PRODUCT NOTE

ABB Low voltage IP23 induction motors

Compact design, maximum power density



ABB IP23 induction motors are designed for indoor installations that demand high power density. These compact motors deliver higher output power per frame size than traditional IP55 designs and operate without auxiliary cooling, reducing both system complexity and operational costs. With open vents that allow air to flow directly over the windings, the motors run cooler and minimize overheating risks.

* Available on request depending on the power and frame size.

Key features

IP23 motors are an excellent choice for refrigeration compressors. Their open-drip-proof design provides efficient cooling and stable performance inside controlled compressor environments, while still offering reliable protection against falling water and large particles. This combination delivers dependable performance, high energy efficiency, and reduced maintenance—ideal for demanding refrigeration applications.

Our standard motor design supports a maximum mechanical speed of 3600RPM and can be upgraded up to 4500RPM on request.*

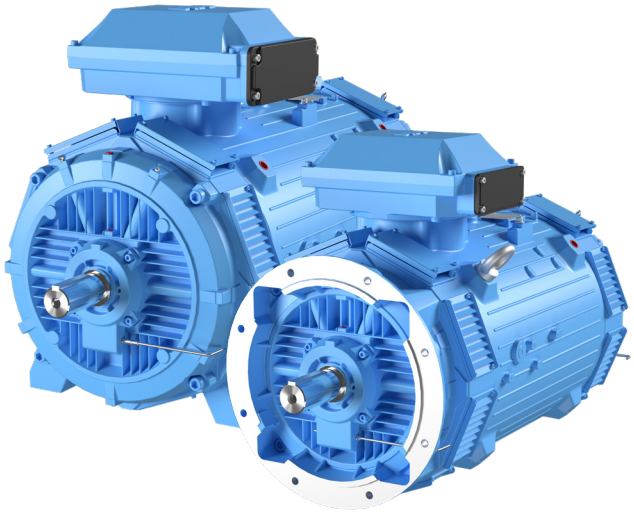
This motor range is also available in IE2 efficiency, offering customers flexibility to meet specific application or regulatory requirements.

In scope	
Shaft heights	M3FH 280-355
RPM	1500/3000
Output powers	90 kW - 900 kW
Poles	2 and 4
Efficiency class	IE4 (IE2 range also available)
Duty type	S1
Design code	M
Voltage code	D
Availablity	Production orders, from FIMOT

Key applications and segments

The applications are typically customized to meet the customer's specific specifications and requirements.

- Refrigeration compressors



ENGINEERED
TO OUTRUN

Technical data

IE4 M3FH IP23 induction motors

Output kW	Type designation	Product code	Speed (r/min)	Poles
3000 r/min				
90	M3FH 280MLA	3GFH281410-*DM	3000	2
110	M3FH 280MLA	3GFH281410-*DM	3000	2
132	M3FH 280MLA	3GFH281410-*DM	3000	2
160	M3FH 280MLB	3GFH281420-*DM	3000	2
200	M3FH 280MLC	3GFH281430-*DM	3000	2
250	M3FH 315MLA	3GFH311410-*DM	3000	2
280	M3FH 315MLA	3GFH311410-*DM	3000	2
315	M3FH 315MLB	3GFH311420-*DM	3000	2
355	M3FH 315MLC	3GFH311430-*DM	3000	2
400	M3FH 315LKB	3GFH311820-*DM	3000	2
450	M3FH 315LKB	3GFH311820-*DM	3000	2
500	M3FH 315LKC	3GFH311830-*DM	3000	2
560	M3FH 355MLA	3GFH351410-*DM	3000	2
630	M3FH 355MLB	3GFH351420-*DM	3000	2
710	M3FH 355LKA	3GFH351810-*DM	3000	2
800	M3FH 355LKB	3GFH351820-*DM	3000	2
900	M3FH 355LKB	3GFH351820-*DM	3000	2
1500 r/min				
90	M3FH 280MC	3GFH282330-*DM	1500	4
110	M3FH 280MLA	3GFH282410-*DM	1500	4
132	M3FH 280MLA	3GFH282410-*DM	1500	4
160	M3FH 280MLB	3GFH282420-*DM	1500	4
200	M3FH 280MLC	3GFH282430-*DM	1500	4
250	M3FH 315MLB	3GFH312420-*DM	1500	4
315	M3FH 315LKB	3GFH312820-*DM	1500	4
355	M3FH 315LKC	3GFH312830-*DM	1500	4
400	M3FH 355MC	3GFH352330-*DM	1500	4
450	M3FH 355MLA	3GFH352420-*DM	1500	4

abb.com/motors-generators/iec-low-voltage-motors

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB AG does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB AG. Copyright© 2026 ABB All rights reserved

9AAU000000000092 REV D 03-2026