



TOTALLY ENCLOSED FAN-COOLED, LOW VOLTAGE SQUIRREL CAGE  
HIGH THRUST HOLLOWSHAFT

**PUMP MOTORS**



# PERFORMANCE DATA

TEFC, CLASS F INSULATION, CLASS B TEMPERATURE RISE, BS, AS DESIGN B

TYPICAL PERFORMANCE

415V, 50HZ

OUTPUT		FULL LOAD RPM	FRAME NO. (EHV)	EFFICIENCY			POWER FACTOR			CURRENT		TORQUE			ROTOR GD <sup>2</sup> (KG-M <sup>2</sup> )	STANDARD DOWN TORQUE KGS
(KW)	HP			FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD (KG-M)	LOCKED ROTOR (%FLT)	PULL OUT (%FLT)		
1.5	2	700	112M-WC	74.0	72.5	70.5	68.0	60.8	44.5	4.04	18	2.09	150	180	0.060	1000
2.2	3	950	112M-WC	80.8	80.0	78.0	74.0	67.0	55.0	5.12	30	2.25	175	220	0.060	1000
		710	132S-WD	80.8	80.0	78.0	69.0	62.0	47.5	5.49	29	3.02	150	220	0.154	1500
3.0	4	955	132S-WD	82.0	81.0	79.0	74.8	67.0	57.0	6.80	40	3.06	175	230	0.154	1500
		710	132M-WD	80.0	79.0	77.0	70.0	64.0	50.5	7.45	38	4.11	140	230	0.192	1500
4.0	5.5	2880	112M-WC	84.8	83.5	81.5	82.0	85.0	78.0	7.46	56	1.35	200	260	0.047	700
		1440	112M-WC	84.8	83.5	81.5	82.0	77.0	66.0	8.00	56	2.70	200	240	0.066	850
		960	132M-WD	83.3	82.5	81.0	76.3	70.0	59.5	8.76	55	4.05	175	240	0.181	1500
		720	160M-WD	82.0	80.5	78.5	72.0	65.0	52.5	9.43	55	5.41	140	230	0.351	2000
5.5	7.5	2900	132S-WD	84.8	84.0	82.0	87.0	85.5	78.0	10.4	76	1.84	200	250	0.065	1000
		1445	132S-WD	86.0	84.8	82.5	82.0	77.0	67.0	10.9	76	3.70	200	230	0.106	1300
		960	132M-WD	84.8	84.0	82.0	76.3	71.0	62.0	11.8	76	5.57	175	230	0.232	1500
		720	160M-WD	84.8	84.0	82.0	74.0	67.0	54.0	12.2	76	7.43	140	230	0.493	2000
7.5	10	2900	132S-WD	85.5	84.8	82.0	87.0	85.5	78.5	14.0	95	2.52	200	240	0.078	1000
		1445	132M-WD	86.0	85.5	83.0	84.0	80.0	70.0	14.4	95	5.05	200	230	0.146	1300
		965	160M-WD	86.0	84.8	83.0	77.8	72.0	64.0	15.6	95	7.56	175	230	0.408	1750
		725	160L-WD	86.0	84.8	83.0	74.8	69.0	58.0	16.2	95	10.07	140	220	0.598	2000
11	15	2900	160M-WD	87.0	86.5	84.8	87.0	85.5	80.0	20.2	143	3.69	200	230	0.164	1400
		1450	160M-WD	88.0	87.5	85.5	84.0	81.0	71.0	20.7	143	7.38	200	230	0.321	1750
		965	160L-WD	88.0	87.5	85.5	80.0	73.0	64.0	21.7	143	11.09	175	220	0.598	2000
		725	180L-WD	88.0	87.5	85.5	76.3	70.0	59.0	22.8	143	14.76	140	220	1.254	2000
15	20	2910	160M-WD	88.0	87.0	85.5	88.0	86.0	81.5	26.9	191	5.02	200	230	0.217	1400
		1455	160L-WD	88.5	88.0	86.0	84.0	81.0	72.0	28.1	191	10.03	200	220	0.411	1750
		965	180L-WD	88.5	87.5	86.0	80.8	75.5	65.0	29.2	190	15.12	175	220	1.254	2000
		725	200L-WF	88.5	87.5	86.0	76.3	71.0	60.0	30.9	190	20.13	140	210	1.780	2850
18.5	25	2915	160L-WD	88.0	87.5	86.0	88.0	86.5	82.5	33.2	225	6.18	160	220	0.267	1400
		1455	180M-WD	89.5	88.5	86.5	84.8	81.5	74.5	33.9	225	12.37	170	220	0.624	1750
		965	200L-WF	89.5	88.5	87.0	80.8	76.3	68.0	35.6	225	18.65	160	210	1.638	2850
		730	225S-WG	89.5	88.5	87.0	77.8	71.0	62.0	37.0	225	24.66	140	210	2.365	4200
22	30	2920	180M-WD	89.0	88.0	86.5	89.0	88.0	84.0	38.6	270	7.33	160	220	0.340	1400
		1455	180L-WD	90.2	89.5	87.5	85.5	82.5	76.3	39.7	270	14.71	170	210	0.762	1750
		965	200L-WF	90.2	89.5	87.5	80.8	77.0	70.0	42.0	270	22.18	160	210	1.952	2850
		730	225M-WG	90.2	89.5	87.5	78.5	72.0	63.0	43.2	270	29.32	140	200	2.839	4200
30	40	2925	200L-BF	89.5	88.5	87.0	89.0	88.0	84.0	52.4	361	9.98	160	210	0.543	2000
		1455	200L-BF	91.0	90.2	88.0	85.5	83.3	77.0	53.6	361	20.06	170	210	1.293	2500
		965	225M-WG	91.0	90.2	88.0	81.5	78.0	72.0	56.3	361	30.25	160	200	2.720	4200
37	50	2925	200L-WF	91.0	90.2	88.0	89.9	88.5	86.0	62.9	452	12.31	160	200	0.606	2000
		1455	225S-WG	91.7	91.0	89.0	86.5	83.3	77.8	64.9	452	24.74	170	200	2.010	4200
45	60	2925	225M-WG	91.0	90.2	88.5	89.5	88.5	86.5	76.9	510	14.97	125	200	1.410	2000
		1455	225M-WG	92.4	91.7	90.2	86.5	84.0	78.5	78.3	510	30.09	140	200	2.285	3650



# PERFORMANCE DATA

TEFC, CLASS F INSULATION, CLASS B TEMPERATURE RISE, BS, AS DESIGN B

TYPICAL PERFORMANCE

415V, 50HZ

OUTPUT		FULL LOAD RPM	FRAME NO.	EFFICIENCY			POWER FACTOR			CURRENT		TORQUE			ROTOR GD <sup>2</sup> (KG-M <sup>2</sup> )	STANDARD DOWN THRUST KGS
(KW)	HP			FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (A)	LOCKED ROTOR (A)	FULL LOAD (KG-M)	LOCKED ROTOR (%FLT)	PULL OUT (%FLT)		
30	40	720	250S-W5	91.7	91.0	89.5	78.5	72.0	64.0	58	360	40.6	160	220	4.10	4970
37	50	965	250S-W5	91.7	91.0	89.5	82.5	78.5	72.0	68	445	37.3	165	220	4.10	4970
		720	250M-W5	91.7	91.0	89.5	80.0	74.0	66.0	70	440	50.0	150	210	4.90	4970
45	60	970	250M-W5	92.4	91.7	89.5	84.0	80.0	74.0	81	510	45.2	150	220	4.90	4970
		725	280S-W5	92.4	91.7	90.2	80.0	74.0	66.0	85	505	60.5	140	210	7.33	5250
55	75	2945	250S-W5	91.7	90.2	88.5	89.5	87.5	85.5	93	625	18.2	130	220	1.55	2000
		1470	250S-W5	92.4	91.0	89.5	86.5	84.0	78.5	96	625	36.4	150	220	3.91	4350
		970	280S-W5	92.4	92.4	91.0	84.0	80.0	74.0	99	625	55.2	145	220	7.33	5250
		730	280M-W5	92.4	92.4	91.0	81.5	74.0	66.0	102	620	73.4	135	210	10.0	5250
75	100	2950	250M-W5	92.4	91.0	89.5	89.5	87.5	85.5	126	855	24.8	130	220	1.85	2000
		1475	250M-W5	93.0	91.7	89.5	87.5	84.0	80.0	128	855	49.5	145	220	4.54	4350
		975	280M-W5	93.0	92.4	91.0	85.5	81.5	74.0	131	850	74.9	140	210	10.0	5250
		730	315S-W5	93.0	92.4	91.0	82.5	75.5	68.0	136	850	100	135	210	19.1	5500
90	121	1475	280S-W5	93.0	91.7	90.2	87.5	84.0	80.0	154	1025	59.4	145	220	6.92	4600
		975	315S-W5	93.0	92.4	91.0	85.5	81.5	74.0	157	1020	89.9	140	210	15.7	5500
		730	315M-W5	93.0	93.0	91.7	82.5	75.5	68.0	163	1020	120	125	210	23.9	5500
110	150	1480	280M-W5	93.0	91.7	89.5	87.5	85.5	80.0	188	1190	72.4	125	210	8.20	4600
		975	315M-W5	93.0	92.4	91.0	85.5	81.5	74.0	192	1190	110	120	210	18.1	5500
132	175	1480	315S-W5	93.6	92.4	90.2	87.5	85.5	81.5	224	1430	86.9	125	210	11.3	4850
		975	315M-W5	93.6	93.6	92.4	85.5	81.5	74.0	229	1430	132	120	210	19.5	5500
150	200	1480	315M-W5	93.6	92.4	90.2	87.5	85.5	81.5	255	1625	98.7	110	210	11.3	4850
185	250	1480	315M-W5	93.6	92.4	90.2	87.5	85.5	81.5	314	2005	122	110	210	13.6	4850

- NOTES: 1. THE ABOVE ARE TYPICAL VALUES BASED ON TEST  
 2. ACTUAL LOAD & FULL VOLTAGE STARTING: ACCORDING TO BS 4999, AS 1359  
 3. TOLERANCE: ACCORDING TO BS 4999, AS 1359  
 4. DECLARED EFFICIENCY HAVEN'T TAKEN INTO ACCOUNT OF THRUST LOAD LOSSES  
 5. THRUST LOAD LOSSES ESTIMATED AS FOLLOWS: ACCORDING TO NEMA, MGI-12.08

FRAME	LOSS KW/100 RPM/1000 KG THRUST
112M	0.0100
132S-132M	0.0124
160M-180L	0.0147
200L	0.0217
225S-225M	0.0251
250S-250M	0.0271
280S-280M	0.0295
315S-315M	0.0318

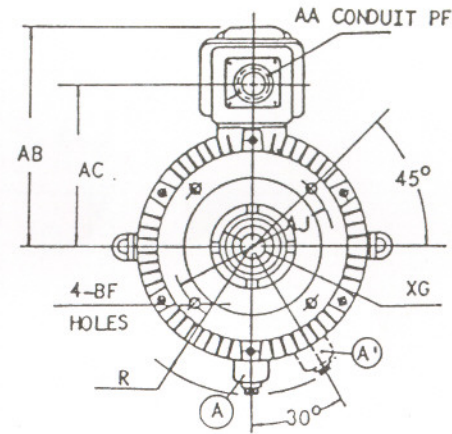
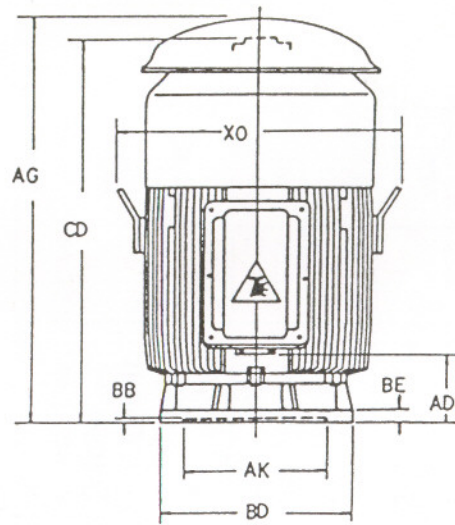
6. REDUCING THE THRUST LOAD WILL INCREASE BEARING LIFE AS FOLLOWS:

% THRUST	100	85	77	67	61	57
MIN. LIFE (Hrs)	8800	15000	20000	30000	40000	50000

7. DATA SUBJECT TO CHANGE WITHOUT NOTICE



# DIMENSIONS



DIMENSIONS IN mm

OUTPUT (KW)				FRAME NO.	MOUNTING						CD	XG	AG	XO	R	AA	AB	AC	AD	OIL PLUG POSITION	SHAFT EXTENSION		APPRO. WEIGHT
2P	4P	6P	8P		AK	AJ	BD	BF	BB	BE											UPPER END	LOWER END	
4.0	4.0	2.2	1.5	112M-WC	209.55	231.775	250	12	5.0	20	429	22	485	300	—	1/2"	209	160	98	—	7308B	6306WC3	60
5.5, 7.5	5.5	3.0	2.2	132S-WD	209.55	231.775	250	12	5.0	20	501	28	552	338	—	1"	244	184	117	—	7310B	6209WC3	75
—	7.5	4.0, 5.5	3.0	132M-WD	209.55	231.775	250	12	5.0	20	539	28	590	338	—	1"	244	184	136	—	7310B	6209WC3	90
11,15	11	7.5	4.0, 5.5	160M-WD	209.55	237.775	300	12	5.0	20	552	35	611	434	—	1"	282	222	126	—	7312B	6309WC3	130
18.5	15	11	7.5	160L-WD	209.55	231.775	300	12	5.0	20	596	35	655	434	—	1"	282	222	148	—	7312B	6309WC3	155
22	18.5	—	—	180M-WD	209.55	231.775	300	12	5.0	20	581	35	629	482	—	1.5"	307	247	155	—	7312B	6211WC3	195
—	22	15	11	180L-WD	209.55	231.775	300	12	5.0	20	619	35	667	482	—	1.5"	307	247	174	—	7312B	6211WC3	220
30, 37	30	22, 18.5	15	200L-WF	342.90	374.650	420	18	6.5	25	781	40	876	520	268	2"	372	285	184	A'	7220B	6312C3	310
—	37	—	18.5	225S-WG	342.90	374.650	420	18	6.5	25	853	44	956	572	290	2"	427	330	135	27.5°	7320B	6313C3	400
45	45	30	22	225M-WG	342.90	374.650	420	18	6.5	25	853	44	956	572	290	2"	427	330	135	27.5°	(7220B)/7320B	6313C3	440
55	55	37	30	250S-W5	342.90	374.650	420	18	6.5	25	963	50.8	1062	612	343	4"	490	375	121	A	(7220B)/7322B	6315C3	520
75	75	45	37	250M-W5	342.90	374.650	420	18	6.5	25	1001	50.8	1100	612	343	4"	490	375	140	A	(7220B)/7322B	6315C3	600
—	90	55	45	280S-W5	342.90	374.650	420	18	6.5	25	1033	50.8	1150	710	373	4"	585	435	200	A	7324B	6316C3	750
—	110	75	55	280M-W5	342.90	374.650	420	18	6.5	25	1083	50.8	1200	710	373	4"	585	435	250	A	7324B	6316C3	850
—	132	90	75	315S-W5	342.90	374.650	500	18	6.5	30	1161	60.0	1279	765	403	4"	610	460	269	A'	7326B	6218C3	1050
—	150, 185	110, 132	90	315M-W5	342.90	374.650	500	18	6.5	30	1212	60.0	1330	765	403	4"	610	460	320	A'	7326B	6218C3	1200

- NOTE: 1. TOLERANCE OF AK: H7  
 2. PARENTHESES BEARING NUMBERS APPLY FOR 2 POLE MOTORS  
 3. UPPER END THRUST BEARING : USE OVERSIZED ANGULAR CONTACT THRUST BEARING  
 LOWER END GUIDE BEARING : USE DEEP-GROOVE BALL BEARING WITH GREASE RELIEF VALVE



# RATINGS & SPECIFICATIONS

## MOTOR TYPE

SQUIRREL CAGE INDUCTION MOTOR (SCIM)

## DESIGN STANDARD

BS 3979 (1966), BS 4999, AS 1359, AS 1360, MEMA MG-1, MG-13

## TIME RATING

CONTINUOUS

## VOLTAGE

380V, 400V, 415V, 440V

## INSULATION

CLASS F

## TEMPERATURE RISE

NOT TO EXCEED 80°C BY RESISTANCE METHOD

## PROTECTION ENCLOSURE

TOTAL ENCLOSED, IPW44, FOR OUTDOOR USE

## DIRECTION OF ROTATION

COUNTER-CLOCKWISE FACING COUPLING END SIDE

## COOLING METHOD

SELF EXTERNAL FAN, SURFACE COOLING ICO141

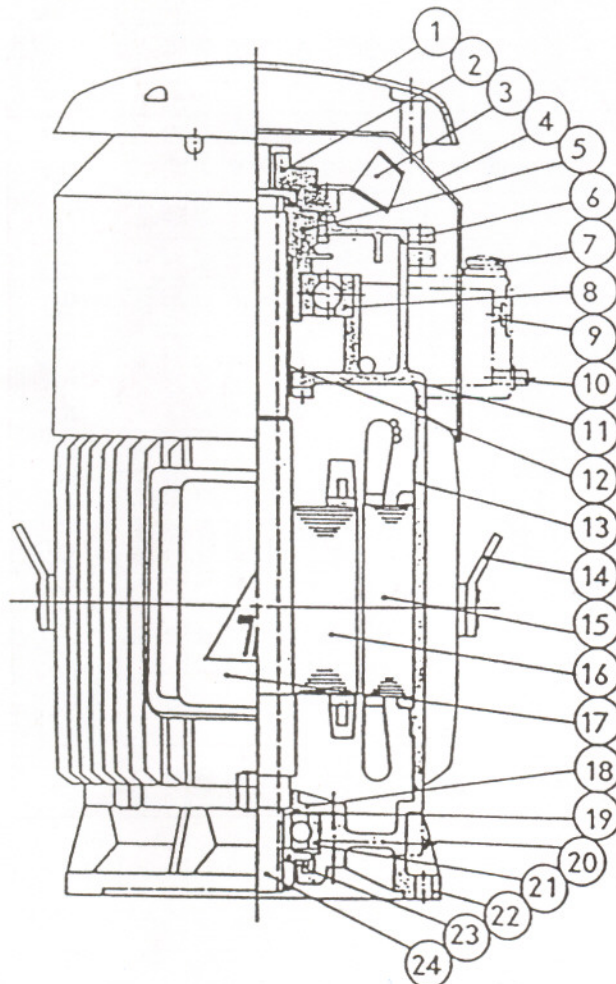
## PAINTING

MODIFIED PHENOLIC RESIN IRON OXIDE BASE COATING WITH PHENOLIC RESIN SPRAYED TOP COATING SURFACE FINISHED PAINTING IN BLUE-GREY COLOUR (MUNSELL 7.5GB4/2)

## APPLICATION

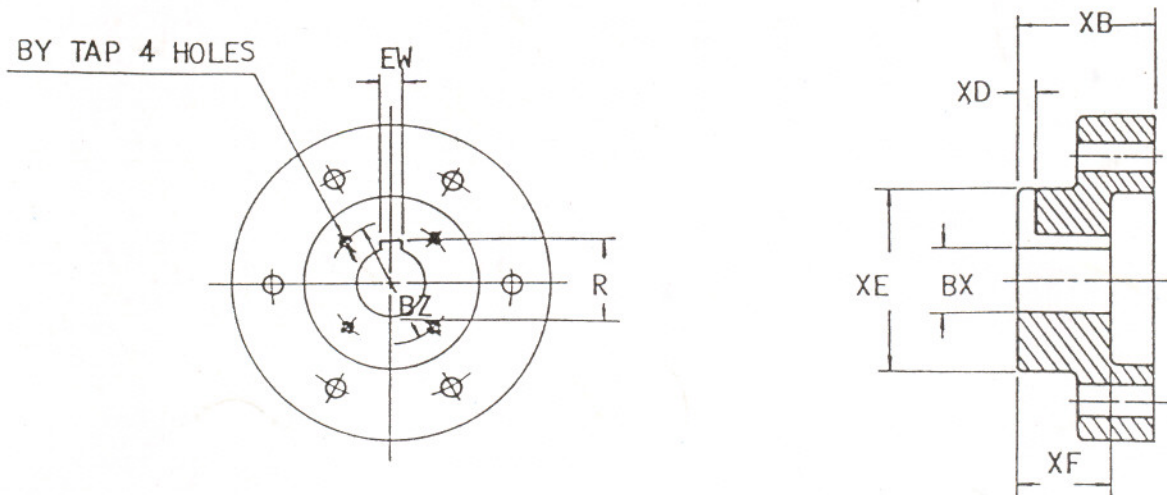
DESIGNED PRIMARILY FOR DEEP WELL TURBINE PUMP

## CONSTRUCTION



1. Vertical Splash Cover
2. Coupling
3. External Fan
4. Fan Cover
5. Bearing Cap
6. Ratchet
7. Plug (Oil Inlet)
8. Bearing
9. Oil Separator
10. Plug (Oil Outlet)
11. Eng Bracket
12. Oil Gauge
13. Frame
14. Hook
15. Stator
16. Rotor
17. Terminal Housing
18. Brg. Cap (Brg. Cover-Inner)
19. Stop Ring-Bearing
20. Grease Nipple
21. Bearing
22. End Bracket
23. Grease Flinger
24. Shaft

# DRIVE COUPLING FOR HOLLOWSHAFT MOTORS



DIMENSIONS IN mm

FRAME NO.	BX	BY	BZ	EW	R	XB	XD	XE	XF
112M	19.075	*10-32 UNF	34.925	4.775	21.463	44.45	8.7	51	28.5
132S 132M	19.075	*10-32 UNF	34.925	4.775	21.463	44.45	8.7	51	28.5
160M 160L	25.425	*10-32 UNF	34.925	6.35	28.600	65	10.3	57	41.2
180M 180L	30.175	*1/4"-20 UNC	44.45	9.525	33.350	65	10.3	57	41.2
200L	31.775	*1/4"-20 UNC	44.45	9.525	34.950	74.6	10.3	73	49.2
225S 225M	36.525	*1/4"-20 UNC	53.975	9.525	41.275	74.6	13.5	73	49.2
250S 250M	38.125	*1/4"-20 UNC	53.975	9.525	42.875	95	13.5	80	62
280S 280M	42.875	*1/4"-20 UNC	63.5	9.525	47.625	108	13.5	95	73
315S 315M	54.000	*3/8"-16	82.55	12.7	60.350	122	17.5	120	78

- NOTE:
1. TOLERANCE OF BX : H7
  2. TOLERANCE OF EW : JS9
  3. TOLERANCE OF R : +0.2,0
  4. \* MARKED TABLE APPLIED TO STANDARD SIZE FOR EACH FRAME

## TECO ELECTRIC & MACHINERY PTE LTD

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