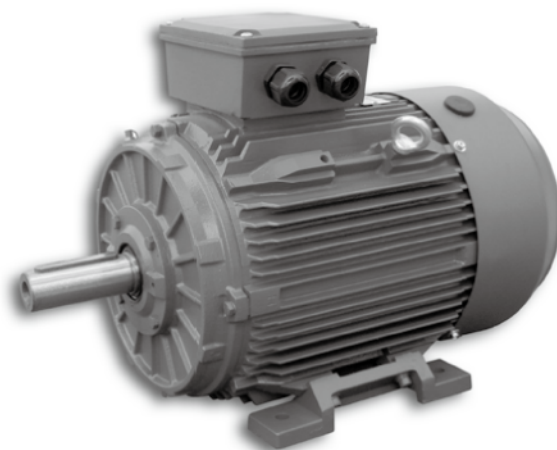


# TCR Ex Series

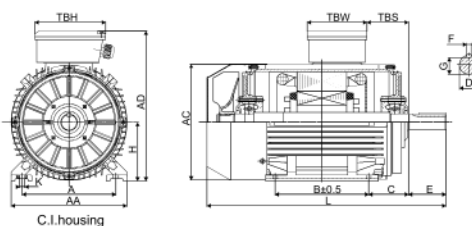
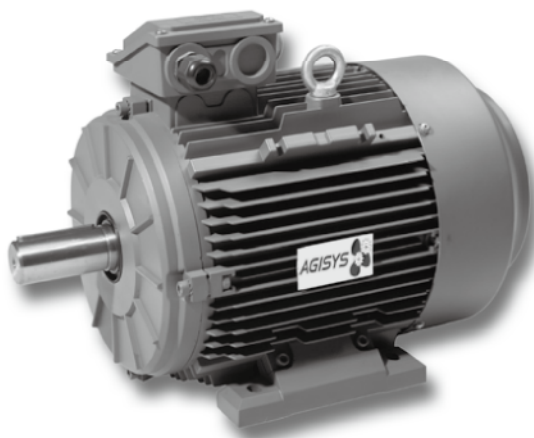
## FEATURES

- Energy saving
- High efficiency
- High starting torque
- Low starting current
- Cast iron housing
- Removable feet
- Option of terminal box location (top, left or right)
- PTC thermal protection
- SKF bearings
- Explosion-proof motor - Ex protection:  
Gas: II 3 G Ex nA IIC T4 Gc  
Dust: II 3 D Ex tc IIIC T125°C Dc

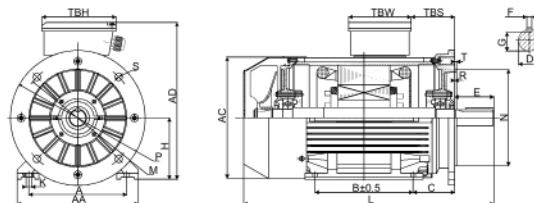


## APPLICATIONS

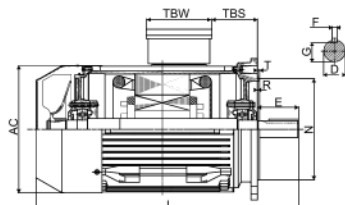
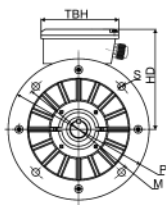
- Pumps
- Waste water treatment plants
- Air compressors, fans
- Gear reducers and power transmission
- Pulp and paper mills
- Steel mill
- Conveyors, elevators
- Material handling equipment
- Agricultural application
- Hydraulic equipment



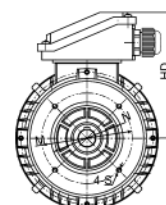
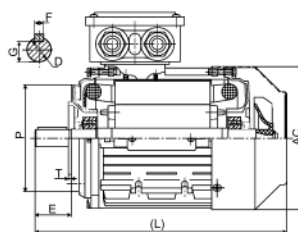
IM B3 Figure 1



IM B35 Figure 2



IM B5 **Figure 3**



IM B14 **Figure 4**

### Overall & Installation Dimensions

Frame	Foot Mounting				Shaft						General						
	H	A	B	C	D	E	F	G	K	AA	AD	HD	AC	L	TBS	TBW	TBH
80	80	125	100	50	Φ19	40	6	15.5	Φ9	160	220	140	Φ158	280	16	97	97
90S/L	90	140	100/125	56	Φ24	50	8	20	Φ10	175	240	150	Φ176	325/350	16	97	97
100	100	160	140	63	Φ28	60	8	24	Φ12	200	265	165	Φ199	388	20	118	118
112	112	190	140	70	Φ28	60	8	24	Φ12	230	291	179	Φ220	405	29	118	118
132S/M	132	216	140/178	89	Φ38	80	10	33	Φ12	255	332	200	Φ259	467/505	29	118	118
160M/L	160	254	210/254	108	Φ42	110	12	37	Φ15	314	402	242	Φ313	605/650	91	162	187
180M/L	180	279	241/279	121	Φ48	110	14	42.5	Φ15	348	439	259	Φ360	687/725	160/180	162	187
200L	200	318	305	133	Φ55	110	16	49	Φ19	388	497	297	Φ399	768	192	186	233
225S	4,8	225	356	286	Φ60	140	18	53	Φ19	436	553	328	Φ465	814	190	186	233
225M	2	225	356	311	Φ55	110	16	49	Φ19	436	553	328	Φ465	809	202	186	233
	4,6,8	225	356	311	Φ60	140	18	53	Φ19	436	553	328	Φ465	839	202	186	233
250M	2	250	406	349	Φ60	140	18	53	Φ24	484	616	366	Φ506	918	233	218	260
	4,6,8	250	406	349	Φ65	140	18	58	Φ24	484	616	366	Φ506	918	233	218	260
280S/M	2	280	457	368/419	Φ65	140	18	58	Φ24	557	668	388	Φ559	984/1035	265	218	260
	4,6,8	280	457	368/419	Φ75	140	20	67.5	Φ24	557	668	388	Φ559	984/1035	265	218	260
315S	2	315	508	406	Φ65	140	18	58	Φ28	630	845	530	Φ680	1205	130	280	320
	4,6,8	315	508	406	Φ80	170	22	71	Φ28	630	845	530	Φ680	1235	130	280	320
315M/L	2	315	508	457/508	Φ65	140	18	58	Φ28	630	845	530	Φ680	1355	130	280	320
	4,6,8	315	508	457/508	Φ80	170	22	71	Φ28	630	845	530	Φ680	1385	130	280	320
355M/L	2	355	610	560/630	Φ75	140	20	67.5	Φ28	740	1010	655	Φ820	1500	140	330	380
	4,6,8	355	610	560/630	Φ100	210	28	90	Φ28	740	1010	655	Φ820	1570	140	330	380

Frame	Bearings		Cable Gland	B5						B14						
	Drive End	Non-Drive End		N	M	P	S	T	R	N	M	P	S	T	R	
80	6204ZZ		1-M20×1.5	Φ130	Φ165	Φ198	4-Φ12	3.5	0	Φ80	Φ100	Φ118	M6	3	0	
90S/L	6205ZZ		1-M20×1.5	Φ130	Φ165	Φ198	4-Φ12	3.5	0	Φ95	Φ115	Φ138	M8	3	0	
100	6206ZZ		1-M20×1.5	Φ180	Φ215	Φ250	4-Φ15	4	0	Φ110	Φ130	Φ158	M8	3.5	0	
112	6306ZZ		2-M25×1.5	Φ180	Φ215	Φ250	4-Φ15	4	0	Φ110	Φ130	Φ158	M8	3.5	0	
132S/M	6308ZZ		2-M25×1.5	Φ230	Φ265	Φ300	4-Φ15	4	0	Φ130	Φ165	Φ198	M10	3.5	0	
160M/L	6309C3		2-M32×1.5	Φ250	Φ300	Φ350	4-Φ19	5	0						0	
180M/L	6311C3		2-M32×1.5	Φ250	Φ300	Φ350	4-Φ19	5	0						0	
200L	6312C3		2-M40×1.5	Φ300	Φ350	Φ400	4-Φ19	5	0						0	
225S	4,8	6313C3	2-M50×1.5	Φ350	Φ400	Φ450	8-Φ19	5	0						0	
225M	2			Φ350	Φ400	Φ450	8-Φ19	5	0							0
	4,6,8			Φ350	Φ400	Φ450	8-Φ19	5	0							0
250M	2	6314C3	2-M50×1.5	Φ400	Φ500	Φ550	8-Φ19	5	0						0	
	4,6,8			Φ400	Φ500	Φ550	8-Φ19	5	0						0	
280S/M	2	6316C3	2-M50×1.5	Φ400	Φ500	Φ550	8-Φ19	5	0						0	
	4,6,8			Φ400	Φ500	Φ550	8-Φ19	5	0						0	
315S/M/L	2	6317C3	2-M63×1.5	Φ550	Φ600	Φ660	8-Φ24	6	0						0	
	4,6,8	NU319		6319C3	Φ550	Φ600	Φ660	8-Φ24	6	0						0
355M/L	2	6319C3	2-M63×1.5	Φ680	Φ740	Φ800	8-Φ24	6	0						0	
	4,6,8	NU322		6322C3	Φ680	Φ740	Φ800	8-Φ24	6	0						0



**IE1 Efficiency Motors Technical Data**

Model	Power (KW)	Full Load Speed (r/min)	I <sub>n</sub> 400V (A)	I <sub>n</sub> 400V (A)	I <sub>a</sub> /I <sub>n</sub> (Times)	Eff. 100%FL (%)	Power Factor (CosΦ)	Full Load Torque (Nm)	T <sub>a</sub> /T <sub>n</sub> (Times)	T <sub>min</sub> /T <sub>n</sub> (Times)	T <sub>max</sub> /T <sub>n</sub> (Times)
<b>2 Pole - 3000 rpm Synchronous Speed 50Hz</b>											
T1C 801-2	0.75	2838	1.09	2.06	5	72.1	0.73	2.52	2.2	1.9	2.6
T1C 802-2	1.1	2836	1.54	2.90	5	75	0.73	3.70	2.2	1.8	2.6
T1C 90S-2	1.5	2842	1.98	3.79	5	77.2	0.74	5.04	2.2	1.8	2.5
T1C 90L-2	2.2	2835	2.39	5.04	5.5	79.7	0.79	7.41	2.2	1.8	2.5
T1C 100L-2	3	2841	2.97	6.56	5.5	81.5	0.81	10.08	2.3	1.9	2.6
T1C 112M-2	4	2900	3.88	8.58	6	83.1	0.81	13.17	2.4	1.9	2.6
T1C 132S1-2	5.5	2895	4.65	11.16	6	84.7	0.84	18.14	2.3	2	2.6
T1C 132S2-2	7.5	2900	5.98	14.81	6.4	86	0.85	24.70	2.3	2	2.7
T1C 160M1-2	11	2910	7.85	20.83	6.3	87.6	0.87	36.10	2.3	2	2.7
T1C 160M2-2	15	2908	10.57	28.06	6.8	88.7	0.87	49.26	2.3	2	2.7
T1C 160L-2	18.5	2912	11.69	33.60	7	89.3	0.89	60.67	2.3	2	2.7
T1C 180M-2	22	2920	13.81	39.69	7.2	89.9	0.89	71.95	2.3	2	2.6
T1C 200L1-2	30	2915	18.67	53.64	7	90.7	0.89	98.28	2.3	2	2.6
T1C 200L2-2	37	2920	22.90	65.80	7.2	91.2	0.89	121.00	2.3	2	2.7
T1C 225M-2	45	2920	26.21	78.70	7	91.7	0.90	147.16	2.3	2	2.7
T1C 250M-2	55	2930	35.47	97.85	7.8	92.2	0.88	179.25	2.2	1.9	2.5
T1C 280S-2	75	2930	45.66	131.22	7.8	92.7	0.89	244.44	2.1	1.9	2.5
T1C 280M-2	90	2930	51.68	155.21	7.7	93	0.90	293.32	2.1	1.9	2.5
T1C 315S-2	110	2940	62.97	189.09	7.7	93.3	0.90	357.29	2	1.8	2.3
T1C 315M-2	132	2940	71.12	223.93	7.6	93.5	0.91	428.74	2	1.8	2.3
T1C 315L1-2	160	2945	91.10	273.57	7.8	93.8	0.90	518.81	2	1.8	2.3
T1C 315L2-2	200	2945	120.08	345.07	7.9	94	0.89	648.51	2	1.8	2.3
T1C 355M-2	250	2945	142.04	426.54	7.8	94	0.90	810.64	2	1.8	2.3
T1C 355L-2	315	2945	189.13	543.48	7.8	94	0.89	1021.40	2	1.8	2.3
<b>4 Pole - 1500 rpm Synchronous Speed 50Hz</b>											
T1C 802-4	0.75	1410	1.03	2.00	5.4	72.1	0.75	5.08	2.2	1.9	2.6
T1C 90S-4	1.1	1415	1.32	2.71	5.3	75	0.78	7.42	2.2	1.8	2.6
T1C 90L-4	1.5	1410	1.74	3.60	5.5	77.2	0.78	10.16	2.2	1.8	2.5
T1C 100L1-4	2.2	1420	2.31	4.98	6	79.7	0.80	14.79	2.2	1.8	2.5
T1C 100L2-4	3	1420	3.08	6.64	6	81.5	0.80	20.17	2.3	1.9	2.6
T1C 112M-4	4	1425	3.74	8.47	6.3	83.1	0.82	26.81	2.4	1.9	2.6
T1C 132S-4	5.5	1420	4.85	11.29	6.5	84.7	0.83	36.99	2.3	2	2.6
T1C 132M-4	7.5	1420	5.98	14.81	6.4	86	0.85	50.44	2.3	2	2.7
T1C 160M-4	11	1430	8.61	21.32	6.8	87.6	0.85	73.46	2.3	2	2.7
T1C 160L-4	15	1435	10.06	27.74	6.7	88.7	0.88	99.82	2.3	2	2.7
T1C 180M-4	18.5	1435	12.32	33.98	7.2	89.3	0.88	123.11	2.3	2	2.7
T1C 180L-4	22	1450	15.29	40.60	7.3	89.9	0.87	144.89	2.3	2	2.6
T1C 200L-4	30	1450	18.67	53.64	7.6	90.7	0.89	197.57	2.3	2	2.6
T1C 225S-4	37	1460	22.90	65.80	7.5	91.2	0.89	242.00	2.3	2	2.7
T1C 225M-4	45	1470	29.18	80.49	7.3	91.7	0.88	292.33	2.3	2	2.7
T1C 250M-4	55	1470	33.70	96.85	7.4	92.1	0.89	357.29	2.2	1.9	2.5
T1C 280S-4	75	1470	48.11	132.71	7.5	92.7	0.88	487.21	2.1	1.9	2.5
T1C 280M-4	90	1470	51.68	155.21	7.7	93	0.90	584.65	2.1	1.9	2.5
T1C 315S-4	110	1475	62.97	189.09	7.8	93.3	0.90	712.15	2	1.8	2.3
T1C 315M-4	132	1475	71.12	223.93	7.8	93.5	0.91	854.58	2	1.8	2.3
T1C 315L1-4	160	1475	85.93	270.56	7.9	93.8	0.91	1035.86	2	1.8	2.3
T1C 315L2-4	200	1475	113.63	341.23	7.7	94	0.90	1294.82	2	1.8	2.3
T1C 355M-4	250	1475	150.10	431.33	7.9	94	0.89	1618.52	2	1.8	2.3
T1C 355L-4	315	1475	178.97	537.44	7.8	94	0.90	2039.34	2	1.8	2.3
<b>6 Pole - 1000 rpm Synchronous Speed 50Hz</b>											
T1C 90S-6	0.75	930	1.16	2.15	5.3	70	0.72	7.70	2.2	1.9	2.6
T1C 90L-6	1.1	930	1.63	3.02	5	72.9	0.72	11.29	2.2	1.8	2.6
T1C 100L-6	1.5	935	2.09	3.94	4.9	75.2	0.73	15.32	2.2	1.8	2.5
T1C 112M-6	2.2	935	2.97	5.60	5.7	77.7	0.73	22.47	2.2	1.8	2.5
T1C 132S-6	3	935	3.95	7.44	6.3	79.7	0.73	30.64	2.3	1.9	2.6
T1C 132M1-6	4	940	5.01	9.59	6.2	81.4	0.74	40.64	2.4	1.9	2.6
T1C 132M2-6	5.5	940	6.34	12.57	6.8	83.1	0.76	55.87	2.3	2	2.6
T1C 160M-6	7.5	950	8.49	16.82	7	84.7	0.76	75.39	2.3	2	2.7
T1C 160L-6	11	955	11.43	23.56	7.3	86.4	0.78	109.99	2.3	2	2.7
T1C 180L-6	15	955	14.84	31.25	7.2	87.7	0.79	149.99	2.3	2	2.7
T1C 200L1-6	18.5	960	15.58	36.31	6.9	88.6	0.83	184.02	2.3	2	2.7
T1C 200L2-6	22	960	18.41	42.89	7.3	89.2	0.83	218.84	2.3	2	2.6
T1C 225M-6	30	970	24.82	57.84	7.4	90.2	0.83	295.34	2.3	2	2.6
T1C 250M-6	37	970	27.94	69.20	7.5	90.8	0.85	364.25	2.3	2	2.7
T1C 280S-6	45	975	32.26	82.63	7.7	91.4	0.86	440.74	2.3	2	2.7
T1C 280M1-6	55	975	37.40	99.29	7.7	91.9	0.87	538.68	2.2	1.9	2.5
T1C 315S-6	75	975	45.71	131.36	7.9	92.6	0.89	734.56	2.1	1.9	2.5
T1C 315M-6	90	975	51.74	155.37	8	92.9	0.90	881.47	2	1.8	2.3
T1C 315L1-6	110	975	62.97	189.09	7.7	93.3	0.90	1077.36	2	1.8	2.3
T1C 315L2-6	132	975	79.68	228.96	8	93.5	0.89	1292.83	2	1.8	2.3
T1C 355M1-6	160	975	85.93	270.56	7.6	93.8	0.91	1567.06	2	1.8	2.3
T1C 355M2-6	200	975	113.63	341.23	7.8	94	0.90	1958.83	2	1.8	2.3
T1C 355L-6	250	975	150.10	431.33	7.8	94	0.89	2448.54	2	1.8	2.3