

TERRAMAX® TCS SERIES SMOKE EXTRACTION MOTORS



TerraMAX TCS Series motors are IE3 energy efficient low voltage motors specifically designed to be coupled with fan for smoke extraction during a fire mishap, while working at elevated temperatures for the specified duration. During normal conditions the unit can be used for providing regular ventilation. Our experience in motor applications and the design of a reliable insulation system for these motors, make TCS Series motors a perfect fit for this severe application.

SPECIFICATIONS

- Output: 0.75kW to 375kW (1HP to 500HP)
- Pole: 2 to 8 pole
- Frame: IEC 80-355
- Power supply: Designed for specific voltage supply between 200V to 690V and frequency 50 or 60Hz
- Construction: Cast iron with integrally cast feet
- Leads: Flying leads (lead termination in terminal box on request).
- Terminal box (on request): Cast iron with special captive screws and metric cable entry
- Connection: ≤ 3kW: star connection, >3kW: delta connection
- Protection: IP55 (higher protection class on request)
- Insulation: Class H insulation with class B temperature rise
- Bearings: Shielded bearings for IEC 80-132
- Mounting: All standard mountings B3, B5, B35, V1 (B14 and B34 for IEC 80-132)
- Reference standard: BS EN 12101-3: 2015
- Applicable environment: 300°C, 2 hrs
- Cooling: IEC 418 (Air-over motor), IC 410/411 can be offered based on application.

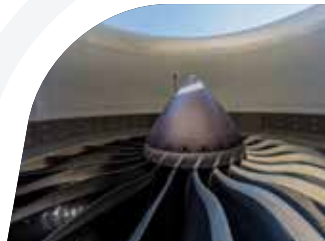
OPTIONAL ACCESSORIES

Space heaters, RTD, BTD (for less than 250kW motors only), cable glands, forced ventilation, insulated bearing, canopy for V1 mounting.

APPLICATIONS

- Jet fans
- Axial fans
- Axial roof ventilators
- Tunnel ventilators
- Centrifugal roof units

CERTIFICATIONS (ON REQUEST)



TERRAMAX[®] MOTORS TCS SERIES

PERFORMANCE DATA

Model No.	Frame	Rated (kW)	Speed (RPM)	50 Hz Supply										Moment of Inertia (kgm ²)	Weight (kg)
				Full Load Amp			Power factor	Efficiency			Starting Current (I _{LR} /I _{RATED})	Starting Torque (T _{LR} /T _{RATED})	Breakdown Torque (T _{BD} /T _{RATED})		
				380V	400V	415V		100%	75%	50%					
2 POLE MOTORS															
TCSP751A.1..G.....	80M	0.75	2880	1.7	1.6	1.6	0.83	80.7	80.7	75.6	6.5	3.0	3.3	0.0013	15.7
TCS1P11A.1..G.....	80M	1.1	2878	2.4	2.3	2.2	0.84	82.7	82.7	79.3	6.8	3.2	3.3	0.0016	17.2
TCS1P51A.1..G.....	90S	1.5	2888	3.2	3.0	2.9	0.85	84.2	84.2	81.8	7.5	3.5	3.5	0.0021	21.3
TCS2P21A.1..G.....	90L	2.2	2889	4.4	4.2	4.0	0.88	85.9	85.9	84.7	8.1	3.8	3.6	0.0029	24.7
TCS0031A.1..G.....	100L	3	2889	5.8	5.5	5.3	0.90	87.1	87.1	86.6	7.9	3.2	3.6	0.0042	34
TCS3P71A.1..G.....	100L	3.7	2880	-	-	6.3	0.93	87.8	87.8	88.4	7.7	3.3	3.5	0.0058	42
TCS0041A.1..G.....	112M	4	2921	7.7	7.3	7.0	0.90	88.1	88.1	88.1	8.6	2.7	3.7	0.0101	43
TCS5P51A.1..G.....	132S	5.5	2936	10.5	10.0	9.6	0.89	89.2	89.2	87.7	7.7	2.4	3.6	0.0184	69
TCS7P51A.1..G.....	132S	7.5	2934	14.1	13.4	12.9	0.90	90.1	90.1	89.3	7.8	2.6	3.6	0.0214	75
TCS0111A.1..G.....	160M	11	2955	20.6	19.6	18.9	0.89	91.2	91.2	89.7	7.9	2.3	3.7	0.0626	124
TCS0151A.1..G.....	160M	15	2956	27.9	26.5	25.5	0.89	91.9	91.9	90.9	8.4	2.6	3.9	0.0754	138
TCS18P1A.1..G.....	160L	18.5	2953	33	32	31	0.91	92.4	92.4	91.9	8.1	2.6	3.6	0.0928	161
TCS0221A.1..G.....	180M	22	2961	41	39	38	0.87	92.7	92.7	91.3	7.4	2.2	3.6	0.1399	196
TCS0301A.1..G.....	200L	30	2973	57	55	53	0.85	93.3	93.3	91.6	7.4	2.1	3.7	0.2430	251
TCS0371A.1..G.....	200L	37	2974	70	66	64	0.86	93.7	93.7	92.5	7.8	2.4	3.8	0.2934	281
TCS0451A.1..G.....	225M	45	2978	84	79	77	0.87	94.0	94.0	92.7	8.0	2.2	3.9	0.4264	383
TCS0551A.1..G.....	250M	55	2977	100	95	91	0.89	94.3	94.3	93.0	7.0	1.9	3.4	0.6214	467
TCS0751A.1..G.....	280S	75	2983	137	130	125	0.88	94.7	94.7	93.2	7.9	2.1	3.8	1.0793	643
TCS0901A.1..G.....	280M	90	2982	162	154	148	0.89	95.0	95.0	93.9	7.6	2.1	3.6	1.1811	698
TCS1101A.1..G.....	315S	110	2983	199	190	183	0.88	95.2	95.2	92.7	7.2	2.0	3.6	2.2274	917
TCS1321A.1..G.....	315M	132	2984	236	224	216	0.89	95.4	95.4	93.3	7.4	2.2	3.7	2.4236	968
TCS1601A.1..G.....	315L	160	2983	286	271	262	0.89	95.6	95.6	94.0	7.3	2.2	3.6	2.7640	1093
TCS2001A.1..G.....	315L	200	2984	356	339	326	0.89	95.8	95.8	94.6	7.3	2.3	3.6	3.0911	1173
TCS2501A.1..G.....	355M	250	2983	441	419	403	0.90	95.8	95.8	94.2	6.9	2.0	3.3	4.0729	1633
TCS3151A.1..G.....	355L	315	2984	555	527	508	0.90	95.8	95.8	94.9	7.0	2.1	3.3	4.7428	1772
TCS3551A.1..G.....	355L	355	2987	633	601	579	0.89	95.8	95.8	95.0	8.6	2.8	4.0	5.7956	1998
TCS3751A.1..G.....	355L	375	2986	661	628	605	0.90	95.8	95.8	95.2	8.1	2.6	3.7	5.7956	1998
4 POLE MOTORS															
TCSP752A.1..G.....	80M	0.75	1446	1.8	1.7	1.7	0.75	82.5	82.5	77.6	6.6	3.0	3.0	0.0031	18.7
TCS1P12A.1..G.....	90S	1.1	1450	2.6	2.5	2.4	0.77	84.1	84.1	79.1	6.8	2.9	3.4	0.0045	21.3
TCS1P52A.1..G.....	90L	1.5	1448	3.5	3.3	3.2	0.77	85.3	85.3	80.3	7.0	3.0	3.4	0.0052	22.8
TCS2P22A.1..G.....	100L	2.2	1456	4.6	4.4	4.2	0.84	86.7	86.7	85.1	7.0	2.3	2.9	0.0115	35
TCS0032A.1..G.....	100L	3	1458	6.2	5.9	5.7	0.84	87.7	87.7	86.2	7.7	2.6	3.1	0.0145	40
TCS3P72A.1..G.....	112M	3.7	1460	-	-	7.1	0.82	88.4	88.4	87.7	7.5	1.8	2.8	0.0192	50
TCS0042A.1..G.....	112M	4	1457	8.3	7.9	7.6	0.83	88.6	88.6	88.1	8.4	3.2	3.6	0.0192	51
TCS5P52A.1..G.....	132S	5.5	1468	11.1	10.5	10.2	0.84	89.6	89.6	89.7	6.7	2.3	2.7	0.0446	77
TCS7P52A.1..G.....	132M	7.5	1470	15.2	14.4	13.9	0.83	90.4	90.4	90.4	7.5	2.8	3.0	0.0550	87
TCS0112A.1..G.....	160M	11	1475	21.8	20.7	19.9	0.84	91.4	91.4	90.6	7.3	2.5	3.3	0.1200	136
TCS0152A.1..G.....	160L	15	1476	29.1	27.7	26.7	0.85	92.1	92.1	91.6	7.6	2.7	3.4	0.1597	167
TCS18P2A.1..G.....	180M	18.5	1477	37	35	33	0.83	92.6	92.6	92.2	7.3	2.5	3.3	0.2209	206
TCS0222A.1..G.....	180L	22	1478	44	42	40	0.82	93.0	93.0	92.5	7.5	2.7	3.5	0.2415	226
TCS0302A.1..G.....	200L	30	1479	57	54	52	0.85	93.6	93.6	93.6	6.6	2.2	2.9	0.4488	256
TCS0372A.1..G.....	225S	37	1484	70	67	64	0.85	93.9	93.9	94.0	7.3	2.4	3.1	0.6683	365
TCS0452A.1..G.....	225M	45	1483	85	81	78	0.85	94.2	94.2	94.2	7.2	2.4	3.0	0.7130	378
TCS0552A.1..G.....	250M	55	1487	103	98	94	0.86	94.6	94.6	94.0	7.2	2.2	3.4	1.3974	512
TCS0752A.1..G.....	280S	75	1489	138	131	126	0.87	95.0	95.0	94.0	6.4	2.3	2.7	2.2302	686
TCS0902A.1..G.....	280M	90	1489	165	157	151	0.87	95.2	95.2	94.5	6.4	2.4	2.7	2.3841	728
TCS1102A.1..G.....	315S	110	1487	199	189	182	0.88	95.4	95.4	95.0	6.5	1.9	2.9	3.4482	902
TCS1322A.1..G.....	315M	132	1488	238	226	218	0.88	95.6	95.6	95.2	6.8	2.1	3.0	3.7582	956
TCS1602A.1..G.....	315L	160	1488	288	274	264	0.88	95.8	95.8	95.6	6.9	2.2	3.1	4.4423	1097
TCS2002A.1..G.....	315L	200	1488	356	338	326	0.89	96.0	96.0	95.8	6.9	2.2	3.0	5.0623	1186
TCS2502A.1..G.....	355M	250	1490	445	422	407	0.89	96.0	96.0	95.8	6.5	1.9	2.5	8.4434	1653
TCS3152A.1..G.....	355L	315	1489	554	526	507	0.90	96.0	96.0	96.2	6.2	1.8	2.3	10.176	1824
TCS3552A.1..G.....	355L	355	1490	624	593	572	0.90	96.0	96.0	96.2	6.9	2.1	2.5	10.945	1889
TCS3752A.1..G.....	355L	375	1490	659	626	604	0.90	96.0	96.0	96.3	6.6	2.1	2.4	11.138	1914

Blue Shaded: For sale by Regal Rexnord operations in India only. Performance per IS:12615

The performance data is applicable for normal working conditions and ambient of 40°C

TERRAMAX[®] MOTORS TCS SERIES

PERFORMANCE DATA

Model No.	Frame	Rated (kW)	Speed (RPM)	50 Hz Supply										Moment of Inertia (kgm²)	Weight (kg)
				Full Load Amp			Power factor	Efficiency			Starting Current (I _{LR} /I _{RATED})	Starting Torque (T _{LR} /T _{RATED})	Breakdown Torque (T _{BD} /T _{RATED})		
				380V	400V	415V		100%	75%	50%					
6 POLE MOTORS															
TCSP753A.1..G.....	90S	0.75	946	2.3	2.1	2.1	0.64	78.9	78.9	71.1	4.8	3.0	3.1	0.0036	21.3
TCS1P13A.1..G.....	90L	1.1	941	3.1	3.0	2.9	0.66	81.0	81.0	74.8	4.8	3.0	3.0	0.0046	23.8
TCS1P53A.1..G.....	100L	1.5	966	3.7	3.5	3.4	0.74	82.5	82.5	77.8	5.9	2.2	2.7	0.0143	32
TCS2P23A.1..G.....	112M	2.2	958	5.4	5.2	5.0	0.73	84.3	84.3	82.4	5.9	2.5	2.8	0.0158	43
TCS0033A.1..G.....	132S	3	973	7.5	7.1	6.9	0.71	85.6	85.6	84.3	5.5	2.0	2.6	0.0390	61
TCS3P73A.1..G.....	132S	3.7	973	-	-	7.8	0.76	86.5	86.5	86.7	5.6	2.0	2.5	0.0494	68
TCS0043A.1..G.....	132M	4	973	9.5	9.0	8.7	0.74	86.8	86.8	85.9	5.6	2.1	2.6	0.0494	68
TCS5P53A.1..G.....	132M	5.5	973	12.5	11.9	11.4	0.76	88.0	88.0	88.0	5.9	2.2	2.6	0.0660	80
TCS7P53A.1..G.....	160M	7.5	976	16.0	15.2	14.6	0.80	89.1	89.1	88.7	5.3	1.8	2.4	0.1355	125
TCS0113A.1..G.....	160L	11	977	23.4	22.3	21.5	0.79	90.3	90.3	89.6	5.6	2.0	2.6	0.1811	152
TCS0153A.1..G.....	180L	15	982	32	30	29.3	0.78	91.2	91.2	90.7	6.1	2.1	2.7	0.3035	210
TCS18P3A.1..G.....	200L	18.5	984	38	36	35	0.80	91.7	91.7	91.6	5.8	2.0	2.4	0.5179	241
TCS0223A.1..G.....	200L	22	984	45	43	41	0.80	92.2	92.2	92.1	6.0	2.1	2.5	0.6070	262
TCS0303A.1..G.....	225M	30	987	59	56	54	0.83	92.9	92.9	91.9	6.8	2.2	2.9	0.9206	361
TCS0373A.1..G.....	250M	37	987	73	70	67	0.82	93.3	93.3	92.8	6.8	2.4	2.9	1.6082	466
TCS0453A.1..G.....	280S	45	989	90	86	82	0.81	93.7	93.7	92.9	6.1	1.9	2.6	2.2380	566
TCS0553A.1..G.....	280M	55	989	107	102	98	0.83	94.1	94.1	93.7	6.2	1.9	2.5	2.6734	590
TCS0753A.1..G.....	315S	75	989	149	141	136	0.81	94.6	94.6	94.4	5.1	1.6	2.2	3.3734	762
TCS0903A.1..G.....	315M	90	990	176	167	161	0.82	94.9	94.9	94.7	5.2	1.7	2.2	3.9282	828
TCS1103A.1..G.....	315L	110	990	214	204	196	0.82	95.1	95.1	95.0	5.4	1.8	2.2	4.7728	953
TCS1323A.1..G.....	315L	132	990	253	241	232	0.83	95.4	95.4	95.2	5.4	1.9	2.2	5.4662	1024
TCS1603A.1..G.....	355M	160	991	303	288	277	0.84	95.6	95.6	95.6	6.1	1.9	2.5	8.5699	1529
TCS2003A.1..G.....	355M	200	991	373	355	342	0.85	95.8	95.8	95.9	6.0	1.9	2.5	9.9148	1645
TCS2503A.1..G.....	355L	250	991	466	443	427	0.85	95.8	95.8	95.9	6.1	2.0	2.5	11.708	1798
8 POLE MOTORS															
TCSP754A..1.G.....	100L	0.75	723	2.3	2.2	2.1	0.66	75.0	75.0	69.5	4.8	1.8	2.7	0.0149	32
TCS1P14A.1..G.....	100L	1.1	721	3.2	3.0	2.9	0.67	77.7	77.7	72.9	4.8	1.9	2.7	0.0172	35
TCS1P54A.1..G.....	112M	1.5	715	4.2	4.0	3.9	0.68	79.7	79.7	77.8	4.7	1.9	2.4	0.0200	49
TCS2P24A.1..G.....	132S	2.2	723	5.8	5.5	5.3	0.70	81.9	81.9	81.3	4.4	1.8	2.3	0.0453	65
TCS0034A.1..G.....	132M	3	724	7.9	7.5	7.2	0.69	83.5	83.5	82.9	4.7	2.0	2.5	0.0577	73
TCS3P74A.1..G.....	160M	3.7	732	-	-	8.8	0.69	84.5	84.5	85.4	5.5	1.8	2.5	0.1312	123
TCS0044A.1..G.....	160M	4	730	10.4	9.9	9.5	0.69	84.8	84.8	85.5	5.3	1.8	2.4	0.1312	123
TCS5P54A.1..G.....	160M	5.5	729	13.5	12.8	12.3	0.72	86.2	86.2	87.0	5.3	1.7	2.3	0.1674	139
TCS7P54A.1..G.....	160L	7.5	728	18.1	17.2	16.6	0.72	87.3	87.3	87.8	5.4	1.8	2.3	0.2040	162
TCS0114A.1..G.....	180L	11	730	25.8	24.5	23.7	0.73	88.6	88.6	89.5	6.5	1.8	3.0	0.3337	218
TCS0154A.1..G.....	200L	15	739	36	34	33	0.71	89.6	89.6	89.0	5.5	2.0	2.6	0.7327	296
TCS18P4A.1..G.....	225S	18.5	738	41	38	37	0.77	90.1	90.1	90.5	5.2	1.7	2.3	0.8781	355
TCS0224A.1..G.....	225M	22	738	47	45	43	0.78	90.6	90.6	91.1	5.2	1.7	2.3	1.0453	358
TCS0304A.1..G.....	250M	30	739	63	60	58	0.79	91.3	91.3	92.8	5.3	1.9	2.3	2.1617	541
TCS0374A.1..G.....	280S	37	742	79	75	72	0.78	91.8	91.8	92.0	6.0	2.1	2.4	3.2584	693
TCS0454A.1..G.....	280M	45	742	96	91	88	0.77	92.2	92.2	92.6	5.9	2.1	2.4	3.5326	741
TCS0554A.1..G.....	315S	55	742	125	119	115	0.72	92.5	92.5	91.4	4.7	1.8	2.1	3.7895	827
TCS0754A.1..G.....	315S	75	743	168	159	154	0.73	93.1	93.1	92.1	4.8	1.9	2.1	4.8296	839
TCS0904A.1..G.....	315S	90	743	201	191	184	0.73	93.4	93.4	92.6	4.9	1.9	2.1	5.6618	855
TCS1104A.1..G.....	355M	110	743	220	209	202	0.81	93.7	93.7	94.2	6.0	1.5	2.5	7.8323	1459
TCS1324A.1..G.....	355M	132	742	260	247	238	0.82	94.0	94.0	94.5	6.0	1.5	2.4	8.9257	1550
TCS1504A.1..G.....	355M	150	742	295	280	270	0.82	94.2	94.2	94.7	6.0	1.5	2.4	9.9098	1642
TCS1604A.1..G.....	355M	160	742	314	299	288	0.82	94.3	94.3	94.8	6.2	1.6	2.5	10.566	1697
TCS2004A.1..G.....	355L	200	742	387	368	354	0.83	94.6	94.6	95.0	6.3	1.7	2.5	13.190	1920

Blue Shaded: For sale by Regal Rexnord operations in India only. Performance per IS:12615

The performance data is applicable for normal working conditions and ambient of 40°C

TERRAMAX® MOTORS TCS SERIES

PART NUMBER LOGIC

Marathon® TerraMAX® TCS series standard product code for IEC frame motors is shown below.

IE3 smoke extraction motor			Rated power			Frame		Voltage					Mechanical variations				
						A = Std. IEC, B = Non-Std. IEC		1 = 400V 2 = 400/690V 3 = 415V 4 = 380/660V 7 = 525V 8 = 440V B = 690V E = 230/460V F = 380V G = 230/380V									
T	C	S	0	4	5	2	A	1	1	1	3	G	A	C	0	1	1
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Pole			Frequency			Mounting			T box position			Accessories					
1 = 2P 2 = 4P 3 = 6P 4 = 8P 5 = 10P 6 = 12P 0 = Multispeed			1 = 50Hz 2 = 60Hz 3 = 50/60Hz 4 = Other			1=B3 2=B5 3=B35 4=V1 5=B34A 6=B34B 7=B14A 8=B14B 9=SpI			1=Top 2=Left 3=Right			B=Brake C=Brake + Encoder E=Encoder G=General Purpose					

For additional details, please contact our technical support team.

marathon®
Motors

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