



A REGAL-BELOIT COMPANY [®]

More *Than Just a Motor Company*



ALL STAINLESS STEEL MOTORS, GEARMOTORS, AND DRIVES

Bulletin 1525 Product Selection Guide

PREMIUM STAINLESS STEEL WASHGUARD MOTORS

Meets Demanding Sanitation Requirements

Designed specifically to meet the demanding sanitation requirements of the pharmaceutical, food processing and beverage industries. These motors are also ideal in clean room and severe chemical-processing applications involving frequent washdown with nitric acid and caustic lye. In fact, WASHGUARD All-Stainless Motors include IEEE 841 severe-duty features right out of the box!

PREMIUM STAINLESS STEEL DUCK



Mechanical Protection Features

- All exterior components are 300-series stainless steel.
- Nothing on the motor's exterior is painted or coated in any way.
- All sealing components are Viton® for superior chemical resistance.
- Full fact nameplate is laser etched on the motor frame – no separately attached nameplate to trap dirt or contaminants.
- Endshields are O-ring sealed to the frame.
- Double lip shaft seals on both ends of TEFC motors (shaft end only on TENV motors).
- Removable hydrophobic breathers in opposite shaft endbell and conduit box equalize pressure without allowing moisture to enter.
- Exterior fastener use minimized reducing the number of entry points for moisture. There are no holes in the frame for attaching a nameplate. Bearing lock screws are located inside the motor and the conduit box mounted screws have been eliminated.
- Double-sealed bearings are pre-lubricated with moisture-resistant high-temperature grease for long life.
- Interior coatings applied to rotor and stator protect against corrosion.
- New conduit box mounting system provides optimum sealing.
- Ease to clean construction is BISSC Certified for bakery applications.

Electrical Performance and Protection Features

- WASHGUARD efficiencies meet EPACT mandates for non-exempt motors when tested without shaft seals.
- Windings are immersed and cured in polyester insulating varnish for extra moisture-resistance.
- LEESON's exclusive IRIS™ Inverter-Rated Insulation System provides extra protection and long life, especially in inverter-driven applications.
- Single-phase motors use Solid State Sinpac® switch – no mechanical switch contacts to corrode and fail.
- Single and three phase motors are UL component recognized – file number E57948, guide number PRGY2.

Standards and Approvals

- Single and three phase motors are UL component recognized – file number E57948, guide number PRGY2.
- CSA Energy Efficiency Verification Program, report number EEV 78720-1.
- Construction is CSA Certified for safety report number LR33543 and listed under BISSC authorization number 769.



300-Series stainless steel exterior components – frame, base, endshields, shaft extension, fan guard, hardware, conduit box and cover – for maximum corrosion resistance.

Laser-etched full-fact nameplate on motor frame.

Interior coatings applied to rotor and stator protect against moisture and corrosion.

Double-sealed bearings with moisture-resistant high-temperature grease.

Viton® double-lip shaft seals on both ends of TEFC motors.

Hydrophobic breathers in opposite endshield and conduit box allow passage of air for pressure equalization without allowing moisture to enter the motor.

Fillet welded base is double-welded for greatest strength.
Extra strong cast stainless steel base on motors over 1HP.

Revolutionary conduit box mounting uses pressure clip to assure maximum sealing and allows easy repositioning for multiple conduit entry locations.

Viton® O-rings seal the fit between the frame and endshields to exclude moisture and resist harsh chemicals.

PREMIUM STAINLESS STEEL WASHGUARD MOTORS



SINGLE PHASE TENV/TEFC • C FACE WITH BASE

HP	RPM 60 Hz	NEMA Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over- load Prot.	FL. Amps 230V	"C" Dim. (Inches)
1/3	1750	56HC	116343	A	35	115/208-230	None	2.7	12.20
1/2	3450	56HC	116344	A	38	115/208-230	None	3.8	12.20
	1750	56HC	116345	A	38	115/208-230	None	3.3	12.70
3/4	1750	56HC	116346	A	42	115/208-230	None	3.8	12.70
1	3450	56HC	116347	A	49	115/208-230	None	6.0	13.70
	1750	56HC	116348	A	49	115/208-230	None	4.5	13.70
1 1/2	3450	56HC	116482	A	49	115/208-230	None	6.8	13.81
	1750	145TC	121622	B	53	115/208-230	None	7.4	14.81
2	3450	145TC	121623	B	57	115/208-230	None	8.8	14.81
	1750	145TC	121632	B	57	115/208-230	None	10.0	14.81

TENV/TEFC • C FACE LESS BASE

HP	RPM 60 Hz	NEMA Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Voltage	Over- load Prot.	FL. Amps 230V	"C" Dim. (Inches)
1/3	1750	56C	116349	A	35	115/208-230	None	2.7	11.70
1/2	1750	56C	116350	A	38	115/208-230	None	3.3	12.70
3/4	1750	56C	116351	A	42	115/208-230	None	3.8	12.70
1	1750	56C	116352	A	49	115/208-230	None	4.5	13.70
1 1/2	1750	145TC	121624	B	53	115/208-230	None	7.4	14.87
2	1750	145TC	121633	B	57	115/208-230	None	10.0	14.87

BRAKE MOTORS



THREE PHASE TENV • C FACE WITH BASE

HP	RPM 60 Hz	NEMA Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Voltage	FL. Amps 230V	% FL. Eff.	"C" Dim. (Inches)
1/2	1725	56C	116483	A	150	208-230/460	1.6	78.5	15.85
1	1725	56C	116484	A	155	208-230/460	3.0	81.5	15.85

TEFC • JM PUMP

HP	RPM 60 Hz	NEMA Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Voltage	FL. Amps 230V	% FL. Eff.	"C" Dim. (Inches)
1	1750	143JM	121626	B	53	208-230/460	3.1	82.5	16.00
1 1/2	3450	143JM	121627	B	46	208-230/460	4.0	82.5	16.00
	1750	145JM	121628	B	49	208-230/460	4.4	84.0	16.00
2	3450	145JM	121629	B	52	208-230/460	5.2	84.0	16.00
	1750	145JM	121630	B	50	208-230/460	5.6	84.0	16.50
3	3450	145JM	121631	B	53	208-230/460	7.6	85.5	16.50
	1750	182JM	131996	B	85	208-230/460	8.2	87.5	16.20
5	3450	184JM	131997	B	89	208-230/460	12.0	87.5	16.20
	1750	184JM	131998	B	96	208-230/460	13.0	87.5	16.77
7 1/2	3450	213JM	140740	B	153	208-230/460	18.4	88.5	16.81
	1750	213JM	140741	B	156	208-230/460	20.4	89.5	19.81
10	3450	215JM	140742	B	155	208-230/460	24.0	89.5	19.81
	1750	215JM	140743	B	173	208-230/460	26.0	89.5	19.81

THREE PHASE TENV/TEFC • C FACE WITH BASE

HP	RPM 60 Hz	NEMA Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Voltage	FL. Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
1/2	3450	56HC	116165	A	35	208-230/460	1.6	82.5	12.04
	1750	56HC	115633	A	35	208-230/460	1.6	78.5	12.54
	1140	56HC	116297	A	35	208-230/460	2.3	77.0	12.54
3/4	3450	56HC	116167	A	40	208-230/460	2.4	84.0	12.54
	1750	56HC	115634	A	41	208-230/460	2.3	80.0	13.04
	1140	56HC	116298	A	46	208-230/460	3.0	78.5	14.04
1	3450	56HC	116169	A	43	208-230/460	2.6	85.5	13.04
	1750	56HC	115635	A	44	208-230/460	3.0	81.5	13.54
	1750	56HC	116674	A	39	208-230/460	3.1	82.5	13.13
	1750	143TC	121419	B	44	208-230/460	3.0	81.5	13.61
	1750	143TC	G121658	B	50	208-230/460	3.1	82.5	13.19
	1140	56HC	116299	B	48	208-230/460	4.0	77.0	13.13
1 1/2	3450	143TC	G121524	B	45	208-230/460	4.0	82.5	13.69
	1750	56HC	116450	B	49	208-230/460	4.4	84.0	13.63
	1750	145TC	G121420	B	49	208-230/460	4.4	84.0	13.69
	1140	56HC	116300	B	51	208-230/460	5.4	80.0	14.13
2	3450	145TC	G121526	B	49	208-230/460	5.2	84.0	13.69
	1750	56HC	116451	B	50	208-230/460	5.6	84.0	13.63
	1750	145TC	G121421	B	50	208-230/460	5.6	84.0	13.69
3	3450	145TC	G121528	B	53	208-230/460	7.6	85.5	13.69
	1750	182TC	G131900	B	85	208-230/460	8.2	87.5	14.77
5	3450	184TC	G131901	B	90	208-230/460	12.0	87.5	14.77
	1750	184TC	G131902	B	96	208-230/460	13.0	87.5	15.27
7 1/2	3450	213TC	G140698	B	160	208-230/460	18.4	88.5	18.69
	1750	213TC	G140675	B	160	208-230/460	20.4	89.5	18.69
10	3450	215TC	G140699	B	165	208-230/460	24.0	89.5	18.69
	1750	215TC	G140676	B	173	208-230/460	26.0	89.5	18.69

TENV/TEFC • C FACE LESS BASE

HP	RPM 60 Hz	NEMA Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Voltage	FL. Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
1/2	3450	56C	116316	A	35	208-230/460	1.6	82.5	12.04
	1750	56C	116166	A	34	208-230/460	1.6	78.5	12.54
3/4	3450	56C	116317	A	40	208-230/460	2.4	84.0	12.54
	1750	56C	116168	A	40	208-230/460	2.3	80.0	13.04
1	3450	56C	116318	A	43	208-230/460	2.6	85.5	13.04
	1750	56C	116170	A	44	208-230/460	3.0	81.5	13.54
	1750	56HC	116675	A	45	208-230/460	3.1	82.5	13.13
	1750	143TC	121523	B	44	208-230/460	3.0	81.5	13.61
	1750	143TC	121659	B	46	208-230/460	3.1	82.5	13.19
1 1/2	3450	143TC	121560	B	45	208-230/460	4.0	82.5	12.69
	1750	56C	116448	B	49	208-230/460	4.4	84.0	13.63
	1750	145TC	121525	B	49	208-230/460	4.4	84.0	13.69
2	3450	145TC	121561	B	48	208-230/460	5.2	84.0	13.19
	1750	56C	116449	B	49	208-230/460	5.6	84.0	13.63
	1750	145TC	121527	B	54	208-230/460	5.6	84.0	13.69
3	3450	145TC	121562	B	49	208-230/460	7.6	85.5	13.69
	1750	182TC	131923	B	82	208-230/460	8.2	87.5	14.77
5	3450	184TC	131949	B	90	208-230/460	12.0	87.5	14.77
	1750	184TC	131924	B	94	208-230/460	13.0	87.5	15.27

- These motors are totally enclosed, non-ventilated — Others are fan cooled.
- Combination 56H base motors have mounting holes for NEMA 56 and NEMA 143-5T and a standard NEMA 56 shaft.

Catalog numbers in green are EPACT motors.





WASHGUARD SST

STAINLESS STEEL MOTORS

Long Life in Severe Duty or Washdown Applications

Washguard SST motors are designed **Stainless Steel Tough** to withstand the demanding environments found in the food processing, chemical processing and beverage industries.

Product Features

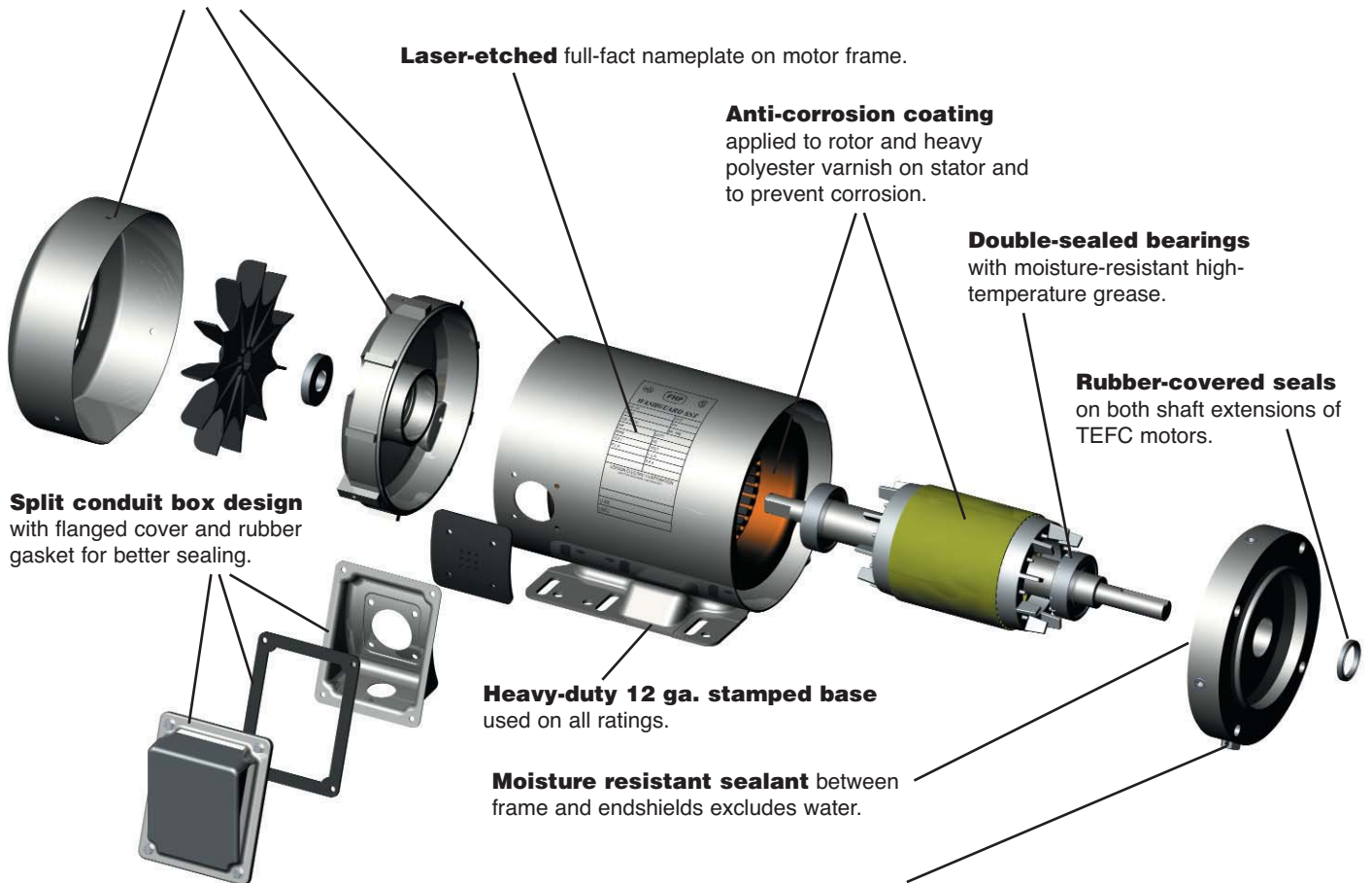
- 1/3 thru 3 HP
- 1750 & 3450 RPM ratings available in TEFC and TENV enclosures
- 56C, 143TC & 145TC frame sizes available
- Rigid/C-Face and C-Face less base mountings available
- LEESON's IRIS (Inverter Rated Insulation System) included on all ratings
- Fully-gasketed conduit box and rubber-covered oil seals to exclude water
- All-stainless steel construction prevents corrosion in harsh washdown environments



WASHGUARD SST

- No paint or coatings of any type are used on the exterior of the motor
- Nameplate is laser-etched into the motor frame to eliminate nameplate rivet holes and bearing locking screws located inside the motor to reduce entry points for water
- Rugged industrial-duty construction

300-Series stainless steel exterior components – frame, base, endshields, shaft extension, fan guard, hardware, conduit box and cover – for maximum corrosion resistance.



Four condensate drains in each endshield (at three, six, nine and twelve o'clock) provide locations to purge condensate and water, which may enter the motor.
T-drains provided for effective drainage without allowing water to splash inside the motor. T-drain for opposite shaft end is installed at six o'clock position (and can be relocated easily). T-drain for shaft end is shipped loose for customer installation at low point of motor.

WASHGUARD ALL-STAINLESS MOTORS



WASHGUARD SST

Built with all stainless steel external components to prevent corrosion and well sealed against moisture and condensation to protect internal components, the Washguard SST all-stainless motors are able to withstand the severe washdown environments found in the food processing, chemical processing, and beverage industries.

Mechanical Protection Features

All exterior components – frame, base, endshields, fan guard, shaft, hardware, conduit box and cover – are made from 300 series stainless steel for maximum corrosion resistance. Nameplate data is permanently laser-etched into the motor frame – no Mylar nameplate that can wash off or riveted metal nameplate to trap dirt. No paint or any type of coating is used on the exterior of the motor.

Sealant is applied to endshield and frame fits before assembly to prevent water entry. Shaft seals on both ends of TEFC motors – shaft end only on TENV. Double-sealed bearings have high performance Exxon Polyrex EM grease. Conduit box is fully gasketed half-split design with flanged cover and body gasket with lead separator. Anti-corrosion coating on rotor prevents corrosion. Four quadrant drain locations on each endbell allow drainage of condensation in any mounting position. Stainless steel T-drains are provided to prevent liquids from splashing into the drain locations. Motors are shipped with a T-drain assembled in the six o'clock position on the opposite endshield. Another T-drain is shipped loose in the conduit box for installation at the lowest point of the shaft-end endshield. For a totally sealed motor, a spare pipe plug is included to replace the pre-installed T-drain.

Mechanical performance is further enhanced by over-sized bearings, heavy 12 gauge base, shaft-end bearing is locked internally to limit axial endplay, and specially designed shaft extension resists breakage at bearing journal.

Electrical Performance and Protection Features

FHP Washguard SST full load efficiencies meet EPACT standards for non-exempt motors when tested without shaft seals. For extra moisture resistance, windings are immersed and cured in polyester insulating varnish. LEESON's exclusive IRIS™ Inverter-Rated Insulation System provides extra protection and long life, especially in inverter driven applications.

Standards and Approvals

UL component recognized, file number E57948, guide number PRGY2. Energy efficiency ratings are verified by an independent testing laboratory. CSA Energy Efficiency Verification Program, report number EEV 78720-1. Construction is CSA Certified for safety report number LR33543. Motor is CE marked for European acceptance.

THREE PHASE ALL-STAINLESS • TENV/TEFC • C FACE WITH BASE

HP	RPM 60 Hz	NEMA Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Voltage	FL Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
1/3	3450	56C	191200•	A	29	208-230/460	1.0	74.0	9.40
	1750	56C	191201•	A	30	208-230/460	1.3	78.5	9.40
1/2	3450	56C	191203•	A	32	208-230/460	1.5	77.0	9.40
	1750	56C	191204•	A	33	208-230/460	1.6	81.5	9.40
3/4	3450	56C	191206•	A	33	208-230/460	2.0	78.5	9.40
	1750	56C	191207•	A	38	208-230/460	2.3	82.5	9.40
1	3450	56C	191209	A	41	208-230/460	2.6	80.0	13.40
	3450	143TC	G191210	B	42	208-230/460	2.6	80.0	13.87
	1750	56C	191291•	A	49	208-230/460	3.0	81.0	13.50
	1750	56C	191211	A	47	208-230/460	3.0	82.5	13.40
	1750	143TC	G191212	B	48	208-230/460	3.0	82.5	13.87
1½	3450	56C	191215	A	48	208-230/460	3.8	82.5	13.40
	3450	143TC	G191216	B	49	208-230/460	3.8	82.5	13.87
	1750	56C	191217	A	48	208-230/460	4.8	84.0	13.40
	1750	145TC	G191218	B	49	208-230/460	4.8	84.0	13.87
2	3450	56C	191221	A	49	208-230/460	5.0	84.0	13.40
	3450	145TC	G191222	B	50	208-230/460	5.0	84.0	13.87
	1750	56C	191223	A	52	208-230/460	5.8	84.0	13.40
	1750	145TC	G191224	B	53	208-230/460	5.8	84.0	13.87
3	3450	145TC	G191293	B	62	208-230/460	7.4	85.5	13.87



ALL-STAINLESS • TENV/TEFC • C FACE LESS BASE

HP	RPM 60 Hz	NEMA Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Voltage	FL Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
1/3	1750	56C	191202•	A	29	208-230/460	1.3	78.5	9.40
1/2	1750	56C	191205•	A	32	208-230/460	1.6	81.5	9.40
3/4	1750	56C	191208•	A	38	208-230/460	2.3	82.5	9.40
1	1750	56C	191290•	A	48	208-230/460	3.0	81.0	13.50
	1750	56C	191213	A	46	208-230/460	3.0	82.5	13.40
	1750	143TC	191214	B	47	208-230/460	3.0	82.5	13.87
1½	1750	56C	191219	A	47	208-230/460	4.8	84.0	13.40
	1750	145TC	191220	B	48	208-230/460	4.8	84.0	13.87
2	1750	56C	191225	A	51	208-230/460	5.8	84.0	13.40
	1750	145TC	191226	B	52	208-230/460	5.8	84.0	13.87

• These motors are totally enclosed, non-ventilated – Others are fan cooled.

Numbers in green are EPACT motors.



PREMIUM STAINLESS STEEL DC MOTORS

IEEE 841 Severe-Duty Features Right Out of the Box

Designed specifically to meet the demanding sanitation requirements of the pharmaceutical, food processing, and beverage industries. These motors are also ideal in clean room and severe chemical-processing applications involving frequent washdown with nitric acid and caustic lye. In fact, WASHGUARD All-Stainless Motors include IEEE 841 severe-duty features right out of the box!

PREMIUM STAINLESS STEEL DUCK



Mechanical Protection Features

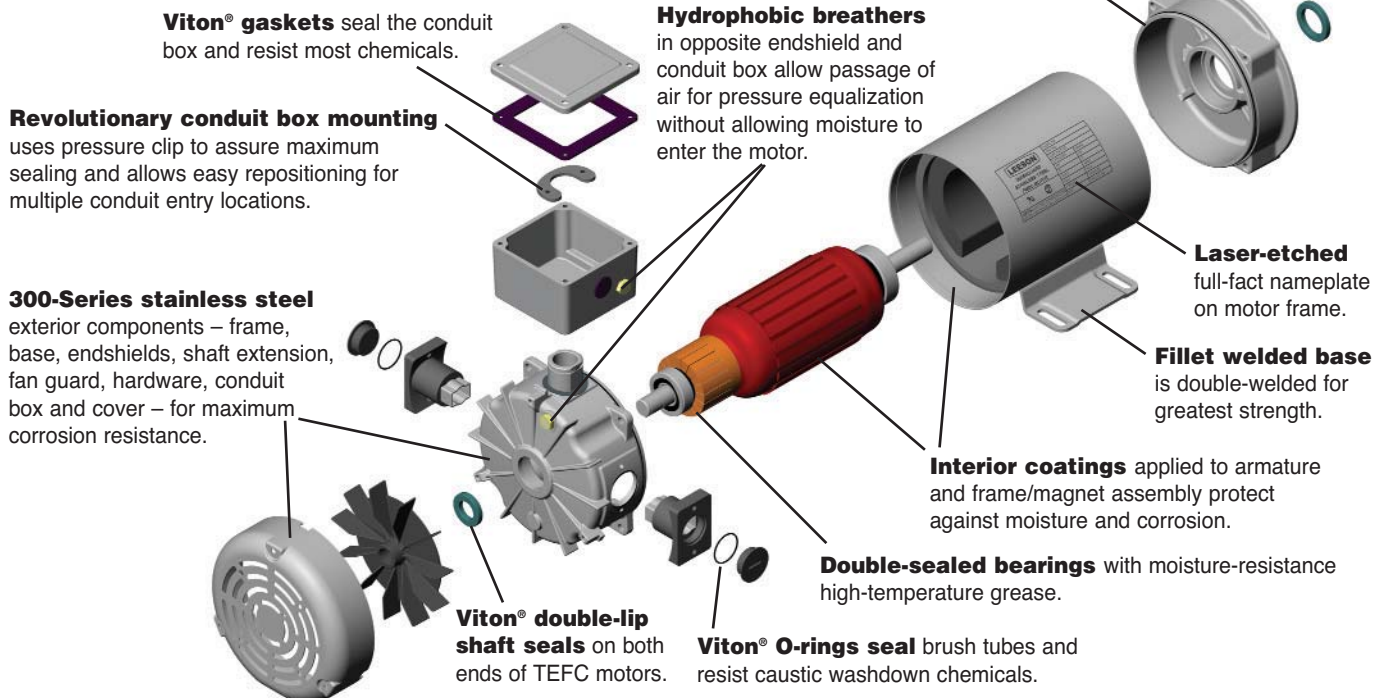
- All exterior components are 300-series stainless steel
- Nothing on the exterior of the motor is painted or coated in any way
- All sealing components are Viton® for superior chemical resistance.
- Full fact nameplate is laser etched on the motor frame – no separately attached nameplate to trap dirt or contaminants
- Endshields are O-ring sealed to the frame
- Double lip shaft seals on both ends of TEFC motors (shaft end only on TENV motors)
- Removable hydrophobic breathers in opposite shaft endbell and conduit box equalize pressure without allowing moisture to enter
- Exterior fastener use minimized reducing the number of entry points for moisture. There are no holes in the frame for attaching a nameplate. Bearing lock screws are located inside the motor and the conduit box mounted screws have been eliminated.
- Double-sealed bearings are pre-lubricated with moisture-resistant high-temperature grease for long life.
- Interior coatings applied to armature and frame/magnet assembly protect against corrosion
- Brush tubes are sealed with Viton® O-rings to keep moisture out
- New conduit box mounting system provides optimum sealing
- Easy to clean construction is BISSC Certified for bakery applications.

Electrical Performance and Protection Features

- Linear speed/torque characteristics over entire speed range.
- Armature windings are immersed and cured in a polyester insulating varnish for extra moisture-resistance
- High starting torque for hard to start loads.
- Use with LEESON SPEEDMASTER DC motor controllers for optimum performance.

Standards and Approvals

- DC motors are UL component recognized - file number E57948, guide number PRGY2
- Construction is CSA Certified for safety report number LR33543
- Listed under BISSC authorization number 769



PREMIUM STAINLESS STEEL DC MOTORS

PREMIUM
STAINLESS
STEEL DUCK



NEMA FRAME ALL-STAINLESS PMDC MOTORS

TEFC • SCR RATED 90 & 180V • NEMA
ALL-STAINLESS STEEL • C-FACE WITH BASE*

HP	RPM 60 Hz	NEMA Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Arm. Volts DC	Control Volts AC Input	F.L. Amps DC	"C" Dim. (Inches)
1/4	1750	S56C	109065●	A	38		115	3.1	11.81
1/3	1750	S56C	109066●	A	44	90	115	3.8	12.81
		S56C	109067●	A	44	180	230	1.9	12.81
1/2	1750	S56C	109069	A	46	90	115	5.2	13.87
		S56C	109070	A	46	180	230	2.7	13.87
3/4	1750	S56C	109072	A	47	90	115	7.5	15.37
		S56C	109073	A	48	180	230	3.7	15.37
1	1750	S56C	109075	A	51	90	115	9.5	16.37
		S56C	109076	A	50	180	230	5.0	16.37



TEFC • SCR RATED 90 & 180V • NEMA
ALL-STAINLESS STEEL • C-FACE LESS BASE

HP	RPM 60 Hz	NEMA Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Arm. Volts DC	Control Volts AC Input	F.L. Amps DC	"C" Dim. (Inches)
1/4	1750	S56C	109078●	A	38	90	115	3.1	11.81
1/3	1750	S56C	109079●	A	44	90	115	3.8	12.81
		S56C	109080●	A	44	180	230	1.9	12.81
1/2	1750	S56C	109082	A	46	90	115	5.2	13.87
		S56C	109083	A	46	180	230	2.7	13.87
3/4	1750	S56C	109085	A	47	90	115	7.5	15.37
		S56C	109086	A	48	180	230	3.7	15.37
1	1750	S56C	109088	A	51	90	115	9.5	16.37
		S56C	109089	A	50	180	230	5.0	16.37

● These motors are totally enclosed non-ventilated, others are TEFC.
* Base is welded to frame and not removable.

METRIC (IEC) FRAME PMDC MOTORS

TEFC • SCR RATED 90 & 180V • METRIC (IEC)
ALL-STAINLESS STEEL • C-FACE WITH BASE*

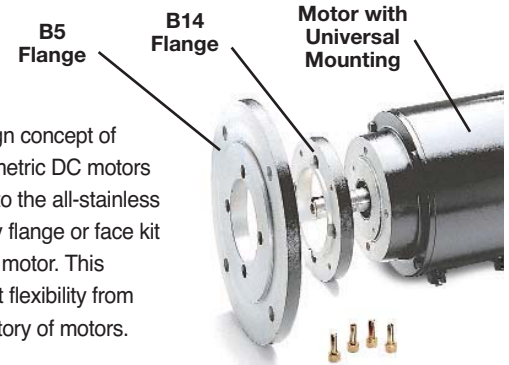
HP	Kw	RPM 60 Hz	IEC Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Arm. Volts DC	Control Volts AC Input	F.L. Amps DC	"C" Dim. (Inches)
1/3	0.25	1750	80D	109068●	A	44	180	230	1.9	12.81
1/2	0.37	1750	80D	109071	A	46	180	230	2.7	13.87
3/4	0.55	1750	80D	109074	A	48	180	230	3.7	15.37
1	0.75	1750	80D	109077	A	50	180	230	5.0	16.37

TEFC • SCR RATED 90 & 180V • METRIC (IEC)
ALL-STAINLESS STEEL • C-FACE LESS BASE

HP	Kw	RPM 60 Hz	IEC Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	Arm. Volts DC	Control Volts AC Input	F.L. Amps DC	"C" Dim. (Inches)
1/3	0.25	1750	80D	109081●	A	44	180	230	1.9	12.81
1/2	0.37	1750	80D	109084	A	46	180	230	2.7	13.87
3/4	0.55	1750	80D	109087	A	48	180	230	3.7	15.37
1	0.75	1750	80D	109090	A	50	180	230	5.0	16.37

STAINLESS STEEL FLANGE AND FACE KITS FOR DC METRIC (IEC) FRAME MOTORS

The modular design concept of LEESON's other metric DC motors has been applied to the all-stainless metric motors. Any flange or face kit can mount on any motor. This allows the greatest flexibility from the smallest inventory of motors.



B5 FLANGE KITS (For Stainless DC Metric Motors)

IEC Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	BD Flange Dia. (mm)	AK Register (mm)	BF Hole (mm)	AJ Bolt Circle (mm)
71	175593	A	2	160	110	9	130
80	175594	A	3	200	130	12	165
90S/90L	175594	A	3	200	130	12	165
100L/112M	175595	A	5	250	180	15	215

B14 FLANGE KITS (For Stainless DC Metric Motors)

IEC Frame	Catalog Number	Disc. Sym.	App. Wgt. (lbs.)	BD Flange Dia. (mm)	AK Register (mm)	BF Tap (mm)	AJ Bolt Circle (mm)
71	175596	A	1	105	70	6	85
80	175597	A	1	120	80	6	100
90S/90L	175598	A	1	140	95	6	115
100L/112M	175599	A	2	160	110	6	130



AC ADJUSTABLE SPEED DRIVES

MICRO SERIES INVERTERS

Full Feature, Ultra-Friendly Operation



Product Features

- Programs and reads-out in plain English.
- Intelligent Power Module-IGBT's with a 16 bit Intel microprocessor.
- User choice programming with:
 - ✓ Choice of "Quick Start" factory presets.
 - ✓ Built-In English programmable options via the key touch-pad.
- Output Frequency: 0-120 Hz.
- Overload Current Capacity: 150% for one minute, based on nominal output of the control.
- Speed reference signal. Choice of potentiometer, 0-10VDC or 4-20mA inputs.
- Analog output signal, 0-10VDC, speed or load.
- Two auxiliary contacts: One form C relay and two open collector output.
- Preset speeds: Four.
- Slip compensation.
- Adjustable carrier frequency.
- Adjustable acceleration and deceleration times.
- Forward/Reverse.
- DC braking—time and voltage adjustable.
- Password protected.
- Constant torque—with adjustable current limit.
- 150% overload capacity for one minute based on nominal output rating of the control.
- Rugged, heavy-gauge steel enclosures with barrier type terminal strips.
- Underwriters Laboratories Listed.

WASHGUARD NEMA 4X (IP65) STAINLESS STEEL

300-Series Stainless Steel NEMA 4X enclosures are fully gasketed to withstand frequent washdown but must be protected from caustic agents. Paint-free stainless steel, no external fans, and anodized aluminum heat sinks provide superior heat transfer and greater structural integrity compared to plastic or fiberglass enclosures.

WASHGUARD NEMA 4X (IP65) THREE PHASE INPUT/OUTPUT

	HP	Output Amps	Input Voltage ⌘	Catalog Number	App. Wgt. (lbs.)	Disc. Sym.	Dimension Key
200-240 Volts	1/2	2.2	200-240	174527	8	A	G
	1	4	200-240	174528	8	A	G
	1 1/2	5.2	200-240	174529	8	A	Y
	2	6.8	200-240	174530	10	A	H
	3	9.6	200-240	174531	11	A	J
	5	15.2	200-240	174732	11	A	K
	7 1/2	22	200-240	174735	27	A	Q
	10	28	200-240	174738	32	A	U
400-480 Volts	15	43	200-240	174741	40	A	V
	1	2	400-480	174532	8	A	G
	2	3.4	400-480	174533	10	A	H
	3	4.8	400-480	174534	10	A	H
	5	7.6	400-480	174535	11	A	J
	7 1/2	11	400-480	174745	11	A	K
	10	14	400-480	174747	11	A	Q
	15	21	400-480	174750	32	A	U
480-590 Volts	20	27	400-480	174753	36	A	V
	1	1.6	480-590	174536	8	A	G
	2	2.7	480-590	174537	10	A	H
	3	3.9	480-590	174538	10	A	H
	5	6.1	480-590	174539	11	A	J
	7 1/2	9	480-590	174759	13	A	K
	10	11	480-590	174761	17	A	Q
	15	17	480-590	174764	38	A	U
20	22	480-590	174767	40	A	V	

WASHGUARD NEMA 4X (IP65) • SINGLE PHASE INPUT 230V THREE PHASE OUTPUT

	HP	Output Amps	Input Voltage ⌘	Catalog Number	App. Wgt. (lbs.)	Disc. Sym.	Dimension Key
	1/4	1.4	115/230	174519	8	A	AD
	1/2	2.2	115/230	174520	8	A	X
	1	4	115/230	174521	11	A	H
	1 1/2	5.2	115/230	174517	11	A	H
	2	6.8	208-230	174525	11	A	H
	3	9.6	208-230	174526	12	A	J

⌘ User programmable for 50Hz and other voltage inputs



STAINLESS MOTOR COMPARISON



Feature	Super Duck	FHP WASHGUARD SST	Premium Stainless Steel Duck
Bearing seals	Double Sealed	Double Sealed	Double Sealed
Bearing, shaft-end, locked	Yes	Yes	Yes
Bearing sizes, PE/OPE			
56/140-frame	6205 / 6203	6205 / 6205	6205 / 6203
180-frame	N/A	N/A	6207 / 6207
210-frame	N/A	N/A	6209 / 6207
BISSC Certified	Yes	No	Yes
Breather	None	None	Hydrophobic
Chemical resistance	Good	Excellent	Excellent
Condensate drains	4 each end	4 each end	None
Conduit box	Hard Coated	303 Stainless	303 Stainless
Conduit box cover	304 Stainless	304 Stainless	304 Stainless
Conduit box gaskets	Nitrile Buna-N	Nitrile Buna-N	Viton
Conduit box lead exit	Threaded	Straight	Threaded
Endbell seal	Sealant	Sealant	Viton O-ring
Endbells	Hard Coated	303 Stainless	303 Stainless
Fan guard	304 Stainless	304 Stainless	304 Stainless
Hardware	302 Stainless	302 Stainless	302 Stainless
HP, maximum	2HP	2HP	10HP
IRIS insulation	Yes	Yes	Yes
Motor Frame	304 Stainless	304 Stainless	304 Stainless
Mounting base	304 Stainless	304 Stainless	304 Stainless
Nameplate			
Agency marks	CE, CSA, UL	CE, CSA, UL	CE, CSA, UL
Location	Riveted to frame	Etched on frame	Riveted to conduit box
Material	Stainless	N/A	Stainless
Seal material	Nitrile Buna-N	Nitrile Buna-N	Viton
Seal construction	Single Lip/V-Ring	Single Lip	Double Lip Seal
Shaft extension	303 Stainless	303 Stainless	303 Stainless
Through-bolt seals	Nylon Washer	Nitrile Washer	Viton O-ring
Overall corrosion resistance – water and mild chemical solutions	Good	Excellent	Excellent
Ability to withstand caustic washdown	Fair	Good	Excellent

WASHGUARD STAINLESS STEEL GEAR REDUCERS

DESIGNED FOR WASHDOWN DUTY

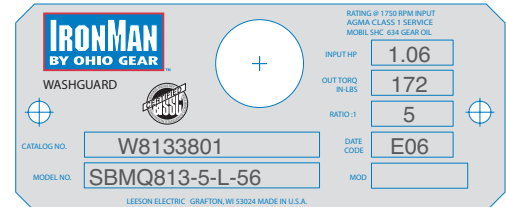
Built to Withstand the Rigors of High-Pressure Washdowns

Product Features

LEESON All-Stainless Steel gear reducers are designed and built to withstand the rigors of high-pressure washdowns in nearly any severe environment, including: food service, chemical and poultry processing, car washes and more. Built on the foundation of LEESON's industrial-duty Ironman® by Ohio Gear line, these reducers add exclusive WASHGUARD All-Stainless features to ensure trouble-free operation.

Combine the gear reducer with a LEESON WASHGUARD All-Stainless motor for a Gear+Motor™ that boasts an unmatched ability to thrive under conditions that would quickly destroy most other motors and gear reducers.

Stainless steel nameplate, riveted to housing and adhesive backed to eliminate particle entrapment.



O-ring on input flange provides a positive seal against moisture intrusion.

Premium 316 grade cast stainless steel housing and covers highly polished for high luster as standard.

Food-Grade Synthetic Oil Mobil SHC634 meets USDS Class H2 standards while providing superior mechanical/thermal performance and extended life.

O-ring seals on input and output covers eliminate gaskets, sealants and leaks.

Viton® double-lip seals are up to five times more durable than nitrile seals and provide superior resistance to chemical corrosion in severe applications.

Stainless steel assembly hardware resists corrosion from moisture and chemicals.

303 stainless steel output shaft is corrosion resistant for long life and ease of servicing (also available with hollow shaft).

Non-compressible stainless steel shims keep factory bearing settings constant.

Vent free design - The ENVIRO-SEAL operates in any mounting position and is standard in all stock LEESON All-Stainless reducers to create a "Sealed For Life" design. There's no need to install a vent.



CHEMICAL COMPATABILITY SUMMARY

Material	Where Found	Reaction Level to Material		
		316 Stainless	Cast Iron	Aluminum
Acetic Acid	vinegar, textiles, film	B	D	B
Arsenic Acid	insecticides	A	D	D
Barium Chloride	waste water treatment	A	C	D
Barium Sulfate	pulp & paper processing	B	B	B
Butter	food products & processing	A	D	A
Calcium Chloride	food processing, road maintenance	B	C	D
Carbonic Acid	beverage processing	A	D	B
Catsup	food products & processing	A	D	D
Citric Acid	fruit processing	A	D	C
Detergents	cleaning solutions	A	N/A	B
Diethylene Glycol	polyester resins	A	A	B
Grape Juice	beverage processing	A	D	N/A
Lactic Acid	dairy food products	B	D	B
Mayonaise	food products	A	D	A
Nitric Acid (50%)	acid rain, refining	A	D	D
Salad Dressing	food products & processing	A	D	B
Soap Solutions	cleaning solutions	A	A	C
Sodium Hydroxide (80%)	cleaning solvents, metal polishing	B	D	D
Sodium Hypochlorite (<20%)	sanitizers, bleaches	C	D	D
Soy Sauce	food products & processing	A	D	A
Sulfuric Acid (<10%)	fertilizers, chemical processing	B	C	D
Sulfur Dioxide	pulp & paper processing	A	N/A	C
Tannic Acid	wood and leather finishing	A	C	C
Vegetable Juice	food products & processing	A	D	D
Vinegar	food processing, pickling	A	D	D
Water, Fresh	water, fresh	A	D	B
Water, salt	brine, fishing, shrimping	B	D	B
Whey	food products & processing	A	N/A	B
Whiskey and Wines	beverages	A	D	C
Zinc Chloride	dry cell batteries	B	D	D
Zinc Sulfate	wastewater, chemical processing	A	D	D

A = Excellent

B = Good, minor effect

C = Fair, moderate affect (not recommended for continuous use)

D = Severe effect, not recommended

N/A = Information not available

NOTE: The information in this chart is meant to be used only as a guide in selecting LEESON products for appropriate chemical compatibility. Before installation, test equipment in your specific application conditions



Packaged Solutions With a STAINLESS Reputation

Product Features

LEESON Stainless Ironman® by Ohio Gear worm reducers, mounted to stainless LEESON motors provide you with a packaged solution offering superior corrosion resistance for nearly any severe environment. Drawing from a wide range of stainless Ironman® by Ohio Gear worm gear reducers and perhaps the industry's broadest stock of stainless NEMA C-face motors, LEESON has what it takes to deliver the perfect Gear+Motor™ package. Single-phase and three-phase or permanent magnet DC and brakemotor Gear+Motors™ are all available with stainless construction through our exclusive gear Mod-Squad service.

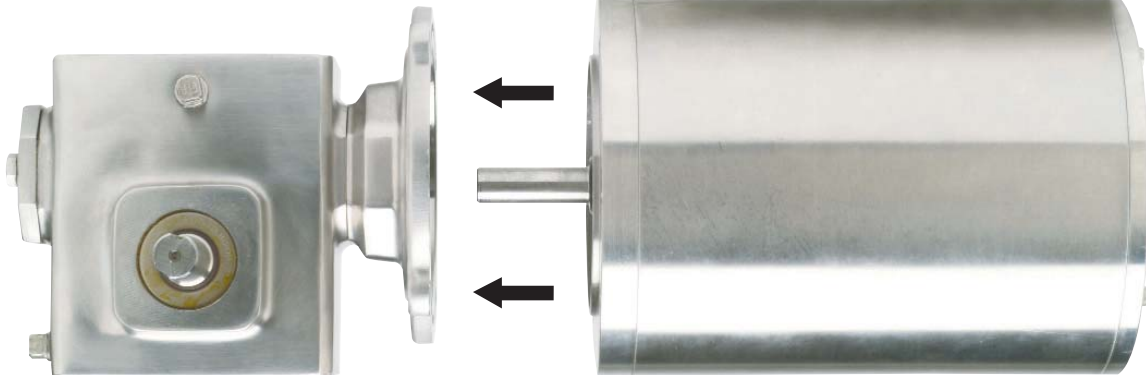
Better yet, there's no additional charge for the labor! You pay only for the reducer and motor. The assembly is on us and the complete package is shipped directly to your location.

NOTE: A Gear+Motor™ consists of the worm reducer model or catalog number followed by the motor's catalog number.

GEAR

+

MOTOR



STYLE HMQ



**STYLE BMQ
GEAR+MOTOR**



STYLE BMQ

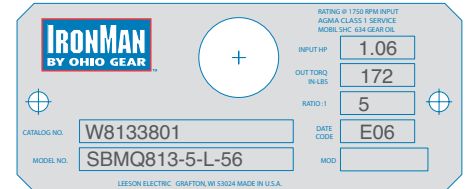
STAINLESS STEEL GEAR REDUCER

MODEL NUMBER SYSTEM



OHIO GEAR™

TYPICAL NAMEPLATE




LEESON 800 Series Gear Reducer Model Number Nomenclature

All stock and custom 800 series reducers are identified by a model number. The model number appears on the nameplate and describes pertinent features of the reducer. An example follows, along with a listing of the various letters and positions used.


NOTE: All reducers also have a catalog number—for example W8133801. Reducers and renewal parts should be ordered by catalog number. If a stock reducer has been factory modified by the addition of an optional base for example, the modification number T818, for example, is stamped in the blank column of the nameplate. Accessories that are field installed will not be noted on the nameplate.

Catalog numbers 5000 (for example, W8135000) and higher are custom reducers manufactured for a specific application. The machinery or equipment manufacturer should be contacted for replacement reducers. Renewal parts can be ordered from LEESON by catalog number.


Style




Style SBMQ




Style SBM




Style SHMQ




Style SHM




Style SDMQ



Style SDM



Style SDHMQ



Style SDHM

Series

Ratio

Output Shaft Orientation

Motor Flange

Output Bore Code

Hollow Shaft Only
See page 23

NEMA Input Flange Code	For NEMA Frame
56	56C
140	143-5TC
180	182-4TC
210	213-5TC

See selection tables on pages 14-20 for quick selections. Refer to LEESON catalog 8050 for all ratios available.

L – Left-hand Output Shaft*
R – Right-hand Output Shaft*
D – Double Output Shaft
H – Hollow Output Shaft
* Viewed from drive end of reducer.

STAINLESS STEEL 800 SERIES CENTER DISTANCES

Series	Center Distance (Inches)
813	1.33
815	1.50
818	1.75
821	2.06
824	2.38
832	3.25

Sample Model Number

Solid Shaft
Motorized Quill Input, Single Reduction Stainless Steel Reducer, 1.75" Center Distance, 15:1 Ratio, Left Hand Output Shaft, and 5/8" Input Bore with NEMA 56C Flange.

<u>SBMQ</u>	<u>818</u>	<u>15</u>	<u>L</u>	<u>56</u>
Style	Series	Ratio	Mounting Assembly	Motor Input Flange

Hollow Shaft
Motorized Quill Input, Single Reduction Stainless Steel Reducer, 1.75" Center Distance, 15:1 Ratio, 1.00" Hollow Output Shaft, and 5/8" Input Bore with NEMA 56C Flange.

<u>SHMQ</u>	<u>818</u>	<u>15</u>	<u>H1</u>	<u>56</u>	<u>16</u>
Style	Series	Ratio	Mounting Assembly	Motor Input Flange	Output Bore Code





SINGLE REDUCTION "HOW TO USE"

QUICK SELECTIONS



OHIO GEAR™

How To Use Quick Selections

Before You Start:

- Identify the **Service Factor** of the application.
- Refer to pages 24-25 for **service factor guide**.
- Determine the **actual input horsepower** of the motor by multiplying the motor's name plate horsepower by the Service Factor.
- Determine the **output speed (RPM)** required at output shaft of reducer.
- Identify the **mounting style** required by your application from the style charts shown on page 12. Note the basic mounting style (SBMQ, SBM, etc.).

To select the proper gear reducer size, use the Quick Selections as shown:

Style SHMQ

QUICK SELECTION GUIDE

1 Find the appropriate Quick Selections page. The tables begin on page 14 and are organized by motor HP. The reducer should be selected first; Gear+Motor combinations follow.

4 Check load capacities against the needs of your application. Do not exceed the overhung load (OHL) shown in the table. Refer to catalog 8050 for detailed instructions to calculate the actual overhung load. If overhung and thrust loads will be applied simultaneously or if the load exceeds listed capacities, contact LEESON.

800 SERIES C-FACED 1750 RPM INPUT

1/4 HP

Output Speed (RPM)	Service Factor ⁽¹⁾	Output Torque (lb-in)	Overhung Load ⁽²⁾ (lbs.)	Ratio	Motor Frame	Solid Output Shaft ⁽³⁾	Hollow Output Shaft ⁽⁴⁾
350	4.20	41	700	5	56C	SBMQ813-5-X-56	SHMQ813-5-H-56-XX
233	3.75	56	700	7.5	56C	SBMQ813-7.5-X-56	SHMQ813-7.5-H-56-XX
175	3.00	76	700	10	56C	SBMQ813-10-X-56	SHMQ813-10-H-56-XX
117	2.24	108	700	15	56C	SBMQ813-15-X-56	SHMQ813-15-H-56-XX
88	1.82	135	700	20	56C	SBMQ813-20-X-56	SHMQ813-20-H-56-XX
			860	20	56C	SBMQ815-20-X-56	SHMQ815-20-H-56-XX
			700	25	56C	SBMQ813-25-X-56	SHMQ813-25-H-56-XX
			860	25	56C	SBMQ815-25-X-56	SHMQ815-25-H-56-XX
						BMQ813-30-X-56	SHMQ813-30-H-56-XX
						BMQ815-30-X-56	SHMQ815-30-H-56-XX
						BMQ818-30-X-56	SHMQ818-30-H-56-XX
						BMQ813-40-X-56	
						BMQ815-40-X-56	
			1200	40	56C	SBMQ818-40-X-56	
			860	50	56C	SBMQ815-50-X-56	
			1200	50	56C	SBMQ818-50-X-56	
			1385	50	56C	SBMQ821-50-X-56	
			860	60	56C	SBMQ815-60-X-56	
			1200	60	56C	SBMQ818-60-X-56	
			1415	60	56C	SBMQ821-60-X-56	
			1495	80	56C	SBMQ821-80-X-56	
			1770	80	56C	SBMQ824-80-X-56	
					56C	SBMQ824-100-X-56	
					56C	SBMQ832-100-X-56	
					56C	SDMQ821-150-XX-56	SDHM821-150-HX-56-XX
			1065	200	56C	SDMQ821-200-XX-56	SDHM821-200-HX-56-XX
			1770	200	56C	SDMQ824-200-XX-56	SDHM824-200-HX-56-XX
			2275	250	56C	SDMQ832-250-XX-56	SDHM832-250-HX-56-XX
			2275	300	56C	SDMQ832-300-XX-56	SDHM832-300-HX-56-XX
			2275	400	56C	SDMQ832-400-XX-56	SDHM832-400-HX-56-XX
			2275	600	56C	SDMQ832-600-XX-56	SDHM832-600-HX-56-XX
			2275	900	56C	SDMQ832-900-XX-56	SDHM832-900-HX-56-XX

2 Locate output RPM column on left side of the table. All ratings are based on an input speed of 1750 RPM. Scroll down to the output speed (RPM) required. Output speeds are rounded to the nearest whole number. For exact output speed, divide 1750 by the ratio listed.

3 Move to the Service Factor column and find one suitable to meet the application requirements. Refer to page 25 for AGMA recommended service factors.

5 Select motor frame size.

6 Identify the model number of the basic reducer by continuing to the right. See page 12 for detailed information on building an exact model number.

QUICK SELECTION GUIDE



800 SERIES • ALL-STAINLESS STEEL REDUCERS C-FACED QUILL INPUT SELECTIONS 1750 RPM INPUT



1/4 HP							Model Numbers	
Output Speed (RPM)	Service Factor▲	Output Torque (lb-in)	Overhung Load■ (lbs.)	Ratio	Motor Frame	Solid Output Shaft◆	Hollow Output Shaft▼	
350	4.20	41	700	5	56C	SBMQ813-5-X-56	SHMQ813-5-H-56-XX	
233	3.75	56	700	7.5	56C	SBMQ813-7.5-X-56	SHMQ813-7.5-H-56-XX	
175	3.00	76	700	10	56C	SBMQ813-10-X-56	SHMQ813-10-H-56-XX	
117	2.24	108	700	15	56C	SBMQ813-15-X-56	SHMQ813-15-H-56-XX	
88	1.82	135	700	20	56C	SBMQ813-20-X-56	SHMQ813-20-H-56-XX	
88	2.57	136	860	20	56C	SBMQ815-20-X-56	SHMQ815-20-H-56-XX	
70	1.48	170	700	25	56C	SBMQ813-25-X-56	SHMQ813-25-H-56-XX	
70	2.18	162	860	25	56C	SBMQ815-25-X-56	SHMQ815-25-H-56-XX	
58	1.31	192	700	30	56C	SBMQ813-30-X-56	SHMQ813-30-H-56-XX	
58	1.88	182	860	30	56C	SBMQ815-30-X-56	SHMQ815-30-H-56-XX	
58	2.44	199	1200	30	56C	SBMQ818-30-X-56	SHMQ818-30-H-56-XX	
44	1.03	239	700	40	56C	SBMQ813-40-X-56	SHMQ813-40-H-56-XX	
44	1.57	221	860	40	56C	SBMQ815-40-X-56	SHMQ815-40-H-56-XX	
44	1.94	247	1200	40	56C	SBMQ818-40-X-56	SHMQ818-40-H-56-XX	
35	1.32	256	860	50	56C	SBMQ815-50-X-56	SHMQ815-50-H-56-XX	
35	1.59	291	1200	50	56C	SBMQ818-50-X-56	SHMQ818-50-H-56-XX	
35	2.29	315	1385	50	56C	SBMQ821-50-X-56	SHMQ821-50-H-56-XX	
29	1.12	288	860	60	56C	SBMQ815-60-X-56	SHMQ815-60-H-56-XX	
29	1.27	347	1200	60	56C	SBMQ818-60-X-56	SHMQ818-60-H-56-XX	
29	1.96	344	1415	60	56C	SBMQ821-60-X-56	SHMQ821-60-H-56-XX	
22	1.33	415	1495	80	56C	SBMQ821-80-X-56	SHMQ821-80-H-56-XX	
22	1.83	453	1770	80	56C	SBMQ824-80-X-56	SHMQ824-80-H-56-XX	
18	1.26	513	1770	100	56C	SBMQ824-100-X-56	SHMQ824-100-H-56-XX	
18	2.92	530	2275	100	56C	SBMQ832-100-X-56	SHMQ832-100-H-56-XX	
11.7	1.24	878	1065	150	56C	SDMQ821-150-XX-56	SDHMQ821-150-HX-56-XX	
8.75	0.97	1127	1065	200	56C	SDMQ821-200-XX-56	SDHMQ821-200-HX-56-XX	
8.75	1.54	1122	1770	200	56C	SDMQ824-200-XX-56	SDHMQ824-200-HX-56-XX	
7.00	3.35	1366	2275	250	56C	SDMQ832-250-XX-56	SDHMQ832-250-HX-56-XX	
5.83	3.27	1486	2275	300	56C	SDMQ832-300-XX-56	SDHMQ832-300-HX-56-XX	
4.38	2.46	1959	2275	400	56C	SDMQ832-400-XX-56	SDHMQ832-400-HX-56-XX	
2.92	1.98	2539	2275	600	56C	SDMQ832-600-XX-56	SDHMQ832-600-HX-56-XX	
1.94	1.57	3241	2275	900	56C	SDMQ832-900-XX-56	SDHMQ832-900-HX-56-XX	
1.46	1.32	3890	2275	1200	56C	SDMQ832-1200-XX-56	SDHMQ832-1200-HX-56-XX	
1.17	1.15	4457	2275	1500	56C	SDMQ832-1500-XX-56	SDHMQ832-1500-HX-56-XX	
0.97	1.06	4862	2275	1800	56C	SDMQ832-1800-XX-56	SDHMQ832-1800-HX-56-XX	

▲ Service factor is based on maximum torque rating of reducer. Refer to catalog 8050 for maximum reducer ratings.

■ Output shaft overhung load rating is based on load applied one shaft diameter from face of reducer housing.

◆ Model numbers are for solid output shaft reducers. When ordering, substitute the X or XX with the required shaft hand assembly. Refer to pages 21-22 for shaft hand assemblies.

▼ Model numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code. Refer to page 23 for bore sizes available. For double reduction styles, confirm assembly position from page 22 and replace HX with required assembly.





QUICK SELECTION GUIDE

800 SERIES • ALL-STAINLESS STEEL REDUCERS C-FACED QUILL INPUT SELECTIONS 1750 RPM INPUT



1/3 HP						Model Numbers	
Output Speed (RPM)	Service Factor▲	Output Torque (lb-in)	Overhung Load■ (lbs.)	Ratio	Motor Frame	Solid Output Shaft◆	Hollow Output Shaft▼
350	3.19	54	700	5	56C	SBMQ813-5-X-56	SHMQ813-5-H-56-XX
233	2.84	74	700	7.5	56C	SBMQ813-7.5-X-56	SHMQ813-7.5-H-56-XX
175	2.28	100	700	10	56C	SBMQ813-10-X-56	SHMQ813-10-H-56-XX
117	1.70	142	700	15	56C	SBMQ813-15-X-56	SHMQ813-15-H-56-XX
117	2.35	142	860	15	56C	SBMQ815-15-X-56	SHMQ815-15-H-56-XX
88	1.39	178	700	20	56C	SBMQ813-20-X-56	SHMQ813-20-H-56-XX
88	1.95	179	860	20	56C	SBMQ815-20-X-56	SHMQ815-20-H-56-XX
88	2.55	191	1200	20	56C	SBMQ818-20-X-56	SHMQ818-20-H-56-XX
70	1.12	225	700	25	56C	SBMQ813-25-X-56	SHMQ813-25-H-56-XX
70	1.65	214	860	25	56C	SBMQ815-25-X-56	SHMQ815-25-H-56-XX
70	2.02	236	1200	25	56C	SBMQ818-25-X-56	SHMQ818-25-H-56-XX
58	1.42	241	860	30	56C	SBMQ815-30-X-56	SHMQ815-30-H-56-XX
58	1.84	263	1200	30	56C	SBMQ818-30-X-56	SHMQ818-30-H-56-XX
58	2.71	276	1255	30	56C	SBMQ821-30-X-56	SHMQ821-30-H-56-XX
44	1.19	291	860	40	56C	SBMQ815-40-X-56	SHMQ815-40-H-56-XX
44	1.47	326	1200	40	56C	SBMQ818-40-X-56	SHMQ818-40-H-56-XX
44	2.23	338	1315	40	56C	SBMQ821-40-X-56	SHMQ821-40-H-56-XX
35	1.00	338	860	50	56C	SBMQ815-50-X-56	SHMQ815-50-H-56-XX
35	1.20	385	1200	50	56C	SBMQ818-50-X-56	SHMQ818-50-H-56-XX
35	1.73	416	1385	50	56C	SBMQ821-50-X-56	SHMQ821-50-H-56-XX
29	0.99	448	1200	60	56C	SBMQ818-60-X-56	SHMQ818-60-H-56-XX
29	1.53	454	1415	60	56C	SBMQ821-60-X-56	SHMQ821-60-H-56-XX
29	2.16	466	1770	60	56C	SBMQ824-60-X-56	SHMQ824-60-H-56-XX
22	1.01	548	1495	80	56C	SBMQ821-80-X-56	SHMQ821-80-H-56-XX
22	1.39	598	1770	80	56C	SBMQ824-80-X-56	SHMQ824-80-H-56-XX
22	3.21	612	2275	80	56C	SBMQ832-80-X-56	SHMQ832-80-H-56-XX
18	2.19	705	2275	100	56C	SBMQ832-100-X-56	SHMQ832-100-H-56-XX
11.7	1.48	1159	1770	150	56C	SDMQ824-150-XX-56	SDHMQ824-150-HX-56-XX
8.75	3.09	1512	2275	200	56C	SDMQ832-200-XX-56	SDHMQ832-200-HX-56-XX
7.00	2.54	1804	2275	250	56C	SDMQ832-250-XX-56	SDHMQ832-250-HX-56-XX
5.83	2.48	1961	2275	300	56C	SDMQ832-300-XX-56	SDHMQ832-300-HX-56-XX
4.38	1.87	2586	2275	400	56C	SDMQ832-400-XX-56	SDHMQ832-400-HX-56-XX
2.92	1.50	3351	2275	600	56C	SDMQ832-600-XX-56	SDHMQ832-600-HX-56-XX
1.94	1.19	4278	2275	900	56C	SDMQ832-900-XX-56	SDHMQ832-900-HX-56-XX
1.46	1.00	5134	2275	1200	56C	SDMQ832-1200-XX-56	SDHMQ832-1200-HX-56-XX

▲ Service factor is based on maximum torque rating of reducer. Refer to catalog 8050 for maximum reducer ratings.

■ Output shaft overhung load rating is based on load applied one shaft diameter from face of reducer housing.

◆ Model numbers are for solid output shaft reducers. When ordering, substitute the X or XX with the required shaft hand assembly. Refer to pages 21-22 for shaft hand assemblies.

▼ Model numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code. Refer to page 23 for bore sizes available. For double reduction styles, confirm assembly position from page 22 and replace HX with required assembly.

QUICK SELECTION GUIDE



800 SERIES • ALL-STAINLESS STEEL REDUCERS C-FACED QUILL INPUT SELECTIONS 1750 RPM INPUT



1/2 HP

Output Speed (RPM)	Service Factor▲	Output Torque (lb-in)	Overhung Load■ (lbs.)	Ratio	Motor Frame	Model Numbers	
						Solid Output Shaft◆	Hollow Output Shaft▼
350	2.12	81	700	5	56C	SBMQ813-5-X-56	SHMQ813-5-H-56-XX
233	1.88	112	700	7.5	56C	SBMQ813-7.5-X-56	SHMQ813-7.5-H-56-XX
233	2.47	119	860	7.5	56C	SBMQ815-7.5-X-56	SHMQ815-7.5-H-56-XX
175	1.51	151	700	10	56C	SBMQ813-10-X-56	SHMQ813-10-H-56-XX
175	2.05	153	860	10	56C	SBMQ815-10-X-56	SHMQ815-10-H-56-XX
117	1.13	215	700	15	56C	SBMQ813-15-X-56	SHMQ813-15-H-56-XX
117	1.55	215	860	15	56C	SBMQ815-15-X-56	SHMQ815-15-H-56-XX
117	2.10	224	1200	15	56C	SBMQ818-15-X-56	SHMQ818-15-H-56-XX
88	1.29	271	860	20	56C	SBMQ815-20-X-56	SHMQ815-20-H-56-XX
88	1.69	289	1200	20	56C	SBMQ818-20-X-56	SHMQ818-20-H-56-XX
88	2.52	295	1175	20	56C	SBMQ821-20-X-56	SHMQ821-20-H-56-XX
70	1.09	324	860	25	56C	SBMQ815-25-X-56	SHMQ815-25-H-56-XX
70	1.34	357	1200	25	56C	SBMQ818-25-X-56	SHMQ818-25-H-56-XX
70	2.05	364	1175	25	56C	SBMQ821-25-X-56	SHMQ821-25-H-56-XX
58	1.22	398	1200	30	56C	SBMQ818-30-X-56	SHMQ818-30-H-56-XX
58	1.80	417	1255	30	56C	SBMQ821-30-X-56	SHMQ821-30-H-56-XX
58	2.65	420	1770	30	56C	SBMQ824-30-X-56	SHMQ824-30-H-56-XX
44	1.47	512	1315	40	56C	SBMQ821-40-X-56	SHMQ821-40-H-56-XX
44	2.12	520	1770	40	56C	SBMQ824-40-X-56	SHMQ824-40-H-56-XX
35	1.14	630	1385	50	56C	SBMQ821-50-X-56	SHMQ821-50-H-56-XX
35	1.72	619	1770	50	56C	SBMQ824-50-X-56	SHMQ824-50-H-56-XX
35	3.82	673	2275	50	56C	SBMQ832-50-X-56	SHMQ832-50-H-56-XX
29	1.01	687	1415	60	56C	SBMQ821-60-X-56	SHMQ821-60-H-56-XX
29	1.43	706	1770	60	56C	SBMQ824-60-X-56	SHMQ824-60-H-56-XX
29	3.13	779	2275	60	56C	SBMQ832-60-X-56	SHMQ832-60-H-56-XX
22	2.10	933	2275	80	56C	SBMQ832-80-X-56	SHMQ832-80-H-56-XX
18	1.45	1068	2275	100	56C	SBMQ832-100-X-56	SHMQ832-100-H-56-XX
11.7	2.67	1702	2275	150	56C	SDMQ832-150-XX-56	SDHMQ832-150-HX-56-XX
8.75	2.06	2269	2275	200	56C	SDMQ832-200-XX-56	SDHMQ832-200-HX-56-XX
7.00	1.67	2746	2275	250	56C	SDMQ832-250-XX-56	SDHMQ832-250-HX-56-XX
5.83	1.63	2993	2275	300	56C	SDMQ832-300-XX-56	SDHMQ832-300-HX-56-XX
4.38	1.23	3911	2275	400	56C	SDMQ832-400-XX-56	SDHMQ832-400-HX-56-XX

▲ Service factor is based on maximum torque rating of reducer. Refer to catalog 8050 for maximum reducer ratings.

■ Output shaft overhung load rating is based on load applied one shaft diameter from face of reducer housing.

◆ Model numbers are for solid output shaft reducers. When ordering, substitute the X or XX with the required shaft hand assembly. Refer to pages 21-22 for shaft hand assemblies.

▼ Model numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code. Refer to page 23 for bore sizes available. For double reduction styles, confirm assembly position from page 22 and replace HX with required assembly.





QUICK SELECTION GUIDE

800 SERIES • ALL-STAINLESS STEEL REDUCERS C-FACED QUILL INPUT SELECTIONS 1750 RPM INPUT



3/4 HP						Model Numbers	
Output Speed (RPM)	Service Factor▲	Output Torque (lb-in)	Overhung Load■ (lbs.)	Ratio	Motor Frame	Solid Output Shaft◆	Hollow Output Shaft▼
						350	1.41
350	2.16	122	860	5	56C	SBMQ815-5-X-56	SHMQ815-5-H-56-XX
233	1.25	168	700	7.5	56C	SBMQ813-7.5-X-56	SHMQ813-7.5-H-56-XX
233	1.64	179	860	7.5	56C	SBMQ815-7.5-X-56	SHMQ815-7.5-H-56-XX
233	2.25	182	1200	7.5	56C	SBMQ818-7.5-X-56	SHMQ818-7.5-H-56-XX
175	1.36	230	860	10	56C	SBMQ815-10-X-56	SHMQ815-10-H-56-XX
175	1.87	236	1200	10	56C	SBMQ818-10-X-56	SHMQ818-10-H-56-XX
175	2.85	239	1065	10	56C	SBMQ821-10-X-56	SHMQ821-10-H-56-XX
117	1.03	323	860	15	56C	SBMQ815-15-X-56	SHMQ815-15-H-56-XX
117	1.40	336	1200	15	56C	SBMQ818-15-X-56	SHMQ818-15-H-56-XX
117	2.11	344	1125	15	56C	SBMQ821-15-X-56	SHMQ821-15-H-56-XX
88	1.12	434	1200	20	56C	SBMQ818-20-X-56	SHMQ818-20-H-56-XX
88	1.68	442	1175	20	56C	SBMQ821-20-X-56	SHMQ821-20-H-56-XX
88	2.48	444	1770	20	56C	SBMQ824-20-X-56	SHMQ824-20-H-56-XX
70	1.37	546	1210	25	56C	SBMQ821-25-X-56	SHMQ821-25-H-56-XX
70	2.07	525	1770	25	56C	SBMQ824-25-X-56	SHMQ824-25-H-56-XX
58	1.20	626	1255	30	56C	SBMQ821-30-X-56	SHMQ821-30-H-56-XX
58	1.77	629	1770	30	56C	SBMQ824-30-X-56	SHMQ824-30-H-56-XX
58	4.09	630	2275	30	56C	SBMQ832-30-X-56	SHMQ832-30-H-56-XX
44	1.41	780	1770	40	56C	SBMQ824-40-X-56	SHMQ824-40-H-56-XX
44	3.15	839	2275	40	56C	SBMQ832-40-X-56	SHMQ832-40-H-56-XX
35	1.15	928	1770	50	56C	SBMQ824-50-X-56	SHMQ824-50-H-56-XX
35	2.54	1010	2275	50	56C	SBMQ832-50-X-56	SHMQ832-50-H-56-XX
29	2.08	1169	2275	60	56C	SBMQ832-60-X-56	SHMQ832-60-H-56-XX
22	1.40	1399	2275	80	56C	SBMQ832-80-X-56	SHMQ832-80-H-56-XX
17.5	2.15	1912	2275	100	56C	SDMQ832-100-XX-56	SDHMQ832-100-HX-56-XX
11.7	1.78	2553	2275	150	56C	SDMQ832-150-XX-56	SDHMQ832-150-HX-56-XX
8.8	1.36	3436	2275	200	56C	SDMQ832-200-XX-56	SDHMQ832-200-HX-56-XX
7.0	1.12	4099	2275	250	56C	SDMQ832-250-XX-56	SDHMQ832-250-HX-56-XX
5.83	1.09	4457	2275	300	56C	SDMQ832-300-XX-56	SDHMQ832-300-HX-56-XX

▲ Service factor is based on maximum torque rating of reducer. Refer to catalog 8050 for maximum reducer ratings.

■ Output shaft overhung load rating is based on load applied one shaft diameter from face of reducer housing.

◆ Model numbers are for solid output shaft reducers. When ordering, substitute the X or XX with the required shaft hand assembly. Refer to pages 21-22 for shaft hand assemblies.

▼ Model numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code. Refer to page 23 for bore sizes available. For double reduction styles, confirm assembly position from page 22 and replace HX with required assembly.

QUICK SELECTION GUIDE



800 SERIES • ALL-STAINLESS STEEL REDUCERS C-FACED QUILL INPUT SELECTIONS 1750 RPM INPUT



1 HP

Output Speed (RPM)	Service Factor▲	Output Torque (lb-in)	Overhung Load■ (lbs.)	Ratio	Motor Frame	Model Numbers	
						Solid Output Shaft◆	Hollow Output Shaft▼
350	1.06	162	700	5	56C	SBMQ813-5-X-56	SHMQ813-5-H-56-XX
350	1.61	163	860	5	56C	SBMQ815-5-X-56	SHMQ815-5-H-56-XX
350	2.52	166	1000	5	56C	SBMQ821-5-X-56	SHMQ821-5-H-56-XX
233	1.24	238	860	7.5	56C	SBMQ815-7.5-X-56	SHMQ815-7.5-H-56-XX
233	1.69	242	1200	7.5	56C	SBMQ818-7.5-X-56	SHMQ818-7.5-H-56-XX
233	2.48	244	1035	7.5	56C	SBMQ821-7.5-X-56	SHMQ821-7.5-H-56-XX
175	1.02	307	860	10	56C	SBMQ815-10-X-56	SHMQ815-10-H-56-XX
175	1.40	315	1200	10	56C	SBMQ818-10-X-56	SHMQ818-10-H-56-XX
175	2.14	319	1065	10	56C	SBMQ821-10-X-56	SHMQ821-10-H-56-XX
117	1.05	448	1200	15	56C	SBMQ818-15-X-56	SHMQ818-15-H-56-XX
117	1.58	459	1125	15	56C	SBMQ821-15-X-56	SHMQ821-15-H-56-XX
117	2.34	460	1770	15	56C	SBMQ824-15-X-56	SHMQ824-15-H-56-XX
88	1.26	590	1175	20	56C	SBMQ821-20-X-56	SHMQ821-20-H-56-XX
88	1.86	592	1770	20	56C	SBMQ824-20-X-56	SHMQ824-20-H-56-XX
88	4.21	626	2275	20	56C	SBMQ832-20-X-56	SHMQ832-20-H-56-XX
70	1.02	728	1210	25	56C	SBMQ821-25-X-56	SHMQ821-25-H-56-XX
70	1.56	699	1770	25	56C	SBMQ824-25-X-56	SHMQ824-25-H-56-XX
70	3.47	767	2275	25	56C	SBMQ832-25-X-56	SHMQ832-25-H-56-XX
58	1.33	839	1770	30	56C	SBMQ824-30-X-56	SHMQ824-30-H-56-XX
58	3.07	840	2275	30	56C	SBMQ832-30-X-56	SHMQ832-30-H-56-XX
44	1.06	1040	1770	40	56C	SBMQ824-40-X-56	SHMQ824-40-H-56-XX
44	2.36	1119	2275	40	56C	SBMQ832-40-X-56	SHMQ832-40-H-56-XX
35	1.91	1347	2275	50	56C	SBMQ832-50-X-56	SHMQ832-50-H-56-XX
29	1.56	1558	2275	60	56C	SBMQ832-60-X-56	SHMQ832-60-H-56-XX
22	1.05	1865	2275	80	56C	SBMQ832-80-X-56	SHMQ832-80-H-56-XX
17.5	1.61	2550	2275	100	56C	SDMQ832-100-XX-56	SDHMQ832-100-HX-56-XX
11.7	1.34	3403	2275	150	56C	SDMQ832-150-XX-56	SDHMQ832-150-HX-56-XX
8.8	1.02	4581	2275	200	56C	SDMQ832-200-XX-56	SDHMQ832-200-HX-56-XX

▲ Service factor is based on maximum torque rating of reducer. Refer to catalog 8050 for maximum reducer ratings.

■ Output shaft overhung load rating is based on load applied one shaft diameter from face of reducer housing.

◆ Model numbers are for solid output shaft reducers. When ordering, substitute the X or XX with the required shaft hand assembly. Refer to pages 21-22 for shaft hand assemblies.

▼ Model numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code. Refer to page 23 for bore sizes available. For double reduction styles, confirm assembly position from page 22 and replace HX with required assembly.





QUICK SELECTION GUIDE

800 SERIES • ALL-STAINLESS STEEL REDUCERS C-FACED QUILL INPUT SELECTIONS 1750 RPM INPUT



1-1/2 HP							Model Numbers	
Output Speed (RPM)	Service Factor▲	Output Torque (lb-in)	Overhung Load■ (lbs.)	Ratio	Motor Frame	Solid Output Shaft◆	Hollow Output Shaft▼	
350	1.07	245	860	5	56C	SBMQ815-5-X-56	SHMQ815-5-H-56-XX	
350	1.67	250	1000	5	143-5TC	SBMQ821-5-X-140	SHMQ821-5-H-140-XX	
350	2.59	252	1770	5	143-5TC	SBMQ824-5-X-140	SHMQ824-5-H-140-XX	
233	1.13	363	1200	7.5	56C	SBMQ818-7.5-X-56	SHMQ818-7.5-H-56-XX	
233	1.65	366	1035	7.5	143-5TC	SBMQ821-7.5-X-140	SHMQ821-7.5-H-140-XX	
233	2.31	374	1770	7.5	143-5TC	SBMQ824-7.5-X-140	SHMQ824-7.5-H-140-XX	
175	1.43	478	1065	10	143-5TC	SBMQ821-10-X-140	SHMQ821-10-H-140-XX	
175	2.08	476	1770	10	143-5TC	SBMQ824-10-X-140	SHMQ824-10-H-140-XX	
117	1.05	688	1125	15	56C	SBMQ821-15-X-56	SHMQ821-15-H-56-XX	
117	1.56	691	1770	15	143-5TC	SBMQ824-15-X-140	SHMQ824-15-H-140-XX	
117	3.53	723	2275	15	143-5TC	SBMQ832-15-X-140	SHMQ832-15-H-140-XX	
88	1.24	887	1770	20	56C	SBMQ824-20-X-56	SHMQ824-20-H-56-XX	
88	2.81	938	2275	20	143-5TC	SBMQ832-20-X-140	SHMQ832-20-H-140-XX	
70	1.04	1049	1770	25	56C	SBMQ824-25-X-56	SHMQ824-25-H-56-XX	
70	2.31	1151	2275	25	143-5TC	SBMQ832-25-X-140	SHMQ832-25-H-140-XX	
58	2.05	1260	2275	30	143-5TC	SBMQ832-30-X-140	SHMQ832-30-H-140-XX	
44	1.57	1678	2275	40	143-5TC	SBMQ832-40-X-140	SHMQ832-40-H-140-XX	
35	1.27	2020	2275	50	56C	SBMQ832-50-X-56	SHMQ832-50-H-56-XX	
29	1.04	2338	2275	60	56C	SBMQ832-60-X-56	SHMQ832-60-H-56-XX	
23	1.07	2994	2275	75	56C	SDMQ832-75-XX-56	SDHMQ832-75-HX-56-XX	
17.5	1.09	3782	2275	100	56C	SDMQ832-100-XX-56	SDHMQ832-100-HX-56-XX	

2 HP							Model Numbers	
Output Speed (RPM)	Service Factor▲	Output Torque (lb-in)	Overhung Load■ (lbs.)	Ratio	Motor Frame	Solid Output Shaft◆	Hollow Output Shaft▼	
350	1.26	333	1000	5	143-5TC	SBMQ821-5-X-140	SHMQ821-5-H-140-XX	
350	1.94	336	1770	5	143-5TC	SBMQ824-5-X-140	SHMQ824-5-H-140-XX	
233	1.24	489	1035	7.5	143-5TC	SBMQ821-7.5-X-140	SHMQ821-7.5-H-140-XX	
233	1.73	499	1770	7.5	143-5TC	SBMQ824-7.5-X-140	SHMQ824-7.5-H-140-XX	
233	3.91	505	2275	7.5	143-5TC	SBMQ832-7.5-X-140	SHMQ832-7.5-H-140-XX	
175	1.56	635	1770	10	143-5TC	SBMQ824-10-X-140	SHMQ824-10-H-140-XX	
175	3.51	667	2275	10	143-5TC	SBMQ832-10-X-140	SHMQ832-10-H-140-XX	
117	1.17	921	1770	15	143-5TC	SBMQ824-15-X-140	SHMQ824-15-H-140-XX	
117	2.65	964	2275	15	143-5TC	SBMQ832-15-X-140	SHMQ832-15-H-140-XX	
88	2.10	1251	2275	20	143-5TC	SBMQ832-20-X-140	SHMQ832-20-H-140-XX	
70	1.73	1535	2275	25	143-5TC	SBMQ832-25-X-140	SHMQ832-25-H-140-XX	
58	1.53	1680	2275	30	143-5TC	SBMQ832-30-X-140	SHMQ832-30-H-140-XX	

- ▲ Service factor is based on maximum torque rating of reducer. Refer to catalog 8050 for maximum reducer ratings.
- Output shaft overhung load rating is based on load applied one shaft diameter from face of reducer housing.
- ◆ Model numbers are for solid output shaft reducers. When ordering, substitute the X or XX with the required shaft hand assembly. Refer to pages 21-22 for shaft hand assemblies.
- ▼ Model numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code. Refer to page 23 for bore sizes available. For double reduction styles, confirm assembly position from page 22 and replace HX with required assembly.

QUICK SELECTION GUIDE



800 SERIES • ALL-STAINLESS STEEL REDUCERS C-FACED QUILL INPUT SELECTIONS 1750 RPM INPUT



3 HP							Model Numbers	
Output Speed (RPM)	Service Factor▲	Output Torque (lb-in)	Overhung Load■ (lbs.)	Ratio	Motor Frame	Solid Output Shaft◆	Hollow Output Shaft▼	
350	1.30	504	1770	5	182-4TC	SBMQ824-5-X-180	SHMQ824-5-X-180-XX	
350	3.15	509	2275	5	182-4TC	SBMQ832-5-X-180	SHMQ832-5-X-180-XX	
233	1.15	748	1770	7.5	182-4TC	SBMQ824-7.5-X-180	SHMQ824-7.5-X-180-XX	
233	2.61	757	2275	7.5	182-4TC	SBMQ832-7.5-X-180	SHMQ832-7.5-X-180-XX	
175	1.04	952	1770	10	182-4TC	SBMQ824-10-X-180	SHMQ824-10-X-180-XX	
175	2.34	1000	2275	10	182-4TC	SBMQ832-10-X-180	SHMQ832-10-X-180-XX	
117	1.76	1446	2275	15	182-4TC	SBMQ832-15-X-180	SHMQ832-15-X-180-XX	
88	1.40	1877	2275	20	182-4TC	SBMQ832-20-X-180	SHMQ832-20-X-180-XX	
70	1.15	2302	2275	25	182-4TC	SBMQ832-25-X-180	SHMQ832-25-X-180-XX	
58	1.02	2520	2275	30	182-4TC	SBMQ832-30-X-180	SHMQ832-30-X-180-XX	

5 HP							Model Numbers	
Output Speed (RPM)	Service Factor▲	Output Torque (lb-in)	Overhung Load■ (lbs.)	Ratio	Motor Frame	Solid Output Shaft◆	Hollow Output Shaft▼	
350	1.89	849	2275	5	182-4TC	SBMQ832-5-X-180	SHMQ832-5-X-180-XX	
233	1.57	1262	2275	7.5	182-4TC	SBMQ832-7.5-X-180	SHMQ832-7.5-X-180-XX	
175	1.41	1667	2275	10	182-4TC	SBMQ832-10-X-180	SHMQ832-10-X-180-XX	
117	1.06	2410	2275	15	182-4TC	SBMQ832-15-X-180	SHMQ832-15-X-180-XX	

7-1/2 HP							Model Numbers	
Output Speed (RPM)	Service Factor▲	Output Torque (lb-in)	Overhung Load■ (lbs.)	Ratio	Motor Frame	Solid Output Shaft◆	Hollow Output Shaft▼	
350	1.26	1273	2275	5	182-4TC	SBMQ832-5-X-180	SHMQ832-5-X-180-XX	
233	1.04	1892	2275	7.5	182-4TC	SBMQ832-7.5-X-180	SHMQ832-7.5-X-180-XX	

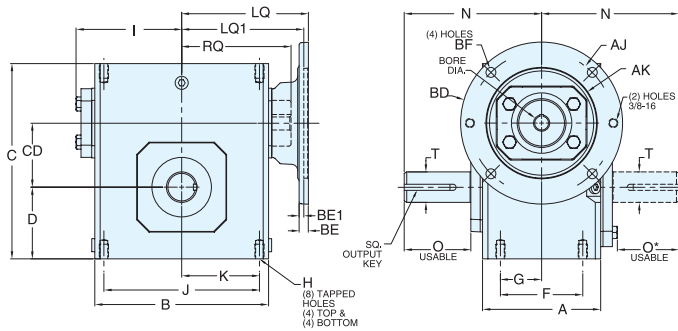
- ▲ Service factor is based on maximum torque rating of reducer. Refer to catalog 8050 for maximum reducer ratings.
- Output shaft overhung load rating is based on load applied one shaft diameter from face of reducer housing.
- ◆ Model numbers are for solid output shaft reducers. When ordering, substitute the X or XX with the required shaft hand assembly. Refer to pages 21-22 for shaft hand assemblies.
- ▼ Model numbers are for hollow output shaft reducers. When ordering, substitute the XX suffix with the required output bore code. Refer to page 23 for bore sizes available. For double reduction styles, confirm assembly position from page 22 and replace HX with required assembly.



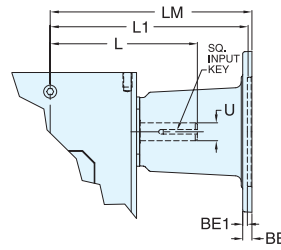


SINGLE REDUCTION DIMENSIONS

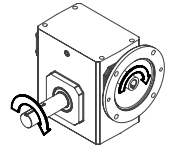
STYLE BMQ & BM



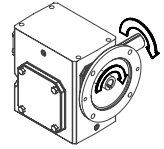
STYLE BM



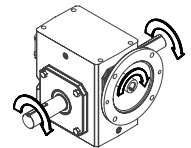
ASSEMBLIES



L



R



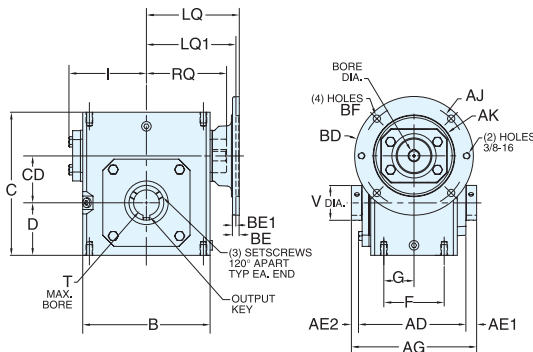
D

Reverse all arrows for opposite input shaft rotation. Contact factory for other mountings or assembly positions.

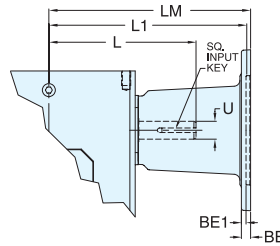
STYLE BMQ DIMENSIONS (Inches)

Series	A	B	C	D	CD	F	G	H		I	J	K	N	O	O*	T +0.000 -0.0015	Output Key
								Tap Size	Depth								
813	2.82	3.80	4.66	1.72	1.33	2.00	1.00	5/16-18 UNC	0.50	2.61	3.25	1.63	4.00	2.16	1.94	0.625	3/16 X 1.38
815	3.44	4.88	5.38	1.91	1.54	2.75	1.38	5/16-18 UNC	0.63	3.14	4.19	2.09	4.31	2.11	1.90	0.750	3/16 X 1.38
818	3.56	5.06	5.75	2.06	1.75	2.75	1.38	5/16-18 UNC	0.63	3.24	4.19	2.09	4.31	2.05	1.84	0.875	3/16 X 1.38
821	3.81	5.80	6.38	2.28	2.06	2.88	1.44	3/8-16 UNC	0.63	3.61	5.00	2.50	4.68	2.29	2.08	1.000	1/4 X 1.44
824	4.06	6.12	6.94	2.50	2.38	2.88	1.44	3/8-16 UNC	0.69	3.77	5.00	2.50	5.14	2.66	2.44	1.125	1/4 X 1.44
832	5.75	8.50	9.38	3.50	3.25	4.00	2.00	7/16-14 UNC	0.88	5.02	7.50	3.75	7.06	3.66	3.42	1.375	3/8 X 2.50

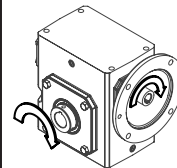
STYLE HMQ & HM



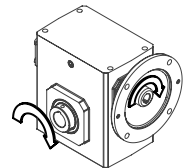
STYLE HM



ASSEMBLIES



H1



H2

Reverse all arrows for opposite input shaft rotation. Contact factory for other mountings or assembly positions.

STYLE HMQ DIMENSIONS (Inches)

Series	AA	AB	AD	AE1	AE2	AF	AG	B	C	D	CD	F	G	H	I	R	T MAX -0.000 +0.0025	V	Output Key
815	5.97	4.41	4.61	0.51	0.30	0.75	5.42	5.19	5.38	1.91	1.54	2.75	1.38	0.53	3.14	0.75	0.625	1.00	3/16 X 1.50
818	6.19	4.56	4.73	0.49	0.28	0.75	5.50	5.19	5.75	2.06	1.75	2.75	1.38	0.53	3.24	0.75	1.000	1.44	1/4 X 3.00
821	7.24	5.43	4.99	0.61	0.40	0.75	6.00	5.80	6.38	2.28	2.06	2.88	1.44	0.53	3.61	0.75	1.438	1.94	3/8 X 3.00
824	7.69	5.75	5.18	0.51	0.31	0.75	6.00	6.12	6.94	2.50	2.38	2.88	1.44	0.69	3.77	0.75	1.438	1.94	3/8 X 3.00
832	10.88	8.50	7.04	0.54	0.29	0.75	7.88	8.75	9.38	3.50	3.25	4.00	2.00	0.53	5.02	0.88	1.938	2.51	1/2 X 3.00

MOTOR MOUNTING DIMENSIONS

NEMA DIMENSIONS (Inches)

Series	LM 56C/ 140TC	L1 180TC/ 210TC	LQ 56C/ 140TC	LQ1		56C/ 140TC	RQ 180TC	210TC
				180TC	210TC			
813	6.07	N/A	3.46	N/A	N/A	3.09	N/A	N/A
815	6.60	N/A	3.99	N/A	N/A	3.62	N/A	N/A
818	6.70	N/A	4.09	N/A	N/A	3.59	N/A	N/A
821	7.07	N/A	4.46	N/A	N/A	4.06	N/A	N/A
824	7.76	8.76	4.63	5.06	N/A	4.09	4.56	N/A
832	9.01	10.01	5.88	6.31	6.75	5.51	5.81	6.25

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway▲	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	8.50	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	8.50	N/A	0.50	1.375	5/16 X 5/32	0.53

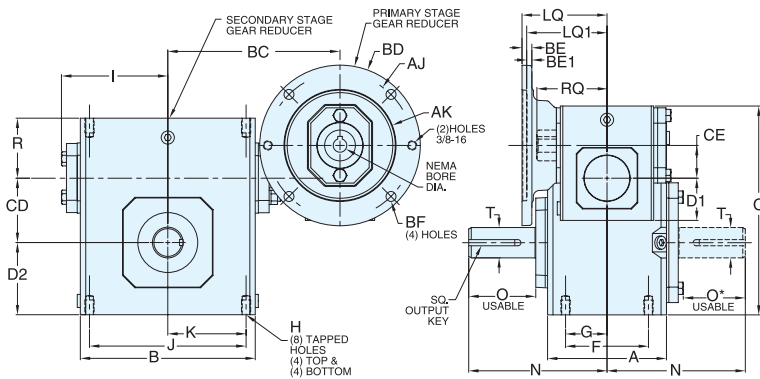
* Applies to double output shaft

▲ Keyway width by depth

DOUBLE REDUCTION DIMENSIONS

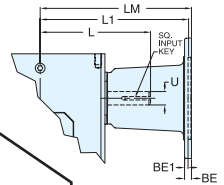
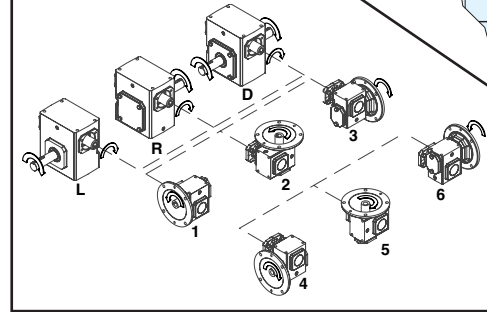


STYLE DMQ & DM



STYLE DM

ASSEMBLIES

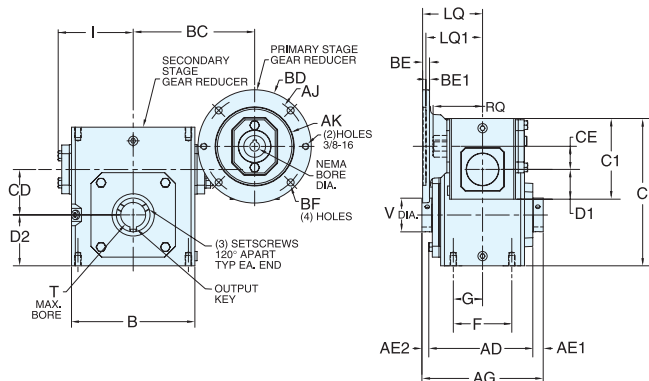


Reverse all arrows for opposite input shaft rotation. Contact factory for other mountings or assembly positions.

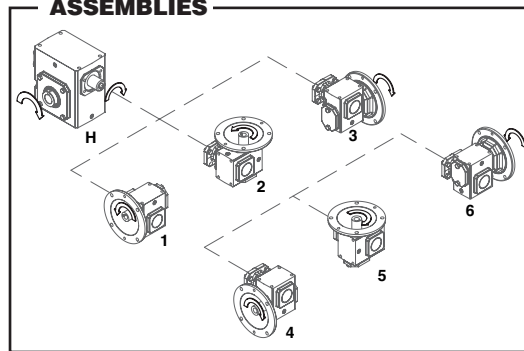
STYLE DMQ DIMENSIONS (Inches)

Series	A	B	BC	C	CD	CE	D1	D2	F	G	H		I	J	K	N	O	O*	R	T +0.000 -0.0015	Output Key
											Tap Size	Depth									
813	2.82	3.80	5.32	5.99	1.33	1.33	1.72	1.72	2.00	1.00	5/16-18	0.50	2.61	3.25	1.63	4.00	2.16	1.94	1.61	0.625	3/16 X 1.38
815	3.44	4.88	5.85	6.38	1.54	1.33	1.72	1.91	2.75	1.38	5/16-18	0.63	3.14	4.19	2.09	4.31	2.11	1.90	1.93	0.750	3/16 X 1.38
818	3.56	5.06	5.94	6.75	1.75	1.33	1.72	2.06	2.75	1.38	5/16-18	0.63	3.24	4.19	2.09	4.31	2.05	1.84	1.94	0.875	3/16 X 1.38
821	3.81	5.80	6.32	7.28	2.06	1.33	1.72	2.28	2.88	1.44	3/8-16	0.60	3.61	5.00	2.50	4.68	2.29	2.08	2.03	1.000	1/4 X 1.44
824	4.06	6.12	6.44	7.81	2.38	1.33	1.72	2.50	2.88	1.44	3/8-16	0.69	3.77	5.00	2.50	5.14	2.66	2.44	2.06	1.125	1/4 X 1.44
832	5.75	8.50	8.05	10.22	3.25	1.54	1.91	3.50	4.00	2.00	7/16-14	0.88	5.02	7.50	3.75	7.06	3.66	3.42	2.63	1.375	3/8 X 2.50

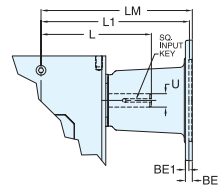
STYLE DHMQ



ASSEMBLIES



STYLE DHM



Reverse all arrows for opposite input shaft rotation. Contact factory for other mountings or assembly positions.

STYLE DHMQ DIMENSIONS (Inches)

Series	AA	AB	AD	AE1	AE2	AF	AG	B	BC	C	CD	CE	D1	D2	F	G	H	I	R	T MAX +0.000 -0.0025	V	Output Key
815	5.97	4.41	4.61	0.51	0.30	0.75	5.42	5.19	5.85	5.38	1.54	1.33	1.72	1.91	2.75	1.38	0.53	3.14	0.75	0.625	1.00	3/16 X 1.50
818	6.19	4.56	4.73	0.49	0.28	0.75	5.50	5.19	5.94	5.75	1.75	1.33	1.72	2.06	2.75	1.38	0.53	3.24	0.75	1.000	1.44	1/4 X 3.00
821	7.24	5.43	4.99	0.61	0.40	0.75	6.00	5.80	6.32	6.38	2.06	1.33	1.72	2.28	2.88	1.44	0.53	3.61	0.75	1.438	1.94	3/8 X 3.00
824	7.69	5.75	5.18	0.51	0.31	0.75	6.00	6.12	6.44	6.94	2.38	1.33	1.72	2.50	2.88	1.44	0.53	3.77	0.75	1.438	1.94	3/8 X 3.00
832	10.88	8.50	7.04	0.54	0.29	0.75	7.88	8.75	8.05	9.38	3.25	1.54	1.91	3.50	4.00	2.00	0.53	5.02	0.88	1.938	2.51	1/2 X 3.00

MOTOR MOUNTING DIMENSIONS

NEMA DIMENSIONS (Inches)

Series	LM	LQ	RQ
	56C/140TC	56C/140TC	56C/140TC
813	6.07	3.46	3.09
815	6.07	3.46	3.09
818	6.07	3.46	3.09
821	6.07	3.46	3.09
824	6.07	3.46	3.09
832	6.60	3.99	3.62

Frame	AJ	AK	BD	BE	BE1	Bore Dia.	Keyway▲	BF
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41

* Applies to double output shaft
▲ Keyway width by depth





TECHNICAL INFORMATION

HOLLOW SHAFT BORE SIZES (Inches)*

Fraction Size	Decimal Size	Output Bore Code	813	815	818	821	824	832	Keyway**
5/8	0.625	10							3/16 x 3/32
11/16	0.688	11							3/16 x 3/32
3/4	0.750	12							3/16 x 3/32
7/8	0.875	14							3/16 x 3/32
1	1.000	16							1/4 x 1/8
1-1/8	1.125	18							1/4 x 1/8
1-3/16	1.188	19							1/4 x 1/8
1-1/4	1.250	20							1/4 x 1/8
1-7/16	1.438	23							3/8 x 3/16
1-1/2	1.500	24							3/8 x 3/16
1-5/8	1.625	26							3/8 x 3/16
1-11/16	1.688	27							3/8 x 3/16
1-3/4	1.750	28							3/8 x 3/16
1-7/8	1.875	30							1/2 x 1/4
1-15/16	1.938	31							1/2 x 1/4

Stock Bore Sizes

* Other bore sizes are available. Contact LEESON for sizes and availability.

** Dimensions refer to customer driven shaft.

NOTE: Specify the required bore size when ordering. The suffix "XX" can be substituted with the bore code from table above.

SINGLE REDUCTION APPROXIMATE WEIGHTS (lbs.)★

Reducer Style	813	815	818	821	824	832
Solid Output Shaft						
SBMQ	16	19	22	26	32	69
SBM	18	22	25	31	38	73
Hollow Output Shaft						
SHMQ	16	19	23	27	34	72
SHM	18	22	26	32	40	76

DOUBLE REDUCTION APPROXIMATE WEIGHTS (lbs.)★

Reducer Style	813	815	818	821	824	832
Solid Output Shaft						
SDMQ	32	34	38	42	48	88
SDM	34	37	40	44	50	91
Hollow Output Shaft						
SDHMQ	32	35	39	43	50	91
SDHM	34	37	41	45	52	94

★ Weights include oil



Condensed Glossary of Motor and Gearing Terms

Axial Movement - Often called “endplay.” The endwise movement of motor or gear shafts. Usually expressed in thousandths of an inch.

Back Driving - Driving the output shaft of a reducer — using it to increase speed rather than reduce speed. Worm gear reducers are not suitable for service as speed increasers.

Backlash - Rotational movement of the output shaft clockwise and counter clockwise, while holding the input shaft stationary. Usually expressed in thousandths of an inch and measure at a specific radius at the output shaft.

Center Distance - A basic measurement or size reference for worm gear reducers, measured from the centerline of the worm to the centerline of the worm wheel.

Drip-Proof - Venting in end frame and/or main frame located to prevent drops of liquid from falling into motor within 15 angle from vertical. Designed for use in areas that are reasonably dry, clean, and well ventilated (usually indoors). If installed outdoors, it is recommended that the motor be protected with a cover that does not restrict the flow of air to the motor.

Efficiency - A ratio of the input power compared to the output, usually expressed as a percentage.

Explosion-Proof Motors - These motors meet Underwriters Laboratories and Canadian Standards Association standards for use in hazardous (explosive) locations, as indicated by the UL label affixed to the motor. Locations are considered hazardous because the atmosphere does or may contain gas, vapor, or dust in explosive quantities.

Flanged Reducer - Usually used to refer to a reducer having provisions for close coupling of a motor either via a hollow (quill) shaft or flexible coupling. Most often a NEMA C face motor is used.

Gear+Motor™ - LEESON's registered trademark for a separable gear and NEMA C face motor as opposed to an integral gearmotor. Integral gearmotors suffer from lack of application and availability constraints as well as having inherent service issues when one or the other component needs replacement.

Input Horsepower - The power applied to the input shaft of a reducer. The input horsepower rating of a reducer is the maximum horsepower the reducer can safely handle.

Mechanical Rating - The maximum power or torque a reducer can transmit. LEESON reducers typically have a safety margin equal to 200% or more of its mechanical rating allowing momentary overloads during start-up or other transient overload conditions.

Motor Selection - See the technical section of LEESON's Stock Motor Catalog 1050, request LEESON's book, Practical Motor Basics or contact LEESON's District Office for expert assistance.

Mounting Position - The relationship of the input and output shafts of a reducer relative to horizontal.

Output Horsepower - The amount of horsepower available at the output shaft of the reducer. Output horsepower is always less than the input horsepower due to the efficiency of the reducer.

Overhung Load - A force applied at right angles to a shaft beyond the shaft's outermost bearing. This shaft-bending load must be supported by the bearing. Overhung load ratings are listed for each reducer size and should not be exceeded.

Prime Mover - In industry, the prime mover is most often an electric motor. Occasionally engines, hydraulic or air motors are used. Special application considerations are called for when other than an electric motor is the prime mover.

Self-Locking - The inability of a reducer to be driven backwards by its load. As a matter of safety, no LEESON reducer should be considered self-locking.

Service Factor for Gearing - A method of adjusting a reducer's load carrying characteristics to reflect the application's load characteristics. AGMA (American Gear Manufacturer's Association) has established standardized service factor information.

Service Factor for Motors - Refers to a motor's ability to handle a load greater than the motor's rated HP on a continuous basis. Most LEESON motors have a continuous duty service factor of 1.15 or higher. This ability of the motor is intended to handle momentary or transient overloads or unusual service

conditions and should not be utilized when sizing motors for continuous service. For assistance in motor selection please contact your LEESON's District Office.

Thermal Rating - The power or torque a reducer can transmit continuously. This rating is based upon the reducer's ability to dissipate the heat caused by friction.

Thrust Load - Force imposed on a shaft parallel to a shaft's axis. Thrust loads are often induced by the driven machine. Take care to be sure the thrust load rating of the reducer is sufficient that it's shafts and bearings can absorb the load without premature failure.

Totally Enclosed Non-Ventilated (TENV) - No vent openings, tightly enclosed to prevent the free exchange of air, but not airtight. Has no external cooling fan and relies on convection for cooling. Suitable for use where exposed to dirt or dampness, but not for hazardous (explosive) locations.

Totally Enclosed Fan Cooled (TEFC) - Same as the TENV except has external fan as an integral part of the motor, to provide cooling by blowing air around the outside frame of the motor.

Worm Gear Reducer Service Factors

Proper determination of an application's service factor characteristics is critical for maximum reducer life and trouble free service. See the definition of service factor in the glossary.

All worm reducers and LEESON Gear+Motor motorized reducers are sized for applications having an AGMA defined service of 1.0, unless otherwise stated. (Alternately, 1.0 service factor is sometimes expressed as “Class I Service”.) Reducers in such applications operate on a continuous duty basis, for 10 hours per day or less, and are free of recurrent shock loads. When operating characteristics are different than noted, the input horsepower and torque ratings listed must be divided by the service factor selected from the table below. This table applies to reducers with an electric or hydraulic motor input.

Special Application Considerations

CAUTION: Please contact LEESON for assistance in applications not listed or for applications with unusual characteristics. Including the following:

- Input speeds not listed in catalog
- Frequent starting or repetitive shock applications
- Selection of reducers for man lifts or people moving equipment
- High energy loads, including stalling
- Starting or momentary overloads exceeding 200% of gear reducer mechanical capacity (100% overload)

Duration of Service (Hours per day)	Uniform Load	Moderate Shock	Heavy Shock	Extreme Shock
Occasional 1/2 Hour	—*	—*	1.00	1.25
Less than 3 Hours	1.00	1.00	1.25	1.50
3 - 10 Hours	1.00	1.25	1.50	1.75
Over 10 Hours	1.25	1.50	1.75	2.00

* Unspecified service factors should be 1.00 or as agreed upon by the user and manufacturer.

Service Factor Table

When a single or multi-cylinder engine is the input power, the service factor selected from the table above should be increased by multiplying the value by the factor selected from the table below.

Service Factor Conversion Table for Engine Driven Applications

Hydraulic or Electric Motor	Single Cylinder Engines	Multi-Cylinder Engines
1.00	1.50	1.25
1.25	1.75	1.50
1.50	2.00	1.75
1.75	2.25	2.00
2.00	2.50	2.25

On the next page, AGMA standardized service factor data is listed for a wide variety of applications operating 3 to 10 hours per day and for 10 hours or more per day.





A.G.M.A. SERVICE FACTORS

Application	Service Factor 3-10 Hours	Over 10 Hours
AGITATORS		
Pure Liquids	1.00	1.25
Liquids & Solids	1.25	1.50
Liquids-Variable Density	1.25	1.50
APRON CONVEYORS		
Uniformly Loaded or Fed	1.00	1.25
Heavy Duty	1.25	1.50
APRON FEEDERS	1.25	1.50
ASSEMBLY CONVEYORS		
Uniformly Loaded or Fed	1.00	1.25
Heavy Duty	1.25	1.50
BARGE HAUL PULLERS	1.50	1.75
BARKING		
Drums (Coupling Connected)	1.75	
Mechanical	1.75	
BAR SCREENS (Sewage)	1.00	1.25
BELT CONVEYORS		
Uniformly Loaded or Fed	1.00	1.25
Heavy Duty	1.25	1.50
BELT FEEDERS	1.25	1.50
BLOWERS		
Centrifugal	1.00	1.25
Lobe	1.25	1.50
Vane	1.00	1.25
BOLTING MACHINERY	1.00	1.25
BREWING & DISTILLING		
Bottling Machinery	1.00	1.25
Brew Kettles, Cont. Duty	1.00	1.25
Can Filling Machines	1.00	1.25
Cookers-Cont. Duty	1.00	1.25
Mash Tubs-Cont. Duty	1.00	1.25
Scale Hoppers-Frequent Starts	1.25	1.50
BUCKET		
Conveyors Uniform	1.00	1.25
Conveyors Heavy Duty	1.25	1.50
Elevators Cont.	1.00	1.25
Elevators Uniform	1.00	1.25
Elevators Heavy Duty	1.25	1.50
CALENDARS		
Rubber	1.50	
Textile	1.25	1.50
CANE KNIVES	1.50	
CAN FILLING MACHINES	1.00	1.25
CAR DUMPERS	1.50	1.75
CAR PULLERS	1.25	1.50
CENTRIFUGAL		
Blowers, Compressors, Discharge		
Elevator, Fans or Pumps	1.00	1.25
CHAIN CONVEYORS		
Uniformly Loaded or Fed	1.00	1.25
Heavy Duty	1.25	1.50
CLARIFIERS	1.00	1.25
CLASSIFIERS	1.25	1.50
CLAY WORKING INDUSTRY		
Brick Press	1.75	2.00
Briquette Machines	1.75	2.00
Clay Working Machinery	1.25	1.50
Plug Mills	1.25	1.50
COMPRESSORS		
Centrifugal	1.00	1.25
Lobe	1.25	1.50
Reciprocating:		
Multi-Cylinder	1.25	1.50
Single Cylinder	1.50	1.75
CONCRETE MIXERS		
Continuous	1.25	1.50
Intermittent	1.25	1.50
CONVEYORS-Uniformly Loaded or Fed Apron, Assembly, Belt, Bucket, Chain, Flight, Oven, Screw	1.00	1.25
CONVEYORS-Severe Duty		
Live Roll	Contact Factory	
Reciprocating, Shaker	1.50	1.75
COOLING TOWER FANS	Contact Factory	
CRANES		
Dry Dock Cranes	Contact Factory	
Main Hoist	1.00	1.25
Bridge and Trolley Travel	Contact Factory	
CRUSHERS		
Ore or Stone	1.50	1.75
Sugar	1.50	1.50
DISC FEEDERS	1.00	1.25
DOUBLE ACTING PUMPS		
2 or more Cylinders	1.25	1.50
Single Cylinder	Contact Factory	
DRAW BENCH (Metal Mills)		
Carriage & Main Drive	1.25	1.50
DREDGES		
Cable Reels, Conveyors	1.25	1.50
Cutter Head & Jig Drives	1.75	2.00
Maneuvering Winches, Pumps	1.25	1.50
Screen Drives	1.50	1.75
Stackers, Utility Winches	1.25	1.50
ELEVATORS		
Bucket-Uniform Load	1.00	1.25
Bucket-Heavy Duty	1.25	1.50
Bucket-Continuous	1.00	1.25
Centrifugal Discharge	1.00	1.25
Escalators	Not Approved	
Freight	Not Approved	
Gravity Discharge	1.00	1.25
Man Lifts, Passenger	Not Approved	
EXTRUDERS (Plastic)		
Film Sheet, Coating, Rods, Pipe Tubing	1.25	1.25
Blow Molders, Pre-plasticizers	1.50	1.50
FANS		
Centrifugal	1.00	1.25
COOLING TOWERS	Contact Factory	
Forced Draft	1.25	
Induced Draft	1.25	1.50
Large (Mine, etc.)	1.25	1.50
Large Industrial	1.25	1.50
Light (Small Diameter)	1.00	1.25
FEEDERS		
Apron, Belt	1.25	1.50
Disc	1.00	1.25
Reciprocating	1.75	2.00
Screw	1.25	1.50
FLIGHT		
Conveyors, Uniform	1.00	1.25
Conveyors, Heavy	1.25	1.50
FOOD INDUSTRY		
Beet Slicers	1.25	1.50
Bottling, Can Filling Mach.	1.00	1.25
Cereal Cookers	1.00	1.25
Dough Mixers, Meat Grinders	1.25	1.50
HAMMER MILLS	1.50	1.75
HOISTS		
Heavy Duty	1.75	2.00
Medium Duty	1.25	1.50
Skip Hoist	1.25	1.50
INDUCED DRAFT FANS	1.25	1.50
LAUNDRY WASHERS & TUMBLERS	1.25	1.50
LINE SHAFTS		
Driving Processing Equipment	1.25	1.50
Other Line Shafts, Light	1.00	1.25
LUMBER INDUSTRY		
Barkers-Spindle Feed	1.25	1.50
Barkers-Main Drive	1.75	1.75
Carriage Drive	Contact Factory	
CONVEYORS		
Burner	1.25	1.50
Main or Heavy Duty	1.50	1.50
Main Log	1.75	2.00
Re-saw Merry-Go-Round	1.25	1.50
Slab	1.75	2.00
Transfer	1.25	1.50
Chains-Floor	1.50	1.50
Chains-Green	1.50	1.75
Cut-Off Saws-Chain & Drag	1.50	1.75
Debarking Drums	1.75	2.00
Feeds-Edger	1.25	1.50
Feeds-Gang	1.50	1.50
Feeds-Trimmer	1.25	1.50
Log Deck	1.50	1.50
Log Hauls-Incline Well Type	1.50	1.50
Log Turning Devices	1.50	1.50
Planer Feed	1.25	1.50
Planer Tilting Hoist	1.50	1.50
Rolls-Live-Off Bearing-Roll Cases	1.50	1.50
Sorting Table, Tipple Hoist	1.25	1.50
Transfers-Chain & Craneway	1.50	1.75
Tray Drives	1.25	1.50
Veneer Lathe Drives	Contact Factory	
MACHINE TOOLS		
Auxiliary Drives	1.00	1.25
Bending Rolls	1.25	1.50
Main Drives	1.25	1.50
Notching Press (Belted)	Contact Factory	
Plate Planers	1.50	1.75
Punch Press (Geared)	1.50	1.75
Tapping Machines	1.50	1.75
METAL MILLS		
Draw Bench Carriages & Main Drives	1.25	1.50
Pinch, Dryer & Scrubber Rolls Reversing	Contact Factory	
Slitters	1.25	1.50
METAL MILLS (cont'd)		
Table Conv. Non-Reversing Group Drives	1.25	1.50
Individual Drives	1.50	1.75
Reversing Wire Dwg & Flattening Machines	1.25	1.50
Wire Winding Machines	1.25	1.50
MILLS, ROTARY		
Ball and Rod Mills with Spur Ring Gear		1.75
With Helical Ring Gear		1.50
Direct Connect		1.50
Cement Kilns, Dryers, Coolers, Pebble, Plain & Wedge Bar Mills		1.50
Tumbling Barrels	1.50	1.75
MIXERS (Also see Agitators)		
Concrete, Cont. & Int.	1.25	1.50
Constant Density	1.00	1.25
Variable Density	1.25	1.50
OIL INDUSTRY		
Chillers	1.25	1.50
Oil Well Pumping	Contact Factory	
Paraffin Filter Press	1.25	1.50
Rotary Kilns	1.25	1.50
PAPER MILLS	Contact Factory	
PASSENGER ELEVATORS	Contact Factory	
PLATE PLANERS	1.50	1.75
PRINTING PRESSES	Contact Factory	
PUMPS		
Centrifugal	1.00	1.25
Proportioning	1.25	1.50
Reciprocating		
Single Act, 3 or more Cyl.	1.25	1.50
Double Act, 2 or more Cyl.	1.25	1.50
Single Act, 1 or 2 Cyl.	Contact Factory	
Double Act, 1 Cyl.	Contact Factory	
Rotary: Gear, Lobe, Vane	1.00	1.25
PUNCH PRESSES (Gear Driven)	1.50	1.75
RUBBER & PLASTIC INDUSTRIES		
Calendars		1.50
Crackers		1.75
Laboratory Equipment	1.25	1.50
Mills (2 on line)	1.50	
Mills (3 on line)	1.25	
Mixing Mills	1.50	1.50
Refiners		1.50
Sheeters		1.50
Tire Building & Machines	Contact Factory	
Tire & Tube Press Openers	Contact Factory	
Tubers & Strainers		1.50
Warming Mills		1.50
SCREENS		
Air Washing	1.00	1.25
Rotary-Sand or Gravel	1.25	1.50
Traveling Water Intake	1.00	1.25
SEWAGE DISPOSAL		
Bar Screens	1.00	1.25
Chemical Feeders	1.00	1.25
Collectors	1.00	1.25
Dewatering Screens	1.25	1.50
Scum Breakers	1.25	1.50
Slow or Rapid Mixers	1.25	1.50
Thickeners	1.25	1.50
Vacuum Filters	1.25	1.50
SKI TOWS & LIFTS		Not
Approved		
STOKERS	1.00	1.25
STONE CRUSHERS	1.50	1.75
SUGAR INDUSTRY		
Cane Knives, Crushers, Mills		1.50
TABLE CONVEYORS (Non-Reversing)		
Group Drives	1.25	1.50
Individual Drives	1.50	1.75
Reversing	Contact Factory	
TEXTILE INDUSTRY		
Batchers, Calendars	1.25	1.50
Card Machines	1.25	1.50
Dry Cans, Dryers	1.25	1.50
Dyeing Machinery	1.25	1.50
Knitting Machinery	Contact Factory	
Looms, Mangles, Nappers, Pads	1.25	1.50
Range Drives	Contact Factory	
Slashers, Soapers, Spinners	1.25	1.50
Tenter Frames, Washers, Winders	1.25	1.50
TUMBLING BARRELS	1.50	1.75
VANE BLOWERS	1.00	1.25
WINDLASS	Contact Factory	
WIRE		
Drawing Machines	1.25	1.50
Winding Machines	1.25	1.50

DISTRICT SALES OFFICES & WAREHOUSES

LEESON District Sales Offices & Warehouses can provide complete information including price and availability on both standard stock and special motors.

- **ARKANSAS, Little Rock**
 District Mgr., Phil Newby
 501/568-6468
 Fax: 501/568-6604
- **CALIFORNIA, Los Angeles**
 District Mgr., Felix Wilson
 323/278-7979
 Fax: 323/278-7955
- **CALIFORNIA, San Francisco**
 District Mgr., Dave Richardson
 925/931-0749
 Fax: 925/931-0759
- **COLORADO, Denver**
 District Mgr., Mike Kannawin
 303/331-6500
 Fax: 303/331-6510
- **CONNECTICUT, Hartford**
 District Mgr., Bob Maher
 860/646-9665
 Fax: 860/643-2982
- **FLORIDA, Tampa**
 District Mgr., Bill Taylor
 813/740-2571
 Fax: 813/663-9104
- **GEORGIA, Atlanta**
 District Mgr., Walter Brooks
 770/933-0453
 Fax: 770/933-0549
- **ILLINOIS, Chicago**
 District Mgr., Mike Miller
 630/458-9511
 Fax: 630/458-1923
- **INDIANA, Indianapolis**
 District Mgr., Mark Redman
 317/776-2600
 Fax: 317/776-2007
- **IOWA, Des Moines**
 District Mgr., John Marshalla
 952/939-0115
 Fax: 952/935-8399
- **KANSAS, Kansas City**
 District Mgr., Pat Donnelly
 913/599-6983
 Fax: 913/599-6987
- **MARYLAND, Baltimore**
 District Mgr., Craig Brisbane
 570/325-3684
 Fax: 570/325-3870
- **MICHIGAN, Grand Rapids**
 District Mgr., Greg Norris
 616/249-8430
 Fax: 616/249-8628
- **MINNESOTA, Minneapolis**
 District Mgr., John Marshalla
 952/935-8273
 Fax: 952/935-8399
- **MISSOURI, St. Louis**
 District Managers
 Pat and Ken Anvender
 314/714-1460
 Fax: 314/714-1461
- **NEW JERSEY/METRO NEW YORK/LONG ISLAND**
 (Plainfield, NJ 18229)
 Contact: Dave Beck
 570/325-3684
 Fax: 570/325-3870
- **NEW YORK, Syracuse**
 District Mgr., Chris Everett
 315/431-4536
 Fax: 315/431-4541
- **NORTH CAROLINA, Charlotte**
 District Mgrs.,
 Steve McAbee
 and Doug Landgraf
 803/396-8200
 Fax: 803/396-8208
- **OHIO, Cincinnati**
 District Mgr., Ken Simko
 513/755-1000
 Fax: 513/755-1081
- **OHIO, Cleveland**
 District Mgr., Matt Simko
 440/951-5117
 Fax: 440/975-3575
 800/331-2911 (W.PA, WV)
- **OKLAHOMA, Oklahoma City**
 Contact: Owen Stone
 405/348-5700
 Fax: 405/348-0600
- **OREGON, Portland**
 Contact: Todd VandeKamp
 360/573-1418
 Fax: 360/573-2474
- **PENNSYLVANIA, Allentown/Philadelphia**
 District Mgr., Craig Brisbane
 570/325-3684
 Fax: 570/325-3870
- **TEXAS, Dallas**
 District Mgr., Homer Rodden
 972/245-2017
 Fax: 972/245-2328
- **TEXAS, Houston**
 Contact, Donnie Heckler
 713/952-5337
 Fax: 972/245-2328
- **UTAH, Salt Lake City**
 District Mgr., Dennis Vest
 800/730-5290
 Fax: 303/331-6510
- **WASHINGTON, Seattle**
 District Mgr., Amorette Gent
 425/775-3504
 Fax: 425/775-6706
- **WISCONSIN, Milwaukee**
 District Mgr., Tom Bares
 414/475-9222
 Fax: 414/475-9267
- **INTERNATIONAL**
 Motors International
 International Sales
 Administrator,
 Sue Kastner
 WISCONSIN, Grafton
 (+1) 262/377-8810
 Fax: (+1) 262/377-3440
- **ASIA**
CHINA, Shanghai
 (+86) 21-625-317-00
 Fax: (+86) 21-625-587-07
- **CENTRAL AMERICA, SOUTH AMERICA & CARIBBEAN**
FLORIDA, Miami
 Contact: Manny Garcia, Jr.
 (+1) 305/220-4423
 Fax: (+1) 305/220-5945
- **EUROPE**
ITALY, Bologna
 (+39) 051-731-487
 Fax: (+39) 051-734-943
- **LEESON CANADA**
ALBERTA, Edmonton
 Branch Mgr.,
 Mike Strenkowski
 780/437-3380
 Fax: 780/434-3448
- **BRITISH COLUMBIA, Vancouver**
 Branch Mgr., Jeff Male
 604/941-0352
 Fax: 604/941-0659
- **MANITOBA, Winnipeg**
 Branch Mgr., Charlie Vogel
 204/786-6802
 Fax: 204/786-6934
- **NEW BRUNSWICK, Moncton**
 Branch Mgr., Ken Sheehan
 506/383-8883
 Fax: 506/383-8887
- **ONTARIO, Toronto**
 National Sales Mgr.,
 Frank Pesce
 905/670-4770
 Fax: 905/670-4378
- **ONTARIO, Hanover**
 Branch Mgr., Doug Stafford
 800/463-1797
 Fax: 800/225-9007
- **QUEBEC, Montreal**
 Branch Mgr., Richard Haines
 514/337-8020
 Fax: 514/337-0773


■ SALES OFFICE AND WAREHOUSE □ SALES OFFICE ONLY

For the latest warnings & cautions and terms & conditions, see LEESON's 1050 stock products catalog.



WASHDOWN DUTY PRODUCTS

LEESON Electric offers a complete product family of washdown duty products to complement the Premium Stainless Steel Duck and FHP Washguard SST All-Stainless motors.

 <p>Washguard White Duck Epoxy Coated AC motors to 15 HP</p>	 <p>Packaged Solutions – Washdown motors & AC Inverters to match your application needs.</p>	 <p>Right Angle – SCR rated 90VDC & 12 Volt Washdown Duty Gearmotors. 80 thru 250 inch lbs., F.L. Torque.</p>	 <p>Washguard 3 Phase brake motors, C-Face design from 1/3 thru 2 HP</p>
 <p>Ironman® by Ohio Gear Washguard white epoxy right angle gear reducer in 1.33" thru 3.25" center distances rated up to 7 HP input</p>	 <p>PE350 series PMDC gear-motors 12V & 90V ratings from 1/8 thru 1/4 HP</p>	 <p>3 Phase JM Pump motors 143JM thru 215JM frame, 1 thru 15 HP, 2 & 4 pole designs</p>	 <p>Speedmaster® SCR DC motor controls with NEMA 4X enclosures to 3 HP</p>
 <p>Washguard Super Duck paint-free AC motors to 2 HP</p>	 <p>Speedmaster® AC drives in NEMA 4/12 and NEMA 12 enclosures to 120 HP</p>	 <p>Gear+Motors™ combinations of Washguard AC and DC motors with gearboxes</p>	 <p>Gear+Motors™ combinations of Washguard AC and DC motors with gearboxes</p>
 <p>Washguard hollow output shaft reducers</p>	 <p>Gear+Motors™ combinations of Washguard AC and DC motors with gearboxes</p>	 <p>Gear+Motors™ combinations of Washguard AC and DC motors with gearboxes</p>	 <p>Washguard White Duck epoxy coated PMDC motors to 1.5 HP</p>



LEESON ELECTRIC
 GRAFTON, WISCONSIN 53024-0241 U.S.A.
 TEL (262)377-8810 FAX (262)377-9025 www.leeson.com

More Than Just a Motor Company

LEESON CANADA
 TELEPHONE (905) 670-4770 FAX (905) 670-4378
 MISSISSAUGA (TORONTO), ONTARIO L5T 2N7

A REGAL-BELOIT COMPANY



© LEESON ELECTRIC, 2006

PRINTED IN U.S.A.

Bulletin 1525
 Specifications subject to change without notice.
 5409S-NP/04-06/7500/ROTOGRAPHIC