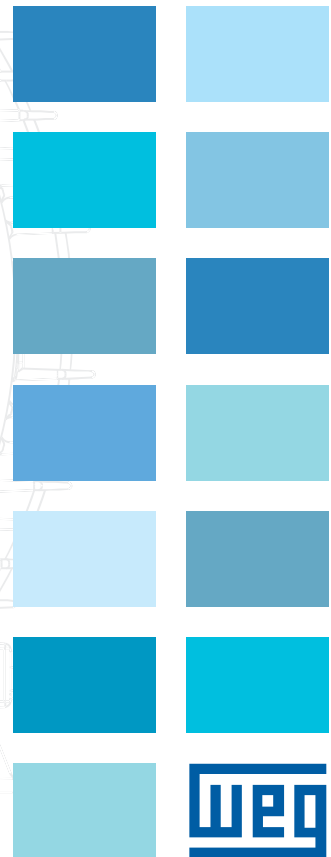


# W20

## Three Phase Low Voltage Motors

Flexible | Efficient | Powerful





## WEG Worldwide

WEG was founded in 1961, in south of Brazil. Now it has 26 factories in 11 countries and more than 1100 service centers around the world including the largest motor manufacturing plant of the world in Brazil with 2,500,000 square meters. WEG supplies solutions in five business unites: motors, automation, energy, transmission & distribution and coatings.





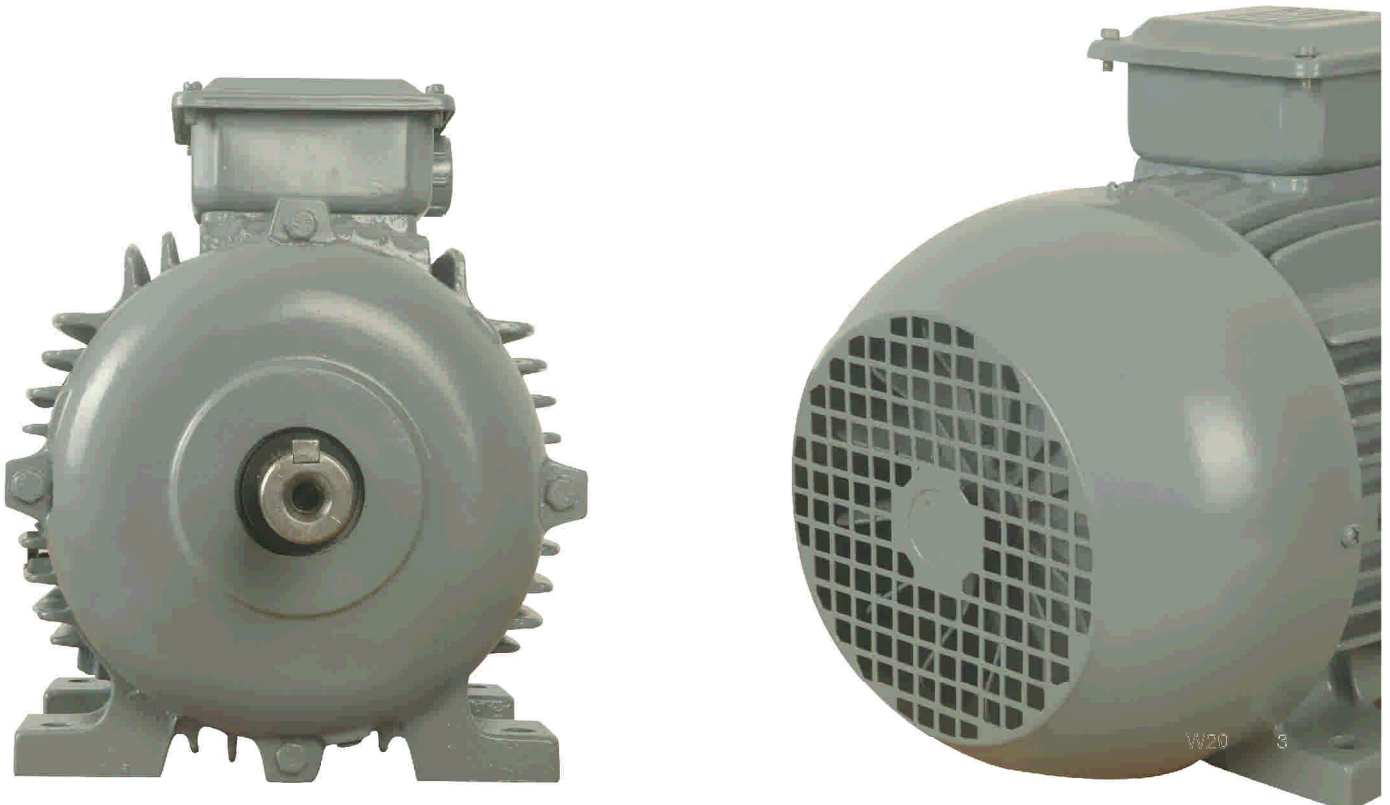
## Flexible | Efficient | Powerful

China is a modern country and became the factory of the world due to its huge structure. To support this scenario, the country is facing new challenges and also is ware about the environmental protection.

This new line is flexible for various applications, performs high level of efficiency and is reliable during its usage avoiding stop of machines and high demand for maintenance.

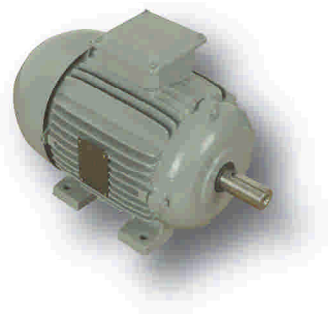
## W20 motor—

because development demands flexibility and efficiency.



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## Standard features

- Three-phase multi-voltage, IP55, TEFC
- Cast iron frames (80 to 355)
- V'Ring on both endshields
- Drain: Automatic Plastic
- Stainless steel nameplate AISI 304
- Design N
- Class "F" insulation
- Paint color: RAL 7000 (gray)

## Optional features

- Degree of protection: IP56
- Bearing seals:
  - Lip seal / Oil seal
- Class "H" insulation
- Thermal protection: Thermistors for frame 255 to 355
- Roller bearings for frame 225 to 355















































# Construction features

Frame	80	90	100	112	132	160	180	200	225	250	280	315	355		
<b>Mechanical Features</b>															
Nameplate	CE; IEC 60034														
Mounting	B3R														
Frame	Materials cast iron														
Degree of protection	IP55														
Grounding	Inside the terminal box and frame									Double grounding					
Cooling method	TEFC														
Fan	Materials Plastic												Aluminium		
Fan cover	Materials Steel Plate														
Endshields	Materials cast iron														
Drain	Plastic Automatically operated														
Bearings	Shielded/Clearance (DE)	ZZ					C3								
	Shielded/Clearance (NDE)	ZZ					Z - C3			C3					
	Locating bearing configuration	NDE bearing fitted with wave washer					DE bearing locked with inner bearing cap and fitted with wave washer in the NDE bearing			DE bearing locked with outer bearing caps and fitted with pre-load springs in the NDE bearing					
	Drive end	2P 4-8P	6204 ZZ	6205 ZZ	6206 ZZ	6307 ZZ	6308 ZZ	6309	6311	6312	6314	6314	6314	6314	6316
Non-drive end	2P 4-8P	6203 ZZ	6204 ZZ	6205 ZZ	6206 ZZ	6207 ZZ	6209	6211	6212	6316			6316	6314	6314
Bearing seal	V-ring														
Lubrication	Grease Type	Polyrex EM													
	Grease fitting	None								With grease fittings in DE and NDE bearings					
Terminal Block	6 Terminals														
Terminal Box	Material Steel plate														
Leads Inlet	Main T-Box	Thread size		1xM24		2xM28.5		2xM40		2xM46		2xM63		2xM72	
	Plug	Plastic plug for transport and storage purposes													
Shaft	Material	AISI 1040/45												AISI 4140	
	Furo roscado	2p 4-8p	M6	M8	M10	M10	M12	M16	M16	M20	M20	M20	M20	M20	M20 M24
Key	China key type: B								China key type: C						
Vibration	Grade A														
Balancing level	With 1/2 key														
Nameplate	Material Stainless Steel AISI 304														
Painting	Plan	201A													
	Color	RAL 7000 grey													
<b>Electrical Features</b>															
Design	N														
Voltage	230/400V					400/690V									
Winding	Material	Copper													
	Insulation Class	F (DT 80K)													
Service factor	1.00														
Rotor	Die-cast Aluminium														
Thermal Protection	None														



# Mounting Configurations

Standardized mounting configurations														
Assembly	Configuration													
	Reference	B3R(E)	B3L(D)	B3T	B5R(E)	B5L(D)	B5T	B35R(E)	B35L(D)	B35T	B14R(E)	B14L(D)	B14T	
Details	Frame	with feet			without feet			with feet			without feet			
	Shaft	left	right		left	right		left	right		left	right		
	Terminal box	right	left	Top	right	left	Top	right	left	Top	right	left	Top	
	Mounting	base or rail			flange FF			base or flange FF			flange FC			
Assembly	Configuration													
	Reference	B34R(E)	B34L(D)	B34T				V5L(D)	V5R(E)	V5T	V6L(D)	V6R(E)	V6T	
Details	Frame	with feet			pad mounted			with feet			with feet			
	Shaft	left	right		left	right		bottom		Top				
	Terminal box	right	left	Top	right	left	Top	bottom	left	right	Top	left	right	Top
	Mounting	base or flange FC			rod			wall			wall			
Assembly	Configuration													
	Reference	V1L(D)	V3L(D)	V15L(D)	V15R(E)	V15T	V36L(D)	V36R(E)	V36T	V17L(D)	V17R(E)	V17T	V18L(D)	V19L(D)
Details	Frame	without feet		with feet			with feet			with feet			without feet	
	Shaft	bottom	Top	bottom			Top			bottom			bottom	Top
	Terminal box	left	left	left	right	Top	left	right	Top	left	right	Top	left	left
	Mounting	flange FF		wall or flange FF			wall or flange FF			wall or flange FC			flange FC	
Assembly	Configuration													
	Reference				B6L(D)	B6R(E)	B6T	B7L(D)	B7R(E)	B7T	B8L(D)	B8R(E)	B8T	
Details	Frame	pad mounted		with feet			with feet			with feet				
	Shaft	bottom	Top	front			front			front				
	Terminal box	left	left	left	right	Top	left	right	Top	left	right	Top		
	Mounting	rod		wall			wall			ceiling				





# IP55 Standard IE1-2P

Output		Frame	Cn (kgfm)	I <sub>1</sub> /I <sub>n</sub> I <sub>A</sub> /I <sub>N</sub>	T <sub>1</sub> /T <sub>n</sub> M <sub>k</sub> /M <sub>N</sub>	T <sub>b</sub> /T <sub>n</sub> M <sub>k</sub> /M <sub>N</sub>	Inertia (kgm <sup>2</sup> )	400 V					
								rpm min-1	% of full load		In (A)		
									Efficiency η		Power factor Cos φ		
kW	HP							75	100	75	100		
0.12	0.16	63	0.040	3.8	2.3	2.3	0.0001	2720	53.5	56.0	0.68	0.80	0.387
0.18	0.25	63	0.060	4.2	2.4	2.3	0.0001	2730	56.5	59.0	0.69	0.80	0.550
0.25	0.33	63	0.090	4.3	2.5	2.3	0.0002	2720	57.0	60.0	0.65	0.76	0.791
0.37	0.5	71	0.130	4.3	2.3	2.3	0.0003	2730	66.0	67.6	0.75	0.85	0.929
0.55	0.75	71	0.200	4.2	2.5	2.7	0.0003	2710	70.0	70.0	0.78	0.87	1.30
0.75	1	80	0.260	5.0	2.4	2.4	0.0006	2770	72.0	72.5	0.73	0.82	1.81
1.1	1.5	80	0.390	5.0	2.6	2.6	0.0008	2770	75.0	75.5	0.75	0.83	2.50
1.5	2	90S	0.510	6.3	2.7	2.6	0.0017	2840	78.0	78.0	0.76	0.83	3.28
2.2	3	90L	0.760	6.8	2.8	2.9	0.0022	2810	78.0	80.0	0.77	0.85	4.58
3	4	100L	1.02	6.7	2.3	2.8	0.0052	2870	81.0	82.0	0.81	0.87	5.96
4	5.5	112M	1.36	6.8	2.4	3.0	0.0073	2875	83.0	84.0	0.82	0.87	7.81
5.5	7.5	132M	1.84	6.5	2.4	3.0	0.0159	2910	85.0	85.5	0.81	0.87	10.5
5.5	7.5	132S	1.84	6.5	2.4	3.0	0.0159	2910	85.0	85.5	0.81	0.87	10.5
7.5	10	132S	2.52	6.4	2.3	2.6	0.0187	2900	86.5	86.5	0.82	0.87	14.2
9.2	12.5	132M	3.08	7.5	2.7	3.1	0.0243	2910	87.0	87.0	0.81	0.86	17.4
11	15	160M	3.66	6.5	2.0	3.0	0.0353	2930	87.5	88.0	0.81	0.86	20.8
15	20	160M	4.98	7.4	2.2	3.1	0.0471	2935	88.5	89.0	0.80	0.86	27.9
18.5	25	160L	6.14	8.0	2.5	3.2	0.0559	2935	89.5	89.5	0.78	0.86	34.2
30	40	200L	9.87	7.3	2.6	2.9	0.1794	2960	90.0	91.0	0.80	0.85	56.0
37	50	200L	12.2	7.0	2.6	2.8	0.2063	2960	91.0	91.5	0.80	0.86	67.9
45	60	225S/M	14.8	7.0	2.3	3.1	0.3139	2960	91.0	92.0	0.85	0.88	79.6
55	75	250S/M	18.1	7.5	2.4	3.2	0.3767	2965	91.5	92.5	0.85	0.88	96.7
75	100	280S/M	24.5	8.0	2.4	3.2	1.08	2980	92.8	93.0	0.85	0.88	131
90	125	280S/M	29.4	8.0	2.4	3.2	1.18	2980	93.0	93.5	0.85	0.88	157
110	150	315S/M	36.0	7.7	2.4	3.0	1.41	2975	93.7	93.8	0.85	0.88	191
132	175	315S/M	43.2	7.5	2.4	3.0	1.65	2975	94.0	94.0	0.87	0.89	226
150	200	315S/M	49.1	8.4	2.6	3.0	1.88	2975	94.0	94.2	0.87	0.89	256
160	220	315S/M	52.4	7.5	2.6	3.1	2.12	2975	94.0	94.2	0.88	0.90	270
185	250	315B	60.6	7.7	2.0	3.0	2.81	2975	93.0	94.0	0.78	0.83	343
185	250	315S/M	60.6	8.2	2.4	2.8	1.96	2975	94.7	94.7	0.86	0.88	318
200	270	315B	65.5	6.4	1.8	2.8	2.81	2975	93.4	94.0	0.82	0.85	362
200	270	355M/L	65.3	7.2	1.8	2.6	4.56	2985	94.6	94.9	0.91	0.92	329
220	300	315B	72.2	6.2	1.8	2.5	3.21	2970	93.8	94.1	0.85	0.87	386
220	300	355M/L	71.8	8.5	2.2	3.0	4.88	2985	94.9	94.9	0.91	0.92	360
250	340	315B	82.0	6.5	1.9	2.7	3.21	2970	94.0	94.4	0.83	0.86	444
250	340	355M/L	81.6	7.8	2.2	2.5	5.39	2985	94.9	94.9	0.91	0.92	409
260	350	315B	85.3	6.7	1.9	2.8	3.21	2970	94.2	94.5	0.81	0.86	462
300	400	315B*	98.4	7.5	1.8	2.5	4.01	2970	94.4	94.6	0.84	0.86	532
315	430	315B*	103	6.7	1.9	2.6	4.01	2970	94.6	94.6	0.86	0.88	546
High-output design													
0.37	0.5	63	0.130	5.2	3.1	2.9	0.0002	2740	71.0	71.3	0.70	0.79	0.948
0.55	0.75	80	0.190	6.5	3.0	3.2	0.0007	2805	76.5	77.0	0.81	0.86	1.20
0.75	1	71	0.260	6.2	3.1	3.1	0.0005	2810	72.5	72.5	0.76	0.84	1.74
1.1	1.5	90S	0.380	6.3	2.7	2.6	0.0012	2840	79.5	79.5	0.76	0.83	2.41
1.5	2	80	0.530	6.0	3.0	2.7	0.0009	2770	77.0	77.5	0.82	0.87	3.20
1.5	2	90L	0.510	6.3	2.7	2.6	0.0017	2840	78.0	78.0	0.76	0.83	3.28
2.2	3	100L	0.750	6.9	2.3	2.8	0.0051	2870	80.0	81.0	0.83	0.88	4.32
3	4	112M	1.01	7.6	2.6	3.4	0.0070	2905	84.0	84.0	0.83	0.88	5.74
3	4	90L*	1.03	6.2	3.2	3.1	0.0025	2830	81.0	81.5	0.68	0.78	6.77
4	5.5	100L	1.36	7.5	2.9	3.1	0.0065	2870	81.0	83.1	0.81	0.86	8.14
4	5.5	132S	1.34	6.5	2.3	2.8	0.0135	2910	84.0	85.0	0.78	0.85	7.99
5.5	7.5	112M	1.87	7.7	2.5	3.0	0.0096	2870	85.0	85.5	0.87	0.90	10.1
7.5	10	112M*	2.55	7.6	3.0	3.0	0.0094	2870	86.0	86.5	0.72	0.81	15.3
7.5	10	132M	2.52	6.4	2.3	2.6	0.0187	2900	86.5	86.5	0.82	0.87	14.2
9.2	12.5	160M	3.05	7.2	2.2	3.0	0.0353	2935	88.0	88.8	0.82	0.86	17.4
11	15	132M	3.67	8.0	2.7	3.2	0.0280	2920	88.0	88.0	0.81	0.86	20.6
15	20	160L	4.98	7.4	2.2	3.1	0.0471	2935	88.5	89.0	0.80	0.86	27.9
22	30	160L*	7.31	7.5	2.5	3.0	0.0639	2930	89.5	90.0	0.82	0.86	40.7
45	60	250S/M	14.8	7.0	2.3	3.1	0.3139	2960	91.0	92.0	0.85	0.88	79.6
55	75	225S/M	18.1	7.5	2.4	3.2	0.3767	2965	91.5	92.5	0.85	0.88	96.7
55	75	280S/M	18.0	7.7	2.3	3.0	1.08	2975	93.4	93.9	0.85	0.88	96.1
75	100	250S/M	24.6	8.3	2.6	3.0	0.5023	2965	92.5	92.8	0.85	0.88	131
110	150	280S/M	36.0	7.7	2.4	3.0	1.41	2975	93.7	93.8	0.85	0.88	191
132	175	280S/M	43.2	7.5	2.4	3.0	1.65	2975	94.0	94.0	0.87	0.89	226
185	250	355M/L	60.5	7.0	1.8	2.0	4.02	2980	93.5	94.0	0.90	0.92	307
200	270	315S/M	65.4	7.9	2.2	2.9	2.03	2980	94.7	94.9	0.84	0.87	345

\* Isol. "F" - Δ T 105 K

# IP55 Standard IE1-2P

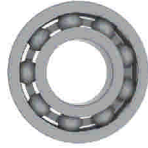
Output		380 V							415 V						
		rpm min-1	% of full load				In (A)	rpm min-1	% of full load				In (A)		
			Efficiency $\eta$		Power factory Cos $\phi$				Efficiency $\eta$		Power factory Cos $\phi$				
kW	HP	75	100	75	100	75	100	75	100	75	100				
0.12	0.16	2690	55.0	58.8	0.74	0.84	0.369	2735	51.0	53.5	0.64	0.75	0.416		
0.18	0.25	2700	57.5	59.5	0.75	0.85	0.541	2750	54.5	58.0	0.64	0.76	0.568		
0.25	0.33	2685	59.0	60.0	0.71	0.81	0.782	2740	55.5	59.9	0.60	0.72	0.806		
0.37	0.5	2700	66.5	67.0	0.81	0.89	0.943	2750	65.5	67.0	0.70	0.81	0.948		
0.55	0.75	2670	70.0	69.0	0.83	0.90	1.35	2730	69.0	70.1	0.73	0.84	1.30		
0.75	1	2740	73.0	72.5	0.79	0.86	1.83	2790	70.5	72.5	0.67	0.78	1.85		
1.1	1.5	2745	75.0	75.5	0.81	0.87	2.51	2790	74.5	75.5	0.70	0.80	2.51		
1.5	2	2820	78.0	78.0	0.81	0.87	3.32	2855	78.0	78.0	0.71	0.80	3.29		
2.2	3	2790	78.0	80.0	0.82	0.88	4.70	2820	78.0	80.0	0.72	0.82	4.58		
3	4	2855	81.0	81.5	0.85	0.89	6.17	2880	81.0	82.0	0.77	0.84	5.95		
4	5.5	2860	83.0	83.5	0.86	0.89	8.08	2885	82.5	84.0	0.78	0.85	7.72		
5.5	7.5	2895	85.0	85.0	0.85	0.89	10.9	2915	84.5	85.5	0.78	0.84	10.5		
5.5	7.5	2895	85.0	85.0	0.85	0.89	10.9	2915	84.5	85.5	0.78	0.84	10.5		
7.5	10	2890	86.0	86.0	0.86	0.89	14.7	2910	86.5	86.5	0.78	0.84	14.2		
9.2	12.5	2900	87.0	87.0	0.85	0.89	17.8	2915	87.0	87.0	0.76	0.83	17.4		
11	15	2915	87.5	88.0	0.84	0.87	21.7	2935	86.5	88.0	0.78	0.84	20.7		
15	20	2925	88.5	89.0	0.83	0.87	29.1	2940	88.0	89.0	0.76	0.83	28.0		
18.5	25	2930	89.5	89.5	0.83	0.87	35.7	2940	89.5	89.5	0.75	0.82	34.7		
30	40	2955	90.0	91.0	0.84	0.87	57.6	2965	90.0	91.0	0.76	0.82	55.9		
37	50	2950	91.0	91.5	0.84	0.87	70.6	2960	91.0	91.5	0.77	0.83	67.8		
45	60	2955	91.0	92.0	0.86	0.89	83.0	2965	91.5	92.0	0.84	0.87	77.6		
55	75	2960	91.5	92.5	0.86	0.89	101	2965	92.5	92.5	0.83	0.86	95.4		
75	100	2980	92.8	93.0	0.86	0.89	136	2980	92.7	93.0	0.83	0.87	128		
90	125	2975	93.0	93.5	0.87	0.89	163	2980	93.0	93.5	0.83	0.87	153		
110	150	2975	93.7	93.8	0.86	0.89	199	2980	93.7	93.8	0.84	0.87	186		
132	175	2975	94.0	94.0	0.88	0.90	235	2980	94.0	94.0	0.86	0.88	220		
150	200	2975	94.0	94.2	0.88	0.90	267	2980	94.0	94.2	0.86	0.89	247		
160	220	2970	94.0	94.2	0.89	0.90	284	2975	94.0	94.2	0.87	0.89	263		
185	250	2975	93.0	94.0	0.80	0.84	357	2980	93.0	94.0	0.76	0.82	335		
185	250	2970	94.7	94.7	0.87	0.89	331	2975	94.7	94.7	0.84	0.87	310		
200	270	2970	93.4	94.0	0.83	0.86	377	2975	93.4	94.0	0.81	0.84	354		
200	270	2980	94.7	94.9	0.92	0.92	347	2985	94.5	94.9	0.90	0.91	321		
220	300	2970	93.8	94.1	0.87	0.88	402	2975	93.8	94.1	0.83	0.86	376		
220	300	2985	94.9	94.9	0.92	0.93	375	2990	94.9	94.9	0.90	0.92	347		
250	340	2970	94.0	94.3	0.84	0.87	463	2975	94.0	94.4	0.82	0.85	433		
250	340	2980	94.9	94.9	0.92	0.93	425	2985	94.9	94.9	0.91	0.92	393		
260	350	2970	94.2	94.4	0.83	0.87	481	2975	94.2	94.5	0.79	0.85	450		
300	400	2970	94.3	94.4	0.85	0.87	555	2975	94.4	94.6	0.83	0.85	519		
315	430	2970	94.5	94.4	0.87	0.89	570	2975	94.6	94.6	0.85	0.87	532		
High-output design															
0.37	0.5	2710	71.7	71.0	0.75	0.83	0.954	2765	70.0	71.0	0.66	0.76	0.954		
0.55	0.75	2785	76.0	76.0	0.83	0.88	1.25	2820	76.0	77.0	0.79	0.84	1.18		
0.75	1	2790	71.5	72.5	0.80	0.87	1.77	2830	70.0	72.5	0.71	0.80	1.77		
1.1	1.5	2820	80.1	78.9	0.81	0.87	2.43	2855	78.9	79.3	0.71	0.80	2.41		
1.5	2	2750	77.0	77.5	0.85	0.89	3.35	2790	77.0	77.5	0.78	0.85	3.13		
1.5	2	2820	78.0	78.0	0.81	0.87	3.32	2855	78.0	78.0	0.71	0.80	3.29		
2.2	3	2855	80.0	81.0	0.87	0.90	4.47	2880	80.0	81.0	0.79	0.85	4.31		
3	4	2890	84.0	84.0	0.86	0.89	6.00	2910	84.0	84.0	0.82	0.87	5.60		
3	4	2800	81.0	81.5	0.74	0.81	6.90	2845	81.0	81.5	0.64	0.74	6.92		
4	5.5	2850	81.0	83.1	0.84	0.88	8.42	2890	82.0	83.1	0.78	0.84	8.03		
4	5.5	2900	84.0	84.8	0.83	0.87	8.24	2920	84.0	85.0	0.75	0.82	7.98		
5.5	7.5	2860	85.0	85.5	0.89	0.91	10.5	2880	85.5	86.0	0.85	0.89	9.80		
7.5	10	2850	86.0	86.0	0.79	0.85	15.4	2885	86.0	86.5	0.67	0.76	15.8		
7.5	10	2890	86.0	86.0	0.86	0.89	14.7	2910	86.5	86.5	0.78	0.84	14.2		
9.2	12.5	2925	87.8	88.0	0.85	0.88	18.1	2940	87.5	88.5	0.78	0.84	17.2		
11	15	2910	88.0	88.0	0.84	0.88	21.3	2930	88.0	88.0	0.77	0.83	20.6		
15	20	2925	88.5	89.0	0.83	0.87	29.1	2940	88.0	89.0	0.76	0.83	28.0		
22	30	2925	89.5	90.0	0.85	0.88	42.0	2935	89.5	90.0	0.79	0.84	40.2		
45	60	2955	91.0	92.0	0.86	0.89	83.0	2965	91.5	92.0	0.84	0.87	77.6		
55	75	2960	91.5	92.5	0.86	0.89	101	2965	92.5	92.5	0.83	0.86	95.4		
55	75	2975	93.4	93.9	0.86	0.89	100	2980	93.3	93.8	0.83	0.87	93.8		
75	100	2960	92.5	92.8	0.87	0.89	137	2970	92.5	92.8	0.83	0.87	128		
110	150	2975	93.7	93.8	0.86	0.89	199	2980	93.7	93.8	0.84	0.87	186		
132	175	2975	94.0	94.0	0.88	0.90	235	2980	94.0	94.0	0.86	0.88	220		
185	250	2975	93.5	94.0	0.91	0.92	325	2980	93.5	94.0	0.88	0.91	299		
200	270	2975	94.7	94.9	0.86	0.89	355	2980	94.7	94.9	0.82	0.86	337		

\* Isol. "F" -  $\Delta T$  105 K

## Why choose WEG?

### Bearings

Since bearings are critical to the motor performance and lifetime, WEG has an extremely concern when choosing its suppliers. WEG evaluates the bearings based on durability and noise level test. Only high level bearings are allowed to be used.



### Efficiency

The W20 motor line exceeds the IE1 (standard efficiency) requirements according to IEC60034-30 standard. This performance assures a fast return of investment and an environmental friendly product.



### Cooling system

The fan is designed to have the lowest noise and to provide an uniform refrigeration of the motor with significant temperature reduction.



### Customization

Product suitable to meet the most demanded applications in the industry.



### Painting Plan for Industrial Environments

Suitable for the use in slightly severe and sheltered environments, with low average humidity, regular temperature variations.

### FC 200 Cast Iron Frames

More strength for your application. "the same material used for explosion motors"



### Terminal box and terminal block

The terminal box is designed with plenty internal space for easier cable connection and it allows rotation at 90 degrees steps which results in flexibility on installation. W20 motor terminal box is made by strong steel plate and the terminal block designed with barriers increase the safety by avoiding short circuits.



### Interchangeability with existing motors

Several options of feet holes configuration.





# IP55 Standard IE1-4P

Output		Frame	Cn (kgfm)	I <sub>l</sub> /I <sub>n</sub> I <sub>A</sub> /I <sub>N</sub>	T <sub>l</sub> /T <sub>n</sub> M <sub>A</sub> /M <sub>N</sub>	T <sub>b</sub> /T <sub>n</sub> M <sub>K</sub> /M <sub>N</sub>	Inertia (kgm <sup>2</sup> )	rpm min <sup>-1</sup>	400 V				In (A)
									% of full load				
									Efficiency $\eta$		Power factory Cos $\phi$		
kW	HP	75	100	75	100								
0.12	0.16	63	0.090	3.5	2.0	2.2	0.0003	1375	54.0	57.0	0.61	0.72	0.422
0.18	0.25	63	0.130	3.4	2.0	2.2	0.0004	1360	54.0	58.0	0.63	0.74	0.605
0.25	0.33	71	0.190	3.5	1.9	2.1	0.0004	1310	55.0	59.0	0.65	0.76	0.805
0.37	0.5	71	0.270	3.7	2.0	2.0	0.0006	1320	60.0	62.0	0.63	0.76	1.13
0.55	0.75	80	0.380	4.7	2.1	2.2	0.0019	1410	66.3	68.0	0.70	0.82	1.42
0.75	1	80	0.520	5.0	2.3	2.2	0.0023	1395	71.0	72.1	0.70	0.81	1.86
1.1	1.5	90S	0.770	5.6	2.3	2.4	0.0039	1400	75.0	75.5	0.69	0.79	2.66
1.5	2	90L	1.05	5.5	2.3	2.4	0.0048	1390	78.5	79.0	0.73	0.82	3.34
2.2	3	100L	1.52	5.6	2.4	2.6	0.0065	1410	80.0	80.0	0.74	0.82	4.75
3	4	100L	2.06	6.0	2.8	3.0	0.0084	1420	80.0	81.5	0.72	0.81	6.47
4	5.5	112M	2.71	7.0	2.1	2.5	0.0147	1440	84.6	85.0	0.77	0.83	8.18
5.5	7.5	132M	3.69	6.5	2.1	2.5	0.0349	1450	84.5	85.0	0.77	0.84	11.0
5.5	7.5	132S	3.69	6.5	2.1	2.5	0.0349	1450	84.5	85.0	0.77	0.84	11.0
7.5	10	132M	5.02	6.7	2.1	2.9	0.0465	1455	85.5	86.0	0.77	0.84	14.8
9.2	12.5	160M	6.16	6.0	2.2	2.4	0.0633	1455	87.0	88.0	0.79	0.84	17.8
11	15	160M	7.36	6.0	2.3	2.6	0.0753	1455	87.5	88.0	0.74	0.81	22.1
15	20	160L	10.0	5.8	2.3	2.4	0.1054	1460	88.5	89.0	0.79	0.83	29.1
18.5	25	180M	12.3	7.0	2.5	3.0	0.1615	1470	89.5	89.5	0.77	0.84	35.1
22	30	180L	14.6	7.0	2.7	2.9	0.1884	1465	90.5	90.5	0.80	0.85	41.0
30	40	200L	19.8	6.7	2.5	2.8	0.3034	1475	90.0	91.0	0.78	0.84	56.0
37	50	225S/M	24.4	6.7	2.3	2.8	0.5599	1475	91.0	91.5	0.81	0.86	67.4
45	60	225S/M	29.7	7.0	2.4	3.0	0.6649	1475	91.5	92.0	0.77	0.83	85.1
55	75	250S/M	36.3	6.8	2.3	2.7	0.8748	1475	92.0	92.5	0.85	0.89	95.3
75	100	280S/M	49.2	6.7	2.0	2.7	1.85	1485	93.0	93.5	0.84	0.87	132
90	125	280S/M	59.0	7.3	2.4	2.8	2.17	1485	93.6	93.6	0.85	0.87	159
110	150	315S/M	72.2	7.3	2.4	2.8	2.57	1485	93.8	93.8	0.83	0.86	196
132	175	315S/M	86.6	7.7	2.4	2.8	3.21	1485	94.2	94.2	0.83	0.86	234
150	200	315S/M	98.4	7.7	2.8	2.8	3.45	1485	94.5	94.5	0.83	0.86	265
160	220	315S/M	105	7.5	2.5	2.8	3.77	1485	94.5	94.5	0.83	0.86	283
185	250	315S/M*	121	7.3	2.3	2.5	3.63	1485	94.8	94.8	0.82	0.86	325
200	270	315B	131	6.8	1.9	2.9	4.02	1485	94.6	94.7	0.77	0.81	375
200	270	355M/L	131	6.6	2.3	2.2	6.34	1490	94.7	94.8	0.85	0.87	348
220	300	315B	144	6.5	2.0	2.8	4.60	1485	94.7	94.8	0.77	0.82	408
220	300	355M/L	144	7.0	2.1	2.3	6.89	1490	94.7	94.8	0.86	0.88	378
250	340	355M/L	163	6.9	2.2	2.5	8.12	1490	94.7	94.8	0.86	0.88	428
260	350	315B*	171	6.0	1.6	2.4	5.17	1480	94.7	94.8	0.81	0.84	470
260	350	355M/L	170	6.5	2.2	2.3	8.12	1490	94.7	94.8	0.86	0.88	445
280	380	355M/L	183	7.1	2.2	2.4	9.02	1490	94.7	94.8	0.87	0.88	479
300	400	315B*	197	7.3	2.0	2.8	5.75	1485	94.7	94.8	0.76	0.82	556
300	400	355M/L	196	6.7	2.2	2.4	9.92	1490	94.7	94.8	0.87	0.89	508
315	430	315B*	207	7.4	2.0	2.7	5.75	1480	94.7	94.8	0.77	0.82	582
315	430	355M/L	206	6.7	2.2	2.4	9.92	1490	94.7	94.8	0.86	0.88	537
330	450	315B*	216	7.1	2.2	2.6	5.75	1485	94.7	94.8	0.78	0.83	602
330	450	355M/L	216	6.5	2.3	2.3	10.8	1490	94.8	94.9	0.87	0.89	556
355	480	355M/L*	232	7.9	2.4	2.5	11.7	1490	94.9	95.0	0.87	0.88	605
High-output design													
0.12	0.16	71	0.090	3.5	1.9	2.1	0.0004	1340	55.0	59.0	0.65	0.76	0.386
0.18	0.25	71	0.130	3.5	1.9	2.1	0.0004	1340	55.0	59.0	0.65	0.76	0.579
0.25	0.33	63	0.170	5.0	3.1	3.1	0.0007	1415	60.0	62.0	0.54	0.65	0.895
0.37	0.5	80	0.250	5.9	2.0	2.6	0.0020	1430	63.0	66.0	0.73	0.82	0.987
0.55	0.75	71	0.390	5.0	2.8	2.9	0.0009	1385	70.5	72.0	0.58	0.68	1.62
1.1	1.5	80	0.770	5.0	2.3	2.3	0.0032	1385	72.0	75.0	0.70	0.81	2.84
1.5	2	100L	1.03	6.0	2.4	2.6	0.0065	1420	81.5	81.5	0.74	0.82	3.24
1.5	2	90S	1.05	5.5	2.3	2.4	0.0048	1390	78.5	79.0	0.73	0.82	3.34
2.2	3	90L*	1.52	5.8	2.7	2.5	0.0066	1410	79.0	80.0	0.71	0.80	4.96
4	5.5	100L*	2.80	6.7	2.6	2.6	0.0105	1390	82.0	83.1	0.76	0.83	8.48
4	5.5	132S	2.66	8.3	2.2	3.1	0.0341	1465	84.0	85.5	0.72	0.80	8.40
5.5	7.5	112M*	3.75	7.9	3.0	3.0	0.0188	1430	85.7	85.7	0.80	0.86	10.8
7.5	10	132S	5.02	6.7	2.1	2.9	0.0465	1455	85.5	86.0	0.77	0.84	14.8
9.2	12.5	132M	6.16	7.5	2.2	2.8	0.0582	1455	86.5	87.0	0.78	0.85	18.0
11	15	132M/L*	7.36	7.5	2.4	2.7	0.0676	1455	88.0	88.0	0.80	0.87	20.7
11	15	160L	7.36	6.0	2.3	2.6	0.0753	1455	87.5	88.0	0.74	0.81	22.1
15	20	160M	10.0	5.8	2.3	2.4	0.1054	1460	88.5	89.0	0.79	0.83	29.1
18.5	25	160L*	12.4	6.0	2.4	2.4	0.1123	1455	89.0	89.5	0.76	0.82	36.2
18.5	25	180L	12.3	7.0	2.5	3.0	0.1615	1470	89.5	89.5	0.77	0.84	35.1
22	30	180M	14.6	7.0	2.7	2.9	0.1884	1465	90.5	90.5	0.80	0.85	41.0
30	40	180L*	20.0	7.2	3.0	2.9	0.2075	1460	90.0	90.7	0.73	0.81	59.1
30	40	200M	19.8	6.7	2.5	2.8	0.3034	1475	90.0	91.0	0.78	0.84	56.0
37	50	200L	24.5	7.0	2.3	2.5	0.3735	1470	91.0	91.5	0.82	0.86	67.3
37	50	250S/M	24.4	6.7	2.3	2.8	0.5599	1475	91.0	91.5	0.81	0.86	67.4
55	75	225S/M	36.3	6.8	2.3	2.7	0.8748	1475	92.0	92.5	0.85	0.89	95.3
55	75	280S/M	36.1	7.3	2.3	2.8	1.80	1485	93.0	93.2	0.81	0.85	99.7
75	100	250S/M	49.4	7.2	2.4	2.6	1.12	1480	92.6	93.0	0.85	0.87	133
90	125	315S/M	59.0	7.3	2.4	2.8	2.17	1485	93.6	93.6	0.85	0.87	159
110	150	280S/M	72.2	7.3	2.4	2.8	2.57	1485	93.8	93.8	0.83	0.86	196
132	175	280S/M	86.6	7.7	2.4	2.8	3.21	1485	94.2	94.2	0.83	0.86	234
185	250	315B	121	6.6	1.8	2.7	4.02	1485	94.1	94.1	0.76	0.82	343
185	250	355M/L	121	6.8	2.1	2.5	5.80	1490	94.5	94.7	0.85	0.87	323
200	270	315S/M*	131	7.0	2.4	2.8	3.77	1485	94.7	94.8	0.80	0.85	356
250	340	315B	165	6.2	1.8	2.6	5.17	1480	94.7	94.8	0.80	0.83	457

# IP55 Standard IE1-4P

Output		380 V						415 V					
		rpm min-1	% of full load				In (A)	rpm min-1	% of full load				In (A)
			Efficiency $\eta$		Power factor Cos $\phi$				Efficiency $\eta$		Power factor Cos $\phi$		
			75	100	75	100			75	100	75	100	
kW	HP												
0.12	0.16	1360	55.0	57.0	0.65	0.76	0.421	1385	51.0	55.0	0.57	0.67	0.457
0.18	0.25	1340	54.0	58.0	0.67	0.79	0.597	1370	52.0	56.0	0.57	0.68	0.658
0.25	0.33	1280	55.0	56.0	0.70	0.80	0.848	1320	51.0	55.0	0.58	0.70	0.903
0.37	0.5	1300	60.0	62.0	0.67	0.78	1.16	1340	57.0	60.0	0.55	0.68	1.26
0.55	0.75	1400	68.0	68.2	0.75	0.86	1.43	1415	66.0	67.6	0.67	0.79	1.43
0.75	1	1380	71.0	72.1	0.75	0.84	1.88	1405	67.0	72.1	0.64	0.76	1.93
1.1	1.5	1385	75.0	75.5	0.75	0.83	2.67	1405	75.0	77.0	0.64	0.75	2.65
1.5	2	1380	79.0	79.0	0.78	0.86	3.35	1400	78.0	79.0	0.67	0.77	3.43
2.2	3	1400	80.0	80.0	0.79	0.85	4.89	1420	80.0	80.0	0.68	0.78	4.82
3	4	1410	81.0	81.5	0.77	0.84	6.63	1430	80.0	81.5	0.67	0.78	6.48
4	5.5	1430	85.0	84.5	0.81	0.86	8.36	1445	84.0	85.0	0.72	0.80	8.18
5.5	7.5	1445	85.0	85.0	0.81	0.86	11.4	1455	84.0	85.0	0.72	0.81	11.0
5.5	7.5	1445	85.0	85.0	0.81	0.86	11.4	1455	84.0	85.0	0.72	0.81	11.0
7.5	10	1450	86.0	86.0	0.82	0.87	15.1	1455	85.0	86.0	0.72	0.80	15.0
9.2	12.5	1450	87.0	88.0	0.82	0.85	18.6	1460	87.0	88.0	0.76	0.82	17.6
11	15	1455	87.0	87.6	0.79	0.83	22.9	1460	87.0	88.0	0.70	0.78	22.3
15	20	1455	88.5	89.0	0.82	0.85	30.0	1465	85.0	89.0	0.75	0.82	28.4
18.5	25	1465	89.5	89.5	0.81	0.85	36.7	1470	89.5	89.5	0.74	0.81	35.1
22	30	1460	90.2	90.2	0.82	0.86	42.9	1470	90.3	90.3	0.76	0.82	41.0
30	40	1470	91.0	91.0	0.81	0.85	58.5	1475	90.0	91.0	0.75	0.81	56.3
37	50	1470	91.0	91.5	0.83	0.87	70.2	1475	91.0	91.5	0.77	0.83	67.4
45	60	1475	91.5	92.0	0.80	0.84	88.5	1480	91.5	92.0	0.74	0.80	85.1
55	75	1470	92.0	92.5	0.86	0.90	99.6	1475	92.0	92.5	0.83	0.87	94.1
75	100	1480	93.0	93.5	0.86	0.88	138	1485	93.0	93.5	0.83	0.86	129
90	125	1480	93.6	93.6	0.86	0.88	165	1485	93.6	93.6	0.83	0.86	154
110	150	1480	93.8	93.8	0.85	0.87	204	1485	93.8	93.8	0.81	0.85	191
132	175	1485	94.2	94.2	0.84	0.87	243	1485	94.2	94.2	0.81	0.85	228
150	200	1485	94.5	94.5	0.84	0.87	276	1485	94.5	94.5	0.81	0.85	258
160	220	1485	94.5	94.5	0.85	0.87	295	1485	94.5	94.5	0.82	0.86	273
185	250	1480	94.8	94.8	0.83	0.87	338	1485	94.8	94.8	0.80	0.85	317
200	270	1480	94.6	94.7	0.80	0.82	390	1485	94.6	94.7	0.74	0.80	366
200	270	1485	94.7	94.8	0.86	0.88	363	1490	94.7	94.8	0.84	0.86	339
220	300	1480	94.7	94.8	0.80	0.84	418	1485	94.7	94.8	0.75	0.80	403
220	300	1485	94.7	94.8	0.87	0.89	394	1490	94.7	94.8	0.85	0.87	368
250	340	1485	94.7	94.8	0.87	0.89	446	1490	94.7	94.8	0.85	0.87	418
260	350	1480	94.7	94.8	0.83	0.85	471	1485	94.7	94.8	0.79	0.82	464
260	350	1485	94.7	94.8	0.87	0.89	464	1490	94.7	94.8	0.85	0.87	434
280	380	1485	94.7	94.8	0.88	0.89	499	1490	94.7	94.8	0.86	0.87	467
300	400	1480	94.7	94.8	0.80	0.84	571	1485	94.7	94.8	0.73	0.80	550
300	400	1485	94.7	94.8	0.88	0.89	536	1490	94.7	94.8	0.86	0.88	496
315	430	1480	94.7	94.8	0.81	0.84	598	1485	94.7	94.8	0.73	0.80	577
315	430	1485	94.7	94.8	0.87	0.89	560	1490	94.7	94.8	0.84	0.87	524
330	450	1485	94.7	94.8	0.81	0.85	618	1485	94.7	94.8	0.74	0.81	596
330	450	1485	94.8	94.9	0.88	0.90	580	1490	94.8	94.9	0.86	0.88	542
355	480	1490	94.9	95.0	0.88	0.89	630	1490	94.9	95.0	0.86	0.88	583
High-output design													
0.12	0.16	1310	55.0	56.0	0.70	0.80	0.407	1350	51.0	55.0	0.58	0.70	0.434
0.18	0.25	1310	55.0	56.0	0.70	0.80	0.610	1350	51.0	55.0	0.58	0.70	0.650
0.25	0.33	1405	61.0	63.0	0.60	0.70	0.861	1420	58.0	61.0	0.51	0.60	0.950
0.37	0.5	1420	64.0	67.0	0.77	0.84	0.999	1440	62.0	65.0	0.70	0.80	0.990
0.55	0.75	1370	72.0	72.5	0.63	0.72	1.60	1400	68.0	71.0	0.53	0.64	1.68
1.1	1.5	1370	72.0	75.0	0.76	0.86	2.80	1400	72.0	75.0	0.65	0.76	3.01
1.5	2	1410	81.0	80.5	0.79	0.85	3.33	1430	81.0	81.5	0.68	0.78	3.28
1.5	2	1380	79.0	79.0	0.78	0.86	3.35	1400	78.0	79.0	0.67	0.77	3.43
2.2	3	1390	79.0	80.0	0.75	0.83	5.03	1420	79.0	80.0	0.66	0.76	5.03
4	5.5	1380	82.0	83.1	0.80	0.85	8.83	1400	82.0	83.1	0.73	0.81	8.33
4	5.5	1460	84.0	85.0	0.74	0.82	8.70	1470	84.0	85.5	0.70	0.78	8.30
5.5	7.5	1425	86.0	85.7	0.88	0.91	10.7	1435	85.7	85.7	0.75	0.81	11.0
7.5	10	1450	86.0	86.0	0.82	0.87	15.1	1455	85.0	86.0	0.72	0.80	15.0
9.2	12.5	1450	86.5	87.0	0.82	0.87	18.5	1455	86.0	87.0	0.73	0.82	17.9
11	15	1450	88.0	88.0	0.83	0.88	21.6	1460	88.0	88.0	0.77	0.85	20.4
11	15	1455	87.0	87.6	0.79	0.83	22.9	1460	87.0	88.0	0.70	0.78	22.3
15	20	1455	88.5	89.0	0.82	0.85	30.0	1465	88.5	89.0	0.75	0.82	28.4
18.5	25	1450	89.0	89.5	0.80	0.84	37.4	1460	89.0	89.5	0.73	0.80	35.7
18.5	25	1465	89.5	89.5	0.81	0.85	36.7	1470	89.5	89.5	0.74	0.81	35.1
22	30	1460	90.2	90.2	0.82	0.86	42.9	1470	90.3	90.3	0.76	0.82	41.0
30	40	1460	90.0	90.7	0.77	0.83	60.7	1465	90.0	90.7	0.71	0.78	59.0
30	40	1470	91.0	91.0	0.81	0.85	58.5	1475	90.0	91.0	0.75	0.81	56.3
37	50	1465	91.0	91.5	0.84	0.87	70.2	1475	91.0	91.5	0.80	0.85	65.5
37	50	1470	91.0	91.5	0.83	0.87	70.2	1475	91.0	91.5	0.77	0.83	67.4
55	75	1470	92.0	92.5	0.86	0.90	99.6	1475	92.0	92.5	0.83	0.87	94.1
55	75	1480	93.0	93.2	0.84	0.87	103	1485	93.0	93.2	0.80	0.84	97.1
75	100	1475	92.6	93.0	0.86	0.88	138	1480	92.6	93.0	0.84	0.87	128
90	125	1480	93.6	93.6	0.86	0.88	165	1485	93.6	93.6	0.83	0.86	154
110	150	1480	93.8	93.8	0.85	0.87	204	1485	93.8	93.8	0.81	0.85	191
132	175	1485	94.2	94.2	0.84	0.87	243	1485	94.2	94.2	0.81	0.85	228
185	250	1480	94.0	94.1	0.78	0.84	354	1485	94.1	94.1	0.74	0.80	339
185	250	1490	94.3	94.7	0.86	0.88	337	1490	94.5	94.7	0.84	0.86	315
200	270	1485	94.7	94.8	0.82	0.86	371	1485	94.7	94.8	0.78	0.83	352
250	340	1480	94.7	94.8	0.83	0.85	469	1485	94.7	94.8	0.77	0.81	452

\* Isol. "F" -  $\Delta T$  105 K



# IP55 Standard IE1-6P

Output		Frame	Cn (kgfm)	I <sub>l</sub> / I <sub>n</sub> I <sub>k</sub> / I <sub>N</sub>	T <sub>l</sub> / T <sub>n</sub> M <sub>k</sub> / M <sub>N</sub>	T <sub>b</sub> / T <sub>n</sub> M <sub>k</sub> / M <sub>N</sub>	Inertia (kgm <sup>2</sup> )	400 V					
								rpm min-1	% of full load				In (A)
									Efficiency η		Power factory Cos φ		
kW	HP							75	100	75	100		
0.12	0.16	63	0.140	2.6	1.7	1.6	0.0005	855	46.7	45.5	0.60	0.71	0.536
0.18	0.25	71	0.190	3.3	2.0	2.2	0.0008	905	54.0	57.0	0.55	0.62	0.735
0.25	0.33	71	0.270	3.5	2.2	2.2	0.0009	900	60.5	64.0	0.50	0.57	0.989
0.37	0.5	80	0.400	3.6	1.7	1.7	0.0019	905	60.0	63.0	0.64	0.75	1.13
0.55	0.75	80	0.580	4.5	2.3	2.3	0.0030	930	65.0	67.0	0.63	0.73	1.62
0.75	1	90S	0.800	4.2	1.9	2.0	0.0045	910	70.0	71.0	0.69	0.79	1.89
1.1	1.5	90L	1.16	4.8	2.7	2.7	0.0062	925	71.0	73.0	0.60	0.72	3.04
1.5	2	100L	1.61	4.1	2.0	2.2	0.0090	910	75.5	75.5	0.65	0.73	3.90
2.2	3	112M	2.28	5.0	2.2	2.3	0.0165	940	78.5	78.5	0.66	0.74	5.36
3	4	132S	3.06	5.3	2.0	2.2	0.0340	955	80.5	80.5	0.70	0.77	6.82
4	5.5	132M	4.06	5.8	2.3	2.4	0.0446	960	81.5	82.0	0.66	0.74	9.27
5.5	7.5	132M	5.58	6.4	2.7	2.8	0.0581	960	83.5	84.0	0.62	0.71	13.0
7.5	10	160M	7.57	5.7	2.2	2.5	0.1077	965	85.0	85.5	0.76	0.83	15.0
9.2	12.5	160L	9.29	6.0	2.0	2.6	0.1293	965	86.0	86.0	0.75	0.82	18.6
11	15	160L	11.1	6.0	2.2	2.6	0.1580	965	87.0	87.0	0.77	0.83	21.7
15	20	180L	15.0	7.5	2.3	2.7	0.2620	975	89.0	89.0	0.84	0.88	27.6
18.5	25	200L	18.5	6.0	2.1	2.5	0.3408	975	89.0	89.0	0.76	0.82	36.1
22	30	200L	22.0	6.0	2.3	2.4	0.4037	975	90.5	90.5	0.79	0.84	41.4
30	40	225S/M	29.7	7.2	2.6	2.7	0.9253	985	91.3	91.3	0.84	0.87	54.2
37	50	250S/M	36.8	7.5	2.7	2.6	1.16	980	91.9	91.9	0.85	0.87	66.4
45	60	280S/M	44.5	6.8	2.4	2.6	2.07	985	91.5	92.0	0.78	0.83	84.5
55	75	280S/M	54.4	6.5	2.3	2.5	2.41	985	92.5	92.5	0.82	0.85	100
75	100	315S/M	74.2	6.7	2.3	2.5	3.22	985	93.0	93.0	0.81	0.85	136
90	125	315S/M	89.0	6.3	2.1	2.3	3.57	985	93.1	93.3	0.80	0.84	166
110	150	315S/M	109	6.4	2.3	2.4	4.83	985	93.8	93.8	0.80	0.84	200
132	175	315S/M*	131	6.3	2.1	2.2	5.29	985	94.0	94.0	0.81	0.85	237
150	200	315B	148	7.0	1.9	2.4	7.59	985	94.0	94.5	0.78	0.82	278
150	200	355M/L	147	6.2	2.0	2.1	9.05	995	94.9	95.3	0.76	0.81	280
160	220	315B	157	7.0	1.9	2.5	7.10	990	94.0	94.5	0.78	0.82	297
160	220	355M/L	157	6.2	1.9	2.1	9.53	990	95.0	95.3	0.77	0.82	296
185	250	315B	182	7.2	2.0	2.5	8.60	990	94.5	94.5	0.79	0.83	339
185	250	355M/L	182	6.0	1.9	2.1	10.2	990	94.2	94.8	0.76	0.81	348
200	270	315B	197	6.6	2.0	2.6	8.60	990	94.6	94.6	0.80	0.84	362
200	270	355M/L	197	6.3	2.1	2.3	12.4	990	94.5	94.8	0.78	0.81	376
220	300	355M/L	216	6.5	2.0	2.3	13.8	990	94.8	95.3	0.77	0.80	417
250	340	355M/L	245	6.1	2.2	2.2	14.8	995	95.1	95.6	0.79	0.82	460
260	350	355M/L	255	6.1	2.1	2.1	14.8	995	95.1	95.6	0.79	0.82	479
280	380	355M/L	275	6.0	2.1	2.2	14.8	990	95.2	95.4	0.77	0.80	530
300	400	355M/L*	295	6.4	2.1	2.1	14.8	990	95.5	95.6	0.73	0.79	573
315	430	355M/L*	310	6.0	1.9	1.9	15.5	990	95.8	95.9	0.78	0.81	585
High-output design													
0.25	0.33	80	0.260	4.6	2.5	2.9	0.0022	950	60.0	64.0	0.55	0.65	0.867
0.75	1	90L	0.800	4.2	1.9	2.0	0.0045	910	70.0	71.0	0.69	0.79	1.89
1.5	2	112M	1.55	5.5	2.2	2.2	0.0150	945	78.0	78.0	0.66	0.74	3.75
3	4	112M	3.04	6.3	2.6	2.6	0.0257	960	80.0	82.0	0.65	0.73	7.06
3	4	132M	3.06	5.3	2.0	2.2	0.0340	955	80.5	80.5	0.70	0.77	6.82
4	5.5	132S	4.06	5.8	2.3	2.4	0.0446	960	81.5	82.0	0.66	0.74	9.27
7.5	10	160L	7.57	5.7	2.2	2.5	0.1077	965	85.0	85.5	0.76	0.83	15.0
9.2	12.5	160M	9.29	6.0	2.0	2.6	0.1293	965	86.0	86.0	0.75	0.82	18.6
15	20	180M	15.0	7.5	2.3	2.7	0.2620	975	88.0	88.0	0.84	0.88	27.6
18.5	25	200M	18.5	6.0	2.1	2.5	0.3408	975	89.0	89.0	0.76	0.82	36.1
22	30	200M	22.0	6.0	2.3	2.4	0.4037	975	90.5	90.5	0.79	0.84	41.4
37	50	225S/M	36.8	7.5	2.7	2.6	1.16	980	91.9	91.9	0.85	0.87	66.4
45	60	250S/M	44.5	8.0	2.8	2.8	1.43	985	91.8	92.1	0.84	0.87	79.7
75	100	280S/M	74.2	6.7	2.3	2.5	3.22	985	93.0	93.0	0.81	0.85	136
90	125	280S/M	89.0	6.3	2.1	2.3	3.57	985	93.1	93.3	0.80	0.84	166
132	175	355M/L	130	6.1	2.0	2.3	7.89	990	94.7	94.7	0.75	0.80	251
220	300	315B	218	6.8	1.8	2.3	10.7	985	94.6	94.6	0.82	0.84	398
250	340	315B*	246	6.8	2.2	2.7	10.7	990	94.6	94.7	0.82	0.85	446
260	350	315B*	256	6.8	2.1	2.6	10.7	990	94.6	94.7	0.82	0.85	464
280	380	315B*	275	7.4	2.2	2.7	11.5	990	94.8	94.8	0.80	0.84	504

# IP55 Standard IE1-6P

Output		Frame	Cn (kgfm)	I <sub>l</sub> /I <sub>n</sub> I <sub>k</sub> /I <sub>N</sub>	T <sub>l</sub> /T <sub>n</sub> M <sub>k</sub> /M <sub>N</sub>	T <sub>b</sub> /T <sub>n</sub> M <sub>k</sub> /M <sub>N</sub>	Inertia (kgm <sup>2</sup> )	400 V					
								rpm min-1	% of full load				In (A)
									Efficiency η		Power factory Cos φ		
kW	HP							75	100	75	100		
0.12	0.16	71	0.180	2.2	2.1	2.0	0.0008	660	43.4	45.6	0.45	0.53	0.717
0.18	0.25	80	0.250	2.8	2.2	2.4	0.0021	695	44.1	48.6	0.53	0.62	0.862
0.25	0.33	80	0.350	3.5	2.3	2.2	0.0028	700	53.6	56.6	0.52	0.61	1.05
0.37	0.5	90S	0.530	3.0	1.9	1.8	0.0039	685	56.5	57.4	0.55	0.64	1.45
0.55	0.75	90L	0.790	3.3	1.9	2.0	0.0056	675	60.0	60.0	0.56	0.66	2.01
0.75	1	100L	1.04	3.5	1.8	2.4	0.0079	705	67.2	67.8	0.53	0.62	2.58
1.1	1.5	100L	1.53	4.0	1.7	2.3	0.0118	700	72.3	71.2	0.57	0.66	3.38
1.5	2	112M	2.09	4.2	2.2	2.2	0.0178	700	75.4	73.5	0.61	0.70	4.21
2.2	3	132S	3.02	6.1	2.5	2.8	0.0602	710	78.0	77.1	0.68	0.77	5.35
3	4	132M	4.12	6.1	2.2	2.6	0.0728	710	80.1	79.0	0.68	0.76	7.21
4	5.5	160M	5.37	4.7	2.2	2.4	0.1006	725	82.0	82.0	0.63	0.72	9.78
5.5	7.5	160M	7.39	4.8	2.2	2.3	0.1221	725	83.0	83.5	0.62	0.71	13.4
7.5	10	160L	10.1	4.7	2.2	2.3	0.1508	725	85.0	85.5	0.64	0.73	17.3
9.2	12.5	180M	12.3	6.7	2.2	2.9	0.2344	730	86.0	85.9	0.75	0.81	19.1
11	15	180L	14.8	6.8	2.3	2.5	0.2758	725	88.5	88.3	0.79	0.84	21.4
18.5	25	225S/M	24.7	6.9	2.1	2.8	0.8328	730	90.1	90.0	0.80	0.85	34.9
22	30	225S/M	29.4	7.5	2.2	2.7	0.9716	730	91.0	91.0	0.82	0.85	41.1
30	40	250S/M	40.0	7.9	2.3	2.9	1.16	730	91.2	91.6	0.79	0.84	56.3
37	50	280S/M	48.7	6.5	1.9	2.3	2.07	740	92.2	92.3	0.75	0.79	73.2
45	60	280S/M	59.2	6.5	2.0	2.4	2.53	740	92.1	92.3	0.75	0.80	88.0
55	75	315S/M	72.4	6.5	1.9	2.2	3.05	740	93.1	93.0	0.78	0.82	104
75	100	315S/M	98.7	6.6	1.9	2.2	4.37	740	93.4	93.5	0.79	0.82	141
90	125	315S/M	118	6.8	2.1	2.4	5.29	740	93.8	94.2	0.76	0.81	170
110	150	355M/L	145	6.4	1.5	2.2	12.2	740	94.1	94.5	0.74	0.80	210
132	175	315B	174	6.9	1.9	2.6	7.77	740	94.5	94.4	0.74	0.79	255
132	175	355M/L	174	6.5	1.6	2.2	12.8	740	94.5	94.8	0.73	0.79	254
150	200	355M/L	197	6.5	1.6	2.2	14.3	740	94.7	94.7	0.72	0.78	293
160	220	315B	211	7.3	2.1	2.8	9.75	740	94.7	94.7	0.72	0.77	317
160	220	355M/L	211	6.6	1.6	2.2	15.9	740	94.7	94.7	0.75	0.80	305
185	250	315B	244	6.5	1.8	2.4	11.5	740	95.0	94.8	0.78	0.81	348
185	250	355M/L	244	6.5	1.6	2.2	16.7	740	94.6	95.1	0.71	0.78	360
200	270	315B*	263	6.5	1.6	2.3	11.5	740	94.8	94.4	0.79	0.82	373
200	270	355M/L	263	6.8	1.6	2.1	18.9	740	94.6	95.2	0.72	0.79	384
220	300	355M/L*	290	6.5	1.6	2.1	19.8	740	94.7	95.2	0.73	0.78	428
High-output design													
2.2	3	132M	3.02	6.1	2.5	2.8	0.0602	710	78.0	77.1	0.68	0.77	5.35
5.5	7.5	160L	7.39	4.8	2.2	2.3	0.1221	725	83.0	83.5	0.62	0.71	13.4
7.5	10	160M	10.1	4.7	2.2	2.3	0.1508	725	85.0	85.5	0.64	0.73	17.3
18.5	25	250S/M	24.7	6.9	2.1	2.8	0.8328	730	90.1	90.0	0.80	0.85	34.9
22	30	250S/M	29.4	7.5	2.2	2.7	0.9716	730	91.0	91.0	0.82	0.85	41.1
30	40	225S/M	40.0	7.9	2.3	2.9	1.16	730	91.2	91.6	0.79	0.84	56.3
37	50	250S/M	49.4	8.2	2.3	2.8	1.48	730	91.5	91.5	0.78	0.84	69.5
45	60	250S/M*	60.0	8.3	2.5	3.4	1.67	730	91.0	91.5	0.78	0.83	85.5
55	75	280S/M	72.4	6.5	1.9	2.2	3.05	740	93.1	93.0	0.78	0.82	104
75	100	280S/M	98.7	6.6	1.9	2.2	4.37	740	93.4	93.5	0.79	0.82	141
110	150	315S/M*	145	7.0	1.9	2.2	5.53	740	94.1	94.6	0.73	0.79	212

\* Isol. "F" - Δ T 105 K

# IP55 Standard IE1-8P

Output		Frame	Cn (kgfm)	I <sub>r</sub> /I <sub>N</sub> I <sub>A</sub> /I <sub>N</sub>	T <sub>r</sub> /T <sub>N</sub> M <sub>A</sub> /M <sub>N</sub>	T <sub>b</sub> /T <sub>N</sub> M <sub>K</sub> /M <sub>N</sub>	Inertia (kgm <sup>2</sup> )	400 V					
								rpm min-1	% of full load				In (A)
									Efficiency η		Power factory Cos φ		
kW	HP							75	100	75	100		
0.12	0.16	71	0.180	2.2	2.1	2.0	0.0008	660	43.4	45.6	0.45	0.53	0.717
0.18	0.25	80	0.250	2.8	2.2	2.4	0.0021	695	44.1	48.6	0.53	0.62	0.862
0.25	0.33	80	0.350	3.5	2.3	2.2	0.0028	700	53.6	56.6	0.52	0.61	1.05
0.37	0.5	90S	0.530	3.0	1.9	1.8	0.0039	685	56.5	57.4	0.55	0.64	1.45
0.55	0.75	90L	0.790	3.3	1.9	2.0	0.0056	675	60.0	60.0	0.56	0.66	2.01
0.75	1	100L	1.04	3.5	1.8	2.4	0.0079	705	67.2	67.8	0.53	0.62	2.58
1.1	1.5	100L	1.53	4.0	1.7	2.3	0.0118	700	72.3	71.2	0.57	0.66	3.38
1.5	2	112M	2.09	4.2	2.2	2.2	0.0178	700	75.4	73.5	0.61	0.70	4.21
2.2	3	132S	3.02	6.1	2.5	2.8	0.0602	710	78.0	77.1	0.68	0.77	5.35
3	4	132M	4.12	6.1	2.2	2.6	0.0728	710	80.1	79.0	0.68	0.76	7.21
4	5.5	160M	5.37	4.7	2.2	2.4	0.1006	725	82.0	82.0	0.63	0.72	9.78
5.5	7.5	160M	7.39	4.8	2.2	2.3	0.1221	725	83.0	83.5	0.62	0.71	13.4
7.5	10	160L	10.1	4.7	2.2	2.3	0.1508	725	85.0	85.5	0.64	0.73	17.3
9.2	12.5	180M	12.3	6.7	2.2	2.9	0.2344	730	86.0	85.9	0.75	0.81	19.1
11	15	180L	14.8	6.8	2.3	2.5	0.2758	725	88.5	88.3	0.79	0.84	21.4
18.5	25	225S/M	24.7	6.9	2.1	2.8	0.8328	730	90.1	90.0	0.80	0.85	34.9
22	30	225S/M	29.4	7.5	2.2	2.7	0.9716	730	91.0	91.0	0.82	0.85	41.1
30	40	250S/M	40.0	7.9	2.3	2.9	1.16	730	91.2	91.6	0.79	0.84	56.3
37	50	280S/M	48.7	6.5	1.9	2.3	2.07	740	92.2	92.3	0.75	0.79	73.2
45	60	280S/M	59.2	6.5	2.0	2.4	2.53	740	92.1	92.3	0.75	0.80	88.0
55	75	315S/M	72.4	6.5	1.9	2.2	3.05	740	93.1	93.0	0.78	0.82	104
75	100	315S/M	98.7	6.6	1.9	2.2	4.37	740	93.4	93.5	0.79	0.82	141
90	125	315S/M	118	6.8	2.1	2.4	5.29	740	93.8	94.2	0.76	0.81	170
110	150	355M/L	145	6.4	1.5	2.2	12.2	740	94.1	94.5	0.74	0.80	210
132	175	315B	174	6.9	1.9	2.6	7.77	740	94.5	94.4	0.74	0.79	255
132	175	355M/L	174	6.5	1.6	2.2	12.8	740	94.5	94.8	0.73	0.79	254
150	200	355M/L	197	6.5	1.6	2.2	14.3	740	94.7	94.7	0.72	0.78	293
160	220	315B	211	7.3	2.1	2.8	9.75	740	94.7	94.7	0.72	0.77	317
160	220	355M/L	211	6.6	1.6	2.2	15.9	740	94.7	94.7	0.75	0.80	305
185	250	315B	244	6.5	1.8	2.4	11.5	740	95.0	94.8	0.78	0.81	348
185	250	355M/L	244	6.5	1.6	2.2	16.7	740	94.6	95.1	0.71	0.78	360
200	270	315B*	263	6.5	1.6	2.3	11.5	740	94.8	94.4	0.79	0.82	373
200	270	355M/L	263	6.8	1.6	2.1	18.9	740	94.6	95.2	0.72	0.79	384
220	300	355M/L*	290	6.5	1.6	2.1	19.8	740	94.7	95.2	0.73	0.78	428
High-output design													
2.2	3	132M	3.02	6.1	2.5	2.8	0.0602	710	78.0	77.1	0.68	0.77	5.35
5.5	7.5	160L	7.39	4.8	2.2	2.3	0.1221	725	83.0	83.5	0.62	0.71	13.4
7.5	10	160M	10.1	4.7	2.2	2.3	0.1508	725	85.0	85.5	0.64	0.73	17.3
18.5	25	250S/M	24.7	6.9	2.1	2.8	0.8328	730	90.1	90.0	0.80	0.85	34.9
22	30	250S/M	29.4	7.5	2.2	2.7	0.9716	730	91.0	91.0	0.82	0.85	41.1
30	40	225S/M	40.0	7.9	2.3	2.9	1.16	730	91.2	91.6	0.79	0.84	56.3
37	50	250S/M	49.4	8.2	2.3	2.8	1.48	730	91.5	91.5	0.78	0.84	69.5
45	60	250S/M*	60.0	8.3	2.5	3.4	1.67	730	91.0	91.5	0.78	0.83	85.5
55	75	280S/M	72.4	6.5	1.9	2.2	3.05	740	93.1	93.0	0.78	0.82	104
75	100	280S/M	98.7	6.6	1.9	2.2	4.37	740	93.4	93.5	0.79	0.82	141
110	150	315S/M*	145	7.0	1.9	2.2	5.53	740	94.1	94.6	0.73	0.79	212

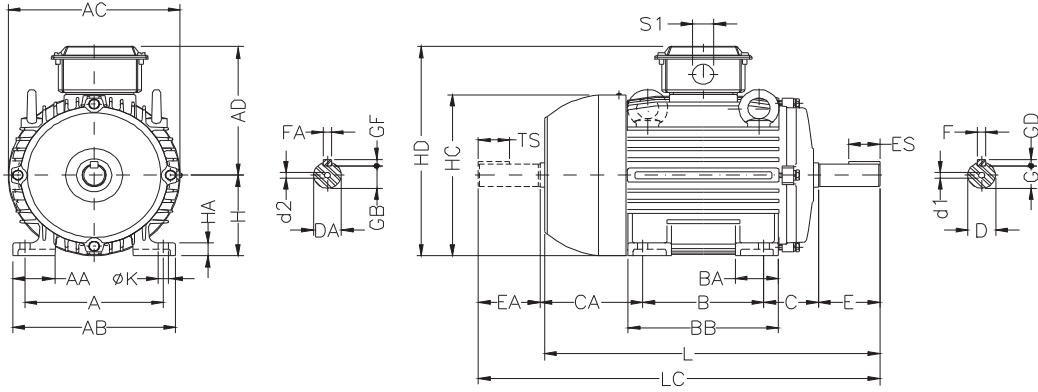
\* Isol. "F" - Δ T 105 K

# IP55 Standard IE1-8P

Output		380 V							415 V						
		rpm min-1	% of full load				In (A)	rpm min-1	% of full load				In (A)		
			Efficiency $\eta$		Power factory Cos $\phi$				Efficiency $\eta$		Power factory Cos $\phi$				
			75	100	75	100			75	100	75	100			
kW	HP														
0.12	0.16	650	47.1	47.6	0.48	0.57	0.672	670	40.3	43.2	0.43	0.50	0.773		
0.18	0.25	690	47.7	50.6	0.57	0.66	0.819	700	41.2	46.1	0.51	0.59	0.921		
0.25	0.33	690	55.6	57.2	0.56	0.65	1.02	700	51.7	55.6	0.50	0.58	1.08		
0.37	0.5	680	59.0	58.3	0.60	0.69	1.40	690	53.8	56.1	0.51	0.61	1.50		
0.55	0.75	665	62.0	60.0	0.60	0.70	1.99	680	59.0	59.0	0.52	0.62	2.09		
0.75	1	695	69.0	68.0	0.58	0.66	2.54	710	64.6	66.7	0.49	0.58	2.70		
1.1	1.5	690	73.6	70.8	0.62	0.70	3.37	705	70.7	70.7	0.53	0.62	3.49		
1.5	2	690	76.2	73.2	0.65	0.73	4.27	705	74.2	73.1	0.57	0.66	4.33		
2.2	3	705	78.3	76.7	0.73	0.80	5.45	715	77.5	77.1	0.65	0.74	5.36		
3	4	705	80.5	78.6	0.73	0.80	7.25	715	79.6	79.0	0.64	0.73	7.24		
4	5.5	720	83.0	82.0	0.67	0.75	9.88	725	82.0	82.5	0.60	0.69	9.78		
5.5	7.5	720	84.0	83.0	0.67	0.74	13.6	725	82.5	83.0	0.58	0.68	13.6		
7.5	10	715	85.0	85.0	0.69	0.76	17.6	725	84.0	85.5	0.60	0.70	17.4		
9.2	12.5	725	86.1	85.5	0.79	0.84	19.5	730	85.9	85.9	0.72	0.79	18.9		
11	15	720	88.3	87.8	0.81	0.85	22.4	730	88.6	88.5	0.77	0.83	20.8		
18.5	25	730	90.0	89.8	0.83	0.86	36.4	735	90.3	90.2	0.78	0.84	34.0		
22	30	730	90.9	90.5	0.84	0.86	42.9	735	91.0	91.2	0.80	0.84	40.0		
30	40	730	91.3	91.3	0.81	0.85	58.7	735	91.1	91.8	0.77	0.83	54.8		
37	50	735	92.2	92.1	0.77	0.80	76.3	740	92.2	92.4	0.73	0.77	72.3		
45	60	735	92.2	92.0	0.77	0.82	90.6	740	92.0	92.3	0.72	0.78	87.0		
55	75	735	93.2	92.8	0.80	0.83	108	740	93.0	93.0	0.76	0.80	103		
75	100	735	93.3	93.3	0.80	0.83	147	740	93.4	93.4	0.78	0.81	138		
90	125	735	93.9	94.0	0.79	0.82	177	740	93.7	94.2	0.74	0.80	166		
110	150	740	94.2	94.5	0.77	0.82	216	745	94.1	94.5	0.71	0.78	208		
132	175	740	94.8	94.3	0.77	0.81	263	745	94.2	94.4	0.71	0.77	253		
132	175	740	94.6	94.8	0.75	0.81	261	745	94.4	94.8	0.71	0.77	252		
150	200	740	94.8	94.7	0.76	0.80	301	745	94.7	94.7	0.69	0.76	290		
160	220	740	94.9	94.6	0.75	0.79	325	745	94.7	94.7	0.68	0.75	313		
160	220	740	94.8	94.8	0.77	0.81	317	745	94.7	94.7	0.72	0.79	298		
185	250	735	95.0	94.8	0.80	0.82	362	740	94.8	94.5	0.76	0.80	340		
185	250	740	94.7	95.1	0.75	0.80	369	745	94.5	95.0	0.67	0.76	356		
200	270	735	94.7	94.7	0.81	0.83	387	740	94.7	94.3	0.77	0.80	369		
200	270	740	94.8	95.1	0.75	0.81	394	745	94.4	95.2	0.69	0.77	380		
220	300	740	94.8	95.2	0.76	0.80	439	745	94.6	95.2	0.70	0.76	423		
High-output design															
2.2	3	705	78.3	76.7	0.73	0.80	5.45	715	77.5	77.1	0.65	0.74	5.36		
5.5	7.5	720	84.0	83.0	0.67	0.74	13.6	725	82.5	83.0	0.58	0.68	13.6		
7.5	10	715	85.0	85.0	0.69	0.76	17.6	725	84.0	85.5	0.60	0.70	17.4		
18.5	25	730	90.0	89.8	0.83	0.86	36.4	735	90.3	90.2	0.78	0.84	34.0		
22	30	730	90.9	90.5	0.84	0.86	42.9	735	91.0	91.2	0.80	0.84	40.0		
30	40	730	91.3	91.3	0.81	0.85	58.7	735	91.1	91.8	0.77	0.83	54.8		
37	50	730	91.5	91.0	0.82	0.86	71.8	735	91.5	91.5	0.76	0.82	68.6		
45	60	730	91.0	91.2	0.80	0.85	88.2	735	91.0	91.6	0.76	0.82	83.3		
55	75	735	93.2	92.8	0.80	0.83	108	740	93.0	93.0	0.76	0.80	103		
75	100	735	93.3	93.3	0.80	0.83	147	740	93.4	93.4	0.78	0.81	138		
110	150	735	94.1	94.4	0.75	0.80	221	740	94.1	94.6	0.71	0.77	210		

\* Isol. "F" -  $\Delta T$  105 K

# Mechanical data

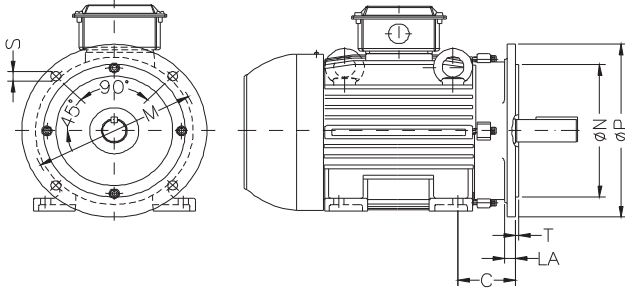


Frame	A	AA	AB	AC	AD	B	BA	BB	C	CA	Shaft dimensions											H	HA	HC	HD	K	L	LC	S1	d1	d2	Bearings		
											D	E	ES	F	G	GD	DA	EA	TS	FA	GB											GF	D.E.	O.D.E.
80	125	35	148	159	134	100	40	125,5	50	93	196	40	28	6	15,5	6	14j6	30	18		11	5	80	13	157	214	276	313	1xM24	DM6	DM4	6204-ZZ	6203-ZZ	
90S	140	38	164	179	148		42	131	56	104	246	50	36		20		16j6	40	28	5	13	5	90	15	177	238	304	350	DM8	DM6	6205-ZZ	6204-ZZ		
90L						125	156							8		7											329	375						
100L	160	49	188	199	158		50	173	63	118	286	60	45		24		22j6	50	36	6	18,5	6	100	16	198	268	376	431	DM10	DM8	6206-ZZ	6205-ZZ		
112M	190	48	220	222	179	140	177	70	128								24j6			20		7	112	18,5	235	291	383	448			6307-ZZ	6206-ZZ		
132S	216	51	248	270	207		187	89	150	38j6	80	63	10	33			26j6	60	45	8	24	7	132	20	274	339	452	519	2xM28,5	DM12	DM10	6308-ZZ	6207-ZZ	
132M						178	225																			490	557							
160M	254	64	308	312	241	210	254	294	108	174	42j6						42j6			12	37	8	160	22	317	401	590	712			6309-C3	6209-Z-C3		
160L						254	294																				634	756	2xM40	DM16				
180M	279	80	350	358	261	241	298	332	121	200	48j6									14	42,5	9	180	28	380	441	656	782			6311-C3	6211-Z-C3		
180L						279	298																				684	820						
200M	318	82	385	396	303	287	332		133	222	55m6						48j6			16	49	10	200	30	402	503	721	842			6312-C3	6212-Z-C3		
200L						305	370																				759	880						
225S/M	356	80	436			296	311		105	391	149	280	55m6*		100		55m6*			16	53	11	225	34	466	599	809	935			6314-C3			
						255	312		138	449	168	274	60m6				60m6										841	995						
250S/M	406		506			349	374		140	125		312	60m6*				60m6*			18	58	11	250	42	491	624	915	1071			6316-C3			
		100				406	419		140	125		274	65m6				60m6										1026	1188						
280S/M	457		557			368	388		170	160		350	65m6*				60m6*			20	67,5	12	280	53	578	754	1116	1278			6319-C3	6316-C3		
						406	419		170	160		299	75m6				60m6*			18	58	11	315	52	613	814	1146	1308			6319-C3	6316-C3		
315S/M	508	120	628			406	419		170	160		376	65m6*				60m6*			20	67,5	12	315	52	613	814	1146	1308			6319-C3	6316-C3		
						457	474		170	160		325	80m6				65m6			170	160	22	71	14	355	50	725	1031			6319-C3	6319-C3		
355M/L	610	140	750	816	676	580	630		200	760	254	467	75m6*	140	125	20	60m6*	140	125	18	53	11	355	50	725	1031	1387	1561			6322-C3	6319-C3		
						630			210	200		397	100m6	210	200	28	80m6	170	160	22	71	14	457	50	725	1031	1457	1661	2xM72	DM20	DM20	6322-C3	6319-C3	

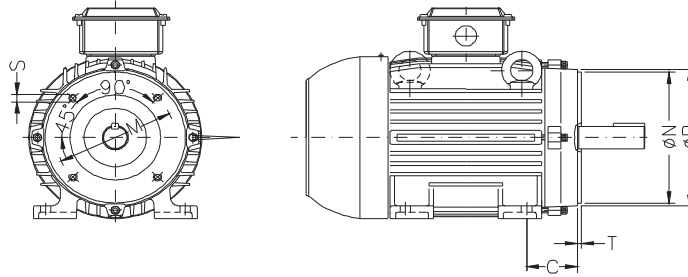
Note: --- \* Shaft dimensions for II pole motors, only for direct coupling.  
 --- All dimensions are in millimeters.  
 --- The average values shown are subject to change without prior notice.  
 To obtain guaranteed value, please contact with our nearest sales office.



# Mechanical data



Frame	"FF" Flange									No of holes
	Flange	C	LA	M	N	P	T	S	a	
80	FF-165	50	10	165	130	200	3,5	12	45°	4
90S/L		56								
100L	FF-215	63	11	215	180	250	4	15		
112M		70								
132S/M	FF-265	89	12	265	230	300	5	19	22°30'	8
160M/L		108								
180M/L	FF-300	121	18	300	250	350	5	19		
200M/L		133								
225S/M	FF-400	149	22	400	350	450	6	24		
250S/M		168								
280S/M	FF-500	190	22	500	450	550	6	24		
315S/M		216								
355M/L	FF-740	254	22	740	680	800	6	24		



Frame	"C-DIN" Flange							No of holes
	Flange	C	M	N	P	S	T	
80	C-120	50	100	80	120	M6	3	4
90S/L	C-140	56	115	95	140	M8		
100L	C-160	63	130	110	160		3,5	
112M		70						
132S/M	C-200	89	165	130	200	M10	3,5	

Frame	"C" Flange							No of holes
	Flange	C	M	N	P	S	T	
80	FC-95	50	95.2	76.2	143	1/4"20	4	4
90S/L		56	149,2	114,3	165	UNC		
100L	FC-149	63				184,2	215,9	
112M		70	228,6	266,7	280			
132S/M	FC-184	89				279,4	317,5	395
160M/L		108						
180M/L	FC-228	121	279,4	317,5	395	5/8"11	6,3	
200M/L		133						
225S/M	FC-279	149	355,6	406,4	455	5/8"11	8	
250S/M		168						
280S/M	FC-355	190	368,3	419,1	455	5/8"11		
315S/M		216						
355M/L	FC-368	254	368,3	419,1	455	5/8"11		

# WEG Worldwide

## ARGENTINA

WEG EQUIPAMIENTOS  
ELECTRICOS S.A.  
(Headquarters San  
Francisco-Cordoba)  
Sgo. Pampiglione 4849  
Parque Industrial San Francisco  
2400 - San Francisco  
Phone: +54 (3564) 421484  
Fax: +54 (3564) 421459  
[info-ar@weg.net](mailto:info-ar@weg.net)  
[www.weg.net/ar](http://www.weg.net/ar)

## WEG PINTURAS

Mélian, 2983  
Parque Industrial Burzaco  
Buenos Aires - Argentina  
Phone: (54-11) 4299-8000  
[tintas@weg.net](mailto:tintas@weg.net)

## AUSTRALIA

WEG AUSTRALIA PTY. LTD.  
14 Lakeview Drive Caribbean  
Gardens Industrial Estate  
Scoresby Vic 3179 Victoria  
Phone: 61 (3) 9765 4600  
Fax: 61 (3) 9753 2088  
[info-au@weg.net](mailto:info-au@weg.net)  
[www.weg.net/au](http://www.weg.net/au)

## BELGIUM

WEG BENELUX S.A.  
Rue de l'Industrie 30 D,  
1400 Nivelles  
Phone: + 32 (67) 88-8420  
Fax: + 32 (67) 84-1748  
[info-be@weg.net](mailto:info-be@weg.net)  
[www.weg.net/be](http://www.weg.net/be)

## CHILE

WEG CHILE S.A.  
Los Canteros 8600  
La Reina - Santiago  
Phone: (56-2) 784 8900  
Fax: (56-2) 784 8950  
[info-cl@weg.net](mailto:info-cl@weg.net)  
[www.weg.net/cl](http://www.weg.net/cl)

## CHINA

WEG (NANTONG) ELECTRIC  
MOTOR MANUFACTURING CO.,  
LTD.  
No. 128# - Xinkai South Road,  
Nantong Economic &  
Technical Development Zone,  
Nantong, Jiangsu Province.  
Phone: (86) 0513-85989333  
Fax: (86) 0513-85922161  
[info-cn@weg.net](mailto:info-cn@weg.net)  
[www.weg.net/cn](http://www.weg.net/cn)

## COLOMBIA

WEG COLOMBIA LTDA  
Calle 46A N82 - 54  
Portería II - Bodega 7 - San  
Cayetano II - Bogotá  
Phone: (57 1) 416 0166  
Fax: (57 1) 416 2077  
[info-co@weg.net](mailto:info-co@weg.net)  
[www.weg.net/co](http://www.weg.net/co)

## DENMARK

WEG SCANDINAVIADENMARK  
Sales Office of WEG  
Scandinavia AB  
Anelysparken 43B  
True  
8381 Tilst - Denmark  
Phone: +45 86 24 22 00  
Fax: +45 86 24 56 88  
[info-se@weg.net](mailto:info-se@weg.net)  
[www.weg.net/se](http://www.weg.net/se)

## FRANCE

WEG FRANCE SAS  
ZI de Chenes - Le Loup  
13 Rue du Morellon - BP 738  
38297 Saint Quentin Fallavier  
Phone: +33 (0) 4 74 99 11 35  
Fax: +33 (0) 4 74 99 11 44  
[info-fr@weg.net](mailto:info-fr@weg.net)  
[www.weg.net/fr](http://www.weg.net/fr)

## GERMANY

WEG GERMANY GmbH  
Industriegebiet Türnich 3  
Geigerstraße 7  
50169 Kerpen-Türnich  
Phone: +49 (0)2237/9291-0  
Fax: +49 (0)2237/9292-200  
[info-de@weg.net](mailto:info-de@weg.net)  
[www.weg.net/de](http://www.weg.net/de)

## GHANA

ZEST ELECTRIC GHANA  
LIMITED - WEG Group  
15, Third Close Street Airport  
Residential Area, Accra PMB CT  
175, Cantonments  
Phone: 233 30 27 664 90  
Fax: 233 30 27 664 93  
[Info@zestghana.com.gh](mailto:Info@zestghana.com.gh)  
[www.zestghana.com.gh](http://www.zestghana.com.gh)

## INDIA

WEG ELECTRIC(INDIA) PVT.  
LTD.  
#38, Ground Floor, 1st Main  
Road, Lower Palace Orchards,  
Bangalore - 560 003  
Phone(s): +91-80-4128 2007  
+91-80-4128 2006  
Fax: +91-80-2336 7624  
[info-in@weg.net](mailto:info-in@weg.net)  
[www.weg.net/in](http://www.weg.net/in)

## ITALY

WEG ITALIA S.R.L.  
V.le Brianza 20 - 20092 - Cinisello  
Balsamo - Milano  
Phone: (39) 02 6129-3535  
Fax: (39) 02 6601-3738  
[info-it@weg.net](mailto:info-it@weg.net)  
[www.weg.net/it](http://www.weg.net/it)

## JAPAN

WEG ELECTRIC MOTORS  
JAPAN CO., LTD.  
Yokohama Sky Building 20F,  
2-19-12 Takashima,  
Nishi-ku, Yokohama City,  
Kanagawa, Japan 220-001  
Phone: (81) 45 440 6063  
[info-jp@weg.net](mailto:info-jp@weg.net)  
[www.weg.net/jp](http://www.weg.net/jp)

## MEXICO

WEG MEXICO, S.A. DE C.V.  
Carretera Jorobas-TulaKm. 3.5,  
Manzana 5, Lote 1  
Fraccionamiento Parque  
Industrial - Huehuetoca,  
Estado de México - C.P. 54680  
Phone: + 52 (55) 5321 4275  
Fax: + 52 (55) 5321 4262  
[info-mx@weg.net](mailto:info-mx@weg.net)  
[www.weg.net/mx](http://www.weg.net/mx)

## NETHERLANDS

WEG NETHERLANDS  
Sales Office of  
WEG Benelux S.A.  
Hanzepoort 23C  
7575 DB Oldenzaal  
Phone: +31 (0) 541-571080  
Fax: +31 (0) 541-571090  
[info-nl@weg.net](mailto:info-nl@weg.net)  
[www.weg.net/nl](http://www.weg.net/nl)

## PORTUGAL

WEG EURO - INDÚSTRIA  
ELÉCTRICA, S.A.  
Rua Eng. Frederico Ulrich  
Apartado 6074  
4476-908 - Maia  
Phone: +351 229 477 705  
Fax: +351 229 477 792  
[info-pt@weg.net](mailto:info-pt@weg.net)  
[www.weg.net/pt](http://www.weg.net/pt)

## RUSSIA

WEG RUSSIA  
Russia, 194292, St. Petersburg,  
Prospekt Kultury 44, Office 419  
Phone: +7(812)363-21-72  
Fax: +7(812)363-21-73  
[Info-ru@weg.net](mailto:Info-ru@weg.net)  
[www.weg.net/ru](http://www.weg.net/ru)

## SOUTH AFRICA

ZEST ELECTRIC MOTORS  
(PTY) LTD. WEG Group  
47 Galaxy Avenue, Linbro  
Business Park, Gauteng  
Private Bag X10011, Sandton,  
2146 Johannesburg  
Phone: (27-11) 723-6000  
Fax: (27-11) 723-6001  
[info@zest.co.za](mailto:info@zest.co.za)  
[www.zest.co.za](http://www.zest.co.za)

## SPAIN

WEG IBERIA S.L.  
Avenida de la Industria,25  
28823 Coslada - Madrid  
Phone: (34) 916 553 008  
Fax : (34) 916 553 058  
[info-es@weg.net](mailto:info-es@weg.net)  
[www.weg.net/es](http://www.weg.net/es)

## SINGAPORE

WEG SINGAPORE PTE LTD  
159, Kampong Ampat,  
#06-02A KA PLACE.  
Singapore 368328.  
Phone: +65 6858 9081  
Fax: +65 6858 1081  
[info-sg@weg.net](mailto:info-sg@weg.net)  
[www.weg.net/sg](http://www.weg.net/sg)

## SWEDEN

WEG SCANDINAVIA AB  
Box 10196  
Verkstadgatan 9  
434 22 Kungsbacka  
Phone: (46) 300 73400  
Fax: (46) 300 70264  
[info-se@weg.net](mailto:info-se@weg.net)  
[www.weg.net/se](http://www.weg.net/se)

## UK

WEG ELECTRIC  
MOTORS (UK.) LTD.  
28/29 Walkers Road  
Manorside Industrial Estate  
North Moors Moat - Redditch  
Worcestershire B98 9HE  
Phone: 44 (0)1527 596-748  
Fax: 44 (0)1527 591-133  
[info-uk@weg.net](mailto:info-uk@weg.net)  
[www.weg.net/uk](http://www.weg.net/uk)

## UNITED ARAB EMIRATES

WEG MIDDLE EAST FZE  
JAFZA - JEBEL ALI FREE ZONE  
Tower 18, 19th Floor,  
Office LB 18 1905  
P.O. Box 262508 - Dubai  
Phone: +971 (4) 8130800  
Fax: +971 (4) 8130811  
[info-ae@weg.net](mailto:info-ae@weg.net)  
[www.weg.net/ae](http://www.weg.net/ae)

## USA

WEG ELECTRIC CORP.  
6655 Sugarloaf Parkway,  
Duluth, GA 30097  
Phone: 1-678-249-2000  
Fax: 1-770-338-1632  
[info-us@weg.net](mailto:info-us@weg.net)  
[www.weg.net/us](http://www.weg.net/us)

## VENEZUELA

WEG INDUSTRIAS VENEZUELA C.A.  
Avenida 138-A  
Edificio Torre Banco Occidental de  
Descuento, Piso 6 Oficina 6-12  
Urbanización San Jose de Tarbes  
Zona Postal 2001  
Valencia, Edo. Carabobo  
Phone(s): (58) 241 8210582  
(58) 241 8210799  
(58) 241 8211457  
Fax: (58) 241 8210966  
[info-ve@weg.net](mailto:info-ve@weg.net)  
[www.weg.net/ve](http://www.weg.net/ve)

