



WASHGUARD® MOTORS

WHITE EPOXY • SINGLE & THREE PHASE

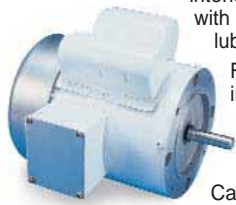
NEMA FRAME • WASHGUARD®

LEESON WASHGUARD® motors are designed for extended life in applications requiring regular washdown as in food processing, or otherwise wet, high humidity environments. WASHGUARD® motors retard the entrance of water during cleaning operations and release any water that does enter the motor. Extra protection for the motor's interior prevents rust and corrosion build-up and drains release trapped moisture to insure a longer life than possible with a standard motor.



Mechanical Protection Features:

High quality, corrosion resistant 303 stainless steel shaft plus lubricated spring-loaded contact seals and patented, "V" ring Forsheda seal deflect water, protect bearings and the motor's interior. Double sealed, oversized bearings with high temperature moisture resistant lubricant are used.



Frame, base, endshields, armature and interior components protected by enamel and polyester compounds of outstanding adhesion and resistance to moisture, acids, alkalis and oil.

Cast conduit box with threaded entrance, drain holes and tough, high temperature

Nitrile gaskets keep water out and resist deflection under high pressure washdowns Conduit box cover and fan cover, when used, are type 304 stainless steel.

Four drains in each endshield at 3,6,9, and 12 o'clock purge water, and can be repositioned for maximum effectiveness regardless of the motor's mounting.

Machined fits are sealed, and nylon gaskets are used to seal bolt heads. Stainless steel data plate.



Chemically inert static free fan is positively positioned on the shaft by opposing flats, shoulder and snap ring arrangement and protected by heavy gauge, stainless steel fan guards. Finished in USDA approved tough white epoxy for

superior corrosion resistance and protection against harsh caustic cleaning solutions.



PROTECTED WITH RUST-OLEUM® COATINGS

WASHGUARD® • NEMA C FACE • REMOVABLE BASE TENV & TEFC • SCR RATED 90 & 180 VOLTS

HP	Full Load RPM	NEMA Frame	Catalog Number	App. Wgt. (lbs.)	Arm. Volts DC	Control Volts AC Input	F.L. Amps DC	"C" Dim. (Inches)
1/4	1750	S56C	108423●	23	90	115	2.7	10.69
1/3	1750	S56C	108424●	26	90	115	3.5	11.69
1/2	1750	S56C	108226●	38	90	115	4.9	13.69
	1750	S56C	108227●	43	180	230	2.4	13.69
3/4	1750	S56C	108228●	53	90	115	7.0	15.69
	1750	S56C	108229●	50	180	230	3.5	15.69
1	1750	S56C	108230	45	90	115	10.0	15.81
	1750	S56C	108231	42	180	230	5.0	14.81
1 1/2	1750	S56C	108232	50	180	230	7.6	15.81

SINGLE PHASE • TEFC • C FACE LESS BASE

Featuring Electronic Solid State Encapsulated Switch

HP	RPM 60 Hz	NEMA Frame	Catalog Number	App. Wgt. (lbs.)	Voltage	Over-load Prot.	F.L. Amps 230V	"C" Dim. (Inches)
1/3	1725	56C	114311	27	115/208-230	None	3.2	10.69
1/2	1725	56C	114313	29	115/208-230	None	4.4	11.19
3/4	1725	56C	114315	31	115/208-230	None	5.4	11.69
1	1725	56C	114317	34	115/208-230	None	6.4	12.19
1 1/2	1725	56C	114319	43	115/208-230	None	9.5	13.69

THREE PHASE • TENV and TEFC C FACE LESS BASE

HP	RPM 60 Hz	NEMA Frame	Catalog Number	App. Wgt. (lbs.)	Voltage	F.L. Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
1/4	1725	56C	113649●	19	208-230/460	1.1	68.0	9.56
1/3	1725	56C	113954●	19	208-230/460	1.3	72.0	9.56
1/2	1725	56C	113473●	22	208-230/460	1.8	78.5	10.06
3/4	1725	56C	113019●	28	208-230/460	2.5	80.0	10.56
1	1725	56C	113020●	32	208-230/460	3.2	80.0	11.56
	1725	143TC	120760●	35	208-230/460	3.2	80.0	11.75
1 1/2	1725	56C	113021●	44	208-230/460	4.2	84.0	13.06
	1725	145TC	120761●	47	208-230/460	4.2	84.0	13.25
2	1725	56C	114616	48	208-230/460	6.2	81.5	12.69
	1725	145TC	120762	39	208-230/460	6.2	81.5	12.75
3	1740	182TC	131596	61	230/460	9.0	82.5	14.47
5	1740	184TC	131597	72	230/460	13.2	82.5	14.47

WASHGUARD® • IEC FRAME • TENV IP55 B5 FLANGE WITH REMOVABLE B3 BASE ▲ SCR RATED 180 VOLTS

Rated HP	Output kW	Full Load RPM	IEC Frame	Catalog Number	App. Wgt. (lbs.)	Arm. Volts DC	F.L. Amps DC	"C" Dim. (Inches)
1/2	.37	1750	71	098040	22	180	2.5	10.69
3/4	.55	1750	80	108407	52	180	3.5	16.02

† Class F insulated.

● These motors are totally enclosed, non ventilated – others are fan cooled.

▲ If base is removed, do not reinstall bolts without using washers to compensate for thickness of base.

Super Duck



LEESON Severe Duty, stainless frame, WASHGUARD® II motors are designed for superior extended service in severe environments. Typical applications include food processing areas requiring frequent sanitation procedures using high pressure cleaning with concentrated caustic solutions, areas of high humidity and in chemical environments.

Mechanical Protection Features
 These motors have an *entirely paint free exterior* with 300 series stainless steel motor body, conduit box lid, shaft extension, hardware, fasteners and an etched motor data plate.

To enhance chemical and corrosion resistance, all surfaces of the endbells and conduit box are processed using a U.S. Department of Agriculture approved

technique. This proprietary process has been tested and qualified for more than 2,500 hours of salt spray endurance for external surfaces, and

1,000 hours for internal surfaces. This process has proven successful in food washdown applications and has shown excellent corrosion resistance.

Shaft seals, slingers and one-way stainless steel drains retard entrance of contaminants and water into the motor. Multiple, repositional drains provided for all angle mounting, release any water that does enter the motor from hose downs or condensation. Chemically resistant, tough nitrile gaskets and a threaded entrance for power connection also restrict entrance to the motor's interior. Nylon gaskets are used to seal bolt heads.

Bearings used are double sealed and prelubricated with moisture resistant Exxon POLYREX® EM high temperature lubricant.

Electrical Performance and Protection Features

Efficiencies meet EPACT mandates for *covered* motors when tested without shaft seals. High temperature, moisture resistant IRIS insulation system assures long life on inverter service. Windings are immersed and cured in polyester insulating compound.

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.

WASHGUARD® II motors are certified to the Baking Industry Sanitation Standard #29 and listed under BISSC authorization number 769.

STAINLESS FRAME • TENV> • C FACE LESS BASE

HP	RPM 60 Hz	NEMA Frame	Catalog Number	App. Wgt. (lbs.)	Voltage	FL. Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
1/2	1725	56C	114394	30	208-230/460	1.6	78.5	11.06
3/4	1725	56C	114395	34	208-230/460	2.3	80.0	11.56
1	1725	56C	114437	44	208-230/460	3.0	81.5	12.06
	1725	143TC	121109	40	208-230/460	3.0	81.5	12.13
1 1/2	1725	56C	114581>	45	208-230/460	4.4	84.0	12.69
	1725	145TC	121350>	40	208-230/460	4.4	84.0	12.75
2	1725	56C	114582>	51	208-230/460	6.0	84.0	14.19
	1725	145TC	121351>	51	208-230/460	6.0	84.0	14.25

> All ratings TENV except 1 1/2 & 2 HP, which is TEFC with stainless steel fan cover and chemically inert fan.

CHEMICAL RESISTANCE RATING CHART

CHEMICAL	CONCENTRATION	COMPONENT-RESISTANCE	
		STAINLESS STEEL PARTS	ENDBELLS & CONDUIT BOX
WATER:			
De-Ionized Boiling	100%	Excellent	Excellent
Salt (Immersed)	30%	Excellent	Excellent
Salt (Spray)	5%	Excellent	Excellent
Tap - 250°F/120°C @ 10,000 PSI	100%	Excellent	Excellent
ACIDS:			
Hydrochloric	35%	Poor	Very Good
Sulfuric	25%	Poor	Excellent
Nitric	35%	Excellent	Good
Picric	Saturated Solution	Excellent	Very Good
BASE:			
Caustic	100%	Excellent	Excellent
Caustic	12.5 pH	Excellent	Excellent
Caustic - 125°F/50°C	9.5 pH	Excellent	Excellent
SOLVENTS:			
	--	Excellent	Excellent





WASHGUARD® ALL-STAINLESS MOTORS

ALL-STAINLESS • THREE PHASE • SINGLE PHASE

PREMIUM STAINLESS STEEL DUCK



For maximum service in the most critically clean or corrosive environments, nothing beats LEESON's new WASHGUARD® All-Stainless Motors.

Specifically designed to meet the demanding sanitation requirements of the pharmaceutical and food processing industries, these motors are also ideal in severe chemical-processing applications involving nitric acid and caustic lye. In fact, WASHGUARD® All-Stainless Motors include IEEE 841 severe-duty features right out of the box!

Mechanical Protection Features:

Exterior components are entirely of 300 series stainless steel, including frame, base, endshields, conduit box, box cover and hardware. Plus, the full-fact etched stainless steel nameplate is blind riveted to the conduit box eliminating rivet holes in the frame as a source of entry for moisture. Nothing on the motor's exterior is painted or coated in any way.

Endshields are o-ring sealed to the frame. Double-lip shaft seals, o-rings, and gaskets are made from chemically resistant Viton® material. Hydrophobic breathers in the opposite shaft endbell and conduit box equalize pressure without allowing moisture to enter the motor. Double-sealed bearings are pre-lubricated with moisture-resistant high-temperature grease.



Electrical Performance and Protection Features

WASHGUARD® efficiencies meet EPACT mandates for non-exempt motors when tested without shaft seals. For extra moisture resistance, windings are immersed and cured in polyester insulating compound. And LEESON's exclusive IRIS™ Inverter-Rated Insulation System provided extra protection and long life, especially in inverter-fed 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 and listed under BISSC authorization number 769.

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

HP	RPM 60 Hz	NEMA Frame	Catalog Number	App. Wgt. (lbs.)	Voltage	FL. Amps 230V	% F.L. Eff.	"C" Dim. (Inches)
1/2	1750	56C	116166●	22	208-230/460	1.6	78.5	11.21
3/4	1750	56C	116168●	37	208-230/460	2.3	80.0	11.71
1	1750	56C	116170●	38	208-230/460	3.0	81.5	12.21
	1750	143TC	121523●	39	208-230/460	3.0	81.5	12.28
1½	1750	145TC	121525	46	208-230/460	4.4	84.0	13.69
2	1750	145TC	121527	47	208-230/460	6.0	87.5	14.19
3	1750	182TC	131923	67	208-230/460	8.2	87.5	14.87
5	1750	184TC	131924	79	208-230/460	13.0	87.5	15.37

● These motors are totally enclosed, non-ventilated—Others are fan cooled.

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

HP	RPM 60 Hz	NEMA Frame	Catalog Number	App. Wgt. (lbs.)	Voltage	Over- load Prot.	FL. Amps 230V	"C" Dim. (Inches)
1/3	1750	56C	116349●	25	115/208-230	None	2.7	12.20
1/2	1750	56C	116350●	29	115/208-230	None	3.3	12.70
3/4	1750	56C	116351●	31	115/208-230	None	3.8	12.70
1	1750	56C	116352●	34	115/208-230	None	4.5	13.70
1½	1750	145TC	121624	43	115/208-230	None	8.6	14.19
2	1750	145TC	121633	60	115/208-230	None	9.2	13.96

● These motors are totally enclosed, non-ventilated—Others are fan cooled.

CHEMICAL RESISTANCE RATING CHART

CHEMICAL	CONCENTRATION	ALL STAINLESS COMPONENTS
WATER:		
De-ionized Boiling	100%	Excellent
Salt (Immersed)	30%	Excellent
Salt (Spray)	5%	Excellent
Tap - 250°F/120°C @ 10,000 PSI	100%	Excellent
ACIDS:		
Hydrochloric	35%	Poor
Sulfuric	25%	Poor
Nitric	35%	Excellent
Picric	Saturated Solution	Excellent
BASE:		
Caustic	100%	Excellent
Caustic	12.5 pH	Excellent
Caustic - 125°F/50°C	9.5 pH	Excellent
SOLVENTS:	--	Excellent



WASHGUARD® SST™

This new member of LEESON's family of tough ducks is designed for long life in demanding washdown applications. LEESON's new FHP WASHGUARD® SST™ All-Stainless motors are Stainless Steel Tough!

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.

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

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

● These motors are totally enclosed, non-ventilated—Others are fan cooled.

