 & 300 RPM
- Non-standard shaft designs available

Quick-turn Mod-Squad Programs

Stock motors can be modified easily—in many cases, the same day the order is received. Services include:

- Cord options and switches
- Mounting plate changes
- Lead extensions
- Custom colors
- Severe-duty modifications

For modified gear reducers try the LEESON Gear Mod-Squad program.

Stock gear products may be modified with:

- Mounting options
- Shaft extensions

Modified Gear+Motor™ Packages

Drawing on the extensive range of LEESON NEMA C-Face motors, you can modify a gear/motor solution optimized to your application.

Help from Your Local LEESON Pro

For quotations, availability and application assistance contact your local LEESON office.



SINGLE-PHASE GENERAL PURPOSE MOTORS

Hundreds of Industrial Designed "Off-the-Shelf" Solutions

- 42–250T Frame
- 1/2–20 HP
- Totally enclosed and drip-proof designs
- Rigid base, C-Face, Rigid C-Face and Resilient base
- Overload protection available

Applications:

| | |
|---------------|-------------------|
| Pumps | Material Handling |
| Machine Tools | Compressors |
| Fans/Blowers | Conveyors |



AGRICULTURAL MOTORS

High Torque Rugged Industrial Designs

- 48–286T Frame
- Designed especially for the ag customer or the OEM
- Extra-high starting torque designs: General Purpose, Crop Dryer, Auger Drive, Fan Ventilation, Grain Stirring and more
- Manual and auto reset overload thermal protection
- Sealed bearings
- Premium efficient models—Eco Ag® 1-Phase and 3-Phase
- 16 HP 1-Phase crop dryer—ODP
- 15 HP 1-Phase crop dryer—TEFC

Applications:

| | |
|-----------------|----------------|
| Poultry Feeders | Auger Drive |
| Silo Uploaders | Conveyors |
| Crop Drying | Pumps |
| Compressors | Barn Fans |
| Tobacco Barns | Grain Stirrers |



NEW

WASHDOWN MOTORS

Broadest Industry Solutions for Maximum Service in Harsh Environments

- USDA-approved white epoxy paint
- Cast conduit box with stainless steel cover
- Internal corrosion resistant coatings on frame, base, end shields, rotor and stator
- 100% stainless steel 1-Phase and 3-Phase designs available
- 1/2–10 HP
- Stainless steel motors
- Stainless motors with shaft grounding rings available
- Encapsulated washdown motors—IP69K
- Stainless steel pedestal fan motors

Applications:

| | |
|------------------|-----------------------|
| Dairies | Pump Industry |
| Beverage Plants | Bakeries |
| Food Processing | Pharmaceutical Plants |
| Slaughter Houses | Car Washes |
| Feather Pickers | |

**THROUGH 30 HP
COMING LATE 2017**



FAN & BLOWER MOTORS

Industrial and Commercial Fan Motors Available

- General Purpose 1/4–3 HP
- PSC Type: 1/4–1 HP
- Two-speed: 1/4–1 HP
- TEAO: 3/4–3 HP
- Condenser Fan: 1–1.5 HP
- Commercial Duty: 1/4–1/2 HP
- Furnace & Air Conditioner: 1/4–3/4 HP
- Fan & Heat Pump: 1/6–3/4 HP
- Outdoor Condenser Fan: 1/6–3/4 HP
- Cooling Tower: 3–250 HP
- Stainless pedestal fan 1/4–1/2 HP
- Kiln Duty 2–30 HP



Applications:

Direct and Belt-drive Air Handlers
Exhaust Fans
Pedestal Fans
Kilns

Cooling Towers
Industrial Fans
Commercial Fans
Two-speed Fans



DC MOTORS

Industrial & Commercial Design DC motors for Low & High Voltage Applications

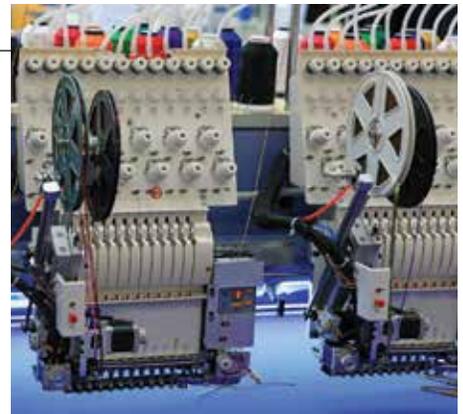
- 1/20–3 HP
- Permanent magnet designs
- Removable bolt-on base
- NEMA C-Face designs
- 12, 24, 36, 48, 90 and 180 Volt designs
- PWM or SCR type controller rated
- High starting torque
- Permanently lubricated sealed bearings
- Washdown, explosion proof and IEC models



Applications:

Pumps
Conveyors
Turntables
Textile Machinery

Reeling Equipment
Medical Equipment
Treadmills
Solar Panels



AC & DC GEARMOTORS

Little Motors, Big Solutions with Industry Interchange Designs

- AC: 115/230V 1-Phase and 230/460V 3-Phase designs
- DC: 90, 180 and low voltage designs
- Right-angle and parallel shaft designs
- Most common F.L. torque and RPM designs
- AC and DC washdown designs
- Bison®, Bodine® and Dayton® Direct Interchange



Applications:

Conveyors
Turntables
Packaging Equipment
Augers
Food Processing Equipment
Material Handling



LEESON UNIVERSITY.
IT'S EVERYTHING YOU
NEED TO KNOW.

- Regal Overview
- AC Electric Motor Principles
- DC Electric Motor Principles
- PMAC Electric Motor Principles
- Motor Applications
- Power Transmission
- Gear Reducer Principles
- Manufacturing Plant Workshop
- leeson.com Review

**CONTACT YOUR LOCAL
LEESON SALES OFFICE
FOR MORE INFORMATION**



PUMP MOTORS

Commercial, Washdown and Explosion Proof Ratings Available

- JM/JP close coupled
- Jet Pump in 1- and 3-Phase from 1/2–3 HP
- UL listed Fire Pump—Lincoln
- Drip-proof, totally enclosed, washdown duty
- EPAct efficient designs
- Stainless steel washdown
- Carbonator pump designs
- SAE pump motors
- Premium efficiency JM/JP pump



Applications:

- | | |
|--------------------|--------------------------------------|
| Centrifugal Pumps | Fire Pumps |
| Hydraulic Pumps | Turbine Pumps |
| Water System Pumps | Vertical end Suction Propeller Pumps |



EXPLOSION PROOF MOTORS

Industrial & Commercial Application Designs

- 56–449T Frame
- Single-Phase 1/3–2 HP
- Three-Phase fractional to severe duty 449T frame
- Three-Phase 1/3–350 HP
- DC: 1/3–3/4 HP, 12, 24, 90 & 180 VDC
- Class I Group D or Class I Groups C & D or Class II Groups F & G
- 1.15 service factor
- UL listed for use with inverters
- Available in EPAct & NEMA Premium™ efficiency
- Severe duty features



- Rigid and C-Face mounts available
- ATEX certified zone 2 & 20
- 6-pole X-proof 1/3–200 HP

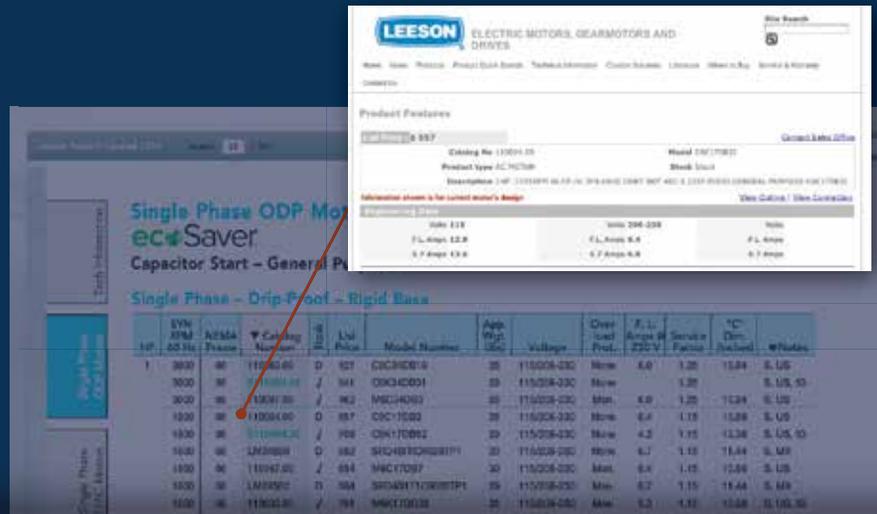
Applications:

- | | |
|---------------|------------------------|
| Pumps | Petroleum and Gasoline |
| Compressors | Grain Elevators |
| Gear Reducers | Paint Booths |
| Machine Tools | |
| Conveyors | |



SEARCHABLE CATALOG

LEESON's new catalog is available in both printed copies as well as online. The online catalog is searchable by item number or item type, with electronic links to the current motor data for a specific product. It is available on leeson.com.



IEC—METRIC MOTORS

IEC Global Designs to Meet International Specifications

- 63–250 IEC frame
- 0.18KW (1/4 HP)–37W (50 HP)
- 208–230/460 and 575 Volt 3-Phase
- TEFC, Aluminum, Cast Iron & Stainless Steel frame construction
- B3, B3/B5 and B3/B14 Mountings
- Removable bases—90 frame and lower
- IP 55 enclosure protection
- Premium efficient 90 frame and higher
- DC: .06KW to 2.2KW, 180 volts
- IEC Brakemotors



Applications:
Machine Tools
Textile Machinery
Conveyors
Pumps
Food Processing



NEW

BRAKEMOTORS

Dependable Stopping and Holding Brakemotors

- Single-Phase: 1/3–2 HP
- Three-Phase: 1/3–10 HP
- Totally enclosed and drip-proof designs
- Rigid base, Rigid C-Face and C-Face mounts available
- Washguard® and stainless motors
- High cycle brake motors
- Brake kits and coupler brakes
- IEC Brakemotors



Applications:
Conveyors
Machine Tools
Door Openers
Elevators
Hoists
Baggage Handling
Packaging Equipment



NEW

AC & DC CONTROLS

Energy Saving and Precision Speed Controllers

- DC Controls
- Open Chassis, NEMA® 1 and NEMA 4/12 enclosures
- SCR and PWM and Regenerative Controls
- 1/40–3 HP rated
- Low voltage 16–120 Amps
- AC Controls
- IP20, IP31 and IP65 enclosures
- 1/4–150 HP
- 115 volt, 1-Phase input–3 HP, (3-Phase output)
- 230, 460 & 575 Volt ratings
- Standard V/Hz, Vector Duty, and PMAC designs available



Applications:

Conveyors
Handling Equipment
Hoists
Packaging Equipment
Fans
Machine Tools



SPECIAL DUTY MOTORS

High Quality, Short Run Specials—Application Specific Solutions

- Boat Hoist Duty: 1/2–2 HP
- Instant Reversing: 1/3–1 HP
- Woodworking: 3/4–4 HP
- Two-speed: 1/.25–10/2.5 HP
- Compressor Duty: 1–20 HP
- Severe Duty IEEE-841: 1–350 HP
- 50 HZ Motors: 1-Phase, 1/3–5 HP, 3-Phase, 1/4–5 HP
- 200–400 Volt : 1–20 HP
- 575 Volt: 1/2–300 HP
- Medium Voltage: 150–700 HP
- Elevator Duty: 15–100 HP
- Automotive Duty: 3/4–100 HP
- Crusher/Quarry Duty 50–250 HP



Applications:

Boat Hoist
Woodworking Equipment
Compressors
Fans/Blowers
Parking Gates
Foundries
Elevators/Escalators
Rock Crusher Equipment and Applications
Mining



NEW

THREE-PHASE GENERAL PURPOSE MOTORS

NEMA Premium—Meets IE3 Specifications—Inverter Duty

- 1/6–400 HP
- 143–449T frame offers high efficiency levels that meet NEMA Premium™
- Built for high cycle or long run-time applications
- Drip-proof & totally enclosed, enclosures
- IRIS® insulation system—Wattsaver®e motor
- Premium efficient motors with 3-year warranty
- Inverter rated
- Ultimate E—Cast iron



Applications:

Pumps
Gear Reducers
Conveyors
Compressors
HVAC



PERMANENT MAGNET (PMAC) MOTORS



High Efficient Motors Throughout Speed Range

- NEMA 48-286T (IEC 80–180)
- 72 in-lbs through 100 lb-ft torque
- Cast iron construction 180T–286T frame, all others rolled steel
- Motor/Drive Package available 56–180 frame
- TENV and TEFC
- With and without feedback
- Open and closed loop available
- 3-Year Warranty

Applications:

| | |
|--------------|----------------------|
| Pumps | Extruders |
| Fans/Blowers | Presses |
| HVAC | Process Applications |
| Compressors | Generators |
| Conveyors | |

Platinum™

INVERTER/VECTOR DUTY MOTORS



Constant Torque Speed Control

- 1–350 HP
- Class F thermostat protection
- Precision balanced
- ODP, TENV and TEBC designs
- 3-year warranty
- With encoders or encoder provisions
- 2000:1 constant torque
- 10:1 constant torque—ODP designs
- IRIS® insulation system
- Speedmaster Plus
- Platinum e™ PMAC
- Platinum e™ AC Drives
- 1000:1 constant torque

Applications:

Material Handling
Extruders
Conveyors
Machine Tools
Transportation

NEW

PULLEYS & SHEAVES



Thousands of Stock Power Transmission Solutions

Product Types:

Taper Bushings

- BTL—Bushing Taper Lock 1008, 1108, 1210, 1215 and more
- QTL—Quick Detachable JA, SJ, SDS and more
- STL—Split Taper Lock G, H and more

V-Pulleys

- Finished Bore AK, 2AK, BK, 2BK
- Taper Bore—STL/H AK-H, 2AK-H, BK-H, 2BK-H

- Finished Bore—Adjustable Speed VL, VM, 1VP, 2VP
- Taper Bore—QTL A/B-C-D
- Finished Bore—Light Duty—AL

Applications:

Conveyor Belts
Fans
Air Handling
Farm/Ag Equipment
Compressors

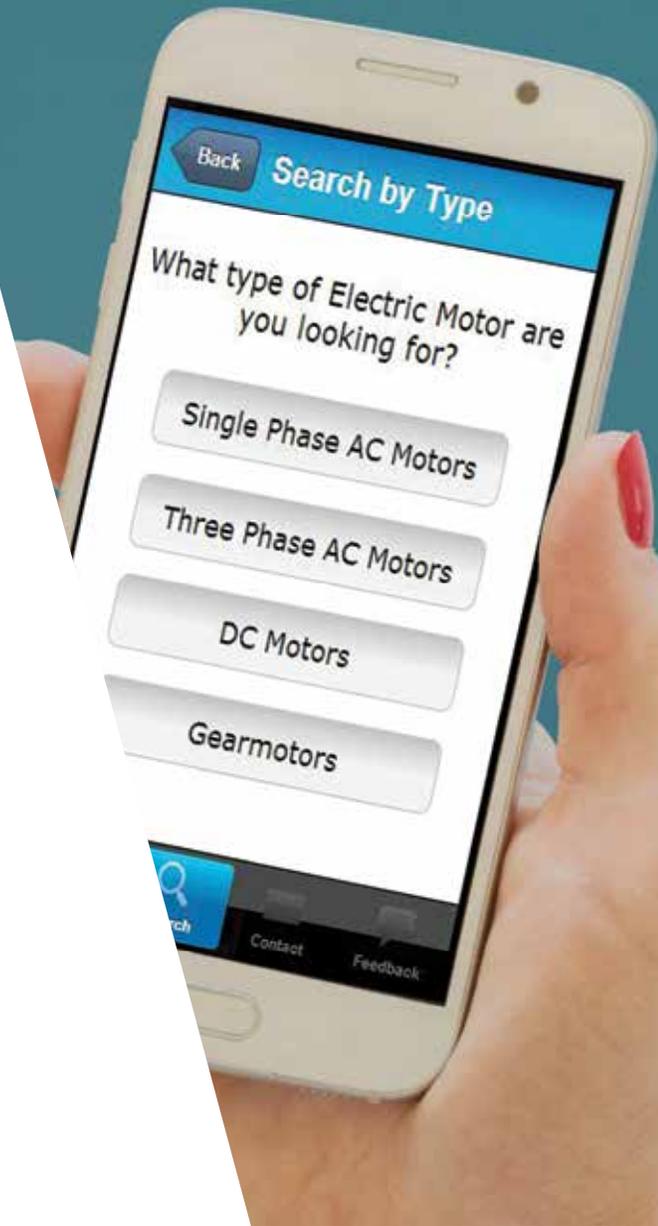
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- Shipment tracking
- PDF product packet information
- Alternative product suggestions

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www.Leeson.com

APPLICATION CONSIDERATIONS

The proper selection and application of electric motors and related products and components, including the related area of product safety, is the responsibility of the customer. Operating and performance requirements and potential associated issues will vary appreciably depending upon the use and application of such products and components. The scope of the technical and application information included in this publication is necessarily limited. Unusual operating environments and conditions, lubrication requirements, loading supports, and other factors can materially affect the application and operating results of the products and components and the customer should carefully review its requirements. Any technical advice or review furnished by Regal Beloit America, Inc. and its affiliates with respect to the use of products and components is given in good faith and without charge, and Regal assumes no obligation or liability for the advice given, or results obtained, all such advice and review being given and accepted at customer's risk.

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