TECO

Engineering the Future

Date: January 2012

Product Overview

TECO ELECTRIC EUROPE LIMITED have been established in the UK since 1993 and have recently relocated to new offices and a 12,000 square foot warehouse facility located at Salford Quays, Greater Manchester. As a wholly owned subsidiary of the multinational Teco Electric and Machinery Co. Ltd. of Taiwan and having acquired Westinghouse Motors in 1995 we are part of the 3rd largest global electric motor manufacturer.

At our Salford facility we hold vast stocks of low voltage aluminium and cast iron motors and variable speed drives which comply with the latest European Standards. Our own stock is backed up by European stocks held in Germany and The Netherlands and supported by 8 manufacturing plants. We have the in-house capability to design and project manage the manufacture of HV motors and large motor and drive projects.

Whatever your motor and drive requirement our experienced engineering team can help and advise on the correct products to suit your applications. With a team of specialist distributors across the UK and Ireland, local service and support is never far away.

www.teco-group.eu

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IE2 EFFICIENCY MOTORS — ALUMINIUM

Aluminium Motors 63 to 160 frame

As part of our strategy to enter the European Motor Market Teco has designed a range of motors using European market knowledge and expertise which we are manufacturing in our own plants in the Far East. This ensures that we have full control of both quality and production costs.

The result is a multi-mount range of motors which are certified IE2 efficiency and have standard features that are options on some of the main competitor products:

- All Feet fixings are pre-drilled and tapped. All feet are replaceable due to stator and feet being fully machined before assembly.
- Metric High tensile (8.8) setscrews used (Not self tappers).
- Two external earth fixings that are moveable like the feet.
- All motors have Thermistors as standard.
- All thermistor connections firmly fixed in terminal box.
- Spring lip seals are standard on both drive end & none drive end. B5 and B14 flanges are fitted with lip seals for use on wet gearboxes.
- Moveable lifting lugs. After the motor feet have been moved the customer can move the two lifting points to match the new mounting safely.
- Paint system is a total of 60 Microns thick.
- External Screws are all hexagon head high tensile 8.8 rated and Galvanised to protect against corrosion.
- All Aluminium motor end shields have steel sleeves on the bearing mounting bores ensuring long reliable bearing life.
- All motors have drive end bearings fixed.
- 63 series bearings as standard from 112 frame giving better radial load ratings on belt drive applications.

Available in 2, 4, 6 and 8 pole options with all standard flange mounting options.

IE2 Efficiency Motors to IEC 60034-30; 2008 IP55 - IC411 TEFC, Insulation Class F, Temperature Rise B

2 Pole (3000 rpm @ 50Hz) Ratings at 400V, 50Hz

Power (kW)	Teco Part Code	Frame	Rated Speed (50Hz)	Efficiency			Power Factor*	Current		Torque			Rotor Inertia ($kg\text{-}m^2$)
				Full Load (%)	3/4 Load (%)	1/2 Load (%)		I_N (A)	Locked Rotor (A)	T_N (kg-m)	T_l/T_N (%FLT)	T_b/T_N (%FLT)	
0.18	I2-0.18-2B3	63	2775	67.4	67.4	60.4	78.5	0.49	2.2	0.06	190	200	0.001
0.25	I2-0.25-2B3	63	2785	69.9	70.0	65.7	79.0	0.65	2.9	0.087	195	205	0.001
0.37	I2-0.37-2B3	71	2790	71.0	71.0	66.7	81.0	0.93	4.5	0.129	190	220	0.001
0.55	I2-0.55-2B3	71	2780	75.5	76.2	73.3	83.0	1.27	6.7	0.193	190	220	0.002
0.75	I2-0.75-2B3	80	2815	77.4	78.6	77.4	86.0	1.63	10	0.259	310	300	0.003
1.1	I2-1.10-2B3	80	2820	79.6	80.8	80.0	86.0	2.32	16	0.38	335	325	0.004
1.5	I2-1.50-2B3	90S	2865	81.3	82.0	80.9	85.5	3.11	24	0.509	310	330	0.006
2.2	I2----2-2B3	90L	2860	83.2	84.0	83.2	87.0	4.39	33	0.748	305	320	0.008
3	I2----3-2B3	100L	2880	84.6	85.5	84.8	84.5	6.06	45	1.01	305	335	0.016
4	I2----4-2B3	112M	2905	85.8	86.3	85.3	86.5	7.78	60	1.34	195	285	0.033
5.5	I2----5-2B3	132S	2930	87.0	87.0	85.6	80.5	11.3	80	1.83	265	305	0.054
7.5	I2----7-2B3	132S	2920	88.1	88.4	87.5	78.5	15.7	110	2.5	280	300	0.065
11	I2---11-2B3	160M	2950	89.5	90.5	90.0	89.0	19.9	165	3.63	230	305	0.154
15	I2---15-2B3	160M	2950	90.5	91.5	91.0	90.0	26.6	225	4.95	245	315	0.192
18.5	I2---18-2B3	160L	2945	91.0	92.0	92.0	91.0	32.2	290	6.11	260	310	0.237

4 Pole (1500 rpm @ 50Hz) Ratings at 400V, 50Hz

Power (kW)	Teco Part Code	Frame	Rated Speed (50Hz	Efficiency			Power Factor*	Current		Torque			Rotor Inertia ($kg\text{-}m^2$)
				Full Load (%)	3/4 Load (%)	1/2 Load (%)		I_N (A)	Locked Rotor (A)	T_N (kg-m)	T_l/T_N (%FLT)	T_b/T_N (%FLT)	
0.18	I2-0.18-4B3	63	1375	65.0	63.8	58.2	74.5	0.54	2.1	0.127	200	200	0.002
0.25	I2-0.25-4B3	71	1380	69.5	70.1	66.2	77.0	0.67	2.8	0.176	200	200	0.003
0.37	I2-0.37-4B3	71	1385	69.5	69.9	66.3	75.0	1.02	4.3	0.260	205	205	0.003
0.55	I2-0.55-4B3	80	1435	78.1	78.1	75.2	76.0	1.34	8.8	0.373	255	280	0.01
0.75	I2-0.75-4B3	80	1430	79.6	79.6	76.1	77.5	1.75	11	0.510	245	270	0.012
1.1	I2-1.10-4B3	90S	1435	81.4	81.4	79.2	80.0	2.44	17	0.746	265	305	0.014
1.5	I2-1.50-4B3	90L	1430	82.8	83.2	81.9	80.0	3.27	23	1.021	275	315	0.018
2.2	I2----2-4B3	100L	1435	84.3	86.3	86.5	81.5	4.62	32	1.492	280	285	0.039
3	I2----3-4B3	100L	1430	85.5	86.5	86.7	78.5	6.45	42	2.041	270	250	0.044
4	I2----4-4B3	112M	1440	86.6	87.0	87.0	83.5	7.98	63	2.703	285	285	0.065
5.5	I2----5-4B3	132S	1450	87.7	88.2	86.9	84.0	10.8	80	3.691	255	295	0.145
7.5	I2----7-4B3	132M	1455	88.7	88.8	88.0	84.0	14.5	109	5.015	265	300	0.176
11	I2---11-4B3	160M	1465	90.0	90.5	90.0	86.0	20.5	160	7.306	200	240	0.296
15	I2---15-4B3	160L	1465	91.0	91.5	91.0	86.5	27.5	220	9.962	220	255	0.427

* Power Factor as Percentage at Full Load

IE2 EFFICIENCY MOTORS — CAST IRON

Cast Iron Motors 80 to 315 frame

In line with the development of the Aluminium LVED motor range a full series of Cast Iron construction motors to IE2 efficiency has been developed.

Key features and benefits are:

- 160 to 315 frame all Multi Mount design.
- All Motors fitted with Thermistors terminated in the terminal box.
- Both IE2 and IE3 in same frame size and design. This enables the customer to fully interchange the motors and also reduces future design costs.
- Multi mount. All Feet fixings are pre-drilled and tapped.
- All feet are replaceable due to the stator and feet being fully machined before assembly.
- Re-greaseable bearings on 180 frame and above with button type grease nipple. Grease through system with exit at the bottom of the motor.
- Quality 63 series bearings from SKF FAG NSK and NTN
- Two external Earth Fixings on all frames.
- Two Bolt clamp type on 280 and larger frames.
- Spring lip seals are standard on both drive end and none drive end. B5 flanges are fitted with lip seals for use on wet gearboxes.
- Large Terminal box with two cable entries making connection easy on site.
- Motor is a symmetrical design allowing the terminal box to be moved towards the fan cowl.
- Two lifting eye bolts that are moveable so are always in the best position for a safe lift even after the terminal box position has been moved.

Available in 2, 4, 6 and 8 pole options with all standard flange mounting options.

IE2 Efficiency Motors to IEC 60034-30; 2008 IP55 - IC411 TEFC, Insulation Class F, Temperature Rise B**2**

Pole (3000 rpm @ 50Hz) **Ratings at 400V, 50Hz**

Power (kW)	Teco Part Code	Frame	Rated Speed (50Hz)	Efficiency			Power Factor*	Current		Torque			Rotor Inertia ($kg\text{-}m^2$)
				Full Load (%)	3/4 Load (%)	1/2 Load (%)		I_N (A)	Locked Rotor (A)	T_N (kg-m)	T_l/T_N (%FLT)	T_b/T_N (%FLT)	
11	C2- - -11-2B3	160M	2950	89.5	90.5	90.0	89.0	19.9	165	3.628	230	305	0.154
15	C2- - -15-2B3	160M	2950	90.5	91.5	91.0	90.0	26.6	225	4.947	245	315	0.192
18.5	C2- - -18-2B3	160L	2945	91.0	92.0	92.0	91.0	32.2	290	6.112	260	310	0.237
22	C2- - -22-2B3	180MA	2945	92.0	92.5	92.0	90.5	38.1	295	7.269	215	260	0.283
30	C2- - -30-2B3	200LA	2955	92.0	92.0	91.5	90.5	52.0	440	9.878	205	300	0.602
37	C2- - -37-2B3	200LA	2960	93.0	93.0	92.5	91.0	63.1	585	12.16	235	325	0.753
45	C2- - -45-2B3	225MA	2960	93.0	93.0	92.0	85.5	81.7	710	14.79	170	335	1.074
55	C2- - -55-2B3	250MA	2970	93.5	93.5	93.0	91.5	92.8	730	18.02	145	305	1.343

4 Pole (1500 rpm @ 50Hz) **Ratings at 400V, 50Hz**

Power (kW)	Teco Part Code	Frame	Rated Speed (50Hz)	Efficiency			Power Factor*	Current		Torque			Rotor Inertia ($kg\text{-}m^2$)
				Full Load (%)	3/4 Load (%)	1/2 Load (%)		I_N (A)	Locked Rotor (A)	T_N (Nm)	T_l/T_N (% FLT)	T_b/T_N (% FLT)	
0.18	I2-0.18-4B3	63	1375	65.0	63.8	58.2	74.5	0.54	2.1	1.27	200	200	0.002
0.25	I2-0.25-4B3	71	1380	69.5	70.1	66.2	77.0	0.67	2.8	1.76	200	200	0.003
0.37	I2-0.37-4B3	71	1385	69.5	69.9	66.3	75.0	1.02	4.3	2.60	205	205	0.003
0.55	I2-0.55-4B3	80	1435	78.1	78.1	75.2	76.0	1.34	8.8	3.73	255	280	0.01
0.75	I2-0.75-4B3	80	1430	79.6	79.6	76.1	77.5	1.75	11	5.10	245	270	0.012
1.1	I2-1.10-4B3	90S	1435	81.4	81.4	79.2	80.0	2.44	17	7.46	265	305	0.014
1.5	I2-1.50-4B3	90L	1430	82.8	83.2	81.9	80.0	3.27	23	10.21	275	315	0.018
2.2	I2----2-4B3	100L	1435	84.3	86.3	86.5	81.5	4.62	32	14.92	280	285	0.039
3	I2----3-4B3	100L	1430	85.5	86.5	86.7	78.5	6.45	42	20.41	270	250	0.044
4	I2----4-4B3	112M	1440	86.6	87.0	87.0	83.5	7.98	63	27.03	285	285	0.065
5.5	I2----5-4B3	132S	1450	87.7	88.2	86.9	84.0	10.8	80	36.91	255	295	0.145
7.5	I2----7-4B3	132M	1455	88.7	88.8	88.0	84.0	14.5	109	50.15	265	300	0.176
11	I2---11-4B3	160M	1465	90.0	90.5	90.0	86.0	20.5	160	73.06	200	240	0.296
15	I2---15-4B3	160L	1465	91.0	91.5	91.0	86.5	27.5	220	99.62	220	255	0.427

* Power Factor as Percentage at Full Load

Other ratings are available. Please contact the Teco Sales Office or your local Teco Distributor for more information.

MV, HV & SPECIAL PURPOSE MOTORS

Medium & High Voltage Motors

Teco is the worlds 3rd largest manufacturer of MV & HV motors.*

Using our in-house expertise and experience here in the UK Teco can interpret MV & HV motor specifications and develop a design to suit most applications. From this the most appropriate manufacturing facility within the Group would be selected to manufacture the motor.

Whether IEC or NEMA specification our Project Team can offer a technical solution, assuming the system design requirements can be met by an AC rotating machine and within any physical space restrictions that the installation may have. New designs of both Exn and Exp motors are available for applications which may need to be mounted in hazardous areas

In the UK Teco have particular expertise in the area of MV & HV motors for the driving of large pumps and compressor motors in application areas such as power stations and desalination plants, being specified and supplying some of the worlds largest OEM's and on projects as far afield as Israel, India, Korea, Uzbekistan and the USA.

The highest specification motors supplied from the UK to date are a series of 12 machines at 6MW on an 11kV supply for the driving of pumps in the largest desalination plant in the world which is currently under construction in Israel. Other notable areas of application include nuclear plants, steel works, the quarrying and aggregate industry and water/wastewater pumping.

* - IMS Report, published 2011

FLAMEPROOF MOTORS

LV Flameproof Motors

BASEEFA UK Certified motors to Exd IIB T4 and Exde IIC T4 built to IP55 as standard. With 150℃ PTC thermistors embedded on every frame size, side mounted terminal boxes and various mounting arrangements available this range of motors offer versatility in flameproof applications.

Power ratings from 0.18kW to 110kW (80-280MC IEC frame size) and voltage ranges between 380V and 690V at 50Hz or 60Hz supply make the Teco range a versatile option for hazardous area operation. Within the series are B3 and V1 flange mounting options.

This series of motors are capable of withstanding the pressure increase caused during an internal explosion and prevents such an explosion being released from within to an external explosive atmosphere. The design also prevents the occurrence of sparks, arcs or “hot spots” in service which could reach the self ignition temperature of the surrounding, potentially explosive, atmosphere.

Teco Flameproof motors are tested to:

- IEC 60079-0, General requirements for gas
- IEC 60079-1, Flame-proof enclosure “d”
- IEC 60079-7, Equipment protection to increased safety “e”

These motors are also suitable for PWM inverter control in T3 surface temperature environments which gives both flexibility of control and potential energy savings on pump and fan applications.

E2 SERIES ELECTRONIC VSD

E2 & E2+ “T-Verter” Drives

A simple, cost effective, variable speed drive the E2 Series comes in IP20 and IP65 (NEMA 4) variants, with a DIN Rail mounting option, offering flexibility of mounting and control where you need it.

With power ranges between 0.2kW and 2.2kW and a voltage supply option of 100V, 200V single phase and 200V, 400V 3 phase and 50 or 60Hz, the E2 is suitable for use in all commercial and industrial markets.

With built in EMC filter, 4—16KHz switching frequency for reduced audible noise from the motor, and integral dynamic braking on some models, the E2 Series is equipped with features associated with more costly and complex drives.

The IP65 variant comes with simple user controls for start/stop, direction changing and a speed control potentiometer, reducing the amount of external wiring and allowing the drive to be mounted adjacent to the motor on such applications as conveyors, lathes and guide rollers on printing and textile machines. IP65 units without switches are available to order where local control is not required.

In the UK Teco stock the 200V single phase and 400V 3 phase supplied units for immediate dispatch in the IP20 and IP65 “switched” variants.

Model E2-___-xxxx	1P2	1P5	101	2P2	2P5	201	202	203	410	402	403
Rated Motor Power (kW)	0.2	0.4	0.75	0.2	0.4	0.75	1.5	2.2	0.75	1.5	2.2
Rated Output Current (A)	1.4	2.3	4.2	1.4	2.3	4.2	7.5	10.5	2.3	3.8	5.2
Rated Capacity (KVA)	0.53	0.88	1.6	0.53	0.88	1.6	2.9	4	1.7	2.9	4
Input Voltage	1ϕ 100-120V (-15% ~ +10%) 50/60Hz (+/-5%)			1ϕ 200-240V (-15% ~ +10%) 50/60Hz (+/-5%)			1/3ϕ 200-240V (-15% ~ +10%) 50/60Hz (+/-		3ϕ 380-480V (-15% ~ +10%) 50/60Hz (+/-5%)		
Output Voltage	3ϕ 200-240V								3ϕ 380-480V		
Input Signal Type	PNP Type (Source) input (External DC24V allowed)										
Control Method	Sinusoidal wave PWM Control										
Frequency Range	1—200 Hz										
Resolution	Digital: 0.1Hz (1-99.9Hz); 1Hz (100—200Hz), Analogue: 1Hz/60Hz										
Display	3 digit LED display frequency/inverter parameter/fault record/program version										
External Signal Setting	0 ~ 10VDC, 4 ~ 20mA, 0 ~ 20mA										
Other Function	Upper and Lower frequency limit										
Carrier Frequency	4 ~ 16kHz										
Accel/Decel Time	0.1 ~ 999 seconds										
V/F Pattern	6 patterns										
Torque Control	Torque boost level adjustable										
Multi-function Input	2 for multi-speed 1 (Sp1)/2 (Sp2), 1 Jog/Rapid Stop/External BB/Reset										
Multi-function Output	1 relay for Fault/Running/Frequency Agreed function										
Braking Torque	20%						20% ~ 100% Built In Transistor				
Instantaneous Over Current	Approximately 200% Rated Current										
Overload	150% for 1 minute										
Over Voltage	DC Voltage > 410V								DC Voltage > 800V		
Under Voltage	DC Voltage < 200V								DC Voltage < 400V		
Momentary Power Loss	0 ~ 2 seconds, restart by speed search										
Stall Prevention	Accelerate/Decelerate/Constant Speed										
Output Short Circuit	Electronic Protection										
Ground Fault	Electronic Protection										
Other Functions	Heatsink overheat protection, Current Limit										

NEW 510 FAMILY OF ELECTRONIC VSD'S

L510 Drives

The new 510 family of inverter drives from Teco starts with the L510 range of single phase supplied drives.

With power ranges between 0.2kW and 2.2kW and a voltage supply option of 100V, 200V single phase and 200V 3 phase and 50 or 60Hz, the L510 is suitable for use in all commercial and industrial markets. The drives also include an integral EMC filter for suppression in compliance with IEC EN61800-3.

The 32 bit CPU design provides high performance, faster A-D conversion and torque compensation and combined with features such as built in Modbus RS485 communication, a built in display and keypad, including speed adjustment potentiometer, 5 multi-function digital inputs and PID functionality, the L510 competes with more expensive vector control drives in demanding applications such as pumps, conveyors, packaging and textile machines. Also available are communication interface modules for Profibus, DeviceNet, Ethernet (TCP/IP) and CanOpen protocols.

Built to IP20 and designed for side by side mounting the L510 is ideal for fitting in a control panel and the optional DIN rail mounting kit speeds up installation.

E510 Sensorless Vector Drives

The E510 series of sensorless vector drives is available in 200 or 400 volt variants up to 18.5kW providing a powerful starting torque at low frequency with high performance operation at the highest efficiency.

Combining all of the features of the L510 and with additional integral PLC functionality with 6 multi-function digital inputs and 2 programmable relay outputs the E510 is suitable for a number of applications including textiles, woodworking, food processing, packaging and labelling as well as fan and pump control. The coated boards and isolated control circuit protect against moisture and dust particles.

Additional features include integrated safety stop and fire mode functions, soft PWM modulation for quiet motor operation in ventilation fans and auto-carrier frequency switching to provide a highly reliable performance by avoiding overheating, combined with a variable speed cooling fan based on ambient temperature to avoid unnecessary energy consumption.

A510 High Performance Drives

Available from Quarter 1, 2012 the A510 series of drives is available up to 160kW at 400V.

This range offers full vector control, PID and PLC functionality and comes with a comprehensive range of communication option modules in addition to the built in RS485 Modbus.

More information will be published at www.teco.co.uk as it becomes available.

CV SERIES ELECTRONIC VSD

CV Sensorless Vector Control Drives

The 7300CV Series drives with sensorless vector control is designed to give optimum motor control in addition to having built-in PLC functionality and RS485 serial communication.

The LED/LCD keypad and display is designed to make programming and monitoring of the drive as simple as possible and with features such as a memory unit with copy function and programming via a PC or PDA ease of commissioning is a key benefit. Stock units come complete with the LCD keypad as standard.

With 6 programmable inputs and 2 programmable relay outputs the CV range has the versatility to drive a wide range of applications. The maximum output frequency of 400Hz allows control of high speed motors for such as woodworking machines and simple machine tools and router motors where speed control accuracy of +/- 0.5% in vector mode gives accurate open loop speed holding without the necessity to incorporate encoder feedback into the speed loop.

The 7300CV range complies with global standards including CE, UL, TÜV & cUL and has been utilized worldwide on such applications as chillers for generator sets, where ambient operating temperatures within the control centre range from -10~50℃.

Control method	V/F & Sensorless Vector Control
Starting Torque	150% /1Hz（Sensorless vector）
Speed Control Accuracy	+/-0.5% （Sensorless vector）
Digital Input Signal	NPN/PNP
Output Frequency Range	0.1~400.0Hz
Frequency Accuracy	Digital：+/-0.01% 、Analog：+/-0.4% （25+/-10℃）
Frequency Resolution	Digital：0.01Hz、Analog：0.06/60Hz（10bits）.
Frequency Setting Signal	Analog 0~10v/4~20mA、Communication、Keypad
Overload Capability	150% /1min
Accel/Decel Time	0.1~3600sec
Braking Torque	20%, with braking resistor 100% above (braking transistor is built-in)
V/F pattern	15 patterns fix, one curve programmable
Carrier Frequency	2~16KHz
Other functions	Auto voltage regulation (AVR), Speed Search, S-Curve, 3-wire Control, PID Function, Torque boost, Slip Compensation, Energy Saving, Communication Control (Modbus slave), Auto Restart, Simple PLC function
Motor Overload	Electronic Thermal overload relay
Instant Overcurrent	Approx 200% of rated current
Overload	150% / 1min
Overvoltage/ Undervoltage	200V Class：Vdc＞410v；400V Class：Vdc＞820v 200V Class：Vdc＜190v；400V Class：Vdc＜380v
Momentary Power Loss	0~2 seconds, Can be restarted by SPEED search
Heatsink Fan	Protected by Thermistor
Stall Prevention	Stall prevention for acceleration/deceleration/operation
Ground Fault	Electronic circuit protection

PENTA SERIES ELECTRONIC VSD

Penta Series Multi-purpose Drive

The Penta Series of drives is designed to offer 5 modes of motor control and is available across a number of supply voltages between 380V and 690V and in various frame sizes between 2.2kW and 3MW. Also available in IP00, IP20 and IP54 enclosure ratings, and in stand-alone and cabinet solutions these drives offer the latest in control technology.

Operating modes are:

IFD (Inverter frequency drive) where the vector modulation function for generic applications operates in a V/F pattern.

VTC (Vector Torque Control) operates a sensorless vector function for high torque performance applications.

FDC (Field Orientation Control) is a vector mode with encoder feedback for high torque precision and operation over a wide speed range.

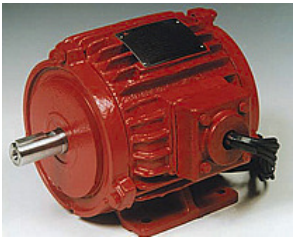
SYN (Synchronous) is a vector control mode for brushless synchronous servomotors with permanent magnets characterized by high torque precision as well as a high efficiency level.

RGN (Regenerative) gives a reflected unity power factor whilst giving a simple solution to applications such as multi-pump systems, electrical axis motor systems and multi-positioners.

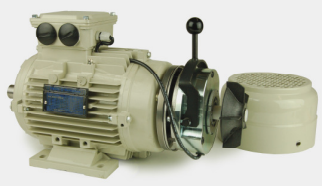
Owing to the highly configurable nature of this range and the number of communication and function modules available these are only available to customer specific orders. The Teco engineers will match the most appropriate solution to the application requirements.
The following table is only a small representation of the range available.

The following table is only a small representation of the range available.

Part Number	Rating (kW)	Rating (Amps)	Rating (kW)	Rating (Amps)	Rating (kW)	Rating (Amps)	Inom	IP Rating
	120% Overload Rating		140% Overload Rating		175% Overload Rating			
0086 4T BA2K2	75	133	75	133	55	98	135	IP20
0113 4T BA2K2	100	180	90	159	75	133	180	IP20
0129 4T BA2K2	110	191	100	180	80	144	195	IP20
0150 4T BA2K2	120	212	110	191	90	159	215	IP20
0162 4T BA2K2	132	228	132	228	110	191	240	IP20
0180 4T XA2K0	160	273	150	264	132	228	300	IP00
0202 4T XA2K0	200	341	160	273	160	273	345	IP00
0217 4T XA2K0	220	375	220	375	185	321	375	IP00
0260 4T XA2K0	250	425	250	421	220	375	425	IP00
0313 4T XA2K0	280	480	280	480	250	425	480	IP00
0367 4T XA2K0	315	528	315	528	280	480	550	IP00
0402 4T XA2K0	400	680	400	680	355	589	680	IP00
0457 4T XA2K0	400	680	400	680	315	528	720	IP00
0524 4T XA2K0	450	765	450	765	355	589	800	IP00



A wide range of Guardian “Smoke Spill” LV motors are available in pad mount format from UK Stock. These motors are rated at 300℃ for up to 2 hours and have been specified by a number of fan manufacturers. Other temperature classes and mounting arrangements are available.



Aluminium construction Brake Motors available with either DC or AC brakes, and multi-mount, based on the IE2 LVED design motor. Available as built up units or as loose kits for retrofitting onto existing motors, with single or double brakes.

IP23, “Open Drip Proof” motors in Cast Iron frames enable higher powers to be accommodated in smaller frame sizes where IP55 protection is not required. These are generally used in compressors or enclosed air handling units. Various mounting options are available.

GAMBICA
AUTOMATION INSTRUMENTATION & CONTROL LABORATORY TECHNOLOGY

REMA

Pump Centre

Membership of the trade bodies Gambica, REMA and The Pump Centre gives Teco a voice in the UK in the setting of standards and best practice for use of motors and drives, sharing our expertise and experience with other OEM’s and end users.

www.teco-group.eu

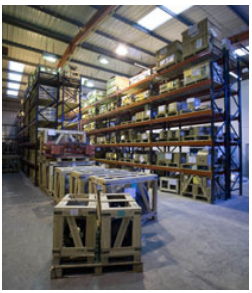
NEMA frame motors are available through both the Far Eastern manufacturing facilities and also Teco Westinghouse based out of the USA and Canada. This offering covers LV, MV and HV motors in different environmental protection ratings, mounting options and with both 50Hz and 60Hz speed ratings.

Slip Ring or Wound Rotor Motors are available in Cast Iron construction from 11kW—5MW with operating voltages between 400V— 11kV. They come in IEC or NEMA frames and with various mounting options to suit the operating environment.

Specialist Drive design and manufacture.

Our engineering team can specify and design purpose built drives in varying enclosure styles to suit a wide variety of applications and environmental operating conditions including Low Harmonic and Active Front End solutions.

Over £1M of stock in our Salford Warehouse is backed up by European facilities in Germany and The Netherlands, and 8 manufacturing plants. LV Motors and drives are available for immediate dispatch within the UK. Some of our distributors offer a 24/7 service for breakdown situations.



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