

ELECTRIC MOTORS

Mining Series | High Efficiency | Low Voltage Motors

Technical Brochure

BROOK CROMPTON – A GLOBAL PLAYER

BC is a global multinational group of companies linked together by common products and markets. BC is the group's Electric Motor and Motor Service company located in Australia. Our Electric Motors are manufactured by our partner company another global player with manufacturing and distribution footprints stretching across Asia, Europe, Australia and Africa.

**BROOK
CROMPTON**
Keeping Industry Turning



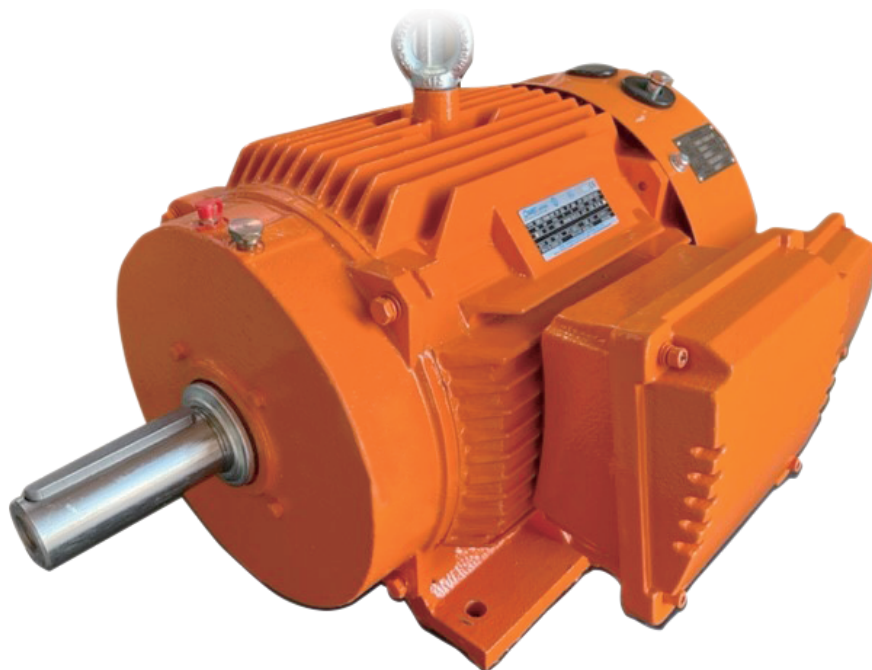
MINING SERIES ELECTRIC MOTOR

“Designed and Manufactured for Long Life & Lower Total Cost of Ownership.”

BROOK CROMPTON



WARRANTY

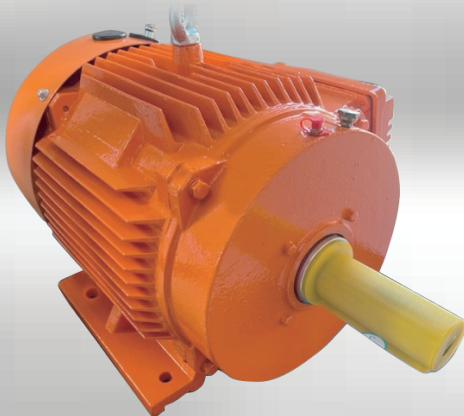


IE3

MINING SERIES MOTORS

IE3 High Efficiency

Technical characteristics



- ☑ IE3 high efficiency rated motor series
- ☑ Design & Performance proven to IEC 60034 standards
- ☑ IP 66 enclosure rating, fixed and rotating seals
- ☑ Class H insulation with maximum B rise.
- ☑ Vacuum impregnated winding for Durability, Long Life and Lower Cost of Ownership.
- ☑ S1 duty at 1000m AMSL and 40 °C ambient.
- ☑ No de-rating between -20 and +40 °C
- ☑ Dual voltages 400V / 690V, 50Hz / 60Hz
- ☑ Tested to 1.5 times FLC for 2 minutes
- ☑ Ratings upto 355kW and larger on request
- ☑ High quality cast iron TEFC frames to IEC dimensions
- ☑ Bearings are re-greasable, heavy duty 63 series C3 clearance
- ☑ Diagonal terminal lid, easy access on installation
- ☑ Mounting options B3, V6, V5, B5, V3, V1, B35, B36 or V15
- ☑ Variable mount lifting lugs for easy handling
- ☑ IEC vibration Grade N as standard
- ☑ Two coat wet spray finish gloss RAL 2008 Tropic Proof design
- ☑ Steel Fan cowls – heavy duty versions on request
- ☑ Hi impact static resistant injection moulded fans
- ☑ Insulated bearings and earth brushes for VSD applications available
- ☑ 150 °C Thermistors standard
- ☑ PT 100 thermal protection available
- ☑ Forced ventilation units available
- ☑ Anti condensation heaters available
- ☑ Tacho generator and encoders available
- ☑ Vibration and Temperature Smart sensors available
- ☑ 3 plus Warranty

OUR PRODUCTS

BROOK CROMPTON manufactures and distributes a wide range of high quality Electric Motors and related products to many global standards across most market segments through out the Australian market. All products are manufactured to meet and exceed applicable international and local standards. In addition, they have many performance and construction features that are specifically designed to cope with Australia's unique local environmental and application requirements.

This product brochure describes BROOK CROMPTON Mining series cast iron motors and larger Y2 series cast iron IE3 motors. These motors have been developed to exceed the needs of our clients operating within an energy environment of increasing complexity where energy utilisation economics are driving technological advances and by default purchasing decisions relating to total cost of ownership. These high efficiency motors are designed to meet the requirements described in both the Australian minimum efficiency standards and international IEC 60034 (IE3) performance standards. These motors are increasingly the go to product for the discerning motor buyer when key application requirements requiring robust mechanical properties as well as high standards of electrical performance, ensuring the efficient use of energy and a low resultant low carbon footprint are important decision factors

EFFICIENCY REGULATION

To ensure these energy efficiency savings are maximised by industry, and in doing so inversely reducing generation demand needs, our government has implemented minimum energy efficiency standards for electric motors. The older IE1 efficiency motors used in the above example were commonly sold well into the mid 2000's until legislation prevented further import or manufacture after 2006. Many thousands of these inefficient motors remain installed throughout industry. Revised national standards have now raised the minimum efficiency across a wide range of industrial electric motors to a level generally termed as IE2. Above this level is a far higher specification of motor with an IE3 level of efficiency. These are now termed high efficiency motors. BROOK CROMPTON Mining series of cast iron electric motors as described within this brochure either meet or exceed the requirements of the higher IE3 efficiency standards.

NATIONAL ELECTRIC MOTOR STANDARDS



Our Mining series BROOK CROMPTON IE3 high efficiency electric motors are manufactured and perform in accordance with the below mentioned national and International standards.

AS 60034.1	Rotating electrical machines - Rating and Performance
IEC 60034-2-1	Rotating electrical machines - Standard methods for determining losses and efficiency
AS 60034.5	Rotating electrical machines - Degrees of protection provided - IP code
IEC 60034-6	Rotating electrical machines - Methods of cooling - IC code
AS 60034.7	Rotating electrical machines - Construction, mounting and terminal box positions - IM code

AS 60034.8	Rotating electrical machines - Terminal markings and direction of rotation
AS 60034.9	Rotating electrical machines - Noise limits
AS 60034.11	Rotating electrical machines - Thermal protection
AS 60034.12	Rotating electrical machines - Starting performance of single-speed induction motors
IEC 60034-14	Rotating electrical machines - Mechanical vibration limits
IEC 60034-30	Rotating electrical machines - Efficiency classes for single speed three-phase cage induction motors
IEC 60072-1	Dimensions and output series for rotating electrical machines - Frame numbers 56 to 400 and flange numbers 55 to 1080

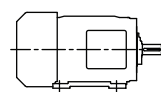
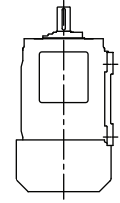
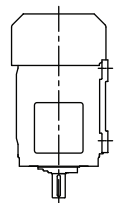
PRODUCT IDENTIFICATION NAMEPLATES

All BROOK CROMPTON Mining series cast iron high efficiency motors are equipped with stainless steel rating plates riveted to the main motor casing on which all relevant ratings, performance and supply connection related identification data is permanently engraved.

 BROOK CROMPTON Mining Motor <small>Keeping Industry Turning</small>								
TYPE	OMK3-315S0-02P	IM	B3	IP	66	NR		
Hz	KW	r/min	V	A	CONN	COS	EFF	
50	110	2980	400/690	185.3/107.4	Δ/Y	0.9	95.2%	
DUTY	S1	INS	H	PTC	150°C	KG	IEC60034-1	
BRGS DE	6317C3		BRGS NDE	6317C3				
Brook Crompton Australia Pty Ltd 5/220 New Cleveland Road Tingalpa 4173 Brisbane Australia www.brookcrompton.com								

MOUNTING ARRANGEMENTS

The BROOK CROMPTON Mining series cast iron high efficiency motors are designed so that they can be operated in all horizontal and vertical mounting positions, providing consideration is given to the location of drain holes and bearing types specified for application loads.

MOTOR MOUNTING STANDARDS			
Mount Orientation			
Mount	Horizontal	Shaft Up	Shaft Down
Foot Mount	B3 - IM1001	V6 - IM1031	V5 - IM1011
Foot & Flange Mount	B35 - IM2001	V36 - IM2031	V15 - IM2011
Flange Mount	B5 - IM3001	V3 - IM3031	V1 - IM3011

TERMINAL BOX

These Mining series motors have cast iron IP66 terminal boxes with gaskets. The angled profile of the box section allows for easy access to the terminal studs and facilitates easier tightening. The dome profile lids also allow additional internal clearances. The gland plates on all frames are removable greatly cutting installation time. Each terminal box is rotatable in 90° intervals allowing for any cable entry direction.

TERMINAL BOX GLAND ARRANGEMENT			
Motor Frame	Design Type	Gland Qty	Size
80~100	M3 - Removable	2	M25x1.5
112~132	M3 - Removable	2	M32x1.5
160~180	M3 - Removable	2	M40x1.5
200~225	M3 - Removable	2	M50x1.5
250~280	M3 - Removable	2	M63x1.5
315	Y2 - Removable	2	M63x1.5
355	Y2 - Removable	2	M72x2

DUTY RATINGS

All BROOK CROMPTON Mining series cast iron high efficiency motors are rated for continuous duty S1.

Where motors are required to meet the needs of S2 to S9 duty applications please contact our offices for assistance.

AMBIENT x ALTITUDE APPLICATION

In accordance with the requirements of IEC 60034-1, this Premium series of electric Motor is listed in its standard format based upon an ambient temperature range of -20°C to 40°C ambient and altitudes up to and including 1000mts.

T (°C)	ALTITUDE (m)								
	1000	1500	2000	2500	3000	3500	4000	4500	5000
10							0.97	0.92	0.88
15						0.98	0.94	0.90	0.86
20					1.00	0.95	0.91	0.87	0.83
25				1.00	0.95	0.93	0.89	0.85	0.81
30			1.00	0.96	0.92	0.90	0.86	0.82	0.78
35		1.00	0.95	0.93	0.90	0.88	0.84	0.80	0.75
40	1.00	0.97	0.94	0.90	0.86	0.82	0.80	0.76	0.71
45	0.95	0.92	0.90	0.88	0.85	0.80	0.78	0.74	0.69
50	0.92	0.90	0.87	0.85	0.82	0.80	0.77	0.72	0.67
55	0.88	0.85	0.83	0.81	0.78	0.76	0.73	0.70	0.65
60	0.83	0.82	0.80	0.77	0.75	0.73	0.70	0.67	0.62
65	0.79	0.76	0.74	0.72	0.70	0.68	0.66	0.62	0.58
70	0.74	0.71	0.69	0.67	0.66	0.64	0.62	0.58	0.53
75	0.70	0.68	0.66	0.64	0.62	0.60	0.58	0.53	0.49
80	0.65	0.64	0.62	0.60	0.58	0.56	0.55	0.48	0.44

DEGREE OF PROTECTION

The BROOK CROMPTON Mining motor series is designed with an IP66 enclosure rating according to the requirements of IEC60034.5. This is accomplished via the use of a dual fixed and rotating seal design at both the drive and non-drive end of the motor frame. The outer seal provides a rotating labyrinth and lip seal whilst the inner seal acts as a mechanical oil seal. The motors terminal box is also rated IP66 with a closed cell gasket between all joint surfaces.

IP	6	6	Dust and Water protection standards
Numeral 1	1	2	
2: Motors protected against solid objects greater than 12 mm			
4: Motors protected against solid objects greater than 1 mm			
5: Dust-protected motors			
6: Dust-tight motors			
Numerals 2			
3: Motors protected against spraying water			
4: Motors protected against splashing water			
5: Motors protected against water jets			
6: Motors protected against heavy seas			

COOLING

All BROOK CROMPTON Mining series high efficiency motors are totally enclosed fan cooled (TEFC) IC411 designs to IEC60034-6. Standard cooling fans are injection moulded reinforced polypropylene. All motors can be equipped with alloy or steel fans on request when required. All fans are bi-directional in design allowing all motors to be run either clock-wise or anti-clockwise without modification. Fan covers are all steel construction.

ROTOR DESIGN

All BROOK CROMPTON Mining series electric motors have rotors constructed from high quality carbon steel. The resin coated lamination steel is carefully selected taking into account its mineral composition, electrical and mechanical properties to ensure that the rotating core is electrically efficient and reduces eddy current core losses to a minimum. The end ring design includes integral cooling fins which completes the internal air circuit. This helps the motor to effectively distribute the internal heat generated to the outer casing where heat loss is most effective. This reduces overall heat build up and lengthens the expected life of the motors resin impregnated insulation systems.

INSULATION SYSTEM

All BROOK CROMPTON Mining series high efficiency motors are constructed using a vacuum impregnated class H insulation. The vacuum impregnated windings provides benefits, such as

- Greater strength and rigidity
- Improved protection against moisture and foreign contamination
- Improved dielectrics
- Higher resistance to ground
- Lower maintenance
- Longer life
- Lower Total Cost of Ownership

All electrical designs are optimised to guarantee a Class B, 80°C working temperature rise above ambient at full load under normal operating conditions. Our class H insulation system has a working thermal limit of 125°C above the base 40°C ambient. This is an additional 20°C over the protection provided by the class F insulation systems found in other industrial motors. Further to this the class H insulation has a short term duration withstand rating of a further 15°C. This creates an insulation system with a maximum duty temperature of 165°C with transient peaks up to 180°C.

Hot spot margin	10		15
Permissible maximum winding temperature rise above base without derating	80	105	125
Rated Ambient temperature base	40	40	40
Maximum winding temperature limits			
Insulation Class	B - 130 °C	F - 155 °C	H - 180 °C

This huge thermal safety margin for a motor with a design temperature rise of just 80°C maximum provides ultimate levels of protection for tough motor applications where unusually high ambient temperatures are common,

multiple start cycles are present, or heavily fluctuating loads create elevated temperature cycles. With heat related degradation being the key enemy of motor insulation integrity our Class H system ensures that our BROOK CROMPTON Mining series motors will outlast most.

BEARINGS SIZE & REGREASING

All BROOK CROMPTON motors are fitted with high quality branded bearings across the series. Frames 160 and up are regreasable at both the drive and non-drive ends. See the below tables for standard recommended regreasing intervals. Users should be aware that non standard duty applications in vertical installations, high ambient temperature, higher speed and high load applications may need reduced grease intervals.

The motors are supplied as standard with C3 clearance ball bearings in motors up to and including a 280 frame size with larger frames most commonly used on heavy duty applications using pulleys and belts have a ball / roller arrangement as standard. All frame sizes are designed in a manner that allows standard bearing selections to be changed to customise the motor to its specific duty. This includes the ability to interchange ball and roller bearings as well as angular contact bearings without modification to any motor component parts. Care should be taken selecting bearings, it should be noted that roller bearings require a radial load to ensure correct operation and are in general not suitable for direct coupling arrangements as well as most 2 pole speed applications.

BALANCING & VIBRATION

Rotors are dynamically balanced using a half key in accordance with IEC 60034-14 standards. Motor frames 160 to 280mm are supplied balanced to grade normal. Larger motor frames are supplied balanced to grade reduced as standard. This high level of balance ensures low levels of vibration once installed ensuring longer bearing life and enhanced mechanical durability.

Typical Bearing sizes and Regrease Intervals - Mining Series IE3 range

STANDARD HORIZONTAL MOUNT (IM1001)								
Frame Size	Motor Poles	Bearing size		Regrease qty (g)	Regrease Intervals- hours			
		DE	NDE		2P	4P	6P	8P
80	2 - 8	6204ZZ	6204ZZ					
90	2 - 8	6205ZZ	6205ZZ					
100	2 - 8	6206ZZC3	6206ZZC3					
112	2 - 8	6306ZZC3	6306ZZC3					
132	2 - 8	6308ZZC3	6308ZZC3					
160	2 - 8	6309 C3	6309 C3	15	2000	4000	4000	4000
180	2 - 8	6311 C3	6311 C3	20	2000	4000	4000	4000
200	2 - 8	6312 C3	6312 C3	22	2000	4000	4000	4000
225	2 - 8	6313 C3	6313 C3	24	2000	4000	4000	4000
250	2 - 8	6314 C3	6314 C3	26	2000	4000	4000	4000
280	2	6314 C3	6314 C3	26	2000			
	4 - 8	6317 C3	6317 C3	38		4000	4000	4000
315	2	6317 C3	6317 C3	38	2000			
	4 - 8	NU 319	6319 C3	45		4000	4000	4000
355	2	6317 C3	6317 C3	38	2000			
	4 - 8	NU 322		60		4000	4000	4000
				6320 C3	50		4000	4000

Vibration Grades

Rated Motor Speed rpm	Vibration Grade	Maximum RMS value of vibration velocity mm/s		
		H56 to H132	H160 to H280	H315 to H355
Rigid Mounting	A	1.3 mm/s	1.8 mm/s	2.3 mm/s

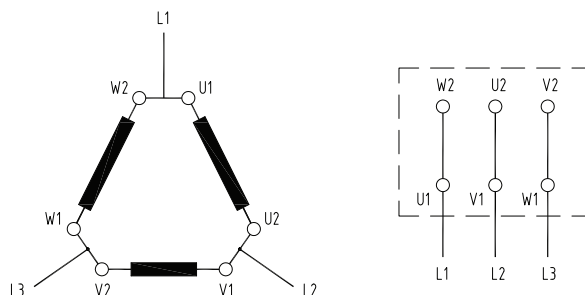
PAINT & CORROSION PROTECTION

BROOK CROMPTON Mining series high efficiency motors are differentiated from our other general motor product ranges by being finished in gloss electrical bright red orange RAL 2008. The paint process is a two coat based wet spray system as standard.

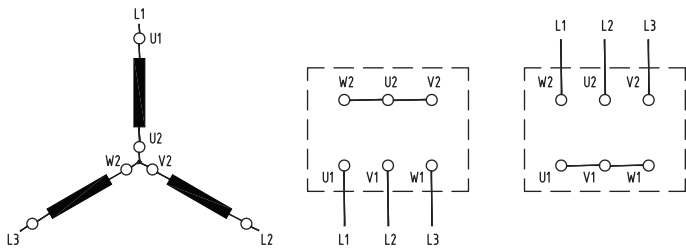
All of our Premium series motors are supplied with tropical protection of internal exposed bare metal surfaces. This ensures the durability of the motors when installed in both tropical and excessively humid industrial environments.

TERMINATIONS

Terminal voltages and connections are marked on each motor's stainless steel rating plate. These detail 50Hz and 60Hz ratings in for Star and Delta connection configurations. All motors are designed to have connection six terminals with interconnecting link bridge connectors allowing users to choose connection logic at the time of installation. Note current motor design standards require all motors above 80 frame to be delta connected for direct on line or VSD starting at standard 400V, 50Hz or 440V, 60Hz Australian voltages. Star configuration allows for 690V voltage applications.



Delta Connected Winding 400 / 415V



Star Connected Winding 690V

Motor Frame Size	Winding Heater wattage
160	40 W
180	50 W
200	50 W
225	60 W
250	60 W
280	60 W
315	2X80 W
355	3X80 W

Heater Terminals in main Terminal Box

OVER TEMPERATURE PROTECTION

BROOK CROMPTON Mining series high efficiency motors all are supplied with PTC thermistors already installed and terminated to an auxiliary terminal box. These motors have 150°C thermistor as standard.

All motors can be upgraded to include additional thermistors, klixon type bi-metal thermal overloads or PT100 thermocouples on request.

HEATERS

BROOK CROMPTON Mining series high efficiency motors from frame size 160 and above can be equipped with strip heaters used to keep motors above ambient temperature when switched off. This helps prevent the build up of condensation within motor frames. These heaters are typically wound on to the winding overhang at one end of the motors stator winding. The leads are terminated into an auxiliary terminal box. Although mainly used in larger MV motors, larger frame LV motors can be equipped with 240V space heaters as an alternative, these are thermostatically controlled incaloy heaters preferred in some applications where a more robust heat source is required.

Brook Crompton Mining Series CAST IRON FRAME IE3 GENERAL PERFORMANCE DATA 50Hz 400V

> Ratings 0.75kW to 355kW

> IE3 efficiency at 75% and 100%

> Multi-Voltage / Multi-Frequency Ratings

> Right Hand side Terminal Box standard

> Multi-Mount Terminal Box M3 series allows repositioning

> Thermistors 1x 150 °C

> Cast Iron Robust frames

> TEFC IP66 standard

> Class H Insulation

> VI resin Impregnation and Tropicalisation

> Regreasable bearing design 160 - 355 frame

> B3, B5 and B35 Mounts

MotorPart Code	Rated Output		Motor Performance		Power Factor		Full Load Amps 400V	Full Load Torque	Locked Current / Rated Current	Locked Torque / Rated Torque	Max Torque / Rated Torque	Moment of inertia(J)	Net weight
			75% load	100% Load	75% load	100% Load							
	KW	RPM	%	%	cosØ	cosØ	Amps	Nm	% of FLC	% FLT	%Tmax	Kg-m ²	Kg
OMK3-080M2-02P	0.75	2845	80.9%	80.7%	0.78	0.82	1.6	2.5	7.00	2.30	2.30	0.0009	17
OMK3-080M2-02P	1.1	2835	82.9%	82.7%	0.79	0.83	2.3	3.7	7.60	2.20	2.30	0.0011	18
OMK3-080M2-04P	0.55	1380	80.9%	80.8%	0.70	0.74	1.3	3.8	6.60	2.30	2.30	0.0015	19
OMK3-080M2-04P	0.75	1380	82.7%	82.5%	0.71	0.75	1.7	5.2	6.60	2.30	2.30	0.0015	19
OMK3-090S0-02P	1.5	2850	84.4%	84.2%	0.80	0.84	3.1	5.0	7.90	2.20	2.30	0.0013	25
OMK3-090L0-02P	2.2	2855	85.9%	85.9%	0.81	0.85	4.3	7.4	7.90	2.20	2.30	0.0018	27
OMK3-090S0-04P	1.1	1390	84.1%	84.1%	0.72	0.76	2.5	7.6	6.80	2.30	2.30	0.0025	35
OMK3-090L0-04P	1.5	1400	85.5%	85.3%	0.73	0.77	3.3	10.2	7.00	2.30	2.30	0.0031	37
OMK3-090S0-06P	0.75	925	79.1%	78.9%	0.67	0.71	1.9	7.7	6.00	2.00	2.10	0.0033	27
OMK3-090L0-06P	1.1	930	81.2%	81.0%	0.69	0.73	2.7	11.3	6.00	2.00	2.10	0.0044	30
OMK3-100L0-02P	3	2860	87.3%	87.1%	0.83	0.87	5.7	10.0	8.50	2.20	2.30	0.0039	40
OMK3-100L1-04P	2.2	1450	86.9%	86.7%	0.77	0.81	4.5	14.5	7.60	2.30	2.30	0.0067	44
OMK3-100L2-04P	3	1450	87.9%	87.7%	0.78	0.82	6.0	19.7	7.60	2.30	2.30	0.0082	47
OMK3-100L0-06P	1.5	960	82.7%	82.5%	0.69	0.73	3.6	14.9	6.50	2.00	2.10	0.0101	43
OMK3-112M0-02P	4	2880	88.3%	88.1%	0.84	0.88	7.4	13.3	8.50	2.20	2.30	0.0056	49
OMK3-112M0-04P	4	1435	88.8%	88.6%	0.78	0.82	7.9	26.6	7.80	2.20	2.30	0.0117	54
OMK3-112M0-06P	2.2	955	84.5%	84.3%	0.70	0.74	5.1	22.0	6.60	2.00	2.10	0.0160	39
OMK3-132S1-02P	5.5	2900	89.4%	89.2%	0.84	0.88	10.1	18.1	8.50	2.00	2.30	0.0125	66
OMK3-132S2-02P	7.5	2900	90.3%	90.1%	0.84	0.88	13.7	24.7	8.50	2.00	2.30	0.0147	72
OMK3-132S0-04P	5.5	1440	89.8%	89.6%	0.79	0.83	10.7	36.5	7.90	2.00	2.30	0.0249	67
OMK3-132M0-04P	7.5	1450	90.6%	90.4%	0.80	0.84	14.3	49.4	7.50	2.00	2.30	0.0311	79
OMK3-132S0-06P	3	960	85.8%	85.6%	0.70	0.74	6.8	29.8	6.80	2.00	2.10	0.0316	73
OMK3-132M1-06P	4	970	87.0%	86.8%	0.70	0.74	9.0	39.4	6.80	2.00	2.10	0.0417	74
OMK3-132M2-06P	5.5	970	88.2%	88.0%	0.71	0.75	12.0	54.1	7.00	2.00	2.10	0.0517	89
OMK3-160M1-02P	11	2930	91.4%	91.2%	0.85	0.89	19.6	35.9	8.50	2.00	2.30	0.0421	106
OMK3-160M2-02P	15	2930	92.1%	91.9%	0.85	0.89	26.5	48.9	8.50	2.00	2.30	0.0535	115
OMK3-160L0-02P	18.5	2930	92.6%	92.4%	0.85	0.89	32.5	60.3	8.50	2.00	2.30	0.0615	131
OMK3-160M0-04P	11	1460	91.6%	91.4%	0.81	0.85	20.4	72.0	7.70	2.20	2.30	0.0841	114
OMK3-160L0-04P	15	1460	92.3%	92.1%	0.82	0.86	27.3	98.1	7.80	2.20	2.30	0.1135	140
OMK3-160M0-06P	7.5	960	89.3%	89.1%	0.75	0.79	15.4	74.6	7.00	2.00	2.10	0.0910	104
OMK3-160L0-06P	11	965	90.5%	90.3%	0.76	0.80	22.0	108.9	7.20	2.00	2.10	0.1302	130
OMK3-180M0-02P	22	2940	92.9%	92.7%	0.85	0.89	38.5	71.5	8.50	2.00	2.30	0.0969	174
OMK3-180M0-04P	18.5	1470	92.8%	92.6%	0.82	0.86	33.5	120.2	7.80	2.00	2.30	0.1537	176
OMK3-180L0-04P	22	1470	93.2%	93.0%	0.82	0.86	39.7	142.9	7.80	2.00	2.30	0.1842	192
OMK3-180L0-06P	15	975	91.4%	91.2%	0.77	0.81	29.3	146.9	7.30	2.00	2.10	0.2286	176
OMK3-200L1-02P	30	2950	93.5%	93.3%	0.85	0.89	52.1	97.1	8.50	2.00	2.30	0.1464	230
OMK3-200L2-02P	37	2950	93.9%	93.7%	0.85	0.89	64.0	119.8	8.50	2.00	2.30	0.1735	248
OMK3-200L0-04P	30	1470	93.8%	93.6%	0.82	0.86	53.8	194.9	7.30	2.00	2.30	0.2852	249
OMK3-200L1-06P	18.5	975	91.9%	91.7%	0.77	0.81	36.0	181.2	7.30	2.00	2.10	0.3428	224
OMK3-200L2-06P	22	975	92.4%	92.2%	0.77	0.81	42.5	215.5	7.40	2.00	2.10	0.4139	244
OMK3-225M0-02P	45	2960	94.2%	94.0%	0.86	0.90	76.8	145.2	8.00	2.00	2.30	0.2684	299
OMK3-225S0-04P	37	1475	94.1%	93.9%	0.82	0.86	66.1	239.6	7.40	2.00	2.30	0.5006	298
OMK3-225M0-04P	45	1475	94.4%	94.2%	0.82	0.86	80.2	291.4	7.40	2.00	2.30	0.5920	326
OMK3-225M0-06P	30	980	93.1%	92.9%	0.79	0.83	56.2	292.3	6.90	2.00	2.10	0.5948	296
OMK3-250M0-02P	55	2965	94.5%	94.3%	0.86	0.90	93.5	177.2	8.00	2.00	2.30	0.3543	391
OMK3-250M0-04P	55	1480	94.8%	94.6%	0.82	0.86	97.6	354.9	7.40	2.20	2.30	0.6841	393
OMK3-250MX-04P	75	1480	95.2%	95.0%	0.82	0.86	132.5	484.0	7.50	1.80	2.20	0.9045	474
OMK3-250M0-06P	37	980	93.5%	93.3%	0.80	0.84	68.1	360.6	7.10	2.00	2.10	0.9089	383
OMK3-280S0-02P	75	2965	94.9%	94.7%	0.86	0.90	127.0	241.2	7.50	1.80	2.30	0.6632	544
OMK3-280M0-02P	90	2965	95.2%	95.0%	0.86	0.90	151.9	289.4	7.50	1.80	2.30	0.7560	591

Brook Crompton Mining Series CAST IRON FRAME IE3 GENERAL PERFORMANCE DATA 50Hz 400V

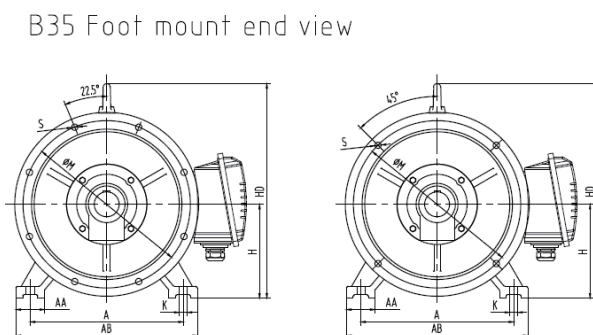
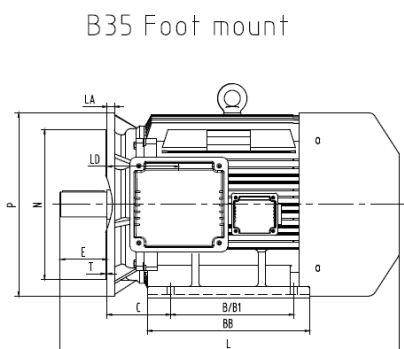
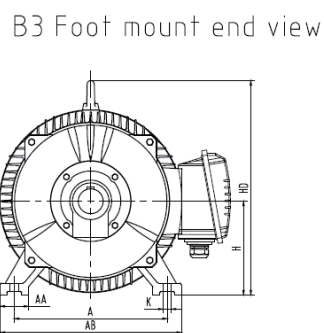
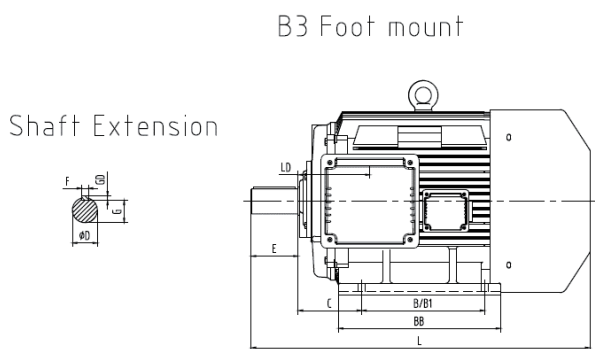
- > Ratings 0.75kW to 355kW
- > IE3 efficiency at 75% and 100%
- > Multi-Voltage / Multi-Frequency Ratings
- > Right Hand side Terminal Box standard
- > Multi-Mount Terminal Box M3 series allows repositioning
- > Thermistors 1x 150 °C

- > Cast Iron Robust frames
- > TEFC IP66 standard
- > Class H Insulation
- > VI resin Impregnation and Tropicalisation
- > Regreasable bearing design 160 - 355 frame
- > B3, B5 and B35 Mounts

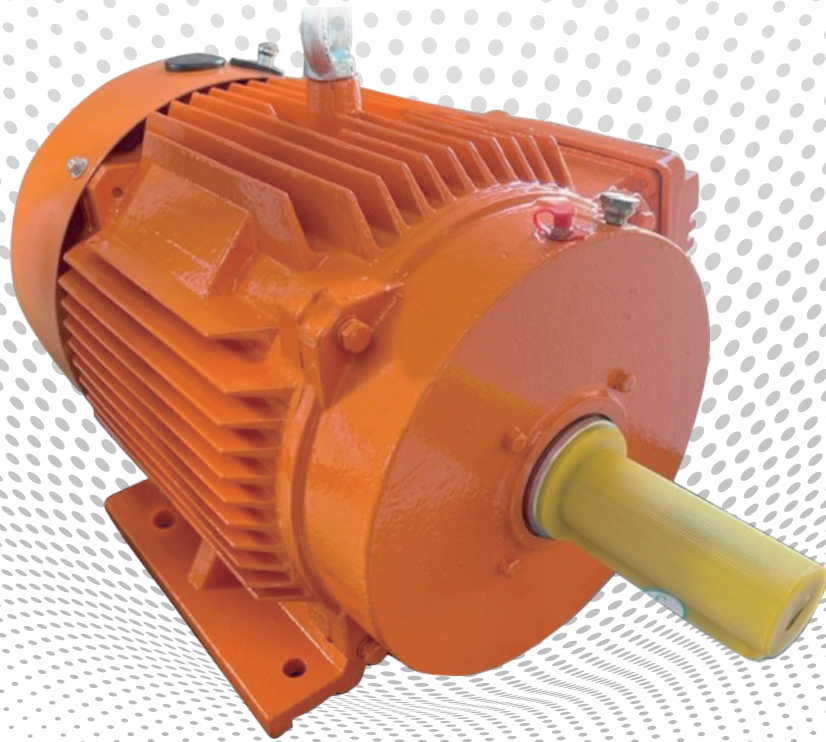
MotorPart Code	Rated Output		Motor Performance		Power Factor		Full Load Amps 400V	Full Load Torque	Locked Current / Rated Current	Locked Torque / Rated Torque	Max Torque / Rated Torque	Moment of inertia(J)	Net
			75% load	100% Load	75% load	100% Load							
	KW	RPM	%	%	cosØ	cosØ	Amps	Nm	% of FLC	% FLT	%Tmax	Kg-m ²	Kg
OMK3-280M0-02P	110	2965	95.4%	95.2%	0.85	0.90	185.3	354.3	7.50	1.80	2.30	0.9880	687
OMK3-280S0-04P	75	1480	95.2%	95.0%	0.84	0.88	129.5	484.0	6.90	2.00	2.30	1.3885	576
OMK3-280M0-04P	90	1480	95.4%	95.2%	0.84	0.88	155.1	580.7	6.90	2.00	2.30	1.6833	658
OMK3-280M0-04P	110	1480	95.6%	95.4%	0.82	0.88	189.1	709.8	7.80	2.00	2.30	1.9899	748
OMK3-280S0-06P	45	980	93.9%	93.7%	0.81	0.85	81.6	438.5	7.30	2.00	2.00	1.6704	531
OMK3-280M0-06P	55	980	94.3%	94.1%	0.82	0.86	98.1	536.0	7.30	2.00	2.00	2.0295	601
OMK3-280M0-06P	75	980	94.8%	94.6%	0.82	0.86	133.1	730.9	7.30	2.00	2.00	2.8210	698
OMK3-315S0-02P	110	2980	95.4%	95.2%	0.86	0.90	185.3	352.5	7.50	1.80	2.30	1.2523	819
OMK3-315M0-02P	132	2980	95.6%	95.4%	0.86	0.90	221.9	423.0	7.50	1.80	2.30	1.3942	934
OMK3-315L1-02P	160	2980	95.8%	95.6%	0.86	0.91	265.5	512.8	7.50	1.80	2.30	1.5361	1009
OMK3-315S0-04P	110	1480	95.6%	95.4%	0.85	0.89	187.0	709.8	7.00	2.00	2.20	2.7112	854
OMK3-315M0-04P	132	1480	95.8%	95.6%	0.85	0.89	223.9	851.8	7.00	2.00	2.20	3.0065	934
OMK3-315L1-04P	160	1480	96.0%	95.8%	0.85	0.89	270.9	1032.4	7.10	2.00	2.20	3.7518	999
OMK3-315L2-04P	200	1480	96.2%	96.0%	0.86	0.90	334.1	1290.5	7.10	2.00	2.20	4.6978	1194
OMK3-315S0-06P	75	980	94.8%	94.6%	0.80	0.84	136.2	730.9	6.60	2.00	2.00	2.9249	744
OMK3-315M0-06P	90	980	95.1%	94.9%	0.81	0.85	161.0	877.0	6.70	2.00	2.00	3.4551	854
OMK3-315L1-06P	110	980	95.3%	95.1%	0.81	0.85	196.4	1071.9	6.70	2.00	2.00	4.3925	1014
OMK3-315L2-06P	132	980	95.6%	95.4%	0.82	0.86	232.2	1286.3	6.80	2.00	2.00	5.3503	1084
OMK3-355M0-0P4	250	1485	96.2%	96.0%	0.86	0.90	417.7	1607.7	7.10	2.00	2.20	7.3160	1625
OMK3-355L1-04P	280	1485	96.2%	96.0%	0.86	0.90	467.8	1800.7	7.10	2.00	2.20	7.3160	1625
OMK3-355L2-04P	315	1485	96.2%	96.0%	0.86	0.90	526.2	2025.8	7.10	2.00	2.20	8.0550	1700
OMK3-355L3-04P	355	1485	96.2%	96.0%	0.86	0.90	593.1	2283.0	7.10	2.00	2.20	8.9863	1865
OMK3-355M1-06P	160	990	95.8%	95.6%	0.82	0.86	280.9	1543.4	7.50	1.80	2.00	7.7455	1600
OMK3-355M2-06P	185	990	96.0%	95.8%	0.82	0.86	324.1	1784.6	7.50	1.80	2.00	9.2033	1650
OMK3-355M3-06P	200	990	96.0%	95.8%	0.83	0.87	346.4	1929.3	7.50	1.80	2.00	9.2033	1720
OMK3-355L1-06P	220	990	96.0%	95.8%	0.83	0.87	381.0	2122.2	7.50	1.80	2.00	10.2967	1760

Brook Crompton Mining Series CAST IRON FRAME IE3

GENERAL PERFORMANCE DATA 50Hz 400V



Frame Size	Pole	Frame H	Shaft Extension						Foot Centres			General Dimensions										B5 Flange Dimensions						
			D	E	F	G	DH	A	B	B1	C	K	AA	AB	AC	BB	HA	HD	AD	LD	L	P	N	M	S	LA	T	
80M	2-8	80	19	40	6	15.5	M6	125	100	-	50	10	34	160	176	130	10	175	165	106	310	200	130	165	4X12	12	3.5	
90S	2-8	90	24	50	8	20	M8	140	100	-	56	10	36	176	176	180	12	185	170	128	360	200	130	165	4X12	12	3.5	
90L	2-8	90	24	50	8	20	M8	140	125	-	56	10	36	176	176	210	12	185	170	142	390	200	130	165	4X12	12	3.5	
100L	2-8	100	28	60	8	24	M10	160	140	-	63	12	40	200	206	233	14	255	185	162	440	250	180	215	4X15	13	4	
112M	2-8	112	28	60	8	24	M10	190	140	-	70	12	45	226	220	180	15	275	210	140	420	250	180	215	4X15	14	4	
132S	2-8	132	38	80	10	33	M12	216	140	-	89	12	55	262	260	186	18	335	240	159	480	300	230	265	4X15	14	4	
132M	2-8	132	38	80	10	33	M12	216	178	-	89	12	55	262	260	224	18	335	240	178	520	300	230	265	4X15	14	4	
160M	2-8	160	42	110	12	37	M16	254	210	-	108	15	65	314	315	260	20	390	275	213	615	350	250	300	4 x 19	15	5	
160L	2-8	160	42	110	12	37	M16	254	254	-	108	15	65	314	315	304	20	390	275	234	660	350	250	300	4 x 19	15	5	
180M	2-4	180	48	110	14	42.5	M16	279	241	-	121	15	70	349	360	311	22	425	290	161	685	350	250	300	4 x 19	15	5	
180L	2-8	180	48	110	14	42.5	M16	279	279	-	121	15	70	349	360	349	22	425	290	161	725	350	250	300	4 x 19	15	5	
200L	2-8	200	55	110	16	49	M20	318	305	-	133	19	70	388	400	369	25	475	325	186	785	400	300	350	4 x 19	17	5	
225S	4-8	225	60	140	18	53	M20	356	286	-	149	19	75	431	450	368	28	520	345	189	820	450	350	400	8 x 19	20	5	
225M	2	225	55	110	16	49	M20	356	311	-	149	19	75	431	450	393	28	520	345	189	815	450	350	400	8 x 19	20	5	
225M	4-8	225	60	140	18	53	M20	356	311	-	149	19	75	431	450	393	28	520	345	189	845	450	350	400	8 x 19	20	5	
250M	2	250	60	140	18	53	M20	406	349	-	168	24	80	484	485	445	30	575	400	207	920	550	450	500	8 x 19	20	5	
250M	4-8	250	65	140	18	58	M20	406	349	-	168	24	80	484	485	445	30	575	400	207	920	550	450	500	8 x 19	20	5	
280S	2	280	65	140	18	58	M20	457	368	-	190	24	85	542	550	485	35	650	430	215	1005	550	450	500	8 x 19	22	5	
280S	4-8	280	75	140	20	67.5	M20	457	368	-	190	24	85	542	550	485	35	650	430	215	1020	550	450	500	8 x 19	22	5	
280M	2	280	65	140	18	58	M20	457	419	-	190	24	85	542	550	536	35	650	430	215	1060	550	450	500	8 x 19	22	5	
280M	4-8	280	75	140	20	67.5	M20	457	419	-	190	24	85	542	550	536	35	650	430	215	1070	550	450	500	8 x 19	22	5	
315S	2	315	65	140	18	58	M20	508	406	-	216	28	120	628	620	570	45	755	580	257	1220	660	550	600	8 x 24	22	6	
315S	4-8	315	80	170	22	71	M20	508	406	-	216	28	120	628	620	570	45	755	580	257	1250	660	550	600	8 x 24	22	6	
315ML	2	315	65	140	18	58	M20	508	457	508	216	28	120	628	620	680	45	755	580	257	1330	660	550	600	8 x 24	22	6	
315ML	4-8	315	80	170	22	71	M20	508	457	508	216	28	120	628	620	680	45	755	580	257	1360	660	550	600	8 x 24	22	6	
355ML	2	355	75	140	20	67.5	M24	610	560	630	254	28	116	726	700	750	52	860	620	284	1520	800	680	740	8 x 24	25	6	
355ML	4-8	355	100	210	28	90	M24	610	560	630	254	28	116	726	700	750	52	860	620	284	1590	800	680	740	8 x 24	25	6	



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