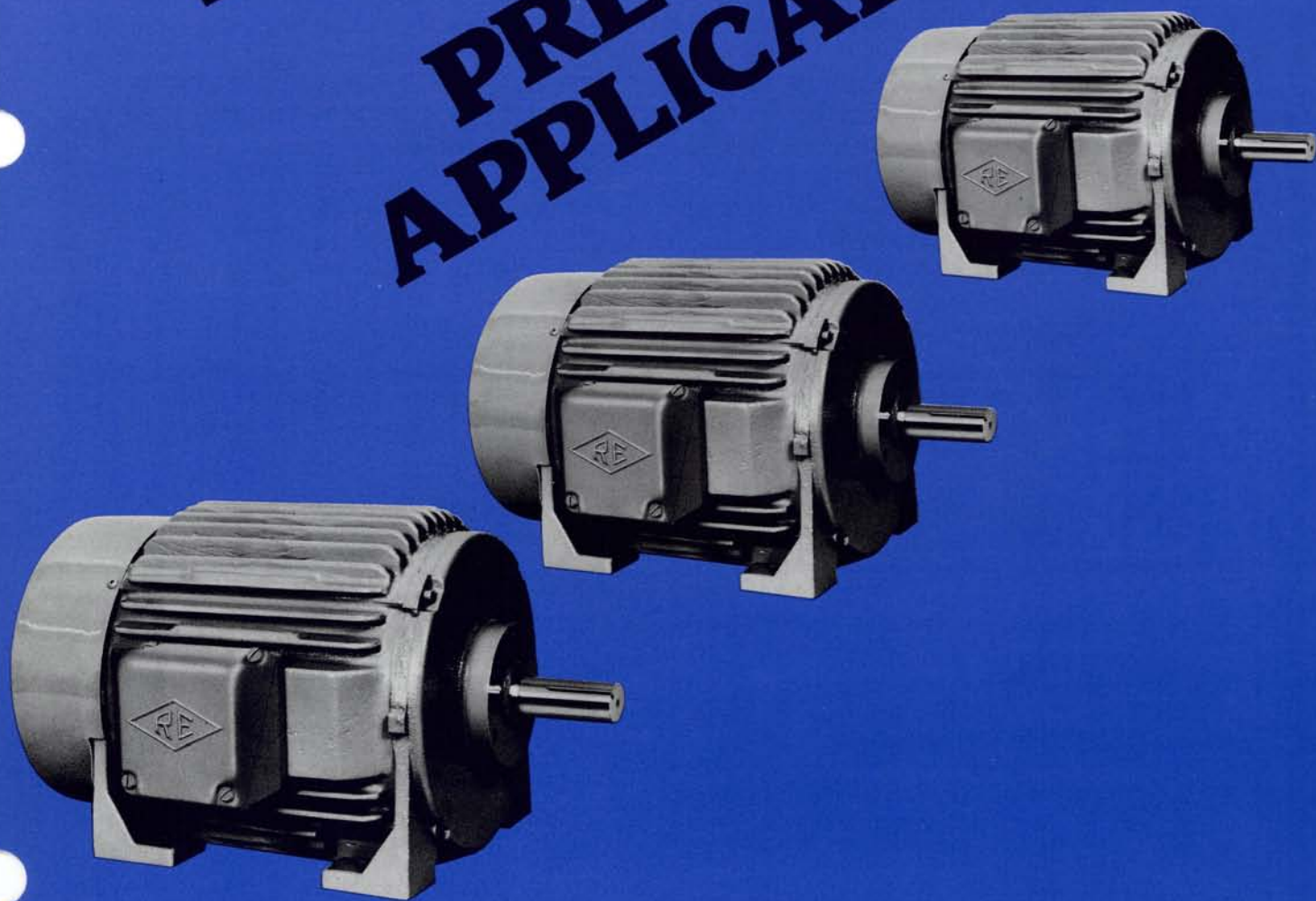


REULAND AC MOTORS for PRECISION APPLICATIONS



REULAND ELECTRIC
 THE POWER DRIVE PEOPLE

PRECISION MOTORS

Reuland Electric Precision Motors offer the most flexibility both electrically and mechanically, while delivering outstanding performance. Available in U-Frame, T-Frame, and Maximum HP ratings to suit any needs. Ideal for machine tools, grinders, spindle drives, test stand, pumping, HVAC --or anyplace where extremely low vibration and minimal shaft runout are desirable.

In order to meet the demanding performance specifications only the highest quality components are used. All machined parts are held to stringent tolerances. Special electrical designs are utilized along with precision dynamic balancing in order to meet the vibration specification of 0.00005" peak to peak displacement. Multiple ventilation techniques and mechanical modifications add to versatility.

DESIGN AND CONSTRUCTION FEATURES

The mounting feet are located on the bearing brackets and incorporate matched duplex, angular contact, precision ABEC7 ball bearings front and back. Bracket fits, bearing chamber bores and foot pads are accurately machined. The combination of an oversize, ground shaft through the interior of the motor, large precision duplex bearings, and critical tolerances result in an extremely rigid shaft system. Shaft runout and deflection due to loading are minimized.

All rotating components are dynamically balanced on modern, high speed balancers. Special winding techniques are used to reduce electrical vibration, lower noise, and maximize efficiency. The airgap and its concentricity are optimized for maximum electrical performance.

Each motor is precision assembled and inspected for compliance to vibration and runout requirements. This information is permanently recorded.

SPECIFICATIONS

- Precision balanced to 0.00005 inches total peak to peak displacement.
- Maximum shaft runout 0.0005 inches TIR.
- Heavy cast iron housing and bearing brackets - feet cast integral with brackets.
- Standard NEMA mounting dimensions.
- Matched duplex, angular contact, precision ABEC7 ball bearings front and back.
- NEMA Design B.
- Total Class H Insulation system.
- Low vibration and low loss winding technique.
- Precision tolerance on all machined parts.
- TEFC enclosure Standard, TENV, enclosed force-cooled, enclosed liquid cooled available.

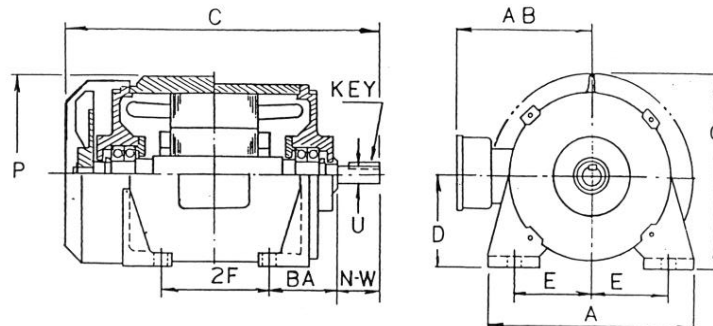
PRECISION MOTORS RATINGS

A.C. Squirrel Cage Motors — Three Phase — Continuous Duty
NEMA B — 40° Ambient — Class H Insulation

FRAME	SYNC RPM	TEFC U-FRAME (1)	TEFC T-FRAME (2)	TEFC MAX HP (3)	FORCE COOLED MAX HP (3)	TENV MAX HP (3)
145	3600	—	2	4	4	1.75
	1800	—	2	4	5	1.75
	1200	—	1	2	3	1.5
	900	—	.75	1.5	2	1
184	3600	2	5	10	10	4
	1800	2	5	7	8.5	4
	1200	1.5	2	4	6	3
	900	.75	1.5	4	6	2
215	3600	7.5	10	20	20	7.5
	1800	5	10	15	19	7.5
	1200	3	5	10	14	5
	900	2	3	7	10	3
256	3600	15	20	30	30	12.5
	1800	10	20	30	35	12.5
	1200	7.5	10	20	27	10
	900	5	7.5	15	19	7.5
286	3600	20	30	50	55	17
	1800	20	30	40	52	17
	1200	10	20	30	37.5	12
	900	10	15	20	27.5	10
326	3600	30	50	60	75	17
	1800	30	50	60	75	17
	1200	20	30	40	47	15
	900	15	25	30	37	10
365	3600	50	75	75	95	20
	1800	50	75	75	92	20
	1200	30	50	50	65	17
	900	25	40	40	52	12

NOTES: 1. HP at Class A Temperature Rise 2. HP at Class B Temperature Rise 3. Maximum HP at Elevated Temperature Rise.

TYPICAL DIMENSIONS



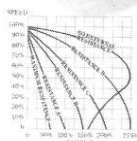
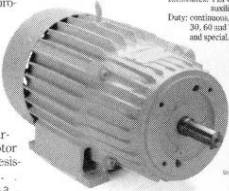
FRAME	C	D	A	O	E	2F	BA	U	N-W	AB	P	KEY
145T	15.0	3.50	7.0	7.50	2.75	5.0	2.75	.875	2.25	6.0	7.5	.188 SQ
184T	16.6	4.50	9.5	9.25	3.75	5.5	2.75	1.125	2.75	7.5	9.9	.250 SQ
215T	20.0	5.25	10.5	11.00	4.25	7.0	3.5	1.375	3.38	8.3	11.5	.312 SQ
256T	24.3	6.25	12.5	12.68	5.0	10.0	4.25	1.625	4.00	9.2	13.0	.375 SQ
286T	26.8	7.00	14.0	14.25	5.5	11.0	4.75	1.875	4.63	10.3	14.5	.500 SQ
326T	30.6	8.00	15.5	16.88	6.25	12.0	5.25	2.125	5.25	13.0	15.6	.500 SQ
365T	33.6	9.00	17.8	17.88	7.0	12.25	5.88	2.375	5.88	15.6	19.2	.625 SQ

Wound rotor motor

Reuland wound rotor motors provide adjustable starting current, starting torque and speed. So they're ideal for applications like bending rolls, conveyors, printing presses, pulpers, pulverizers, plunger and centrifugal pumps, reciprocating compressors, stokers, and hoists, bridge and trolley drives on cranes.

Typical speed-torque curve.

The series of speed-torque curves show the typical performance characteristics of a wound rotor motor with the proper resistance in the rotor circuit. Using zero resistance as a starting point, the adding of resistance produces a maximum torque and slow speed. Further increasing resistance, as in "B" and "A" progressively reduces torque from maximum. Note that maximum resistance produces minimum torque.

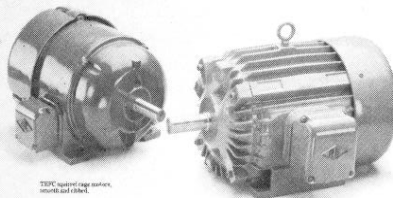


Standard Configurations.
Hertz: 40-50-40-25.
Speed: 4-12 pole.
Horsepower: fractional through 150.
Frame size: cast aluminum: 56-365,
cast iron: 404-445.
Voltage: through 600 VAC.
Insulation: minimum of Class F.
Enclosure: TENV, TENV 0002,
auxiliary cooled,
Duty: continuous, intermittent (15,
30, 60 and 120 minute ratings) and special.

Squirrel cage motors

This rugged, economical squirrel cage motor is used in many industries such as metal forming, material handling, hydraulics, textile, machine tool, and food processing. As dependable as it is sturdy, the Reuland motor runs quietly. Over 16,000 ratings available—low starting torque, high starting torque, high breakdown torque, Nema design, A, B, C and D, (both 5-8% and 8-13% slip).

Standard Configurations.
Hertz: 60-50-40-25.
Speed: 2-20 pole.
Horsepower: fractional through 150.
Frame size: cast aluminum—
56-365,
cast iron—404-445.
Voltage: through 600 VAC.
Insulation: minimum of Class F.
Enclosure: TENV, TENV 0002,
auxiliary cooled,
Duty: continuous, intermittent (15,
30, 60, 120 minute ratings) and special.
Winding: all copper.
Terminal Box: overcast.
Bearings: Ball and angular contact,
cast aluminum cast bell with
steel bearing insert.



TENV squirrel cage motor, standard cast iron.

Gearmotors

We've combined Reuland motor (and brakemotor) technology with our reducers to offer you the Reuland gearmotor.

Numerous reducer configurations are available.

Right angle single worm. It's available with flange or foot mounts, each with solid (single or double) or hollowshaft. Torque arm mounts are available with the hollowshaft.

Ratio: 5:1-60:1
Output torque: up to 10,000 in. lbs. in fl.

Combination helical/right angle worm. It's available with flange or foot mounts, each with solid (single or double) or hollowshaft. Torque arm mounts are available with the hollowshaft.

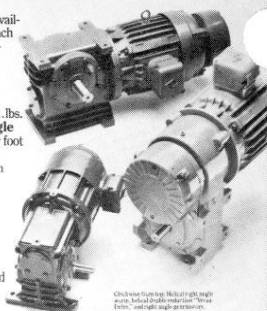
Ratio: 7.2:1-37.2:1
Output torque: up to 18,000 in. lbs.

Helical bevel. It's available with flange or foot mounts, each offered with solid (single or double) or hollowshaft.

Ratio: 10:1-160:1
Output torque: up to 350,000 in. lbs.

Helical parallel and concentric shaft. These Reuland gearmotors are available with single, double and triple reduction gears, and foot or flange mount, and single solid shaft.

Ratio: 1.5:1-1800:1
Output torque: up to 130,000 in. lbs.

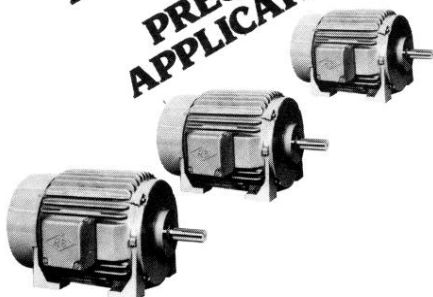


Helical parallel shaft "Versa-Drive" gearmotor, right angle input, hollowshaft, torque arm mount.

Helical parallel shaft "Versa-Drive." It's available in solid (single and double) hollowshaft with torque arm mount. Three integral sets of mounting feet allow versatility in mounting, without adaptations.

Ratio: 4:1-190:1
Output torque: up to 9,075 in. lbs.

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Brakemotors

We've combined all the features and modifications of Reuland motors with the time-proven Reuland heavy-duty Direct Acting disc brakes and MagnaStop brakes to offer you the Reuland brakemotor, available from 1.5 to 150 lb./ft.

It's engineered to be virtually trouble free. Every brakemotor is assembled from all heavy-duty components.

Our heavy duty Direct Acting disc brake has just seven major parts. And only one moves. The armature.

The spring set design provides a built-in safety factor. In case of a power failure, the drive automatically stops. Without power, the magnetic release is gone. And the spring loaded armature is thrust against the brake lining for a fast, positive stop. When the power resumes the magnet retracts the armature, releasing the brake.

In addition, a manual brake release is located outside the housing.

A cast metal housing protects the brake from external damage, so no shrouds are necessary.

The economical Reuland MagnaStop brake has a double action ball bearing cam and single linkage. So it puts less strain on the solenoid. Like our Direct Acting brake, the MagnaStop brake is also springset and magnetically released.



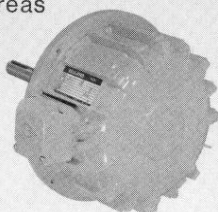
TENV Brakemotor.

REULAND PARTIAL MOTORS 0.1 TO 300 HORSEPOWER

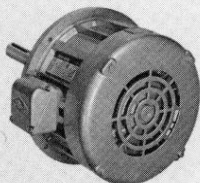


REULAND ELECTRIC
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for applications with limited mounting areas



REULAND
WAFERTHIN
ELECTRIC MOTORS



- machine tools
- textile machines
- cranes and hoists
- door openers
- tensioning devices
- special machinery

BULLETIN WAF 100

Standard modifications

Available on all Reuland motors.

Auxiliary cooling.
Balance, special.
Brake, motor mounted.
Bearing: special,
oversized.

Breathers and drains.
Cadmium plating.
Chemical casting treatments.
Conduit box, oversized.
Export packaging.
End bells: "C" face.

"D" flange.
"P" base.
"DIN" flange (metric).
Helicoll inserts.
High altitude.

Insulation Class, Super B, F, Super E, H and Super H.
Marine duty (IEEE-45, USCG, ABS).
Metric flanges (DIN).
Paint, special.

Part winding starting.
Rotors, fabricated bar.
Rotors, ventilated.
Safety wire.
Screened openings.
Shafts: Spline.

Stainless steel.
Squared.
Tapered.
Double extended.
Step reduction.
Various bore sizes.

Shaft seals.
Space heaters.
Speed switches (anti-plugging).
Star delta starting.
Special ambient.
Tachometers.
Taconite protection.
Tests, special.
Tropical protection.
Zinc chromate primer.

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