

# **PUMPS, MOTORS and CONTROLS MANUFACTURING**



**ELECTRIC MOTORS - High Efficiency Motors, Energy-saving and with variable Speed controls** 

VALCO® International trademark

MADE IN ITALY

CE

Manufacturing Group established in Italy in 1976 worldwide.
Works, Pump & Motor Test Laboratory, Pumps and Electric Motors Research Centre.

**E**xclusive High Tech Pumps for Water and Other Fluids, Motors and Controls, in Standard or Custom Designs.

VALCO: THE MOST COMPLETE RANGE OF PUMPS FOR DOMESTIC, AGRICULTURAL, INDUSTRIAL AND CIVIL USE AND A RELIABLE SOURCE OF PUMP AND MOTOR SERVICE:

A GLOBAL, INNOVATIVE AND COMPETITIVE PUMPING AND MOTORS SOLUTION.

WATER AND PUMPS ARE ESSENTIAL FOR LIFE!



## **ELECTRIC MOTORS for Standard and Special Applications, High Efficiencies, Energy-saving and also with Variable Speed Controls.**

## **EFFICIENCY LEVELS FOR THREE PHASE MOTORS to IEC 60034-30**

IF1 = Standard Efficiency

IE2 = High Efficiency (comparable to USA EPACT 60Hz)

IE3 = Premium Efficiency (comparable to USA "NEMA Premium 60Hz)

Ecodesign EUP Directive 200532/EC and Commission Regulation EC 640/2009.

## **Motor construction**

Asynchronous Induction Compact AC Power in Standard or Custom Designs. Totally enclosed fan ventilated (TEFC) ranges for industrial applications.

Single phase and three phase.

Standards: Powers and Frames to IEC, IEC 60072-1, IEC 60034-7, IEC

60034-1, IEC 60034-5, IEC 60034-30, EN 50347. With frame sizes from 56 to 500 with construction forms footmounted or flangemounted B3, B5, B14, B3/B5, B3/B14 and special executions on demand. From 2 to 12 pole and with double or multiple polarity and also with Variable Speed Inverter control (frequency control with modulation), soft-starters and controls. Stator frames and shields made of die-cast aluminium or cast iron; ball bearings with double screen, silent: they do not require maintenance; steel or stainless steel shafts.

Degree of protection IP54, other degrees available on request. Insulation Class F or B and other classes available on request, in an ambient temperature not exceeding 40 DEG.C., and at an altitude not exceeding 1000 metres. S1 continuous duty (other duties on demand).

## **Innovations and Specialties**

Windings in Class F with copper wiring in class H2 with impregnation in Class H.

Tropicalization on request. Flame-proof versions available – motors for hazardous areas - following Directive 94/9/EC ATEX (Ex) for equipment intended for use in potentially explosive atmospheres Eexd (motors compatible with explosive athmosphere that are mixed or inflammable: air, gases and dust).

Low Voltage executions for use in installations with safety rules against electrocution. DC motors and low voltage motors available on demand all throughout the ranges. AC and DC Brake Motors also available. Asynchronous and Synchronous Generators suitable for Hydropower, Marine and Industrial Applications. Mains and Inverter Supply.

## **Custom Built Special Solutions**

Special Executions available with special voltages, special shafts and special flanges. Please apply. Important: we also supply motors components like Wound Stators and Rotor Shafts made to custom designs for customers individual requirements.

Frame Sizes from 56 to 500. Powers from 0.17 to 560 kW

## Voltages

Single Phase: 230 V

Three Phase: 3 kW and below 230/400 V

4 kW and above 400/690 V

Other voltages available on request.

## Cvcles

50 Hz Standard

60 Hz available all throughout the range













Innovative and





and Rotor with Shaft

Shaft with Rotor balanced. Also special executions

Motor with fitted the innovative, practicable and safe faston typeconnection on the terminal box

Windings and shafts





Stator laminations in iron steel sheets or magnetic silicon sheets (packs) with rotor diecast



double or triple

enamelling

Flange frame

size 80 B14

Flange frame size 100 B5



V-Diecasting

Flange frame size 100 B5R reduced



Motor Housings and Shields in Aluminium Diecast also made to Custom Designs





# **ELECTRIC MOTORS**

Asynchronous Induction AC Electric Motors, totally enclosed fan cooled (TEFC) squirrel cage rotor.

S1 continuous duty and normal operating conditions.

# **SINGLE PHASE 2 POLE 3000 min<sup>-1</sup>** for GENERAL STANDARD APPLICATIONS, B3 FOOTMOUNTED \*\*

TYPES	RATED POWER		FRAME	min <sup>-1</sup>	In (A)	Weight
1~	HP	kW	SIZE	at 50 Hz	at 230 V	in Kgs (B3)
F63-2M-25	0,25	0,18	63	2750	1,40	3,9
F63-2M-33	0,33	0,25	63	2750	1,90	4,3
F63-2M-50	0,5	0,37	63	2750	2,90	4,6
F71-2M-50	0,50	0,37	71	2750	2,80	5,8
F71-2M-75	0,75	0,55	71	2750	4,10	6,6
F71-2M-100	1	0,75	71	2750	5,10	7,1
F71-2M-150	1,5	1,1	71	2750	7,70	7,6
F80-2M-80	0,80	0,60	80	2750	4,70	9,0
F80-2M-100	1	0,75	80	2750	5,80	9,4
F80-2M-150	1,5	1,1	80	2750	8,30	10,9
F80-2M-200	2	1,50	80	2750	10,50	11,6
F90S-2M-250	2,50	1,85	90S	2810	12,20	14,2
F90L-2M-300	3	2,2	90L	2820	13,70	17,1
F100L-2M-300	3	2,2	100L	2850	14,00	18,9

<sup>•</sup> Reduction in speed will result in a fall of performance.

The single phase electric motors for general standard applications are supplied in standard execution with terminal box and with permanent split capacitor (PSC).

# **SINGLE PHASE 4 POLE 1500 min**<sup>-1</sup> for GENERAL STANDARD APPLICATIONS, B3 FOOTMOUNTED \*\*

TYPES	==	POWER	FRAME	min <sup>-1</sup>	In (A)	Weight
1~	HP	kW	SIZE	at 50 Hz	at 230 V	in Kgs (B3)
F63-4M-25	0,25	0,18	63	1350	1,60	4,4
F71-4M-40	0,4	0,3	71	1350	2,70	6,3
F71-4M-50	0,5	0,37	71	1350	3,20	7,2
F80-4M-50	0,5	0,37	80	1350	3,10	6,9
F80-4M-75	0,75	0,55	80	1350	4,30	8,4
F80-4M-100	1	0,75	80	1350	5,70	9,8
F80-4M-150	1,5	1,1	80	1350	7,50	11,9
F90S-4M-150	1,5	1,1	90S	1380	7,80	13,2
F90L-4M-200	2	1,5	90L	1400	10,00	15,2
F90L-4M-250	2,5	1,85	90L	1400	12,00	17,2
F90L-4M-300	3	2,2	90L	1400	14,00	18,0
F100L-4M-300	3	2,2	100L	1420	13,50	21,4

<sup>•</sup> Reduction in speed will result in a fall of performance.

<sup>\*\* =</sup> Available also construction form flangemounted B5, B14, B3/B5, B3/B14, and special executions on demand.



## **ELECTRIC MOTORS**

Asynchronous Induction AC Electric Motors, totally enclosed fan cooled (TEFC) squirrel cage rotor.

S1 continuous duty and normal operating conditions.

## **EFFICIENCY LEVELS FOR THREE PHASE MOTORS to IEC 60034-30**

IE1 = Standard Efficiency

IE2 = High Efficiency (comparable to USA EPACT 60Hz)

IE3 = Premium Efficiency (comparable to USA "NEMA Premium 60Hz)

Ecodesign EUP Directive 200532/EC and Commission Regulation EC 640/2009.

## THREE PHASE 2 POLE 3000 min<sup>-1</sup>

## for GENERAL STANDARD APPLICATIONS, B3 FOOTMOUNTED \*\*

TYPES	RATED POWER		FRAME	min <sup>-1</sup>	In (A)	Weight
1~	HP	kW	SIZE	at 50 Hz	at 230 V	in Kgs (B3)
F63-2T-25	0,25	0,18	63	2800	0,63	3,8
F63-2T-33	0,33	0,25	63	2800	0,80	4,2
F63-2T-50	0,5	0,37	63	2800	1,13	4,5
F71-2T-50	0,5	0,37	71	2800	1,05	5,4
F71-2T-75	0,75	0,55	71	2800	1,55	6,2
F71-2T-100	1	0,75	71	2800	2,00	6,7
F71-2T-150	1,5	1,1	71	2800	2,95	7,2
F80-2T-100	1	0,75	80	2830	1,85	7,8
F80-2T-150	1,5	1,1	80	2840	2,70	9,6
F80-2T-200 *	2	1,5	80	2840	3,60	11,0
F80-2T-300 *	3	2,2	80	2840	5,30	12,1
F90S-2T-200	2	1,5	90S	2840	3,30	11,9
F90L-2T-300	3	2,2	90L	2840	4,90	14,1
F90L-2T-400 *	4	3	90L	2840	6,70	16,8
F100L-2T-400	4	3	100L	2840	6,40	18,6
F100L-2T-550 *	5,5	4	100L	2840	8,70	22,1
F100L-2T-750 *	7,5	5,5	100L	2840	11,90	23,7
F112M-2T-550	5,5	4	112M	2850	8,60	23,9
F112M-2T-750 *	7,5	5,5	112M	2850	11,60	28,7
F112M-2T-1000 *	10	7,5	112M	2850	15,80	32,1
F132S-2T-750	7,5	5,5	132S	2860	11,60	34,8
F132S-2T-1000	10	7,5	132S	2870	15,00	40,7
F132M-2T-1250 *	12,5	9	132M	2880	18,80	45,2
F132M-2T-1500*	15	11	132M	2900	22,50	49,9
F132M-2T-2000 *	20	15	132M	2920	31,00	58,0
F160M-2T-1500	15	11	160M	2930	22,00	76,0
F160M-2T-2000	20	15	160M	2930	30,00	85,0
F160L-2T-2500	25	18,5	160L	2930	63,00	98,0
F160L-2T-3000 *	30	22	160L	2935	43,00	115,0
F180M-2T-3000	30	22	180M	2935	41,50	128,0
F180L-2T-4000 *	40	30	180L	2945	56,50	140,0
F180L-2T-5000 *	50	37	180L	2945	70,00	149,0
F200L-2T-4000	40	30	200L	2950	55,50	142,0
F200L-2T-5000	50	37	200L	2950	69,00	151,0

<sup>•</sup> Reduction in speed will result in a fall of performance.

## THREE PHASE 4 POLE 1500 min<sup>-1</sup>

## for GENERAL STANDARD APPLICATIONS, B3 FOOTMOUNTED \*\*

TYPES	RATED POWER		FRAME	min <sup>-1</sup>	In (A)	Weight
1~	HP	kW	SIZE	at 50 Hz	at 230 V	in Kgs (B3)
F63-4T-17	0,17	0,12	63	1360	0,50	3,7
F63-4T-25	0,25	0,18	63	1370	0,75	4,1
F71-4T-33	0,33	0,25	71	1370	0,90	5,5
F71-4T-50	0,5	0,37	71	1380	1,20	6,3
F71-4T-70 *	0,7	0,5	71	1380	1,70	6,9
F80-4T-75	0,75	0,55	80	1400	1,70	8,2
F80-4T-100	1	0,75	80	1400	2,20	9,6
F80-4T-150 *	1,5	1,1	80	1400	3,00	10,7
F90S-4T-150	1,5	1,1	90S	1400	2,80	11,8
F90L-4T-200	2	1,5	90L	1400	3,70	13,3
F90L-4T-300 *	3	2,2	90L	1400	5,40	17,2
F100L-4T-300	3	2,2	100L	1400	5,30	18,0
F100L-4T-400	4	3	100L	1400	7,10	21,2
F100L-4T-550 *	5,5	4	100L	1400	9,60	22,8
F112M-4T-550	5,5	4	112M	1420	9,30	26,2
F112M-4T-750 *	7,5	5,5	112M	1420	12,70	30,6
F132S-4T-750	7,5	5,5	132S	1440	12,00	40,6
F132M-4T-1000	10	7,5	132M	1450	16,00	49,9
F132M-4T-1200 *	12,5	9	132M	1450	20,00	52,2
F132M-4T-1500 *	15	11	132M	1450	24,00	58,5
F160M-4T-1500	15	11	160M	1460	23,00	87,0
F160L-4T-2000	20	15	160L	1460	31,00	102,0
F160L-4T-2500 *	25	18,5	160L	1460	38,00	118,0
F180M-4T-2500	25	18,5	180M	1460	36,00	126,0
F180L-4T-3000	30	22	180L	1460	43,00	139,0
F180L-4T-4000 *	40	30	180L	1465	58,00	148,0
F200L-4T-4000	40	30	200L	1470	57,00	150,0

Reduction in speed will result in a fall of performance.

## ON REQUEST and SPECIALTIES

- High Efficiency levels IE2 (comparable to USA EPACT 60Hz) and IE3 (comparable to USA "NEMA Premium 60Hz)
- special voltages
- tropicalization
- inverter supply
- multiple polarity from 6 to 12 poles
- IP protections
- insulations
- double winding
- special shafts and hollow shafts

- customized flanges
- plug-in version for quick, easy and safe connectivity
- Flame-Proof for hazardous areas
- for adverse operating conditions with repeated starting and occasional overloading
- Brake motors
- DC Motors
- Flat motors
- · motors components

We also supply high efficiency Asynchronous and Synchronous Alternators and Permanent Magnet Generators used in conjunction with hydro, gas and wind turbines for production of renewable energies and for Generating Sets and for Marine and Industrial applications. Also DC low voltage direct current. High frequency Rotating Converters for Concrete Vibrators.



<sup>\* =</sup> motors out of standards with rated power greater than those of IEC sizes.

<sup>\*\* =</sup> Available also construction form flangemounted B5, B14, B3/B5, B3/B14, and special executions on demand.

# STANDARDS, EU DIRECTIVES, REGULATIONS AND RECOMMENDATIONS

## NATIONAL, REGIONAL AND INTERNATIONAL STANDARDS

Electric Motors to IEC, IEC 60072-1, IEC 60034-7, IEC 60034-1, IEC 60034-5, EN 50347 Standards.

National Standard Organizations: DIN, BSI, ANSI, NIST, JISC, UNI, GOST-R, SAC, SAI, AENOR, SIS, KATS, DGN, PKN, SASO, SABS, TSE, TCVN, etc.

Low Voltage versions 42V AC following rules CENELEC HD 400.1 for use in installations with safety rules against electrocution. Most international standards.

Kindly contact us for confirmation and certifications and approvals details.

#### **EU DIRECTIVES**

EU Directive 98/83/CE suitable to waters for human consumption executions, RoHS-2002-2002/95/EC Directive, Low Voltage Directive 2006/95/CE, Machines Directive 98/037/EEC, Electromagnetic Compatibility Directive 89/336/EEC, Executions Flameproof ATEX Directive 94/9/EC for equipment intended for use in potentially explosive atmospheres Eexd-IIB-T3-II-2-G.

#### **CERTIFICATIONS and APPROVALS**

All major International and National Certifications and Approvals are obtainable on our products through Certifying Bodies and Authorities like UL, NSF, CSA, IMQ, TÜV, ETL, SGS, QSA, ASME, API, WRc, NSF, IAPMO, TTK CE, SEMKO, PSE, GOST-R, UL, CSA, WIMES 3.03 with Certifications and Approvals: BSI, TUV4807, TUV20013, TUV20014, TUV20016, TUV20020, TUVCE0036, Crecep, DVGW, IAPMO, WRAS20014, WRAS20015, WRAS20016, WRAS20018, WRAS20020, DIN 531, DIN 537, DIN 541, DIN P 637, VQM, etc. Kindly contact us for confirmation and certifications and approvals details.

We provide Testings, Conformity and Inspection Certificates through our Valco modern Testing Laboratory and through major Approved Service and University Testing Laboratories: RTM Breda, CMC, CREI-VEN, NANOFAB, CIVEN, ECSIN, PARCO VEGA; Universities: Università degli Studi of Padua, Università Ca' Foscari of Venice, Università degli Studi of Verona, etc.









#### **ENERGY SAVING STANDARDS and RECOMMENDATIONS**

Energy-saving Efficiency standards for three phase motors to IEC 60034-30

IE1 = Standard Efficiency

IE2 = High Efficiency (comparable to USA EPACT 60Hz)

IE3 = Premium Efficiency (comparable to USA "NEMA Premium 60Hz)

Ecodesign EUP Directive 200532/EC and Commission Regulation EC 640/2009.

## PUMPS AND MOTORS TO LAST AND TROUBLE-FREE

We want to help our Customers to be Successful, by providing the Best Products and the Highest Service at Competitive Market Prices.

We Solve Pumping Problems, also the most difficult ones, Designing and Building for you the most Reliable, Efficient and Competitive Pumping Solutions.

Contact us for your Pumping Problems!

## 60 Hz available all throughout the range: please apply.

We provide full Technical Service, Spare Parts, Assistance and Aftersale Service and Maintenance through our Valco Distributors' Network and our Valco Service Centres.

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All trademarks and registered trademarks are the property of their respective owners.

Other company, product, and service names may be trademarks or service marks of others.

#### Reduction in speed will result in a fall of performance.

Single phase motors may be provided on request with overload motor protection, on 3 phase version the overload motor protection must be provided by the user and we can offer you our lines of control and protection panels (starters).

Features subject to change - not contractually valid unless specifically authorized by VALCO.

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Useful and valuable products for progress, prosperity and peace<sup>©</sup>

Head Office, Works, Pump & Motor Test Laboratory Pumps and Electric Motors Research Centre.

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