

# PREMIUM STAINLESS<sup>®</sup>

WHEN IT HAS TO BE REALLY CLEAN



# When cleanliness is critical

## The food and beverage industry has always had problems with motors that are hosed down etc

*Stainless steel motors meet the demanding Sanitation requirements of the food processing industry.*



The food and beverage industry has are hosed down for cleanliness and hygiene reasons in processing plants. The high pressure cleaning with extreme caustic solutions has in the past contributed to the failure of many motors on the production line, which has always been a concern. Both aluminium and cast iron motors fail to stand up to the caustic solutions which eat away the motor material at a rapid rate. While the effects of hosing and condensation create havoc with the motor. If motors are covered with paint or an epoxy coating the coating can easily chip and create problems.

In the last few years the United States has seen the birth of the stainless steel electric motor. In this short time the growth of this product has been extraordinary – it is the fastest growing motor product in the US. Government inspectors are now pushing for companies to use only stainless motors in the food and beverage industry, due to the absence of paint and epoxy coatings on this product. Unfortunately American motors are NEMA imperial frame which are of little use in Europe with our IEC metric system.

### IEC metric PREMIUM stainless steel motor

WEITEL Electric Motors has developed a complete range of rolled stainless steel, IEC metric frame motors, which are completely interchangeable with all other electric motor in industry.

The motors start at 0.18 kW and go through to 7.5 kW in all speeds. Whether the electric motor is foot,

flange, foot and flange mount or 'C' face mount the motor can replace any existing motor.

### Totally enclosed, non-ventilated and SEW

Even though the motors are stainless steel and it is difficult to get the heat out of the motor, the windings are of such a quality and so efficient they can be supplied totally enclosed, no ventilation (TENV) in smaller sizes up to 0.75 kW. Without a cooling fan or fan cowl the motors still run cooler than standard electric motors.

As SEW-Eurodrive has a huge share of the food industry market, the premium motor can be supplied with SEW dimensions, which allows them to be fitted straight onto any SEW gearbox with no adaptation to flange or shaft required.

### Ease of cleaning

The absence of cooling fins on the motor allows for ease of cleaning as food particles cannot be caught between the fins of the motor. Any harsh caustic solutions have no effect on the motor while the addition of an etched nameplate in the stator housing means nameplates can never be lost or illegible.

A weakness with electric motors in harsh environments is condensation inside the motor caused by the change of temperature between the inside and outside of the motor. To ease this problem the premium motor has been fitted with four quadrant drain plugs on each endshield, so that no matter how the motor is mounted there will always be a drain plug at the lowest point of the motor.

The motor is fitted with a special 'T'

drain at the lowest point, which stops water from high pressure hosing entering the windings, but allows condensation to drain out over a period of time.

### Hoseproof IP66 rating

The Premiums IP66 rating means it is completely hoseproof from a strong jet of water from any angle. Double lip oil seals in both endshields stop water entering along the motor shaft. A Gamma Seal, which acts as a slinger to keep water away from the oil seal, is fitted on the drive end shaft.

The stator windings are double varnished with a vacuum impregnation system encapsulating the windings in varnish for protection against water.

The terminal box is insulated from the winding housing by the use of a 12 mm rubber gasket. The winding leads are completely encapsulated in the terminal box, which makes the whole motor as close to fully submersible as possible.

The bearings are double rubber sealed, but low friction sealing keeping the high efficiency status of the motor, C3 clearance to allow for expansion and rating from -20°C to +200°C.

The Premium stainless motor is a complete solution and a huge breakthrough in the war against bacteria in the food and beverage industry.

**STAINLESS STEEL MOTORS TO IEC (TENV)**

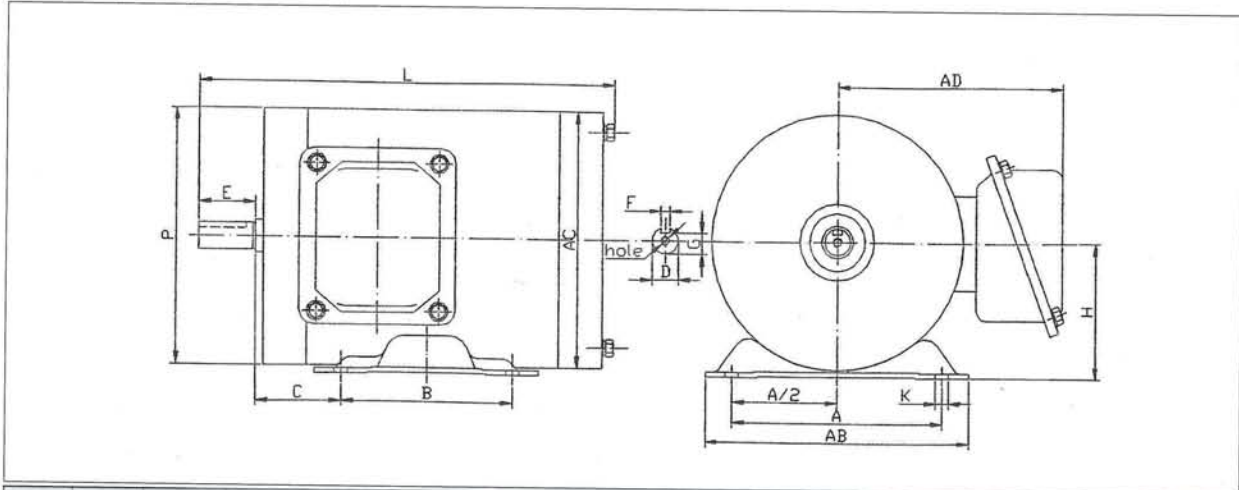
Model YSS	RPM	HP	Kw	AMPS (A)	Eff (%)	T.R (K)	LRT (%)	LRA (%)	BDT (%)	WT (kg)	BRGS.	Noise L <sub>WA</sub> (dB)
6312	2875	1/4	0.18	1.1/0.6	74	55	3.1	6.8	4.1	8.5	6202	58
6322	2880	1/3	0.25	1.15/0.63	76	64	3.0	7.0	4.0	8.5	6202	58
7112	2880	1/2	0.37	1.48/0.88	80	64	3.5	8.0	4.4	11.5	6203	61
7112	2900	3/4	0.55	2.0/1.15	81	69	3.4	9	4.3	13.5	6203	61
8012	2900	1	0.75	2.8/1.6	82	80	3.9	8.5	4.6	15.5	6204	65
6324	1440	1/4	0.18	1.1/0.6	76	69	4.0	6.5	5	8	6202	47
7114	1435	1/3	0.25	1.15/0.63	78.5	70	2.3	6	3.1	9	6203	51
7124	1430	1/2	0.37	1.5/0.9	79	75	2.5	6.0	3.1	10.8	6203	51
8014	1450	3/4	0.55	2.15/1.25	80	80	3.8	8.5	4.5	17.5	6204	60
8024	1440	1	0.75	3.0/1.7	80	80	3.2	7.5	4	20	6204	60
7116	945	1/4	0.18	1.26/0.73	65	91	2.2	5	3.0	9.5	6203	49
7126	945	1/3	0.25	1.5/0.87	69	88	2.2	5.5	3.1	10	6203	49
8016	945	1/2	0.37	1.7/0.97	78	75	2.5	6	3.0	17.5	6204	52
8026	945	3/4	0.55	2.35/1.36	80	93	2.7	6	3.0	20	6204	52

**STAINLESS STEEL MOTORS TO IEC (TEFC)**

Model YSS	RPM	HP	Kw	AMPS (A)	Eff (%)	T.R (K)	LRT (%)	LRA (%)	BDT (%)	WT (Kg)	BRGS.	Noise L <sub>WA</sub> (dB)
8022	2910	1.5	1.1	3.6/2.1	83.5	50	3.1	8.0	4.0	17.5	6204	76
90S2	2890	2	1.5	5.3/3.0	84	70	2.7	8.0	3.4	24	6205	79
90L2	2885	3	2.2	7.3/4.2	86	76	3.1	8.5	3.8	30	6205	81
100L2	2910	4	3	9.7/5.7	86.5	88	2.2	7.5	3.0	37	6206	82
112M2	2900	5.5	4	12.3/7.1	86	85	2.1	8.2	2.9	45.5	6306	83
132S12	2915	7.5	5.5	17.8/10.3	86.5	70	2.2	7.2	3.2	66	6308	86
132S22	2910	10	7.5	23.2/13.4	87	70	2.5	8	3.5	79.5	6308	91
90S4	1445	1.5	1.1	3.9/2.25	82	60	2.8	7.9	3.4	22	6205	66
90L4	1440	2	1.5	5.9/3.4	82.5	77	3.1	8.0	3.6	27	6205	68
100L14	1450	3	2.2	7.3/4.2	86	64	2.4	7.3	3.0	34	6206	71
100L24	1440	4	3	9.5/5.5	87	71	2.7	7.5	3.2	42	6206	72
112M4	1450	5.5	4	12.8/7.4	87	80	2.3	8	2.9	46.5	6306	73
132S4	1460	7.5	5.5	17.2/9.9	87.5	78	2.7	8.5	3.5	78	6308	76
132M4	1455	10	7.5	23.4/13.5	88	80	2.7	8.3	3.5	91	6308	81
90S6	950	1	0.75	3.5/2.0	79	65	2.2	5.8	2.8	20	6205	65
90L6	940	1.5	1.1	4.7/2.7	79	89	2.2	6	3.0	26	6205	66
100L6	960	2	1.5	5.7/3.3	82.5	65	2.1	7	3.0	38	6206	68
112M6	975	3	2.2	8.5/4.9	84	50	2.5	7.5	3.3	51	6306	71
132S6	975	4	3	11/6.4	85.5	80	2.4	7.8	3.2	80	6308	75
132M16	975	5.5	4	14.5/8.5	86	80	2.3	7.6	3.2	93	6308	76

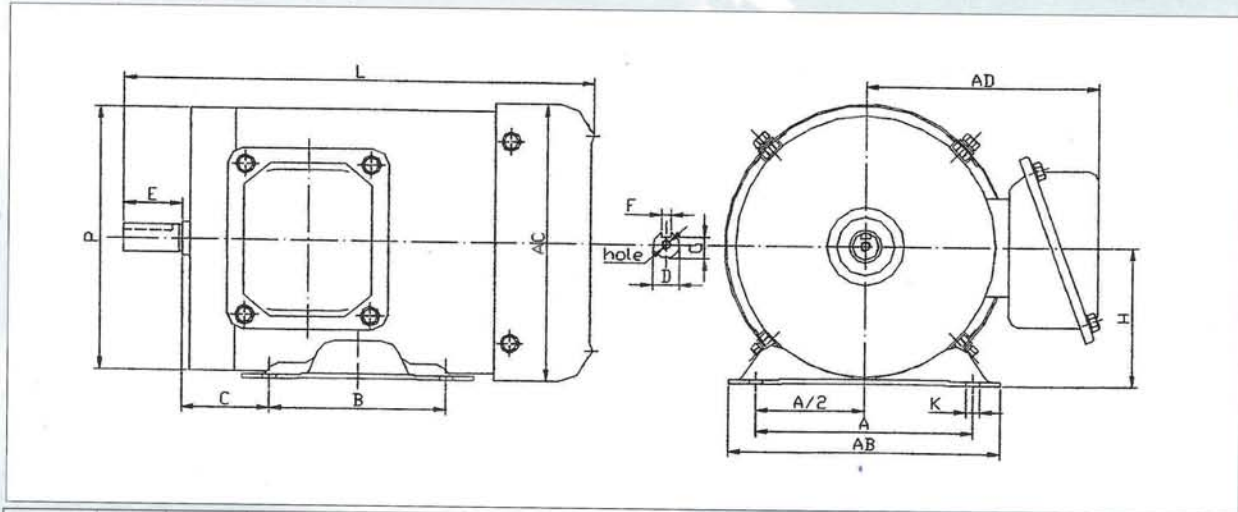
1. All data subject to change without notice.
2. The voltage to be 240/415, 50 circles.
3. T.R—temperature rise
4. LRT—rotor-locked torque
5. LRA—rotor-locked amps
6. BDT—breakdown torque

● Model(63-80) B3 TENV



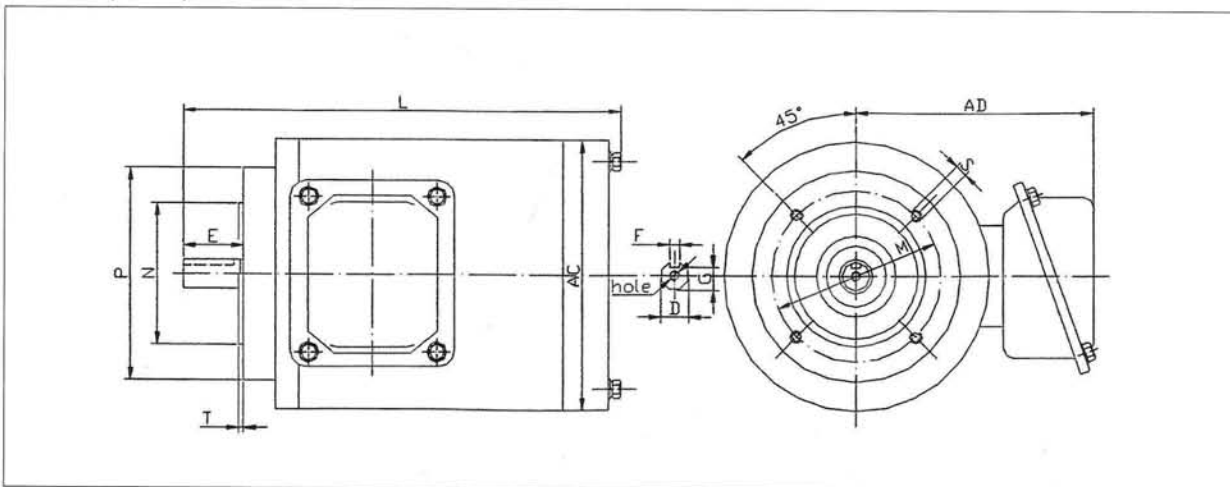
Frame model	Flange model	Poles	Dimension															
			A Basic size	A/2 Basic size	B Basic size	C Basic size	D Basic size	E Basic size	F Basic size	G Basic size	H Basic size	K Basic size	P	hole	AB	AC	AD	L
H63		2,4	100	50	80	40	11	23	4	8.5	63	7	114	M4	125	114	112	241
H71		2,4,6	112	56	90	45	14	30	5	11	71	7	134	M4	140	134	122	278
H80		2,4,6	125	62.5	100	50	19	40	6	15.5	80	10	144	M6	150	144	127	322

● Model(90-132) B3 TEFC



Frame model	Flange model	Poles	Dimension															
			A Basic size	A/2 Basic size	B Basic size	C Basic size	D Basic size	E Basic size	F Basic size	G Basic size	H Basic size	K Basic size	P	hole	AB	AC	AD	L
H90S		2,4,6	140	70	100	56	24	50	8	20	90	10	164	M8	165	176	140	369
H90L		2,4,6	140	70	125	56	24	50	8	20	90	10	164	M8	165	176	140	414
H100		2,4,6	160	80	140	63	28	60	8	24	100	12	190	M10	190	202	153	433
H112		2,4,6	190	95	140	70	28	60	8	24	112	12	215	M10	220	231	171	469
H132S		2,4,6	216	108	140	89	38	80	10	33	132	12	246	M12	246	260	187	524
H132M		2,4,6	216	108	178	89	38	80	10	33	132	12	246	M12	246	260	187	564

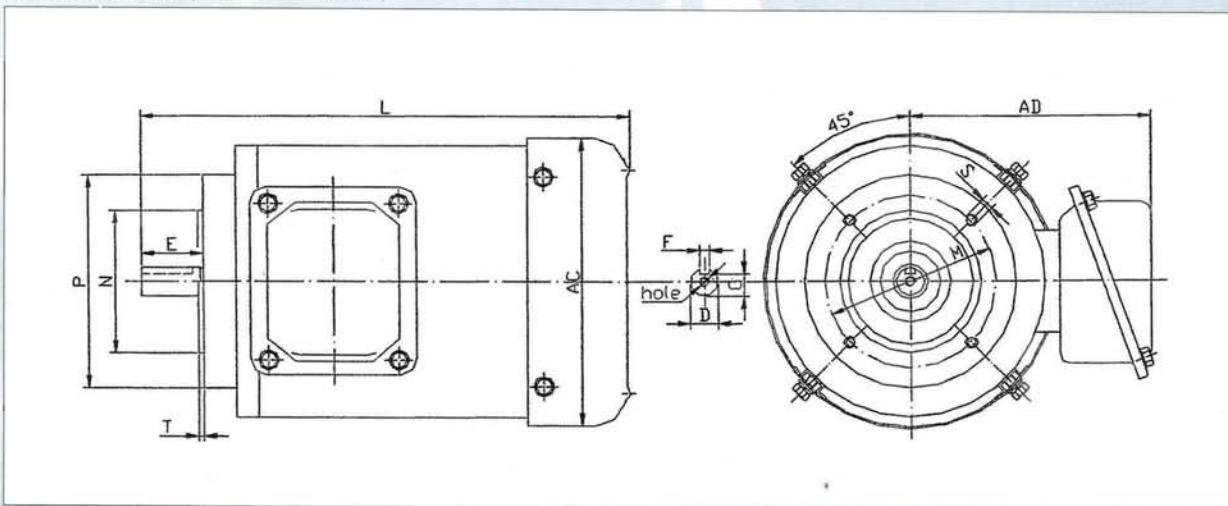
● Model(63-80) B14 TENV



Frame model	Flange model	Poles	Dimension														
			D Basic size	E Basic size	F Basic size	G Basic size	M	N Basic size	P	R Basic size	S Basic size	T Basic size	Flange holes	Shaft hole	AC	AD	L
H63	FT75	2,4	11	23	4	8.5	75	60	90	0	M5	2.5	4	M4	114	112	241
H71	FT85	2,4,6	14	30	5	11	85	70	105	0	M6	2.5	4	M5	134	122	278
H80	FT100	2,4,6	19	40	6	15.5	100	80	120	0	M6	3	4	M6	144	127	322

R=Length from flange face to shaft shoulder

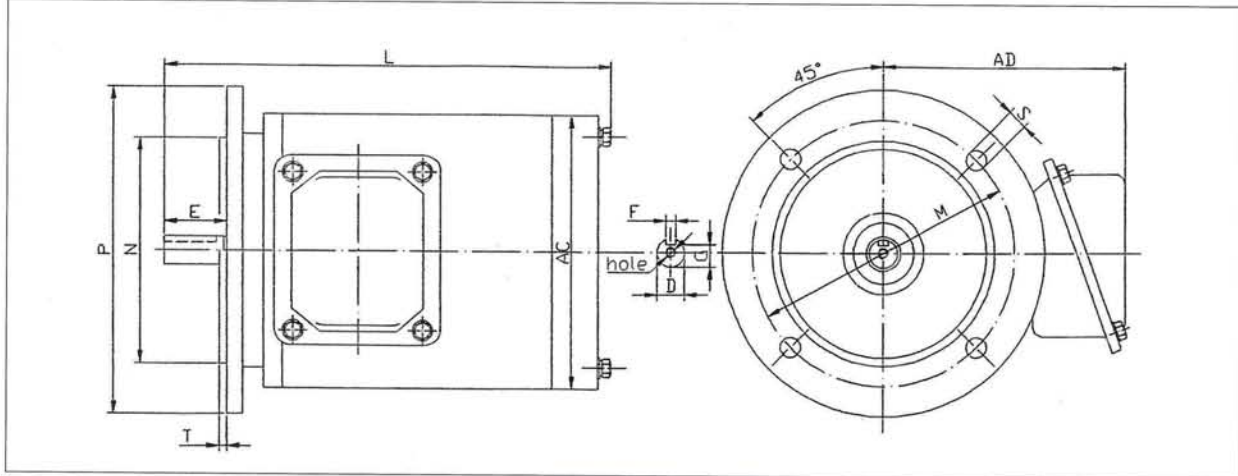
● Model(90-132) B14 TEFC



Frame model	Flange model	Poles	Dimension														
			D Basic size	E Basic size	F Basic size	G Basic size	M	N Basic size	P	R Basic size	S Basic size	T Basic size	Flange holes	Shaft hole	Ac	AD	L
H90S	FT115	2,4,6	24	50	8	20	115	95	140	0	M8	3	4	M8	176	140	369
H90L	FT115	2,4,6	24	50	8	20	115	95	140	0	M8	3	4	M8	176	140	414
H100	FT130	2,4,6	28	60	8	24	130	110	160	0	M8	3.5	4	M10	202	153	433
H112	FT130	2,4,6	28	60	8	24	130	110	160	0	M8	3.5	4	M10	231	171	469
H132S	FT165	2,4,6	38	80	10	33	165	130	200	0	M10	3.5	4	M12	260	187	524
H132M	FT165	2,4,6	38	80	10	33	165	130	200	0	M10	3.5	4	M12	260	187	564

R=Length from flange face to shaft shoulder

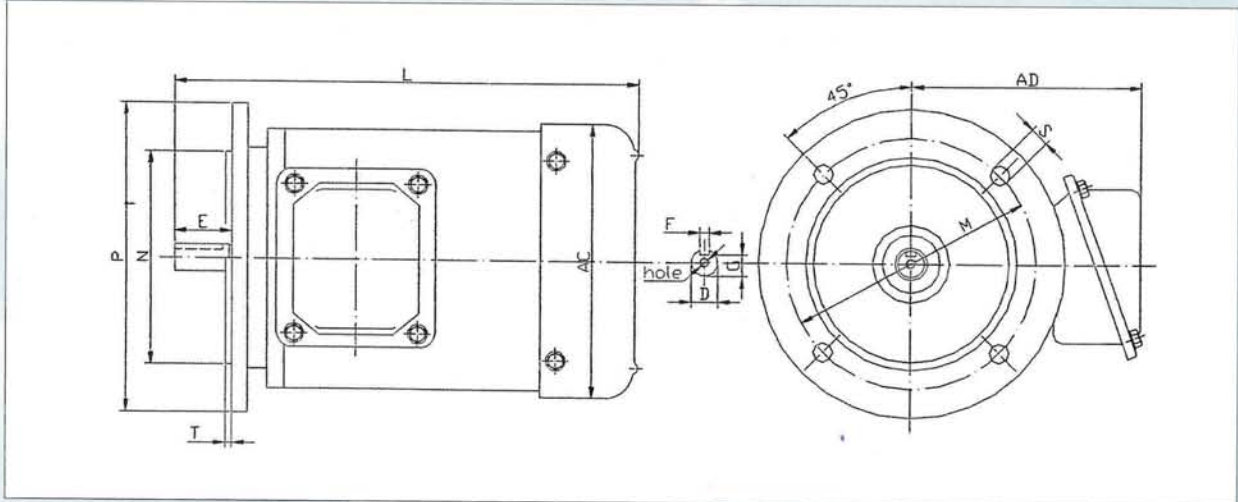
● Model(63-80) B5 TENV



Frame model	Flange model	Poles	Dimension														
			D Basic size	E Basic size	F Basic size	G Basic size	M	N Basic size	P	R Basic size	S Basic size	T Basic size	Flange holes	Shaft hole	AC	AD	L
H63	FF115	2,4	11	23	4	8.5	115	95	140	0	10	3	4	M4	114	112	241
H71	FF130	2,4,6	14	30	5	11	130	110	160	0	10	3.5	4	M5	134	122	278
H80	FF165	2,4,6	19	40	6	15.5	165	130	200	0	12	3.5	4	M6	144	127	322

R=Length from flange face to shaft shoulder

● Model(90-132) B5 TEFC



Frame model	Flange model	Poles	Dimension														
			D Basic size	E Basic size	F Basic size	G Basic size	M	N Basic size	P	R Basic size	S Basic size	T Basic size	Flange holes	Shaft hole	Ac	AD	L
H90S	FF165	2,4,6	24	50	8	20	165	130	200	0	12	3.5	4	M8	176	140	369
H90L	FF165	2,4,6	24	50	8	20	165	130	200	0	12	3.5	4	M8	176	140	414
H100	FF215	2,4,6	28	60	8	24	215	180	250	0	15	4	4	M10	202	153	433
H112	FF215	2,4,6	28	60	8	24	215	180	250	0	15	4	4	M10	231	171	469
H132S	FF265	2,4,6	38	80	10	33	265	230	300	0	15	4	4	M12	260	187	524
H132M	FF265	2,4,6	38	80	10	33	265	230	300	0	15	4	4	M12	260	187	564

R=Length from flange face to shaft shoulder

## EUROPE'S first and only complete range of IEC metric stainless steel electric motors

Totally hose proof  
and dust proof(IP66)

Quickly and easily cleaned.

Motor not damaged by  
caustic cleaning solutions.

Up to 7.5KW 132M frame available

Double lip oil seal with  
corrosion proof gamma seal.

12mm terminal gasket.

Sealing compound on end shields.

Special NTN blue seal bearings,

C3 high temperature (200°C)

Varnished rotor to prevent rust.

4 quadrant drain plugs.

Condensation release drain plug.

Hand wound and inverter duty.

Smooth body for easy cleaning.

Vacuum impregnated windings.

Etched nameplate.

Locked bearing front end.

Metric IEC frames.

MEPS approved.

B3, B5, B35, B34 mounting.

TENV(no fan or cowl up to 0.75kw)

SEW Motor dimensions available

Stainless steel front bearing

9RB gamma seal

Stainless steel housed oil seals



Standard metric frame motor



12mm terminal gasket



4 quadrant drain plugs on all models