

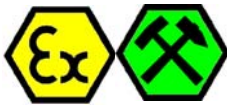
MINING'S ELECTRIC MOTORS 3KTCR AND 4KTCR



Explosion protection	
Certificate of Conformity: Frame size 71 and 160 Frame size 80, 90, 100, 112, 132 Frame size 180, 200, 225 Frame size 250 Frame size 280 Frame size 315	BVS 04 ATEX E 231 BVS 04 ATEX E 259 BVS 04 ATEX E 260 BVS 04 ATEX E 261 BVS 04 ATEX E 262 BVS 04 ATEX E 263
Explosion protection	⊕ I M2 EEx de I; ⊕ I M2 EEx d I
Degree of protection	IP 55
Thermal class	F

Materials									
Frame size	Stator		Shield	Terminal box	Flange	Fan's shield	Fan	Cable gland *	
	Stator frame	Feet	Material	Material	Material	Material	Material	External diameter of cable (mm)	Cable entries
71	Cast iron	Cast iron-screw on feet	Cast iron	Cast iron	Steel sheet-welded	Stell sheet-welded	Stell sheet-welded	17 – 19	M28X1,5
80								17 – 19	
90								17 – 19	
100								17 – 19	
112								20 – 24	
132								20 – 24	
160	Stell sheet-welded	Welded	Stell sheet-welded					25 – 28	M36X1,5
180								25 – 28	
200								28 – 32	
225								36 – 40	
250								36 – 40	
280								48 – 53	
315								48 – 53	M64X2

*Standard: one cable gland
On request: two additional cable glands



Technical data for 2 pol motors

Type	Power kW	Speed Min ⁻¹	In 400 V A	In 500 V A	In 1100 V A	Ia/In Starting current	Mm/Mn Starting torque	Efficiency %	Power factor cos φ
4 KTCR 71 A-2	0,37	2800	1,06	0,83	0,38	4,2	2,8	59,5	0,86
4 KTCR 71 B-2	0,55	2805	1,32	1,05	0,48	5,5	3,1	70,0	0,86
4 KTCR 80 A-2	0,75	2790	1,70	1,35	0,61	5,4	2,6	72,0	0,89
4 KTCR 80 B-2	1,10	2790	2,35	1,90	0,86	6,1	2,9	77,0	0,87
4 KTCR 90 S-2	1,50	2830	3,25	2,59	1,18	6,3	2,8	77,0	0,87
4 KTCR 90 L-2	2,20	2845	4,40	3,52	1,60	6,9	2,65	82,0	0,88
4 KTCR 100 L-2	3,00	2865	6,00	4,77	2,17	7,1	2,9	83,5	0,87
4 KTCR 112 M-4	4,00	2890	7,80	6,21	2,82	7,6	2,95	84,5	0,88
4 KTCR 132 SA-2	5,50	2910	10,8	8,50	3,90	6,6	2,8	84,5	0,88
4 KTCR 132 SB-2	7,50	2925	14,5	11,4	5,20	7,9	3,1	85,5	0,89
4 KTCR 160 MA-2	11,0	2840	22,3	17,9	8,10	6,9	3,0	80,6	0,88
4 KTCR 160 MB-2	15,0	2940	28,5	22,7	10,3	7,7	3,2	83,0	0,92
4 KTCR 160 L-2	18,5	2945	32,4	26,1	11,8	8,0	3,0	90,1	0,91
3 KTCR 180 M-2	22,0	2930	39,0	31,0	14,1	7,2	2,9	92,0	0,89
3 KTCR 200 LA-2	30,0	2930	53,0	42,3	19,2	7,3	2,8	93,0	0,88
3 KTCR 200 LB-2	37,0	2930	64,0	51,3	23,3	7,3	2,9	93,5	0,89
3 KTCR 225 M-2	45,0	2945	79,0	63,2	28,7	7,2	2,6	93,5	0,88
4 KTCR 250 M-2	55,0	2970	95,0	75,6	34,4	7,5	3,2	94,4	0,89
4 KTCR 280 S-2	75,0	2980	131,0	104,0	47,3	8,0	3,0	94,5	0,88
4 KTCR 280 M-2	90,0	2980	152,0	122,0	55,3	8,0	2,9	95,0	0,90
4 KTCR 315 S-2	110,0	2970	194,0	155,0	70,3	6,0	2,4	95,5	0,86
4 KTCR 315 MA-2	132,0	2970	228,0	181,0	82,4	6,5	2,8	95,5	0,88
4 KTCR 315 MB-2	160,0	2975	270,0	215,0	97,5	6,9	2,4	95,7	0,90
4 KTCR 315 MC-2	200,0	2980	335,0	270,0	121,7	6,9	2,3	95,8	0,90

Technical data for 4 pol motors

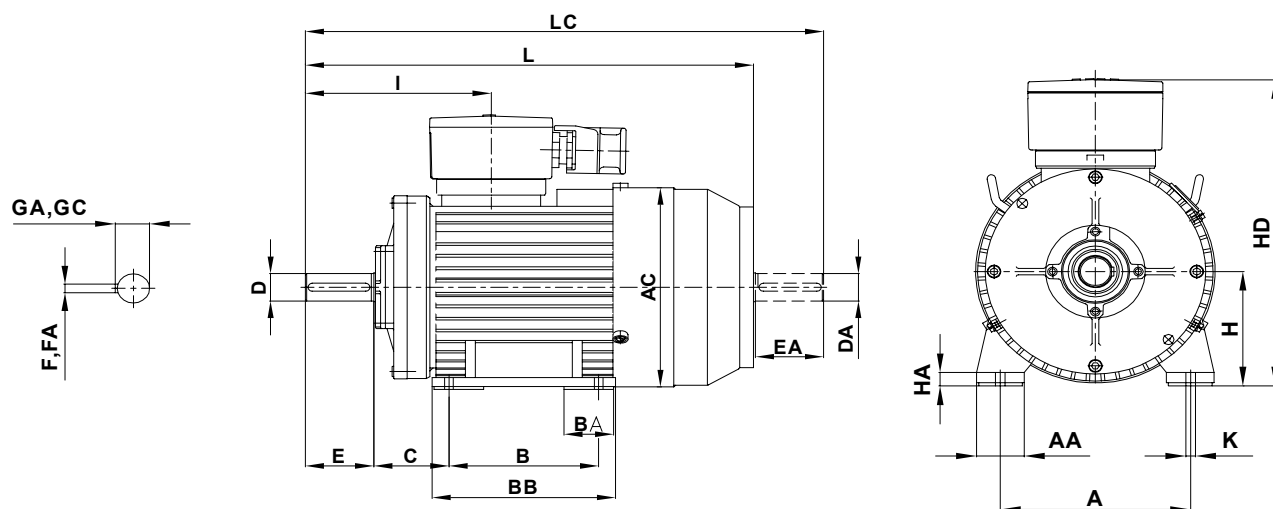
Type	Power kW	Speed Min ⁻¹	In 400 V A	In 500 V A	In 1100 V A	Ia/In Starting current	Mm/Mn Starting torque	Efficiency %	Power factor cos φ
4 KTCR 71 A-4	0,25	1355	0,75	0,61	0,30	3,8	2,5	59,5	0,80
4 KTCR 71 B-4	0,37	1350	1,05	0,84	0,42	3,8	2,9	63,0	0,81
4 KTCR 80 A-4	0,55	1410	1,38	1,09	0,55	4,6	2,7	72,0	0,81
4 KTCR 80 B-4	0,75	1400	1,80	1,43	0,71	5,0	2,6	76,0	0,80
4 KTCR 90 S-4	1,1	1410	2,40	1,92	0,96	5,4	2,4	79,0	0,84
4 KTCR 90 L-4	1,5	1405	3,25	2,61	1,31	5,8	2,6	79,0	0,84
4 KTCR 100 LA-4	2,2	1405	4,80	3,83	1,92	5,1	2,2	79,0	0,84
4 KTCR 100 LB-4	3,0	1400	6,40	5,10	2,55	5,3	2,3	81,0	0,84
4 KTCR 112 M-4	4,0	1430	8,20	6,48	3,24	6,6	2,8	85,0	0,84
4 KTCR 132 S-4	5,5	1435	10,9	8,75	4,37	5,5	2,7	84,5	0,86
4 KTCR 132 M-4	7,5	1445	14,8	11,7	5,86	6,5	2,9	87,0	0,85
4 KTCR 160 M-4	11,0	1470	22,0	17,6	8,81	6,7	2,8	87,0	0,83
4 KTCR 160 L-4	15,0	1460	29,0	23,3	11,7	6,3	2,7	87,5	0,85
3 KTCR 180 M-4	18,5	1460	35,0	27,7	13,8	6,5	2,3	92,0	0,84
3 KTCR 180 L-4	22,0	1455	40,0	31,9	16,0	6,4	2,3	92,5	0,86
3 KTCR 200 L-4	30,0	1460	56,0	44,9	22,5	6,2	3,0	93,0	0,83
3 KTCR 225 S-4	37,0	1465	68,0	54,8	27,4	6,3	2,8	93,5	0,84
3 KTCR 225 M-4	45,0	1470	83,0	66,2	33,1	6,2	2,8	94,0	0,83
4 KTCR 250 M-4	55,0	1475	98,0	78,2	39,1	6,1	2,5	94,5	0,86
4 KTCR 280 S-4	75,0	1475	135,0	106,1	53,1	6,1	2,8	95,0	0,86
4 KTCR 280 M-4	90,0	1475	158,0	125,9	62,9	6,5	2,9	95,0	0,87
4 KTCR 315 S-4	110,0	1485	193,0	153,1	76,5	6,0	2,4	95,5	0,87
4 KTCR 315 MA-4	132,0	1485	232,0	183,1	91,6	6,5	2,6	95,8	0,87
4 KTCR 315 MB-4	160,0	1480	282,0	224,0	112,0	7,0	2,6	96,0	0,86
4 KTCR 315 MC-4	200,0	1485	345,0	275,0	126,0	6,9	2,6	95,8	0,87

-Data for 6 and 8 pol motors on request



Dimension 4KTCR, 3KTCR

Form IM B3

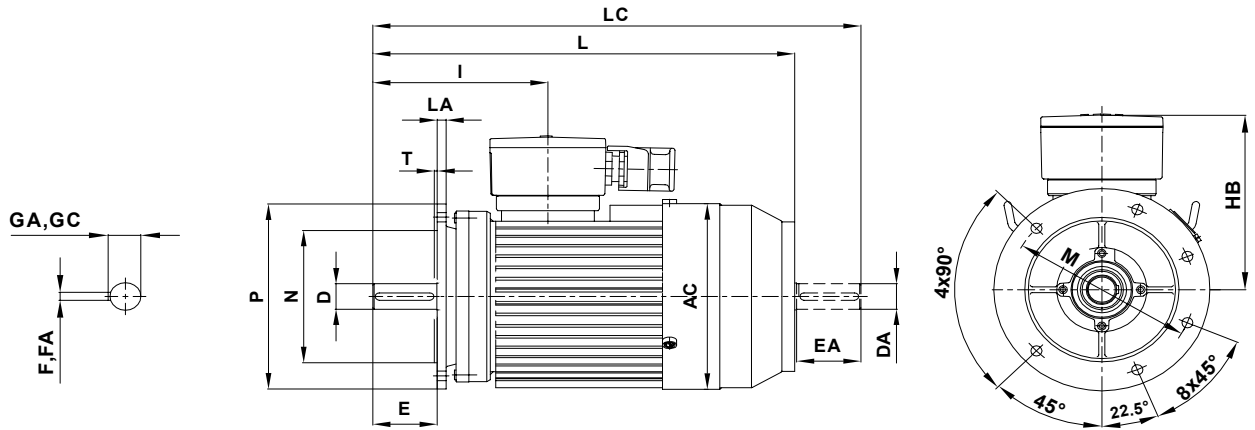


Dimensions																					
Frame size	A	AA	AC	B	BA	BB	C	D	DA	E	EA	F	GC	H	HA	HD	I	K	L	LA	LC
4KTCR 71 A, B	112	30	142	90	30	114	45	14	30	5	16	71	10	218	114	9	289	10	325		
4KTCR 80 A, B	125	32	160	100	35	130	50	19	40	6	21.5	80	10	249	131	10	341	10	386		
4KTCR 90 S, L	140	35	180	125	60	155	56	24	50	8	27	90	10	271	140	10	382	10	437		
4KTCR 100 L	160	45	198	140	45	175	63	28	60	8	31	100	17	288	158	12	447	11	512		
4KTCR 112 M	190	50	222	140	45	180	70	28	60	8	31	112	15	311	159	12	470	11	536		
4KTCR 132 S	216	55	261	178	75	218	89	38	80	10	41	132	18	350	181	12	562	16	647		
				210																	
4KTCR 160 L	254	60	313	254	90	300	108	42	110	12	45	160	21	436	255	14	694	19	812		
				241		295													721		841
3KTCR 180 L	279	70	352	279	80	333	121	48	110	14	51	180	21	492	299	14	761	15	881		
3KTCR 200 L	318	80	392	305	90	395	133	55	110	16	59	200	21	543	310	18	817	18	937		
3KTCR 225 S				286		346		60	140	18	64				341		823		973		
3KTCR 225 M-2	356	80	438	311	90	371	149	55	110	16	59	225	21	593	311	18	853	18	973		
3KTCR 225 M				311		371		60	140	18	64				341		883		1033		
4KTCR 250 M-2								60			64										
4KTCR 250 M	406	100	491	349	90	429	158	65	140	18	69	250	23	687	380	24	997	18	1152		
4KTCR 280 S-2				368		454		65		18	69								1036		1191
4KTCR 280 S				368		454		75		20	79.5								1036		1191
4KTCR 280 M-2	457	110	537	419	100	505	190	65	140	18	69	280	23	744	382	24	1096	18	1224		
4KTCR 280 M				419		505		75		20	79.5								1096		1224
4KTCR 315 S-2				406		526		65	140	18	69				454		1050				1210
4KTCR 315 S				406		526		80	170	22	85				484		1080				1270
4KTCR 315 M-2	508	110	617	457	115	577	216	65	140	18	69	315	25	859	454	28	1220	18	1380		
4KTCR 315 M				457		577		80	170	22	85				484		1250				1440
4KTCR 315 MC-2				457		577		65	140	18	69				454		1300				1460
4KTCR 315 MC				457		577		80	170	22	85				484		1330				1520

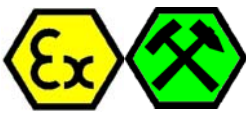


Dimension 4KTCR, 3KTCR

Form IM B5 (V1)

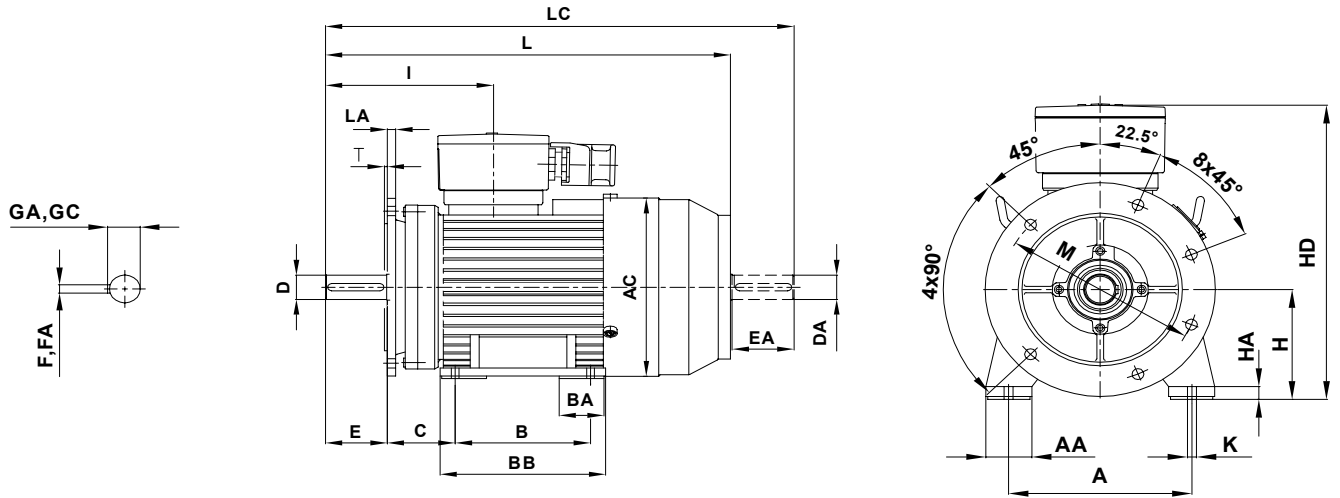


➔ Dimensions																					
Frame size	Flange	AC	D DA	E EA	F FA	GC GA	H	HB	I	K	L	LA	LC	M	N	P	S	Nr. of fixing holes			
4KTCR	71	A, B	F 130-I	142	14	30	5	16	71	147	114	9	289	10	325	130	110	160	9	4	
4KTCR	80	A, B	F 165-I	160	19	40	6	21.5	80	169	131	10	341	10	386	165	130	200	12	4	
4KTCR	90	S, L	F 165-I	180	24	50	8	27	90	181	140	10	382	10	437	165	130	200	12	4	
4KTCR	100	L	F 215-I	198	28	60	8	31	100	188	158	12	447	11	512	215	180	250	14	4	
4KTCR	112	M	F 215-I	222	28	60	8	31	112	199	159	12	470	11	536	215	180	250	14	4	
4KTCR	132	S, M	F 265-I	261	38	80	10	41	132	218	181	12	562	16	647	265	230	300	14	4	
4KTCR	160	M, L	F 300-I	313	42	110	12	45	160	276	255	14	694	19	812	300	250	350	18	4	
3KTCR	180	M											721		841						
3KTCR	180	L	F 300-I	352	48	110	14	51	180	312	299	14	761	15	881	300	250	350	18	4	
3KTCR	200	L	F 350-I	392	55	110	16	59	200	343	310	18	817	18	937	350	300	400	18	4	
3KTCR	225	S	F 400-I		60	140	18	64			341		823		973						
3KTCR	225	M-2	F 400-I	438	55	110	16	59	225	368	311	18	853	18	973	400	350	450	18	8	
3KTCR	225	M	F 400-I		60	140	18	64			341		883		1033						
4KTCR	250	M-2	F 500-I		60			64													
4KTCR	250	M	F 500-I	491	65	140	18	69	250	437	380	24	997	18	1152	500	450	550	19	8	
4KTCR	280	S-2	F 500-I		65		18	69					1036		1191						
4KTCR	280	S	F 500-I		75		20	79.5					1036		1191						
4KTCR	280	M-2	F 500-I	537	65	140	18	69	280	464	382	24	1096	18	1224	500	450	550	19	8	
4KTCR	280	M	F 500-I		75		20	79.5					1096		1224						
4KTCR	315	S-2	F 600-I		65	140	18	69			454		1050		1210						
4KTCR	315	S	F 600-I		80	170	22	85			484		1080		1270						
4KTCR	315	M-2	F 600-I	617	65	140	18	69	315	544	454	28	1220	18	1380	600	550	660	24	8	
4KTCR	315	M	F 600-I		80	170	22	85			484		1250		1440						
4KTCR	315	MC-2	F 600-I		65	140	18	69			454		1300		1460						
4KTCR	315	MC	F 600-I		80	170	22	85			484		1330		1520						



Dimension 4KTCR, 3KTCR

Form IM B3/B5



Dimensions																												
Frame size	Flange	A	AA	AB	AC	B	BA	BB	C	D	DA	EA	FA	GC	GA	H	HA	HD	I	K	L	LA	LC	M	N	P	S	Nr. Of fixing holes
4KTCR 71	A, B	F 130-I	112	30	140	142	90	30	114	45	14	30	5	16	71	10	218	114	9	289	10	325	130	110	160	9	4	
4KTCR 80	A, B	F 165-I	125	32	160	160	100	35	130	50	19	40	6	21.5	80	10	249	131	10	341	10	386	165	130	200	12	4	
4KTCR 90	S, L	F 165-I	140	35	180	180	125	60	155	56	24	50	8	27	90	10	271	140	10	382	10	437	165	130	200	12	4	
4KTCR 100	L	F 215-I	160	45	205	198	140	45	175	63	28	60	8	31	100	17	288	158	12	447	11	512	215	180	250	14	4	
4KTCR 112	M	F 215-I	190	50	235	222	140	45	180	70	28	60	8	31	112	15	311	159	12	470	11	536	215	180	250	14	4	
4KTCR 132	S, M	F 265-I	216	55	266	261	178	75	218	89	38	80	10	41	132	18	350	181	12	562	16	647	265	230	300	14	4	
4KTCR 160	M, L	F 300-I	254	60	312	313	254	90	300	108	42	110	12	45	160	21	436	255	14	694	19	812	300	250	350	18	4	
3KTCR 180	M	F 300-I				241		295													721		841					
3KTCR 180	L	F 300-I	279	70	348	352	279	80	333	121	48	110	14	51	180	21	492	299	14	761	15	881	300	250	350	18	4	
3KTCR 200	L	F 350-I	318	80	398	392	305	90	395	133	55	110	16	59	200	21	543	310	18	817	18	937	350	300	400	18	4	
3KTCR 225	S	F 400-I				286		346		60	140	18	64						341		823		973					
3KTCR 225	M-2	F 400-I	356	80	436	438	311	90	371	149	55	110	16	59	225	21	593	311	18	853	18	973	400	350	450	18	8	
3KTCR 225	M	F 400-I				311		371		60	140	18	64						341		883		1033					
4KTCR 250	M-2	F 500-I								60				64														
4KTCR 250	M	F 500-I	406	100	506	491	349	90	429	158	65	140	18	69	250	23	687	380	24	997	18	1152	500	450	550	19	8	
4KTCR 280	S-2	F 500-I				368		454		65		18	69								1036		1191					
4KTCR 280	S	F 500-I				368		454		75		20	79.5								1036		1191					
4KTCR 280	M-2	F 500-I	457	110	557	537	419	100	505	190	65	140	18	69	280	23	744	382	24	1096	18	1224	500	450	550	19	8	
4KTCR 280	M	F 500-I				419		505		75		20	79.5								1096		1224					
4KTCR 315	S-2	F 600-I				406		526		65	140	18	69								454		1050					
4KTCR 315	S	F 600-I				406		526		80	170	22	85								484		1080					
4KTCR 315	M-2	F 600-I	508	110	628	617	457	115	577	216	65	140	18	69	315	25	859	454	28	1220	18	1380	600	550	660	24	8	
4KTCR 315	M	F 600-I				457		577		80	170	22	85								484		1250					
4KTCR 315	MC-2	F 600-I				457		577		65	140	18	69								454		1300					
4KTCR 315	MC	F 600-I				457		577		80	170	22	85								484		1330					



Special applications/options

➔ Frame Size	71	80	90	100	112	132	160	180	200	225	250	280	315
Special voltage up to 1140 V	●	●	●	●	●	●	●	●	●	●	●	●	●
Special frequency	●	●	●	●	●	●	●	●	●	●	●	●	●
Frequency inverter drive	●	●	●	●	●	●	●	●	●	●	●	●	●
Special power	op	op	op	op	op	op	op	op	op	op	op	op	op
Special shaft end	op	op	op	op	op	op	op	op	op	op	op	op	op
Free shaft end on NDS-end of motor	●	●	●	●	●	●	●	●	●	●	●	●	●
Special flange	op	op	op	op	op	op	op	op	op	op	op	op	op
Flange made in R acc. to DIN 42955	●	●	●	●	●	●	●	●	●	●	●	●	●
Additional greasing								●	●	●	●	●	●
Fixed bearing on AS								●	●	●	●	●	●
2RS bearings	●	●	●	●	●	●	●	●	●	●	●	●	●
Labyrinth seal							●	●	●	●	●	●	●
Oil seal								●	●	●	●	●	●
Protection IP 56	●	●	●	●	●	●	●	●	●	●	●	●	●
Protection IP 65	op	op	op	op	op	op	op	op	op	op	op	op	op
Protection IP 66	op	op	op	op	op	op	op	op	op	op	op	op	op
Protection cover	●	●	●	●	●	●	●	●	●	●	●	●	●
Vibrations within R or S limits	●	●	●	●	●	●	●	●	●	●	●	●	●
SPM placing							op	op	op	op	op	op	op
Special data plate	●	●	●	●	●	●	●	●	●	●	●	●	●
Terminal box with EEx d cable glands	op	op	op	op	op	op	op	op	op	op	op	op	op
Terminal box with socket	op	op	op	op	op	op	op	op	op	op	op	op	op
Thermal protection of winding	●	●	●	●	●	●	●	●	●	●	●	●	●
Heating of winding against condensation	●	●	●	●	●	●	●	●	●	●	●	●	●
Heating of winding at temp. lower - 20 °C	●	●	●	●	●	●	●	●	●	●	●	●	●
Insulation class H	●	●	●	●	●	●	●	●	●	●	●	●	●
Special colour	●	●	●	●	●	●	●	●	●	●	●	●	●

● - on request

op - option

Ordering data

- rating in kW
- voltage and frequency
- start connection (on-line or star-delta)
- r.p.m.
- type of motor arrangement (Form IM ..)
- mechanical requirements
- special requirements (i.e. H-class thermal insulation, two-shaft, radial bearing seals).