Cast Iron Frame Motors For Zone 21 Premium Efficiency EFF1

Standard Features:

- Three-phase, multivoltage, IP66, TEFC
- Output: 0.12 up to 250kW
- Frames: 63 up to 355M/L
- Voltage: 220-240/380-415V (up to 100L)
  380-415/660V (from 112M and up)
- Class “F” insulation (ΔT=80K)
- Continuous duty: S1
- Design N
- Ambient temperature: 40°C, at 1000 m.a.s.l.
- Squirrel cage rotor/Aluminium die cast
- Oil Seal (frames 63 up to 80)
- W3Seal (frames 90S up to 355M/L)
- Anti-condensation drain holes
- Temperature Classification: Zone 21-maximum guaranteed external surface temperature T125ºC temperature limitation because of the presence of dust clouds (for material with ignition temperature above 125ºC) and presence of dust layers (up to 5mm)
- Regreasing nipples from frame 225S/M and above
- Metric thread cable entries in terminal box
- Thermistors (1 per phase) 140°C
- Suitable for Inverter Duty applications
- Color: RAL 5009

Options Available:

- Degree of Protection: IP65
- Bearing seals:
  - Oil seal (frames 90S up to 355M/L)
- Thermal protection:
  - Thermostats
  - RTD-PT 100
- Space heaters
- Design H
- Class “H” insulation
- Roller bearings for frame 160M and above

More options available, on request

Typical Applications:

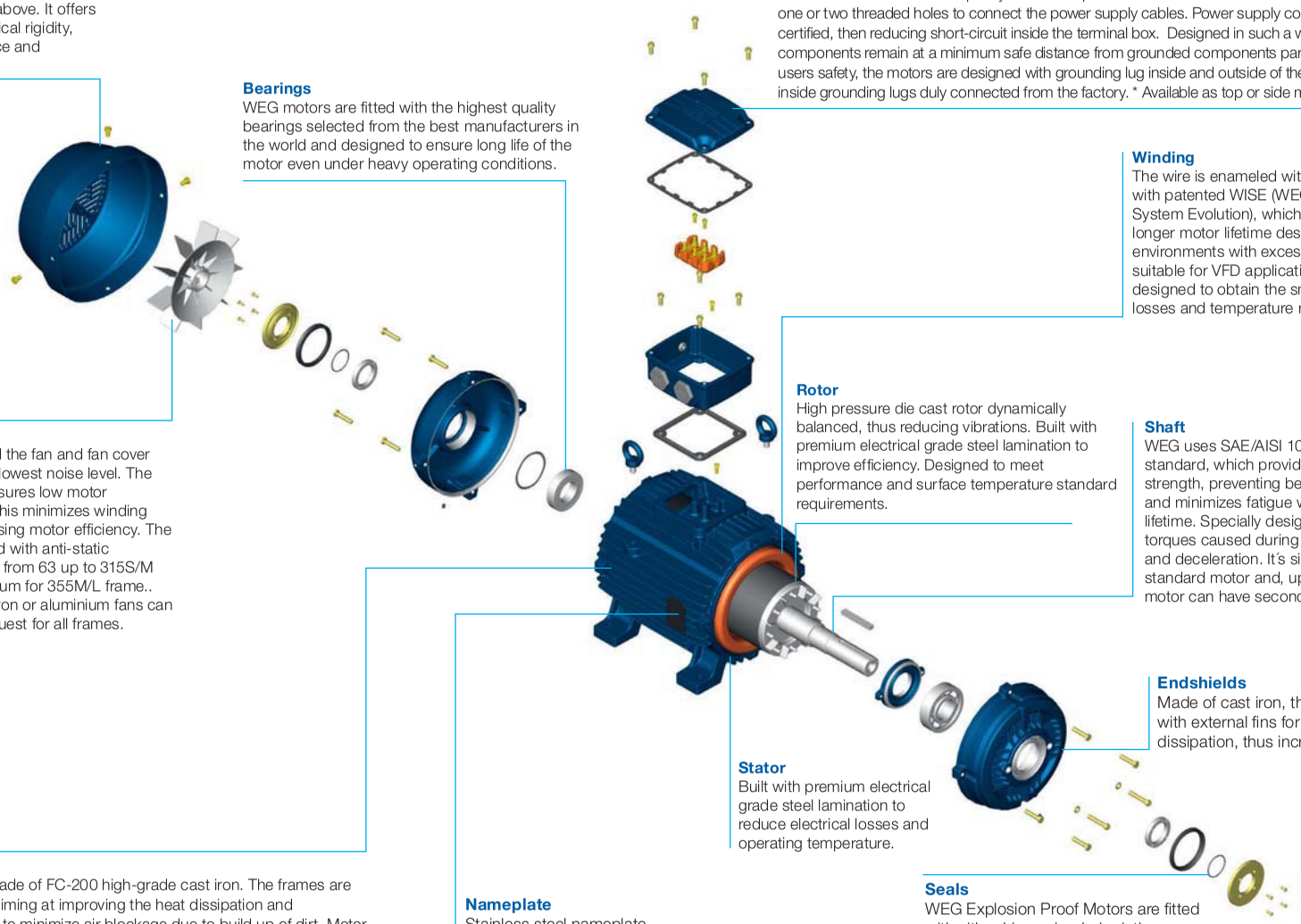
These motors are designed to operate in areas that can release flammable dust or in atmospheres where explosions can occur due to a mixture of air and dust:

- Sugar refining plants
- Breweries
- Cement plants
- Textiles, pharmaceutical, chemical and agricultural process industries
- Other several duty applications

Fan Cover
Made of steel plate for frames 63 up to 132M and of cast iron for frames 160M and above. It offers a superior mechanical rigidity, corrosion-resistance and extended lifetime.

Bearings
WEG motors are fitted with the highest quality bearings selected from the best manufacturers in the world and designed to ensure long life of the motor even under heavy operating conditions.

Terminal Box
Made of cast iron made with plenty of internal space. The terminal box can be rotated in 90° intervals, having one or two threaded holes to connect the power supply cables. Power supply connection components are certified, then reducing short-circuit inside the terminal box. Designed in such a way that the energized components remain at a minimum safe distance from grounded components parts. In order to allow end users safety, the motors are designed with grounding lug inside and outside of the terminal box, with the inside grounding lugs duly connected from the factory. * Available as top or side mounted.



Winding
The wire is enameled with class H. Supplied with patented WISE (WEG Insulation System Evolution), which allows three times longer motor lifetime designed to work in environments with excess of moisture and suitable for VFD application. The winding is designed to obtain the smallest Joule losses and temperature rise.

Rotor
High pressure die cast rotor dynamically balanced, thus reducing vibrations. Built with premium electrical grade steel lamination to improve efficiency. Designed to meet performance and surface temperature standard requirements.

Shaft
WEG uses SAE/AISI 1040/45 steel as standard, which provides high mechanical strength, preventing bending under load and minimizes fatigue which extends lifetime. Specially designed to withstand torques caused during motor acceleration and deceleration. It´s size is larger than the standard motor and, upon special design, motor can have second shaft end.

Fan
WEG has designed the fan and fan cover having in mind the lowest noise level. The efficient cooling ensures low motor temperature rise. This minimizes winding losses, thus increasing motor efficiency. The W21 line is supplied with anti-static polypropylene fans from 63 up to 315S/M frames and aluminium for 355M/L frame.. Alternatively, cast iron or aluminium fans can be supplied on request for all frames.

Endshields
Made of cast iron, they are provided with external fins for better temperature dissipation, thus increasing bearing life.

Stator
Built with premium electrical grade steel lamination to reduce electrical losses and operating temperature.

Frame
WEG motors are made of FC-200 high-grade cast iron. The frames are provided with fins aiming at improving the heat dissipation and adequately spaced to minimize air blockage due to build up of dirt. Motor designed to ensure that surface temperature is lower than ignition temperature of the gas that is present in the environment. Mechanical components are designed towithstand an explosion inside the motor without causing any risk to outside areas since there is no flame flame propagation through flame path. The motors can be mounted in any position, horizontal and vertical, withstanding the maximum axial and radial thrusts.

Nameplate
Stainless steel nameplate ensuring a permanent record of all motor data.

Seals
WEG Explosion Proof Motors are fitted with either Lip seal or Labyrinth Tachonite as standard (see standard features list) to provide the best possible protection.

W3Seal
Exclusive WEG sealing system (tachonite + v´ring + o´ring) guarantee maximum protection against the ingress of solid and liquid contaminating

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Output		IEC Frame	Full load torque C_n (Nm)	Locked rotor current I_l/I_n	Locked rotor torque T_l/T_n	Break-down torque T_b/T_n	Inertia J kgm²	Allowable locked rotor time Hot/Cold (s)	Weight (kg)	Sound dB (A)	Rated speed (rpm)	400 V						Full load current I_n (A)
												% of full load						
												Efficiency η			Power Factor (Cos φ)			
kW	HP											50	75	100	50	75	100	
II Pole - 3000rpm																		
0.12	0.16	63	0.41	5	2.8	3	0.000	25/55	7.7	52	2760	58	64.8	65.5	0.51	0.64	0.74	0.357
0.18	0.25	63	0.64	4.4	2.5	2.5	0.000	30/66	7.7	52	2730	63.5	68.5	69.5	0.62	0.76	0.81	0.462
0.25	0.33	63	0.85	4.5	2.5	2.5	0.000	18/40	8.2	52	2730	64	68.5	71.2	0.58	0.71	0.8	0.634
0.37	0.5	71	1.25	5.5	3	3.2	0.000	23/51	10.9	56	2810	69	73.8	74.5	0.63	0.77	0.85	0.843
0.55	0.75	71	1.89	5.7	2.7	2.7	0.000	16/35	11.6	56	2790	72.5	76.6	76.7	0.68	0.8	0.86	1.2
0.75	1	80	2.51	6.8	3.1	3.1	0.001	20/44	15.2	59	2795	76.5	80.5	80.5	0.73	0.82	0.86	1.56
1.1	1.5	80	3.74	7.8	3.4	3.4	0.001	15/33	16.4	59	2820	81	83	83.6	0.64	0.76	0.84	2.26
1.5	2	90S	4.91	7.3	2.8	2.8	0.002	14/31	20.2	62	2860	83.2	84.9	84.5	0.68	0.8	0.85	3.01
2.2	3	90L	7.35	8.4	3.7	3.5	0.003	9/20	22.5	62	2865	84	86	86.6	0.64	0.76	0.83	4.42
3	4	100L	9.7	8.9	3	3.1	0.007	12/26	32.2	67	2895	84.5	87	88.3	0.73	0.83	0.87	5.64
4	5.5	112M	13.32	8.2	2.7	3.4	0.008	17/37	42.7	64	2900	87	88.4	88.6	0.72	0.83	0.87	7.49
5.5	7.5	132S	17.95	8	2.7	3.2	0.021	19/42	61	67	2935	88.5	90	90.1	0.71	0.81	0.86	10.2
7.5	10	132S	24.01	8	2.5	2.9	0.024	13/29	66	67	2925	88.5	90.6	90.8	0.72	0.82	0.87	13.7
9.2	12.5	132M	29.91	8.5	2.8	3.1	0.028	11/24	74	67	2935	88.5	90.9	91	0.7	0.81	0.87	16.8
11	15	160M	35.72	8.5	2.8	3.3	0.053	14/31	117.9	70	2950	90	91.9	92.3	0.7	0.8	0.85	20.2
15	20	160M	47.7	8.2	2.4	3.3	0.059	12/26	130.5	70	2945	91	92	92.5	0.74	0.82	0.86	27.2
18.5	25	160L	59.63	8.8	2.5	3.2	0.068	10/22	135.2	70	2945	91.9	92.8	93.1	0.73	0.82	0.85	33.7
22	30	180M	71.43	8.6	2.7	3.3	0.119	14/31	193.7	70	2950	92.5	93.5	93.7	0.76	0.84	0.87	39
30	40	200L	94.92	7.4	2.7	2.8	0.206	31/68	248	74	2960	92.8	93.7	94	0.77	0.84	0.87	52.9
37	50	200L	118.65	7.6	2.7	2.7	0.224	25/55	260	74	2960	93.2	94	94.6	0.76	0.84	0.87	64.9
45	60	225S/M	141.9	8.5	2.4	2.9	0.448	18/40	414	82	2970	93.6	94.5	94.7	0.82	0.88	0.9	76.2
55	75	250S/M	177.67	8.9	2.6	3.4	0.502	15/33	460.8	82	2965	94	95	95	0.85	0.89	0.91	91.8
75	100	280S/M	236.1	7.7	2.2	2.9	1.271	51/112	740	83	2975	93.2	94.4	95.6	0.83	0.87	0.89	127
90	125	280S/M	295.12	8.2	2.2	2.8	1.412	42/92	780	83	2975	94.1	95.5	95.8	0.82	0.88	0.9	151
110	150	315S/M	354.15	8	2.3	2.8	1.506	38/84	830	83	2975	94.4	95.3	95.8	0.82	0.87	0.89	186
132	175	315S/M	413.17	7.8	2.2	2.7	1.742	32/70	900	83	2975	94.3	95.5	96	0.82	0.88	0.89	223
160	220	315S/M	520.29	7.8	2.2	2.5	2.118	33/73	1010	83	2970	95	96	96.2	0.85	0.89	0.9	267
200	270	355M/L	635.33	7.2	1.8	2.6	4.826	70/154	1490	81	2985	93.5	95	95.4	0.89	0.91	0.92	329
250	340	355M/L	800.05	7.8	1.7	2.5	5.746	65/143	1750	81	2985	95.5	96.3	96.4	0.87	0.91	0.92	407
HIGH OUTPUT DESIGN																		
75	100	250S/M	236.9	8.5	3	3.4	0.556	10/22	490	82	2965	93	94.3	94.6	0.83	0.88	0.9	127
110	150	280S/M	354.15	8	2.3	2.8	1.506	38/84	830	83	2975	94.4	95.3	95.8	0.82	0.87	0.89	186
IV POLE - 1500 rpm																		
0.12	0.16	63	0.79	4.5	2.6	2.7	0.00045	20/44	8.1	44	1415	56.5	62.5	64.5	0.43	0.55	0.65	0.413
0.18	0.25	63	1.25	4.6	2.6	2.7	0.00056	27/59	8.7	44	1400	58	64	67.5	0.44	0.55	0.66	0.583
0.25	0.33	71	1.66	5	3	3.1	0.00079	48/106	11.9	43	1400	69	73	75	0.5	0.61	0.69	0.697
0.37	0.5	71	2.52	5	2.7	2.8	0.00079	37/81	12	43	1395	69	74	75.5	0.47	0.59	0.69	1.03
0.55	0.75	80	3.68	6	2.6	2.8	0.00242	17/37	15	44	1430	72	77	78	0.56	0.69	0.78	1.3
0.75	1	80	4.95	6	2.6	2.6	0.00328	16/35	16.9	44	1420	76	78.6	80.1	0.62	0.75	0.82	1.65
1.1	1.5	90S	7.29	7	2.6	3	0.0056	14/31	22.2	49	1445	80	83.8	83.8	0.59	0.72	0.8	2.37
1.5	2	90L	9.69	7.5	2.8	3.3	0.00672	12/26	24.6	49	1450	80.5	84.6	85.2	0.54	0.68	0.77	3.3
2.2	3	100L	14.79	7.4	3	3	0.01072	17/37	34.2	53	1425	85.3	86.4	86.4	0.65	0.77	0.83	4.43
3	4	100L	19.65	7.8	2.9	3.3	0.01225	12/26	40.2	53	1430	84.5	86.5	87.5	0.64	0.76	0.83	5.96
4	5.5	112M	26.73	6.6	2.1	2.6	0.01875	12/26	46.4	56	1445	87.1	88.3	88.6	0.66	0.77	0.83	7.85
5.5	7.5	132S	35.96	8.5	2.4	3.1	0.05427	12/26	66.9	56	1465	88	89.6	90.1	0.69	0.79	0.85	10.4
7.5	10	132M	47.95	8.2	2.5	3	0.0659	9/20	77.1	56	1465	89	90	90.4	0.71	0.81	0.86	13.9
9.2	12.5	160M	60.14	5.6	2.3	2.3	0.08029	27/59	110	67	1460	89.6	91	91	0.7	0.8	0.84	17.4
11	15	160M	71.92	6	2.5	2.6	0.10037	19/42	120.5	67	1465	90.3	91.4	91.2	0.68	0.78	0.83	21
15	20	160L	95.89	6.1	2.5	2.6	0.11542	17/37	139.7	67	1465	90.5	91.9	91.8	0.66	0.77	0.83	28.4
18.5	25	180M	119.46	8	2.9	2.9	0.19733	12/26	184.9	64	1470	91.6	93	93.4	0.65	0.76	0.82	34.9
22	30	180L	142.86	7.9	2.8	2.9	0.23321	16/35	199.6	64	1475	92.5	93.5	93.7	0.71	0.81	0.86	39.4
30	40	200L	190.48	7	2.5	2.6	0.33095	18/40	245	69	1475	93	94	93.9	0.67	0.78	0.83	55.6
37	50	225S/M	237.3	7.2	2.2	2.7	0.69987	16/35	369.2	70	1480	93	94	94.1	0.76	0.84	0.87	65.2
45	60	225S/M	284.76	7.4	2.4	3	0.83984	15/33	398.2	70	1480	94	94.5	94.5	0.76	0.83	0.88	78.1
55	75	250S/M	357.15	7.2	2.5	2.8	1.15478	17/37	489.8	70	1475	94.1	94.7	94.6	0.77	0.86	0.89	94.3
75	100	280S/M	472.99	7.2	2.2	2.6	2.16799	38/84	660	70	1485	93.9	95.1	95.2	0.79	0.85	0.88	129
90	125	280S/M	591.24	7.8	2.4	2.6	2.81036	25/55	795	70	1485	94.3	95.1	95.3	0.79	0.85	0.88	155
110	150	315S/M	709.49	7.6	2.4	2.6	3.21184	29/64	860	72	1485	94.5	95.2	95.6	0.8	0.86	0.88	189
132	175	315S/M	827.74	7.8	2.4	2.6	3.77391	25/55	995	72	1485	94.8	95.4	95.7	0.78	0.85	0.88	226
160	220	315S/M	1040.59	7.6	2.4	2.6	3.77391	20/44	1005	72	1485	94.7	95.7	95.9	0.76	0.84	0.87	277
200	270	355M/L	1272.8	6.6	2.1	2.3	6.85703	49/108	1525	79	1490	95.3	95.8	96	0.8	0.86	0.88	342
250	340	355M/L	1602.78	6.9	2.2	2.5	8.12016	36/79	1615	79	1490	95.3	96.3	96.5	0.8	0.86	0.88	425

Notes:
**Class "F" insulation with ΔT105K*
Standard voltage, connection and frequency: 220-240V Δ 50Hz 380-415V Δ 50Hz
380-415V Y 50Hz 660-690V Y 50Hz
The values shown are subject to change without prior notice. To obtain guaranteed values please access our website.

Cast Iron Frame Motors For Zone 21 - Premium Efficiency EFF1

Output		380 V								415 V							
		Rated speed (rpm)	% of full load						Full load current I_n (A)	Rated speed (rpm)	% of full load						Full load current I_n (A)
			Efficiency η			Power Factor (Cos φ)					Efficiency η			Power Factor (Cos φ)			
kW	HP		50	75	100	50	75	100			50	75	100	50	75	100	
II Pole - 3000 rpm																	
0.12	0.16	2730	60	66	67	0.56	0.69	0.79	0.344	2790	55	63	63	0.48	0.61	0.71	0.373
0.18	0.25	2700	65	69	69	0.66	0.79	0.83	0.478	2760	62	68	70	0.58	0.73	0.78	0.459
0.25	0.33	2700	65.5	69.5	70	0.62	0.75	0.83	0.654	2755	62.5	67.5	71.9	0.55	0.68	0.77	0.628
0.37	0.5	2790	70.5	73.8	74.3	0.68	0.8	0.88	0.86	2825	67.5	73.8	74.5	0.6	0.74	0.82	0.843
0.55	0.75	2760	73.5	76.7	76.5	0.73	0.82	0.88	1.24	2810	71.5	76.5	76.7	0.64	0.77	0.84	1.19
0.75	1	2770	77	80.5	79.8	0.76	0.85	0.88	1.62	2805	76	80.5	80.5	0.7	0.79	0.84	1.54
1.1	1.5	2800	82	83.2	82.8	0.69	0.8	0.86	2.35	2835	80	82.5	83.5	0.58	0.72	0.81	2.26
1.5	2	2845	83.6	84.8	84.3	0.73	0.83	0.87	3.11	2870	82.8	84.8	84.6	0.64	0.77	0.83	2.97
2.2	3	2855	84.5	86	86	0.69	0.8	0.86	4.52	2875	83.5	86	86.6	0.58	0.72	0.8	4.42
3	4	2890	85	86.7	87.5	0.77	0.85	0.88	5.92	2900	84	86.7	88	0.69	0.81	0.86	5.51
4	5.5	2890	87.5	88.3	88.3	0.77	0.85	0.89	7.73	2910	86.5	88.3	88.5	0.68	0.81	0.86	7.31
5.5	7.5	2930	89	90.3	90.2	0.75	0.83	0.87	10.6	2940	88	89.8	90	0.68	0.78	0.84	10.1
7.5	10	2920	89	90.5	90.6	0.75	0.84	0.88	14.3	2930	88	90.6	90.9	0.7	0.8	0.86	13.3
9.2	12.5	2930	89	91	91	0.76	0.85	0.89	17.3	2940	88	90.8	91	0.66	0.77	0.85	16.5
11	15	2945	90.5	92	92.2	0.74	0.83	0.87	20.8	2955	89.5	91.8	92.2	0.66	0.77	0.83	20
15	20	2940	91.5	92	92.4	0.78	0.85	0.87	28.4	2950	90.5	91.9	92.4	0.7	0.8	0.85	26.6
18.5	25	2940	92.1	92.8	93	0.76	0.84	0.87	34.7	2950	91.7	92.7	93	0.7	0.8	0.83	33.3
22	30	2945	92.8	93.5	93.5	0.79	0.86	0.89	40.2	2955	92.2	93.5	93.7	0.73	0.82	0.85	38.4
30	40	2955	93	93.7	93.8	0.81	0.86	0.88	55.2	2965	92.6	93.7	94.1	0.74	0.82	0.86	51.6
37	50	2955	93.4	94	94.4	0.8	0.86	0.88	67.7	2965	93	94	94.6	0.72	0.82	0.86	63.3
45	60	2965	93.9	94.5	94.5	0.84	0.89	0.91	79.5	2970	93.3	94.5	94.6	0.8	0.87	0.89	74.4
55	75	2960	94.2	94.7	94.7	0.87	0.9	0.92	95.9	2970	93.8	95	95	0.83	0.88	0.9	89.5
75	100	2970	93.4	94.4	95.4	0.85	0.88	0.9	133	2975	93	94.4	95.5	0.81	0.86	0.88	124
90	125	2975	94.3	95.5	95.8	0.84	0.89	0.9	159	2980	93.9	95.5	95.8	0.8	0.87	0.89	147
110	150	2970	94.6	95.4	95.7	0.84	0.88	0.9	194	2975	94.2	95.2	95.8	0.8	0.86	0.88	182
132	175	2970	94.5	95.5	96	0.84	0.89	0.9	232	2975	94.1	95.4	96	0.8	0.87	0.89	215
160	220	2965	95	95.9	96.1	0.86	0.9	0.91	278	2975	94.9	96	96.2	0.83	0.88	0.89	260
200	270	2980	93.7	95	95.3	0.9	0.92	0.92	347	2985	93.3	94.9	95.4	0.88	0.9	0.91	321
250	340	2980	95.5	96.3	96.4	0.89	0.92	0.93	424	2985	95.4	96.3	96.4	0.86	0.91	0.92	392
HIGH OUTPUT DESIGN																	
75	100	2960	93.2	94.3	94.3	0.85	0.89	0.91	133	2965	92.8	94.3	94.6	0.81	0.87	0.9	123
110	150	2970	94.6	95.4	95.7	0.84	0.88	0.9	194	2975	94.2	95.2	95.8	0.8	0.86	0.88	182
IV Pole - 1500 rpm																	
0.12	0.16	1405	59	64	65	0.46	0.59	0.69	0.407	1425	54	60.5	63	0.4	0.51	0.61	0.434
0.18	0.25	1390	60	65	67	0.47	0.57	0.68	0.6	1410	56	63	67	0.41	0.53	0.64	0.584
0.25	0.33	1385	70	73.5	74.5	0.54	0.65	0.73	0.698	1415	68	72.5	75.5	0.46	0.58	0.66	0.698
0.37	0.5	1385	71	74.5	75.5	0.51	0.63	0.72	1.03	1405	67	73.5	75	0.43	0.55	0.66	1.04
0.55	0.75	1420	73	77.5	77.5	0.59	0.72	0.81	1.33	1435	71	76.5	78	0.53	0.65	0.75	1.31
0.75	1	1410	77	78.7	79.6	0.66	0.78	0.85	1.68	1425	75	78.5	80.1	0.58	0.71	0.79	1.65
1.1	1.5	1440	81.5	83.8	83.6	0.64	0.76	0.83	2.41	1450	78.5	83.8	83.8	0.55	0.69	0.77	2.37
1.5	2	1440	81.5	84.7	85	0.59	0.73	0.8	3.35	1455	79.5	84.5	85	0.5	0.64	0.74	3.32
2.2	3	1420	85.5	86.3	86.2	0.7	0.81	0.86	4.51	1430	85	86.4	86.4	0.62	0.75	0.81	4.37
3	4	1425	85	86.5	87.5	0.68	0.8	0.85	6.13	1435	84	86.5	87.5	0.6	0.73	0.81	5.89
4	5.5	1440	87.5	88.4	88.3	0.7	0.8	0.86	8	1450	86.7	88.2	88.6	0.62	0.74	0.81	7.75
5.5	7.5	1460	88.5	89.6	90	0.72	0.81	0.86	10.8	1470	87.5	89.4	90.1	0.65	0.77	0.83	10.2
7.5	10	1460	89.2	89.8	89.8	0.75	0.84	0.88	14.4	1465	88.7	89.8	90.3	0.68	0.79	0.85	13.6
9.2	12.5	1455	90	91	90.7	0.74	0.82	0.85	18.1	1465	89.2	91	91	0.67	0.78	0.83	16.9
11	15	1460	90.6	91.5	91	0.72	0.81	0.85	21.6	1470	90	91.3	91.3	0.64	0.75	0.81	20.7
15	20	1460	90.9	91.9	91.5	0.7	0.8	0.85	29.3	1470	90.1	91.9	91.8	0.62	0.74	0.81	28.1
18.5	25	1465	91.8	93	93.3	0.7	0.8	0.84	35.9	1475	91.3	92.9	93.3	0.6	0.73	0.8	34.5
22	30	1470	92.8	93.4	93.5	0.75	0.83	0.88	40.6	1475	92.2	93.4	93.7	0.68	0.79	0.85	38.4
30	40	1475	93.5	94.1	93.7	0.71	0.81	0.85	57.2	1480	92.5	93.9	93.8	0.63	0.75	0.81	54.9
37	50	1480	93.4	94	94	0.8	0.86	0.88	68	1485	92.6	93.9	94	0.73	0.82	0.86	63.7
45	60	1480	94.2	94.4	94.3	0.79	0.85	0.89	81.5	1485	93.8	94.3	94.5	0.73	0.81	0.87	76.1
55	75	1475	94.2	94.6	94.4	0.8	0.88	0.9	98.4	1480	94	94.7	94.7	0.75	0.85	0.88	91.8
75	100	1475	94	94.7	94.7	0.75	0.84	0.87	138	1485	93.7	95	95.2	0.77	0.84	0.87	126
90	125	1480	94.1	95	95	0.81	0.86	0.88	136	1485	94.1	95	95.3	0.77	0.84	0.87	151
110	150	1485	94.5	95.1	95.2	0.81	0.87	0.89	161	1485	94.3	95.1	95.6	0.78	0.85	0.87	184
132	175	1485	94.5	95.4	95.6	0.8	0.86	0.88	199	1485	94.6	95.3	95.7	0.76	0.84	0.87	221
160	220	1480	95	95.4	95.6	0.8	0.86	0.89	236	1485	94.5	95.7	95.9	0.74	0.82	0.86	270
200	270	1480	94.9	95.7	95.8	0.78	0.86	0.88	288	1490	95	95.8	96	0.78	0.85	0.87	333
250	340	1485	95.3	95.6	95.7	0.83	0.87	0.89	357	1490	95.1	96.1	96.4	0.77	0.85	0.87	415

Cast Iron Frame Motors For Zone 21 - Premium Efficiency EFF1

Output		IEC Frame	Full load torque C_n (Nm)	Locked rotor current I_r/I_n	Locked rotor torque T_r/T_n	Break-down torque T_b/T_n	Inertia J kgm²	Allowable locked rotor time Hot/Cold (s)	Weight (kg)	Sound dB (A)	Rated speed (rpm)	400 V						Full load current I_n (A)
												% of full load						
												Efficiency η			Power Factor (Cos φ)			
kW	HP											50	75	100	50	75	100	
VI Pole - 1000 rpm																		
0.18	0.25	71	1.95	3.5	2.1	2.2	0.00079	49/108	11	43	900	49	57	61	0.42	0.51	0.6	0.71
0.25	0.33	71	2.58	3.5	2.1	2.2	0.00096	43/95	12	43	900	53	63	67	0.39	0.48	0.55	0.979
0.37	0.5	80	3.8	4.7	2.1	2.2	0.00242	14/31	15	43	925	62	67.5	70	0.48	0.61	0.7	1.09
0.55	0.75	80	5.73	4.8	2.2	2.4	0.00311	11/24	16	43	920	62	68.5	70.3	0.48	0.63	0.72	1.57
0.75	1	90S	7.63	4.8	2.1	2.2	0.0056	20/44	22	45	920	74	77.7	77.7	0.5	0.63	0.72	1.94
1.1	1.5	90L	11.45	5	2.3	2.4	0.00672	12/26	23	45	920	72	77.7	77.7	0.48	0.61	0.71	2.88
1.5	2	100L	14.87	5.5	2.2	2.5	0.01289	19/42	32	44	945	79	81.5	81.5	0.49	0.6	0.7	3.8
2.2	3	112M	22.18	6.2	2.4	2.6	0.02243	16/35	45	48	950	81.5	84	83.8	0.52	0.64	0.72	5.26
3	4	132S	29.27	6	2.1	2.5	0.04264	28/62	59	52	960	82	85	86.5	0.53	0.67	0.74	6.76
4	5.5	132M	40.24	6.5	2.2	2.5	0.05039	21/46	68	52	960	85	86.6	87.2	0.56	0.69	0.76	8.71
5.5	7.5	132M	54.59	6.8	2.3	2.5	0.0659	17/37	79	52	965	84.5	87.5	87.6	0.53	0.65	0.73	12.4
7.5	10	160M	72.41	6.6	2.5	2.9	0.14364	19/42	106	56	970	87.5	89.5	90	0.61	0.74	0.81	14.8
9.2	12.5	160L	90.51	6.2	2.2	2.7	0.16518	15/33	130	56	970	89.4	90.1	90.1	0.6	0.73	0.8	18.4
11	15	160L	108.62	7	2.4	2.7	0.17595	13/29	136	56	970	89	90.3	90.3	0.58	0.72	0.79	22.3
15	20	180L	144.82	8	2.7	3	0.28959	9/20	189.6	56	970	91.2	91.9	91.6	0.72	0.81	0.87	27.2
18.5	25	200L	180.1	6.3	2.3	2.5	0.37671	17/37	210	58	975	91.3	92.7	92.9	0.67	0.78	0.82	35.1
22	30	200L	216.12	6.2	2.3	2.6	0.44846	15/33	240	58	975	91.2	92.6	92.9	0.65	0.75	0.82	41.7
30	40	225S/M	285.24	7	2.6	2.6	0.98842	21/46	366	61	985	91.7	93	93.5	0.73	0.81	0.85	54.5
37	50	250S/M	358.37	7	2.5	2.6	1.3179	20/44	450	61	980	91.8	94	94	0.72	0.81	0.84	67.6
45	60	280S/M	427.86	6.8	2.2	2.7	2.29824	27/59	610	66	985	92	93.6	94.2	0.67	0.77	0.82	84.1
55	75	280S/M	534.82	6.7	2.1	2.6	2.64298	21/46	655	66	985	92.5	93.9	94.3	0.67	0.78	0.82	103
75	100	315S/M	713.09	6.7	2.1	2.4	3.44737	20/44	725	69	985	93.7	94.4	94.5	0.72	0.81	0.84	136
90	125	315S/M	891.37	6.5	2.2	2.4	4.02193	16/35	810	69	985	94	94.8	94.8	0.71	0.8	0.83	165
110	150	315S/M	1069.64	6.5	2.2	2.4	5.28596	18/40	980	69	985	94.5	95.1	95.1	0.69	0.79	0.84	199
132	175	355M/L	1241.61	6.1	1.9	2.2	9.05472	90/198	1400	73	990	94.3	95.5	95.8	0.67	0.77	0.81	246
160	220	355M/L	1560.88	6	1.9	2.1	9.53128	76/167	1460	73	990	94.2	95.8	96	0.65	0.77	0.81	297
200	270	355M/L	1915.63	6.1	2.2	2.3	12.39067	85/187	1700	73	990	94.7	95.5	95.7	0.66	0.76	0.81	372
250	340	355M/L	2412.27	6.1	1.9	2.1	14.77349	64/141	1890	73	990	95	96	96.2	0.69	0.78	0.81	463
HIGH OUTPUT DESIGN																		
75	100	280S/M	713.09	6.7	2.1	2.4	3.44737	20/44	725	69	985	93.7	94.4	94.5	0.72	0.81	0.84	136
VIII Pole - 750 rpm																		
0.18	0.25	80	2.51	3.1	1.8	2	0.00242	16/35	13.7	42	700	42	51	55.8	0.42	0.52	0.61	0.763
0.25	0.33	80	3.34	3.5	2	2	0.00294	15/33	14.8	42	695	51	60	64.3	0.41	0.52	0.61	0.92
0.37	0.5	90S	5.09	4	2	2	0.00448	21/46	18	43	690	53.5	61.3	64.5	0.39	0.5	0.59	1.4
0.55	0.75	90L	7.63	4	2	2.2	0.00616	21/46	21.5	43	690	59	64	66.3	0.39	0.5	0.6	2
0.75	1	100L	9.89	4.2	1.9	2.2	0.01121	38/84	30.2	50	710	71	74.2	76	0.4	0.53	0.61	2.34
1.1	1.5	100L	15.05	4.2	1.8	2.2	0.01289	31/68	30	50	700	71	74.5	77	0.4	0.52	0.62	3.33
1.5	2	112M	19.79	5.4	2.4	2.7	0.0243	32/70	45	46	710	79	81.3	82	0.43	0.55	0.66	4
2.2	3	132S	29.68	6.2	2.4	2.5	0.07527	25/55	70	48	710	82	84.3	84.2	0.54	0.66	0.73	5.17
3	4	132M	39.57	6	2.4	2.4	0.08531	21/46	72.5	48	710	82.8	84.6	84.5	0.54	0.67	0.75	6.83
4	5.5	160M	53.29	5.2	2.2	2.8	0.12209	27/59	110	51	725	83	85.8	86.6	0.44	0.57	0.66	10.1
5.5	7.5	160M	72.16	5.6	2.5	2.8	0.16518	22/48	130	51	730	83.5	86.4	87	0.42	0.55	0.65	14
7.5	10	160L	96.88	5.2	2	2.4	0.16518	19/42	145	51	725	85.5	88	88.5	0.52	0.64	0.71	17.2
9.2	12.5	180M	121.1	7	2.2	2.7	0.262	12/26	163	51	725	87.5	88.3	88.5	0.67	0.77	0.83	18.1
11	15	180L	145.32	7	2.2	2.4	0.26201	9/20	183	51	725	88	89	89	0.68	0.78	0.83	21.5
15	20	200L	192.44	5	2	2.2	0.50227	28/62	300	53	730	89.5	90.8	91.5	0.53	0.65	0.71	33.3
18.5	25	225S/M	240.55	7.2	2.1	2.6	0.84722	18/40	340	56	730	90.5	91.5	91.9	0.69	0.79	0.83	35
22	30	225S/M	288.66	7.5	2.2	3	0.98842	18/40	365	56	730	90.8	92.2	92.5	0.67	0.77	0.82	41.9
30	40	250S/M	384.87	7.5	2.1	2.8	1.22377	17/37	440	56	730	91.7	92.5	93	0.69	0.79	0.83	56.1
37	50	280S/M	474.59	6.5	1.9	2.2	2.64298	32/70	590	59	740	92.6	93.5	93.9	0.63	0.74	0.8	71.1
45	60	280S/M	569.51	6.5	2	2.4	3.10263	32/70	650	59	740	92.9	93.7	94	0.62	0.73	0.79	87.5
55	75	315S/M	711.89	6.5	2	2.2	3.44737	32/70	730	62	740	93.5	94.5	94.5	0.63	0.74	0.8	105
75	100	315S/M	949.18	6.6	1.9	2.2	4.36666	20/44	876	62	740	93.9	94.7	94.9	0.66	0.78	0.81	141
90	125	315S/M	1186.48	6.8	1.9	2.4	5.28596	23/51	970	62	740	93.9	94.7	95	0.67	0.77	0.81	169
110	150	355M/L	1423.78	6.4	1.5	2.2	12.56043	41/90	1430	70	740	93.5	95.2	95.2	0.62	0.73	0.79	211
132	175	355M/L	1661.07	6.5	1.6	2.2	13.18845	47/103	1445	70	740	94	95.4	95.4	0.63	0.73	0.79	253
160	220	355M/L	2088.2	6.6	1.6	2.2	16.32856	42/92	1620	70	740	94.3	95.7	95.7	0.62	0.74	0.79	305
200	270	355M/L	2562.8	6.8	1.6	2.1	19.46866	37/81	1830	70	740	94.2	95.1	95.5	0.58	0.71	0.78	388

Notes:
**Class "F" insulation with ΔT105K*
Standard voltage, connection and frequency: 220-240V Δ 50Hz
380-415V Y 50Hz
380-415V Δ 50Hz
660-690V Y 50Hz
The values shown are subject to change without prior notice. To obtain guaranteed values please access our website.

Cast Iron Frame Motors For Zone 21 - Premium Efficiency EFF1

Output		380 V								415 V							
		Rated speed (rpm)	% of full load						Full load current I_n (A)	Rated speed (rpm)	% of full load						Full load current I_n (A)
			Efficiency η			Power Factor (Cos φ)					Efficiency η			Power Factor (Cos φ)			
kW	HP		50	75	100	50	75	100			50	75	100	50	75	100	
VI Pole - 1000 rpm																	
0.18	0.25	890	51	58	61	0.46	0.55	0.63	0.712	910	47	56	61	0.39	0.47	0.57	0.72
0.25	0.33	890	55	64	67	0.4	0.53	0.59	0.961	910	51	62	67	0.37	0.44	0.53	0.979
0.37	0.5	920	64	68.5	70.5	0.52	0.65	0.74	1.08	930	60	66.5	69.5	0.44	0.57	0.66	1.12
0.55	0.75	910	64	69.5	70.5	0.53	0.67	0.76	1.56	930	60	67.5	70	0.44	0.59	0.66	1.66
0.75	1	910	75	77.5	76.8	0.55	0.67	0.74	2.01	930	73	77.7	77.7	0.46	0.6	0.7	1.92
1.1	1.5	910	73	77.5	76.8	0.53	0.65	0.74	2.94	930	71	77.7	77.7	0.44	0.57	0.67	2.94
1.5	2	940	80	81.5	81.5	0.53	0.64	0.72	3.88	950	78	81.5	81.5	0.45	0.57	0.68	3.77
2.2	3	945	82.5	83.5	83.4	0.55	0.67	0.74	5.42	955	80.5	84	84	0.48	0.61	0.7	5.21
3	4	955	83	85.2	86	0.57	0.69	0.76	6.97	965	81	84.8	86.5	0.5	0.64	0.72	6.7
4	5.5	955	85.7	86.8	87	0.6	0.72	0.78	8.96	965	84.3	86.4	87.2	0.52	0.66	0.74	8.62
5.5	7.5	960	85.5	87.6	87.6	0.58	0.7	0.76	12.6	965	83.5	87.4	87.6	0.48	0.61	0.7	12.5
7.5	10	965	88	89.7	89.9	0.65	0.77	0.82	15.5	975	87	89.3	90	0.58	0.71	0.79	14.7
9.2	12.5	970	90	90.3	90	0.64	0.75	0.81	19.2	975	88.7	89.9	90	0.55	0.71	0.79	18
11	15	970	89.5	90.5	90.2	0.62	0.76	0.81	22.9	975	88.5	90	90.3	0.54	0.68	0.76	22.3
15	20	970	91.4	91.8	91.4	0.75	0.83	0.89	28	975	91	91.8	91.6	0.7	0.8	0.85	26.8
18.5	25	970	91.8	92.6	92.7	0.72	0.81	0.84	36.1	980	90.8	92.6	92.9	0.64	0.75	0.8	34.6
22	30	970	92	92.9	92.9	0.7	0.78	0.84	42.8	980	90.4	92.2	92.9	0.6	0.72	0.8	41.2
30	40	980	92	93	93.4	0.76	0.84	0.86	56.7	985	91.4	93	93.5	0.7	0.79	0.84	53.1
37	50	980	92	94	93.9	0.75	0.83	0.86	69.6	985	91.6	94	94	0.69	0.79	0.82	66.8
45	60	980	92	93.5	93.5	0.76	0.84	0.87	84	985	91.5	93.5	94.1	0.64	0.75	0.8	83.2
55	75	985	92.5	93.7	94.1	0.71	0.79	0.84	86.5	985	92.2	93.9	94.2	0.64	0.75	0.81	100
75	100	985	94	94.4	94.4	0.75	0.83	0.85	142	985	93.4	94.4	94.5	0.69	0.79	0.83	133
90	125	985	94	94.4	94.4	0.75	0.83	0.85	142	985	93.7	94.8	94.8	0.68	0.78	0.82	161
110	150	985	94.3	94.8	94.7	0.74	0.82	0.84	172	985	94.3	95.1	95.2	0.66	0.77	0.83	194
132	175	985	94.7	95	95	0.73	0.81	0.85	207	990	94.1	95.5	95.8	0.64	0.75	0.8	240
160	220	990	94.5	95.5	95.7	0.72	0.79	0.82	256	990	93.9	95.8	96	0.6	0.74	0.8	290
200	270	990	94.4	95.5	95.7	0.7	0.79	0.82	358	990	94.4	95.4	95.7	0.62	0.73	0.79	368
250	340	990	95	95.6	95.7	0.7	0.79	0.82	387	990	94.7	95.9	96.2	0.66	0.76	0.8	452
HIGH OUTPUT DESIGN																	
75	100	985	92.8	93.9	94.2	0.71	0.8	0.83	107	985	93.4	94.4	94.5	0.69	0.79	0.83	133
VIII Pole - 750 rpm																	
0.18	0.25	685	38	46.2	49	0.38	0.47	0.55	0.677	705	40	49	55.5	0.4	0.49	0.58	0.778
0.25	0.33	690	44	53	56	0.44	0.55	0.64	0.763	700	49	59	63.8	0.4	0.5	0.59	0.924
0.37	0.5	685	53	61	63.8	0.43	0.55	0.63	0.945	695	52	60	64	0.37	0.47	0.56	1.44
0.55	0.75	680	55	62.5	65	0.42	0.54	0.64	1.35	700	57	63	66	0.37	0.47	0.57	2.03
0.75	1	680	61	65	66.5	0.42	0.54	0.64	1.96	715	70	74	76	0.38	0.5	0.58	2.37
1.1	1.5	700	72	74.4	75.5	0.44	0.56	0.64	2.36	710	69.5	73.5	76.9	0.37	0.49	0.59	3.37
1.5	2	690	72.5	75.5	76.9	0.44	0.57	0.65	3.34	715	78.2	81	81.8	0.4	0.51	0.63	4.05
2.2	3	700	79.8	81.6	82	0.47	0.59	0.69	4.03	715	81	84.3	84.3	0.5	0.63	0.71	5.11
3	4	705	83	84.3	84.2	0.58	0.7	0.75	5.29	715	82.5	84.6	84.6	0.51	0.64	0.73	6.76
4	5.5	705	83.2	84.6	84.5	0.58	0.71	0.77	7.01	730	82	85.4	86.6	0.41	0.53	0.63	10.2
5.5	7.5	725	84	86.2	86.6	0.48	0.61	0.7	10	730	83	86.1	87	0.4	0.52	0.62	14.2
7.5	10	725	84	86.7	87	0.46	0.6	0.69	13.9	725	84.5	87.8	88.5	0.48	0.6	0.69	17.1
9.2	12.5	720	86.5	88.2	88.5	0.56	0.68	0.74	17.4	730	87.2	88.3	88.6	0.63	0.75	0.81	17.8
11	15	725	87.8	88.3	88	0.71	0.81	0.85	18.7	730	87.8	89	89	0.65	0.75	0.81	21.2
15	20	725	88.2	89	88.8	0.73	0.81	0.85	22.1	735	89	90.6	91.3	0.5	0.63	0.69	33.1
18.5	25	730	90	91	91.2	0.56	0.67	0.73	34.2	730	90.2	91.5	91.9	0.65	0.77	0.82	34.2
22	30	725	90.8	91.5	91.5	0.73	0.81	0.84	36.6	735	90.5	92.1	92.5	0.63	0.74	0.81	40.8
30	40	730	91.1	92.2	92.2	0.71	0.8	0.83	43.7	730	91.3	92.5	93	0.65	0.77	0.82	54.7
37	50	725	92	92.5	92.6	0.73	0.81	0.84	58.6	740	92.1	93.4	93.8	0.6	0.72	0.79	69.5
45	60	735	92.9	93.5	93.8	0.68	0.76	0.81	74	740	92.5	93.5	94.1	0.58	0.7	0.77	86.4
55	75	735	93.3	93.9	94	0.66	0.77	0.81	89.8	740	93.1	94.5	94.6	0.61	0.73	0.79	102
75	100	740	93.5	94.5	94.5	0.65	0.75	0.8	111	740	93.7	94.7	94.9	0.63	0.76	0.8	137
90	125	735	93.8	94.5	94.4	0.69	0.78	0.81	109	740	93.6	94.6	95.1	0.63	0.75	0.8	165
110	150	735	94.1	94.7	94.8	0.69	0.8	0.82	147	745	93	95.2	95.2	0.59	0.77	0.77	209
132	175	735	94.2	94.8	95	0.71	0.79	0.83	173	745	93.5	95.4	95.4	0.6	0.71	0.77	250
160	220	740	94	95.2	95.1	0.65	0.76	0.81	217	745	93.8	95.7	95.7	0.58	0.71	0.78	298
200	270	740	94	95.4	95.4	0.63	0.73	0.79	266	745	94	95	95.5	0.54	0.68	0.76	383