

Energy Efficient 3 Phase LV Induction Motors



Motors Price List w.e.f. 20 November 2013

- IE2 & IE3
- EFF2 & EFF1
- Inverter Duty
- Brake Duty
- Crane Duty

CE (IE3) (IE2)
HAVELLS-LAFERT MOTORS





About us

Havells India Ltd is a billion-dollar-plus organization, and is one of the largest & India's fastest growing electrical and power distribution equipment manufacturer with products ranging from Industrial & Domestic Circuit Protection Switchgear, Cables & Wires, Motors, Fans, Power Capacitors, CFL Lamps, Luminaires for Domestic, Commercial & Industrial applications, Modular Switches, Water Heaters and Domestic Appliances covering the entire gamut of household, commercial and industrial electrical needs.

Havells owns some of the prestigious global brands like Crabtree, Sylvania, Concord, Luminance & Standard.

With 94 branches / representative offices and over 8000 professionals in over 50 countries across the globe, the group has achieved rapid success in the past few years. Its 15 state-of-the-art manufacturing units in India located at Haridwar, Baddi, Noida, Faridabad, Alwar, Neemrana, and 6 state-of-the-art manufacturing plants located across Europe, Latin America & Africa churn out globally acclaimed products. Havells is a name synonymous with excellence and expertise in the electrical industry. Its 20000 strong global distribution network is prompt to service customers.

To add to the existing state-of-the-art manufacturing plants, Havells has now started a world class Motor Plant at Neemrana (Rajasthan). It is one of the largest LV Motor Plant in Asia spread over 42 acres and is manufacturing energy efficient motors ranging from 0.12HP to 470HP.

The plant has a capacity of manufacturing over 20000 motors per month. The state-of-the art plant and machinery has been imported from AEG Spain.

Some of the salient features of the plant and the product are :

- Largest single location motor plant in India
- VPI facility for VPI impregnation
- Automatic winding lines upto 250 frames
- Automatic plant drying & conveyerise station
- Automatic test plant upto 355 frame
- All critical operation are done on CNC machines
- Motors have 6 leads for VFD application

Havells is committed to manufacturing excellence and providing world class quality products at affordable prices. Havells offers a complete solution which is not only safe and reliable but also saves energy. We continue the same tradition with our motors.

Inaugurate savings.

Energy-efficient motors from Havells.



CE IE2 IE3
HAVELLS-LAFERT MOTORS

WIDE RANGE FROM 0.12 HP TO 470 HP



HAVELLS
POWERSOLUTIONS

Features:

- Multi-mount construction and easy change of terminal box position (up to 160 frame)
- 6 Lead Terminal Box
- Suitable for standard VFD drives
- Low weight-to-output ratio
- Good aesthetics and surface finish
- Better heat dissipation



Corporate Office: Havells India Ltd., QRG Towers, 2D, Sector-126, Expressway, Noida-201304 (UP) India. Tel.: +91-120-4771000, E-mail: marketing@havells.com, www.havells.com,
Consumer Care No.: 1800 11 0303 (Toll Free), 1800 103 1313 (All Connections), 011-4166 0303 (Landline)
Join us on Facebook at www.facebook.com/havells and share your ways to save the planet!

Content

S. No.	Titles	Page No
1.	Price List - Foot Mounted - B3 (EFF 2)	7 - 10
3.	Price List - Foot Mounted - B3 (EFF 1)	11 - 14
5.	Price List - Foot Mounted - B3 (IE 2)	15 - 17
7.	Price List - Foot Mounted - B3 (IE 3)	18 - 20
9.	Price List - Inverter Duty without Encoder (EFF 2)	21 - 24
10.	Price List - Inverter Duty with Encoder (EFF 2)	25 - 28
11.	Price List - Brake Duty (EFF 2)	29 - 32
12.	Price List - Crane Duty (EFF 2)	33
13.	Crane Duty Selection Chart (EFF 2)	34 - 36
14.	Price List for Cash Extras for Special Features	37 - 38

Standard Motors



Special Motors

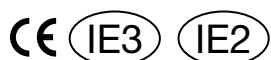


STANDARD PRODUCT SPECIFICATIONS

Motor Type	AC Three Phase Squirrel Cage Induction Motor
Efficiency	Energy Efficient (As per IS 12615)
Voltage ± Variation	415 Volts ± 10%
Frequency ± Variation	50 Hz ± 5%
Combined Variation	10% (Absolute Sum)
Enclosure	TEFC
Mounting	Foot, Face, Flange, Foot cum Flange & Foot cum face
Frame Dimensions	As per IS 1231 & IS 2223
Altitude	Upto 1000M
Relative Humidity	Upto 100%
Degree of Protection	IP 55 (As per IS 4691)
Class of Insulation	Class 'F'
Ambient Temp / Temp Rise	50°C / 70°C
Duty / Rating	S1 / Continuous (As per IS 325)
Position of Terminal Box	Top
Direction of Rotation	Bi-directional
Grease Type	Lithium Based Grease
Cooling	Shaft Mounted Fan
Paint	RAL 9005

MATERIAL SPECIFICATIONS

Motor parts	Frame size	Material
Stator frame	56 - 160 90 - 355	Aluminium alloy Cast iron
Endshield	56 - 112 90 - 355	Aluminium alloy Cast iron
Flanged endshield	56 - 112 90 - 355	Aluminium alloy Cast iron
Fan cover	56 - 71 63 - 355	Industrial nylon grade Sheet steel
Fan	56 - 355	Industrial nylon grade
Terminal box	56 - 71 63 - 160 160- 355	Industrial nylon grade Aluminium alloy Sheet steel / Cast iron



Energy Efficient Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Induction Motors - Foot Mounted (B3)

Horizontal Foot Mounted Induction Motor suitable for 415V \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C conforming to IS 12615:2011, IEC 60034-30-2008

2 POLE -3000 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.09	0.12	MH56ZAA2	MHHXTAS20X09	7,290
0.12	0.16	MH56ZBA2	MHHXTAS20X12	7,460
0.18	0.25	MH63ZAA2	MHHXTBS20X18	8,640
0.25	0.33	MH63ZBA2	MHHXTBS20X25	8,890
0.37	0.5	MH71ZAA2	MHHXTCS20X37	9,420
0.55	0.75	MH71ZBA2	MHHXTCS20X55	10,390
0.75	1	MH80ZAA2	MHHXTDS20X75	10,780
1.1	1.5	MH80ZBA2	MHHXTDS201X1	11,790
1.5	2	MH90SAA2	MHCXTES201X5	13,550
1.8*	2.5	MH90SBA2	MHCXTES201X8	14,700
2.2	3	MH90LCA2	MHCXTFS202X2	17,420
3	4	MH100LAA2	MHCXTGS20003	20,450
3.7	5	MH100LBA2	MHCXTGS203X7	21,400
3.7*	5.5	MH112MAA2	MHCXTHS203X7	25,760
5.5	7.5	MH132SYA2	MHCXTIS205X5	34,840
7.5	10	MH132SZA2	MHCXTIS207X5	36,360
9.3	12.5	MH160MTG2	MHCXTKS209X3	63,210
11	15	MH160MVA2	MHCXTKS20011	63,500
15	20	MH160MXA2	MHCXTKS20015	74,450
18.5	25	MH160LXA2	MHCXTLS2018X5	96,640
22	30	MH180MXG2	MHCXTMS20022	1,07,770
30	40	MH200LLG2	MHCXTOS20030	1,60,300
37	50	MH200LNG2	MHCXTOS20037	1,95,560
45	60	MH225MN2	MHCXTQS20045	2,51,670
55	75	MH250MN2	MHCXTRS20055	3,37,230
75	100	MH280ST2	MHCXTSS20075	4,39,110
90	125	MH280MT2	MHCXTTS20090	5,09,000



Note: Havells standard motors in frame 315 and above are **EFF1** at no extra cost and are listed in EFF1 pricelist

* Class F insulation with temperature rise limited to Class B

Excise duty including cess will be charged extra as applicable at the time of dispatch

Coil
Insertion



Energy Efficient Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Induction Motors - Foot Mounted (B3)

Horizontal Foot Mounted Induction Motor suitable for 415V \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C conforming to IS 12615:2011, IEC 60034-30-2008

4 Pole -1500 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.06	0.08	MH56ZAA4	MHHXTAS40X06	8,060
0.09	0.12	MH56ZBA4	MHHXTAS40X09	8,110
0.12	0.16	MH63ZAA4	MHHXTBS40X12	8,230
0.18	0.25	MH63ZBA4	MHHXTBS40X18	9,340
0.25	0.33	MH71ZAA4	MHHXTCS40X25	9,600
0.37	0.5	MH71ZBA4	MHHXTCS40X37	9,940
0.55	0.75	MH80ZAA4	MHHXTDS40X55	11,120
0.75	1	MH80ZBA4	MHHXTDS40X75	11,180
1.1	1.5	MH90SAA4	MHCXTES401X1	12,770
1.5	2	MH90LBA4	MHCXTFS401X5	13,900
1.8	2.5	MH90LCA4	MHCXTFS401X8	15,020
2.2	3	MH100LAA4	MHCXTGS402X2	18,450
3.0*	4	MH100LBA4	MHCXTGS40003	19,400
3.7	5	MH112MAA4	MHCXTHS403X7	23,650
5.5	7.5	MH132SZA4	MHCXTIS405X5	32,590
7.5	10	MH132MZA4	MHCXTJS407X5	37,970
9.3	12.5	MH160MYA4	MHCXTKS409X3	60,090
11	15	MH160MXA4	MHCXTKS40011	60,860
15	20	MH160LXA4	MHCXTLS40015	75,640
18.5	25	MH180MXG4	MHCXTMS4018X5	1,02,200
22	30	MH180LXG4	MHCXTNS40022	1,13,890
30	40	MH200LNG4	MHCXTOS40030	1,53,750
37	50	MH225SN4	MHCXTPS40037	1,88,850
45	60	MH225MN4	MHCXTQS40045	2,28,900
55	75	MH250MN4	MHCXTRS40055	3,13,110
75	100	MH280ST4	MHCXTSS40075	4,03,020
90	125	MH280MT4	MHCXTTS40090	4,64,680



Note: Havells standard motors in frame 315 and above are **EFF1 at no extra cost** and are listed in EFF1 pricelist

* Class F insulation with temperature rise limited to Class B

Excise duty including cess will be charged extra as applicable at the time of dispatch

Slot
Insulation



Energy Efficient Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Induction Motors - Foot Mounted (B3)

Horizontal Foot Mounted Induction Motor suitable for 415V \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C conforming to IS 12615:2011, IEC 60034-30-2008

6 Pole -1000 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.18	0.25	MH71ZAA6	MHHXTCS60X18	9,090
0.25	0.33	MH71ZBA6	MHHXTCS60X25	10,740
0.37	0.5	MH80ZAA6	MHHXTDS60X37	11,760
0.55	0.75	MH80ZBA6	MHHXTDS60X55	12,050
0.75	1	MH90SAA6	MHCXTES60X75	13,590
1.1	1.5	MH90LBA6	MHCXTFS601X1	14,900
1.5	2	MH100LAA6	MHCXTGS601X5	19,030
1.8*	2.5	MH100LBA6	MHCXTGS601X8	20,550
2.2	3	MH112MAA6	MHCXTHS602X2	22,750
3*	4	MH112MBA6	MHCXTHS60003	30,050
3.7	5	MH132SYA6	MHCXTIS603X7	34,780
5.5	7.5	MH132MZA6	MHCXTJS605X5	38,790
7.5	10	MH160MZA6	MHCXTKS607X5	62,740
9.3	12.5	MH160LYA6	MHCXTLS609X3	74,210
11	15	MH160LZA6	MHCXTLS60011	78,120
15	20	MH180LZG6	MHCXTNS60015	1,06,720
18.5	25	MH200LPG6	MHCXTOS6018X5	1,38,810
22	30	MH200LRG6	MHCXTOS60022	1,50,650
30	40	MH225MP6	MHCXTQS60030	2,35,660
37	50	MH250MP6	MHCXTRS60037	3,15,420
45	60	MH280SV6	MHCXTSS60045	4,04,540
55	75	MH280MV6	MHCXTTS60055	4,58,980



Note: Havells standard motors in frame 315 and above are **EFF1** at no extra cost and are listed in EFF1 pricelist

* Class F insulation with temperature rise limited to Class B

Excise duty including cess will be charged extra as applicable at the time of dispatch

Lacing



Energy Efficient Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Induction Motors - Foot Mounted (B3)

Horizontal Foot Mounted Induction Motor suitable for 415V \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C conforming to IS 12615:2011, IEC 60034-30-2008

8 Pole -750 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.12	0.16	MH71ZAA8	MHHXTGS80X12	11,140
0.25	0.33	MH80ZAA8	MHHXTDS80X25	12,780
0.37	0.5	MH90SAA8	MHCXTES80X37	13,050
0.55	0.75	MH90LBA8	MHCXTFS80X55	14,300
0.75	1	MH100LAA8	MHCXTGS80X75	17,590
1.1	1.5	MH100LBA8	MHCXTGS801X1	21,430
1.5	2	MH112MAA8	MHCXTHS801X5	24,820
2.2	3	MH132SZA8	MHCXTIS802X2	32,890
3	4	MH132MZA8	MHCXTJS80003	51,520
3.7	5	MH160MYA8	MHCXTKS803X7	51,530
5.5	7.5	MH160MZA8	MHCXTKS805X5	62,740
7.5	10	MH160LZA8	MHCXTLS807X5	79,620
9.3	12.5	MH180LYG8	MHCXTNS809X3	1,03,540
11	15	MH180LZG8	MHCXTNS80011	1,09,170
15	20	MH200LRG8	MHCXTOS80015	1,53,770
18.5	25	MH225SP8	MHCXTPS8018X5	1,99,240
22	30	MH225MP8	MHCXTQS80022	2,39,500
30	40	MH250MP8	MHCXTRS80030	3,23,400
37	50	MH280SV8	MHCXTSS80037	4,13,330
45	60	MH280MV8	MHCXTTS80045	4,77,590



Note: Havells standard motors in frame 315 and above are **EFF1** at no extra cost and are listed in EFF1 pricelist

* Class F insulation with temperature rise limited to Class B

Excise duty including cess will be charged extra as applicable at the time of dispatch

Assembly



Energy Efficient Motors - (EFF1)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Induction Motors - Foot Mounted (B3)

Horizontal Foot Mounted Induction Motor suitable for 415V \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C conforming to IS 12615:2011, IEC 60034-30-2008

2 Pole -3000 RPM

Kw	HP	Frame	Cat. Ref.	List Price Rs.
0.09	0.12	MHHE56ZAA2	MHHETAS20X09	8,380
0.12	0.16	MHHE56ZBA2	MHHETAS20X12	8,590
0.18	0.25	MHHE63ZAA2	MHHETBS20X18	9,940
0.25	0.33	MHHE63ZBA2	MHHETBS20X25	10,230
0.37	0.5	MHHE71ZAA2	MHHETCS20X37	10,810
0.55	0.75	MHHE71ZBA2	MHHETCS20X55	11,960
0.75	1	MHHE80ZAA2	MHHETDS20X75	12,390
1.1	1.5	MHHE80ZBA2	MHHETDS201X1	13,570
1.5	2	MHHE90SAA2	MHCETES201X5	15,580
1.8*	2.5	MHHE90SBA2	MHCETES201X8	16,900
2.2	3	MHHE90LCA2	MHCETFS202X2	20,020
3	4	MHHE100LAA2	MHCETGS20003	23,520
3.7	5	MHHE100LBA2	MHCETGS203X7	24,610
3.7*	5	MHHE112MAA2	MHCETHS203X7	29,620
5.5	7.5	MHHE132SZA2	MHCETIS205X5	40,350
7.5	10	MHHE132STA2	MHCETIS207X5	42,020
9.3	12.5	MHHE160MTA2	MHCETKS209X3	71,640
11	15	MHHE160MYA2	MHCETKS20011	73,040
15	20	MHHE160MZA2	MHCETKS20015	85,630
18.5	25	MHHE160LZA2	MHCETLS2018X5	1,10,610
22	30	MHHE180MZA2	MHCETMS20022	1,18,540
30	40	MHHE200LPG2	MHCETOS20030	1,76,330
37	50	MHHE200LRG2	MHCETOS20037	2,14,080
45	60	MMHE225MP2	MHCETQS20045	2,75,520
55	75	MHHE250MP2	MHCETRS20055	3,70,950
75	100	MHHE280SV2	MHCETSS20075	4,63,280
90	125	MHHE280MV2	MHCETTS20090	5,34,430
110	150	MHHE315SYE2	MHCETUS20110	6,75,080
132	180	MHHE315MZE2	MHCETVS20132	8,29,660
160	220	MHHE315LYE2	MHCETWS20160	9,08,510
180	240	MHHE315LYE2	MHCETWS20180	9,55,700
200	270	MHHE315LZE2	MHCETWS20200	10,60,890
225	300	MHHE355MA2	MHCETYS20225	11,22,200
250	340	MHHE355MB2	MHCETYS20250	11,87,830
275	370	MHHE355LA2	MHCETZS20275	12,58,530
315	425	MHHE355LB2	MHCETZS20315	13,01,120
335	455	MHHE355LC2	MHCETZS20335	14,70,680



Note: Havells standard motors in frame 315 and above are **EFF1 at no extra cost**

* Class F insulation with temperature rise limited to Class B

Excise duty including cess will be charged extra as applicable at the time of dispatch

Forming



Energy Efficient Motors - (EFF1)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Induction Motors - Foot Mounted (B3)

Horizontal Foot Mounted Induction Motor suitable for 415V \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C conforming to IS 12615:2011, IEC 60034-30-2008

4 Pole -1500 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.06	0.08	MHHE56ZAA4	MHHETAS40X06	9,270
0.09	0.12	MHHE56ZBA4	MHHETAS40X09	9,320
0.12	0.16	MHHE63ZAA4	MHHETBS40X12	9,470
0.18	0.25	MHHE63ZBA4	MHHETBS40X18	9,860
0.25	0.33	MHHE71ZAA4	MHHETCS40X25	10,970
0.37	0.5	MHHE71ZBA4	MHHETCS40X37	11,430
0.55	0.75	MHHE80ZAA4	MHHETDS40X55	12,740
0.75	1	MHHE80ZBA4	MHHETDS40X75	12,860
1.1	1.5	MHHE90SAA4	MHCETES401X1	14,680
1.5	2	MHHE90LBA4	MHCETFS401X5	15,990
1.8	2.5	MHHE90LCA4	MHCETFS401X8	17,280
2.2	3	MHHE100LAA4	MHCETGS402X2	21,210
3.0*	4	MHHE100LBA4	MHCETGS40003	22,390
3.7	5	MHHE112MAA4	MHCETHS403X7	27,190
5.5	7.5	MHHE132SRA4	MHCETIS405X5	37,470
7.5	10	MHHE132MTA4	MHCETJS407X5	43,670
9.3	12.5	MHHE160MYA4	MHCETKS409X3	68,470
11	15	MHHE160MZA4	MHCETKS40011	69,980
15	20	MHHE160LZA4	MHCETLS40015	86,990
18.5	25	MHHE180MZA4	MHCETMS4018X5	1,12,400
22	30	MHHE180LZA4	MHCETNS40022	1,25,270
30	40	MHHE200LRG4	MHCETOS40030	1,69,130
37	50	MHHE225SP4	MHCETPS40037	2,07,720
45	60	MHHE225MP4	MHCETQS40045	2,51,790
55	75	MHHE250MP4	MHCETRS40055	3,46,050
75	100	MHHE280SV4	MHCETSS40075	4,23,170
90	125	MHHE280MV4	MHCETTS40090	4,88,270
110	150	MHHE315SYE4	MHCETUS40110	5,94,250
132	180	MHHE315MYE4	MHCETVS40132	6,96,420
160	220	MHHE315LYE4	MHCETWS40160	8,16,950
180	240	MHHE315LYE4	MHCETWS40180	8,69,080
200	270	MHHE315LZE4	MHCETWS40200	9,91,970
225	300	MHHE355MA4	MHCETYS40225	10,15,020
250	340	MHHE355MB4	MHCETYS40250	10,93,320
275	370	MHHE355MC4	MHCETYS40275	11,07,010
315	425	MHHE355LA4	MHCETZS40315	12,51,500
335	450	MHHE355LB4	MHCETZS40335	13,53,310
350	470	MHHE355LC4	MHCETZS40350	16,13,370



Note: Havells standard motors in frame 315 and above are **EFF1 at no extra cost**

* Class F insulation with temperature rise limited to Class B

Excise duty including cess will be charged extra as applicable at the time of dispatch

Paint Shop



Energy Efficient Motors - (EFF1)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Induction Motors - Foot Mounted (B3)

Horizontal Foot Mounted Induction Motor suitable for 415V \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C conforming to IS 12615:2011, IEC 60034-30-2008

6 Pole -1000 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.18	0.25	MHHE71ZAA6	MHHETCS60X18	10,460
0.25	0.33	MHHE71ZBA6	MHHETCS60X25	12,350
0.37	0.5	MHHE80ZAA6	MHHETDS60X37	13,570
0.55	0.75	MHHE80ZBA6	MHHETDS60X55	13,910
0.75	1	MHHE90SAA6	MHCETES60X75	15,610
1.1	1.5	MHHE90LBA6	MHCETFS601X1	17,140
1.5	2	MHHE100LAA6	MHCETGS601X5	21,880
1.8*	2.5	MHHE100LBA6	MHCETGS601X8	23,630
2.2	3	MHHE112MAA6	MHCETHS602X2	26,170
3*	4	MHHE112MBA6	MHCETHS60003	34,550
3.7	5	MHHE132SYA6	MHCETIS603X7	39,990
5.5	7.5	MHHE132MZA6	MHCETJS605X5	44,600
7.5	10	MHHE160MZA6	MHCETKS607X5	71,800
9.3	12.5	MHHE160LYA6	MHCETLS609X3	84,930
11	15	MHHE160LZA6	MHCETLS60011	89,440
15	20	MHHE180LZG6	MHCETNS60015	1,16,840
18.5	25	MHHE200LPG6	MHCETOS6018X5	1,51,970
22	30	MHHE200LRG6	MHCETOS60022	1,64,930
30	40	MHHE225MP6	MHCETQS60030	2,58,010
37	50	MHHE250MP6	MHCETRS60037	3,46,990
45	60	MHHE280SV6	MHCETSS60045	4,15,620
55	75	MHHE280MV6	MHCETTS60055	4,70,990
75	100	MHHE315SYE6	MHCETUS60075	5,67,080
90	125	MHHE315MYE6	MHCETVS60090	7,13,030
110	150	MHHE315MZE6	MHCETVS60110	7,95,070
132	180	MHHE315LZE6	MHCETWS60132	9,28,160
160	220	MHHE355MA6	MHCETYS60160	9,66,430
180	240	MHHE355MB6	MHCETYS60180	10,60,810
200	270	MHHE355MC6	MHCETYS60200	11,01,620
250	340	MHHE355LA6	MHCETZS60250	11,87,300
315	425	MHHE355LB6	MHCETZS60315	18,99,350



Note: Havells standard motors in frame 315 and above are **EFF1 at no extra cost**

* Class F insulation with temperature rise limited to Class B

Excise duty including cess will be charged extra as applicable at the time of dispatch

Finished Rotors



Energy Efficient Motors - (EFF1)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Induction Motors - Foot Mounted (B3)

Horizontal Foot Mounted Induction Motor suitable for 415V \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C conforming to IS 12615:2011, IEC 60034-30-2008

8 Pole -750 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.12	0.16	MHHE71ZAA8	MHHETCS80X12	12,800
0.25	0.33	MHHE80ZAA8	MHHETDS80X25	14,690
0.37	0.5	MHHE90SAA8	MHCETES80X37	15,000
0.55	0.75	MHHE90LBA8	MHCETFS80X55	16,440
0.75	1	MHHE100LAA8	MHCETGS80X75	20,220
1.1	1.5	MHHE100LBA8	MHCETGS801X1	24,650
1.5	2	MHHE112MAA8	MHCETHS801X5	28,550
2.2	3	MHHE132SZA8	MHCETIS802X2	37,750
3	4	MHHE132MZA8	MHCETJS80003	58,310
3.7	5	MHHE160MYA8	MHCETKS803X7	68,250
5.5	7.5	MHHE160MZA8	MHCETKS805X5	71,840
7.5	10	MHHE160LZA8	MHCETLS807X5	91,130
9.3	12.5	MHHE180LYG8	MHCETNS809X3	1,13,900
11	15	MHHE180LZG8	MHCETNS80011	1,19,540
15	20	MHHE200LRG8	MHCETOS80015	1,68,370
18.5	25	MHHE225SP8	MHCETPS8018X5	2,18,110
22	30	MHHE225MP8	MHCETQS80022	2,63,260
30	40	MHHE250MP8	MHCETRS80030	3,54,070
37	50	MHHE280SV8	MHCETSS80037	4,31,950
45	60	MHHE280MV8	MHCETTS80045	5,01,470
55	75	MHHE315SYE8	MHCETUS80055	5,81,730
75	100	MHHE315MYE8	MHCETVS80075	7,25,810
90	125	MHHE315LZE8	MHCETWS8090	8,18,900
110	150	MHHE315LZE8	MHCETWS80110	8,66,920
132	180	MHHE355MA8	MHCETYS80132	10,14,090
150	200	MHHE355MB8	MHCETYS80150	11,42,660
160	220	MHHE355MC8	MHCETYS80160	11,72,580
180	240	MHHE355LA8	MHCETZS80180	11,97,310
200	270	MHHE355LB8	MHCETZS80200	12,82,650
250	340	MHHE355LC8	MHCETZS80250	18,32,350



Note: Havells standard motors in frame 315 and above are **EFF1** at no extra cost

* Class F insulation with temperature rise limited to Class B

Excise duty including cess will be charged extra as applicable at the time of dispatch

Testing



Premium Series - (IE2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Induction Motors - Foot Mounted (B3)

Horizontal Foot Mounted Induction Motor suitable for 415V \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C conforming to IS 12615:2011, IEC 60034-30-2008

2 Pole -3000 RPM

Kw	HP	Frame	Cat. Ref.	List Price Rs.
0.09	0.12	MHEE56ZAA2	MHHITAS20X09	8,550
0.12	0.16	MHEE56ZBA2	MHHITAS20X12	8,760
0.18	0.25	MHEE63ZAA2	MHHITBS20X18	10,140
0.25	0.33	MHEE63ZBA2	MHHITBS20X25	10,430
0.37	0.5	MHEE71ZAA2	MHHITCS20X37	11,030
0.55	0.75	MHEE71ZBA2	MHHITCS20X55	12,200
0.75	1	MHEE80ZAA2	MHHITDS20X75	12,640
1.1	1.5	MHEE80ZBA2	MHHITDS201X1	13,840
1.5	2	MHEE90SAA2	MHCITES201X5	15,890
1.8*	2.5	MHEE90SBA2	MHCITES201X8	17,240
2.2	3	MHEE90LCA2	MHCITFS202X2	20,420
3	4	MHEE100LAA2	MHCITGS20003	23,990
3.7	5	MHEE100LBA2	MHCITGS203X7	25,100
3.7*	5	MHEE112MAA2	MHCITHS203X7	30,210
5.5	7.5	MHEE132SZA2	MHCITIS205X5	41,160
7.5	10	MHEE132STA2	MHCITIS207X5	42,860
9.3	12.5	MHEE160MTA2	MHCITKS209X3	73,070
11	15	MHEE160MYA2	MHCITKS20011	74,500
15	20	MHEE160MZA2	MHCITKS20015	87,340
18.5	25	MHEE160LZA2	MHCITLS218X5	1,12,820
22	30	MHEE180MZA2	MHCITMS20022	1,20,920
30	40	MHEE200LPG2	MHCITOS20030	1,79,850
37	50	MHEE200LRG2	MHCITOS20037	2,18,370
45	60	MMHE225MP2	MHCITQS20045	2,81,030
55	75	MHEE250MP2	MHCITRS20055	3,78,370
75	100	MHEE280SV2	MHCITSS20075	4,72,550
90	125	MHEE280MV2	MHCITTS20090	5,45,120
110	150	MHEE315SYE2	MHCITUS20110	6,88,580
132	180	MHEE315MZE2	MHCITVS20132	8,46,250
160	220	MHEE315LYE2	MHCITWS20160	9,26,680
180	240	MHEE315LYE2	MHCITWS20180	9,74,810
200	270	MHEE315LZE2	MHCITWS20200	10,82,100
225	300	MHEE355MA2	MHCITYS20225	11,44,640
250	340	MHEE355MB2	MHCITYS20250	12,11,590
275	370	MHEE355LA2	MHCITZS20275	12,83,700
315	425	MHEE355LB2	MHCITZS20315	13,27,140
335	455	MHEE355LC2	MHCITZS20335	15,00,100



* Class F insulation with temperature rise limited to Class B

Excise duty including cess will be charged extra as applicable at the time of dispatch

Coil
Insertion



Premium Series - (IE2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Induction Motors - Foot Mounted (B3)

Horizontal Foot Mounted Induction Motor suitable for 415V \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C conforming to IS 12615:2011, IEC 60034-30-2008

4 Pole -1500 RPM

Kw	HP	Frame	Cat. Ref.	List Price Rs.
0.06	0.08	MHEE56ZAA4	MHHITAS40X06	9,450
0.09	0.12	MHEE56ZBA4	MHHITAS40X09	9,510
0.12	0.16	MHEE63ZAA4	MHHITBS40X12	9,660
0.18	0.25	MHEE63ZBA4	MHHITBS40X18	10,060
0.25	0.33	MHEE71ZAA4	MHHITCS40X25	11,190
0.37	0.5	MHEE71ZBA4	MHHITCS40X37	11,660
0.55	0.75	MHEE80ZAA4	MHHITDS40X55	12,990
0.75	1	MHEE80ZBA4	MHHITDS40X75	13,120
1.1	1.5	MHEE90SAA4	MHCITES401X1	14,970
1.5	2	MHEE90LBA4	MHCITFS401X5	16,310
1.8	2.5	MHEE90LCA4	MHCITFS401X8	17,630
2.2	3	MHEE100LAA4	MHCITGS402X2	21,630
3.0*	4	MHEE100LBA4	MHCITGS40003	22,830
3.7	5	MHEE112MAA4	MHCITHS403X7	27,740
5.5	7.5	MHEE132SRA4	MHCITIS405X5	38,220
7.5	10	MHEE132MTA4	MHCITJS407X5	44,540
9.3	12.5	MHEE160MYA4	MHCITKS409X3	69,840
11	15	MHEE160MZA4	MHCITKS40011	71,380
15	20	MHEE160LZA4	MHCITLS40015	88,730
18.5	25	MHEE180MZA4	MHCITMS418X5	1,14,650
22	30	MHEE180LZA4	MHCITNS40022	1,27,780
30	40	MHEE200LRG4	MHCITOS40030	1,72,510
37	50	MHEE225SP4	MHCITPS40037	2,11,870
45	60	MHEE225MP4	MHCITQS40045	2,56,820
55	75	MHEE250MP4	MHCITRS40055	3,52,970
75	100	MHEE280SV4	MHCITSS40075	4,31,630
90	125	MHEE280MV4	MHCITTS40090	4,98,040
110	150	MHEE315SYE4	MHCITUS40110	6,06,130
132	180	MHEE315MYE4	MHCITVS40132	7,10,350
160	220	MHEE315LYE4	MHCITWS40160	8,33,290
180	240	MHEE315LYE4	MHCITWS40180	8,86,470
200	270	MHEE315LZE4	MHCITWS40200	10,11,810
225	300	MHEE355MA4	MHCITYS40225	10,35,330
250	340	MHEE355MB4	MHCITYS40250	11,15,190
275	370	MHEE355MC4	MHCITYS40275	11,29,150
315	425	MHEE355LA4	MHCITZS40315	12,76,540
335	450	MHEE355LB4	MHCITZS40335	13,80,380
350	470	MHEE355LC4	MHCITZS40350	16,45,630



* Class F insulation with temperature rise limited to Class B

Excise duty including cess will be charged extra as applicable at the time of dispatch

Slot
Insulation



Premium Series - (IE2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Induction Motors - Foot Mounted (B3)

Horizontal Foot Mounted Induction Motor suitable for 415V \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C conforming to IS 12615:2011, IEC 60034-30-2008

6 Pole -1000 RPM

Kw	HP	Frame	Cat. Ref.	List Price Rs.
0.18	0.25	MHEE71ZAA6	MHHITCS60X18	10,670
0.25	0.33	MHEE71ZBA6	MHHITCS60X25	12,590
0.37	0.5	MHEE80ZAA6	MHHITDS60X37	13,840
0.55	0.75	MHEE80ZBA6	MHHITDS60X55	14,190
0.75	1	MHEE90SAA6	MHCITES60X75	15,920
1.1	1.5	MHEE90LBA6	MHCITFS601X1	17,480
1.5	2	MHEE100LAA6	MHCITGS601X5	22,320
1.8*	2.5	MHEE100LBA6	MHCITGS601X8	24,110
2.2	3	MHEE112MAA6	MHCITHS602X2	26,690
3*	4	MHEE112MBA6	MHCITHS60003	35,250
3.7	5	MHEE132SYA6	MHCITIS603X7	40,790
5.5	7.5	MHEE132MZA6	MHCITJS605X5	45,500
7.5	10	MHEE160MZA6	MHCITKS607X5	73,240
9.3	12.5	MHEE160LYA6	MHCITLS609X3	86,630
11	15	MHEE160LZA6	MHCITLS60011	91,230
15	20	MHEE180LZG6	MHCITNS60015	1,19,180
18.5	25	MHEE200LPG6	MHCITOS618X5	1,55,010
22	30	MHEE200LRG6	MHCITOS60022	1,68,230
30	40	MHEE225MP6	MHCITQS60030	2,63,170
37	50	MHEE250MP6	MHCITRS60037	3,53,930
45	60	MHEE280SV6	MHCITSS60045	4,23,930
55	75	MHEE280MV6	MHCITTS60055	4,80,410
75	100	MHEE315SYE6	MHCITUS60075	5,78,420
90	125	MHEE315MYE6	MHCITVS60090	7,27,290
110	150	MHEE315MZE6	MHCITVS60110	8,10,970
132	180	MHEE315LZE6	MHCITWS60132	9,46,720
160	220	MHEE355MA6	MHCITYS60160	9,85,760
180	240	MHEE355MB6	MHCITYS60180	10,82,030
200	270	MHEE355MC6	MHCITYS60200	11,23,650
250	340	MHEE355LA6	MHCITZS60250	12,11,040
315	425	MHEE355LB6	MHCITZS60315	19,37,340



* Class F insulation with temperature rise limited to Class B

Excise duty including cess will be charged extra as applicable at the time of dispatch

Lacing



Premium Series - (IE3)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Induction Motors - Foot Mounted (B3)

Horizontal Foot Mounted Induction Motor suitable for 415V \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C conforming to IS 12615:2011, IEC 60034-30-2008

2 Pole -3000 RPM

Kw	HP	Frame	Cat. Ref.	List Price Rs.
0.09	0.12	MHPE56ZAA2	MHHPTAS20X09	9,390
0.12	0.16	MHPE56ZBA2	MHHPTAS20X12	9,620
0.18	0.25	MHPE63ZAA2	MHHPTBS20X18	11,130
0.25	0.33	MHPE63ZBA2	MHHPTBS20X25	11,450
0.37	0.5	MHPE71ZAA2	MHHPTCS20X37	12,110
0.55	0.75	MHPE71ZBA2	MHHPTCS20X55	13,390
0.75	1	MHPE80ZAA2	MHHPTDS20X75	13,870
1.1	1.5	MHPE80ZBA2	MHHPTDS20X11	15,190
1.5	2	MHPE90SAA2	MHCPTES201X5	17,450
1.8*	2.5	MHPE90SBA2	MHCPTES201X8	18,930
2.2	3	MHPE90LCA2	MHCPTFS202X2	22,430
3	4	MHPE100LAA2	MHCPTGS20003	26,340
3.7	5	MHPE100LBA2	MHCPTGS203X7	27,570
3.7*	5	MHPE112MAA2	MHCPTHS203X7	33,170
5.5	7.5	MHPE132SZA2	MHCPTIS205X5	45,190
7.5	10	MHPE132STA2	MHCPTIS207X5	47,060
9.3	12.5	MHPE160MTA2	MHCPTKS209X3	80,240
11	15	MHPE160MYA2	MHCPTKS20011	81,800
15	20	MHPE160MZA2	MHCPTKS20015	95,900
18.5	25	MHPE160LZA2	MHCPTLS218X5	1,23,880
22	30	MHPE180MZA2	MHCPTMS20022	1,32,770
30	40	MHPE200LPG2	MHCPTOS20030	1,97,480
37	50	MHPE200LRG2	MHCPTOS20037	2,39,770
45	60	MMHE225MP2	MHCPTQS20045	3,08,580
55	75	MHPE250MP2	MHCPTRS20055	4,15,470



* Class F insulation with temperature rise limited to Class B

Excise duty including cess will be charged extra as applicable at the time of dispatch

Hardness
Testing



Premium Series - (IE3)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Induction Motors - Foot Mounted (B3)

Horizontal Foot Mounted Induction Motor suitable for 415V \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C conforming to IS 12615:2011, IEC 60034-30-2008

4 Pole -1500 RPM

Kw	HP	Frame	Cat. Ref.	List Price Rs.
0.06	0.08	MHPE56ZAA4	MHHPTAS40X06	10,380
0.09	0.12	MHPE56ZBA4	MHHPTAS40X09	10,440
0.12	0.16	MHPE63ZAA4	MHHPTBS40X12	10,600
0.18	0.25	MHPE63ZBA4	MHHPTBS40X18	11,040
0.25	0.33	MHPE71ZAA4	MHHPTCS40X25	12,290
0.37	0.5	MHPE71ZBA4	MHHPTCS40X37	12,800
0.55	0.75	MHPE80ZAA4	MHHPTDS40X55	14,260
0.75	1	MHPE80ZBA4	MHHPTDS40X75	14,410
1.1	1.5	MHPE90SAA4	MHCPTES401X1	16,440
1.5	2	MHPE90LBA4	MHCPTFS401X5	17,910
1.8	2.5	MHPE90LCA4	MHCPTFS401X8	19,360
2.2	3	MHPE100LAA4	MHCPTGS402X2	23,760
3.0*	4	MHPE100LBA4	MHCPTGS40003	25,070
3.7	5	MHPE112MAA4	MHCPTHS403X7	30,460
5.5	7.5	MHPE132SRA4	MHCPTIS405X5	41,970
7.5	10	MHPE132MTA4	MHCPTJS407X5	48,910
9.3	12.5	MHPE160MYA4	MHCPTKS409X3	76,690
11	15	MHPE160MZA4	MHCPTKS40011	78,380
15	20	MHPE160LZA4	MHCPTLS40015	97,430
18.5	25	MHPE180MZA4	MHCPTMS418X5	1,25,890
22	30	MHPE180LZA4	MHCPTNS40022	1,40,310
30	40	MHPE200LRG4	MHCPTOS40030	1,89,430
37	50	MHPE225SP4	MHCPTPS40037	2,32,650
45	60	MHPE225MP4	MHCPTQS40045	2,82,000
55	75	MHPE250MP4	MHCPTRS40055	3,87,580



* Class F insulation with temperature rise limited to Class B

Excise duty including cess will be charged extra as applicable at the time of dispatch

Mechanical
Inspection



Premium Series - (IE3)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Induction Motors - Foot Mounted (B3)

Horizontal Foot Mounted Induction Motor suitable for 415V \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C conforming to IS 12615:2011, IEC 60034-30-2008

6 Pole -1000 RPM

Kw	HP	Frame	Cat. Ref.	List Price Rs.
0.18	0.25	MHPE71ZAA6	MHHPTCS60X18	11,710
0.25	0.33	MHPE71ZBA6	MHHPTCS60X25	13,830
0.37	0.5	MHPE80ZAA6	MHHPTDS60X37	15,190
0.55	0.75	MHPE80ZBA6	MHHPTDS60X55	15,580
0.75	1	MHPE90SAA6	MHCPTES60X75	17,490
1.1	1.5	MHPE90LBA6	MHCPTFS601X1	19,190
1.5	2	MHPE100LAA6	MHCPTGS601X5	24,510
1.8*	2.5	MHPE100LBA6	MHCPTGS601X8	26,470
2.2	3	MHPE112MAA6	MHCPTHS602X2	29,300
3*	4	MHPE112MBA6	MHCPTHS60003	38,700
3.7	5	MHPE132SYA6	MHCPTIS603X7	44,790
5.5	7.5	MHPE132MZA6	MHCPTJS605X5	49,960
7.5	10	MHPE160MZA6	MHCPTKS607X5	80,410
9.3	12.5	MHPE160LYA6	MHCPTLS609X3	95,120
11	15	MHPE160LZA6	MHCPTLS60011	1,00,170
15	20	MHPE180LZG6	MHCPTNS60015	1,30,870
18.5	25	MHPE200LPG6	MHCPTOS618X5	1,70,200
22	30	MHPE200LRG6	MHCPTOS60022	1,84,730
30	40	MHPE225MP6	MHCPTQS60030	2,88,960
37	50	MHPE250MP6	MHCPTRS60037	3,88,630



* Class F insulation with temperature rise limited to Class B

Excise duty including cess will be charged extra as applicable at the time of dispatch

Forming



Inverter Duty Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Inverter Duty without Encoder Arrangement Motors - Foot / Flange / Foot cum flange Mounted
Continuously rated suitable for operation on 415 Volts \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C and altitude less than 1000m above MSL, conforming to IS 325:1996 / IS 12615:1999

2 Pole- 3000 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.75	1	MH80ZAA2	MHIWTDS20X75	20,020
1.1	1.5	MH80ZBA2	MHIWTDS201X1	21,180
1.5	2	MH90SAA2	MHIWTES201X5	25,650
1.8*	2.5	MH90SBA2	MHIWTES201X8	27,760
2.2	3	MH90LCA2	MHIWTFS202X2	29,500
3	4	MH100LAA2	MHIWTGS20003	33,170
3.7	5	MH100LBA2	MHIWTGS203X7	35,150
3.7*	5.5	MH112MAA2	MHIWTHS203X7	39,380
5.5	7.5	MH132SYA2	MHIWTIS205X5	50,800
7.5	10	MH132SZA2	MHIWTIS207X5	52,400
9.3	12.5	MH160MTG2	MHIWTKS209X3	83,860
11	15	MH160MVA2	MHIWTKS20011	85,440
15	20	MH160MXA2	MHIWTKS20015	95,400
18.5	25	MH160LXA2	MHIWTLS218X5	1,18,600
22	30	MH180MXG2	MHIWTMS20022	1,32,880
30	40	MH200LLG2	MHIWTOS20030	1,92,170
37	50	MH200LNG2	MHIWTOS20037	2,29,250
45	60	MH225MN2	MHIWTQS20045	2,91,930
55	75	MH250MN2	MHIWTRS20055	3,90,030



List Price inclusive of 3 Phase External Forced Cooled Fan & VFD Treatment
Without Encoder arrangement

3 Phase Forced Cooling Fans are Make of SEM, Bangalore

Excise duty including cess will be charged as applicable at the time of dispatch

Automatic
Impregnation



Inverter Duty Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Inverter Duty without Encoder Arrangement Motors - Foot / Flange / Foot cum flange Mounted
Continuously rated suitable for operation on 415 Volts \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C and altitude less than 1000m above MSL, conforming to IS 325:1996 / IS 12615:1999

4 Pole- 1500 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.55	0.75	MH80ZAA4	MHIWTDS40X55	20,440
0.75	1	MH80ZBA4	MHIWTDS40X75	20,460
1.1	1.5	MH90SAA4	MHIWTES401X1	24,870
1.5	2	MH90LBA4	MHIWTFS401X5	26,120
2.2	3	MH100LAA4	MHIWTGS402X2	32,030
3.7	5	MH112MAA4	MHIWTHS403X7	37,650
5.5	7.5	MH132SZA4	MHIWTIS405X5	48,390
7.5	10	MH132MZA4	MHIWTJS407X5	54,210
9.3	12.5	MH160MYA4	MHIWTKS409X3	80,540
11	15	MH160MXA4	MHIWTKS40011	81,580
15	20	MH160LXA4	MHIWTLS40015	96,830
18.5	25	MH180MXG4	MHIWTMS418X5	1,27,010
22	30	MH180LXG4	MHIWTNS40022	1,40,270
30	40	MH200LNG4	MHIWTOS40030	1,85,420
37	50	MH225SN4	MHIWTPS40037	2,24,570
45	60	MH225MN4	MHIWTQS40045	2,67,630
55	75	MH250MN4	MHIWTRS40055	3,64,440

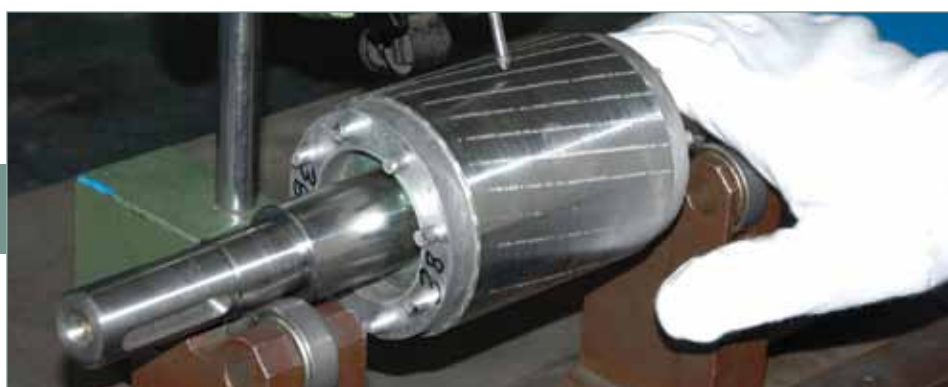


List Price inclusive of 3 Phase External Forced Cooled Fan & VFD Treatment
Without Encoder arrangement

3 Phase Forced Cooling Fans are Make of SEM, Bangalore

Excise duty including cess will be charged as applicable at the time of dispatch

Rotar
Inspection



Inverter Duty Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Inverter Duty without Encoder Arrangement Motors - Foot / Flange / Foot cum flange Mounted
Continuously rated suitable for operation on 415 Volts \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C and altitude less than 1000m above MSL, conforming to IS 325:1996 / IS 12615:1999

6 Pole- 1000 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.37	0.5	MH80ZAA6	MHIWTDS60X37	21,140
0.55	0.75	MH80ZBA6	MHIWTDS60X55	21,310
0.75	1	MH90SAA6	MHIWTES60X75	25,800
1.1	1.5	MH90LBA6	MHIWTF601X1	27,150
1.5	2	MH100LAA6	MHIWTGS601X5	32,060
2.2	3	MH112MAA6	MHIWTHS602X2	36,130
3.7	5	MH132SYA6	MHIWTIS603X7	50,250
5.5	7.5	MH132MZA6	MHIWTJS605X5	55,100
7.5	10	MH160MZA6	MHIWTKS607X5	82,920
9.3	12.5	MH160LYA6	MHIWTLS609X3	84,910
11	15	MH160LZA6	MHIWTLS60011	99,330
15	20	MH180LZG6	MHIWTNS60015	1,31,970
18.5	25	MH200LPG6	MHIWTOS618X5	1,68,380
22	30	MH200LRG6	MHIWTOS60022	1,81,150
30	40	MH225MP6	MHIWTQS60030	2,74,860
37	50	MH250MP6	MHIWTRS60037	3,66,940



List Price inclusive of 3 Phase External Forced Cooled Fan & VFD Treatment
Without Encoder arrangement

3 Phase Forced Cooling Fans are Make of SEM, Bangalore

Excise duty including cess will be charged as applicable at the time of dispatch

Hardness
Testing



Inverter Duty Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Inverter Duty without Encoder Arrangement Motors - Foot / Flange / Foot cum flange Mounted
Continuously rated suitable for operation on 415 Volts \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C and altitude less than 1000m above MSL, conforming to IS 325:1996 / IS 12615:1999

8 Pole- 750 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.25	0.33	MH80ZAA8	MHIWTDS80X25	21,930
0.37	0.5	MH90SAA8	MHIWTES80X37	23,940
0.55	0.75	MH90LBA8	MHIWTFS80X55	25,210
0.75	1	MH100LAA8	MHIWTGS80X75	30,470
1.1	1.5	MH100LBA8	MHIWTGS801X1	34,510
1.5	2	MH112MAA8	MHIWTHS801X5	38,310
2.2	3	MH132SZA8	MHIWTIS802X2	47,980
3.7	5	MH160MYA8	MHIWTKS803X7	70,290
5.5	7.5	MH160MZA8	MHIWTKS805X5	82,990
7.5	10	MH160LZA8	MHIWTLS807X5	1,01,220
9.3	12.5	MH180LYG8	MHIWTNS809X3	1,28,180
11	15	MH180LZG8	MHIWTNS80011	1,34,500
15	20	MH200LRG8	MHIWTOS80015	1,84,560
18.5	25	MH225SP8	MHIWTSP818X5	2,35,670
22	30	MH225MP8	MHIWTQS80022	2,80,120
30	40	MH250MP8	MHIWTRS80030	3,73,740



List Price inclusive of 3 Phase External Forced Cooled Fan & VFD Treatment
Without Encoder arrangement

3 Phase Forced Cooling Fans are Make of SEM, Bangalore

Excise duty including cess will be charged as applicable at the time of dispatch

Mechanical
Inspection



Inverter Duty Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Inverter Duty with Encoder Arrangement Motors - Foot / Flange / Foot cum flange Mounted
Continuously rated suitable for operation on 415 Volts \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C and altitude less than 1000m above MSL, conforming to IS 325:1996 / IS 12615:1999

2 Pole- 3000 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.75	1	MH80ZAA2	MHIDTDS20X75	20,530
1.1	1.5	MH80ZBA2	MHIDTDS201X1	21,740
1.5	2	MH90SAA2	MHIDTES201X5	26,320
1.8*	2.5	MH90SBA2	MHIDTES201X8	28,530
2.2	3	MH90LCA2	MHIDTFS202X2	30,340
3	4	MH100LAA2	MHIDTGS20003	34,170
3.7	5	MH100LBA2	MHIDTGS203X7	36,220
3.7*	5.5	MH112MAA2	MHIDTHS203X7	40,680
5.5	7.5	MH132SYA2	MHIDTIS205X5	52,550
7.5	10	MH132SZA2	MHIDTIS207X5	54,220
9.3	12.5	MH160MTG2	MHIDTKS209X3	87,040
11	15	MH160MVA2	MHIDTKS20011	88,200
15	20	MH160MXA2	MHIDTKS20015	99,110
18.5	25	MH160LXA2	MHIDTLS218X5	1,23,430
22	30	MH180MXG2	MHIDTMS20022	1,38,250
30	40	MH200LLG2	MHIDTOS20030	2,00,180
37	50	MH200LNG2	MHIDTOS20037	2,39,010
45	60	MH225MN2	MHIDTQS20045	3,04,510
55	75	MH250MN2	MHIDTRS20055	4,06,940



List Price inclusive of 3 Phase External Forced Cooled Fan & VFD Treatment
With Encoder arrangement

3 Phase Forced Cooling Fans are Make of SEM, Bangalore

Excise duty including cess will be charged as applicable at the time of dispatch

Forming



Inverter Duty Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Inverter Duty with Encoder Arrangement Motors - Foot / Flange / Foot cum flange Mounted Continuously rated suitable for operation on 415 Volts \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C and altitude less than 1000m above MSL, conforming to IS 325:1996 / IS 12615:1999

4 Pole- 1500 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.55	0.75	MH80ZAA4	MHIDTDS40X55	20,970
0.75	1	MH80ZBA4	MHIDTDS40X75	20,970
1.1	1.5	MH90SAA4	MHIDTES401X1	25,500
1.5	2	MH90LBA4	MHIDTFS401X5	26,810
2.2	3	MH100LAA4	MHIDTGS402X2	32,950
3.7	5	MH112MAA4	MHIDTGS403X7	38,830
5.5	7.5	MH132SZA4	MHIDTIS405X5	50,010
7.5	10	MH132MZA4	MHIDTJS407X5	56,100
9.3	12.5	MH160MYA4	MHIDTKS409X3	83,560
11	15	MH160MXA4	MHIDTKS40011	84,340
15	20	MH160LXA4	MHIDTLS40015	1,00,610
18.5	25	MH180MXG4	MHIDTMS418X5	1,32,100
22	30	MH180LXG4	MHIDTNS40022	1,45,950
30	40	MH200LNG4	MHIDTOS40030	1,93,110
37	50	MH225SN4	MHIDTPS40037	2,34,010
45	60	MH225MN4	MHIDTQS40045	2,79,070
55	75	MH250MN4	MHIDTRS40055	3,80,170



List Price inclusive of 3 Phase External Forced Cooled Fan & VFD Treatment
With Encoder arrangement

3 Phase Forced Cooling Fans are Make of SEM, Bangalore

Excise duty including cess will be charged as applicable at the time of dispatch

Paint Shop



Inverter Duty Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Inverter Duty with Encoder Arrangement Motors - Foot / Flange / Foot cum flange Mounted
Continuously rated suitable for operation on 415 Volts \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C and altitude less than 1000m above MSL, conforming to IS 325:1996 / IS 12615:1999

6 Pole- 1000 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.37	0.5	MH80ZAA6	MHIDTDS60X37	21,690
0.55	0.75	MH80ZBA6	MHIDTDS60X55	21,870
0.75	1	MH90SAA6	MHIDTES60X75	26,480
1.1	1.5	MH90LBA6	MHIDTFS601X1	27,900
1.5	2	MH100LAA6	MHIDTGS601X5	33,010
2.2	3	MH112MAA6	MHIDTHS602X2	37,270
3.7	5	MH132SYA6	MHIDTIS603X7	51,970
5.5	7.5	MH132MZA6	MHIDTJS605X5	57,040
7.5	10	MH160MZA6	MHIDTKS607X5	86,060
9.3	12.5	MH160LYA6	MHIDTLS609X3	88,130
11	15	MH160LZA6	MHIDTLS60011	1,03,220
15	20	MH180LZG6	MHIDTNS60015	1,37,310
18.5	25	MH200LPG6	MHIDTOS618X5	1,75,320
22	30	MH200LRG6	MHIDTOS60022	1,88,670
30	40	MH225MP6	MHIDTQS60030	2,86,670
37	50	MH250MP6	MHIDTRS60037	3,82,800



List Price inclusive of 3 Phase External Forced Cooled Fan & VFD Treatment
With Encoder arrangement

3 Phase Forced Cooling Fans are Make of SEM, Bangalore

Excise duty including cess will be charged as applicable at the time of dispatch

Finished Rotors



Inverter Duty Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Inverter Duty with Encoder Arrangement Motors - Foot / Flange / Foot cum flange Mounted Continuously rated suitable for operation on 415 Volts \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C and altitude less than 1000m above MSL, conforming to IS 325:1996 / IS 12615:1999

8 Pole- 750 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.25	0.33	MH80ZAA8	MHIDTDS80X25	22,520
0.37	0.5	MH90SAA8	MHIDTES80X37	24,570
0.55	0.75	MH90LBA8	MHIDTFS80X55	25,890
0.75	1	MH100LAA8	MHIDTGS80X75	31,350
1.1	1.5	MH100LBA8	MHIDTGS801X1	35,560
1.5	2	MH112MAA8	MHIDTHS801X5	40,670
2.2	3	MH132SZA8	MHIDTIS802X2	49,620
3.7	5	MH160MYA8	MHIDTKS803X7	72,860
5.5	7.5	MH160MZA8	MHIDTKS805X5	86,110
7.5	10	MH160LZA8	MHIDTLS807X5	1,05,210
9.3	12.5	MH180LYG8	MHIDTNS809X3	1,33,340
11	15	MH180LZG8	MHIDTNS80011	1,39,940
15	20	MH200LRG8	MHIDTOS80015	1,92,240
18.5	25	MH225SP8	MHIDTPS818X5	2,45,630
22	30	MH225MP8	MHIDTQS80022	2,92,130
30	40	MH250MP8	MHIDTRS80030	3,89,910



List Price inclusive of 3 Phase External Forced Cooled Fan & VFD Treatment
With Encoder arrangement

3 Phase Forced Cooling Fans are Make of SEM, Bangalore

Excise duty including cess will be charged as applicable at the time of dispatch

Testing



Brake Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Brake Motors - Foot / Flange / Foot Cum Flange Mounting

Continuously rated suitable for operation on 415 Volts \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C and altitude less than 1000m above MSL, conforming to IS 325:1996 / IS 12615:1999

2 Pole- 3000 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.18	0.25	MHBY63ZAA2	MHFXTBS20X18	17,510
0.25	0.33	MHBY63ZBA2	MHFXTBS20X25	17,730
0.37	0.5	MHBY71ZAA2	MHFXTCS20X37	19,710
0.55	0.75	MHBY71ZBA2	MHFXTCS20X55	21,430
0.75	1	MHBY80ZAA2	MHFXTDS20X75	21,860
1.1	1.5	MHBY80ZBA2	MHFXTDS201X1	23,150
1.5	2	MHBY90SAA2	MHFXTES201X5	29,600
2.2	3	MHBY90LCA2	MHFXTFS202X2	34,590
3	4	MHBY100LAA2	MHFXTGS20003	42,460
3.7	5	MHBY100LBA2	MHFXTGS203X7	43,800
3.7*	5.5	MHBY112MAA2	MHFXTHS203X7	69,890
5.5	7.5	MHBY132SYA2	MHFXTIS205X5	71,410
7.5	10	MHBY132SZA2	MHFXTIS207X5	1,01,120
9.3	12.5	MHBY160MTG2	MHFXTKS209X3	1,13,710
11	15	MHBY160MVA2	MHFXTKS20011	1,14,280
15	20	MHBY160MXA2	MHFXTKS20015	1,37,960
18.5	25	MHBY160LXA2	MHFXTLS218X5	1,77,980



Excise duty including cess will be charged as applicable at the time of dispatch

Coil
Insertion



Brake Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Brake Motors - Foot / Flange / Foot Cum Flange Mounting

Continuously rated suitable for operation on 415 Volts \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C and altitude less than 1000m above MSL, conforming to IS 325:1996 / IS 12615:1999

4 Pole- 1500 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.12	0.16	MHBY63ZAA4	MHFXTBS40X12	17,900
0.18	0.25	MHBY63ZBA4	MHFXTBS40X18	18,640
0.25	0.33	MHBY71ZAA4	MHFXTCS40X25	19,850
0.37	0.5	MHBY71ZBA4	MHFXTCS40X37	20,270
0.55	0.75	MHBY80ZAA4	MHFXTDS40X55	22,310
0.75	1	MHBY80ZBA4	MHFXTDS40X75	22,410
1.1	1.5	MHBY90SAA4	MHFXTES401X1	28,490
1.5	2	MHBY90LBA4	MHFXTFS401X5	29,960
1.8*	2.5	MHBY90LCA4	MHFXTFS401X8	34,730
2.2	3	MHBY100LAA4	MHFXTGS402X2	38,490
3.0*	4	MHBY100LBA4	MHFXTGS40003	40,990
3.7	5	MHBY112MAA4	MHFXTHS403X7	48,370
5.5	7.5	MHBY132SZA4	MHFXTIS405X5	66,270
7.5	10	MHBY132MZA4	MHFXTJS407X5	73,190
9.3	12.5	MHBY160MYA4	MHFXTKS409X3	1,05,150
11	15	MHBY160MXA4	MHFXTKS40011	1,05,720
15	20	MHBY160LXA4	MHFXTLS40015	1,32,350



Excise duty including cess will be charged as applicable at the time of dispatch

Slot
Insulation



Brake Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Brake Motors - Foot / Flange / Foot Cum Flange Mounting

Continuously rated suitable for operation on 415 Volts \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C and altitude less than 1000m above MSL, conforming to IS 325:1996 / IS 12615:1999

6 Pole- 1000 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.18	0.25	MHBY71ZAA6	MHFXTCS60X18	19,080
0.25	0.33	MHBY71ZBA6	MHFXTCS60X25	19,500
0.37	0.5	MHBY80ZAA6	MHFXTDS60X37	23,130
0.55	0.75	MHBY80ZBA6	MHFXTDS60X55	23,340
0.75	1	MHBY90SAA6	MHFXTES60X75	29,540
1.1	1.5	MHBY90LBA6	MHFXTFS601X1	31,210
1.5	2	MHBY100LAA6	MHFXTGS601X5	40,370
2.2	3	MHBY112MAA6	MHFXTHS602X2	48,580
3*	4	MHBY112MBA6	MHFXTHS60003	76,990
3.7	5	MHBY132SYA6	MHFXTIS603X7	78,060
5.5	7.5	MHBY132MZA6	MHFXTJS605X5	82,140
7.5	10	MHBY160MZA6	MHFXTKS607X5	1,11,170
9.3	12.5	MHBY160LYA6	MHFXTLS609X3	1,21,170
11	15	MHBY160LZA6	MHFXTLS60011	1,39,270



Excise duty including cess will be charged as applicable at the time of dispatch

Lacing



Brake Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Brake Motors - Foot / Flange / Foot Cum Flange Mounting

Continuously rated suitable for operation on 415 Volts \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 50°C and altitude less than 1000m above MSL, conforming to IS 325:1996 / IS 12615:1999

8 Pole- 750 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.12	0.16	MHBY71ZAA8	MHFXTCS80X12	22,770
0.25	0.33	MHBY80ZAA8	MHFXTDS80X25	23,920
0.37	0.5	MHBY90SAA8	MHFXTES80X37	28,730
0.55	0.75	MHBY90LBA8	MHFXTFS80X55	30,220
0.75	1	MHBY100LAA8	MHFXTGS80X75	38,440
1.1	1.5	MHBY100LBA8	MHFXTGS801X1	43,590
1.5	2	MHBY112MAA8	MHFXTHS801X5	51,370
2.2	3	MHBY132SZA8	MHFXTIS802X2	68,640
3	4	MHBY132MZA8	MHFXTJS80003	88,200
3.7	5	MHBY160MYA8	MHFXTKS803X7	1,00,330
5.5	7.5	MHBY160MZA8	MHFXTKS805X5	1,11,240
7.5	10	MHBY160LZA8	MHFXTLS807X5	1,41,650



Excise duty including cess will be charged as applicable at the time of dispatch

Assembly



Crane & Hoist Duty Motors - (EFF2)

Totally Enclosed Fan Cooled (TEFC) Squirrel Cage Crane & Hoist Duty Motors - Foot Mounted /Flange/Foot Cum Flange Mounting

Crane & Hoist Duty (S3/S4), suitable for operation on 415 Volts \pm 10%, 3 Phase, 50 Hz \pm 5%, Insulation Class 'F', Degree of protection IP 55, Ambient of 45°C and altitude less than 1000m above MSL, conforming to IS 325:1996 / IS 12615:1999

4 Pole- 1500 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.55	0.75	MH80ZAA4	MHKXTDS40X55	12,260
0.75	1	MH80ZBA4	MHKXTDS40X75	12,460
1.1	1.5	MH90SAA4	MHKXTES401X1	13,520
1.5	2	MH90LBA4	MHKXTFS401X5	14,770
2.2	3	MH100LAA4	MHKXTGS402X2	19,920
3.7	5	MH112MAA4	MHKXTHS403X7	24,970
5.5	7.5	MH132SZA4	MHKXTIS405X5	34,400
7.5	10	MH132MZA4	MHKXTJS407X5	40,200
11	15	MH160MXA4	MHKXTKS40011	62,630
15	20	MH160LXA4	MHKXTLS40015	79,810

Intermediate Ratings

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.55	0.75	MH71ZCA4	MHKXTCS40X55	11,020
1.1	1.5	MH80ZCA4	MHKXTDS401X5	12,960
2.2	3	MH90LDA4	MHKXTFS402X2	15,300
3.0*	4	MH100LBA4	MHKXTGS40003	20,320
3.7	5	MH100LCA4	MHKXTGS403X7	20,950
5.5	7.5	MH112MBA4	MHKXTHS405X5	27,280
9.3	12.5	MH132MRA4	MHKXTJS409X3	42,070



6 Pole- 1000 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.37	0.5	MH80ZAA6	MHKXTDS60X37	12,990
0.55	0.75	MH80ZBA6	MHKXTDS60X55	13,290
0.75	1	MH90SAA6	MHKXTES60X75	13,930
1.1	1.5	MH90LBA6	MHKXTFS601X1	16,130
1.5	2	MH100LAA6	MHKXTGS601X5	21,070
2.2	3	MH112MAA6	MHKXTHS602X2	25,060
3.7	5	MH132SYA6	MHKXTIS603X7	41,040
5.5	7.5	MH132MZA6	MHKXTJS605X5	42,660
7.5	10	MH160MZA6	MHKXTKS607X5	66,260
9.3	12.5	MH160LYA6	MHKXTLS609X3	78,270
11	15	MH160LZA6	MHKXTLS60011	81,820

Intermediate Ratings

Kw	HP	Frame	Cat. Ref.	List Price ₹
1.8*	2.5	MH100LBA6	MHKXTGS601X8	21,930
3*	4	MH112MBA6	MHKXTHS60003	27,540
3*	4	MH132SZA6	MHKXTIS60003	36,880
7.5	10	MH132MTA6	MHKXTJS607X5	42,930

Excise duty including cess will be charged as applicable at the time of dispatch

8 Pole- 700 RPM

Kw	HP	Frame	Cat. Ref.	List Price ₹
0.37	0.5	MH90SAA8	MHKXTES80X37	14,300
0.55	0.75	MH90LBA8	MHKXTFS80X55	16,120
0.75	1	MH100LAA8	MHKXTGS80X75	19,390
1.1	1.5	MH100LBA8	MHKXTGS801X1	24,410
1.5	2	MH112MAA8	MHKXTHS801X5	27,260
2.2	3	MH132SZA8	MHKXTIS802X2	36,180
3	4	MH132MZA8	MHKXTJS80003	56,750
3.7	5	MH160MYA8	MHKXTKS803X7	69,540
5.5	7.5	MH160MZA8	MHKXTKS805X5	70,130
7.5	10	MH160LZA8	MHKXTLS807X5	90,520

Note: For selection of frame please refer subsequent pages 14 to 17

Crane Duty Motors - Selection Chart - (EFF2)

(S3/ S4 Duty)

4 Pole (Speed 1500 PPM)

Frame	60 Starts / hour			90 Starts / hour			Motor GD2
	25% CDF	40% CDF	60% CDF	25% CDF	40% CDF	60% CDF	KGm ²
	Kw	Kw	Kw	Kw	Kw	Kw	Kw
71ZCA4	0.55	0.55	0.55	0.55	0.55	0.55	3.92
80ZAA4	0.55	0.55	0.55	0.55	0.55	0.55	6.32
80ZBA4	0.75	0.75	0.75	0.75	0.75	0.75	8
80ZCA4	1.1	1.1	1.1	1.1	1.1	1.1	9.64
90SAA4	1.1	1.1	1.1	1.1	1.1	1.1	10
90LBA4	1.5	1.5	1.5	1.5	1.5	1.5	12.52
90LDA4	2.2	2.2	2.2	2.2	2.2	2.2	16.2
100LAA4	2.2	2.2	2.2	2.2	2.2	2.2	18.4
100LBA4	3	3	3	3	3	3	22.32
100LCA4	3.7	3.7	3.3	3.7	3.7	3.3	24.2
112MAA4	3.7	3.7	3.7	3.7	3.7	3.7	48.8
112MBA4	5.5	5.5	5	5.5	5.5	5	60.8
132SZA4	5.5	5.5	5.5	5.5	5.5	5.5	88
132MZA4	7.5	7.5	7.5	7.5	7.5	7.5	120
132MRA4	9.3	9.3	9.3	9.3	9.3	8.5	148.8
160MXA4	11	11	11	11	11	9.9	324.8
160LXA4	15	15	15	15	15	15	422.8

Frame	150 Starts / hour			300 Starts / hour			Motor GD2
	25% CDF	40% CDF	60% CDF	25% CDF	40% CDF	60% CDF	KGm ²
	Kw	Kw	Kw	Kw	Kw	Kw	Kw
71ZCA4	1	0.55	0.5	0.5	0.45	0.4	3.92
80ZAA4	1	0.55	0.55	0.55	0.5	0.45	6.32
80ZBA4	1	0.75	0.75	0.67	0.6	0.6	8
80ZCA4	1	1.1	1	1	1	0.8	9.64
90SAA4	1	1.1	1.1	1.1	1.1	1	10
90LBA4	2	1.5	1.5	1.5	1.5	1.3	12.52
90LDA4	2	2.2	2.2	2.2	2	2	16.2
100LAA4	2	2.2	2.2	2.2	2.2	2	18.4
100LBA4	3	3	3	2.8	2.8	2.5	22.32
100LCA4	4	3.3	3	3	3	2.5	24.2
112MAA4	3.7	3.7	3.7	3.7	3.3	3	48.8
112MBA4	5.5	5.5	4.5	4.5	4	3.5	60.8
132SZA4	5.5	5.5	5.5	5.5	5	4	88
132MZA4	7.5	7.5	7.5	7.5	7	6	120
132MRA4	9.3	8.5	8	7.7	7.2	6.8	148.8
160MXA4	11	11	9.3	8	7.5	7	324.8
160LXA4	15	15	13.5	13.5	11	9.3	422.8

Note:

1. Load GD² value should not be more than motor GD² value.
2. All motors suitable for an Ambient Temperature of 45°C.

Crane Duty Motors - Selection Chart - (EFF2)

(S3/ S4 Duty)

6 Pole (Speed 1000 PPM)

Frame	60 Starts / hour			90 Starts / hour			Motor GD2
	25% CDF	40% CDF	60% CDF	25% CDF	40% CDF	60% CDF	KGm ²
	Kw	Kw	Kw	Kw	Kw	Kw	Kw
80ZAA6	0	0.37	0.37	0.37	0.37	0.37	7.88
80ZBA6	1	0.55	0.55	0.55	0.55	0.55	9.88
90SAA6	1	0.75	0.75	0.75	0.75	0.75	12.72
90LBA6	1	1.1	1.1	1.1	1.1	1.1	19.12
100LAA6	2	1.5	1.5	1.5	1.5	1.5	26.92
100LBA6	2	1.8	1.8	1.8	1.8	1.8	37.72
112MAA6	2	2.2	2.2	2.2	2.2	2.2	56.72
112MBA6	3	3	3	3	3	2.7	74.8
132SZA6	3	3	3	3	3	3	94
132MYA6	4	3.7	3.7	3.7	3.7	3.7	118
132MZA6	5.5	5.5	5.5	5.5	5.5	5.5	149.2
132MTA6	7.5	7.5	7	7.5	7	6.5	216.4
160MZA6	7.5	7.5	7	7.5	7	6.5	324.8
160LYA6	9.3	9.3	9.3	9.3	9.3	9.3	422.8
160LZA6	11	11	11	11	11	11	422.8

Frame	150 Starts / hour			300 Starts / hour			Motor GD2
	25% CDF	40% CDF	60% CDF	25% CDF	40% CDF	60% CDF	KGm ²
	Kw	Kw	Kw	Kw	Kw	Kw	Kw
80ZAA6	0	0.37	0.33	0.33	0.33	0.3	7.88
80ZBA6	1	0.55	0.5	0.5	0.5	0.45	9.88
90SAA6	1	0.75	0.7	0.7	0.7	0.65	12.72
90LBA6	1	1.1	0.9	0.9	0.9	0.8	19.12
100LAA6	2	1.5	1.3	1.3	1.1	1.1	26.92
100LBA6	2	1.8	1.6	1.8	1.5	1.3	37.72
112MAA6	2	2.2	2	2	2	1.8	56.72
112MBA6	3	3	2.7	2.7	2.2	2	74.8
132SZA6	3	3	2.7	2.7	2.7	2.2	94
132MYA6	3.7	3.7	3.3	3.3	3.3	3	118
132MZA6	5.5	5.5	5	5	5	4.5	149.2
132MTA6	7.5	7	6.3	6.5	6	5.5	216.4
160MZA6	5.8	5.3	5	-	-	-	324.8
160LYA6	9.3	9.3	9.3	9.3	8.2	7.8	422.8
160LZA6	11	11	9.8	9.8	8.5	8	422.8

Note:

1. Load GD² value should not be more than motor GD² value.
2. All motors suitable for an Ambient Temperature of 45°C.

Crane Duty Motors - Selection Chart - (EFF2)

(S3/ S4 Duty)

8 Pole (Speed 750 PPM)

Frame	60 Starts / hour			90 Starts / hour			Motor GD2
	25% CDF	40% CDF	60% CDF	25% CDF	40% CDF	60% CDF	KGm ²
	Kw	Kw	Kw	Kw	Kw	Kw	Kw
90SAA8	0	0.37	0.37	0.37	0.37	0.37	12.72
90LBA8	1	0.55	0.55	0.55	0.55	0.55	19.12
100LAA8	1	0.75	0.75	0.75	0.75	0.68	26.88
100LBA8	1	1.1	1.1	1.1	1.1	1	63.72
112MAA8	2	1.5	1.5	1.5	1.5	1.2	66.8
132SZA8	2	2.2	2.2	2.2	2.2	2.2	118
132MZA8	3	3	3	3	3	3	150.8
160MYA8	4	3.7	3.7	3.7	3.7	3.3	358
160MZA8	6	5.5	5.5	5.5	5.5	5	478
160LZA8	8	7.5	7.5	7.5	7.5	7	600.8

Frame	150 Starts / hour			300 Starts / hour			Motor GD2
	25% CDF	40% CDF	60% CDF	25% CDF	40% CDF	60% CDF	KGm ²
	Kw	Kw	Kw	Kw	Kw	Kw	Kw
90SAA8	0.37	0.37	0.37	0.37	0.37	0.33	12.72
90LBA8	1	0.55	0.5	0.55	0.5	0.45	19.12
100LAA8	1	0.75	0.66	0.68	0.66	0.58	26.88
100LBA8	1	1.1	1	1	0.8	0.7	63.72
112MAA8	2	1.5	1.2	1.5	1.2	1	66.8
132SZA8	2	2.2	2	2	1.8	1.5	118
132MZA8	3	3	2.6	2.8	2.2	1.8	150.8
160MYA8	3	3.3	3	3	2.5	2	358
160MZA8	5	5	4.5	4	3.5	3	478
160LZA8	8	7	6.5	6	5.5	5	600.8

Note:

1. Load GD² value should not be more than motor GD² value.
2. All motors suitable for an Ambient Temperature of 45 deg. C.

Price List for Cash Extras for Special Features

S. No.	Description of Extra Features	Extra Charges
1	Special shaft extension	
1.1	Non standard single/ double shaft extension, diameter of shaft being same or less as standard [Kindly refer to us for following: a) Dia more than Standard b) Length more than twice of the standard	5% of LP
1.2	Shaft material - EN 24	10% of LP
1.3	Stainless Steel shaft	15% of LP
2	Mounting Standard flange or face mounting (B14, B5, V1, V18 & V19) or foot cum flange/face mounting (B35, B34, V14, V36).	
2.1	Up to frame 132	Nil
2.2	Frame 160	3% of LP
2.3	Frame 180 & above	5% of LP
3	Non-Standard paint shades as per IS:5	
3.1	Epoxy	
3.1.1	Epoxy 631 / 632	3% of LP
3.1.2	Paint shade other than RAL 9005 & 631/632	5% of LP
3.2	Non-Epoxy Paint shade other than RAL 9005	5% of LP subject to max of Rs.7000/-
3.3	Paint Thickness Rust Coat primer+ PU Paint up to 70 microns For additional thickness up to 150 microns For thickness > 150 up to 215 microns	Nil 4% of LP 6% of LP
4	Epoxy Gel coating on winding overhang	2% of LP
5	Insulation Class "H"	10% of LP
6	Vacuum Pressure Impregnation	5% of LP
7	Stainless Steel Hardware	
7.1	Upto Frame 225	Rs. 900/- Net
7.2	Frame 250 and Above	Rs. 1500/- Net
8	Non Standard Voltage (Other than 415 Volts)	3% of LP
9	Frequency Base Frequency of 50Hz to 60Hz 50 / 60Hz motors for export	Nil Nil
10	Multi Speed Motors	
10.1	Single Tapped winding type motor upto 8 Pole (to be taken on higher frame). [Tapped winding is indicated by speed ratio 1:2(e.g. 4/8 or 2/4)]	10% of LP for Tapped Winding
10.2	Dual Winding e.g. 4/6, 6/8	17.5% of LP for two Winding
11	9 Leads / 12 Leads	3% of LP
12	Enclosure / Types	
12.1	IP 56	5% of LP
13	Space Heaters	
13.1	Up to Frame 180	Rs. 1350/- Net
13.2	Frame 200 - 250	Rs. 2750/- Net
13.3	Frame 280 - 355 Charges for Separate Auxillary Box	Rs. 2750/- Net Rs. 2300/- Net
14	PTC Thermistors (without relays)	
14.1	3 Nos.	Rs. 2000/- Net
14.2	6 Nos.	Rs. 3900/- Net
15	RTD	
15.1	3 Nos. (Frame 160 - 250)	Rs. 5000/- Net
15.2	6 Nos. (Frame 160 - 250)	Rs. 6000/- Net
15.3	3 Nos. (Frame 250 and above)	Rs. 6000/- Net
15.4	6 Nos. (Frame 250 and above)	Rs. 7500/- Net No.

S. No.	Description of Extra Features	Extra Charges
16	2 Nos. Simplex Type	Rs. 6500/- Net
17	Cable Glands	
17.1	Single Compressor Cable Glands	
	Frame 71-132	Rs. 700/- Net
	Frame 160-225	Rs. 1000/- Net
	Frame 250-355	Rs. 1300/- Net
17.2	Double Compressor Cable Glands	
	Frame 71-132	Rs. 1200/- Net
	Frame 160-225	Rs. 2200/- Net
	Frame 250-355	Rs. 2900/- Net
18	Forced Cooling Arrangement (3-Phase)	
	Frame 280	Rs.27000/- Net
	Frame 315	Rs.30000/- Net
	Frame 355	Rs.49000/- Net
	(For 3 Phase arrangement please contact us)	
19	C1 Fans 160 & above	Nil
20	Special Bearings	
20.1	Insulated Bearing (NDE Side)	
	6314	Rs.34000/- Net
	6316	Rs.34000/- Net
	6317	Rs.37000/- Net
	6318	Rs.37000/- Net
	6319	Rs.37000/- Net
	6322	Rs.40000/- Net
20.2	Roller Bearing arrangement on DE Side	
	Frame 160 to 180	Rs.1550/- Net
	Frame 200 to 250	Rs.3000/- Net
	Frame 250 to 315	Rs.4000/- Net
	Frame 355	Rs.5000/- Net
21	Vibration Level	
	Vibration level shall be as per normal class of IS 12075-1987.	
	For any other value please refer to division.	
	Precesion Class A	10% of LP
	Precesion Class B	20% of LP
22	Finishing & Packing	
	Motor delivered in unpacked condition	No reduction in price
	Motor delivered with only RED oxide primer coat	No recution in price
	Seaworthy / Export packing case for home market	5% subject to maximum of Rs. 5500/-
23	Testing (As per IS:325-1996)	
23.1	Routine test per Motor	
	Frame 56-132	Rs. 1400/- Net
	Frame 160-225	Rs. 2200/- Net
	Frame 250-355	Rs. 2950/- Net
23.2	Type Test per rating on one Motor	
	Frame 56-132	Rs. 4900/- Net
	Frame 160-225	Rs. 7500/- Net
	Frame 250-280	Rs. 10000/- Net
	Frame 315 and above	Rs. 15000/- Net
23.3	Second numeral IP55 test	
	Frame 56-355	Rs. 5000/- Net
23.4	Testing with Inverter Drive (Drive to be Provided by Customer)	Rs. 55000/- Net per Moto

Other Products

Building Circuit Protection



Compact Fluorescent Lamp (CFL)



Luminaires



Fans & Domestic Appliances



Power & Flexible Cables



Industrial Circuit Protection



APFC & IPFC



Capacitors



Switches





MHMPL00008/AUG13

Regional & Branch Offices:

NORTH - REGIONAL OFFICE: Corporate Office: QRG Towers, 2D, Sector-126, Expressway, Noida-201304, Tel: 0120-4771000, Fax: 0120-4772000, **Delhi:** Tel: 011-47676700, 23888200, Fax: 011-47676750, 23888250, **Chandigarh:** Tel: 0172-4232400-401, Fax: 0172-4232403, **Dehradun:** Tel: 0135-6670202, Fax: 0135-6670203, **Noida / Haryana:** Tel: 0120-4771000, Fax: 120-4772000, **Ludhiana:** Tel: 0161-4676001 / 6024, Fax: 0161-46766007, **Jammu:** Tel: 0191-2490424, Fax: 0191-2490405, **Sri Nagar:** Tel / Fax: 0194-2490431, **Jaipur:** Tel: 0141-3988210, Fax: 0141-2389024, **JodHPur:** Tel: 0141-3914645, 3988210, **Lucknow:** Tel: 0522-2201032, 2200938, **Kanpur:** Tel: Airtel: 09935533751/52/53, 0512-2690128/129/130, Fax: 0512-2692800

EAST - REGIONAL OFFICE: Kolkata: ICC Tower, 5th Floor, 4 India Exchange Place, Kolkata-700001, Tel: 033-40129851 / 52, Fax: 033-40127339, **Bhubaneshwar:** Tel: 0674-2598104, 2598105, 2598106, Fax: 0674-2598107, **Guwahati:** Tel: 0361-2134521, 2458923, Fax: 0361-2460355, **Siliguri:** Tel: 0353-2525907, Fax: 0353-3290402 (RIM), **Jamshedpur:** Tel: 0657-6542492, 09234369436, **Patna:** Tel: 0612-2207221, 2207222, 2207223, Telefax: 0612-2655518

WEST - REGIONAL OFFICE: Mumbai: 302, Boston House, 3rd Floor Suren Road, CTS No. 260/261, Andheri (E) Mumbai-400093, Tel: 022-67298600-603, **Ahmedabad:** Tel: 079-40061111, 40060738-740, Fax: 079-40060741, **Indore:** Tel: 0731-2572340-41, 4009998 (Airtel), Fax: 0731-2551626, **Rajkot:** Tel: 0281-2481112, 2921212, Fax: 2481112, **Nagpur:** Tel: 0712-2224132, 2222692, 2222029, **Pune:** Tel: 020-64016413 / 14, **Raipur:** Tel: 0771-4243400 / 01, Telefax: 0771-4243402, **Surat:** Tel: 09979890137, Telefax: 0261-2350137, **Jabalpur:** Tel: 0761-4064491

SOUTH - REGIONAL OFFICE: Chennai: Sigapi Achi Building, No. 18 / 3, 6th Floor, Rukmani Lakshmi Pathy Road, Egmore, Chennai-600008, Tel: 044-42280600, 605, Fax: 044-28524326, **Bangalore:** Tel: 080-49075000, 9844085913, Fax: 080-25582663, **Coimbatore:** Telefax: 0422-2305767, 2306199, 2305199, **Hyderabad:** Tel: 040-27533372, 27533355, 27533632, 66320407/0408/6401/6402, Fax: 040-27533211, **Kochi:** Tel: 0484-4099000, Fax: 0484-2393170, **Vishakapatnam:** Tel: 0891-6514339, Fax: 0891-2522547, **Vizag:** Tel: 0891-6514339, Fax: 0891-2522547, **Vijayawada:** Tel: 91+9247058847/57, **Calicut:** 09895855499, **Madurai:** 09994493242, **Trivandrum:** 09633817795, **Hubli:** 09448146028, **Trichy:** 09944460160,

Representative Offices: • Goa • Solapur • Gwalior • Kathmandu • Bhopal

Terms & Conditions :

- List prices are valid for delivery from our godown/factory.
- The list prices are exclusive of Excise Duties, Sales Tax and any other Central or Local Taxes, Octroi Duty and other levies. These will be charged extra as applicable on the day of supply.
- Insurance charges are included in the prices.
- In our endeavour to continuously improve the product from time to time, frame sizes indicated are provisional and subject to change without notice.
- The price list is subject to our Standard 'General Terms and Conditions' of Tender and sale and the prices are subject to revision without prior notice.
- Minimum order value acceptable is ₹ 20,000/-

Havells India Ltd.

Corp Office: QRG Towers, 2D, Sector-126, Expressway, Noida-201304 (U.P), Ph. +91-120-4771000

E-mail: marketing@havells.com, www.havells.com

Consumer Care No.: 1800 103 1313 (All Connections), 011-4166 0303 (Landline)

Join us on Facebook at www.facebook.com/havells and share your ways to save the planet!



HAVELLS